```
{
 "cells": [
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# 02 Feature Engineering\n",
    "---"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 7,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Import libraries\n",
    "import pandas as pd\n",
    "import numpy as np\n",
    "import matplotlib\n",
    "import matplotlib.pyplot as plt\n",
    "import seaborn as sns\n",
    "from scipy import stats\n",
    "from sklearn.preprocessing import KBinsDiscretizer\n",
    "import statsmodels.api as sm\n",
    "from statsmodels.iolib.summary2 import summary_col\n",
    "import matplotlib.patches as mpatches    \n",
    "import warnings\n",
    "import matplotlib.ticker as mtick\n",
    "\n",
    "warnings.filterwarnings('ignore')\n",
    "\n",
    "seed = 0"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 8,
   "metadata": {},
   "outputs": [],
   "source": [
    "df=pd.read_excel(\"df_01.xlsx\", index_col=0)\n",
    "df_test=pd.read_excel(\"df_test_01.xlsx\", index_col=0)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 9,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "Trainning shape:\t (1746, 26)\n",
      "Testing shape:\t\t (448, 26)\n"
     ]
    }
   ],
   "source": [
    "print('Trainning shape:\\t',df.shape)\n",
    "print('Testing shape:\\t\\t',df_test.shape)"
   ]
  },
{
 "cell_type": "code",
 "execution_count": 10,
 "metadata": {},
 "outputs": [
  {
   "data": {
    "text/plain": [
     "array([[1972, 'Master', 'Single', ..., 0, 0, 0],\n",
     "       [1951, 'Graduation', 'Married', ..., 0, 0, 0],\n",
     "       [1984, 'Graduation', 'Single', ..., 0, 0, 0],\n",
     "       ...,\n",
     "       [1992, 'Graduation', 'Together', ..., 0, 0, 0],\n",
     "       [1958, 'Graduation', 'Single', ..., 0, 0, 0],\n",
     "       [1952, 'Graduation', 'Married', ..., 0, 0, 0]], dtype=object)"
    ]
   },
   "execution_count": 10,
   "metadata": {},
   "output_type": "execute_result"
  }
 ],
 "source": [
  "df.values"
 ]
},
{
 "cell_type": "code",
 "execution_count": 11,
 "metadata": {
  "scrolled": true
 },
 "outputs": [
  {
   "data": {
    "text/html": [
     "<div>\n",
     "<style scoped>\n",
     "    .dataframe tbody tr th:only-of-type {\n",
     "        vertical-align: middle;\n",
     "    }\n",
     "\n",
     "    .dataframe tbody tr th {\n",
     "        vertical-align: top;\n",
     "    }\n",
     "\n",
     "    .dataframe thead th {\n",
     "        text-align: right;\n",
     "    }\n",
     "</style>\n",
     "<table border=\"1\" class=\"dataframe\">\n",
     "  <thead>\n",
     "    <tr style=\"text-align: right;\">\n",
     "      <th></th>\n",
     "      <th>Year_Birth</th>\n",
     "      <th>Education</th>\n",
     "      <th>Marital_Status</th>\n",
     "      <th>Income</th>\n",
     "      <th>Kidhome</th>\n",
     "      <th>Teenhome</th>\n",
     "      <th>Dt_Customer</th>\n",
     "      <th>Recency</th>\n",
     "      <th>MntWines</th>\n",
     "      <th>MntFruits</th>\n",
"      <th>...</th>\n",
"      <th>NumCatalogPurchases</th>\n",
"      <th>NumStorePurchases</th>\n",
"      <th>NumWebVisitsMonth</th>\n",
"      <th>AcceptedCmp3</th>\n",
"      <th>AcceptedCmp4</th>\n",
"      <th>AcceptedCmp5</th>\n",
"      <th>AcceptedCmp1</th>\n",
"      <th>AcceptedCmp2</th>\n",
"      <th>Complain</th>\n",
"      <th>Response</th>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>ID</th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>67</th>\n",
"      <td>1972</td>\n",
"      <td>Master</td>\n",
"      <td>Single</td>\n",
"      <td>46423</td>\n",
"      <td>1</td>\n",
"      <td>1</td>\n",
"      <td>2013-09-18</td>\n",
"      <td>6</td>\n",
"      <td>68</td>\n",
"      <td>0</td>\n",
"      <td>...</td>\n",
"      <td>0</td>\n",
"      <td>4</td>\n",
"      <td>7</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"  </tbody>\n",
"</table>\n",
       "<p>1 rows Ã 26 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "    Year_Birth Education Marital_Status  Income  Kidhome  Teenhome  \\\
n",
       "ID                                                                   \
n",
       "67        1972    Master         Single   46423        1         1   \
n",
       "\n",
       "   Dt_Customer  Recency  MntWines  MntFruits    ...    
NumCatalogPurchases  \\\n",
       "ID                                              ...    
\n",
       "67  2013-09-18        6        68          0    ...    
0   \n",
       "\n",
       "    NumStorePurchases  NumWebVisitsMonth  AcceptedCmp3  
AcceptedCmp4  \\\n",
       "ID                                                                     \
n",
       "67                  4                  7             0             0   \
n",
       "\n",
       "    AcceptedCmp5  AcceptedCmp1  AcceptedCmp2  Complain  Response  \n",
       "ID                                                                \n",
       "67             0             0             0         0         0  \n",
       "\n",
       "[1 rows x 26 columns]"
      ]
     },
     "execution_count": 11,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df.head(1)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# 1. Remove Outliers"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 12,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "text/plain": [
       "Year_Birth             int64\n",
       "Income                 int64\n",
       "Kidhome                int64\n",
       "Teenhome               int64\n",
       "Recency                int64\n",
       "MntWines               int64\n",
       "MntFruits              int64\n",
       "MntMeatProducts        int64\n",
       "MntFishProducts        int64\n",
       "MntSweetProducts       int64\n",
       "MntGoldProds           int64\n",
       "NumDealsPurchases      int64\n",
       "NumWebPurchases        int64\n",
       "NumCatalogPurchases    int64\n",
       "NumStorePurchases      int64\n",
       "NumWebVisitsMonth      int64\n",
       "AcceptedCmp3           int64\n",
       "AcceptedCmp4           int64\n",
       "AcceptedCmp5           int64\n",
       "AcceptedCmp1           int64\n",
       "AcceptedCmp2           int64\n",
       "Complain               int64\n",
       "dtype: object"
      ]
     },
     "execution_count": 12,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df_numeric = 
df.select_dtypes(include=['number']).drop(columns=['Response'])\n",
    "df_numeric.dtypes"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 13,
   "metadata": {},
   "outputs": [],
   "source": [
    "distribution_cols = ['Income', 'Recency']\n",
    "distribution_cols += [x for x in df_numeric.columns if x.startswith('Mnt') 
or x.startswith('Num')]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 14,
   "metadata": {
    "scrolled": false
   },
   "outputs": [
    {
     "data": {
      "text/plain": [
       "<function matplotlib.pyplot.show(*args, **kw)>"
      ]
     },
     "execution_count": 14,
     "metadata": {},
     "output_type": "execute_result"
    },
    {
     "data": {
      "image/png": 
"iVBORw0KGgoAAAANSUhEUgAABMAAAA1SCAYAAADTfMkNAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
```

i5vcmcvqOYd8AAAIABJREFUeJzs3Xl4lOXZ9/
HvOVsy2VgCCRL2fVFEQQT3gmxWkfqooI9969JWqdoW7GHdBWv1tbbV12prrcWltUW0WCx1QayoVHZkKS
CLyK4sAklIMsks1/
tHJmkSEkggyQT4fY4jR2bu+7rP67ynczci3mnENEREREREREREREORE5Ul0AiIiIiIiIiIg1JBTARER
EREREREREREETmhqQAmIiIiIiIiInNBXAREREREREREETkhKYCmIiIiIiIiInNBUABMREREREREREREkROaCm
AiIiIiIiIiInJCUwFMRGrFzDabmTOzsYnORURERETqnz7viciJTAUwERERERERERERkoakAJiJiIiIiIiIg1Zm
918Fkz+4eZFZrZSjPrX6FNOzN7N7Ncy2mFnIzNaa2Vnxc63N7Hkz22pmeWa2wMxGVRP/
ZTN728yKzGUs7+ZWYGZzTezzhWuWuOdXM/
mlmu81sT7xdh8Z9ZURERERODPq8JyInGhXARORY3AxEgC+A04DDf
AJhZCvAv4GBgEmgAPmDDzXz/vB4sAJoDmwCBgM/i/
fXBvgo3mYesEhB4Anjq1TvgyIkS3kAaRIwnzBnSKZfNSXSEZZEa6POeiJwQNAJMRI5FJP7bVTn7/InCCwCWXzJQq0KwfJGThSncWFv8+Rnx35cA3YEvgTOcc99zzz
0DvAUMpPTDzEHgfOfct4GnKX0/urVK/H/hB85/
XkTph557qvT3baAFsBHYGv+9B+gFfCXKvmdA5wL9ANOBc6idO0cEREnZOSCmAiIiIdTcI2Oic2
+ScKwGmAZdXaM58FL88evAsPgorMuBac65YufcgorMuBac65YufcF8DGeLxqY8avGRqPQTzmWADn3Gbn3EogVqVvByQD
SAJ8AO76ufWRURERI4/vro0btWqlevUqVMDpSIiIiJS/
5YuXbrXOd060XlI49DnPREREdnNTc6e9Zvzu9Jvjkn9d9+Wbk7nsM9tnanyWQgvDpQPAEKKPv6nM79JK+LLzCJ
OR2rsP2AxrsPEXYYI1nOZnnoQS+IdjcyMIKxj02F6z8T8z5m0uR2XXvaKWR8HkXKY7mp7tKYrhJL7yMI9i59cEj3YnPHQLmrOiw
7zf2mktk1izv5hP94bILYnyP50zNC3yOKJpj5JI9fX3p10gRURERE5Kjkh6P8ZUMu+4qjXNQ2hUFZw
UOKXwCpfg9nZQU5q3Uym/LC/
H1zHlHnEpCxiJysVAATERERGROssrifLK+lxyS0qLX21SjjzBqFuzAANaJbMhN8w/
NufjVAQTkUaiIiIiIjUSTTmeZXdDbjEb88L88FvDqm04G2c88xCx//nq1zmE2/3mMeHdgcxsZnzZ9S99/
Dmm2+yatWqw7r0lqlaIWMU4A+0z+TU0skV4x6n+jsb5bcLh1nQH3+f+VR+8e3VvfvJJtjJPiY5+i25x0BFmtTX0AWS5mVy0TwmfuPS+WJOu+22ChA88
+whOUyfPp3TNTjuNpKQk2kdvz7333jj5s3j/
PPPa9pKq0CFbhJUk5wKMxZaB0tyoMQZkwjfFJRN06qfyxtfhsrMEO+G3GZbeD5/H3/OcU+lqC5yK/Qrj5IHMdDQvRhrSmI15sLl4rvDYWoKc
jXdw9u/O3k8
+fwV1X5xdKaZtTyeSbNnfrp8ZpwIVUh/8/hhVTX2EOhUzgxyTgQDSbKBNVDm6sUx6Y5sdqdaw1tAsqeOm4oI1Zc4LxRlbrd9x3wlrakXNnB1WwmYQuhhTEbRH
mzwg4NtmW8w/
uqnmUFRfSkpVzqiVaI1MW7l57GMK6X/oW3bOdRQQCsRmaqRYZwdNmxJ+2KaqtGBOHQntVKXuFdJwz/
jxw+DDaTsyD6I4Vk0nzcv78w9hqwS/
Pn2LB+sbT29yWSajJ1fZYSNrA+DNZ2AEJKRO0QS1IhRK7G8Vc/
j+TWIlf3aM59kmUTYhFJl+Kk4aIgnPqAzQkwD6qmuxT73yaIIewiS3nCk+AvxTIF8eDovbw4fJMXp6TdxS+0Jt
zQD0ZZcnKuWFSTXgfsZAfbFM5VUGTYrjeURbe0+CWwbmpvA6iXyKUqz/
AFEPSEdhlA+X8KBJzZq0FDHgxnf7bawD5DJ0FmxfPpSSYaYWVHmGE8cyTx9P3wyQgCS8z74x6LBOMRSOmtm1atRdVcqHGnDp1gV0FOuuX81K22+NUzn2IV
fVjWCcbJK51UcpPxdYZT6l53pnfNMNHCPfC7XsP6gYPmXHUmkYOWmuJIzXjH7gk7uvcyBvVNQhGbt/uhIUUw3EFU0MvfsoncRP7XQRRsu0eQ2bC4iBP7qmEDT
sN/
kBz73yLYchOaONn4wHtmiuoNYlZ9NN/mJXIwszLrDcyGDlL3FzmqtlbR/
Eod7ZCDMaOt1PaxsYnkyvMCehuE3PhHiqe08oTS+T2WApTSDvCx/
TdtQt8R3yeoIe7M31dsbKt6hJz+vRNhDXNDH/zEsaTWPEPcUdlAizfPGNhpcIuhmx/r3kLlI3vgcBMRvNw2yIdTMGbEPfiKaxOXV6AzQpQyr9xGLk6IF/
r7wfLBk4Y/kXSe1cXKY9XC4uzVr1RKVIMmpaxbYVPiyNrHb/
MoyqHcEAF06MRptaoIh3CdsnwjAnfUHY/dBDBwYowRaQz9r7wmHrEybaTA9KVCj/
aLbV0J4G8AWOa4T3Vzsn3DGVmWkFJ4P4kR0LXHN2GB26JyYUiHXnUbPxbWSo15HUTKN0Ag7/vpWwmmgZWk/
CLOAA/iBBxgI0J4xkWyf4vHeycIBnwVU0X7s5h/4PzeC7HBcF4CsoPfiS55QOF/
mpzq6/6/91K86iMSkg8FSB2iXxE0JC0wnv1vPQWeg/hJLiBqKsiNLZYBwQtB+vjNGQZQ/
MTPSDdn5CBvD38XZq6gGgFQ/dS4yEP89gT/2K3+AFsm0+8IWQBFAMhyDlLbRSfq+EAtXmVXjvBuLU6Rn3BiE/
zsy8Fyr70IAGGhyuI/
gEg1HWHqZ7+s8CvdjFBL9TggsPSUqjSBT6pzYHu3CtUFJ6oOM/cHrLnpE3O3EhyNTCBbFTZMebCHj7gs+oA/UeLoIf+Cx54/cHL6vn0/
PkC94eBuEqnwfpA0Y51Lv2e0bRfvOL9M7AF6FpKRnZM/
sN18r4Mw7cOVUg1WZDLZMKSnaqbkhRdpgbPHoyEKA/iT2bomzIZvFEyunrjSyUVnx2DjY/Tjde2wUuaSCW2mvrcvq/
0YWnh1zhqUNY7eWTMoy4FB2YL9ZCRV2/Db8J2vW1WkF3cPPbJGrqtKyx/
sKLqZIYrDg3w4YyPxVVQW0wJbpjaH+i7vB1ssfzgK9NYNbM+cg+4BYCQ0S+SBJL0DeNKswRhaSZvZ4ut+0Ht3sDV5/
/SvjsvOVXYGCoZnSzmnZ3i+JFLVYnM07eXhtuVd0IGUXcLi2ba+s0qqY9FU2C7GKKlj1zL5gBasyYkIvCrptwfd6+QoW+cUrc4fZ51WUn72X+UWfhRB
WX80Kl4YYBAKJxPtvK8+jJx7Qw2+jkfBRaiqNQdsDxczwyNiAY4DlWpcmhwDmtq3t2Zn7PEzjUBBpoKYNKinIkKOWtqVyiulJoTdwK8CWhVfOGNUt
+x5BXQTUU2GDUlpxXRDdrrPydtx3yD7PJyHrpN0P6Ce/2JcaSeDfY0gTdz73/
XhkG2jfPh3aFw6+kzPNUgWpTmSj8unyLLZbs16Iq6W5fNNS9+ScxYWLR4KIJJb6/
gjBF1rqetBcB2KG5kXjCjV6rwpyNM3Jqjq8b/
WGNzsTbMAjIYh4imtd24Pel3bYdd/OLbX3wCSkFs8RDJ6hrIFvT68Wag/
EzHfNKvMoVd4Dzx3yKGAQvqUqrcs6+Y7QJDyU3J3SuzFtaa9lx6JLumIeNAPbNIAx8tIvKUcgZ1zFPdiWLu0C33EQwPWDH5l19VzVfWaMQUiTGGqIjRImK5qXnbwAmRV7nIHgR
1dmD5E2+v8TPv6R98tvVQIwa53I9vdIvdSFHqe9yTr3cwzm/yxHB5TKMz6S2cNgfRWHrDhRMF8aFmEBx6ovVz1/
qgn62D2xuYDkuwn7CoLYoJ2SAHX9K0xsoz98xg5hrC5WjlFVfmv6nd/
VxYnqSg+RH/s1+UPXjEhXyaibbDCLRgagxiRfpuTaaHHXlt6Djd9FGjSG08upffwhZ21p9U3dFv2ks8J0oZVGCTPTyQyNk3Ik4lHiBnr3yQOX/xj5M9/
qS3+dD7k7ZwWoUpnA8WmYkyfxMg+3wzfhPqu/ebnB7hgX8bGQHBiEifmFm7fiD70TaNM/yrIF/
fvXtqHp+qyNn2+AHn4YqHiA87DVTzcx+uLhrg85YdYSaJabTD4ihjsRbZIzFshN2zHgz6ZnlrXuPDmuL1rPEPPQW2/
dSeT8h9N0kpFxRCv1TAIRYIKGVEcbb4BMzuvdVJFH0AvpsHmv62L6GNnKdMltdEs7WHvzjOSJ8VmTGqEGq/
a5XmOeRW0E8wwGz/T0u/eHgI5f6xTSdy6MFPrsR1LjF/3wvcf+O7G5C+0/ylphD+GVJ0/
YhhJRAeDITzbl5xvkHRg/b/wcLZUv01ooA36hk/lh69O8xmT7YvTBZfrIPxRdGUhhhqLAqlhyvrM/BQr55+U6Qv+vcdw5dh1W1xN/
9vZSAhcJwybe86fmnb+RfvgWZ80Qn2ihJaY/
EEfiO8pu1IMWKtqXJUv1nvgLv+bfPW+y9P8QmBFaR+KP1NJQ6oBdNX0M9hlZxXuX1M8N9R3Cw7RJjoyTqHl9VmoHhK/VN9NkSb1CrFn/8hSN/
hGSTAKaH/BpcyRS8jUiyPuCMd9MaNIsKjwxSbIXUdtcAxjZJLWvK3Wmi/iZsA/vMmu/4MKS9rYmO4d38M7EdoXovR3gq0C/LymjWJlV+++Yu8C4EJdH/
w/pKNbGfa85IF/
rrSQWDrh4FYbrPgdFXLn9RoUjNy+ZaRuusbPFKMJPLOLJXP7f2cf9QDYeZ/LEnZ4WqqVpTK2VfFq0TzHG0QUNBZ/
5O56+LOn/+q/
KALgSofFu97VOx4Ig45EWCMnitl6Onv4U3/
n9+OKGkUrlMVhPwYuaxQ9SkKDIXXmvXJyn1ZG8+KUPCc4pqH68/3TzOYLlJ9ykT1S90hB3JE5X1nOvObuQTgw6zrdKY6+JfZK9AjJVV31EQd9wqYcO6W2mHm8uPNq4azuVyzdvtFdnJzDf4D9J7+/u11j4g+GmHQ9uNpdbyo6gbaJzK1yXlmfiDGzxH+DvMrS9MDvwWs1Eflv9+3ajzZjoK0lMR3BRfnA2Ps
ovnnqUHuH3dLA+pUqcsYR8N+VpMXYFGp8XfIKAjT0wiTJbJe5ZkSO26a8yb/
sLEWjVqmSb9/s5S14nGfJQaVeMr5NRjdS1RBmS5RivZGBqyHGhWqmL/2UQ0YRGtT/RvJxk/
p/8YvZVWXXkcYy1jDoUHdyL0K6g/R+Jk53anYVFjXtSDUTZNrFD8xLwnUGxaTZo1yXVORffZaffxebbntlHo+eEHhdr/
uYvHo4uOnzOkDkHnxxpFTlZ3yYwMixuJyOvyg/qybMSqULYy7k02xkL4wrs7Yyi0sxdzeLrsi+M8LhJnlodd5T1RkyU+O5a0n7Rwb
Ku6d81uc9p7ipe2txMysstaM5Rxq5nsi4OZtoMtxv8BSW5BB2zbeD8ejgUbgp+ElUb/6jWxqtb3iUn0L1Ct/
YUWBTXc3mL8xR6NzZ+ZMwQKQaFNhkAI1HVwCXDG/ocTVXjpKHQyEvuaXVtUu6WlmAtJsUwMNx/
zHXTGfzX3cPFLdTcZhBBPWGvrFv3uycRbmCKWJ4Ln1bFX/ebd2/ltbfTunXc/
4XoXpaIS0gSgXzkIGX+rz/AKdbtpLvA7CsFmGHE5IyBP2+gc2FTZC1sr00/8Amw6gDDsaXYXbZqHpm1UJy4vLd20tjLhtfIYOwIHRt
+gYhIkVKaIXeR+7X+XFHP3LrtLBc2+Idnp+gFQjlkbqBw/
WdJFrvkJBxGxEewT+NTGzaeIdsIfjh3tSs3C4kJeJxDPNxbXsgHbYSBwkAd+FbRo0jnl6R0YAl5eO+d8Rhe8b7zdfXEm0bNKN5fgtOjvDWtEC2ko2
dHXeEtPhcj9o0N0irw4bcrKH4Hk1wwpSHRdOCGm9R8XLx+vYtZLi3Hu+rbknc7LCctPXhT02j6oe6Hgq9rJYHmpkKWqX5FkyWmmOhuYk4Xu7Q5n
P+2PIMhu9R9JxoSxFz3xFnXYYC96WrOvbHvBR0vPT8E3p1Y3J2y0pC1jqMCXzr+hk6/nypQxY0q3LXk/
iYT6kVKlfuHBLyNaj5vyyMsTuPF+kjbZfRXybXmGcbdm9xJm3pAYxXRrrWUBPOXuLoqczx3LG/
iuNm5G7K5/qXObQFEw9dlMY0qS+KctQCdlYVEz+9GzRTr+H1xHfomcyi9w/
7xL4a77PrVnu04PgI3QbntpjyFbgkCsmyyfdG72x/
fM4Mfgtj+AlUiO/vTXVcUjIqSH0JpLPq8MLZn8xZrg3HU/b3YhaRE5W6a8kYvKw5Vu4N6Hc0W/kpFr9DJvQrcjhWnfBI0ZiNyzKOcWoInZaHAaIttHcEzj
V6MJyBUsoZW8Usl+q7HEGP9//B8fZNrmEDX3tfHtc6GeABcsaStQqUEXoBRfT5ClIZ88e5c+fn1j/
5sMkX3fxvhvhvMYFQsa03FPz/dGVhkM3gONfd3+ssFPxgXm9z8jaRTaxLKAu/
8JhcSoHTZfvLiu0lnLu4RZ01Y5iHnhtxbwIWhWLeMQMuP1ZgGnu7vfM0S3kzwRmv3nAtMcGE8FWPRhmcwB6+CncwU7vxkrqmfwzMBMbSYy
PwsamNMP7qthpmmnOfRIcFYZkeV9ZvjhTcCj7acTg76a+ThUbtHmCY1kBpv1r0m0nkuq3WNSqbO3O64ZORwJdybVG+whWKKrwq4UCS1VgK6ejRWk
9zKSPOXIgDBEHmy9ItsVH9QLy1lPOu3nzlcU7yyb9VcOd0+Y+Q4mOHYPl1rxwIVNFvBIJdsK8UcNGNhQ0k0T5k3bM3OvHr9HWjWbKoiRYqp/
0YDl4mwQV5mFbrSz9ZmswKi3k5rpFpJ1q1Bnv5uijCbVrZwb6SoUmkJ9pmoIHoybpmbvd9u2d4jtmwYpJgJ7aEpqiWoScqxQNfpEX6hhYbwLmDHeSC
5ZWEWKr7VJnGXv1iNnUFFENCiXF/GVbkn7WBp9bnkT1Urc4fCK92fEH0B/
zz/S8cyXyKh5ngiWaNkGC9RMvwZFjqpQIdy7QvWZfOfc1PnkgUSRIIaxTH1ffwk9Zv7wafn/
nqb+xvJ76+I9ZqmXZUcAprkjGqd2uqDr6nW3zFU/
SXmw+uLRG04ZOz7/rvAH29znhGGL9Jnza2/
jRqG1rRmbudOxW7MNwL1yzSG/oAbx0vvzi9r2CWiRXR/
ub43JHZ7UWcx3QB58v/dP2u+9Sp+p6F6o1avKMQT85w+9KM7bwrGqzRQP46Y6Qzw7BuXtnc8GrJw/
CiNL3EHvh8iUHXOI2dLyiEy+LTTvXlK9hYuOoT0CvX0FThfl+ccXbjv2FfiuMz9ikYJUCFSU3xLyZB8Vfb5emnvpYIYDfzGI1qjoejj+E8nSxC3S9UlD0
HEM6WqNAEzDPOdEppKPaOjHDV9MFsjKtKE/vpp0w+G/d4/
FhCyeI9nDjoN1HuJwnKD7bGIrWJAE3xbS46nvbpg9nIsSOvH/PbXcWuzQVM5DuOXcTOOF7vXOFsbCAyEu+jOsgGWWlPJxL5/mv/
5Q0y8LkYzkIUjOMVE5tEIDvXSuALn+fuGcFBNN9LI/zfW1h/
UFTBpaGgVFeXDrqjSxmlW65AmYyvP7NqKPmH4k56n5oQ/kGwlF69BWQ/gfuabnOW9gZ/j/
iZzbJcFodvpfBbQXDMcgSwvL9qBmm8AzvQ8ybivYpd1gmaGGuNzP/lz/eNzGpiuE9/TgRD/
FNHEd3uj1nmzAW17izZEu3+Ilqt/
mNzsKTYLcU1bLpfVG5MkxnTKqBMpk73Mcgr9zuOXcZrM8oNHw0SqLiXs/
NfHo4fNfVGRzNj9mOtAXgkfD6W19I7nu2O1lnfeP9SVw/
3ym9jfr4PNs0fNfv2MAX2VH4MeeLMSaAHBqPG8oO3Cl4/Kt3bZ9eHSNP/
vwQPfgY3DoRTZMVpZk0KOiLjRwZwp0xnjNwP+8lSnM2+N+E7j0A1WuA2L6d3X9dR9lGB/
r9SldEoIx7jk9QNTFaowK81wxnaqvSzYKxOKKM0n4AtdzMOSg7NtxevpqNGjZ2NLZhRI9KqPw5Ws/
J5XcQGv0QZdqbzMhoF4oUPb+tg9mr1+x08KDk9qtjRBhmxTNUr7RVZaqmmvOMYLRW1e8Q6YJtkttrydXKsYMmiKNvtIrHLvXI/
1Hh+53J0XmKJnk3NPctc8G6GeyLgZvUuBRxWcnKeDRjmI+ffDq8lTlXMAJP7L9TeWvEw0fSZh55T5tVGCRM2vmd2b/
m6WJHhSKkqGEDvBXXYn9tbQYQ5kPcbAB80JdlvZeRyDQ7ilGHZ52ljmvnxudKjU8TFf8ta3pzpnZ3uRXeFM0ZUFxqpR8Ir3Fvf6BGeRWH
4mIvaFbmi6nNMv7Q8fcM01T4LHVbMl4SRmumYojxjzJ6lCDXPvHp/4mhaVT8NmxvHGVpLg6LLnJymaxwT5wUmU8Ln6yvTRDEW7V+mhf4
4xSWVDhU5oS5uDYcnFzf2XzDhbzuFKHx6b3LGVoE4gg67Yu2vnUfr/uuR3sLfn5Po4Eh8t7zycQT4zHKdbQHgYLo7Fd2w/
xAR+ux/Vk1GNzvN1ZNQXqsJJNR2nqSp3t5Pj9r7ssM9j3+K/
1GbVOzAfQ55DbvH2ZBUFm2BCd3Yw4dD6jl53kQMRxrpXFKudKf6rPSxJkjzrYDUhXUYI/8NHdqYT7LD9Lfpxa3p/
Ekq5p8CKQvCudQwsqqW7KEUxsVuUW4oMQW3AUwkdtL1iEBSvXEaJT9PsmnKt6VZWGSPt1m7+9AwTdpr+0CJuotzbWJcsvVgHA2bAKOoaEepFPQ4J
HEAYZwM5E9WjR69RNAvr8vwU8SBIQ/K8sIoiXYmsLhVMmsKx/
Gzyov8+pLrPc1o71j9Cp2h91uHxMNgj8h3hrDrYn3EuuzKHhIp4CHKAwKvbeGPv8TuNhEZLXNcsxkrFg5RE/Qdg6bZqrKP0KwwJb1C8nm6wmXuLk7Yw
CRa3NcbhNeMsnDbNbkQt3oBShLXSi8zWwThpO4RVJSgrw69ewdf+6O+Hfu/zPYdNvn+Hg+AYCfH9cmf2VNfmHq6HLNhedR+zoB8N3VJhSF3/
dfB/sq5VxWSG9OxdXSwXcx6KKOamTa3Hk+OHz+AIf5H+e3jN1KKHAYxXWhEu2oAzfnEMm6WH6GAZsJ1Fkxk3zuAZyzd2zO4MKvSTmLaLE0rbrMchM
OKNzODXnl6u34wzBCLozjJY1Fl2+hNPNd3c0NwDTH35nsbkg57i6JIuGIKsPV3C2AHcH6EhDPmxv3+FqYTg/
nrzaTJKGnm4RtfTYAxQv1SHX67CsDgdBTqBgPomwkDaMGn9trfeYPcmcF2K3yx0pzJ4GntDnovoHn4TNp7L39jKKBTNgmT8zA2MUEPHmyDVh
+XtPAPrX0aIqHWEf+ewqX6j3tbEHmDzLAlXAwh7z4sUcJxWlcKE9CdbsnWcy9+aTEqoDcxQDPYwiCRI8D2RFeS3dKv0jmzr7zh5OWpx8L5GmHRV
23dFcsNsjvpeyPhwOZl3DFNZQOc8Cy0yhB0KkP/
cs8K2Eo2/SkMNL/AnoZJ3DYhcQMvIv0j6MsEz9nxHtN/BczL/
vGVv5qwnA3BCFxjH2cfwDeT8SyN0DYlfPbw67vVuYlZQIsm5E9Qd9K6QxJ5TSbdxzBnRbU1LiKSCm8EIsezuLrq
bJwKJ3V/2fUZO3j7ybm/
zPcEuFWXwWhzpdTtLn+/x2fLHnyRDqD79Vq1VMMgeBP5uWqyJPFo5VnrYZw+RAVAkQUJsYTlRxWd0Xe6KPRsHXrxBtKDQcGq9gS+ayw2NSBY0D9
uk3bN7IvmPHU2JuZSGpz3S5IMiY+0eN3cxeulh9XxRtEiDHO86YyXqkS3kFnlGpr1L9G8ng0Js+CTyu3D38iBtlUM9k3mpiq6U+PpVKMUo4hsUoMuTS2
jCZ9rWf7RZeb5DqOBp/
ulZT+9yxcaHfEYFsAEiPh7KxP5EUaqkxnZJ7YfTTxMJwYJgoxK8LGnKRuQQrAULwdvr9RlHN1yRrWg3R6iIMmF9J2NUHq+AsfLWRddM2sLbhRRtq28bDY
XaZzhj7QWScK9yz1QsIgtrFTEG17vjJgHS0Wf8NM47R2pL2qpvm6pM3K9TTLhGpx9q0s9zPxbBvZAJhaQTzR5tjj8vRPoVeYCTvtezdoF1/
RT8Uua0t2BZvjEPwxzL6KpF3kBEF/t0TkKY1Nz7D4BDb1sCZqYq3QjPdlqhfBa7FxEE3Wu2aFMjjjyFfPGkkvdv1KG+6HF+nhzN4z/
hovM8jLDPxuf7eb0k/FExK2anyzUpKjdq+nqUs4nqxyNSPHH9e/GaFYr6CCpOUnhPRd9eMhE7LbqP5cSLRWXH4dfGnXT7d1pkZHXQs3z
+1QXXOEd/9yhH3nKjDuqWOPO3eSLcmemKuT6+Ja5LMVIaeAjEo3YdwbNBz/
ft1NZMoWmwHVXaCMhY0gB9uxeHjphvEvgkwe2eVZb1tjXt9yvH8sjxvLOkcgtJSGZvQxb3Y5LKjM+uJLX/kvuo7uEwZQFx1OO8OG1Wnpl+Yss/
dxl7jo91ucR5Y3s89cotUBa7qH0/
g90ncD47YRNJrxh5CPfBzqfkvUwDzGw7nkQOVTUD0kLSNf0oqczGLfyA1U4Jb0OEzQ7PMC8UwJ6zCtJ9RVk0yzzj40BzyjSdCDjRoebYSIa6Wrh
sfVNmQ90B6XmovXEYs8+q7Xmwgwvom6xKxaVUpOoSH6wBa47VHnL1rP5U5m0NLaGXOGF4zpkexqLCFyYrN65kkO/
2aVa7xSBmNTKzk6J4UT+rz8nNz3PSokktJJGVy/
c8FomX7Ltpg99evQzj2T8Kd/q34pqNaBRYKFYFYe+c/yoH/
9rbrbu83JXXL1tBSx6JNN6Ygnyq7vS+Y3Ls7VHOHv07Dn+2V84lQRiTjIGgAQjPJ9qT5aAQOvQ9qKHL57+YkiJlwI8ZzFHcbD8vY+LPDGhcfzQfJTjUh
FiWDgkNQdPSbnvGCXjdBFGHDZ1a7+D/
QTFnTt5npfc/FiMWNAHrSW3P9OlvdNVSVvKmOFUoHnnlAz2z8bUQoPGd/Zsg0Q2g9Gffjq5X2B/X9hUCnzlq8X/
eR2zlJG4L8kU0P5+NjO96vKvB3Bl2NP+O9sI+rqiK1YHGFhXxf5LrAzVrqbUoqZo4nJ99X9Zn7Z90n3L1N4pdjAoJlw0rFAUe/
FE1GBFe2Eb3ySe+KGPr+9Ur7Hu5x9n01F9NC/rNnn5TOD2Cc22Wn8NMBMs19W4DXnvu1Hu3Ckwv0b1LP+9F/
xPuz3ZJi7YmM4X1wYzPRLPTHuu9ZXTfq1dXKudUTCtAV9whY6wJyYVP2pHeNlJZW3v2iwkVXDKBoD8X/
YbmWhJIWGe0ZUl9RUnzG1OvjYhM08jDM5oKKxbp7QXVaT6cTw6O+hzzFDkmrQg0fR+xMWTXTTSX8FMVv0oTi4XOvQm7zK0OfaOLV7sj82ZuB0FNUvNk/
jTX2XDFxyxRTbdD3lFo5FGhxRb5XAbTSQmTDyJa5Fjf+rh52vfE7Qy2FTvE8aSL+T0MkSjEYNKsJ0hwT0TlcRyx58u4JAuDNnvt2a2ygDfzwXU+1qH0n
8tAQZvEXBPsNzCcVGkeQvSTf2C5sHfZmrtRl0IVGrqUEjQdaLnJdu5g6rUNg3oVuDsRxH0VJ4NCoPg6KQ3dpg7k1UV0Nyqlhc78UKddKfqqbHxZg7
B2TI7VkMOD2W5T9DyWFYX4XpWTmLIiJ6Lbtg92XLtSSzLkcvxTRbxlbtyvaXqKj7ZcVVsSVfb+OsdUVZpL4FqAYlZhYhQGJhRqR6wpv7qlrhwkMkNWF
DL+fsJCfQm3BVt4KHB+bxlA9fZ1ZL9lJJ/LWvuXOaU/
DJsVkz3KsxvwVNCgA8ytp02GfQd/4kpmAVsxuw/
t91BHmGiIJh3uS3mF1MlA+cH/sO2zCcr0vfjrwaJ6MTKr0TRN/u6J7cZBzu8VWlMpz/
8R1Au2C/xFzFv3iTCa8E0W6nnBxkyYG0efpVqOOeGz3xeN3MWeMSe/
E9kmNqXT3yFDfWKlGVCvQ5KkftYtY/1DxaWX8M9zU5f4GG9WcG/
zgixdhNxX6zDXkp8/5F9S6tHhcCxJlKoktgR4ocl35+fyzIlu3Y5c0C6wAu9sDBAgA1DVJTPNQqgBD7x34ZrKEBZmOtsKDhQvtPqsPyWLHFl/
I5mVw28DOA9Pqd0fpUuIcPd4ANuOZ3/
Z4zI/PRjiXuUwnUm0zj7D6PN7TBSTnVN1lDqEFoMdW3UYNOcGBYGkHvxxvDzg8s6JJF1sAOO4uQpsGfTAWyDJ0XMawxiJL/
zTmj5hEoIUNAyY8LShgXZ3/KJrHY1ZyN9oYXwS6Ksof+SwOz29f7jwmA6bb/
xHQrBJyvyi0H8IiWpcIBqsEQCPBzKJI/wZPZ9yavxuHJXYRd/
eLb8zSfVfZe/7Mw9PcXK5obd7yy/uY2lhZU2yVdfI22+cyBN1W7V7eNU+NTiObFOGjR/
0AOF2fqRkjjUfXJrdDq7PpvwUhYi8mB6aOl0uwg3a+V9gbSbSNmKb7OrMrTb+6R1RkXGN/tBKZnW31BOQsEnwDdZ5EYfz8fBMPQa7I32RFX/
MvW5TMsu3LX+X4XsBD80hswkZM9LMxVoaedtVgG3xdYw30NphfibjR+ECRPbzp+NH3upxfqbXu3K42hKIsMqnEHPDjTgP0PrtQjZB1fkvmNXbLf4N
v+QwiNivTBiIX+pgSONLf72dpzU7jSIzsVn6NNTnqmtl98cGHNnvtlFldflLKPOjIRJRHY62WS+BnLKMvR25ZRsHWrNxq0pFJC2uRPw3Hb7ME1Fz8F8WD/6aMbY
KQIXhJnc7mKw1Zu+4nV3RMpy1kd/XeCAA86pG8/N3SIPMaBkKR/
vVflMQhSr0D1lvnJGAeTcROgcP4GZIAvDwgl8jwj7Xvta2JTJHEwZjcu/tdBUsHAMe+HVWmtBfq5pWqOjoB3kDMsxD3Z/
tnoGt9Mf44YjXNL9iqdIx1RMQyEmKBDGEG+KXMEGaSqH3BH3XiDj77lPNl7jOYO/9y8JkD0VO1Rj6M2u3+sXGJWl1q/
RlsXRr5HuSzyeAJEe/LFW/xYmNjk38tpPahRHuH7UW+o6XgDkd8vRj/
GHZmu4nkdySPKLc8dCUuD8IC6I6RPJJC0dbftT6A8vHuGsK4/QVVZLPe1JmbjAA/
0QrSDoA0ZpSgjJq4j+EKAQu81btXC1a/gfdSWQzlajGP2sr7/xXnUoB6X/pNDzjtXXsqpUOt6jfNuzZLgJjq4kGvu6nOkv/
HrKlMA2xY3R4/
MQI4vjAyS/2U9D/
mpA5WKfhhqK6aaYx6xbYVLv30M4fd+nf+E7ReDVGyIdHQpnX6GCYaKuy2rj+RqanfVrVB+u1iDzn9Q0xhQP7zJK1WYc99vPb5uXXLNCD0hHO9lBqv8Ee
EHRp4pJYuXWfxLQ6r7v1WeT6XWp0cdM3hgFSGBJjz3EhRDMPo2rnPSHzbLqcWjOSqWvTBF+3mTaK0xLJkU5qQuMu4Ru7hzvThWy0x9W8RVPT
+o6hRd3yxT5ilznZ1QxOw4BoG0VaEqyL2IY0lIoT0TfQhtCV8q3MR7rRLyfSmDHqoYYBUV7pQy5nY3M+fYZKkuP5aXLZBPQXG7+TqbO7wrnUzkaukbDjXfj
1XhW0Pjp0A1LWZeUuntpQYzGWvn8Dz0lhNXuTjS1wuT3kSTG7v/h5DHxH2Q6AvGtOn/X35NX/1b1VcgfIrf/tKWGaZHkEe6xP2BjHVvFj+Z7e6fsdrvtU1/
aXGhHhHK7aN4XUMBvjQjhuTi7bvk5ne0ml2WuWHl9w8Ec5+9q16eUmYr/xOKO8zKAuEXZWyr0Jk8zdMS58Ojkm13fwYI6pEE6gkP3AmhDFzOpjbjR
vUCC6FXbnTjrS0Xqtt2y8frQ7u1zc1WGhSPqvj4FTHXLP8hB5fZIpvaXZ7F4nuaFxFuqkW7rtxNrt7pEv1kA4TXtKPtJNPk+FCwN5c5XTvOmO8Cn89fbyPzI3m
C7rM3WsaYmbbPSDvhcpTH2ZIJuL8Wtq6+UM16wyW2p82FD8fzAt3xHUMhp3ny8S2xFM3VUykx6UD/
o2RWsdNQjEH+6HOpB6ZYkFqJSBOjwWJ0xR7FjlF9t1WZ4oTqW+lo3vzbPJOfXvq3VQQo/
dKA7fa8ZmSnkHs3dMHdq5bvXwZEfmNWbsHQXvPFmMJ6Lg8NJfp5qo4DO9ryKeTyl5W/
Rea/nPNMPIRzqR6H9X52i8JaaFwSB97iOP66qqiRJDz0DZRR6mhA/
e4qgYn94zcAqmHIiC6VpIvnJu3JUvUg2wvXrgiaoy6q0rAtoxnd6nC7Ldxxe0Y/
tbxywpgDRq3K0kY2tL2JFRUPDyQrSBpn9W2M4qRQFTY0Xdmp3BMzq3ksl4zPaZ2VgI1jmM2xqW3NPEvEQ7gq3j6tJjDeHS4kbmqYTBwe8iZ3i
GcwHnqJhexsDyS0zlwzAUmEQVfwyfAXTXybrTFPjNtxuN3Lv07PfZRZRcMcP/
v8Pe18YvmXrZtLnA+B4d3wmeeOwRUrCLFuZtTEjz2G0cwP3/
qNk4lEUyOh2LOzKWjPvrTbFn4W0aX4ZcvE1SPSDb5jhLNIzP0+n3nOWgDvxjP2FUvZfHGyF4RKMn6aHZTjfV0BWjhh5AfpjlNlXhkgzvnm8b
SOKrDJ0Xhv73Vxf1ZVTdQvVCRQd0rpd7O4B3tM3YdUWNNMeRZ+3V5qjSEzeRPNvPyivmj31AB/
yNZHfT6OVczrZx1CX46D4ODAA1ZZNw3xA87LPQR1w8M0jy9hHFOG7sRVtbPP0gNL0Azl1ayT68wp0MDUc5P0ZrSxWgfQ+ml+Bx/
ZWGFWXNHgFlPWIKC2Ih1/eUVp5Ab1+i8HNC0y/GApbSK6xFfLaKTcJiT1vEVaxWJFbf/
QWvFf9iHyWQ2XB4+D8tEgBLJwKEOw7B1E3IR2xnXx+GjmXSuHpfBWEdCg5cjZMmAYKgwaYJ8CK3jKYkU/w6aowKvb1n/
p3aZPo4rkXB6BIrX9sjZ52GIK/
qeiRRHZV5ItSEHEJgOAQ5dbP9xvzwmIlEPWnibOHntlM47B+i4HzSYTJ3bnnb4C0xZ4/ilh0O1yKzHFf6CWq
tmPutYEMB8RKI9kxWgWEgHc+VGSXHa5SEhLunYIWoL+p7fmlPNfLlplIuw7mg8y/ePk3KtdZJ8BdkzrNvKahjs37s2DUgzr+J9d3Bdg59mTMv3+SfO4
GOpQz0kFuAD+mZsdcnG1OnfRxqXX+ZY81KOv3+Kf5G7C6KaPjb+9NyU5bKrdj6NXzWFy7f2DVFC47HHB8hQEKZ3CeCqTBUpJOBgobjBemKKXkj5

```
006enpAIwYMaL82ry8PKZMmcJ9993Hgw8+CMDw4cMpLCzk4YcfZsKECXi99fPeUh0VwKROfvzjHyc6Ba
mjJ598MtEpiIickMxsFPD/AC/wvHPu/1Y5nwS8DAwAvgbGOec2x8/
dDdwERIEfOufePVxMM+sMTANaAsuAbzvnSszsAuBJoB8w3jn3eoX+OwDPA+0BB1xS1r/
I8crl5+I2f47b+gXEYpCUBIHSH2vXAWvXEfM03Jenk1k45pizvYBmAQ89mwfqNXarZB9tgj4W7S5iQOs
g/
noYWSZSk+uuu44pU6bw6KOP8sILLxxyfs6cOQwfPpyMjIzyKYDp6ekMGDCgfI2uxYsX06ZNm0oFq5ycH
AYMGFCrHJYuXYrf/9/187p06cIHH3xQ5zz69+/PH//4Rx588EG++c1vMmDAgGoLSN/61rcqPb/
iiiv44Q9/SDRaugHFsmXLDvneOG7cOH76058yf/
58rrrqqvLjFQtamZmZZGVllY8A69q1K2lpaVx77bV897vf5cILL6R58+bl7efPn09BQQFXXXVpemVQ4
cO5Wc/
+xnbt2+nY8eOtXgFj44KYCIiIiJ1ZGZe4BlgOLAdWGxmbzrn1lRodhOw3znXzczGA48B48ysAu0
BeaYWdk/QdcU8zHgCefcNDN7Nh77d8BW4HrgJ9Wk+TLwc+fce2aWBmhukRyXXMFBYh+/T2zDGti3t/
SgPwA+H4TDEAn/t3FyEOveC0/3Pliv0zD/0S3QLodasKuQ3JIYQ9um4LH6L1D1bRng/
R2FrPw6xIDWwXqPL/XraEdgNQU+n48777yTH/
7wh0yePPmQ83v37mXBggW8+uqrh5wbNmwYAF999RWtW7c+5Hzr1q3Jz88/Yg69e/fm5ZdfJhwOM2/
ePO655x5uvvnmSn3WJo8byR/
Px8nnvuOR566CEyMzOZMGECkydPrlQIy8rKqnR9VlYWkUiEvXtL31PD4TDZ2dmV/X6XjFQtaA
IFAgFAoBECLFi2YPXs2U6ZM4eqrryYWizFixAh+85vf0KVLl/L+
+vbtW+3rsm3bNhXARERERJqYQcBG59wmADObXQ5Mjj9+HXjazCxAXQ5Mjj9+HXjazCx+fJpzrhj4wsw2xuNRXUwz
WwsMBa6Nt3kpHvd3FUaUVSpuxYtsPufcewDOuYP1c9sijcdFo8QW/
5vY3HchXAJt22NdumNtcqBFJuYpXc7YOQfFxfDVDtz2LbgNnxFd9SmkpuE5+wI8Z52DJaugciz2F0dZs
KuIjmk+slMa5itk62QvrZO9LNhVRP/M5HpZX0ykJjfeeCMPP/wwjz322CHnWrZsyZgxY7j//
vsPOVc2ra9Nmzbs2bbPnkPN79uwhOfnIm0OkpKQwcOBAAIYMGUIoFOKBBx5g0qRJnH322bXOw+PxMHHiR
CZOnMi2bdt45ZVXuPfee2nb7979+5K1+/
evRufz0erVq0A8Pv9h7TZtWtXeR51MWTIEN555gZ8+tprr2XBggXlsWbNmnmVIwQ2gZ8+
edeqrrlQAk6PW/dofJTqFY7bhL/+v/PGJcD9lKt6XiIg0iByg4lZN24Gza2rjnIuYWS6QoT+
+oMq1OfHH1cMBA445yLKt9GqDc3s+8D3ATp06HCEsCKNI7Z5I9F/
zoC9u6BtezxnnYs4BtezxnnYs1b1FtWzOD5GTo1BXr1LW0IPbVTmKrlxP711vE/
v0+noHn4DnnG1hKauPeyAli7s4CDOjf6th2fTwcM6NPiwAfflnE6v3F9DvGHSZFDicpKYmf/
OQn3H333QwYMKDSdMRhw4w4Yxffp0+vbtSzBYffH8rLPOYsqUKSxatKh8GuSOHTtYunQp5557bp3zueO
3jqqad47LHHyndVrE0eFbVv35677rqLF154gTVr1lQ698Ybb1RaDH7OnDmceeaZeJOH21P1kz4B1lVz3zueOOO
fp0PB4PQ4YMqfP9AASDQS677DL+85//8OijjwKlxbFgMMjOnTv55je/
eVRxj4UKYCIiIiJ1V93QBFfLNjUdr2537sO1PxfwcD5wBqXTJF+ldkrkHw8J5NxzwHMAAwcOPFJckQYX
W76Y6JuvQqBFqmo6nm+MgvadSRmcEoO3lNycPv24lZ9SuyTucSWzsdzwYjSYppPX4Nq68vCMOsOlHBq
iwApvurepurPKSk+WiR5mL+rkFNbJjXIVEuRMjfffDOPPPPIn3zyCRdeeGH58UmTJvHnP/
+ZoUOHcvvtt5OTk8OuXbv48MMPOe+887jmmu45JJLOP3007n66qt59NFHCQaDTJkyhezsbDyeuv93kp
KSwsSJE7n//vtZv349PXr0qFUeN998My1btuTss8+mefPmZGdnk2HBxMBh5jRBrJw8OD3BhDkHCD2cGVDfKASQFbA
GEFZXFHhANLaPjgR5REKOS+sDHT9eaA7Xi9N0rkUTQQLhMQ/
K
```

Hd2VloG1yoJep2ItMiEtHVJSa+zDRcJQcBDy83B7duG+3E5s3vvw8RxIS8cz8Fw8AwZjaenH+EpUdx+O
j78sIM3voUuG/8gX1LOMgJfWyV5WfB3i7Kxgo/
5diNTWDTfcwA033JDoNA7roosu0nqHFagAJiIiIiIijc6FiohMfxH8fjwXXNxg0x6PxFLTsCEX4s4YhF
u3GvfZf4j+
+TkIJGGdu2FdeuDp2AVS0yA5BfP5Sr9Qhoog9wAud19pgWrrF7htX0AoVBo4LQPr0AVOaYe1aYsF6zaS
yXx+aNYCmrXA2nWEMwbhSorhyx3ENqwlNvcdYh+/h516Bt7zL8YyW9fba/
JFfphdRVEGtU5O2E6MXTL8LNwdYntBhPZpjV+EE5ETjwpgIiIiIiLSqJxzpbs97v8az8gxWEpqolPCko
PY6QNxp/aH7VtKpy7u2Ipbt5pYxYY+X+mUxHBJ5QDNWmDtO0NWGyy7LZZe/wu4WyAJOnbB27ELLnc/
7rP/
4NasIPKf5XguGoHnnIswz7FNjXTO8e+vStf+6pSA0V9lOqT5WbY3xIqvQyqAiUi9UAFMREREREQaVWz+
XNxn/
8EGnoNlt010OpWY1wcdu2Idu5aO9MrPw329u3QqY0n8JxaD1DQsNb10ZFh6Myy5cRept2YtsLPPx/
UbQGzhx8Tef4vY6hX4Lh+Htck56rjbDkbYURBhQKtkvAmceujzGB3T/
Hy2v5iL26WS7NVi+CJybFQAExERERGRRuP27iL2r7ehYxesT9Pep8HMIKMZltEs0anUyIIpeC8aidvyO
bGF84g89ySekWPwnn3+UcX791eFJHstIWt/VdU5w8/
GvDAbDpRwWmbjFhhF5MSjMrqIiIiIiDQK5xyRWa+D14fn7PO1uHk9so5d8Vw+Dtp1IPbO34l+OLvOi1/
vLAiz5WCYXs0Djb7zY3Uyk7yk+ozPDhQnOhUROQGoACYiIiIiIo3CrVgCWzZhAwbXeVF4OTJLSsZz0Ui
sa09ic98l9u6bpTtT1tL8rwoJeIxuzQINl2QdmBnt0/
x8kR8mFKn9fYiIVEcFMBEREREREaXCusIDo7H+ULhLfvXei0zlhmceDnfsNrPdpxBZ+RPTN6bhY9IjXfR
2KsCEvTPdmfvxNYPRXmfZpPmIONuSWHLmxSA0mT56MmZX/tG3blv/5n//h888/b/C+r7/+
+vJ+PR4P7dq145prrmHz5s0N3rdUpgKYiIiIiIg0uOh7s6C4CM/
gCzT1sYGZGXbWuaW7Wi5fTOydmUe8ZtHuIjwG3ZvI6K8ymgYp9aVZs2bMnz+f+fPn88tf/
pLly5czbNgwCgoKGrzvXr16MX/+fObNm8dDDz3E3LlzueSSSygpUWG3MWkRfBEREREREaVCxLZ/jli/
CTu2PtchMdDonBTPD+p9FLBwmtvjfWE4HPKcPrLZtQTjGf/
YV0zndT9DXtMZImBnt0vxsyC0hFImR3MTyk+OHz+dj8ODBAAwePJgOHTpw/
vnn89Zbb3HVVVc1aN+pqanlfZ9zzjmkpKR
wzTXXsGTJEs4555wG7Vv+S+8eIiIiIiLSYFwsRvStGZCWjvWrvgAjDccGDIbstkRnvYb7ake1bZbuKSL
qoFfzpjX6q0wHTYOUBjBgwACASlMRp0+fzmmnnUZSUhLt27fn3nvvJRKJlJ8/
cOAA3/3ud2nbti3Jycl06NCB733ve3Xu+/
TTTwdg27ZtlY5v3bqUh5JSUhg5ciTr1q2r1ObRRx+lW7duHCcnk52dzahRo/
jqq68AmDt3LmbG7NmzufTSS0lNTaVDhw48+
+yzh+RwpHt98cUFXMTNWrVrF8OHDSU1NpVevXXsyYMaNSnHnz5nH++eeTkTkPnH++eeTkZFBRkYG/
fv357XXXqvU5vnnnn6dv374kJSXRsWNHfvGLX9T5NasPKoCJiIiIiEiDcauWwe6vsDMHY35/
otM56ZjHg+fC4hBXCgYZjfNy/pLbbbrut/
JpJkyyYxb948nnjjeeSRo5rSvXXrVgA6d+5cfmz//v3cddddPHbYZaxeP+aOK1bAmLkLtz/c9YCZlGf/
fv357XXXqvU5vnnnn6dv374kJSXRsWNHfvGLX9T5NasPKoCJiIiIiEiDcauWwe6vsDMHY35/
fv357XXXqvU5vnnnn6dv374kJSXRsWNHfvGLX9T5NasPKoCJiIiIiEiDcauWwe6vsDMHY35/
otM56ZjHg+fC4RBIIvLqi7iiwkrnS6KOpXtDtEv1kRHwJijLw8tM8pKiaZBSz8oKX23atAFg9uzZjBs3
jjPPPJOZM2dy++2388tf/pLbbrut/
JpJkyYxb948nnjiCd59910eeeQRzp07/X/+cfmzfvn2cd955rFu3jmeffZbp06dTUFDAyRdfT
FFREQAvv/wyjzzyCJMmTeLdd9/ld7/7Hd26dTTtkGudNN91Ev379mDFjBqNHj2bChAnMmjWr/
Hxt7rXMtddey5gxY3jjjTfo3r0748ePPZ/v27QDk5eVx6aWX0qVLF/
4448zYcIExo4dy6xZs5gwYQL3338/Tz/
9dJ1ft2OlKZAiIiIiItIgXCRC9IN3oCN3oGUrrFPXRKdz0r/d4PUNMimY872g+wqihy5YQPIDvq4uF3aUV1bNsJp06ZN/
OAHPyA9PZ2LL74YgAcTeETZi5E4e6CYBRo0YBcPfdd3PPPPO3PffOsJlF74g/AaW+qmQzg9AeuOr+SGvjXCAiK/e4uy5JYpIE8N+/tGS/3ba42ZgebkoVfMY3V7SgbhEUzNqxzPYL0Sdkpt7dmUv6eycw17u6XXXbUWIOy8KK2A+/PsFJQs+Gf8aEZRxiDpagZtbQmLtXWy2mmzWDqU9fWcMNAJJ7dc/jFEbqZxBZu0rPg0DIUI6JT+Dr1DCN3gDgOY6wdAdrvAoK4Ls/9a1AZs6+E1GuncaP3XZSHjRhsS/wGIOHtpJ2Qk95MrfFZFOZCDcD2B6QxszyTFNsxNO2qpu7tHi/71F/hqpvq7fc7z1LzSpRe/Xq7ZVpg+o85Zo61+vTozsPjX/aXNP4dF/MZDoVJfkKjvKyrGF7+2i7C0D+NSj4CK1I4cb3ReNUlkNAYRqQHEQK1ngy/6bb5Kj8KYJyV3I8MYM0E8Wq3lD7cSOp/g8OJkTEKFIpjdDVZ2G1Wxzxpdo+O9ex+S+C1uDrzxtPF1/cxPbMcJ3UGDlXbRJ/Axoq6vvhbXnYDi/DT+bqVkqn2uIj7OqsDVdOJoGHPhvYbDIQmIRvUU/2GvtWO2QN1R/jaCL+MGDpCWG48xL1gUdSCUHzdMeqa24tkZtV3aMwmmcqoUTQR//nbKT9YXNf2oRz5H2yJ9t0jYkeRXVZmOyhN4Y4QM5U1Y3FLKyTkVRi1qE3ztRzNs4Pd4DUXI1fhOaVDPBGB6d5LhCFZJT/oxWU0gTHuMM9N/RgSchl12A9KMHQMM4n1fmKZG8iHgAQkpHkPVRAuvW+oJ8Xv/OvYhGnLwebcsb9MtH52UffHkb4o0d9CV/r2vI/23v0cLUyJHI75nP1nPDZXBAf4ts2q2FR8wrZ/FhJrT/KnrYiD+0Qcp2cdr1T3VeD/0wZmTh9jsOQoTUkNuY0cnB3/p0jF+nDhQnp42lwTQDGhRSb7/QbTRbhgVaQCwFK5pHEh4Bf5vzcW7X/7vnHmRUq6HRyNS/SCI/pjzcwhm+q3SxLeX7z8AiBK6qG7pBjDcS1RoA6ULlbjN0bGBBU2kTr/EWbKcf5fR8zDnuREWSdYwvxz4wxB+t6FKO07i0s3fmS+KmYFdWX/sbUFBgjUnGzA/UYLdtvdavQYpPVIU7R6LRfjUf7/NpuI1bfLfzrLn7p8kr0Mr/E6HbhJKnFtm8RT+jD5lp0H9TDBDCsDYVBlp/LFLtLdS92dU/w28u3KBpWmoBdXDkZfVEZuNdmVnkKbt0YjQ6XCpfhb/8vSzKIJ9BykLeZJUzYwm/a06kpY1LdVlw6y+aW5kjcH1iFHZ3yI0kevj4aIbVfWNLN+rL4y37qZnWSlYf9h0bLM8zm3bvgSdSl1g1uZo+dtUN8UA1Qe9q6VYf5Ecc2n9CIpAaKzYLp0f8A2nxvO+AKg6jwRbq7Ek+7ABSrrU9Gm2O8pp0h17udIMuZ6/AH+Tz5UQ/eqOavzEn86qAkWGJ/2L8u6EoG+ITxh2bQTDaFuYPddWHZ8Onf0//dj9b/wGGjggJVGGjo4xwODSN+rYu9p51Dj5JX4IRgxpHvSAqH5R7ix4p6Q3TqmPLTPExX0S7U1Lq2Sn0oTkBSh3yKCSq3rmUl+8jpCGe3zr4kOePgXIlR3knAY2lDw9kjS0D/N1UE8+hWAnKSEuO6aGfi6IDfAxIkDp7NP2PKBSthkm3GyohGxNTj+r9sEEszgOGDEgVNYs7WW3rnjS4EZ4eA3+dAswFQzF4b/s5Hel4nTW0PJiTvL0RGr0rAlzmPxqHG39d7F5U9q9q+B5NzIsHubZW4VvKgN2WimYrKAgXt5gl2BWmpy4HHV7lz1MDu2eGO4fAlxcUXuexE8UWmDOI23YXHH0B/I01CUuuwfuhE10U38Qur0e0O9uvIVXIh/nJwZfSunFAyI5Pg5Lw6cy6Uw2Ouyp99kw9LKCv6WS1nncGsWTjaU5nNtfPHCByXjRMbEXVXDqzpp6nQrUAkxPtuDQVudmfgKvWeOhYmt6QTbJhbhlRVUSVpb/V/F/ojmmVkvttI+eDIYb6a3dfPUQLLP2VUkkz4IP+yI3SPnWlbbEL2KZ5BKXmAE1Q1e6ZJmNAqmG9l2qc99PdLwTl1dRbhP30C6B4CUf86jEdzW93avq2mbUS8dXMXQPH+ZhBRe1+hM/7wxlOEEd4Am7y4s0ZI4tv5QINJ+R87vZ8xbFuROsDb0GqkIS1vx54aESaMbVAmwrbU+ciocpjZM3EsDJnnp6wCfc9ZS5IZAfaFCbUhhLCdAqMw4W1fkqOlv7rfAl+xJ3ygSujEWxBfOHYHUlXMj4mC6u8CuRDl+QANr69cfKfj7sJdwz2zEb0wH2dyRJV0DqhJ0cYCDwDH70sxWaF/VjXGWhBpSC9U0bt7O3ryRNY9lx6IEbn4cBnEd+kdkkJr80Rbi9/y7sGE0fI8ekjVP/Kc/IZYl2b3FndKbs9WDHa5jbtfzZoA02Y5WfjVLnfG3PFpcRgh4DQD2pjrXYApjg8VaO1NbFldlbRDhDXnNvsqtaEOlSrKMQgoTLR30+pOD2PAXBSzNZEGWOsyDdQx3cGXkOvlvBrjKLqV3hgEe0I3IhDJ2pk=

```
+Q64vm17o8XiYOHEiEydOZNu2bbzyyivce+
+95OTkcMstt5S3r3ofu3fvxufz0apVK4Ba3WttDRkyhHfeeYeioiLmzJnDpEmTuPbaa1mwYEF5rFmzZh
1ScAPo2bNnnfo6VpoCKSIiInIUzGyUma0zs41mdlc155PM7NX4+YVm1qnCubvjx9eZ2cgjxTSzzvEYG+
IxA/HjF5jZMjOLmNmV1eSQYWY7zKzxV5qVk5oryCc2fy506Iy1PvRLjySOpWdg/
c5ky548dhdF6dU8cNwUKNum+ghFHTsKErP2lJy4vF4vAwYMOGT3wunTp+PxeBgyZMgh1/Tr14/
HH3+cWCzGZ599Vqf+7rjjDlq1asVjjz1WfmzYsGGsXr2avn37MnDgwEo/
1RWK2rdvz1133UW3bt1Ys2ZNpXNvvPHGIc8HDBiA1+s9qnutjWAwyGWXXcaNN95Yns+QIUMIBoPs3Lnz
kHsaOHBgeWGvsTT9Ur+IiIhIE2NmXuAZYDiwHVhsZm865yp+Ar0J2O+c62Zm44HHgHFm1gcYD/
QF2gJzzKxH/JqaYj4GPOGcm2Zmz8Zj/w7YClwP/KSGVH8JfFhf9y1SW7GP/
wXhMJ4zz050KlIN69ufJakFpJQU0jl4/
EwnPCXFhwEbc0ton6YdRaV+TZkyhZEjR3LDDTcwfvx4Vq1axf3338/3vve98kXhzzvvPL71rW9x6qmnY
mb84Q9/IDU1tdJi9rWRkpLCxIkTuf/++1m/fj09evRg0qRJ/
PnPf2bo0KHcfvvt5OTksGvXLj788EPOO+88rrnmGm6+
+WZatmzJ4MGDadasGR988AEbNmyoVEgDePvtt7n33n33nu58MILmTFjBu+99x4zZ86s073Wxj//
+U+mTp3K2LFj6dChAzt27OD3v/89Q4cOBUpHzE2ePJkf/
ehHbNmyhQsuuIBYLMb69ev54IMPDinUNTSNABMRERGpu0HARufcJudcCTANuLxKm8uBl+KPXweGWekwi
8uBac65YufcF8DGeLxqY8avuTAeg3jMsQDOuc3OuRVFEDHcwntvQTrEsPrFmLR
Kcj1djj/
Gxu2YEzP19Es8XHT43c7zGygl425pUkOhU5AY0YMYJp06axZMkSLrvsMp588knuuOMOnn76v4OohwwZw
osvvsiVV17J1Vdfzd69e3n77bfrVDQqc9ttt5GRkcGvfvUroHQa5oIFC+jVqxcTJ05kxIgR3HnnneTm5
tKvX7/y/j/66CNuuOEL1rnkEt544w3+8Ic/
MHbs2Eqxn3/+eZYtW8bYsWOZNWsWzzzzDGPGjKnTvdZGt27dMDPuueee8nxHjRrF1KlTy9vceedPPfc
c7z99ttcfvnlXHPNNbzyyiucf/
75dX7NjpVGgImIiIjUXQ6wrcLz7UBVncSLz7UDVoS7lbZxzETPLbBTLjxxxdUuTYn/ri6mJnAAedcpJr21TIzD/
Ar4NvAsCO0/
T7wfYAOHTocrqlIcRCWfqAiRCHbaGYlORWqwqDgZH44esXzSFi+isM8ZRFu0TnRatdI21cene4s5UByle
ZL3yBeIAJMnT2by5MlHbDdu3DjGjRtX4/nX9Uez8jIYP/+/HHHPnj19Rj15v/jii9+9Uez8jIYP/+/
ZWOtW3blhdeeKHGWNdffz3XX3/9EfvMycnh7bffPmybI91rTX1t3ry5/HHPnj15/
fXXD2lT1XXXXcd11113xHYNTSPAREREROquugVdzXC3b16B16+PjN7B16+PjC7A0Xa6okNjiT7BOXTX6q4nKjRprS/x09YcJ9Tsb5/GQ/
sn7iU6r1nJSSqc+ahSYiNSVCmAiIiIidbcdaF/
heTtgZ01tzMwZMwHNAP2Hebamo7vBZrHY9TUV1VDgNvMbDPwS+D/mNn/
rc2NiRyL2KJ5UFKMnXZmolORGiwuTsaAnv4wsWAKBT36EVy3At/eXYlOrVbSAx4y/
B425qoAJiJ1owKYiIiISN0tBrrHd2cCMhPjAScNcAJjZXGaJRPm+dcB+dcJ0oXyH/
+ErgX845Fz8+Pr5LZGegO7Coppjxbz6IxyAe8x+Hu+c5+B8/
ZOXfITpUi9cmVFBNb+DG064i1bJXodKQahTFjZXGAjr4IKZ7SgaQHe5+B8/
lJX3D8jAJrm+pj28EwxdFDlj8UOalddNFFOOc49dRTE51Kk6QCmIiIiEgdxdfjh8F1gLTHfOrTazh8
ysbJXZPwKZZrYRmATcFb92NMA9dWAO8A9zqnIvWFDMe8kfu+PMEqjMzoJP/ApHiszHhszOwsM9sOM9sOXAX83szsK2os0utiS+V
BUiKefRn81VUuQL/HT0VSwpysGd/
gutX4dvzZeKSq4O2KT6iDrbkhxOdiogcR7IvcR6HKC1MVXftz4Gf1yZm0QyuokXRhlz
4E163EczCvcRI8SmZGmxQfW/LDxDQtT0RqQf8vJSIiIiRyW24CPwB7BuvROdilTDxUd/pVuMdkcY/
VXmYM/
TIRYjdcWCBs7u2LVJ8VEcc3xZGEl0KiJyHFABTERERERE6szl7setXoF1740FAolOR6qxNeLjq6iPXoE
SPLVcni2a3oxQuy6krFgITXy9p+ygDwO+yGvaeYpI06ACmIiIiIiI1Fls0TzAYb1PS3QqUoP5oSSSLUY
nX91GSB3s2R9vqJCUtZ82UGb1I8lrtEz28kV+SaJTEZHjgApgIiIiIiJSJ644RGzpAqpxjVywtPdHpSDW
2hn1sjfjp7Q/
jrePmnCVZbSlp0ZrUZfNK51E2YW2CXnYWRAhFYolORUSaOBXARERERESkTmLLF0NxNxCOvTL9GpSDWcg3l
FyQQtRlf/UUwPNONgr/749+0hacuG+k+wHrVJ8eGALQc1DVJEDs+X6AQq+vGPf1z+
+Mknn0xgJiIiJy+9F4uIyOE4FyO28GNonY21ZK50lKNrREf26M+BgSK8dVx9FeZog7diS7/
N6lL51HcqUf9JliPMpO9+Ay2HgzTs3lSotMRkSZMI8BERERERKTW3OfrYf/XWC+t/
dUUOQcfFyWTYjG6HM3orzJeLwXd+5G8ZQ0O+fbvrL8F65jWjVbKPLfkaASYih6cCmIiIiI1Fps0TwIp
mAduyQ6FanG5oiPCbn1xHg8pqxbXT3INJDvFy95QlIKw1gETkZqpACYi
n+N2/AZ1r035vUmOh2pwjn4qCiZVIvRuS4Y47P1YnlpxCKKcLwdXLINJ0R1hlBUv/
FrdqHTAROQwVwEREREREpFZiiz8BA+vRJ9GpSDXWlPjZFfVxVxWj2M/
```

ipT0K0v3lAhwY2r6ydgA2iZ5MXvUQFMRA5PBTARERGRo2Bmo8xsnZltNLO7qjmfZGavxs8vNLNOFc7dH
T++zsxGHimmmXWOx9gQjxmIH7/
AzJaZWcTMrqzQvr+ZzTez1Wa20szGNdTrICcPFy4h9ulCrEMXLDUt0elIFREHHxUFaeGJ0rEeRn+VKW7
TnkhaRpOeBukxo3Wyj835JYlORUSaMBXARERErOrIzLzAM8BooA9wjZlVHRJzE7DfOdcNeAJ4LH5tH2A
80BcYBfzWzLxHiPkY8IRzrjuwPx4bYCtwPfCXKn0XAv/
HOVfWx5Nm1rw+7l1OXm7VpxAqwnqdmuhUpBpLi5PIdx76B0qwehr9BYAZBV37krRtE979e+sxcP3KCnr
ZXxwjPxxNdCoi0kSpACYiIiJSd4OAjc65Tc65EmAacHmVNpcDL8Ufvw4MMzOLH5/
mnCt2zn0BbIzHqzZm/Jqh8RjEY44FcM5tds6tBCqt/OycW++c2xB/
vBPYDbSuv9uXk41zjuiiedC8JWSfkuh0pIrCmDG/
KJm23gjZvvovABV26Y0za9KjwLJTfABs1W6QIlIDFcBERERE6i4H2Fbh+fb4sWrbOOciQC6QeZhrazqe
CRyIx6iprxqZ2SAgAHxew/nvm9kSM1uyZ8+e2oaVk4zbvhl27cR6nYrV6/AiqQ+fhJIJA6cnFTdI/
FgwlVBOZ1JWL4Vo/U2vrE8tAh4CHmOLCmAiUgMVwERERETqrroKgKtlm/
o6fkRmdgrwJ+AG51ysujbOueeccwOdcwNbt9YgMalebPEn4A9gXXokOhWpYlfEy6fFAbr6IjTz1Oqt4a
gUdDsVb1EByZ+vbbA+joWZkRX0skUL4YtIDVQAExEREam77UD7Cs/bATtramNmPqAZsO8w19Z0fC/
QPB6jpr4OYWYZwD+B+5xzC2p1VyLVcEWFuDUrsS7dMb8/0elIBTEHswuDJJmjXwON/
ipT3KY9kdR0UlYuatB+jkV20EduSYwDxVoHTEQOpQKYiIiISN0tBrrHd2cMULqo/ZtV2rwJfCf+
+ErgX845Fz8+Pr5LZGegO7Coppjxmxaz6IxyAec+bhkotf/
wbwsnPutWO8VznJxVYsgWgE61F1nwdJtBUlAb6M+ugfKCHQ0DNTPR4Ku/
QheetGvLn7Grizo5MV9AKwVaPARKQaviM3EREREZGKnHMRM7sNeBfwAlOdc6vN7CFgiXPuTeCPwJ/
MbCOlI7/
Gx69dbWbTgTVABLjVORcFqC5mvMufAtPM7GHg03hszOwsSgtdLYDLzGxKfHOq4e43rn3PK
Ge1XkROScI7Z0AbTKwlq2SnQ61Yo42BHxsS3ioyBmFDqj2Bkp5sjwxMjwxGjvj9DKE6vf3RETrCBmfFg
YJMsboaOvcdblKuzSm/RVCwmu/
ZSDg4c1Sp910SzgIclbug5Yv8zkRKcjIk2MCmAiIiIiR8E59xbwVpVjD1R4HAKuquHanwM/
r03M+PFNlO4SWfX4YkqnRFY9/mfgz0e8CZEjcNs2w95d2DkXJTqVSpyDrREfy4oDbA77CWMYjiQr/
fED+52x3hkxDIog3WJ0DYQ5LVDCKQ2wU2Jje78wSAQYmFTcaIW9aGo6JdntSFnzKQfPHkpTqyiaGdnxd
cCcc9qwQUQqUQFMREREESqFVu2oHTx+07dEp0KUFr42hzx8UlRMjuiPpItRkdfhFN8EbK8Ufx2aPtCZ
3wV9bIz4uM/
xQGWFyeR441wVnIx3f3hplbDqZU1JX4+Cwc4NVBMRgMufF+dws69aLFgDv4vtxJu27FR+66NrKCPrQdD
7C+O0TLZm+h0RKQJUQFMREREREQO4YoKcauXY117NonF7wtjxnuFQdaFA6RYjAGBYrr4w3gPU8Ayg1Rz
dPVE6OqPUOJgU9jPhrCfvxekkuWN8I1giI7+xplCWB9yo8bsghRaeaL08Tf+WldF7bvSbPFcUtZ8Sm4T
LIBlV1gHTAUwEalIi+CLiIiIiMghYiuXQqRpLH6/scTH1Lx0NoT99AsU882UQroHDl/
8qk7AoFcgzDdTChmcFOJgzMOrB9P4W34qB6JN/6tRzME/C1JxwODkEJ4EjF5z/
gCh9l0JrlsBkaZXOEz3ewh6jS35JYlORUSamKb/
Li8iIiIiIo2qqSx+7xx8XJTMjII0AuYYESyiz1EUvqryGHTyR/
hmSiGnB4rZGiktsC0NBXCNO6OwThaFktge9XFmUjFpjTz1saLCzr3wFIdI3vRZwnKoiZmRFfSVrwMmIl
JGBTAREREREanEbd8Ce77CuvdOWA4RB7MKU5gfSqaLL8zwYBHNvbF67cNr0DsQZnRKIa29Ud4vSuEv+W
nsa4KjwT4P+/g4lEwHX5hOjbTrY02Ks9sRDaYSXLMsoXnUJDvFS2HE8XXo+N/
sQETqT9N7ZxcRERERkYSKLVsIPj/WuXtC+g/
FjNfy01hbEuC0QDFnJRUf86ivw0nxOC5IDnF2Uog9US8v5KWzMJRErIkMINoT9fCPg6k098QY1Ii7Ptb
I46GwU0+SN6/
DU3gwwckcKjtYutT1loONv0aaiDRdKoCJiIiIiEg5V1KMW7Mc69Q1IYvfFzt47WAqO6JeBieF6BtonJ0
azaCzP8LolELaeKN8WBTkz/lp7E3waLCCmPG3/DS85jg/
OYQv0cWvuMLOvbBYjOC6lYlO5RBpfg+pPmNLvgpgIvJfKoCJiIiIiEg5t3YVlJRg3Xo2et8lDv6Wn8ZX
US/nJIfolIDdGYMex3nJIYYkhdgf8/
BSXjrzi5KIJmA0WChmzDiYSoEzzksOkZLAdb+qijTPpKRF6yY7DTIr6GOr1gETkQpUABMRERERkXKx5Y
sgPQOyTmnUfsMOZsRHfg1JKqadL3HrN5lBR3+E0cEicnwRPg4F+VN+Grsi3kbLoShmvHowlV1RL0OSQ2
TW8/pn9aGwcy8Cu3bg27c70akcIjvoJRR17C7SOmAiUkoFMBEREREERAcAd2Ifb/
DnWtSfWiAtNOQdvFaSwNeJjUFIxHRIw8qs6yR7HOcnFnJdcRF7Mw5/y0/i4KJlIAw8qKogZf81PY2/
Uy3nJoYQWAw+nqEM3HBD8rOlNg8xOKV0HbKvWAROROBXAREREREQEgNjyxQBY18ad/
vhxKJl14QCnB0ro3ESKXxW180UZnVJIB1+E+aFkXspLZ1u4YUaDfRnx8uf8NA7EPFyQHKJtEy1+AcRS0
ijJyiF53YrSKmYTkuLzkOb3qAAmIuVUABMREREREZyLEVuxBE5ph6WlN1q/q4oDLAgl08UXppe/
6RYrkgwGJxdzQXIRRc7468F0ZhxMYV89LZLvHCwMJfFKfhphZ3wjWER2Ey5+lSns1AP//
r349nyZ6FQOkRX0sk3rgIlInApgIiIiIiKC27IJDuxr1MXvt4W9vFsYJNsbYWBScaPs9nis2vqiXJJSy
GmBYjaH/
UzNS+ftgiB7jqEQtiPiZVp+Gh8WBWnrjTAqpbBJrvlVnVC7rjjzNMndILO0DpiIVOBLdAIiIiIiIpJ4s
eWLwR/
AOnRulP7yY8bMglRSzXFucgjPcVD8KuMz6BsI09UXYXXYz9qSAKtKkujgC3NafBrnkXZsjDrYHvGxMJT
E5oifJItxVlKILr7IcVEILBNLDlLcpj3Bz1aQf95ImlLyWcn/
XQesbE0wETl56V1ARERERERROQk50qKcWtWYp26Yj5/g/
cXdTDzYColzhgeLCLQdGomdZLscQxIKuHUQAmbwn42hP38szAVw3GKN8opvigZnhjNPKWjuULOKHLGjo
iPrWEfJRhJFuP0QD
Hd/WF8x+nrUNixOy0XzMH/5TbCbTskOp1yqf7/
rgN2VlYw0emISIJpCqSIiIjIUTCzUWa2zsw2mtld1ZxPNLPp8fMLzaxThXN3x4+vM7ORtXRmxX4+cXmlmnCufujh9fZ2YjjxTTzDrHY2yI

xwzEj19gZsvMLGJmV1bp/zvx9hvM7DsN8RrIicOtWQHhEqxbr0bpb25RkJ3R0h0fmx0nU/
0OJ8mgdyDMZSmFDA8W0scfJuSMFcUBPigK8veCVP5ekMo7hSl8WBTky4iX9r4I5yUXcVlKIb0Dx2/
xCyDUrgvO4yW4bkWiUzmE1gETkTIaASYiIiJSR2bmBZ4BhgPbgcVm9qZzbk2FZjcB+51z3cxsPPAYMM7
M+gDjgb5AW2COmfWIX1NTzMeAJ5xz08zs2Xjs3wFbgeuBn1TJryXwIDAQcMDSeKz99f1ayIkhtnIZpGd
A6+wG72ttiZ+lxUn09JfQoQnu+HgszCDTGyPTW8JplC5sXwIUxDwYEDBHwBw+mtRMwWPmAkmE2nYkuH4
VeRd+EzxNZ5xFVtDLprwwu4uimgYpcpJrOu9MIiIiIsePQcBG59wm51wJMA24vEqby4GX4o9fB4aZmcW
PT3POFTvnvgA2xuNVGzN+zdB4DOIxxwI45zY751YCVYfQjIT/z969x9d51Xe+//
z2fUuyLpblq3yR40twSAKJE5KG2wRIQlsIbWEmtKeFKWdoT6EnAxnkkxfhxdlDuc19DCFaUspTCnQFg
gp5RIgJAESwjWOncR2YjuO5UtsOY4tW7ZsS/v+/M4f+7EjK9qSpUjaW3t/36/36EjK9qSpUjaW3t/36/
Xfmnv9axnrfVctvzo53Xhh+4+EAa9fgjcMl0HL/
XFzwzi+3uxnrXYDEdlTpUiPDDUxIJIiSsT+RmtqxaYlXuHzY8GdEQDmiNO3Oor+HVOZuU6okNnSBw+UO
2mXGBR+sV5wESksSkAJiIiIjJ5y4BDIz73hWlj5nH3IjAIdI6zb6X0TuBUWEaluqbSPgDM7P1mtsXMtv
T3909QrNSj4OmtgGOr185oPSWHe4eaALh+jk16LxPLLltFEIvX3DDIpliEeeE8YCLS2BQAExEREZm8sf
50Hz3BTKU805vU+novex90/7+4b3X1jV1fXBMVKPQq2Pw6dC7G2jhmt52eZFC+UYlyTytI8wQqJMvd4LE
52WQ+pZ5+GUqnazbmA5gETEVAATERERGQq+oDlIz53ANGBhn30rpx4H2sIxKdU2lfSJ4/1
F44TC2es2M1nOgEOOxXIpLYgWWx2orOCLTJ7NyLdHsMMm+fdVuygUWpmNkS86xjO49kUamAJiIiIjI5G
0G1oarMyMyYoT2p/76g89wLnVl98J/
CQl7sf3AvcFq4S2QOsRBR6rVGa4z8NhGYRlfmeC9j0A3GRmHWHhwZ8zBaOUDwnVM65+GMmML4/1E
RrpMSrk7kZq0eqL7t4BUEsTmrP09VuygUWpqOA5gETaXQKgImIhMUjgf1wcpB5V2Afe4+w4+zFVEq
0zZSHN45Vxz8A/
zDuQUhD874DcGoAu+zKGatjZz7O7kKCKxI5OqK1ExCRmZNZsYamnS3dEDxQzVbi0bhgR3qsNOqD/
+ecw8jz766EuGQY6Xf3SZ7j5hPSIyM2Zq+OOTuQSHNPRRRsksX0PH5oeJnThGciaHv71+RQMmzJ1ebrQDtnu/
rrpJlavXj1ur6ybbbrqJ7u5kskk733/
+g8F1OPiEwvLxbwZ8Lhj5HpGf44atEx3tkMME6WbyCxbXVABM84CJNC71+RQMmAiIiIiU2BmbLnLnvDcc/
rhyzbSUtycfY3chwWWJPK0a+igTyHT3kDi8H8sH6mY2HXbMsVrsTMMhcE07ZCM
glLlr7ssnIOPxxuoi1S4tK4AggysezySzB3UvueqXZTzluYjtE3VKAYKIAr0igUABMRERGZJDOMLAp8B3
gpsAN5tZhtGZXsfNLd1wCfj4W8v8Zm3KBV2bZ2Hz4vYn9UwwUEmPFEC+LNzi9u
QE4aSxeKODP7sBWrJ6W4Y8/
zaQ568a1yRxRDX2Ui1Do6KLYNK+2hkE2RSk5HB5SEFekUSgAJiIiIjJ51wK97r7P3fPA3cCto/
LcCnw5fp8fP8N4E1mZmZmH63e6ec/
f9QG9Y3phlhvvcGJZBWOY7JqjDgWYziwFpIA+cnr7Dl7nE9z4D+TzTsfpjXzHzHKk7kk6+IFOqPBy2+cNA
Yzst09pA48ixXy1W4nMO4NBZmgeMJFGogCYiIiIyCS5exH4APADYBdwj7vvMLOPmdlb4my3A51m1g
t8ELjtzL5mth/4DPAeM+sbsXrlfwPuAHqBvcD34+2fBN5oZnuAN8afRURmnFmM9IpLwYOawRO1WwP
MmgH8ASV2sf8BmuMp2vBQgWi24JxB1hLf+v6+DAGtp8rQRQq9pbVbyM5E3+P4PlH1Ad/
FXXe/v1jU+YsHn8SQlSVy6+9VWyo6pk/Y9f+KY+zx/a9E5VfN3ZjZbIxFKrmlwo6n8SGe/o7YmQUUBsP9NHpJZrYCLVHJk0/
pjfynCpmySlbECS2Klj8xyzrAeW2zL13X8b3yWTDzxMcm94+IhRSRlZEjfv3aIe2hXbqWaiR4PSjo+n3
cKbFzW3rfBdR8hZ0TmvtL1ocs5ibmOdlVyl5FUjOrqdSN3rbTbMLrQWfmNFasZFuA+7Ke8qpVV9fI7BNiKb
vMd/QDCSrM6SzO8HIuvwVyPh8gXdCD7uqn8sK/R6ozxAYAdw2bowA5t4obD/JAe6orW9+WDm9ujOmn9l1

```
qT2t87Ks+9wHvC9+8EHnJ3D9NvC1dw7AHWAo9VKjPc5+GwDMIyvzNBHQeBG62sGbgOqJ3l12TWBDu3Qi
oFi6e++mMQDn2Mm3NVMjeNrZNGk11+CZFclsTh/
dVuCgALUlEiBgfOaEivSCNQAExERERkksL5tj4IPADsAu5x9x1m9jEze3uY7QtAp5n1ArcDd4b77gDuA
XYC9wMfcPdSpTLDsu4Abg/L6gzLrlgH5dUkW4CnKQfWvuju22fgVEgNKw9/3Bmu/jj1x/
4ncwmOlGK8OpEnqaGP8jLkFi8niMZI79kxceZZEIsYC1Mx9msifJGGEJs4i4iIiIiM5u73AfeNSvvIiP
dZ4F0V9v048PGLKTNM30d5Xq/R6WPW4e5nK9UtjcN7d5WHP66c+uqPgyXjp5k0S6JFVsY0TExeHo/
FyS1ZQWrvTgZvfBtY9ftjLGqKsu1EjrOFgJZ49dsjIjNH33ARERERkToU7Nj2soY/
usOPhptwYGMyh6n3l0yDTPdqomdPEz96uNpNAWBxU7lPiIZBitQ/BcBERERERROqMF/
L4sy9v+GNvIcbeYpxXJvI0R0YvcioyNdllPbhZzawG2ZGIkIoa+09rGKRIvVMATERERESkzviec6s/
Tm34Yz7s/
dUWKbEursCATB9Ppsgt6ibVWxvzgJkZC9NRDpzJU15DRETqlQJgIiIiIiJ1prz6YxoWTW34468yKc54h
I3JHBENfZRpll3WQ3ygn9jAsWo3BYAlTTGGik5/tlTtpojIDFIATERERESkjrw4/
LFnSsMfj5cibM4l6YkV6IoGM9BCaXTZ7tUANTMM8sV5wNTbUaSeKQAmIiIiIlJHfM8uKBSYyvBHd3hwq
IkYcGUyN+1tEwEoNc8jP39RzQTAmmIRWuMR9p/WRPgi9UwBMBERERGROlJe/
XFqwx935uP0lWJckcyR0tBHmUGZ5T0kXjhE5MxgtZsClHuBHTpboBhoHjCReqUAmIiIiIhInfB8Dt+zE
1s5+dUfs4HxcCbN/EiJS2LFGWqhSFm2u9xDMbW3NnqBLW6KUnToG9IwSJF6pQCYiIiIiEidKK/
+WMBWTn74408zKTJubEzmMPX+khlWbO2g0NpRMwGwhekYEWD/
aQXAROqVAmAiIiIiInXixdUfl0xqvyPFKFvzCdbEC8zXxPcyG8zIdveQPLQPy2aq3RriEaMrHWWf5gET
qVsKgImIiIiI1AHP5/Bnd016+GPg8OBwmpQ5lyf0x7/
Mnkz3JVgQkNr3TLWbAsCSphj92RKn86VqN0VEZoACYCIiIiIidcD37ILi5Fd/
3JZLcLQU49WJPAkNfZRZVOhcRCndXDPDIJc2xQDYp2GQInVJATARERERkToQ7NgG6SZYePHDH4cC45FM
moXRIis08b3MNjMy3atJ7t8NheoHnVoTEZpipmGQInVKATARERERkTmuvPrjLmxFz6SGPz48nKYImvhe
qibbvZpIsUDyYG+1m4KZsbQpxv4zeUqBV7s5IjLNFAATEREREZnjfPeOcPjjmove52Ahys5CgkvjBVoj
+mNfqiO3cBlBIkm6d0e1mwKU5wErBNA3VP0eaSIyvRQAExERERGZ44Knn4Sm5ote/
bHk8MPhJpotYIMmvpdqikbJLl1Fcu8uCKo/+fyiphgRYK/
mAROpOwqAiYiIiEyBmd1iZrvNrNfM7hxje9LMvh5u32Rmq0ZsuytM321mN09Uppn1hGXsCctMXEQdV5j
Zr8xsh5k9ZWapmTkTUm2eGcZ7d2Or1mAXOY5xSy7JiSDKVckcMQ19lCrLdK8mmh0mcfi5ajeFeMToSkc
1D5hIHVIATERERGSSzCwKfAZ4K7ABeLeZbRiV7X3ASXdfA3wK+ES47wbgbNuAy4Bbgb80sOkGZnwA+5e5
rgZNh2ePVEQP+Gfhjd78MeCOg7gx1ynduh6CErV57UfkHS8YvMimWRYssi1W/
x41IbskKPBolVUPDII9nSwzm9f0QqScKgImIiIhM3rVAr7vvc/c8cDdw66g8twJfDt9/
A3iTlbvn3Arc7e45d98P9IbljVlmuM+NYRmEZb5jgjpuApra7+zYAdz/
h7vpLrk4FTz8BrW0wf8FF5f9xJo0DVyVzM9swkYvk8QTZxStI9e4Er/
58dEubYwDqBSZSZxQAExEREZm8ZcChEZ/
7wrQx87h7ERgEOsfZkOsfZt1J6J3AqLGN0XZXqWAe4mT1gZk+Y2X+pdCBm9n/r7+y/i0KWW+JlB/
MA+rOfihj/
25mP0FhK8MpGnWRPfSw3Jdq8mduYUsf4j1W4KrfEILfEIe04pACZSTxQAExEREZm8sSINo6MJlfJMV/
p4dcSA1wK/F/78LTN70xh5cffPu/tGd9/Y1dU1VhapYcGObYBjPRMPfyw4/
CiTptVKrItrRKzUluyyHtyM9J7qD4M0M5Y1xXjubIFcKah2c0RkmigAJiIiIjJ5fcDyEZ+7gecr5Qnn5
GoDBsbZt1L6caA9LGN0XePV8Yi7H3f3YeA+4AqytY8K8j2ZTnA6iXJ3ME9XE91Jjg
lSafNdSUnt3VrspAHS3xCg57D+jYLFIvVAATERERGTyNgNrw9UZE5Qntb93VJ57gfeE798JPOTuHqbfF
q7g2AOsBR6rVGa4z4z8NhGYRlfmeCOh4ArjCzpjAw9gagNv6qlGnjA8fh+UNYz5oJ854oRdiUTbIyVmCRJ
r6XGpXpXk38+AtET52odlNYkIqSiJiGQYrUEQXARERERCYpnG/
rg5QDTbuAe9x9h5l9zMzeHmb7AtBpZr3A7cCd4b47gHsoB6TuBz7g7g7qVKZYZl3QHcHpbVGZY9Xh0ngb+
kHFTbCjzh7t+fmbMh1RI8/SQAtmr8AJg7/HA4TRR4dUJ/
zEvtynavBqiJ1SAjZixtjrH3dJ6gBibmF5GXLzZxFhEREREZzd3vozy0cGTaR0a8zwLvqrDvx4GPX0yZ
Yfo+yqtEjk4fr45/
Bv553IOQOcvdCZ56EhYuwVrmjZv3mUKcg8U4VyezpDTxvdSwUksr+Y4uUr07Gdr4+mo3h+7mGAfOFDh0
tsDKeYlqN0dEXib1ABMRERERmWuOPg/Hj044/DHn8OPhNPMjJS6JFcfNK1ILst2rSTx/
kMjQmWo3hcVNMSIGewbVc1KkHigAJiIiIiIyxwRPboZIdMIA2M8zaYbd2JjMEdHE9zIHZLpXYzipvbuq
3RTiEWNxOsaewTyuYZAic54CYCIiIiIic4gXiwRPbcFWrMKSqYr5jhajPJFLsCZeYH40mMUWikxdsb2T
YktbTcwDBrCsOcZgPqA/q8UjROa6mpoD7NOf/
nS1myAi0vD0u1hEpLb5szsgk8HWXFo5j8ODw2mS5lyhie9lLjEj091Dy7NPYbksPk6QdzYsa46xuR+eP
ZVnYbqm/
nwWkUlSDzARERERkTkkePIxaG6BJd0V82zLJzhSinFlIk9CQx9ljsl2X4IFJZIHnq12U0jHInSlojxzK
lftpojIy6QAmIiIiIjIHOGnB/G9u7HV67DI2I/
yw4HxSCZFV6TIKk18L3NQfsFiSqkm0jUyDHJFS5zj2RL9GX2fROYyBcBERERERROaIYNsWcB93+OMjmRR
5NzYm85h6f8lcFImQXbaK5L7dUKx+0Gl5SwwD9QITmeMUABMRERERmQPcnWDrY7BoKdbaNmaevmKUp/
JJLo0XaNPE9zKHZbovIVLIkTy0t9pNIR2LsDAdZddJrQYpMpcpACYiIiIiMgf4of0wcBxbs37M7SWHB4
eaaLKAyzTxvcxxucXLCWLxmlkNcnlLnIFcSatBisxhCoCJiIiIiMwBwZObIRbHVl4y5vbHc0mOB1GuSu
aIaeijzHXRKNllPaT3PA2lGhgG2RwOgzypYZAic5UCYCIiIiIiNc5zWXzHVmzVJVg8/
pLtgyXj55kUS6NFlkXVQ0Xqw/
Cq9USyGVL7q78aZCoWYVE6xs6TOQ2DFJmjFAATERERERealxwbYtUMhj617xkm3u8KPhJgCuTuY08b3Ujd
yS5ZSSadK7nqx2U4DyZPin8gFHMwoyi8xFCoCJiIiIiNQw94Bg089gwUKsa/
FLtj9biLO3GOeViTzNEfVMkToSiZJZuY7UvmewbKbarTm/
```

GuRODYMUmZMUABMRERERqWHeu7s8+f0rLn/JtpzDj4bTdERKrIsXqtA6kZk13LMeKxVJP/
tUtZtCMhphaXOMHQNZAg2DFJlzFAATEREREalhwaafQbp5zMnvf5pJM+zGNckcEQ19lDpUmL+QQmtHzQ
yD7JkXZ6jo7D+tgLPIXKMAmIiIiMgUmNktZrbbzHrN7M4xtifN7Ovh9k1mtmrEtrvC9N1mdvNEZZpZT1
jGnrDMxER1hNtXmNlZM/vw9J8BmQ1+/
Ci+dze2fgMWjV6w7XAxypO5BGvjBeZHgyq1UGSGmTG8aj3JwweIDp6sdmtY2hwjGTGeGshWuykiMkkKg
ImIiIhMkplFgc8AbwU2AO82sw2jsr0POOnua4BPAZ8I990A3AZcBtwC/
K2ZRSco8xPAp9x9LXAyLLtiHSN8CvjB9By1VEPw2C8gEsXWXXh7lRweGGqiyZzLE/kqtU5kdmRWrQcg/
czWKrcEomasnBdnz2CebFGBZ5G5RAEwERERkcm7Fuh1933ungfuBm4dledW4Mvh+28AbzIzC9Pvdvecu
+8HesPyxiwz3OfGsAzCMt8xQR2Y2TuAfcCOaTxumUWezRBs3Yz1rMHSTRds25xLcjyIclUyR1xDH6XOl
VpayXUtLQ+DrIG5t3rmxSk57DqlyfBF5hIFwEREREQmbxlwaMTnvjBtzDzuXgQGgc5x9q2U3gmcCssYX
deYdZhZM3AH8OcTHYiZvd/MtpjZlv7+/omyV1Cat3oAdOP+rZvQyvtdtaWbKjiIfhYHHjXwJS6OVdnQwnb
qhThF5kU3dEC3bFSlVonMruGe9YTH+gnfvRwtZtCRzJCWyLC9hMKgInMJQqAiYiIiEzeWH1uRndLqJRn
utLHq+PPKQ+ZPDvG9gszu3/
e3Te6+8aurq6Jssss8aBE8NjPYeESrPPF6+IODwyniQBXJTX0URpHZsVaPBIlvfOJajcFM6NnXpwjw0V
OZIsT7yAiNUEBMBEREZHJ6wOWj/jcDTxfKY+ZxYA2YGCcfSulHwfawzJG11WpjtcAf2FmB4APAPf/
VzD44tUOVavCnnoRTA0Q2XHFB+rZ8gueKca5I5miKVH8omMhs8USSTPdqmnZtxQrVD/
6umhfHgG3qBSYyZygAJiIiIjJ5m4G14eqMCcqT2t87Ks+9wHvC9+8EHnJ3D9NvC1dw7AHWAo9VKjPc5+
GwDMIyvzNeHe7+Ondf5e6rgE8D/
6+7/810ngCZOR6UKD3yIHR0woqe8+mDpQgPD6dZFC2yJqZeJ9J4htZdTiSXIbV7e7WbQjoWYVlzjO0ns
hQCBaNF5gIFwEREREQmKZxv64PAA8Au4B5332FmHzOzt4fZvkB5Pq5e4HbgznDfHcA9wE7gfuAD7l6qV
GZY1h3A7WFZnWHZFeuQuc23PwEnTxB51TWEaxrgDj8YTgNwbTKHaeJ7aUD5rqUU2ubTvPVXNTEZ/
tq2BNmSs+ukeoGJzAWxibOIiIiIyGjufh9w36i0j4x4nwXeVWHfjwMfv5gyw
/R9lFeJHJ1esY4ReT463napLR6UKP30hzB/
ASxfdT59ay7BwWKca5JZmjX0URqVGUPrrqB980+Iv9BHYcnyifeZQYvSUVoTER7vz3D5/
OT5gLWI1Cb1ABMRERERqRG+7fFy768rN57/Y/
pkKcLDmTSLo0VWa+ijNLjhVesJYnGatz1a7aZgZqxtTXA0U+LIsL6bIrVOATARERERkRrgpbD3V2fX+d
5f7vCDoSYMDX0UAfB4guGeS0nv3o5lhqrdHHpa48Qj8Hh/ttpNEZEJKAAmIiIiIlIDfNuW8sqPI3p/
PZ5L0FeK8Wqt+ihy3tDay7FSkaanH692U4hHjFXz4jxzKsdwIah2c0RkHAqAiYiIiIhUmRcL5d5fCxZC
90oABkoRfppJszRapEdDH0XOK7Z3klu4rDwM0qsfdFrblqDksPWEeoGJ1DIFwEREREREqiz45SMweJLI
Va/
BzAgc7htqIgJco6GPIi8xtPZyYqdPkjywp9pNoS0RZUlTjC39GQqBemqK1CoFwEREREREqsgHTxL87Ee
w8hJsSTcAv8imeL4U4+pkjrSGPoq8RKZ7NaV0M82P/
7zaTQFgQ0eC4aKzXb3ARGqWAmAiIiIiIlVUevBecCey8XoADhai/
CqbpCdWYGVcQx9FxhSNcvbSV5E62Ev8+YPVbg1dqShdqSibjmYouYLWIrVIATARERERkSoJ9j2L79yOX
XEV1jKPTGB8b6iZeeZclcxVu3kiNW1o7eWUkmnmPfrjajcFM2NDR4LThYCdA/
ruitQiBcBERERERKrAS0VK930L5rVhl12JO/
xgOM2wG9enssQ175fIuDwW5+wrXk3qwLPEXzhU7eawpClGRyLCr44OE6gXmEjNUQBMRERERKQKgk0/
hxPHiFx7AxaNsTmXpLeQ4IpEnvnR6q9sJzIXDK29nCCRYt6vHqp2U8JeYEkGcgHPnspXuzkiMooCYCIi
IiIis8wHjhP85AHoXol1r+RQIcojmRTd0QLr44VqN09kzvB4gjOXvorU/
meIHz1c7ebQ3RKjNR7hZ0fUC0yk1igAJiIiIiIyizwIKH77lu2ncFQSJJy6PV7wUWMeOKziQnciW2n9BcYCK1RAEwEREREZFZFPzyYTh0AHvN6wiaWvjuUBNZN16bypJQ8
Etk0jyR5Oz6K0nv3Ums/0i1m0N3c4wFqSg/
OzJEvqReYCK1QgEwEREREZFZ4i8cJnj4AWzlJVjPWh7KpDlUjLMxmaNd836JTNnZ9a8iiCdp/
dn9UOWhh2bGqzqTDBWdzf2ZqrZFRF6kAJiIiIiIyCzwYoHiN78CqRR23evZmk/
yZC7JpfE8PfFitZsnMqd5Isnpy68hdeBZUnt3Vrs5dKVjLG+O8ejRYYYKCm6L1AIFwEREREESmwMxuMbP
dZtZrZneOsT1pZl8Pt28ys1Ujtt0Vpu82s5snKtPMesIy9oRlJsarw8zeYmaPm9lT4c8bZ+5MyMUKfvw
D6D9K5NfeyKFoCz8eTrM0WuSKhFaLE5kOQ+uupNDeSevD38UK1f9eXdGZpBjAT48MVbspIoICYCIiIiK
TZmZR4DPAW4ENwLvNbMOobO8DTrr7GuBTwCfCfTcAtwGXAbcAf2tm0Qnb
ATwKXdfC5wMy65YB3AceJu7Xw68B/
in6Tx+mbxg11MEjz6CrX8lA4tX8e2hJloiAdenskQ075fI9IhEOLXxDcTODNLy2E+q3RpaE1HWty/
LHwbNa3VWk2hQAExEREZm8a4Fed9/
n7nngbuBuDWUXluBb4cvv8e2/wywfPuft+oDcsb8wywh31uDMsgLPMd49Xh7k+k6+6+/
Nh+g4gZWbJaTt6mRTvP0rp21+FBYsFuvoG/uVMCwvGo9LZt/
SvRkf7Wbw+XzkzTHjPsPnqEYaEJ8kWpSAExERERk8pYBh2pYBh0Z87gvTxgvTxszj7kXgNNA5zr6V0juBU2EZo+uqVMdIvwk84e658Q7IzN5vZlvMbEt/f/94WaeMrwQusmW1jfkb7lU53Ts8/mY
qmOk3wGedPfcWAdiZu2/LNYdMd49Xh7k+k6+6+/glMq/Gg/Gdp/
K0hLRH8MiM2Hw1Tfg0ShtD3236NW2iDQ6BcPEREZPLGmuN79J3uSnmmKn3CdpjZZZSHRf7f8XF3OJf+9wEAAAAAAAAAAAAAAAAA
+C36F3dTau2oanuu6krywnCR7z53hj9Y105Mk/
+JzDr1ABMRERGZvM3A2nB1xgTlSesfyTJ9j8W6sbPKTlJEAWSFMX4nu/Lj9AuL3x2rmcs7iAdfCrOXMT0lO8E3jI3T1Mvy1cwbEHWAs8VqnMcJ+HwzIIy/
zOeHWYWTvwfeAud//FtB65VESAGemKmdOuoWqTrBWwEQpIR0ZQBwbhx9KR26v5Pz9Yh2ozOb0T5vhXgTAGlE9LZK4xUpZV1iGmdjO4hgTxSmNc+xxXRoKoPNV8TK+TpBzFv+YJXf1YdRDE3oa48UTJ5B6g2X2tHmGe+2fYenvwXx1B0G2R2p6V6AEXwmrbbBS1O1FaaZwq0QPuXuvd9YsSbeSMnUUmNPQZGjiVNbTMKvbvx2QYr/
tegVN3Acyoa4dpFKY5lSjx0WKtCilSDAmAiIiIikxT2xPog8ACwC7jH3XeY2cfM7O1hti8AnWbWC9wO3Bhb8lADqjGBYoADaDLx83NutDUsBI2I
hhnqPv2ndtwVPDYXf8EmGE9nqdJWVpfD1KjDPnsCe4g0Au1B3tL8+NVzU5sgqwI+VbCMsbp4nVbOpnFDfjdO3fGxCmf/
DNkuthbn2fDmTmx7nV6NcqNuY9rpthB8MPWcGgcI8SbVmOG+oVZq/
8qDY6fGcgjTf6tP4O/1c0g+2AuLNX6AeFLjyvzXLOp3Lxcu4p4tC5rnSKjwtDNGE8gIdnpDPhlTG5/

BnuuwO4B9gJ3A98wN1LlcoMy7oDuD0sqzMsu2IdYTlrgP/
bzLaGr4UzcjLkJYJ9z1L69t2Ulizjvlf9Jr3FBFclcqxR8EtkVpXmtXPq2htJHDlE688fqHZz6G6Os74
twRPHszxzasxpGUVkBplPYlLAjRs3+pYtW2awOSIiIiLTy8wed/eN1W7HXKBnvZfPX3ie4hf/
hkJLK997/e+zL0jyqkSOSxOFajdNpGG1bf4JLXue4sQ73kNu9aVVbUvJnR/
3DXO2EPDvL22nPRmtantE6sHFPuupB5iIiIiIyDTwUwMUv/
J58qkmvvW6/419QYKNyayCXyJVNnjVkTJymQAAIABJREFUa8l3LKDj/nuInj5V1bZEzfi1xWkCnH/
dd5psSQtiiMwWBcBERERERF4mP3Oa4j99jrMW4543vJc+T3JdUsMeRWpCNMbADW+FUon53/
wilqnuHFwt8Qg3LG7ieLbEt/adoRRc/
KgsEZk6BcBERERERF4GP3Oa4pc+wzESfPWN7+OEJXltKssqBb9EakaptZ0Tr/
8NYqdO0PnNL2K5bFXbs6QpxrULUzx3tsB9B88ymamJRGRqFAATEREREZmic8GvvelO7r7h9ylGorwpnW
FZrLorzonIS+UXdTPwurcSP3aE+d/5RyhUd3jy6tYEl89PsuNkjocODykIJjLDFAATEREREZkCP3Oa/
Jc/y88Xv5JvX/3bzIs6N6UzdEQ1p49Ircou6+Hk9W8h0bef+d/7KpSqG6y+rCPB2rY4m/
uzPNinIJjITIpVuwEiIiIiInONn+jn1D3/zPcvvYm+zuWsjhW4KpkjZtVumYhMJLNqHVbI0bH5J8z/
9pc5+RvvxlPpqrTFzLh6QYqYGU8ez1IInF9f0ULE9MtEZLopACYiIiIiMgnBwX0889Aj/PCq36EQT/
GaZJYezfclMqcMr70cIlHaH3uYBXd/loF3vJdS+/yqtMXMuLIzSTxibB/
IkSkGvG3lPFIxDdgSmU76RomIiIiIXKSzT23jO9sPc++VbyMdj/
GW5oyCXyJz1PAlGzh+461Ez55mwVc/
Q+Lwgaq1xcy4bH6SjV0p9p0u8KXdpziW0e8WkemkAJiIiIiIyARKpRJP/vJxvjDUzp4l67giMsSbW/
K0RTRfj8hcll/UzbGb/i0eT9D5L39P8+M/h6B68/
itbUvwpmVN5ErOP+4+xfYTWc0LJjJNFAATERERERnHoaMn+fKje3kgvZK2Yoab0kNsaHIimqJHpC6UWt
s5dtO7yC5eTtsj36fzns8TPdlftfZ0pWPcvLyZjmSU+w6e5Z69pxnMa2VZkZdLATARERERkTEcGSpwz7
Y+vvJ8iWGL84bBvbyhK0l7XI/QIvXGkykG3vCbDFz/FuLHX2DhP/4VzVt+BkF1Ak/
pWIQblzVx9YIUh84W+PtdJ9l0dJhioN5gIlOlSfBFREREELuznNnCzz2/
Bn2DTupvHP985tZsWIp1rWo2s0TkZlkRqbnUnKLl9P+2MO0/fQ+mrdv4sz1byKz/
kqIzG7wO2LGuvYEy5pjbO7P8vDzw2zpz/
LaJU1cPj+plSJFJkkBMBERERFpeNlSwDMn82w5NszxXEAqP8yv7XuctYkCucuuhmi02k0UkVkSpJsZeP
1vkDq8n9btm+j4wT20bPoJZ37tzWTXXDbrgbDmeIQ3Lm3iheEi20/k+MHBs/
zyhWGu7kpzxfykVosUuUgKgImIiIhIQyoGzv4zeXYM5NgzmKfksODMcW7ufZQVkRzDV15HrqWt2s0UkW
owI9u9muyyHtIHe5n31Cbmf++rlFpaGb5sI8Ov3EiprWNWm7S4KcaidJTDQ0WeOZXnocND/
PT5ITbMT7KhI8mKlrh6hc1x7uUFGMwU1JwJCoCJiIiISENwdwbzAc+dLdA7mGf/
6TxFh1Qpz+WHdrDh4DbmRwNOv/
oGzixcVu3mikgtMCOzci2Z5ZeQ6ttH894dtGx6iJZND5FfsYbMJa8g17OeUnvnLDXH6G6J090SZyBX4t
lTeXYO5Nh+IkdTzFjXlqSnNc7KeXFSUQVRqs0LeThxHD81gJ8agMGT+OApGB7Ch4cgMwTZbHmuucCBcI
63WAwSyfIrlcbmtcK8NmxeK9baDvM7sY5OaG1TsGwSFAATERERmQIzuwX4n0AU+Ht3/+
+jtieBfwSuBk4A/87dD4Tb7gLeB5SA/+juD4xXppn1AHcD84EngN939/
xU6mgk+ZJzNFPkheHy6+DZAmcK5f9dbynleEX/ftbu38bygUPkl6/
m7LWv5XjnIlAPChEZLRIhu2IN2RVriA6doWnfLtr2PM28f/9ngmg5dcDtQZ2wGuAcweAo/
0Y8fPwbhTz9xDE4PXpg5FoPmeZBKQzqNtXdAIgGRaPnfnnPXp1iEQh6KRTyfw0/0Q99zeGb4wvKiMeiY
j81fgHUsKAfG5i/A5i+Atg5Mw/cvYO4Xv4rExo0bfcuWLTPYHBEREZHpZWaPu/
vGaS4zCjwLvAXoAzYD73X3XOLWaWy4+jvEPbv/ZZZrz6OVkgK/AhYF+42Zplmdg/wTXe/
28z+Dtjm7p+dbB2N5F8lgKvEr8EOtqUhOb2czgPfGFOT9OUvqLcZnkdvUjpDncBekmYw0ObLjWl/
jsrJ+pOHJjqpfEaCBIzHRdB+o26qqtrddp8tIUDhefZ0m6a76RybCd1GjMv/eQRNjS+eCOqrrQwMQ9/
IcUtQBRIDIwJvD/FRiqEzUd+4Ra6G+QvErXzpQ2wy/O64tLb40oVibhXU0yipQTH0ySGSN2txNJH8NMEIfVTuR9p5FuyjdAuoZDE4m3H/
uH6BJiAERc45TdaD8emEQOHQHlg8Y8rNX6Z/cWk5XERvCAA/MRNbjPVW/
RnClSCw1c+HWnt6fHVSXGW5YOaM7NoCpVT6Mgrg+mG/EgGGNW1RCMHu8aSjzh2k92hAyx1PPVEx1L+U2AT1Aj+s
ulG9XNtHbpzTUz/SGXUh9sY4C+9qXMdjMtSU2nY9aHFGEmpUvb5HHVWk/ZDrK+mc4J5wiJ3/
RyX2bhbyPLT3/tHyJ2RhaW/0+tHa/H1BdBYWDOXwdv2LtP8AZXZXn6RbemTiMPDKAR4dnJ0m/
4Otr+4txjOnKxN67FiINRS+pw/d6/0oY54XtnW+ABW8FzRpkNGQ/
90rjL8Qhn+IqqR2zt/VG8R4/pGuF5Y4xNzhXVRb+g44T7Dz+CM0lHGlXsQf9HqiQWhI/lHzvtHr7dKWU2a4LLm9uW/
5dJbyTGLY0gkjGH+4Smdd/HWRqJyCVfrmZj+pyJJA6Smd6ytdkGbvK73tcb+PfT0FGPhDrnbN4wHKU7Dc46/
L3prGRBJx53YIPuJdftltcrwI+Ryrm9h2M+MPJvLxkiDEE0GiDKrW6aU/ZjW9jaqMzmutphSOVcmIuzSGwevpnVuWf/
oU1EQhkMEIx6sFBUvSeF9ZHrMsLHYKXqIoBDbTsxUEeK7HS7MnQ7fk/
mAMpoRcXDqiyzbdXXMpqtGtRRvMYbyw4MENeLdlUEiiAgJ1C6Ugt60jCGPDlsdYFLrLmM1GxGGTW/
r/0PBzjUVHEvsuyjO7UvrGIdSiLxsuCYCS7aFmyVyHG+0GvZ7i62tLM6AMOQ1eU8x51N2NN/
ay3zT+jl9Nd0R/zfe7hovxORmy5LIRWPfoOdFt2fHHfBTQEkL5DOkcKLNH3ehEIMLaJnxXNnb3Th1nyA7KY1XOuh/
K7eWz/bfbTdRdgsTLdORY0ZUZBiGRmkQEaoBCo+5LRtQr1aHmPdV3S4sspfEIN8TEmyvzl9OhLwMKR8XZ6nVY6XK4
6SadnOCimNP4YLyeZQEMvxnNyiAhy7v/+hF28mz91uvjLO/bT9/
vwjcAONaEjDKyyfAaa9/3QDDHNkD3KRzCbuaIy+qPYh61s/0MWa1Ff3GYtBz/QjlfT+pxqpXd+SR+7y4HTY
a+b6sIOGQpwrRrSp0+9R/wZ/AWxS/
gXjP+eb0S/OpOS5ZeJUiVyi/TkPJ8fMyvuNmqhgeaZ6X7R5Ea/7CI/
0DBlkV+w9i3npH+oVmmZvjwqtpyxpnZmq8zlbwAdppzHdx2yUyXLHCHG+XTPvfeNf/
Qmj3zssqYGRYGfcJXMlUO2rR3QKoJa5kXBrnaysGnRLLaDX4JA5jXBguXjLnds5nyHGRDZ8uBssxweUj

```
lufcn+uHQc+WgYLEwbe2Kvu3fYleNfkSqjkkFwB5//PHjZvbcNNa/ADg+jeXNJTr2xtXIx9/
Ixw6Nffw69sZVC8e/cgbKHOsvgNH/vV8pT6X0sSaLGS//VOp4CTN7P/
D+8ONZM9s9KkstXMNq0znQOQCdg3N0HnQOYIrn4K4ZaEiV6V6Y6Bx89C9now0X9aw3qQCYu3dNrS1jM7
Mt0z0nx1yhY2/
MY4fGPv5GPnZo7OPXsTfmsUNdH38fsHzE527g+Qp5+swsBrQBAxPsO1b6caDdzGJhL7CR+adSxwXc/
fPA5ysdaB1fw4umc6BzADoH5+g86ByAzsE5Og9z6xxovUwRERGRydsMrDWzHjNLALcB947Kcy/
wnvD9O4GHvLz60L3AbWaWDFd3XAs8VqnMcJ+HwzIIy/
zOFOsQERERaUiaA0xERERkksL5tj4IPEB5Sql/
cPcdZvYxYIu73wt8AfincAL6AcoBLcJ891CeML8IfODc6oxjlRlWeQdwt5n9P8CTYdlMpQ4RERGRRlTt
AFjF7vYNQMfeuBr5+Bv52KGxj1/H3rjq9vjd/
T7gvlFpHxnxPgu8q8K+Hwc+fjFlhun7eHGlyJHpk65jCur2Gk6CzoHOAegcnKPzoHMAOgfn6DzMoXNgP
sZyrCIiIiIiIiIiIvVCc4CJiIiIiIiIiEhdq0oAzMxuMbPdZtZrZndWow3TwcyWm9nDZrbLzHaY2X8K0
+eb2Q/NbE/4syNMzP7q/
C4t5vZVSPKek+Yf4+ZvWdE+tVm9lS4z1+Z2VjLmleNmUXN7Ekz+174ucfMNoXH8fVwEl/CSXi/
Hh7HJjNbNaKMu8L03WZ284j0mr5PzKzdzL5hZs+E98D1jXLtzez/DO/5p83sa2aWqudrb2b/
YGbHzOzpEWkzfq0r1TGbKhz7/xfe99vN7Ftm1j5i26Su6VTum9k01vGP2PZhM3MzWxB+rvtrH6b/
aXgtd5jZX4xIr6trX88qfYfNbJWZZcxsa/j6uxH7TOpeHe/7MJdUun/nKqv87PpRMzs84tr/
+oh9puW7XWvM7EB4T281sy1hWkM8xGY2foR13urmZ02sw/V+71gDfxMN6KNF/1sZ3X870KF8zDj97/
V0HNOhXPw9RHHf8DMtobp9XEvuPusvihP6roXWA0kgG3AhtluxzQdyxLgqvD9POBZYAPwF8CdYfqdwCf
C978O/AAw4DpgU5g+H9gX/uwI33eE2x4P/B/h/z8z8CdYfqdwCf
C978O/AAw4DpgU5g+H9gX/uwI33eE2x4Drg/3+QHw1mof96hzcDvwVeB74ed7gNvC938H/B/h+z8B/
i58fxvw9fD9hvAeSAI94b0RnQv3CfBl4H8P3yeA9ka49sAyYD+QHnHN31vP1x54PXAV8PSItBm/
1pXqqIFjvwmIhe8/MeLYJ31NJ3vf1MLxh+nLKU9U/hywoIGu/b8BfgQkw88L6/Xa1/NrnO/
wqtH3+oh9JnWvVvo+zKXXePfvXH1R+dn1o8CHx8g/bd/tWnsBB879/h6RVvfPcRXORRR4AVhZ7/
cCDfxMN8E5aLh/Fyqchxm//
6mh55yxzsGo7f8D+Eg93QvVOMnXAw+M+HwXcFe1Lvo0H9t3gLcAu4ElYdoSYHf4/
nPAu0fk3x1ufzfwuRHpnwvTlgDPjEi/IF+1X0A38GPgRuB74Q18fMQvz/PXmvIfiteH72NhPht9/c/
lq/X7BGilHASyUel1f+0pB8AOUf5HPxZe+5vr/
doz6pf+bFzrSnVU+9hHbfst4CtjXauJrulUfmUyvED3wCuZMQfUI1w7Sk/
zL15jHx1ee0b4TXqOzzmd30q92ql70O1j3eS56Ym/z2a5mM89+z6Ucb+o2/
avtu19mLsAFjdP8dVOBc3Ab8I39f9vTD6d91sXPdKddTKORi1rWH+XRjjXpjx+58ae84Z5xob5b/
51tbTvVCNIZDn/
ng+py9Mm9PCrouvBjYBi9z9CED4c2GYrdKxj5feN6wR7zx9juH0wzD/
Zc1IrVgP9wBetPAT0782smQa49u5+GPgkcBA4QvlaPk7jXPtzZuNaV6qjlvwh5f/
Bgckf+1R+Z1Sdmb0dOOzu20ZtaoRrvw54Xdhl+xEJ/1x4s9eFaVO5V+fK7/
Lx1MMxVDTq2RXgg+FQlH8YMTxrOr/btcaBKZdhXX/btcaBB83scTN7f5hW989xFdwGfG3E50a
ufKc8zrgqLvvGZE25++FagTAxhr/
7rPeimlkZi3AvwIfcvfT42Udo81nkD5nmNlbgWPu/vjI5DGy+gTb5uI5iVEe3vRZd78S6Kc8xKKSejn2mWG6gaMlCmJnczQMvaDAVQqr8e8d/9t/MSYmusaFdLI1WaPskbTs3j6WvEcVc7ptrHv/
xWDgy2Gkpsbay2RsWD0XYeUfNF4R47LQ0fKw8N/c24dwe9RcAKj7Pc9fLkC34cdnRf5OhT9DVLrbs3z8pYjv7kHL9BPNyt/sbaaKRKOD7wrP2WG4/zwP/7/TdVjd+7TYc4IydGbkbSJdY+Dg+AXXk9k58Kf3H3iOM0cQy6+G9W0JkEcs/
```

```
IiJS1xQAE5GKzOyAmXn4KpnZETP7ipktqnbbREREROTl0bOeiDSSWLUbICJzwveAQ8BvAb9LOXj+7qq2
SEREREESmi571RKTuqQeYiFyML7j7nwB3hp+vBDCzJjP772bWa2ZDZvaEmb3j3E5mFjOz/
2RmT5vZsJkdNbOPjNj+h2a2zczOmtkeM/uvZhYLt703/N/In5vZp8zslJkdNrPfG7F/
k5n9uZk9Y2YZM+szs/9gZjeE+
+4ekfe6MO3ZmT5ZIiIiInOMnvVEpO4pACYiF8XMEsDV4cft4c8vAHcAg8C/
AsuBb5rZG8Ptfw58Glgdbn8EuDQs74/C/
TuAbwAl4OPAn42q+obw9RiwFPicmbWG2/4X8BFgIfA14Algnbv/AtgFrDOza8O8bw9/
fnWq50BEREESkXulZT0Tqnbl7tdsgIjXKzA4AK0cl/xT4HcCAY0AA/C3lh5pXAW8Avk652/xpoAX4bXf/
Vlhm3N0LZrYD2ED5YakPWAD8HnDU3Reb2XuBLwIDwLKw/AwQBa4BDgD9YZuucvcnR5X/n4FPAn/t7v/
RzJ4GLgPWu7v+Z1BEREQanp71RKSRKAAmIhWNeCj6HhAHbgaywJuBPOX/
qRvL48BbKT80ASx19yOjyh4CmirsPw94J+WHol+4+2vDfQaBVuDfAENh/
Xl3T47R9i7gMHASeB2wG9ji7tdMdNz/P3t3HidVdef//
3VqX3qBbugGumm2ZhNEFERwF2QziOEiE7ynYhJlKhRcH6OkaBgHP0aTXQMfuMeY3SiaGAkiIpOQIOCL
AZFQVbZkUXorbqrazu/
P6ppu1kbpLt6eT8fj35U1b3n3vu5RVF161Ofc46IiIhIS6BrPRFpSdQFUkTq4jlr7SiSFyk+4HGSv8pB
8uKorbXWWGsN4CE5gOo+oKyqzTkHd3Rw3Ica2489uG3V9l2ttQe3A4jVuF8zY/9V1a3HGNP/0P1ba/
cCc0iWzM+oWq2SeBEREZHD6VpPRJo9JcBE5ERMJ3mRclbV30ySF0OeNMa8RnIGOoRtssrz08artXj
bGvGiM+W/ghaplBy9UXjLGVFC1jXJC6/jstbu49uhOsnz/
lRM7XREREZEWRdd6ItJsuY7fREQkyVr7z8aYjSRnnesPbALeBD4PrCX5S1o5yXkzNgHXAUPC3WvQVmytt
3H1+JjLfwz1BhBSE1YzK4ozhdadj0b61++fV4ZJBQi57tq2qY9jKdC1noiIiDQ1db3WO6EEWLUysP1nOvS8
F3r6enEa16gKaRMaUzr2ocE4uehKAyZb3HwrK6hLnHL3Rnt7hdpdkMZ2ZAGYhLmjuj+hFe8O6HX5anfKcB
+HgZScyw/Y4kWbsfsJBoS7ovdZwfhgXw8KiqRRLuAGjeyVV+jKYnwKNqSwmKFMEOlOhlgAMACNP80NPBw0ZZ
c/
I9dGDbWgEpP0n8WEg7rKz6FiA2VEWrlwB+V9p+lBLXuydZ4kBvjWXT0oxqIe0sdD5dA7BgGETsLlUVy80Q
8UW3Ua0hKdY2aWM+JNn2vh9b9bKrnH0ryT8DwIt9SGMfmh0bGsl2HxFPjcZWJUTzvOQwtxrfB0qTx95v+
fWiFUX7SgVRlMgeYOnnDLzyUxE+ehhgqlhIIqVtfmBrbc0iWN0e0OgN9ha3PHsmBpXFrqLG89RF/kiClR0kuUHa
aPy4+1WCeYtSVlsDdsKC7EHhEdCr2dsmdTRtNsg61RjpNFdbgcqanZ2MmWw0uR08Tnu1lBrfVBRbEH
lQPzP+U4DQ1iwfDqwLaLWvaegwvFKX9Q4yeldLgMDc2xHwL0DVzazkq0rhKDIRvhTXaQeTzcPz0bu3OzNv
NhwC+32OX27TNxw2nkShz4S/
zY0vJvj0szxtFO69GgCLGvaBQa3O4JkkhvVVO88yiWf8hXE1T8PP5uhAZwW+UDB+HTRB1VanrYgpdB/
+HFgS/SvwgdH38w/UFAeXH8p8MOzUfaFnHnpNXjc4A1HvqcDDCJPpsnDlqa9RS3/
gfgKiCPaDpNq7D0YCagdOvuMwY7Rmp0f2e2G1fxr6nhrPsLw9YNRI7HC3PGHVl6/0crP/
ONCPE3fTO2tpg3ZCj+2jUIvc9IpEShXHwQSUdB0ko/
8N1yV6e8OGg8HgCoYCmLMRlOa98n4H4LJYyHWmFvK8BEBmqsX0BLxPjh9yr1tTHtJIF9SsmMO8G+nnNFhJlFnZZkRNUrO0t7EwxN/
DTSgODdXsiD1IWuKPPEsTWJQFTqdNyj+j7PfhzW/m+dZ3Mt5UmRtNfMWMM9iZ0PjPGoGTSNAdOP1ZG1WpBqc
cJw51Y/MmmyM2AsNNaA+fr5fc0oDvz7WmFFtYlnrj/tmLh1oX41s5/0VN3+Z5/n5gT1t6N+QRIEjN/bQWP
JcX90MzFUq1ZQTgyPyKOF0sKR/+
+sCW5TFDt/uYNvbX6D/l3i5iCg0AaxfCgx+vB56hLG1cKCzZNb57RLy/
```

```
6YQYMGATBo0CA6d+5Mt27d6hRLLBbDWsuaNWu46667GDVqVPW+6hrH0qVLGTFiBD//
+c+rt7vqqqsOO9bo0aN54IEHABg5ciSbNm3i/
vvvZ8yYMQDcc889XHzxxfzpT8kJp0eNGgXAL3/5S371q1+Rn59fva9JkyYxYcIEAAYMGEBubi5z587lp
ptuYt26dRQXFzNjxgzS09MBGDFiRPW2JSUlTJ8+nV/96lfce++9AAwfPpzy8nLuv/
9+Jk6ciNNZfz+eKAEmKXP77benOgQRaSQee+yxVIcgIiLfQVk0wYIdIXL8Tnpmehr02AXpbsJxy4p9Ye
ZvCzGyYxCjJJiIHMUPf/hDpk+fzoMPPsgf//jHw9a/
9957DB8+nIyMjOougOnp6QwYMKB6jK5ly5bRrl27WgmrvLw8gwBgwYUKcYVqxYgdv97Q8FXbt2ZcGCBScc
R//+/Xnuuee49957+d73vseAAQOOmEC68soraz2+6qqr+MUvfkE8nhxD8ZNPPjnsevyaa67hP/
7jP1i8eDFXX/
3tb3A1E1rZ2dnk5ORUV4B169aNtLQ0rrvuOn7yk59w0UUX0apVq+r2ixcvJhQKcfXVV9fqXjl06FB+/
etfs337djp16lSHZ/
DkKAEmIiIiIiLfybvby4hay6C2vpQkn3q08lAeS7DymzCZHgdD2gUaPAaRluRkK7AaA5fLxZ133skvfv
ELpk2bdtj6ffv2sWTJEl599dXD1g0bNgyAr7/+miPNnNy2bVtKS0uPG0Pv3r158cUXiUajLFq0iLvvvvp
sbb7yx1jHrEseECRMoLS3l6aef5r777iM7O5uJEycybdq0WomwnJycWtvn5OQQi8XYt28fANFolNzc3F
ptDj7ev7/2nDs1E1oAHo+HcDgMQOvWrZk/fz7Tp0/nBz/
4AYlEghEjRvD73/+erl27Vh+vT58+R3xetm3bpgSYiIiIiIg0TuuLK1lbFKFflpd0T/
2O+3UsZ2R7CcUSfLCrnHYBF10yGrYSTUSajgkTJnD//ffz0EMPHbYuKyuLsWPMnXq1MPWHezW165dO/
bu3XvY+r179+Lz+Y57/
EAgwMCBAwEYMmQI4XCYe+65h8mTJ3POOefUOQ6Hw8GkSZOYNGkS27Zt4+WXX2bKlCnk5eVx0003Vbffs
2dPre337NmDy+WiTZs2ALjd7sPa7N69uzqOEzFkyBDefvttKioqeO+995g8eTLXXXcdS5Ysqd7X3LlzD
0u4AfTs2fOEjnWilACTRqH7dbelOgRpYOv/
+7+q7+vfv2Wq+RoQEZGmqTKe4J1tITI9Dnq1Tm3CyRjDOTl+iiMh3thcyo97tqJVPQ/
ELyJNk9fr5d///d/55S9/yYABA2p1Rxw2bBgzZ86kT58+
+P3+I25/9tlnM336dJYuXVrdDXLHjh2sWLGC884774Tjue0O3j88cd56KGHqmdVrEscNXXs2JG77rqL
P/7xj6xeXXvi59mzZzN69Ohaj2t2lxwwYACvvfYaEydOrG4zc+ZMHA4HQ4YMOeHzAfD7/Vx++eV8/
vnnPPjgg0AyOeb3+9m5cyff+973Tmq/34USYCIiIiIiclLe31lOWTTB8PwAzkYw7pbLYbignZ93toeY/
VUJP+zRCrcj9XGJSONz44038h//8R/Mnz+f66+/vrp9+lWU28lLy+P3bt38/7773P+
+edz7bXXctlll3HGGWfwgx/8gAcffBC/
38/06dPJzc3F4XDWVhaDBw8mMzOTBQsWsH79+sMq2956khWl1cbR48ePeoUx4033khWVhaDBw8mMzOTBQsWsH79+sMq2956
6y2mTJnCRRddxKxZs3j33Xd54403qtdPnz6dkSNHcv311zN+/HhWrVrF1KlT+elPf1prAPzjefPNN3n+
+ecZN24cBQUF7Nixg6eeeoqhQ4cCye6T06ZN47bbbbmPLli1ceOGFJBIJ1q1bx4IFC5g9e/YJP3cn4sT/
ZUREREREpMXbUxHjk31hemR6aONrPL+rp3ucDMn1s7sizvxtZVhrUx2SiDRCB5NOh2rTpg1LliyhV69e
TJo0iREjRnDnnXdSXFxMv379gGTF6RtvvvEGvXr24/vrrue2225g4cSKnnXXYaGRkZJJxXPLbfcQkZGBr/
97W/
rHMeQIUP44IMPuP7667nsssYPXs2zzzzDOPG1R6j7dlnn+WTTz5h3LhxzJ07lyeeeIKxY8dWrx8xYgS
vvPIKy5cv5/
LLL+exx7jjjvuYMaMGSd0DoWFhRhjuPvuvu6vjHTVqFM8//3s6at956iyuuuIJrr72Wl1
9+mQsuuOCknrcTYU7kA2HgwIH24GwDIt9VzVkEkSn5GtAskFKfjDErrLqDUx1HHPo3+b4YzOayKGM7peqq1XfhPn8QIRRHdPo3+b4Y/
KIyJGtWbOG3r17pzqMRq+4uJiuXbtyyy23MH369FSHA8DChQu55JJLWLVqFX379k11ON/
JsV6Hdb3Wazw/
1YiIiIiISJOwKxRlfUmU07O8jTL5BdA3y8u+cIJ3t5eRF3TR1q+vPiJy6jz55JN4PHzMA66d+/
O3r17+d3vfkdlZSUTJkxIdWhyFPoUEBERERGRE/
LBrnK8DkPPPVo13pkVjDINzfby9LcxEh2v18tq1q1bMcYwaNAgFvbnxTPQxfzKP9I+pprTM4RjRBTE6zSmPLLTGfqGL/Scft3ULUKHXnybd+pwoz/bb1L
9+mQsuuOCknrcTYU7kA2HgwIH24GwDIt9VzVkEkSn5GtAskFKfjDErrLUDUx1HU6BrPTkRf9
1YzOayKGM7peNxNr4qq1XfhPn8QIRRHdPo3+b4Y/
KIyJGtWbOG3r17pzqMRq+4uJiuXbtyyy23MH369FSHA8DChQu55JJLWLVqFX379k11ON/
JsV6Hdb3Wazw/
1YiIiIiISJOwKxRlfUmU07O8jTL5BdA3y8u+cIJ3t5eRF3TR1q+vPiJy6jz55JM4HA66d+/
O3r17+d3vfkdlZSUTJkxIdWhyFPoUEBERERGRE/
LBrnK8DkPPPVo13pkVjDINzfby9LcSczaX8n54aD0xETh2v18tDDz3E1q1bMcYwaNAgA3nvvPTp16pTq0O
QolAATEREREZE621YW5avSKP2zvY0Y0+oeR3OTgnx8/7u8pZsCPEiI5pqQ5JRJqJ66+/
nuuvvz7VYRzTxRdfrHEQa9Ag+CIiIiIiUifWWj7YGcLvNHTPbLzVXvXZV1CLro1crDJ/
vCrCuqTHU4IiKSIkqAiYiIiIhInWwpjbJ8lbz71eGcEKcxDMn1s70sRt5TWSAkwERERERERE5ri1lUXaWx+jT2ovTNJ
3qr4MyPE7OauNja1mMZXvDqQ5HREQamBJgIiIiIiIiJyXMv2VOBzGrqkN63qr5q6ZrjJC7p4f2eIPRWxVI
cjIiINSAkwERERERERE5pv3hOBtLohRmuHE2obG/
DmWMYVCOD7fD8LfNpcQS6gopIiIiLHtHxvBQ4DhU1k5sdj8TkdDMrxsaR0Qa
wLRp0zDGVP916NCB4cd1fuwf//jH1cd1OBzk5+dz7bXXXsnnz5no/
ttSmBJiIiIhIihljRhljRhlj1hpjCeq8x5tWq9R8bYzpXLc82xxiwwxpQZ6Y2YcZd24Flt1+8ZSHMW
jiVYtT9MpzQ3flfz+PqQF3RTmOFm2iDSAzMxMFi9ezOLFi/nlL3/JmjVrGDduHMXFxQDceOONbN68mSVLlhxx+1NOOYXzzz+//WZ8tbuBQTJ+fux
e/
XqxeLFi1m0aBH33Sz5LLLLiMS0ftPQ3KlOgARERGRlswY4wSeAIYD24BlxpjXrLVrajS7GhgOHGDYAH4+GvnC7R3Avw64RxFdZ5LUOzTEk1cg0W9VnK3a9KZDWb/3
YaY8YDDwHXAGFgKtC36u/QfNlV8Flz9+k3YaIJ6NGq6Vd/
1XRmGx+7K+LM3VLGDb0Yb1a4WD0MAUFBVxcwwQXMmzePq6+
+ul6PHQwGrLfDDNHJ9DAqgD1MXUXdYd3z6Df2tn2aO3eTN7F6pgvI8XTzKsNE5tNuC6+s9Ub2ckIEcN0Bq7Lir1jhcCKxOsrzOVIdeSkvchiG5RA
7rwPDjDHGWhuy1i4eKWPoHKMsnuS+RfzSbumJZOSKIOVEKiexbI3fAQTgB5K4PbfGMJGKx5y8MdzKNUb3MeSH3MJ9pIa3GW1mJwdDDAaF3FfXIFxdWc6r
8KEBFpXAYMGABQY9DzOf300/
+clP6NChAz6fj3g8zi233MLDDz/Mrl27uOKKK/j888/p168fAN99910ATJo0qXr9sHPxh1fH1PXl5UVD/QeDm9R3NjoTvYUyQ5mRBNkwfBiIitN7rqBpWo57QMRzSnhIWnrJ
+c1P4NChAz6fj3g8zi233MLDDz/Mrl27uOKKK/j888/p168fAN99910ATJo0qXr9sHPxh1fH1PXl5UVD/
QeDm9R3NjoTvYUyQ5mRBNkwfBiIitN7rqBpWo57QMRzSnhIWnrJ
```

RoERdccAEZGRlkZGTQv39/XnvttVptnn32Wfr06YPX66VTp0785je/
OeHn7FRQAkxEREQktfKAmlfA26uWHbGNtTYGFAPZx9nvr4HfAscc5MgY8zNjzHJjzPK9e/
eeSNzSAqwrilASTdCzGYz9dSTZPid9s7ysPlDJ6v2VqQ5HRBrQwcRXu3btAJg/
fz7XXHMNZ511Fm+88Qa33norjzzyCLfcckv1NpMnT2bRokU8+uijvPPOOzzwwAMYc+ITg2zduhWALl26
VC/bv38/559/PmvXruXJJ59k5syZhEIhLr30UioqKgB48cUXeeCBB5g8eTLvvPMOf/
jDHygsLDysG+cNN9xAv379mDVrFqNHj2bixInMnTu3en1dzvWg6667jrFjxzJJ79my6d+/
O+PHj2b59OwAlJSWMGTOGrl278te//pXXX3+dH/3oRxQVFVVv//
DDDzNx4kTGjRvH3LlzmThxIlOnTmXGjCOO3FCv1AVSREREJLWOdOV86NR0dWnzbWNj+gOF1tpJB8cLOx
pr7dPA0wADBw7UlHhSy7K9FaS5HXQINt+vDae19rCrPMY728rIT3ORR4WlelW4i9eG97WXsrogdv2E9yP
W7uDQ/7aS2PVjhtGnTJn7+85+Tnp7OpZdeCsA999zDxRdfzJ/+lCy4HjVqFAC//
OUv+dWvfkV+fj5Lly7l5ptv5pprrqne5w9/+MM6H9H9tay5o1a7jrrrrsYNWoUgwYNql7/6KOPEgqFWLlyJ
VlZWQCcd955O7cmeeff56bb76ZpUuXMmLECH7+859Xb3fVVVcddqzPzwAMPADBy5Eg2bdrE/
fffz5gxY+p8rgdNmjjSJCRMmAMmqudzcXObOnctNN93EunXrKC4uZsaMGaSnpwpwMwYsSI6m1LSkqYPn06v
/rVr7j33nsBGD58OOXl5dx///
1MnDgRp7Ph3nNVASYiIiKSWtuBjjUe5wM7j9bGGOMCgkDRie4AY9H9x9jnEGCAMWSAjoYYxZeIrilRZid3mMHa
EY3TPdOE6iwqGpcBjD4Fw/
cWuZu6UMa5UHFmmOvvnmG9xuN263m549e7Jp0yZeffVV2rdvTzwe55NPPjlsLLBrrrmGRCLB4sWLAejf
vz8PP/ww/+///T/WrVtX52OvWLECt9uNx+PhjDPOoKShL/85S+12rz
33nsMHz6cjIwMYrEYsViM9PR0BgwYwPLly6uPP2/
ePO69916WLl1KPB4/vGuvuoqVqxYQTwer/
O5HlQzoZWdnU1Ti3bt1IS0vjuuuu44033qhV73DfU5xWIxhg4dyu7du6v301
Ca7085IiIiIk3DMqC7MaYLsAMYD1x3SJs3ZoaF7BkfBi4Ha3+3x/iWbq39A/
AHgKoKsLnW2otPdeDSvH36Svq9lkKFjOnInD4D4WDIkCGHBdvMrxpzkUikzbtZ9P33n
sPYwzt2rWjQ4cOHZ6cy8fOkPw4cOqlx5GDrMTf7f4vf
4477qBNmzY89NBD1cuGDRvGF198QZ8+fRg4cGCtvyGMlijp27Mhdd91FYWEhq1fX/
t1r9uzZhz0eMGAATqfzpM61Lvx+P5dfkJkTJkyojmfIkCH4/
X527tx52DkNHDiwOrHXUPSzhoiIiIiI1PLZN2HS3A5y/
C1rQHif08GF+ZPxIbXevNDzL/fWMHz+eVatWMXXqVH76059Wh/
vnnc+WVV9K3b1+MMTzzzDMEg8Fag9nKOkOGz6vIJdQVUqSlcDqdBgw4LDZC2fOnInD4WDIkCGHbdOvXz8f/
vnhhEokEX37559Qkd+WMpmLJ+ezEsvvcTQoUO059dZbycvLY
/fu3bz//dMEg8Fag9nXRSAQYNmjBgAevZ+VSAN46623mDJ3mDJlChdddi899LN9
75XHvttdx4441kZWUxePBgMjZWbBgAevXr6+VSAN46623mDJlChdeddi899LN9
98k+eff55x48ZRUFDAjh07e0Oqppxg6dCiQrJibNm0at912G1u0at912G1u2bOHCCy8kkUiwbt06FixYcFiirr4pAS
YiIiIiItUOVMbZWhajX5a3enyclicliQv6KZ7RpyleyroluGmUwsYA01EkoO9v/LKK9x///28/
PLL5OTkcMcddzB9+vNkOGDOGFF15g8+bNOJ1OzjzzTN56660ghSaUnJAIbGDIOCzUQNJHmTSTsLLBrHMttMSLp/Dwww/
z29/+lqeeeeoo2bdqwZMkSpkyZwqRJkygqKqJ9+/acf/75OvXr/
r4zzzzzDE899RThcJjCwkKeeeYZxo0bV2vfzz77LI899hiPPvoowWdO/
aEzrUuCgsLMcZw9913s2fPHHtq2bcuYMWOqOz6AEuPPOO+nQoQOPPPvoov/3tb/
H5fPTo0aPWTJJfcEPmubr/99ur73a+7LYWRSCqs/+//qr6vf/
+WqeZr4LHHHkthJNLcGWNkNWcPPOiH1KJrPQF4f2eIJbsrGIsEjNAIxkTkY3tkWwgI39GqF4r4U+Dy
IAa9asoXfv3kQp+pg4cKFXHLJaxatYq+fZvX6Afheh3W9VpP7P+QiIiIiGJAawlo++yZMh4CrxSfu+
AFwOw0CP2XRBPO3h1IdjoiIiAgq2qGqocOA3zhcbGtacAq3C1bfmTY+/p7wa8+NGNq/nVzXJ1xw/
o4v2dIfZUxFIdjkiDcrvdVFRUpGDjKipwu7/OBkOqj/kBBLXkNewoeqiPGwAGn+6RT/pZ7rKdgoLh0xsWeT9urWj7ofmpOsWbDO1R7dZbFzyvCaFvDa/
eh+F/violElc1jLQcOTk57Nixg/
LyclWCSYOxy2lJIeXs6OHTvIycn5zvvT6JYiIiIiIs3cCFweSswXpCsBdjQ+p4MhuX4W4k4J4Vp6F+/
FYadICZGRkALBz506i0WiKo5GWu12k5ubW/06/
C6UABMREREEREdGstXyxv5Jcv5OASx1EjiU34KJvlpdV+yvpmOamF2Kdwsx3V1NKGD+tkrR+RAZZGRmnJAEhkkr6hBMRE
RERRacF2lscojiTorOqvOunT2kM7v4t3t5exu1zjgYmINBVKGIm1IiItGBF7K/EYSA/
qARYXRhjGNNIuOR7Y7K9KqIwnUh2SiIjUgRJgIiIiItVNxa1hRVkhdw4XFqPKu68jkdnNvOT3EkwZtb

yjQwuIhIE6AEmIiIiIhIC7W5JEpFzKr740nI8bvo38bLuuIIH+2uSHU4IiJyHEqAiYiIiKSYMWaUMWat
MWaDMeauI6z3GmNerVr/sTGmc9XybGPMAmNMmTFmRo32AWPMm8aYL40xXxhj/m/
DnY00JasPVOJxQPug5sY6GT0zPXRKc/
OPXeVsKI6kOhwRETkGJcBEREREUsgY4wSeAEYDpwHXGmNOO6TZDcABa20h8CjwUNXyMDAV+Pcj7PoRa2
0v4EzgPGPM6PqIX5quSNyyrjg5m6HTqPvjyTDGMCjHR5bXwZzNpXwT1qD4IiKNVaP6qef222+vvv/
YY4+lMBIRERGpT/
rMr2UQsMFauwnAGPMKcAWwukabK4BpVfdfB2YYY4y1NgQsMsYU1tyR1P2KM+QTIr9ezkCZnY0
mEaAI6pan743fhchjObxdg/vYQf91Uwv/p2QqfU3UGIiKNjd6ZRURERFIrD9hW4/
H2qmVHbGOtjQHFQHZddm6MaQVcDvzvUdb/zBiz3BizfO/
evScYujRlXxZV4nMa2vqdqQ6lyQu6HZyb6+dAZYI5X5WS0KD4IiKNjhJgIiIiIql1pL5nh357rkubw3d
sjAv4C/D4wQqzw3Zi7dPW2oHW2oFt27Y9brDSPETilo3FETqmuXCo+
+MpkRtwMbCtj02lUd7bHtLMkCIijYwSYCIiIiKptR3oWONxPrDzaG2qklqZwP467PtpYL21tsX3M5XaN
pZEiFkoUPfHU6ow00OvVh4+2Rdm2d5wqsMREZEalAATERERSa1lQHdjTBdjjAcYD8w5pM0c4N+q7n8f+
Ls9TnmJMeZ+komy24/VTlqmL4sq8TsNbXzq/niq9c/
20jHo4u87Qqwrqkx1OCIiUkUJMBEREZEUqhrT6xbgHWANMNNa+4Ux5j5jzNiqZs8B2caYDcBk4K6D2xt
jNgO/A35sjNlujDnNGJMPTCE5q+QnxpiVxpifNNxZSWMWiVs2FEfIV/
fHemGMYXCun2yvkzmbS9kViqY6JBERoZHNAikiIiLSEllr5wHzDll2T437YeDqo2zb+Si7Yedqo2zb+Si7VWZDjmhDSY
S4uj/WK5fDcEF7P+9uDzFzYwk/
7JFJtk9fvUREUkkVYCIiIiIiLciXB9T9sSH4XQ4u6RDAAq9sKKE4Ek91SCIiLZoSYCIiIiIiLUQkbtlY
ou6PDSXd4+SiDgHC8QSvbiimPJpIdUgiIi2WEmAiIiIiIi2Euj82vCyvkwvbByiOJJi5sZjKuJJgIiKp
oASYiIiIiEgLcbD7Y1t1f2xQOX4X57Xzs7sizmsbS4jEjzmJq4iI1AMlwEREREREWoDKeIKNJRE6prkx
6v7Y4PKCbobk+tkRivHaxmIlwUREGpgSYCIiIiIiLcCmkihxCx3TNBthqnRKdzM418/2UIzXNxUTTSgJ
JiLSUJQAExERERFpAdYVVeLT7I8p17kqCbatLMbrG5UEExFpKEqAiYiIiIg0c7GEZUNJhLygZn9sDDqn
uzkn18eWsmR3SA2MLyJS/
5QAExERERFp5jaXRokmID+o2R8biy7pHoZUVYL9ZUMxFTElwURE6pMSYCIiIiIizdzaokrcDsgNqPtjY
9I53c0F7f3sqYjz8vpiyqJKgomI1BeNgCkiIiIi0owlrGV9cYQOATdOdX9sdPKCbi5qb/
jHrnJeWlfE+MJMWnlbZqLSJhIQi0Ikkrx1OMHlSv653Rij+o3jsYkEhMshHIZoBBupTD6fkQhEKrHRCM
RiYC3YRPLW4QSnE+NygdsD/
gD4A5hAENIzMC5VjkrzoASYiIiIiEgztq0sSjhuNftjI9Yu4OKSvADv7yznz+uK+EG3THIDzfPfy8ai2
N27sLu2w+5d2OID2OIDUFwEleGjb2gM+IMQTMOkpUNma0xWm+RfdhtonY3x+hruRBqQTSQgVIYtKYKS4
uRtaTE2FIKKEDZUBuWh5F84DCNdGEYAACAASURBVJzKiRUMZGZistpistti8jthOnZOPt9KqEsT0zzfV
UVEREBIC1RRGcBto304RKc9HG5+LSvCALd5Xz0voiruqSQZcMT6rD+s5sPIbdthm7YS2JTetg905IV
HX1dHsgPR2C6ZguheD1gcudrPhyOpPVSfEYxOMQjUK4AltRji0rga93YCvKax8smAZZbZKJmjY5VX+50
DoL42icVXU2HoPSEmxJMZQUYUtLkrcHE10lRVBW+u1zdpDDAT5/8jnz+jAZmdA2F3zJx7g9GLe76vl0Q
/
V9FzhdyYTiwQSWTSSf44MVeJWVUBnGhsMQKk0m20pKsNu3wPKPktsE0zFdC3H0ORNT2BPj1PuLNH56lY
qIiIiINFPWWtYVR2gfcOFyqFqjscv0OhmeH+T9neW8trGE0QVpnJ7d9KqabDSKXb+axOcrsRu+hGgkmb
Bpm4vpcwYmqy1kt4W09O9URWSjESgtSVZFlRZ/
m6hZ+wV25bJvGzqckJWNaZOLyWoDma0wma0xma0hsxX4/
Ke8mslaCxWhZHKrtOTb27ISbFWCi5JiCJVxWMWWywWBNAgGMW1zoVM3CAQxwTQIBJN/
9RDzoQ7du7UWivZj93wNe3Zh160hvuqfyVhOOwPnoPMwuR3qNSaR70IJMBERERGRZmpXeYyyaIK+rZt+
JVFLEXA5GJYXZNHX5by5tYziSILz2tV/
suO7stZit24isWIJdu3nyTGnfH5Ml0JMXgG0y8N4Tu3r0Lg9kNUmWfV1aDyRSiguqu5eaYuLsLu2Y9d9
cXg1ldsDGa0wmZnJsa+8/mR1lccLLmeyYupgRZq1ye3j8WSXzXAFtjJcdT+MDVckx+AqK4NE/
PCgPd5kAisYxHTIr7qflhxvq+o+bk+j/Pc2xiS7PrbOhp59sIk47NyO/
Wo99rMVxD5ZgunZF+dFwzHt81MdrshhlAATEREREWmm1hZFMCQHWpemw+M0XNQhwNI9YRZ9Xc7+yjiXF
aQ1yio+G6kk8dkKEss+hD1fg8eL6dQt2aUxtwPGkZqB643Hm6w4a5tbO15roaI8WXkVKqsaPyt5a0tL4
Ju92Egk2Q3wSAmsmhyOZPLM4012MXR7wOvFpKdDQVcIBDD+IAQCyfHL/
IHkQPPNhHE4Ib8TJr8TtrISu+Yz7JpVxNZ+nkyEjR6XrLITaSSaz/8+ERERkSbKGDMK+C/ACTxrrf2/
h6z3Ai8CA4BvgGustZuNMdnA68DZwAvW2ltqbDMAeAHwAFwA/OA26y1p3JkZGnkrLWsLaok1+/
E42x8iRM5NqcxDM7xkeF28Nn+Sg5UxvmXhTIh2324Syz4isXIZ0RCqTVVhDLsJ07d6oZw00xnz
bjbBt7mGVYwfZ6mqvOMQTyVtjAAMOk0x+OV2NslIrFYzXi+l/
Nva0ftg1q7CfryT2h4dxjrwC03+QnidpFJQAExEREUkhY4wTeAIYDmwHlhlj5lhrV9dodgNwwFpbaIwZ
DzwEXAOEgalA36q1b6NtRJGkJMkYQ58sLxkeB4t3V/
CntUV8v2tGtGymaItIk4du1qEssWYb/
aAA5HstqrV99kMqkZJTnMwUHiHQ59az4BxuPFnDEQ27UHiQ8XEJ8zE7P6M5xjf4BJz0x1eNLC6b+yiIi
ISGoNAjZYazcBGGNeAa4AaibFrgCmVd1/HZhhjDHW2hCwyBhTWHOHxpj2QIa1dknV4xeBcYAS01dCWqMkWw8kXOHzgjO2xxQEspY7KoMWijOP+D
aJzeAqOhMiBsZLKHpVAtLM5KEXKWuWUzMxtlTKRwfX+p8HwsYHgdIbRtpvZl+Q4TxnDIHbw5fvi5r9Pck+EtM8h48Nu8kC96x/vm4
Hz4xlNvNn7qD
EmD6+B3dxdW2uxIUvoe3/sPFSAJRe0dJtu6uIiKxSZrWcIIRDwIfh2CbaiOKazT
OxX75OXbFEmJPP4rrX3+KaZeX6tCkBdOnoYiIiEhq5QHbDbW2pgxphjhXehTWqxOK83zEeOSZt0FpCrvdY5WN3Br+HsDuR7
W8CnulOjRpoZQAEx

```
4OheQFW7qtkxd4wX5fHGNclnXS385Qdw4YrSHy+ksTyj2D3zuSMhD1Ow/TqowHN5aSY1tk4Rl9J4n/
nEf/v52DM93GcdejvPCL1TwkwERERkdTaDnSs8Tgf2HmUNtuNMS4gE9h/
nH3WnIP+SPsEwFr7NPA0wMCBAzVIfjOxtqgSgPy0xjsYeZNkEzhLinCWleAoK0nehisgHsMk4ph4HOt0
Yt1erMdDwuMjnpZOIi2TeFoGiUBa1UDqJ89hDGe19ZHtc7J0TwV//LKIcV0yKPgO/
9Y2kcBu2URi5VLs6s8gFoXW2ZjBF2K69sC49TqS78YE03CMHkdi4Xzif5uJjcdxnn1uqsOSFkYJMBERE
ZHUWgZ0N8Z0AXYA44HrDmkzB/g3YDHwfeDvx5rR0Vq7yxhTaowZDHwM/B/g9/
URvDRO64ojtPY6Gs2MgU2StTgP7MO7fRPu3Ttw7/0a1ze7cUQjhzd1OJOJL4cDE49jYtEjlmEm3B5ird
sQy84hlpVDLDuHaFYO8VZZ4DixKq5O6W5aeRz84+sK/
rK+mEvygpzd1lfngehtIo7dsgm7+jMSaz6DUFmy2qtrd0z33pDdtlkNai+pZ9weHMNGk1gwn8S8WZhgE
MdpZ6Q6LGlBlAATERERSaGqMb1uAd4BnMDz1tovjDH3AcuttXOA54A/
G2M2kKz8Gn9we2PMZiAD8BhjxgEjqmaQnAi8APhJDn6vAfBbiLJogh2hGKdnqfvjiTLhCnybvsT71Vq8
2zfhDJUCkPD4iLZuQ3nX3kQzs4kH04n7g8T9QazHe3hVl7WYeAwTqcRZEcJZXoazvAxXaTGukv14tmwg
sGblt80dTmKts4ll5xLLyiHaJnkba50NzqN/
Zcv0OhmRH+TjPRX8fUeIXaEoowvS8TgPT1zZRAL27Sbx1QbsV+uxmzdCZRhcLsgrwAwYgunYCeNStZfU
H+Nw4rjoUhLvziU+62XwB3B06Z7qsKSFUAJMREREJMWstfOAeYcsu6fG/
TBw9VG27XyU5cuBvqcuSmkq1lV1f+yo2R/rxFSU41+/Ct+6z/
Fu34RJJIj7AlTm5lPZZyCVOfnE0zNPrOuiMViXG+tykwikEc3OPbxJNIKr5ADu4v24SvbjKj6Ae9c2fO
tWVVePWeNIJsaycoinZxLPaEU8vRUJf5CE14f1+vB5vFyYkWC1gU+LIuwu28cYXxntwgewpSXYfbuxu3
fBnq+TXRsB0jMwBV0weR2hQ4G6OEqDMi43jqGjSbz9BvFX/
oj58c8x7fOPv6HId6RPRRERERGRZmRtUYR0t4MMj7o/HlU8hu+rtfhX/
xPfpi8xiTix9FaU9exPRcduyYRVPXf/
s24P0ezcw5NjsRju0gO4ivfjKt6fTJDt3YV38zocBxNYR9Ae6J5dwFtnXc5LkSAXrFnKgI1LMT5/
cjyvHr2Tt+3yMGnp9XpuIsdjvD4cl36PxFuzif33c7huugMTTEt1WNLMKQEmIiIiItJMVMQSbC2L0quV
R+M3HYGzaD+BVUsJfL4cZ0WIuC9AqPvplHfpRbR1m3pPetWJy0W0dVuirdvWXm4tJlqJM1SKszKMiUZw
RCOYaCRZcWYcpDsMl5d/xYfuLrzfZxibTz+fy9IqSD91k0SKnDImmJasBJs3i/j//
AXndTdgjBL3Un+UABMRERERaSY2FEewQEfN/vgtm8D71TqC//
wI35b1WGMI53Um1K0Ple07gaOJfOE2BuvxEfP4iB2n6RALObEw/
6z08sdSN6MD5XT3HG8rkYZnstpgBp6L/
fgfJD56H+d5l6Q6JGnGlAATEREREWkm1hVHCLgMWd4mktSpRyZSif+LFaT98yNcRd8Q9wcpOX0QoW59S
ASad1crY6DQHSPHGWdx2MfsUBr9Y5Vc4q/A3QiK3ERqMj37YL/
eQeLv8zAFXXB07JzqkKSZUgJMRERERKQZiMQtm0oidMto2d0fncUHCK5cTGDVMhyRMJHsXPafO5KKgm7
gaFl9ATMclkv9FXwW8bCy0svWqIvLg+XkuuKpDk2kmjEGx7kXk/jb68Rf/zPmpjsw/
kCqw5JmSAkwERERERZFmYFNJhLiF/
JY4+6O1eHZuIbjiQ3wbvwCgoqCQsp79ibZpl+LgUstp4ExvhPbOOB9XevlzaRqDfZUM8YVxttw8qTQyx
uPFcdFwEm/NJv7OG7jGXZvqkKQZaoGfjiIiIiIizc/aokq8TkNbfwuqcorH8K/
9jOAnH+LZs5OEx0tZ77MIdT+deFAzHdbUzhVnlLOcTyq9fBT2sT7i5jJVg0kjYtrkYPr0x366nES/
ATi69kh1SNLMKAEmIiIiItLExRKWDSURCtLcOFpA90dHeRmBzz4muHIJzvIyohmtOXD2JVR06Yl1aQKA
o/EaGOKrpCAWY1mllxdL0zinqhpMY4NJY2D6DcBu3kh87uuYif8fxq3/
z3LqKAEmIiIiItLEbS6NEk00/+6Prr27CH7yEYEvV2LiMcLtO3HgnGFUtuuYHPld6iTPFaeNs5x/
VnpZEvaxJuJmeKCCrm7NFCmpZVwuHEMuJDH/
byT+8R7OoaNTHZI0I837E1JEREREpAVYW1SJ2wG5gWZ4eZ9I4P3qS9I+
+RDvtk0kXC5CXXsT6tGPWGZWqqNrsrwGBvsq6RKLsSLi4fWyNHq6IwwNVJDusKkOT1ow0z4f07UHiQ//
jqPvmZiclj2On5w6zfATUkRERESk5Yhby/riCB0CbpzNqQoqGiWwegVpy/+Bq3g/
sUAaxf3PJdStD9brS3V0zUauK85IZwVrom5WRzxsKnYz2BdmoK9S3SIlZczZ52J3bCX2t5m4JtyCMY5U
hyTNgBJgIiIiIiJN2LbSKOG4pWNa87i0N+EKgp8uIfjJhzgrQkSyc/nm/
FGE87uBQ1+C64PTQF9PlE6uGJ9WevhH2M+nlV4uDlTQ0x1V71JpcMbnxwwYjP1oIfaLTzF9z0x1SN
IMNNpPydtvvz3VIYiISAPRe76IyMlbWxzBZaB9E+/+6CgtJu2TDwl89jGOaIRw+wL2nzuSSE4Hje/
VQNIdlvP9leyOxfhnxMOcUJD2zhgX+sN00vhg0sBMt57YNauI/+88TK/TMa6m/
R4nqXfcV5Ax5mfAzwAKCgrqPSAREREEakbay3riippH3DhcjTNJJGz6BvSli4ksPoTsJaKgu6UnnYWs
dZtUx1ai5XrijPCWcFXMRdfRDy8WpZGgSvKBf4wea54qsOTFsI4HDgGDCbx3pskln+Ec/
CFqQ5JmrjjJsCstU8DTwMMHDhQoyGKiIiIiDQSO0IxQjFLv2x3qkM5YY6yEtI//
juBVcvAOAh160NZ7zOJp2WmOjQBHAa6uWN0dsXYGHWzOurm5dJ0OrminOOrpJMrpsI8qX8dOkL7fBIfv
Iuj/9kYnz/VEUkT1mhrCB977LFUhyD1TF2eROQgvee3PPoMEDk11hZV4jCQF2y0l/
WHMZFK0j5eQPCfH2HicUKFfSjtezYJfzDVockROA308ETp6o6yPupmbdTNzLI0cpwxBvkq6emO4lQiTO
qJMSZZBTb3dRIfLsA57LJUhyRNWNP5pBQRERERkWrWWtYWRWjnd+FuCt0frcW3bhWZC+fiDJVS3qkHJf
0GE09XxVdT4DLQ2xOlhzvK5piLtVE3c0NBFpgE/bwR+nkiZDoTqQ5TmiGT3RbTtTuJJe/
jOPtcTEarVIckTZSmURERERFJMWPMKGPMWmPMBmPMXUdY7zXGVFq1/
mNjTOca635ZtXytMWa8zXWfE1Rw4b6SSX02Qs6pr5Gh/
BRf4KshwJFgc9vJUSTozS4OsibiJaOAcOcXMmYMgYYkvfCfVoUgT1vg/
LUVERESaMWOME3gCGA5sB5YZY+ZYa1fXaHYDcMBaW2iMGQ88BFxjjDkNGA/
0AToA7xljegDxljegDtgF8Ap1lrK4wxM6vavdBQ5yX1b21RJQbIb8zdH60l8OkSMt+fh3U6KTr7YkLd+oBDv8M
3dcZAnitOnitOKGHYFHXzVczF30JBXFi6uaP08kTp4o7iaQIFitK4mbQMTI/
TsJ8ux144HNMqK9UhSRPUiD8tRURERFqEQcAGa+0mAGPMK8AVQM0E2BXAtKr7rwzMzCt1tpK4Ct
```

jzIaq/W0leZ3nN8ZEgQCwswHORRpIsvtjJTl+J15n40wmOcpKaDX/r/g2ryPcvhMHBg/TOF/
NVNBhOd0boY8nwr6Eg61RN1tiLtZGPTix5LtidHXH6OqOkuVIaPB8OSmmb3/
sutUkFv0d55jvpzocaYKUABMRERFJrTxgW43H24FzjtbGWhszxhQD2VXLlxyybZ61drEx5hGSibAKYL6
1dv6RDm6M+RnwM4CCgoLvfjbSIL4Jx9lfmWBg28bZs9WzZQOt3/wLJhqhaOBFhLqfjrIezZ/
DQI4zQY6zkrMs7I072Rl3sivuZEGFnwUVfoImQb4rVvUXp60zTlMYwk5SzwTTMIU9SaxciuPC4ZgMdaG
WE6MEmIiIiEhqHemr36Ej6BytzRGXG2Nak6wO6wIUAa8ZY35orX3psMbWPg08DTBw4ECN3NNErC2OAI1
w9kdrCaxcTObCucQys9g/
7Epimeqq1BI5DOS64uS64pwJhBKGXXEne+NOtlVVhwE4sbR1JhNhOdW3CXwOvR3J4czpZ2I3fJmcEXL0
uFSHI01MI/vEFBEREWlxtgMdazzO5/
DuigfbbDfGuIBMYP8xtr0U+MpauxfAGDMLOBc4LAEmTdPaokra+JwEXI2o+2M8Rubf/
0Zw1VIq8rpw4NwRWLcn1VFJIxF0WAodMQrdMSCZENsbd3Ig4aAo4WBd1M2qiLe6fbpJkFNVIZbtiJPtT
JDtjPP/
s3fnUXKV573vv0+NXdWjJoTmeQZJSGIeTBgMwgROzsXX2Dk5dsxZvsk1Oc5J7jqxk7VyfLwWSZzr62nF
seMAxjh2sBhiZMxkBjEKTQxCAwIhCSQhNLV67pqf+0dtcNNoQtTUXb/
PWr2q9t7vfvezq3p3vf3U+747qt5idc2aWrDpsym8uJrQxZdhTS3VDkmGECXARERERKprHTDLzKYBeyl
OVv+5QWVWAp8HVgM3AE+4u5vZSuAXZvZtipPgzwLWAgXgPDNLUhwCeTmvInI+XXkc5zoD/
P4lHxExeuEMukGXn/ncR376B7/lK6Fp2vIY9yXI0hpzGUY2qw7A4pNzqChNiRQohD+RA7shH8/
c6uTmuowKhQMRk2OkiKjQrnievXrW7YmUvwN7dReP4pwp/8/
WqHI0OIEmAiIiIiVRTM6XUz8AgQBm53981m9gvbBG4DfhZMct9CX3T0PrDGze
4AXg/
UvEQxzlKFvW0cagElN0SpHUmTpFKPu+wnRd3fTfv6V9E+bW+2QZAgyg4Q5iVCeceTfX5936HGjqxCisx
CiqxCivRBiVy5CYcAo8EYrMDqcZ3Q4z9hwcejlqFBB84sNQ9bSik2bSWH9c4Qu+j0s2VTtkGSIUAJMRE
REpMrc/UHgwUHr/nbA8xTw6WPsewtwy1HW/y/gf5U2UqkF2zoyjIiHaIpWf/ijpfoZdd/tRPe/Q/
uFV5OaPLPaIckwEzZoNac1lGfSgMRYwaE3SIwNTI7tyUXIB4mxMM5p4TzjI3nGR3JMiORoNlfnxGHAzl
yC73iDwtrnCF96VbXDkSFCCTARERERkSGiK5Pnnb4cC0dWf/ij9fcy6t7biR7aT/
vF15CaOK3aIUkdCRk0m9McyjNhUGKs240jwfxih/
MhXk7H2JAuXjNNVmBKNMfkSI7JkSytYU22PxRZ20iYMJnCuucIXXQZFqmNHrFS25QAExEREREZIt4I7v
44sam6zXjLZhj1q58SPbSfw5dcQ3r81KrGI/
Ke0Ps9xn43v1jBoaMQ4lA+zMFCiO3ZCJszxRs0tIXyzIjmmB7NMimSI6LeYUNGaMEiCo/
+Gt+4AVtyXrXDkSFACTARERERkSFiW0ea1liI1li4ekEUCrQ9+Eui+3bTfrGSX1L7QgYjwwVGhgvMpjj
hfmchxIF8mHfz4fd7iEVwpkZzzI5mmBnN0RBS77CadvoEGDma/
OqnsLPOwaz6w8KltikBJiIiIiIyBPRlC+/zuyTF/
RKx6QbjTsuoBEm9uoWPPpaJaheLCKnyAzawgVmZG+zN5N9r8OOv1
LB4fhUhJcDkBJQAExEREZArYeSdMcDdEWq84wn/
jObbQ8/
SB9k2fSddZVKSkjH4xqVVYV5+H2Dx4Xe4Yt8CuMAXQZZ20iYMJnCuucIXXQZFqmNHrFS25QAExEREZIt4I7v

jzIaq/W0leZ3nN8ZEgQCwswHORRpIsvtjJTl+J15n40wmOcpKaDX/r/g2ryPcvhMHBg/TOF/
NVNBhOd0boY8nwr6Eg61RN1tiLtZGPTix5LtidHXH6OqOkuVIaPB8OSmmb3/
sutUkFv0d55jvpzocaYKUABMRERFJrTxgW43H24FzjtbGWhszxhQD2VXLlxyybZ61drEx5hGSibAKYL6
1dv6RDm6M+RnwM4CCgoLvfjbSIL4Jx9lfmWBg28bZs9WzZQOt3/wLJhqhaOBFhLqfjrIezZ/
DQI4zQY6zkrMs7I072Rl3sivuZEGFnwUVfoImQb4rVvUXp60zTlMYwk5SzwTTMIU9SaxciuPC4ZgMdaG
WE6MEmIiIiEhqHemr36Ej6BytzRGXG2Nak6wO6wIUAa8ZY35orX3psMbWPg08DTBw4ECN3NNErC2OAI1
w9kdrCaxcTObCucQys9g/
7Epimeqq1BI5DOS64uS64pwJhBKGXXEne+NOtlVVhwE4sbR1JhNhOdW3CXwOvR3J4czpZ2I3fJmcEXL0
uFSHI01MI/vEFBEREWlxtgMdazzO5/
DuigfbbDfGuIBMYP8xtr0U+MpauxfAGDMLOBc4LAEmTdPaokra+JwEXI2o+2M8Rubf/
0Zw1VIq8rpw4NwRWLcn1VFJIxF0WAodMQrdMSCZENsbd3Ig4aAo4WBd1M2qiLe6fbpJkFNVIZbtiJPtT
JDtjPP/

```
6mxhdX+clOYJOyGbNhNicQrrnq12KFJDlAATERERqa4JwO4By3uCdUct4+45oBMYdZx9pwMHgZ+Y2Utm
dquZNR7t4Gb2JTNbb2brDx48WIrzkRLY3J4mbDCpEnd/
zOdpffxX5Bqb6T7j7PIfT0ROSshgajBP2KUN/
bSGCjyTSvCjYML8XiXCjskiUWzmXPy1TXh3Z7XDkRqhBJiIiIhIdR3tP5jBA12OVeZY6yPAEuCH7n4W0
At8aG4xAHf/sbsvc/dlY8aMOfmopWzyBWfLkTQTGiNEQ+X/
B7fpxWeJHj5A59JP4JHK9DgTkZNnBqdH8nwikeKqRB9jIzleSMX5l84WHu9L6M6Rx2BzFkChQGHDC9UO
RWqEEmAiIiIi1bUHmDRgeSLwzrHKmFkEaAXaj7PvHmCPu68J1t9DMSEmQ8CO7gypvDOtAsMfQz1dNL3w
BP0Tp5GaOK3sxxORj2dEuMCFDWmuSfYxKZLjxXSMH3e28FBvgva8/r0fyFpaYcJkChtW4/
l8tcORGqArRERERKS61gGzzGyamcUoTmq/clCZlcDng+c3AE948dZWK4Ebg7tETgNmAWvd/
V1gt5nNCfa5HNhS7hOR0tjUnqYhbJyejJT9UOVZKQAAIABJREFUWC3PPYrl83QuubjsxxKR0mkJOec2p
Lk22ceMaJbNmRi3dTXz654kh5UIe19o7hnQ042/9mq1Q5EaUP5PVRERERE5JnfPmdnNwCNAGLjd3Teb2
TeA9e6+kuJk9j8zs+0Ue37dGOy72cxWUExu5YAvu/t7X3P/GfDzIKm2A/
jjip6YnJJUrsD2zgwzWmKEynwnxuj+vSQ2b6Bn3hLyTa1lPZaIlEdjyFkazzA/
mmVbNsob2SivZaMsiGW4oCFNW7hQ7RCra/wkaGohv/
Y5QgsWVzsaqTIlwERERESqzN0fBB4ctO5vBzxPAZ8+xr63ALccZf3LwLLSRirltq0jQ94p/
90f3WlZ9QCFeEIT34sMA4mQszieYW40y9ZslC2ZGFsyMRbGM5zfkKI5NHhqyfpgoRA2Zz6+4QX8wD7st
HHVDkmqSH0jRURERERqxKb2FC3RECPj5W2mN7yxmfjeXXQtOg+Pxsp6LBGpnIaQc1Y8w7XJPqZHcrwSz
BH2RF/
93jXSZs6DcJjCuuerHYpUmRJgIiIiIiI1oDOTZ3dvjinNUaycwx9zWVqefpBs2yj6ps8v33FEpGqSIWd
ZQ5pPBZPlb0jH+XFnC8/0N5Cus85g1tCATZ1JYeN6PJ2qdjhSRUqAiYiIiIjUgFcPp4HyD39sfGk1ka4
jxYnvQ/p3QGQ4awo55zWkWZ7s4/
RIjtWpBv61s4WX0zEKdZQIszkLIJOhsPHFaociVaRPPBERERGRKiu4s/
FwitMTEZqi5WuiW6qf5rVPkho3hfTpk8p2HBGpLS0h58KGNFcm+mi0Ao/
2JflJVzM7s3UyLfjo02DUGArrnqN4E2WpR0qAiYiIiIhU2VvdWbqyBWa0lrf3V9O6p7B0is7F55f1OCJ
Sm0aFC1yWSHFhQz9pN+7uaWJFdyMH88M7NWBmxV5gB9/
F395Z7XCkSob3b7mIiIiIyBDwyuEU8ZAxobF8vTFCPV00vvQ8/VPnkBsxpmzHEZHaZgaTInmWJ/
tYHEvzTi7CHV3NPNKbGNYT5du0mRCLU1j/XLVDkSpRAkxERERERepIr6sgVe78wwtTlKuIyT3ze/
8DhWyNO18NyyHUNEho6wwdxYlk819jIrmmVjJsa/drawLhUnPwxHCVokis2cg295Fe/
pqnY4UgU1NeD3u9/9brVDEBERkQrQZ77I72w6kqbgMKOlfMMfw0cOkXx1Hb2zziTf1Fq244jI0BM3WBL
PMDOa5aV0nCf7E7yajnFFso/
J0Xy1wyspm70A37KRwotrCV9yRbXDkQpTDzARERERkSpxd145lGJ0Q5jWeLhsx2l57lE8HKF7wdllO4a
IDG0tIeeShhQXNfTT78ZdPc38uidJ9zAaFmmtbTB+IoUNq/
HC8EruyYkpASYiIiIiUiV7e3McTueZXsbeX9H9e0m8/
io9cxdTSCTLdhwRGfrMYGIwP9iCaIZt2Si3drawdhgNiwzNOQO6OvDXt1Y7FKkwJcBERERERKrklcMpI
gaTm8qXAGt+5mHy8QZ65i0p2zFEZHiJGJwZz7A82ceYcJ5V/
Qnu6GrmrWxNzaJ0aiZOgcYmCus0GX69UQJMRERERKQK0vkCW4+kmdIcJRoqzxCj2NvbaXh7O90LluHRW
FmOISLDV3PIuSSR4uKGflJu/LKniQd7k/
QP4WGRFgphs+bjO17HDx+sdjhSQUqAiYiIiIhUwab2NDmHGS1lSky50/
LMw+Qam+mddWZ5jiEidWFCMCxyfjTD5kyUW7ua2ZyO4kN0WKTNngehEIX1q6sdilSQEmAiIiIiIhXm7m
w4mGJUPMyohvJMft/wxiZi+/fSfea5EB4Gw5ZEpKoiBgvjGa5K9JM05zd9jdzd00hHfuilFSyRxCZPp/
DyWjybqXY4UiFD7zdVRERERGSI29WdpT2dZ3ZbmXp/
FfK0PPco2daR9E2dU55jiEhdagsXuDzRz9JYmr25CLd3NbNmCE6Sb3MWQKof3/
RytUORClECTERERESkwtYf7KchbExqKk/
PrOSmDUSOHKJr0fkQUpNfREorZDArlmV5so+x4TxP9Se4s6uZfbny9Ggti7HjoG0keU2GXzf0aSgiIiI
iUkFH0nne7MoysyVK2MowkXQ2S/Pqx0iPPp3UhGmlr19EJJAMORcnUlzU0E+PG//
W3cTjfQ1khkBvMDMr9gLbt4fCnreqHY5UgBJgIiIiIlVmZleb2TYz225mXz3K9riZ/
TLYvsbMpg7Y9rVg/TYzu2rQfmEze8nMHij/
WcjJ2nCwnxAws7U8wx8bX15NuLebrsUXQDkSbCIig0wMJsmfEc2yIR3nts4W3szW/
tyDNmM2RGMU1j5T7VCkApQAExEREakiMwsDPwCWA/OBz5rZ/EHFbgKOuPtM4DvAN4N95wPXAuNAguAq4F/
Dup7z1eAreU9A/
ko0vkCGw+nmdQUIREpfVPcUv00r11FavwUMqdNKHn9IiLHEjNYFs9wRaKfkDn39jRxf0+S3kLtJuItGs
NmzcM3v4J3dVY7HCkzJcBEREREquscYLu773D3DHAvsGJQmRXAT8Hn/gMcNM1NpuBlm/
L3dPuvhPYHtSHmU0EPgXcWoFzkJO0qT1Npb/
y+af3ThNL9dC46vyz1i4icyOhwgU8m+jkzluaNbJTbuprZkoniNTos0uaeAe4UNBfYsKcEmIiIiEh1TQ
B2D1jeE6w7ahl3zwGdwKgT7Ptd4Ce/+ZGbrzWz9wYMHT/
Uc5CS4OxsOphgVDzO6ofRDg0I9XTS+
+Bx9U2aTGzGm5PWLiJyssMGCWJarkn00mvNAbyP39TTSXYO9way5BSZNpbDheTybqXY4UkZKgImIiIhU
19H+Gxj8Pfmxyhx1vZldCxri7/9jdl7n7sjFjlDQppx1dWdrTeWa1RctSf/
OaJ7B8nq6F55WlfhGRj6o15Fye6GdxLM2uXITbOlt4NR2rud5gofkLob+fwisn/
NiUIUwJMBEREZHq2gNMGrA8EXjnWGXMLAAkD0Au3H2fdC4Doz20VxSOVlZvZv5QheTt7q/
X0kI8bkptInwMJHDpF8dR29MxeQb24tef0iIqcqZDA3luXqZB+toTwP9SW5u6eRrlrqDXbaOBg1hsILT
+N+3I7TMoQpASYiIiJSXeuAWWY2zcFCe1XzmozErg88HG4AAn3N2D9TcGd4mcBswC1rr719x9ortPD
ep7wt3/SyVORo7u7Z4se3pzzGuGuLEy7DnRmbn/
8tHgrRfcbZJa9bRKQUmkPOZYn+kUNBnF43AiIiUkXBnF43A4
```

9QvGPjCnffbGbfMLPrgmK3AaPMbDvwF8BXg303AyuALcDDwJfdPV/pc5ATW/1uHw1hY3pL6Xt/
RQ68Q3LbRnrmLKaQaCx5/SIipWIGs4LeYCPDeX7bl+SXPY0cyVc/
NWFTZ0IiSeGFp6sdipRJ6WffFBEREZGPxN0fBB4ctO5vBzxPAZ8+xr63ALccp+5VwKpSxCmnZl9flp3d
WRaNihMJlb73V8uzj1CINdAzb0nJ6xYRKYemkHNpQ4oduQgvp+P8pKuZSxL9LIlnKMOfyZNi4TA29wz8
pbX4u+9gp4+vTiBSNtVPs4qIiIiIDGOr3+0nGoJZrbGS1x3bvYOGXa/
TvWApHouXvH4RkXIxgxnRHMuTfYwJ53miP8kvups4XMXeYDb3DIjGyD/
3eNVikPJRAkxEREREpEwO9ed4vTPD7NYY0VJ3a3Cn5ZmHySeb6Jm1sLR1i4hUSDLkXNKQ4tx4ikP5MHd
0NbMmFadQhbnBLBbHZs/HN7+Ctx+qfABSVkqAiYiIiIiUyer9/
UQM5rSVvvdXw5tbiL27m64zzoGIZjYRkaHLDKYFvcHGhfM81Z/gZ91NHKxCbzCbvxAsROH5VRU/
tpSXEmAiIiIiImVwJJ1ny5E0M1pixMMlbnYX8jQ/
+wjZlhH0TZ9X2rpFRKokEXIubEhxQTxFRyHET7uaWd1f2d5glmzEZs6h8PJavLurcgeWslMCTEREREESk
DJ7Z10fIYO6I0vf+Sm5cS7T9IF2LzoeQmvQiMnyYweSgN9jESI5nUpXvDWYLFkOhoDtCDjP6tBQREREER
KbF3+3JsOZJmTluMZKS0TW5L9
dP8/GOkT5tAauL0ktYtIlIrGgwuaEhzYUN/
xXuDWUsrNmUGhfXP46n+8h9QKkIJMBERERGREnJ3ntzbSzxkzGsr/
Z0Zm9c8SSjVR+eSi4tdJUREhrFJkTzLk31MGNAb7FAFeoPZmWdBJk1hzTNlP5ZUhhJgIiIiIiIltLM7y
1s9WeaPjBELlzZBFe44TONLz9M3fR7ZkWNKWreISK1qMLiwIc0FA3qDvVDm3mA2cjRMmkZh9Sq8v698B
5KKUQJMREREREKRE3J1Ve3tpjBizWks/91fL0w/hoVBx7i8RkTozOZJneaKf8eEcT6cS/
FuZe4OFFp8N6bTuCDlMKAEmIiIiIlIim4+kOZDKs3BUA+ESD0+M7d5BYvtmeuYvpZBoLGndIiJDRUPIu
TCR5oJ4iiNBb7A1qfL0BrORo7CpMymseRrv6S79AaSilAATEREREESmBXMF5+p0+RsZDTGmKlLbyfJ7WJ
1aSa2yme+5Zpa1bRGQImhzNsTzRz7hwjqf6E/
y8u4nDZegNZovPhlyOwrOPl7xuqSwlwEREREREESmDNgX66sgUWjWrAStz7q/Gl54ke3k/
n0ksgUuLkmojIENUQci5sSHN+PEV7IcQdZegNZq1t2Iw5xTtCdh4pXcVScUqAiYiIiIh8TO2pPM+/
28fkpginJ0uboAp1d9K8+jH6x08lNWFaSesWERnqzGBKmXuD2aJl4E7h6cdKVqdUnhJgIiIiIiIfg7vz
8O5uQgZLRjeUvP7WVQ9ghQKdyy4p/qcnIiIfMrA32OF8uKS9waypGZs9n8LLa/
FD+z9+hVIVSoCJiIiIiHwMm9rTvN2TY/GoBhKR0jav4zu3kXhjE10LlpFvai1p3SIiw837vcGSfe/
3BvtFiXqD2cKlEImQf+hXuJdhxn0pOyXAREREREROUV+uwON7exndEGZGS7S0lWeztD6xkmxzGz3zlpS
2bhGRYSwR9AY7L57iUNAbbO3H7A1miSS26Gx8x+v465tLF6xUjBJgIiIiIlVmZleb2TYz225mXz3K9ri
Z/TLYvsbMpg7Y9rVg/
TYzuypYN8nMnjSzrWa22cy+UrmzqS9P7O0lnXfOHlP6ie9bnn+USGc7HWdfCuFwSesWERnuzGBq0Bvs9
HCOVUFvsPaP0RvM5i6AthHkH74fz2VLGK1UghJgIiIiIlVkZmHgB8ByYD7wWTObP6jYTcARd58JfAf4Z
rDvfOBGYAFwNfDPQX054C/
dfR5wHvDlo9QpH9OOrgyb2tPMGxGjLV7aBFVsz04aNzxLz6wzyZw+qaR1i4jUk0TIuWhAb7CfdDWz7hR
7g1koTOjsi6CjncLqp0ofrJSVEmAiIiIi1XUOsN3dd7h7BrgLuH5QmeuBnwbP7wEut2J3o+uBu9w97e4
7ge3AOe6+z91fBHD3bmArMKEC51I3erIFHnirm9ZYiAUj4iWt27IZ2h65h3xTC12LLyhp3SIi9eiDvcH
yPNmf4N9PsTeYjZ8Ik6dReOYxvKujDNFKuSgBJiIiIlJdE4DdA5b38OFk1ftl3D0HdAKjTmbfYLjkWcC
aox3czL5kZuvNbP3BgwdP+STqibvz613dpPPOhWMTREKlHfrY/
MzDRDrbOXLuFXg0VtK6RUTqWbE3WIpz4ykOfozeYKFlF0ChQP6R+8sTqJSFEmAiIiIi1XW07Mngpvixy
hx3XzNrAu4F/tzdu452cHf/sbsvc/dlY8aMOcmQ69sL+/
t5qyfL0tENtJZ66OPbb9L08mp65iwiM1ad9kRESs0MpgW9wcYO6A125CP0BrPmFmzhUnzLRgqbXipjtF
JKSoCJiIiIVNceYOAkTxOBd45VxswSg+/
ryyR16G9vVme3tfH5KYI00t818dQXw8jHl5BrrmNrkXnl7RuERH5oETIuXhQb7D1qdhJ9wazM86C0aeR
f/
A+vOeo3zFJjYlUOwARgDd+8b1qhyBVpPdfROrcOmCWmU0D9lKc1P5zg8qsBD4PrAZuAJ5wdzezlcAvzO
zbwHhgFrA2mB/sNmCru3+7Qucx7PXnCty/s5vGiHH2mERp7/pYKND20ApCfb0c/OSn8Uhpk2siIvJh7/
UGGxvOsz4d54n+JFsyMT6Z7Of0SP74+4ZChC68jMIDd5P/9T2Eb/
zjkt8NWEpLPcBEREREqiiY0+tm4BGKk9WvcPfNZvYNM7suKHYbMMrMtgN/AXwt2HczsALYAjwMfNnd8
AXw12HczsALYAjwMfNnd88CFwB8Bl5nZy8HPNRU9sWEmV3Du29FFT67ABacniYVL+09O05onaHjrDTqW
fYLsSA1FFRGppGTQG+y8eIqOQoifdTfxeF+C9Al6g1nbCOysc/DXN+MbN1QmWDll6gEmIiIiUmXu/
iDw4KB1fzvgeQr49DH2vQW4ZdC6Zzn6/
GByCtyd37zVze7eHOePTTCqobTzfsV3vU7z6sfpmzaXvhnzS1q3iIicnPfuFDk+kmNjJsaGdIxtmSiXJ
/uZHc1yrM5dNm8h/vYu8g/9BzZ1BtY6oqJxy8lTAkyq5rvf/
W61QxARERERE5oaf29bG1I8OiUXGmNpd2aGK4q4O2B39Jrm0UHXaWfjyjH/
wxIRkYqIGSyLZ5gWybE+Hef/6kamRrKcG8+EymhPRsgE+62bqmbvdKsqnXdwrqb3wQ4UM7QRkZfg/
zkqI9ASEn3igGXOVARMKYCzi7ALhHldQg1rpE4dtiwWuiZSbOrMlSaE4fz7wZ/SAvZVYhvKTZpEMUMgUUgWaB9Wvmn1G8aj63LAKg9wHFYoP0fT1jqaGoU/
sqUPOeJeLsyezlY7Xgqm6I9SfrpxoPgLk25pjD2VgxxzBMUSUuYPhTsc+jz2unrXTkB/FDl6tl3p0bI4+fVRq/
+zV30evDAhGEGSsBUOYW0RL5e4JqvsGVkoq9Qb5FeMK+ht7kp4sMsVDOiqxQqfD5R0wKKKwsyl+lC0OeNG54SE8Eks+LU+LaDHBMgbj7KxZxFx+oy3qqAq3lqRiizD5HkSD2EwSQhKN3zpKJfODSKrixe7Hk0Bq6g8O0Fo4L7Dwr+tuhcC4AbKe1BvqSEWMG9m5eTr7zmmGQlWNDDqCDkmY6gKn0gj1izPE/bmsrXV6EHq4Ui4PTM8+Oz/+k/
KwgB3VRHS6q5Pgvfn6/8Dw==

```
dXO1xBCTARERERqXOHUznufL2DzUfSnDkyzrmnNZR2zq9clhEP/ILkay/
Tueh8uhZfCKWsX0REqqYx5JzbkObqZB9jIzleSMX5l84WnoqMpf/
K66FQIPfTH+KHlASrNiXARERERKRubTmS5o5tHfRkC/ze+CRnjIyX9G6Poe4ORt/
9ryTe3ELH0kvoWbCsZHWLiEjtaA05FzakWZ7sY3wkx7p0nB/
7ZB6/8gu0x5vI3fp9Cm9uq3aYdS1S7QBERERERCqtJ1vgib29bDmSZkxDmAtOT5CMlPa74fhbb9D2m7u
wXJbDFy0nNXlmSesXEZHa0xpyzm9Is6CQYWsmxsZcCy9f9AWmH36LpQ8/
wpSl+wmfe3FJv2yRk6MEmIiIiIjUjYI7Lx1K8dQ7feTcOWNEjAUj46Ud8ljI07R2Fc3PP0audSTtV/
xnci0jSle/
iIjUvJZgaOSiQoY3slG2j5rEjgs+x8juQyx8cjVnnncWjclEtcOsK0qAiYiIiMiw5+681Z3lyXd62d+f
5/REhGVj4jTHwiU9TvSdt2l7/
FdED+6jb+ocOs75PTwSLekxRERk6GgIOWfGM8yLZXg7G+ataIRVzbN5ZmsXs2LtnDF5DNNaoqW98Yocl
RJgIiIiIjJsuTvbuzI8/24/+/
pyJCPGBWMTTG6KlHT4ifX30fLcIyQ3rqWQbCoOeZw0Q5Pdi4gIABGD6bE800dH6D24i7cPd7PttJm8tq
OLhhDMHdHAvBExJjVFS9srWd6nBJiIiIiIDDupXIGtHWlePJjiYCpPU8Q4e0xDyb9lD/
X10PjiczS+vBrLZuiZu5juM8/
Fo7GSHUNERIaXxjGjmTeyjaWbnqP9UAevTVrApvxsXj6coiFszGiJMbM1xrSWKA1h3buwVJQAExEREZF
hIV9wdnVn2dSe4vXODHmH1liI805rYEpzab9Rjxw+QHLjGpKvrsNyWfonz6T7jLPJtY0u2TFERGQYC0f
oW3QeTR2HuezVtXzypd/
w5vg5vD7nXLYXxrD5SJoQMK4xwpSmKJObo0xojBINqXfYqVICTERERESGrK5Mnh1dWd7syrCrO0O2ALG
QMb0lyvTmGCPioZINdQz1dJHYtpHE1peIHXgHtxB90+bQM3+pJrkXEZFTkmsbRfvFy4l0HGbypnXMeew
2HOOtOcvYPuMs9mZHs3p/
juf39xM2OC0RYXxjhPHJCOOS0ZJ+zg13SoCJiIiIyJDQnytwMJVnX2+WfX059vbm6M4WAGiMGFOaooxL
RhjXGCnJMEdL9RPb9zbxt94g/
vZ2oof2A5AZeRodSy6mf8psConkxz6OiIhIrm0URy66mq6eC0ju2sakna8xbds6PBSmZ8J03pq+kN2jJ
nOokOSVQyk2eHG/
aAhGN0QY0xBmTCLCyHiYEfEwrbEQYfUW+wAlwERERESqzMyuBr4HhIFb3f0fBm2PA3cCS4HDwGfcfVew
7WvATUAe+O/u/sjJ1FlrCu6k805/zunK5unOFOjOFujM5DmcynM4nac/5+
+Xb4oYIxvCzGwtJr1aoqf4Dbg7of5ewh3tRDrbCXccJnpwH9EDe4l0dRSLhMKkx4yjb9H5pCZOJ9c6sl
SnLSIi8gH5pha6zzib7gXLiB16l4Y9O4jv380ZT93LGQSfSaNP5+CEmewbPYlDiREcySTYlgqzsT39fj
0GNMdCtERDNEVDNEZDNEWKz5sGrGsIW91Muq8EmIiIiEgVmVkY+AFwJbAHWGdmK919y4BiNwFH3H2mmd
0IfBP4jJnNB24EFgDjgcfMbHawz4nqdJ551U3knlCsXHvJMp+FH3aQgbzdEQ45MRmqMhWm
MhRjaEjzspcGzvLqIH3sGyWSyXGfSYxTJpQn09hPt6CPX1YoX8B/
bPNbeRGTGa3mnzyI46jfTo8RBRs1lERCrIjMyYcWTGjAMglOondmAPscMHiB45xPgta5mUfur94g70No
+kfcTpHGk9jY6mkXTGm+mNJng3EqcvHCMTOvpnWcQgHjZiYSMeMuLh0PvLETNCBmGDsBmhUPExbLyfOH
P392MoLv/u+YyWGGOTtfEZWhtRiIiIiNSvc4Dt7r4DwMzuAq4HHBiarrge+Hjy/B
gnK3Z3uh64y93TwE4z2x7Ux0nUWnUWXFdmQI7u7JEw8V5uuIRoyUWIha24nLYiIVDNEaMxmiIxkiIyCkM30
hs30zDhmffX/ZIFI9E8EgU3nvekCTXOgJvSFJobCbf3EqhpY1CUwtEou/
vGwY0yFFERKouEYcRbeSAHNDvjqX6CHV3EuruJNzdSaSvh9NT/
Yw79CahPZsgl8XyOSyXg1yWnIXpaWiiN97IkTPPpXPWIjIFJ1twMvniY7bgpPIFurJONg8FnLwXe2oXH
z9a2I3R0NBMgG3YsOGQmb1VrmACo4FDZT6GnBq9N7VL703t0ntTu/
Te1K5SvzdTSlhXOUwAdg9Y3gOce6wy7p4zs05gVLD+hUH7Tgien6hOAMzsS8CXgsUeM9t2CucwFOia12
tQ7+cPeg1ArwHoNQC9BlCh1+Br5T5A0Um19T5SAszdx5xaLCfPzNa7+7JyH0c+Or03tUvvTe3Se1O79N
7Urjp8b47WxWnw96vHKnOs9UcbH3jU72zd/cfAj48X4HBQh79XH1Lvr0G9nz/
oNQC9BqDXAPQaQH2+BseePEFEREREKmEPMGnA8kTgnWOVMbMI0Aq0H2ffk6lTREREpG4oASYiIiJSXeu
AWWY2zcxiFCe1XzmozErg88HHzG4AnvDjj7ErgRjOLm9k0YBaw9iTrFBEREakbtTET2QcN+y74Q5jem9q
l96Z26b2pXXpvalddvTfBnF43A49QnHP9dnffbGbfANa7+0rgNuBnwST8tT37RQTWgTlVlCc3D4HfNnd8wB
Hq7PS51Zj6ur36hjq/TWo9/
MHvQag1wD0GoBeA6jD18Deu12liIiIiIiIiIjIcKQhkCIiIiIiIiMqwpASYiIiIiIiIsNaTSXAzO
xqM9tmZtvN7KvVjqdemdkkM3M3vSzLaa2WYz+0qwfS/
dbM3ggeR1Q71nplZmEze8nlZmEze8nMHgiWp5nZmuC9+WUw4bFUmJm2mdk9Zva6mW0N/gjZvZcP2cr+umNpjZ/
wj+nm0ys383swZdN9VhZreb2QEz2zRg3VGvEyv6ftAu2GhmS6oXTM6v4zsWYSYGYWBn4ALAfm
A581s/nVjapu5YC/dPd5wHnAl4PX4KvA4+4+C3g8WJbqbq+AqwdcDyN4HvBO/
NEeCmqkQl3wMedve5wCKK75Gumyoys3EULDy3/Bc6YbYpeAAAgAElEQVRw94XA68DXAIJ2zY3AAoq/j/
8ctEWHnTpuY6s9W1TvbcaBbpvVcRvoDtTWuIMPvwZ1/5lYMwkw4Bxgu7vvcPcMcBdwfZVjqjvuvtfdXwzudwF
dXwyed1P8oJhA8f34aVDsp8DHqhOhAJjZROAjwI+C5QZcD7NlAJD2DPn7Ps1jHRnOZTQF/Vm6uv6HlBm2SVXeu+ZJ8HVcft
2XpvM9Z920xtoA9QW+OD6vIzsZYSYHaUdV7xKOR9V7wxoFb7hsGrj5KUV07lRcl9RcB
lgA/dPezgF6GcZf6oSSY4+F6YBowHmik8ZG6bwT/
```

ziF/nOd77D1q1bWb9+fbVDG9aUABMRERERqSOFF1+AeAM2Zdoxy1gsDhMmU9j8Ml4oVDA6EZHyMDP+
+q//mpUrV/Lqq68et+zbb7/
NjTfeyMiRI0kmk1x11VVs27btQ2WWL19OIpFg2rRp3HHHHac8nHLRokUA7N69+yPH8fd///
fMnDmThoYGxo4dy9VXX827774LwKpVqzAzHn30Ua699loaGxuZPHkyP/
rRjz4Uw4oVKzjzzDOJx+NMmjSJv/mbvyGXy72//
Y477sDMePXVV7nyyitpbGxk7ty53HfffR+o59lnn+Xiiy+mpaWFlpYWFi9ezN133/2BMrfeeisLFiwgH
o8zZcoU/vEf//Ejv2anQgkwERERERZE64T3d+GubsBlzsPDx74cVmjYLervxt96sUHQiIuX16U9/
mtmzZx+3F1h7ezsXXXQR27Zt40c/+hErVqygt7eXK664gv7+fgDcneuuu46tW7dy++238+1vf5vvf//
7rFmz5pTievvt4nDzadN+98XEycRx55138nd/93f8xV/8BY888gg//OEPmTlzJr29vR+o/
6abbmLhwoXcd999LF++nD/90z/lgQceeH/7o48+ymc+8xmWLFnC/fffz5/92Z/
xrW99i5tvvvlDsX7uc5/juuu4z/+4z+YNWsWN954I3v27AGgq6uLa6+9lunTp3Pvvff+/
+zdeXxU5d3//9d1ZsskJAESEpawOwoWJMiuFQLsmhd0LsqWv21alul2ip4/
ywuqFirtdpbW2lr1VK1eFep1S/eiEJpXW6/ggjUigICokDClgUIZJ851/
ePTMYEEkggycwk7+fjkc6Zc67lcwZqyCfX9Tm8/PLLXHPNNezbty/a/
5FHHmH69OlMnTqVRYsWMX36dGbPns3cuXOP6bNrCT0FUkRERESkk3A/
Xg2uixnS9PbHqJz+4PPhrv1XbTJMRCQi/Ob/we7aEZO5Tc/eeKZMPaa9Ysrr/
+eu6//36GDBlyWJvHnuMsrIyPvroI7p37w7AGWecwYABAA5g3bx433XQTixcv5t//
jcffPABY8bMnjyZLVu1m0aBE33ngjGzduZP/+/
cydO5fU1FQAJk2aFO1vbWlrKnDlzuPvuu7n33nsBmDhxIuXl5TzwwANMnz4dj8fTrM/
vWCRUAuzWW2/NdQQiUY8ExERFpEfvFJujaHZPe7ahtjdeL6XsCdv3H2G9detQVVYyIiieDqq69mzpw5PPTQ/
zpT3867PqyZcuYOHEiaQ4cOHvcqy1fj8/
nisQxARERFpEfvFJujaHZPe7ahtjdeL6XsCdv3H2G9detQVVYyIiieDqq69mzpw5PPTQQ/
zpT3867PqyZcuYOHEiaWlp0S2Aqamp5ObmRmt0ffjhh/Ts2bNVBwqpPnz7k5uY2K4bVq1fj8/
mi7wcOHMhbb73V4jhOOeUU/vjHP3LvvffyrW99i9zc3EYTSJdcckmD95deeik/
+clPCIfDAKxZs+awn2+vuOIKfvrTn7J8+XIuu+yy6Pn6Ca2MjAyysrKiK8BOPPPFEunTpwlVXXcX3v/
99zj77bLp2/ephK8uXL6esrIzLLruswfbK69+/fjE/
w2Oi7mIiIiIhIJ2Cti93+Jab/wGb3MScMwm7ZiN38GWboyDaMTkQSybGuwIoHXq+X22+/nZ/
85Cfcd999h10vKipixYXoVvPTSS4ddmzBhBsAGC7du2iR48eh13Lzc2lT3QdNKTnD05OJi8
vD4Bx48ZRWVnJPffw8ZMzttNOaHYfjOMyYMZM2awfft2awfft2XnjhBe666y/
Z8+eBv337NmD1+slMzMAJ/
Pd1ib3bt3R+NoiXHjxvHmm29SUVHBsmXLmDlzJlddddRUrVqyIjrVo0aLDEm4AQ4cObdFcLZWwCbDBV90
S6xCOy6b//nX0ONHvpTOp/+cmIiIikkjcbV8CYLJ6NbuP8Xhh4AkKMOCWrFPQ5YvXo1Z5xxRovj/17/
5I477iA3fBdsQJEyawMECRo4cSTAYbLT/17/+debMmcPKlSuj2yALCgpYvXo1Z5xxRovjue222/
jNb37gwWPP3iqK9v377MmjWLP/3pT6xbt67BtVdffZfZXzzjuvfv62yVzc3P561//
yvTp06NtFixYYgOM4jBs5Da5FgwGGTHjh1861vfOqZxt1fTGN7lxPvfqQzxj4e+g4mIiIiIdz
dAJ2+xeQFITUtBb1M737Yjeuw+7Yjeul7wtE7iIgkgkgBtuuIEHwdhjRdhhnEEHzOSyoooL
x48fz4x//mD59+mRS+jTmzZoW5ZZtCXAHDDTfQxCYTfQvXt3o4dS
p6Om+99RabNm06bGXbG2+8Eu133cXZ5/NK6+8+8wxeuQQqcdeXXXYZK1as4Nprr2Xq1Km8/fbb
PBb2OYuFg3X4MPVqpiPqiWbGRxXHBAZkWLZBxHAvr2OZZDbpZz8ttfvW09J+XP5nWV0d0Vq2lKwUm9IO
+y7XXnst559559OmKNlbb/A3T26wPaz1zgdLCKhRWLDMASrK9CdHdDz2dtt3l+ZbgteIrpPmyx/wpH9qDd
rmQUgiySDFaasHs2KXfS2DjwNZpD/98NhBuc9tmv/EA/99pyGXbdMmCm8ry6b4V
gVk9MBEnvjVYvXrgCkBJiLCtddey7XXXhvrMI6o6uIN7MOqKcEXERERERerREenAbE0N7Cw45u2PACYpC
bplqBC+iIgkLCXARERERERERQ6MLtjO7hhTI9jT4BBpA7Y9i+w4VArRSYItJ+lAATEREREREREEenA6grgcxwrw
KC2Dhg1NbUJNRERkQSjBJiSdmt38JaV0xScHjG6h+HTAREZEEEowSYIiIi
akOmIiIJDIlwEREREREREEOihbWQEH9kPXjFYZT3XAREQkUSkBJiIiIiLSQdk9uwAwSg3n56KOPmDBQLb5XxR
ETaw3333YcJvM//uM/
oPPP2/7Fa3f+973ovM6jkjNOTg5XXAe1iLSPT9PR0li9fzUW0+97Bhw1iXbRM0OaZAI4EhHb2L3bRhtbqbF2tDlNRWGc8kp0BKF2zBtlYZT0SkvXi9/
Tbnn38+1dXbT63fMUb6wBERERERKRt2D27wOeDrt2b3cRdvwbnn0L2fhs60XUNE2AiIiIiIhI52J
T6JDh8lyrPUYxHu0FXRnxr8c5T1A7ODaMNm8oB+hvlrHKTT7jaXrLFj

```
devH2eddRaLFy/msssua9O5U1JSonOffvrpJCcnc+WVV7Jq1SpOP/
30Np1bvqIVYCIiIiIiHZTdsxPSu2OMab1BM7O0AkxEEl5ubi5Ag62ICxYs4OSTTyYQCNC3b1/
uuusuQqGvah7u27eP73//+/Tu3ZukpCT69evHD37wgxbPPXr0aAC2b9/
e4Py2bduYNm0a3bt3Jzk5mcmTJ/
PZZ581aPPQQw8xaNAgkpKSyM7OZsqUKezaVbva9+2338YYw9KlS7ngggtISUmhX79+PPnkk4fFcLR7ff
bZZzHGsHbtWiZOnEhKSgrDhg3jlVdeaTDOe++9x1lnnUVaWhppaWmccsop/
PWvf23Q5plnnmHkyJEEAgH69+/PL3/5yxZ/
Zq1BCTAREREkQ7K7tmNaa3tjxEmMxv278WWHWjVcUVE2lNd4qtnz54ALF26lCuuuIJTTz2VhQsX8uMf
/5hHH32Um2+
+Odpn5syZvPfeezz22GMsWbKEBx988JPPPPvuMJ598kgULFlBWVsa
5555LRUUFAM8//
zwPPvggM2fOZMmSJfz+979n0KBBh23jvP766xk1ahSvvPIK5513HtOnT2fRokXR68251zpXXXUF110E
a+++iqDBw9m2rRp5OfX1oEsLS3lggsuYODAgfztb3/j5Zdf5pprrmHfvn3R/
o888gjTp09n6tSpLFq0iOnTpzN79mzmzp3b4s/teGkLpIiIiIhIB2TLDkL5QejaOgXw65geWVjA5m/
DDB3ZqmOLSGJYln+Q3RWxeRpsdtDLuTldjqlv3QqnLVu28KMf/
YjU1FTOPfdcAO655x7OOeccnnvuOQCmTJkCwB133MHdd99NTk4OK1eu5KabbuKKK66Ijnn11Vc3e25rL
evXr2fWrFlMmTKFMWPGRK8/9thjlJWV8dFHH9G9e+1/t8844wwGDBjAvHnzuOmmm1i5ciWTJk3iRz/
6UbTfpZdeethc5513Hg8+
+CAAkydPZsuWLTzwwANccMEFzb7XOjNmzC6664DalfNZWdns2jRIm688UY2btzI/
v37mTt3LqmptVvtJ02aFO1bWlrKnDlzuPvuu7n33nsBmDhxIuXl5TzwwANMnz4dj8fTrM+vNWgFmIiIi
IhIB2QLW/cJkFEZPcAY1QETkYRSXFyMz+fD5/
MxdOhQtmzZwksvvUSvXr0Ih8Os1WbPmsFpgV1xxBa7rsnz5cgBOOeUUHnnkEX73u9+xcePGZs+9evVqfD
4ffr+f0aNHU1payl/
+8pcGbZYtW8bEiRNJS0sjFAoRCoVITU0lNzeXVatWRedfvHgx06dP5e9K7DaZfPZWdns2jRIm688UY2btzI/
v37mTt3LqmptVvtJ02aFO1bWlrKnDlzuPvuu7n33nsBmDhxIuXl5TzwwANMnz4dj8fTrM+vNWgFmIiIi
IhIB2QLW/cJkFEZPcAY1QETkYRSXFyMz+fD5/
MxdOhQtmzZwksvvUSvXr0Ih8OsWbPmsFpgV1xxBa7rsnz5cgBOOeUUHnnkEX73u9+xcePGZs+9evVqfD
4ffr+f0aNHU1payl/
+8pcGbZYtW8bEiRNJS0sjFAoRCoVITU0lNzeXVatWRedfvHgx9957LytXriQcDjc63yWXXNLg/
aWXXsrq1aujfW9RNaGRkZZGVlRVeAnXjiiXTp0oWrrrqKhQsXNlj5BB8+XLKLovcUC
oUYP348u3fvjo7TXrQCTEREREESkA7J76p4A2corwLw+6JahOmAindixrsCKpfT0dJYtW4Yxhp49e9K7d
+/o9sWioiJqamrIzs5u0KfufUJCQBz587lnnvu4f777+emm25i0KBB/OxnP2PatGlHnHv48OE8//
zz1NTU8N5773H3hO9NJLL0XbFBUVsWLFigbn6kyYMYMAGA6667jgMHDvDUU09x//
33k5GRwfTp07nvvvvsarKTKyspq0D8rK4tQKERURUFAs+61TteuXRu893q9BAIBAg89FNbm4cF8Q
v9VFZWAtCtWzeWLl3KnDlzuPzyy3Fdl0mTJvHEE08wcODA6HwjRza+Wnj79u+/
iU+t9SkBJiIiIiLSEe3ZBYEABJNbfWiTmYXd+jnWuhijTSUiEv+8Xi95eXmNXsvMzMTn87Fnz54G53
3g0Q3ZLYtWtXfvOb3/Cb3/yGjz/+mF/
+8pd85zvfYdSoUYwYMaLJuZOTk6Nzjxs3jsrKSu655557z5mzpzJaaedFp3joosuYvbs2Yf1r9te6DgOM2b
MYMaMGWzfvp0XXniBu+66iz59+nDjjTdG2x96H3v27MHr9ZKZmQmHr9ZKZmQnQrHttrnHjxvHmm29SUVHBsmXLmDl
zJldddRUrVqyIjrVo0aLDEm4AQ4cObdFcx0vfrURERERORiB3z67WfwJknqxsqKoLWH1tEpJ15PB5
yc3MPe3rhggULPLII7iuy4YNG1o032233UafPnXp8+fTq5evcw5GTvubGHh1kcRPPLII032233UZmZiYPP/
xw9NyECP49NNPGTlyJHl5eQ2+GksHNY+G2+9Ga99GW1bUNPk9WYy1tsEJm9eKshxNt
jNyEBRkc8uAtLKgmrt0bDY/oHWrNTKmO1NYU63YNIw0lvwPGPzYp6UOO6ppFWRgZlXdmw+/ST/q0ab7dv+pqWvQPqeWpDzjkbxn1h3Q6qbtWMWo5/bLP58NuZ3MIc48dzO9BzTi6D9/
+PGtLftm+WzmoZ0xNVRKx8h/
=jQ9lxnT+d3MZsFT1+NuPzwnlXvkxMB2pd9o00qt6fx3G7fcSafW5Cb8OZYzP93QBPOhoDL6nKDvHeSTKFLN2M==
```

hzvzGm7tnkfwQyjDGbgZnArEjfT4EFwDrgTeAma20YOAO4BhhvjPko8nV+ZKxfABONMZuoffLkL9rlRi
XmbHFtLTeTlt72k2VmQ+k+7MEW7bwVkQRT+7sYkdhorb9/3lYZRURERESOylq7GFh8yLl76h1XApc10f
fnwM8POfcejdcHw1pbDEw4zpAlAdmSotqDtK5tPpfpkYWltg6YGaaaMyIdkc/
no6KiguTk5FiHIp1URUUFPp/
vuMfRCjARERERkY6kuAg8HkhOafu5uvcAx1EdMJEOLCsri4KCAsrLy7USTNqVtZby8nIKCgrIymr0YdY
tohVgIiIiIiIdiC0phLSu1JaIa1vG64VuGaoDJtKBpaWlAbBjxw5qampiHI10Nj6fj+zs7Ojfw+OhBJi
IiIiISAdii4sg9fh/UGguk5mF/WIz1nUxjjaYiHREaWlprZKAEIklfYcSERERekgrBuGvcWYdqj/
FZWZBdVVULSn/
eYUERFpISXAREREREQ6iv37wA1DezwBMsL0yAbAFmgbpIiIxC8lwEREREREOghbXAiASW2/
BBhpXcHvx+arEL6IiMQvJcBERER
ERDoIW1JUe5DeflsgjTGQmYWrFWAiIhLHlAATERERekoiovA54OkYLtOazKzYc8ubHVVu84rIiLSXHH
1FMhbb701evz444/
HMBIREemI9H1GRDo6W1IIqem1q7LakcnMwlqL3ZmP6X9iu84tIiLSHFoBJiIiIiLSQdjiQkw7FsCPqiu
ErzpgIiISp5QAExERERHpAGw4DPv2QnsWwI8wSUFITcMWKAEmIiLxSQkwEREREZGOYF8JWLddC+DXZzK
ysCqELyIicUoJMBERERGRDsAWFwJgYrACDIAeWVC6H3tgf2zmFxEROQIlwEREREREOgBbUlR7EIsaYES
eBInqgImISHxSAkxEREREpCMoLgR/AAJJsZk/IxMcR9sgRUQkLikBJiIiIiLSAdiSQkhLxxgTk/
mNxwvdM1UIX0RE4pISYCIiIiIiHYAtLopd/a8Ik5GF3bEd67oxjUNERORQSoCJiIiIiCQ4G6qB/
ftiVv8rqkcWVFdD4e7YxiEiInIIJcBERERERBLd3mLAxjwBFi2ErzpgIiISZ5QAExERERFJcLa49gmQJ
q1rbANJS4dAAFdPghQRkTijBJiIiIiISIKze4trD1LTYhqHMQYysrQCTERE4o4SYCIiIiIiia6kCAIBT
CAp1pFgemRB4W5sdVWsQxEREYlSAkxEREREJMHZvUXQJcYF8CNMZjZYi92xPdahiIiIRCkBJiIiIiKS4
GxJMSbG2x+jMrMAsKoDJiIicUQJMBERERGRBGbdMOzfG/
P6X3VMUhBS07EFSoCJiEj8UAJMREREREREERCSR7d8Hrhs3CTAAk5mFzd+KtTbWoYiIiABKgImIiIiIiIJDRbUg
SASY2PGmAAZPWEg6WwryTWkYiIiABKgImIiIiIJDRbUlx7EE8rwLJ7AWC3fh7jSERERGopASYiIiIiks
j2FoHHA8kpsY7kK127QyAJd+uWWEciIiICKAEmIiIiIpLQ7N5iSE3HGBPrUKKMMZDVC/
ulVoCJiEh8UAJMREREREERCSB2ZIi6JIa6zAOY3r2gn0l2P17Yx2KiIiIEmAiIiIiIonKWgt7S+KrAH6Eye
4NgNU2SBERiQNKgImIiIiIJKqyA1BTHVcF8KO6ZYDfrzpgIiISF5QAExEREWknxpgpxpjPjDGbjTGzGr
keMMa8FLn+gTFmQL1rd0TOf2aMmVzv/
DxjzB5jzCeHjHWfMabAGPNR5Ov8trw3iQ1bUgSAicMEmHGcSB2wzbEORURERERAkwEREREREkfZgjPEAvwXOA
0YAVxpjRhzS7Hpgr7V2EPAY8HCk7whgGjASmAL8LjIewLJ7QUkR9kBprEMREZFOTgkwEREREREkfYxBthsrd1ira0GXgQuPqTNxcBzkeOXgQmm9tF+FwMvWmurrLVfA
Jsj42GtfRcoaY8bkPhj9xaDMZASf0XwoX4dMD0NUkREYksJMBEREZH20QfYXu99fuRco22stSFgP5DRz
L6NudkY83Fkm2S3xhoYY35ojFlljFlVWFjYvDuRuGH3FkFKKsbjOXrjWMjoAT6fCuGLiEjMKQEmIiIi0
j5MI+dsM9s0p+
+hfg+cCJwC7AR+1Vgja+1T1to8a21ejx49jjKkxBtbUhyfBfAjjONAj564WgEmIiIxpgSYiIiISPvIB/
rWe58D7GiqjTHGC6RTu72xOX0bsNbuGbUUx2UB/
PpMdi8o3I0tPxjrUEREpBNTAkxEREZEkfXwIDDbGnGCM8VNb1P34cvCM8VNb1P61Q9q8Bnw3cvxt4J/
WWhs5Py3ylMgTgMHAa5Sm183AEmA9sMBa+6kx5n5jzIWh1hk3JUpnftMxzspvUxjkRERDorJcBERERERBLR3mKI
9/
pfESaYDJlZuEqAiYhIjCgBJiIiIiKSgGxJISYRtj9GmD79oGA7tvxgrEMREZFOSAkwEREREZEEY0MhKC
1NjPpfESanP2Cxmz+LdSgiItIJKQEmIiIiIpJo9hUDNmG2QAKQ0QOSgribtQ1SRETanxJgIiIiIiIJxp
YUAyTWFkhjMH36YjdvwLpurMMREZFORgkwERHplEpLS6PH+/fv54knniA/
P58nnnjisGuPPPfYYjz32WPR6QUHBEdvXP5efn89frgsewc6YfP3PWMW+nH0iP1sUv/
P58nnnjisGuPPfYYjz32WPR6QUHBEdvXP5efn89Pf/pTHn300Ub7NTZ3/
TEOHa+xOVrqePs3NU5T4+bn5zNr1iwKCgqibdasWcOMGTP47DNthRI5FnZvbQIskbZAApg+fXHbPxfd4ueWMvbhPrUKKMMZDVC/
5ztM0LL7yAtZZnn332uGIQ6bRKisHng6zesY5EWnm96KRT2pvgeMBEGcqiebdasWcOMGTP47DNthRI5FnZvbQIskbZAAtCnH1RUYHdsj
3UkIiLSySgBJiIindKSJUuix0uXLmXLi3Mnz+fLVu2HHZt69atbN26sbN26NXr9z3/+8xHb1z+3detWli0r+8xHb1z83f/
58qqqqyM/Pb7RfY3PXH+PQ8Rqbo6WOt39T4zQ17tatW5ls2WnX7/8Rqbo6WOt39T4zQ17vz586msrOTPf/
5ztM0LL7yAtZZnn332uGIQ6bRKisHng6RgrCNpEdO7LxiD3fBJrEMREZFORgkwERHplFauXBldYfXBx
9grWXXrl1Yaw+7Vqfu+qGvjY21cuVVKNmzYwK5du5rs/8EHH0Hxw2d/
1z9Y+bmqOlq7iOt39T4+Tn5zc6bn5+fvQz2LVrV7RNOBwGoKKiQqvARI6B3VsEqWkYj8fEqWkYY2IdSouYQBL0
H95F9Ya2MdjoiIdCLeWAfQlFtvvTXXIYgm7hnK5UO/SGs/rW6RE1Lx3Jdl+eee+6I
UKh0GE/vNY/V/+4qTmWLFnCZZdddtQY6yxduvSIY0ZcuJdd/
78+Yfd36GeffZZHnnnkCJ8dMB8f+ic3fiuk7INbhiIhIJ3HUFWDGmMB8dMB8aY1YZY1
YVFha2R0wiIiJtLhwOs2rVKlatWnVYkqv+teasWnUGhsrHA4TEVFxVH7NjZ+/XN1x03NsWrVqqPOUd/
x9m9qnF27djU6bv0VcE1pzuckIl+xrgv7SjFp3ZoM2Hap9d0o9O2S+tTbPWpvPpWYWkESFhTMUtWy8sjLy8/8PG8S5QZ9dHW8z5fDk0j03OcJvMmZBnqw
Xo0eP9ohJRESkzXk8HvLy8sjLyzsskVP/WnNWcRnMhD31zEk2ZfR4vnmYjX8+Pg28zhFgSVmBzFWJh6TR9rTnbix0by+P3kLIZAwevtzdPYZPXP1d33NQceXl5R52jvUP39Q
4PXv2bHTcnj17j17HnWs5nxOIlLPgf0QDkNqgibA/H5MzgDcTz/
CukdfZSsiItIa4nYL5OOP/
Sz/tFfD/
v0B7vP7N4TUhnUzTCOFqfJX4/TlNd49oKHfTl+fnLkbgsPzO9tuGKAwOt/
1z9Ws8CcnzjVG5LrHA2s3PLoYtYq7GRHR8nAUGc62CXiFigMakq9vtaTqdQ8l1/p2OswTtYx3uHqqWKJdHMxhoAwlTeQNo98vwm+q3rj9tc/
ntNNOwxhDz549vWhMmWyDuzpmxm6/fzvVOzvN0+cn9X1T/
<!--
(nothing) -->

```
XP3jpuZIS2vZD8DH27+pcXJychodNycnJ/oZ9OzZM9qmbrVYMBhk6NChxxSDSKe1t6j2NYETYPTpB/
4A7if/inUkIiLSSSgBJiIinVL9lU+TJk1i4MCBXH311QwcOPCwa/3796d///7R69dcc80R29c/d/
XVVxMIBMjJyWm0X2Nz1x/j0PEam6Oljrd/
U+M0Ne7VV19NUlIS11xzTbTNd77zHYwxWv0lcgxsSRE4DiR3iXUox8x4PJj+A7HrP8bW1MQ6HBER6QRM
Sx4/nJeXZ4+1WG5z1N+acrQtkIOvuqXN4mgPm/
7719HjRL+XzqT+n5u2QIoknqN9n5GOyRiz2lp7bMXOOpm2/reetI7QX5/D5m/
Fc8lVsQ7luNidBbhLX8Pz7f8PZ+ToWIcjIiIJqrn/1tMKMBERERGRBGJLihO2AH4D2b0gOQX33x/
GOhIREekElAATEREREUkQ1lrYW5TQBfDrGMfBDBqG3bShdluniIhIG1ICTEREREQkUVSUQVVVYhfAr8c
MHQmOwf3gvViHIiIiHZwSYCIiIiIiCcKWFANgOsIWSMAkp2AGDML96ANsZUWswxERkQ5MCTAREREREkUR
Rt1Wwg6wAAzAjRkF1Ne6/VsY6FBER6cCUABMREREERSRB2b+0KMLp0oARYRg/
I7o37wf9i3XCswxERkQ5KCTAREREREkQRh9xZDSheM1xvrUFqVM2IU7N+L3fBJrEMREZEOSgkwEREREZE
EYUuKOtTqr6ic/
pCaRnj5O7VPuhQREWllSoCJiIiIiCSK4iJMWscogF+fcRzMiNGQvxW7eUOswxERkQ5ICTAREREREkQRgK
yug/CB0wAQYgBk8HFLTCS/9H9UCExGRVqcEmIiIiIhIArDFhQCYtK4xjqRtGI8HJ/c0KNqN/
deHsQ5HREQ6GCXAREREREQSQSQBRnrHTIAB0G8gZPUk/
NYb2KrKWEcjIiIdiBJgIiIiIiIJwBYXgjEdswh+hDEGJ+90KDuI+/
7bsQ5HREQ6ECXAREREREQSgC3eA13SMB5PrENpU6ZHNmbAINz338bu3xvrcEREpINQAkxEREREJAHYos
IOWwD/UCb3NDAQ/
j8vYq0b63BERKQD8MY6ABEREREROTJrLZQUYgYNj3UoHHQNBSEvBSEPO0NeKq0hBNRYQxjoYizdPC5dn
TDdPC59vSEyHBdjmj+H6ZKG+foZ2Pffxl3xv3jGnd1GdyMiIp2FEmAiIiIi7cQYMwX4NeABnrHW/
uKQ6wHgeSAXKAausNZ+Gbl2B3A9EAZ+Yq1dEjk/
D7gA2GOtPaneWN2Bl4ABwJfA5dZa7SdLVAf2Q01NzFaAVbiGj6v9fFzlZ69buwXTg6WbEyZoLF5j8QCO
sVS4DkVhhy9qvISpzXqlO2EG+UIM8tXQ1xvCaUYyzAwaht3+Je4/
FuOcOAST1asN71BERDo6JcBEREREE2oExxgP8FpgI5AMfGmNes9auq9fsemCvtXaQMWYa8DBwhTFmBDAN
GAn0BpYZY4ZYa8PAs8BcahNn9c0C/mGt/YUxZlbk/U/
b7g6lLdnIEyBNOz8BsjDssLoywLpqPyEMWU6IU/
xV9PCE6eq4eI6QyLIWyqxhV9hDQcjLv6r8rK4KkOaEyQ1UMypQReAI/Y0xOOPOxn1tAaFXXsD7/
VsxXv34IiIix0Y1wEREREETaxxhgs7V2i7W2GngRuPiQNhcDz0WOXwYmGGNM5PyL1toqa+0XwObIeFhr3
wVKGpmv/
ljPAVNb82akfdUlwEhrnwRYpWtYUhbkT6VpfFrtp583xJRgOeOTKxnmryHDc+TkF0QeWOlYBvlCnB2s5
NKUMk5PqiCA5a2KIL/
bl86y8iClbtMDmWAyzunnwO6duEsWtu5NiohIp6JfoYiIiIi0jz7A9nrv84HTmmpjrQ0ZY/
YDGZHzKw7p2+co82Vba3dGxtppjMlqrJEx5ofADwH69evXvDuR9ldcCF4vJKe06TTWwoYaH/
8oD1JhDUN91YzwVx9xpVZzeQ3084bp5w1TEnbYWOPjoyo//
67ykxuoYmxSFUmOPayf6TsAM3I07qr3ITMLz2lnHX8wIiLS6SgBJiIiItI+GkshHPrTflNtmtP3mFhrn
wKeAsjLy2uVMaX12eLaJ0CallSSb6Ey17C4LJkvQj66O2HOSqqkm6dtnsDY3eMy1lPFyW41a6v9rKwK8
O9qP6cnVfG1QBXeQ27TnDoWW1qKu2QhplsGzpARbRKXiIh0XNoCKSIiItI+8oG+9d7nADuaamOM8QLp1
G5vbE7fQ+02xvSKjNUL2HPMkUvM2aI9mDbc/rgr5OH50lS2hbyc6q/i3GBFmyW/
6ktxLGOTqpgcrKC74/JWRZBnS1PZXuNp0M44Ds5ZE6B7JuGX/4zdmd/msYmISMeiBJiIiIhI+/
gQGGyMOcEY46e2qP1rh7R5Dfhu5PjbwD+ttTZyfpoxJmCMOQEYDKw8ynz1x/ouoAJKCcqGQ7Bvb5vV/
1pX7eOFA10IA+cGKxjir2nWUxpbUzePy9nBSs5OqqDaGv5yMJU3yoJU1KsPZnw+nPHngd9PaP7T2D072
zdIERFJaEqAiYiIiLQDa20IuBlYAqwHFlhrPzXG3G+MuSjS7CT2ic3Yq39FFgArAPeBG6KP
AESY8xfgOXAUGNMvjHm+shYvwAmGmM2UfvkyV+0x31KG9hbDNaFtPRWHdZaeKciiUVlKXR3wkxqp1VfR
9LLG2ZKcjnDfdV8Uu3nmdJUNlT7otdNcgrOxAvAWkLP/
h6762gLIUVERGqpBpiIiIhIO7HWLgYWH3LunnrvK4FvNUbZsbnJNkq4l91KfatcbYbUxWcsBqk4B7AVx
nizPMja6gAnems4NVB11Kc6thevgdGBavp7Q3xYFeC1shQ21VQzMVhBkmMx6d1wplyEu/R/CD3/
O7zX3IjplRPrsEVEJM5pBZiIiIiISByrS4C11hZI18Ib5cmsrQ4w0ldNXhwlv+rr6nGZEKzgZH8VG6p9
zCtN5cua2t/fm7SuOJMvBsdL6Lnf427ZGONoRUQk3ikBJiIiIiISx2xRISQFMYHAcY/
lWlhcnswn1X5O8ldxcqCaNnyw5HFzDIz01zAxWIGDZcHBLiwrD1JjwaSm4Uy5GILJhOc/
jbt6eazDFRGROKYEmIiIiIhIHLPFha2y+su18HpZMuuq/
Zzsr+Ikf00rRNc+untcJiVXMMRXzZqqAM+WprIz5MF0ScU57xLonUN40cuElyzEurGtYyYiIvFJCTARE
RERkXhWXIg5zgL41sKyiiDra/yM9lcxMoGSX3W8Bk4NVPPNpAqqrGH+gS68V5GE6/
PjjD8PM+xk3BXvEn7+SeyB/bEOV0RE4owSYCIiIiIiccpWVkDZgeNeAbayKsBHVQGG+aoZnoDJr/
qyI0+K7O8N8X5lEvMPdKHEenFOOxNzxjexBVsJPfkr3M0bYh2qiIjEESXAREREREETilC3cDYDp2u2Yx/
i0ysc7FUH6eWsY7a9urdBiym9gbFIVZyRVsM91eLY0ldWVfsyJw3C+9R/
gDxB+4WnCS17D1nSMexYRkeOjBJiIiIiISLzas6v2tVv3Y+q+tcbLG+XJZHlCnBaoiuuC98eirzfMlGA
FWZ4w/
6hIZsHBFA6mZeB861LMkBG4K96pXQ22bUusQxURkRhTAkxEREREJE7ZPbvA54OU1Bb3LQ47vHowhVTH5
cykSjwdLPlVJ+hYvpFUSV6gkoKQl3mlqax3k3HGnY0z6UKoriL8p98RXvxK7ZZSERHplJQAExERERGJU
3bPTkjvjnh0q0qC68cTMExtckhfwdNftUxBgb5QkxOLifVWBaVpfDawWQqs/viXHQFZthJuKveJ/
TEQ7hrPsBaPSlSRKSzUQJMRERERCRO2T27MN1aVv/LWlh0MIV9rsPpSZWkOLaNoos/qY5lfLCCk/
1VfFbjY15pKlsI4px2Zm1tsC6phP9nAaGnf437xeZYhysiIu1ICTARERERkThkyw5A+UHo2rL6X+9XBv
g85ONr/mqyPJ1vpZNjYKS/hknBCrzG8reDXfifsmQqumXhTJmKOXMCl04j/
PzvCf35D9id+bEOWURE2oE31gGIiIiIiMjhbKQAvAvUAvuma0ew+m6u9/N/
```

KIAO8NQz21bRVaAmhm8dlUrCC9TU+1lX7+aLGy4RgBSMGDsEMGIjd8Al27b8IPfUYZvBwnDPH4/
QbGOuwRUSkjSgBJiIiIiISh2wLnwC5N+ywqCyF7k6YvA74xMdj4TFwkr+Gvp4wK6sCvF6ewifVNZybXE
HGyFOwg4dj16/Frl9L+E+/
JZwzAM+Z4zFDhmOMNsuIiHQkSoCJiIiIiMQhu2cXBJIgKXjUtiELC8uSATgjqRKvkl8NpHtcJgQr2Fzj
Y221nz+VppIXqGJcEAKj87AjRmM3b8Cu+zfhF+dBZjaeM76JOflrGI9+ZBIR6Qji6r/mjz/
+eKxDEBGRDkzfZ0Qkkdg9O6Fr854A+XZFkD1hL2clVXSqovct4RgY4q+hnzfEv6v9rKxK4tNqP98IVjL
SD87wk7FDR2C/+Bz76UeEF74I/
1iMkzsWJ3csJjU91rcgIiLHIa4SYCIiIiIiAtZa2LMLc8Lgo7bdWO1jTVWAob5q+njD7RBdYktyLKclV
TEoXMPqqgBvlCezsjLA2cEKTvSBc+IQ7MDBULANd8MnuO8sxX13GWb4STh5Z2AGnNispKSIiMQXJcBER
EREROJN6T6orjpq/
a99YYfFZcl0d8KM8le3U3AdQ4bHZWKwgu1hD2urArxS1oU+nhBnBivp5w1hcvrjyemPLd2P3fgpdvNnh
Nd9DJlZOF8/A2d0HiaQFOvbEBGRZlICTEREREQkznz1BMimE2BhC6+VJWOB05Mq8WhRUosZA/
28YXI85WwJefmk2s9LB7vQyxNiXFIlJ/pCmLR0TN7p2FPGYL/
crNPPIAAAIABJREFUjP3sU9w3XsVd9jrOqFycr5+Bye4V61sREZGjUAJMREREPRCTO2D07aw+OkAB7rzK
JXWEvZyRV0EV1v46LY2CQL8QAb4gvQl42VPt5pawLmU6YrydVMcxfjc/
rxQwaBoOGYYv2YDd8gvvRStzVyyGnP57csZiRp2B8/
ljfjoiINEIJMBERERGROGP37ILkFEwg0Oj1bTVePqgMMNBbQ1/V/Wo1XgODfSFO9IbYFvKyvsbHG+XJ/
LMiiVH+ak4JVNPN42IyszBnjsfmnY79fAN203rCC1+CNxfWrgo7dSymZ+9Y346IiNSjBJiIiIiISJyxe
3Y1Wf+r0jUsKksm1Vi+Fqhq58g6B8fAAF+I/
t4Qha7Dphofq6oCfFiVRF9PiBGBaob6akhKSsKMPAU7YjTs3ondtA53zQrcD/8v9O5buyrspK9h/
I0nMkVEpP0oASYiIiIiEkes60LhbsywkYdfs7CkPEiZNZwbrMCnul9tyhjI8rhkeaqocKvZEvLyZY2PJ
eXJLMMy0FfDUH8NA70hknr2xvTsjR1Tif18Y+2qsP/
5KyxZiHPSqZjcsZheOXqCpIhIjCgBJiIiIiIST/YWQzjUaP2vT6t9fFbjZ5S/
igyPG4PgOq+gYxnpr2GEr4YS12FryMu2kJdNNX4cLDneEIN8NZzgc+g+fBRm+MlQuBu7cR3uv1fBmhXQ
IxtnVB7OyV/
DpHeL9S2JiHQqSoCJiIiIiMQRu3sHAKZbRoPze8MOfy9PpocTYpivJhahCbWrwjI8Lhmeak7xV1PiOhS
EvOwIe/hnRTJUQBfj0t8Xon96X3LG9Sbt62fAl5uxWzbi/
uN13H8sxgwYiDMqDzNiFCaQFOvbEhHp8JQAExERERGJI7ZgOzhOgxVgroXXy5IBGJtUhaNddHHBMZDpc
cn0VDMaOOAadoc97A572Fzj5dPq2idCJpsu9O7Tnd79TyW7qpTMrRsIfv4p9rWXYPHfMENH4oz8GmbwM
IzXF9ubEhHpoJQAExERERGJI3bHNuieifF4oueWVwbYEfZyeqCSFMfGMDo5klTHkuqEGOQLYS3sdx2KX
IeisIfdIQ+ba3xAEPpmE+x3Fj3CFfTYt4uMHZ/TY8mbZLz2V/
xDhuGc9DXMwMEYj35cExFpLfovqoiIiIhInLDWxe7Ix5wwKHquIOTh/
cokBnhr6OcLxTA6aQljoKvHpavHZVDkz63Kwr6wh32uw37XYZ9JoqD7QMLdT6ztYy2pFaV0/aKEruv/
l66pQbr1zqZbTm+6JfkIeJxY3pKISEJTAkxEREREJF4UFUJ1FWRmAbUJk0VlySQbS26gKs
bByfEKGMj2hskmHD3nWiizhn2uw76whwPeIOX+bPbQm0pvAMqBjQcACBqX9CQfqX4PqT6HVJ9DF59Dqt
+JvPfg93SM/
bFha6kJW6pdS41rqXGh2rW41mIAg8EYao8jrwAeYwh4DH6Pwe8YvNovLCIRSoCJiIiIiMQJu2M7ACaSA
FtWnkyp6zAhWIFPP8d3SI6BVGNJdcL09UYSY0EAl+qaCmoKd1NVXEJZVTWlwXRKu3SjOC2Trb4g1Ry+I
sxrIOh1SPaayKtDkseQ7HUIemuTQz6n4ZffMfgc8DkGj2MiCaaGiSVjao+stbgWQvVew25twipsIeTWS
1qFiR5HX8N1Ca3IuWiS66u2Ibd2rNbgNZDsc0jx1n6l+h3S/Q7pfg9d/
Q7dAh6SvFpZJ9IZKAEmIiIiIhInbME28PkgrSvrq318Wu1npK+aTI8b69AkBvw+L/
7efUjp3YeMmmqSCr4kuHU5STu2YdwwFV0zKR6WS8kJwznYpTvlIZeqsI1+HaxxKa4MUxVJMh0vAxzPKA
7gdQxeB7ym9tVjIkk4H6Qbp9410+hx3YIua2tjsdT+j8ViqV1RV5tEI5pkqwxbKkMuxZUhth+0VB3yWX
TxGnoEvWQmecgKeumd4qV7wBNN+olIx6AEmIiIiIhInHALtkFGD/
ZbL0vKksl0woz0V8c6LIkD1uenYsAQKgYMwVRXEczfQnDrRvp8sJScFUuo7tWXstFjqRhyMjTyJEnX1q
2+ql21FXItIQvhyGsosvLKpTa5BF8lu6y10WSTAziRRJQn8lr7ZfAY8JhIkiuS4Ko79kSSXfGgxq1NDp
bVuByocdlX7bK/
2mXbwZroyrOAY+iZ7CWni5d+XXz0SfFpO6VIglMCTEREREQkDthwCHbvwA4bxaKyZCwwNqkS/
cwth7L+AOUDh1M+cDhOZQXBLz8jZfMndHvzr6S9/
TrlJ+VRPvo0wundo30cY0jyGpJiGHe88DmGbgEP3QKeBk+QkDLC7d0I4zPI+o9VQpIOy00KUjbsFMqGjiFMqGjiawO5+UT
Wvpsvp/
6bLqXapOGErZqWdQ1W9QbUEvOSLHGNL9HtL9Hgam1Z6rDlsKK0PsLg+zpyLEOzvLeWdnOWk+h0Hpfgal
+
+mf6oub1W0i0jQlwEREREETaiTFmCvBrwAM8Y639xSHXA8DzQC5QDFxhrf0ycu0O4HogDPzEWrvkSGMaY
54Fzgb2R4b/nrX2o7a8Pzk+tmAb2zP6sjypJyd4a+jnC8U6JEkkxlDVsy9VPfvilB8kZfMnpGz+lIy/
zaM6qw8Hx5xN5aCR4Kjge0v4PYY+KbVbIAHKQy47y0IUlIf4uLiSNUWVJHkMQ9L9DOsWUDJMJI4pASYi
IiLSDowxHuC3wEQgH/jQGPOatXZdvbXA3uttYOMMdOAh4ErjDEjgGjDzMwS50hj/v/v/
W2pfb/OakVZTv2sni3ItJNS6nBqpiHY4kMDe5CwdGjeXAyK+T/MV6Utevofui/
ybULZMDXz+biuGngEc/Ch6LZK/Diem12yDDrmVnRYjtB0Os31fFxyVVBD2Gkd0DjMpIIiuoz1gknuj/
kSIiIiLtYwyw2Vq7BcAY/AXYxcF/
k+GVgrqktMnMx8KK1tgr4whizubI/B4KB90EuUDRxDc/
jld1q2i29K/kfb+3zmYexblJ38d6w/
EOsqE5XEMOSk+clJ8hN0kdpaH+PJADWsKK1lVWEl20MOojCRGdAiQEmIiIi0j76ANvrc8

HTmuqjbU2ZIzZD2REzq84pG+fyPGRxvy5MeYe4B/
ArEgCrQFjzA+BHwL069evhbckreWj3QfZnDGA04o30T2tV6zDkY7GcajoP5iKfoMI7NxG6rrVpL/
zOqkf/JOyU07n4NfGYYMpsY4yoXkcQ04XHzldfFSFXb48UMMXB2r4e34Z/
ywoY3C6n1EZSQxI9eFoi6RITCgBJiIiItI+GvuJ59AK5021aep8Y0sK6sa8A9gF+IGngJ8C9x/
W2NqnItfJy8tTxfUYKKoI8Y+dlfTf8wVDA1VUxzog6biMoap3f6p698dfuJMu61aTuuIfpKx6l/
KT8ijLPbPBkyPl2AQ8DkO7BhjaNcDeqjBbSmv4orSGDfuqSfU5fC0zidEZSaT4tCpMpD0pASYiIiLSPv
KBvvXe5wA7mmiTb4zxAulAyVH6NnreWrszcq7KGPMn4D9b4R7k/7F35/FVVff+/
1+fM+bkZCIJCZAwz+CAglac64BorVqFW37bdW2SrX1Qu+jV6VY8Fr9WXtrr9feWmu1tcNVarX6pQ7or
dqvrRNYLSIyyhAQEgiZpzOs3x9nExMSIIGETO/n47EfZ5+119577XNnzLeNjUEXcBTHdGcTqxwqKDb0QOalDYz/
TBfqblh9leG2d9ZYy/flzHazvqmJQT5vj8NIqiAUytwkS6nQJgIiIiIkfG28B4MxsNbCM1qP1V+
+R5BvgK8DpwGfAX55wzs2eA/DlVZj0kSJU+kNgj8eeItUy7B2t2lmQ51zH3tjiF0CvN/dByid9/
L2WsoaEnxmy9uEQwGSaZGeLpIMMPGcPPbMPJfKY2eSseY9ouvfJ7LmnzQWj6Fmxmk0jp4AppZKh8tvxv
CMIMMzglQ1JVhXGWNdZSMf7GmkIOJnen6EKblhgj4FwkS6iwJgIiIiIkeAN6bXjcALgB9Dm3ysxuB5
Y7554Bfgn8xhvkvpxUQAsv3xJSg9vHgRuccwmA9rbp7fJ3ZjaYVDsAhKwAE1
a/Tt3ICQdfSaSbJNMzqDruFKqnziC6YRUZa94j70+/
JpY7mLqjT6RuynEaJ6yLZIVSrcKOzQuzqTrGusomnttaw1+213JMbpjjB0cYFPb3dDFF+h0FwERERESO
EOfcs8Cz+6Td1mY9Cszr4rn/AvxLd64pIiIiIiIiIkfG28B4MxsNbCM1qP1V+APhBR7bppZ91uOOWV7rOnMcHSzTXkhv2c2FSKL9ZE45DhB19RpJu5UJia
ycdTM+FYIlvWkbFuJdmv/
pms116gfvxR1B1zIk1Fo0Bd9g5bwGeMyw4xNitIWUOCdZVNLC9r4O2yBsZmBZkxOMKozKC6R4p0EQXAR
ERERESOoFjS8eTGKgBOGRIh/e31OKBxSHHPFkykJb+f+tGTqB89
9icCeMqLrV5G+4QPSP3y3uVVVY/
eRpJNMzerqkfZ6ZURAJUBAJUBdPsqGyifVVMTZUVZEb9jF9cISjcsOE/
eqKKnI4FAATEREREETlCnHO8sLWGsoYEI7RlPbG8QlworaeLJ9Ku+KDBVJ5wJlXHnUJk8zqiG
1alWoX99VkaR02kbspxNIyZDMFgTxe1z0sP+Dg6L40puWG21MRYVxHjtx1ex9F5YabnR8hNU
dIkUOhAJiIiIiIyBHy3u5G3i9v5KhBIYZFA1hjA6GPXoP4GPt1Iz+bieLprIQblAkLqxU6gbO4VAxW7SP/
qQ9M1ryf3oQ5KhMPUTjqZ+8nE0FY/SwPmHyW/
G6MwQozND7G5IsLayiRtlnIyXS3Xq7a3XcrRQ1Y4oxM0z1T6yBL/
MzMy3CtLwwG6pirK9s4omNVeSEfBw/
OMLRuWEiAQUcRrKmJNIGkQMvH6zHnxTIi0U6QwEwERERERGRI+Ks2lY6b2rtmGAOtvVRkAg4/LgTT
EzLS+MotQoTaUPftCIiIi3cQ5x5+3VLOzPsHpQyNkhz8ZvVPVOJzFI3YYPlZmRm+YnN83
PtPwwO+sTbK2JsbE6xuqKJgIGY7NDTMwJMzbLmy2r2OqutSJ9nQJgIiIiIiIiJdoLIpwePrqwD49LB0IvsZX8c
aG0jbsJrasVPUokVkPxKZOVRNO5mqYz5F2rZNRNevIPbMWjEY6sdPVTDsMPjMGJoeYGh
6gBnOUVafYGttjC1eyzC/wejMEOOyUgGvsmB6f/2dNF6DL96VhEREEBqKKxgS/
X1dJYyLJWUVRMoL7bzWRtu59LBGnbtTEI1hCkT7K56dh+Fgaho/
FX1tNZMt6IlvWkfXa82S0S99jzxQfk0jJ5I46gJNBWNwgXb3nBCDs5nRmF6gML0AMfnO3Y3JNhYE6O0Nsb6
1VU0AFET8jMsKMTY7xND0AD6NXyh9TJ8NgImIiIiI9AZ7g18NCcenh0UZFD5wK4n01e8Sz8wmlld4hEo
o0j8kopnUTD6OmsnH4a+pIm3TaqzwOvZJ+PWMEwmopG01RYRHzwUOKD8tTSspN8ZgyOBBg
cCXB8fpjKpiTb6+Jsr43z+s56/
r6znojfGOMFw0ZlBknXHSWlD1AATERERETkEO1pbvnl+HRRorkHCX75qisJbd1A9dEn6u6Piochk
cRjqZ14LBaPESrdG9jbZrT4UT/
8XcykgkAnD9ALK+Q2OChxAcPST3mFZCMRPUe7AAzIyfsJyfsZ8qgME0Jx8TEa5dlOoStvhhsYeNbbXXxVlf2cSqPY1AqnXY
6MwQozODFGcEdVdJ6ZX6VADsJz/
5SU8XQUREREQEgF31cR5bX0ksCWcmRGY0BtzubV5ZOaVoxxuIEQM5Eu5AJBGoeNpHHYyFRCIkGgqpzgnl0EK3Y
RrNhN2oZV+Fctb14nmRYhlltAPM+bcguI5RWQzMhWYOwAQn5jZGaQkZlBks5R3phgZ12CHfVx3i6t583
SevwGxdEgo7OCjMoMURDxq7uk9Ap9KgAmIiIiItIbbKpu4qmN1fgNrp7VTTUM2YPiUtYZw/2CjKzQEIiM6ebSyg
ygPn9xAcNJj5oMPV705zD11BHsGI3gcpyglV7CFSWk7Z2Jf7GhuZVk8Ew8dzBxAYPJTakmKYhxcTzCsG

```
vbpT78pmRnxYgPy3AVMLEko6y+jg7vIDYK9tjQB1hvzE8I8gIb1JATHqKAmAiIiIiIp2wcncDz22pITP
k44yh6UQPMOB9S6GSjwju2kHFjDO6uYQi0oYZyUiUxkiUxqEjWi3yNdR7QbFyApWpKbL2n0TffxuAZDB
EU9EoGoePpWnEWGKDh4JPY17tK+gzhkWDDIsGAaiPJ9lZn6C0Ps5Or8skQNjnBcQyFRCTI0sBMBERERG
RDnDO8dqOOv62o57CiJ9Th6QT8nfwR5tzZP5tGYm0dGrHTOnegopIpyTTIjSlFdFUWPRJonP4a6oI7d5
JaNfHhHeWkL1pbSp/
OELj8DE0jhhL4+iJJLJze6jkvVsk4GNUpo9RmamAWF08SenegFh9vPnukmGfUZwRSLUQywxSGNEdJqV7
KAAmIiIiInIQDfEkSzdXs74qxujMICcUpOHvxA+00NaNhLdtomL66RDQJbhIr2dGIjOb+sxs6kdNAMBX
X0t4Z0lq+ngrkfWrAIjlD6Fh3BQaxk4hVjBMY4jtR/
oBAmKl9Qk2VMUACPqgKBpkeEaQ4miAYdEgQQ2qL11A374iIiIiIgewvTbGnz6qpiaW5Lj8MBOzQ1hnfu
A6R+bfXySRnkHtuKndV1AR6VbJSJT6UROp925i4a+uIG3bR0RKNpLx5stkvvEX4pnZNIydQsO4qTQVjd
LYYQewb0Cs3guIlTXEKatPsKk6FRDzGQyJBFIBsYwAxdEgkYC6oErnKQAmIiIiItIO5xxvlzXwyvZaIn
7jnOIoeWmd/zEb3rKe8PbNqbG//Lr8FukvEpk51E46jtpJx+FrqCdt+ybSSjYQXfkWGe+
+TjIcoWHMJBrGTaFx1ARcMNTTRe7VIgEfIzN9jPQCYk0J1xwM29WQ4O2yet4sTeXNT/
M3txArzgiSHVKgUQ5O38AiIiIiIvsob0jw/
NZqttTEKY4G+FRBpOPjfbXktf6Kp2dQO1atv0T6q2RahLoxk6kbMxmLxwh/vIW0ko1ENqwmffU/
cP4ADaPG0zB2Co1jJpFMz+jpIvd6Ib9RFA1S5A2qH086yhsTlNUnKGtI8H55A//
YlcqbFfS1aiGWn+bvXEtdGRAUABMRERER8SSSjjdL6/
nbjjp8BicMTmNsVvCQf0ilrV1J6OOt7Dnx0+oKJTJAuECQhuFjaRg+lopkklDZdiJbN5K2LRUQc2Y0DR
uVGjdszEQSOfkaN6wDAj6jIBKgIJIKYySdo6IpSVl9nLKGBBurmli1pxGANL9RnBFkeDRAUTTIkPQAAY
0jNuApACYiIiIiAmyqbuJ/
S2opa0gwPBpg+uC0wxpnxl9RTs6LT9KUV0jdmMldWFIR6TN8PpoKi2kqLKZy+mkE9+wirWQDkZKNZL/
6Z7Jf/
TPxzGyaRoxL3VVyxDiS0cyeLnWf4DMjN+wnN+xnIqlu6zWxVLfJ0voEO+virK9M3WnSb1AYCVAUDVCUE
aQoGiAzqD8lBhoFwERERERkQPu4NsYr2+vYXBMjGjBOGxqh2Otyc8jicQYt/
T0A5afMBp9+aIkMeGbEcgcTyx1M9TEn4a+pTHWV3LGVtHXvk75qBQCxvEIaR4ylaegIYkOHk8gapBZiH
WBmZIaMzFCIMVmptPp4kt0NqTHEdjUkWLGrgbfLGoBUt8liLxhWFA1SEPHjUz33awqAiYiIiMiAtKMuz
us761hT0UTYbxyXH2Z8Vgh/F3STyfrrs4RKt7H79M+QyMjqgtKKSH+TyMimbvzR1I0/GpJJghW7CO/
YSnjHVtL/+RYZ//
h7Kl8kSmxIMU1DhxMbMpxYYRHJSLSHS983RAI+ijNSgS6AhHPsafwkIPZRVRMfeN0mAwZD0wMMiwYZmh
5gaDRAVtCnscT6EQXARERERGTASDrH2somlpfWU1IbJ2Bw1KAQkwaFCXbR+DCRD94h493XqZk4jYbiMV
2yTRHp53w+YrkFxHILqJkyHZIJghXlBHfvILR7J6HdO8n8aA17P6US6RnEBg8hnldILH8I8fwhxPMKdK
fJg/CbkZ8WID8tFQpxzlEXd80Bsd3e3SaTLpU/
PWCpYFj6J0Gx9MPoGi89SwEwEREREen3djfE+WBPIyt3N1IVSxINpFp8jckMHdrdHdvjHBnL/0rW/
3uexoJhVE47uWu2KyIDj8/
f3F2ybvzRAFhTI6HyUoJ7yghUlhOs2E20ZBOWiAPgSLUqSwzKJz4oj3hO6jGRk088OxcC+vm/
LzMjGjSiQR8jMz9pJVbRmKS8MdHcfXJDVax5ncygj4KIn8JIgIL0AIWRADkhtRTrC/
QOEBEREZF+xzlHeWOC9ZWpu4KV1icwUoMgH5sXZlg00LVjvSQSZP/
laaIr36ZuxHj2zDxHd30UkS7lQmEahwynccjwTxKTSQI1lQQqdxOsKCdQXUGguoJI6TZ8jQ2frGtGIjO
b+KB8Etl5JLIGEc/KIZGVQyJrEMloBphaNkGqlVhemp+8ND/
js1NpsaSjvCFBeWOCPY1JdjUk2FgVw2soRtAHBZFUMGzvuvlpAaIBU2CsF1EATERERET6hdpYkpLaGB9
VxdhY1URVLAlAXtjP8flhRmQED+uujvsT3L6FrL8+S3j7ZqqmzqD6mJM0YLWIHBk+H/
GsQcSzBtEwvPUia2xoDoilpkoC1RWEPt6Kr6mxVV7n83vBsBzimYNS85nZJDOySGRkkcjIxoXTBuxnW9
BnFKYHKEz/
JIQSTzoqm5JUNCbY05SgojHJyvIGvK8eAMJ+Iy+8NyDmJy8t1VosO+zvsm730nEKgImIiIhIn/
LJmC2pW91vr42xvS5OZVPqV0fQl2rpNSEnxND0ABnB7mnVECjbQebfXySy4QMSaemUzzyX+tGTumVfIi
Kd5cJpxMJDiOUPabPMYk34a6vx11YRqK1uNZ9W9jH++rq22/
MHSGRkksjwAmNRbz49SjISJZmeQTISJRGJQvAw76TbBwR8n7QU28s5R30iFRirakpQ1ZSkqinJusomVp
a7VutHA0Z2yE9O2N8cFMsO+cgM+sgI+gj51HqsqykAJiIiInKEmNls4D8BP/
CQc+7/22d5GHgUmA7sBq5wzm3ylt0CXAskgG8751440DbNbDTwGJALvAN82TnX1N3H2BWcczQmHbWxJD
WxpPdDIkllU6L57l0NiU9+SKQHUv+wj84Mev+wd9Ot7J0jWLqdtPUfkLZhFcFdO0kGQ1QdcxI1E4/
V4NMi0me4YIh4Th7xnDwa28uQiOOvr8VfV4O/
vhZffS3+utpUWn0Nwe1bCNfV4PPGH9tXMhgiGUknGcn4JEAWTsOFwiRDabhw+JP5ULh5mQuGcIEgzu8H
n7/
PtTgzM9IDRnrAx9D01uGWxoSjuilBTdxRE0tSG0tSG0+ypbqJ1XGH22dbAYMMLxjWcooEfKT5jYjfR1r
AiARS8wG1KDsoBcBEREREjgAz8wM/
Bc4FSoC3zewZ59zwLbJdC+xxzo01s6uBO4BFZnYisBg4CxgEvGxmx3vv6WybdwA/dc49ZmYP+Nu+v/uPtPs45ziqrs+5YnZj8iG4uL6+smeCjfMz5O/P51qZnf/F/HIy3uVwd/ODaXy7FpNsaQs2Cx60w0rqKXFQ+Rzo/bQ5B8EmzSqsAZc7LjmWjuUTsiTLtjR6n4lInW44kjgWGAYOlcAhr2/y+ulUSjBwTZ2sWvW8CS7k5TnRtZMvVYWeG1V9u0iMinq8M2ZjGMIcdmO1yikVoMXHiFUKzqo7xt1vTHG3xqPvEw3+zQ8tUbhpS/5l5aZjNEH/GhDJNGgKYJ3y7WggkjZNxoGrcGw2RKUNgWDEjTqRRATJvCBhlRVJ8Ky2VzLGGI85jZkiE/rwXJlO0BaSnK/yBMCk1YrI/6gAuxQOk0K+fbF0a5cRXvaLc21m/M+xbMKoL1XcnZBrtA24T2nWm4xrD+FNRX1D3F4LWrYIXz30Gr6GQgnyfaZHkpHbjbHPMQqXJrt2hL3f5gcI1sZqq6lYx1lcIF6qv+SqP9MLQzQ71SZ+aDXl2kkqSaD2WmMC4gJCkptvjcHZWJ6ItDDm/UQd6vp/4hHxJGpY8X/2VB5KD+PY19jUo1hBZaU07UmoDAQ4TjNZL9OI5mXVjxbVWv3efQ+yzGW/TiJGkrD1w1+f4+rXFdL5+mZtRJ3b1ahKMLhJdI9rpR5K+TaNfFTbYAF4C6RTlWWSI1T0jiVi4KUDE2KDRQFzM6FRrOAeR+iTXZc7WNxRkJ6GqP2/vD+y4aIlxGcfZ+qVjndoUYGewptAhMBKwOPjnbEmyBPIqQGe8gc0/I9nkfddJUT3FyEh+6Uuv1f2NjVOcQUfEl3vbmPJH0Nz5hU3f2ezFbTAWLJLBW75MYV9+8Z4ytNwLTWktlwudSjNHjqQXqCHdSu4BeBdwODF1W6AMdAkahhXfwhW0BUdOKVyrBjkFEEcvFkotm/TkFSIy+yb/QD/DQV+iDM+B1tNgJVv9xcb2U2HCwdVLQeUGSsP/HyM43/gbH+1TZ6zT3w3MeqrzwDAuyRXpw6YyntQJu0HtdyzGqLE28CWPHytWIlr8u6eOifvHltN4AyZhJb3LG2oPXJOAg6GENNVTnl21TfrhCuZXR5oixM1Hlcs3B+4Mtm2W7zUl2e9oSvY3LMYzPuNuuMJhWMqJ7mGmNkHx/Ni3xfy3XD5oQjG9FaWlzEIBHFOzt0bbS7WttG9Fhy/RXmKHzTUGAkV0Mx0f3kCrZLh6OMjikxldmytE3J/Lo2qWSNpxrdqwnWp0V6Aqgw6HFtX+jZqKW66MEiXXc+ZOaQx5CdHzU/xyn6+1HPpRm6Et7bA8sK+g/2omixKeSP9IaIa45ka3pwXRC7N9ebVP8Y9JwYpcvS3m5gjn0nFBlUvC41hbiYhEpEQJQbg/OJl+lDmwo7CzYIqaQ0hhCgV1r1f4S1s7tKBcvbpqVQeRiJVUo+5wxfjxCsuD2BCj6c4WZrsaLHb8sHLNkr7ELVpaoI+jSKsg+i60o2S4BKv+CwtBOQLwE2JrPiqR1PHv1T0IRtCvWj/LIrqbKp6pZeE9njO7h+93b9F5uFUNl9xOWQAXJeLbFWMxAiOX4Mxy9HSbsazU+GEYh1i+kBF+FIGHHqJMJpEi/c1ghB/4nkBEM/zCv0MkK3TtZ8KsehszvS4vf3zZ6RUk2gBWbCWRdeO9dxC+OjpIm0yvjJxRTm5iR5ydtX5HRj+B6Dg9FJ7r2V9xEflNbDZ3m9eD1D5iNFjbj2+qBSfdZmSq/5HlymqMafp2UF0YP3+7z8Dy/7TAAbhGvVm2TQ3HxCHEpfFYz2D4X5zXG+mWLsQ1FHMLJQuRLiZr3FBoZmxmIiZzTZxJBhCdNa/Shp6ORmYk5D6EXEfKhODzHCXYKOdJI62NadzQ0wdZ4yRXIdwQA0brh/Mjj8cUVE1qOrHRTO6JKFfnaLWcMJXbehtDmFw9q4W35r3ptUuifDCzybxdtBNCQ6UZIrRy7JZ/d3U/yqVmPQpIDCMY4/NCHpqVWWqeVEWd7dqIyrkAIjtpQ8YxOnwoK9lbIMgnI/hAiwobvXoMXPfhvD8X0mQS0bS+6X0phvdo2wgfbpg6iR2yEYcZIcoX3TM5BEETEScj30RWzBvQYdzuh1FrXWW9LEWt2OwiQj6QZzdHaC4vaD7wlNa6OtWa/rnqLeGgldQWIbL1xQkzdGv9ZChwjDdpr2ggYa8BW6cdLKi+zbsVX5s0mnM6/hlzeyn57RzFuoerMgTtG/BBHgVBw4zzuebOSJ1uq/F/fF9YOAoOSw2fVlcwHfPH8wWYdbUXF8GtBPpQIsPBCeYC0qx+0P6Rv2RBaYrEG4O+GdCmO6hOAvTVeqNzFWBAO9EP0CnBgdEGJZSjvyX2H5qQfQSGj3W3aH0uUaKqgz1MbXIatOHmj9jv16LLf7Od+1u2LdsOSrc0FWH3BCz2C5WOFSrydqfEkvS2jpA0fsnuMI5LrKw9Or3vgZ5PnF2+6Oa1/AoWoPYHfWCBP0k/1MSMeTLBuB6Akzql6nUbWMaNuUkK7xqIrOtjGXcSC5cBF2g5qNBL2OrlUmhUjijmw2fzjFu6EVDS19oC40lNQj2CWjMO+aEVZdWjNlNsW5Czv6bSjIWi2XljgvxnxQ0N0xnmxwbYEIiJU0qJIJaGPiwvN9Hg04O/A8cjA/Eh3Hm7h2/oBgmGeW1W5qKj35O60tf52IaXZIMmtZ6fOjF0rItsVDMqZ25SiS8a3mZNY9QHWdowR0vaBhBeeN4SWiSyRBVlQvpURkjnYUXt7vHsGSaM2BK6PpwwhudMwlkdahyIEfKIKijGdY3RUejkTmm7lZoMLSWzkiN8DyFTMdkNVXUVbfOCw3nXwJlGOfHHG0OAKW+cVklTWCk7FRBiVhvh7nQKlU5uijNlGuANZ3A9O0PMxSpfWFT1RUzsDeGo+9JhM9U3pQrbSH1CHiA8mUBvSZVa9nY3DuLO+eTIwm/jfF/JDU3sgJGeNSq7ctHOajaAzNxIH7pDiTBtmoYEOm7mcLJY9n/RZhBBWx8EOLEwGQNh9cU5/fwbwxs2YG8FnLFABkHb7PAA==
```

Gy9tz3a26aZrQbOAq7y8vza226PBsBKamK8WFILgN9SY6qEfEbQm8IBIzPkI+IPpv7V9vuIBIyMoI9ow
Ie/h//ddmMnU/3pC2kqLMalpYJe/b+Tj4jIAYSDkBEFvLtQelNsf/mdg3gsFQxrasL2BsX2Po/
HsEQCEnEs6T0mEpBIYIlE6o6XiQTmkpBMPbdYE7gklkxCMtl6Ppn08nrzSW89d4BIUi+SDIWp+exVxMa
kutfHWvxx1JRItZZu/lPJex5LOuLJ1PO6mCPuUmmpdNq0NOtu54/
I4Ni8PhgAW7FixS4z29xdhfHkA7u6eR99ieqjLdVJa6qP1lQfrak+2lKdtDYQ6mNkTxfAUwRsbfG8BPj
U/vI45+JmVgnkeelv7LNukTff3jbzgArnXLyd/
K2Y2TeAb3hPa8xsTSeOaa+BcB71F3qt+ga9Tn2HXqu+o2+
+Vrfe1dMlOCy3dH6VQ3mdOnSt16kAmHNucCcL0Wlmttw5N6O799NXqD7aUp20pvpoTfXRmuqjLdVJa6q
PI6q95kv7/hG7vzz7S2+v79+B8rdNdO5B4MH2lnWUzqO+Q69V36DXqe/
Qa9V36LXqG7rzdToyAyaIiIiISAnQ8ib1xcD2/
eUxswCQDZQfYN39pe8Ccrxt7G9fIiIiIgOGAmAiIiIiR8bbwHgzG21mIVKD2j+zT55ngK9485cBf3HOO
S99jpmFvbs7jgfe2t82vXVe9raBt82nu/HYRERERHq13jgI/
mE1we+HVB9tqU5aU320pvpoTfXRluqkNdXHEeKN6XUj8ALgBx52zq0ys9uB5c65Z4BfAr/
xBrkvJxXQwsu3hNSA+XHgBudcAqC9bXq7/DfgMTO7A/
iHt+3uovOo79Br1Tfodeo79Fr1HXqt+oZue53M9ZG7H4iIiIiIiIiIiIiBwKdYEUEREREREZF+TQEwER
ERERERERHp13pVAMzMZpvZGjNbb2Y393R5jgQzG25mL5vZajNbZWY3eem5ZvaimaWa/vZaajNbZWY3eem5Zvaima3zHgd56WZm93l19E
8zO75nj6B7mJnfzP5hZku956PN7E2vPh73BvrFGwz4ca8+3jSzUT1Z7u5gZjlm9oSZfeidJzMH8vlhZv
O898r7ZvY/ZpY20M4PM3vYzErN7P0WaZ0+J8zsK17+dWb2lfb21Rfspz7u8d4z/
zSzp8wsp8WyW7z6WGNm57VI7xffQe3VR4tl/2pmzszyvef9/
vyQrmdmi8xsm5m9600XtFjWr99ffZleg97HzDaZ2UrvfbTcSxuw13i9ia61+ob9vE76juqFrAvjHof1v
nLO9YqJ1MCtG4AxQAh4D5jS0+U6jem9FDjem88Asc9FDjem88E1gJTgB8CN3vpNwN3e/
MXAM8BBpwEvNnTx9TI+D2w1Hu+BJjjzT8AzPXhvFNwN3e/
8BkRbnxVcH2vkBnA4cD7zfIq1T5wSQC2z0Hgd584N6+ti6sD5mAQFv/u4W9THF+34JA6O97x1/f/
oOaq8+vPThpAZK3wzkD5TzQ1PXT8Ai4F/bSe/376+
+Ouk16J0TsGnv53GLtAF5jdfbJl1r9Y1pP6+TvqN64UQXxT0O933Vm1qAnQisd85tdM41AY8BF/
dwmbqdc+5j59w73nw1sJrUj/
yLSQU+8B4v8eYvBh51KW8AOWY29AgXu1uZWTHwGeAh77kBZwL/FPeFn2rY+99fQEcLaXv18wsyxSH+y/
BHDONTnnKhjA5wepu9dGzCwApAMfM8DOD+fcX0ndHa6lzp4xP0Fn2rY+99fQEcLaXv18wsyxSH+y/
5+Le0zeAYm/+YuAx51yjc+4jYD2p759+8x20n/MD4F7gu0DLu9/0+/NDjqh+//7qw/
Qa9B0D+Rqv19C1Vt9wgGue9ug7qgd1YdzjsN5XvSkAVgRsbfG8xEsbMCzVPes44E2g0Dn3MaROFqDAyz
YQ6uknpH6kJb3neUBFix+zLY+5uT685ZVe/
v5iDFAGPGKpLqEPmVmUAXp+OOe2AT8CtpAKfFUCKxi450dLnT0n+vW5so9rSP2DBAO0PszsImCbc+69f
RYNyPqQLnGj1yXh4b3dFdD51JvpNeidHLDMzFaY2Te8tAF5jddH6Fqr79B3VC92mHGPw3q9elMArL1WG
a6dtH7JzDKAPwL/4pyrOlDWdtL6TT2Z2YVAqXNuRcvkdrK6DizrDwKkmvX+zDl3HFBLqmno/
vTr+vC+wC4m1Wx5GBAFzm8n60A5Pzpif3UwIOrGzBYAceB3e5Paydav68PM0oEFwG3tLW4nrV/
Xh3SMmb1kqbEW950uBn4GjAWmkfoz4j/2rtbOpnQ+9Q56DXqnU5xzx5O6lrnBzE4/
QF69hr2XPvt6F31H9WJdEPc4rNerNwXASkiNT7JXMbC9h8pyRJlZkNRJ8Dvn3JNe8s69zZq9x1Ivvb/
X0ynARWa2iVTz07NItQjL8bq8Qetjbq4Pb3k2HW8G2xeUACXOuTe950+QCogN1PPjHOAj51yZcy4GPAm
czMA9P1rq7DnR388VvEExLwS+6LxBAxiY9TGWVND4Pe+ztRh4x8yGMDDrQzrAOXeOc+6odqannXM7nXM
J51wS+AWp7iOg86k302vQCznntnuPpcBTpN5LA/Uary/
QtVYfoO+o3quL4h6H9Xr1pgDY28B4S93NLURqwOpnerhM3c4bj+iXwGrn3I9bLHoG2HtHg68AT7dI/z/
eXRFOAir3NhnsD5xztzjnip1zo0idA39xzn0ReBm4zMu2b33srafLvPz9prXXPz9JmLvnNsBbDWziV7S2cAHDND
zg1TXx5PMLN177+ytjwF5fuyjs+fEC8AsMxvktayb5aX1C2Y2G/
g34CLnXF2LRc8Acn8Acyx1h9DRwHjgLfrxd5BzbqVzrsA5N8r7bC0hB7f/
Uheg16GTOLmlnm3nlSn7PvM3Cv8foCXWv1AfqO6p26MO5xeO8r1wvuCLB3IjXS/
1pSd2FY0NPlOULHfCqpJnv/BN71pgtIjVP0v8A67zHXy2/
AT706WgnM6Olj6Ma6OZNP7gI5htQH1HrgD0DYS0/znq/3lo/
p6XJ3Qz1MA5Z758ifSN3tYsCeH8Bi4ENSX2a/IXUnlwF1fgD/
Q6pJd4xUMOPaQzknSI2Ntd6bru7p4+ri+lhPanyAvZ+rD7TIv8CrjzXA+S3S+8V3UHv1sc/
yTXxyF8h+f35o6vrJ++xd6X0vPQMMbbGsX7+/+vKk16B3Td61y3vetGrvazKQr/
F606Rrrb4x7ed10ndUL5zowrjH4byvzNuAiIiIiIiIhIv9SbukCKiIiIiIiIh0OQXARERERERERERE
SkX1MATERERERERE+jUFwERERERERERpF9TAExERERERERPo1BcBERERERERKRfUwBMRERERE
RERET6NQXARERERERESkX1MATERERERERE+jUFwERERERERERpF9TAExERERERERPo1BcBEpF
8wM+dNo3q6LCIiIiLStXStJyKHSwEwEQHAzDa1uLA4pUX6aS3SN3VwW2e2l9/MftViWy2nf+mCQ/
hPb6ry9vWKt+2vdsG2RURERPo0XeuJyEAX6OkCiEivNBf4mzd/fTds/13g1RbP/7G/
jGYWdM7FDrZB51xXXFiJiIiIDAS61hORAUctwERkX3uAy8ws38wGA5/30pq1+DfvRjNba2bVZvZbMwuZ
2ZnAy17WkXvz7rOPV51z/9JietXb7iIv/
xNmtsTM6oEvtvg3cZGXb9S+223ZLN7MXgHO8BY9snddMxtkZn8ws11m1mBH5nZz7u2+kRERER6NV3ri
ciApACYiOzr10AYuMabwsCv9pN3MfB3Uq1Jvwh8GSgB/
ugtr+aT5uotnWFmP2kxjdtn+eeBscBvgB2HcAxPANu8+Re9/
b8BfAe4DFgHPAKsBk4+hO2LiIiI9FW61hORAUldIEVkX68Cs4BvAAZ8APwVmNdO3uudc+uB3
+6XZnY/qQub8v00V5
mTXv9CVjf4vlG4FPOuTiAmc3zYD33zrlfEdv5tJflTeD33rbbbrIiIn2crvVEVEEB
SCzARac8DpP6VGwP87AD59o7nUOE9ZnRw+//pnLMW0yv7LH9r7wXRfvg7uJ99/

```
QR4AfgmqQujCuBRM9NnoYiIiAwkutYTkQFHHwQi0p5HgTqgllTT9P3Ze+Gy77gPCe/
xUD9jGvd5Xus9ZnmPR3VgG+2Vodw5NxvIBI4FVgFXAacgIiIiMnDoWk9EBhx1gRSRNpxzlWZ2eov5zm5
iq/dYbGYPAeucc3cfRpH2/
vv4FTOLkxqDoqNluMnMjiE1DsQlZnYRsBJoAkZ5eSoPo2wiIiIifYqu9URkIFILMBFpl3NuhXNuxSGuu
wn4EamLjWtJDZh6OH5DahyHIHAhcG8H1vkP4J/AFOAmYDzwDql/Mi8hNY7FTuDbzrl/
Hmb5RERERPoUXeuJyEBjzu3bmlVERERERERERKT/
UAswERERERERERHp1xQAExERERERGRfk0BMBERERERERER6dcUABMRERERERERkX5NATARERERERER
EenXAp3JnJ+f70aNGtVNRRERERHpeitWrNjlnBvc0+XoC3StJyIiIn1NR6/1OhUAGzVqFMuXLz/
0UomIiIgcYWa2uafL0FfoWk9ERET6mo5e66kLpIiIiIiIiI9GsKgImIiIiIiISL+mAJiIiIiIi
IiPRrCoCJiIiIiIiEi/
pgCYiIiIiIiIiIj0a526C6SIiIiIiIiIDCxVVVWUlpYSi8V6uigywASDQQoKCsjKyjrsbSkAJiIiIiIi
IiLtqqqqYufOnRQVFRGJRDCzni6oSDBDOOerr69m2bRvAYQfB1AVSRERERKSPcBXlxP/
0P7jdZT1dFBEZIEpLSykqKiI9PV3BLzmizIz09HSKioooLS097O0pACYiIiIiLSw8xstpmtMbP1ZnZzO8v
DZva4t/xNMxu1z/IRZlZjZv/a0W1K35c5D/
e7OniiMgAEYvFiEQiPV0MGcAiAikUiXdL9VXAEExERESkB5mZH/
gpcD4wBbjSzKbsk+1aYK9zbhxwL3D0m0wcTwNmnmYuDX3vwTwNnmXQ2a2S
XARmBVJ7cpfURy7QcknvgN5Obj+8yl2IjR8HEJrqmxp4smIiLSZygAJiIiItKzioCtLZ6XeGnt5nHOxY
FKIM/MosC/AYsPYZsAmNk3zGy5mS0vK9O4Ur2RW/
8hBIP4Zn0WS4tghcMgmcSVbO7poomIiPQZCoCJiIiI9Kz22vW7DuZZDNzrnKs5hG2mEp170Dk3wzk3Y/
DgwQctrBx5blcpZA/C/N4N3AuGgBlu88aeLZiISB+xaNEizIzzzjuvbzbLLLruMM88884iV5atf/
Spmhpnh8/
koLi7myiuvZNOmTUesDANVoKcLICIiIjLAlQDDWzwvBrbvJ0+JmQWAbkmbWAKzowD
alj3BlO7HCIc3PLRiC3MEkN23A34PlEhHpa5YtW8bbb7/NCSec0KPlmDRpEo888zjJZJIPP/
yQBQsWcMEFF/Duu+8SCoV6tGz9mQJgIiIiIj3rbWC8mY0GtgFzgKv2yfMM8BXgdeAy4C/
OOQectjeDmS0Capapxz93tBsoNtU/oA19gANVUwYXKrdCsciluzChePYYFgD5VORKTvyM3Npbi4mB/
84Af86U9/6tGyRKNRTjrpJABOPvlk0tPTufLKK1m+fDknn3xyj5atP1MXSBEREZEe5I3pdSPwPwArAaWOK
cW2Vmt5vZRV62X5Ia82s9MB+4+VC22V3HIN3H7SoFwLIHtUq3wqGQiOO2bemJYomI9Dlmxq233sozzzz
DypUrD5h3y5YtzJh9zcXNLT0znvvvPNYs2ZNmzznn38+kUi0E0aNH86tf/
eqQu1Mee+yxAGzdurrVVekfKcddddzFu3DjS0tIoLCxk9uzZZ7NizmsVceOGFRKNNRRowYw
QMPPNCmDEuWLOHoo48mHA4zfPhwFixYQPDweb17+q1/9CjNj5cqVnHvuuuUSjUSZNmsSTTz7ZajuvvvfYap
512GllZWWRlZTFt2jT+8Ic/tMrz0EMPMXXqVMLhhMCNHjuSHP/
xhp+vsUCgAJiIiItLDnHPPOucmOOfGOud+4KXd5px7xnvc4Jy73Dk3zjl3gnNuQ4vHyf+4KXd5px7xptvcM5d7pwb55w70TnXZvAn59wi59yPDrRN6RN6Y
PKdqYe9wmAUTgMQOOAiYh0wuWXX86/ECRP4wQ/
2/7VYXl7Oqaeeqy1a3jggQd44oknqK2tZeaeeyyfffYZAM45LrroIj788EMefvhh7rnnHu677z7+/Wt3mr7oPe4nE18rqtfz+TvxKK5wvOdBakBdU+jGE0N5cmZVFFkKvKsBIsfZ09qJC/FNSXf/WbPxwcEuaxeQVXLgmm
+zgGmpIPuzd/wc=
```

Hmm

OzTffzCOPPMIHH3zQatlTTz3F+eef3+p5y+6S06dP5w9/+ANz585tzrNkyRJ8Ph8zZ87s9PEARCIRPvv
Zz/L+++9z1113AangWCQSYfv27XzmM585pO0ejj4VABMRERERGSjcrtS/
8bafLpAA5AxqziciIh133XXXceedd/L3v/+dM844ozl9/vz5/
Pa3v+Wss87iW9/6FkVFRezcuZNXX32VU089lSuvvJILLriAY489li984Qvcdd ddRCIRFi9eTGFhIb52x
mw8mPT0dObNm8fChQtZu3YtEyZM6FA5rrvuOnJzcznppJPIzs7m5ZdfZt26dW1atj333HMsWLCAM844g
yeffJIXX3yRp59+unn54sWLOe+887j66quZM2cOK1euZOHChXz9619vNQD+wfz5z3/
m4Ycf5pJLLmHEiBFs27aNn//x11llAqvvkokWLuOmmm9i8eTOnn346yWSStWvX8vLLL/
PUU091uu46o/OvjIiIiIdDtX5gW29tMCDMAys6FiDy6ZPEKlEhHpH/YGnfaVn5/
PG2+8waRJk5g3bx6zZs3iu9/9LpWVlRxxzDEAmBlPP/
00kyZN4uqrr+amm25i7ty5TJkyhaysrDbb7Igbb7yRrKws/uM//qPD5Zg5cyZ//
etfufrqq7ngggt46qmn+MUvfsEll7Qeo+2hhx7inXfe4ZJLLmHp0qX89Kc/
5aKLLmpePmvWLB577DDGWL1/OZz/7WX7yk5/wne98h/
vvv79TxzBu3DjMjFtvvbW5vLNnz+bhhx9uzvPd736XfbLn26KdJh/
97necdtpph1RvnWHOuQ5nnnjFjhtt7t4EjpeVdINUFsmNaHrPuAikiIgOdma1wzs3o6XL0BT1xrSf7F//
jb3GbNuD//
Bf3mye59gPc668SuGkBltO5cVpERDpi9erVTJ48uaeL0etVVlYyZswbrzxRhYvXtzTxQHglVde4dOf/
jQrV67kqKOO6uniHJYDnYcdvdZTF0gRERERkV4odQfI7APmscwsHODKdykAJiJyBD3wwAP4fD7Gjx9PW
VkZP/
7xj2lsbOSaa67p6aLJfigAJiIiIiLSyziXhN2l2ISDtLrI9AJkeo8PnE9ERLpUoUBzm7rvvvZsuWLZgZJ5
54Ii+99BIjR+quavL2VAmAiIiIiIr1NxR6Ix+BAJkeo8PnE9ERLpUOBzm7rvvvZsuWLZgZJ5
wz6cywV/
2dBsEXEREREellOnQHSMB8PsjIwu3ZfSSKJSIi0mcpACYiIiIi0su4sp2pmYO1AAPIzMKVKwAmIiJyIA
qAiYiIiIj0Mm5XKaRFsLS0g+a1zCzYs0vdXERERA5AATARERERkV7G7SqFrJyOZc7MgsZGK/
t3kKJiIj0YQqAiYiIiIj0NlV7sIzMDmU1706Q6gYpIKyfwqAiYiIiIj0Is45qKmBSHrHVsjMSj1qIHw
REZH9UgBMREREpIeZ2WwzW2Nm683s5naWh83scW/5m2yks/
0cze9ab3zOxzLdbZZGYrvWXLj9zRyGFrqIdEvOMBsIxUAEwtwERE2rdo0SLMrHkaNmwYn//
859mwYUO37/urX/1q8PFxcVeeWVbNq0qdv3La0FeroAIiIiIgOZmfmBnwLnAiXA
22b2jHPugxbZrgX2OOfGmdkc4G7gCuB9YYIZzLm5mQ4H3zOz/
Oufi3nqfds7tOnJHI12ipjr12MEAmAUCkB7F7dFLLSKyP9nZ2Tz//
PMAbNy4kYULF3L22WezatUqotFlT+570ARJPPLIIySTST788EMWLFjABRdcwLvvvksoFORrWfcsnFAATE
RER6VknAuudcxsBzOwx4GKgZQQDsYmCRN/
8EcL+ZmXOurkWeNEC3AewHnBcAs462AAPIzFYLMBGRAwgEApx00kmcdDJkAnHTSSYwMYLTTjuNZ599lssvv7
xb9x2NRpv3ffLsJ5Oens6VV17J8uXLOfnkkzm9QQ4uIuXLOfnkk7t13/
IJdYEWAEYWa2bWZs2bPZsWMHAK+88gpmxlNatdVDuhs0A6mqG5v8YsFxCsv/
rVrzAzVq5cybnbnk3Jly7jwjwgJRqOMGDGCBx54otNgTXOwuE5gxoE0ZDnasv/
UFYWMjs2bPZsWMHAK+88gpmxrJly7jwwguJRqOMGDGCBx54oE0ZDnasv/
rVrzAzVq5cybnbnks0GmXSpEk8+eSTrbbz2muvMTg/4Q6s8Dz30EFOnTiUcDj
Ny5Eh++MMfdrrOuoICYCIiIiI9y9pJ27cl137zOOfedM5NBU4AbjGzNG/
5Kc6544Fzge+Y2entbtzsK2a23MyW79y5s1OFb0hH/Mz/BYHjUXqQUdD/
A1ZMgQAJYtW8YVV1zB8ccfz9NPP81PfMW7Xmzt4dI+ugh2Dn9GO0rPlWrbJsKcfvZ97ba/
nxee+017r33XPNOzNr7ij6wLVu2ADB2ADB69Ojmt3yz0+JUQHPtRzLPVFq8DzE1pCVlq8mWAjLRaDWalkSrSrYn/
mW8dZB1XQtt2N+P2LJNWQLadHdx7vYPAldwsIOf+GEXd6+hsGEsMZhx65/bWSh+SQxOGmIxuHaRjUnvJwpCtJHcnBuD6Ab4szO7bDeRDUm/
qrpPWAtewhjXagXbpFKATENBTyf8/
q4XW4ZYz99lHz/
eYaHBRydnr5V3nU+pWGrwyewmW16UNkrj3Hq7MMgeyzQ/
nhIthOx/+6QXvEfRGM5ka8V+wBaa/xvqOC6vn2vzvs/
ntmvlaLU/i8L3TP9LodWZIrmPrl3vIOcfl78K4Pyzg9j2dqRpyiTAVWXuOgLcuEXnfZ6gYgk9IGrDZrGB+o2Wy3qkLVvhAd/5nFeHmv2O4ENKDDJXdvQ5tFRHuhRW/oL47i9ywAzz8Swd6eKz3r+RE2THA5UPgA/
8WhGO2EVb+ezRqkZMDOBkkApBcDtGCkbKpT4eEBTkTcvAlmrLWbBt57NJYrwNA+dN+GZ/+5WS3XeTn0P6DBWCZpVjW5tSsFNDnGnoSs+UhYSWhDcu3l7O5uPx3W3YRGh5E9j8kmbYh7TDONxnbU23+BBJcPXA6MtRD/
9EDYi+7tf18FNLiwGLoKClRiTHS2fSWWC6gnsIEJQvR/GRSAAZZYhF/
LF+ohzZ8Gkz9YVtVqP7YnSdGKgfXDuZXGvGe8YaCqGGS1Fi8HT+7/
AcPB9tE1AEGyh6e1shMhMHJA0TuLNO3YMo+C7K6DqNrtOMREfOAyffbGa7SMdw9V9LUcD0REgGJXlGP8BAGDfsRpbR0yGIdR8qkkbCSTUXlhHcPJ62ZiupXcYyZGHcNOMEn0PnNLnuXlF7dkpsa1OYwe2iyj7v/
yl6mSabPQLqBKYORb/
t7ixZEg8ooP48Fg4ZvB/
iqzFIa6sFTxGlHVf/
zj3YMWWHIDJPq7jZsNfAllexUw+FVYxObkRLwoYPMf59qdsdeH/
gJf3mRMx+6mOm0pmOD+Gbgy5rK+aX9yEpmMVhqoY6hj9OOmaX0JT3LHFYZ8Ae8WmQeImJNhnbnQHZXJgwaf4HLTHr7PT0ArRVJcK+PTFTZNs80vFoW4+nAgxDsdmpj4MnM1egrWO6WsxLMnb8i+SMJiz4hE8B7QwE4mtE6wsPM1l1E+zTnlWtGBSn/
qa+Xzmy6KcbgJLqaftMzVFP1kwftWXt63WuevwdGxa5sKvZHsxkvtp/
w4ZUnC/
eszwLb6HaRLkS46BgEkONGq+5y+G5fpGJNKw1DTI+IQIXRXq3wJ1nVXjsCgjLhqMD9gMHZrumS5ASHpfyb+MX6Dra+hRvUw5U2h+eHRvqu+sn5Ml1jV6MMjm7qutA1XVPdQwEaRngC0KZLajfDy75kvn1p/
PFuAmiC3JaKBT2DtEECw7JnNWPzoC/nPyWxD5zXjtbwG/
5ujqg7/
3XwgsBzWDw0dfUD7umiT8G0g9k7ZCgGVDyhHX1cPQaOAl8B/ZnbqdXWb5ub4v3EImlJKJ6ivn7kFVX0z4Ai8jMa4xGNXA7Y4+Hg8vwdW2v6S4QOOTfs2RD8/
QW1f2fhUYt5Nw2z5Kg9hW6oWWV5++6u4jY/
HfCjsSUjFT9Vxrnec4Ls6KLsKjWUpX7X83L6u7pPG9DZbnMGX2VnV/wHJZuuiQHy0iLWh73Z8/
3qAFFD/a/
Dl3nL6uuyQO7F2Fx/
DEzrtgO2IpLpkcNcJGr5GPdcO+NSO+dpGZ4sLFcqhi4Om29mlOH5bHiXK
nntBRhR4pmYbAhy/
7WJSKgfkx7CBbQfP9HYlcVgj5gGmDOBwtKx9cEsf1JlkTLQq0gyIBdo5wMM7IRpIaeLU9mSZwE5jffMBs6WC7TtdYMLpVZH8CZfLTTa8O6s1zw0WmSO3z1lHH1BrmA6jAemwH9VWHTt3s9Alva2RB0WaJRQsUvoM+0WTrr2fmyaD4Jcz
sgfa2yAnXP7PUOWVO6LcmFVxvSw3E1tbVB98u/
Rf4HZv3KNzu5eJXeLXO18f3mHjMCTNUiKbqw3Y1eZTX9ynT2CF6XuARyI/
mZUTfOYdBDrN3/
ns/
SjOkfXR/
rj+mKcjAjpcQ6OpYBl4NkkAC48a+rEDrmdOeVDl0n4FegeHoWS7tTOMo2
8c7vbDOVaqh5r+n5Am02g2HKF/
DZgcEw9DoB/
Tp8+rmuBELHvcEEuTLeY6tVqgr/
t1A2FdiN8sAHkr3CdTj5EdDw9hQo4yXHo9CuS5jFgV+rqJbiUc1GkNDOzDpZ6U5/
Xl3mbXGhXvwGEiCuwqV4ryZ2XWsEQNG/
pk7GQeeDMRy8u5RzqxIx9nPtBmNNBSvb1WpNi9/
BX6QMYa0FrVGuANq3vfSeiSn9KfuB/
L2h8XmuC3t8Bv3nfSSTKmk6ij6LFdf2+aFtVmMMNfy+D9bOyO8mmF9F/
kaxXa53IedWxSObyEHHnlWGhdQ1dWXSX0Tn1Syu2cFKlSGkAD42/
pEA3/
j0oQ1HXDuSWSPhfd+oHd+oAPXu8fGq1cTh2UO8gbyR/
lEuGOq6PEUU/
P87srsmPR/
Kd4uAh9AOnt1qvA+AlzSfrOUmDmU7TXh/
WOUs0AQA7NYq+G4E+3m/
Ep1pAAtH4N6HRAhw7sB1ysRhgw1Aq/
tHQ6iDtWrq6bp4TpGa+UPU2QFGF8I7CmHrrjU/
Z2Y2+D3DmQqmMzy+9ABbTpm/
1w7bb8/
nrNAQHLEBSzUHVMJT3n3IM5IYvI4Q9pUj/
LxywwT1sqwv0RF5tb0x3dNGsIlmH+PAJ3JyG5LA0UKk7/
YRxKcgPnyKf0PZ3X/
P9Ivh/
FB/
7CSPs5wsaaXpnp/
o1FgT2+S+X2uo/
iTTH8p3h7MhRPnHnrL/
W4PFJ/
PXnXdv9xLAc7szaTtaE68/
LwR/
P9NvRMsKk/
ffv4S7LK9wUxBPc1XhpzZ7OL2+0+7E/
p3Mnxj9R5dS+4E1/
EPbNzC7NhbdzLjA1a6iwRUK/
RGN5cscHQaZvDbaOZdGnbUm6VGpu6NZDvjfN8a1zZHu+nDG2+/
wnlCMcyFM1sk6+tmBjWjdcRHoG5DRdS/
Qh1+K5xIHS75+eZvnN8L7d0zkr3gHZ2wsA6NH84LLG2u/
M5b6Q/
ckmkLJDxQbuvrGvvJANucmbbwrGNhJ0pyJO8qG/
mWR2MwhxTgq2Whzp5XWmk3w1z8I0k/
TFH7ZtJ+Hk/
8dRhvHAnrhDFzl/
+A8zY7r0kMw9D2a/
eRKz7HC0vR4XqvFmObOxfj0J47Uv1Hbb9/
L3vhIxqWhjvgK0A/
+qaVWnk7f2sF1Ux/
ScSMOKGgb+X4XQF5BLu9q1YzmeZhStEw4nPIvjpeIEcqXgU0JBi+BPgv4EjBPa+f0/
uUF1mZGp+2vKfj5xpnbaoCrx4F/
R9A+tXQWmoyIZuZHvKWvFUUjftpAlY5oytfBc3XqJOrz7HxOg4sXdCwf2rWKHz5QI4t2ghhWeuNzQGlDM+NxcMsDXG1ZPk/
fkaFR5BC0zj4nF3hW1nmGPNeLGLFzLSGThCvBx/
YUnALxZiSOkGdTpuyMqrvxC53lCCI/
PoWN1iaHEKrSBodY+x+fl5o+Zdln0/
PP+zKBtBYOv+xnrVmDYZnybK/
rmaZQQjI+31EnZdOw0b08r47R9sR6zhsWGsd4gR1OL2/
7JSLpYHJxkQ0ub/
UQ/
vAhaQKSWyLR7NN11OhCXfi2iD1s2hV4ZI+GgfQWLZJO0u4EmFH1RoLe8v8AV0T4A+8RFfVSFsYl1wqMj23bpIW8oq9UTIPxZd6K7b8bzNNfkM2sKjiWl2xpLEU9A1kwHjWBErgdj8k7Yi1vjl8uuhVi2xn2SdPr10DjZl5sbtI9fuUrFCpmZMB+KkbWYJfmhyuaVnTMXdFZcV+Ip9d6Q04QfHI2OruAlrRkKJ1lS9Xqbn2CTGFsXt8YUfnhwPLijf0brQPv9BqBb7v+x1YgNyNvBuLPjX+TDVsZ98ezxb1K9j13v3ZRRq0MZCAkhfJ2Ib4eWnyHOrDgMMuZAOHb3uJmwmAJQlVIX1vt6iYx/
rLvwVpgU13FnnLPUHLRzmCYAqztu3IHnb/
uYeV+ZVQkYsGMhHp6ZcXWpbwSBN+mrM4pn38hpCtqQE3JCaHJmcEP3mdfDKmbdHtdjvU2aW+5R6yzQd2YbpbmVr5YNQSh2d3iJW9B82ID5Oxyjjbpqoui1uA9ZqXJj03Zrw5i6Do+s9j5bn6VQrfsHwZP7ZLC9fevWJmcUCaQK/
1bi/
XCOB4Mn/
C8TyxtsyAMCuOl18fSUmhKfZ2vQR9l7NY1mIb+XzQlnA3XpcFSTTbwOCKNhR1u5ZKTlv4i2Gnw3OGVi7CbJ5S2OeEWXCEpH7mbSDNy0NrSKMZL2SwBw0eu9g4DDMjiZjnQcl0m7fWjT4pJqNnkU0q6RewLfnbC7DiXWF80kNH3mFxqKWAILyKiiKGlFMC4yzBEmqeMsc0zDjeG4vj0Bh2omx4gT9QE7WTq2gC1SpcqK2ZGHKX6ifvIpmYlkoZ7VGgRB9wTy8OPWAxqRg2QLN3TBLgOe0pEMlG4sZ4qdJ5wuPu42XJEN9ahU1sFuSy63WkaGQ2YFKMC3UNkgHFBIpoaGfhE3Ww1+fR1vK2o0Dj4PmMe6YJbyGWe0sHmL2UQdL0Nf8kwGwXhMiByHX2cZ0Rn1f8SkPmuP8gRq+TmL8ve+2q1d

```
qrMiOHOteOTk5rZ6HQiEaGhoAGDRoEMuWLWPx4sV84QtfIJlMMmvWLP7rv/
6LMWPGNO9v6tSp7dbL1q1bGTly5H5qrespACYiIiLSw5xzzwLP7pN2W4v5BqDNLaqcc78BftNO+kbg2K
4vqRwJrqaqc+N/
ARZOg1AYyjUQvohIewKBADNmzGh3WX5+PsFgkNLS0lbpO3fuBGjukpiTk8N9993Hfffdxz//+U9+
+MMf8sUvfpFjjjmGKVOm7Hff6enpzfueOXMmDQ0N3HbbbcyfP59PfepTzfu46KKLWLhwYZv193Yv9Pl8
zJs3j3nz5rF161Z+97vfsWDBAoqKirj++uub8+97HKWlpQQCAfLz8wE6dKwdNXPmTJ5//
nnq6+t56aWXmD9/
PldddRVvvPFG87aWLl3aJuAGMHHixE7t63CpC6SIiIiISG9SXYV1MgAGQGaWWoCJiBwCv9/
P9OnT29y9cMmSJfh8PmbOnOlNlmnWOOOYZ77rmHZDLJhx9+2Kn9fec73yE/
P5+77767Oe3ss89m1apVTJ06lRkzZrSa2gsUDR8+nJtvvvplx48bxwQcftFr21FNPtXk+ffp0/H7/
IR1rR0QiET772c9yzTXXNJdn5syZRCIRtm/
f3uaYZsyY0RzYO1LUAkxEREREpJdw8Tg01He6BRiAZWbh1AJMROSQLF68mPPOO4+rr76aOXPmsHLlShY
uXMjXv/715kHhTz31VD73uc9x1FFHYWb84he/
IBqNthrMviPS09OZN28et956K//XV3Nj17cxuZO3atUyYMIH58+fz29/+lrPOOotvfetbFBUVsXPnTl599VVOPfVUrrzy
Sq677jpyc3M56aSTyM7O5uWXX2bdunWtAmkAzz33HAsWLOCMM87gySef5MUXX+Tpp5/u1LF2xJ///
GcefvhhLrnkEkaMGMG2bdv4+c9/zllnnQWkWswtWrSIm266ic2bN3P66aeTCZZu3bt/8/
evQfJVZ333v8+e/d1uuciaUZ3iYslMFcbkJG4xNjmascB5xiIY+NAld/
i1Hlf1xucnEqRpOyyXT4nryvhmMRxEuMbBIfYHPs4BhsMMeALN4G4IyGBkAVIQkIaza3v3bvX+0d3j3p
mekYzUs/0jOb3qZrau9dea+21d28JzcOz1uaRRx4ZE6ibbgqAiYiIiIjMFumhyvYIM8B483e4coB5M/
dWLRGRY8Fll13GD37wA77yla/wb//2byxevJg///M/50tf+tJwnfPOO4/bb7+dnTt34vs+Z511Fvfff/
+UgkY1n/3sZ/nbv/1bbrnlFr75zW/S3d3Nk08+yV//9tb/Gxj31sRN/f/va3ufXWW/
na177GwoUL+cY3vsGVV145pWudjDVr1mBm/NVf/RXvvvPMOPT09fPSjHx1+AyXAX/
zFX7B8+XK+9rWvccsttxCLxTjppJNGvElzphzbtKV161b52pvH5gpN9100/D+2k/
+6ZTbv3bX3x9V+7mo/ppvvfXWFo5EREESk9czsGedc40U/ZIRW/
FtPRirvfpPg23+P96EPY6uOn1rbV7fgnvg1oT/9a6xramu4iIiM55VXXuGUU05p9TBkEn71q1/
xwQ9+kJdeeonTTz+91cNpqomew8n+W09rgImIiIiIzBZDg5VtWcIw6uYCYCIiIiIiIs0WqmgEWP4IAWKISAHMKgImIzEsf+MAHmMo
yV/ONMsBEREREGaL1BDE4ke0iL2FwpXMMU2BFBERGUMBMBERERGRWcKlBo/
sDZA1iaQywERERBpQAExEREREZJZwQ0cZAGtL4voVABOR5tK0OmmlZj1/
CoCJiIiIiMwWqSHsKAJglkzAJglkzCYJ9+WRWRpgmHw2Sz2VYPQ+axbDZLOBw+6n4UABMRERERmQWcc5AeOsop
kO1QKEBOv6yKSHMsXryY3bt3k8lkFFyXGeWcI5PJsHv3bhYvXnzU/
ektkCIiIiIis0EuC0FwVAEwkGp6ujoAGDPnj0Ui8bmm3A4zJlS4afw6OhAJiIi
IiIyGwwNFJzk3ZkgKtkOgBvow5auaMKGREERQqQbBmCBBEWklTIEVERERZgGXqgTAAjmYNMBLJSl8D/
c0YkoiIyDFDATARERERERkdkgNVFNAEzMbmFBEODATAREREWEEERERRkmAJgIiIiIiKtVs0Aa2YAzGkN
MBERkWEKgImIiIiItJjLVANg0VhrC6yRQREERabVMurJtQgAMqGSBKQNMREREkmAJgIiIiIiKtVs0Aa2YAzGkN
rRQREZnnFAATEREREWkxl0lBLIaZNaU/S7ZXdjQNUkREBFAATERERESk9TLp5q3/
BZUMMNA6YCIiIlUKgImIiIiItJhLp5q2/
hdwKADWrwCYiIgIKAAmIiIiItJ66RTWzAywaAxCYU2BFBERqVIATEREREESk1TJpiDUvA8zMINmO6z/
YtD5FRETmMgXAREREREREayJVKUMg3dw0wqATA+hQAExERAQXAREREREREaK5OubJscALNkOwwcxDnX1H5
FRETmIgXAREREREREREaKZMCwJq5CD5Ash3yechlm9uviIjIHKQAmIiIiIhIC7l0JQDW/
AywjsqO1gETERFRAExEREREpKWGp0BOQwYYaCF8ERERFAATEREREWmp4QywaPMXwQdw/
X3N7VdERGQOUgBMREREREKSVMmkwg2i0uf1GohCOaAqkiIgICoCJiIiIiLRWOgXRGGbW1G7NDJLtmgIpI
iKCAmAiIiIiLWdmV5jZNjPbbbmY3NzgeNbMfVo9vNLPjq+WxWdfuhuja/
qvb5fPVn8cxdkUyFy6SbvgD+sGQ7rk8BMBERkVCrByAiIiIyn5mZD3wDuBTn3AD4A+fcHXAvU938EXGxm5px7bUVfsM0Oec
W2NmnwC+CvwRcAD4A+fcHjM7HXgAWFHX7lPzafX7lPOuU0zciFyxFw61fwF8Kss2Y7btwfnXNMzzEREROYSZYCJ
iIiItNa5wHbn3A7nXAH4CGUtAN6q+7yLkOcgutAM1RxsiGtU0v/mG4wFEgRGDQaj/vaGutH/+X/IJECIyYhy
ZDPT07+IiMgcoQCYiIiIiGutAN6q+7yLkOcgutAM1RxsiGtU0v/mG4wFEgRGDQaj/vaGutH/+X/IJECIyYhy
mNmN5rZJjPbtH///
qO5DjlS05kB1t6PVQCUIiMs8pACYiIiIiMs8pACYiIiIiLSWo0CU24qdczsNCrTIv9r3fFPfV
FvnnFvX09MzPzAHLZaVaVaV0DDMD1901P/
yIiInOEAmAiIiIirbULWFn3+XW43JNiN+DSEu8xfX+NTHEAqeU+ZrieVtTCPDLXwTUMNV56Xrdmf8xWUHxlbnUk6iVsmgXNw+OdB
```

```
4D1Tk//
IiIic4QCYCIiIiKt9TSw1sxOMLMI8AngnlF17gGur+5fDTzsnHNm1gX8HPhL59xjtcpmFjKz7up+GPgo
8PI0X4cciXS6sp2uKZCRKESioAwwERGZ5xQAExEREWmh6ppen6XyBsdXgLudc5vN7MtmdmW12neARWa2
Hfgz4OZq+WeBNcDnq2t9PW9mi4Eo8ICZvQg8D+wGvjVzVyWT5TIpgOlbBB8g2Y7TGmAiIjLPhVo9ABER
EZH5zjl3H3DfqLIv1O3ngGsatPsK8JVxuj2nmWOUaTLNGWAAJBQAExERUQaYiIiIiEiL1DLApm0NMMCS
7dB/EOdGv1tBRERk/lAATERERESkVdLVAFg0On3naG+HYhEy6ek7h4iIyCynAJiIiIiISKtk0hCNYp4/
baewRO1NkJoGKSIi85cCYCIiIiIiLeIyKZjOBfABkh2Vrd4EKSIi85gCYCIiIiIirZJOT+8C+ABJZYCJ
iIgoACYiIiIi0iIuPf0ZYBaJQDQGCoCJiMg8pgCYiIiIiEirZFLYdGeAASTblQEmIiLzmgJgIiIiIiIt
4FwZMhmITfMaYIAlO3C9+6f9PCIiIrOVAmAiIiIiIq2Qy4ErT/
8aYACdXdDfhwtK038uERGRWUgBMJE5ZteuXdx8883s3r2bW265hZtuuon/+T//J5/73OfYtm3biOO//
e1vuemmm/j3f/93brrpJp577jkGBgb4+te/zqOPPPjqm7Nlnn23YT+34M888M+b4o48+OlzWyNatW/
nc5z7HY489NtxfrWzbtm0NjzcaY03t2ODgYMO2tWt+/PHHeeaZZ8a0b9RPo3q1sp/97GcNr6++/
UTfUaOy+rYT1X322WfHHHvwwQe56aabeOihhxqOpb6/2v7Pfvaz4Xsy0Xf0ox/
9aEy98a6z1ua5554bPj7RPan/zuvrNWpTX3f09/
H4449PeO8aaXTv65/1Wt+PPfbYhOM6XNlE42l0TRPdr8m0P1w/
h3sOJzLZsdX3N9UxTnYsIse0TLqynYEMMDq6KsG2g73Tfy4REZFZyP/
iF7846cq33XbbF2+88cZpG8wvfvGL4f0rrrhiTNmiMzZMuc+DL208qvZzUf011+6jzE2N/kz80z/9E/
39/ezYsYM9e/YAkE5X/gG9efNmXn311eHjTz/9NMDwL5btT/wy+XyeF198kS1btowpe/
nllymXy2P66evrG/d4rZ/
NmzdzySWjLmGW265hWKxyJYtWyiVSuzYsYONGzdSLBbZvHkzL7zwwpjjtfPVj/
Hyyy8H4N577+XXFF1+kUCjwi1/8Ykzb2jVv3ryzZZs345wb0b6mvp/7779/
TL1bbrkF5xw7duxoeH317U8877bQRfdd/
RxdeeOGYstr1FQoFfv3rX49b9+WXX6ZYLI449vrfmsYONGzdSLBbZvHkzL7zwwpjjtfPVj/
Hyyy8H4N577+XFF1+kUCjwi1/8Ykzb2jVv3ryzZZs345wb0b6mvp/7779/
TL1bbrkF5xw7duxoeH317U877bQRfdd/
RxdeeOGYstr1FQoFfv3rX49b9+WXX6ZYLI449vWvfx2AV199dfiZqB9LfX8vvvvji8H7tGhr9nVD7jt58
880x9ca7zlqbl19+mYMHD1IoFHj99dfHvSe1+ps3byaTyQj+j82bN9Pf3z/
uvWuk0b2vf5aff/55nHNs2bJluO9O9G42p0L8a796PH0+iaJnqGxvuOGv05G6+fwz2HE92zyY6tvr/
6P9eTGeNkx9IMX/rSl97+4he/eNu0nuQYMd3/1pOR3IF3cM8/hXfSaVhH5/
SerBzgXnsFO3Et1r1kes8lIiIygyb7bz1lgInMIbt27WLv3r2wuNBEPDEE0/
gnBtR9u+aQCGIwiCh/8Chv6vP/
fozI+tW7eyeOdMMWO7ahmKlx8Chr3ogr9NjyU/82Ks8zFcrwSQnUppFJM24lpafPMmQNvHEjobQzrxLy7tjjRfZHmZPPrzP5wh/i/
fozI+tW7eSzWZHlO3du3e4LJvNNjy+cePGMWOsZarVj355JMN246AGHR0xvPP7442PqPfMmM8Nlja
6vvv1TTz01Jqul/t7VMrHqy2rfwZNPPPj1h3doYascefPDBEWN66KGHRoxl48aNaI/
pr9AyMzgJr9B3V6o13nfVtgiAYPvd496S+fjabHX6eNm7cOLxfazO6bi1Dq/77GO/
eNTL63tfGWP8sj+670bga3YvRz+N442l0TRM9Q6M1al8zXj+TeQ7Hu2eTHdvo/
qYyxsmOReSYl0lVtjMxBbKjCwB3QOuAiYjI/BRq9QDGc9NNN7V6CMcE3cdjy/e///
2j7qNcLk+4+97/uZv/mb48x133DHlHcJGUSmPXJ/n+97/
Phg0bhgNjkx1Tffuf/exna25s3t2ir1RtP7frq25fLZR544nmZ6fZ3tjSuHSZjambqNz1AccR/f/
7LPPjqh7++23UygUxpyv73eabx9Qb/X1M5h41GhcwYdlE4xl9/bfffjtnn332uM/
QaI3a1/6cjfcsTuY5HO+eTfR815vMn5ZXx+nv99dcnNRRaY1565qZAWiQC8TZc7zvTfi4REZHZ6LAZYG
2o5ltMrNN+/fr/
xiJtFKjjJ7ZZHQmUaPMoiMVBAGbnOxYRI51biYzwAA6unAHFAATEZH56bABMOfcbc65G13TPTM
xJhEZx9KlS1s9hAnF4/EJjPx8/cY7XrqW9fG1fN6O9o6dKlk/
7eJqo7XvnR3BOY+Dsa7zrHa1PLABt9Tw5Xv75No2doMtc31fs2kUbjanQvQPjTfTnar
x+JvMcTuaZmmhsE93bw41xsmMROealUxCOYP7MTMqwzi7o1f/
QFhGR+WnWToG89dZbgU/W+TpSR9J+rhp9zbX7uHbtWt773ve2Zmymvdvh/
Mu//MtwefUyylVcFDX3ddY5LTrYkLQS8s+dFzYj2vX/3Bp6zHhP5HXgm8f7UXD/lgAEcwWJQwfkpLWWMSjh9oyUEZb1JelqZc7j6P
jfUfXXnstp512WsPrq29/1J4JmPFZf3Bp6ssHnDb+Zt2Bn4+Upo8e9cP6SsuNN8WV8B31WbUOVM7qjE6HUnUrUfh2wn+vdtY9M9kRcCvO5sCjAq2r3Y5zvdJT82Hpo2DPvYK4VvbJM1mqHaXH5mqDAsiXvYUyFPazGn9CZHtpLGSUV1hX2/ebxEZdTJ6eF5vctapzt3ZmE2Vz8zvsemK2RRiHa5+ZMFnd7Ra5UTuw9NbM94nP99XStvaxAHGqkNc8KBTfuhVuFUaDo2+YOWNMjDe8pygUTbU2VJ6tTO/e5VVwNZazIgEkLrSvTmYUS+zevoMtqbdeddqcTdjKe1HAaceyKhHa+t0IojgvSKDCtOSFU+e6dEnxMxbnNVvYV0Za4bJFrMkVrpsXw0WWiiW0hrzM+h5RDzAX1OTRGzEqvOq+6CtrFEufuHvnZtw6DFxtqn6wQeN3bNvy7rtcmNhvL5EPuN1+Z4wvyz1hNFmP8kH8DfgE8YkOgV7X4vVaGWrh8dBzaBxXQFXAKJTMPsSPnXx0KCmV5Lll2kAgXpvcxkb1nrp57Kfp2ahkVl+vsaP46oH9v9NHhNaW+oMXAXz4+y6ycvNkWEhlbQlmjjJuUa52wcdMXFMXdlmyBnzXZudU03M2MvS4SfE1hj8nQS43B+iNTRmbjPNZxxqf5pmtFqbHsEdcXVMHGpz0DmEfbVtR6zm6MQUFN5Hz1gnuTxS9dM3kdGbvZLyw5rVY2f4dQ3+FaNUV+XzB2Muaw6Qx9yvPwxzFqzpJd0t6FKHLNfcm5cVjUy9uqrULuxoWPmfpVUTU+5UBGDczhk+G5kpsKAtO4hi2b2b00oZ0AcD1fN9xrfVGJ9pbKOdkbr0+LD/s0hqoIeDvmBfL5BJt9mZW8LyIXBUVylsP5xMW9MXc5xOjVCYWQQqcQLdp8yrE1VfeKe1ZFsOX35Oc99bVWbHZ+0gOtWlkoMhjg8lGq9YBIO9e0VXTEqdMl2P7nA6Xye6jaSQ3G2hm3cJqiDkhcqJ2m6CmAYNjYBJDqXMbaRYimWDMiDLeHATVeVR6z/J9xGDnvtchiz6tCcBX7RwjAwNqi7VRLzfAY0sVAZmyl8/rg8kPcHNtYzjgCDWRfqiB4+X3POgbWHyt3W+3hjR3TlbUcbvfJVhL39M4jjh+L52I3E6tbUwMQ+E9xq8N4zwe4DyxWSrEvn3KmemBpMBBgyArbJ0H0iBdrL1a2qXqR5XnN0LxIdSj5ILiMWOBxSxS3FQXTB+dJYkDFRElx3zhxMIv0JDKyaBgk8U6AOHxKgQAnmY3wXm3Mm1fIR3QWNeMQlj0bygpmkkrGQR0M68WwSw0dNbwBeNxbFhZRAhUZRR40wKIQFeX3MTj2Fd0jUa1nMzDbsfaOTLpBzXB/iUqyh0CI3npI7PXM4lVgSNzAC4ooE8hd3hcAVEWewRlrwlcLA3+4bqdmWEd2TR5G4HeYVgmwUKFRLOWAIA7NlXDl1ezYRQPoRfkyBNNfu7AzvS/R45KncSXmGq0IpKOoiPTUL2tY2BhG3uMngbXB4AEYtGrdlmkN0aN9Mq3lsAD8ZUoA7X97YNe8e8dPEnKzC3tf9ZECAXbDKOVbaTrDu5P5X0fAnJQZD8+MFkgFqXWXuLCpVGD8xQ6MZ6nSdJyRXXA3Gl/ZTpxtTEZLuH/P54n5P80/EVfjp7y0vn8zR1c1ezw2zw9F2Y89LHRrWS5JNXg+68/f4q0XFIp+8IqxTZhxrKDq0qEhPMSo3TbdsxP2BeMK41yfzVGSVnfl/Ny1hxXHWVXDb4+ZrIuBxQZhZ37twEjnPqyutXkWtAjvvrCe9q3oBLR/9wRAlwK6A/6Xm+Oe0yzQb8fqcx+ejR0CLnhcohDBxC1hTfNB9IIgCnzOg2IzBglEgmXZWfvpxhTKHNMR0QBtaqGrXkbT0NFxzxdDbpqeJ+FhC4ahCuvtMwKT1Jr97eCcyBH9Pvx/OR8+7A/XZ+hSsfhRp1OGsX+Ca98+Qx0Fj4Ny1S6NYbJVWpyhKfeBIs2vQYiDDwl1M/CzTHJWIM2OYqeVA4NmxeZBzIrwuKyZ7GMa+1TmfhAr0J3XXd0KKNw9XwAjtp6qkBJQ1FK/EgoAP1B/AyBIjHJ7Y5+Tj+72o+24adeO3eQYs/J1zZpIIqaJ4SpXlWGHZ7gxWPGUmj4x2zbyKkZWGBaOmEUKn7ZNJdFTfW9Rk2Z6g0y9Y6CF0pGY6+E2FxD8zPtKW6kOfbl+4Es8Zc3vHD0k8o3o7lnTcaqZv0KHmbRbh/ZD/h4XVIRLOfDb9OH2d5pJWgoPNFgiTqgOqy+LAiV9/aQjnJ1Dg1xTK9NIqwLdzvvdqPgAoCqd7aj9MGc4CUUexMkEl2sABdKDzMI2h1D0EQ4B8i4XTyREsjtp4gXLLNyMeXtEw0Hh5QU7FVGAJQOBgCS2fn+9zrFsawdoO+6f/KXTm+Mz2DVoU+D4uUUtnmDaMzkSQjh0Mv81iaDWr3UlBd5tw0w+YwsWkqwzXWbLdrLIB5UXGHfY1uwlY6oDYQw2dHr6XJ8vhfQa6cB5QXXT3Djc+gz9fEd6zzYDQWMPhP9gvF8Mj5e0xAvqt7Wri9/rvW7HLHtEgcDcABpw2OKNsMqpCD/
nXAFpdIcWMq8D7+fd8zL1CX7BYkqE4GUZ2sRyVrrwSOvjQu8zqHdWrP/DQsMNdBIywbTOqpAK/pRBnsZzFJbZvWLdGIWD+pK4yJvUlbEZBVWcsnJWKmDl98MRCqnmTD9Ye+dG81/Gzv7DHTpCcyx0ADzmQMe66Vh6ZAq2tIl3ySU8A5qHN7tMfA1/pOUn8wfqA5jxnVNDs3/oxpnY6Nb4lNwJGa7mjbO/Ajxi5h0MgqW8VKqfkahtBAKQdp4T/pC85Sq6jtDwEOQNs7ZSRAQMdQRPl+9Fr3xM6jEkn1ePAFeJjoFL6iDfMuTHNKXg+bqrUDOuedgSBbHTTE+g1JjIrzWpoxShZx/CwDxTm58WvFEWeiO+mnWn+qGTLRvDAEm5PpDyxHmwX5SktjwdlTAEDxg1Zf1RmIeNv0H2SwDvFLPi3fvB+0UL7v4UCQ3MWbjvvNZ4YTg9nMDfDYWdkP8eFtGnd1D9FWeNffVNUOmBLzKXxqmCAAHXAixi0hWRE7JxhtK9sWtAiJP9Vk6CuW6K28bRLgA4ikAZpGKG6F23b0f2JBoqhhWWXqlVEUQHiUnRLAw3eEAbqYFoXhbbDVZpB+cqxyLQuL3vHwf5MZVsK8XjCd/2vkPkGIVumJGWxr7aN5+UFWc5eUqtPXDOl7HfLZuuGkUF4dD5qfRFUGD9Q2NxDvYa13GD67rUrTRKGSDPGsc/DNjG/7L6p/BdPzFJ1OGzFG0QZqBiHrc5M3rQydy1wMWvfYtkP0P0ObYfRs17ERl4svaH1hLlDg/9wOPXqrFa8mwJQ3Ys6UuGO2x+bYnDWYq4uMYVOAg9zAIhfyzWcT8ZR6gzBs2QeQxjwNETvUVAdJVAQ7iyOYMWt4c0nqYJDdBlXaz6mJQ3Bfav1sI9HYSF6wjq8qh/MYyX/4/c/AMwHsQE0gE0MGQAaeHQn5ZRnhL0Yqmu3w3kyLMHhdgqNRQ/aGsSj6Up4Z3b+GLTB7mO3dKcvdGfnEEN1bnEY+
```

sA5dwZwPVCfLvnPwI3A2urPFdN2EXJEXCo1owGw2psg0ZsgRURkHrLRb0CbyLp169xEC/
UerfrpXo2mQK795J9Ouc/X7vr7o2o/F9Vfs6ZAzm2N/kyIiMjUmNkzzrnxF1prMTM7D/iic+7y6ue/
BHDO/U1dnQeqdZ4wsxCwF+hxdf+Qq2Z4HQCWAwuBR5xz764e+2PgA865/
zrRWKb733oyUvFvv4CtPA7vvItm5HyuXKb8b9/CO+8i/Es+OiPnFBERmW6T/
beeMsBEREREWmsF8Fbd513VsoZ1nHMlYABYNKrOx4HnnHP5av1dh+lTWsiVy5DJzOgaYOZ50N6J00L4I
iIyD83aRfBFRERE5olGa3ONTtGfsI6ZnUZlWuRlk6k/
omOzG6lMlWT16tWHG6s0SzYNOIi1zex5O7pwB7QGmIiIzD/
KABMRERFprV3AqrrPK4E949WpToHsBA5WP68EfgL8iXPu9br6Kw/
TJwDOuducc+ucc+t6enqO8lJk0lIpAGwm1wCjuhD+wV5cefJvUhYRETkWKAAmIiIi0lpPA2vN7AQziwC
fAO4ZVeceKovcA1wNPOycc2bWBfwc+Evn3GO1ys65t4EhM9tQXRvsT4CfTveFyOS59FBlZ4YDYHR0QTm
A/
r6ZPa+IiEiLKQAmIiIi0kLVfQvHTwAAIABJREFUNb0+CzwAvALc7ZzbbGZfNrMrq9W+Aywys+3AnwE3V
8s/C6wBPm9mz1d/FleP/Tfg28B24HXg/pm5IpmUdCUDbCbXAINqBhhoGqSIiMw7WgNMRREpMWcc/
cB940q+0Ldfg64pkG7rwBfGafPTcDpzR2pNIurBcBasAYYoIXwRURk3lEGmIiIiIjITEunwDyIRGb0tB
aLQTQGygATEZF5RgEwEREREZEZ5lJDEI9TWaJthnV2Ue5VAExEROYXBcBEREREGZaJjXzC+BXWUcXHN
AUSBERmV8UABMRERERmWEuNdSyABgdXZAewuWyrTm/iIhICygAJiIiIiIy09JD2Ay/
AbLGFiwEwO17uyXnFxERaQUFwEREREREZpBzDtLp1mWALeqpjGPPW605v4iISAsoACYiIiIiMpMKeSgV
W7cGWLwN2hK4t3e15PwiIiKtoACYiIiIiMhMSqcq23hb68awqAe3RwEwERGZPxQAExERERGZQS49BIC1
agokYIt6oHc/
Lp9r2RhERERmkgJgIiIiIiIizqZYB1uoAGA63d3fLxiAiIjKTFAATEREREZlJsyAAdmghfE2DFBGR+UEB
MBERERGRGeRSrQ+AWbwNEknc23oTpIiIzA8KgImIiIiIzKT0EESjmO+3dhwLu5UBJiIi84YCYCIiIiIi
M8ilU62d/lhVWQj/
gBbCFxGReUEBMBERERGRGeTSQxCdJQEwHO5tLYQvIiLHPgXAREREREERmUjoF8dYHwIYXwn9b0yBFROTY
pwCYiIiIiMhMSg1hs2EKpBbCFxGReUQBMBEREZEWM7MrzGybmW03s5sbHI+a2Q+rxzea2fHV8kVm9oiZ
pczsH0e1+VW1z+erP4tn5mpkIi4IIJeFeFurh1KxsEcL4YuIyLygAJiIiIhIC5mZD3wD+DBwKvZnbq
qGqfAfqcc2uArwFfrZbngM8D/32c7j/
lnHtv9eed5o9epiyTqmxnQQYY1BbC36+F8EVE5JinAJiIiIhIa50LbHfO7XDOFYAfAfeNqqUtnMVcEd1/0f
AxWZmzrm0c+5RKoEwEwmQvSlQDYbJgCCWDdtXXAtBC+iIgc2xQAExERERERkdZ6Zlgjh5ubxbWbY7mtnsnMNu3fv3/qnQo5cpiyTqmxnQQYY1BbC36+F8EVE5JinAJiIiIhIa50LbHfO7XDOFYAfAfeNqqUtnMVcEd1/0f

bDVtL2+C8tSnMi5pC3HJygQGfP/
VfrYPtDirTURE5j0FwEREREREplktA2z0FMjXiyGeyUc5KVxgeQvX/WokveZ0/
NQg8a0vHFH7zojPpSsTdER8frxjkGf3Z5s8QhERkclTAExEREREZLoNDkA0hoXCw0WpsnFfuo0uL+A9r
V73q4HcyhMpLOyh/
bEHoXRk0xjjIY8PrWhjWVuIB3eleXh3GudmR5abiIjMLwqAiYiIiLSYmV1hZtvMbLuZ3dzgeNTMflg9v
tHMjq+WLzKzR8wsZWb/OKrNOWb2UrXNP5jNhpWl5i832D8i+8s5eDATJ++M82I5/
Nn47Zgx+N7zCQ31k3jxySPuJuwZv7csztrOME+9k+WnO4colRUEExGRmaUAmIiIiEgLmZkPfAP4MHAq8
Mdmduqoap8B+pxza4CvAV+tlueAzwP/vUHX/wzcCKyt/lzR/
NHLZLmBvhHrf20thtlejHBGpEDnLFn3q5H80tXklq4i+eQjWD53xP14ZpzTHeO9i6Js7S/
w79sHyJSmvraYiIjIkVIATERERKS1zgW2O+d2OOcKwA+Aq0bVuQq4o7r/
I+BiMzPnXNo59yiVQNgwM1sGdDjnnnCV+Wb/
CnxsWq9CJjY4MPwGyHTZ+M9MnEVewMnhYosHdniD7z0fP5chuek3R9WPmXHKgigXLI2zN1Pizlf76cvP
rnXPRETk2KUAmIiIiEhrrQDeqvu8q1rWsI5zrgQMAIsO0+euw/QJgJndaGabzGzT/
v37pzh0mQxXLEA2A22VKZC/
zMQpOOPcWA5vNk59HKW4cDGZ1WtJPPMoXnroqPtbnQzzweVtZIqOf93Wz67U7A8CiojI3KcAmIiIiEhr
NQqBjJ4TN5k6R1TfOXebc26dc25dT0/
PBF3KERscqGwTSbYVwmwrRjhtlk99HG3wPRuwIKDzkXsrC5gdpZ54iEtXthHyjLu2D/
BC75FPrxQREZkMBcBEREREWmsXsKru80pgz3h1zCwEdAIHD9PnysP0KTPEDfQBkE108mAmzkIv4JQ5MP
WxXtDexeCZ64m/+hLxLc82pc/2iM9lKxMsjoW4/80U/
7krRVlviBQRkWmiAJiIiIhIaz0NrDWzE8wsAnwCuHdUnXuBG6r71wIPO8mI
BPgp80fukxKNQPsodgq8s44N5qfE1MfR0udcjb5xSvofPge/P7epvQZ8Y2Llsc5uTPCM/tz/
HD7AFktji8iItNAATARERGRFqqu6fVZ4AHgFeBu59xmM/uymV1ZrfYdYJGZbQf+DLi51t7MdgL/
C7jBzHbVvUHyvwHfBrYDrwP3z8T1yFhusJ/
Xlq5lq0twaqRAlz9HAzyeR995l4IZC+77IQTNWcDeM+PsnhjrF8d4K13ie1v72ZOeWxlyIiIy+4VaPQA
RERGR+c45dx9w36iyL9Tt9Tt54Brxml7/Djlm4DTmzdKOVLZwRS/
fM+H6fICTp1jUx9HCxLt9J37QRY9+gvan/glQxde3rS+T+yI0BnxeWxvhu+/
NsDFKxKc3R2jksQoIiJydJQBJiIiIiIyjR5OHEcuHGf9VrS7Vf/
JVSZbGQ/znrjQ/3TlEPpijGXMiIjKrKAAmIiIiIjJNtg8U2NK1mrP3bmHBXJ362ED/ug+QW7qKrgd/
THTH1qb2HfWN9y+L855FUbb1F/
ju1n52peZ25pyIiLSeAmAiIiIiItMgVyrzizeHWDR0gPcOvNHq4TSX73Pw9z5CcUE3C352F+G332xq92
bGqQuiXLyijaDs+LfXBvjNnjSB3hIpIiJHSAEwEREREZFp8NDuNOmS44pn74VEstDaToXjtB70ZWUY2
0s/MkdhN7Z0/
Rz9MRDXLE6yfHtYR7fl+XObf0cyJWafh4RETn2KQAmIiIiItJkOwYLvHQwz2mxEksH9HXsBMIByvI
0DH7wS5/l0330bkV2/a/o5wp6xYUmcC5fGOZgv872t/Tz6doagrGwwERGZPAXARERERESaKBeUuf/
NFB0Rj7OylayoUntXi0c1fYL2Lg5c+nGCWBuLfvxdoq9vmZbzrEqG+f3VCVYmQjy6N8P3tvWzO621wUR
EZHIUABMREREREaaJHdqdJFcusXxwj1rsPB5Q6F7Z6WNMqSLRz4JKPU+xaxMJ7vk/bCxthGtbrioU8zl/
axkXL4mRKZe58dYD73xwiXTx2XjAgIiLTQwEwEREREZEm2TlY4IXePCd3ReiOhQgf2EeQ7MSFwq0e2rQ
rx+Ic+NDHyC9bTddD/
0HXgz+G4vRkaC1PhPnI6iQnd0V4sTfPN7f0sXGfpkWKiMj4FAATEREREWmCfFDmvjdTtIc9zlgYBSDUu
4/iMZ79Vc+FI/S+/6MMnv4+2jY/Q/cP/wV/
oG9azhX2jLO7Y3xkdYLumM8jezJ865U+tvblcXpbpIiIjKIAmIiIiIhIEzyyO8NgdepjyDMISoT6Dhzz
0x/H8DyGztxA70UfJdTXS8+d/0D8leemZUokQEfE56LlbVy0rA0H/MfOIb63tZ/
XBhQIExGRQxQAExEREE5Sq8PFHi+N8cpXRF64iEAQn29WLlMsXNRi0fXGrkVJ/DOh/+IYucCFtx/
NwvuvQsvm5628y1PhLhiVYINS2JkA8ePdwxxx6sKhImISEWo1QMQEREREZnLsqUy9705RGfE44xF0eHy
UO8+AEpd8ywDrE6Q7OTAxf+F5Nbn6HhxI5E7djLwoSvJrT0dzJp+Ps+ME9ojHJcM87uhIpsP5vnxjiEW
Rn3WL4lz2oJoJTtPRETmHWWAiYiIiIgcIeccD7yVIltynLAwCiMdS88Ua4OqQk0QjEKIhNF+
DOFdcSxOIs/NldLPjpnXhDA9N3SjPe1RHho8clOW9JHIfj/jdT/
PPmgzz6doahQjBt5xYRkdlJGWAiIiIiIkfolb4CW/vzrOuO0RnzKxXLZ7fXVIR0tSt/
sLnLkwyoKoP+JYqHcfpWQn+PonN0Cpq5v9l11LctvztL+0kcW3f43BCy8j854N4E3P/
5f3zDi+PcxxyRD7sgFb+ws8ujfDY3szrOmMcFZ3jBPaw9g0ZKOJiMjsov8ai4iIiIgcgaFCwIO7wIO7UnTHf
E5ZEBlzPNS7b/4tgH84nkfqlLPJrnoXXU9/XU/9iq5H7qVt6/P0X/
pfKHUvnnQ2Ru5qI2X3Ou+JkfF6qW5crp1oc+6bbb4B+vFX/UMncNO8cH3YyJo8MgFKDGfEHa8Q1y1I4vAM8b3w4sN3+aGg2kd+36dPKl5s7Wy71owTJ/3GZ0HtZ07s9xBoE8Yg7b8r+/
B0jxuMmphiVQ0rrGT0qIPvDF/0AdUL8oHUH/x8JpaUemCT7nYqj6iBI/
O7u8w2m9O+KhkFBgSIw7DBOZ1HzXWtDQXxdWQiiv8JqrSy4cY/
+ZvHr4CCmZJJOHfKZ8tKRnDRGzmlWZHlMwOt+dMs5C8KOmHcrmW3zHyd0Dw/
vS3HyQW3Y+ELB8PAlkqmFAfqHl4QQ5HeYcWMLPoDVdfo+y2rbpmRSvuJ4+Ekrb3r2ZZMUMlpZU1Yz1ufZcRDVNELOYRUDNPnhv+hGPRZ/
xXr5Y+lUyPo9dkIeT7Pkxe2ZJxfHHnO0evdH0ppZ8U/PRHYCw9HXHhlnPzfhWNmSVemHd6i90RJ0lyqAkFl8Zb+7ARx4/
bLC5zyDcDEn+3unVzqP0dBTsI+B2O5jHYd1RQCfB3hbTfltH1h7wqMQhFXsdUT0eNvUxAOnFzYSxvnOsCCRZnlwvP6y/
Xnaj9tvVp5P5Fv+QLOgjqNUM0yspqwPAfmnI+LLB0+o/NGaLIcN3/
Z2N6a9PbtWOhwr0YwcObfqNAT0tvKbSXWT4SXb/
+HXL2D0fgUzQFfBRBwXnrWRtfDrPOvSnv/AsVPFz5CHe2Z9Lvk6m9Oa1mrsXJa5sfwNUkWo1aBXQHW4/W9TBMrTxa/
fVp08iI1TvB3pOaAoq/TZ0ZLtGZt5/GaOEEsLLE7/F9v2/YL8Jr2AXpKVO8iaOh/
BVi2jkRP47VxyLcYZ6LxrBN+5ZkSxX2HTq6CVJiwuPfnVZ7YlcaAJgzNRqG/Oi2q8Cfo2E6w/
MGJRVPq0bCXZzMIMGCPoA4B+B2ZdgD0rdvZy4zsdqo4AHzpgTHLzAIcvXBFFVOqivQDIh91rwR2BfX1bzC2/
FTNLfSXbXoxbVDOO2PtMc6HR/
s3n9M8tQaX+j+kJfm5R1LT/69l97sWtfSDB6Gr0LBnoH2JGfBJLpxZcxtsnuAqKmyCPBFKljD/
CSVjeTaOwlN+H+dfYpjR3TQt5dafG8WHPbpAgW6nKDHrqTlWcxhxIjAJkbe4XEGv4lPgvhl72ciUvVIj4lWxJ/
9N3t2GKnO/ObgGTf4Ox02ub/IOfJHpBoG+NkxeEhMhDhcbHpS/
qS6e4Nfd1QIK4Q+WNUzZ06zNYEVlb2OcX3IpvoeRIkBefH3OaUwRKhY2UDHS2kfZ3GpvYBB1mZJpcVG8mnyBFhaZSDnxb/
x7g/P3LqkVn9Vk6EqEsTDiwsGHhVEp4zXyGxQXfzWCd+9Qw1YBAnfpPSyzb2B/xf3BdqnfpEb6+mS3GDoK2PBOG3pvEDZRcG6/
8HByuB4PnEj+6ouoBiLiVZW4/FtGy1Msu3F1Z0rbgQ+zzqVXAi7wz+U9bXxnBGe+Y+n1AZfgRD/
xF1QH+ToVPOI8Lq0ZYuwPeaqsTz4+0eV35kQ75MM0F/
XmJdWNe2G1/ssiV/nZ0HC3yRb6vT5/vcjHWTwbWwcG81E+z5/
Ztnb5JHgNHdh1Lb40Km3Ux0y5RrAGn0J2zBT+FjaJIRtS+UqDcTtKXYq/
lfjF0Y2o1/
P13F8KTE7Pqve8mvJ8Q4ZYzYw3Ol+Bhx/
fZnuVewfKbbQG8FqIjxgs4Yfi0NnkXf7M5cXE8OAv9Lb5BdsjvGgNhGcTs8Zfqfzq6Li9C5/o1jLW2jzcYX2Es4yt9+KDWbl7BzrZhJoSsv5+BBsB5nFvAjEM5ErMPdXQ8SCSpt1Y/v/
aPhh+8JJ0JvYk+Zs4f3EFhDhj8tHrwz4Qj/
NNs1f+89LNsZmmvYQn4G7l97QDnnrVsm9Z/
0w+1oFPvdG+LSHGOQxvb8jldNxY0Z0d9FCI/j5x1WlZSvkUAzsIHTn2/e8e0PHJqOOTTTwYzjV3mI2RzYSZnb6+iA8pRK4JzVB1u2UbIaMGdLuVZd/
0vQJ05a+YwsdaxpUXgmBXpxEMd7mKKovCfiEW9OrHYCsRwh1O4jkGdyG14DxhZRZMV8RBbevAO4Q/4Ka2KVvcFDDZm3L1cf4PRnHuAC/
CaBajVQYdS+DYq4Iy2/
IT0r+Yp5o5iNhfqlnHU8tMFT2hpdRqNyn6NDkqS1MNsi8EZgCl8SmCj8+6cWRdEMm0bq/
7nlN9hZi5uWPoWF4W3RFTnUg/
r/
QtTJAd5NeLbtCwNr7Lf0lKX+lKgrixAy7A7gJLe+0rR6qqHj+UuZsALw6Dv9Gn8XQ2yBXyszHH7KRjRs3M5ob/
5+OQHT0NSCVCwzF49uH/0+jZDhcW5g6MdVW6ZBJBqbcDHNaPNGQuJp5/
jG5KJXrX+VH6pzjIgBrW1Nl/
cRC6p1L5Y/
C1wyPL+bcjRlrQY9+t1RZxemSLoS/
ct2TfeDmPI1c7DxZIDVBoe4yj5jrn+m0MYFSg6tl9WU/
Lbc9Wt6/
EDfAmxbJxWWbx/
tvrHsdZNhTdt3v2ZpP9/
yNnaHUNmeXcmlwZ+ctvfcT5NN0FgMpvWHmDz/
czNAPaeHhCz/
1MqzvpPjPQ40w9X9ux8FNRu2Ci4eSO/
Ys/
qZoAEE3MjSB89C7ctoDfxpnHs91K9VRYCoWrm8/
XE5W6b28CDgm3D6y02/
ZQXi2/
AIcPSOvYi96TD07tvKrUGlVcR8W0d0Bfe9C0drC+4MWwmm0MhZCeZoDl03Ks6bS/
5BqC1Ao9i42BqxPqbGbtqX5tx+8XTAg10AW9YBBeedy1f/
QBWzmQAF3MBwhXm0ovrC+r/
pXrMmXY8rM+Zw8ej9kTdBYlE5v0tBp4cUGGmxBLb8dm8Rj1Qf3D3G0P/
HJk5y6lrTbfQPoNMHgQqJX2FE1bv43Z/
o8iY9xhzA0OxrLLtPAZ6e6VjB+ScYVzWFmwGsmkNhXdzDPJxQTo4X5UMu4uWfyoz/
ruTrHJM5pH/
Fv8zhYH5ctSG5Lt4VtwXcQ5y6/
NMgmkvBgI4cOCAJLxKm5LNvuBz8tN88pE8k5/
aDnQB9Yj/
XQq3htJf7EPONJhIU5/
MRyVC1e2vaCvQBfvcjMnIaxxRN9Jkdp1BeB2xdcyRZlsgoHmrqMy6Fjk8JNKb0G+SI5b3IEIuBk+uyiftROv/
G1NiOVfMh1qWo7n1VDZEHqNPTTNKLa0F4dnBMsfVTAYuu+NZV5/
ZqNmGJbSaW9X7lfT04+N6eRyL68WmRt2TsBHgMflFwbu4pJ5g2TF3Y/
eLJHnPk5R+vaGChLZRPTjQGW4rbyS3UdjN0H2rzJd7O3dTVAYiI/
zB9OSmMQBBe7G57kMy3QDJVTEDX9Y/
tJX8rhIX3V/
mbLTMKo0EjyBj5MVJL7xKr6t/
lCa8SWPzBC+HfHm8TnI+V5zL5rHROLMvTMBQNpZWE57ZQ5GqPA/
UVbR8+k4gUgR4WkMZjUZHaZfIPF9ZpdPV3JI8E+o3MfySEIYy+yUr9Dkc5R/
T+WjE9Mlkv+N9zTrvGxKsLYJzbzbfJKMg6dMOmiKQNiKAAwEmWuI+MvR5+mo9AOPKchRlDvmqdN5Rqdy/
ixOj0+Gy+qn9o/
rASQRfkBu0ez0x/6IqDp6wlfNqTsQWrAYG2LbVbdLX9wNcWNVgNo4mGmgGbBrJlFoC5vz2/
xPHkf2Qrps0M0rR5+6YE/FhdRqlG1C5N9YFP/
Oz8RiOMsSjgHNM1UNIkDTWwYAR9M3/JYmrf3dR4Rn5/
jSHMKH5R6kJmbBtKR9bk8pxC5/
S3qUBzvXhUtfJR5JQ7ScuiFF8J1LZVJrf0/
NrI1hP64GsnT6dAzJ3kYt5NMtOr03vjQ2wTzSr3NUp0RG0TS6dt5HJFPEiZEZd/
J7dXbCvC9ftNx+Ez0NZc4Ng/
wSG1/
f+wVDEW+wU2Ujsj+nY5UH7zfPAGXh0AZhBX2JtBXdVGzgtXpGKFaEXh/
Q7EJLjHyT0cDAlQuATKH7YZxZTR4s6TZr3kXp/
jYyWu7VH9U3kH+9Mm5+g3kmiA3eBQGMaeVtt0XXYVXgMvTUp3o/
u9rkMB7Pl+wN5VmVW6dSjuZV+wB7MHF1e1Wv1MnkCMIP/
0Y+6WMRMK9F89pL4fXy7YO1LVZG5Td/
0AzTFrAvyNm3l2eqIyF5xOqDsw97UITUOJ3Fq9aWH2J1W4MqxYHm0iY1+xF9rXkrtiv1PnWg+jmdgmG63SQZsq+NL/
PvQaX/
OjLmC5z8KDuYlsvjsX89lRjgDVVJ9TEsg/
sPExWNbhaVGvXT+4m6mc1iEyN5N/
Ie4yy3NTjD6dZkYw3tpM1PiaBAAd5Mzz5YS39NLRWf0c7f+ALzxdZfNTVHC7GQ3/eYdrLixoQoH/
TjEqStm6o68fbhhS0VT1ilDY9aWQ6M8LoJ+5yIBqnN4dRr4VoKsPuJtgd5eXbJjeyY6kSMf7vU3bIaWzPVbJnd9Gg9IzWmv7X2sxQ/
9Lbk+TGd2M5GP1b8mEUk6z/
54zGv+OWvoi1t2+CCB95HcsLdN7C7bqXv1xN0gbM9X+KsE33nD2Z/
5U5m0Wt7P8Vs1u7XGgbF3h7E0x7JYDiVmdCsaUEcV0P/
z/
i2ZmPNR9FUeNRPAYlIb1YLPbZ0WyLD/
mO6CmjPnzZ6Lf73fqNQpGmDE+QPqA/
gwSLIKi76eHr8qC2WrReHvVxLdIOTDe6LMG/
SqeoE1ck5KdK/
+LJ9ZbjYsTSdLPH5OcTY/
VXCmA6x07bK7TqljwCr6D0fSNENJgF1MVKI/
5cVDlHW/
RlAKg/
B9lxgXTXBj2sMYg3jCfNB5PV+T2L8cUA8mo/
WmpfEPb7MlV5PC/
a+f4xH7r7zmAOV3Y/
8K8KBhOyY+AmO4aWxd/
vDVg/
8UrEB4x+Tkh+t4WUgMiWJOJ0PbB+O6eEs2yJ6ITQj2CG/
9d4Qa5+9tlljyHJ/
h/
ccUW+8D5FxCFI/
94dFDg/
zEC3MvRJNx/
hDk/
zlpvvYk/
VHGNO6QDSGPNWrOKoOLqpF+3Hm9QEw4T5WOP6ZkXzOBTJnqGI/
96C9HsgfzrvY/
fJvjmjJ/
XvFqfXfFmc4XxtRoN+gSn8Ld3/
/
T6uW+qRH/
vR7gpZ7t2+BLG/
/
Nq+lw8nr4VxkBUvvHSzG6LtaqiJlGzj/
eoF/
KAmcpqrtOwDhqF/
oYVq/
L7KCQiBe4Ac1UJPy1t8RbI4RXsl9qlzFVoF8/
xL8ydCu0qpgWPpI3s+qcaNmtAYYpwP/
C6fXR2jdc/
4j4+c/
7Bf1/
m7VhdFjX/
KjE+Qy0QGZwVX+mxDn6lT59a1ZQs/
9QUXEBgv1L4/
vTmcTsyVZb4fK+lU/
PA4aCp6YDhM5I/
Lp/
HK9JzT9g/
QC/
Jv/
AwKHoyP/
Sl/
/
YH8dfnz/
9rPKUMsCp/
Rw+rf/
GryTL+qXmCjz/
Wj5+rT/
NK+aGVrpdkN5jv/
78t5p+Y5/
Bf9sLe0/
nHOm/
yXz/
+t/
A3/
A6Tr2/
e2CKI/
v9/
7f/
Y3/
//
s7X/
w2b/
6lo/
D/
//
//
g

```
RLvTmeO5DDN1iVDHNiR4R3dYRZqOwwEZE5QQEwERERkdZaAbxV93kXsH68Os65kpkNAIuq5U+Oaruiuu
+AB83MAd90zt3W6ORmdiNwI8Dq1auP7kqOcc457n1jiFzguGxlGyFv/
KBHqHcfpY4u8LWO1FS4UJjBsy4ge9xJdD31EAt/dhe5E95N/
yVXUW5BMDER9ljTGWFNZ4TAOfZng+GA2MO70zy8G9rDHquTYVa3h1mdDNMV8RQQExGZhRQAExEREWmtR
r8pu0nWmajtBc65PWa2GPhPM9vqnPvNmMqVwNhtAOvWrRt9Xqnz270Zdg4VeV9P7LALpIcP7KWg6Y9Hr
Liwh/2XXUty2/
O0v7SRxbffyuBFHyZzxvvAvJaMya97k+RZQKqaHfZOtsTrgwU29+UBBcRERGYrBcBEREREWmsXsKru80
pgzzh1dplZCOgEDk7U1jlX275jZj+hMjVyTABMJueVvjyPV9f9elfHxG8ptGIBf6CP0uqTZmh0xyjPI3
XK2WRXvYuujQ/T9cv/
IL71Bfov+zhBV+uDi8mwx9rOCGs7IzjnGCyWeScbjAmIJULGymSYFYkwKxIhlsRDE2YPiojI9JhTAbDX
7vr7lrYXERERmQZPA2vN7ARgN5VF7T85qs49wPVU1va6GnjYOefM7B7gLjP7X1QWwV8LPGVmCcBzzg1V
9y8Dvjwzl3Ps2Zsp8fM3huiO+bxvceyw2Tyhg/
sxoKg3QDZFkOyk90Mfo+31LXQ+9yiL77iV1PsuIvW+9+PCjV9CMNPMjM6IT2fEHxMQ258N2J0usq2/
AIBvsLQtxMpqQGxFIkwi3JqsNhGR+WROBcBEREREjjXVNb0+CzwA+MB3nXObzezLwCbn3D3Ad4A7q4vc
H6QSJKNa724qC+aXgP/HOReY2RLgJ9VATQi4yzn3ixm/
uGNAqljmxzsGifjGhUvj+JOYyhY6sBeAkgJgzWNGZs1p5JYfR+dzj9H+5EPEN29i8KLfn/
FF8idjZECsUpYtlTmQC4Z/
nt6fZeM7lWNdEY8ViTArk5WAWHfMx5tl1yQiMtcpACYiIiLSYs65+4D7RpV9oW4/B1wzTtv/
AfyPUWU7gPc0f6TzS6ns+D87BsmWylyyMkE8NLksnfC+3Tjf1xsgp0G5LUnfBZeTXns6XZt+w8Kf3UWx
Zx
lD536gEgjzZm8mVTzksSrpsSpZmUIbOEdfLmB/
NSBWP20y4hnLE5UsseWJEMvbQsQm+fyJiEhjsz4Aduutt7Z6CCIiIiIyzwTO8dPfDbInU+LCpXEWHGbR
+2HOEfvdNvJLVs7qYMxcV1i8gneu+CPadm4jueUZFv783yl1LSL93vPInnwm5UR7q4d4WL4Z3fEQ3fHK
r2TOOdIlV80QK3EgF/
DGUHH4rRYLoz4rEqFqQCxMT1xZYiIiUzHrA2AiIiIiIjPJOcfP30jx2mCRc7pjwxk7kxHq209o4CCpk8
6cxhEKAJ5H5sRTyBx/MrFdO2h/5Vk6f/UzOn79c/
Kr15A9+Uzyx62l3N7Z6pFOipmRDBvJsMfx7ZVnrlh29OaCyk8+4LWBAi8drGSJhQyWJUKsaAtXtokwSa
0lJiIyLgXARERERESqnHM88FaaLX15zlwY5aSuqS2yHt2xFYDc8uOnYXTSkOeRW72G3Oo1hAYOEt+5jb
adr7LgjR8DUFzQQ/
64NRSWH0dx2SqCjgWzbs2w8YQ9Y2lbiKVtY7PEakGxp97JUq7W7wh7lQyxRJjl1XZ646SISIUCYCIiIi
IiVIILj+zJ8HxvjlMXRDhtYXTKfcR2bKXY1U0wB6bgHYtKnQsZes95DJ25gVB/
L7G9bxHd+xZtLz9N8vknAAjiCYrLVlNYtorCslUUl6zERWMtHvnkNMoSC8qOvkIwHBTblSqytfrGSc9g
SdwfDogtT4TpiniHfZOpiMixSAEwEREREZn3nHM8vDvN0/
tzrO0Mc+YRBL8slyWyeyepU8+ZhhHKlJhRWtBNakE3qVPOgnJAuP8g4d69RA5Ufjp2vAKAA0qLFlNYup
piNShWWrRkzqzh5ntGdyxEd+zQr3bZUpne6uL6B/
MBLxzI8Ux1MbG4b8NZYiuqWWJaYF9E5gMFwERERERkXiuVHT9/
Y4hX+guc1Bnh7O7oEWXIRHe+ijmn6Y+zkedTXNhDcWEPmbVnAGCFHJHedyoBsd69xF97mcTmTQCUwxGK
S1ZSXLqSwuLlFJcsJ+haBDY3AkXxkMfKpMfK6vp1ZecYKBwKilXeOlkcrt8R9ljSFmJx3GdxPMSSeIhO
ZYqJyDFGATARERERmbdyQZn/
s2OQN1Ml3rsoyru7Ikf8S39sx1aCaJzCoiVNHqVMBxeJkV+2mvyy1dUCh58aqAbE9hE5sJfEs4+RLAcA
lENhggXdlBb2UOrqJmjvJEgkKbe1U060E7QlITQ7f73yzFgQ9VkQ9VlTfSdAIXD05gP68gH9+YB3siW2
DxSG3zoZ8YzFcZ+eeIiFUZ9FMZ+FUV+BMRGZs2bn39AiIiIiItNsoBDwo9cHOZAL2LAkxgntU1vwfoRy
QGznNnLLj5szU+dkFDOC9i6y7V1kT3h3pSwICA8eJHxwP+H+A4QG+wjv3kls24s0CgGVo/
FKUCzRTtDWTjnZTqljQSVw1tVN0NE1a56PiG8sawuxrO3Qr4SlciVTrC8f0F8I6MuX2XwwR6F8qJ1vjA
iILYj6dEQ8OiM+7REPX8ExEZmlFAATERERkXlnW3+e+95MUXaOi5a3jQgCHInI22/
h5bJkVxzfnAHK7OD7FBf0UFzQM7I8CPBzGbxcprLN1rbp4fJIXy9eNo0XlIabOc+j1LmQYEEPpQWLKC3
oqWSULeyhHE+0/
O2UIc9YFKsEt2qcc+QCx1CxzGChzGCxzFChzO50iW39hzLGAAxIhj06qwGxzohHR8QnGfZoD3t0RDxiv
imDTERaQgEwEREREZk3SuXKYvfPHsixMOpz/
tI47eGjz8iJ7tiKM4/8suOaMEqZ9XyfINFOkGinOFE95/ByGUJD/XU/
A4QOvkP0jdewuuBYORypTKts76Kc7KAci1OOtVGORMH3wTycWSWDzAxXXY/
MygGUy1i5DOVg5DYIxpQDuGis0nesjaC9k1LXIsrJ9oZrnJkZ8ZARD3ksjo88FjhHplgmXXKki2XSpcp
+plhm51CBTMmNCJBBJYOsfTgg5tMe9khGqp/DHu0Rn7aQ4SlIJiJNpgCYiIiIiMwLezMlfv7GEPtzAe/
uinDmomhzpmsFAfFXXyK/eDkufBTTKOXYY0Y5nqAQT1BYvGLkMefw00OEBvsqP+kh/MwQ/
tAAof1v4xVyeKVS436nyHleJWDmVTK7rJgfM4XT+SFKXYsodi+l1LO0su1eStDeOW5mmm9Ge8RnvNnDZ
efIlhzZoEym5MiUymTrtgeHCmRLjvKodrVMslqgrD1yKGBWX+57CpKJyOQpACYiIiIix7RMqcxv9mR4v
jdHzDcuWhZneSLctP4Tzz5GaOAgA+89v2l9yjxgRpDsIEh2kF8+TuZgEOAV85UML+eg+mOuXNmnEtxiO
MDlVT7boW3DNcfKZbxiHi+fqwThUgP4QwMyY0AbAAAgAElEQVSEB/
uI7NpB27YXDlWNxCj2LKXUvYRi97LqdikuGjvsJXpmJMJGYoIsS+cc+cCRGSdQtidTIjtYpjQ6lQxoCx
nJaubYcDZZNWDWEa4EyyK+gmQiUqEAmIiIiIgckwLneP5Ajt+8naEQOE7ujHD6wmhTfyH2hgZof/
IhsitOILfihKb1KwKA71P225rfr+dRjsYpR+OUOhaQH3XYCnnC/
b2EB3oJ9fcS7j9AfMtzJIobh+uUOroodVcyxWrZYqUF3ZXpmlNgZsRCRiwE0Litc45iGbKlaoAsOBQgy
5QcB3IBb6ZKFMpjo2RR36oBMo/2sF/
dVj7XgmahYyiTzDlHoVwJKhYCR75c3dbtB84ROAjKjpKrTA2vlZVdpQ8Hw9NXnePQZwe1ia3VGCxmlWC
```

```
nAd6ofTPwsLr9ylpzvhm+1fbB94zQ8PbQsZBVXtgQ8Wx4qzXk5EgpACYiIiIix5R8UOb5Azk27c8xVCy
zJO5zTk+MzsjUfjGfjM5f/xwrlxk45/ea3rdIq7hIlMLi5RQWL68rdPiZVOVtmP29lQDZwf1Ef/
dqJSMNcJ5P0LmAoL1reD2zyra635bAxeIN1xqbiJkR8SHieXT6JawUYF4R4j7OD+H8KHgeJcehwNioIN
nBfMCudIl8MDZIFg/ZcBZZMuwRDxltIY823xte/
6ytug2PEyxzpRIM9uMG+g9tc1koFnDFApTL1fXbPMz3IRaDeBsWb8MlOykvWEixvYuiFzoUvAoOBbPyQ
XlMYCsfHPoplMsUAjfijZ2Hva9U1mTzqgGnWvCqdgxjeKrs8NZqn+vvg8M5KFMXLKsG0crDnyuBs7KDw
DFmbbipCHsQ8YxoXWAs6nvDZbGQjfruqvu+R9hDAbR5TAEwERERETkm9OZKvNCb5/
kDOQplx5K4z9ndcZa1hablF57ozleJv/oSg2duIEh2Nr1/kVnFbHjhf+qzHYOA0GBfJSDWfwA/
PUgokyK6/228bHrsWmNmlGNtuEgUF47gwmGcH2Y4JOLAgiJWKmLFUmUbFKFU3R9neOVQmHJbknKinaC2
TSQpt7VX99sJutopxJJknVUW6y8dmnKZKTn2Z0u8OVQJLo3HxxFyZULlgFBQJFQqEi7mCRXzhMolvHIA
GGVrx3mduIgHscoLDBxGYB5FP0TRC1H0wpRKYYqpMC7tAUOH/
RrCHoQ9I1zNlAp7kAgZXV6oWn7oeNgzQqPKahlX9cGuVnB1GWeBc8PbRmXFciVLrVh21S0U3aH9bMkxW
ChRco5iwMTfn0GiuoZcMuyRCFW2I36qATMFyo49CoCJiIiIyJzVnw/
Y2p9ny8E87+QCDFiVDHFKV5SFseZnfNVYPkfnI/
dSau9k6JSzp+08IrOe71Na0E1pQTdZTh55LAjws+nK4v6ZFF4+h5fL4uWzeMVCNdBVwvK5QylHQNn3cb
EELhGqZnj5uFAI54VwoUrWF36osjZaEGDlACvk8HNZvGya0IF9eLt+h5/
PjhmuwyjH2ygn2isBs3AEFwrjQuFKJlsQ4MoBhaBMvlTJqso5j1woQjbSRj4cpeSHKYbCFKNxiuEYxXC
UUqKdXChM2QuBX1l7zap5UlYN7lk1oyoKJHCEKBMOioSLKSL5LJF8hkguTTw9QCw9QCzVT6yYJ1IqECn
l8aNRggU9lBZ2U+rqPpRdl+ykHEtAuElrG7q6N4gGJax6n2v7lIPKG0zL5cp6c74Pvo8LRynH4pWXgRw
meGRWmd5Y/
dSccVeVXSVYVp8hV58xV3sxw9vpEtmgTLFB1pxnDAfHhteWq99GKvtRTcmcUxQAExEREZE5I10s81aqy
BupIm8MFTmYDwBYFPM5uzvKqmSYttDUpldNVXjPGyy474f4Q/
30fuDKKa95JDJv+P7wQv8tUQ7wcln8XAY/
k8bLpSsBuWwGL5vGz6QIlUpYUPlxZuD5OM8nHAoRi8YpxyprpQVtyeEMuFJbOy4SHSfIcyRv7oxWf7pG
FgcBpaF+GOqjPNhfybQb6ie+9QW8/5+9O4+Tqrrz///
6dFXvC8qO3bIo4EKiJjAIcUORzRBARxQUomJciLiAM44bCo7RqIkYo4krgwKJosGfDHFBRog/
J+zGCVEiGgLSCDSINEhXQy/
n+8e9VVSvdDVXb28n48Hj6q699x7P+fW0ofPPefcQ5VnbvN6wbnUdFww6N8YwSI3QvCem5/
U8pKGlR+trMxLbrmjGaDoDYUtT0v3Eo1p/r9M7/yFe+OVZ2RTluUlIQnENi2RZN5QyNQ6/
jSXljuKyxyh0nJC4cfSw8t2hkrZvL+82uGlyUnhO5YevglDhWRZitejTHcsbRqUABMRERFJMDMbDvwKb
wboF5xzP6+0PAc69W5W5d9NmXhu8LtPVTONwfL2BUqpSBUxs5QKfv9S
/
VBgw7pAc5o5yW9smq5y1zMlJeRvfJ9slYtoywzm90XXsKhDscdeTsRSYkgNfLKyOLkraJDqYBAgFKj2
lH6THtKi53Dis55PWsO7DfS+4dKvb+HTzo9c5yzr9zaHmFO4e6YMrhu4UmBXBJSbikgL8sEFkXvSxyp9
Go9SQFvDuPunKvh1h5GVZS4sdQHPV4kOC3O0jKD1XbIw+gzE+QlWfmeImzlDRcaqr/
mEZ5apo3ZNbvqeeCwajnh/
8RDB6x51l1gklGlkGWgVFCUlkxSWUhkoqLsGLvMak4RNnBYkJlUESAAxakKJDKgeQ0DgTTOZCczpfJ6R
xITqO8mjnu0pMgKyWJ7JSAN79c1LxyGf6cc+kB73lqQL3K4kUJMBEREZEEMrMA8DQwBgH1pjZIufcp1
HFrgW+cc71NLNxwCPA5WZ2PClp/ALm/Mbvf+vRG1KUnGPqFJwUu1uw8ST97TNtBCrSvzXuO4d9lvWsRVY5mTvnA2q7iw7Stm9tvC9h/iuXR/tWSaw
bkpCTRNjWJE3KS6ZgeoG1qoNHnr2nzP2+SuX4NRT1OZm+/
87xhPiIijc0Ml5JKaUoqpce0T3Q0dRfukRfuhVccfizyh8p+S3Dv197w2JKDJJXWvzedCwQrJsmSkvyx
p35vODOcGeacN6fcoYNYSQlWcihyM4caaww8GyQmmHN5/
UhKR4Zuu3BvOW1rCQQtSFEzh27Rs9qdlcyAti2/Tsr1/
GTkUpGQQSkmjLKmmdIwjxSA1yUgNGmnBgN+jLYnUQHj+t8N3yUwuLyVVYcohASTEpwSDBtm0jc8QFkyBg
5t+p8/AdOavcrZOjvzmAc45yvDncyp1/YwQHyX7MTYESYCIiIiKJ1R/4wjm3Cdjpf/
568BT5rVUROvOOcAv0/Kd4/sZDKjhpAEhYX0EOyHHsfw4PB3I5iunu7
c6lpF0nio8/
gUbobyYi0rIEgpCtE5vPfdTGHoPrBqdKOPaToknGUzYCdK6yRawDOYDsNxu7F8gWDfQuaOGkWPpIVHCWfYsjnIi/
ELmtzZbVfKzzoodJn3YQyuB1ca7rZrQGH0ZutpYx3XWi4YoJnuIt+fuH6t1aPr3XDg+AHTR4bA5nPTr9e/
xOOVSzvTEvBT7EMyt48dcXGJ4D0ZJ5Olzm37Hh3g0lU1dVUgwT+pqo+G6p+mn+PuIt7gKoWzkrWmRyVmvn0+aTU7/
5gB7q/Cr4cMHTVi/fvkwrcbxKldRN4PWUBE8p59+j6XjtjB0RxFRsdq4Brf9pD3SCXmlaYKDLdi2DtOmeV4uSkJUZMtN1l+Wzc2FW4FLQYcf+zBFjXWZOPSFjRH2xqJB+cPBFB6D9JG/FyQe6cwK8PTf0fhhQE5cUWKuH3YWuG5D0aDFn9B+TA7zqEFOB/
ERgE9rxULR8Gkp8k+KPYavhQq5ndJqbI9BSq0NE1dw9k8HGL8bDPOCi3aaTqIOlOBfuPM5V2H/
F54Svv0mP9ngpMjx+FB7fYOwrTC5LL3l/Dkpg1/
zEUZrL/RPlVVIDoCs/
wWvtRaa/5n16cumBu8ze5UuGDpYzHgxb8Vmem3Jr/
zt1lvkHbSaxXD0SjIGIOhMKmYm8aU1Hn2D/b4HwjUfl3/XxDx/tSKzdqzHFEb6BPz+1fpUAJ2txc9fpuPbYRPkVYSY01pPm7BbQxnV4I4sGuiI4I7YE1ZSlRD/
mqZTHtq2QyxX+KJYI/2YvRxozEd8Io3CkOaAwgr+WpXs1VK7Jr6LlzHk/
eTW7kFA3hHsh9nmkIntdHx+EBwb+QeLV2jtaLhHzTXk4dlZfXbJYQC/6Yeg+Q5rPqB1tu8kpC7+sPzSxFKeBFLx0g8ZgmGoHWlxPZoB/
EfV7VQF2ZQNqlMhBO7b4rDdWiUbwI4gn0wYtVBGkm+lVZcIzpTd9Vwod3+9owcwSnmG2xeTKSTg0aAW3ZZH1N9Si1cV3F0Sq4BiW5J8bVQJ4Pw+aSpLncTFDEzmXVWFFTWxAvgMs0KfcnNR8tOHKQ8C0eGBMZLz4gnmuUsuWOekfq7/
DbQvDN+b+X2dJYePlgvH9c4wk4yWNVDCFwUHVmAUBjBqVB3gG8Ws3kyNUSLUgxCNDp+xcuFfC1yNEdRnXQLCz+lBoK5/
Ub1Q7TBVMjLiPZbtVqozdqnLXfXBcvd8Hbz0WPAlCwRt5g3WJJrlIH2QvEJtQj8ezFqNXrIYptvJCIsnINoq04B3lcl8CaUBWLLx+
6vdfIkXRLiZaBNBPt8nUlHU2FsRmfuxOD1dTvi+AtR7Kl0j6KPOmHFM9MKukFGcrNP2vW7IT+mEcnOnmYrKgMTdSN/
Yj1Jrvr/
VMF3pMUSmp5TrPrRyXpGz/FrBnfILSpx3SzLJvJTrpf1Nq6XB/
sIXz3kpRfThSdVfjdAqK5K55CnJ1Tl4mDQzDbrJlknf4sgB6GNVGbnl+ZOE51hBjYxNbSI0AVSoNcVCnU2UwExMoIGhfm9SFN7Fdqbg/
```

tz7hRgAHBTVJ1nOefO8P+9lbgQG8X5fj37+a/vBP7HOdcL+B//dYvjnPss/B4DfYEi4A1/
dUt9/+cAwystq+n9HoF3N7NewPXAbxspxniaQ9X6vwd8xzl3GrARuCtq3T+iPgc3NlKM8TSHqvWHaj7v
/m/hOKCPv81v/L8TzdkcKtXfOXd51O/AH4CFUatb0vtf09+71vT9b+5ay/
e0SWil7eJEapVt0UY0h9bd/kuEObTuNlciqK3TDDSZBBjQH/jCObfJOXcIeAUYneCY4so5t90595H/
fD+wAchNbFRNwmjgJf/5S8CYBMbSWAbj/Wd3S6IDiSfn3Ad4dy+LVtP7PRp42XlWAseYWZfGiTQ+qqu/
c26Jc67Uf7kSyGv0wBpJDe9/TUYDrzjnDjrn/gl8gfd3otmqrf5mZsBlwO8bNahGUsvfu1bz/
W+hWtz3tAlpde3iJqY1tkXjprW3/xKhtbe5EkFtneahKSXAcoGtUa/
zaUXJIDPrDnwPWOUvmuJ3hZzdwrtdO2CJma0zs+v9ZZ2cc9vB+yEBOiYsusYzjor/8W0t7z/U/
H63xt+EScDbUa97mNlfzOxPZnZOooJqBNV93lvb+38OsNM593nUshb5/lf6e6fvf/
Oh72nj0rltPGqLJoZ+/
xNDv+WNQG2dpqspJcCsmmWu0aNIADPLwhv6cptzbh9e98cTgTOA7cAvExhevJ3lnPs+XhfQm8zs3EQH1
NjMLAUYBbzmL2pN739tWtVvgpndg9d1er6/aDvQ1Tn3PWAa8Dszy0lUfHFU0+e9Vb3/
wHgqJsFb5Ptfzd+7GotWs6wlv/
8JZ2ZLzexv1fwbjb6niaBz23hafVu0idFnP370W94I1NZp2oKJDiBKPnB81Os84KsExdJozCwZ7wsy3z
m3EMA5tzNq/fPA4gSFF3fOua/8xwIzewOvu+1OM+vinNvudwMtSGiQ8TcC+Cj8vrem999X0/
vdan4TzOwqYCQw2DnnAJxzB4GD/vN1ZvYPoDewNmGBxkEtn/fW9P4HgUvw5gIEWub7X93fO/
T9bzKccxfWpVxr/Z4mgM5tI1FbNGH0+9/
I1OaKP7V1mr6m1ANsDdDLzHr4PWLGAYsSHFNc+XO+vAhscM49HrU8euzvxcDfKm/bEphZllh58DQ/
Hqugi4yi92FfBmYiJsNBV6frSW9z9KTe/3IuDH/
h1SBgCF4e7DLYmZDQf+AxjlnCuKWt4hPAGpmZ2AN0HmpsREGT+1fN4XAePMLNXMeuDVf3Vjx9dILgT+7
pzLDy9oae9/TX/vaOXf/
+ZC39OEaHXt4kRQWzSh9PvfyPRbHl9q6zQPTaYHmHOu1MymAO8CAWC2c+6TBIcVb2cBE4H1Zvaxv+xuv
Dv9nIHXBXIzcENiwou7TsAb3m8FQeB3zrl3zGwNsMDMrgW+BMYmMMa4MrMMYAgV3+NHW+r7b2a/
BwYB7c0sH7gf+DnVv99vARfhTcRZBFzT6AHWUw3tvwtIB7L2AHHWA31vwtIBd7zvwsr/
Tv+nQs8YGalQBlwo3OurpOZNkk11H9QdZ9359wnZrYA+BRvaOhNzrmyRMQdK9XV3zn3IlXnAISW9/7X9
Peu1Xz/m7lq/y61xO9pU9FK28WJ0Orboo2htbf/
EqG1t7kSRG2dZsD80TYiIiIiIiIiIiItUlMaAikiIiIiIiIiIhJzSoCJiIiIiIiIiEiLpgSYiIiIiIiI
iIi0aEqAiYiIiIiIhIi6YEmIiIiIiIiIiItGhKgImIiIiIiISIumBJiIiIiIiIiLRoSoCJiIiI
iIiIiEiLpgSYiIiIiIiIi0aEqAiYiIiIiIhIi6YEmIiIiIiIiIiItGhKgImIiIiIiISIumBJiI
tDpmdrWZOTP7ONGxiIiIiEhsqa0nItVRAkykCTOzzf4fb2dmZ0UtPydq+eY67mtQdeXNbE7Uvu6JWp5p
ZoVR67rHqE7hBsnySsuXRx3LmdleM/
vQzIbE4rjxVFOdRERERGqjtp7aeiLSeJQAE2k+Jkc9vzFOx7jezAL+8yuAnDgdpzYfAE8CnwBnAYvNrE
91Bc0suTEDExEREYkjtfUqUVtPRGJJCTCR5uEb4FIza29mHYB/
9ZdFRF1Nm2JmG81sv5nNM7MUMxsELPOLdguXreYYXYGL/Nc3Vj6Gf5wMM/
u5mX1hZgfM7CMzGxO1foKZfeof/5Afy0/9dVcD/
+UXPa+Gq5pvOOduBc4D9gIpwIWV6nibmf0T+Mxf3t3MXjOz7Wb2jZktM7Mzo2I6Sz/M7Mzo2I6zsyW+PH+/
0CPSnWqcsU06irl1f7roJndamZ/M7MiM9tpZvfVVic/
zn+YWbGZ7fL3eVLlcyoiIiKtntp6qK0nIvGlBJhI8/ASkApM8v+lAnNqKDsT+DMQBK4EJgL5wB/
89fuBX/n/oi301032GxTfr+EYLwL/
ART6+zweWOg3vAC6AZuAecCrQB7wtJkNBD4F3vPLbfNjmF35AGZmwL8AWf6i3ZWKPIR39XCJmWUC7wOX
Ahv954OA983sRL/874AhwJfAP/3462sm8ARwgl/
vPwEn11QnM+sJzMK7sjrHL9MV6NKAY4uIiEjLprZeRWrriUjMBRMdgIjUyZ+AocD1gOH9If4AmFpN2Ru
dc6/5DYsfA99zzr1oZk/hXU3c45y7rZrtvsVryNyAdyWuFHgh+hj+FclxQDlew6sMr/
v6eXhXEZcDjwGjgD7AMcBWoDdwvnPuITMLN1C+qCGOWf6/sLV4DbZoU5xzs/
2YLsO7yrcJGOScc2b2BjAGuMNbfVzHYB06o5drX8c3mL//JK59wb/
vJk51xJdXUys1P88l/58X/qnMu3w8MORERERMLU1qtIbT0RiTklwESaj2fw5ksAuLmWcn/xH/
f6j1k1FazGb/HmnxiMd+Xrq0rru/uPScCUSut6+o//jdeAq6xDHWP4APgI76rjeuBN51xppTL/
W01Mnznnwl39/+4/dgNy/ech59xW//nGOsQR3Xhpz+HzuDK80DlXUtPGrkNZY/
XmPqXQAz+wzv6uXf6nB8ERERaV3U1
jtMbT0RiTkNgRRpPl4GioADwNxayoUbEJXnfSjzH2v83jvn1nO4wfHbaops9h8PAR2cc+acM7yriBeb2
TEcbhCd7x/rbf+11TGON5xzU51zM5xzf6imQQRwsBuZseHy1ba3wH/
MRsiE65Gl9mNd9UUIHq+ifBFhCp18q/+/
cw51x6vcfaIH1d1V3JFRERE1NY7TG09EYk59QATaSacc4Vmdm7U8/ruInxFLM/
MXgA+d849Uk25H+N1M38faFMphl1mtgC4DFhlZu8B7YBz8K5a/gyv8ZAFzMCbWHV09bus/
8U593x9KxPlj3gNoxOBZWa2G7gYCAGz/
a7oHwDn4s0jsQa4vNI+NuI1ONua2ctAZ6BjVL2dmT0M3MN7M/4P1+lgMTqqsT3jwQq/
xjF+Dd5QgOX60VERERiVBbr0Zq64lITKgHmEgz4pxb55xb18BtNwO/
wOtufi3ehKnVldvknPufqC7mlV0L/ByvQXA13h/7FcA7fjfxq/AmIP0XvAbA65W2/
wBvotIyvC74oxtSn6h4D3C4G//JeHcR+hMw2Dn3hV/sSmAp3tW53sDjlfZZRiDevxVfAcOAfRHV/
992Pd0Xvn3hd2wdzuHt9dXXaB6zGOz/XAccBrwAPHk19RUREpOVSW6/aeNXWE5GYsJp/
90RERERERERJo/
9QATEREREREZEWTQkwERERERERFp0ZQAExERERERGRFk0JMBERERERERadGC9Sncvn171717
9ziFIiIiIhJ769at2+2c65DoOJoDtfVERESkualrW69eCbDu3buzdu3ahkclIiIi0sjMbEuiY2gu1NYT
ERGR5qaubT0NgRQRERERERERkRZNCTAREREREREREWnRlAATEREREREREZEWTQkwEREREREREFp0ZQA

ExERERERERGRFq1ed4EUERERERERkdZl3759FBQUUFJSkuhQpJVJTk6mY8eO5OTkHPW+lAATERERERER
kWrt27ePnTt3kpubS3p6OmaW6JCklXDOEQqF2LZtG8BRJ8E0BFJEREREpIkp/3ITZR/
+D069LUQkwQoKCsjNzSUjI0PJL2lUZkZGRga5ubkUFBQc9f7UA0xEREREpIkpX/
kBbsN6yj9eS+Di8STldk10SCLSSpWUlJCenp7oMKQVS09Pj8nwW/
UAExEREUkwMxtuZp+Z2Rdmdmc161PN7FV//Soz6x617i5/+WdmNixq+TFm9rqZ/d3MNpjZwMapjcSC2/
sN5LSB0AHKXvw1ZcvewZWVJTosEWml1PNLEilWnz8lwEREREQSyMwCwNPACOBUYLyZnVqp2LXAN865ns
As4BF/21OBcUAfYDjwG39/AL8C3nHOnQyId10khgr3Yp2OI2n05ViPnpR/8B7la/
430VGJiIg0W0qAiYiIiCRWf+AL59wm59wh4BVgdKUyo4GX/
OevA4PNuxw6GnjFOXfdP4Augv5nlAOcCLwI45w455/
Y2Ql0kBlxpCRR9C5nZWEoqSecMhoxM3M6vEh2aiIhIs6UEmIiIiEhi5QJbo17n+8uqLeOcKwUKgXa1bH
sCsAv4LzP7i5m9YGaZ1R3czK43s7VmtnbXrl2xqI8crX2F3mNW1uFlWdnwzZ7ExCMi0szNmDEDM2PYsG
FV1l166aUMGjSo0WK5+uqrMTPMjKSkJPLy8hg/
fjybN29utBhaKyXARERERBKruoktXB3L1Q8CHwf+K1z7nvAAaDK3GIAzrnnnHP9nHP9OnToUPeoJW5c
4TcAWMbhBJhlZeP2KgEmInI0lixZwpo1axIdBieffDKrV6/m9ww8/5IEHHmD58uVcdNFFHDp0KNGhtWhK
gImIiIgkVj5wfNTrPKyDWLdIGTMAm2APbsVmw/
kO+dW+ctfx0uISXNQ6I9SkIdq2bctG372s0mZZ/Qysx5uzjkfGvTsnnQ1IyNjIJgGZwZ5zoP3Xv/Qysx5mloI3qf2iSmUWAVf5zy8F3nfOOX/
5OP8ukT2AXsBa59z0N4Vkdhw1SbAssGVH06OiYhIvZgZd999N4sWLWL9+vv1lv3yyyy/
ZN24cbdu2JSMjg2HDvhvHZZ59VKTNixAjS09Pp0aMHc+bMafBwytNPPPx2ArVu3Vlhelzgefvhhevb
sSVpaGp06dWL48OHs2LEDgOXL2NmLFmyhJEjR5KZmUnXrl155plnqsSwYMECvvvd75Kamsrxxx/
PPffcQ2lpaWT9nDlzMDPWr1/
PkCFDyMzO5OSTxzn5jZA2Y2yi/
2ItDOzL4ApuEPZ3TOfQIswEtuvQPc5JwLdxG6GZhvAegaqw6ydFxhd9AegYWCESWWVa2t27vN4k
KS0Sk2Rs7diy9e/eutRfYnj17OPvss/nss8945plnWLBgAQcOHODCCy8kFAoB4Jxj1KhRbNiwgdmzZ/
P444/z5JNPsmrVqhr3W5svv/wSgB49etQrjpdffffpmHHnqIadOm8e677/Lb3/6Wnj17cuDAgQr7v/
baazttNNYuHAhI0aMYPLkySxevDiyfsmSJVx++eV8//f58033+Tmm2/
mF7/4BVOmTKkS6xVXXMGoUaN444036T5/8Ic/
8PrrrrzNx4kT27j188eaxxx5j8uTJjBkzhsWLFzN58mSmT5/OU0891aBzV/
BuB9BREREGrlnHsLeKvSsvuinhcDY2vY9mdAlZa8c+5joF9sI5VGse+bir2/
wBsCCbD3a6Bno4ckIhKt7J3/
D7cjMXemtc7HERg+pkHbJiUlceedd3LttdcyY8YMeuutt6rLXnnlsxvfvdp9zuZZ3HTTTbz11lT8MLN0K
FDI9vu27ePmTNncu+993L//
fcDMGTIEIqkinjwmgPmZmmZg/nbpAAkcIU3Lbd3+8QWGYMzcVEMSnVMmbd+gcGnh0jgZCKBoVjhgoxcCD88MGAYzGuZXRxx0RS0GWmQlm6gEmInKUJkyYwMyZM3nooYd47rnnqqx/99136datGxdccEFk2cCBA+nTpw9vvfVWhSTYpz71qUgCDKBnz54A7Nixo8oxevToDn7xBXr2a7bHKUAHhsPXqgBdKBjmBbgEK/2Wz//hG7LlqnrjW1dA8sxRybOaSzbnAOtctAKwDrtRZlnX0g29O2djV8lTO/W6KCVYtdPGHe+KEwbRMXoTyWjxOZtRsN5qw21Y8TRN0nVXZPLB8LdRIH/4HxNeDyvywdYu5AhYuNH3F9+Ek6S+8aCfqbsSbfaAM7OKavs2u3PqKMxEx8tVbbkIz4o2AhySs6t3Cm4mlrqaZjPhsvSFxRRkBu+OnE8pDUJnuHm0Ptj1RqZdOjnsx48xOc/vkrTbXEo6Cfl/ymRwvJ/YsTEuUo1SZpX0/RwT+0+Jz6hWbf1+GRIuP44J+L/1J4HNTKYSjGKCnUa9l6lUdFy5MiZMoCNwdUS4hsJzB53SM59Q1Dk9EFgTmzVAOrQ+wNzNkhQRwlpAqKLIQLkRsQkfIVXBYQW3+vgGrcs3xLp9pl0XSzpBrHcwbLXnuckCWn2rwpW8Eog3ed8vYgCSFdG2dZHRC8+zyk0sbOEkiSq0Xs1ZRN3
7c3KHDh3Yv3//EWM45ZRTePnllykpLVhkUg/s0frvg2L9KKhrvHk3sPw+oA/
u7MZBHOLUfpW4PrlWSMO3NJ6f7obBZ1AeyKj5C3HlwDS/ULJu+vbyu9ciEDk/DPpJOiAqpO2mdO4Ceo62zbz62bBEbPK9sCi6d+rKoHDtGeD2iugx6/
WCGcZO0HKk8v3X46btZBE8pPGRVmsgOqxpOvZYZTRE8DHRJgI9BucAwbrq5mzsFMnoHTN0QaMH+9fh+xc7F7MaWyMm04IFHKcNXGoEeJHI1sWJEd6Z3Ib86hqx8SsgPKApWhGUBRKLaOHhcwsuRVR4TuMRhWwVQn99Yxe8wMNWgu84KMzQYLsjKSvu+XDVIhJDN4OD4+HIEwM1Rl4j6ScbFn6wWVfhLU7FQ8rugh1XfQ+dhcoFSbJbvnbGdHJwIOgpGLpvP+jEjLDpgtQzLmJxv+4yXlvy13XEvaX8Pwam/SoSG1ldCQ9r3Re6QCnAYvcdNQd6jr4sPfNlHzeP3GHBuwXa1xDTpldeRfGJRgVRFYadHedVb79jNHnj4bhPGg+7rJ9mGt5l3Dvgb+7h4fvfFWNPNLWmU0o0P5ee7wZv2y4ca+eD8R/hlrtzF6jf2TWVUnPdtI8PNO4OzE0y5eRFLVJMHhUzAmXcsT4Umq0llJ6zeHU4jR3xcQRnN96q64J9e57NgTpJ1EHuBC5gE8v3ee5ruu/JzpGrMz6J8vNPXP9H7yh3oPrbxgryQ2Ii0ZK6I+QtQeHtT+dlXwVuV5TAqgpDJdOEjwWH+7h+rUdemnKvJvDirsTHXtzZ4J4P3UGbYRBxlLqSlTm6IsyX1TFFCngP72wumMYgUoPP0cYpb
HezZwYuLr32WCBTy3R6wB+3O30ehHp92R6ILvzS6kMrSw8lP+i3yfcCGpDaygvwiAcj4rgOxuaPjvNsH+N0+BKFnOTT3P7MOcJL3eCk9/vwHSMmpiv8mm7DNh8IAp5c1+RjSmt+5zYfcT1BDTaLmQAP9/2PpxexmvxXi53nq9x4Inb8rcfSCkHjePi/6uwNHfV4FnrLh3SaPuZC9dArmMqpNHsrtcM90QZqcDjqBWt7wSO5Rcyy8CWIkF1M1tZFBeG+8uh5bX8KHjoJ2mfb/UEXCHGtqt3X9u/MZddZcpp7Nm1qUNm8yfY2PXJnrm27GZMt4ZynrqHeNa0HV2jbnt8jWEMi9C6t2dTMuEP5oSgcvZRc0VVZNW7dZ9aM4BHgYH+DTE4+RGEJw0zYA5JFwA6QfNnP1Hqi9BL6B0w2QxxJAwXvqnHIi0jAjPEfnjuvAhSX6b7CJIzJkXW3CRf4Ou8GTZ/8RaB7p72RDWIAECK4Rk8c6cxIqY6r4zNZ4rADrmO8hBHTdYoeeBJkXrlTJj23Uu7upAhQY2uZ/Pc/L1pLhEwv8oKZxcPObK0DV7h2wLdWOHAvfDgqedhGqvIRghzXVUWQzHmwnEu7CvBtW1ve45oqIYpzP1QB5TNXi7Y5C/lLn4iC5trXBBPOFb5TK3fzw0LhElkHq3E67N8+o0M5hGBIR7mlPEuJSvwGWmMR9+ZNYvIHbj0F8tc5g8XXJCiD7yT6vgdMtrlwlOKRL+aI1GczEuUs4RHBNAaEaJYfDGjXT6l1TgYmKwCP9LeqEXyIm6NcvhWp4XgJBHIeHXiDoUVCK1R/6d8FG5Ahl3rnnG3AdEDQZGKUdtNFhqdTuTUQ+lKOcEv7bAoRDQ/

asXLmSk08+malTpzJ06FDuuOMOCgsLOe200wAwM958801OPvlkrrnmGm699VYmT57MqaeeSk5OToPimT
JlCjk5Ofzyl7+scxwDBw7kgw8+4JprruGiiy7ijTfe4Pnnn2fMmIpztL3wwgt89NFHjBkzhsWLF/
P0008zatSoyPqhQ4fyyiuvsHbtWn70ox/xxBNPcPvtt/PUU0/Vqw49e/
bEzLj77rsj8Q4fPpzZs2dHytxxxx0899xzvP3224wePZrx48czf/58zjnnnAadt/ow51ydC/
fr18+F7zbQWKInwW/NPcA0Cb6IiEjDmNk651y/RMfRHCSirScVlS1dTPmKD0iacB1mVmGd2/EV5e+
+SWDC9SSdGN95UkREwjZs2MApp5yS6DCavMLCQk444QSmTJnCzJkzEx0OAMuXL+f8889/
fr1fOc730l0OEelts9hXdt66jstIiIiItJEuMK9kJlZJfkFHO4VpjtBiogk3DPPPENSUhK9evVi165dP
P744xw8eJBJkyYYlOjSpgRJgIiIiIiJNhCv8pvo7QAJkZII14fZqCKSISKKlpqbyyCOP8OWX2Jm9O/
fn6VLl9KtW7dEhyY1UAJMRERERERERKSpKNyLdehY7SpLSoKaDqNWgQYYOoz7R
XLZ0mwRcRERERaQJceRns31f9HSDDMrNx32gIpIiISH0pASYiIiIi0hTs3weuvPo7QPosO1tzgImIiDS
AEmAiIiIiIk2AK9wLgNU0BxhAZg4c+BZXUtJIUYmIiLQMSoCJiIiIiDQF+7wEWK1DILN1J0gREZGGUAJ
MRERERKQJcIX+3R1r6QFm/
vBIpwSYiIhIvSgBJiIiIiLSFBTuhZRULCWl5jJZOYASYCIiIvWlBJiIiIiISBPg9u2ttvkcXAOkZEAhoC
KSIiEg9KQEmIiIiItIEuL3fHDEBZmaQma0eYCIi9TBjxgzMLMPLvuOOO41/9V/5xz/
+EfdjX3311ZHjJiUlkZeXx/
jx49m8eXPcjy0VKQEmIiIiItIUFH6DzGPLBNYB7DZWQeuVyWEmAiIvXVpk0bVqxYwYoVK/
zODBgzlw4EDcj33yySezYsUKPvvb
kvjaWlY3bujn+QYmItCDBYJABAwYAAwYMoGvPrxkwbnn5zDW2+9xdixY+N67MzMzMix+/XrR05ODldccQXvvfcel1xySVyPHU1lZSXOObzepCKn/s2WxHbnwg5vAoIKA3P2sLh/ThTOIT+e78Wkxz+2+Gkg3Nm/Rp1qTr1QJZhAZwpP+2ZNzN6Z3UHeqbJrdgsqa+qTSLcRNxYOMCVXe4zuc+iFw6WH3v
cvcp2/
rjlFsV77x9rbk4enOlbGPW6ZQLc4GZo3HHI7Mt3JzQZrAGJJAk2TGLMwR7W0vAjrSeY2PpCT8/
bxgMvMRCS1OBcnlc47RpujbBnUbXK2sbNUA/
ZAFf29YeHaaTVsMbakKlKVCEYsPAsTYuEEUnPhWFNmTLf2j1KfwxuDr19KpwtwBo07sKpzUF5A+WwMwOxO
ysyPaLzsIERxaTqUMc4ct2oa9jcsrmrdYSVKRIyysbbRTgP9GGEWL/Xv+sa48zIq1cLjUIKOYoJEOYXGttwNP3c2O1e23r/RvJRC2Us2IHoA2ZNBDE4HXlhOgg+0b6xuJnIwtFwJOOuz9WSO1n69lbNGfkKXVaP8r6enQ+3rhbyiQz6V45n9/
uRBGbBe6/o3Szz04dWqDW5+rqLYx5MThuzWMdGGIpJXVTuEmNPnBJoWudj2Bg9LD/aZKu+fenBIEyEw5PO
vBIpwSYiIhIvSgBJiIiIiLSFBTuhZRULCWl5jJZOYASYCIiIvWlBJiIiIiISBPg9u2ttfcXAOkZEAhoC
KSIiEg9KQEmIiIiItIEuL3fHDEBZmaQma0eYCIi9TBjxgzMLPLvuOOO41//9V/5xz/
+EfdjX3311ZHjJiUlkZeXx/
jx49m8eXPcjy0VKQEmIiIiItIUFH6DZWQeuVyWEmAiIvXVpk0bVqxYwYoVK/jFL37Bxx9/
zODBgzlw4EDcj33yySezYsUKPvzwQx544AGWL1/ORRddxKFDh+J+bDksmOgARERERaO3foIBSHwJ/
kvjaWlY3bujn+QYmItCDBYJABAwYAAMGDAALp27co555zDW2+9xdixY+N67MzMzMixf/
CDH5CRkcH48eNZu3YtP/jBD+J6bDlMPcBERERERBJt317v8UhzgIGXJAsV4Q4WxzcmEZEWrG/
fvgAVhiIuWLCA7373u6SmpnL88cdzzzz33UFpaGlm/
d+9efvKTn3DccceRlpZG165due3QHm+Ln3q9UVbYrnMJeqvUpBRyWEmAiIvXVpk0bVqxYwYoVK/jFL37Bxx9/
4YcfpmfPnqSlpdGpUyeGDx/Ojh07AFi+fDlmxpyeGDx/Ojh07AFi+fDlmxpIlSxg5ciSZmZl07dqVZ555pkoMR6rn1DlzMDPWr1/
PkCFDyMzM9OSTT2bhwhoV9vPhhx9o4TQ05ODmeccQavvfZahTIvvPACffr0ITU1lW7W7duvHoo4/
W+5zFgnqAiYiIgkmNu/
D6BuQyDDSbJ9e6FD5SvaX537IzVHrkgnHQKT3IhXl1uFhwBOHEV+fO3u/okiVLuPzyyy/nxj3/
MY489ybz57Ndzu3j5EjRk8POf/ff/
bs4eyzz5Zdu3Y888wzzHe3eRvecxVxlvaX537IzVHrkgnHQKT3IhXl1uFhwBOHEV+fO3u/okiVLuPzyyy/
5wLL7yQjRs3kp6ezssvv8xDDz3EI488Qp8+ffj6/ff+//33qwzjvPbaa5k4cDDj3WhRYHyhjEsoupLKX5saxOyRDlwY57/qD4ntsTAEqfttpVv
TFy5Mg61zXsiiuu4Prrr+ff//
3f+fWvf824ceeP3YtGkTeXl57Nu3j5EjRjRzJ69Gjuu+8+nHOsX7+e+vr6J3IG9/Hxx/
7LHHuPvuu7njjjsYNGgQ69atY/
r06WRmZnLFFVfw9NNP88wzz/DQQw+RlJQQRFaZBARHHjnmzc2bNTNtTnKFmVXZzZBR1tDA5w3zMuSKxDWUZqd6eH3dHrCGHlG8lG+lpmDN5BxaERSEf33cR/7QaMZPnpvlhWo3+hVJTnaAiIiIicQYqC2TzRDZIL13TdNXsZ3DVJLmCDHhZtCdqLGZbnzcpOR4ugLrs6dK9M96rd4e7wrNsGxs4c/pJ3M8w0c80aRVXFNHT2
Aq+2VF67aj8YsHQSaMn3tG4YbSiJbD9XCpqGMgyw0CBEZtkyZCHpJAlEoURgaEsP9wp0awQ6vYCp0CbkN0wn
y5ZdfcsMNN1Qos3v3blJTUzMzMgwV9BDLsNIYMDhdSnJJtcIkaIXwCzwFRrQ5OXzhj+FDY0ag9LcgSCHMrz
6VzkFkzT50/9Eq1G/pUTQyY8ED+hx4fhOGwSIXb1kDGngM4PfJ7wKcpHcyWWJ7xPJPLjBIwwr0m4IeYwLKkmXyKxgkt7Z84ok5Mx5VtpZiiWITT5Ekrk6FaqKbfQVAjz0MA2szl3TNGlvHWqoVKE6HGyvpU7RyS0/D5Ez5AjPxrX/jxdHEz6KY2wE
wMgK5ZSdqyGt+5Jbm3ijP87EUJPBnAXmjPVR2hOmyKxkMJp+mWSF3m3P3yL4lPAxGY7RB7qbXGP3Db8XLIHA1Zz1+YKb4XnW9oWHA1FR

PPPk5mZWWEy+7rIyMhg6tSpTJ8+nY0bN9K7d2+mTZvGvHnzuOCCC7j55pvJzc1l586d/OlPf+Lss89m/
Pjx3HDDDbRt25YBAwbQpk0bli1bxueff14hkQbw9ttvc88993DeeeexcOFC3nvvPd5888161bUu/
vjHPzJ79mzGjBlD165d2bZtG88+
+ywXXHAB4PWYmzFjBrfeeitbtmzh3HPPpby8nI0bN7Js2bIqibp4UwJMREREJLFygehJMPKBM2sq45wr
NbNCoJ2/
fGWlbXP95w5YYmYOeNY591x1Bzez64HrwZsQWBIkVL8EmGVk4L7Zc+SCIiJSJ0OHDuWVV17hwQcfZP78
+XTs2JHbb7+dmTNnRsoMHDiQOXPmsHnzZgKBAN/73vd4++2365U0CpsyZQqPPfYYv/
zlL3n22Wdp3749K1eu5J577mHq1Kns3buXLl26cPbZZ3PaaadFjv/888/z7LPPUlxcTM+ePXn+
+ecZM2ZMhX2/8MILPPHEE8yaNYu2bdvy9NNPM2rUqHrVtS569uyJmXH33XdTUFBAhw4dGDlyZOQOlAB3
3HEHxx13HLNmzeKXv/
wlaWlp9O7du8KdNBuLOefqXLhfv34ufPeBxnLbbbdFnve64tZ6bfv5737V4G2bguj4K9+hQUREROrGzN
Y15SGAZjYWGOac+4n/eiLQ3zl3c1SZT/
wy+f7rf+D19HoAWOGcm+cvfxF4yzn3BzM7zjn3lZl1BN4DbnbOfVBbLIlo64mn5NnHIRgkMPiiOpUvX/
Nn3MZPCd79cN2HTYqINMCGDRs45ZRTEh2G1MHy5cs5//zzWb9+Pd/
5zncSHU5M1fY5rGtbT3OAiYiIiCRWPnB81Os84KuayphZEGgD7KltW+dc+LEAeAMvYSZNVegAVp8hkBk
ZUFoCB4vjF5OIiEgLogSYiIiISGKtAXqZWQ8zS8Gb1H5RpTKLgKv855cCC7zuvG/
8iYJyZpZpZD6AXsNrMMs0sG8DMMoGhwN8aoS7SUP4k+HWWnuk97i+MTzwiIiItjOYAExEREUkgf06vKc
C7QACY7Zz7xMweANY65xYBLwJz/Unu9+AlyfDLLcCbML8UuMk5V2ZmnYA3
KFxQeB3zrl3Gr1yUieuvAwOHqznHGCZOMDt34d16By/
4EREpNkYNGgQ9ZnmqrVRAkxEREQkwZxzbwFvVVp2X9TzYmBs
Ddv+DPhZpWWbgNNjH6nERXHIe6xXD7AM73G/7gQpIiJSFxoCKSIiIiKSSCE/
AVbfOcDweoCJiMSbehVJIsXq86cEmIiIiIhIAjm/
B5ilptV5G0tOgeQU+FYJMBGJr+TkZELhRL1IAoRCIZK496P0qAiYiIiIgkUqjIe6xPDzCA9Az1ABOR
uOvYsSPbtm2jqKhIPcGkUTnnKCoqYtu2bXTs2PGo96c5wERERERERERERERREEqmhCbCMDJzuAikicZaTkwPAV199
RUlJSYKjkdYmOTmZTp06RT6HR0MIMBERERGRBHLhBFh9JsEHLD0T983XcHIRKSinJycmCQgRBJJQyBF
RERERBKpuAGT4IN3J8hv92lIkoiISB0oASYiIiIikkihEASTsUCgfttlZEJp6eEEmoiIiNRICTARERE
kQRyxUX1Hv4IQEaG96g7QYqIiByREmAiIiIiIokUKqr/
8Ee8OcAA3QlSRESkDpQAExERERFJINfABFikB5gSYCIiIkfUpO4Cedttt0WeP/
HEEwmMRFozfQ5FRESkUYVCkJZe/
+3UA0xERKTO1ANMRERERCSRiouwBswBZsnJkJyiHmAiIiJ1oASYiIiIiEgihUINGwIJkJGB+7YwtvGIi
Ii0QEqAiYiIiIgkiCstgdKSht0FEiA9Q0MgRURE6kAJMBERERGRRAmFvMcG9gCz9EwNgRQREakDJcBER
ERERBKluMh7bGgPsIwM2L8P51zsYhIREWmBlAATEREREUkQ5/
cAs4bOAZaeCWWlUByKYVQiIiItjxJgIiIiIiKJEgr3AEtr2PYZGd6jhkGKiIjUSgkwEREREZFEKY7BHG
CA2687QYqIiNRGCTAREREERkQRxoaOdA8xLgPHt/tgEJCIi0kIpASYiIiIikijhBFhySsO2T/
eGQKoHmIiISO2UABMRERERSZTiEKSkYEkNa5ZbcrKXPNuvHmAiIiK1UQJMRERERCRBXKgIUho4AX5YRg
buW/UAExERqY0SYCIiIiIiiVIcavj8X2HpmbjCvbGJR0REpIVSAkxEREREJEG8HmBHlwCzCzrGwo/
CZGEYmIiLRMSoCJiIiIJJiZDTezz8zsCzO7s5r1qWb2r1qWb2qr9qr9+lZl1j1p3l7/8MzMbMbVmm7gJn9xcwWx78W0W
iChIuwoE2BkZsG3+3GlpbGJSURERERERSZTiEKSkYEkNa5ZbcrKXPNuvHmAiIiK1UQJMRERERCRBXKgIUho4AX5YRg
Af0AYYDv/
H3F3YrsCG+NZCjEorBEMisbO9xn4ZBioiI1EQJMBEREZHE6g984Zzb5Jw7BLwCjK5UZjTwkv/
8dWCwmZm//BXn3EHn3D+BL/
z9YWZ5wA+BFxqhDtIAzjkojsEQyEwvAeb27olFWCIiIi2SEmAiIiIiiZULbI16neb6ne8vq7aMc64UKATaHW
HbJ4A7gPLaDm5m15vbZWjNbu2vXrobWQRqi5BCUl8euB5jmARMREamREmAiIiIiWXVLHN1LFPtcjMbCR
Q459Yd6eDOueecc/2cc/
06dOhw5GgldkJF3uPRzgGWkQmA26sEmAiIiISE2UABMRERFJrHzg+KjXecBXNZUxsyDQBthTy7ZnAaPMbD
PekMoLzGxePIKXoxAKAWBH2QPMIzMKpB5iIiEiNlAATERERSaw1QC8z62z62FmKXiT2i+qVGYRcJX//
FLgfeec85eP8+8S4Vx7mGfPM5ZzznX39/
e+c25CY1RG6s4Vx7mbgBO/7SdmtgD4FCgFbnLl0SwkIlj/
4SGQqWlHvSvSVLzmDbt2X3U+xEWV8rfLPtQxDcm6FlBMBc5D2fpAeGT7xPe+4MBOwydsY4+IwPjlo04qoP/
BDImPcCysmDDMLP3Dl5ViSBnmIiIhUpr+OIiIiEJhBkCebGmLIMcgvGsj3lnq9x+ywRvaPyBJsbgkbqmA
8Oj3JSIi0gIpASYiIiIikgihEASNMAKOUifEbKhYIeERmFAOSQ6ARZnQBpBBJiIiGQQSRgSqxkPHMAqAnoixvrIFJPRYWAF0
iYiIgkgAsVxYC/
LDMLPUAExERqYESYCIiIiiiRAqwmI1BBK8BNjePbHbn4iISAuiBJiIiIiISCIUx24IJIBl5UDhzXxzM
duniIhIS6EEmIiIiIhII3OuHIqLYzsEMisLSkug6NuY7VNERKSFUAJMRERERKSxFRcDrLrY9wDDKzCaC
F9ERKQKJcBERERERBpbcch7jGUCLDPLe9y3N3b7FBERaSGUABMRERERaWwhPwGWHMMeYFleDzBXqARYiIiISGKtAXqZWQ8zS8Gb1H5RpTKLgKv855cCC7zuvG/
Ehj8xNgMe0BlpICySnqASYiIlINJcBERERERBpbeAhkSlrMdmlmkJmFUwJMRESkCiXARERERREQamYtHD
zCArGzc3j2x3aeIiEgLoASYiIiIiEhjC4V7gMU2AWaZWoCKSIiUg0lwERERERERERGluoCAIBLBiM7X6zs
qG4GBceYikiIiIAxPgvrkjLcvvtt2NmmBllZWWUl5cD0K5dO2699Vacc8yePZuioiJ27doFQHZ2Nvv37
ycYDDJmzBj+8Ic/0LlzD8b6Xvc/B7+bvRZF4i+0fmlxnf66Yk7dIXBc/uX5rZ2ZYB+JW19okT8M0Blay4cPNNaccRf6PzlBubSxZ7VRrpZm3tlGTCjSCgg
ycYDDJmzBj+8Ic/0LlzZ6688kpee+01Dh06xJ49e5g0aRL//d//d//za5du7jlllvYv38/
zzzzDMnJyXTq1Inrr7+enJwcgsL+e1vf8vOnTsj+/n973/
Pzp07KS0tJRgM0qFDB1JSUjjvvPYOYO3cugUCANm3asgGfPHm688uke/v73v/
Pss88SDAb5yU9+wlZFAbBxfllxxCcvSLvvfce27dvvdZF+zYsbz55ps45zzDDXqYz99GMmLCxk0qRJkf2GDCF1MGDGF1

98kZKSEpKTk7ntttvIzc0lPz+fJ598MnLuSktL6dixI+np6Vx77bWROr788stcddVV5OTkRM5/5eWFhY
XMnj0boMq2F198MfPnz2fHjh106NCB5ORkgsEgY8eO5bXXXgPgoosu4r/
+67+4+eabycrK4uWXX+aSSy5h4cKFVY4t0lzV9H2KVflYyc/
P56mnnuLmm28mNze30Y4r0lS44iJIjd38XxFZ3p0gKfwG0tJjv38REZFmSj3ARGpRVlZGaWkpJSUlkQQ
OwNdff827777LkiVL2LJlSyT5BbB//37AS/S8/
vrrOOfYvn078+bNY8uWLWzfvp2DBw8yZ84c8vPzOXjwIHPnzuWll14CoKSkhPz8fN59910AlixZwo4dO
yrsZ9u2bZSWlkaOs337drZs2cL8+fNxzlFaWsrXX3+Nc445c+YA8NJLL+Gco6SkhDlz5rBly5Yq21Tez
/z589m+fTtAJHlXUlJCQUFBpA7h/
bz00kuUlJRE6jB37lwA5s2bx6FDhygtLY3EXFBQwJYtWyrUcdOmTZHXYZWXh893ddvOmzeP7u345yjo
KCAbdu2sWXLlsh537JlC3PmzKG4uJi5c+dGtps7d261xxZprmr6PsWqfKzMmzcv8n0QUaZWKQzEf/
ghgmV4CzO3VMEgREZFoSoCJNND//u//
snLlyjqX37FjR4XXXoaVlVZVVWhUIhli5dmH/
0c+r2ya8rLp1NdWhcvw7duzgL3/5S63xrlq1vz8fFatWoVzjtWrV7Nv3z7A65USvTw/P7
+V61ahXbtm2LlKnpONHLwzHu2LGjwnaVjy3SXFX+3hzpM13f8rGSn58f+W7u2LGDbdu2NcpxRZqUUFF
cEmBktwHAfV0Q+32LiIg0Y012CORtt92W6BCaFJ2PpulICaKj3fe8efMq9DxrqMWLF8cgovqbN29erev
DdXTOAVBeXs67777L2LFjWbJkSYXl8+bNq3C+y8rKmDt3bqRMfYV7o4VFH1ukuar8vTnSZ7q+5WOl8m/
D3LlzufPOO+N+XJGmxIWKICUl5vu1tDTIyMTt3B7zfYuIiDRnR+wBZmbXm9laM1sbPcxLROKvtt5TzcG
REoThHljRPc7Wrl0LwNq1ayssr3wuKm8bi1jDxxZprip/b470ma5v+Vip/
H1u7r91Ig0SKsLiMQcYwLFtcTu/is++RUREmqkjJsCcc8855/o55/p16NChMWISEV/
nzp0THcJRCQQCta43Mzp37hwpFwgE6NevHwD9+vWrsLzyuai8bSxiDR9bpLmq/
L050me6vuVjpfL3ubn/
1ok0SJzmAAOwY9vBrgJcHHuqi4iINDdNdgjkE088AWjoX1j4fEj81eczFwgE4jYMMhAIMGHCBB5//
PGjGDOAEAAAIABJREFUHgY5cuTIhAyDnDBhQmRy/
+qE6xj+fClJTFs2DAAhg4dyqpVqyLLJ0yYwKxZsyLnOxAIAIMHHiRGbNmtWg2ILBYIVhkNHHFmmuKn9vj
vSZrm/5WJkwYQK/
+MUvIq8nTpzYKMcVaSpcWRkcOgSp8UmAcWw7KC+DrwugY5f4HENERKSZ0ST4Ig101llnMWDAgDqXr9zD
IT09vcK66NcAAwYMYMIC8vj4EDB9a6n2jV9YZKT0/nwgsvrLD/
6OfVbRPdI6Q2Ne0zHOf3vve9WuM988wzycvL48wzz8TM6N+/Pzk5OQC0adOmwvK8vLwK5/
vMM88kNzc3Uqam40QvD8fYuXPnCttVPrZIc1X5e3Okz3R9y8dKXl5e5LvZuXNncnNzG+W4Ik1GcZH3GM
8eYKB5wERERKIoASZSi0AgQDAYJDk5maSkw1+Xdu3aMWzYMIYOHUq3bt2IHh6cne3dfjwYDHLppZdiZn
Tp0oUJEybQrVs3unTpQmpqKldffTV5eXmkpqYyceJErrrqKgCSk5PJy8ur0BMqnKQJ7yc3N5dgMBg5Tp
cuXejWrRtXXnklZkYwGKRdu3aYGVdffTUAV111FWZGcnIyV199Nd26dauyTeX9XHnllXTp4l05Hjt2LC
kpKSQnJ9OxY8dIHcL7ueqqq0hOTo7UIdyjY8KECaSkpBAMiMxd+zYkW7dulWo4wknnFCl90nl5eHzXd
22EyZMoEuXLpgZHTt2JDc3l27dukXOe7du3bj66qtJS0tj4sSJke0mTpxY7bFFmquavk+xKh8rEyZMiH
wfBcxsuJl9ZmfmFmVOwKYWaqZveqvX2Vm3aPW3eUv/
8zMhvnL0sxstZn9n5l9YmYzG682ckThOyfHqwdYzjYGRypZdiZn
xW31mt/n//
uVw3etimIjl9DIBtPdZ9DERFpvsxsnXOuyU7yZ2YBYCMwBMgH1gDjnXOfRpX5KXCac+5GMxsHXOycu9z
MTgV+D/
QHjgOWAr2BciDTOfetmSUDfwESUDHwK3OudW1hZLvNt64infupmy2b8mafBFWF63uByjbNECrF0HgldeF5f9i4
iINBV1beupB5iIiIhIYvUHvnDObXLOHQJeAUZXKjMaJ9KjMaCE+q+Dow2MzMX/
6Kc+6gc+6fwBdAf+f51i+f7P+r+1VPia/iOPcAwxsGqR5gIiIihykBJiIiIpJYucDWqNf5/
rJqyzjnSoFCoF1t25pZwMw+BgqA95xzq6o7ujO7uJldb2ZrzWztrl27YlAdOaJQeA6wtPgd49i2sH8fruhA/
I4hIiLSjCgBJiIiIpJYVs2yyhVY6yxP49wXn7AXs03nHeb8855/o55/
pFz2kp8ePCCbA49wADcAWaCF9ERASUABMRERFJtHzg+KjXeUDlsWuRMmYWBNoAe+qyrXNuH7AcGB7LoO
UohIdApqTE7xi6E6SIiEgFSoCJiIiIJNYNYaoJeZ9TCzFGAcsKhSmUXAVf7zS4H3nXcno0XAOP8ukT2AXs
BqM+tgZscAmFk6cCHw90aoi9RFqAiSU7CkQPyOkZ4BaemaB0xERMQXTHQAxAiIiIq2Zc67UzKYAC4EA8JwL
j707D7OjrPO///7W2XtLp5dsnT0kLGEHA4gLwxoYB9SfjjMiM4ww8lyOjziiPMz/
ckREdZ+ZRdJzRx4UfoqigiCAiIAoqOwlbCCGQhEACSTqdpNPb2ev+/VHVnU7S7O6z/
m8rutcVafqrvubu6/ddEeB659xqM7sGWOGcuwP4PvBDM/iEyBdSpJPQ9wGbOBsBsB
teKkk1xMREZmolAATEREREdkSdNJ9wbIEPcAAaG6Bzp24FkeBPTJ71nq7SXE9ERGSCUgJMJFFS4ue
Nt/
5FnHMluaaIiMhEpASYSYiIiIhIEnSEipASYiKiIiIiIiIi2OwUd20p3TRERkQlQGCTARERERERkRLpHwJZqh5gADZrDtPG
D+eg2DFBGR6qUEmIiIiIhIdFBBMBw5Qjc4zQMmIiIiIiIiIiuIJVTAkwERERERERERKxKX7Sjv/
V8hmzoZ8DrF51ZJfW0REZCJpQZFQyaYiXbvjjgJlrWUABMRERERERERERKRHX1wuJZMmv/
EEtEzDX7AXWEREZCJQAkxEREREREREREREpIUw6SEaVgc2cDa9vvmmXSZbm+mZ+iIhIOBAJQpAT

ZrNjiHe3ldWa4vIiJSTkqAiYiIiIiUgHMOMpmyTIIPQOt0iMXw171QnuuLiIiUkRJgIiIiIiKlkMuC88
uWADMvgs2ej1vzDK5YKEsMIiIi5aIEmIiIiIhIKaT7gmWZhkAC2MLFkE7j1mkyfBERqS5KgImIiIiIlE
KYACvXJPgAzJoNyST+qpXli0FERKQMlAATEREREESmBgacvJpJli8G8CDbvMNza1bhspmxxiIiIlJoSYC
IiIiIipdA/BLKcPcAIh0EWCrg1q8oah4iISCkpASYiIiIiUgrp/
h5g5U2A0Tod6hvwVz1Z3jhERERKSAkwERERkTIzs+VmttbM1pnZVUPsT5jZzeH+x8xs/
qB9nwy3rzWz88Jtc8zsfjNbY2arzeyfSvdpZDguM0F6gJlhCxbjXn4J19NV1lhERERKRQkwERERkTIys
wjw38D5wFHA+8zsqH2KXQ7scs4dBnwN+Ep47FHAJcBSYDnwP+H5CsD/
65w7EjgV+PAQ55RS6+2BSBSi0XJHEgyDdA7/
uafLHYqIiEhJKAEmIiIiUl7LgHXOuQ3OuRzwU+CifcpcBPwgXP85cJaZWbj9p865rHPuZWAdsMw5t8U5
9ySAc64bWAO0leCzyAG4ni5I1RB86crLpkyF5lb8Z/
U0SBERqQ5KgImIiIiUVxuwadD7zeyfrBoo45wrALuB5pEcGw6XPAF4bKiLm9kHzWyFma3Yvn37QX8IGY
GebkjVlDuKAbZgMWzZjOvYVu5QRERExp0SYCIiIiLlNVR3IDfCMgc81szqgFuBjznnnhpzsyTn3Hefcyc
65k1tbW0cYshwM190FqVS5wxhgCxeD5+GveKTcoYiIiIw7JcBEREEymszMGfQ+9nA68OVMbMoMAXYea
BjzSxGkPy6yTn3i3GJXEanpxtL1ZY7igGWqsHmLcR/
+glcLlvucERERMaVEmAiIiIi5fUEsNjMFphZnGBS+zv2KXMH8IFw/
T3A751zLtx+SfiUyAXAYuDxcH6w7wNrnHNfLcmnkANyhQJk0hNqCCSAHXE0ZDO4VU+WOxQREZFxpQSYi
IiISBmFc3p9BLiHYLL6W5xzq83sGjO7MCz2faDZNYBVwJXhceuBm4BngfuCsCpwPvPvB840s6fD1
wUl/
WCyt55wBOoEGgIJQOsMmNpM8fGHCHKqIiIilan8z2Ae5Lrrrit3CCK6D0VEpOScc3cBd+2z7epB6xngPcEbE0bhH/
oDbtBGbu6DcIYmIiIyLCZUAExERERGpSAM9wMZuCKRz0O2M1wpRthUiZJ1RBBxGg+fTHCnS4hVpjfjYA
dKhtmAxbuUj+E88hKcEmIiIVCglwEREREREExll/D7CxSID1+sYz2TjPZhN0uWBGEw9H3BweQde/
Pme4sBNgrfkcHs9zeCzH7Ghxv2SYxWLYoiNwzz+LO68bq6s/
5BhFREQmGiXAREREREETGW3fYAyx58HOAdfvGn9Ipns/
F8DFmRAocFsnTEinS6Pl4gxJbRQfdvscu3+O1QpRnsnGezCZo9YqcmspweCy/
V3k7YiluzbP4Tz5K5G3nHHSMIiIiE5USYCIiIiIi462nG5IpzBv9M6h8B09mE/
wpncQHFsXyLI7lafCGn7Q+YtAY8WmM+CyIFcg72FSI8kI+xq96a/
mTV+SMVIbFsTxmYA2NMGtOMAzyzX+GRfVngoiIVBY9BVJEREREZJy53u6DGv7YWfT4YXcdv0+naIkUOb
+mj5MSuQMmv4YSM1gYK3B+Ks3pyTQO+GVvLT/
rqWVHMRxGufR46OnGPbNi1HGKiIhMdEqAiYiIiIiMM9fdNeoE2Cv5KDd217GrGOHNiQxvS2aoG2Xia19
mMCda5LxUmhPjWV4rRPk/XfU8kk7gz2iDlmkUH/
o9zi8e0nVEREQmGiXAREREREETGW08XNooE2IpMglt6akmY45yaPubGCgd8kuNoeQZL4nn+vKaPtmiBP2
VS/Linnt3Hngq7duBWPzN2FxMREZkAlAATEREREERlHzjno6RlRDzDn4E/
pJL9Pp2iLFDg7lab+EHt9HUjSc5yezHJaIsOOYoQb6o5i9ZJTKP7pdzjnj9t1RURESk0JMBERERGR8ZT
uA7/4hgkw5+CBdJJHMkkWRvOcnswSG8NeXwcyL1bg/
Jo+miJF7j7iTO6deTz5tWtKc3EREZESUAJMRERERGQ89XQFywMkwJyD36dTPJFNsjiW402J7JgOeRyJl
Oc4I5nhyGiGVfNP4Ec7YuzKFEobhIiIyDhRAkxEREREZBy5nm6AA84B9lAmycpsgsNjOU6M50qe/
OrnGRyXLHDOjjXsjqa4Yc1OXtqdLU8wIiIiY0gJMBERERGR8RQmwIbrAfZUNs7DmSQLonmOL2Pya7Dmt
plc+tjNNPTu4tYN3TzwWi++G7+5yERERMabEmAiIiIiIiIuPIdQ8/
BPLFXIz7+lLMihTKMuxxWNEotuQoLr3/+xzud/
Foe5qb1+2mN6+J8UVEZHJSAkxEREREZDz1dEM0CrHYXpu3FCL8qreGJs/nzckM3kRJfoX6FhyBP2Uqy/
9wE6c0x9jcW+CGtZ283psvd2giIiKjpgSYiIiIiMg4cj1dkKrBBnXv6vGN23pqSZrjrak00QmW/
ALA8+g64S1Euzs59qXHOXt2Lb5z3PTSbp7qSOM0JFJERCYRJcBEREREREMZTT/
dewx8LDm7rqSXjjLckMyQnYvIrlJ0xh/
Ss+dQ9fj8txTTnzaljWirKPZt6+fWrPeR9JcFERGRyUAJMREREREGQc9fcAA3AOftuXYksxyinJDFMjE3
9Ora4TTsfyOeof+R2JiPH2mSmOnhrnuZ1ZfvhiJ53ZYrlDFBEReUNKgImIiIiIjKeeLixMgK3KxVmVS7
A0lmNOdHIkjgpTmug97Ghqnn2M2JZNmBnHNCd528wUnVmfG9Z2sn53rtxhioiIHJASYCIiIiIi48QV8p
DJQKqG7UWP3/almB4psDQ+uRJGXcedSjFVx9Tf3Izlg9jbamOcO6eWVMT
42YYuHtzSh695wUREZIJSAkxEREREZLz0dAOQS9Xxy55aYuY4LZGdcE98fCMunmTXaWcT6dxBwwO/
HtheH/
M4e3Yt8+tjPLi1j5+u201XbnL0bBMRkeqiBJiIiIiIyDhxPd044L4pi+n0PU5LZEl6k7OXVG76bHqOPJ
HaVY+TWP/
8wPaoZ5w6Lckp05K83lvg+hc6WduZLWOkIiIi+1MCTEREREREERkvHR3sWrucTwfa2JpPMf0STLv13C6jj2
V3NQWGu+5Fa+3e2C7mbGwIc7yObXURD1ue7mbX23sJlOY+JP8i4hIdVACTEREREREERknGzryXL/
MecwgyxHxfLlDufQRSLsevN5ePkcU+/
88cB8YP3q4xHOnl3D0VPjPL8ry3fX7OKl3eoNJiIi5acEmIiIiIjIOMgWfe6wGSTyWU5N5SbdvF/
DKUxpYtcpZxF/bSNNt/
8Q8nsn9iLhUyLPnVNLzDNu3dDNLzZ0aW4wEREpKyXARERERETGmHOOezb10OklWL7qbpKRCsl+hdLzl9
B56tnEX11H069+BJSKcO6eWY5sSrO/
K8d01u3hsWx8iIpObEmAiIiIiZWZmy81srZmtM7Orhti/0M7OrhtifMLObw/
2Pmdn8Qfs+GW5fa2bnDdp+vZm1m9lzpfkUMtizO7I8vyHsvY1zMrsKnc446Jv4ZF0nnImyY0v0vSrm4
ZMgkXMWNqU4IK5dbQmo9z/eh/
fXbOLNbuyOKdEmIiIlI4SYCIiIiJlZGYR4L+B84GjjgPeZ2VH7FLsc2OWcOwz4GvCV8NijgEuApcBy4H/
C8wHcEG6TEmtPF7h3cw8zUlFO3rgSP1lT7pDGTd+ipexa9ckX15L64/+i9iWTUOWq4t5vH1WDWfMqsG

```
A2zd284MXO1m/O6dEmIiIlIQSYCIiIiLltQxY55zb4JzLAT8FLtqnzEXAD8L1nwNnmZmF23/
qnMs6514G1oXnwzn3R2BnKT6A7JEt+tz2chdxzzhtepJYbxfFVG25wxpXfYcdTcefXYRl0rT89FvUP3g
PFApDlp1ZE+W8ObWcMi1Jd87nZxu6uGFtJy92ZvGVCBMRkXGkBJiIiIhIebUBg7vNbA63DVnGOVcAdgP
NIzz2gMzsg2a2wsxWbN++fZShy2DBvF+9dGZ9TpueIhkBr6+nonuA9cvOnEv7BZfSt+BI6h9/
gNYffYPk2mfB+fuV9cxY2BDnHfPqWDYtSW/B8YuXu/n/n9/
FE+1pssX9jxERETlU0XIHICIiIlLlhpodfd+uMMOVGcmxB+Sc+w7wHYCTTz5ZXXAOwdM7Mjy/
K8sxTQmm10Tx+now36dYBQkwABdP0HnqWaTnLGLK0w/S9OufkH90Gt2nnkVmydFge//
v3TNjUUOcBfUxNvcWeLEzx+9e6+WPW3o5ojHBMc1J5tRGCTo7ioiIHBolwERERETKazMwZ9D72cDrw5T
ZbGZRYArB8MaRHCslsKUvz32be5lZE2Xp1DgA0V0dABTqp5QztJLLts2nfeZcUpvWUf/
c40Ei7PGZ7H77n5Obu2i/
8p4Zc+tizK2LsTNTZF1Xjhc6s6zamWVK3OOIxgSHN8aZWaNkmIiIHDwlwERERETK6wlgsZktAF4jmNT+
0n3K3AF8AHgEeA/we+ecM7M7gB+b2VeBWcBi4PGSRS4AZAo+v3y5m0QkmPerP0kT3b4FgEJjSznDKw/
PIz1vCek5h5F69SUannmElp9/j8yCI+h6+/
kUmqYNeVhTMsKyZIoTW5Js6snzSk+Bx9vTPNaepi7msaghxoKGOPPrYiSjms1FRERGTgkwERERkTJyzh
XM7CPAPUAEuN45t9rMrgFWOOfuAL4P/NDM1hH0/
LokPHa1md0CPA8UgA8754oAZvYT4Aygxcw2A593zn2/
xB+v4jnn+NUr3XTnfM6aXUMisicpE+vYhh9PUKypK2OEZeZ5pOcfTnrOIurWPkP96hW03vh1ut66nN4T
3wLD9OiKesaChjgLGuLkio7NvXle6y3w/
K4sz+zIAtCSjNBWG2VWbYy22ijNiYh6iImIyLCUABMREREpM+fcXcBd+2z73KD1DHDxMMdeC1w7xPb3j
XGYMoTH2tOs78pzUkuSluTeTevY9i3kpzQPm+SpKpEoPUedRN/Co2h2h8/PdM+cNdxF97lc7z/
hcukTzgofFIMGn+woY4vnN0ZIq0p4t0ZIqs2ZUbSIglIsaMVJTmZGSvV13UU2JMRESUABMRERERORivd
Of4w+t9zK2LsXhKbO+dzhHt2Ebf/
CXlCW6C8pMpdr71AupeeIqGpx+m9aYt7PyLv6bQOmNEx3tmTEtFmZYK/
oxxztGV9+nIFNmRKdKZ9Xm9L09+0IMk457RmPCoj3k0xCPUxzzqYh4NMY+amEcqYiSjHlFDiTIRkQqmB
JiIiIiIyCj15H1u39hNfcxj2bTkfomTSFcnXj5LfmoVzv/1RszoOfJEcs3TaXroblpu/jY73/
W35NrmH8SpjCnxCFPiERY1BNucc6SLjq6cH7zyRXrzjp2ZIpt7C2SLQz/sNGKQDJNh/
UmxZMRIRox4xEh4RiLikYgYiYgR92xgvf+9EmgiIhOXEmAiIiIiIqNQ9B23v9xFrug4Y3YNMW//
pEe0I5wAf0pzqcObNHLT2mg/7720/P6XNN16Pbsu/GuyY9BjzsyoiRo1UY8ZNfvvL/
hBgqwv75P1HbmiI+c7skVHftCyN10g6wfrg3uUHUjcg3jEC5Nle79SUY/
aqEdtzKM2atTFgveJiBJnIiKloASYiIiIiMgIOee4d3MPm3oLnDY9xZREZMhyse1bAcg3KgF2IH5NHR1
nv5vm+2+n6Zc3suvP30dm8dJxvWbUM+o9oz428qdIOucoOMJkmCNfDJJiA+8HJcpyvqMQvu/
K7dmXKTqG6nsWMaiJetTFjPpYhCnxYKjm4GVSSTIRkUOmBJiIiIiIyAit7MjwzI4sR02NM78+Nmy5WMd
WCnVTcLF4CaObnPxkDR1nvYuW++9g6p030XnexaSPOqHcYe3FzIgZQ/
b2Gynngp5mmULQAy1TdGSKPplCsJ4u+GztK7C+y2ffUZoxj3Cop7dnmYjQGI/
QGFcvMhGRkZhUCbCXfvz1shwrIiIiIvJyV47fbe5ldm2UY5sSBywb3b6VfGNTiSKb/
Fw8SceZ76T5j7+m8e5bsHyOvuNOKXdYY8qsfzgkTDlAOeccWd/
Rm3f0FXx68z69BUdvwWdnpsirPfn9hmTGPaMxTIpNiXs0xiNMSQTJssZ4hHhEyTERkUmVABMRERERKYf
2dIHbXu6mIe5x6vTUgXvb5PNEOztIH8Sk7tXMxeJ0nPEXNP3pNzT+7pdYLkvvm95W7rBKzszCyfehmaG
H2OaKjp7+5FjeD9cd7ekCL3f5FPbpQZaKGFPiHnXxCHXR4CmYtbFgHrK6/
nnJYh4R9SITkQqmBJiIiIiIyAHszhW5ed1uoh68febQk94PFtvZjjlHvlFPgBy1SJSdb7uAqQ//lil/
+g1eLkP3m88BJWb2Eo8YTZEITUPMQTe4B1lP3qe3sCdJ1pEusDdkcfjmUZMRIRY1kZP8nYQ5eT0SCMolB
T8n09DUSkQluwifArrvuunKHICIiIiJVKl3wuXndbnK+4+y2WmpHMHF6tCOYAL+gCfAPjhdh15vIP5vPxcVi
1D92P7H2Lexa/h5cqrbckU0Ke/UgSw7dg8x3/
fOOOdLhPGTpoiNT8MmFT8bszDnymSK5YpBQeyNxDxKDkmUN0Jm04EmYFiyjHpFDmFdNRGQ0JnwCT
ERERESkHLJFn1vWd9GZ8/mzWTU0DvPEx33Ftm/
BRSIU6g4005MckOfRuexM8o0tTHnqIab98Bvs+vP3kRurYaXO4fXsJrZ9C7Ed7VAo7NkVi5FvnUV+2ix
cqmZsrjfBeGbURI2aKDDMMvBnNvzhMtcMXiqZc4ftCzu2d+/rbfgk/
eLA+WHS6ElI8ETOaeE85Y1Dprsf2pC85eJyNhRAkxEREREZB/
9ya+tfQXeMiPFPtNTIm82xjm3kpzSD98a9xeQAzOg9/DhyrTNpeuhuumm/
5Dr0nnk7Piafj1zeO7ly+T6z9dRKvrie+aT3xrZvwspk3PKzQMJXsvMWkjzqB3Kx5VTsU08yIR4Khlwz
/8NNhOecouGDuskxxT6+z/qdfpguOjkyBjd37z19WH/
NoSUZoTUVpTkZoTUZoSUaVGBORUVMCTERERERkFzR8bP1XbzeW+D0GSlm143uL/
7o9i1kZs4bp+iqT75pGu3LL2HKyj9S+
+RD1D75EOklxMCwRfyAlAY6MGhcG61ixvXE1Lj6LKdbpbgQnleBxENFvVpExpXS2FVmhMfCi+9PeUt8Uk5eb
nOrRRHqSoO/yzyO1itr0kYKSf6gA7+ExVnTJDNFtP/
AOMmZh3cnSIQLzE44Ls2bsitVx8y9Bp6W8v4r2F0wIpx4mmP/
fmdt3jEWDJ3QnPqO6DOjNkJRj4jdhZM+kJj0yfb8m+zGMfrLoDrPyG4GEJjcMxwu5ZrUSxG7vDbvr/
GaF2Wam40+xGmxSzzGTVGiiH0spcxZaNZ2jyf8J1rUsC5wz0YiGr+z/k39zcJpYGasxZ/
tOTKoqJ1nbojXWLeu7VuezlcTB11T7iZa7N/ep+nRBlN1eFpkDLLoxX+g7fW+kJ4gxl+OxWg/
m0mUpQ3PnTIjDPNnjkDtc2o9p2KPqNCkmQ5ZJmfxqdmDzf7RsBRlh4nkfmzN38rl57a85BSUgGsAP/
R93WSZMa61MqaLTaLvnhOOVWhMtMhk+k0hMY85W9yNwiMkuKEyhd7M7r5UXkmzTcbk1Ktq96A7bXbb6IuS4ydnk0OGDC5ZLpEYHczqPR7+RZT0lNQJCiYqQNZ0XkS9PCXU4NlzdQJ2oqoGZkQLbz0gYDyUFPHNjsNbB5K7yDlOTEKzTClalP/H1y6fQy7ch1U0MGOHkbU2N9RGwsGbnpEXlsg8sX7VSJdRq0d8F9ZJLQw0ToYPL/F0MXTvVr5ucExOMRYD1c1cdMXnrHvh0OhaIPqrqnHOrK99TTi9y95/aRwq2iaBLumVG6BpR3Ti87AsWy1D9/dyt1ISnoVzcJwqS0PqrMG0ooQ4ewt2QY6P8q9pf2FJFwNJzfc/YrwkLAlCCrfWMhN71iD3bSOonGpftuBqjE0/xbEXcqz9NwpCGx0VnevSvIkBVbIn3dK6p+fnqMHmnKYbdVwOJc6HBHG2K6xNqFTXDbWbNbvhIAe34Lum0r0HLwz7AXtZn+sTSR0JomLI1MmuswK5wpP8ul0TUfKRv6LzIqW6ZCPQ56Y3fs57GQ+xyeA1+XX8ntd+MX7kg63OVLq5Ec0ZVrBk22eeRjN/qX7Tjf1uPH/qpHV+7T+Q7Dl7V8mC7AWb1iHaMzPYUt/tsjIQ7Q1o+uqk+SMLpXkRGtv3IVuQuNbWwsN/cyk7kr4+BbJKs+CF9PuF+7HGZahRd7sYSJAxJ1wCB9B7zYTDtTs0SlNe4gKeDRDbkvLb1eOhqlJ4Ojl4Tc4Jx/EV/rgDkb+ZL9XBR8S3NqN0Wz9M7lovmBa20V3aMx0AjQCqBCz9CA9c9hRWuVIRtvJBsX5D+yJ+0Bw9tP1t57mj6G8Ifk
```

GyMe8ypizG3Lsb8+hj18ZHN4ycilUkJMBERERGpeh2ZAjev6yJT9Hn7rBpm1BxcMznWsQWAQmPLWIYn+
xhISpX4usX6RjqXnUnX0cuoe+Fpatc9R80Lz5BZcAQ9y94+dpP0y4hY/
2T+dd7AUGXfOXZmi2xPF9meKbK2M8eqnUEvseZEhPkNQTJsbl2MREQ9xESqiRJgIiIiIlLVXtqd5Vcbe
/
AMzmyrpWmET3scSmz7VoqpGvxkagwjlInGr6kLeqItPZm6F5+l9sVnaLn5BbJt8+k8BowYAAAgAElEQV
RZdgbZ+UuqdsL8cvPMaElGaUlGOZKgl1hnzmdrX4GtfQWeDnuIecDM2igL6uPMr48xszZKRF8zkYqmBJ
iIiIiIVCXfOR7c2sfDW9M0JSK8ZUaK2kOZM6iQJ7HhBXKtM8cuSJnQXCJJ9zHL6DnyBGrWrabuhadovu
0G8q0z6XnT20gfthSiB/
HYRBkzZsbURISpiQhHTk1Q9B3bM0W2pQts7Svy4NY+HtwKcc+YXx9jQUOMBfVxGg8hES4iE5MSYCIiIi
JSdbpyRX79Sg+v9ORZUB/jTa1JIof4BLnUC88QyfTRs/iYMYpSJgsXjdF7xPH0Lj4mmCx/
zZNMvetmpsSTpJccTfqI48nNWQA2ugSr5XN4vd3g9jz+0MUT+DV16mF2kCKeMaMmyoyaKMc1Q7bowmRY
gc29eV7cnQN6mZrwWNgQZ0F9nLl1MeIR1bfIZKcEmIiIiIhUDeccz+3M8tvNvfjO8abWJIsaYtihJhOc
o+7Jh8g3NpObPvuNy0tlikToW3QUfQuOILF1EzUb15J64Rlqn1uBH0uQnzaTfOtMCq0z8eOJgSSWFQpE
enYT6e4k0h0uu3bjZYee5cyPxSk2NlFobCE/
bRa5WfPIz5iNi8VL+WkrQiJizA0nynfO0ZX32dIX9A7rHy4ZMZhdG2NhQ4wFDXFak5FD/
5khIiWnBJiIiIiIVIUdmQL3be7l5e48rckIp0xPUX8oQx4HiW9+mVjHVnYtO1M9cwQ8j+yseWRnzcMKe
ZKvvUy8/XViuzqoeW4FXiE/
5GF+PEmhto5Cqo7s3FaKNXX4qVrcoJ5jXi5DtGc30e7dxLZuJvXScwA488i3ziQ3a26QEJs1j2L9FN2P
o2BmTIlHmBKPcEQjFH1He6Y4MH/Y/a/nuf/
1PmqjxoKGOAvr48xviFET1WT6IpOBEmAiIiIiUtEyBZ8Ht/
bx5PYMEQ9OaEmwZEocbwwTA7VPPkQxkaRv/
uFjdk6pDC4aIz1vCel5S8INjkhvF1YshkMbHXgRijV1uIOYL8yyGeIdW8PXFmqeW0Hd048AUKxrIDczS
IjlZs6l0DIdF0+M4aerbBHPmFkTZWb4VNi+QjCZ/
pa+Ii915ngufLrkjFQkGC7ZEGeWJtMXmbCUABMRERGRitSb93miPc2THRlyvmNRQ4xjmxIkx7i3RqRzJ
8n1z9Oz9GSIqnktb8CMYt2UMTudSyTJts0n2zY/2OD7xDp3EO/
YQnz7FuKvvzrQSwygUDeFQvM0io3NFOsa8GvqKNbW42JxXCQSzFPmeTgvEi49iESC9+HSxeLgHcL3kXN
QLELEG/W8aOVUEw3mBVvYEDxEY1c2GC65pa/
AI9vSPLwtTdSgrTbG3PpgWOXMmijRQ5xfUETGhn5Di4iIiEjFcM6xpa/AMzsyPLczi+9gTl2UpVMT4/
ZUt9qnHwbzNPm9TAyeR76plXxTK71Ljg029fUQ37GN6O6dxLp2Ee3aRXzLq3i57EFfxo/GgqRZPI6LJ/
HjiT2JMd8H5zC/iBXyWD6H5XJ71gt5LJzY34/
Fg4n9EymKjc0UprZQmNpCvmU6+dZZEJuYT9H0zGhORmhORji6KUEunEy/
PV2kPV3gT1uCYa4Rg1k1UWaHybBZtTHqxmjotYiMjhJgIiIiIjLp7cwUeXF3ltU7s2zPFIkazK+PcWRj
nPr4+CS+ACyXpea5FaTnLgqezCcyAfk1dWRq6mDOor13FItEMr146T6sWMB8H3wfc+HS98H5e7b7xTCp
VcAKObz8noSWV8jjpfuC3l1mQe8xM/
xIFJesxdU14qJRXCSGH43iolHM94MnXeZzeNkM0Z3tJDa+iPlFAJznkW+ZSX7mHHLhq9jYMiHnNYtHjD
l1MebUBQm7bNGxPRMkxLanizy6LU3/
szzrYx6zaqPMqokyLRW8apUUExl3SoCJiIiIyKSTKfhs6s3zaneeDV15dmSDP5ibExHe1JpkXn2M2DgP
O/K6O5n665/
i5bL0HH78uF5LZFxEIhRrGyjWNpQ7kj2cI9LXTWxXRzCv2Y5tpFavpPaZRwHwEylyM+eQnxEmxWbMxqV
qyxz0/
hIRY3ZtjNm1QUKs4Dt2ZYvsyBbZkSnyWm+etZ25gfKpqDEtGaU1FaE1FaU5EaExEaE2anripMgYUQJMR
EREpMzMbDnwdSACfM8592/77E8ANwInATuA9zrnNob7PglcDhSBf3TO3TOSc04WvnN05Xx2ZotsD4cXb
U0X2JEJEl6eQWsywkktSdpqS9eLIrH+eabe83MoFNh52rnkW2aU5LoiFc9sICmXmb0w2Ob7RLt2Eu/
YRnxHkBRLbHyR/
rRQsaaOYkMjxfpGinUNwcMEIkEvMzDwi8FDB8IebBTDpe+Cec2iUVwkiosnKdbU4tfUBXOj1U8JenaOQ
QIq6hmtqSitqT1/gmeLPruyPrtzRTqzPrtzPq/15im4PcfFPJgajzA1GaExHqE+7lEfC151MY/
amKdJ90VGSAkwERERkTIyswjw38A5wGbgCTO7wzn3/
KBilwO7nHOHmdklwFeA5rZUcAlwFJgFnCfmYWPmnvDc5ac7xzZoiPnO3KDllk/
2N6b9+kJX72FPevFQX8M1kSNxngw5870VITmRIRIKSeYLhRo+NNvqHvqYXJTW9l1+nkUGqaW7voi1cjz
KDS2UGhsoe+wpQBYPkdsZzvxjq1Eu3cT6esmuu01Ehtf3DOccx9ur8n9I0FiK0yOWbEYDP3c95hIlGL9
lCC5FibZCg2N+LX1QaIsVYufqgmSbqNMRCUiHjNqPGbU7Pmz3HeO3ryjO/z517/c0lvgpd05fLf/
eWqiRk3UIxU1UhGPZLhMRY2YF7zi3qD1iBHzGHjvWTCnWcTAQD3OxolzDsIE7MBr4H0Bij4UC7hwDj08
L/
haeOHDIjwbeEgF+20fZh8OCoXwlQ+WxQJu8Pv+l1kw5140BtEoNmidWAxicYjGsEN5AEaZKQEmIiIiUl
7LgHXOuQ0AZvZT4CJgcLLqIuDqcP3nwDct+AvlIuCnzrks8LKZrQv2f43Wu9BywT94xU1E
hGgkTXrJroQI+Hhpg35k9wHC0rFkhueIGeJcey+4S3QGT85hcTkeG5WJzc9Nnkps8epkCQbDDngidZmv
eGCSor5PEyfXiZNJFMH5HebiJ9PeGym0THVrx0L8OdxUWiuGgs6FHWv4zEggRFcIW9FnveB8v+3Fbrfn
Hu2Z+OJuiNpeiNpeiJpwbWM9EEmWicHdEEmUicdDSB7x3czyfP+eHLDawH19//
k7twk8NwZhTNwxx87Ombg6/BSAxRbsgjhzzfENuGPvgQyr3B53CDVnx//+TWwHL/BOuk5EX2JMr6l/
1JOAycv1fCLbL8nXjHnFjuqIFRJsBWrlzZYWavjFcwoRagY5yvUQlUTyOjehoZ1dMbUx2NjOppZFRPIz
NW9TRvDM4xntqATYPebwZOGa6Mc65gZruB5nD7o/sc2xauv9E5ATCzDwIfDN/2mNnag/
gMMnb086Gy6etb+fQ1Bv653AGMH319R+tf/
rUUVxlRW29UCTDnXOvBxTJyZrbCOXfyeF9nslM9jYzqaWRUT29MdTQyqqeRUT2NTBXV01CdCfb9d/
NwZYbbPlQ3qWH+oe6+A3znQAFK6VTRfV+V9PWtfPoaVzZ9fSe3yTt4U0RERKQybAbmDHo/

```
m48MILuf766+P9mTRpEj6fjx07dhwwppKSknhgr7ek3QywsVfd3O1rv3jhv3qknv6s+T0SERERkfRnd3
0FTifk5LZbzuQXKBG+iBwybrjhBu655x7ef/99zjrrrPjxW265heeff54pU6bwox/
9iGHDhrFr1y7+9re/MXnyZK688kq+9rWvcfzxx/Otb32LX/ziF/
h8Pu68804GDx6Mw9H1eUaZmZnMmTOHefPmsWHDBo444ohO9eOGG24gPz+fU089ldzcXN5++22+
+OKLA2a2vf7669x2222cddZZvPLKK7z11lssWrQofv7OO+/k/
PPP57rrrmPmzJmsXbuWefPm8d3vfrdFAvyOLFmyhKeffppLLrmEkSNHsn37dh5//
HGmTJkCRJZP3nHHdx8881s2bKFM888k3A4zIYNG3j77bcPCNT1NM0AExERERHpx+yuHZA3ENPRf5TlD
4JABba2um86JiKSRLGgU6KCggI++OADxo0bx5w5c5g2bRo//
vGPqays5LjjjgMiu+cuWrSIcePGcd1113HzzTdz4403cvTRR+P3+7vVn5tuugm/
388DDzzQ6X5MmjSJv//
971x33XV87WtfY+HChTz55JNccknLHG1PPfUUq1ev5pJLLmHx4sU8+uijXHTRRfHz06ZN48UXX2TVqlV
ceOGFPPTQQ9x666088sgjXRpDcXExxhh++tOfxvs7ffp0nn766XiZH//4xzzzxBO8/
vrrXHzxxVx55ZXMnz+fM844o1v3rSuMtbbThUtKSmxst4G+1DwJvmaA9a7m90hJ8EVEpD8wxnxkrS1Jd
j/aY4yZDvwX4ASestb+MuF8BvAsMAHYB1xhrd1sjJkK/BLwAI3A/7PW/
jV6zTvAEKAuWs00ay23LBB8JkvW3nvQeay3B+36OGTYCx+nntF/2qzLCb/4J59XfwzGmd/
OwiEj6WLduHUcddVSyu5HyisrGT16NDfddBN33nlnsrsDwDvvvMM555zD2rVrOeaYY5LdnY5LdnYPS3vews3
/
rpd0SSBEREZH+xBjjBB4FpgJlwIfGmFettc0TeHwHKLfWFhtjZgL3AlcAe4ELrbU7jDHHAG8Aw5pdN8t
aq4jWoaymCupq2k+AHzMwsqOZ/aoMFAATEWnXY489hsPhYOzYsezZs4f//M//
pKGhgeuvvz7ZXZM2KAAmIiIiklwTgY3W2lIAY8yLwMVA8wDYxcAd0fcLgEeMMcZau6bt2ZZmU8Brzmw1rb
0PvdlnTQmQT4McaTATn+yE6QIiLSroyMDO699162bt2KMYaJEyeydOlSRo0aleyuSRsUABMRERFJrmHA
tmafy4BT2ipjrQ0aYyqBgURmMVcCqxJCH79jzEmBPwRuNu2kvvCGPM94HsAI0eOPMihSKqxu6K7m3Ui
AAZAfkFkBpiIiLTruuuu47rrrrkt2N9p19tln05W0V/
2dkuCLiIiIJJdp5VjiX6v6vtljHGjCeyLPKGZudnWWwuPBc6I/q5uq/+6ErZ+V9AnA/
ny7tcattU9Ya0ustWD9g3qUscl9dldOyArG5Ph7VR5M3AQlO/
D1td1XFhERCSNKAAmIiIiklxlwIhmn4cDO9oqY4xxAbnA/
ujn4cBC4F+stZtiF1hrt0dfq4AXiCy1lENMZAfI/E6XN/
kFkeu0DFJERPoZBcBERERERkutDYKwx5nBjjAeYCbyaUOZV/
MRa+16ssDHGZYwpiL53gIIuixX4LDDTGbD+EFAPzjDEfMJ8DHwHbgyb4blaSEPbshHO58/i/
AeH2QlY3dqQCYiIj0L0qCLyIiIiIiklkrQ0CNxHZwXEd8d8LK19lNjzNyrSBNjzF3GmIuixX4LDDTGbA
RuAeZGj98fi/i/
AeH2QlY3dqQCYiIj0L0qCLyIiIpJk1trXgNcSjt3e7H09cHkr190N3N1GtRN6so+SmLItotPO3RjXQaf
HlkCKiEj/
ohlgIiIiIiL9kN23B4wwBf16XrjMDB8G+PdjGho4LIi4iIpAkFwERERERE+iFb9gUMGoLxZHS6vHG5MWOPS
EVlCKSLST+Tm5rJ8+/XKWL1/
O/
fffz8cff9y9fzJly8L1/O/
fffz8cff8y5555LTU1Nr7c9derUVq9b6LXXj+t45zvnmOqVQR9rq+1Nr/
pCT4IiIiIL9jLVhCFTC8JFdvtY4nOD3KwAmIv2Ky+Xi1FNPBeDUU09l5MiRnHHGbz22mtcfvkB+8z0
qKysrHjbp512GpmZmVx55ZWsWrWK0047rVfbln/
SDDAREREREkf6mphrCIcjK6d71ObYLYEUkX5swoTIZsnNlyK+/PLLPSbkl/
PLLHHvssWRkZDBixAhuu+u02gsFg/
HxFRQX/+q//YtCYDQWZRfchpOcjIXfm/F6tdlpxHPsbSPJEc2PjO/h9tp2+xjeJJYLpjdOEyvlXz5/
Rx9uuhKxLcnVfuDgu/ptXrJvoL5w71CtUxvCX9bPGQFYx3YwBKIpRANTUJqVmW1h6YANLHGb6NDU/
4aMKLUNPJXEXDnhpt6Go+gATRXNOBUFbOmvhmE1LRkpvQQ/8oMpyRkrNCX+o9LV3tzq+QQ1kM8phqI/
+IRrcjxRcDpn4DkMGLVGCBY69CrIqn8+9Y3VK0SsIbEFvaZtaErtwQqIjdhGJQ8vNCgpBDR1wF7tvyJ9P
f2nDJe2Hhk3lyrjDHB/yd6uH5MkkkwgDutx/xzFYO4HQWGWHMuIlOrKyK+QUsJKaDeK36lnMdbcyhW3Uq
XcBQphvlGGx9qt98bdv8zJK03+m18gTRTNXGIbFe8d4T31PoSQ5dSLwp1bX3e8H3D6BrPKZr47oDBJQAAf
XCKmUHC2uB/Nk1e4/zl6dTbPRXamEC8ovjBn+93AkyUYpG2Kh8VJadWUGw13WOEaZK5wZJ6Qy6M3Y+wDlMD
+D58GJmtIkJnCVqewS9Ktbwpn0k1U78RMRJgf0I+WZOk+M97B6/W4OBUPX7/wQFO6jqsYAVfQvQvAYRtK5kq
4c+B/jnnF2TI/o2dM9/Wz5bFNjt7JV6K4ELVe1NoCGuaTxbW70CeshQpqmXY6gwdhSzuuNvKi3Kdv3XShI
XqzFo1vGs2hZC0mWf3Ss3VdTdvnHi2RaHGRR9H32QXQdSsJMvDGW1XhYyu1mtFWS/
uTwFPahvhb5ZzXexFP54+y+nXsv+u0Rla+Y8dm2XgQfTmDQzmo1KtY2tekO1LrD4WTX/
s8jsWyRnU0CfCKcRMdXSHC5ncsPatS8Ol2jnjLgp/iLUekBQ0aQkFYA55m3PZqWuaX1p94YqVWfU/
hJTWFDHX9D9PXpSGhgIR0+PMJl1u0fjPgcbbXnqC+JdnkmwQMEQ8ufDkJzqm8dtVAt3tqsvNVfsAqFs3iU+
ViOdrTUEdmGewsxcmLyD44Bm0rr1GlTfAgOQjw6CHV4hgOqfuP6sQxh5eE+L66TX4nlpA/0Q6QYpW0AK8
u6rA4rUVbp8+aRHycfECZEOkC8F+/8hjuPajntUE7TLfkt0PPuOmoU5DtjZ+CtZgNxrYC0oHsAiCBbQ/
OgbYy0lnaWy7Tl8R+t1cd+AWZCXDAK/jodQ3TTnegqUaFEqUN+6m0xGX3xTHF0u9MzQN2xtDsaKf/
bzSqbpDDVNSt7BwCJq/mF6G3jCJ8GYFb96o0TcYkwVxyDWP4EmOTBMFuxZsoRrZApnJgYrsvOi7cDD0Q+Ba
Jv/T5QYpWuoRVlBG97vjj1bp+6eDMaSKUr/3wXKGR3yE0WuYjNOzvwQl7PsGAd83Op9fr3H8E/u7ikmdaXN
e5D3vjmJm27bCqlh8qRQPzIvMxuXdxJOTW8gLzuxq9lXzv2c1jsgHeHL5OYu+w5oiJ9UeGvoa1qfHvm/
LDPfRYPWeSl2ZKXb/H6NVvh3BtjlSEe6RnPK4JWw7Y7qrMdk4k+zO8hcOeWE+ybKLzeFLJoTIRwGgbU=
```

56qqqqeOKJJ7jrrrsYOHAgN954I3fccUeLmVSFhYUtri8sLCQYDLJ3716ATo01Ji8vr8Vnj8dDfX09AA
MGDODNN9/kzjvv5Fvf+hbhcJhp06bx8MMPM3r06Hh748ePb/
W+bNu2jVGjRrVx13qeAmAiIiIiIv2MrayArJxu5aYBwOuLBM80A0xE+gmXy0VJSUmr5woKCnC73eze3X
Lzj127dgHElyTm5eXx61//ml//+td88skn/OpXv2LWrFkcd9xxHH300W22nZmZGW970qRJ1NfXc/
vtt3PLLbdwyimnxNu46KKLmDdv3gHXx5YXOhwO5syZw5w5c9i2bRvz58/ntttuY9iwYXz/
+9+Pl08cx+7du3G5XBQUFAB0aqydNWnSJP785z9TV1fH0qVLueWWW7jqqqv44IMP4nUtXrz4gIAbwJFH
Htmltg6WlkCKiIiIiPQztrIcMrO6fb0xBvx52glSRA4JTqeTCRMmHLB74csvv4zD4WDSpEkHXHPcccdx
3333EQ6H+fzzz7vU3q233kpjYyMPPQwmcJEybgdDq7NdbO8Pl8XHjhhVx//fXx/
kyaNAmfz8eOHTsOGFNJSUk8sNdXNANMRERERKS/
qazADB12UFWY3Fzs7p091CERkdR25513cv7553Pdddcxc+ZM1q5dy7x58/jud78bTwo/
efJkvvGNb3DMMcdgjOHJJ58kKyurRTL7zsjMzGTOnDnMmzePDRs2cMQRR3DLLbfw/
PPPM2XKFH70ox8xbNgwdu3axd/
+9jcmT57MlVdeyQ033EB+fj6nnnoqubm5vP3223zxxRctAmkAr7/+OrfddhtnnXUWr7zyCm+99RaLFi3
q0lg7Y8mSJTz99NNccskljBw5ku3bt/
P4448zZcoUIDJj7o477uDmm29my5YtnHnmmYTDYTZs2MDbb799QKCutykAJiIiIiLSj9hgEGqqIPMgc/
T482DTBmxjA6a7ucRERNLEtGnTePHFF7n77ruZP38+hYWF3Hrrrdx5553xMpMmTeKZZ55h8+bNOJ1OTj
zxRF5//fUuBY1ibrrpJu677z4eeOABHn/8cQoKCvjggw+47bbbmDNnDhUFQwZMoTJkydz3HHHxdt/
8sknefzxx6mvr6e4uJgnn3ySy65pEXdTz31FA899BAPPPvgg+fn5PProo1x00UVdGmtnFBcXY4zhpz/
9Kbt372bQoEHMmDEjvgMlwI9//GlikpsbHdB/
rS7Nmz4+/HXnVzt+v54oX/6pF6+rPm9+ihhx5KYk9ERER6hjHmI2tt60k/pIVk/
a0nPcuW7yP463swp52DY2z3E9jbzZsI/
+1NXN+bgxnS9f+4E5H+Yd26dRx11FHJ7oZ0wjvvvvMM555zD2rVrOeaYY5LdnR7V3vews3/
rKQeYiIiIEg/
YivLATBZBzkDLDe6E6QS4YuISD+gAJiIiIiISH9SWRF5PdgAWE4ugBLhi4hIv6AcYCIiIiIi/
YjtoQCYcbkg268ZYCIiaeLss8+mK2muDjWaASYiIiIi0p8EKsDriwSwDpY/
VzPAREESkX1AATERERESkH7GV5Qe//DHK5ObB/j2aUSByiNM/AySZeur7pwCYiIiIiEg/
YisrIDOrZyrz50FjI1QFeqY+beburq6ZHdDDmF1dXW43e6DrkcBMBERERGR/
iRQjsnK6ZGqjD+2E6SWQYocqgoLC9m+fTs1NTXaCSb9NSQ6YiIiIiIiLSj9hgEGqqIPMgc/
T482DTBmxjA6a7ucRERNLEtGnTePHFF7n77ruZP38+hYWF3Hrrrdx5553xMpMmTeKZZ55h8+bNOJ1OTj
zxRF5//fUuBY1ibrrpJu677z4eeOABHn/8cQoKCvjggw+47bbbmDNnDhUVFQwZMoTJkydz3HHHxdt/
8sknefzxx6mvr6e4uJgnn3ySy65pEXdTz31FA899BAPPvgg+fn5PProo1x00UVdGmtnFBcXY4zhpz/
9Kbt372bQoEHMmDEjvgMlwI9//GOGDh3Kgw8+yAMPPIDX6+WIIZbHdB/
rS7Nmz4+/HXnVzt+v54oX/6pF6+rPm9+ihhx5KYk9ERER6hjHmI2tt60k/pIVk/
a0nPcuW7yP463swp52DY2z3E9jbzZsI/
+1NXN+bgxnS9f+4E5H+Yd26dRx11FHJ7oZ0wjvvvMM555zD2rVrOeaYY5LdnR7V3vews3/
rKQeYiIiIEg/
YivLATBZBzkDLDe6E6QS4YuISD+gAJiIiIiISH9SWRF5PdgAWE4ugBLhi4hIv6AcYCIiIiIi/
YjtoQCYcbkg268ZYCIiaeLss8+mK2muDjWaASYiIiIi0p8EKsDriwSwDpY/
VzPAREESkX1AATERERESkH7GV5Qe//DHK5ObB/j2aUSByiNM/AySZeur7pwCYiIiIiEg/
YisrIDOrZyrz50FjI1QFeqY+EUk7breburq6ZHdDDmF1dXW43e6DrkcBMBERERGR/
iRQjsnK6ZGqjD+2E6SWQYocqgoLC9m+fTu1tbWaCSZ9ylpLbW0tu3bt6tJOkN1fX1tXW43e6DrkcBMBER
UMDZPXQDLDcaABs7x44fGzP1CkiacXv9wOwY8cOmpqqaktwbODS43W4GDx4c/
x4eDAXAREREREReT6i0BsB8iemQFGZha4XKCdIdEUOaX6/
v0cTgYiIiIiIL9hK2MBMBMTyXBNwb8eVoCKSIiaU8BMBERERGRfiIWAOupXSCSABjD8XqxlgIiKS
5hQAExERERERHpLyrLwWRwCWQHwS0sRq9kYAiyzGdIpCWQYocqgoLC9m+fTs1NTXaCSb9NSQ6YiIiIi
P1y0iItIHFAATERERERSaJoTq+biOzguA542Vr7qTHmLmPMRdFivwUGGmM2AAD6PHbwKKgXnGmI+jP4X
RczcCTwEbQAPrj+0bo3
RczcCTwEbgU1oB8h+z1b13gww48+LtKGdIEVEJE0pB5iIiIiIiHkllrXwNeSzh2e7P39cDlrVx3B3G3W
uAo7p2Z5KSqsOgCcD4+yFP/H9uQBKhC8iImlLML8BEREREoBWxWAzF5Y/
ggYTwZ4fdh9e3ulfhERkd6mAJiIiIiISD9gqwLg8Lg8/VeA/5cLYEUEZG0pQCYiIiIiIEh/
UB3A9EYC/
CiTkwtaAikiImlKATARERERkTRnrY3kAAOuFBphx/
lyorsI2NvReGyIiIr1EATARERERkXRXVwuhEPh6LwAW2wkSLYMUEZE0pACYiIiIiEi6qw5EXnsBGO0S
CdIJcIXEZH0owCYiIiIiEias1WRAJjpyQCYPweMAav6YUVEZEuJ2VaoS+mMLlCw8dHd2Jr8LlTHyTf6nv
BERSUMKgImIiIiIpLnYDLBeTYIP4M/
FKgeYiIiikIQXARERERETSXXUA3B6Myzl94cXNASSBERSUMKgImIiIiIpDlbHejdBPx/
jyoq8HW1fZ+WyIiIj1IATARERERkTRnAwHozQT4UUY7QYqISJpSAExEREREJN1VBzC9nf8LIDcv8rp3
++3JSIi0oMUABMRERERSWPW2sgukH0wAQxHds+u3m9LRESkBykAJiIiIiKSzurrINTUNzPAsv2RV80AE
nADMOZ3QnSM0AExGR9KIAmIiIihIOqsORF77YQZYZFdI1JgRE+gWQEBMRERERCSN2apIUMr04Wu8d9GJ
7APbvw4aCfdKeiIhIT1AATEREREREQknUUDYH2SAvBtGPbv65v2IAZ
a3AGRdvdqGaSIiKQPBcBERERERNJZdQAcDcbozb0zftxQJge5QIX0REDcCYCIiIIiacxWByCzb/J/
ARi3G7KytROkiIkFQXARERERETSWVUAvH2U/
yvGr50gjEXTG29uAQSAJiIiIiKSxmxVANNNXCfCjTN4A2Lsba8N92q6IiEh3KQAmIiIiIpKmrLWH8eNDV
H8eNDVCoLJv2xUREekmBcBERERERNJVQz00NUEyZoABdq/
ygImISHpQAExEREREJF1VByKvXCAyxXATAREUkvCoCJiIiIiKQpwMFhC8iImlLM8BERERERPoBWxUAr
CATARERERkXRVlZwZYMYYyM0jvFcBMBERERSQ8KgImIiIiIpCkbWwLZLZ1zPAAJMb2QlSREQkHSgAJi
IiIpJ

kxpjpxpj1xpiNxpi5rZzPMMa8FD2/whhzWPT4QGPM28aYamPMIwnXvBOt8+PoT2HfjEb6VFUAXC5wu/
u+7dw8qKnG1tX2fdsiIiJdpACYiIiISBIZY5zAo8AFwNHAlcaYoxOKfQcot9YWAw8C90aP1wPzgH9ro/
pZ1toToj+aqtMP2eoA+LIiSxL7mIknwtcySBERSX0KgImIiIgk10Rgo7W21FrbCLwIXJxQ5mLgd9H3C4
BzjTHGWltjrV1GJBAmh6KqQN/
vABkTDYBpGaSIiKQDBcBEREREkmsYsK3Z57LosVbLWGuDQCUwsBN1/090+eM808YUIWPM94wxq4wxq/
bs2dP13ktS2aoAxpekAFh2Djid2D0KgImISOpTAExEuuTdd99l9uzZvPLKK8yZM4elS5cyZ84c1q9fD8
Dnn3/OnDlzWL16NQ8//DCrV69ucb6yspKHH36Y7du38/DDD1NWVsbDDz/
MRx991Go9ixcvZvbs2SxevLjF+bKyMubOncuyZcuYM2cOv//975k9ezZ/
+ctf4udWr17N3Llz2b59e7tjWbJkCXPnzmX9+vU8/PDDBAKBFufvv/
9+Zs+ezUMPPcTs2bNZs2ZNiz7G+hQTG2Osntjn9evXM3fuXBYsWBDva2vlEyWej/
Xr3/7t3+Jji5WJnWvrfsXKJ37+6KOP4veivesSn19sTIn1Jt7LxLHEnnusnvbKPfjggzz44IPxMh0938
Tnknj/
E8cce54dPYe26o19x2Pf1Vh9iWOJlVuzZk2LdhLvcWe0dU1bxzsaW6LE59TW82nreFvPtXm5xOd6iGst
MGW7USbRLGvtscAZ0Z9vt1bIWvuEtbbEWlsyaNCgDjsrKSa6BDIZjMMB/jwtgRQRkbSgAJiIdMkf//
hHAP7+979jrWXx4sVYa3nmmWcA+N3vfoe1lvnz51NaWsr8+fNbnH/
zzTcpLS3lueeeo7S0lOeff57S0lJeeOGFVutZnQpAEuXLm1x/vnnn6e+vp4FCxZgrWXFihUA/
OlPf4qfmz9/
PvX19Tz33HPtjuWtt96ivr6eZ555htLSUt54440W58vKygdDYvHlzvO3mfYz1KSY2xlg9sc/
PPPMM9fX1LFu2LN7X1sonSjwf61cwGIyPLVYmdq6t+xUrn/
j5hRdeiN+L9q5LfH6xMSXWm3gvE8cSe+6xetort2XLFrZs2RIv09HzTXwuifc/
ccyx59nRc2ir3th3PPZdjdWXOJZYudjYE8fT1ve0NW1d09bxjsaWKPE5tfV82jre1nNtXi7xuR7iyoAR
zT4PB3a0VcYY4wJygf3tVWqt3R59APjJeILLUUvoR21APjY3JWwJJJA+Y3b0zae2LiIh0lgJgItJp7777
bpvn6urqWLp0KXV1dQCEQiGstYRCofj51atXs2LFCqy17Ny5s8Vr83JvvfVWvJ7W2nnvvvffYubPtP7Zj
52J17ty584AZMa2Npa6uDmstK1eu5K233mqz/lAoxJIlS+J9rKurazErKDbGlStXXUlZWFv/
c2piWLFnSonxrM2qan0/s186dO1m/fn28TGtjev/
99+P3ZOfOnaxevbrF57feeit+r5pft2zZShblmrcTe26xMSXW2/xeNp8J19bzb69czb69czIoVK1i/fn27z/
fzzz9v8VzWrFlzwP1PHHHMoFOK9995r9zm0V2/ivQuFQi1mlSWWi/
1urFy5ssV4Wvuetqasrkz5Va9o6nvgd6mjGVWvPqa3n09Hzbe87HbNixQrNAoMPgbHGmMONMR5gJvPt/
O10gJKSErtq1ape68zs2bM7bM7LDP2qpu7Xf8XL/xXj9TTnzW/
RyIxDz30ENC539H2OJ1OgAMgAMCBn2hqKiIuXPnxj+3bTY8nxxj+3Nxan09nlPvp8n7xi1/whz/8gQ8+
+IBQKITT6WTQoEHs2bOn3fpi7TmdzvqavUv/
zy+LnE+lqrx+fz0dj499nWFq7tqNyxhi8XmgLH2OYdzTk499VQuv/
wHHAikZlfM621pdFrNwN+wANUNOEHs2bOn3fpi7TmdzvqavUv/
OUvWwQGY9e0dTzxO5Q4tkSt9bmt59PW8baea/
+3CNiefvrp7fbpYBljPrLWnLWlvRaAz3AGPM14CHgCPACxDfAXe0zqXALdbadn8zPCpr7avGGC/
wHHAikZlfM621pdFrNwN+wANUANOALcDfAXe0zqXALdbadn8ZevtvPelZ4c2bCP3uv3FMuxAzZHhS+mC
3byW8dAnOa27EcVhxUvogIiKHts7+rdfhrx1UpgAAIABJREFUDDAlRhWRnhIKhZIS/
ALanTGWqDt9jAUxVq1a1WKmz86dOzusr3n5xP/
wTKyvrba70ufuPoOO2mntXPPoaDHzLLHezo63vefQ1Xpj5zoac2K9nfmeJpZPuurteO
J36GOghut9bmt59PRc2vrO534P98UcAFr7WvW2iOstWO2stfbV6Pt6a+3l1tpia+3EWPAreu
wa22+tTbbWjvcWvtZdHfICdba46y1R1lrb5gtA+bvb+3DLx+TXZCFxwYLvDwkWJnwkQeonMW8ly6q
8DD+kqh5+YsNqfMeWgwDsUYgfgFfD+gXX+FZqcl5vAaTVcQU9tkxiB+BUHgmlr9LSnQWaFjyI5GR6Gr5g
dS2DbalzYjb1eRePgGrcdmX2DNQXvjCeDm1/Ww9ki/
VL+PWmU8+N2F/I8zmcSncpt+N+1LxXO8ZvABL/YIdXsPh22YYpXumAAmbcefKlZRaZRuNhdA2QdJxnmvG
x36rXu7zmpOvF6t7Fx4nNvNt3LJEQjn9MrNaMEsaEUDB1rrSs7TlrB4+3Q/
K7xcGD64Nnt0XXQ2uv0ZyX4EyYqqtPKR1TWZiZ9fhnJYGcFhhmBVgjv5KnhG9s9p9iHWsjqTdQ3SMQ6uF
AJN4ciK+ZTPYh1z5CznXpfbjE2Wi9jdDrn9/ffSXKcZbxJ2sALPmTvRnQGBzOiiUs9sXRD0SWjT4U0vS/
6Vvo3rUp/lrsEI4f2Sg+PSb0ZlFXIw6oNK1qFgeM4uRuKK7TJwRWgU6PRaxFFgMbSDgCEWUYhq/
rI2WCGpAaMiaNTmCEf9kK3JRgkTn/

kxpjpxpj1xpiNxpi5rZzPMMa8FD2/whhzWPT4QGPM28aYamPMIwnXvBOt8+PoT2HfjEb6VFUAXC5wu/
u+7dw8qKnG1tX2fdsiIiJdpACYiIiISBIZY5zAo8AFwNHAlcaYoxOKfQcot9YWAw8C90aP1wPzgH9ro/
pZ1toToj+aqtMP2eoA+LIiSxL7mIknwtcySBERSX0KgImIiIgk10Rgo7W21FrbCLwIXJxQ5mLgd9H3C4
BzjTHGWltjrV1GJBAmh6KqQN/
vABkTDYBpGaSIiKQDBcBEREREkmsYsK3Z57LosVbLWGuDQCUwsBN1/090+eM808YUIWPM94wxq4wxq/
bs2dP13ktS2aoAxpekAFh2Djid2D0KgImISOpTAExEuuTdd99l9uzZvPLKK8yZM4elS5cyZ84c1q9fD8
Dnn3/OnDlzWL16NQ8//DCrV69ucb6yspKHH36Y7du38/DDD1NWVsbDDz/
MRx991Go9ixcvZvbs2SxevLjF+bKyMubOncuyZcuYM2cOv//975k9ezZ/
+ctf4udWr17N3Llz2b59e7tjWbJkCXPnzmX9+vU8/PDDBAKBFufvv/
9+Zs+ezUMPPcTs2bNZs2ZNiz7G+hQTG2Osntjn9evXM3fuXBYsWBDva2vlEyWej/
Xr3/7t3+Jji5WJnWvrfsXKJ37+6KOP4veivesSn19sTIn1Jt7LxLHEnnusnvbKPfjggzz44IPxMh0938
Tnknj/
E8cce54dPYe26o19x2Pf1Vh9iWOJlVuzZk2LdhLvcWe0dU1bxzsaW6LE59TW82nreFvPtXm5xOd6iGst
MGW7USbRLGvtscAZ0Z9vt1bIWvuEtbbEWlsyaNCgDjsrKSa6BDIZjMMB/jwtgRQRkbSgAJiIdMkf//
hHAP7+979jrWXx4sVYa3nmmWcA+N3vfoe1lvnz51NaWsr8+fNbnH/
zzTcpLS3lueeeo7S0lJeeeo7S0lJeeOGFVutZnQpAEuXLm1x/vnnn6e+vp4FCxZgrWXFihUA/
OlPf4qfmz9/
PvX19Tz33HPtjuWtt96ivr6eZ555htLSUt54440W58vKygdDYvHlzvO3mfYz1KSY2xlg9sc/
PPPMM9fX1LFu2LN7X1sonSjwf61cwGIyPLVYmdq6t+xUrn/
j5hRdeiN+L9q5LfH6xMSXWm3gvE8cSe+6xetort2XLFrZs2RIv09HzTXwuifc/
ccyx59nRc2ir3th3PPZdjdWXOJZYudjYE8fT1ve0NW1d09bxjsaWKPE5tfV82jre1nNtXi7xuR7iyoAR

The above is wrong; replacing with correct transcription below.

```
XK5XC1m+YwePTp+rq371Xy2UPPPV111VfxetHdd4vOLjSmx3sR7mTiW2HOP1dNeuVGjRjFq1Kh4mY6eb
+JzSbz/
iWNuPlurvefQVr2x73jsuxqrL3EssXKxsSeOpzOzv2Lauqat4x2NLVHic2rr+bR1vK3n2rxc4nMVkW6o
qgJf8pY/
xuUPhHAI9uxOdk9ERETalLK7QLa1BFK7QPau5vdISyAPbW39PoqIpJt02AUyVWgXyPTS9MgvITsH59nJ
DSTbynLC//
sizotn4jjh5KT2RUREDj09tgukiIiIiIikoOoAJhVmgOXkgtOlnSBFRCSlKQAmIiIiIpJmbGMDNDRAZm
ayu4JxOJQIX0REUp4CYCIiIiIi6aa6KvLqS34ADMDkD8Tu2k5X0quIiIj0JQXARERERETSjK0KAGAyU2
AJJEB+AdTXQ2V5snsiIiLSKgXARERERETSTVVl5DWFZoAByMmIiIpSwEwEREREZE0Y+NLIFNkBlheLA
CmPGAiIpKaFAATEREREUk3VZXgcEJGRrJ7AoBxuyE3D7tLM8BERCQ1KQAmIiIiIpJmbHUVZGZijEl2V+
LMgALsV5oBJiIiqUkBMBERERGRdFMVSJn8X3H5A6GyHFtfl+yeiIiIHEABMBERERGRNGOrKlMuAGbyCw
AlwhcRkdSkAJiIiIiISLqpDmBSJQF+zMBBANjtW5LcERERkQMpACYiIiIikkZsUxPU10Nmis0A8/
rAn4fd+mWyuyIiInIABcBERERERNJJdSDymmozwABTWITdthlrw8nuioiISAsKgImIiIiIpBFbFQmAmR
SbAQZAYRHU1cLePcnuiYiISAsKgImIiIiIpJOq1J4BBmC3aRmkiIikFgXARERERETSiI0tgUzFGWD+PP
B6CSsPmIiIpBgFwEREREREE0klVABwOyPAmuycHMMbAoCIlwhcRkZSjAJiIiIiISBqx1QHwZUaCTSnIFA
6B8n3Y6qpkd0VERCROATARERERkXRSFQmApSrlARMRkVSkAJiIiIiISBqxVZUpmQA/
buAgcDq1DFJERFKKAmAiIiIiIumkKoBJxQT4UcbphILBSoQvIiIpRQEwEREREZE0YYNBqK9L7RlggCkc
DDu3Y5sak90VERERQAEwEREREZH0UVUZeU3hGWAQTYQfDmO3b012V0RERAAFwEREREREE0oatLAfAZOck
uScdGBRNhL91c3L7ISIiEqUAmIiIiEiSGWOmG2PWG2M2GmPmtnI+wxjzUvT8CmPMYdHjA40xbxtjqo0x
jyRc
M8EYszZ6za+NMaZvRiO9qiISACMrO7n96IDJyIC8fO0EKSIiKUMBMBEREZEkMsY4gUeBC4CjgSuNMUcn
FPsOUG6tLQYeBO6NHq8H5gH/1krVvwG+B4yN/
kzv+d5LX4vNAEv1ABiAGTwEu6U0krdMREQkyRQAExEREUmuicBGa22ptbYReBG4OKHMxcDvou8XAOcaY
4y1tsZau4xIICzOGDME8Ftrl1trLfAscEmvjkL6hK0sB18mxunq9baCFnYHHewIOtnW5GRLk4stTS4qQ
wZrO77eDB8FTY3YzRt7va8iIiId6f1/
c4qIiIhIe4YB25p9LgNOaauMtTZojKkEBgJ726mzLKHOYa0VNMZ8j8hMMUaOHNnVvktfqyzvtdlfTRZK
m9xsDzrZEXSxK+QkROsrZ91YBjpDDHKGGOMOcri7CXdi0aJh4HRhN3wGxeN6pc8iIiKdpQCYiIiISHK1
FmFInF/
TmTLdKm+tfQJ4AqCkpKQT83okmWxFOSYnt0frrAwZ1jRk8Emjh3rrwIEl3xFirLuJAY4wbmNxAA5jsdZ
QZQ2BsIPKsIP1jR7WNmbgxlLsbmKcp5Ex7iAOA8blgiHDCG/
4DMcF30Bp6EREJJkUABMRERFJrjJgRLPPw4EdbZQpM8a4gFxgfwd1Du+gTkkz1loIVERmVvWAvSEH79Z
52djkBmCYM8RYdwMFzhDOdmJVg5u9D1vYHXKyNeiiNOhiXZOHPEeIU70NjPc0YkYchl3+N9izCwqLeqT
fIiIi3aEAmIiIiEhyfQiMNcYcDmwHZgJXJZR5FbgG+C9wGbAk2ou4LdnRcGn/7jzXUAD3/
dG56UP1VZDMAjZOQdVTdDC8novK+ozcAHj3E0Uu5vIcnR9AqDDQJErRJErRNjC9pCTzxo9/Lk2k/
fqvEwsOopjzbs4NnyKUwEwERFJIgXARERERJIomtPrJuANwAk8ba391BhzF/CRiIzv2
bGrjfGbAb8gMcYcwkwzVr7GXAj8AzgA16P/
kgasxWRHSDNQeQA29Lk4s1aH+VhJ6NcTZzoacTbjcBXaxwGRrhCDHfW8VXIyWeNbv4SGsCac29gyvbVF
PdIKyIiIt2jAJiIiIhIkllrXwNeSzh2e7P7P39cDlbVx7WBvHVwHH9FwvJekqIwGw7swAC1v4e52XlQ1es
k2Ys711FLlCPdzBCGNgqCvEEGeIr0JO1jR5WDB2CuM27mfKyFz8HmevtCsiItIeBcBERERERNKArayIv
OniDLD6sOFPNZl8GXRT7GrihIwGXH2Qjz4WCBse3s3mz8tYceRkNq0rZ8qwLE4Y6FVSfBER6VOOZHdAR
EREREQ6oaIc3G7wZHT6kn0hB89VZbM56KIko54Sb98Ev5oL5w9i4rY1XFn6NgMzXLyxrYY/
lAaobgr3bUdEROSQpgCYiIiIiEgasIFyyMrp9MyprU0ungvkUGsN5/jqKHYHe7mHbTCG+qGHMeiL/
+PswR4mFHjZUtXEU+vKWV/RkJw+iYjIIUcBMBERERGRNGAryju9/
HFzk4sF1Vn4HGGm+eoodCZ3tlX90MNwNDaQsWMLR+R5mD4ii0yXg4VfVvHGtmqC4Z5JxC8iItIWBcBER
ERERNJBZXmndoAsbXLxx+ossh1hzvHVkdVDuzwejIYhIwm73PjWfQyA3+Nk6vBMjsrzsGZvPc9uqKC8o
XeS8ouIiIACYCIiIiIiKc82NkBdbYc7QH7R6OKV6iz80eCXN0XyzFuXm7qRY/
Ft+ATTGFn26DCGEwq8nDnER0VDmP/
5vEJLIkVEpNcoACYiIiIikuo6sQPkpiYXi2qyyIsGvzJSJPgVUzvmaBxNjYVbnF9Li+LAsN+ePyCLHHVk
S+fb2GsI2+bPWRESkf3EluwPNPfTQQ8nugohE6fdRREQkddjKcgBMVuszwHYEnSyqjgS/
zvbV4Umx4BdAY0ERTbkDyPzHh9Qee3KLc9luB+cOz2T1nnpW7K5jV12Qiw/LwefS/
68XEZGeoX+jiIiIiIikOFsRCYC1tgRyf8jBguosvMZyprc+JYNfABhD7ejxeL7ahmvvrgNOO43h5EIfE
wu9bK1u4pn1FeyqTdLOlSIi0u8oACYiIiIikuoqy8EY8GW2OFwdNrxcnUUsKV4zvLV4U2BhPftqT18HNbhI
PMfH7ZZZozfw7nDMmkKW57bUMFn5coLJiIiB08BMBERERGRFGcryyErG+N0thi/
vDRYWVGdRG3ZwpreenBQPfgGEvT7qh43G99kaCLY9u6vA62La8CwGZDh5dXMVf1VeMBEROUgKgImIiIi
IpDhbWQ6Z/
0yAby0srs5iT8jJ6d56BjrDSexd19SMORpnfS3e0nXtlvO5HJwzLJOxuW5W7q7jpY0BaoPpM04REUktC
oCJiIiIiKS6inJMs/
xf79Z72RR0c5KnkSGuUBI71nUNRSMIZmaT+cnKDss6jaFkkI9TCr2U1TTxzOcV7FReMBER6QYFwEREREE
REUpgNh6AqAFmRGWCfNbr5oN7LGFcTxe6mJPeuGxwOaseMx7t1I67dOzp1yWi/h3OHZRG0luc3VPDp/
vpe7qSIiPQ3CoCJiIiIiKSyqgDYMGTnsDPo5PWaTAY5gpyU0YBJ1R0fO1B95PGEPRn431/
a6WsGep2cPzyLfK+TP22pYhIpykAJiIiIiKSwmxlOQA1WXm8Up1FhrGc7m3AmabLBLwDryaB
q3Il4S9fh3rmt09d5XQ7OGZrJEbkeVu2p58WNAWqblBdMREQ6pgCYiIiIiEgqqygnbAx/
yjycOms4w1uPNw12fOxIzZHHE8rwktOFWWAADmOYMMjLqYVettc08T/
rlRdMREQ6pgCYiIiIiEgKs5XlvDfuTMrwUZLRwIA0XHAkaRGLhfQEvC64w3w+xIEczXlJl9LUOpwzN15OzjE9JmRY9/zxU6ixnT4bkPCHLADr3kdkvHpE51PH0SOgkBnicbQfH3CGYB7+JQfqbWzeTHuXX82qHHlTJUjRF3Vkdr0mFzzOSVtG6VXl+LUllaNqDShpDh6d5a3yepaL/qIwfEBfYQeNBUPz+5ciGjPVwNHTiC1eJrahEqqdCUKzZw6a93gfW3UPOJMVrl1O7eCadLsq+S8Ko7Xjd6lGsD+E/Wq+NLpx/
```

```
Bu3oB7x5YuX3+438N5w7IIW8tzGypYu095wUREpG0KgImIiIiIpLCN9Q5Wjj2NMa4mDnf3r5lONUccRy
jD16VcYM3le51MG5FFgdfJkq3VvFVWTUh5wUREpBUKgImIiIiIpKiKhhCv5Y1jUPVeTspoSHZ3epx1ua
k+egIZWzfi2VbarTq8TgdnD83kyFwPH+2p58WNldQoL5iIiCRQAExEREREJAUFw5aFX0Z2gJy6fU1aJ7
1vT/XYYwlmZpP7l/
+FYFO36nAYw0mDvEwa7GNHTZBn1lfwVU336hIRkf5JATARERERkRS0tKyGXXUhLlj9JzIzM5Ldnd7jcl
ExcQru/XvI+eCvB1XVYTluzhseyQv2/
BeVfKK8YCIiEqUAmIiIiIhIilm7r56P99VzjKuOMbs20uTPT3aXelXD0FHUjD6K7A//hnvX9oOqKz/
DyfnRvGCvba1myZYqGkPKCyYicqhTAExEREREJIXsrgvyxrZqCn1OTg5EdkcM5vbvABhA5UmTCXszyXv
jDxA6uGT/GdG8YOMHeFi7v4Fn1pezq7Z/
bSAgIiJdowCYiIiIiEiKaAiFWfhlALfDcNpgH579uwm7XISycpLdtV5nPV4qTj4b995dZK9856DrcxjD
cQO9TBmaSV3Q8uyGCj7cXYfVLpEiIockBcBEREREERFKAtZbXtlZT0RDmtCIfPpcD177dBP0DwPTTDPgJ
6oePpnbUEeSseBvP1k09UufgTBcXjMyiKNPFX7bX8NKmAIHGUI/
ULSIi6UMBMBERERGRFLBqTz3rKxo5fmAGhT4XQDQA1v+XPzZXcfLZBHNyGbD4BZwV+3ukzgyngzOKfJw
8yEtZdRO/
XVfB2n31mg0mInIIUQBMREREERCTJyqqbeHt7DcOzXIzL8wBgGupxVVfSlDsgyb3rW9aTwb4zZ2DCIfIX
PYtpbOiReo0xFOd6mD4yG7/
HwZKt1bzyZYDqpnCP1C8iIqlNATARERERERkSSqaQrzv18GyHQ7OKXQh4kud3Tt3wNwyM0AAwjl5LFv8gW
49u8m77WXwPZckCrH7WDKsExOGJjBpkATT64r5+O9mg0mItLfKQAmIiIikmTGmOnGmPXGmI3GmLmtnM8
wxrwUPb/CGHNYs3M/iR5fb4w5v9nxzcaYtcaYj40xq/pmJNJVYWtZtDlAXcgyuciHx/nPXF+u/
buBQ2MHyNY0Fo2gcsKZ+ErX4X9nCfRggMphDEcNyOCCEVnkehz8eVs187+oZF+9dooUEemvXMnugIiIi
MihzBjjBB4FpgJlwIfGmFettZ81K/
YdoNxaW2yMmQncC1xhjDkamAmMB4YCS40xR1hrYxm+z7HW7u2zwUiXvftVLVurg5xS6GVAhrPFOde+3V
iHk2B2bpJ6l3w1Y4/FVVVJ9pr3weEkcOYFPbohgN/
jZMrQTEqrmvh4bwNPf17ByYU+Thuc2SIYKSIi6U8zwEREREESSayKw0Vpbaq1tBF4ELk4oczHwu+j7BcC
5JrJO7mLgRWttg7X2S2BjtD5JA19UNrB8Vx1j/G5G+z0HnHfv30PQnweOQ/
hPdmOoPGky1WOPJfujd8lZ9kaPzgSLNGEY4/fwtZFZjMh288GuOh7/bD//2K9lkSIi/ckh/
G9TERERkZQwDNjW7HNZ9FirZay1QaASGNjBtRZ40xjzkTHme201boz5njFmlTFm1Z49ew5qINJ5FQ0hF
m+uJj/DwYQCb6tlXPt20eQ/tBLgt8oYKkvOorr4GHI+/Bs5773Z40EwAJ/
LwaTBPqYOz8TrdLB4SzXPbaikrLqpx9sSEZG+pwCYiIiISHK1ts4q8b/
u2yrT3rWnW2tPAi4AfmiMObO1xq21T1hrS6y1JYMGDepsn+UgNIUtr3wZwAKnF2XidLTyGJuacAbKD8k
E+K0yhsqTz6ZmzHhyVr5D7l8WQTjU8XXdUOB1MXV4JqcUeilvCPH8F5Us2FTJ7jrlBxMRSWcKgImIiIg
kVxkwotnn4cCOtsoYY1cC/vWuttbHX3cBCtDQyZby1rZrddSFOHewl2936n+Ouir0Yaw/
ZBPitMoaKiedQdfQEsj5ZQf6i5zFNjb3UlGG038OMUdkcl5/Bluomnv68gj9trmJ/
fe8E3kREpHcpACYiIiKSXB8CY40xhxtjPESS2r+aUOZV4Jro+8uAv9pIcqJXgZnRXSIPB8YCK40xWcaY
HABjTBYwDfhHH4xFOvB/++r5ZH8D4wd4GJblbrOca19kB8imXC2BbMEYAiecRkXJWWRsXs/Al5/
EUVPVa825HIbx+RlcOCqHo/I8fF7RwJPryln0ZUAzwkRE0ox2gRQRERFJImtt0BhzE/
AG4ASettZ+aoy5C1hlrX0V+C3wnDFmI5GZXzOj135qjHkZ+AwIAj+01oaMMYOBhZE8+biAP1pr/+7zwU
kLO2uDvLmtmiKfi2PyM9ot6963G2sMwRwFwFpTc8RxhDKzGfDeGwya/
wj7Z8yiaejIXmsvw2k4ocDLkXke1lc0sjHQyLqKRsb43Uws9DEy243pwd0pRUSk5ykAJiIiIpJk1trXg
NcSjt3e7H09cHkb1/4H8B8Jx0qB43u+p9Jd1U1h/
lgaIMNpmFTkxdFBsMS1fzeh7FxwOvuoh+mnfvho9k69lPx3X6fg5SeoPPvr1B5/
KvRiIMrncnBCgZejB2SwobKRDRWNbAoEKPA6KRnkY3x+Bu7WcrqJiEjSaQmkiIiIiEgvCoYtfywNUBcM
c+aQyA6DHXHt263lj53QlF/I7ulX0FA0gry/
vkre6y9hGup7vV2P03BMfgYXHZbNxEIvobDlz9uqefQf+3lzWzU7a7U8UkQk1WgGmImIiIiIhIL7HW8vrW
ar6qDTK5yMeAjE7M6AqFcFXspb5oRMdlBZvhZd9ZM8j5dBU5a1fg2b6ZimmX0FQ0XY/
weRue42VMf4ovKRj7eV8/qvfUUep0cO9DLUQMy2tzsQERE+o4CYCIiIiIivWTF7jo+LW/
g2PwMRmS3nfS+OVf5Hkw4TJN2gOw8Y6g65mTqi0Yw4IOlfwqBMy7AetrPt9YzzRsKfS4KfS4S4
aQ5Yt1U2UBpr4y/Ya/
rK9huFZLsYNyODIXA85Hi1rFRFJBgXARERERER6wYaKBt7ZUcvIbBfjB3g6fZ2n7EsAGgcN6a2u9VtNB
UXsnj4T/yfLyf6/
FXg3rSNwxgXUjTu+V3ODNedxGsbmehib6hlab66GyMcS26iBbq5tYWlbDSH8G40QbvYUimq8N8cCIi
0jMUABMRERER6WFl1U0s/FzAwnpxpxgXgpDT1MtxnpxT6urRDYEbZlwSzcghl+Xuxh/2Yy0XgpDOoH1FM7kd/
Y8DrL5H18XIqz55B05C+XVaa63GSm+/
kmPwMAtFg2Fe1QZbvrOP9nXV4nYaR2W5GRH8KfU4FxEREeokCYCIiIiIiPWhffZAFpQEyXQ7OHOrD1ZV
dAa3Fs62UhqIRfTZjqb9qHDSEPedfQWbpOvz/t5xBv/9v6kYfRfUpZ9M0ZGSf98fvcTI+38n4/
AwaQpadtZFg2I7aIBsqGwHwOAxDMp0MyXRTlOViSKYLv9vRpQCqiIi0TgEwEREREZEeUtUU4qWNAQDOH
tq5HR+bc+3fjbOuhobCYb3RvUOPMdSOOZq6Zq6kcVkf/4x2ev/D1/
pOhpGjKG65AwaRo0FR98nqM9wGkbluBmVE8kLVxsMs7suxJ66IPsbQmzdXYeNlXUYCnxOBnldDPI5GZD
hJNfjINfj7FpwVUTkEKcAmIiIiIhID2gIhfnDxgC1wTDnDsvq1s5/
nm2lkboGKwDWk6zbQQ9WxE6kedwJZGz8l8GZH8J61+my8FhOQ4OiwbEQmFLRWOY/Q0hKhpCVDaG+ay8nsZ9La/
LcTvI9TjIy3CS54kExnI8DrJcDrLdDrxOo9ljIiJRCoCJiIiIiIiBykhlCYlzcF2FMf4swhmeR7u7fTX8a
2UuX/6kXW7aH6qBOpPuI4vNtLydr0Gdkf/JWcD/5KY9Fw6ovHUHUz/
mKIL5hUldgup0GAZ6nQxs9j2y1lIXstQ0haluClMdtFQ3halpClMaaKQ2aA+ox2GIBsMMWS4nWW5Dlst
```

```
BpstBpttBpsuQ6YoEzHwuo/xjItKvpV0A7IsX/iul6hERERGRQ1tjyPKHTQF21AQ5vcjH0Kxu/okdy/
81ZKTyf/U2p5P6kWOpHzkWZ00A3+b1+Mq+xL/
sDfzL3iDoz6Nx+OE0DjuchmGHERowEEzfL5VszhgTD1gN8h14PhS21ATD1IcsdUFLfSgcfbXUhcLsqw9
SVmNpCFkODJVFeJ2xgJgh0+34Z7As2m4saJbl0uwyEUk/
aRcAExERERFJFU1hy4LSSrbXBJk02MeIbHe363Lt242zvlb5v/pYKMtP9fiTqR5/
Mo7aanzbvyRj5zYyNn1O5mdrAAi7PQQLBtNUUERwYCEh/wCC/gGE/AOwGd6UCFg6HQa/
x0lHcwettTSGI4GxhlCz12jwLHassjFIfShStjUGyHQZst0O/B4nOW4HOW4Hfo+DHLeTHE/ks/
KUiUiqUABMREREKQbmsKWBZsCbKsOcupgXzyheXd5ypT/
K9nCmdnUjD2WmrHHgrW4AuV49n6Fu3wv7op9+NavxdFY3+Ia63AS9voIezP5/+zdeZwV1Z338c/
vrn1vb9BAg+wq4IJREnDBJaJGRB/
jlhjBJJOI44LLGHDGx4goOEZjTKJjNOPKqNGJmkSjQ9QQJ2IeJyCCY0IURSXIJptAd9PrXc7zR1U3t5t
uuN1039s03/
frVa+qOnWq6lRV3+7Tv3vOqXQsTroghiuIN1tPt1h3BXFcOJKXazQzokEjmmUv3bRrEShLOepT6ablmq
Rjc22ST6vSNKR33b8oZN4YZf44Zb2iAXr7y/GQWpGJSO7sEwGwe+
+9N99FEBERERFpUpdM8+uVlaytTnJceUHT4OV7Q+N/
dTNmJEvLSJaW7UxzjkB9HcGaKoI7KglVVxGoryXQUEegvo5AQz2hzzdjjeupZJuHT0eipIp7kSrpRaqk
N4myfiT79Cftz/
peFEOLjA7ATNiISOWxX+OibSjNpmmJumo8ee7G6csHIDSSNAPiHmD+feOBimLBimJBDQmmYjDmKVUAAA
gAElEQVR0qn0iACYiIiIi0l1UNaR49pNKttalOKF/jKGdEPzS+F/7CDO/
RVeMRFn5nvMnk15wrKGOQH09gYZaf15HsGaHF0jb/
jmRtX+nMNHQtFuqsJiGA4aSGDCEhoFDaRgwBELd/
1+3cMAIR4KUtNG4rXGcsqpEmuqE8+dpNtUmWVmZJpURHwsY9IoEmgJiTfOCICXhgFqOiUi7df/
foiIiIiIi3cTndUme/biS2lSakwfxv/GGRDvnOq0xv/
qoUIh0qGiPbfoco5AbTXhqq0Ufvg+pW+9BEC6oJBEv0Ek+w0m1XcAyYpBVJX24ZNUBBcIQiAIzhF0jlRpb1J9+pOqGEg6Wpi3yxNpT/rMn8lX3IrGmy9dyUSd/
WkOUgSlnQ+F/7OTPS8SLq40XUHzCUaj85UFdLZMtn3qD8n62m9O8fApAqKqF+2Ejqho2kYdgI0rHu
JW9k2S+5bK8xVsunfPGGqtKpL0AmT/
3Wo41NAuOhQx6t2gx1rhcqDHHRPZrCoCJiIiIi0yGc46lm+v447yE2vH2plr+vKGGg
cc7y/
rZ4F62uoSqQZXBhibL8C4l3Y6qtR9O8rCG3bwtbjJ3b5uUT2ihkEg7hgEEEe0+bZ+zUfXskQD4a2biGzZ
QHTzemIf/
IXCZYsBSBaX0jDXBoGDyfRzUFrVYSdxN56tbfeUAepNJZOQtrhIhHS0eQ0qtrhIhHS0RiuIEaqs
Jhkn3ISffqT6t0XF95NP8vdMDNCBiGMaBe8yyCdEQxr2fIs2UqLtURjq7aUo6rBsdV5y4k9tFYL+mOmx
YLWNG5aLBSgsMWLBgrDRmFIb+OUrtFNf9uIiIiIiHQd5xx/r0rw/z6r4bOaJGXRkAy131uPB//
0wqVkjtkBE5O6dIV3PhCA39B9PQfzA7wHtbZcXnRDatJ7J5PdFVK4h/
8K6XNxAk0W8Aib4dHkOrdh2Qvb0oXlZAuiEOgkwLRLo3V1xOorSZQV0OgtsabZy+zbCtkl7Dujl
zEhHY6QLYqTDEVwgiAsEIGRYfT2hHZUEGrxzmfMiQg5I9juA+kHDvdZwg4aTLirpnGvbSwEzIkGI7LaT
a3bSzguO1accDanWx0trSHst0bbVJ5u2t2RAPOR1Oy1u8RbO4nCQ0kiAkkiAaLDrv6iQnkUBMBERERHZ
b6Sc44Nt9SzaWMvmvmuhTxkHFseQEdnV3xxYi61ZR8OlHVBx5HAS7oFmHSHcRCJDo3Y9E735UH3IUOEdw
RyWRrZsI+1PByvcJ1tY0282ZeQP0x+K4cAQXjnrzNj+nDksmCCQSWEM9lmhomgKJhjaOL58y8lwFEYqSj
UZKRAtIDepMuiJOKxrx5gTdPF8RJRwu8FnF7kkoR2lFBqGIr4e1biGzxXkQ5L/
```

1NVlaRsOgYV6LuEHDSPbul91xu7GAmf8mzOz3afmSgdqUozaZpjblpW+tT7GuOkldK2/
jjAaNknCA0qgfFAsH/
JcaBCiJBImH9LZNaU4BMBERERHp8SoaUry3tZ53t9RRmUhTGglwbHkBw4rDBHP8D1KwYiu9X3qKZFEp1
aO+kNNzi+SdGaniUmqLS6kdNnJncqKBUFUFwR0VBP2WWsE6f4D+ZAKrqyGwo2L3xw6GSAdDuIIYrqgUF
wqRbnxzZThKOlpAKlrgteCKFJCOFuAi0a4JPAWDJEvLSJaWUTfUb+WZThPetpnI5s+Ibl5PdOUHxN//
XwBSsTgNA4eTOGAoSb81XKq0zCtfW5zb+aKCRIN3nxrnqZS3vTFrKIyLRHDhiPfWz6667nbK9iUDaeeo
SzlqEmmqk47qZJqaZJrqhGNzbZJPq3Z9A2fIoCQSpFfUC4z1ivgBMn89FlSAbH+jAJiIiIiI9Eh1qTQf
VzSw7PN6Pt2RAKB/
LMiYvjEGxkN5+cfH6usoe+EJLJVky2nn4yIFOS+DSHfkwhESZf1IlPXLd1G6TiBAok9/
En36U33oGHCOUNV2IpvXe0GxjeuIffJ+s11cMOR1tQxHvNaiyaQX4EomvMAXHXhNJJAOhUkXFpMqKiFd
VEKqsJhUob9c0otkSS/
ShSWd1w11LwXMGzssHgrQt5XtznnjlFUn01Qn0t486ahuSLG9NsHaqgYaXPPf+WFzlAbxAmMFIUoLwvS
KBpuCZAXqYtnjKAAmIiIiIj2Cc153mY8rGviksoG1O5KkgaKQ8YWyKMOLwxTtoZVBl0qn6D3vPwlt28K
WU84huR+8EU9EdsOMZElvkiW9qTl4tJfUUE9oh9cSzhtPrA5L+AGvdAoXDO2cQqFd10Nhf72xH6LhdQ9
NYqkEgWSSQH0tgdoagrXVBGurCa9fTbR2B4FkslnxnAVIFZWQKulNqqTUmxf3IlXSy5vHC3HRWNcGyVw
aa2jAGuoJ1NdhDXX+vN4fx62WQF0tVlfrXVdTWg1WX9es+2t9KEpFvJTKeCkV8V5UxkqpiHvT6ngvGsL
NW9tF0wlKXYLSoKM0GqRXPEppSSG9YhFKI0EiQbUe29coACYiIiIi+6RE2uv6srY6ybrqBGt3JKj2X0N
WGglwSK8IgwpD9C0I5r2bS2BHJaUL5lHw6UdsO/
ZUGgYMyWt5RKR7cpEoibJyEmXlOT6xN4ZasGYHweoqgtVVhGqqmpYjqz8hWLOjaWD/
TOlIgfdSgII46VgMF415gbhAwAuOWaBp2VkAc2ksmYRUCkslsVSyWVfOnYGuem88tz20cnPBoFeGSJR0
pIBkNEa6pLfX7TXiTY1BwmAwSG8zeuPAgaV3YLVbscoGGlJpalJGtQuwIxCmKlhAZUERn8d78fdkKcl6
g201gDdeXSxZT6lroNTSlIahNBKkOBamOBalqChOPF5AsJu0oBOPAmAiIiIieWZmk4B/
A4LAo865H7bYHgWeBMYCnwMXOedW+du+D1wKpIB/
cs79Pptj7iuc894Ytr0+RUVDiq31KbbUpdhUm2R7fbrp36LCkNG3IMRhsSAD46E9jieTK1ZfR9Hbb1D4
zv9g6RQVRx3X1NJDRKTbMMOFI03jlrUqnfZajVVXEaypIlDvtcYKNNR5b76sryNQvQPbugVLp7xgWTrt
teJKO3+e9oJhwaD3Bs2MOYEg6VCYZKwwI4Dlj1sWbpxHm9YbA16EOi+sEQZ6+RPgvVihtppAzRYS2+uo
aUhRk3bscEF2BAuoChewKVbKx1ZCyoWgHtgOUIO5HcQbailM1FCUqKMoVU883UAsnSRGihhpYqQptBQx
lyYcxAsYBoJed9dAEIL+eiCANaUFM/L582gUi8agoAAKYhCJYNY9/
g52JwqAiYiIiOSRmQWBB4DTgbXA22b2knMucyCYS4FtztzfrZ0/
HzLlU2nvDV30qTX3K7ZzSjctp6lKOHYk0OxLeOC47EmmSLb78Lw4HKI0EGBQP0SsapE9BkHio+1X0o6t
W0PvlZwjU1VIzbBSVRx1Hqqg038USEemYQMAfK6w43yXJGRcKe909i72QWNyfmsYhc85rtVb3GfW1CWq
TKepSjtq0UUuAWgtRE4xQGS3is3Bf6kJRXBuBqVAqQTRRRzRR703JeiKN60kvLZxKEEolCKWS/
nLSW08nm6elk4RCQYLhCBaLEYjFIRbH/
DmxWMayn14Qh0gEwhEv2La3986loa4OQiEsHNnr43UGBcBERERE8usY4GPn3EoAM3sGOBfIDFadC8z2l
38N3G9en75zgWecc/XA383sY/94ZHMnHtnSx3/
va56t3nCAYgFAxSEjJJIgP7xEEWhAEX+W8IKQwFCgX1j3JVkWTkN/QZSOfronj2wt4jI/
soMF4mSikQJAcX+1LoUztXQANQ7azY1OKPOGQ3RAhIuRsJBJZBw5k0YKTr+ty+QTmMuTdClsHSagEsTq
EsTqPGXXSWB9PaM7qbmvSW0cfKvNfO6AZwZaYy0BUhjTespMxzGyM8+5P8MK8bGHN3hsnemdgXAli5du
sXMPu2qwvj6Alu6+ByyZ3oO3YeeRfeg59A96Dl0H/
vSsxiW7wLswSBgTcb6WuDYtvI455JmVgH08dMXtdh3kL+8p2MCYGaXA5f7qzvM7MMOXEO+7Es/h/
mk+5Qd3afs6D5lR/cpe7pX2dF9altWdb12BcCcc13+1ZWZLXHOjevq88ju6Tl0H3oW3YOeQ/
eg59B96Fl0qta+0m054m9bedpKb61/RaujCDvnHgYe3l0Buyv9HGZH9yk7uk/
Z0X3Kju5T9nSvsqP7tPe632AJIiIiIvuXtUDmKwEHA+vbymNmIaAU2LqbfbM5poiIiIiMh+QwEwERERkfx
6GxhpZgeaWQRvUPuXWuR5Cfi0v/x14I/
OOeenTzazqJkdCIwBJ/
TK9rgN8DQWCuc+49M7sNWOKcewl4DPiFP8j8j9+5/
AGt08CVzvnUgCtjTv2gdbBJ/
TK9rgN8DQWCuc+49M7sNWOKcewl4DPiFP8j9VryAFn6+5/
AGt08CVzvnUgCtHTPX15YD+jnMju5TdnSfsqP7lB3dp+zpXmVH92kvmffloYiIiIiIiIiISM+kLpAiIi
IiIiItKjKQAmIiIiIiIiI9WrcKgJnZJDP70Mw+NrMb812e/YmZrTKTkZZWb2rpkt8dPKzOwPZvaRP+/
+d73L2NGY218w2mdnfMtjave/muc//fPzVzL2NsE8E7M6Pr/
NTXQC4LBJ1eG6BeVV9Ub+vvBjR/u7r6IOrUfYfQ2v3mE5OM2Y8EIXqJnnGJWpmx0dfhjvoIwEuYEEfwl7D1Kb3kV2kOtoXQ0xJ6k8fkkQ1VJJc0CnG41p3vgdbeCKVJp7lGunO/
X06Iza3kkd/lVDfn6W6i9QKkbeeHsXnX29cF5Lr/r7F1MZZ/Z2+1IWrlK3A7MdUkEg+RR2Ke9YMIExkQ/
hXywTVr2Ijx3Gvhs0xeVMnnWFoQDRAheAh2ZVQuqWI70+Ka2+DWxJcTeDX4HB3CpH/qLxVY6T5JBoBl/
nwxvmOGBg8+1Ae0FN9l12ma5E2nGyB0jv8ly4LL/RauP7cLVm+Do9Bdb/g8vs/
TRXdlvYr4b9bCyNxvC6DEgr2hg/
LtEHdzJHRH6OsF8Hv6lh5M5LVh6nfVHrh0GpZFdmLo/0Wh5vHG6KVJTfO96hvAjdf2cXM8cmNnp3/
Sq9nK4oEzY8Y9j4Nh1b4PfNmpsi/aX3OCGOmfVVUX1+h9vOthJ9ACcmBTeTjnXSQuK10WmtSBmkPO/
0ZZHy4MV7X7Ve/xkUoHjvbPY3cQ5Nv5O3X09Dd5/BbD3qe13i1qh41lsrZMg/
vNEv1HvOMeT/N3aHeMPW2YQMHe/4nTubRXjTt7n3YLhJhGIa+GJnUNCuBa3o4YPl1HbG/
3LubYOQxGb/6XqTcLTWhfH6kgwYcW8zPQeq+MbLwqVP0+P+6JyVUUXpfkvrmdtc/
Djf2xf8WmbuVedMnzHKiHQ6sP+s4sRzJ7cqGsSh1Lc/TUqvsXO53dx/PPhCMG4/
x2y9ek4jl2LvrqX3b1qucKMoQBjpZbBpsUkGvmi6pFP/
+ykrSSuW1TZuAD8gcbiiZ1WnPlpOlhN8SzszRs/mQgSIMzO1xNEhUUdR/
IvtgMRTlZHmzOn1X1dG0Rm0oufSWGjkT6j/Ei8eV5yPP4nMEkWrOGx5/yNc/
Lrz+S/pzAkWm4eLF1Kf0i5bYRemvKgy9cYVOk9JZcO8CyYKX/
1/fBG47BDMeN+/eGtGr8MMNh9HyH5PzL3L39Z0L9FEOvTYp5HdcN/
yo5RP63Xqvb6FjLLdqdzsV0t+ZRP/OlQYMVevlKMfxIBS5jeWQxMW/
Pw8j3ei68U6mo0P7m6U/
Jn8ptcP6bsbjs3KhN3J5tiadmEyqDpgqffrr0Jlhq8n9RTw/
pnJYYfPT+aMG8xdMAhsIv0BUoxNbXOm8llAY6qzBMtcMWNu3vTf0lmB0/
0VLQ/W55QEMZBGYMAoy8OwUnHGTbdnsA1khqq4Ec5kNR8/
5b7mFc3SEeCp0avu3s2jL8Vgq6VxAbKk/
eUw/Qn8jpONn3UuGbt/
8vnWMWjf6yZ5yHrHDlpDaqfkO/
lr6RDvJaaNNvBR1+Ipu3VjPZVn1xBL5z4uPqT/
3HKPoNHx5oLW6NGo3sZB3Yg8G7p/
7vfqr2kPCFj/
S5hgmVNfN/
tvHhFC6MxHj6ui1+Gc0bcQW3VScBT6nTcQkOZu7v7L9XRfy7wfPhgGhQqkYq5P0gRbJj26GjJ3Qe4vJn4wb
N7MhBtPGfwVnE6FK3rFUUpyh/
4mfT0kqp3N3n3lDsy0Slw8GwHgOt5u9AQ/
zz9r7tevjqAAHRxJJwYwvPHoLA9yQm+Uuf+rQHhyPkL7/
q9F+HJWNWPhjxdWfG7y9J9c/
D9L8D5CHc18SnEdL1HIFaI+w7Fni0HtjHeDfpzlGjwYd2CrGc9gp8/
3r2fz9rfMOnxPb3RjRKq2HN3qaWe7sMe2YIzbLqEe9AtVLWVe8e7R/
vOHVqJGSrFJJ/
wcPwi6gL6y5/
2PSn5HhPYr+mL9QpXCWkrTRCVh9YsY6TxjOKGMvL+hfQa0Q+mfLOrv8bQQDW6Wu7dZ1ZZL4kGrSN2sCXpnH
ozVvhtjRWJCp/7Hml/GNkb6Gqa53kEyrG8qsBBZHfPsOCdXEJZ4vUvCm6mKJp/
s0L/S9kVlzu2I2GnLfSRl3pvNVZQJH9ao/
cbp5pO6hlxVdYkO52r3q2gfjbHdn7+IqmQr+a6ZrmqSqTVaVwCpEFRqOlBvOZmO/
a4dbXPnOVBmaQ7wu/MLIn3nE6FTP0+Wy+e4oqJ+JXUyw8s+1TFM13dHPP2/
r1ZSX/wnOQ+wnyPlOKQK2VNO6CkT3e7ozFdB4v37GpYzX7p8Y3i8j1Te6wfS+5dSzTVmo82TWOhXnRw0FuF
KiSF2G5AcnRPKL2BY4zMK6t+9zAvJ32fDPUfCLJ9eS2YEsw5ZFdDXp2mQJ5m2rxrc4ChZfn1Ls3ExXB5/+
8l7G0u5KKm/nRhl4r9d0bsyTwhlcLqTO0T9Cvv6dhO1M3zY2OrJRcXHfxt/
6PXdN1rg/T2MjxCRrz1b+nP1+E3FW5eDQzQN0czgiP0VZVTqqSs/
vI7EdaF3GvbVzoYZjjwOo0BTvW8gbJ9wcb/W+0Tdn7KsJSrJJ3O0Wk/
wJD1D8uu1T5oJL/dJJLgSz/HOWbvG8nLXy2B1nx/0xC8sftGSLYH/
cmmwX9NfVW+Vv/V9uvS92bhJbyjn9dIp5oUqUDWvpkfrkfzX/
p+tr+BfEO6ugdhgwKeHf3lnQ7MG/QVzkrR3ZbwvR/
lfqN5GSkk9XgOlmaJP1ywfrzg3s/
sf6uGyTVKppAd3Tn+jT5dfYYMlR/
e39WD0rUZ3+Jf9r9Oop7eeLkIOfhQZvRjf9pyTz8cPY5Thl8+eUpw/
XHjj2X/4Zmsft4t9+Y0G90aN1g2Q+MVjkrWa2WhN3GK1dnvL7uD/c3+L2dxb3/
2JTfYR5vLkrf7Q/
I8W9pG97j/
DQOt5Lg+s9/bjP9uP/
2U93G03gh95d/o5Fb8ZbnvOW+X/
iAbzl+Ojnvlcw/M9SfsfaTb8ln/
P2+f6c9e2HpjrSlgg+qs2RfsRfmoBZ/
BN+JrpxAxzN6Fbx5+qm4/
+3fC6+1z7tR3/
e9Ltv59Tf5cz73/
j7g1/
zf/d5M8/
/
n/Z2fnk8fHX7dZ/
6/
mvQ7/
/
+UAAAAB0B+k3wCiGwhL1zGmAAAAABJRU5ErkJggg==

9mlOOAisZmw9I1Wow3cD7e5wK8ZzHZzKJmdiDeIJ2Lc12+nsjMDHgMWO6c+2nGJn0ucqit56DPhHQH+j
nMmurWu6H6b7vp73AW9PtpV6rbZUd1r9zoNi3AnHNJM7sG+D0QBOY6597Lc7H2F/
2BF7zPHCHgP51zr5rZ28BzZnYpsBq4MI9l7JHM7JfABKCvma0FbgV+SOv3/
WXgLLwBDmuAS3Je4B6sjWcxwczG4DUnXgVcAeCce8/MngPex3tjy9XOuVQ+yt0DnQB8G1hmZu/
6aTehz0WutfUcpugzId3Aj/RzuGeqW++R6r9tUP00O6o7Zk11u+yo7pUD5py6iYqIiIiIiIiISM/
VnbpAioiIiIiIiIiIdDoFwERERERERERERERpEdTAExERERERERERERERHo0BcBERERERERERKRHUwBMRERERER
ERER6NAXARERERERSkR1MATERERERERERERERejQFwERERERERERERERERpEdTAExEREREREREREREREHo0BcBERER
EREREKRHUwBMRERERERERERER6NAXARERERERERERESkR1MATET2e2Y228ycmf0232URERERkc6lup6IgAJ
gIt2Kma3y/zg7MzshI/
2kjPRVWR5rQmv5zSxuZvea2WozqzezzWb2P2b21c69muxkVEgeb5GeeS+cmW0xs9+b2bh8lLM92romER
ER2b+prtcsXXU9EckpBcBEuq9pGctXduJx7wSuA3YAjwGvA0OAozrxHJ1pHvAzYB0wEZhvZuWtZTSzcC
4LJiIiIrIXVNfzqK4nIjmhAJhI97QN+LqZ9TWzfsDX/
LQmGd+WXWNmK8ysysyeMrOImU3Aq+wADGvM66+f4s+/6Zy7yjn3DWAY8IB/3H/x89/vr8/w1+/y12/
x1+/21/uY2UP+t3hV/jeMJ2WUM25mPzSzj82s2szeMbPz/G2zgVv9rN/xj7ugxb14zDn3T8Bp/
npvYLyZDc+4B1ea2Xpgvn/cI83sVf+bxM1m9l9mdkhGmQ43s0VmVmNm/
wX0aXFvv9uyLBnfUk7IuK45ZvaBmdWa2Vozu6ytazLPHWa2xv82doP/
LWezc4uIiMh+QXW9nVTXE5GcUABMpHt6AogCU/0pCjzeRt45wJBEPBN4NvAWuA3/vYq4N/8CeAzf/
5fZvaomV0C9HfONVa6Fvjz41vMT2ix/oaZBYAXgcuB1cBLwJF439w1VkpkeA/
4vUOGXaQjwvF+5WAS85edb7pfx1y0v0D/PyRlJW1pk+QHwCvBnMzsAeAM4wz/+
wJnAwvMrLeZhfxyHgu8TS/
BvYbD0C3AKUA78E3gFG7eaaTgO+D6Tw7smfgC8AxR04t4iIiOzbVNfLoLqeiOSEc06TJk3dZAJWAQ44D
+8P9sfAJ/7yef62VX5e+utP+Ov3++sMvNnnOMIYEXG/g6oB/
7R3x4EKoEkUIRXifoQqANiwHa8P+y9gKP9/SuBe/3pHT/th0A/fzmF17T9XrxKlwOe8c83219/
vI170XJ6CS94Pzwj7dSM/W7w017PSPtfP+1y4MSMMsf97b/x037rr3/XX1/
QSnkmAH0zzv3FjDzhtq4JONNPe80/
RjlgQCDfP3eaNGnSpEmTptxMqK7X2r1QXU+TJk05mUKISHf1IHCfv3ztbvL9rz/f7s+LdndQ59zf/G/
sjga+jPct4pHAT83sMedcyszSPW4w31xdYgbV9/
AqMde0sj0b8/Aqh58DS4FXnXPOzDLz/E7AGcuM5l2ekfQRzBj+UB/
3uCca7z/OOcSu9l/PvBzvPvd2GXhbeBcdn5TKyIivsP1fU8quuJSE6oC6RI9/UkUANUA7/
YTb6kP3ct0lP+vNnn3MxOBELOucXOR8D3/E3FbDzdcU/foW21f58/
VAgXPOnHMGxPEqQY3bG4B+GdsjwPm7K2eXnOtbxOnHP1GauN5zw0I62xif6neAOsAg
w2s7i/PKrFIav9eQl4Y1/gVQ4b/d2fR8xsTGOi3+S+rWsK4t2TXngVwifxKqb/
2PJ6REREZL+gup5HdT0RyQkFwES6KedcBd63XkGgd865cfW2yd63dif7y+21xp8P9sd/+L/+
+r3AajN73sx+Dvynn77+wawBm/
siYNbbF8KLAQGAm+b8StIk59xm4Dm8StPImn+MBWb2b2vbI3+glfJHGNmD/
vZf+WW7tEU5zzSzn5nZ1zpwrZmewvvm7xQze8nMXgW+CGzEG59hHbAI3+glfJHGNmD
wAvw84Ws865Ley8b/9tZo+Z2fN44100dU3H41WmngZmsHOcjcZvc0VERGQ/
orpeh6muJyIdogCYSDfmnFvqnFvawX1AT/
GqyBcitccG+BRvGbgJ+B9I1WK9w3VP2TsvhTv1dmws8l549wB/88/RxqvWfeDeN+gfRevAvIyXuUD/
9w/BNL+9hPwKlKv+tt/
BfweKMT71qzxzUUd4pxb7x9jvn+uccDvgFOcc1v9it+5wGK8gUlL8Zr8Zx5jBXAjXlP8c/
1jrW5xqsuAf8X7tvSbwDF4zffbuqZ1wEd4A6RehvfN6YPAw3tzvSIgrLvUl2v/
VTXE5GOslZamIqIiIiIiIiIiPQYagEmIiIiIiIiIiI9mgJgIiIiIiIiIiLSoykAJiIiIiIiIiIiPZoCY
CIiIiIiIiIi0qOF9pxlp759+7rhw4d3UVFEREREOt/
SpUu3Of65bsc+wLV9URERGRfk21dr10BsOHDtHDlkyZIlnbcgERERkUUMnWoTS1s8ihd7hHdN7Nky
ZKOl0pEREQkx8zs03yzXYV+hup6IiIjsa7Kt66kOvS13+JVmtZ8YDDDOf
bDF9ijwJDAW+By4yDm3KmP7UZz7sfZHFNERCRblZWVbNq0iUQikeuiiIiIiPzDAoEAxcXF9B/
hGLxTCzfBdJ9hP00Wpra1m3bh3AXgfB1AVSRERELJ+OAT52zq10zjUAR2zqgA+phZIfB/
gTkdOCYAZna5mS0xsyWbW72fpfB/
8iHJh35K6qmHcdVV+S3wLIf2Cpgv0WWzWi3VK91sFwERERETyq7Wv012WeeYA9zjndnTgmF6
cw8758Y558b169dvj4WVidzJudcmtSfXiP11CPgvMfkNn6W51KJiOykll+ST53186cxwERERETyay0wJGN9
MLC+jTxrzSwE9MFrkC9ClUWRxTugHn0qSeewL3wd+wA0diXzyG9PNP4zZtgING5bt4
IiIiPYYCYCIiIiL59TYw0swBNYBk4BLWhs4HkHPAWaCsvYHbVq++DC54ShCzHPBOpTCHOIiIiInkj+bfv9INmejindwaaN
XvDrC1/
CvniMl1YQw21SCzAREZHOpC6QIiIiInnkj+l1DfB7YDhf7YDnwnHPuPTO7zczO8fP9H7jPzD4wszV4wjJbqDlehzA
BOs5VbAPAhgzDzLxuHr3KvBZgIiLSKWbPno2+yy7etf/zoTJkzIWVm+
+93vNv2+DwQCDB48mClCTprBq1aqclWF/
pRZgIiIiIiIZnmHsZeLlF2i0Zy3XAhXs4xuw9HVO6n6eGIn5nf2UTElBy
31eLiHSW+fPn/8naTL/
0E6neaDuEnPBBCRf2zG3QI6aoycGsBt690nf2UTEeLBy

srKGDx4MD/4wQ/47W9/m9eyFBYWctxxxwFw/PHHE4/HmTJlCkuWLOH444/
Pa9l6Mn2lJCIiIiKSJ65yGxQWNXvDlfUq87ZpHDARkU5jZtx000289NJLLFu2bLd5V69ezeTJkykrKyM
ej3PGGWfw4Ycf7pLnzDPPJBaLceCBB/L44493uDvlUUcdBcCaNWvaXY4777yTESNGUFBQQP/+/
Zk0aRIbNnjd6BcsWICZMX/+fM4++2wKCwsZOnQoDz744C5leO655/
jCF75ANBplyJAhzJw5k2Qy2bT98ccfx8xYtmwZp59+OoWFhRx66KE8//
zzzY7z5ptvctJJJJ1FSUkJJSQljxozhV7/6VbM8jz76KKNHjyYajTJs2DB+9KMftfuedYQCYCIiIiIiee
K2b4PCwuaJTQEwjQMmItKZLrzwQkaNGsUPfvCDNvNs3bqVE088TQKQ8//
JAHH3yQ5557jurqar7yla9QW1sLgHOOc845h+XLLzN37lx++tOfct999/
HWW291qFyrV68G4MADD2xXOxZsyYwe9//3v+/d//nREjRlBdXd3s+JdeeilHHnkzz//
PGeeeSbTpk1j3rx5Tdvnz5/PRRddxJe+9CVefPFFrr32Wn784x9zzTXX7FLWiy+
+mHPOOYcXXniBkSNHMnnyZNauXQtAZWUlZ599NgcddBC/+c1v+PWvf823v/1ttm/f3rT/
3XffbRp0zjvvPOYN28e06ZNY9asWdx///
0dunftoS6QIiIiL5UrENKz+gWZJFIlBUrBZgItJtpV79LW7D+ryc2wYMJDjpvA7tGwgEuPHGG7n00k
u57bbbGDVq1C557rnnHqrq3
n33XcpK/O+kDjhhBMYPnw4c+fO5eqrr+bll1/
mL3/5C2+99RbHHO09wfeYY45h+PDhHHzwwwVmVJZlM4pxj+fLl3HjjjUyaNKnpWWFAJ/PvHnzuPBzr9y+Lkt+v4f8//
HixUycOJGrrrqqab8Qlyd0WfNWQBfVcaPJ1W+o3LcSn4JMUFj1UOtjQ6rjh9BFMVuJmeiZWdxAJGTeLp
RMJWj6G6qC/LL9B+Hh+PDhHHzwwVmVJZlM4pxj+fLl3HjjjUyaNKnpWNmWY/
HixUycOJGrrrqqab8LLrhgl3OdeeaZ3HHHHQCcccYZrFy5kttvv52zzz4bgFtuuYUJEybwxBNPADBp0i
QAvv/973PzzTczePDgpmNNnz6dqVOnAjB27Fj69+/PvHnzuPLKK1mxYgUVFRXcf//
9FBd7Y1tOnDixad/
KykrmzJnDzTffzK233grA6aefTk1NDbfffjvTpk0jGAxmdf86Qi3ARERERETywKWSUFUFRcW7buxVhtu
oFmAiIp3tW9/6FkOHDuXOO+9sdftrr73G6aefTklJCclkkmQySXFxMccccwzvvvsuAO+88w4HHnhg
U0ALYMCQIYwaM6bjzlpl1+n6pmi1HzVfQ6VvVvNScCkyadD32uvKl3UHsxsMZmcp5RxygJlZUWZgaT0y
wbVKd3jR2MUWXnnfzB27RlI4OaFrLOR3HPBjv9ck2W7LV5bGdFaQ9MjyAGIWvbPWsJ8n6hwNdv4XxMZCO
RdfzIsvvtis5RfAwoULqa6u5sILL2y6pmQyyamnnsrGjRubjtNVumULsO9973v5LkLe3HvvvfkugoiIi
IjkQmUF4KCwaJdN1qsM9/5fcKkkFuyWVXYR2Y91tAVWdxAKhbjhhhv4p3/6J2bPnr3L9ii1btrBo0SKef
fbZXbaddtppAGzYsIF+/
frtsr1fv35UVXtsQyHHXYYTz75JIlEgjfffJObbrqJK664ok5synynH1KlTqaqq4uGHH+a2226jT58+T
Js2jdmzZzdrSVVeXt5s//
ZnkaI7du3dosvVevXs3WI5EIAPtu3dosvVevXs3WI5EIdXV1APTu3Zv58+cz
+9nPOOigg5rON3r06Fbvy5o1axw9m+efNmCgoK9nj+eDzOuHHjABg/
fjx1dXXccsstzJgz2YNTz/
9NDNnzmTQoEFceeWVTfk3bdrUbP9NzYRCoXo27cvAOFweJc2s6bdvd23YNTz/
9NDNnzmTQoEFceeWVTfk3bdrUbP9NmzYRCoXo27cvAOFweJc2s6bdvd23YNTz/
MmMHFF1/MokWLmo41b968XQJuAIcccki7ztVe6gIpIiLSI5VU4B4bmwsWLm/Zbt24dS5cu5a6//
5m5c+fy2WfWNx1s87bTTeO+v99d+Xn7DDhnzEdgTp+9hnu4UVV5qt73L
+evr27dssIJdNOTINGTKEG2+kREjRvD+++832/bCy/
ssj527FiCwSDBYJCxY8fu8qbG5557jkAgwPjx4zt0TbFYjK9+9atMmnkAP+sGqjTnMvxtSyK5cMfbFbWs1oJWqTnv3hWTNqQCZKF7zQ96J33F+P3h+Bvnu+iORgEJFAzbCSDnoWNuA0AFaLbB0+A4q+VKB4fXA+wYRJAoYk3cq88ndxiJYRbDhYDTyadMsXc2XlYSLlb0qiCrcCZBQgvqr+kHhBiLBxHOdWk5w2PvvaYQ7wFL5CCFxR99Ts0uM0tCyfS+kGnnbI7+2nDTNwTjeaxOKzlevHu+VR/
7FPK9Lq1O6UzzuoxcRo/
ZWbzf8XaA85mPgrtafmTwzMJvVsAm+yfaYV5Zeyve0TfSm+l5+8Jvx7DFN+k+eaQ4RDDJw+4DFDTcD4/
UyeCm5EJkIqFxnT5+KiUAfj4ecXcYYXzEqjwjZ2Dx/UVhFZpjtCu6kg5/Z3kCcJF35WAHTAs5AiRUkEFFQFN4mvRGxPfkz2fxz/gBXLL/
6SvZ/2bBP55a3kpyoE6pKeNRmQD9gNfyQ/wtz2b2bCXaxVJFAYi0JkkYNPkZ6HXX8bMMPLWNRYxzWJs7XcvGt1CvCB/bn6vLWDQo2s9/
n+bbs66SA4/wM2gEJXEpYLWVIxz9sJKT5DEuiVXeP1DmqZ0JvsZVb7sNJxm0GjBrC9WoVwF0xnhrpcPJ0/
QSkQwc9OVlFSHFVHjD3Bhb+6zHDEvgI26D5Qno0hoz3WpjmzFs5lk97Xd0Ihfgh0ZBMCXV6m2f2vYGcVHHYDnqS0j/
7/IT9d6P2NLFgqq6Hd2nNSY6d7qW6jgGnVR7ZTjaM8NbmTWffWFnZa3Dq3TDSdWNMl68m1EDvkzP3WZe/
9JFB9Ny9SGdd5iGqeoFLT1EO5OaoJ4r8nKiH58BRQEnyPHKfA/7GfzoGuF/
hFJ6Hgm1Z5k4NyGKmPvlmZDiDWZHVdC0Z2RUM0kOjmMZtr9TXAdD9i5Rz2lBuaPcGjbavY5p/
Q8HFErSRPpwRdChqcVzRuX8qaHBnZUhNlwhfqNZ91CnJ9i/
p19V1bzKc0+ha+z0pVU0Sz0YEGOaSyLwfJuo6LaGmlO8VmFr8Ll5mSeNrWRwVtpHKtumyU8Fr3qNvDpxHxXHj0T9T+Lh

eROcM59CTgTuNrMvtzayZ1zDzvnxjnnxvXr169jVyDt4hrqobZmt2+AbBL3g2QKgImIdNjs2bMxs6Zp4
MCBfO1rX+OTTz7p8nN/
97vfbTpvIBBg8ODBTJkyhVWrVnX5uaU5BcBERERE8mstMCRjfTCwvq08ZhYCSoGtmRmcc8uBauAIf329
P98EvIDX1VK6g8bujNl0gYzHAXCVehOkiMjeKC0tZeHChSxcuJAf//
jHvPvuu5x22mlUV1d3+bkPPPfRQFi5cyJtvvsltt93GggULOuss2hoaOjyc8tOGgRfREREJL/
eBkaa2YHAOmAycHGLPC8B8B3wEWAl8H/uicc/4+a/
xB8IcBhwCrzKwQCDjnqvzlicBtOboe2QNXsQ0Ay6IFmAWCEC/
EaQwwEZG9EgqFOO644KCeddBIvv/wyF154YZeeu7CwsOncxx9/PPF4nCTprBkyRKOP/
74Lj237KQWYCIiIiJ55I/ZdQ3we2A58Jxz7j0zu83MzvGzPQb0MbOgRnAjX76iXhvfnwXr5XXVf5bH/
sDb5rZX4DFwO+cc6/
m7qpkd9x2LwBGYRZdIAHihVClAJiISGcaO3YsQLOuiM899xxf+MIIXiEajDBkyhJu2b9+nXX+fNLSVvQUGzaMH/
8x39k4MCBFBQUMHToCu677LJ2n/
uoo44uNXsQ0Ay6IFmAWCEC/
EaQwwEZG9EgqFOO644wA47rjjGDp0KCeddBIvv/wyF154YZeeu7CwsOncxx9/PPF4nCltprBkyRKOP/
74Lj237KQWYCIiIiJ55I/ZdQ3we2A58Jxz7j0zu83MzvGzPQb0MbOPgRnAjX76iXhvfnwXr5XXVf5bH/
sDb5rZX4DFwO+cc6/
m7qpkd9x2LwBGYRZdIAHihVClAJiISGcaO3YsQLOuiM899xxf+MIXiEajDBkyhJkzZ5JMJpu2b9++nX/
8x39k4MCBFBQUMHToUC677LJ2n/
uoo44CYM2aNc3SV69ezeTJkykrKyMej3PGGWfw4YcfNstz5513MmLECAoKCujfvz+TJk1iw4YNACxYsA
AzY/78+Zx99tkUFhYydOhQHnzwwV3KsKdrffzxxzEzli1bxumnn05hYSGHHnoozz//
fLPjvPnmm5x00kmUlJRQUlLCmDFj+NWvftUsz6OPPsro0aOJqMMGzaMH/
3oR+2+Z51BLcBERERE8sw59zLwcou0WzKW64Bdvp52zv0C+EUr6SuBozq/pNIpKraBBSAWzy6/
WoCJiHS6xsDXgAEDAJg/fz4XXXQR//AP/8Ddd9/NX//6V2bNmsXnn3/eFECaMWMGf/
7zn7nnnnnsYMGAAa9as4U9/+lO7z7169WoADjzwcwwKa0rVu3cuKJJ9KnTx8efPBB4vE4P/zhD/
nKV77CihUriMViPnkk9xxxx3cdddjB49ms8//5w//vGPu3TjvPTSS/n2t7/Ntddey/
PPP8+0adMYPHgwZ599dtbX2ujiX2/m8ssv51/+5V/
42c9+xuTJk1m5ciWDBw+msrKC0aZ1aZ+qTJF4EpZA0AlVXLmTVrFvF4nGuuuabd925vKAAmIiIiIpJDrmIbFBZhewEBZhgew6Y1hhEW
5Dy2HhRETy57W1O9hYm9xzxi7QPxbiK4OzGEOxFY0tnFauXMlVV11FcXExExX/
nKVwC45ZZbmDBhAk888QQAkyZNAuD73/8/N998M4MHD2bx4sVcffXVHTRU3H/Na3vpX1uZ1zLF+
+nBtvvJFJkyZxzDE7h+e85557qK6u5t1336WsWsAyAE044geHDhzN37lG/zxwzHYQGVLTnMj/
zhR+L9k8JcfFtAgn+3ZZK5XmwgnIgEFgCbRqh6ZGsmP3GKrJyhiK+eLsCn6PjmnEyT+/RedAPZtyJT+7O8isqBpcF++whFtTL4iQDKqd6PZb52vf
sZvYTfyr6rKfq3nGGwPSDiOo3GW0eA+dnu/fi2vm9Wb+/OqOnnN8hYv+BfvwpN9pkZFYTLFPs3czG7GNOoiJ/6SczoVLKr9WgUoVLM8ADh5lSzSx3/
/m+qkQAmjDu/2d1CZ0MWiAXGNybSZCqNmgtvEvC9+ZFi/2KY5/48w0BeMe5Fq/
fX2Fd77m+uXM/ktSszkbsErjh7Fas0O9jgCkbx1ShrjyI+uBQx+t1+r8J+7gSutN/
/vpKsPiIz6e4d7AwjHAnytJpEfF2iUvYvNu96mvtXPbwzwPtWJ/
/3Nnx2dfvJoO/79wf1+HtWW4lB6tGOmazsVX9Hbk9MqZfdWmVb6J4VJ7d67gSmHJFAugxFEs+bJF6KWhkOZ4eBO5nyZLpexxHP5+Pzrh2jKqNiz2Afd+vzt/
+evUvzhGvtv3+nYSEMAEdCkSUPNduNsqyb68f+3OO9JtGOfoiajFw2HmvGJFBfj6YJpB1tRSuPhuHcc8i+E8qzL/
JbYYm1H6DnYfaIXUlMKc0/
nHn/7fs3ybnhg4z4SLxzOrFTeo2x8jeFV3a1Xe/YlyQqF2ugtcxbB8r0GEW5r4knZlUDHJpIsr+I6X2Bd5Mv3ktzfyeLGU9V/yZ6WBi/r8x/1bFb7HpVUSmycJpeRqwNsI1MoS+mnzb1Ek7Fvei/6PYdzc0Myi+P0wB+Pw7tN+I8emdaDTsLsJd3hcH7+HJSPn5p/
Ic/Pk/LDuqG8OfdOTr2XYR9jGYIvIojPVuRFtdNtMmFe1OVmwbDSjIaqBXxtVz+Z7b9uh0WTjUtJjNvX38+AYW5qfqZYSmUNBRuC4Gx/
67TgfMHyiM0gD66iG8AA32d2/
MCZzp9FVSKSv2eLGJrFKP3vgxefPU/ZxLTJ+jZI1YS7Y+/t7HhsCIsZqprR8jm5l+WZDZnhpMtMpZ/
9gYyEqKAjr3YHVwvuDycGT1Xws+SfwxBrRh3+ZfaXEBbHJcBkXiibyLh/
kawQDbErrw28x78mfd+5zrFOnd5Ujk9KddTmTsF46JMfa6zXXP3lMvLAxGH5jlwuxXP1fl4PBZ+eKBMj8ASDgZRnw2nX1jnPwHvuzXFKhrQo2ngTpVetFd08nOx9IQsvgxk88MCpEPL6+rE6p0m1yKZG2ux8OpEzHMHFcMNLANACydDUwRpnEMvE6R05gmU/Mr7+b1EMMXwQrAKUNDHU1/yEtBa77wNAN30kt9lupnkEEtA2FXHZRSqb1SRNiWw1UzoEz3zAQKCZ8ZhD8LAUvFACoUbwBmA1rOr7NX1UsWmm3WLMjaR/bE8aYMJVx6LQvMC9l8rpbTR0qXsYaPqZJUm6ckgJvBs2UK2Y0/
f++VGWL+YdH7mGDK5x68fJ56CHgWWMBa1Vb4KDtaoWG3rQLCt2RpyxrIg1TJoKkZe1fMfwmrb2+EBIxsV0bOHt0zzIg45zmG6y6Ha5tQ5ojrRpyArFtUuVwrXrzMsQ2wCQ76TtNzJERtQ5oORCGARiW0dvq8+yKY2A2xxdUfVYzKFXUx5tRWsDwcBTUm2x4ACm0Jtlq9H+OhddiH/rsK0pw/
+3DASvbm6jVCgAzCSw6Sqs+ueqAYJ2TIUgPTBD3fBTuJ2+xftqF8wkD6kq+Z6lfvSvh/FdfaZX1kHx+0a3vtp4gzgdmw8WTUUsL4xyQC4BwXsBG7PJcAVB/BtzjKT76c3Wk/
9+8Q4cNnx+D3mpyUCGPVwG35rr0SGjK8+r7+iz6HEBmOeEkZbi+9jzxsfIItzC0BnVMbZYPYFPqIfNrbxr6bXD8Gyk/
rqzKAkXi+XeOoZcLAWx+qI+XYpvpB/F7F+7RIK8sAU8FsT/ptz9pl8YgbCtWWNPM/
AvsAaBWxAq8wZO0k8LjcU3rdDDR1VWTpq/cBdJ1cbyYxDRr7HvHLwZ5yfYH5Q3hwVPxfdkPp6v/fi/
x0OJVcYE7e0J5yrm2sxAHESZRGLl5IGAdDE7ygRGF+hpfHRGlL2n2MXTo6Edp1Ia9+l5ez1Zo06Gcb7eFDBQNfQ2R9iPHA8wq9Z53Mm9zJtdp0uZA1QpQ/
ZW1NhxtKXtlWZWtPdLuQAMz+3o4Nn6oaubwGHGpQ9bfAe8/
3Z+Fs3r8zWdWdsMvP5dyBiQD7+Svf1M+NBkMXljZajbhoGvYRBUqKIPGbPs0iCv1IwjYxX7BBXnDkodLNYBnHFj6MgydLWPpT+mhpxIyPaxu/sX3TugAdU6n8tpl/
pb2fs8BrtyfmBbKvPEhftQ4LjFtZ0gfc9/3k8E+KV7BPVEkF7v8W8EF0a6rGkUnDo4tBJa4Qr1Vk+Q/zfSgB0+pqmMW8eSf+/Zb6Zg/0a0eAn6Zm8G+SIbjjDyVU09lIAyB0mnkvnfGgJO/
+Dbm3kiVrAAm8Kq3ERsdxTyjDgnRe+rOIidsXfQfAZlgx6Je1M9kjZUEG4xBuB3FOcPTw8oMhDJYD9Q2fSbfwHsOGoWFftr6H5jzvs1BJuR87XXS+bYZgKXq3rlw9yvjpx08R5MWqzpWPvdsWPeKvzv3wrwRvyMXaQsHJvgd1vrWYsEF7Y/r3v/
WjPG4+PPdgZm4FbUNaWpHbrjvgF2ApBnvD1XtzzqeW7MfC0/
xDPoxYJyOQCtAkQCGcYoNdoZyJUQUbHbPjnIwTkRL9+tvXWsg4Ne3t1jAWAd8/
3PxdZvQc0cRHjZbf1RkNrGh1AW7+UpvFvkJLkXbAUuOcaFm5JMNHz95W/ZOLrBtWtY0tgn8TK4Rz+nYLkMS3uMCQYg2XVg8ab+zHh3f4Ujsq0/9JcyTuuU9sUv6BjoOxiabRm9cw/
vD5Ssgt2ljUm5MCoDLCvLuTJfHLxxrR8GPkvG4OUoPZ/0pLTlp09Fqd7sS71o5rVktxZbAL4hEHeYw1rt7B4+qgxiiT1W83Ed/aHJbNnL5tGpOLsS9cPPW/9UFvWajK6SmgbyIPAf/b/
rGUB/wy/+L3zyh1AGr1G+WR/KspLmkZhuJ1uSgTGnLTe1mRFxmpWvGq1E/
mzYVlv9Tbsb8WEGsExvHi8XMdDcuYBxWU2YMG2q0A0OJswd/qyMEFsP3ZbGc1IoRm2OzJnv7jKGmuEEHeAiGY0t9kpLMpr1V/
mHb8cZZWx4vRQRhUqVlC4xjPnqEIL7OPMcKe3Ov1tjNk+Mq0CSjTjbWb0Oxtfd4vqVMzA/IAzFPpVzLUHZ6IW2AUwG0RGAuPoPuAj2BOSyq/
jnK1GFT2gxPsXOhqjB/BDIYgeh8tDyqkMjSGbpaR5lQtYyizh68FYpVmQP2hu0WKDHZ+iSGhW8qjeZvIwHS1bWZ6Qm/
9tEO+hvD5n/F5uqLNP9m7nKUSNZ33t30Mk+6w3Uw8Bxcb8uRi1uOnJb3n0C+IFyXbtoI2U8JKiPP8ERkCWEhpiOgXj9cybSTB5wP+8X/
cLw4WsxhfaRhDAYGrwFjRzb6+pOpFRdKrT0Ao+6w+tzTRIwPiaf1ooLbRo69TWf+GEthlWZ2uFl/vP+Uso1gRN1p1nr5ZnQCexPTBo/
7dzunrwB6bdPEqzuQa4Ah2LxZCQLXC2dg6Ahr1R/4HdLRq5a8tjqWZ3MFQhdEReJqeFD1mErU1aQ6C69l3GMa7Rk3gqH/
7/gVt0cqUWqbNMjSGp3vEMfY+ye6qDkgMsfMsrO3BZxd7s4D+4YVjOuAZ2Ja8iwC7I54lpLUyDPrEaOI2p4PAAR7OSMe0oGQfb/
XfOfMWZuo3sS+8C45bXO5XsTyQ9u/t2XBqDM/v8gCAKUSLbLnBk3c3vNKBrA5VDnWIWuqXXWxMT1O4Y9z6ytPuvKYCpv+ZALr6UIUnlhrScJFfCBbhEEuzDb5bhcgIuSmxIFeS8jJCtJzrLScP6C+0RP6Q7ICvzwIL2UVTbwd/UQ69b+Oumj9pt3S7JtM+ErERpJxEJkMpdYg1+j+ODfRWTyCC0XsyRUJrDU5lN9BB1x4OUcP9DYB76GRMTH6HfaExnvmvHQJMjmSRKPeLNfUnuhaCXjtEvY2m2nQg4XUM3sVVnHNDdhl8yWFb+u2hhmh8QPOvjSpBc0XyLOydxyQvJ3YXjjoqsB0QImIWWt9WqiRW3tE5PwCWYOS+q/4yprmttmdYPCm/
xuNmx7hpQZiZgvZGHQRszmGU9WvWZQ3yeqtrQvs03zjuX5Dg4jtmXQOyOqYHaGpVdjZBuF4mnKX8H3lwOL9i6NgmZ0Vx+/
fb75EWMRwc3QGhWdmgq4aVgcVOF9l3EBq08+ZBSxDoJhCIyAocJlcF3Bc3CLY4UHb/Lxge54ZvY7dl8qX3iWwoXgD4Tny0vcJ07lB/2pRPwN9IYEfBFjuMNJTnAzEYZTO3pxJQXvmvwjfVWPDAk3l7NTWVlFCw/
9tV6A8zDr9c4mf4wKFcQCfbxMKE8OC5HhHHvkl3IWHy23Uy5GNRPUIJgFXAvfNBZtN4eHhz2y9Wxf6bI6D3ZGWc9JSC2e4VHzfB2aPgqLTDRh2ibHhH0j0F2wn+iXadRxs8Xf//cN1v2A7aGKaoJOMF/zRqT95zf/RjQT7sIS9ktTWL1Qya5n0fOqwrQ7/
6q1cmoZ9hfZq9I/
OIYdfNAzjtx5++yTNb3xkO/gmj6cD/cO6wztFC0NIG4z/aY0V+6VhF6bmD7/n7pT6qjmbj0aKnC/w9z3Irr3bYFGnbtWPUaNT+HsQsdlOxFKgZG0IVCvFa3fE/vVH/
9/U7r8rYy9xQi+g9c7kaqNt+cpkFA7D+n7Lg5NphhvEBMzgOlZWqCVrfwi3MwJx/RSNPiaPFkUPXp3fJY1/
nugfVM4cHp5WXdLFfyN1nLYYwuNXyQ8gkU0BNVvYeHCiF9fA7CqhBL/uCvTvEOuRxsDhaTBq6y/UJ1hz3eo1ECvcsHT/
pRMkJLYxS2OAKzbbfMyhjyfl+H+sZKvzjGEQv/jkqbg0CdNLcMb9Fx4+QVr1FtDCbVYQF3CEdn7Tu1Pa2TJOs6ES6ULY8sX8SomWyRXrG+tMPK6w1HYk7VPlkBnuVEBQoA1NhByQUZ6PfTC4Snb3sXh6MACzPSdxtfBbhFfUsMMhSYQbqYexhUb0NNZPvoNXaGSaTz8dyypcM8pnCBSbq9V1fHLbl9o1wIH4V7a16omG9wj+DF3w/5B/
ZW9oWOkyL5fDl2zVZc8XTb9ZcpZbNwbwN9pvVPRNPDQWNaKfDQBP/
RxSTNoWZuJhNOKz3/3QlnhTdWjhMl4n8nVyK7g4O7YK+NqvkZWi1EZk8kW1O6bFZPl/fXT1IJvE3bb7cT6dh+BVVXjf/
yWQRXOw/O5tK54nOCBvN/4cmtHf6VJlXrxDpaLjA0yEXVeDzD9t+tsrmRCrcc/
3aD3zo/p/K9S9g+uLYqdIxgZ+wM5JHmH2tfd7NiLqrt+N/
99X4b88nyZp1DbHBbZ6QlQcDlKG2jBe6wXWxMeMyKoXAyfhN7AnfWWWLjp2m1ghyRV6oPGXmaZLIdC6sXcCKqfAdwuXqpfJ5TAAGLhGfBv4Hw+T2kxqeBJd9qKuqOLrNSS1GVpNHeqZbk0jeqD8vbTm8/
4QSF3F7Gmf/
AbOqLl3fpOPpsN+9qCnhXbNiWgQJpHzWcrs6+a8+G/
IwGOiqSBMyv3+Gbvoo/cd8Py/
2Y88l/2txsm0MVr5RQXjx9mf/aEH+rmOJMXHEfFyHzHqU3+ZPgUfsV2yV77bfvQgQ1xvD1e+3TeEJ3I+9NGpdv8r/
9sJJExs7rnNhP4pm/
Kdr/mnP3/
XX5sj7gTD3sRHxwX6/sfHMsSAh0hO2GWmZ3aWXdF1sTxcW7pfx1m1Db9ZKTpVnMXlyYmKgsPYYr7IAjx2RY2APBSiVRm9sQCVUI8rGPt9dswkdxwvDr1GCOz4cqiW/
iVYe7Fc0iLq5uvlp6+p0dbVYK1x7v2LmcY+kbpNKt/
AtAlTVyPV5cP6BI1Kzd7cEBbEh5X7sLtO0J+m4OVn6FoKOCW+/
T3S2PUb7jEtyKL0ZvAq5hA/
E1XKgLwb6LVnlYa+sUqyrhUkK+eF5Ywa2JHX/
CnTRFDsBfbCiRCmc9MXEmSo+lD+Tl6E4UzPYvO1vYg2VQvf3MZydNRnF3UVO5NS/+mAfZ16M5TSC6sTWM2YjVjlmOG3fkzjyI7jKtN3DMfVuhmPXcW8wPNwfqHhgu3g7lqr+XT2xFA9EiHvmBbT9u1YiuKUCAgeBG0fIoTJjZS6u3GE2eyxz6vVUuQ7fm8kZSoWaAA4b2yXrJvbkSLaJeGU6sIfcK0QZsPPDDNuW2oDzmoPB/H1OF2qOrJlk5jFcGVHCJ0OjEQwIx36gWtNEhgbTvoOk8fJG5A9E6o6mI8K1s4O2zBvITLi1VLWoLDHqfPCVsbsjrfnemw5Pj0sp9/cHZ44q/tdtj1uAMrWNEt7xwXKRi3v/
dCYGbYcU4bQA1CFcXcwaHnwsItNTkm8FU9xNH74Drgk+vEL0DtIxwqgW4v6BT4IpVpSD/9iktE0hVhGctGyK5Z/
e1ZEoZ0npwZ3xuIHLDPvWmY7ayjTe9NwKHrJj5jbwWSwQjWjeQShHNbQpF6c+2WC0vn9AYHFH4kJLrMvGaUehWfKD0VPXhpZzWd3aRtRYZX0vXjaylv2CjjnXsU5kzbvOrtvMaXaA5VmLMjLpmgL7+NNW+rjn1Agt4X3I3z2IfPy1Rd/
adb7rr7+evn37ctdddzWlnXbaabz33nuMHj2acePGNZtaCxQNGTKEG2+8kREjRvD+++832/bCCy/
ssj527FiCwWCHrjUbsViMr371q0ydOrWpPOPHjycWi7F+/
fpdrmncuHFNgb1cUQswERERERZFcqasD5yAazX6fuPe2SL0JUkSk68yZM4czzJTmTJ7NzTs2TJmz/
ZrFZdd1jQo/IknnLB/
OrFmzWLnzyN0WsmwYCwNpsWDJJaniBMs7tKSoBBaNGjWLM7wuAucA5r8YyPCNjRhjx9VP/
ZrFZdd1jQo/IknnsjC5KrFmzWLnzyN0WsmwYCwNpsWDJJaniCs3nN7yUuMlojL4rXeA0a5tWK3WiiOcHVN29W9tP+M+2ItNUSYP+yO3+
l9ddf56OPPmoWSAN45ZVmXJieffDLPP/88rAv/
OrFmzWLFiBaBNGjWLGjBk89dRTHqrqVx77bpUMGjSIk58ScoUrrjiCsrKyjrWyM6oLS3
l9ddf56OPPmoWSAN45ZVXmDlzJieffDLPP/88f/
jDH3jxxbdda3Z+N3vfsfcuXM577777zzGDp0KOvWreOhx7i1FNPBbwwUGbRu7lzOz5JmZ+a6667j6quvZm1Vbme9MlOfz93Ew7WHcNlUp3zyY7W0+VuneR+9//4QRCVj9vl/Nw1R5W+GyudaXP/8ctf/
jLpdJoVK1Kw+uuv7xKo7vK7MdGwNrf6UxLHnLx+47v/
jLpdJoVK1bw+uuv7xKo62oKgImIiIiI5EptjTdvRwsceJEnnnmGW68Xci6ExJEjWlkY9vFVAxKUMcmGy47xzJAEsqmGW6//
XaefvppysvvPLuf7665kzZ05Tnvkbw0CUXsmqwWFnPVCuqrpHjx+CAGGcw00kU7Ln4pP3mbGj9mHqrU1ZL2lZyCEw/
ziF3nllVaFTRqdM0113D33D33/W47+RsHHHAAAJ554IiEkZs6cmUJOfNNu/Tz7UcdMnDsnRkaneLRxTypE9ohm/sWLJzpa8Z2hLWUebjTnEWf3GCO9ZZPwCUUgnvaOD4pWsGAHrVD4/lIsFsZucp9yeecgz3dMWxfz1vAmQ3xZPsj4h9bxuCx7T87TvbXG2eQ6LnxXJbLSVMQiLgOdfHqe5qFIIFy0o8x8Jg+TuKFqtgJBe5D7gCLLg3lMXCEvc3VzPqFGtQhkZUFIdSkx13Mbor6kKkrpebyJ4mtKD6QyUzVNzoJ5E/1nCnUgGpb7ZpmL4+nvXb1bFvdb5NpbnvQZpmtuNUz/
j/7z3zq0X75llvvee+/NY0lERER6HjNb6pxfdAPaSZXdb39WXrtp6Qeu4/
AaWdhg7Mf+Df1u99gJb0IffuKLiydiMiuli9fzmGHHZbvYYWwCmnnMKyZcs44AgMWEw3zNp+KhVYxYeU/5mKsiV8oj+ltzlIfwmBvZWMdnUeDG3ljVKTj9jUwg/
AaWdhg7Mf+Df1u99gJb0IffuKLiydiMiuli9fzmGHHZbvYkgWFixYwCmnnMKyZcs44ogj8l2cTrW7n8N
s63oaA0xEREREJFc60AIMgMIiXMW2zRG3Fy3ASDRAfR0UxDq/s63oaA0xEREJFc60AIMgMIiXMW2zi+PiIjIfkIBMBERERGRXKmp9ubtGQMMNgTVWgiWmlAhBfQnt4bIiIspP
GABMRERERyRG3Fy3ASDRAfR0UxDq/
YCIiss+bMGGCvijZDbUAExERERHJlZpqMLmIkiu1NRCJymbt2s3i
XgDMVSgAJiK5p1ZFkk+d9fOnIiIiISI642ur2d3+EjBZgFZ1bIBGRPQiHw9TW1ua7GLR7GLIfq62tJRQK7XP9Cx5t6ubPzm1oL/H8JJT6FuDTE2RtmNtB6kmNHvJ1E6PXUd/
7/

VxFAATEREREcmVmpp2D4APQCwOZjh1gRSRHCsvL2fdunXU1NSoJZjklHOOmpoa1q1bR3l5+V4fT4Pgi4
iIiIjkiKvpWAswCwQgFlcATERyrqSkBID169eTSCTyXBrZ34TDYfr379/0c7g3FAATEREREcmV2mqsaE
DH9o0XgcYAE5E8KCkp6ZQAhEg+qQukiIiISJ6Z2SQz+9DMPjazG1vZHjWzZ/3tb5nZcD/
9GDN715/+YmbnZ3tMyZPamo6NAQZQWKgWYCIiIh2kAJiIiIhIHplZEHgAOBM4HJhiZoe3yHYpsM05NwK
4B7jLT/8bMM45NwaYBDxkZqEsjyk55pIJSCQ6NgYY/psgKys0Bo+IiEgHKAAmIiIikl/
HAB8751Y65xqAZ4BzW+Q5F3jCX/
41cJqZmXOuxjmX9NMLgMbISDbHlFyrqfHmHW4BVgSJBqiv67wyiYiI7CcUABMRERHJr0HAmoz1tX5aq3
n8gFcF0AfAzI41s/eAZcCV/vZsjom//
+VmtsTMlmzevLkTLkfaVFsNgO1FF0hA44CJiIh0gAJgIiIiIvllraS17OPWZh7n3FvdHA0cD3zawy
2Pi7/+wc26cc25cv3792lFsaS9Xu3ctwCxe5B1H44CJiIi0W7d6C+T3vve9fBdBerDMn6977703jyURE
RFpZi0wJGN9MLC+jTxrzSwElAJbMzM455abWTVwRJbHlFzrjC6QAAqAiYiItJtagImIiIjk19vASDM70
MwiwGTgpRZ5XgK+4y9/
Hfijc875+4QAzGwYcAIgg+sTiY4SorOq9MIiIi+4lu1QJMREREZH/
jnEua2TXA74EgMNc5956Z3QYscc69BDwG/
MLMPsZr+TXZ3/1E4uoTXbi9bAFmgQDE4uoCKSIi0gEKgImIiIjkmXPuZeDlF
mm3ZCzXARe2st8vgF9ke0zJs9pqCIaw0F5UwQuLNAi+iIhIB6gLpIiIiIhIDrjaGijo4PhfjeKFagEmI
iLSAQqAiYiIiIjkQk01RDo4/
pfPCougsgLnWn2pp4iIiLRBATARERERkRxwNdUdfwNko3gRJBqgrrZzCiUiIrKfUABMRERERCQXamuwv
QyAWWGRt6A3QYqIiLSLAmAiIiIiIrlQUw3RvesCSbwQQOOAiYiItJMCYCIiIiIiXcy5tNdtcW+7Qotw
JzeBCkiItIuCoCJiIiIiHS1ujpwbu8DYLE4mIFagImIiLSLAmAiIiIiIl2ttsabF+zlGGCBAMQL1QVSR
ESknRQAExERERHpYq6mGmCvB8EHvHHANAi+iIhIuygAJiIiIiLS1RpbgO3tIPiAxYtwFdv2+jgiIiL7E
wXARERERES6WlMArBNagBUWQlUFzrm9P5bI/2fvzoPkqO50739/
mbX3plartQuKNh3ZNkYb9iA8YDNLDDGRh6Y8A3m3hjHO46Z+8bF7xue19cxXoMxeGzDXDz2IC8YAwZb
Y7AxeMPsiMU2IGSEWNRC+9Jb7ZXn/
aOqmupSV69VXa3u5xNRUm5nDyZWSWlHp1zUkRkjlAAJiIiIiIiLSYOUukETq0QWyFXK54lMlRURUREZFwUg
ImIiIiINFq5BVgkMuCA05MgRirKW1OKGB8EVERMZNAZiIiIiIiIhIo5VagA05MgRUREExk0BmIiIiIhIo5VagNVFPAFm6gIpAF9CZ5
0GiBacATEREZNwUgImIiIg0mZldZGbzmrmV07wvKomf2wtPxxMzumNP8CM3vKzP5Yen9vxTa/
KZX5bOm1cPqOSA6TTGL16gIJkGgBjQEmIiIybqFmV0BERERERV0BERERkLjMzH/
gGcAHAHQzpDxpdhudcy9UWO5HzyhdeM3vKcgJ8HKz/
4oHPuDTM7Bbaw3ZXOuU3XQuDwXOubXd3d0
TqriMUzIJgNWzC2SitTihccBERETGRQGYiIiISHP1ACsqPi8H3G+ccu4BuG+ccy+XN3D
O7Si99wO3UuxqKU3ghlqA1bF3aksxANM4YCIiIuOjAExERESkuZ4E1pjZjDg/tRCGPoe+Y0OpmpjZSjOLAFcAG6vW2Qr
Vc86Z2TzgHuBTzrmHyyubWcjMOkrTYeBiYPGqMA3jXlKUXj1NPi2HPndgcvl4YEDUSJRMAQsVEQGYbGGiTB6BmU
nOG4GbfOPW9mnzWzD5VW+xbQX8Eri3N/
wSwGvh0aayvRaIF7jOzPwjnfuAjsDOzFbrBdGNHcvZu8NP/UJERmeucc/
cC91bbN++eK6TRw+Qjb/
QvwLzWKPbuedZTJc0MtwOrXBdI8DxItagEmIiIyGmoBDUOHOzhBuBxItCsR8OwAAIABJREFU+D4WCte33
ESrBsEXEREZJwVgIiIiIiIN5FKD9e3+gEmIiIyLMATEREREREESkkZIN6gLZ2g6AO3ig7mWLiIjMNgrARERERQaKZXEGtEFsq0Yg
HFwf/
3LFhERmWUUgImIiIiINIhzDlbKpxowBNtQCBGYiIiIjSWBEiIiIIg0SiIiIg0SiYNLmhMF8hQCBItCsBERETGQQ
GYiIiIiEijJAeL740YBB+gtR13QAGYiIjIWBSAiYiIiIg0iEslARozBhhgbW0aA0xERGQcFICJiIiID
TKUAuwxgRgtHVAfx8un2tM+SIiIrOE/5nPfGbcK998882fueaaaxpWmZ///
OeHzes69W3j3v7AHx+f1HbNVlnviy66qMfQSmzdv5pZbbmHPnj08+OCD5HI5vvKVr/
Ljxxhu57777WLyJQsWLKCnp4cY/RLy7zzJ8/n69cXuBv/7VB91Eq73Kf8/PqH/
56BgcHufnmm2lvb2fFihW8+OKLfO5znxuaXygU/+MBczf/Da3vz20HcC//du/kc/
nuemmm8jn89x4443s2rWLW265hXA4zKpVQ+t+jt7eWb3/wmy5Yt48Ybb+RHP/
oRixYt4s477+TE08kGo3y1FNP8ao+8IMfsGz/vsMzrS/AluaLzzfsQ2Ejbnrp/CXaOPnu0/KGpo5TfSQgCjrtxnhBxzbk7+gv5M2JcxzrCQvlR8MD7RYhu0hjGfUjKaw4FhvgBoLY3f/
9u+5r20vXbbuXxHBrH9Nqnpbvs68F6FnGnPQ/WsYn5L+bYWOyyb9TnXoakrWeMZ8R3ZRpzGmFXw/wFuLBDEm8RIH/
OCMDEzsy0BFS8IDGe0+pVMwj+GXF1CmvWDIHAZhmKmqe/Q8bA/
GmAEnuFfuerNHbAbxcpbPG+f0S4mjtfQTCtwvCOBPoADzBMKIV4hs0jPgIVoEJKRjU

```
3TP41aZjweJ51Os2jRInbv3j30XnmcN9xww9CxVda1cj+V523x4sXD1q22ePFirr322sPOQ3VdYrEYqV
RqaH55X2Ujbf+FL3yBO+64g4cffviw/
ZrZUBnl4ymX7XkehUJhWBnlc7t79+6h5eXjLtdtrGtWPtZK5bJrHU95H9XXwvd9/vVf//
WwupXfy+XVKr/
yGsbj8VHPbfU+qpfXUt5H9XGXyyuft8rl1dtUX5vq45xoneTIVuv73Ahm9pRzbm1DdzJLNPpeby4qPPY
gwX0/wfvw3zYmANuzi+Bnd+N/9L/
hrTmx7uWLiIjMdOO911MXSJmTqsOuWkFwKpXi4YcfHgoXRgtE7rrrrhHDr7G2q3bPPffw+OOP45wbFjY
VCgWcczzxxBM89NBDY5aZSqWGyqh8r/TTn/70sECrcj/333//sGWjhV/
l5Q899NBh56G6LuXl5flPPPEEfX19QLG11EjbP/PMMzz66KMj7rdcxpYtW4bqWC67fJ5SqRRPP/
30sHNbubx83OV9j3V+d+3axY4dO4Y+9/
b2DpVd63jK+6i+FoVCgUceeeSwupXfn3jiCXp6ekYsv6enZ9h1Ge3cVtaxsuzy8loq91F53JXllfdbXl
69zTPPPHPYtak+zonUSY5stX4vIrNSaQwwIpHGlN9WbHWrJ0GKiIiMLtTsCshwI7WCk+a64447xrXegw
8+WJf93X///fi+X3N5EATceeedddnXAw88MOp+7rnnngmXOZm6BUHAfffdx+WXX86GDRtGXOd73/
seQRCMWsYtt9wy6n6+//3vT7huo/nud7871NrpF7/4xVCoNZ7jqXb77bfXvO5BEPC9731vxPK/
973vjVpu5bqVdRxpeS3V+ygf90jllZePVcZ46yyzU63fi8islByESBTzGvT/zrE4hEKgJ0GKiIiMasy/
ic3sGjPbZGab9u7dOx11EpnzRmt9NJHWZI2qQyP2Ve5yM9lWdIVCoea2levU87gqW15t2rRpWGuysY6n
Vv1qzd+1a9eI5Y/
VKq9y3co6jrS8lup9lD+PVF55+UgtC8drPHWSI1ut34vIbOTSycYNgE9xGABa23GHFICJiIiMZswAzDl
3s3NurXNubXd393TUSWTOG60F2GjLpqsOjdjX2rXFLtvxeHxS9fF9v+a2levU87gWL148NL127dqhssd
zPLXqV2v+4sWLRyy/
sg61ti2vW1nHkZbXUr2P8ueRyisvr95mIud9PHWSI1ut34vIrJRsbAAGQFs7Ti3ARERERqUukDOMBsFv
nMl2Ly0PPj6Wd73rXXXpBnnBBRfw61//uuZyz/P4i7/4i7p0gzz//
PNrdoP0I+LLrpowt0gL7vssgnXz8e///
+93v1uwG6XkeV199NTfddFPN/Vx55ZXceutE6rbaD72sY8NTV944YU8/vjjQ3UZ63iq/fVf/
zV33XXXiMs8z2Ps8z2P9+vVDfz5Ulr9+/Xquu+66muVWrltZx5GW11K9j/
Jxj1Reeblzbtg269evH3d30PHUSY5stX4vc5mZXQR8FfCB/3DOfbFqeRT4DnA2sB/
4sHPuVTO7APgiEAGywP/tnPtPtVaZuzgVuAOHAv8A9uIk8/
krpwyUFo8JNOra0dt2sHzrliizARERE5jAbBlzmp+uaw1s1iPB7n3HPPHWrNMlorlr/
8y7+cdOulShdffDFvfetbMbNhNhrWh838fMWLduHe94xzvGMejw+VUfle6eZDDWMGwZZWO
1Nlq8eDHveMc7DjsP1XUpLy/Pf7duHe3txUF8TzjhbBG3P/
PMMznnnHG3G+5jOOPP36ojuWy11lzcXmLMjMKYvTTtjVrcrIQYllXylvxHbCFdAXfqmj+Ah8oqAxXYn
x6hsAdV9HhRN0hncEMZGI0X8V2rNV5Y1CqnKCtgWYmG8P3+2ycBO0pn8MlEbgbIrQzgmMq7QOX0lPzv
75tJXgYlRj7YCsq1JN4M6+5a8DN4PRBXGaL9oLA73EB3wlP/lVNJbG+97/Yfz29/Lqi5R3BCdlAzp/mov
9Nuea8AD3zjuTYFfAOhEsrKW8Yy/
HUO5anD81Tj9n/nGYnHPAIg4+rlzA3AnVzXp5ufZ3wt3Rr9f8bd/
VgXrxbftdF7wXt4rm/bjBB+vVPyqhLtT/HxoyB4PgZwDsWXw7G4n1Hmd+9Px7M/N1+Hvwk9Hf5rvt8+L9fH+iLB/
8zDCejeSx/SJ2ye/5ru69v+/j9z83Fq6sw0h3W1oGe9yw/u2i5t9+5s4Pcxt/PfCZC8VHNvw/PDs/
bt99/7VkqdKi11Uy0tmhwoqnr5nLBf2Bvz/aqj05r+6r+/X/R/
N4ERHRsH5g7ILrdsOEzf9b1Ct92mwwy+6y6ifT/5qGL55F4NL/v7nF0+kVv8LvF5LpkY0iG5sC61Vc7/o5vvI+yfL
c3zRa9bvKm2Gs2/eR/
Y9Od9tKwm4EbL+6zLTn8hCscmNqmsAzpTtWLw7Ew15grJwJAIPHQ3A5PfFnLjhU/
k+HChiIiITXE8nNRs7gHdyXyN3W7NHjfCHVE1AJggJ1/
Gb2GhERJV8ZoeMdNBw8JcFwNlFQgk+ffg5CXiH9ubqN7emMxH7cbn/gb7trSLAgqnrRCcwv+9ExADBRwAQT1ZLbtnwfh/
vJ4ABWvMAJ4Cx4fwHqf8yBFMS3hq5NrSb0JsLOLZqjAbd+2r/
YDh2pyR2vOKHFEXB3XXh7GcIVX8xWSRQyKEvXBzG/lx+Xl+WVzMWPavpS/W56ehj0vO/M6gsE+OzGE/
ZVUOEvXbcPQFYtmaEsJ8eFWrkrfX7pnOu/+o0AYtKkmh8vGxv/cJOIN+8fj0GxJP6KGfPzN3/
CYDGCH+n26wrqv6l+mrgJ+uAe5PofM5d6/59/+nTn/wc36e+L/xnufa6t+qbNvxYj+vxj72fs/
WXHeZvwbLTy7vYhLw3+KO+2X+37bN6TOrbbnp+q0KGAgI6Y/j/
PPyEb8aFXPGgbbdmM/P8nONYaPuG/zrnWO76+1L81Jl/
```

lhL4ddM20ge9HYkbvWe/
ATw7Q+uSDky4m5BnvWBJnVXuYR3an+Pn2AYLavXNFRESaRgGYiIiIiMgUOOe4/7U+IvksZyd3NLs645Z
bsJjkUWtoeep3eP29ky7HM2Ndd4yTOyP8fn+GH23rI1M4AkJAERGZUxSAiYiIiIhMwYuHsryecpz74m8
JRyfelbCZ+s44BwsC2h/
+xZTKMTNO64qxtjvGtr4c3/1TL4cyhTrVUkREZOoUgImIiIiITFK24PjljkG6yHHaq88SxBPNrtKEFFo
7GDj+dOIvPE145/
Ypl7emI8K7lyboyxbYsOUQ2wdydailiIjI1CkAExERERGZpId3JRnIBZyT3YWHoxBraXaVJqz/
5LUUEm10/
vT7eMmBKZe3JBHiguUthDzjB1t7eXpvCqdxwUREpMkUgImIiIiITMK+dJ4n96RY2RZmycBegCOuBRiAi
0Q58K4/w08O0vnTW6Ew9a6L7RGfC5e3sCge4hc9g2x8tV/
jgomISFMpABMRERERmSDnHPdvHyTkwRldUbzBfoJwBBcKN7tqk5Kbv5CD695LtOcV2n97T13KjPjGu5f
EOb0ryouHstyy5RC7k/m6lC0iIjJRCsBERERERCZoy6Esrw3kOHV+jFjIwx/spxA/8ro/
VkqtPJ7+E86k9dlHiT+3qS5lmhkndUZ577IEmYJjw58O8ciuJIG6RIqIyDRTACYiIiIiMgHlge87Ix6r
O4otvrzBfoLYkdf9sVrfGW8nvXgF8x64m+jLL9St3IXxEBetaGF5S4gHdyb5zpZD7EupNZiIiEwfBWAi
IiIiIhPwyO4k/bmAs7tjeGYAhA7uI9/a3uSa1YHnceAdHyDX2c38//o+sZeer1vRUd/
j3MUJzl0c52A24D+3HOJ3OwfJBWoNJiIijacATERERERknPal8zyxJ8UxbWG64yEALJXETw6Q75jf5Nr
Vh4tE2XfepeTmL6Tzp98n9qc/1rX8o1rD/NmKFpa1hHh4V4pvvnCQLYcyelKkiIg0
lAIwEREREZFxcM7xi+0DhMw4sys6ND98YA8AuVkSgMGbIVh2wWI67/
kB8c3P1rX8WKjYGuy9SxOYwd2v9HPb1j52Dubquh8REZEyBWAiIiIiIuPw/MEMrw/
kOb0rSiz05m10aH8xAJstLcDKXDjC/vd8iGz3Ujp/
9kNanvpd3fexKFEcG+zsBTF2JfNs+FMvP9rWyx6NDyYiInUWanYFREREREmunQ+4Fc7BumK+RzbHh62
LLR/N0EoTCHR1qTaNY4LR9h33oeY/8j9dPz2Xvz+Xvre/Wdg9ft/
dM+M4+ZFWNkeZsuhLC8eyvBS7yGO64jw1kVxlrWExy5ERERkDArAREREETG8NudSVJ5xzuXxLDSwPdl
4f17yHd0QtX8WcMPceDc99PxdAutTz+MP9DHwYv+GkL1/
adE2DNOmR9lTUeELYcyvNSb40+9WZa1hFi3MM6ajsjQQwdEREQmSgGYiIiIiMgo3hjM8cy+NMd1RJgf9
Q9bHtq/m/
Si5U2o2TTyPHrPfieFllY6nnkYLznAgQ99DBeL131XUd84rSvGiZ1RtvVl2XIoy92v9NMa9ji9K8rpXT
HaI4dfBxERkdEoABMREREREqSEfOO55fYBEyDitYuD7Mkun8Af7ybfPrvG/
RmTGwIlnUYi30PnYAyz44f9h/1/+LUFbR0N2F/
aM4+cVW4S9MZhna1+Oh3eleGRXiqPbwpzUGeW4eRFivoY1FhGRselvCxEREZEmM7OLzGyLmW01s2tHWB
41sx+Wlj9uZsdULPtUaf4WM3t/xfxXzeyPZvasmW2aniOZfR7ZlWR/
usBbumOEvcO734X37wZm1xMgx5I65nj2v+dD+H0H6f7BjYT27Wro/jwzlrctYWpnAAAgAElEQVSGec/
SBB88upWTOiPsS+W59/
UBvvbHA9y1rY8XD2bIBa6h9RARkSObWoCJiIiINJGZ+cA3gAuAHuBJM9vonHuhYrWPAwedc6vN7ArgS8
CHzewk4ArgZGAp8ICZHeecK5S2885k2t885t2/aDmaW2ZXM8+juFCvbwiytMRD7bH0C5Fgyi1ew9/y/ZMFv/
osFt/07hy66nPTqkxu+39awx2ldMU6dH2V/psBr/
Xm2DxTHCgt7cFxHlBM6IxzTFhkxsBQRkblLAZiIiIhIc60DtjrntgGY2W3ApUBlAHYp8PnSz/cDXzez
vulwG3OuQzWiptLZX36DTVfdYqOMe9r/cT840zF8RqrjjOf7OzOrt+jn9lqY2+LiyaRLFiAq1GZvyZ8jlw
ORgR/FrxHwmQEfPbBFYPJmxM6awyU04xUNwxvIbGJ57PA/wkb8pTRl
vulwG3OuQzwipltLZX36DTVfdYqOMe9r/cT840zF8Rqrjf0BMiW2fcEyLHkO7vZe+HlzP/
dvczf+D0G1r6LvndcCF7jx+cyMxbEQiyIhThzQZQ9qQKvDeR4qTfD8wczhAyOaY+wpiPC6vYILWF1fBE
RmesUgImIiIg01zJge8XnHuCttdXZxzuXNrBfoKs1/rGrbZaVpB/
zCzBzwf5xzN4+0czO7BrgG4Kijjprakcwij+1Os5dJ2L40T92i2JQvv3kG+fxU+AHEOhpY29F1xGx1
MP0rrpQcI7X+fgxR8haG2ftjp4ZixOhFicLG2O8aeVIEdgzneGMyxtTcLwNJEiDUdEdbMi9AV9Q97kq
eIiMx+CsBEREREmmukf4LD2ZUa53Rtj3XOfeGmS0E7jezeF51zDx62cjK7dq1GYuxlg7dq1GkSJ4lMfH96Z5K
jWEMtbR+76WBbev5v0wmWjrjPr+T69684j272EeU/
+moW3fIX+c97H4BnngD+9/9zwzViSCLEkEcItcBzKBuwYzLNjMM9vdyb57c4k8yJeMQzriLK8NYSnME
EZE5QACYiIiLSXD3AiorPy4E3aqzTY2Y2zny+x4zu5ti18jDAjAZLlMI+Mmr/
cRCxlu646OuO/QEyDk2/lctqZUnkOtaRMdTv6Pjt/
fS8ocn6H33xWUWUfpqc8r8KMn8m2HYU/
vSPLk3TdQzjmkPs6o9wqr2MG3hxnffFBGR5pjxAdhLt351WrcARmXFsb0uk+WjcB
XFsb0uA37lnHNmthG41D/
DXAE2bWAnjOuf7S5IcI5czjnu2z5IXzbgfcsSREbp+ggQOjA3B8AfTb69k/
3nfYjojlfpePp3dP14A7muhSRPPpvUCWdMa9fIaolQueVXhFzg2JXM80Yyz+vz9vdTnHA/
r2CMta1DpMRGQ2mfEBmIiIiMhs5pzLm9kngZ8CPvBt59zzZnYdsMk5txG4BbjNzLYSVH5dUfru82b2fYIB
8/ONFL2AYdfeEDEjXBb9rC2ZAXZNttO7HMqCrGvnFIMz6y1Cjt6f+B0u4vy/m0vctzDVnqHfmqxMyFpqcT4jRS
ZJVtw7E4d3jpsfTnmLYw9ApD1XQmOGSoKzU+YHzDE/6C3nxQGy/Kwd0+Wx4RrTLdhsLq66kyhrQeZt
d3kL7d5Nvnz9nnwA5Efn2TvpOP4e+08/
BH+wnumt78fXn4PV+4aq3xNjKr6GwGmBdMSTbPw9E3+FyeFQC1kT/+UAQwBWQoN+SM6XoBuGQFX2+c/
vSwPF7pJHt4Y5ui3C0pYQCQViIiIz2owMwERERERERGEpkPgHD9+tZ/eTMB5yxITCjHC+/
eQWbCkgbWbnQotbSSPPYnksSeBc4R69xPdtZ3Yjldpf/SXtD32KzIrT2HV2/rLJ12Imdxe/L/
nSB3akCe1JvDqYPMC/isawlzNKWEMtawnTHfXyFoyIiM4YCMBERERGZs361Y5BX/3OsWxhj4TjG/

SqzdAp/oI/c6lMaWLs5wIz8vAXk5y1g8IQz8Qd6adn6PIltm+natpncgsX0v/U80mtOAa/
5Law8M7rjodIYcVHygeNApsC+dIH96QIv92V5/
mAGAN9gcSLEwniI7phPdzzEgpivrpMiIk2iAExERERE5qRn96XZtDfN8R0Rjm0f37hfZUNPgGzXAPj1V
GjtoO+Mt9N32luJv/
YSbc9vYv49PyA3v5uBde8hdcLp4M2cwehDnrEwHhoKT51zJPNuKBA7kCnw3IE0ueDNbVpDNhSGdUZ95k
V95kV8OiIevqcWYyIijaIATERERETmnBcPZbhv+wBLEiHOWBCd8Pbh/
cUALDdPAVhDeD6plSeQOvo4Yj0v0/7cJjp/fgdtj/
6Sgbe8m+RJZ0Fo5v1TxsxoCRstYY+j28JAMRRLFRyHMgV6swGHsgG92QKvD+QouOHbt4U9OqPFMKw94t
EW9mkNe7SVXvGQYepWKSIyKTPvbw0REREkQZ6qTfDxlf66Yr5nLt4/
IPeV4pu20wh3qInQDaa55E+ag3pFauJ7XiFtuc3Me+Bu2l77JckTzqL1HGnku9eMqMfRGBmJEJGIuSxt
OXN+eVgbDAX0J8LGMwFDOQdA7mAvak8qep0jGK3ynIgNhSMRfxhn1vDHiG1JBMROYwCMBERERGZM17uz
fLjV/qZF/V595IE4UkEBV5qkNgrWxg47vQZHbzMKmakl68ivWwl0V3bad38NK1P/
pa2J35DvmM+6WNPJNe9hHzXQvJdi3DhiXVpbYbKYKw7fvjywDlSeUcqH5AqOJL5gFS+2MUyVQjYMZgnl
Q/IH56TkQjZUDjWPhSUlVuS+bRFvEl990VEjmQKwEREREREkTni5N8tdr/
TRHvE4b2mCiD+5ACC25Q9YEJBceXydayhjMiOz5CgyS47CS6eI7dhG/
PWttDz7GBYUhlYrtLRRaG2n0NpO0NpOoaVium0e+c6uGTWW2Ei8iu6UtTjnyAWQygckC8WwLJl/
Myzbl8rzer8jGxyeksX8YkhW7mpZDsjaS2FZa9gj6mvAfhGZPRSAiYiIiMis99TeFA/
0DDIvOrXwCyCx+Rly87rId3bXsYYyUUEsTvLYk0keezIEAaGBXkK9+wkfOoA/2I+fGiC0fw/
+9lfwsulh2zrPJ9/
VTW7BYvILFpMrvYLW9iOqVZ+ZEfEh4vt0jLJePhgejlWGZAcyBXYM5kmP0OUy4llFV8uqrpdhj9aIR0v
Im1Q3YhGR6aYATERERERmrcA5HugZ5Ol9aZa1hDhnUXxKXb/8g/
uI7NxO7xnn1rGWMmWeR769k3x7J+kVIywv5PFTg/
jJAfyBPsK9Bwgf2kf0ta0kNj87tFoQjZdCsUXkuheTn7+QQksbQWv7EdGtspaQZ8WxwkY5hELghrpaVg
ZkqXzAYD5gbzpPKu+ojsmM4rhk5WCspTRYfyLkFV++EQ95JMJGwteTLkWkeRSAiYiIiMisNJgL+Olr/
bzSn+OEeRFO74pOuaVKYvOzOCB5zHH1qaRMDz9EobWDQmsHLFxGqmKRZdKEe/cTPriPcO9+Qof2E3/
haVpy2WFFBOEoQSyGC4Vx4TD4YZx5xQQI3mw5NvQdMzDDGWAeQSxB0NJGobWt2A2zayH5zgUzpium7xm
tpRZftQTOkSmUxiE7bGyygN2pPOl+R2aELpdlEa849lk85BHzjahvRHwj6hlR3yNamjfs5b05XwP8i8h
kKQATERERkVlny6EMP399gEzgeEt3jNUddWi94xzxzc+QWbScINE69fJkRnDRGNmFy8guXFYx0+EP9hP
qO4ifTuKlBvFTSSyXwQp5rFDACnkI8sX8y5UDH0exidSb754DCAjt3YWfGhw2VtmR1hXTMyMeMuIhgNr
BXeCK445lCm++0oXKzwGZgqMv58ilHbmg+BppQP9qvhVDtHIgVgzRqoOzNz/
HvMPnKUQTmZsUgImIiIjIrJHKBzzQM8jzBzPMj/qctzBGR7Q+LWzCO18n1HuA/
hPPqkt5MoOZDQ2iX1fOYbkMoYH+0nhl+0fpirmI/ILF5Od3E0RjuEiMIBIFMyyfw3I5LJ/
FS6fw0iksk8LLpKFQwIJiQOc8Hxctbuei8aGHAxQfBtBBEE+A1X+ge8+KwVRsgj+9wJXDMIZCsWzgyBX
enJcNHPny/
MAxmHccyuaLywrjD9HK4VnML3bZjPkesdCb82L+m63UYqE35yk8EzlyKQATERERkSNeLnA8tTfFo7tTZ
AuOU+ZHObkzUtfBuRObnyHwQ6RWHFu3MmWOMcNFYuTmx8jN7x65K+ah4qvcFdOr6opZSxCOEoQj4PvF4
MvzMBdg2SxeLjNiOc7zS2OcdVBIJHDhKC4SwYWjBKX34ufSKxTGhSME4QguHMaFysvC4E/
9n5aelVtrTb6MwDnyAUMB2fAgbXiwli2FZgczAdkgT6YUtI0m5EHcPzwYGwrLfCMW8ohXTJe7euphASL
NpQBMRERERI5YucDx3IE0D+1MMph3LE2EOL0ryrw6tfoqs2yG+JY/
kF6+6ogeDF1mrlpdMb1MGstl8XJZLJcpzvZDuFCo+B6JEoSj4I3RkisI8NLJ4oMAUgP4ycGK90H8A3vx
KluW5fMTq7/
nFQOxUGjYeGgOK46TZsbQgGmlsdOc7xPEWwgSrQTxFgotrQQt7aXWdx0UWttxsfiEuoN6LiCaTRNPp/
CGWsXlKY/
JVn65cn3KZXuAOVyhQC6XJ5fLky0ExVfgyAaQwSPjh8l4YTJ+hEwowr5QlIwXIuOMAqPXM+pbKRh7s7V
ZdXAWG6FlWtgrPvFTRKZGAZiIiIiIHHH2pvI8uz/Nc/szZAJHd8znnEVRuuP1v721bIb5d/
0nlkkzeNypdS9fpCYzglgcYnEKY689Os8rBk2JVnLjWT8IiuOd5bLFYCyfL3a9LJTe83mskBuaHlonyB
82DhrODR8rzTnAYYUCXiZNqO9Qcay1bOawajg/
RKG1jSDRVmyBVgr+cK4UCpZemRReOo2XO7yMqXJmxX37PhY4cEExUCwMDwmz0TiDC1cwsGApya5FJNsX
kGzrIONHyBWKDwfIFoqt0wZyAQfSb46VNlrPTQ+IDHtYwPBxzSrHRIuMslzdN2WuUwAmIiIiIjOec47d
qQJbe7Ns7c2wK1XAM1jREmJ1R4TumN+QFhKWzTD/
7luI7HydA+e+n2z30rrvQ2RG8jycV+ziOEavwPopFIqt0lKD+MlBvMrpdBJLJ/
EKBaxQKIaDoRCBH8JF47i2eQSRaOkVK3bTLI2b5nx/
KHwz54YCuKGAbthx+wThcClsixCEwuD7I7ZCs3yu2KJusB9/sI/woQMkDu2j/
YXH8DPpNw+rpY1854Li+GulFm4uEi3tI0zgh8iFIqT98JstzLwQGfPJYOScR84NHwctmQ/
IBYWhLp2FCT5AIFIKxiKeEfaNsDfaZw5bHvGK6/
im1mly5FAAJiIiItJkZnYR8FWKj1X7D+fcF6uWR4HvAGcD+4EPO+deLS37FPBxoAD8X865+8ZT5kyXLT
h2p/
K8MZhjZzJPz0COgdLo1l0xnzO6oqxsDxPz6z+Ad5nlssXw643XOPj2C0kftaZh+xIRwPdLXR87ml2TcX
GhMPn2TvLtnVULHF5qsDieW+9+wgf34Q/2ETl0AD85MOxJoOPaT2lfLhSGUGhoujwOWxCJkI/
EyEQSZKJxspEY6XCcbDhCNhQl60fI+iEyXpic55M1n1zgkStAykHeQc5BIXDkHARjdOWs5LmAcFAg7Aq
ECYi4gIgHYd8jHPKJhH0i0SjhSGQodKsM0CJeMYwLe2+GbGHf8BWqSQMoABMRERFpIjPzgW8AFwA9wJN
mttE590LFah8HDjrnVpvZFcCXgA+b2UnAFcDJwFLgATM7rrTNWGU2hSu1YkgXAtIFx2AuoD8XMFB6P5D
Osz9T/
FzWEjK6Yj4nJ0IsTYSIhRoXeg0JAubfvaEYfp1zIamjjxt7GxERKLZOS7SSSbSSWXr08GXOYdlMsctoI

```
V/
qUpqH8nShMGz+0PTQ50Kx62khj+ULWDqJP9BLOJ8nkc9iuRxeflydXGsqmEcuFCHnh8mGwuT8CLnSezY
UIRuOkgvHyIajxWk/
TN7zyXmh4ssPMxgKky1vF8qT9XO4scapq+Db8ECsMjALe5RCs4r5o332GZqvBxHMbQrARERERJprHbDV
ObcNwMxuAy4FKsOqS4HPlKbvBL5uxT4nlwK3OecywCtmtrVUHuMoc9o9vTfFAzsGCWp01Yl6RmvEY0HM
Z1VbmI6oR1fUJz4dgVc1zyO9+iQGj1pN6hiFXyJSJ2a4aIxCNNa4fThXGr+tPEZbtuIBB7nSeG25N8dk
K9crFCaobGEWChfHWwuFCfkh/FCIqOeP/
sAF54r7SKfw0wfwUoP4yQG8ZD9eMkkhkybIZghyebKhSEXQFiEbayETTZCLxMhG4uTCEbJemLwfIueHy
Hlhkl6InOcXX1Z8TeQhCSFXIOwCQq6A58DD4RFUTDvMFd+98jtvfh59T27YW2BGQPFVMCPAK70b3flBP
nBoy9A5qz6HFcVULB9e/
mHdd8vde0tj1BE4CArFeUF5XgE3NB0MX7f8kAjPAzPM80rTHnhWeveq1hthWT4P6SQulYJ0Ev99F+Odd
Pq4r1EjTSgAe+qpp/aZ2WuNqkzJAmBfg/
cho9M1mBl0HZpP16D5dA2abzZcg6PHXqWplgHbKz73AG+ttY5zLm9mvUBXaf5jVduWHyE3VpkAmNk1wD
WljwNmtmWC9Z8N35Fm0vmbPJ27qdH5mxqdv6nR+ZuaI+j8/b/
TsZNx3etNKABzznVPri7jZ2abnHNrG70fqU3XYGbQdWg+XYPm0zVoPl2DaTHSfyhXt5GqtU6t+SP99/
yI7a6cczcDN49WwdHoOzI1On+Tp3M3NTp/U6PzNzU6f1Oj8zc5TWhPLiIiIiIVeoAVFZ+XA2/
UWsfMQkAHcGCUbcdTpoiIiMicoQBMREREpLmeBNaY2Uozi1Ac1H5j1TobgatK05cBv3LOudL8K8wsamY
rgTXAE+MsU0RERGTOmImD4E+6Cb7Uja7BzKDr0Hy6Bs2na9B8ugYNVhrT6xPAfYAPfNs597yZfRbY5Jz
bCHwL+G5pkPsDFAMtSuvdTnFw+zzw9865AsBIZTboEPQdmRqdv8nTuZsanb+p0fmbGp2/
qdH5mwRz1U8cEBERERERERERmUXUBVJERERERERGY1BWAiIiIiIiIjKrzagAzMwuMrMtZrbVzK5t
dn3mCjN71cz+aGbPmtmm0rz5Zna/mb1Ueu9sdj1nEzP7tpntMbPnKuaNeM6t6N9Kv4s/
mNlZzav57FHjGnzGzHaUfgvPmtmfVSz7VOkabDGz9zen1rOLma0ws1+b2WYze97M/
qE0X7+FaTLKNdBvQUal78jU6b534nTPOjG635wa3StOnu7xpkb3Z40zYwIwM/
OBbwAfAE4CPmJmJzW3VnPKec65M5xza0ufrwV+6ZxbA/
yy9Fnq5xbgoqp5tc75BYg+1WsNcA1w0zTVcba7hcOvAcD1pd/
CGc65ewFKfxZdAZxc2ubG0p9ZMjV54J+ccycCbwP+vnSu9VuYPrWuAei3IGPTd2SSdN87JbpnHb9b0P3
mVNyC7hUnS/
d4U6P7swaZMQEYsA7Y6pzb5pzLArcBlza5TnPZpcCG0vQG4M+bWJdZxzn3IMWneFWqdc4vBb7jih4D5p
nZkump6exV4xrUcilwm3Mu45x7BdhK8c8smQLn3E7n3NOl6X5gM7AM/
RamzSjXoBb9FmQs+o6Mj+5760f3rDXofnNqdK84ebrHmxrdnzXOTArAlgHbKz73MPpFlvpxwC/
M7Ckzu6Y0b5FzbicUf4DAwqbVbu6odc7125henyg1vf52RTcKXYMGM7NjgDOBx9FvoSmqrgHotyBj03d
k8nSeJkf3rFOnv2OnTn/
2TYDu8aZG92f1NZMCMBthnpv2WsxN5zrnzqLY9PTvzexdza6QDKPfxvS5CTgWOAPYCfxrab6uQQOZWSv
wI+CTzrm+0VYdYZ6uQx2McA30WxDM7AEze26E16XoOzJVOk+To3vWxtF3cnz0Z98E6B5vanR/
Vn+hZlegQg+wouLzcuCNJtVlTnHOvVF632Nmd1NsLrnbzJY453aWmp/uaWol54Za51y/
jWninNtdnjazbwI/LX3UNWgQMwtT/Iv9+865u0qz9VuYRiNdA/0WBMA5d/
541tN3ZFJ0niZB96x1ob9jp0B/
P46f7vGmRvdnjTGTWoA9Cawxs5VmFqE4iNvGJtdp1jOzFjNrK08DFwLPUTz3V5VWuwr4SXNqOKfUOucb
gb8pPR3lbUBvuemw1FfVWAN/
QfG3AMVrcIWZRc1sJcUBOp+Y7vrNNmZmwLeAzc65r1Qs0m9hmtS6BvotyFj0HZky3fdOkO5Z60Z/
x06B/
uwbH93jTY3uzxpnxrQAc87lzewTwH2AD3zbOfd8k6s1FywC7i7+xggBtzrnfm5mTwK3m9nHgdeBy5tYx
1nHzH4AvAdYYGY9wP8HfJGRz/
m9wJ9RHMwwCfzttFd4FqpxDd5jZmdQbDL8KvB3AM65583sduAFik9l+XvnXKEZ9Z5lzgU+BvzRzJ4tzf
t/0G9hOtW6Bh/Rb0HG8GV9RyZP972TonvWCdL95tToXnFKdI83Nbo/
axBzTl1DRURERERERERk9ppJXSBFRERERERETqTgGYiIiIiIiIjMagrARERERERERERkVlMAJiIi
IiIiIis5oCMBERERERERERmdUUgImIiIiIiIyKymAExERERERERERGY1BWAiIiIiIiIjKrKQAT
kf+fvTsPr6o6//7/vnMyB4JkIhBmmRRFLSmDYrUqg/4A0cooVsC2SsUq2J/
FAQUe61AntPh1LA+itooWiqVYKa22XyqDQa1UEFDKEOYpAyGBDOv54ww9GUlCzgnEz+u6cp2j917177Xvc
+ySXb+6y1toiIiIiEiTpgKYKYiIiIiIiIiIg0aSqAiYiIiIiIhIk6YCmIi
IiIiIiIiINGkqgIlIozCz+WbmzmGxmOncc7+o47r5FRERENOzOhYNeJuBmKh1LMsRsGpXyKZlx8vbQWbyJxn4NwCPm/JQ6HbjqahS/1
tC7qRuCRo/6VB+7fVMtbl1bU3swwze8HM/
mNmx83skJl9Ymb3NtzVVJnTR0HX4cwsx8xWmtnAUPYrIiczRzG1wISP2pn8CpJvOFknddCOJiIiIhJUPu9dC9nojUngpgIk3TEEAGM0sxs
76YCcDvgaVAJDCtofo5iX8X8AzcAS82sZ1UNTqSqbDSyjSlqgDuhgkpzqcqTmNJiIhJPu9dC9nojUngpgIk3TEeAGM0sxs
1TgB759AUHfrE0xs81mlm9mb5hZtJldDnzoa9rBrnqbB39a3/SyQAmwCejjnxjnnbnbOXQRcERQ/
1cxeNbMdZdMdZpZnZqvNvbEheB1cfv6fcHMjpjZjZ18CgGq5vsXPuTuAyIAeIBq6qcF13mdl/fHn6h9m/
Y2Z7fH18aGaZ9g/
pvY2bLzazAzP4X6FRFfq+Y2V7fN6E7zey9GnIUERERCRXd6+leT0TqSAUwkabpZmAAcCE9N2Fv
Ax3m/1bgRuArArLxftsHkI/3BZ7/3Rn/TZuZjG0GnAqD6ZfAS5sQpEAR9fGAvhy+dEEV4sL3SBc/
tNYxneb/
1m1nSBZmbAd4FmHKzR5xBdnDuZZklAH8DbgAfwAfhbW+A5n7/ngxzAr4c8nAImlJIhAI/fDJuCTghEQ+4/ayqYdSAUwkabpZmAAcCE9N2FvAOr
zfSIqIiIiEm+71dK8nInWkAphI0/R3YAPV/
PBrw3CFW5zTk3dg5d5dz7i4/mAtu7Bu/Nk/
NE8A2ADMbUmGthsuBTK9Dl3ky9eBHB7NXnc6Hu9yzk3Cbi1hut7Bu/Nk/
```

```
9mLgtYVKHNFN+3lbcB/x/eb/m2Apc7534A/AGIB24xs7Z4v2EEGOSc+yHwfIV4/
uH164E3gYlAWg05ioiIiISK7vV0rycidaQCmEjT9SJwNtAZeKGGdp/5XnN8r82qawgcBkp879v5Xrfh/
dbwRFC7jr7Xnc65At/7r3yvHaqJneF73eR73VxDHv8A5uD9RvMGoL9zrrBCm39Wkc8m55x/
eH9wPv6+C51zO6vpfwHeG8drgZXAIeB93zeOIiIiIuGme73K+eheT0SqpQKYSNO1ADgGFACv19DOf5Pj
Kuwv9b0G/jvhu/H4q2/zDjNr7pz7yveNYfBNyTbfazszi/e97+573V5NHrsqtOtWQ86LnXNTnXMznXO/
d86VVNHmeBX5dPMNp6+Yj7/vODPz3+xV7L/EOTcaSATOAVbgHUZ/
fQ15ioiIiISK7vUq56N7PRGpVuTJm4jImcg5l2tm3wt6X9cQ/m/H2prZq8AW59zjwF14v3E7H9hoZn/
Fe0MV/O1YFrAG6Av8r5l9CYz1tfufavr7LTADmOMbWn9NXROuwZ/w3hidDXxoZgeB6/
DeyM1zzmWb2T+A7+FdR+ITYHSFGGPN7Be+azuK9/
rhv9+mioIiISN7vXK0b2eiJyURoCJNGHOuXXOuXX1PHcb8CSQi3eB05t8+78CvoN3cVDw3uxcg3eh0P
uAz51zZcBw4P/
iXTvhOrzD74c751ZW0+UvgZcBD94nDD1Sn7yruZYC4Eq8i732wLu469+BK31rYIB3XYoVeIfJdwOerhB
mE95FUa/
B+3mcAB7G+1hwERERkbDTvV7gWnSvJyInZf+dIi0iIiIiIiIiItL0aASYiIiIiIiIiIg0aSqAiYiIiIi
IiIhIk6YCmIiIiIiIiIiINGkqgImIiIiIiIiISJMWWZfGKSkprmPHjiFKRURUKKThrVu4FKRURERKThrVu37qBzLrWx8zg
T6F5PREREzjS1vderUwGsY8eOZGVl1T8rER909cAACAASURBVO2NncOZQvd6IiIicqap7b2
epkCKiIiIiEiTpgKYiIiIiIiIIg0aSqAiYiIiIiIhIk6YCmIiIiIiIiINGkqgImIiIiIi
ISJOmApiIiIiIiIiDRpkY2dgIiIiMi3hZkNAZ4FPMCrzrnHKhyPARYAvYFDwGjn3DYzGwg8BkQD
/3zn3N985vYH5QBywDLjTOefMLAl4G+gIbANucnnkMsnCrrzrrnHKhyPARYAvYFDwGjn3DYzGwg8BkQDJ4D
/3zn3N985vYH5QBywDLjTOefMLAl4G+gIbANGOeeOhPoaRUSk6cnLy2P2P//
v0UFxc3diryLRMVFUaVhqJiYmnHEsFMBEREZEwMDMP3tdPBwPbgo9BkQD
ZgmW0x2LjGjsdERHAW/
zat28fGRkZxMXFYWaNnZJ8SzjnKCwsZNeuXQCnXARTAUxEREQkPPoAXzvntgKY2VvAtUBwAexaYKbv/
bvAXDMz59xnQW2+BGJ9o8WSgETn3CpfzAXACLwFsGuBy33nvAZ8hApgpzX3xTpKl7wFkZFY955EnN8b6
9ID83gaOzUR+Rbbv38/GRkZxMfHN3Yq8i1jZsTHx5ORkcHu3btbPuQCmNcBEREREwiMD2Bm0nc1/
R3FVauOcKwFygeQKbX4AfOacO+5rn11NzFbOuT2+WHuAtKqSMSMrOfmFmWmWUdOHCgzhclDads4xcQn4B1
6YH7ZhOlb82j5OVncGVljZ2aiHyLFRcXEexUanSeOLi4hpk+q0KYCIiIiIiISHh8hAnQ1s05mFg2MBm5xbdMxjamqXNzbZ2JHGHjPp+q4aVwdvw+7pbVbn5WoqZ3UqUVcuT+P8iqDy4rqUlBJKvZ9v+BmtJbUV/fvYwU+XZ8zM4IlImTXdEkJkDVzTXetRutWNmjZu6WVhRRSRxYT+OF40FWdQR2/Pq7UwdFwsYRXHUhxWOOt7f+nEALEUsMi33KQfC/PZv9Q44tMqO3SqWdAzLKmvmBHfbEdaLRrq5j9n8fWxbRzYy71YuFxNFy+Lk1jzp02mjMq1ugPbN7a2Kg8VjGxQtCL0IlWytnTiMeydtgLGxZPPVdrW5GvxpQnxF6R7gzsUl++5MfhkaOOzBQpYy5q4qXRzQkJiSePU5AhR8yk0Tzs4v9wB6Pc1MoQY4Sx6Arr2b/ZOdZFuRamPzHl8fMVr0ICdrOHDWXRKMZczUAVN5+CnoXZ+lpezrtv6ql9DT0LpkJQcuEaVd0LMiNqRVG0dx8EV2J0ofsm9Mkq91NA5kGoIaC6fNtyVrNtfu9SV5MonWZrMjj2oCnLgDVFdUzfmI5EyZHjpEwD+ZYAyLP0tyrx0K0RpSkwvCnExbRnvTkjalBMBMJQLuZ5IGCdbpyJ0swPbL3AlsgAe6+o6atX06lcAH9LcaOaKiiKwU2U3dNuLpdxT3H9AmYB4afANU4Yt3M9ij7Y9zpKY1ZdsPjbKX7UJRn5F1NVwgBnQWdrD5tzOS2lFP4L4iWPEtmTiHOmfqtd6JimkwU+b7G26SgQ2AyRnAS8e4fwCRtXjL0dRYhjs0RTHTV8RGQAXgamRfPIYjrZ7JUOBTJrXAJCW8fyC1wp+s+UtjxAdiVeFmOS7ikYvHSvj+20FxOwPuUprvn2CHkRiDLUGaH0g/1/1bMJcahsvE88Y2YX4v7CL4nnHPg1kyQ4JQsbZrCzKTr4CL/FrIibMgxwVSGvPwTOu9WBXZ5E3Ld9IqdMIGG6xjd4CXZPjyE9ZoZ1xa3IxdsHNzxs4NyUXsqkWyrLiUKG9KpjYXXQp+E9k0zILw5z3XbUB2y7cCUUKiTkN9M13JY24vFcJCYJSsLqgT4xSYRemuWL3mfMuW1ZY4SoD6UJ4zXJVqfHFDftXg8FqFIDQGJ5vK07rTAzXWpIu0qzMySDmYzn7hrt0JzOHcLXEYiaNHjGmMOHwkuOO4UQb7GjpWGbnIkpVVq5vPbVgTswKcLcfezmoSKiGCHG2R32xHDkQ+gBFWiumgowR9Gbie93MXFhzTxBZDRi8Tu6mqzeP4ZJ88l5nMjdw8N2CO2uEnPkY6EbnGy/wmldAb2/ehgSpfT0Q5/WDSbuAnKEcbfVFTIDnSgAw/mAzdnh7IL/SRr7SfyWs3sTf/c6sfjBNMLfNPU0XPvuhLgsedCw5gXqa6wg1MC0gUwiU0OomKz1nu2Xm8y4Xlj+yfAq0j2Kay39qjBOBVQ/sQ/PoUq0RHZSrV0fNtm2Xws43JbJQ6bvcv0HHj83AS0c4GuAMFs5J5wUw66Vje/HxRNbbPqmqF9zRxcxzfJ8hLPXgg3i7YvQ7rlNXyq3gO9O95/f+b/ihnY9ZW/x+9zIpWgKDlqaIw8k0Whr69sfwLb3lW75dcnKmX8cHbDWoUWPw0pGYB8/6Mxc/WMf1VFq5IS1zpUfehw3cx2IyhZ4pJEHGZbN+y1b7VifCmkh03+gGbZB6y+0LCfMowhdhvwXfftOaCBEfm2ggMuNFdy7fn0Xb0gT8Efw4iYCQvkdCydwE1yPmeYj4ZlC5AY+tTuOs6zqcUzcg4xuKm8wjQ/VY5HlRWqv8L+yYPNGN6uSWe4rnwL0bIbuyNT7Y9YJd6kVr0BqI7LEA1/9YqMzUK6k0Fsm3Fz/SiQxhgRmo9RDDNsbQkGDBNfc7f5PbmGIIrh/FxVfSUgpqvGKYq6jR+SqqV7B4hqFeWV6o3cfRu4f/VXcPp6eVavfpC71iHYBj6eEkrGqBrFTlyKRb/hKBcGSgn2e3CpeJWvNfkIBXWOwBc0pPJB/t+yY1m0AF3/q7Qbo3iEiGK8V9YOOdJJxzhd6QIeqW/Uz3LdSUNcvTiNsSBvPVvKbdjtvP/Nkmuq4bDSPuAtgwMxOpmsgHX8yuTmgTWWQTDg/IEV2xvKhthTtqwnjB3L35R9l4DgYKB9AOfC/1PF5s3ZQHo36+DcE3p5O+T8iF3BLVjBhM+9Uh/EoIcgCjE/DEc/GmzTp1TpGn2e6sflNlGbtGXX2lMDyfW26KWUlSL3xTDvZg4u1gQmSaUr6yh06hpbj0TH1CwX2vv4pW3dl3GzsVK5/4Y+K46Pr9uOEnzFmR2gPNM3c+CqgnnKMb2tIEGkRCMmoAWmxEqDFhqTFTB3cBjDkVkSmbjDmTGNEfzgCTS1TU9dzu6xY0F4/VpxJDmqRtKh74vpdwgi3qLYD0MPUrUtr2ZCNA8Sj7tOnw8EiQYBbqp/wQhlRkAEmY2oyDMo0SgQ0a8LZ+GU1wbQBEbYfOLeU5KTJt8gpOzPGEnAx+hdcwZbrf5r8AH7V4C53lkffVDeb2vH8wCYy62+AdQNHTe0Gj2ATrWAQgRnbyJH02hkdlw7R8RQb5zwQiBwOBOYLkW9oUbUzzWIS/n3AbzP/gBUB/8wFfA3xbDyh7ALnm8rHdvP8WZNPHxkHu5Y/xeGVIRAdP09oLKAWjO7+qDfPnLQTn1QbeNPRUaeOOmD6FtR3rlRAF4NOdoPuMYr1R/BPqbA8/2bPS7Mq3Kp4Ae53zZMu0A4DOcYfeKBK8bmG5OWPWcSi3uJVL+V3SgGRbTh6dxDAv6rqKZ+nrB6bPQn+jzvKsLSqbO+yzYPz1K/iYPq/tUBbpV2VzcFJR1H9bC/wpL7vSTE23sNrUHdmuw8OmR9JkhhsHB8XxcL2mBc7/0tb/tcfQbzTydqSnqXHjC/CAg3A0RWe7qg0AMOGZhbS43dzVp5HJgDHlrzJ+qbp2y8DflXwuAjTYdEBe9gDzWKm3AQF/j8GdgyeJ7BSMGEUtmt3QeLcDoX7H4/8J56aoxDo7tD1Mc20M2VWZR3wjsHfwPLkRWF5/FNmgvCMjUm5GcMM1gTIPAvzB35FvEMsqf3xGd0AvJR9PMu4RMDpIZ2RTXpuE0/9F3PWW9cPV+QVzfc9xu3hd4SVIHFRq4AaRhiNUbl7R0RJPrlsoHHPcrhcp5PDH8E0MydN65dZO2tI7LOwVD+CtN0VYXsTDTkqkWEaRTpOV5NbgvDs8CoMUr2mwmREYCtDGD1L4RoiPgHaxk4cDgyI3KBkCMrqXK4Py7yLF1lEn8uccTJoLVhnh+xcZCnbTVAM7RaAAwcBxkSB1nexRTlZPW0YEW+mrpQx2gcW1OUXxxxEqQH5jgTBhiC2R9qWYLjZQHGhXIv7mXQqlvlCRVD4iDdFgT9VI2dPL2ZoNSV/QXVvCNDSa/dNWVYhPRTQWGHuN2DJbnkzWFJPnYjQkXqvkVwSGAJcADcJvChVxHvmZoI6ZH2Y9jVsEKI2cqDO6ptSXETRN6afjRzBDnMSN96r8dj89AKHSb1J8AOkWCd/oD3X/jQx7BnzBsHN0Fz/dqI8HhhdtEURWf/DbFU8IHVXzWxHNQPiXsxX7iBUtd0Cg0xLJiG4ZD1PUEqgGzvM5qE6CPX8FnMPJoAxDrPxHX4v4qi6n+ll79HcVlAUg6+OK8cK1ZTGpBE2zmZpZUuNL9SSOAMm12Nx1vf+JDjxEzUpoWx2LWIrOvu0R4NiG2rZdcEIGiLQP1IKpnlqFOKDZAGxS3e7vHk0yKXvWFH5nVGeGU9LHsDoTn4lgMjwPPG3pNrOLC5gVAkgmRY9X1F69wukjeLEK0QmAOxa2FOUA9bMRsHvZuU5OjDZtpBPWfw8GhUWA9sTUbqCAaZgcEpLNOAsIgQEQ2gBQbS2PQhQdPZb7Vf88+J8gf4eN2YD/LvLlZ4UbSDVmq0hbpq/VLzJxOFgPlTe8twdKH5tL6GGi2sNczJAF43qSOqaxSRdg7q7M5PQbj2xDdB5MKDDwSTGHq3+9sxxRbzdmHWIDuLcjW9yZlzn/GZZ4jczSeszQ0V1qtVIpOzbctmujhWp/6eaYEJRaMfhaoJgqSXs/9Y7w3cgSo2AGXtAP4mgsHPWJPbPGJXd12/yZGpwmLb/zzNtmDlSKvtbhHCwyh95uCyQ7ZhhuBtEGv+Q5bbKPnHF/SgGsDFRI5YSvbtTZiM3CbpqBDGMeKdAgh6N38evNaCbLWwi0DGhR3UJv/M+z7Qdy4Ld4xvPxmxG0N5g7AvW/8/qVgV5Znw9E2d7A8hKsxzUVjFCa2cCX/HPoHLt5eZ0p2ry1fOeRcOM7ubpXnd88ZKWjqvGNOHIgT7z1rPpSYiWZgtVBm1gmVI5jxFN0q+3mC44mhq6VVwQHyV7nqV8Qy5xTVkQySudNqF5fMRJjdeQPTqndbeRiGBpuzWJJtC6EFzAhgyE+BCu7LHKDsFZgjHpQNrMdlPQnbv/IHAZyXSKrRmn4Dik3Wa/3+EEGAU5Z6iSK4QGFUBEb38D1sF2UdaRpo8BhR5bt33Nt/TeTFr7fkBs9VjKpD6KiFj5OQ8+SPwPpiZj1XSXYVJ/gW8DyNQ4aovrWKPUmLbV3jRydUNP5aYHk9jGhOw1izWqttWLWKR4oiBvg7Zlc5r5P3C+1YFBVWpFtuNDd8BfpJ/aF8zHQ03yKy1lCAEWMiebGfZeIN27+ODWUqUk+dtq8a4X3KEsPTyv+LrFTpS4z0dJxPnZz3ukh1+5IqY2UM8FiQKpWk4u4/pijtd+JQPxKlMxWTuL6vFqoPDAMfS+XZJlaaPHbAz1tDdbJhzRFKyEHffxJ9eDmpyw4j8aynfuy0YPY44XeHhpDUTz7fNNTM1lOkgqZR6/nh0cAE5JQzWX+qtARuqH7ZzR6PaKx8t6d7tsSmC8/gcEj9JyiTHkqdtvE4hJZVp+S/iD8uHRa3V8XUJyGaRj1ODjZMoxGmQbn+KALe6qh6HVw0TGkn/p6eZAJw/XZ6wZ25XXxncX8cBlnJAAGvjEFS+f6I1cW7B7Cs0EefQwBz+8jqh1K8SrLWRzYmr7yTRqVYwXSeXYpBlCZtn9fdePzXWsNJ5r7ZcdL+pDHMAZvR/3nDHDgX3J0n8lPHS5YSO3aSUEkCzcSnUJQ0PYf/UEAIH+bo8jBrH4DtOAg6S6X5rq9Yp48Y4Ttd/WsdjtoDZTNw9J+4zaR6H3Xyu+tnadlYYlDEb0zhDr+OsOM4ODs8/23VFl9pHzPc0PAdwdFeSdhTiGQEY2HRcVx5nM5hbJA==
```

72c+YOXNmpeMHDx5k9erVvP3225WOXXml99kye/
fuJTU1tdLx1NRU8vPzT5rDOeecw4IFCyguLmblypXcd9993HrrreX6rE0ekyZNIj8/
n5dffpnZs2eTnJzM5MmTmTlzZrmRVGlpaeXOT0tLo6SkhIMHDwJQXFxMq1atyrXxbx8+fLjc/
rPOOqvcdnR0NEVFRQC0bNmS5cuXM2vWLEaNGkVZWRmDBg3i17/+NZ07dw7017Nnzyo/
l507d9KhQ4dqPrVT1yQKYCIiIiIiZ5y8HMg9gvWo9BDPSqx9Z1zWKu80yIsvD31uIiJN2KRJk3j44Yd5
/PHHKx1LSkpi+PDhzJgxo9Ix/7S+9PR0Dhw4UOn4gQMHiI2NPWn/8fHxZGZmAtC/
f3+Kiop48MEHmTZtGn379q11HhEREUydOpWpU6eyc+dO3nzzTe6//34yMjK47bbbAu33799f7vz9+/
cTGRlJSkoKAFFRUZXa7Nu3L5BHXfTv358///
nPFBYWsmLFCqZNm8a4ceNYvXp1INbSpUsrFdwAunfvXqe+6kpTIEVEREREGoE76P2fDTvr5P9zYc0ToW
UybvOGUKclItLkxcTE8POf/5x58+axZ8+ecseuvPJKvvzyS3r27ElmZma5H3+B5rvf/
S579+5l7dq1gfN27drFunXr6pXP3XffTUpKSrmCXG3yCNauXTumTumT59Oly5d2LCh/
L8VixcvrrTdu3dvPB4PHo+H3r17V3pS48KFC4mIiKB//
+rXqKxJXFwcw4YNY9KkSYF8+vfvT1xcHLt37650TZmZmYHCXqg0uRFgXcfd2eAxt/z22ZDGD7Xg/
EVERETk9OAO+UYPtDir5oY+1qo17pvNuLIyLELfY4uInIpbb72VRx55hI8//pjLLrsssH/
atGm88cYbXHHFFdxxxx1kZGB98+/
v73vzNgwADGjh3LNddcwwUXXMCoUaN49NFHiYuLY9asYjQ9euZZMWMGP/7xj8gtgH8yf/
yFJUuWBI7PmjWLwYMHM3HiRMaMGcP69euZMWMGP/7xj8stgH8yf/
rTn5g3bx4jRoygffv27Nq1i5deeokrrrgC8E6fnDlzJnfeeSfbt2/ne9/7HmVlZWzevJkPP/
ywUqGuoelfThERERGRxnBwP0RFQ2xc7dqntILiE3BgX2jzEhH5FvAXnSpKSUlh9erV9OjRg6lTpzJo0C
DuececnNz6dWrFwBmxpIlS+jRowcTJ07kzjvvZPLkyZx77rkkJibWK58pU6aQmJjIU089Ves8+vfvzz
/+8Q8mTpzINddcw+LFi3nllVcYMaL8Gm2vvvoqn376KSNGjGDp0qU8//
zzDB8+PHB80KBBvPXWW2RlZTFs2DDmzJnD3Xffzdy5c+t0DV26dMHMuO++
+wL5DhkyhHnz5gXa3HPPPbz88su8//77XHvttYwdO5Y333yTSy+9tF6fW12Yc67WjTMzM53/
aQOnk+BF8DUCrLLg/
LUIvoiIfNuY2TrnXGZj53EmOF3v9ZqqktdfwuXm4Bn6g1q1d7k5lP3hd3iGjSTiO/
1CnJ2IiNfGjRs555xzGjuN015ubi6dO3dmypQpzJo1q7HTAeCjjz7i+9//PuvXr+e8806+3uTprKa/
w9re6zW5KZAiIiIiImcCd3A/
llL5KWLVSmwB0TGU7dqpApiISCN78cUXiYiIoGvXrhw4cInCnn36a48ePM2nSpMZOTaqhApiIiIiISJi5
4hPep0B27lrrc8wMUtJw2dtDmJmIiNRGTEwMjz/
+ODt27MDM6NOnDytWrKBDhw6NnZpUQUwUEREREZFwO3TQ+1rLBfD9LCUNt/
5T3InjWHRMCBITEZHamDhxIhMnTmzsNGp0+eWXU5dlr5o6LYIvIiIiIhJm7tB+AyCyx7gUwnMPtyQ5FWi
IiIk2WCmAiIiIiImHmDh7wvklsUbcTU9K85+/
a0cAZiYiYiING0qgImIiIhJk7tB8SmmGRUXU6z+LioVlzFcBERETqSAUwERERkTAxsyFmtvnMvjaz6VU
cjzGzt33H15MHbgDqzJw7dDqOP3Rz1Ja4bJ
VABMREakLLYIvIiIiEgZm5gGeBwYC2cAnZvaec25DULNbgCPOuS5mNgZ4HBgNFAEzgPN8Pw45/
KBC4P6WAcsCor3tnNuSoguSerJOQeH9mMda/
8EyHJS0mDb17ijeVizxAbNTUREpKnSCDARERGR8OgDfO2c2+qcOwG8BVxboc21wGu+9+8CV5qZ0ecKnH
Mr8RbCqmRmXYE04H8bPnVpUAX5cPx4nZ8A6WepWgdMRESkrlQAExEREQmPDGBn0Ha2b1+VbZxzJUAukF
zL+GPxjvgKft75D8zsCzN718za9taWj+BfDr+gTIgKRUMNM0SBERkTpQAUxEREQkPKyKfa4ebaozBvBv
hd0PYfgY7OuV7ACv47sqx8h2Y/MbMsM8s6cOBALbuSU3Jov/
e1viPAIiOhZbJGgImI1NLMmTMxs8BPmzZt+MEPfsA333wT8r4nTJgQ6DciIoK2bdsyduxYtm3bFvK+pT
wVwERERETCIxsIHoXVFthdXRszsrsziwRaAIdPFtjMvgtEOufWVYTOJUhdXRszFhdXRsziwRaAIdPFtjMLgAinXPr/
Pucc4ecc8d9m68Avas61zn3snMu0zmXmZqaWttrkVPgDh4ATyQkDEtJw+3egXXNlDZiZiEjT1aJFC
1atWsWqVat48skn+fzzz7nyyispLCwMSd99e/fmNAKtyyvPE5Z7gUMmiDMwB6SDNzCbAfXKYOGFC
MuUtuyEI+GiQFpZu4Vyp++PlgW5KZgf+GPyBLgcfcbuRjUf4z5Mm5wtF8ASDBaVBV+M+
RJOhMoOnHEWxCHNR8qvZYDWRXFSsUbz0F4F9sVqjBddDtTeHdoRGIpCIHuP/+nVVoCaPg28drObMXRO4z4HR0JFchpSfv+bpzZYN+BhrtrUgStqSHEpl1WZh3FD7NmuuI0ZgU/
+p1zWTKvbpMRjX1ArHjRyH7jsjLGQW+Hol+wT3ZyBYLGpD6OlD+tx5Ntnz8WiPoi3t2d2rUhmtOuJgI0bJj/
kMOVOE9NYejsiLJbhfeWxE5BJC2mTvENbs4Hre4RR8X5F5VhRUVk0Rl2kbgmZGf8LJQc+/
5eCgCP3FvDLlAfsqiSqGmQ2hH55U13Pqn+2PE5CIhKNcmPZH2WAGzaVnzwbTDKxZQmjHIqDyUGH2lq2LSuKNiRsC+lQ/
5xgaIKp7EeGCP9NMKvmhSHKoYFxzanx4EhkSfgcjVTdg5CzHKBWNRqtSSpO2CUJEfg7h2LoJ5mbiIBNhNLv+/
lQqEsa7YthRrNhmOd4NxbmtS8ZfMaBpeqYDTr47dfMJVzrr4xMtkZuG34wfVGUXVxhGq5VuZy9tkqzgAkBqgNU/
y8r6bwW/p/ckEJfjz6Lg/
QlNxOgOwxgySqvutE+i1xgwhumMpd5hPmqbd9jH+V5Mj/fu63bK9fOyfUPAoY9lgD1kptAgL49ZjhP/
BBJnW/hhO0x6hw5FNRDJnG4gBbi0c9FHNXjAAZmXjv9TGvdGR93fqGkiRu77FOgVx/ZEsFw4cX9cxVT5tiFFw4ZrgL0eyYOM6A9TkcQNKdCpwK/
5UhyMTbWqHRo4ncWv7fGvSX8VRb9RL8hY/
rKkFMBN3ogz9J2ieKsZ4Zm5MfWIIgdwOhH8r4Tj+eTvPgnvLJJ4ZmhX22Q0V+zv2BlJgewGvZ5RHL2LCekq+/8z0LF/
bQcGrB+Eju0SahCt4+A7lIjCZ5bb5Hga+lUqsmo8w9/bBlf6k8dB6Fxd/
mCNMpwaezBRVvxM8PvBhqBY4JXvd6VcLi4v1JTlxqB7U4WHerAA+HfnPbKFUvxkKqMmtpnvJ2vqCkOyxkl6nOuLz76+r8yPxnthWwmaBo/
O8RTyKtrTRoR8Q/fpfncDxXUzcPLOr4DZu4POVFbeWfr59V4HmH+KxvzWpcdlzVwdfi+5sR0WgtT+4RjQcbwBcv9jXD1u6/
Lwai1GT8fQAxhkb9XvkMg3Nfem+OdyKE71X6Knm1bRg2Yp6vWv8GPJI5WNnQ+tXQa7F1pRbS0dxC1zc4UCAdLjF9/
zrHwmbVZTvNgIIW6Wp+IWEIiWJEBgQrL4TFg+B0DAJ+Dm/
8LzYAgu2dtYgCBP8xncVPAi1LTvyrFhMYJddLWDNsT+jj+rPhEtJn2Aq6ybf2/
bF2A0eFcyLEVh2zW8Py94ivLzrRiTnEnxSJ6c7q+HhWNs8Y6bM5UxH8GJTp0QeaY2y4gV+9I4tXbD7lVqTd4mWYMK4UXm8Fw/
gO9YxRMXIRjS2Z4RQ0uCvnYg5PNkZvxGSxUF/
5gTpOJGi4DsqrzFkyGZvazD2tyHPHdpI/
gJGJVmcjUiVxDPgyn5O4YkphtTYAihv+mU5yXT14vH7ihx5evMZu6Dno6TUWFlSGO0KAxSZzdjC6K4SahBv7qhVCc1a8Pmr4Uf/
JDRfNP5sBXRDOAS9gYf0BDGj0TLTXc1zzT5Z0/
JZOsmVCNTbYp2otRZ3DX1Nc6Rwr09Uz9Eyhgh6rUTb3bPtyx+7MiFdvCz9UmmnF/SJKfSBA39RRfSA6+Atnw0MdlY7pWiXWtFx8/
jvYG4RDjaXcZ4uUu1LNmGeK+4ih0fXSdvQP8Kz+yJh49c7UZmjxZ+aA3qwP4nEhSaiROH3fGS1/

HOSkpIAuOSSS+jYsSPz5s3j9ttvZ+3atQwaNIif/vSngfOuv/
76Sn1dffXVPPLIIwAMHjyYrVu38vDDDzN06NBaX6vf1KlTmTRpEuAdNdeqVSuWLl3Kbbfdxub
Nm8nNzWXu3Lk0b94cgEGDBgXOzcvLY9asWTzwwAM89NBDAAwcOJBjx47x8MMPM3nyZDye8P0rphFgIiIiIiJh4g
55n7R5yiPAAEtOgX27cWVaCF9E5GQOHTpEVFQUUVFRdO/ena1bt/L222/
TunVrSktL+fTTTTyutBTZ69GjKyspYtWoVABdeeCFPPPEE//M//
8PmzZtr3fe6deuIiooiOjqaCy64gLy8PH73u/IrF6xYsYKBAweSmJhISUkJJSUlNG/
enN69e5OVlRXof9myZTz00EOsXbuW0tLSKvu77rrrym1ff/
31rFu3jtLS0lpfq19wQSs5OZm0tLTACLCzzz6bZs2aMW7cOJYsWVJu5BfAqlWrKCgoYOTIkYFrKikp4
orrmDfvn2BOOGiEWAiIiIiImHiDu33vjnFEWAAJKVAcTEc1kL4IhJe9R2B1ZhatGjBPS09Np06
ZNYPriwYMHKS4uplWr8v8t9W8fPux9IPPcuXN58MEHmT17Nrfffjtdun/
8OYMWNq7Pucc85hwYIFFBcXs3LlSu677z5uvfVW3n777UCbgwcPsnr16nL7/K688koAJk2aRH5+Pi+//
DKzZ88mOTmZyZMnM3PmzHIjqdLS0sqdn5aWRklJCQcPHgSo1bX6nXVW+X+voqOjKSoqAqBly5YsX76cW
bNmMWrUKMrKyhg0aBC//vWv6dy5c6C/
nj17Vvm57Ny5kw4dOlTzqTU8FcBERERERMLEHTwAcfFYdMwpx7LkVBzg9uzCVAATEalRZGQkmZmZVR5L
SUkhKiqK/fv3l9u/b98+gMCUxLPOOovnnnuO5557ji+++IJf/epX3HjjjfTq1Ytzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzzz
23Uly/+Pj4QN/9+/
enqKiIBx98kGnTptG3b99AH8OHD2fGjBmVzvdPL4yIiGDq1KlMnTqVnTt38uabb3L//
feTkZHBbbfdFmhf8Tr2799PZGQkKSkpALW61trq378/
7znyksLGTFihVMmzaNcePGsXr16kCspUuXViq4AXTv3r1OfZ0qTYEUEREREQkTd2g/
NMD0R8A7iszjwe0J7xQSEZGmxuPx0Lt370pPL1y4cCERERH079+/0jm9evXiiSeeoKysjK++qttzZu6+
+25SUlJ4/PHHA/uuvPJKvvzyS3r27ElmZma5n6oKRe3atWP69O6Ol06dKFDRs2lDu2ePHiStu9e/fG4/
HU61prIy4ujmHDhjFp0qRAPv379ycuLo7du3dXuqbMzMxAYS9cNAJMRERERCRcjhzG0ts0SCiL8EDLZB
XAREQawKxZsxg8eDATJ05kzJgrF+/nhkzZvDjH/84sCj8gAEDu066zjvvPMwM1555RUSEhwPg8eEgDfvn38e9/
Hx8UydOpUZM2awefNmunXnXrxrRp03jjjTe44ooruOOOO8jIyGDfvn38/e9/
Z8CAAYwdO5Zbb72/VpKQ1aicVzs1VZTOf+mUkTSmkRiNSBGbzzp7KXm/7MUG8NVg7lP
7CkiVL6nSttfGnP/
2JefPmMWLECNq3b8+uXbt46aWXuOKKKwDviLmZM2s1sn37dr73ve9RVlbG5s2b+fDDDysV6kJNBT
ARERERkTBwpaVwNB8SEhospiWl4Wl4HZsxTkXWMtGREtqbtCgQbz11ls8/
PDDvPnmm6SlpXH33Xcza9asQJv+/fszf/
58tm3bhsfj6aLLuL999+vU9HIb8qUKTzxxBM89dRTLPnzwqUKTzxxBM89dRTvPTSS6SkpLB69Wruv/
9+pk6dSk5ODq1bt2bAgH06tUr0P8rr7zCSy+9RFFREV26dGG15hxIgR5WK/
+uqrzJkzh2eeeYakCSef/
55hg8fXqdrrY0uzbpgZtx3333s37zruzgaPv+W3z4Y0fqgF5z9nzpxGzERCT8zGydc67qRT+knNP1Xq+pcLlHKJnzMNb/
MiK6Vb9WTF2Ubd6AW/V3In92H9YyuUFiiogE27hxI+ecc05jpyG18NFHH/
H973+f9evXc9555zV2Og2qpr/
D2t7raQ0wEREREZEwcHnex8NbQsM9Pc2SvAsz2auz27GiymiIhIU6QCmIiIiIhIOOR6C2DEN9wUSFomgZn
WARMRETkJrQEmIiIiIhIGLi/X+6YhR4B5IuGsJNxejQATEfm2u/
zyy6nLMlffNhoBJiIiIiIiISDnk5EBUFUdENGtaSUnC7s/U/
PSIiIjVQAUxEREREJAxcXi7EN2v4pzUmp8Cxo3A0r2Hjioj4qMAujamh/
v5UABMRERERCQOXl9Ow63/5WFKqN74WwheREIiKiqKwsLCx05BvscLCQqKios55BvscLCQqKiok45jgpgIiIiIiLhkJvTo
E+ADEhKBlQAE5HQSEtLY9euXRw7dkjwSSsnHMcO3aMXbt2kZaWdsrxtAi+iIiIiEiIudJSOJofmhFgU
dGQeBZur54EKSINLzExEYYDdu3dTXFzcyNnIt01UVBStWrUK/B2eDH4mvROdSWSUYXSS2kZrUxtwCAfpFUbX4ncmaDZFGOdb6tl7x9VzhzMgVydY3MSuyY0kRAEyRr1m5nJIyJmaCXqNEp4SEr0rmuhDuMPX9ns6E3M9qnq2eR3dt2/VRjuk9FjJQP7QDDYgh+pfnGYGzc4swhmGwJfYB0XhgdsTEuMUD/
iyS5y8ZLz3gYD86jcHhjeuy6FW8oXXcwFXwxr6pa3Z6Wq+lq3DbrDCcYWTLi1tKevcY+5zxx7TmGkR6cBZdOmyDBAFM6f4t9KhrvhyLbSDdBfC2NTgVvttHlRqqLcOqA2SmTSRCmfO5UUDcBYs1/
C+fnd93Y8lpJ0O/
0FxlPg99bJN4ttiA8ybCcYsbNFPCyo/9BffEBDxnXwYu8nCbLgBt2A4AJe0T9DNjwEhoeHUz3TvWT1yLxkY0YktwMTeUnrYzVjVEkbHX9Gx1GB6hnpVuawxbg8ANzNpoyvXSG1TZ0h5yp0e5JpHTmu3q2/jD6/
sv7cVYPhvtUgDe62X0YiyLQYdnv3l9W9lF55RIY5d3O5nvRhwmE0lf/
lO53FXI6A2kwUO5a/55wPyJ7d0NEJy2kHMO1B9bNcpXt4qjGbXFpdp6WoM84fF4BFMzi/
8nTNAJTqVAPFBKm4Rk7YVAQEDxM9q7MbCj4uX+LHTEh3SpwRH8KFBtNfJn6+mW5uS7PO+uXAn/
c38qQpPmnyZwIQUoc8Bft4RbHBHe6Y1pTbV2/
XFc6G/WmgiOzHDexyHOzVs0pdA8/Mv3RrdGOHYYw9p2zu/Ae6sOeBBp
hhCzFtTpdPXQtpWj6DGzHVA3H4f8FXRKnS5X7tXWQoggAZeYw/6/
y7uC23n93VNmX0tQwHx+QF5bjH+0VAOhEC+vi4odc7f7JrR/J8hOt2ifGWl0cRaqgAFgkJAYQAAR37/
/oQtT5nD+fztB7MZs2Ufm0nTk83j7PgSEq5
pT2+mzbz+CcTFMq8oPHiDPf9pA8DDqfd/
w2f+kZmrqXXn4/S84/x1+KOuTuLdd3cXc0H12v7E+EDoh9Rya6d3v3zXh5X2vbZb1nYrd4x5J9nJGY1i3/Aefxh65d8fXXAIvR+fn1GoPv

GUQFMBERERGREHL5OZCQgJmFvC+LiIDkFMo0AkxERKQcFcBEREREREL I5eZAGBbA97OUNNi7C1daGrY+
RURETncqgImIiIiIhFJeDhaG9b8CktOgpAQO7A1fnyIiIqc5FcBERERERELElZXC0fzwPAHSRwvhi4iI
VKYCmIiIiIhIqOTngXNhLYDRPBFiYijbpYXwRURE/
FQAExEREREJEZeXC4CFcw0wM0hO0wgwERGRICqAiYiIiIiEiq8ARjjXAMM3DfLAPtyJ42HtV0RE5HSlA
piIiIiISIi4vBzvm3BOgQQsLR1cGW7ntrD2KyIicrpSAUxEREREJFTyciAyEqKjw9tvWjqY4bZvDW+/
IiIipykVwEREREREQsTl50J8gnddrjCyqGhITqVs2zdh7VdEROR0pQKYiIiIiEiIuLw8COMC+MGsVWvY
vQNXXNwo/YuIiJxOVAATEREREQmV/
FwsrrEKYG2gtBSXvb1R+hcRETmdqAAmIiIiIhICzjk4mgfx8Y2TQKvW3jy2axqkiIiICmAiIiIiYWJmQ
8xsk5l9bWbTqzgeY2Zv+46vMbOOvv3JZvahmR01s7lB7ePN7E9m9pWZfWlmjwUdm2BmB8zsc9/
Pj8JxjRKkqBBKSqCxRoBFx0BSCk7rgImIiKgAJiIiIhIOZuYBngeuBs4FxprZuRWa3QIccc51AZ4BHvf
tLwJmAD+vIvSTzrkewEXAJWZ2ddCxt51zF/p+Xm3Ay5HayM/
zvjbSGmDgnQbpdm3HlZQ0Wg4iIiKnAxXARERERMKjD/C1c26rc+4E8BZwbYU21wKv+d6/
C1xpZuacK3DOrcRbCAtwzh1zzn3oe38C+BRoG8qLkNpz+bkAWGNNgQQsvQ2UlOB27Wi0HERERE4HKoCJ
iIiIhEcGsDNoO9u3r8o2zrkSIBdIrk1wMzsLGAb8NWj3D8zsCzN718zaVXPeT8wsy8yyDhw4ULsrkdrx
jwBrpCmQAKRpHTARERFQAUxEREQkXKyKfa4ebSoHNosEfgc855zb6tv9R6Cjc64XsIL/
jiwrH9y5l51zmc65zNTU1JN1JXXgHwHWaIvgAxYbCy2TtQ6YiIh866kAJiIiIhIe2UDwKKy2wO7q2viK
Wi2Aw7WI/TKwxTk3x7/DOXfIOXfct/
kK0LueeUt95edBdAwWGdWoaVir1rjsbbjS0kbNQ0REpDGpACYiIiISHp8AXc2sk5lFA2OA9yq0eQ+42f
f+BuBvzrkaR4CZ2cN4C2V3VdjfOmhzOLDxFHKXenD5eY26AL6ftWoDxcW43TtP3lhERKSJimzsBERERE
S+DZxzJWY2BfgA8ADznHNfmtlsIMs59x7wG+B1M/
sa78ivMf7zzWwbkAhEm9kIYBCQB9wPfAV8amYAc31PfZmQ0HSnyxJoTlQiXA5edCXONNfwxoFbQOWL
uOjZuLiIhII1EBTERERCRMnHPLgGUV9j0Y9L4IGFnNuR2rCVvVumE45+4F7q1XotIw8nOx1PTGzgKLi4
cWLb3rgA24srHTERERaRSaAikiIiIi0sCcK4Oj+Y26AH4wa90Wt/
0bXPGJxk5FRESkUagAJiIiIiLS0I4VQFkZxDX+GmAA1q4jlJTgtm5u7FREREQahaZAioiIiIg0tPw8AO
w0WAQfwKW1Zk9Ke3btzic6qZC4yAjiPUZqXCQJUfpOXEREmj4VwEREREREGpjzFcAaewrk7hIPnx+PYW
txJMcuvtG7M7sgcDwC6NEyhszUWNokRDVOkiIiImGgApiIiIiISEPLz/W+NtIUyGIH/
yiMZd3xGKKB1pEldDi8jXNX/ZFD102kIKU1x0sd2UdL2JJ7nA1HjtMmPpKr2zcjNU7/iyAiIk2P/
nUTEREREWlggRFgceEfAbaz2MP7x+LJKfPQJeoEF0SfIMrAkhOJP1FI2X82ENmmLQBpcZGcnxzDf/
KK+fLIcV7blMPV7ZvRMyk27HmLiIiEkib8i4iIiIg0tPw8iI3DPJ6wdrvpRBRvHW1GiTO+H1tIZoy3+A
XgYmI5kdqG2G82lDsnKsLodlY0g9sl0DLGwx+3H+WDnUcpKXNhzV1ERCSUVAATEREREWlgLj837Ot/
bTkRyR8L4kmOKGVw/DFaRZZWalOU0ZGog/
vw5B6pdCw+MoIrMuLpcVY0nx0s4p1v8lQEExGRJkMFMBERERGRBuby88K6/
tfW4kiWFCTQMqKMy+KKAqO+KirM6AxA7NaNVR6PMOOilFj6psWy/
Wgx723Lp8ypCCYiImc+FcBERERERBpafi4WphFgO4s9LD6aQIuIMi6LK6y2+AVQmngWxYktifmm6gKYX
+fEaC5KiWFz7gn+vPMoTkUwERE5w6kAJiIiIiLSgFxZKRQcDcsIsNlFCCcSb4/
K4QqJrKH75FWV0Iib7P9jxohrb9Tgrhp4to/ni0HE+2n2sgTIWERFpHHoKpMhp6Be/
+AWpqakMGzaMl19+mdLSUnr27MmXX37JsGHD+OKLLwC45pprAsf79u3LmjVrGDVqFCtWrODw4cOBfZGR
kUydOpWMjAxyc3N55ZVXOHDgAKNHj+btt98mNTWVfv368e677/wC+B1M/
cuDAASZNmsTy5cu57rrreOuttwKfve731FcXMyAAQNYuXJloP+bb76Ziy66iNzcXBYsWMDNN9+Mcy7w
PjExsVxeY8aM4e233+aOO+6gWbOuvv55FixZx8803k5eXx69//
WtSU1O54ooreP3117nttvvYvn07y5y+DAgfzrX/9i//
79DBs2jOXLl5OamsrYsWNZtGgR1113HYsXR1113HYsXLw7kMW/ePAC++/+93pe/
cMcdd+CcY+7cueVy8PPPsvhw4cZNmwYGzZsHc8Ozub5557LvAZLv2LPAZv/HGG+zbt4/
bbruN7t27B+L5r/eNN95u5f7/
BITE8nOzg7klpGRUenvKDhW8Gc3d+5LN6cyPLly8vl6s937ty5DB06lN///
veB3L766iteeumlwHZ1uVQXtybr1q3j9ddfD/
ydVMXf33XXXcc777wT+Dxr28fAO4kNbAHMO3i+Ip9AZA+MKialF8Qu8Bb
DmGz8lZvsWirqdX2Pb85NiOFHmWLO/
kLQ4j54OKSIiZyyry3DmzMxMl5WVFbJk7rrrrsD7OXm1uPubNCcALb89tmQxg+14Pzr8rlKeAX/
HfvFxcVRWFhY7TknOx4sPT2d6dOn88477/DPf/
evSeN5fF4eOqpp3jnnXf4+OOPufjiiwEC70eOHFllXunp6Zx99tlPrYWV84fNSmyzNQLm8AMyt3/
LHHHgvkGpxjenp6uf2PPvpoIJ7/eiseD/78Ro4cGYjt/91WFByr/
x0G51ox3+C+7733LC+aS3Vxa3L33XdTWlpK3a3L33XdTWloa+DupSlWfyWXFLrPk6m4vWcKc7UvCG8uZvZ
kg7aSJCfa/
3bVG2awelrz5LxPeHYO07hayfT4uiWVEYz0XRx+keXVyHBMtIXzyPEx26cGTouJM3d46/7TpGzolSJnZ
vSVJseJ9sKSIiUpPa3utpCqTIaexkBZ3aFr/
AW8TZtGkTq1evDuyrqfhVhwX4WFhTjnyhVKaopVWlrKxx9/
zJo1a3DOsWbNGm89q7d2/gnL179wbOrarfY7ravq9v6/
gXNauXXUxe33hPnGUH//
K9b9p06Zyue14ToAXpJVFj7DOzs8vlGpxjenP14ouPnKLJ0XP9yW9lPJ9M3d4a7hMbXyfZB6RV
79CfK1ApX3+7FStWBXBHKvKpevvqVaqAkOXWeK5YZwyiRTmKIrHvD1eCsbTUo/nTUaa6qnEQsVQ2fO1aQo6/
OLNzF6mVfN/fdAhHgO0vieDDwjhae0roFlWH4hdARASFbHboS+81Grojk/35GmNG/

VRyGsWSbngwpIiJnptN2CmRVo2Hk1Olz/
XabP3/+SYteobJw4UI8Hu83xqWlpYHFdMvKynj99derzaukpKTG7VMRnEdt+PsuKyvjgw8+qLad//
g333xT69jz58/nO9/5TrX5vPHGG+Xiz58/v9zx119/vdwosOXLl1eKVdVn7M/
VPyWzKkuXLq0xl9dee63GuDX57W9/
Wyl2xWmQVV0LeK+nNn2cTHD82uZ9OjhT84YzO3eR2nAhLoCVOlhakECUOfrGHMdqOfUx2LHO59Bs8xfE
bf6CY736nrR9QlQEfVvF8r97CvlwdwED2zarR+YiIiKN56QjwMzsJ2aWZWZZBw4cCEdOIhIidRkxFgr+
AkxwMaO0tLTSqKNwqe8TrUpLS8nKyqK6aUL+43W5rsLCQrKysqotBJaWlpYbKVXxd1mxr5piVZVrVTFq
OqemXCrGPVmsmrah+mtxztWqj5MJjl/bvE8HZ2recGbnLlIr+blgBrFxIQn/
6fEYDpZ5+G7McWIj6vdvWXHLVIpbJBH/
5ae1PqdtQhTdWkSz7kARW3KP16tfERGRxnLSAphz7mXnXKZzLjM1NTUcOYlIiMTFheZGvLb8I8As6Ktq
j8cTWGsr3Kw+X5njzTkzM5PMzKqnmfuP1+W64uLiyMzMDHxGVcX0H/
N4PJV+lxX7qilWVblWFaOmc2rKpWLck8WqaRuqvxYzq1UfJxMcv7Z5nw7O1LzhzM5dpDZcfh7ExWMRDb
/aSEGZ8c/CWFp7SmjjOYVR3WYc63QO0Xt24DlS+y+5L0yJoWV0BB/
sOMrx0rL69y8iIhJmp+0UyPougi810yL4p69w/B1PmDAh8NTIcBs1ahSLFi0CvP/
D65yjtLSUiIgIbrrpJp5++ukq84qMjCw37bHi9qkIzqM2/
H1HREQwePBgnHNVLqDvP56Xl8eTTz5Zq9gTJkwgPT2dNWvWVHl8/
PjxvPnmm4H4EyZM4IUXXggcv+mmm8q1HzRoUKVYVT2owJ+rv4+q8h06dGi5aZAVc7n55pt58cUXq41bk
3HjxvH666+Xi11RVdfiv57a9HEywfFrm/
fp4EzNG87s3E+VmQ0BngU8wKvOuccqHI8BFgC9gUPAaOfcNjNLBt4FvgvMd85NCTqnNzAfiAOWAXc655
yZJQFvAx2BbcAo59yRkF6geB3Ng7jQTH/8R2EsJcBF9Zz6GOxYp+4k/
utj4jd8Rv4lg2p1jseM76bFsTy7gL/vPsagdpoKKSIiZwYtgi9yGjvZiK26jOhKT0+ne/
fu9OvXL7DvZCOEgo8H9xUXF4eZlRsxVFMsj8fDxRdfTN++fTEz+vbtS79+/
TAz+vTpQ0ZGRpV5paenB85JT08PnFtVv7X5LPwxgmMF91tVe39fwbn06dOHxMREWrRowSWXXFLunODjb
du2LZdrcI4V93fv3p0WLVqUu97g4xdddFG5/
rt3714ut4yMjHJ5VIxlZvTr1y9wjv936M8VqJSvv91VV10VyL2qXHr06FFj3Jr07t273Eigiut/
VXUtfn379q1VHycTHL+2eZ8OztS84czO/VSYmQd4HrgaOBcYa2bnVmh2C3DEOdcFeAZ43Le/CJgB/
LyK0C8APwG6+n6G+PZPB/7qnOsK/
NW3LWHg8nIhPr7B4+4p8bD+RAzdoopJrOfUx2BlcQkcT29H3IZPwdV+NFdyrIduLaL59GARuwrquAC/
iIhII1EBTOQ0FBMTQ9u2bZkwYUKgONCzZ08Ahg0bRocOHejQoUO54337ehewHTVqFElJSeX2RUZGBkYI
DRo0iLZt2xITE8ONN94Y6OuGG24I9D9y5EhiY2O58cYbiY6OJjo6mgkTJgTOmzBhAp07d2b8+PHlYkVF
RQEwYMCAcv37R/UMGjSIzp07M3jw4HLvK+Y1fvx4YmNjuemmmwLtbrrppkD78ePHB/
K+8cYbMTMmTJjANddcA8DAgQNJS0sLfF7+tv4Y48ePL5eH//
P0fwbDhg0L9F9VLsGjVQYNGhT4vIcNG1bp+Pjx48t9hv6+xo8fHyhMTZgwoVw8//W2bt0aIHC8Yv/
BuVWlus8uNjY28DusOPLGf/
yGG24ol9vNN99cbru6XKqLW5Nx48YFYlTH39/48eMDn2FDjhqq6nd7JjhT84YzO/
dT0Af42jm31Tl3AngLuLZCm2sB/
5Ml3gWuNDNzzhU451FmFlrINE5t8p5FzZcAIyoItZrQfsl1PJzsbiGLYA5ByuOxRFrZfSMPtFgc
Y91OofI/
Fyid26t03m9kmOIjzTe33GU0nquqSkiIhJOVpdFoDMzM10oF6oNngJW3ymQXcfd2aA5AWz57bMhjR9qw
flrCuTpq75//yIiUjMzW+eca/SFxszsBmCIc+5Hvu2gL4VvzCOTfUzHKcc2cFxT7inGtZRV4/wTuCjPbt2/
fevn17CK7+28OVlFDyy19gF36XiAsa7s/uy+NR/
OlYAn1jiugU1XBPRKakhNaL51HU5Vxyrh5Vp1N3FRTzjz2FXNY6nv7pDT/
iTUREpDZqe6+nEWAiIiIi4VHVik0Vv4msTZtTaV+5sR541LCO5nlf4xtuDbAyBx8XxXJWRCkdIxuw+AU
QGUlhhy7Ebvk3dqJuT3bMSIiiXUIkK/ceI/
dE+NcXFRERqQsVwERERETCIxtoF7TdFthdXRsziwISgcMnidm2mpj7zFr7YrUGDtQ5c6mT/
332sodMSERFpUCqAiYiIiITHJ0BXM8sws2bgGGBJhTZLgJt9r28A/uZq+FYs51wOcNTMLvZ9++NNwJ+riHVz0H5pbHEFMCKJwOvAl8D3wDv+/Y/
M+pmZAT8EllQR6ag/
RJK+Q07Aix49FeGJzSjrE6kpHOiZQoJn33sXWysDhKiIuhxVjQbjhxntxbEFxGR05gKYCIiIiIhH4JwrAA
aYAHwAbgX5xzm8zsUTMb7mv2CpBiZluAu4H7/Pnmtg14GhhvZtlBr5B0B8DLwBbgG+B93/45wFVm9hVwlW9bGpm2tg1MH10dhaRXGstoIRJIqq
OwaqiWFqGYfSXX0HX8yEigopPQAJPxPUNeVQm3Yn1c5SXX7lqxmxqUpmpUUg/
FkRwp83BOVHHoR3/5lMUlUNi+K/H/zsKOF9X5/
FbxkbSOj2TVvkKOl5aFIEMREZH6UwFMRERERKQBuLIy71MgEG2AE2CdFsSRYGW0jSxogs9o72uNCIopPE
P/vrHqd3ysphqJSxyf7615AExERCSUVwERERERGkLBUSgrg1McAbanxEN2aSTdooqJCNPoL7/
ipDSOp7Ym4bOPvddSR0mxHtomRLJ2/
zEKSzQKTERETh8qqImIiIiINACXlwOAJZxaAeuaEUBOAieLsS/
F5JMZwog9X7tBaYiIicPlQAExERCSUVwERERERElpCL4CGPH1nwKZV2ZsKo6ic1QxUWEe/

```
eVX1PZsilu0pPmav4Gr+yiuFjEeOjaPYt2BQo4WaxSYiIicHlQAExERERFpAC4v1/
vmFEaAZRXFANCtkUZ/AWBG/
rmZRB3cR8zWr+oV4rykGEodfLz3WAMnJyIiUj8qgImIiIiINITcHPB4ICa2Xqcfd/
DF8RjaRZaQEOEaOLm6KezQjZJmiTRf/
SG4uufSPCqCzolRfH6oiJzjpSHIUEREpG5UABMRERERaQAuPwfim2FWv7mLXx6P5gRG98Yc/
eUXEUH+ub2J3pdNzP9j787D7LrKO99/373PXPOoebIk2/
I8Y2zjOICxcfPg5l7T2OQhpC8d+vaFm6ZzOzdAnps4JO4A3QkkTwY3AdpAAsYQA8IxxhjbeB5kbFmeZM
uaZ9U8nnGv+8fepToqVUlVpVKdqjq/z/
Oc5+yz9nDWXtpVWvXutd69e9u0DnFeczia7UmNAhMRkTlAATARERERkRngenugZnr5v5yDl3JJmrwSLf
7cyJs1tGYDpUwttc88PK39MzGP9fUJXunK0ZktznDtREREpkYBMBERERGRmdDXg2Wml/9rf8mnI/
BZOxdGf43wffo3XEJy304Se3dM6xDnNCXwDR4/
oFFgIiJSWQqAiYiIiIicIucC6O+b9giwzbkEMRyrYnNrpNTQ2nMoJdPUPvvItPZPxTzObEzwRk+eQ0Nz
69xERKS6KAAmIiIiInKqBgYgCGAaI8CygfFGPsGqWJH49NKHHn49NKHnTYuFmdgw8Wkdr1FfP+uaR1jQ2OSuAeP
Hxic4dqJiIhMngJgIiIiIiKnyPX1AGCZqY8AezUfp4jNremPZQbPvIBSKkP9k7+Y1v4J39jQmGRbX4F9
g3PzHEVEZOFTAExERERE5FRFATBqpjYCrDz5ffMcSX4/lovF6T/nUpJ73iaxZ/
u0jnFmY4KUbzy2X7nAREShMQAExERERE5Ra6vN1yYYgBsf8mnM/
BZN0dHf40YXH8epXQNdU8+GEbtpijuGRsaE+waKLCrP38aaigiInJiCoCJiIiIzBIzu9HMtprZNjP77D
jrk2b2/
Wj9s2a2umzd56LyrWZ2Q1n5GzfoRpm9VPbqM7PPDvN7kDe59zrxEp9Nabes9YOFbOseT3x
/
Fj9J97Gcn9u0juemtah1jXkCDtG48fGMJNI4gmIiJyKhQAExEREZkFZuYDDHwDwcHzgBXOBW4E/t7c65QiVUmLp7XsBLgSHgR2XH+8rIeufc/afz/
Kqd6+uBTC1mk89inw2MNwrxOZn89inw2MNwrxOZn8fjyDa8+lWFNH3VO/
mNYosJhnnNucZO9gSHgR39c3vEm4iILDwKgImIiIjMjiuAbc657c65PHA3cMuYbW4BvhUt3wu8y8wsKr/bOZdzzr0NbIuON6n9zuoUAz
kxERGaBAmAiIiIiIsyDK6fVp4y5XAP/8OxRofreCl8yT6oGw1pgRkpZ2j74hGZ1gV3k1Mz59Vt/D+fkVVw3/D4WtAJ9JzCuUGEuYB1jAhFdYGf
FeY3PrfIkdmKZXNvAwN6sFHcm1X7ahvoHNsxzw0vFFrJa8Wrb63zGA
oiTxPMA6zwtlwL2ieQOTb2v2i5jB3FSgXrMrDQCxLWAvrZEAwnCCk0sI
4emr5q9/nFW2aWxZdc24zo4/M+1ynPWr0W6BsjB7ZmpAV3vtJ5A9aUO/
aeHUz3RgJm+fT5R/LnxaGVD8qW3GdyM8SmDXc3n0QvpN1Aq5xZvOu/P
J6B7ieLjzbOcfoNw1Ox7z7GNbgkWdQfQNE8gZ6Xj9dxPnmrXsxz0n+NrWs3/
3Ia/rpw0z5KlBAxwTfANrX/BNPmQ5hyL4iIi8r7/HP9djndmemUiuuOiU4V81EQU+aOuyNyJyyQW7P3dj/
2iLDxSEbC45VoJXw==
hYw/4Pw3JLvH9t26Tlpw3+9FhLbGVf5V6/3lXE5aVsHuOoQUp7pf67G+4xKKrqjRo4nPpjtC97G/j/
t0/lzp2Nvf8k6JcXEZx0t3hwn+uyhVhc34Xj81RiB5Pp+wm/
QhpjE4CX5j43PU3eV+Bz6I4pDjV8+55JQ45rQK88pDxEz+QLmLk/
CH3D5++wIvywsjVL3tAGLF3+ViD7X4IIbK6/Bia2NxdlyIGO4EDK0G
72Gzmh5D1ACDiEjxc4vqy/kTWv9v2yLuNyD87bSfRDRP9ZFt7Ok/
kEKvYRa3Gv4KFLwzTV5ZrUZg0VR3K5XVa3z6VY7jvgPw9ARdeEBEpNn/
XZh2iIR9SCFMeG6iK2Md9+TX9Qs/HG2AJ51BxcsW+Ksg/D9xbA3Yvaj7/
jd6fY01Kn3dHhSn1jbnfb7Of/Ug8zhBRQBAU7rddUcxTmjGewzlqN3J+Pj/
rkEn9zhpwbxWq1L4TrGhmfMx5Aul6hjhV/3kKgEjv95P4/
zz9vBEh81H/
2zYkbpzdjGI/8fRbf/r6c9aW7e9Wq9BtjCBzR1A/Ga5Jrzut1h6gg5Tm1ZjTJmj5ZXfUT68BrrA7j1+GaDtFXLXHHmZzl/
+HHVhkIvsL4g6fdj3LvdRWAjk9WIyQJJxcFAWT4x+Ac8V1LDiC6xAAZXYdLPR31x+I7T6L+BIOqYBVJB0Gjs6ruLABc8Y5kwyZi/
Bn/19Ebpug6bmnX3fWtU+t8wEIuT5dK2B9v9Mue0bMrk/
```

wy+iwzqasDG2f645Yo+f26Kp/
+WG7grAtPbSpkTZzVdXGePjjMgSG1q4iITJ0CYCIiIiKz4wpgm3Nuu3MuD9wN3Dxmm5uBb0XLPwTeY2Y
Wld/tnMs553YA26LjnUj5sb4F/NsZOAeJuOwwDA1C/
bEjwAIHL2WTtPtF6j1N1zuqfCrkL+6d3lTI1hTpmPHjHf1ki9X5YAEREZk+BcBEREREZscyYE/
Z571R2bjbOOeKQC/
QcpJ9HfCgmb1gZp8s22aRc+5AdKwDQPt4lTKzT5rZJjPbdOTIkWmdWFXqDhPg25gpkNsLMfqcx3qN/
jpOsb6J3ouuIrVjK5mXnp7y/gnfuHpxmr58wH27+nHTCKKJiEj1UgBMREREZHaMlw1q7F/
wE21zon2vds5dQji18lNmdu1UKuWc+5pz7jLn3GVtbW1Wo1dw3eOY
FZJeuouGxnxE7cnDK+7emYlzcmmRbX4FnDw+fhhqKiMhCpQCYiIiIyOzYC6wo+7wc2D/
RNmYWAxqArhPt65wbeT8M/IjRqZGHzGxJdKwlwOEZPJeqNxoAG80B1l3y2FGMszZewFPy+/
GZ0X3lewniCZru/x4Upj5S7syGBCtrY/xq/
xC7+zXSTkREJkcBMBEREZHZ8Tyw3szWmFmCMKn9xjHbbAQ+Hi3fAjzswnleG4Fbo6dErgHWA8+ZWY2Z1
QGYWQ3wPuCVcY71ceAnp+m8qpLr6oBMDRaPHy17KZfAcKyNFStYs7kvSGXofuf1xDsP0/DY/
VPe38y4oj1NXdzjRzv76M5ptJ2IiJycAmAiIiIisyDK6fVp4OfA68A9zrlXZewLZvBaLNvAC1mtg34f
aInNzrnXgXuAV4DHgA+5ZwrAYuAJ8xsC/Ac8IBz7qHoWHcA7zWzN4nsqJ4ALYZnSVeLVSK9nNrkBsnQUP/Ra8Z
OuQeiY30RuN7M3gKujz7LDHFdHVA7Ovqr4MKnPy6PFUkr+f1J5ZaspP/si6nZ/
Aypba9Oef+4Z7xrSZoggO9v62WwoKT4IiJyYrFKV0BEREkWjjn7gfuH1P2x2XLWeDDE+x7B3DHmLLtw
IUTbN8JvOcUqywT6erAFo8+w+CNfIKs81gXy1WwUvNL34XvJHl4H40P/JAjv7WIUlPrlPavT/
hcuzTNw/uG+MHbvXx0fSMJX3NPRURkfBoBJiIiIiIyBS6fg4H+o/m/nIPns0kavBLtSn4/
eb5P1zXvB6D5p/
+MFfJTPkRrKsbVi9McGi7xox19lAKNvhMRkfEpACYiIiIiMhXdneF7Fz1nxAqYBSFNSq
2n66r3Ees4SMMvfxxGE6doWU2cy9tT7OgvcO+OPgoKgomIyDgUABMREREREmYKRJ0BaXRgAez6bJGUBq5
T8flpyS1fRf94VZF57kcyW56Z1jLX1CS5vS/
F2X4F7tvWSKyknmIiIHEsBMBERERGRKXCdYQCMuno6Sx7bi3HWxQso/dT09Z9/BdklK2l4+KfE9+
+a1jHWNSS4alGavYNFvvtWL0NFBcFERGSUAmAiIiIiIlPgujoglcYSSTZlk3g41mn016kxo/
uq91HK1NL8k+/g93ZP6zCr6uJcuyRNR7bEt7f2cGhI/
y4iIhJSAExEREREZCq6OqCunqHAeCWfYHWsSMpT3qlTFSTTdP7GB7BSkeYf34XlstM6ztKaO9emiFXc
nz7zR62dE7vOCIisrAoACYiIiIiMgWu6whW18DmDmXIISxlnxQqWrtGAUG5rpuub9xLo6aLrvuxBM76mar
ekYN66ooTXl86+7B/
jZ7n7yJQUpRUSqmQJgIiIiIiKT5AYHoL+PQlMbL8UHMbL+SSLPaLNPjKNTWTcotX0HP5b5Da9RYNj9w3rSdDAq
RiHtctzbChMcHmzhzfeKOb7X35Ga6tiIjMFwqAiYiIiIhMktu/
B4BX2tcz5Dw2aPTXaTG07jz6N1xMzeZnqHvqF9M+jmfGRa0p3rMsg3Nwz9t9bNzZz2BBQUsRkWoTq3QF
RERERETmC7d/D0XP59lEO21WpN2f3hQ9Obm+i67Gy+eoe/
YRnO8zcOV7pn2s9nSMG1fW8FpXjte6c7zVm+PytjRXtKdJxTQmQESkGigAJiIiIiIySW7/
Hl478x0MOJ9Lk8OYVbpGC5gZPVe8GyuVqH/qIfBjDFz+G9M+nG/G+S0pVtXF2dKV46lDw/
y6I8s72tNc3JpSIExEZIFTAExEREREZBKccxT37+PZa95Ls1disUZ/nX5mdF/5XggC6h9/
AGfG4GXXntIh6xM+Vy/
OsCFX4uXOHL86MMRTh4Y4vznFZW1pmlP+DFVeRETmEgXAREREREQmo7+XN5pW0peo4V0Jjf6aNZ5H91X
XY87R8NjPiPV203vdB8A/
tUBVc9LnuqUZunIl3uzJ81Jnll93ZFlVG+f8liRnNiRJ+PpHFhFZKBQAExERERGZhNK+PTy7/
p00BVmWavTX7PJ8uq6+gfrN9dRtfoZYdwddH/goLpU+5UM3J32uXJTmwpYkb/
cV2NGX575dBeLeAGc1JjmzIcGa+gRxT8EwEZH5TAEwEREREEZFJeK1jiO7aJVwdH9Tor0rwPPouvppiQz
ONzz1M2/f+nq4PfoxiS/
uMHD4d8zivOcm5TQmOZEvs6CvwZk+OV7pyxAzW1CdY35BgXUOCjPKFiYjMOwqAiYiIicRDFwPJ5YTF
v/EZYvPvVRRzJ9Q2dsoFjbQPPj99P2nb+h/
x3XMXD5dRCbmT9tzIz2dIz2dIzLXYrDwyX2DhbYN1jgrd48BiyvibGuIcHqugTtaR9TRFREZM5TAExER
ERE5CQ2HRmmP1HDdftfwpZcWOnqVL18+1IO3/RRGRGn79OPVP/
5L01pfpfe+HyC9fM6Pf45mxOBNjcSbGpa2O7lwQBcOKPLJ/
CBgiHTNW18ZZXZ9gdV2choSS6IuIzEUKgImIiIjMEjO7EfhrYv/rwAe+7pz7AS4UBcOKPLJ/
AR59zOaN3ngE8AJeD3nHM/
N7MV0faLgQD4mnPur6Ptbwf+HTAQpDN0X30DQ2vOpnHTo7Te8zWyWBhwwaKjIweESO/
sLvN6TB6Ax4bGqLs7ymjgrauM0JDyNEBMRmQMUABMRERGZBWbmA38/
sBZ43s43OudfKNvsBTvsE0O2cW2dmtwJfAj5iZSOnAkuBh8zsAtwLnAkuBh8zsTKAI/D/OuV+bWR3wgpn9/Y/
ZOcOF66mDQ+QDuPa1hylc/Z5KV0fGyC1dxeGbPkrtGy9R8+bLtPzLNym0LGw4qvIrj+XIF1zWr43E/
NYU59gTT045+grBBwcKnJoqMTr3Tk2d+YAqI17rK5Ki2d+YAqI17rKiJsaI2zvLaOK0pH08BMRGRWacAmIiIiMjsuALY5p
zbDmBmdwM3M3A+UBsJuB26PlHwJ/a+HQkZuBu51zOWCHmW0D0cAHDO9ZvZ68CyMyMceUU9CTK/
HrjixnDh2iZbCb/Q0tla6SjMPF4vSfn94vSfdzn9Gy4hs+tNat94lyXX1IbI4C
JL11Fdu0GcqvPDBPm28wnsDczGhI+DQmfsxrDgFhPPuDIcIkj2SK7BkZHiCU8Y3HGZ0kmzpJMjCU1Mer
jGiUmInK6KQAmIiIiMjuWAXvKPu8F3jHRs65opn1Ai1R+TNj9l1WvqOZrQYuBp4tK/
60mf02sIlwpFj32EPamisIlwpFj32EqZ2SeBTwKsXLlyque04P1q/
yAA79z+LIWmVvCV32lO832GztjA0JqziXcdJrVvB6l9O2h47Gfw2M8I4kkKi5eTX7KCQvtSiq2LKDa2g
Dez/
65mRlPSpynpcyYJnHMMFh1Hhot05kp0ZQOePzJM4MLtMzFjSSZMvN+WitGa9mlJ+viegmIiIjNFATARE

RGR2THeX7JuktuccF8zqwX+BfiMc64vKv4H4M+i7f4M+Evg/
zjuIM59DfgawGWXXTa2PlVte1+e13vynNeUoGnvNoZWn1XpKslkmVFoWUShZRH9F1yJP9hH8tA+4p2HS
HQepPb5xzAXAOA8n2JzK4WWxWFArGURhZZ2Sg3N4M3MaDEzozZu1MYTjKTpLzlHTy6gK1eiM1uiI1tie
1/h6A+2BzQlfdrSPq2pGI1Jj8aET0PCo1YjxkREpkwBMBEREZHZsRdYUfZ5ObB/
gm32mlkMaAC6TrSvmcUJg1//7Jy7d2QD59yhkWUz+0fgvhk7kyqQLzl+vmeA+rjHBa4Xr5Cn0LKo0tWS
aSrV1DN0Rj2csSEsKBaJ93UR6+0i3tNJvLeLxN7tZLZuPrpPEItTbG4LA2JtSygsWUF+0TKIxWekTr4Z
LSmflpTP+oaons7Rnw/
ozQf05kv05AP2DRZ5I5o+Obov1CfCgFh9wqMm5pEZecXt6HI6ZvgKlImIAAswAPbWd/
96Xh9fREREFqzngfVmtgbYR5jU/qNjttkIfBx4GrgFeNg558xsI/BdM/
srwiT464Hnovxg3wBed879VfmBzGyJc+5A9PFDwCun6bwWpCcODtGbD3jPsgypHW8CkG9ur3CtZMbEYh
Sa2yk0tzNcVmyFfBgUiwJjsd4ukrveIvP6i0A4WqzQvoT8sjXkVq0jt2wNxGcmIAZhUKwx6dOY9IHR4x
YDx1AxYKDgGCwGDBYCBooBffmAA0NFciV33HDSEXEPkp6RjHkkPSMVs+g9/
Jz0w1fK944ul5fFPTTaTEQWhAUXABMRERGZi6KcXp8Gfg74wDedc6+a2ReATc65jYTBrO9ESe67CINkR
NvdQ5jcvgh8yjlXMrNrgI8BW8zspeirPu+cux/
4spldRDgFcifwH2ftZOe5g0NFnj88zNr6OO3pGPGDe8PRQPVNla6anGYunqDQuphC6+Jjyr3hIRKdB0l
0HCTRcYCaF5+i9oXHcX6M3LLV5M44i+wZGyg1np6HJMQ8oz7hU5+YoN7OkQ8c2ZIjVxp9z5XC8kLJUQj
C5Z7c6HKh5AhO8t0e4ZMs6xNeVAeP+vjocnPSJ6ZcZSIyDygAJiIiIjJLosDU/WPK/
rhsOQt8eIJ97wDuGFP2BOPnB8M597FTrW81CpzjZ7v7SfrGRS0pcI7UzjfJty6esXxQMv8E6QzZ5WeQX
X4GAFYskDi8n9SB3SQP7qLh0X+l4dF/
pdDcTnbtBrJrN1BYvGLWrhmzkVFbU9vPOUfJQSEoD4oxuhyEQbThkmOwELC7P89Q8digmTGaq2wkgX9b
KnwAgKeRYyIyhyyIANhXv/
rVSldBRERERBaAJw4McWi4xNWL0iR8I35oH7GeTvrfcWGlqyZziIvFyS1dRW7pKuBd+AO9pPaGT5ys3f
Q4
dc//ilK6htwZZ5Ndcza5lWtxqXSlq30cMyNm4QizydbOuXCEWTgV09GbL9GbD9g/
WGRrWa6ymMGiTIxlNXGWZmIsqYlRr+T9IlJBCyIAJiIiIiJyqnb05Xnq0DBn1MVZWRfmX0pvfRlnHsPL
11a4djKXlWobGDz7IgbPvgjL50jt30Vq3w5Sb71C5tUXcGYUFi0P84atWEth8XJcIlnpak+LmZGOGemY
R2sKxuYq64sS+HfnAjpzJTYdGSaIEpTVxIylUUBsaU2MJZk4CV8BMRGZHQqAiYiIiEjV6y+U2Lirn4aE
x6VtqbDQBaS2bia3ZCUumapsBWXecIkkw6vPZHj1mRCUSHQcInlwN6mDe6h97lHqnn0EZ0axdTH5JSvI
L1lJfulKSo2tMM9HR8U8oznl05zyWROVlZyjJxfQmS3RmStxcKjIW73hSDED2tM+y2riLKsJR4s1JDRK
TERODwXARERERKSqBc7x0539FEqO31yaOZrQO35gD7H+XvrOu6LCNZR5y/PJty8l376U/
guuxPI5Eh0HomT6B0m//
hI1Lz8HQJBKk1+ykkL7UgptSyi0LaHU2Aw2v3PP+Wa0pHxaUqMJynKlMCDWEb1e7szy645wXSZmRwNiS
2viLEr7JP353QYiMjcoACYiIiIiVe2x/UPsHihyZXuKhsToH+nprS/
jPP9o4nORU+USSXJLV5NbujosCAJifd1HA2KJzoMkd76JuXDOYBBPUGxdQqF9MYW2pRRb2ik2NBPU1M7
rwFjS91ha47G0Jpw+GThHbz44GhArHyUG0JDwWJSO0Z6O0Z72aU/HNFJMRKZMATARERERqVqbDg/
zzOFh1tXHWVOfGF0RBKS3vkx22WpcPDHxAUROhedRbGyh2NjC0Lpzw7JikXhvJ/
GeDuLdHcS7j5B+7UVqCs8e3c35MYr1jQQ1dQTJNC6VJkgkwY/
hzMKplNHLmVf22Tu63iUSBJlaSplagpo6SrUN4E/
xMZIz1QxmNCXDJ0eubwjLstEosZ5cQE8+DIq9WRYUS3hGU9KjKenTGO3blPBpTHrUKdm+iIxDATARERE
RqUqvded4aN8gy2tio3m/Iol9O/GHBhi65JoK1U6qVixGoWURhZZFo2XO4Q/
2EevtJjbYFy4P9OHlhokN9GP5HF4hhwUBOBe9AqYSAnKeHwbjWtopNrdTWLSU/
KLlBHUNM36Kk5HyPZbVeCyrGS0rBo6e/GhQbKDg2D9Y5M2ePEHZvp5BTcyjNh4Gw2rLXjUx72gS/
7RvJH1TsEykSigAJiIiIiJVZ0dfnvt29dOe9rlqURpvzB/
A6a2bCWLx0alqIpVkRqm2gVJtA7mp7BdNpRwNijmM6L2Qx88O4Q0P4WeHiPX3EOvtIn5wL6ltrx6dhlm
qqaOwaDn5xcsoLFpOYfFygnTNCb709Il5RmsqFj19clTgHENFx0AhoL8QMFgIGC45skXHoeEiO/
sd+ZFHUY7hAamYkfZHA2OZMZ/T0edMtJxS0ExkXlIATERERESqytu9eX68s4/6uMe7FmfwvTF/
yJZKpN58heyyNbhYvDKVFJkJI0GasmDNSBjIxcMpkOPuViyE0y+7DpPoPES84yB1218/
OqKsWN9EYfFyCouWkV+0nGLrojAoVqGgkGdGbdyojXssnmCbYuDIlhzZUkCu5MiVHPmSIxeULZccA4Xi
0fXBBMcCSPphICztG6loNFkq5pGKyo+W+R6pKGiWjnnEDAXPRCpEATARERERqRqbO7M8sHuAxqTHbyzJ
kPCP/
0M0uXsbfnaI4VXrK1BDkcpzsTj5tiXk25YwGJVZIR8FxA4T7zpEYv8u0m9uObpPkEiFUyibWig1tlBsa
qXYGC5XMjg2IuYZtV4YJJsM5xxFx9FgWK4UjiLLRQG0fODIlyAfOPoLAV3ZMJiWLznGH2sW8o0oSOYdH
XkWvo+MPisbieaPjkAbO0pVRKZOATARERERWfCcczxxcIgnDw6zJBPj6sVp4mNHfgGUStQ//
gCldA3ZJatmv6Iic5SLJ8gvWk5+0fKjZV52mHjXYWJ93eEUyoFeEvt24b+55egUSgiT9pfqGynVNVKM3
kc+l+oaKNU1wBwbbWlmxA3inlE7haqNBM5GRpfljwbLxn/vLBbJD4UBtuIJImdJ38j4RibuUR/3qE/
41CXKluPh1E2NLhOZmAJgIiIiIrKgDRUDHtg9wJu9edbUxbmiPTXhaIraTY8R7zhI57X/
pmJPxBOZL4JUmtzSVeSWjgkWl0phsv7+HmIDffiD/fhD/cQG+0kdOYA/
PHjcsUqZWkp1jQQ1tQTpGkrpGlw6g/Nj0csHM6xYxIoFrFQMk//
nslhuOHrP4uWyeLlhLJ+HsrFYzvNxyTRBOk2QTBPU1FKqa6JU30ixvuloQI7Yqf2JXB44m2qmtFIwOiX
zmFfZyLNsybFnsMhQb56xac3iHjQlfVqSPs0pn+ay96Q/uZFvIguZAmAiIiIismBt681z/
+5+siXHRS1Jzm5MTDhCItZ5iLqnf8nQyvVkl58xyzUVWUB8n2J9E8X6pvGT9pdK+EMDR4NiIwEyf3AAr
7uD+MG9eNlhLCid8GuceQSJBC6eJEgkCOJJiukagobmMH+flQV9ghJePoeXz+L19xI7cgB/
aOC4J2WWMrWURgJi9U1HR6y5VJoglSZIZQgSqTBQNsOjrXzPyHhGZhJ/
pTsXBscGi46hYsBQMWCg4OgvlNgzWOSNnvwxUzHr4h7taZ/

```
2dCx6+TQlfU2tlKqiAJiIiIiILDgDhYDH9g/
ycleOxoTHtUsyNCVPMKIrCGh88F5cLE7vZdfOXkVFqpHvH536mJ9oG+ewUhFKJSwIXzhXNiIsBp53akG
oUgl/eAB/
cCQQF41WG+wnfmB3+DTMYOJU+EEsjht5xcN3YvHwAQPxkfJkONqstp6gpp5SXQPFplZcIjn9ehOONEvF
jFQMWjj+d1spcAwUA/ry4ZMxe3IBHdkS2/
sKRwNjMYPWtM+io0GxGG1pn5RGi8kCpQCYiIiIiCwY2WLAM4eH2XR4mJKDDY0Jzm9J4p/
kj+Sal54mcWA3Xe+8niCVmaXaisiEzEYDSqfrO3yfUm0DpdoJAnHO4Q0P4g8NRKPHcniFHJbPhVMwS6X
R6ZjFYvRewIYG8UsFrFjEK+bD0Wzu2LMo1dZTbG6j0LKIQtsSim1LKLS0z1guNN8zGhI+DYljg2Ml5+j
NB/
TkSvTkAnryJd7ozrO5c3SsXn3coz0TOzpibFE6RmPCU34xmfcUABMRERGRea8zW2RzZ47NnVlyJceq2j
jntySpm8QT3xK736buiZ+TXbqK4dVnzUJtRWReMCPI1BJkak/
tOEGAlxvGHx7EH+gj1t9NvLebWH83mf278YoFIJzSWWxqHQ2ItS2m2NQa5iabbk5C58KgXHYYLztEIjt
MTXaYZYUoR5pzOOcY8hJ0xjN0+Wm6ggRH+uO83esdDT7GPWhLxVgUBcbaUjFaUz6pmEaLyfyhAJiIiIi
IzEv9+XA6z5auLHsHixiwvCbGuc3JE093HFEqUv/
kL6jZ9BjF+ia6r3j3jOf0ERHB8wjSNQTpGgrN7ceucw6/
v5d4Twfx7g7i3UdI7NlOZuvm0U3Mo1TfQKm+KUzgn0zjUimcHwunaAalMMiWz4UPBBgOg11edih8OECp
eNIqNgPLx5QV/BgddW0cblnOkaYlHKlr49VMEy/
6o6PUMpRo9gNakh7N6TgtdRlaMnHqE95JR96KzDYFwERERERmiZndCPw14ANfd859ccz6JPBt4FKgE/
iIc25ntO5zwCeAEvB7zrmfn+iYZrYGuJvw75pfAx9ZmjAhe75RXwg4OFRk32CR7X15jmTDBNl1cY
8LW5KsqYuTnuRohFjXYRrv/z6Jw/
sZXHcevZdcE063EhGZTWZRwv1GsivXjRbnssR7O4n19+IP9IbvQwPE+nqPmYaJ5+PMwDyCeIIgmcQlUh
Rr6gia2giSSYJEiiARvSfD5fAhAQYYGFAKsFIBL3rK5sjTNGuyw6zNDXPmoVfxdg9juWEGidOZqqe7to
Wu2ma6alvYWttCdsiHzoGw/
i6gtjBMfTFLgyvQ4JWoj0FDMkZNKkFtbZp0bQ1WU4ed4pM3RSZLV5qIiIjILDAzH/g74HpgL/
C8mW10zr1WttkngG7n3DozuxX4EvARMzsHuBU4oYb7THTMLwFfcc7dbWZ3+h9N/
ptNXCByDhYDBYpi0uTdXojsX0J0rcSRbZKgYTsYxoC3lc2FLkqWZGA2TyU3jAuKH9pHcsZXU9q0kDu2l
lEzR+a6byK5Ye/pPTkRkClwyRb59Gfn2ZZWuyrjSQUBNPsfKXDTabLCTQneBvsCjz2IMWJxBP0l/
PM2eZC2vp2px5kEADIUv72CeTG4PmfwQNaUcmaBAynOkPCMV80glYqQScVLpJMl0ikQ6TTyRIJaME0/
E8XyFM2RqdMWIiIiIzI4rgG3Oue0AZnY3cDNQHgC7Gbg9Wv4h8LcWRnZuBu52zuWAHWa2LToe4x3TzF4
H3g18NNrmW9FxKxoA296XZ3NnlnzJkQ/
c0fdcyVEIHKVxMl0nPaM27rEoHaM56dOc8mhM+MS8qU2tab37f5I4sMRx2bkAACAASURBVBsHFFoX03f
+Oxhcdy5BumZmTk5EpJp4HkEqTZBKQ8NocU30GisIBhnOF8jmi+QKRXIlx3AAWWdk/Rj98TqOxBLk/
AQFf8xo3OHoBUA+ekGsVCBWKhIPwlcsKBF3JTzAM/
Bw+M6Fn3Hh57JlwxEmOQtzoR37GXAOcKMPMHBhuTNwGAHG0sEjbOjeFa2LXtHIOvMsXD460u4kr+O2IX
ove9qpcxAE0XcFEETvI+Vl61zgRrcbqZd5Ub2iYx6z7J2gPKyTmVf22Yu2G1mOyoMSFItQLOKKBbyLr8
BbNTduNE0pAPbCCy90mNmu01WZSCvQcZq/Y6FS250atd/
0qe2mT213atR+01dNbbeq0hWILAP2lH3eC7xjom2cc0Uz6wVaovJnxuw7MixgvGO2AD3OueI42x/
DzD4JfDL6OGBmW6dwTlNRTdfcRKq9Dar9/EFtAGqDaj9/
UBuA2mCmz39Sfb0pBcCcc23Tq8vkmdkm59xlp/
t7FiK13alR+02f2m761HanRu03fWq7ihhvyNLYMU8TbTNR+XgJr060/
fGFzn0N+Np462aSrjm1QbWfP6gNQG1Q7ecPagNQG1Tq/PXMUhEREZHZsRdYUfZ5ObB/
om3MLEY4saTrBPtOVN4BNEbHmOi7RERERKqGAmAiIiIis+N5YL2ZrTGzBGFS+41jttkIfDxavgV42Dnn
ovJbzSwZPd1xPfDcRMeM9nkkOgbRMX9yGs9NREREZE6bi0nwT/sQ/AVMbXdq1H7Tp7abPrXdqVH7TZ/
abpZFOb0+Dfwc8IFvOudeNbMvAJuccxuBbwDDi4R+JRzrgQw3jGjr/
xD4G4z+3PgxejYlaRrTm1Q7ecPagNQG1T7+YPaANQGFTl/
c27cdBAiIiIiIiIiIiILgqZAioiIiIiIjIgqYAmIiIiIiIiILGhzKgBmZjea2VYz22Zmn610feY
M9tpZlvM7CUz2xSVNZvZL8zsrei9qVJdjrMXvx7r9ZCH6mcCyy3XdzHGlQxX8wJdsTUqrTmGGZvcuYTNFdaV94EbXe7me2L
rr+XzOymsnWfi9puq5ndUJlazw5dUmtsLMHjGz183sVTP7z1G5bAhuTOEOl6Gb2mlFHNH0BUP6J9m5M9O2vfN/5YPMHHNakQIzjXn6E0NZT
PRO03URuBu52zuWcczuAbYQ/
31XJOXfAOffraLkfeB1YRhubiF0Q/Nb6Tt6kezPC3nGkYhKsPXGjQKF3JtqKwRFKbqDjzsFarJ0AC5PLdHuzY2KtfuVwA3AGrljIrBGMJPzBYAuIpV4rdUPHSMP1BnUffINoiORKUPMRDAzcaCjmkPyDn2Bn6
3RmHtHJHJ1U7y/3NmO7s0JnLUhN4N9x1E/
Ds34h+z13nPpKgcVnOsCnfZU9xHDd/4QmJXEpyD9PDHe0nqbz9mEaBeGqzR7cwpAKDlvyqpX0rJzH/Ty9AAEfAyXuaiXwwmutNh5rAlGt7QFLHEmFwVm/
tKHsdCcMp1jSyl4G3cHjdH9MrVo2CkGnvlgr5NHmHkq7mNSBbDaqL/
bpgzmrb+TbpS0adv/Wn9CGAsrw60Dd6YIzjNO/
```

96Pwz8iPAH69DIUMHo/XDlajgvTNReuh5Pwjl3KPqlFgD/yOhQZbXdGGYWJ+wA/
LNz7t6oWNfeJIzXdrr2ps451wM8SphTodHMYtGq8jY62n7R+gYmP41Fqpxz7r3OufPGef1EP7NVc57HU
V/1qKr+P78afwdUe99P/bdR6oMd0wY3RlNknXMuB/
wvZvk6mEsBsOeB9dGTERKEyd82VrhOc5aZ1ZhZ3cgy8D7gFcI2+3i02ceBn1SmhvPGRO21Efjt6GkUVw
K9I0OWJTRmTvaHCK8/CNvu1uhpJmuA9cBzs12/uSKav/
8N4HXn3F+VrdK1dxITtZ2uvckxszYza4yW08B7CfNwPALcEm029tobuSZvAR52zs37u49SefqZrc4+rv
qqx6jq//Or7XdAtff91H9THwwmbIM3yoLARpgDrfw6OO0/B7GTbzI7nHNFM/
s08HPCp+V80zn3aoWrNZctAn4UXjfEgO865x4ws+eBe8zsE8Bu4MMVrOOcYmbfA64DWs1sL/
AnwBcZv73uJ3wSxTZgCPj3s17hOWSCtrvOwsfWOsKnPP1HAOfcq2Z2D/
AaUAQ+5ZwrVaLec8TVwMeALdEceIDPo2tvMiZqu9t07U3KEuBbZuYT3vC6xzl3n5m9BtxtZn8OvEjYSS
V6/46ZbSO863hrJSotC9KXq/lntor7uFXZV632/qb6jID6fuq/qQ8GE7fBw2bWRjjl8SXg/
4y2n5WfA5vngUUREREREREREZETmktTIEVEREREREREREGacAmAiIiIiIiIiIrKgKQAmIiIiIiIiIiILm
gJgIiIiIiIiIiKyoCkAJiIiIiIiIiIiC5oCYCIiIiIiIiIisqApACYiIiIiIiIiIguaAmAiIiIiIiIiI
rKgKQAmIiIiIiIiIiILmgJgIiIiIiIiIiKyoCkAJiIiIiIiIiIiC5oCYCIiIiIiIiIisqApACYip4WZ3
WVmzsxur3RdTsTMdkb1vK7SdREREREGZL9TXE5H5RgEwkQop+894v5mlo7KLojJ3Gr/
30ZHvMLMhM9trZj81sxtO13dOok7XldXJmVkxap+vmlldpeolIiIiMl3q6x1TJ/
X1RKTiFAATqbwlwH+qwPc+BvwzcAT4APCAmf1+BepRLg/
8NXAX0Az8Z+DO6R7MzOIzUy0RERGRaVNfb5T6eiJSMQqAiVSeA/
7QzDJjV5TdJVsdfb49+nxX9Pl3os+bzeyvzGzAzF4zs4vN7M/
MrNfMtpvZ+8b53h85534XuAT4H1HZF81sRXTsFjP7n9HduX4ze9LM3lVWt/
9qZm+Z2aCZ5aI63DLRSZrZJWb2uJn1RfV8xczcGdgaHnXOfcc79B+BPo7Kbov2PGWZvZqvH3kEta6/
PmNkOYGtUvtzMvmVmu8wsa2avm9nlY777YjPbFJ3P/
WbWFO27xMweM7MOMyuY2REz+ycza4zWJ8zsH83sYNQOe8xsY1mdVprZ3Wa2z8x6zOxBMzuvbP1nzOztq
F5Horu2Z03UjiIiIjLvqK83Sn099fVEKkYBMJHK+wHQDnzqFI5xPvAO4HVgA/
AIcAvwDLAG+OZEOzrnHPAnQdQDEgRvNzAN+AnwS2A1sBC4AHiz7D3sNsIXwDt5PgHOBfxrpwI3jb4BrgA
eB7wHdwKXjbWhmtdH5AHSc4Lwn8t8I73o+GHU2HwZ+G8gC34m+e+mYff4ceDXa5v3AyB3SOiAN/
BT4x2jf3wK+GK3/beA/RPX8BvACCcHV0HiPf/
e+Al4FfANcBj5hZq5mtA74C1BO24y+AlYR3ikVERGRhUF9vDPX11NcTqYRYpSsgInwfOA/
4A+DpaR5jEHgvYUfiEaABuArYA/
QBy8yszTl3ZLydnXPOzD4J/CdrLydnXNDZtZB2DlrJ+ysXA30A7+ONnsLuBj498Bngf8X+N+B9YTD2Y8Ai6Pv3TnO14wMUb
8feI7wjl0wZpsGOzYnRgn4/0569sf7tHPumwDRncr1wAHgYufcUFQ+dsj87c65/25mfwr8MeG54wx708
w+CVxP2DavRsd795jz2kI4zeA1wjYH+DfAWmBfdL4QDdjLXEnZafxWV7QfuBV5zzu01M38a5ywiIiJzk/
p6o9TXU19PpGIUABOpvIBwCPj3gU+fZNsjwEuWG/
4A+DpaR5jEHgvYUfiEaABuArYA/
QBy8yszTl3ZLydnXNDZtZB2DlrJ+ysXA30A7+ONnsLuBj498Bngf8X+N+B9YTD2Y8Ai6Pv3TnO14wMUb
8feI7wjl0wZpsGOzYnRgn4/0569sf7tHPumwDRncr1wAHgYufcUFQ+dsj87c65/25mfwr8MeG54px708
w+CVxP2DavRsd795jz2kI4zeA1wjYH+DfAWmBfdL4QDdjLXEnZafxWV7QfuBV5zzu01M38a5ywiIiJzk/
p6o9TXU19PpGIUABOpvIBwCPj3gU+fZNuJ/
rPc6ZwbNrOrvesrKtzrmKsD0qkTbHG7v5ELb9y3kkUxadxHL6shxcDNZHs+iSwmSZHoiU4rn0jR6S3Jm84z3QqZLKspBoeBmsNuz4PAc7B4LBGVwTrdOWP9eLv7QOyNPzX2YQPKoCl4X1n4gtkcunwb3Ksg6Etzp0X/
r0kGFz2XzbgyCYBfKAd2D4pQbhm3xKgdibmA9LT63gfq2Lx4S6HuGvqqJtI/
pbkqkJqBIMh3PIi7m8+Y2Zb8CK4xdMqBB+VjArAm2pwZNGnk/rRGXcD3ea2b/
vu3b/5zQlnV8uA5Y1W2OYPb9Trj8DKHY/
8Eh49rdfOYnm0rlu+UQovIKS3xkQx5n/
hP4ojC5Op5QDHMvqRR3rb8PZfMOz3/
fg5/BX2nfu3FHMnd2HtR8U+3p6H4q7x6KX6i2ajjbZ/
OWXpzVJhy+pGq3q1+oZe5l+Lnq1ZWXbGS5VPvCmyC+CMHV3Hi5+fHXs5bvzNbe+/
7vn2tN7Z0vOB1Q7AlaRuWPfQfwzqEL+hLf/
qt/nw8ac9/nr/I6Pt7/PAqJbKSa8jl/
HCLtD9ZyL+ZFgPLDu+n/qKpTwdZt/
pP+FRHLFmCkJS+UMWmuIsiNp9T1wn7eNSa6f3ItLWq5ZnbX9e7bYoj+/
H9c+e9ZhP3eGvpaKx7x+pm6xTmJ9vrtlqHn9JvYu1kQcw3gIIDCyxNL2TmAfvVS/
1YI9FyKJRoKS4qH1e+OQbmLwx69t1wb2jhqMl6+l4gTtW9JfdQJTdJMKXmGGn6lYNVmZN5h6aHzpFX/
uWq+M5u6KfaJt5HzvH+P5MEsPrYPZhbtuFoXwKx2V16pLuJuHzbyAsbNmeOX6j9Na6lfZWiZCz7PiV29Q6J+lxDgWtcNKJtH9VwZpbwYd5lZGuTa6WXdeFp5JT7xnYP5GrQ/
Nqd+zhvuw85UtaWibRQWzqm/
UR6TMZKlaHwZvH+/t4Q4bHpW2a24ARuoUv9V0J4Mf5CXt0kaGJnP7KZhyNcW+1J5Sv+jKKAf15h5HDYZ/
eSBPQkCuH6hLz8CR1/
lqpuDVu+ARqN/
aAtSC0AQu7Wgu3wApwChvJHeeHyyAf+hgVY9rbY+R8fp+zmc/
MG3KxBm+VfrUhhI3TvYmBTFzV6GFuN/+TP/
xtHLfqAQtHDH/
ndHM64Fprd/XMdPeBDcVhPZ8BVy8jR5QkTc+O+5yXfNRRDQzrZhJeeNoy/
CeNNftpJDJ/
k4dgtDuYPdnsUsUiVjmLxBzCyffJOb/HXQMvmDtFGyt1zD8nvMOJ6sQ+8WCa6Kdr69/
u/zvrxBCW/
QvAQ1FsT8jK/
tQ49pGbDgh97hvoTgVYtq+6o9drL3rz7v7d2ORNIvZ0d/
X+99Ogw/
gaJYRDu/
C3a6oM4VhxyeDbO/
zD4XmXi+2lvmXVb09i8pZx/
8AjGXt88u/
FP/
h/
1n/
WH7QW+MnP3R3+NOTaPuxQLE+Pa/
6u/
Bbd9Hd1Mx/
H9G+aBnbdTQJm/
gG35wfr/
+Xk+4nZmx/
4n/
+ZWG55eDa0pj8h/
7ZqLZ5M4L3++27VmdZ/
G+7aZmdp2SUDWmeQ7XoJxufV0x7T+T7y2c8/
Ay3ddRmc+6/
3ngc/
ZDhnWD1n1xS9V6BxvjhCM+/
7HVGJuaX0BRM8Jbq4NDVX5q/
ooqAyfaHjxNc6Rp9PtqIqiZX8tpm/
LV/
pbDJmEvjd6lT4/
VV7k5PVuOt/
D0z9NM5D0B/
Tn7/
YfkjFvp/
0gnD/
jQnH2C3ZOJKBNZVv/
z7qf7G5F1v3lR/
lPfj1ZmlRXzUPzNFHF9d/
IjTVJNmwd/
fUd1nfsdqm/

tXK88YCIip8TM+PznP8/GjRvZsmXLCbfdvXs3t956K83NzWQyGW644Qa2bt163Dbvf//
7SafTrFmzhrvuumva0ykvvPBCAPbs2TPlevzFX/wF69atI5VKsWjRIm688UYOHjwIwKOPPoqZ8eCDD/
KBD3yAmpoaVq5cyZ133nlcHe655x7OP/98kskkK1as4I/
+6I8oFotH1991112YGVu2bOH666+npqaGs88+m3vvvfeY4zzxxBO8613vor6+nvr6ei666CJ+8IMfHLP
N17/+dc4991ySySSrVq3iy1/+8pTbbDoUABMREREREqTDXcSRcGDMFksZG8H09CVJEZAZ8+MMf5swzz+S
OO+6YcJuuri6uueYatm7dyp133sk999zD4OAg733vexkeHgbCaesf/OAHef3/Z+/Oo6ssz/3/v+/
n2VPmECBhRhEQgaKWiGKd6gDoUar2qEjb1Uq/
rVL1KNjlz+OMx6+u1rb6bfXUoYujntqqrXqoVAv1VK1UEMGJqoDKPCCcBMu9kP89z//
4IiYQkkED23hk+r7VYsvd+hmsHIpsP133dn37K/Pnz+cUvfsEvf/
lL3nnnncOqa9OmTQAcffTRarj6aef5r777mPu3LksWrSIX//614wcOZLq6upm1//+97/
PhAkTePHFFzn//POZPXs2CxcubHp98eLFXHHFz1q19lwYIFXH/99fzsZz/
juuuua1HrzJkzmT59Oi+99BKjRo1ixowZbNnNnSMKuyoqKCCy+8kBEjRvDCCy/wxz/
+ke985zvs3bu36fwHHni
A2bNnc/
HFF7Nw4UJmz57NHXfcwcMPP3xYX7uO0BJIEREREZF0K9sFoTBkZjV72jgu5PdVB5iIdCn+X/
4Hu2NbWu5tBgzCnXbXbxYZ3rOA633HIL3//
Tz58/n2VPmECBhRhEQgaKWiGKd6gDoUar2qEjb1Uq/
rVL1KNjlz+OMx6+u1rb6bfXUoYujntqqrXqoVAv1VK1UEMGJqoDKPCcBMu9kP89z//
4IiYQkkED23hk+r7VYsvd+hmsHIpsP133dn37K/Pnz+cUvfsEvf/
lL3nnnncOqa9OmTQAcffTRarj6aef5r777mPu3LksWrSIX//614wcOZLq6upm1//+97/
PhAkTePHFFzn//POZPXs2CxcubHp98eLFXHHFz1q19lwYIFXH/99fzsZz/
juuuua1HrzJkzmT59Oi+99BKjRo1ixowZbNnNnSMKuyoqKCCy+8kBEjRvDCCy/wxz/
+ke985zvs3bu36fwHHniA2bNnc/
HFF7Nw4UJmz57NHXfcwcMPP3xYX7uO0BJIEREREZF0K9sFoTBkZjV72jgu5PdVB5iIdCn+X/
4Hu2NbWu5tBgzCnXbxYZ3rOA633HIL3//+97nnnnsYPXp0i2MefPBBqur+eCDDygoKADga1/7Gkcdd
Tz58/n2muv5ZVXXuHDDz/kscceo5iYGNYA3P7iqaZb/
9lFtuuYVp06bV2d/ZV85+Y4ez7ZFe/Nazl81+nJBGZFmqmlFsSg7Vo8UpYS2XSRzbKNw4dKbaYnRe7ueTm0y/GOSBg5Q9O5L2Z//zG6rBhJpTSpvJ/ywgHHEBIEPUfRLiTK5zbKpE9uHK3Rs0tcqVz/8gvRfTBwUiHJXl2m3ygiUsu4rbJxfB9eHlyJLeRQb7lcBKAbF9WumAFRfNxKZ4ZJrQhSb7o9eafkmhgT5T7B1rnyRTpHoZk3jcYXy0yWpMLJ/
n

tXK88YCIip8TM+PznP8/GjRvZsmXLCbfdvXs3t956K83NzWQyGW644Qa2bt163Dbvf//
7SafTrFmzhrvuumva0ykvvPBCAPbs2TPlevzFX/wF69atI5VKsWjRIm688UYOHjwIwKOPPoqZ8eCDD/
KBD3yAmpoaVq5cyZ133nlcHe655x7OP/98kskkK1as4I/
+6I8oFotH1991112YGVu2bOH666+npqaGs88+m3vvvfeY4zzxxBO8613vor6+nvr6ei666CJ+8IMfHLP
N17/+dc4991ySySSrVq3iy1/+8pTbbDoUABMREREREqTDXcSRcGDMFksZG8H09CVJEZAZ8+MMf5swzz+S
OO+6YcJuuri6uueYatm7dyp133sk999zD4OAg733vexkeHgbCaesf/OAHef3/Z+/Oo6ssz/3/v+/
n2VPmECBhRhEQgaKWiGKd6gDoUar2qEjb1Uq/
rVL1KNjlz+OMx6+u1rb6bfXUoYujntqqrXqoVAv1VK1UEMGJqoDKPCcBMu9kP89z//
4IiYQkkED23hk+r7VYsvd+hmsHIpsP133dn37K/Pnz+cUvfsEvf/
lL3nnnncOqa9OmTQAcffTRarj6aef5r777mPu3LksWrSIX//614wcOZLq6upm1//+97/
PhAkTePHFFzn//POZPXs2CxcubHp98eLFXHHFz1q19lwYIFXH/99fzsZz/
juuuua1HrzJkzmT59Oi+99BKjRo1ixowZbNnNnSMKuyoqKCCy+8kBEjRvDCCy/wxz/
+ke985zvs3bu36fwHHniA2bNnc/
HFF7Nw4UJmz57NHXfcwcMPP3xYX7uO0BJIEREREZF0K9sFoTBkZjV72jgu5PdVB5iIdCn+X/
4Hu2NbWu5tBgzCnXbxYZ3rOA633HIL3//+97nnnnsYPXp0i2MefPBBqur+eCDDygoKADga1/7Gkcdd

```
0QxnUhKxu7VwGYiIhIRykAExEREel+WhsY1bRgzhjjAA8CNx3qQtbax621xdba4v79+3diiXIotqwhcD
R5DUsgPQtv1mSQ7/icEKnnxGg952bUkmUC3q6NYS2QnasATESkg+6++26MMU0/Bg0axDe/+U2+
+OKLpN/
7e9/7XtN9HcdhyJAhXHnllWzYsCHp95bmFICJiIiIdD9bgKH7PR4CbNvvcQ4wHnjDGLMBOAX4kwbhdy2
2srzhJ5lZAKysi1JhHU6I1OPsizgdA8dF6tnmh9jkhTDZ2aAlkCIiHZaXl8fSpUtZunQpP/vZz/
jggw8455xzqK6uTvq9x4wZw9Kl9KlS1myZAn33HMPb7zxBhdccAH19fVJv7d8STPARERERLqfd4FRxpijga
3ADGBm44vW2nKgX+NjY8wbwI+ttStStSXKccTFUlGAPRGDWBYWltjEGux4CQ3+ywo0MeH9cHvB2PckV2Ln
zxGdbzMCF9lBcRaa9QKMQpp5wCwCmnnMKwYcM4/
fTTeeWVV7jsssuSeu+srKyme5966qlkZmZy5ZVXsmLFCk499dSk3lu+pA4wERERkW7GWusB1wGLgE+B5
621Hxtj7jHGTE9vddJetqoSMjIxjsM/
4jESwPHRP5txwwAAIABJREFUuhbHuQbGhBNs9sJsyR8E2Ibh+SIictgmTpwI0Gwp4vPPP89XvvIVotEo
Q4cO5bbbbsPzvKbX9+7dy8/+fO/
jjz8egM2bNzd7ftOmTcyYMYOCggZIyMzOZOnUqa9asaXbM/
fffz8iRI4nFYhQVFTFTFt2jR27NgBwBtvvIExhsWLF3PhhReSlZXFsGHDePTRR1vUcKj3+uSTT2KMYdWqV
Zx33nlkZWUxZswYXnzxxxWbXWbJkCaeffjq5ubnk5uZywgkn8Ic//KHZMb/5zW8YN24c0WiU4cOH89Of/
rTDX7POoABMRERREpBuy1r5irR1trT3GWvt/
9z13p7X2T60ce5a6a6v7qgqgqIZeBb+GddhKNCHnmObfXQY8IJoiZgWc5wAM0BExE5Qo3B14ABAwBYvHgx
V1xxBV/96ldZsGAB119/PT/72c+47rrrms6ZO3cuS5Ys4cEHH2TRokXcd999GNPaWM/zbfXRokXcd999GNPaWM6D27RpEwBHH/
3lLsC7d+/mtNNOY82aNTz66KM8//
71rxk5cmSLZZZzf//73mTBhAi+++CLn38+s2fPZuHCL/fEac97bTRz5kymT5/Pggw+yatQoZsyYwZYtW5peq6io4MILL2Tr1q3ccccdd/zdrb5b77vXTJ1ws8ed85ZdBqH99KiggqqK1Z5RowHFz7rHE5JCq/rjvD6+xFUvHBbVkyyhQZb27YtykHZ++yMT25+XF0tEn76NwSy6rMJLfKhaEiT1/lPlCW8jUs86aOTwIRTR1cvaHG1uNqzbsd8BuOz2Ii44SgvvBOqwjFFuM3fbelLbAWpfxeo2qeW8ZqSaoHKJ1cz7/aWQA8MmrN5IUOQGYBSdeb57FCYaG
+qSRHYUZKVqG8FW5xoz/jM4cNsPzaJcrzc99Ok9+HPypufsHPFwaPaGjbYAsXY7W+Y3DSuJKUbq0dcRK9+MDCXD3m5XT6eiF9lkDu+tgoxiOQpk4BHdsf2+ehdX6C8N9Lzp2GT9OOlFzGeKsbaKG8hQd2P/K4gcMGY3uDDmY6rxTpl0ZiJjpCS0P99oDFACCuU5KKhUWO1KVR1ioDlg3KD6ozNgGvHzDEy9CURfDlKMcMzdw
vDxee+01jDEMGDCAQYMGNS1fLC0tJZFIUFRU1Oycxse7dzf8o8PDDz/MnXfeyT333MO1117LyJEj+Y//
+A9mzJhx0Hsfd9xxPP300yQCZYsWcKtt97K1VdfzXPPPdd0TGlpKcuWWLWv2XKNzzjkHgFmzZhE1ojYkOxEmiQhwNdxGnXHfVnKb9D6BWrSF1TXuR2UeEWJBFk6cJPZDMuMcJxAcWH8CQ2k7E
+A9mzJhx0Hsfd9xxPP300yQSCZYsWcKtt97K1VdfzXPPPdd0TGlpKcuWLWv2XKNzzjkHgFmzZlFZWcnj
jz/OPffcQ9+
+fZk9ezZ33313s06qwsLCZucXFhbieR6lpaUA7XqvjfLz85s9jkQixONf7v7Om9W8mHVmRbJGCcEpbXUhMuzuROYPkXMPxrkfA3u6gWXgeFeCdd9e09RtoGKnNQEMxl8SWKetPzVoSkIwyNDRhCqBSp60qWn6qxvKhnJCVJ/dmgMd56XlVUPQuHDbuvGEjeMVIGkXxD8Hx6+LZfuFX6hi+hCD+gZGiqVpqRibeNL7KYzIWJO4a8g8O4eFfOgT9MVgVS1tgWFqhRVcO
QMGXKFH71q18xYsSIpvuNGzeu1a/
L5s2bGT58eBtftcRqTBoY8/
plbRM36KnKTXKKISE8SCoUoLi5u9bV+/+/foRDofZ6KRvHsJeTuE+d37twUMKkMT8/n1/+8XSnp8ctHo9cb9SPmk9ZmZlN9548eTyLbxVXnuwyKQTJp1zfz2zjPaHRzRPOqxLYCsVvAqk2nqPQ5BYqJIf1zCOEG
5KOPPuKnP/0p3/rWt5gwYQ
r06dxxxx0tzm9cXug4DnPmzPmzGHOnDLs3BBgAyzzTXXNB1/4PvYtWsXoVCIfv0aNohzVdi7WhJUEqE8uuXfo9PVKzaWjNmz0ILnGf0cY/DiL1o9QGFk61JzDcfq1Sj4YLTEXMWVGX6ExVNsLaA6yyd0w9i0c1GxfscrAQbTxpKR9NzzWtjvY9JwsoX28Z
Of/KTpuXPOOYeP
6YcePGUVxc3OxHa0HRKFDueWWxg5ciSffPJJs9spa9n3uzhjjYvjvzp6P6V8jSEXdZ9w9EYyr0nhO0W2
N58mQyMjLYtm1bi/
dUXFzcFOylSNgWTMzQbrrRvo0RHX2ERKlSdmsYTj7ZQNwKsPPXdahe4Ju9xXKt0Cy7Tu+0gk0J3KRtJ+mS2a8gZxO3ASsWEReeOcZbSUXM0kn2iGSJiGalAOHBh+TDX5xnBdq/wjp88gwG/F4Nw
Wqq65ixowZrFq1ijvuuIMf/
OAHTUPhTzvtNLC655BLLGjx+PMYYHnvsMWKxGF/5yldafa3333/W9/
y9lnn83111/P4MGD2blzJ2+88Sann346l156KTfffDN33nknZ559NhMnTuTTTz9l27ZtzYYOR6NRvvnNbzJr1iweeeQRHnjgAZ58sknm+y8Xuu/3RBU4Rc8ltPYixF4NWEqmlmXm3wdB+Y4JrQRIBz62GkvDx1+N4T8zp5zCrh9p9zNBlH/7v
PZZ581C9IAXn31VSZPnkwQBIRCIeKxYxUG/cXdwh9lVDzuyUeXMzsrYdl++/KiZ6Sz/VA5RDIJLFjsTfk6jPSAvL86c3e8/z3nl
y9ln583111/P4MGD2blzJ2+88Sann346l156KTfffDN33nknZ559NhMnTuTTTz9l27ZtzYYOR6NRvvnN
Pnzufjiixk2bBhbt27ljz/+yOLFi2lubsbzPNavX88tt9zCwoULycvL44orruCuu+6iT58+TX3ml5eX89FHH/
vUVQl2wKwEREREUq2qEgtscLMpcn2cQ8z/
amQMDEpUaHwyePZiiAUktU5gyZQrPn2Pg8Oc//k1Vdx9PvxdNHHHAaMddHvv1ggZCgWX5POvP2VxRwAnV81Y4YNxanLn+92S96CeRYEEt0mAfmJDKvj7kp8ZI
amQMDEpUsaHwaOyePZiiAUktU0Skt5gyZQrPPvss9957L8888wyFhYXcdNNNzJs3r+mYyZMn8+STT7Jh
wwZc1+XEE0/k1Vdf7VBo1Oi6667jgQce4Oc//zmPPfYY/
fr1Y9myZdx2223MmTOHvXv3MnDgQE477TQmTTJjQdP8nnniCxx57jHg8zsiRI3niaiSe4+OKLm137N7/5D
Q899BAPPvggBQUFPPLII0yfPr1ywvxOr1D77U9Ro4ciTGGW2+9lV27dtG/f38uGPgPCph0oAW6+
+WYGDRrEgw8+yM9//nMLuJsNhhqrbbsPLi4uto27D/
RkN954Y9PPR828IMjhMMastaN2PvRDmuktn/
W6Av8ff6N06VL+65yrKY7GGRn22n3ulVLIkM4Dux3Qw+bnQSqxQRgU8//ZTjjjjsu3WVI0O7zxVIO7zxxht8/
```

etfZ9WqVYwfPz7d5XSqg/
0+bO9nPc0AExERERFJtapKNgwYCdDu+V+NCmMOWMu66o6dJyIi0pspABMRERERSTFbVcHGohFkm4Bsp/
0rMgAiGRkM2LuddUEsSdWJiIj0PJoBJiIiIiKSYn5lFZuHD2F4B7u/ADCG4Xu38k5+MTVeQGZI/
6YtIiJw1lln0ZExV72N/
rQUEREREUmxUuuScMP0P5wADBhauxuMYX1FfSdXJiIi0jMpABMRERERSbFdbhYAfQ4zACswCaKJOJur2
j88X0TkcKmrSNKps37/KQATEREREUkhm0iwM6sv4cAjxxzeh/
ogO5eBu7eypaquk6sTEWkuHA5TW1ub7jKkF6utrSUcDh/xdRSAiYiIiIikUnUlu/
KKKPBqMObwLuFl5TJoz1ZK6wLiXtC59YmI7KewsJCtW7dSU1OjTjBJKWstNTU1bN26lcLCwiO+nobgi4
iIiIikkF9ZSUleESP9CuDwdnL0s3MZtPoTwLCtxmNEbqRTaxQRaZSbmwvAtm3bSCQSaa5GeptwOExRUV
HT78MjoQBMRERERCSF9lRUkwgV0ofD76TwsnIZuGcbxlq2VCcUgIlIUuXm5nZKACGSTloCKSIiIiKSQj
trGwbf50UO/
6O4jUQJOYa+iSq2ahC+iIjIISkAExERERFJoZ0Jg+t75ESPYKCvMfhZuQys3MW2mgSB5vKIiIgclAIwE
REREZEU2kmEflVlOO6RfRT3snMZVLqJRAAl+7rKREREpHUKwEREREREUsRay85wNv1qdh/
xtbycfIZsWQPAlmoNphYRETkYBWAiIiIiIilSkQiocyP0q6s84mt5OfnkVe8hw7FsrdYcMBERkYPRLpA
iIiIiIimyo6YhqCrwao74Wl5uPgYotHVsqXaP+HoiIiI9WZcKwG688camnz/
00ENprESk69P3i4iISPezs8bDBAF9TIIjjcC8nHwABtTuYaONUZnwyQkrCBMREWmNlkCKiIiIiKTIzqo
6CqrKMNGMI75WEMskCEcYuHcbgJZBioiIHIQCMBERERGRFNlZ61NUvoMgI/
PIL2YMXk4eA3ZtwDWwtUqD8EVERNqiAExEREREJAWqEwFVgaGwfCd+LKtTrunl5BPdXUJB1FUHmIiIyE
EoABMRERERSYGdtQ0BVW
H5zs7pAKMhAHMr91IQMeys9fAD2ynXFRER6WkUgImIiIiIpEBZ3Aegb2UJfkZndYD1wVhLoV+Db2FXXF
1gIiIirVEAJiIiIiKSAmVxn5ifIOYnsKFwp1zTy8kDYEB1GQDbtAxSRESkVQrAREREREERSoDTu0aeusm
H5ozGdck0vNx+A3D07ibmG7TUKwERERFqjAExEREREJAXK4j59avZ22gB8ABuJ4ccyCO8tpW/
MZVu1doIUERFpjQIwEREREZEkq/
ECan1LQUVJpw3Ab+Tl5BPaU0rfqMvuuoC4F3Tq9UVERHoCBWAiIiIiIknWOAC/
357t+LEkBWAxF0DLIEVERFqhAExEREREJMmaArDd2wiSEIC51ZX0dRqCr20KwERERFpQACYiIiIikmRl
cQ8XS25tOX5G580Ag4YADCCjYjd5EUdzwERERFqhAExEREREJMlK4z55ToCBzu8A27cTZGhPKQVRl201
HtbaTr2HiIhId6cATERERKQbMsZMM8asMcZ8boy5pZXXrzHGrDLGfGCMWWKMGZuOOqVBWdwnL6gDwO/
kIfh+dh4AoT0l9I251HqW8noNwhcREdmfAjARERGRbsYY4wKPAOcDY4ErWwm4fmet/
Yq19gTgp8AvUlym7JMILBWJgD6JGqDzO8BsKIyXmdO0EyRoDpiIiMiBFICJiIiIdD+TgM+tteustfXAs
8A39j/AWlux38MsQGvi0qRxAH6feDkAfiyj0+/
h5eQR2lNGftTBNbBdc8BERESaUQAmIiIi0v0MBjbv93jLvueaMcZca4z5goYOsH9r7ULGmB8aY1YYY1a
UlJQkpdjerize0I1VUFVGEI6AG+r0e3i5fQjtKcGBpjlgIiIi8iUFYCIiIiLdj2nluRYdXwlbaR6y1xwD
/H3B7axey1j5urS221hb379+/
k8sUaOgAM0BBZVmnL39s5OXk4dTFceI1FMRcdtR4+BqELyIi0kQBmIiIiEj3swUYut/jIcC2gxz2
LHBxUiuSNpXGfbLDDuGqiqQsfwTwchp2gnT3lNIv6uJbKKn1k3IvERGR7kgBmIiIiEj38y4wyhhzt
DEmAswA/rT/AcaYUfs9/B6wNoX1SSIWQtHGLz/spi/
vkRhycmsokdoD1ASC0p5SC2L5B+JoDJiIi0kQBmIiIiEg3Y631yEjEg+jaOAmsRjZ
lzucnqtvxJz/
zHxpgPgLnAd9NUbq8WWMueep/
csINTU42fpADMz87BGofQnlKyQoaYazQHTEREZD+dP4FTRERERJLOWvsK8MoBz925389Ssp6gKBBvXiQWegQGu8pK8kIkZtxJ5PYvcsZi3KKqEs7JFjsMVBcIDP0PvEeIEk22vhzCn/
AQm4I3HgNQTQ5SyBxXLzsXEJluzDG0Dfqsq1aAZiIiEgjdYCJiIiIiCRJ6b4dIPODegCCjOR0gAHU9x9
EdMs68H36xlx21/
nEvSBp9xMREelOFICJiIiIiCRJWbxhEH1+ogogaUPwAeKDh+PUxYls20jffXPAtmsZpIiICKAATERERE
QkacrqfDJcQ0ZtQwAWRJPXAVY3YBjWcYitX0NBdN8gfAVgIiIigAIwEREREZGk+XIHyMYOsOQFYDYcoa
7/
IKLrVhNxDblhh+2aAyYiIgIoABMRERERSQprLWVxr1kAlswZYADxwUcT3r0Lt3w3fWMu22oSWGuTek8R
EZHuQAGYiIiIiEgSVCUC6gPIDbu41VVYx8WGwkm9Z3zQUQBE162mb8ylxrOU12sQvoiIiAIwEREREZEk
aByA39gB5mdkgjFJvaefm4+Xk09s/
Rr6RjUIX0REpJECMBERERGRJCitawjA8vYFYEESd4DcX3zQUUQ3r6OP4+Ea2FadSMl9RUREurJQugsQE
REREemJdsd9wg7EXINbU4WfxB0g9xcffBTZaz4gtvkL+kSHt7oTpPU9gmV/B8/D5ORCTh4mrw/
0L8IkuUtNREQkHRSAiYiIiIgkQWncIzfsYozBqamivqhPSu5b138QQThCbN0a+p4wgs8r6vGtxd0XbFk
b4P/Ps9h/vt/
iXPey72LGTkhJnSIiIqmkJZAiIiIiIklQFvfJjThgA5za6pQtgcR1qRswlNj61fSLOfgWdu7rArPWEiz
6E/
af72O+egrOt3+I881v41xwCWTnEry7JDU1ioiIpJgCMBERERGRThb3Aqo9S27EwcRrMUGAH0vNEkhomA
PmVlUwsLoMgM1VDXPAgiV/I3jnLczYCZjxJ2BcF5Odg+k/
ADP6OOyGL7ClO1NWp4iISKooABMRERER6WRl+w3Ad2uqAQhSGoANB2Dg314k16tl8+Yd+G8sIvjbK5gR
ozHFp7aY9WVGjgHHIVi5LGV1ioiIpIoCMBERERGRTlYWbwjAcsMuTk0VAH6qlkACQUYWlWNOxNTWMHT7
52zxw/hvLobBwzBfO6vVQfcmIxMz7GiCD9/
FJrRzpIiI9Cwagi8iIiIi0snK4j6OgaywaQrAUtkBBlDx1dOo4DSy6l3i9Rnsmf5t+uVlYZy2/
w3cjB7bsAzykw8xxxensFoREZHkUgeYiIiIiEgnK4175IQdHGNw0xSANeofCgDYktn3oOEXAAMGQ24+/
sqlKahMREQkdRSAiYiIiIh0sqYdIAGnpgprDEE0lpZaso0lwwRsSRx68YcxBjP6ONi8AbtzewqqExERS
Q0FYCJyRG688camH+n0zDPPcOONN/Lss8+mtY7Fixdz44038r//
+79preOtt97ixhtv5O23305rHeXl5fzqV7/+ioqIirXWsXr2aOXPmsGbNGtXRRXSV7xSV7xWRZPACS3l9QF54
XwBWXUUQzYBW5m6lgjHQz/XZ7IWWwth3HH3MsuC6BusBERKQHUQAmIj3Cu++

+C8CyZendueqVV14B4OWXX05rHS+88AIAzz//
fFrrWLx4MevWrWPRokVpreOpp57CWsuTTz6pOrqIrvK9IpIMu+t8LJAbcQFwaqvStvyxUaETUGUdKoJD
f/
w3sQzM8BEEH63A1teloDoREZHkUwAmIoftwK6vdHWBPfPMM80ep6sLbPHixc0ep6uz5a233mr2OF1dYO
Xl5bzzzjtYa1m+fHnausBWr15NbW0tALW1tWnrvuoqdXQFXeV7RSRZmnaA3LcE0q2uSukOkK3p7zbUtN
lz23W8GTkG6uqw6z9LZlkiIiIp02V3gUz3cippnX5dpCtq7P5qtGzZMmbMmJHyOho7Whq9/
PLLnHPOOSmvo7H7q9Hzzz/PqaeemvI6Fi9ejN231iYIAhYtWsRll12W8jqeeuqpZo+ffPJJ7r///
l5bR1fQVb5XRJKlMQDLaVwCWVOJV1CUzpLIcwIiWLZ4IcZHE4c+oXAAOC5243o4dnzyCxQREUmyQ3aAG
WN+aIxZYYxZUVJSkoqaREShkB1ixYgW+3/CXQN/
3WbFiRVrqaOy6autxb6tDRJKvLO6RHTaEnIaZX05Nddo7wPafA9au490Q9C8k2PhFkisTERFJjUMGYNb
ax621xdba4v79+6eiJhER6QGKi4tx3YalNq7rUlxcnJY6MjIyDvq4t9UhIslXGvfJDTf8/8/
U1+F4ibTPAIOGZZB7ApfqoH3D+E3hQNi+VXPAREScR+iySyAfeuihtN1by/zals5fF2lOv0+/
dNJJJzVbBnnKKaekpY4LLrig2dKuiy66KC11fPOb32y2DPLyyy9PSx1TpkzhnXfeAcBxHKZOnZqWOr77
3e/
y6KOPNj3+3ve+16vr6Aq6yyveKSDIE1rK7zmdUXgQAp6aq4fkuEoABbPZCjIkcehmkKRqEXfUedvOGhp0
hRUREujENwReRw3ZgIJqugPRb3/pWs8fpmP8FDYHP/
tI10+j0009v9jgd878A8vLyOPnkkzHGMGnSJHJzc9NSx5gxY5q6rTIyMjj22PT8Ja6r1NEVdJXvFZFkq
KgP8O2XA/
AbA7B0L4EEKHACwljWJ9r5b+CFRWAMduO65BYmIiKSAgrARKRHOOmkk4D0dX81uuCCC4D0d7R885vfBN
LX/dVoypQpjBgxIm3dX42+
+93vYoxJe9dVV6mjK+gq3ysina20cQfIfQPw3S7UAeYYKHJ91ifC7Nuj5KBMOAJ9+xMoABMRkR6gyy6B
FJHuoassi/3Wt77VohMsHaZMmdKiuyUdTj/99BadYOmQl5fH9ddfn+4yGDNmwDNmDA8+
+GC6y+gydXQFXeV7RaSzlcU9AHIjDTPAnJpqAPwuEIABDAx5bKmLURY49HODQx5vCgdi13yM9RKYUDgF
FYqIiCSHOsBERERERDpJWdwn5hqibuMOkJUABNH0L4EEGLBvDtj6RPvCLFM0EHwPu3VzMssSERFJOgVg
IiIiIiKdpGEHyC8/YrvVVQSRKOzbFTfdshxLruO3fw5Y0UAAzQETEZFuTwGYiIiIiEgnsPt2gGwcgA/
g1FZ3meWPjQa4Ppu9EIn2zAGLxqBPX+ymL5JfmIiISBIpABMRERERER6QQ1niXu2+YBWHUVQRfYAXJ/
A1wfH8MWr31dYKZwIHbTBmzgJ7kyERGR5FEAJiIiIiLSCUoPGIAPDTPAuloHWKHr42DbvwxywEBI1GO3
b01uYSIiIkmkAExEREEpBOUxRs6pJrNAKup7jID8BuFDPR3/fYPwi/
UHDAREen+FICJiIiIiHSCsjqfkIHMUMMOkPgeTl0tQRfrAAMY6PqUBS4VgTnksSYzC3LzsZsUgImISPe
lAExEREEpBOUxX1yIy7GNIRKTk01QJdbAgkNc8CA9neBFQ3AblyHtUEyyxIREUkaBWAiIiIiIp2gIQD
bb/
ljVQUAQUZWukpqU54TkGkCPqtvXwBG0SCI18KuncktTEREJEkUgImIiIh0Q8aYacaYNcaYz40xt7Ty+l
xjzCfGmI+MMf9rjBmejjp7izo/oDIRNJ//
tS8A8zO7XgBmDAwNeWzwQsTbswyyqGEOWLDxi2SXJiIikhQKwERERES6GWOMCzwCnA+MBa40xU94LD3
gWJr7QTgj8BPU1tl77K7cQD+fh1gTlU5AH5mdlpqOpShIY8Aw+ft2Q0yKweysjUHTEREui0FYCIiIiLd
zyTgc2vtOmttPfAs8I39D7DWvm6tDWvm6trdn3cBkwJMU19iql+wKwvAOWQFrH6XK7QDbqu28Z5Jr6yCGPNcZg
igbumwNmU1CdiIhI51IAJiIiItL9DAY27/d4Wm/n2vJ94NXWXjDG/
NAYs8IYs6KkpKkpKQTS+xddtf5GCC72RLIcvyMrIb1hl3Q/
ssg69qTaRUNgqpK2F2a9NpEREQ6mwIwERERke6ntUSl1QjDGPNtoBh4oLXXbWPW2uLrbXF/
fv378QSe5fSuE9O2MHZL+xyqyq67PLHRkNDHj6Gz9sxDL9xDpjdqGWQIiLS/
SgAExEREel+tgBD93s8s8BNh24EHGmHOB24Dp1tq6q6Fk/
s0BExGRbkgBmIiIiEj38y4wyhhztDEmAswA/rT/AcaYE4HHaAi/
dqWhxl7DCyx76oCJmJ87+wFqeqgiCja3eAGQNDQh7rE4deBmmMgaKB2A3aCVJERLofBWAiIiIi3Yy11gOu
AxYBnwLzrbUfG2N+bYyZvu+wB4AsYIEx5gNjzJ/aeDs5QqW1PhZaHYD/n5uP6FJ/cMKFRWJx0H8/
ZpjhaTWUXPn2s/NsbcY4yZvu+wB4Bs4A/
GmA+MMX9q43JyhErjPhEJIAGGdXQZZPkebmIIFmIiLSedqx57GIiIiIdXW2le
AVw547s79fMt5T1Mxw3DjZb5yovqpUpqPQDyo80H4AP4mV17CSR8uQxyWR3mxOWOdzuNBZMyBn0aPpc6Ecd
HEQY81RYOwNMwBMxMmpqZAERGRTqA
OMBERERGRI1AS93HMgTtAVgDgd/
ElkNCwDHJ4yGOdF6IyOMSOlfkFEI5oEL6IiHQ7CsBERERERI5ASa1HfqT5DpBOYwDWDZZAhwTTmCBj+
oOPgzfOA4UDiBQACYiIt2MAjARERERkSOwq9Yjb7/5X9CwAyTQ5XeBbJTtWAa4Ph/WRQkONQy/
aBCU7cJWV6amOBERkU6gAExERERE5DDVJAKqqPdt8B0galkD6sQxw3TbO7HpGhhNUWYd1iYOPCTZFAwGw
G9enoiwREZFOoQBMREREROQw7Yo3DsA/oAOsqrxbzP/
a3yDXJ8MEfFFfFAXPfiBffuDG9IcMBER6VYUgImIiIIHKaSWh+A/
BYdYOXdZvljI8fA0SGP9V6IioMMwzeuC/
2LCDZ+kcLqREREjowCMBERERGRw1QS94i5hrRwa9hpbjbPDByKisIuskA/P01DsP/
8BBdYGbAINi5HVu+JzWFiYiIHCEFYCIiIiIih6mk1iMv4bI0V4Z16jLRMxGPz2ulXp0S2E9L6Kp2b5sIMzGvzdKtgJ+ztUOD2K
YOVSrOelsDoREZHDowBMREREROQw7K0P8CzkR1vuQZw9IF5gzZZjzUVGM/
+TB1xYmIiBwmBWAiIiIiIodhV+2+HSBbdIB17wDMGBgbqfNx85Us6fA9bsgNbXXkE
VYqIiHRMKN0FiIiIiIh0R43NsTw5AAAgAElEQVQ7QOYdsAOkU1UBdN8lkAADXZ8Cx2dpPMr4PMr4SD1OK5tC
GmMwY8Zhl/+DYNtmnEFDD3ldW7ID//VF2E8/gqwcQjO/
j2nHeSIiIkdKHWAiIiIiIodhV61HTtghKmd465EwSQ+2dE.95FZVEITC2PBBuqe6uMYusPLA5dP6cNvHHXMshMIE7/7j
oNeze3fj/c/
v8X79M+znn2LGnwAGvCcfIVj9z84uX0REpAUFYCIiIiIih6FxB8gDuZXlDcsfTSttU93IYNcn3/
F5Ox4jaGMWmIlEMSNGYVe9j62pavIWYYOMXeI/9AvvP9zFjJ+Bc+i2ciZNxLrgU8vrgP/ck/rK/

Y+1BBo6JiIgcIQVgIiIiIiIdlAgse+oD8qNui9fcqopuvfyxkTEwLlLPnsDlw4PtCDlmPPgewXvLW7wW
rHoP/
78fg2gM5xszcIpPxcQyGs7LyMSZOh2GHUWwaAHBO28l7b2IiIgoABMRERER6aCdNQ0D8Pu00gHmVJUT9
IAADGCI61Poevy9NkZN0HpHm+nTFwYMInjrr3gv/pbgo5XY6ir8v7+G/+Iz0K8I5/
xLMDm5Lc8NhXHOmgoDhxAs+V+sl0jyOxIRkd5KQ/BFREREDpo+74ArCB2QAeYDXCrK/
GHjkxDVZ3PGJgYreMvNZm8WRvj/KzaVo9zJp+J/XAl9rPV+Kve//L8EaMwp34d47bslPvyHgZn/
IkEf30Zu+o9zIknd/
r7EBERUQAmIiIiItJBO2o8MlxDZuiAHSBrqjFB0DADrIfIcyzHhhOsqo9yfLSeQSG/
xTEmNx9z+jkNc7zKSrBbN0EsAzN6LKY9s9AGDoY+ffHffhNzwqT2nSMiItIBWgIpIiIiItJB22oS9D2w
+4uG+V9Aj5gBtr9xkXoyTMBfazLaHIgPDd1cpl8hzvHFOMeOa3eQZYzBjDseSndiP1/
dSVWLiIh8SQGYiIiIiEgHxL2APXUBBa0NwK8sB+hRHWAAYQMnROrZ6YdYURdNyj3MUSMhM4vg7TeScn0
REendFICJiIiIiHTAjrbmf9EwAB96XgAGMCzkMcRN8PfaGNu8tmd6HS7jupjjvoLd8Dl2+5ZOv76IiPR
uCsBEREREDpg274ArG9rHWBVFVhjCKIZqS4r6YyBSbE6MozlT1VZxNvYFfKI7jF6LITD+Evf7PRri4h
I79alhuA/9NBD6S5BpNvQ94uIiEh6bK/xyAk7RNyWAZBbVY6fkQ1Oz/
x35oiBU2NxXqvN4NWaDC7OqqEz59WbSBQz6jjsPz/AnnMBJq9P511cRER6tZ75J7OIiIiISJJsr/
EoiLb+MdqtqiDI7FkD8A/
U1w04PlLPZ4kI7yZhHpg5bgJgCVYs7fRri4hI76UATEREREESknSoTPlWJoNX5XwBOZUWP2wGyNceGEwx
1E7xRm8GqukinXttk58CgoQQfvosNgk69toiI9F4KwEREREE2ml7ddvzv2DfEsgeOAD/
QMbAKbE6ilyPv9RksLY+3KnXd0aOgcoK7Lq1nXpdERHpvRSAiYiIiIi0044aDwP0aSUAM/
FanER9rwjAAFwDp8fi9HUC/
lSdyfpEJ44XHnoURGMEH7zbedcUEZFeTQGYiIiIiEg7bavxyI84hJyWk99Du3cB4OX0nsHtIQNnZNSS6
wS8UJXFR520HNK4LuboUdjV/8TW1nTKNUVEpHdTACYiIiIi0g7W2oYB+G3M/
wrtLgEg0ct2LowYODujlkLX5y81mbxeEyOwR35dM/
JY8D2Cf75/5BcTEZFeTwGYiIiIiEg77K0PqPMtBW3M/
wrvLsE6Ln5WboorS7+IgTNicUaF63m3LsaLVVlUBy275DqkoB/06Uvw/
vLOKVJERHo1BWAiIiIiIu2wtToBQN82O8B24eXmg9M7P2I7BiZG65kYjbPBCzG/
Ioc1RzAc3xjT0AW2fQt21/
ZOrFRERHqj3vmns4iIiIhIB22qTBBxDHmR1j9Ch3aX9Kr5X20ZFfaYmllDhrEsqM7i5epMag6zG8yMGA
2OQ/
C+huGLiMiRUQAmIiIiItIOG6sSFGa4OKaVMMdL4Jbv7nXzv9qS51jOzahlfKSONfVhnqjI4YO6CLaDs8
FMLAOGDCdYtRLr+8kpVkREegUFYCIiIiIih7C3zqe8PqAwo43lj3vLMNbi5SoAa+QYGB9JMDWzhjwnYH
FNJv9dmc1Or/WvYZvXGTkGqquwq/
+ZpEpFRKQ3UAAmIiIiInIIm6oa5n8VZYRafb1xB0gvtyBlNXUXeY7l67E4p0Tj7A0cnq7M5rWaDOra2w
02eBjk5uO/
uRhrg6TWKiIiPZcCMBERERGRQ9hYmSDmHmz+1y6AhiH40oIxcFTY44LMGkaGE7xXF+GJ8lw+qQ8fclmk
cRzM8cVQsgP78YepKVhERHocBWAiIiIiIgdhrW2a/2Vam/8FhMpK8LJysKHD3/
WwN4js2ylySkYtMWNZWJ3Fc1VZlPkH/
2uJOXok5Bfgv7EIG2gWmIiIdJwCMBEREZFuyBgzzRizxhjzuTHmllZeP8MY854xxjPG/
Gs6auwp9tQFVCUCCttY/ggQ2lOi+V8dUOAGnJtRy8RonO1eiP+qyGFJbQy/
jW4wYwzOCSdBWQl21fupLVZERHoEBWAiIiIi3YwxxgUeAc4HxgJXGmPGHnDYJuB7wO9SW13Ps7GqHoCi
NgbgYwNCu0s0/6uDHAOjwh7/klnD0JDH2/
EYv6vMZk9b3WDDjoaCfg1dYNoRUkREOkgBmIiIiEj3Mwn43Fq7zlpbDzwLfGP/
A6y1G6y1HwGaGn6ENlUmyHANOeHWPzq7FeU4XoJEnjrADkfMsUyO1XFqrJYy3+XJihxW1UVazAYzxuCc
OAn27sZ+8G56ihURkW5LAZiIiIhI9zMY2Lzf4y37nuswY8wPjTErjDErSkpKOqW4nuTL+V+htud/
NQ3AVwB2JIaFfKZm1tDH9Xm1JpMF1ZnUBgd8zQcPg35F+H9fjE0kDnlN6/sE/3wff/
HLBB8sx+7YhvW9JL0DERHpytoeZCAiIiIiXVVrScwh9tJrnbX2ceBxgOLi4sO6Rk9WGvep8SxFmW0sfw
RCuxuCQy2BPHJZjuWsWJw1iTCr6iNsqwjxL1k1DA83hFbGGJyvTiJY/
DLeEw8SumQmZuCQFtexdXGC994hWPZ3qNjbsA1lY0uZ62JGHYd76bcxYW1aICLSWygAExEREel+tgBD9
3s8BNiWplp6tE1VDV1GRQcbgL+7hCASI4jGUlVWj+YYOC6SoMj1WVYX5bmqLCZF6zg9I45rwAwcgnPuv
xD84w283/wS56wpOF/7OtTXY79YQ/DZp9jVq6CuDooG4RRPhsFDobICu7sUSnZiP12F/8f/
xr3iuxin7XBTRER6DgVgIiIiIt3Pu8AoY8zRwFZgBjAzvSX1TJ+V15MTdshuY/
4XNCyBTOT1aegykk5T4AZMyajl/booy+tibPRCXJRVQ4EbYAYPw/nG5
dhlbxH87VWClUuhsgKCAKIxzJDhmDFfwQr/PKCeX0weX3g6FEEufnYd97Cf/
kPuNOvaHN5q4iI9BwKwEREREES6GWutZ4y5DlgEuMEuMB8a+3Hxph7gGgBXXW2j8ZY04CXgL6ABcZY+ZZa8else
xup9YL2FSZ4Nj8yEGPC+0uIT5oeIqq6l1CBk6K1THQ81gej/
FkRQ5fz6zlhEg9JhrDnHkewdCjsJ+vxgw9GjN0OPQrwjgHH3XsjBlPEK/
FfvAuQVY27rkXpugdiYhIuigAExEREemGrLWvAK8c8Nxd+73/LtGtktIOflteTw9Hicxva4ufzqU1/
38XRqWRsph+ry8ngAYmt32nChTW41bW60B+Ek2JORTkFnDO3VR/
lqTyZr6MNMya8l3A5wRo2DEqA5f0xxfDLU1BP94HbJzcU85IwmVi4hIV6FdIEVEREEWrFmbz2ZIUNBt
O2PzOF9A/ATGoCfdJn7BuSfFI2z3QvxXxU5vBuP4h/
m1g3GGMzJp8PQowheW4gt0y6oIi9mQIwEREREZED1PkB6yvrGZIVPuh8qKYdIPPUAZYKxsAxYY9pmTX
0c31er83gvypy2JA4vIUtxnFwJp8PQowheW4gt0y6oIi9mQIwEREREZED1PkB6yvrGZIVPuh8qKYdIPPUAZYKxsAxYY9pmTX

VJiV+x349zOix0Lc//
l8WYOO1SapYRETSSX9Si4iIiIjsJxFYviivZ0hWCOcgyx8BQmW7SGgAflq5BsZGElyUVc24cD3rEmH+q
yKXP1RmsT4Roj2rGo3j4JxyBlRXEry+KPlFi4hIyikAExERERHZz/
qKejwLQw6y+yOAU1VBqGIPiYL+KapMDiZi4CvRei7MqmZ8pI7tvssfqrKZX5HDh3UREocIwky/
Qsyx4wjeXYLdviU1RYuISMooABMRERER2c+avfVEHENRxsGXP0Y3fgZAfOCwVJQl7RQ1MD6S4KLMGk6O
xvGBRTWZPFqey1u1MSqDtrv6zFdPhmgM7+U/YAM/
dUWLiEjSKQATEREREdmn1gtYvbeOYdmHXv4Y27AWPyMTL79fiqqTjnANHB32mJpRy9djtRQ4PkvjUR4r
z+VPVZls8dwWyyNNJIpz8umwfQvBP15PT+EiIpIUh7dfsIiIiIhID/
RRWRzfwqi8yMEPDAKiGz+jduDwhmns0mUZA0Uhn6KQT2VQz+eJMOsSYVYnIvR3fL4aq2NspJ7wvl9Gc9
QxmA3HELyxGOfYcZjCgWmtX0REOoc6wEREREREAGst75XG6R9zyY8efPljeOcWnHgtdQOHp6g66Qw5ju
XEaD3Ts6o5KRonQcPyyP8sz+VvNTH27Ns90px8GkTCeP/zrJZCioj0EArAREREREESAdRUJyuuDQ3d/
AdENn2GBugFDk16XdL6QgWP2LY88J6OGItdnZV2UJypy+GNlFutDuZiTz9BSSBGRHkRLIEVEREREgPdK
a4m5hiHZh/
6IHNuwlkTfIoJYRgoqk2QxBvq7Af3dOmobl0d6If5YlU1+nxM4YaLLuH+8SfbocZgiLYUUEenOFICJiI
iISK+3t87ni4oE4/
pEcA8x08vEawnv2EzluOIUVSepkOFYvhKtZ2yknq1eiM8SId4YfAJLBozjmPfWM260zzFHD8Z1NPNNRK
Q7UgAmIiIiIr3e+6VxDDCyPcsfN32OsVbzv3oo18CwsMewsMce32F9tc/
GgqGsqYgR+3AXIwsyGZkX4eicMFFXE2VERLoLBWAiIiIi0qvF/eD/Z+/
O46Oq7v+Pvz6zJJnJAoSEfd8XBRREUVyKsrjh0lrRboptlapfi7ZWRVTUatW22Fa/dSsuX/
1W0cpXf9QFbUFLBVksiIqAIvu+huyznN8fdxKSECBhyYTk/
Xw87mPu3O187mEmnPncc89l8fZi2qYHCAcOntBI/WY58WAqpc1b1kF0kkzN/HGaZRknFuWT/
9lsvs5ozYp4Lz7bUYLPoG04QPvMIO3Tg7QJ+UnZuRW3aT2upAQipRCJgBm+vv2x5rnJPh0RkUZNCTARE
RERadTmbS6iOObo2yz14Bs7R9rq5d7g9z71/mk0QiEyThzMWfP+yahF01mX05Gv2/
dlXXZ75uQ35SMzLB6n5e4ttN2+iXY71tJmxzrCpUUAxGe+jXXrhe/
k07GuPbGD3GYrIiJHnhJgIgIiItJo5UfiLnFwOHxMwgzvN4zyoRJxEJdXfU8DRfpeXk/bW7dNBrCaEpr6E9d
0NJbbisB3vo6Js5UEsMxTKQqQykDwmcp+ibW58WktJrORMSU/
Xw87mPu3O187mEmnPncc89l8fZi2qYHCAcOntBI/WY58WAqpc1b1kF0kkzN/HGaZRknFuWT/
9lsvs5ozYp4Lz7bUYLPoG04QPvMIO3Tg7QJ+UnZuRW3aT2upAQipRCJgBm+vv2x5rnJPh0RkUZNCTARE
RERadTmbS6iOObo2yz14Bs7R9rq5d7g9z71/mk0QiEyThzMWfP+yahF01mX05Gv2/
dlXXZ75uQ35SMzLB6n5e4ttN2+iXY71tJmxzrCpUUAxGe+jXXrhe/
k07GuPbGD3GYrIiJHnhJgIiIiItJo5UfizNtSRMeMANlp/oNuH9i+GX9+HsV9NP5Xo+P3s/
OUcwi17kizHZs5ZctS/N98TKyklPWtu7KmZVc2ZLViUdPx2ZLViUdPBLOx2MgDNfDHaWglttqyizbKFZL/
0NJbbisB3vo+10KD6IiJ1SQmwg1jxv39IdghA/
YlDREREpCGZvbGQuIN+zdNqtH3qqhUAlLTucBSjknrLjKJOPSjq1KPS4hDPS4hDQMzHFXAE74j62xfxsi/
lZEU/js+Z94NQ+pMajtN2+hvb/+IgOA46nda/
u+NQbTESkTigBJiIiIiKN0o7iGIu3FtMrO5WUmXQVFdRKrZaW+J94Pf8qSCgRpMn/cTVbT4sEG93Df7NmDqDH6Rj8XwcEaHQ5XAJFMZ8Y4iNsYN4aWc+xxMZyVvHfC5IZCEe+bHoQthGG0d8FUYn+G7dbD8Mp63EGiSj9OXGVs7OXzaO2OO/2JumUw8hm1dKWs2GeBuZTQpS6b4WPmeFAP4OLvCw8mh/
nwBu86+mGiLNgfcz8wIB4xwwEerKuticUd+JE5eeWLMm77YWUJpfG+3Mb+RSIwlptSA13sszU9QY42JS
AOhBJiIiIiINHglsTivfp1HNO44pWVajXu7ZMybhb8wn+1Dz/Ue5ydyFMWymrLt7EsIrVpGk09mk/
vSYxT16EekdXsiLdsSyW2NCwbxFRfhK9iDv2iDv2APvoI9+Ary8ry4YJJbRhHhGFrHMJgRad6BJRto+ZZ
XEvKRYWXIsrzTO+oIoy3aVUuGOSrKCvr2JsUSvseZpAdIDprHGROSYogSYiIiIiDRoMeeY9s0ethbL
N1mKyUmt3GmP6fj8icN4vCzr2I5FTtWyNylJhR1LkXxW07kbV4LqHVKwgvWwzgvzPiwe32e3uD9APC
2MxaL4iwvLlzt/gOIuvSjq2Z/
iLj0h4N0+mer3kRvykRuqfJxY3Hm3UiYSY7tLY+wq9W6prDjWWIrPyA35aRUO0CoapfiXFRKT
eUgJMREREREBos5xzvrMln1Z4Ig1uk0Tq9Zs3f9IWzafLB3ylq14Wdg4cd5ShF9uVS0th90lnsHnQmvqI
CUnZuJbhjKxaLFiaWlEw+FcYHg3l6KsRj+ogL8+bKL6+bsJrVtJaM1XhFZ8Rjwllck+Ayk44TR
iTbOrLdfvM5qm+mmaWjlR7JyjMOrIi8TZUxonLxJjV0mcxduKWZhIjIUDRoeMIB0zg3TNSqlxsllEpC4
oASYiIiIiDZJzjn+uL2DJ0hDJhKOy06la1bNxv1KX/AhTT58m6L23dhx2ggNfC/JZUY8nEFxOIPitp1rto/
fTywji1hGFqWt2rP7xNNJ3byO8Ddfkr8N7lcef1GNt
WHGNzYYzVe8oG3y+gRchP9yYp9GiSSouQeoeJSHIpASYiIiIiDU407nh7dT5Lth/k1+TI3WJ+YxptLBkJ
z3vdue+zQnZ2nDlfyySxoGn4+S1h0oad2B3QNOJWP5p6R/
9Rmhrz4nmtWMop79KO5xPJEWbQ6eDHNxfPl7COzega+4CIAw0MKgVyiD0nat2OP8rC+Isr4gykebivj3
piKyU330bpZKr6ap5Ib0M1RE6p7+8oiIiIiIiI1IcizNtZR6r86P76YpB+15Eti+maZvv0rUvUU
dO3DrpO+BT5fHUnsUnfi4QzyBpzKnuNANIrR6BaE1K8hY8C8y539OJsWbNvd5j6Vm41DR8RQXlg+z7
8/Pw796JxWP7Pb7z+YjktKZ963aUdOzBrg49WFsUZ21+hH8nkmE5af5EMiySF5mn6SSoidUN/
bUREREESkwdhUGOXNVXvYWRLjoDu/Tvon/
yZr9gzigSDSJX4+aTs2Iq/qQ2LUPvpIi0tatJYdvN/

```
qACLx4kHgomxxsJEMppS1KoDsYwsoulZxNNCgJEYnh9/wR5Stm8muH0zoS/+Q/
rij2kSzqBFnxPp3Xcge1rmsDY/ypr8CP/aWMi/
NhbSIuSnV9NUejdLpVmqelyKyNGjBJiIiIiIHPPizjFncxH/
3lhIWsD4VpswLcMHbuoGN6ymyczppGxeR1G7zuw6aRjxUPiA+4g0RPHUEIVd+1LYte/
ehc5BLAaBmv9kjGS3oLh918RB46RtXE346y9IXzibjAUf0rR1B5ofN4iePftR4AuxNj/
C2vwoH24s5MONhbQKBejVLIVeTVP3GYRfRORwKQEmIiIiIse0NfkRZq7PZ2NhjI4ZAQblhkjx7/+WR3/
eTjL/9Q7hZZ8SC6WzY8gIijr1qNFA4CKNhlmtkl/78PkobtuZ4rad8RUVEl71JeGvv6Dpe6+TNfP/
UdyzH8169qNnuy4UOB9r8iOsK4gya0MhszYU0iYcoFfiNsmG/
DTJaNxRGndE4g7n9i6vMEvAINXvI+hDDxIQOQxKgImIiIjIMWlzYZQPNhSwck+EkN84tWWIjpnB/
W7vz9tF+iezSV/8MQ7IO24w+X1OxAX2v4+IHL54KEx+7xPJ73UCwe2bSf/
6C0LLlxD+fCHxYAolnXqQ07U3x7dqx66cZqxJjBn2z/UF/HN9Ac3T/LRLD9AuPUircIDsND/
+JCWCnHNEHZTEHKUxR0k8vnc+5iWzyl5Lq3ktqfA+EnfE3cHLLGNAqt9I9RtpfiMU8JEZ9JGZ4iMr6K8
w7yPVb0qWiVShBJiIiIiIHDMicceyXSUs3lbM2oIoKT5jQPNUujdJIeCr/sdeYOtGMuZ/
SGjZYsAo7NSDPf1OIZaeWbfBizR2ZkRyWrErpxW7Bp5B6ua1hNZ/
Q9q6bwit+AyAXJ+fzs1yiGbnsjMrh6+z2rAx0pSlRRks3u71BPPhyPbHyQ4amUEfWal+MkIphFOC5Qki
wyp16iybjTlHJE6lJFTFJNXeZFa8/
H1JxcRVzBGvwan6DAJmBH0Q8BlBnxEwCPmNrKCPgK9svTf5fXtjrBivFzPlcUbijtKY935PJM6WoihFU
UfVPFrQB5lBP1kpiSRZ0EdGIkGWGfSTEfQRDhg+JcmkEVECTEREROQYZGajgD8AfuAZ59xvqqxPBV4AB
gLbgcudc6vqOs4joSAS55s9pXyTF+GrvFJKYo6MoI/+zVPplpVS7e2O/p1bCS3/
jLQVn5GyZQPxQJD8nv0p6DlAiS+R+iAQoKRtZ0radgbnCO7aRmDnNoJ5Owjs3klg0zparvma1qUlmIvj
gO2ZOWzNasm2zBy2ZeWyLb0Z34SyiARSgKLEdHj8RnlSKugzAj5I8RvpQe8WxIrrvKnqMi/
hVZc91OLOURxzFEbiFJa9Rh2F0fgBk2Q+IL0sMRb0kR70EfIb4YAvMXm9zMpe93eRQeoHV1oCe/
JwBXsgEoFo1JviMQgEIRiEYAqWmgqZWRBOx6xxPe1YCTARERGRY4yZ+YHHgeHAOmC+mb3pnPuiwmbXAD
udc93MbAzwEHB53Udbc5G4Y3dpjN0lcbYVR9lcFGNTYZQdJTEA0vxG63CAzplBWob8e2/
viUYIbttEcMsGgps3kLJhFcHtWwAozWnF7hOGUtC1Ny4lLVmnJiIHYkakWS6RZrn7prCcw2JRrLQEi0Z
pHo2QE41g0VIssg4rihCJxSmKQzQaIxqNEonFsUjE28clEj9mOMAfjxHAEfAZASDoc/
jNCBInJRahfLQxqzzjqr4PBCAQxAWCuEAA5w8k5issS8wTCFS73AWCOH+gfKw1h3mHN/PKqTS//
+STz4xwwEtc7U/ceT3ZCqOOoqiXICuKxcvfby6KUpzvbbM/
KT4jFLDy5Fg44CPNb6SVvfqNNL+PtEDleZ+LQ0kJlJZASYmXqCmb3EHuAfUHwOfzXv1+8PuxxCvmAxeH
uEu8xnHOQTzuHTce95I/8bj3QIey92XzPp9X94Ggd7zEv5WVLUtJgZRUSElJWqLIOQfFRZCfh8vfA/
l7vNc9ebj83ZCXh9uTB/
l5Xn3Whs8HGZmQ2QTLaoJlNoHMLCwjCzIysYxMSM+E9HTM1zDG4VMCTEREROTYMxj4yjm3EsDMXgYuAi
omwC4C7knMvwY8Zmbm3MF+bRw96/
IjLNtVUn47UXHUu82oOObKp4rCAaNZio+BxRtpX7ST3OJd+CKl3lSYj69gD/78PHyF+eW/
VeMpqZRmt6Bg4BkUte9KPJxR9ycqIkeO2d5EEhDbz2bBxFSJc1ikBH9RIf6ifHxFhfiLCvAXFWKREiwa
wReJYtFIIhFT5c+j2ztjgFV4TzyGRaNYLIbFo4n5KHaU/8Q6M/D5vYSb3+8l4sqSb36/
V0/+svWBRHIuCIHKyyhbV5bYcN45xp2jxPwUm59iAt6r+Sm2QGLyUYyf3RZgsy9AiS9AxHfgtEIgFiEQ
jRCMJaZohGCstMK8N/
niMXwu7k1xh5XNly+Le3WPefWQqA+XeO28ZSW5eVuPTsUHE8mwVG+ylDRvPiUVSyTJ8OL/
I3cAACAASURBVCUScz5fYqowb5ZIzMUTibgqUzSCK9mbGHSF+bBnDxTke0m7qvx+CKdDKIxlZkHLVhBK
h3AYSwtDMLA3eejzeUm/
sh5hkRJcYSEUFkBRAa6wALdhHa5wGURKqzl5g3AY0hNJsbSQ15vMH8CCwfLEIWXzvkSy0Lz7en2dumI5
LY/
Ov0st1SoBtnDhwm1mtvpoBZOQA2w7ymUcS1Qflak+KlN9VKb6qEz1UZnqo7LGVB8dkx3AUdAWWFvh/
Trg5P1t45yLmtluoDlV/t3N7KfATxNv881s2VGJ+NjWmL4vh0L1c3CqowNT/
RyY6ufAVD8H1hjqp0ZtvVolwJxzuYcWS82Z2QLn3KCjXc6xQvVRmeqjMtVHZaqPylQflak+KlN9HPOqu
xemareDmmyDc+4p4KkjEVRDpe/Lgal+Dk51dGCqnwNT/
RyY6ufAVD97Na4Rz0REREQahnVA+wrv2wEb9reNmQWAJsCOOolOREREpJ5RAkxERETk2DMf6G5mnc0sB
RgDvFllmzeBHyXmvwP8M5njf4mIiIgkU30cBF9d8CtTfVSm+qhM9VGZ6qMy1Udlqo/KVB/
HsMSYXjcA7wJ+YIpz7nMzuxdY4Jx7E/gL8KKZrQJ2EOsoExERERERERERERGRFDrm7wADMLOLgX8n1s/UF+3b97vGV6ZsCRrRbG75I2wNsdlzcyvCajq26AFP32Ts4dmvz/9d8Ts4jiO7HOaaPyEnJDMcYpv3yb8Zr4+mmxlkksnMCKEyb6WMe9Y0wQskWMs4WJ0Mb7G3xxhDNT5Fvd+dEe97FdmM9Gzp/ZAY2V/
0cmOrnwFQ/
CaYLgSIiIiIiIiIi0pDpFkgREREREREREWnQlAATEREREREREZEGrV4lwMxslJktM7Ovz0y2ZMeTTGbW/
3sxmmtlSM/vczG5/uPmU1PdizJZmZNzew1M/+J5+Z2V/
NLC3ZMdU1M5tiZlyZzrTmfnkZJmlmNgbdC5TCbV5ZkuyYksnMxie+J5+Z2V/
NLC3ZMdU1M5tiZlvM7LMKy7LN7D0zW5F4bZbMGOvKfurikcT35VMzm2ZmTZMZY12qrj4qrPuFmTkzy0l
GbCL1zcHaomaWamavJNZ/bGad6j7K5KhJ29TMzjKz3Wa2KDHdlYxYk8XMVpnZksS5L6hmvZnZnZHxOfn0/
N7MRkxJksZtazwmdjkZnlmdnPq2zTqD5Dh9N+M7MfJbZZYWY/qm6bY93htOkO9n1sCPZTP/
eY2foK36Hz9rNvo8y91JsEmJn5gceBc4E+wBVm1ie5USVVFLjFOdcbOAW4vpHXB8BNwNJkB1FP/
AF4xznXC+hPI64XM2sL/BcwyDl3HN5g0I1xoOfB1FVlt0G/MM51x34R+J9Y/
Ac+9bFe8Bxzrl+wHLg9roOKomc8OBNXUdkEh9VMO26DXATudcN2Ay8FDdRplUNW2b/
ss5NyAx3Vu3IdYL30qc+6Bq1p0LdE9MPwX+XKeRJZlzblnZZwMYCBQC06n6rZtDF9hp7jENpvZpYN3A2cD
AwG7m6gFzqf4/
DadAf6PjYEz1FNGw+YXOE79FbVlY0591JvEmB4X9yvnHMrnXOlwMvARUmOKWmccxudc58k5vfgJTjaJaJj
eq5DGzdsD5wDPJjiXZ2CwLOAPv6V4450qdc7uBi6FjZzwMq
V1GlSSVFcXzrkZo4u1coF2dB5Yk+/lsgPfj/
```

ZKrP8/
M3sOOBPYnVh3lXNu0VE9ERERaZDy8vLYsmULkUgk2aFIIxMMBmnRogVZWVmHfSwlwERERESSyMz8wOPA
cGAdMN/M3nTOfVFhszXAVcAvKu7rnJsJDEgcJxv4CphRYZNfliXLJPmcc1BagqWmJTsUEZEay8vLY/
PmzbRt25ZQKISZJTskaSSccxQVFbF+/XqAw06CKQEmIiIiklyDga+ccysBzOxl4CKgPAHmnFuVWBc/
wHG+A7ztnCs8eqHKoXBFhcQXLyD+ycewdRO+wUPxjbgQ86spLiL135YtW2jbti3hcDjZoUgjY2aEw2Ha
tm3Lhg0blAATEREROca1BdZWeL8OOPkQjjMG+H2VZb82s7uAfwC3OedKqu5kZj8Fj8FfgrQoUOHQyhW9scV
FxF7exru88UQi0JOC6xLD+LzZhPfuI7AZT/
EMpskO0wRkQOKRCKEQqFkhyGNWCgUOiK332oQfBEREZHkqu5eElerA5i1Bo4H3q2w+Ha8McFOArKBX1W
3r3PuKefcIOfcoNzc3NoUKwcRnzUDt+QTrHsvfBdehv/8b+M7/
WzsjOGwcT3RJycTX70y2WGKiByUbnuUZDpSnz8lwERERESSax3QvsL7dsCGWh7ju8A051z55VHn3EbnK
QGexbvVUuqI27md+Px/Y9164Tv5dCw7p3ydr3M3fOddCn4fsef/
rCSYiIhIHVACTERERCS55gPdzayzmaXg3cr4Zi2PcQXw14oLEr3CMO+y6cXAZ0cgVqmh2D/
eAp9hA06qdr01y8Z3/rchPZ3Y3/+Gi8XqOEIREZHGRQkwERERkSRyzkWBG/
BuX1wKTHXOfW5m95rZaAAzO8nM1gGXAU+a2edl+5tZJ7weZB9UOfRLZrYEWALkAPcf7XMRT3z9Gtzni7
A+/
bFw+n63s5RUfCedBls3EZ83uw4jFBFpXO655x7MjJEjR+6z7jvf+Q5nnXVWncVy1VVXYWaYGT6fj3bt2
nHFFVewatWqOouhsdIg+CIiIiJJ5px7C3iryrK7KszPx7s1srp9V+ENpF91+bAjG6XUhHOO2Iz/
B2kh7LgBB9+hfSdo15H4rHfw9R2AZWlQfBGRo2XGjBnMnz+fk06qvnduXenVqxfPPvss8XicL7/8kgkT
JnDeeeexaNEiUlJShpbQ6YeYCIiIiIiR4hb/gWsWYn1H4QFD/
4jxszwDR4KsRixGbW981VERGoqOzubfv368etf/
zrZoZCens4pp5zCqaeeyti  xY5k8eTI33nkn06+Ny5lwYIFyQ6tQVMCTERERETkCHDxGLH3p0NWU6xH7xrvZ5lZ2
HEn4D5fRHzl8qMYoYhI42Vm3HHHHbz55pssWbLkgNuuWbOGTgcZuTIkSxbtmyfbc4991xCo
RCdO3fmueeeO+TbKfv37w/
A2rVrax3Hgw8+SLdu3UhLS6Nly5aMGjWKTZs2ATBr1izMjBkzZnDBBReQnp5Ohw4deOKJJ/
aJYerUqRx//PGkpqbSvn17JkyYQDQaLV//
3HPPYWYsWbkE4cOHk56eTq9evXj99derHWf27NmcfvrpZGVlkZWVRVxYABA3j11VcrbfPMM8/
Qt29fUlNT6dixIw8/HCt6+xQ6BZIEREREZEjwC1fCtu24DtrBObz12pfO/
4E3MoVxN56HbvuFh1h8ZFirNvNvhHXXxI+1522WXcfffd/
PrXv+bll1NtH1h8ZFirNvhHXXxI+1522WXcfffd/
PrXv+bll1+udpsdO3YwdOhqzAzvzhNPPPEE4Hp/kN55xzDsuXLycUCuGcY/
To0ezatYspU6aQlpbGfffdx9atW+natWut41qzZg0AnTt3rlUcL7zwAg888AAPPPfQQffv2Zfv27fzzn/
+koKCg0vGvueYafvCDH3DjjTfy+uuvM27cONq1a8cFF1wAeLeGXn755fzwhz/
kkUce4dNPP2XixIls3759n2TZlVdeyU9/+lN++ctf8qc//
YkxY8awcuVK2rVrR15eHhdccAFXXXQRd911F845lixZwq5du8r3f+SRR7jjjju49dZbOeuss1i4cCETJ
04kHA5zww031LruakP/s4qIiIiIHAHxFUshmOKN61VL5/g/
gG3wa8X+8hVs45MgHKCLSyPl8Pm677z6effbZvL4sWF3pQqbN3cy1Tf3zwmrxXqhBmUJcRBB/7Wp2UfPpd4N8KEhu42KB/
vSFq/
dqCPBB3n22Wf3Wf/++/
Zw5cygoKNCyyy7rdHvlsGHDuO++/OHXUMBGgqVp9Y5lVkPsAiBLrxoHJJTRW6Xkp20Z/
jyTRNnp6/n1yVpI1P3V6r7BcAhRnNDBBS+xh4ZdYmBmnnUa
nTp2YMmUK119/PW+99RaLFy/m4uBeNqZ/ZvDgwQMAMHjyYTp061TgBFo1Gcc6xdOlSVbrvtNkaNGlV+rJrGMW/
ePEaMGTeSfcnrpy9ZcnOiAEPmnFzJ+oVVWBGqgcT+3gHPY/NYiE29j4vyPhvUuAOhe24wJATDFSQnSlipdNKNAngcLJTHaIjt0XsXP2ee/
uUBPHpn+i4ZnuGUVAeSLI+u5R1vKa1U3p9p6zrqYxvA9OgYnrFiksUx6e0fknrvlL8ByMVhxTCG4WhCGrygAAhs/
wZ5hfCvnP6S3JmT9o6e/wQL+bVJb2vkxN1n8Z1t/+DLBiZrrt+0v/v1lYE/zsI2Qs/XyaW6v/Hws0kzKcmCRmt+b/
bmZr0/S2dvcPQ46fI1q9+MsrzHiMRxrnQkb2f1nyr9hAP6kjV+2pzvU0ZQ1EHz+4/rfiiCjH8NUVn3sdY1vR9j9eZxnOi53hMeeFtmGvyadQ7Vxi4l5LY/
F5l9kSMGB5iNvrqDGEw+AoA3Ks9nKYn5/BxlUn1Nd8TwbS4+rR1DK03jg8v+ltm0s6/
fdg2Bc+TqJmrr/3cdMWnN9o8oFaKtW6bk89ysuf4i0M+rwJ3xGtjIlSDL1tq/C3ncrhuHYQV1ks
    pIiEZbOc3/
g3+hLC5TZUtM7sFtQ6dv8Kt8T/CfWBd7ROk3T3jC8QTUuaEDUZCp3yM5Tp44D5R4GKZNnS2Wbq0m2MGl+fyQ7zbZG7jJNQYuWm2iy05KVh6NFtq5
Ww5uh0zmwpuQB0LvuqFsWkXQl7Oob2L8Ny/lSAf8iGTyA4fLf7/9OYNBkIDw8CVC4UWJzUqEh30/
tz/L2KBdOydZSuWXxE3M8MZSSWR+2gk4MuN1d/
g3EEWzZzjqZEB0f7h8oT5rXpkv0+bp9l0/Oh7fRKn6CdtupqO94zR8TFzmXz/
BTy1wdfa72H/TcZq0Yq43ULqhtYxytZrJfXyVVPX79rcjZ88rlCQtuu82Y0F9znq/Cdm0qYpsjSgvgsiq4/
g5pvgEEKWQDQIW9kRxtZWD6GjH5aAS3Tp10//5EMe5QcZBjCVBavPZE+1z4c2L7+jbHnsxH5GmSyV
E4WK0lMG4jLd28/lgbKm5T7n8GHG1mWRMuqEwBmZE8MTEgRxgyLfxRa+IiknMO9UrYp
HuSiYyLcuzGKyh4zDvUMfe2dTpb9y1NNRNKaRW33hvGcL7NdWcDgOf4wNoOTYm7OUwzBDIYiz94/
z3E9Tn0rvsAtUFb96KHc/HVVbKqF/ei3cA/
SfOvAzGwaK8KWHdpdF5bdM5jbuR+HwRxBdZBYKsVrK9T3rqrmZ0CgbE3M5Hr2KO96LXUJZyjgWp5HrAXB91Tb6Bdwqq+p0JDrzLIpxjQ7HXa/
fTuRa35Lqmvsnkx9vVMZo8yUzlLuMZtHExGYySyIGNsyL+1rEJRPRsR7EHqjkhF4Tuy4eVzsbxu+h6UKKNrCMeFK/
3XsBkfP8IzQuHC9MGL32pYVwBUXVCThhJxk0ZdmX8WJTQOj+CyT4FaMBwoQO4wdT8U+9IXNN/
4RkeOcwPeYe4vDzHh6kOyFR4RJ9OVv8hrCuZ31Nc1S8QnbrNpNYgcaXrSy1wMC7OPQFq0q0JQ95YNx3/3UW5XHHDf/
qe8Z5nNz4lZ8D3Em2kEOENbm+Pbr1KmmWv+Ir48qyzOhGUGBzBf1EBkROHEjvpGRNpAfMQPMbZeOz3qeg5R8zFpIu0nAfVm/
TAZ97dPovNkc+vJmJB8ZiEcuDRY+HO7fPDhKmCLZRKUfD1awkSy/
eNmjf/M9BvxBCoFqeHO1rMl2XP/1f/nXnWS51P/i/+qwjUWVfT8MJM0/
XzH3v+hbjC3GMjy+iQNXHGh8x3ETqDqEfz4eRr89EhoN3cIwVdPl8NsL0jVCL1CIEq7uZx+NpWH4bKi+GfzLvEA
7+xcJvU3B8eWJ+tMVBnhGWMsoYXcMlYJWJDyD7oXAdLo+F2sn7qyTxxX7U0mpp/hWeGVgncTvdcpA2UPEf/
XucAYbjoi0uOfl+sqBjmxDAC7Xfys9ZU2BxyndR9yfk0j/z5lz3kS+YjR7XX/
E04ME89uxPjQTtzDmEPd6nFfRa6Ek/vmOHu8+/
P7g9/l1kmLVnRzQdIb4KNdz+Q80JXLiPuJ1DJEcPF6CffHi7WVDEA7cqK2lCsImJQ9K9vBbDFl3W/
0B/YZsiwZGwmJdAbGj+8R+6vZgZtGUI/mZ2FdeUTMFwXq+37K/zt3ewJzRgZBZNbDbcR8Hd2nR0Zw2n
H+Re4pe8dzgeQwQkNgl/FQ5vXhZrzsBXzWGSoSXsqnWjnn91H+VTh4Dxw/
hscW+8h4Yv2Fj/3Ygb0hjsYPqXppWhGr9ZaW7T/
f4d8qFfI+7m4xBFE41EdWR5q9V/mypLHzbySbV+fB9ePW5/
l3S7w+8zGSLTbYXTr3EFMIQB3SJR5Z3/JudAIoe+pECpT2+sAs+8ilJfZsbSoAS+22XOvFzD0N6A2jQBvZ/YQDxYhj6T
Y0ErTmk2CG8hn0Z/hqV5lNHjpjfR/m6DJqXDQ+v2/fmy6eK8aI/zXMfBNPBOTBPyQV8tGIP+U02rYGKmKy2+zDHw/
BvHZhWUN21f/gOaX9FKS1J9XJvwZLE6Dkwq0eD2RkXbWYpy+Q//TTPKwMvdWw0xJgr0QcfD6qSXnqvmSnBUAeF8xbIL8yXhM
oaETlcOYEcS48dNC/3/C8Qw/pvmLAj5IrAPSnQXU3zQ7KmwZyFb/
RlP3QWBU8IndERYf21/7rYdPq+z9CjMmv7JlMX9PeX7VA3dmA7EJDgtK5+/qS8//
ejuxq4eeoVDhZSGpaG92MWs+/
MUrLw2ZgGumK1NjprO8ZSqgzwdrwwJSYOpLMiP4kBxAwpdN0+Mw4yaNhmMbWGjMowP+H8Amw9RL3UCB8Q8/
+9PFvF7OwPn8MWF1gCAqfcw+YNwWepX2MxQHuPoSbUGHqRI5N5CNmk+uwlC0t9wcUyHOdQ/
DJF6RzBX8ydTLHrbUA2MPhVMvIevjq1vNbOQ/R9BbpKT/m79jF9H/5zXYUr4ojWvB/
hSPhKkqYqrEBl4ZM+w9RiVyEmQaaMnDi7jr7czmEifdXSBu9wZrDGjvX5YvfMMOWGhgYovAKv
TQB0U1FV4WggZf1ZRQ21E7D+kY+6kNaJFbiRrLFDf0c69JdP2f5SQf8Dd4WZUeqtmXqgF1Ai0E4lUf/
jLQuMYvJ8uxYC6Aqqf//2HQ//xLRS3c5CzjzXK1Py69Qd8BzUu1eDb/
Z7xTFL/XS7ws79pW06nrTAjaP2R9K9lLgz9oS55vxDxw9r9sHYeMsxnxbOn1bGLedWcZpyYN5D0HqUGC5kEbZn4i
Mn+FRQIKv1wbu2gKxwl6SjIyjbsVmqRqF3/ps8kq3tLmzHMBD2N1bdwQ0EmWW6Xzs84x9cbjwn+cV8WlUMXWk/

```
P3vf2fKlClcfPHFdOjQgfXr1/
Pkk08ybNgwwLt98p577uGmm25i9erVnHHGGcTjcZYvX87MmTOZNm1areuuNjQGmIiIiIjIYXArV0A8fl
jjf1Vk/
gDWux9u5XLcxnVH5JgiIlJZWdKpqpycHObOnUuvXr0YP348I0aM4NZbb2X37t3069cP8MZsfOONN+jVq
xdXX301N910E+PGjaNPnz5kZWUdUjw33HADWVlZ/O53v6txHEOGDOHDDz/k6quv5rzzzmPatGk8/
fTTXHxx5YcUPPPMM3zyySdcfPHFTJ8+nccff5zRo0eXrx8xYgQvv/wyCxYs4MILL+TRRx/
llltu4bHHHqvVOXTr1g0z44477iiPd9SoUUyZMqV8m1tvvZWnnnqKt99+m4suogrrriCl156idNPP/
2Q6q02zDlX440HDRrkyp420JhUfApkfbnVEOr/LZB6CqSIiNQHZrbQOTco2XEcCxprW+9wRd+civvsP/
jGXHXoT4CswpWWEH/tRaxnHwLf/
sEROaaIyKFYunQpvXv3TnYY9d7u3bvp0qULN9xwA5MmTUp2OADMmjWLb33rWyxZsoTjjjsu2eEclgN9D
mva1tMtkCIiIiIih8g5h/
tqKbRpd8SSXwCWkor16IP7fDFu2HlYs+ZH7NgiInL4nnjiCXw+H927d2fr1q38/ve/
p6SkhLFjxyY7NNkP3QIpIiIiInKotmyCPXlH7PbzPPj/vHsI35sEERE5PKmpqfzPAj/
PPP5+qrryYUCvH+++/TsWPHZIcm+6EeYCIiIihyj+1VKAo5MAC6djHbsSX/
Qxvm+NxFLTjngZIiJyaK6+
+mquvvrqZIdxQGeddRa1GfaqoVMPMBERERERGRQ+RWfAnNmmPh9KNyfOt9PJSUEF80/6gcX0REpLFQAkxE
RERE5BC4kmLc2m+OSu+vMpbbEnJbEp83G+fiR60cERGRhk4JMBERERGRQ+BWr4R4/
KgmwCDRC2zHNq+3m1i3IJxO/ON/
HdVyRERERGjIlwERERERDoHbtB6aNMWCwaNajvn8wM/
+uJXLcVs3HdWyRERERGiolwEREjOVvagAAIABJREFUREREDoHbuB5rllMnZVmPPuD3E/
94dp2UJyIi0tAoASYiIiKSZGY2ysymWdmXXnXnZbNevPMLNPzCxqZt+psi5mZosS05sVlnc2s4/
NbIWZvWJmKXVxLo2FKyqE3Tshu44SxsXeGWLiEiN3XPPPZhZ+dSmTRu+/e1vf/XXXx/
1sq+66qrycn0+H+3ateOyvVrUwJMBEREZEkMjM/8DhwLtAHuAHuMLM+lTZbA1wfFC/
1RyiyDk3IDGNrrD8IWCyc647sBO45oghyAFY734rOyhQRaSiaNhHw/8DhwLtAHuMLM+lTZbA1wFfC/
1RyiyDk3IDGNrrD8IWCyc647sBO45ogH34i5TRsAsDpKgAFY734QjRBfOKfOyhQRaSiaNGnCnDlzmDNn
Dr/
97W9ZtGgRZ599NgUFBUe97F69eq6a/6mLSVObuBcl9RAFOBxqsQqhgK3IDmaMVgo58xIyVknCDZvQi4J
OrQQws5eBi4AvyjZwzq1ETLMBvPvdCzRt8V+9+BFRzbLBfCfkQAa6fj9qBDnRPxZ5ZHOXHb/ooYPEjSVpq1+nvNxbAsCVRbftKnaUhGz6bGmHUaCrwUEF1
97W9ZtGgRZ599NgUFBUe97F69ejFnzhxmz57Nvffey6xZszjvvPMoLS096mXLXoFkByAiIiLSyA0GvnL
OrQQws5eBi4AvyjZwzq1KrIvX5IBmZsAw4MrEoueBe4A/H6mgGzu3ab03k928zsq0028zsq0Zs2hdTviH8/
GN+RMzK+mvIhITQUCAU455RQAT06MDpp06MDpp5/
OW2+9xWWXXXXXZUy05PTy8v+9RTTyUcDnPPFFVewYMECAiTj311KNatuylHmAiIiIydUWFvh/
brEsppKM7MFZjbXzC5O8O5OLGsO7HLHLORQ92TDP7aWL/
BVu3bq1t7I2W27QewumQlIVSpa8gUxW0fXeVfKYFyn5fr69of8PNxni+q0XBGRhmbwI9EAlW5fzfpaf4P/
fwDWrl1bafmaNWs2YM2YM2dnZhMNhRo4cybSDcyHMNzcYBJlyypt8oAc7e4WGnobZgn3qKW8dKNx6/4HXLV0EPpskQgFLPYCq0DUQ5lRR
Mm7wEps2bNwsFgYM2dnZhMbPV67ePQnC4KTxR8SY7tfDRVNnMmEtwwtTy86GHXkXl9zT8o7pdLz4MmQTvvMq/MGCmpz5pEiWqvTdIMYXC0VE7sFKaqA1ovQ2cUe2GZCdT8wJfzBpRdjIb00BVB46eBg/XqvfwsyAhPkrnh2XOfr9yZZ03H+Mno46L48QMPzYZ5vcWqiCoPGAxD5jOA43ApIt1dpc6rm1MWIj7/t4o7iEBbk4AZr1VDrtxTGAA2O/VgnXpZtFpyOBH8aFGsWKFfjp+mDh6WLtdVd4bc0tQIhRfj4efJgYGBuD6rOE59sXcSN
YlNTWVjh078vDDD9ez4EJcBEREREksuqWeZqsX8H59wgvN5ej5pZ19oc0zn3lHNukHNuUG5ubi2Kbd
zcpvXQrO56f5nf8f5Vr0x6aZhP7aBbO1eZjIiIiFZUlvlq1agXAjBkzuPzyxyxnnxxBN54403uPHG/ntb3/
LDTfcUL7PzTffzZs5k8eTLvvvsuDzwzaF6n69pZs2YNAJ07dy5ftmPmHDoYOHcqyZct44knDp1KgU
FBZxzzjkUFRUB8MILL/DAAw9w88w88+677+/LnP/+Zbt267XMb5zXXXEO/fv1/
fXXOffccxxk3bhzTp08vX1+Tcy1z5ZVXctNdpdNNtNtm0b3t7ZM2YM69atAyAvL268Le//
Y3XXnuNH/
zgB+zatat8/0ceeYRx48v48Zx8cUcM336dMaOHQtQqSeYMZExyqGGLR2cPpqxRSLkPxxqM+YSrRN1bi7HiflqhlPrSI2Dnubc8PkAneBQTo7+Zrz4/wEbBOC
uQeF1pZrOAE4C/
AU3NLJDoBnYoBxqNtrYeXeG2JbCgg+6jCSt7rE3eRdIjxMcLRxH8+P0W/l+1pf5iMJZMAiVD2cAsm5yNjp9hxsrGyPvyVDVQF0fPwVuwrGndhHjvV/3RyeFz/OFs3NBnkhZlSb2D4NxmcZzGZ9XN+X3q6U0Y7cMKzVWEzaeNuK9rNkN/xwSoN5R1d02/
fbbufPOO2nXrh3
z5s3j+uuv5/5/LLLy8/5ve/
0al+2cY+nSpdx00028nOmBPFU4EDgBvJSNwz6Y3BlUz8dFA46RtEOtBHwJAxKLcLzsbASBOO+00kn+1dy//
+uuZN28eI0aM4Gc/+xk/+qf57bVdTZlLFq0iOzsbABDDjL4/dHRGZ
33c8EFF9T4XMHTQJlpmfA/3SjHR+U+vPm4oJXtTfz0CO1wKM+tw88xfBuqmRkzHmJZEAYCJwHS3dmpsLhdSWb8M4tvIjSzk+PoU2rtGhXtq96DzNAp3MNrHXb38D9Egbcqks6gSr1v0R8lPYPHjQSvKhAs8+nTUt0Xms+aZDzLcxj+8pQbYYe6Bjb0ILWhmonbTP4mrqMQ0uhwCWbYKhlSwyD8EnwhhAqSoxYz8h1RCEMuoyNgWOj2pgc8JIu/1V+VT9MM8xfC6OZZ8Fyh4gzJ8vCEnN0oR8hv0c0/u7T9jABWbVqCwqpDmzvbN2U2/ij49y/IShNoplsZG6OSYCgA
4s9PZCCbeXYzkfLjOdnvPOdyZ6Ivv2uZXKzC0bMnfxVYhSTMKExhxgZzkaR4TKCUgwB4Tjn5JLc1r2dLVg6u+7Cg7s2zcaJ5B+dU3gR0/6FLZuMz8WR1/18P8XjRwaXnWFemRjtBzVa96Uqo8kzHJqu0uqmPpEz+UyYfK6KUtKK0KRY0pUEu0bnGDP3jYFYR2Qa2Nj3/
3c8EFF9T4XMuMHz+esWPH8nNSuu+46li9fzu7du3nsscfIzMwEYMSIEeX75uXlMWnSJJO
68807uvvtuAIYPH05hYSH3338/48aNw+/
316j+jgT1ABMRERFJrvlA98ROz9Jyz4SvPmcvuNNC9cmT42qU6Ucbn4SfJuKzbOfGP4xAjPZhkZSkAHFRfFWZO7hKO/tGXfw5hEM2wWqhYJ5ZLpDnLD0lLwWgHS6qfn/cP/QLbk7ubsp66eA9kSBUsu7zZDWFSbQHnkEXnVUVgHBXzWUABMbUBxy0oAeE1s1c1qTn5Hk2xtp1H4YbktR4Yp/QJcVeCBo21N9GnP6G0Rv2HjZxcRgvhuB1HVefD6A1dtEmSpuWZ4EtwE8DgHyx1J8kcwsM3rbsYAJDfWEYVPnoZnHnpiNHD6cPmuB7NwFYCWd9jWPN66Jb3zd/
MMU597mZ3QsscM69aWYnAdOAZsCFZjbJOdxX6A08mRgzyL9M+r4CXzex+4D/
AX+r41Bqu8gHwk5QA8/
uxnsfhFs3Dbd2E5bY6pOPsLImxYGsRS7aXUBp3BH3QPM1Pz6YppPgNAwqicXaUxJm1OZAPNhRyYm4ap7
cKkxbQdXSRxuxQe2AlU5MmTXj//
fcxM1q1akWbNm3KfPMCZIY9YgcOAAPPwDARnL8AdUO3mOz6Adi6QlNaoKYCxp8ZVdp6/HjTw8A4KCAnNXamdN24SyE9Eavcoyw2sBLPUN97AQ+Ckz81DHKlaJONrxfvN8kd5FLl5dXDtWQ9u0m8ZpyoJ3uBWDRKXcdBO79Iqj6kT0JLmDRBsDTBubQY2U9bqBSP4KT+sxiZEPZvUZkM3gvr6o/zafMN1bMpTUQAXpIXxR0Ahk6n6aB5r6/Oz4kgxhiPiiSJVtMlxj+78nVWVsNLCtz/
fcxM1q1akWbNm3Ke7hu27aNSCRCy5YtK+1T9n7+/n05/Pyc9/90ouHRX3Ry0wo
99XTr1o377ruPMWPGHLDs3r1788ILL+88kr5Ntu2bWPu3LmVlpU5+
```

+yzARg7dix79uzhqaee4t5776V58+aMGzeOe+65p1JPqhYtWlTav0WLFkSjUbZt2wZQo3Mt07Rp00rvU
1JSKC4uBqBZs2bMmDGDSZMm8d3vfpd4PM6IESP405/+RJcuXcrL69u3b7X1snbtWjp27LifWjvylAATE
RERSTLn3FvAW1WW3VVhfj7ebYxV9/sIOH4/
x1yJ94RJOcLcxvUQTIHMrKTFYD374JZ8QmzOBwRGX37wHSrYVRLjXxsL+XxnCT6gfUaQzplBWob9+PZz
u2N+JM6Xu0r4ZGsxX+ws4ZJOWXTIDB6BMxERqRuBQIBBgwZVuy4nJ4dgMMiWLVsqLd+8eTNA+S2JTZs2
5Y9//CN//OMf+fTTT3n44Yf53ve+R79+/
ejTp89+yw6Hw+VlDxkyhOLiYu666y5uvvlmTj755PIyRo8ezcSJE/fZv+z2Qp/Px/jx4xk/
fjxr167lpZdeYsKECbRt25brrruufPuq57FlyxYCgQA5Od6Fm5qca00NGTKEd955h6KiIt5//31uvvlm
rrzySubOnVt+rOnTp++TcAPo2bNnrco6XLp0IyIiIiJSC/HEAPjJHBvL0kJY1x64Txfi8vfUaJ/
SmGPWhgKeWrqTL3eV0KtpCqM7ZXBqqxCt0wP7TX4BZAR9DMoNMbJ9OkEzXv5qN4u3Fx+p0xERSSq/38/
AgQP3eXrh1KlT8fl8DBkyZJ99+vXrxyOPPEI8HufLL7+sVXm33HILOTk5PPTQ+XLzj77bD7//
HP69u3LoEGDKk3VJYrat2/
PbbfdRrdu3fjiiy8qrZs2bdo+7wcOHIjf7z+kc62JUCjEhRdeyNixY8vjGTJkCFQiA0bNuxzToMGDSp
P7NUV9QATEREREakhF4/D5o1Yt7q9al0d69Mft/wL4h//C//
Z5x1w29V7Svn76nzyInE6Zwbp1zyV8CHcxtgs1c/wdun8e1MRb6/
JJ+4cJ+SEDvUURETqjUmTJjFy5EiuvvpqxowZw5IlS5g4cSI/
+clPygeFHzp0KJdccccgnHHXccZsbTTz9Nenp6pcHsayIcDjN+/
HgmTpzI8uXL6dGjBzfffDMvvvgiw4YN48Ybb6Rt27Zs3ryZDz74gKFDh3LFFVdw7bXXkp2dzSmnnEKTJ
k2YOXMmK1asqJRIA3j77beZMGECZ555Jq+//
jrvvfceb7yxdyjQmpxrTfz9739nypQHzxxXTo0IH169fz5JNPMmzYMMDrMXfPPfdw0003sXr1as444
wzi8TjLly9n5syZ+yTqjjYlwEREREREamrHNoiUQrPkjP9VkTVpinXqXqSnzebHynnoWFwvtsE3OODzcU8
vGWIjKDPs5uG6ZF6PB+AqT4jTPbhPjXxiLeXVtAqs9Hn+zUwzqmiEiyjRgxgpdffn777+fl156iRYtW
nDLLbcwadKk8m2GDBnCc889x6pVq/D7/ZxwgmD8/Zxwwgm8/
fbbtUoalbnhhht45JFH+N3vfseTTz5JTk4Oc+fOZcKECYwfP55du3Run1Rhg4dSr9+/crLf/
rpp3nyyScpLi6mW7duPP3001x88cWjv3MM8/
w6KOPMnnyZLKzs3n88ccZPXp0rc61Jrp164ZvXDrrbfSpk0bJk+ezO9
+9zvS0tLo0aNHpSdp1hXzHhJUM4MGDXJlTx9oTH7+85+Xz3e/8qYkRlLZiv/9Q/
n8/2fvzoPjOs97z3+fc/
p0Nxpo7AA3cLNILSS1cpO1b5Ylx7bsxI7t60mcW6ny3FvlTLlSNTVO1ST3lufeqknV1EQ3iSfXindbth
bLjuVIMmVLpmRr4SKJEklRXCVxJ7HvvvZ53/kCThiBABIhudAP4faq60H2W9zzdACnwp/d5T6XUNbqm++
+/v4yViIiIjDCzV5xz4y/6Ie8xX3/Xm4pwz2vkH/sR3ic+W7QdzmaN7Q7dypITqG8/dypITqG8/yH1XW01WhNMJG5aN++fVxxxRWrdx++
+3s3r2bdevWlbucovqgn8PBJ/q6nNcBEREREREbJnT4Bngd1DeUuBWtrjteVwmfX57VyrP9w
0cGIwx4cXVLGxtaqo4RdAxDNuXpggEXj82zv9DGbHn5BzQ8/d5T6XUNbqm++
+/v4yViIiIjDCzV5xz4y/6Ie8xX3/Xm4pwz2vkH/sR3ic+W7a7QI7mujoIf/ko3m334N/6GqG/
Ns7fRwdyLGqNuDa5jgRr3htm7nQ8dypITqG8/yH1XW01WhNMJG5aN++fVxxxxRXlLkMmYevRXxdx++
+3s3r2bdevWlbucovqgn8PBJ/q6nNcBEREREREbJnT4Bngd1DeUuBWtrjteVwmfX57VyrP9w/
0cGIwx4cXVLGxtaqo4RdAxDNuXpggEXj82zv9DGbHn5BzQ8/d5T6XUNbqm++

ATERERKa/xIo0p9YeZ2SLgh8B/dM6dmyL0N8DlwEagEfg/
xjvXOfeAc26Dc25DS4smj43HdbRDsjztj64w+6vGQpZM8s6PE+m7chOEeWq2by1OcRfp6qYYIbD1ZPkW
5RcRkflHAZiIiIhIeR0Hlo563QacnOzJZlYLPAH8n865l89td86dciPSwHcZabWUKXLOQVd72RbAP5X3
OZ2PcFk0g3eRs7/OySfrGfrQFVS/sR2vv7c4BV6EmsDjsrooe7vTHB/
Ilq0OERGZXxSAiYiIiJTXDmC1ma00syjweeDxyZxYOP7nwA+cc4+O2beo8NWATwF7ilr1fNHfB9ls2Rb
AfzUdI8CxIpIrynj96zYCjuS23xZlvIu1rjFGImJsOTZA6LQgvoiIlJ4CMBEREZEycs7lgK8AW4B9wCP
Oub1m9nUz+ySAmW00s+PAZ4Fvmtnewul/CtwC/
IWZ7So8rinse9DMdgO7gWbgv83g25ozXOEOkFY38zPABkNjfyZgRZAlmObsr3Py1bUMXrKWxJ4d+L3dx
Rn0IkQ847rmOO2pPK+0p8pWh4iIzB+RchcgIiIiMt85554Enhyz7e9GPd/
BSGvk2PN+BPxogjHvKHKZ89K5AIwytEC+kY6Sx1gVFLdNsH/tBqoPv0nNy8/S+9E/
KerYU9FWHWFRIsLvTg1xRUOMmkD/b15EREpH/
5UREREREZlIZzv4EUhUz+hlQwe70jEW+DnqvOK2CIaJGgZXryPx5iv43R1FHXsqzIz1zXHyzvHsicGy1
SEiIvODAjARERERkQm4rnaorWNkKbWZ804uQr/zuKTIs7/
O6V+zHuf5JF9+piTjT1Yy6nFFfZQ3u9O8258pay0iIjK3KQATEREREZmA6zhblgXwd6ejxCxkiZ8vyfh
hVTWDl15F1b5dRDrPluQak3VFQ4yawoL4uVAL4ouISGkoABMRERERGYfL56GnC5vh9b+GQuNgNmBFJId
fwolnA1dch4tEqNle3jtCRjxjQ2sVXemQF04PlbUWERGZuxSAiYiIiIiMp6cLwnDGZ4DtzUQJMT4UyZX
0OmG8isFVV1L11uv4PZ0lvdaFLEpEWJkMePnMMKeHSvu+RURkflIAJiIiIiIyjnN3gJzJGWDOjdz9scn
LU+eHJb/
ewBXXgnnUbN9a8mtdyHXNceK+8eTRfvJOrZAiIlJcCsBERERERMbhuguzopK1M3bNM3mfztBnZYkWvx8
rrKpmcNVaEm++it/
XMyPXnEjUNza0xDk7nGfbmeGy1iIiInOPAjARERERkfF0d0IkgHjVjF1ybyaKh2NZidsfRxu44joAanY
8N2PXnEhbTcCymoAXTg/
RMaxWSBERKR4FYCIiIiIi43DdnZCsxayEK9GPEjrYlwlY7OeJzswlAchXJxlaeTmJPTvxBvpm7sITWN8
cI2LGE0cHCNUKKSIiRaIATERERERkHK67E2pmrv3x7VyEIeexYobaH0frX7MBwjw1r/
xuxq89VjzicV1LnFNDOXa2p8pdjoiIzBEKwEREREExnDOQXcXNoPrf+1NR4lZyCI/
P2PXPCefrGN4+aUkXt+GNzQw49cfa3lNhMWJCM+fHKQ7PfOfh4iIzD0KwEREREExhroh1x2xhbAzzg4
lA1Y6ufxZ7D9cbT+tRuwXJbqV18oTwGjmBkbW+OYwVNH+0cCSRERkWlQACYiIiIiMsa5O0BaTXJGrnco
G5DDWFaG9sdzcnWNDC9bRfVrL2Gp8t+FMRHxuKYpztGBHG90pctdjoiIzHIKwEREREExioEYCTrZuRy
b6WjVFlIixfOyPUm0r92A142TfVrL5a1jnMuqQ1oifs8e2KQwWx5PxsREZndFICJiIiIiIxxbgYYMzAD
LBUaR3IRlkZyzNANJyeUa2hheMlKal59AcuUf9aVmbGpNU42dPz6ePnXJhMRkdlLAZiIiIiIyBiuuxOq
azDfL/m1DmUjhBjLI7mSX2sy+tduwEsPU/36y+UuBYDaqM/
ahhhv9WQ41JspdzkiIjJLKQATERERERnDdXfO2AL4+zJRqi2ksczti+dkmxeSWriM6p2/
w7KVEThd0RClLuqx5dgAmbwWxBcRkalTACYiIiIiMlZXJ1ZT+gBsODTerZD2x9H6123AHx4ksXtHuUsB
wDdjY0uc/mzI86cGy12OiIjMQgrARERERERGcdkMDPbPyAywA9mAEGNZhbQ/
npNpXUK6dQk1O56DXGXU1lIVYVVtwCvtKdqHK6MmERGZPRSAiYiIiIiM1t018nUGZoDtywQkLaShQtof
R+tftwF/sJ/
q3dvLXcp5VzXFCDzjN8cHcE6tkCIiMnkKwERERERERnHdHQBYiWeADYbGsQpsfzwnvWAp6QVt1Lz0DJZ
OlbscAGK+x1VNMd4dyLG/pzLWJxMRkdlBAZiIiIhImZnZPWa238wOmdnXxtl/i5m9amY5M/
vMmH1fMrODhceXRm1fb2a7C2P+o1klRiyVyZ2bAVbiAGx/
JsBVYPvjeWb0XnsjfmqImu1by13NeZfUBtRHPX57cpBcqFlgIiIyOQrARERERMrIzHzgG8C9wBrgC2a2
ZsxhR4G/AH485txG4L8Am4bC7n8BvgysLjzuKdFbmHu6OyGIQixe0su8lYlS5+Wp9yuv/
fGcbGMrQysuo+bVF/D7espdDgCeGdc0x+nNhLzWURkz00REpPIpABMREREpr03AIefcEedcBngIuG/
0Ac65d5xzbwBjk5KPAr92znQk1SUo5aW4wNI7nfdr
8fMmuUSx9V38YgOQLW8pcyR8sSkRYWBXhhdNDpHKVGyCKiEjlUAAmIiIiUl5LgGOjXh8vbJvOuUsKzy8
4ppl92cx2mtnO9vb2SRc9l7muzpK3Px7MBoCxtFLbH0fJVycZuOxqEvt2EZw5Ue5yzru6OUYq73j57HC
5SxERkVlAAZiIiIhIeY03zWiyCxtNdO6kx3TOPeCc2+Cc29DS0jLJy85dzoXQ01XyBfAPZAJqLKSuAu/
+OJ7+NevJx6qofe4JqJC7LzbGfJbXRNh5dpjB7Oz4HEVEpHwUgImIiIiU13Fg6ajXbcDJaZ57vPD8Ysa
c3/r7IZ+DmtIFYKnQOJqL0Fahd38cj4vG6L9yE7HjbxM/
uLfc5Zy3rjFG3sE2zQITEZELUAAmIiIiUl47gNVmttLMosDngccnee4ee4W4G4zaygsfn83sMU5dwroN7Pr
C3d//
HPgF6Uofq5x3R0AWLKuZNc4nI0QYrTNgvbH0QZXrSXT0ELdb36ON9hf7nIAqI36LE8GvNo+zIBmgYmIy
AdQACYiIiJSRs65HPAVRsKsfcAjzrm9ZvZZ1M/skgJltNLPjwGeBb5rZ3sK5XcD/
xUiItgP4emEbwH8GvgUcAg4DT83g25q9ujtHvpawBfJgNqDKQppmSfvjeZ5P9w1342Uz1D/
9WMW0Qq5rKMwCOzNU7lJERKSCKQATEREpkt7eXv7pn/
6Jvr6+cpfyHpVYyXWVE7OuSedc5c65y5xzv33wra/
c849Xni+wznX5pyrds4OefWjjr3O865VYXHd0dt3t3+mcW1cY8yuFu0HKBbjuLjCD6pqSjJ91cCQbsMTP
z5r2x9FydY30XnMD8bf3k9i9vdzlAJCMeixPBuzqTDGsO0KKiMgEFICJiIgUydNPP81pkyd5j/
j0qsqxJrEoFCC2R1Deb7JRn/nWxAbha2P442eOlVpBYupXbrE/
iFltFyu6I+SjaE1zpS5S5FREQqlAIwERGRIujt7WX79u0453jllVd48sKJiMXjxJzYu9d4Hk0PPUIhOV/L/Uxn8WJCDvbh8mGmuwoIiLvFyl3ARP56le/
Wu4SZJr0PRSR+eTpp5/
mXIdZGIZs2bKfz372WuqjLrqsSaRM7r7sKWLL3wcRcx1osjAAAgAElEQVQh7+BQNsLiSA5vFrY/
jhYmaujZeDuNL/
yKumd+Qe9dn6bcPZaRESk8lxwBpiZ/ZfdnMdprZZvb29pmoXSUREZNbZuXMnuVwOgFwuN2+cOFHmiirM+fEoRw/3L2+P4LZoNDlWE5vIsW7QmxtOiR4+LvH/n7XxB8NFdBg==

zILIh8Ps/OnTvLXNGISqyrEmsSAXDpFAwNlGwB/
GO5CGnnzer2x9GGl6+mf+0GqnfvoPa5J8q+KH5L3Kcp5rPtzDChlrwTEZExLhiAOececM5tcM5taGlpm
YmaREREZp0NGzbgF9YM8n2fDRs2lLmiEZVYVyXWJAJAT+EGmiUKwA5kA3wcC2dz+
+MYfVddz8ClV1Pz6gskX/xNWWsxM65oiNKTCTnQmylrLSIiUnkqtgXy/
vvvL3cJ56mV7+JU0vdwPtDPqUh53X333Wzbtg0Az/P46Ec/
WuaKRlRiXZVYkwiA6+4EwEqwBphzcCATsMjPE5nl7Y/
vYUbv+puxfJbktmdxQZSBTbeWrZwl1RGSgcfLZ4a4rC6KzcZbbYqISEloEXwREZEiqKurY/
PmzZgZmzZtora2dItoT0Ul1lWJNYkAuK7CHQ2TdUUf+2TeZ2gOtT+
+hxk9G29naPml1P7+VyRfeBrCsCyleGZcVh/l9FCeYwNz8LMWEZGLVrEzwERERGabu++
+m9OnT1fcjKZKrKsSax
KhqxNicSwWK/rQBzIBHo7FczEAA/
A8uj98F86PkNz2W6KnjtH9sc8RJmpmvJSVyYA9XWm2nx1iWQnCTBERmZ00A0xERKRI6urq+Ku/
+quKm9FUiXVVYk0irrujJOt/OTey/tcCP090LnfkeT49199J9+Y7iB5/m+YH/
5ng1NEZLyPiGZfUBhzqy9KTnjvrrYmIyPQoABMRERERAVxXJ1aCAKw979Eb+nOz/
XEcQ5espf3uz0DoaH74ARK7XprxO0SuqotiwGsdqRm9roiIVC4FYCIiIiIy77l8Dnq7S7L+14FsFHAsm
UN3f7yQbGMrZ+/5HOmFS6l/
9nHqn3oEy87cnRkTEY+26givd6bIhjMbvomISGVSACYiIiIi0tM9MkupBDPADmQCWrw8cW9+BTEuFqfz
1o/Te9X1VL21i+YffwO/
q33Grn9pfZRU3vFmd3rGrikiIpVLAZiIiIiIzHvn7gBptcWdAdad9+gIfdoi82f213uYMbBuI52334c3
0E/Lg98g9vb+Gbl0S9ynLurxSvswboZbMEVEpPIoABMRERGRee9cAFbsFsgD2QCAJfNk/a+JpBcto/
2ez5GrqaXxFz8gfmB3ya9pZlxaF+XscJ4Tg/P78xcREQVgIiIiIiLQ3QmRAOJVRR32QCagwctTM8/
aH8eTr07SceenyTQtoOGJn1C1Z2fJr7k8GRB48KoWwxcRmfcUgImIiIjIvOe6OqC2FjMr2pj9oXEqH5k
3d3+cDBeN0Xn7faQXLKXh6ceofvWFkl4v8IwPJaO81Z1mIBuW9FoiIlLZFICJiIiIyLznujqhprgL4B/
KjLQ/
KgB7LxcJ6Lz14wwvvYS6rf9OYtdLJb3e6rqAENilWWAiIvOaAjARERERmddcGEJPZ9EXwN+fDUhanlpT
++P7+D5dN97D8JKV1G39d6LHjpTsUsmoz6JEhF0dw+S1GL6IyLylAExERERE5rf+Xsjni7oA/
nBoHMtFaIvkKWJX5dzieXTfcDe5mjoafvkgfl93yS61ui5gIOc42JMp2TVERKSyKQATERERkXnt3B0gL
Vm8FsjD2QgOU/vjBbggStctf4Tl8zQ8/
iMsW5qAalEiQnXEeLVjuCTji4hI5VMAJiIiIlJmZnaPme03s0Nm9rVx9sfM7OHC/m1mtqKw/
YtmtmvUIzSzawr7thbGPLevdWbf1SxSCMCKOQPsQCZKwkIaPS28fiG52ga6brib4OxJ6p7+GZSgTdEzY
1VdlKMDOdqHFUqKiMxHCsBEREREysjMfOAbwL3AGuALZrZmzGF/CXQ751YB/
wD8PYBz7kHn3DXOuWuAPwPecc7tGnXeF8/
td86dLfmbmaVcVyd4PiSqizJexsHbuQhLIjm1P05SeskK+q7+MIn9r1NdokXxL6kN8A1e02L4IiLzkgI
wERERkfLaBBxyzh1xzmWAh4D7xhxzH/D9wvOfAneavS9Qk5JWOke57g5I1mJecX41fjsbkMdo8/
NFGW++GFizntTi5SR/9yv87vaijx/
zPZbWBOzuSpHOa2aeiMh8owBMRERERpLyWAMdGvT5e2DbuMc65HNALNI055wPwD7bqH98W/
HCcwAMLMvm9lOM9vZ3l78OGE2cF0jAVixHMgExCykRQHY1JjRvekO8DwafvVTCIsfUq2uC8iGsLcrXfS
xRUSksikAExERESmv8YKpsYsgfeAxZrYZGZGHLO7Rm1/4vOuSuBmwuPPxvv4s65B5xzG5xzG1paWqZW+Rz
gnIOuzqItgJ9zcDgbsNjP46n9ccrCRA09628leuoo1a/
8vujjN8V8GmM+r3SkRr73IiIybygAExERESmv48DSUa/bgJMTHWNmEaAO6Bq1/OMmf3lnDtR+NoP/
JiRVksZa3AAspmiLYB/
NBchg7FUd3+8aMMrLmW47UPUvvA0kY4zRR3bzFhdF9CZynN0IFvUsUVEpLIpABMREREprx3AajNbaWZR
RsKsx8cc8zjwPcLzzPusL0FTPzgM8ysnYYhW0RM2suPA+AjwN7kPdxhTtAFmsG2IFMQIBjgdofL54Z
PZtuJwyi1P/
qUcgX97NcVhMQ84xXtRi+iMi8ogBMREREpIwKa3p9BdgC7AMecc4tNbOvm9knC4d9G2gys0PAXwNfGzX
ELcBx59yRUdtDtiwBYzewPYBZwA/rXEb2V2KgRg1E5/
Bljo4GA2YFEkh6/2x2kJ4wl6Nt5G9OwJanY+X9SxI56xsjbgQE+G/
oyCShGR+SJS7gJERERE5jvn3JPAk2O2/
d2o5ylGZnmd+5W4Pox2waB9UUvdA5y3Z1gBtXJaY91Iucz7Dza/
EwRKpPUslUMLVtF8uVnGV69jnxj8daoW10X5a2eDLs6U9y8qLpo44qISOXSDDARERERmbdcVwdUJzHfn
/ZYB7IBHo5FWv+raHrX34Lzfep//
TNwxbsrZE3gsTgRYVdHinyoxfBFROYDBWAiIiIiMm+5rg4owvpfzsGBTJSFfp5A7Y9FE1ZV03vtjcROv
ENi986ijr2qLmAw5zjQqxl7IiLzgQIwEREREZm/ujqKsgD+mbxPv/
No0+yvohv60BrSC9qoff4pvIG+oo27KBEhGXhsPztM4Z4SIiIyhykAExEREZF5yQ0PQWq4KAvgH8wGGI
4lCsCKz4zujbdj+Rx1z/6yaMN6ZlxWH+XUUI7jg/q+iYjMdQrARERERGRect2dAFhy+gHY/
kxAi58npvbHksjX1tO3biNVh/
YQP7i3aOOuTAbEPGPb2eGijSkiIpVJAZiIiIiIzE+d7SNfp9kC2Zn36Ap92vx8EYqSiQxccS2Zhhbqnv
k3bHiwKGNGPGN1XcCh3gydKc0CExGZyxSAiYiIiMi85DrOghnU1k9rnIOZAEDrf5Wa59N9/
V14qaGitkKuroviG2zXLDARkTlNAZiIiIiIzEuu/Qwk6zDfn9Y4+7MBTV6ehKeF1Est19BM/9qNJPa/
XrRWyHjEY2UyYE9XmsFsWJQxRUSk8igAExEREZF5ybWfgbqGaY3Rm/c4k49o9tcM6l+7fqQV8jc/
xytSK+Rl9VHyDl5p1ywwEZG5SgGYiIiIiMw7Lp+Hrnasfr1v5ZV03vtjcROvtjweyan+ccedaIdPD1D77eFGGrI36tFVH
eLUjRSavmXwiInORAjARERERmX+6OiAMoa5xWsPszwTUe3mSan+cUX9ohXyD+IHdRRnz8vooqbzjjc5U
UcYTEZHKogBMREREROYd134GAKu/+BbI/tA4qfbHsulfu55M0wLqn/4Zfm/
XtMdrqYrQWuXz0pkhcqECTRGRuUYBmIiIiIjMO65jJACbzh0gz939cakCsPLwfLpu/

Ci4kIYnHoJ8ftpDrmuIMZhz7NIsMBGROUcBmIiIiIjMO679DNTUYkFw0WMcyAbUennq1P5YNvmaOro33
0H09DFqX3h62uMtSBRmgZ3WLDARkblGAZiIiIiIzDuu/
TTUXfzsr6HQOJaL0OZPf9aRTE9q2WoGVq2jZufzxN7eP+3xzs0Ce61Ds8BEROYSBWAiIiIiMq+4MISO9
mmt/3UwG+AwtT9WiN7rbiZb30z9U4/
g9fdOa6wFiQgLqyK8cHqIVD4sUoUiIlJuCsBEREREZH7p6YJ8DuouPgA7kAmosZB6TwFJRYhE6Lrxo1g
uS+PjP4JsdlrDXd0UI5V3bDszXKQCRUSk3BSAiYiIiMi8Mt07QKZC493cyN0fzYpZmUxHrq6R7g9/
hODMcRq2PAru4sPJxrjP8poIO84O059Rm6uIyFygAExERERE5pVzAdjFzgA7nI0QYrSp/
bHipJZeQt81N1J1YDfJF5+Z1lhXNcUJgedODRWnOBERKSsFYCIiIiIyr7iOM5CoxqKxizr/
QDYgYSFNan+sSANXXMvgh9aQ3PYsVfteu+hxagKPy+uj7OlKc3xgei2VIiJSfpFyFzDa/
fffX+4SRGYt/fkRERGZHNd+5qJnf2UcHMkGfCjIqv2xUpnRs/
E2IgO91G95jHxtA5klKy5qqLUNMd7pz/
L08QH+4rJ6PH3TRURmLc0AExERESkzM7vHzPab2SEz+9o4+2Nm9nBh/
zYzW1HYvsLMhs1sV+HxP0eds97MdhfO+Ucz/
csdwDkH7Wcuev2vI9mAvO7+WPl8n66b7yVXnaTx598jOHPiooaJeMY1TXHODud5tSNV5CJFRGQmKQATE
RERKSMz84FvAPcCa4AvmNmaMYf9JdDtnFsF/APw96P2HXXbOXVN4/
KdR2/8F+DKwuvC4p1TvYVbp64Fs5qJngB3IBMQtpFntjxUvjFXRecenCIMojY99h0jnmYsaZ1lNhEWJC
M+dHKQnrQXxRURmKwVgIiIiIuW1CTjknDvinMsADwH3jTnmPuD7hec/
Be78oBldZrYIqHXOveScc8APGE8Vv/TZ5/wdIC8iAMs5OJwNWOLn8TSfblbIVyfpuONTYND002/
j93ROeQwzY2NLHOfgV8cGRmYRiojIrKMATERERKS8lgDHRr0+Xtg27jHOzu3n
U8ccvMCYAZvZlM9tpZjvb29un905mgfN3gLyIFsi3sxGyuvvjrJNP1tNx+6cgl6Xp0W/
h9fdMeYzqwOPqpjjv9Gd5vTNdgipFRKTUFICJiIiIlNd4c4nGTjGZ6JhTwDLn3LXAXwM/
NrPaSY45stG5B5xzG5xzG1paWqZQ9uzk2s9AvAqLV0353APZKFEcC3y1wc02ufomOm+/
Dy81RPPD38Tv7ZryGKvrAhZWRfjN8QE6UwpBRURmGwVgIiIiIuV1HFg66nUbcHK iY8wsbdBXc65tHOu
E8A59wpwGLi0cHzbcacl1z76Yta/yvn4GAmYEkkp/bHWSrb2ErHHZ/
CS6VGQrCuqc14NDOuXxDH94xfvNNPLlQrpIjIbKIATERERKS8dgCrzWylmUWBzwOPjznmceBLheefAZ5
1zjkzayksoo+ZfYiRxe6POOdAf1mdn1hrbA/B34xE2+mkjnnoOMsVlc/5XPfzgZkMJap/
XFWyzYtoP3OT0MuR/
PD3yTSfnpK51dFPDa3jtwV8jfHB0tUpYiIlIICMBEREZEyKqzp9RVgC7C7APeMQ5t9fMvm5mnywc9m2gyc
wOMdLq+LXC9luAN8zsdUYWx/9PzrlzvV3/GfgWcIiRmWFPzcgbqmSD/
ZAahvrGKZ+6LxMQs1Dtj3NAArqGZjjs/
DUDzow8QnDkxpfOXVAesaYiyqzPFax3DpShRRERKIFLuAkRERETmO+fck8CTY7GPDY
BGPuBNYVt9LZ7WLvAJlxcCgbsELtj3NGrq6R9o/8Cc3P/BtNj/4rnX/
8H8kuXj7p869sjNGdDvn18UGaYhGWJYMSVisiIsWgGWAiIiIiMi+4U4WZPg1TmwF2JBuQw1iq9sc5JV9
TR8ddf0wYq6Lpse8QPXp40ud6ZtywoIqawOOxI320D+tnQ0Sk0ikAExEREZF5wZ08CjVJrCoxpfPeygT
ELaRF7Y9zTr46Sftdf0w+kaTp598j9vb+SZ8b9Y3bFiXwDB4+3EdvRj8fIiKVTAGYiIiIiMwL7vhRrKl
1SuekHRzOBixV+
+OcFVZV03Hnp8nWNtD4ix8SP7h30udWBx63Lk6QyYf8+GCvQjARkQqmAExERERE5jw32A+93dA8tQDsU
CYgj7Fc7Y9zWhivGgnBGlto+PcHqXpr16TPbYj53La4muHcSAjWk1YIJiJSiRSAiYiIiMic504cA8CmG
IC9lY2SsJAmLyxFWVJBXDRGx+33kWldTP2TD1O1Z+ekz22KnwvBHD840MPpIQWmIiKVRgGYiIiIiMx57
sRRMIOmlkmfkwqNt7MRlkZymNof5wUXROm89ROkFy2j4enHSOx6adLnNsV9PtKWwIAHD/
ZwsDddukJFRGTKFICJiIiIyJznThyF+kYsCCZ9zoFsQIixTO2P84qLBHTe8nGG21ZS/
+zjVO98ftLn1kZ97mqrJhn4PHakn9+dGiR0roTViojIZCkAExEREZE5zTmHO3F0yu2Pb2YCaiykUe2P8
4/v03XTvQwtW03d809R8/
Kzkz41EfG4c0mClcmAF04P89ChXvq0OL6ISNkpABMRERGRua2rA1LDU1oAvy80juYirAiyan+crzyf7h
vuZnDl5dS+
+GuSv98Ck5zNFfGMza1xNrXGOTmY49tv9bCrI4XTbDARkbKJlLsAERERRERZFScieOAmDNCyZ9zpvpKGCs
UPvj/OZ59Fx/F/g+ye1bsVyWvlv/iMmkombGJbVRWuM+29tT/OrYAK93pvjo0hoWJvTPMBGRmaa/
eUVERERkTnMnjkEkAvUNkzvewZ5MlBYvR42nGTvznhk9G2/
HeRFqXn0By+foveOTYJNrpklGfe5YnOCdgSy7OtJ8b38P1zbHuXFhgppADTkiIjNFAZiIiIiIzGnhiXe
hsQXzJhc2nM77dIU+G2OpElcms4YZvetvxvk+yde3QS5P70c+DZP8mTIzViajLEkE7O5Ks6sjxRudKa5
rjrN5gYIwEZGZoABMREREROYsl8/
B6ZPYZWsnfc6eTBQfx1K1P8poZvRdcwPOj1C7ZzuWz9Jzz2fB8yc9RNQ31rfEubB0uyt7uNDvbU7zWkeL
a5jibFlSRDCY/loiITI0CMBERERGZs9yZU5DPYS2TW/8r52BfJmBJJEdUi9/LWGb0X7UZ5/vUvf4Sls/
T/
bHPgT+1f1Ylox7XL6hibUPsfBD2akeKKxvjbF5QRUNMQZiISLEpABMRERGROevcAviTvQPkkWxAynmsi
KRLWJXMdgNrN+D8CPWv/g77ZY6uj/
8HiARTHudcELauMca+7jRvdKV4vTPF5fVRrl+QYIEWyxcRKRr9jSoiIic5Y7cRTiVVBdM6nj92YC4h
ay0M+XuDKZ7QYvvwZ8n/odW2n8xQ/p/uT/
gguiFzVWTeCxsXUkCNvfk+Fgb4Z9PRkuqQ24ZVG1gjARkSLQaosiIiIiMme540ehuRWC4h
czDoXG4WzA8kgP49SOPPv49lpjdzsCricU1znPtWJLmyMcaxgRzf3d/DL9/
ppz+jUFZEZDoUgImIiIjInORSw9BxZsrtj60Jm3aXrsO1h6+ncPjfr
GusYYn1hewxX1Ufb1pHlgXzfbzgwROleEqkVE5h8FYCIiIiIyJ7mTxwCwSaz/
5Ry8no7R4OWp98NSlyZzzPCKy+i68R6CM8dp+um3sOGhoowb9Y1rmuN8bFkNLfEIvz05xI8O9NKV0mww
EZGpUgAmIiIiInOSO3IAPA9aLhyAncz7dIQ+lwTZGahM5qLUslV03fwxgvbND/

6r3hDA0UbOxl43LKoig8vqKIjlec7b3Wzt2v6M81EROYTBWAiIiIiMieF+9+E1kVYNHbBY19PR4ngWK7
2R5mG1JKVdN76cfzuDpoeeQBvoK9oY5sZK5IB9y6rpiHm88t3B3j62IBaIkVEJkkBmIiIiEiZmdk9Zrb
fzA6Z2dfG2R8zs4cL+7eZ2YrC9o+Y2Stmtrvw9Y5R52wtjLmr8LjwNKg5xHV3QscZbOnyCx6bCo23MlG
WR3IEWvxepim9aBmdt30Sv6+H5kcewO/
rKer4iYjHHUsSXF4f5dWOFI8e7iOdV9uuiMiFKAATERERKSMz84FvAPcCa4AvmNmaMYf9JdDtnFsF/
APw94XtHcAnnHNXAl8Cfjjmeqhqh3nH35nrD2B1GwTrBDEA17y9Y0Hr4bNT9R16m4uMqcbD1ivqmHbbG5
DG+yn+Sf/H5GzJ4s6vmfGtc1xNrbEeac/
y4MHexnKKgQTEfkgCsBERERERNWmsTcMg5d8Q5lwEeAu4bc8x9wPcLz38K3Glm5px7zTl37l/
We4G4mV24328ecPv3Ql0DVlv3wcc5eDUdo8nL06jF76WIMi2LaP/In+Cco/nhbxI7sq/
o11hVF+WWRQk6U3kePNjLgEIwEZEJKQATERERKa8lwLFRr48Xto17jHMuB/
QCTWOO+RPgNedcetS27xbaH//
WzMZt7jOzL5vZTjPb2d7ePp33UTFcOoV79wjWtuyCxx7JRegOfS7V7C8pgVx9M+0f/VNyyXoaf/
FDql97sejXWFwd4bbFCXozeR482MOgQjARkXEpABMREREpr/GCqbGrWn/
gMWa2lpG2yP911/P4vFlojby48/
my8izvnHnDObXDObWhpaZlS4ZXKHd4PYX5S7Y+vpGJUWchSLX4vJRJWVdNx1x+TWrKCut/+krpf/
wzLZop6jdaqkRCsLxPy8OFeUloTTETkfRSAiYiIiJTXcWDpqNdtwNgFg84fY2YRoA7oKrxuA34O/
Llz7vC5E5xzJwpf+4EfM9JqOS+EB96EWAxaF37gcZ15j3dyAauCLJ4Wv5cScpGArps+Rv+a9VTv3kHzg
/9MpP1UUa/RUhXhpoVVtA/
n+enhPrKh7g4pIjKaAjARERGR8toBrDazFWYWA4uBJwvW/LjrsRCPAHGJw2F+b1wBPA3zjnXjh3sJl
FzKy58DwAPg7sKfH7qAguDHEH9mGLl2HeB/
+quyMVw8dp8XuZGZ5H3zU30HHHfXjDQ7Q8+A2qX31hZCG6IllcHXD9giqOD+b4xdt9hEUcW0RktlMAJi
IiIlJGhTW9vgJsAfYBjzjn9prZ183sk4XDvgIsQQ9g00mdkh4K+BrxW2fwVYBfxtYa2vXWbWCsSALWb2BrALOA
H868y9q/JxJ47C8CC0Lf/A4/pDY08mysogS1yzv2QGpRcu4+y9XyC1aBl1W/
+dpkceKOpdIlckA9Y3xznUl+WpowM4hWAiIgBEyl2AiIiIyHznnHsSeHLMtr8b9TwFfHac8/4b8N8mGH
Z9MWucLdyBN8EMW/LBC+DvSMVwwOWa/SVlEMar6Lrlj0gc3kvt6y/T8qN/YmjdRvpv/
AhhdXLa419aHyWdD9ndlaY+5nPjwkQRqhYRmd0UgImIiIjInBEe2Auti7BYbMJjhkPj9XSM5ZEcNZ5mx
0iZmDG0ah3Dy1ZTu3s71XtfoWr/Gwyuv4nBaz9MWFU9reHXNcYYyDl+d2qIhqjPmsaJ/
0yIiMwHCsCm6OCP/
0e5SxhXpdYlIiIiMlNcTxecPY1t+PAHHrczHSOLcYVmf0kFcNEYvetvZnD1Omp3vUDy5Weo3vk8Q+s2M
Lj+JvJ1jRc1rpmxqTXOUC7kiaP91EY92mqCIlcvIjJ7aA0wEREREZkTwt2vAWBtKyY8ZjA0dqZiLItkq
fPDGapM5MJytQ103fJxzvzRFxletorqN7bR+p3/
h4YnfkJw5sRFjembcdPCKhIRj8eO9NGdzhe5ahGR2UMBmIiIiIjMei6fI9z+O1jUhtXVT3jcS6k4OeDK
aGbmihOZglxdIz3X38XpT36JgcuvJXbkLVoe/
GeaHv0WsXcOTPmukTHf49ZFCUIHjxzuZTin4FdE5ie1QE7C/fffX+4SRERERERERORQDuD27YKAf7/
pbJjymN2/sSkdZGcmR1NpfUuHCRA19195I/9oNVB/
aS83+HTT+/EFyDYvJbPoMmcuvx0WiU75vEEgGJkGmpC8SUxlUuR+iJsMmvtdTDDVC8fESMKQUe+5DyB0lW0bKMpP0fGVO6kgiGi+E78Cb/7x5w0Ic/7h6AKjuKgE4oL5PRFUbg5lbgEAiWfe2MX+pn1WDgTHExpK2J46CNzvHSPjVnUa6sudn3H2j/CsJnDEpj98IMEBUEaYsyUpbGxMubg8xMfcd/L2cnXu+XNdV3+6n+ch3t/MeFHLTlL8Fj8oAWDfVQqkhFxAxH0RD8BRyM8iOC2nXH3UHnGpHFrlTRr/ASPrjOb3JuN8z/KMBDuJyKQVdLmGrYfLr8zvmNm3Q+O6RiLqBl4Sd2sWzyRR2pZUuB1WFr4IIBdq7cG5s1OxAfUVtX9gw0vMZ3G+vx+W9+ccBMOYYvp3Vne1b8mULefq2sefZ5jJNbT5MhoS8kRGI3pFRtxdTlh

i549rrYpw79Jq9vVk2Ned5kBPhisaYmxoibO4OijjOxARmRoFYCIiIiJlZmb3AP8D8IFvOef+7zH7Y8A
PgPVAJ/A559w7hX1/A/wlkAf+N+fclsmMWamcC3EH3yJ86TncO4cgiOLdcS+5thUcyQa8mQk4lB35R/
eqIMu6aIaYgi+RixJWVdO78TYGLruG2jdeIrntWWp2Pk/
qkisYvvwaUisvBT+C7xnrGmOsqg14syfDwd40b3anaY37XNEQ49L6KI0xH1MKLSIVTAGYiIiISBmZmQ9
8A/gIcBzYYWaPO+feHHXYXwLdzrlVZvZ54O+Bz5nZGuDzwFpgMfAbM7u0cM6FxqwIzjno68EdP4o7/
i75A3vJ9PUzUN9C1w0fp33hSk4Q40RPhDxGzEIuD7KsDrIktNaXSFHka+vpvuleBrraSRx5k6p3D1J1Y
DdhrIrUitVkF7SRXbAEW7CE65rjXNkY4+2+LO8MZHnu1BDPnRoiGXgsro7QEo/
QUuXTEo+QjHoEnkIxEakMCsBEREREymsTcMg5dwTAzB4C7gNGh1X3Af+18PynwD/
byFSL+4CHnHNp4G0zO1QYj0mMOePcyWOEB9+CgT7cYD+uvx+6O+nPw+Mb/5jBmrUM3bCZvOf/
4aSco8ELuSTIssTP0+Ln0b+nRUoj29hCb+Ot9F53E7HTx0i8c4Do8bdJ7H8DAAfka+oIa2pprallY3WS
3kQdx6qaOBGt41S6iv0WZXQ/cgRHlYVUWUgE8Aw2R4e4JJJlwr7lSW3/
oL8IJgjH3RRC80o4tmhjj7N9wmGneeyEmz/gexKGox553JjX793//
m3uPdvGOd5s1MP7w3NvnG2MfLXR5zgHzo38DxvnwIXnt/GB29wfvifnfnbPX4cx1+T8td/
7fJzzJrrORLV4Hvg+eH7hq4edf+6D743aN7L/vQ8f87yRz2vsfjt3X0VX+Ba//
6stasMamib6IZpRCsBEREREymsJcGzU6+PA5omOcc7lzKwXaCpsf3nMuUsKzy805owLTx4j3PoriFdBo
garroZlK4gtaCNW30htLEaVbyR8qPKhPgINESPwIujXVpEZ1liPW3MlaSA9NIDffhrv7Cmsrwd/
cIBI11ns2GES6TSLR4UbWT+gM9lMR7KZwVg1w9EEqWgVw9EEec8nNMMd3kb+7JHyvTeZvTy/
EMQUwpexYYw/ZrvZqEBmEg9GhV1h4fXoMIxR4dnokGqix/
mgdlQY5vjDteC9QdnY12PqwnHh679nO+8PD/Mh7j1B4cg2XFiSb5n/
iT+dnQHYK6+80mFm75aqmIJmoKPE15D30+dePvrsy0Ofe3nocy+f+fzZLy93ARcw3jSGsf+rfKJjJtru
TbD9/Rc3+zLw5cLLATPbP0Gdc818/jNRTPoci0OfY3Hoc5w+fYbFoc/xnP/
6/07n7Ml+jpP6XW9KAZhzrmUqx18MM9vpnNtQ6uvIe+lzLx999uWhz7089LmXjz77inYcWDrqdRtwcoJ
jjptZBKgDui5w7oXGBMA59wDwwMUWP1vpz0Rx6HMsDn2OxaHPcfr0GRaHPsfiKPbnON7/
HRQRERGRmbMDWG1m/z97dx4fdXXvf/z1mclkhQAhG/uuuAEKRVFURNksInqrAm1/
KtYqFatgf9aKKDVq9bitXrrVkR/ahUrVC9VQe4FW25FBEUpq4jsyhayELLP+f0xk5iEJGSZZCbh/
Xw8eMx8t3M+3+M0c/qZc863h5lFE1jU/t1K57wLXB98/yPgf5xzLrh/
gpnFmFkPoA+wupZlioiIiISBgF1/SaCiwBvMA859wGM5sDrHHOvQv8Cfh/
wUXuMwgktAiet4DA4vbFwG3OuRKAqsps6T6ilSRmAA76YbgRwi1e/
io7cND7R4eavfwUdtHMOfce8B7lfbdX+X+FvhcqUS/
idBQO4aG2jE01I4NpzYMDbVjaIS0Hc3V9TGsIiIiIiIiIiJkYRtohJgZjbazLaY
2TYzuyfc8ZwsGyHma03BbyHma03s3VmtibVcLG5/
BzvYMLg9njC2RmXUxs35mtt/d2TfDBX1H+tHfcHQUN8uNNNRXCCw31vULDzG
LNbLWZfRFs/V6NRlVedDcBAYzbfYhN13p6znvD/
IgIgIGBaYLcJPXcBEQKNnIqbw/
c3a/PGUAOxexCE0Fn8rT5fx6wiDkqzkwdAbh6DcA8V0OBYh6CpkiyIe7rQV5cWnpP/
AhLoLPrmDwQtbXTQoh3wdj8tcfdhqNk6wZVp/
JDpI/SmCwHKa67uO1GkAeGHKjbBb/IRnhBRPmS7GP6/3dfv8u9gi3vkONiuJjRR1Q/
8mLBn2+jZ6Ww5x/nZ1aoIVM+Iy6YAmM45XOoAh+oZQgL/
YZIDkT6KGL1hhjcGBVsuT7sfP7c+xlwdzs9s3IaHhc1/fOOe7rxMJY3Vr1ZtAkEzIKcWbMtwekXF4UJXC/
mA/IZXJSyxHIhsFGX7MA5G/8L3zu6KFlhSn+fp/Aog2MzkX5gvAa+JGi/UwDqMHCMCKE/
hAFl4O4UV7nUI2jrMoDxhRQNRO/T1CAWawzWYKt7FpErhkNfFdCyLX5jwMjFNI+f9IwhYAmuYNY0NxlrI/
Y6ntSgwxK2KrldjZ9aOM9HtxBpUaDldQQX3KIyiwJhzMf0Xpc6vrS+pyVpgWc/
e24gwwkTXTxaFkzoTIrx/
8XiuZRt8OsbTD8CE4snsAB7J5M7b8ktjBYu9Ey+nYrp8HYSk5/
ACygb7OkfEltOGKRLkkMOi7FfnOnpWDE8CbuoV2Nb8kfHB9oN0RiZTu7uHW6kdBtmd23PqrSdcpBF+c4fT96gRc
tVVC8ajtlh6Gn4Z9sd9NzPzy1cmXDAJSS+F10ZVB/Db/G9NSZKjFuPW58/a+ZD7sJ5vdp5rxv0bAU3XXc7v
T1w8xRaNuE9iXzr5THgXUvF5IvIaAbDqNvl9rk2lKyUg69/
cLQJvngZ1c0g5yVEgPt0OTRAbG1/
KDNmtUNpi+C8nv0eijLl6rsbt9vxcOzq8fGhC5qeu5JmFtWvwXPp1ve+cJ5p5ajbBcvfqBRv88+WP/
byOtR1oS+HHjDxOPPzFgRn64bGtF/A5gqA/Pd7c8GC0rPXQkdD/rpV39/+0WaNbKfCiXkvM5i/
B0dZjsnoRfRvUvpRw8F/7T3M/gXxCMoKYXdH0UwURY6c/WAZmUR6mWCwSXQ3bmU9MFQQWJf/
hVcbMzr4N48cGr3nosSl3ZtoDRK/93FxbR5wcjjAeLDNmGSGM9YpGkimUj3cRzMJcvdBc5sbx8HEl/Ik6/
Lo/9TMmJWswAN8QUzQ5MNXkHHsK+1Wpb5XDHwo6HDYmUuSJjSv/
tvN5GMnfy3oatWtLNwqBQvfgk+tK6OZ97bwftdCHeaHkzX0JbKNRfhwXUGRLKoVTgFrBi4yaeRR+/fTUV+9Ncnm57Mx
OpMYdxP3sr6/LsgC9iVfTRKuS7c5xQu79vxXh0mdxhcGvI/mcDR3Fcx5rOqh/
rLpi+jGaMSMVKQJrHz7Ihu6qgbVJ9zczmoGaNEMJ/
ke5/CUtvWvuCaLbu6NG/
QfPZxHBj4nvtI7DpB3bqzrWZmgKTI8ZcL2ajqWIIkhkk/iFQa+2e6rB8wLUkDGBX9e6SGW6wM17BFhglgZ/SYiIhoVzTz5d/
TvlKLnw82YhzMlgdEETOvZXgkZJj1ugJdihVeRvGwxGM/QZJbNNmm2bLrCXzHHmj8KGaz6XPYwkQ47XEeCvtbqX/
vgzEnQLoE9Js6a18s+hqVgI/
1hFihCXt4tNdWUFCBAVSItMRFidF4vhnX0wmJFn2ZP6yKrqb1/
kJqG6sgHVfqNfGBbnwQyVkMEN2V3d6mYCm1qkmpTlNcnDJN6hIP2rZI0IDwyUp/
Jaw7Zlc6LNFTWmA8CsPIKs9NMd+WvgjMCNlSV40RlgB47aYqAgnJ0qx4H0Y4WfpN1Ad8JInR2GyrGyaJ/
kdl9lt7YBgfN8DjnuCg01Ye2DxJk4rXZSO0ooucfiDvV/YrpeK1Mxj10P3qb+vt5dXEdZB3ZSrCrFlqhiwBhQ3SuNF0
Gn/b1gcvfTDQfuj1lRYrFUW1y7bL58gJsAWm0iPDA5vaZIJw7ku+d0VEMtdZn4hDC8UUwl+jBOmN1Ddvq1A6J8
wCmo+IHH4A7SF5SpS4+OkuHfUCwXyIEC2FcmrV+F+D+BF11DhFB/vJzHc3I/wiJpH9xgDJ4B2JqnlnCBBT4VeBM/
o9JoWc/

aUFOOe+c84dCW52Az4CXgQ+Ay4BFgSP/QXYG3z/IfAfwXpaA3HAfwEvAEeAHwP/XlXAZpYA/
E8wzq3B98OA/zGzXsHTXgdGAHuA7cA9NTWCmUUBF5Xbdaim86vwf4EDwJ+BguB93E/
gv8+fCbTFKZWuuQ0w4BsC/
x3+UO5Yte1oZr2BuUAiMJ9AW3Yl8CsxwJ+AXwNZwNsEfrFdWNqRA14C+gePvQ34gTPreL8iIiLS+NTXU
19vPurriUS0qHAHIHKSeJPAl9n/
BT6uZxm5wGUEOkbLgTbA+cBuIBvoZGYpBL7cS+2sobxrCQwt70RgyPxFQF8z6+ice9rMfhQ89rpzbn7p
RWb2cwKdmFRgA9AHGF5NHT8k0GHbDgxzzjkzWwSMB24ys//
k+18fRzrndppZBvDLasr7vNL2M865vWZWw20e51Xn3P8J3ksyMCm4/1Ln3OfB/
b5K17zvnLvKzC4h0LE7u9yxatsRKC1nH7AQ2Oic22Nm3uB/qwkEOjr/
BEoItOfFwK3AiuD1+cC7wHrgKwKdMxEREYks6uupr6e+nkiEUwJMpGn4gdkEOkdTT3Cut5r9O5xzeWaW
WW7fFudcSblOQQKBX7xKdQM2Vy4o+MvhZ0CrKupJIfAlfhwzm0jgV7yqrqlK93Jxli4EWxpPNwIdCYA8
51xpB25jNWURrHs/gXtc6ZxbWcO51bXj/
5Z73yP4WljaIQJwzhVVuqb0WGnbJ8CJ29E594WZPUCgk7ckeM0WAr+SxgXP83D8Z6J38PUW4HECvyoDH
A6e+0Y19yYiIiLhob6e+nrq64lEOE2BFGk6bxH4ZefaSvuPBV8Tg6/
VDXsuqbzDOVfVvq+ALcHNX5tZTOkxM0sJruHwQwJf5OuBtkBauSJKe1ilZZf/O3Fd8PVFIKbcdnW/
VO0Ivp5i3/fcSofs7+T7ofdxZtY5+L5vNWVBYF2I6c65f6/
UIcoNviYCWODpR+nVlFFQ7v03wdfoSms9VP5xoDj4WvlpTjW2o5l5gd8655IJdAIfJXD/0/
i+bQoJdKDMOWdANHBV8Nj7zrk+QDKBjlR74LfV3JeIiIiEl/
p6Aerrqa8nEpE0AkykiQSHhM8msOZCeZ8DFwBPB38xujIE1d0KfEBgjYL1ZvZ3IInAcPYLCfyyBoEh7f
8BDKiijN3B1zvMrB+BNQpKrxsD/BG4/ARx/
I3Al38vYLmZHSLwhZ8HzAsOEf+IwFDwpWa2hu87WnXxBYEOywAzewYYRC3+vjnnDpnZ6wSGxv+3mf0Va
Edg+Pmva1HvidqxC/BJsP0PEPjvDJDpnDtoZgsIdJI/MbMPCXR6LgSeBWYBn5vZDmAX3z/
RqfyvwiIiIhIh1NdTXw/
19UQimkaAiTSthUDlJ97cTuBXpQFAZwKdjwZxzq0ABhP4JbIN8H+AHxBYXHM3gYU7/
wQUEVhr4pEqinmCwDoHpwN3EPjin01gTYr2wEDg4RPEkQtcGqy3b7CujwiswbAteNqPCSwY2o1A52luc
H8BteSc20pgQdXDBDqVSwl0JGrjZuBBAgus/phAu22r8Yrvnagds4HVBDpDNwMdCQxpfyh4/
CYCi8r6gRuC531MoEMLsIzAr4jXA0MJrBXxs1rGJiIiIk1PfT319dTXE4lQ9v1UbRGRpmdmbZxzWeW2n
wN+TmAB05+GLzIRERERaSj19UQkUmgKpIiE241mdiWBXwt7AD8h8CvZM2GNSkRERERCQX09EYkISoCJS
LhtIbCI6a8JLHD6D+BB59yqsEYlIiIiIqGgvp6IRARNgRQRERERERERkRZNi+CLiIiIiIiEiLVqcpk
MnJya579+6NFIqIiIhI6K1du/
aQcy4l3HE0B+rriYiISHNT275enRJg3bt3Z82aNbt3Z82aNfWPSkRERKSJmdnOcMfQXKivJyIiIs1Nbft6mgIpIi
IiIiIiItmhJgIiIiIiIiLSoikBJiIiIiIiLZoSYCIiIiIiIi0qIpASYiIiIiIiIi2aEm
AiIiIiIiItKiRYU7ABERERERERGJXNnZ2Rw4cICioqJwhyInGZ/
PR2pqKomJiQ0uSwkwEREREZEQcs6PmSZaiEjLkJ2dzf79+
+nUqRNxcXGYWbhDkpOEc468vDz27t0L0OAkmL6ZRURERERCxL9uNcWPP4B/
1zfhDkVEJCQOHDhAp06diI+PV/JLmpSZER8fT6dOnThw4ECDy1MCTEREREQkBFx2JiXv/
xXyjlHyxjzc4YPhDklEpMGKioqIi4sLdxhyEouLiwvJ9Fslw8EREREREREGsg5R8nf3oaSEjwjxoJzFL/
6PC43J9yhiYg0mEZ+STiF6vOnBJiIiIiISAO5DetwWzdiZ/8A69gFz/AxkJNN8et/
whUWhDs8ERGRk54SYCIiIiIiDeCO5VLy/
iJon4qd1g8AS0nDc9Fl8O0eShb9OcwRioiIiBJgIiIiIiINULL0XcjPw3P+MMzzfffauvbA+g/
CbV6PO7g/jBGKiJzcZs2ahZkxatSo44796EEc/
YtiwYU0Wyw033ICZYWZ4PB46d+FjR5PFcLJSAkxEREpJ7ct3twX6zBzhiAJbU/
7rj1OQ0A/
4Z1TR2aiIhUsnTpUj799NHfvn35+OOPWblyJXPmzGHFihVcfvnlFBYWhju0Fk0JMBERERGRevLv3
A6A9T2zyuMWWnwBpHfFv+KIpwxIRkUqSkpLo168fH3fg26YLTEREKjAz7r33/9XXt
59913Wr19f47m7du1iwoQJJCUl
ER8fz6hRo9iy5Sx54wZM4a4uDh69erFokWLKi06r4mgLzQ4xJ+lR08OWKOBWEiZyq1XM/Pnz6z2dsn/
gDs3r27znE88sgJiaFLly7MMmMDGD4uLisuPz58/HzHi
Ouss4iLzy7MmDGD4uLisuPz58/HzHi
fj0jRowgISGBvn37snjx4lGX5bHmZZhPh0x3jbjYFzbUOBRqIJLbM7rvarFMuQdHkGkVbDbB6/+2Pvrn...

UyJGJiEh1fvKTnzB79mweeeQRXnrppeOOL1u2jBEjRpCYmFg2BbB169YMHDiwbI2uTz/
9lPT09AoJq06dOjFw4MBaxbB27Vp8Pl/Zds+ePVm+fHmd4xgwYAB/+tOfeOCBB/jhD3/
IwIEDq0wgXXXVVRW2r776an75y19SUlICwGeffXZcfuG6667j17/+NR9//
DHXXHNN2f7yCa327duTmppaNgKsV69etGrVikmTJvGzn/2Miy++mLZt25ad//
HHH5Obm8s111xTYXrl8OHDefDBB9mzZw/dunWrRQvWT0QlwEREREEmgu3N7hWywmmQEJgGqT75B/
4N3yBVwkwEWnm6jsCKxJERUVx991388tf/pJZs2Ydd/
zQoUOsWrWKN99887hjl156KQDfffcdKSkpxx1PSUkhJyfnhDGcdtppvPLKKxQVFbFy5Uruvfdebrnllg
p1
1iaOyZMnk5OTw/
PPP8+cOXNo3749U6ZMYdasWRUSYampFb+nUlNTKS4u5tChQwAUFRWRlpZW4ZzS7YyMjAr7yye0AKKjo8
nPzwegXbt2LF26lNmzZ3Pttdfi9/sZOXIkf/
jDH+jZs2dZfWeccUaV7bJ7924lwEREREEIo3btxsS22AxMSc812LjoENn/P/6HM/
wMZoGKSISRpMnT+ahhx7i0UcfPe5YUlIS48aNY+bMmccdK53Wl56ezsGDB487fvDgQWJjY09Yf3x8PIM
GDQJgyJAh5Ofnc//99zN9+nTOPffcWsfh8XiYNm0a06ZNY/
fu3bz22mvMmDGDTp06ceutt5adf+DAgQrXHzhwgKioKJKTkwHw+XzHnbN/
6yOOpiyJAhfPDBB+Tl5bFs2TKmT5/
OpEmTWLVqVVlZixcvPi7hBnDqqafWqa66itgEWJ9Jd4Q7BAC+ev0/
yt5HQkzl4xERERGR8HF7d2HJx48AqI5174X75wrct3uwjl0aLS4REalZTEwMv/rVr/
jNb37DwIEDK0xHvPTSS1mwYAFnnHEGcXFxVV7/gx/
8gNmzZ7N69eqyaZB79+5l7dq1XHDBBXWO56677i0UcfLXuqYm3iKK9Lly7cc889vPTSS2zcuLH
CsUWLFjFmzJgK2+WnSw4cOJC33nqLKVOmlJ2zYMECPB4PQ4YMqfP9AMTFxXHFFVfwr3/9i0ceeQQIJMf
i4uLYt28fP/zhD+tVbkNEbAJMREREREMRSuaPZkJMFp1Y9jaMq1rUHbtXfcRvWgRJgIiJhdcstt/Dwww/
zz3/+k4svvrhs//Tp03n11VcZPnw4t99+O506dWL//v189NFHDB06lIkTJ3L55ZfTv39/
rr32Wh555BHi4uKYPXs2aWlpeDyeOscSHx/
PtGnTmDlzJlu3buWUU06pVRy33HILqampDDnkEEyIOeKeISQkNOxv+on07duXl156Cb/
Hi6du3K3r17ee655xg+fDgQmD45a9Ys7rjjDnbu3MlFF12E3+9n69atLF+
+nEWLFtW57eqi7v9lREREROcqXrf9VmAfxSFhMbmAa5aX1jhSUiIrVUmnSqLDk5mVWrVtG3b1+mTZv
GyJEjufvuu8nKCEkjyAAAIABJREFUyqJfv34AmBnvvvPMOffv25cYbb+SOO+5gypQpnH766SQmJtYrnql
Tp5KYmMgTTzxR6ziGDBnC3//+d2688UYuv/
xyFi1axAsvvvMD48RXXaHvxxRf57LPPGD9+PIsXL+aZZ55h3LhxZcdHjhzJG2+8wZo1a7jiiit48sknue
uuu3j66afrdA+9e/fGzLj33nvL4h09ejTz5s0rO+fuu+/
m+eef5/333+fKK69k4sYX1are6MOdcrU8eNGiQK33aQGMo/
xTISJhuCJE9BVJPgRQRETkxM1vrnBsU7jiag8bu67UkJcs/wP+PZXgm3oSVmzpzIv6NX+A+/
SdRd96HtWnXiBGKiITGpk2bOO2008rU6pT8DPQ5rG1fT1MgRUREREEpLYyM6CoEJLqnwCD4DTIzAxcZkaIAhMREZGaKAEmIiIi
IlJL7shhAKx1YoPKKVsHbOf2BsckIiIiJ6YEmIiIiIhIbZWO2GrVumHlt2GsPMbH4NQ1SRKTRzZo1CzMr
+9exY0f+7d/+ja+/
bvy1GG+44Yayej0eD/d/Px21MPANi+fTszIMPANi+fTszZ87k0ksvZcOGDSQkNOxv+on07duXl156Cb/
fz+bNm5kxYwaXX34569atIzo6ulHrlu8pASYiIiIiUksu8zCKwC0aoV5Gj6RwtI74nZ9g8vMwhNomhSA6ERG
pTlRUFOeddx4A5513Hl27duXCCy9kyZIlXHHFFU0SQ+fOnTnnnHOt/884nPrrmnUuhMSEsrqPv/884mPj6e
v1Hrlu9pCqSIiIhIhDKz0Wa2xcy2mdk9VRyfbmYbzexLM/tvM+tW7tj8N/
1TRt5y+WOZDR8+mOQpXUKlKl1wEREmtzAgQMBKkxFXLBgAWeddRYxMTF06dKFGTNmUFxcXHY8Mz
3sZ3Ts2JHY2Fi6du3KzTffXOe6+/
fvD8Du3bsr7N+2bRv3338/f73///ry+/vLBwADSYYCjUoG8HyPf/
B6m9jwU5HoN1V9S+lRKzyvZDOgbJ4HYN8dp90HrgR62+s24r6xIKZvwBBgW/
ODHx+8Kr++sCl8ijDSL9EutCAFvXwY2xA3JVnuHJiVZYMf/
7gbT1Gmvw7ZFzFgCCEBITCMLiIQ7eq9kqsZ7oGlSrGG3MBbSSLbE4GiMbGDGqIiIIpdCz5/D+KC2pmnebsmFtj1+BkmTKc7N9KhyYc/WNTt/
LMxFbsr3EvkPJTbr/
lwKKKOn/
PFbYz2hvD0KvjdIzmQxKc/2jOmjhzp5jFJ+SRyt+KCfDzSbthJqNkqtnt0Jl4Am6d/
K9jqLoWt2+WnhwgIHQZjMz8S0yyfH4M5+kKVq5ngZdMHtJPJrg/
T60QWUnNtwxd5tt4AHFpUtdl1DgeeHGGG0l/
0hAZbWctbP6pEfQgzhBx2uDq6OBZz9n/
XIrT6Rj7Pg4WHwjmOP3FdK7gyfTTwb7e3fn9uTyXnWHCqBRO/
MgDZNaP1bGo9fDoOdYQiSZfbIlk5ZNQuA9NT3Xj6MMiwL9aTOoLQdN2fR8GMbHT4i3N42o+w9bpH+0ffnWvQYBD3/
0gjRXtuvNnmeNXPvPZR/I8DYWhvW+GiEk/
4nEtzHbrc/
Jp8ftMh3Z/
W9Os0Gv8XpHibxZ1ew/
3k0i/
/d8U6nrgGWq8ZW3tuhyBqNx3Uj3fYpXEbUprmCSJqRJaL3z2IhNmdUimLkS/XeNWMS+i0SXyFYnFNd/
AR/
E+A0JrNaGCjegYjRHNnORnTZZzXLa9Lzx1JR9qLUBt5Yd2PJdoBANqVNT8GkQX0B3kKKhOjI3GCKIN
UZJSkESF4j07
o0N53YkNA1sNlHfz4GwQFGO3wJJq8nEThdKo/
gP5AV2vHBe9Fh4kY+wdl0Hu8/
zHeALe0kGHD+vyV/
c7eqM14LZMdjnPfc1MsQE5Z/fpldPJMlrKXTrVK39vTF5Kbu5y7K54vv9e8z/
NE/
TA9LkZMxt4XGbnl4LHttC8eFhgexHx8yPtUTnr1+8XHqw/
sodzYX/
2Lt8dm6Mdm66XYE8Xh7qVfwbVxNWU7RFUXfgBPA4Kc1P2NvQ7pOO6/
yoNS2BVeWf9i0Rpxzl3/
I0ayayGTzL4PZ2b9t4xHJQW6WwU1fiqH/
x0XDuuDZQNxk4UzJrfyGeX46l+2UbKkvh4hEgiYyx4fXJ1y0zm5V39z5r/
mVMswsGlbHcG0oplPHycMbHjL1+aK70JKOtQbx4FlW1Ja1l5jP5RvzKxr5Ze/
TlhGZ8W2S99TyPuT7zC4bG/
OMp7LdHMwOCdwpeezd5blPhRrKf40KcpdtMgEG0ZkZW7BDydRpMxZ
IkbfjSLl1tvLlzgZlcmCFrG3EtO0DlgL6Ol04qhW02gfsM3X39oI/
B70DO07hLzWgrR/
ueXKOSNxU4m5SxTnz8G4HQMBlLPwAaNc5k0BTTTrszTQYlczIlCRsoTzgmTlu/
+XXXYjS21wu08+VNjyDXKddyq9W3Nnr9qzF+HrcNPhVPoWqmjUkjG+ZLH+3t47+9rAjEUbGrwnnOxgCBBEm+H/
Sm22zwpG1QbJfudnz3mzSh0Xm9GFMPFfqR52dwxNXyCXPk1dOb9gZBxz1eF23S/
H+//
8yzPXZ71kZHZumxUDVI6gWX2oyMcDgzeGZvWPHmoGsL9iT9jl9A/
X18nY2/
6k/
cUNkP3cRN9rMYsV/
O2ovMeAfpDNsOVcBeb8XDe+zw2+6/
Rf0NlSI89kTJEXCNswYECqKNWUp3MxrdxH3+n6Da+9XVm3jKzsSMgTMnswvjRfFYWBnb1nF5nXz/
q2w5+B/
jL+nTfjz0IuTJ/
1f+Hx4uf5LLVU5TEVEOUJkXSOLHnvbdiEVFqGwg08ER+fa/
r37Z/nhFsbJ1RC6yLd8r+/
OsHlkzMkX34+FgGlCjEp/
DjZnhFUf+i7XdoXBsBlajEI6oT/
CWdw4Go4ZEu8ndg/
nJMGNOSDXvxw+0Ccvr2yzHlVwOLOpmnnTOqjKAMzIVnK27sbBv/
HZIcpUWhwgMD7UWvHf+OGB6fM/
IaWtBLsnjHQAvu8O+WbJPdRdxVmkvR4fOVrcmR5nX/
3Qv8pIO4PRNZX/
4o6gsqr7l7IRs+1cK2uyN1n//
QdgbG28rn9LzlVWOmtBXdM/
6Xv3J7dMBoMqX3P3l+wMHg+Rsc7AJmg/
sQ1a7nzcQAIGeVLFxXFA/
9v8I0fZCfcOeeBTnvj+A/
fqzCyrInmgw7vDSgm6uO7nfQZwwLnUCuU2rhzSkTXgh5HGaaVtU/Xvy8ZcHbbGegjJqOb3MVLR3KJu/
7IoqdR/
+3KaOKBDuxmOUlh8ql1BQ3YgYfdPIExJM1QhehqjiLgp5m2wkYVSvPlhVyIbZ/
Jp2OQsfDpZgR2Qv+6aVyLgNKMGAZ6+0/
f9wuGcqwK6Xuw7/
1ukL3VGKp6uZ7D69LhGhSDFk+hHtLMwpwkIeGU7/
8VFi7U8Bd4SO9ZVwWomaSzmybQs8Fm7L0rJ54ek/
3Pm3bOiLwqXyVPqvL8+JcqfXyjv3QYzyxCnvTSt+ZC8TnTVtuqcbMoMx43wqFv/
ln8s6mlOvGy5eFRPDuM/
WnOQBn0BCeMdWXj/
7ZkKRg9Nip6S9DvH0bByAm/
uQbcQqEJ5jfT/
+xTFUKIqWVbbSYqdHj/
DFJ7ij0+TRrezl6Cz4cIDvGm2ZY7RQvgZYqCs+r2DbhLEqM6FjbqU6fqo1Ihg9EvD8bf9Dzpr8GRYFbr5UB/
+8rT5JbWGRo8B4d/
VWsv+hVq0Yla/
3gdRJCzubzmIcCi5Iv5Eb0DFvZVE0/
7/
bP7Kyx7Vu/
AvDLxGhk+ZfyNQn5fYAC8xQIhvBFK5Ua+ro1fShtxQ4M8ru2AR52GmX3IoRbcvvQkFzKf/
VmuBKI/
UAnh/
KM/
7Hh9SCgGdD5LWEZHjvwmzyTDkt7P8WwcDNG+VQJMtJeMZUhqyK2OaMhcgX62G3brXCswN3VdK/
0kUkrDwRKrLO5Pf3Xv3U1uFIIzT7KZOpn3NdqvvpBYaAMRVMQtVSCj9cwzPz3Nhs0Ssuw/
SYxU3gtowiw/
H9j5vngF/2sfrLuZPyfgUOzb5/jUhKQMoX86mNMOJUyF7OIC/
nbhC8nMcdh+0Mhy/EcLqbLiELAWoFoJtQkeWQIUbiS2GuF+Yov05sRvGCQz/
I3ZqNHjbf9AWCQf/
n+yxBQ+Cdi5YNHL95zAqnT1ZHt/
VBemBqNwXH0yeu+OhU8oqBzCqvOyMgUJ9zHUddXRpyFTbr4pI3OyTXhFojT8LKZmqjHoBAn/
z5fU/DWmUhnH/
33eW9ZpyL4TSCEKz0IZC5DsQ8ZGwTd0ZwAGz8FtHYbQ4kNgs9ZNNyAGMFD8SkT7FfYdnNozb/
DnsqXZmrMWZVebH2BUy0XoG8FBCK2YZvUdl5w8x07w4fH3NofJxzpJCNR0gD5RqB1/
Mz2ZwPqsnjyvfDt1dRrhCeCsxfUK/
PfeZwt5+mfDBRdiIDOeMCoXEgtPBVqTg+hWfqr7X6YhF5vZdgf9C8OVsHfNBRFv/
7M3LeZDOo4Qy9Fv7g8qv/
2bcgPeLJVQVeMxNO8+9Ks6zY1C4hZdf3J3b7tNdjcmBv/
oDIaN4ETvZoOTCmBKjW2mKvxLrwJB/
1WhCuvuOPu8FfQ9ZPZ3Jmc19V1X/
7X7DWn0ExB2yZ8MQfAbwa8Fx/
zFgw/
D8fB6EHB8yXDeXn3N6HEEnIBsSEjBi1REGrUPFtL8ZmpXeWsF2/
8xB8f7rzFBDLDq8+qMG2Qs5W5K7aT5LGw+ByD/
OXfE0IPn6+O3e3eCTFAc6BuMJY+Z5ZBZp6DySmJwEdO+5N1mJBdxwf6nXQmxMgwRsGk2cN/
wM1jFm6jHPGZv4p4+w2DZO1+j9m5Zs1hKHWOMw3e8NfYfxsgD44GR8hyc0ZoXyn/
cm0zBjY4xu6oxIhLL44hiQKKjIYLC1cvV+0C5WKzOv6lG8YQw+Xd00bVOPcZFa3UsLFiSuEhuxbt0cWnmRYcyITDF9ycuwi7W/
G/NKz4eYzZpmlEZoe8SqIq8QAjzwtUCbmx2mWbrZIJI9+wXSXdnUvXN0yxjsNaSgTyEGxh07tzHsqZAO/
ABSMT9lfIiTCWX1pFyd/
y/
Jmuw3Rqd5S3LQfw7iDQ3tjwx3zHjcp5jgVhJ8eVfe0Nq/dJwhD9kA1D8JQOaI

```
DMDo0aMB+M1vfsN9991H586dWb16NbfddhvXXXddWZk/
+clPqI3i4mKcc2zatIl77rmH0aNHM3jw4LLjc+fOJTc3l3Xr1pGUFJgWf8EFF9C9e3fmzZvHbbfdxurV
qxk5ciS/
+MUvyq67+uqrj6trzJgxPPzwwwCMGjWK7du389BDDzF27Nha32upadOmMXnyZCAwai4tLY3Fixdz6623
snXrVrKysnj66adp3Trw3Thy5Miya7Ozs5k9ezb33XcfDzzwAAAjRozg2LFjPPTQQ0yZMgWv11ur9gsF
jQATERERiUydgPJzI/
YE91XnJuD9ul5rZj83szVmtubgwYMNCPckkHkk8BqiBBiApaZDxiFc7tGQlSkiIsc7fPgwPp8Pn8/
Hqaeeyvbt23nzzTfp0KEDJSUlfPbZZ8etBXbdddfh9/v5+OOPARgwYACPP/44//mf/
8nWrVtrXffatWvx+XxER0fTv39/srOz+fOfK/
4mtWzZMkaMGEFiYiLFxcUUFxfTunVrBg4cyJo1a8rqf++993jggQdYvXo1JSUlVdZ31VVXi+
+uqrWbt2LSUlJbW+11LlE1rt27cnNTW1bARYr169aNWqFZMmTeKdd96pMPIL4OOPPyY3N5drrrmm7J6K
i4sZPnw4+/
fvLyunqWgEmIiIiEhkqmpOhavyRLOfAIOAi+t6rXPueeB5gEGDBlV5jgS4zAyA0E2BBCwlHQe4PTuwU8
8MWbkiIo2pviOwwqlNmzYsW7W7YMMyM9PZ2OHTuWTV88dOgQRUVFpKWlVbimdDsDsjI/D3/+mnn+b++
+9nzpw53HbbbfTu3ZsHH3yQCRMm1Fj3aaedxiuvvEJRURErV67k3nvv5ZZbbuHNN98sO+fQjUyeH559/
r5Sl156KQCTJ08mJyeH559/
njlz5tC+fXumTJnCrFmzKoykSk1NrXB9amoqxcXFHDp0CKBW91qqbdu2Fbajo6PJz88HoF27dnzwSh2ye/
s2dz7bXX4vf7GTlyJH/4wx/o2bNnWX1nnHFGle2ye/
duunXrVuWxxqAEmIiIiEhk2gN0KbfdGdhX+SQzuwyYAVzsnCsod+2wTeuaJQoTyKlCbBQjgCjfQp4PL
jdO0AJMBGRRhMVFcWgQYOqPJacnIzP5+PAgQMV9u/fvx+gbEpi27Zteeqqpqqjqaf48ssveeyx
jxj39Mv379OP30yst0fi8+Pr6s7iFDhpCfn8/999/
P9OnTOffcc8vqGDduHDNnzjzu+tLpRph2nTpjFt2jR2797Na6+9xowZM+jUqRO33npr2fmV7+PAgQN
ERUWRnJwMUKt7ra0hQ4bwwQcfkJeXx7Jly5g+fTqTJk1i1apVZWUtXrz4uIQbwKmnnnlqnuhpKUyBFRER
EItOnQB8z62Fm0cAE4N3yJ5jZ2cBzwDjnXPme7BJgpJm1Cy5+PzK4TxriSAZ4vRAXH7IiLSoKklLw794
RsjJFRKRuvF4vAwcOPO7phQsWLMDj8TBkyJDjrunXrx+PP/
44fr+fzZs316m+9e+ikbNmzgjDPOYNCgQRX+VZUo6o6tKlC/fccw+9e/
dm48aNF4Y4tWrTouO2BAwfi9Xrrda+1ERcXx/XhzY5ZPL4hkyZAhxcXHs27fvuHsaNGhQWWKvqWgEm
iIiEgEcs4Vm9lUAokrLzDPObfBzOOYAa5xz7wKPA62Bt4LTBnc758Y75w6b2X0EkmgA9zrnDosz
W6Xk/
8qomlpuG2bsSVFGNedc9FRMJh9uzZjBo1EJEyawfv16Zs6cyc0331y2Kb9PPzQoUO56qqrOPPPPMzE
zXnjhBRISEiosZl8b8fHxTJs2jZkzZ7J161ZOeUUpk+fzquvvsrw4cO5/fbb6dSpE/
v37+ejjz7i6NCThTJw4kDR566rRpw/Lly/nNnqqrJ1/fbb6dSpE/
v37+ejjz5i6NChTJw4kVtuuYWkpCTOO+882rRpw/Lly/nNnqqrJ1/fbb6dSpE/
```

VPB7cDk2DFBERaQglwERERERequBysiAuHvOEr8tsUT5ITtU6YCIiIg2kBJiIiIiISFVyssL3BMhyLK0
DfLsHV1gQ7lBERESaLSXARERERESq4LKzIS4SEmAdwe/
H7dkZ7lBERESaLSXARERERCKUmY02sy1mts3M7qni+EVm9pmZFZvZjyodKzGzdcF/
7zZd1C1IThYWASPASEkHM9zO7eGOREREpNmKCncAIiIiInI8M/
MCzwAjgD3Ap2b2rnNuY7nTdgE3AL+qoog859yARg+0hXJFRZCfB/HhewJkKYuOhqQU/
Du+xhvuYERERJopjQATERERiUyDgW3Oue3OuULgDeDK8ic453Y4574E/
OEIsEXLyQq8RsIIMILrgO3dhSsuCncoIiIizZISYCIiIiKRqROwu9z2nuC+2oo1szVmtsrMxld3kpn9P
HjemoMHD9Y31hbH5WQDRMYUSIIJsJJi3N7dJz5ZREREjqMEmIiIiEhksir2uTpc39U5NwiYBDxpZr2qO
sk597xzbpBzblBKSkp94myZImwEGGkdAHA7vw5zICIiIs2TEmAiIiIikWkP0KXcdmdgX20vds7tC75uB
1YAZ4cyuJaudARYpCTALCYW2rXXQvgiIiL1pASYiIiISGT6FOhjZj3MLBqYANTqaY5m1s7MYoLvk4ELg
I01XyUVZGdBVBT4osMdSRlL64DbvQNXUhLuUERERJodJcBEREREIpBzrhiYCiwBNgELnHMbzGyOmY0DM
LMfmNke4BrgOTPbELz8NGCNmX0BLAf+vdLTI+UE3NEsiE/
ArKqZqOFhaR2hqBD37Z5whyIiItLsRIU7ABERERGpmnPuPeC9SvvuL/f+UwJTIytf90/
grEYPsAVz2VkQFxnTH8uUrgO2/Svo3C3MwYiIiDQvGgEmIiIiIlJZdhYWHx/uKCqwuHhISsb/
9ZZwhyIiItLsKAEmIiIiIlKOcw6OZkfMAvjlWccusGcHriA/
3KGIiIg0K0qAiYiIiIiUl58HxcWRNwWSYALM78ft2BbuUERERJoVJcBERERERMrLyQq8JkReAozUdIiK
wn29NdyRiIiINCtKgImIiIiIlOOyAwkwi8QRYF4vpHXUOmAiIiJ1pASYiIiIiEh5OdmB1whcAwyC0yAz
DuGOHA53KCIiIs2GEmAiIiIiIuW40imQkZoA69QFAL+mQYqIiNSaEmAiIiIiIuXlZENMbGC6YSRKbAsJ
rXDbNQ1SRESktpQAExEREREpx+VkRezoLwAzwzp2xm3/
CucvCXc4IiIizYISYCIiIiIi5QQSYPHhDqNmHbtAQT5u7+5wRyIiItIsKAEmIiIiIlJedhYWwSPAACy9
MwBOT4MUERGpFSXAREREREESCnL8Eco9CXIQnwGJjITkVvxJgIiIitaIEmEgz8dhjj3HnnXfyu9/9Ltyh
iEScrKws/vCHP5CdnR3uUKSWNm/ezLRp09iyRf/
nXSLM0aPgXESvAVbKOnaBvbtwecfCHYqIiEjEUwJMpJnYt28fAHv27AlzJCKRZ+nSpWzfvp0lS5aEOxS
ppZdffhnnHPPnzw93KCIVuJwsgIifAglgnbqCc7htm8MdioiISMRTAkykGXjssccqbGsUmMj3srKy+OS
TT3DOsXr1ao0CawY2b95MXl4eAHl5eRoFJpElmABrDiPASEmDuHj8m9aHOxIREZGIFxXuAKT+7rzzznC
HIE2kdPRXKY0CE/
ne0qVLcc4B4Pf7WbJkCddcc02Yo5KavPzyyxW258+fzyOPPPBKmaEQqcjnBJHoTJsCcg1xnHC7xUuiMZG
8JbT1+zGq+zsywrj1w2zbhigoxX3TTBCwiItIMnTABZmY/
B34O0LVr10YPSEREpC7WrFlDSUIaxZs0YJsAhXOvqrum2RsMrOAjOIjWuS6nYWRbEiL5b9JRW7
5bHmZ2BMAQNjCon1uGqvt649cVs24L7egvU9q7HDFRERabZOOAXSOfe8c26Qc25QSkpKU8QkIiJSa4MG
DcLr9QLg9XoZMhQmCOSE4mLi6txWySc3NFsiE/
ATjT8qoGKHPz1aDxvHm3FUb+HAdEFDIvNY0TcMQbH5JPk8fO/
+XE8l5XIpkJf9QWld4CYGE2DFBEROQFNgWzGnnzyyXCHILUQiqmqHTt2rDANsnPnzg0uU6Sl
8gkAHo+HUaNGhTkiOZHrr7+eZ599tmz7hhtuuCF8wIpVlZ0Fc405/
LHDwdk4r9pR4OSu6gL6+Irzl8m3tvX56+oo5UuJhTUEM/5WbwK6iAi6NzyOqUl7OPF6sc/
fAKLCSYsyr7r2IiEhVtAi+SDNw9913V9j+1a9+FaZIRCJPmzZtOPfczzEzBg8eTFJSUrhDkhq8/Gh/w+2
ivuLg4Tj311DBHJPI9l5MF8fGNVn6xgwU5rdhb4mVITAFnRFdMfpXXzuvvn0rg8+voK+aIwhoVHEyiqYj
akdesJBfm4b7Y1WtwiIiLNnRJgIs1Ex44dAY3+EqnyJEj6dmzp0Z/NPSPXX389Z1ZqbRXxJ
5crKwRlwA/3/y4vi2JIrzY/
Pp5is+4fkegwExhQyOyWdHcRRv5bSioHISrGNniPLhNA1SRESkWhojLdJMVB4FJiLfa9OmDbfffnu4w5BbSG+fFHcK5NFmDwlCqr+z7X8m7KPOevAkFg8M27ar/lwtfNM
A66Nu3L3Pnzg13GCIVuKJCyM9vtCdAbiz0sa4ghr6+QrpEldTp2p6+YrzAqoIYFh1N4EetcsumQ5o3Cu
vcFf+Wf+H54b9hHv3GLSIiUpm+HUVEREAHKyA6+NkADL8RtLcuNJ9hTTL7qwXmV08xUzOKaAXcU+/
pYbjys/EqxrT8g9itu9IyTxioiItDRKgImIiIiIEFz/C7BGWAR/
RV4cJcB5sQV4GvCAyR6+YgZEF7ClKJrlebFl+61zV/
B6NQ1SRESkGkqAiYiIiIhA4AmQEPIRYLuLvGjQEwXzR06I
x/05c41/
A6REREWholwERERERERERERAFc2BTJ0T4H0O1h2LJ5483N6Pac+VuXs6ELSvcV8eCyOXUWBZX2tey/
IzsTt3B6yekRERFoKJcBERERERABysiDKB77okBW5ucjHQb+X/tGFZYvWh4LH4PzYfFp5/
Pw1N54jJR6sW0/wReP//JPQVSQiItJCKAEmIiIiIkJwBFh8PGahyVQ5Bx/
nxdLGU0LXqOKQlFletMGFsfn4nfH20QQKvT6sZx/
cxi9w+Xkhr09ERKQ5UwJMRERERARw2VkhXf9ra5GPw34vp/
uKCFFO7TitPY6hcXkc8Xt492gCrs9pUFyMf/1njVOhiIhIM6UEmIiIiIgIQE5WyJ4A6Rx8nB9Da/
PTpRFGf5WX6vUzKKaAb4p9rIjrCknJ+D/
TNEgREZHylAATERERkZOecw5yskM2Auyb4igOlERxenQhnkYa/VVeL18xp/
oKWVsQwxf9LoHv9uK+3dP4FYuIiDQTSoCJiIiIiOTnQUlxyJ4A+Vl+DLHmb5S1v6rTP7qQjt5i/
juxF7tSe2gUmIiISDlKgImIiIiIZGcBYPGtGlzUkRIP24uj6BVVjLcJRn+V8hgMic0n0ePnvwZdzaGvt
+OKCpsuABERkQimBJiIiIiInPRcTiABFoRYJ8XRGNAb19Rg8uqK1/
wyZB4Pfz17HHkbfhXk8cgIiISiZQAExEREEpS4A1bA2wQgfrC2LoElVMnMeFILC6a+VxXBBXSFZ8W/
6aHU2JC08cIiIikUQJMBEREZEIZWajzWyLmW0zs3uqOH6RmX1mZs6+C/
65vuqibJ5eTHXjTwKdAbiqMpgCjTxhGf5WXEuVn6JFt7Gqdzoebvw0s8i8iInISUwJMREREJAKZmRd4B
hgDnA5MNLPTK522C7gBeL3StO2C5wGDgATNr19gxN2vZWRAbh3m9DSpmfUE0iZ4Skj3+EAVWf506p
TLwmzWsy4/
mo33HlAQTEZGTmhJgIiIiIpFpMLDNObfdOVcIvAFcWf4IvAFcWf4E59wO59yXQOVsyyjgQ+dchnPuCPAhMLopgm6
u3NFsiGvY+l+HSzzsK4miR1Qx1oSL31fHRfkY4M2l/

```
zefsepAHiuUBBMRkZOYEmAiIiIikakTsLvc9p7gvpBea2Y/N7M1Zrbm4MGD9Qq0JXDZWQ1e/
2t9QTSGo3tUcYiiarhjfc7iki0fcebh7XxyII/3dx3VmmAiInJSUgJMREREJDJVNYaotpmLWl/
rnHveOTfIOTcoJSWl1sG1ODlZWAOeAOl3sKEwmg7ekrAtfl8V54smt+8ARv7vm/
SLLuTLjAIWbMsmrzj8UzRFRESaUlS4AxARERGRKu0BupTb7gzsq8O1wypduyIkUbVAzl8CuUcbNAJse1
EUuc7D2b6CEEYWGkdP6UerTZ8zdN0HxA27ltUH8pm3OZMrurWma2tfo9btd47D+SXszS3mQF4xh/
OLySz0k1/
iKPI7osyI9hpJMR6SY6Po1tpHj9bRRHsjYA6piIi0KEqAiYiIiESmT4E+ZtYD2AtMACbV8tolwMPlFr4
fCfwm9CG2EEePgnMNegLkxsJoYsxPR29JCAMLDRcdw9FT+5P4r9WcMuQwbTqn8vH+PF7flsU5ybFc2CG
euKjQTQzJKSrhm+wivsku5JucIvJLAiPifB5IjPbSNtpDtNeIMsPvoNDvyCny8+XhfD47lI/
bQeNCAAAgAElEQVTXoG/
bGH6QGkd6vP7vioiIhIa+UUREREQikHOu2MymEkhmeYF5zrkNZjYHWOOce9fMfgAsAtoBV5jZbOfcGc6
5DDN7kEASDWCOcy4jLDfSDLicLACsniPAChxsK/LR3VeEJ0IHLh3t259WW9bR+p/LKL7yp4zqksAXh/
P5/FA+G48U8IPUOAa0jyXBV/dEWGGJY19uEd/
kFLE9u5CD+YEkYKzXSI+PIj3OS3Ksl1Y+D1bD0wH8znEwr4TduUVsySxgw5ECeiX6uKxzK9rFNOzpnCI
iIkqAiYiIiEQo59x7wHuV9t1f7v2nBKY3VnXtPGBeowbYUgQTYPWdArmt0EcxRrcIWvy+MhcdS87p59D
mi1Uc+3oT9DqNQSlx9E6MZt3hAv7x7TH+
+d0xeiZG0ysxmi6tomgb48VbKWHld46sQj8H84rZk1vM7qNF7D9WjJ/
A4sIpcV76t4+hQ3wUbaNrTnhV5jEjLT6KtPgo+iXFsi27kA0ZBby46Qjnp8czJC0OTyQ8XlNERJolJcB
ERERE5KTmshuWANtYGE2C+Un2RPbC8kf7nkP8zq9o+99/5UCXnrjoGNrGeBnWMZ7swhK+yipib24RX2U
VAoGEVoLPQ5QHDCO/xE9+saP0Lj0G7WO89G0XTUqsl5S4KHwhGgIX7TVObxdD99Y+Pj+Uzz+
+PcbOnEKu6Naa1tEaDSYiInWnBJiIiIiInNxyssE8EBtX50tz/
caO4ij6+oqI+MFJXi9HBg8nZelbtF65hOzh48oOJUZ7GZji5ZzkGLIL/
WQUlJBd5Cev2FHiHA5oFxNFjNdo7fOQ6PPQLsaLt5HnfMZHeTg/
LY4O8UWsPZjPS1syubZXG60NJiIidaZvDhERERE5qbmcLIiPr9N0vVJbCn24CJ/+WF5Rcjq5p/
QjYd3H5PUdQFHHrhWOmxltYry0iaA1t8yMnonRtI/
x8tG3x3h1aybjeyTSu010uEMTEZFmJHSPexERERERaY6ys+o9/
XFzYTRtPCW09Ub29MfysvsPoSS+FW0/
XAglzSNxB9AmxsuIzgkkRnt5e3s2mzMLwh2SiIg0I0qAiYiIiMhJzWVmYAmt63zdUb+xp8RLl2Yy+quU
80WTNWgYvsP7af3JinCHUydxUR6Gd4onOdbLO9/
ksPmIkmAiIlI7SoCJiIiIyEnLOT9kZUKruifAvir0AdbsEmAA+Z17cKz7qbRa9d/
EbN8U7nDqxOcxLu4YTILtyGFbcNF+ERGRmigBJiIiIiInr5wc8JfUKwG2pchHopXQxuMaIbDGlzn4Eoq
SUmj3tzeJOnwg3OHUSWkSrF2Ml79+k82eo0XhDklERCKcEmAiIiIictJymRkAWB0TYLl+Y3dxFF2iSho
jrCbhonxkXPhDnNdL0juvYPl54Q6pTnwe4+IOccRFefjL9mwO5ze/kXgiItJ0lAATEZH/
z959x0ld3fsff32m7mxjG3XpTTooBAEbggoa+1Wj3pJoivHGxKuZu5NzExJuI18ZrkJiZXfzHGlqJRbJEQ
C2pAgyJSBFGRKmXpsGxh+8yc3x8z4LK0HdjdmZ19Px+PeczM95zv9/
uZw5fds58553xFRDqu8r2x5wQTYGsaYnd/bI/THxuLZOVQevr5eCv2kv/
SUxBtP4v5A2T4PEzukYkYLkdDnl1fQW24fcUvIiJtRwkwEREREEmw9o8AIs7of1W1fvJsSidPO0/4VLfpQd
l484iY8NqOs39K2Naz+/hjG4hyuuivPBI/hjG4hyuuivPBpJdF2Fr+IiLQNJcBEREREpMNyNyZZXXG60NJiIidaZvDhERERE5qbmcLIiPr9N0vVJbCn24CJ/+WF5Rcjq5p/
M3epzpqbAr76OULY9aKwbWh6oEjqBx6MlnL3yX3rZfbXRKsc8jHuC4ZbNzXwBtbqpIdjoiIpCBfsgMQE
REREUmastKEpz+uTZPpj01VjDkNC4fJXhb5d6aPhJe/iXAg7QhgGKVoSs9dA5aRzkh1SQgbkBiivj7JkVy1FGV5OLgolOyQREREUkhhS
oCJiIiISflykqx3E4J7bOq3k+2RxXCw/mNDoM+OBUPVvE/
K9lRJWRMYZCK+iivba6iMOij07zR/
aJiEh60REREREemEemEemQnIvGFsFPYARYGPbdTYGPbRM42mPx7EjLLxU6juM4jc+a+QtiNKiMeMSV1DZP
s9vLChgor69r4/
RNJz+eBCPh70fXkbyGiqxnHFp+KZ6MZheqpCt4KsADbSHHmsSV6OE+ivbKyHOq/BjM
rmYmISAOdQvtPxfl3lbrnXVnB4mYNS/KQWDvXR5Y0qQa24cSZ7rvG4vRGuovoXOAJRxxPA6XmtE9SOPiT3IKdWDM5Wv19USXJy2VPUFcc3bnNiQjeGyuFvKYX6v3mlBRU/hMk4ivG3pT5AAzaw5ibk4yZzCz1Zus7u3kemYzCKX8+tPfXcOw+ZZQSYFwtS60+3ukvW9ZxnF5IiOtaYUmZt+rpWMkQTSdcG3y2tt3azOlUf7bsMyqFW8YmbnmUZlSKGUyl7rhafasZrpu+zy4qyNeHK0ElnhyYeYIRf0LAhahhcurxRoCSWJn5jLNZu3cBHR6HjI2ZkjMgKUXmx+8FG3+ejFuu4aEIM6s/SvMzcbfJgjZ4Y6Z6cGg8kKm/dw4Hn4+4FJMWsxr5TJdGtezVz+JTPYJo0/PNA+aHbm8RDEHlFETjafanoEcwcZcPWQwz8Dh/6eosSkgFwKBjyn/KnnBQeW1w/Blf+LWS7pe9Y6GtvpV4zpTDF/FmhUJ+XuELEqEeHovSzSlQRowadY8XeFSYgYgfn98sXkqvDqsTIAknsqFekbeXjxLbMtDlfRnemHATWvSkYaUfmhBe9hIT/Z5ytq9jfNm1DCOqOHbNbpJXAuIEMPgrjWtwcsXkKzh0a/9P8sB/YtBFwnFvaCfTAjEuQsIi0Y6eOFDbcT/GQ7QVTzwRlvhEcrTBLeTvyyD3YMCbEbRyUTpk0jonLl1GxoUqnMqJ7zOZbo/4++N2Ef3M7E/aurD+5oc+Ht41+ry5P9JNX+WYGU8cDPUqi7tuRE6jXYPpJXqujXXXwxvDVRxcd62Ek3A+sYIl1FXGV2HJVqhjrA4Rt9KzCNKn4lAadYjuDRC3tyw+j/tJ9TWTPjAMsM+WfU2pfqdzpO8MKCdDsZPs3V57+uXWrEUSn1Tt49LShsFCb9ZxIEgVgbz8vv63kPb+BJhx8qtKfMERNhYmcI4h7UbTqrwj04c3hUW3zB/tOGyUDrAu6e9ulHzJcA7GAYGYLhdtJSktyv+V6DsHhUecrOhm5c4kLyHWS/ND7LEMmtsNd8l1xIJtLzWXRBpbjdXxp4+jBVyA8pUmn4QRPZ/sr2fk2U9tpuvH17x6fxMhJEmN4Lw0BuUNhuMhfHqEbO+jsZSkCfYiQSd+E7u7YgPYf/J6EdoN4JMrTXhEMEh+hKdoe1Y3tM3odZ0JJhTDnMTXtPC/4wRkcwBvYNfyzCsTG7IkcXGjmNfsc4FAJtQVxb++HKN7b+H+T9DkevL3p5eyRkdkf89nnl0P4g3twALVbS32B0HW2G2MyrN1L+W9MiBb0e3dsKvSB47hSTo9uQoRMuMsm2CtbOGsHd0DBYlbmfCA6tfk+8bCO0/rbVTW9k3fWNDkhfLRn6+E+uVfzuy/7A11AWiKbhZGTlO8Jb2P0t81HX9nJZWhtrCeusUzjBg5Ge7tHDhkDjAd1KZrx9ynt6t6kj5hKR8tWNixbHLukPs40DeZTi7fynFgOw8eXkrhpAxNm4v7BTkt+b1Dj51iAYg+nTmZ9KngFIYtxhA6AskbOv7IG2RcUaOBnOBvlpADvjwgYo7lK/0Cm4L6pE1MWu+pVe1LnaLTiGR0kbydmdPHU=
```

HWMB/
PXx6Y+9Nf2x2SJZueyeehnRQAaFzz5CxuoPkx1Ss4woCDI0L8D7u2t5dbOSYCIi6UgJMBERERHpWKr2Q
Th8zBFgK+N3f9T0x8REsnLYde4VhPMKKZj9BNnv/
h1SPKFkZowuDDIsP8CyPbXM2lBJOJraMYuISGKUABMRERGRDsWVx+4AaUdJgNU5WNfgp5cvrOmPxyEay
mTX1Muo7nsSue+8Rt5LT0NDQ7LDOiozY1RBkNGFQVaW1fPMugpqI9FkhyUiIi1ECTARERER6VjKSmPPR
0mAra33E8Hoo+mPx8/rY+/EcykfPZHQquV0/
vMDKX+HSDNjWH6QCV0y2LSvgd+vKmN3ja4BEZF0oASYiIiIiHQobn8C7ChrgK2sD5BlUQo9GgF0QszYN
3wceyZfhKdqH0VPPkDOP16BcGqPBuuXG2BKcSY1YcfvV5fxUWmt1gUTEWnnlAATERERkY6ldA8EM7BA4
LDF1VFjQ9hHL18Y0/THFlHXoy87Pv/
PVPcfSs6iN+n8x18T2LQu2WEdVZeQj2m9sugU8PLXjfuYtaGSmrASoiIi7ZUSYCIiIiIpysymm9kqM1t
rZrcdpjxoZk/HyxeaWd/
49r5mVmNmy+KPB9s69lQW3bkNOuUfsXx1g5+opj+2OBcIUnbqVHaffQlWX0fRsw9T8NyjKT0tMtPnYWp
xJqMKgnxSVs9vP97L+7triGo0mIhIu6MEmIiIiEgKMjMv8ABwPjAMuMbMhjWp9mVgr3NuIPBL4N5GZeu
cc2Pij6+3SdDtgHMOdm3H8guOWGdlXYBcT4Q8TX9sFXXde7Pjwn+h/OTT8W/fTOcn7id/
9pN49+5KdmiH5TFjeEGQ6b2yyA14eHVzFY98UsbHe+uUCBMRaUd8yQ5ARERERA5rPLDWObcewMyeAi4B
Pm5U5xLgzvjrZ4H7zTRp76jK90JdHeQXHra4MmpsjngZEajX9MfW5PWxb+jJVA0cTvbKpWR/
sowuaz6kesQ4KidMJZrTKdkRHiIv6GVKj0w2V4X5sLSOWRsqeTPgYUxhBqMKM8jya2yBiEgqUwJMRERE
JDUVA5sbvS8BTj1SHedc2MzKgf2ZnX5m9j5QAfzAOfePw53EzL4GfA2gd+/eLRd9inI7twMccQTYJ/
UBwOit6Y9twvkDVI6aQNXgUeR8uJisj5aQ+fH7VI2ZROX4s3ChzGSHeBAzo3e2n15ZPkqqwqwur+fNbd
W8ta2aXtk+BnUK0ivbT5eQF48yqCIiKUUJMBEREZHUdLi/npvOtzpSnW1Ab+fcHjMbC/
zFzIY75yoOqezcQ8BDAOPGjUv7+Vxux7bYi7zDJ8BW1vvJ90TI9aR9U6SUaEYm5ePOZN+QMeSuWEjWkr
fIXLGQfZ87i6pTTsP5D3/DgmQxM3pl++mV7aeiPsKGygZKqsK8saUKgIDHKM7y0TPbT/
dMH11DPo0QExFJMiXARERERFJTCdCr0fuewNYj1CkxMx+QB+wFMLOewF+A651z6w7XEOfcQ8BDAOPGjUv7+Vxux7bYi7zDJ8BW1vvJ90TI9aR9U6SUaEYm5ePOZN+QMeSuWEjWkr
fIXLGQfZ87i6pTTsP5D3/DgmQxM3pl++mV7aeiPsKGygZKqsK8saUKgIDHKM7y0TPbT/
dMH11DPo0QExFJMiXARERERFJTCdCr0fuewNYj1CkxMx/
QCSh1zjmgDsA5t8TM1gGDgcWtHnWKczu3QVYOFggeUrY34mF7xMeYQF0SIhOASHYueyeeS+XQU8j9YAG
5b88h6/13qJwwhepRp4In9ZJIuQEvowq9jCqEqoYou2oj7KoJs7s2wqeVDQfqZfmMbpk+umb66BaKPef
6PWjWsohI21ACTERERCQ1LQIGmVk/
YAtwNXBtkzovAjcAC4GpwHzn3MTMcoG/AreY2byWDLq8l1xHewjvWlnsKuVYBCMm2XFOsR+eVX6DxQMrJqI7Ge9cEm2gxSXgttEOgpaUrHsmtjNiILu6ARyYzqwJU5obdsQtjRxWlnSgtTqK5zmU6pKIcSUHcZnrSWcjpaT4CWFwuXTLZgUNq2nQ9G9ATcj3kDsOjZvfEENb/
...

bISnZIIiJJlbIJMBERERGRExVd8zFkhHCFXXhrn0Z/yaHqO3endPJF+Mp2k/
PxUrKWzid7yT+o7T2Q6lHjqR0wDLzeZIeZMDPj5KIgYed4Z0cNfo8xsVv7H90mInK8lAATERERkbTkol
Hc2k+wHr34JBxgW8TH+GCt1v6SwwrnFbF30nmUj5lE1rqPyVz/
MQWznyQSyqJ28AhqBo+ivrgveNrPfcTMjHGdMwhH4c1t1fg9xrguoWSHJSKSFCmVALvvvvuSHYKIiIiI
pAm3ZSPU1NDQsx9vVofI90Toqzs/yjFEM7OpHDmeyuHjCG7fROb6lYQ+WkLW8oVEMrOpGTyS2sEjqS/
uA5b6yTCPGRO6ZhBxjte3VOH3GqMLM5IdlohIm0upBJiIiIiISEtxaz
4BMxZ3Hkxlg4cpGdV4NPpLmsvjoa5HX+p69MXCDWRs2UBo0xqyViwie9kCIlk5nyXDuvdO6ZFhHjMmdQ
vxj201vLxpH34zhhUEkx2WiEibUgJMRERERNJSdM1KSnsN5t2GLHp5w3TxRpMdkrRTzuenps8gavoMwh
rqP0uGLV9I9vvvxKZJDhxG7cDh1PUaAL7U+zPLa8bp3UK8ua2av26sxAyG5isJJiIdR+r9ZBYREREROU
Gushy3fQtzpt2IFzglWJfskCRNOH+Amr6Dqek7+EAyLKNkHaGVy8hasYioP0hd/
5OoGTicur6DccHUmW7o8xhnds/
kza3VzNpQSTjqGKnpkCLSQSgBJiIiIiJpx635hGV9x7IlmMepwVpCHpfskCQNNU6GEQkT3F5CqGQdGRv
WEFr1Ac7jpa73AGoHDqd2wFCiWTnJDhm/x5jcI5N/bK/
hb5v2EXaOk4u0ML6IpD8lwEREREQk7ezcuJm3hp9Nd29YC99L2/D6qCvuS11xX/
hclMDu7bGRYSXryduwGvf6C9T36BO7o+SgkURzOiUtVJ/
HOLNbiPnba3h1cxUNURivu0OKSJpTAkxERERE0kptfQMvFo0iEI0wPhjBtPC9tDWPh/ouPajv0oOKk0/
HV7aHUMl6MkrW0Wne3+g072/U9ehDzUmjqB08Mikjw7we4/
TuId7dUcvft1RRG45yRvdMTP9hRCRNKQEmIiIiImnDOcfLn+ygLCuPafs+JZTfNdkhSUdnRji/
iMr8IipHjsdXsZfQxjWENq0lb+5fcXP/
Sn3PftScNJraQcOJZma3WWheMyZ2zcDngXd21FBeH+X83tn4dLtUEUlDSoCJiIiISNp4c2sVqyIZnLbu
HfJGDkt2OCKHCOfmUzlyfCwZVl5KaOPqWDLsjb/g/
v4i9b0GUHPSKGoGDsOFslo9Ho8Z4ztnkO3z8EFpHWX1ES7rl0u239Pq5xYRaUtKgImIiIhIWli0s4Z3d
9YyasNSBuVlUOtVV1dSW7hTAZWjJlA58tTYNMlNa8jctIa8156n0xt/
oa73wNg0yQHDcBmtt0aXmTG8IEi238N7O2t47JO9XNYvl57Z/
lY7p4hIW1OvQERERETavcU7a3hjSxUDd67jjC3L2XPeFckOSaT5Gk+THDUB/
95dhDatIbRxLfkbVsfuJtlnEDUnjYwlw4IZrRJGnxw/
uQEP87fX8MSack7vnsnEriE8WhdMRNKAEmAiIiIi0m455/
jHtmre2VFD37q9fP6959g79TK08r20W2Y0FHShoaALFaMn4d+zg9CmtYQ2rSH/009wHi+1/
QZTO3gktf2HtngyLD/oZVrPLBbvquUf26pZV17PBb2zKQrpT0cRad/
0U0xERERE2qXaSJSXNu5jdXk9A0Jw4cuP0lDcj/
rO3ZMdmkjLMKOhqBsNRd2oOPk0Aru3E9q0lozNawmtW4nz+qjtG0+GDRiKCwRb5LQBrzGpW4gelT6W7q
rl0VVlTOgSYkLXTAJeJZdFpH1SAkxERERE2p3N+xqYvbGSivooYwqDnPrebLyRMLvHTEp2aCKtw4z6zt
2p79yd8lNOjyfD1hDavI7Quo9xXh91fQZRO2Aotf2HEM3KOeFT9s3x0y3Ty/
u763hnRw3L99RyZvcsRhQG8WqUpYi0M0qAiYiIiEi7sa8hyptbq1hRWkeWz5hanEmfNUvJ+mgx+4aMIZ
LTKdkhirS+g5JhZxDYvY3QxrVkbFlP3vqVOKChey9qBwyjdsBQwgVdjntacIbXw8SuIQbl+nl/
Tx0vb97H29urGd81xMiCIEGv7hYpIu2DEmAiIiIikvLK6iK8tzM2AsU5GJoXYEQnL4Vvzibrg4XUdu9N
5chTkx2mSNszo75zD+o796B87Bmxu0mWrCdjy6fkzn+V3PmvEu5UQO3AYdT1GUR9cV+cP5DwaYpCPs4p
9rKtOsxHe+t5vaSKN7dWMTw/g+EFQXpm+TCNChORFKYEmIiIiEiKMrPpwK8AL/Cwc+5/
mpQHgT8AY4E9wBeccxviZd8DvgxEgG85515tw9BbRGVDhPXlDXy0t5ZN+8IY0C/Xz7D8IJ3qq8h/
7nGCWzdSOewUKkZNBI9GokgH1/hukiPH46neR8aWTwmVfErW+wvIXjIf5/
FS3703db0HUN+jDw3dejZ7IX0zo0eWn+6ZPvbURVhb3sCK0lqW7akl2++hf46f3jl++mT7yQl4W/
nDiogkRgkwERERkRRkZl7gAeBcoARYZGaznHMfN6r2ZWCvc26gmV0N4EewOtmNtg5F2
nbT9E8zjn2haPsrYuytzbCtuowW6oa2FUbCzfb72FUQZB+uX4yfR68FWUUPfUbrKaa0tOmUdNncJI/
gUhqimZmUz1oJNWDRmLhBgK7thHcvpngjs3kLHgdAxwQLuhMQ7deNBR2JVzYmXBBVyKd8sAOn1Q2M4oy
fBRl+BjbOYMtVWE272vgk7I6PiitAyA/6KF7pp/
CDC+FGV6Kgl7ygl58Ho0SE2ltLhKBhnpoaIg9ezzg94M/AD4/1kG/
MFICTERERCQ1jQfWOufWA5jZU8AlQOME2CXAnfHXzwL3W2wO0iXAU865OuBTM1sbP96CNor9sEr2NbC6
vJ7acJTaiKMmEqUm7CirixB2n9Xze6Aow8fowiA9Mn10CngOmloVycmltu9g9vUaSDi/
cxI+iUj743x+6rr3pq57bwCsvo7Anh0Edm8nsGcHwfWfkPnx0s/
qe7xEsnKIZncikpNLJDMbFwwRzcjABTKI+gPg9RL0eDnJ62Wwx0s04KXU/GyPBtgR8bKxPMzHew/
+QzvDHJleyPY4Ql4IGPgt9v/ebw4DjM/+v/cMOnplABwrceYS2pxY/
dY89hEK3BErH+EQh69/5FMmcHzn4o8oRPc/
R2Pb9j8fruxAeRR3lDIw8Fgs4erxxNar83gw8xx2Owe2H63MEz9Gk+0HrqNGn/+gpjiR7Uf/
d3RNt0cjEGn8CH/2OhzGNU5gxZ9dOP6+vj72/kD5/joNEG6Ite3ReLzg94EvnhQLBCAQxAJBCAQhEIi/
DsTfB7H9r32+Rm3qafRZosg7vFEAACAASURBVBAJ46qrYF8lrrIcKivwTDwLz8AhR4+njSgBJiIiIpKa
ioHNjd6XAE0XuTpQxzkXNrNyoDC+/
d0m+xa3XqjNs6s2zNJdNQS9RtBrBDwesnweumX66OT3kBuIPXL8nmOsJeQhfN6lZOyrbLPYRdJPJhTk4
wYNoQ6oA6irxbt3N56yPXjK9+Kp2oenuhLvjhI8tTVQV3vMNFQXoPGfuvVeP3uzC9mTU0hFqBNVGdlUB
bOoDmaxM5hJg9cfe/gCRD2HTpucsOptuq96q8U+tUi75PfHklU+f/
x1LHllPh9khOJlvgP1LF5+YHs0lpyioSGWpAqHY4my/c/
xxJmrroLysnhyLZ5YC4cTj9fjgaxsyM6JJfRSREIJsCVLluw2s42tFUxcEbC7lc8hMWrrtqO2bjtq67a
jtm47ausT0yfZARynw/2d2fTr5SPVac6+sQOYfQ34GrHrbJ+ZrUokyA5O/zcTo/
ZKjNorMWqvxKnNEqP2Sky8vb7dFudqVl8voQSYc67lxib2WLn3ZyrrtqK3bjtq67aitO6
wSoFej9z2BrUeoU2JmPqATUNrMfQFwzj0EPBS/zvq2TOgdg/

5vJkbtlRi1V2LUXolTmyVG7ZWYVGyvjrnymYiIiEjqWwQMMrN+ZhYgtqj9rCZ1ZgFfjL+
+Avi7c87Ft19tZkEz6wcMAt5ro7hFREREUo7WABMRERFJQfE1vW4CXgW8wKPOuY/
M7C5gsXNuFvAI8Mf4IvelxJJkxOvNJLZgfhj4RqreAVJEREsKLaRiAuyhZAfQgait247auu2orduO2rr
tqK07KOfcS8BLTbb9sNHrWuDKI+z7Y+DHCZxO11ni1GaJUXslRu2VGLVX4tRmiVF7JSbl2stcordXFRE
RERERERERaUe0BpiIiIiIiIiIiKS1lEqAmdl0M1tlZmvN7LZkx5POzGyDma0vmtjjjZ8aQTM3vUzHa
a2YeNthWY2Wtmtib+nJ/
MGNPFEdr6TjPbEr+2l5nZBcmMMR2YWS8zm2tmK83sIzO7Ob5d13ULO0pb67qWNqFrrXnUZ02c+p5Hp/
5jYtQHTIz6colRfyxxZpZhZu+Z2fJ4m82Ib+9nZgvj19jT8Zv6JC/
OVJkCaWZeYDVwLrFbdy8CrnHOfZzUwNKUmW0Axjnndic7lnRjZmcC+4A/
OOdGxLf9FCh1zv1PvKOc75z7bjLjTAdHaOs7gX3OuZ8nM7Z0Ymbdge7OuaVmlgMsAS4FvoSu6xZ1lLa+
Cl3X0gb0M/
TY1Gc9Pup7Hp36j4lRHzAx6sslRv2xxJmZAVnOuX1m5gfmAzcDtwLPO+eeMrMHgeXOud8kK85UGgE2Hl
jrnFvvnKsHngIuSXJMIglzzr1F7E5cjV0C/D7+
+vfEfoDKCTpCW0sLc85tc84tjb+uBFYCxei6bnFHaWsRSR3qs0qLU/8xMeoDJkZ9ucSoP5Y4F7Mv/
tYffzhgCvBsfHvSr7FUSoAVA5sbvS9BF1lrcsAcM1tiZl9LdjAdQFfn3DaI/
UAFuiQ5nnR3k5l9EB8er6HcLcjM+gInAwvRdd2qmrQ16LqWtqNr7ejUZz0+6nsmTr9nE6efX8egvlxi1
B9rPjPzmtkyYCfwGrAOKHPOheNVkv77MpUSYHaYbakxPzM9neacOwU4H/hGfBixSDr4DTAAGANsA/
43ueGkDzPLBp4D/sM5V5HseNLZYdpa17W0GDN73cw+PMzjEnStNYf6rdQzqyyVG/
bHEOOcizrkxQE9io6WHHq5a20Z1MF8yT95ECdCr0fuewNYkxZL2nHNb4887zewFYhfU8mNKq3tMLPuz
rlt8TnlO5MdULpyzu3Y/9rMfgfMTmI4aSM+l/
854Ann3PPxzbquW8Hh2lrXtbQk59w5zamna+2I1Gc9Dup7Hhf9nk2AflcenfpyiVF/
7Pg558rMbB4wAcgzM198FFjSf1+m0giwRcCg+F0CAsDVwKwkx5SWzCwrvpgzfZpYFnAd8ePS95ATNAr4Y
f/1F4MUkxpLW4r+897sMXdsnLL6o5SPASufcLxoV6bpuYUdqa13X0lZ0rTWL+qwJUt/
zuOn3bAL08+vI1JdLjPpjiTOzzmaWF38dAs4htnbaXOCKeLWkX2MpcxdIgPhtRO8DvMCjzrkfJzmktGR
m/YEX4m99wJNq65ZjZn8GJgNFwA7gR8BfgJlAb2ATcKVzgt3nqAjtPVkYsOSHbABuGH/
2gZyfMzsdOAfwAogGt/8fWJrIei6bkFHaetr0HUtbcDM/oiutWNSnzUx6nsem/qPiVEfMDHqyyVG/
bHEmdkoYovce4kNtJrpnLsr/vP/KaAAeB/
4F+dcXdLiTKUEmIiIiIiIiIiIiSEtLpSmQIiIiIiIiLU4JMBERERERERSWtKgImImIiIiISFpTAkxERERERERNKaEmAiIiIiIpLWlAATEREREEZG0pgSYiIiIiIikNSXARERERERERSXAREREEEREEQ
krSkBJiIiIiIiIiaU0JMBERERERERSWtKgImIiIiIiISFpTAkxERERERERNKaEmAi0mGZ2eN
m5szszmTHIiIiIiItS309EWlMCTCRJDGzDfFfyFvNLBTfNia+zbXieTvHOwNbzazOzLab2Vwzm9Cojos
/
+rZWHE1ick0e283sOTMb1BbnFxEREWlp6usdFJP6eiKSdEqAiSRfd+DGNjzfw8AXgRLgEeAdYDgwsKVP
ZGb+BHd5EngAqAIuB141s8BxnttjZvoZJyIiIsmmvt5n1NcTkaTRDwyR5HPAd80ss2lB02/
nzOzO+PvH4++/3Mx+YWb7zOxjMzPzZzP7bzMrNbL2ZndfosGfHn6c55/7dOXc5sY7ZrP3nbFT30/
jxJ1vM18xshZlVmdlaM7vbzDLi+020Qj3MP8FC87HQzm2dme+PfRj5qZoWHaYufOeduAq4q6Kv+8HDG
30Oec1apv936pOjr+fF39/
r5ktBOqB3maWaWYzzOwTM6sxsxIz+2qT8xaa2fNmVm1mH5jZmEbneTK+T52ZVZrZ381sZKPy/
zCzdWZWa2a74nGcFC/LNLP/
ibdVlZktNbNLG+17rpkiZeVx8svP0y7iIiISPulvt5n1NdTX08kaZQAE0m+Z4AuwDDd04BgjgVOBlcBQ
YC5wBfAusY7Fo43qbos/
LzSzB8zsGD8zsGiDXOVcR3/6rRnfJA4DngBoAV4DngBVmNgJ4AxgLvAzB4DnjEz
a/pBzMwHnNlo0+7mNcEB/wXsBP4M1AG/A35IrI3/DCwFU5xuAAZ8Sa8v/a/
J53iT2bepSYp3KmfFYBwK/BHKBx4HXgN7EOpkQ+9b1u0A5sfboBTy/vyNHrH1Hx8ueA6LAiAQ/
r4iIiKQ29fUaUV9PfT2RZPElOwAR4Wlivj/
C1hwnMeoAs4h1jGaC3QCJgGbgQggQqg2Mw6O+d2xyj/
+Hagws392zs12zv2Hmd0cP+5dzrkL781sNLAM+Eqj+hD7lnOyc25tfL8HgADwDwPrAj/
phArHNxEvBJo33fb/K5HnDObTlM3+lo/uSc+7f4f4uYaAa+Pbpzrn3o9vbzpc/
2Xn3GVmdjbwd+DkRmVXEEuixWKMegD7j7MVeB742Dr3MVeB742DlXYmZeM+sMXE2so/
MOEAE+As4Cvg7Mi+9fS+wb2RXAGmKdMxEREUkf6ut9Rn099fVEkkYJMJHkiwIziHHWObjpGXe8Rtm9wzt
WYWVmjbaucc5FGHYosYJdzbp6Z9SLWaToTuJ7YN4c/
AWYf5dx9488/7OzMeYt927bdjf4eoyX6nxh+NDeTgTTGTxDpNO4H5zrn5R4nnSG3xdqPX/
eLP9fs7RADOuYYm++wv4Pbpzrn5R4nnSG3xdqPX/
677l+D4wbgZ8S+GQbYE6/71BE+m4iIiLQ/
6ut9Rn099fVEkkZTIEVSwzPzP5vhvzPTpbqzJr7kwLTaDSVk7XSkr63wW8l5cUfx+LpPsumnbk8MpdgiGjE9AuiSYkkq7fZQYmp2KwHkk7GA6MgpUBq2ejMjHiRN1KdtWTDhDhb7c6Yvzk9/TXjz+dS26EOIo3PGGw66XRNqO9zAqsmJAlcSVWCXtPTbB5uCsegnvGOnBtV0wQgxAwewJ2VqWi8wSXQbQg+MtDpSpjtdmpnHQ/u8BYh8xc8lTh5eOe6SjNqtKJJgfM0V3dxUSodFgTr4cRmP8k6QMiLuZHp4qNTsgw8IzMKIy4UyF+Lr3NAJWWGgjYn+Blvh06KwBabiOIaKc/bWm9yqpOKj3NmnLLbC35p+iT3G6/f63Bx8mTu5t+GwoDbe7/fU9BL+9ZV3Jl1rutJLqs3+uXQ7n4+dotn7yXTMlMd3oLbMXNmJSxMN/TzY/mj3/TQ6H4T86O9uMYXRmS4Sqz1I4GR7nXVc4HXvbDKmsgqTN7Y6PrF3jHEgiRT5s0Lt1nFnyN9E5V6P+1+n9YqXI4lHVGTjZ2+F2+zDe6sz4e+Fln8/HuzdzNH5h6kLtdD4uTO2OXlcjzz1nkeLI08xgzvj/TsJl8E9V6e1OzJH0DUqnkq9bXJYp7f7W3LzP7nH+S3Xpu7Ekz+1/gS5xDsfHpN+pofqD5dWwj5Xv6FqBnYr+NB4RMaIF+fkbEJhm7Q9xIJjp8VYH/DZWJNrsfXpCGmAsJpsK+RlmPijpMAd4K3SNkC+0eeN+fDx1r5dePjqEbUKrFvSW+p+YnqhB2yHkWkfIlUaTGn6DtUuXiO0+Hy/PKEpKQa9DZLkJXWgi3AUHzG3aS+hHRtlfqW1/Ow4HWaI6SUQJ5xnP90s0mqrIZTdjxDhEDVqVmv9Xr3GLwZbgPfbjiOJI2IsdWqR0V6VJq6FMexYB0bk7t/rKvf47bjPmGKZ9EAKXBfoEcjHIkH+a1I/uNOyN1BiJwbJcsZ1DKD3vmB7cHoktpSf9P+WmGxbnzn0PHRH2eh4OmHKlrjt3tb/fY8XFOZtyNxTTRSp0J5gBNTlbBqtc8i0Z3x1C8h19C5JC/69NWPf/LuLMNzx1ueOy6I1hEFEN+1sKbhEuR3Hw6HmZl1qeSuq7B7/e63uh4VGkV6+/1xP2ZU2Jgw+TXwGOmr5gD1qk63Z2i3rkUfNZq+nQlRz+YuOSLqLFbt2pYDJZ1F+VuGI+z2eHvU3ZmmvKzFbHrG4WF8mGEezqrz2D/Ya4Ilt3hhqjlaTTlNZBj99MbYjOYwNjhfctW+oFxuT1fSjIw9i5tv4sb/zXHqWIcfgRsYptJfFgsaVlOmLVTg+bIhW3P0ZlDoUdX4gSRqbqZ13EV9fO3H7w0N9XaLXHJi4R7/WD5bTBk7FXx7bTBUXMxWSqaIuOOKqLn6u7xtM2qI+KSbvmn/Nm6Xebl6q89Pg/kMnSGl8P6UNqM2jr19VBbrLNo6qqT8kqrL8l+K4HKsn83ZoMbP/GxEV88JlW0N+aCbFfK2rKk4RznR+ngB0Pl0xtPcsX+2vV5CZk8RhNwM8wpB0POVRfnKpAwNnv5M2yU7sWt+mqh51LlzOxBzuSIjIQRVPL9tnC/EQ4bVJ/A6K9ySBmpWmYbmnppa+91NZCw6ZMZjDjHiwF6KlFoZ6CIsjAGhUDvprp0Q1Bx7k0MnnzUKt0lzr3VvnVAr6+/29Q+Yt1o5OPlSeTz2pcIbt+PZXmZZ1m2C1c4pz3qYrWVN3R6qdHGHBXD2Cq9Bnr+KlBAXw8qbU69ujqmh7GSjxP/E9YS+0jVc5E2eM6h2w2RnIXWQK8PNUOeC6GGyRovmmdaZ3HP/vN+QTUF8xWQ2pXi8Yh+35Ir+GqTnKVVwGiptDL2VpM92kn+/Wgmv23kr18Bjjcey9nLFG49gPzR7ZFQHAqv9MSB5tSFwSAjSVkxhgQ66gWVLsncI30J6YpMEzDzsOyqxdlDbmUKVjggb6+bzq1/NU0VzxjrgYQdOMgjD42N5QQ==/LvOdu8g0Ca9rdEdWWQdY26k0zC/IwcJS8+ERHgMlX7AODchUAPr6uy2FEmtVh5kpw3BuskWA6JtVyxKugy/l/D5OhvjmDYY+oBh7C5bbe2jOU7cRgFOaDRbEJQSYXQwpWTBVSaUGiERMOy0qyV7C+ZKHdsM89BqNkLi/n3Jqe7SANE1dRyzIdlJl0xj8gbr+PvDvJEGIhu4F7ynZ/pVJY/pD8XTBcPe9/2KFYw5Qw9idodqlq+vwGnZ0Yf7sR0g02IW4Q9L+0d+6rqOk2nn7Rn3r/cxXenpuFxZ0GuL8F6Tu36Wuty2F4cLgPkS0IbEQ4h/4xbXNsNg6D1tYQ0Ph/zp7g8uIHkXPdCnIdyI4x+jAudPQYNXt8gyQqtFjGDFL1JwUVL+kLmIuuBUewgGVVUQWMkkiMFPMdkE4q/DOzHmb2pCqsSdHmmVfTJr3nt+wPwKIm67RQtk6mwP9BkefxASCaFDrQDx2pIzCUQVM8A6OzeyQ3kcFqTMdldwfkrA6uSV+HnMkqVJCrv5pXnj8mtzDx+MOkG8vGf7AgQoPe/Q5mrFadl2sXvrmUfXO3X2unTXHkqsIkKNQ8ZTMIoVeZRtJgaFxwkrHP9kljxrf5zs12PAxYG2Gr0IfWSDZVPGoobr+9rrZeSMRwv1RmD5KDtpkewJRpwmGiiG++5eXcPw4m9nkPt4pdPE4Q7K3Btqs4nkVlh6Gm+xyYXvEcbl5+3WRVqTPngrdkpGqzJ3N5Px5lQ4wUdSZUq8Q3GHPGe0upvLBs+ZmK/BuY0fR7Ojzz5nBq6x4rz7JIWP3V0Lje+mSeU6DzYGWZxHOtp78JajJZw9dsvLzU/fe6b/cwkC2+mgh9DL4o4S3mEu/QMXCo6djFBnwbm5ox7Y7/5KHt1Iy3mb7p8zSSK2K0KhEr/x6IybLW+SPKRvbDiAvuQYtGdErhbkOPvNT9VBrAGiQRhmYJ4c/3R1djqVFzEVl/CJH7RLtaT4KS8SbFwCcjOgaq/6LqIn03WB4nQbyF61nI2R/ZAGILswPdZSoOo9rUiY+Ggd/hJoaiI9LlOZyrDpWbvUfn5TsLx0QjhRRn+F2s8w+qH4VqhhAsObtpTCfWY7sDAFjqsCVQxqhfsDuCuZNr6nZKBOmPTCsEmnkcn0y3Zt+nbx9vhk/sRgz1a2UrRHtc+AezhhybyUPX9LlCYvGsAyZhsJfnimAc5/wt5TKLXQBCxdIuAOa8XE1jwmvGNPtZYPDaE4yOsINt9LjUdH2ofXj7W5Yz0vmHIGqTNhxPvXnXs7oJ1sWPBbnK6Z8AwE0r2JFDjw7ibeyY0tP7hlWKmpUn9A6kXxRXJW2RDaWA0HQfWjW6dHh1ZcLoYYWj9gSQHB8hyj+Mb8/qsq9Gh2EXNy1YXzJM8Kv9jvKhvU7WwaP7bzkh0tQp0fG7U9o0kOv/h8BSGNVIQ0sxCtG2H7j7yDgp5/EqSSxIPuTbL82S5/cYbSsaqVZfz0Xo9vVfPdrBkEuQmp0tw2I2DjP+Xpcg0bsuDpmaOMcQYewXlgsj17wYLLvOjX2BH5KovQfNBXEt8rHq9Tf6DBQ8Xtlbv0+n9y/9gmQmI0RwjlXV0kOMpuZiKr2tVa9Z5QrJLLQ0JJhC0nS/WF6EJoJDxMXkrdxGuVtWhB7PaVH3lSCl5ZamL3uHYCdN4XkHsSxvGfEoopc1+7pDvjEuGbOEWNP0DAzSdsfpCO1vMBUjvp5rOawy4wAXB2QwmR5K2CxW7bCaG+vN7hKJtQiOmkzB72UX/QAwCANSgeLl1eVkxGbLBhOZd6W9zWZ/KA98zHuRdbhQzLdL2+nuN6edVhETgJxkyKSXOEbUP1MTqkyQiA8vGYcsTZ1gKDyYgeoztZn+vwI2ltC1tJSxsn4XJOlWKzD9F4yN4zB9ZiZ2FtSxB8Fo2dF0uVSv+BBY+/7KYHPMAkfHr/7OHSjKuSfRW+xdqgZD0jNwVuGhU4bXOkhDzrRjZR4AE+bUgABUQ1A7AiE2nZB3wkn+h7dVj8J0J/G/FCV8vnqYo6xApnaZZD7TrYyM5J9fTS/sE3dqZyBStBLM0UGDeAKlvC6HjyHvxZYxXDzbQzx3zU9dbh7B5Yu9vs6Oo5Bb8bvWE0ZY3V7ZXoESPHRY/wBtMtS3i5hVmOHuB2IC1v/FbmA1vFhm3H7K9+HvR3NEbc0L5NCjEoMJFrhSlt4BFn5+/I0dZX/jT0TmeJj+I6FUPZZbvRlTKM9RPuK0n6eTGK8gAQrIaqRMmHvL6FhfAlHL0Y8nhT9U6kA3vqG0y9rB7QwwWgPrGkNgVJx8AXcdnMDN79cPrqA0gTwz3PNCZ8BV2Xga9z1flaDPhjsyONzD3WVi0q7dsF4bLDR/9yFaNqWQsdsoeWy2OL6Js7pDvRhm8SMD0YkOC6Ak5yFEXtbTn1rVZWZzTJOSgbb3ppPJ6uV4iYzOuGl9z1+MaQMD6dlO7nzS0YV+4VR6qsCOtT4NrxYW7D2iJU7cl2xRkbk1iTDbKiX9g1yo/P2Ja5WXb7NZbsIVyHahTIJb6t0SrVvUYxydxNa+/fkxIdPtn+o4oEfGxZBG0cqmOWV8nhR/fgvbVg/b6FtnEXdYlQA5Z/X4m44J+WQ/uThy6uVoK8iLNs9jFB0R2OhjIKiKzGO5EM5UGAOVCtRyFq8QXK7+mVNAIX7vT3+WCjD9btCT5kBMXEQmWUcaPNbgadGSKySXqYo7HsUUCXJsknEpYoH3Kh4/6SbFSpVAuu7hmpjAMNWsBCrFwvb8FhoyQnWIujpunnP7APxPvdKAsXAn0xFR5e1ofp/mT2sX64uPKhv4RaQf6uxQ7I0k3Zr4SfIpuxMf/RBsgUqMEotwKZrgFyDMq6uHNtAqNoUgL3n8bI7+mHI5GZKavA+M4A2phoWkL/rUu3B/sAEWjH2aJMiXeCjoO7XAV8vV2uw5n1VOg+M8tP7ICkRbCgQx8XYjXLVxoHy7sZ8wYyUT91Qpq1Y9mYtO04tN9DaB7gnCG3M1a+VVeUnjRXTOdYvqKkFnSvuyHAHXotSnZG81/IkPyv4SnDg63NZ4M0hd/RCEaYH4OB4+bWAIz11L8q1ybIyvZkwmcPkSZLD9UhbewjSp3IIqsmmNLS8RMQzZLH0a/8+hNIQNZuFdY/4nZYg6g7Xf9n+9K2N+IGavdlp7uVnhuFXPR1VMg2QOwnv3nBoZ5+AHUgFMZdO6E1lvJZvN6AwvUgtdRHRUOpcqBNNK3EuZmNF7uAjkjzFVN7jyTPvdgb2jgR3Yd3HBKlbkWgGLpqvUY8nrfvtXjBzMrEXhS8E/nthhj3LBzdxqRBbtdIDLHEM1gL6iORa7ltyVhEMzx8nVTjB9NtH0G6PbbnrnQ0g6hh9fPgXrfBJ4QlwKkPs26OPCCSQdjfj9/yfIkKiz1d5+XnqDYKR1Dw8mb33EsEyH17Z3hJ2bmw/wfI5k+oG1FYnNYcRaq4Q6BlZ3Dpi8bD4XHCHMSg3OeoJRGG8ae4xKhT25gjwHr1VlB8yp7tHmHJbp20MA05O3SWLeEN/HwFxLVhIzdHkdq2MF6vCZSfYhJcljYW8WJN2+xqmuJIMB3zgTq8Y2Ma/3QoqL2sPG80vbFMkYkhz1AR3YNqrlzjXRPn9EAu3kjGuPc6EITZmUh9cKgOe7N2FbUPa5Xv+sEfvYkFrrnjB4SdnTEF3wOtsQ/cXUWVdmAvBZi1Il6oIoa9PJ5wc5WGJ8JYbiSO9NcCaSuIx3UYFLY9gtO+bmCe/4bs4DSo7rTfzAnaDlo9hIIIPW/8rvUFWbdadAt2rJtCfW1NOnZG6qGfj6Fb7yoWmsmBhn8sX6KNfQYjEYhUsrbhpTDuyGYZeJwTs7bNCp9RUpF5iaVOHuWtfv6T6AttQrHaqXsB+bNThmkv2c1enEZcAT+FjAV0nSr3ZsYphwoH7MmBk94w60iPEkIE5CF52CkCu9Ahfu4GXd1Wt9ymyFHiRtMgNkV+6kfJNA5PUoTuXwzbI6fqv5sFWbiHwXM+wCCq5lKajRJPUkZ4OtZGE1+fZaUdD5J+Pg6i6UaZm8uTAuJO9r8K+NWv41wBDH6rMLuQmBwlvSKkmBXU9T2BqzYaKyCq23w0w9hSOxGg3Ba00kf5QQSHYTBxUx/Ew8Gs/jNJcy6aQnZfFZ4L7BH4DRAbPPyvypkHp/yV4jFX+5RH8OKmaJE1xV4mvzUyPzzbH3l1Mr0fmUCYWQbcV+zkV1uYIvF/zfFXwfm6hvN5Kk+96Av+dZn/H+Kc4rx1T2Ls10JuBY3f9OJvIDIDkszbGAuAYmDWGl0FYpVcfbGAY8WWk/0V/cMBdKhhpwcn9QALq+O74NYqINMOXjB5Bkp3Aw1H4QbCY0Bc+I4pvIEXlKTWdo/KhdGd0ln9ZKCXvMGi/dk5gXI+3cuRxXEaQb6LbnSjP7dpamHMN/QxqspKEPJwJ0i9bHv9nG5rG+nOV19GtH3gfhHfrHfhnphZdjBxiK8gdM8k8gQ+2NR1mU4wUdd1HrrMKhNaMyZg9g2fhOZhl4qGsQ5bKOxy/MKlBfgazTuxDeHZ4FTp1WzcgCA==

XoQG9J+d7z8y8Q+ZxT4UrzeAmILxAK8TuxbxC8CpxNbK+IrzYxNRERE2hf19Y58DPX1RKTVmXNNR4GKi
IiIiIiIiIikD40AExERERERERGRtKYEmIiIiIiIiIiIpDUlwERERERERERERbusJK0pASYiIiIiIiIiImntm
LeWbayoqMj17du3lUIRERERaXlLlizZ7ZzrnOw42gP19URERKS9aW5fL6EEWN+
+fVm8ePHxRyUiIiLSxsxsY7JjaC/
U1xMREZH2prl9PU2BFBERERERERGRtKYEmIiIiIiIiIiIpDUlwERERERERERERERERJK0pASYiIiIiIiIiIml
NCTARERERERERERUlrSoCJiIiIiIiIiEha8yU7ABERERERERFJXRUVFezcuZOGhoZkhyIdjN/
vp0uXLuTm5p7wsZQAExERERERERZHDqqioYMeOHRQXFxMKhTCzZIckHYRzjpqaGrZs2QJwwkkwJcBERER
ERCQtuF07iC5fRPTjDyArG8/
QUXiGjsTyC5Mdmki7tXPnToqLi8nMzEx2KNLBmBmZmZkUFxezdetWJcBERERERKRji360nMjbf4dtJWA
G3XtCdRXR1/5K9LW/QtfueM+/DE+fAckOVaTdaWhoIBQKJTsM6cBCoVVCLTL/
VIvgiIiIiSWZm081slZmtNbPbDlN+ppktNbOwmV3RaPvZZras0aPWzC6Nlz1uZp82Khvtlp9JpK1EP1h
C5Nk/QE01Nm4Sniv/De+5F+K96Eo8l/8zNm4SVFcT+dNDRFd/
nOxwRdolTXuUZGqp608jwERERERESSyMy8wAPAuUAJsMjMZjnnGv+lvgn4EvCfjfd1zs0FxsSPUwCsBeY0
qvJfzrlnWy96keSKrllJ5MWnoFsxnnMuwLwH/3ljObnY8NG4AYOJvv43Ik8/
Bpddi2fEyUmKWEREEkkUjwERERERESSazyw1jm33jlXDzwFXNK4gnNug3PuAyB6lONcAbzsnKtuvVBFUkd0
86dEZv4e8gvxnD39kORXY5YRwnPexdC5G5HnniC65N02jFRERFKBEmAiIiIiyVUMbG70viS+LVFXA39u
su3HZvaBmf3SzIKH28nTzIvmZmi81s8a5du47jtCJtz+3cRuTJhyEzC8/
UC7BA4Jj7WCCA55zPQ3EvIrOfIbrygzaIVERSwZ133omZMW3atEPKrrjiCiZPntxmsXzpS1/
CzDAzPB4PPXv25JprrmHDhg1tFkNHpQSYiIiISHIdbmELl9ABzLoDI4FXG23+HjAE+BxQAHz3cPs65
yzo1zzo3r3LlzIqcVSQoXjRJ+9k9gXjznFmn9nOvP58Jw9HQo7E/
nrs7h9la0YqYikmjlz5rBo0aJkh8GQIUNYsGAB8+fP58677747mLevHlccMEF1NfXJzu0tKYEmIiIiEhylQ
C9Gr3vCWxN8BhXAS845w7cIsk5t83F1AGPEZtqKdLuufffg13b8Zx6Gpadk/
D+5vXiOX0K1NcSmf0MziWUbxaRdqqgoIBRo0bx4x//
zlL1m5ciWLFy9OdmhpTQkwERERkeRaBAwys35mFiA2tXHWMeu/wDgYlhhVFksrV1x
GZ+zJ06Qa9+x/
3cSyvADt5PG7VR7gPlrRghCKSqsyM73//+8yaNYsVK1Ycte6yZcs4//zzyczMpHPnzlxzzTXs2LHjYPnTprFq1apD6px
//vmEQiH69evH448/
ftzTKUePHg4vcBBEgMM2fOZOTIkQ5JLXEfL4R26Fu4vV3dB9I+y+FWcnN9Nh0Ov/bAPXjk4/0CsLUfDHvBsTepiI6U6RpTMB
+3f38z6EhtB9maTQz9hZiuAFUARcHdrfxaR1hZ9ey5UGCbjV3
jyvf20IRikgqu/
LKKxk8ePlBRR4GVlpZy+umV55xxzDjU1NQA457j44ouJz76KL/4x
S/49a9/zcKFC48rrk2bNaN8o/hOL4wx/
+wE9+8hNuvfVWX31VX7zm98wcOBAAqqqqDjr+l7/8ZXzZ3zzzzOPvss//5Oc//
P+eefz4033sjs2bM+ZM4cvfOELnHLKKbz44ovHPz885vNaMm3J56eBPw+UP74449xPz7vOxR0bqcKzXpo5mDDDztUNIsW00vc0Pr43sPr0Z1q0dvq4zsUcPGr15rSpyZY/
X/
2s59x4403cumlPFG7rjjDu6///8JYVVNnwcuJ/zPuJXwX8MJfPCVPXDC0Zbg+bvEwlbzvN9TDSKNtLW1A8PHn4TPmxG4yaTYI+ZVuWRR4xH7OjHlY9zOOk2eOWRVpeFgbpwBK5BMBRLr/ZBSIDqwSGEKSOKVqXDIpA8wmqPtDNQGqcsXI9KbFJlPxFjxZKEvyjUCdf1FpsUeVzctngyuSGfJQvgz6RWtqYCkYzyESmOMd+ioqN1w0Fa46fD5LFs8hBpssAtI9kpTTMdWQrC

nZGiEWAiIiIi7qoEBjYBaQDOPonzQ8aYNUAa+Ddr7f8AhUCbtfbwj+cb+u5zDGPMp4FPA1RXV59k6SJD
w9Zt7Z3+OPk0t0s5IePxYGbOwb75BrbpHcwoHakmMhJOdQSWm3Jzc3nhhRcwxlBWVkZFRUV/
4H7o0CFSqRSlpaVHnHP4fUtLCwDf+973uP3227nzzjv5/Oc/T01NDf/6r//KjTfe+K73njVrFg8//
DCpVIpXX32Vf/mXf+Ezn/kMv/rVr/qPOXToECtXrjxi22GXXHIJAJ/85Cfp7Ozk/
vvv584776SwsJCbb76Zb3zjG0eMpCopKTni/JKSEtLpNIcOHQIY1LMelpeXd8T7QCBAPB4HID8/
n+eee4477riDv/7rv8ZxHC6//HK++93vctppp/
Xfb86cOcf9vOzdu5fJkyef4LM29BSAiYiIiLjreMNd7EmcX22t3W+MOQ34ozFmA9Ax2Gtaa+8H7gdYvH
jxydxXZMg427dAMDRqpz8eZqbPwr69BueNV/Fe/ZH3PkFERg2fz8fixYuPu6+oqAi/
309jY+MR2w8ePAjQPyUxLy+P73znO99h/fr1/Pu//zsf//jHmT9/
PrNnzz7hvSORSP+9ly5dSjwe5/bbb+fWW2/l7LPP7r/
Htddey2233XbM+Yenfx+TdPNgmW3HAzW+29Iv+eDxMaL5jNM4pzQWxNvS+dRoq0OnxD4ahY/c8KmnNIoCCnM//nRCqwA0IOIJIOoVq
+8pcpKiriW9/6Vv+2Sy65hE2bNjFnzhwWL158xMfxgqJJkybxla98PWZr+z4hwntLaf4X+1NvqvHO1sm1vdvvGyZNAvRG0WpB4FrybQ9e5Dwtnh4ZmXHJcQJTw/dEsaQZOq1uH+D8ECKK6JyZY15FRDlSVMwH3Q/ZR+uF3OfZr8rWd8rcqbcVEf6zxvJz8R9cfwR7OVKYXIDd5V2NS5xbjhCcO6jFa1mWIeoxaFH6jHDeO/8OqbI3Ct1QxMOA1qqYUmp8DUZK0V2Tcxba7jX9RuzH8HS30sWyxutbRV3eGZDX1sVI3lOWm3iCkqRK6pGY2YPgE4gjSXoJkHWYLj4xFD1nOzHgoBp6VNUeKcKVk3QbLgiNr7GRZNgo1XcOlVrEl7KrLjjkpoy0Hx2b7TSppwlm5PZRLHMbhk7z1X58UJDwS+N1SChZ1uwkNK93ej9JQXXS7R0C1vxpL6nN5bjnxO/X9FpJ8u1Shkc4tlOl52lQcLlsMy60cCszJpu92dCTgrbD2jFBQjLxv5u/jzDRvShPQSZm3Bj4OYJ3ZIFVHHDYMjgEhOAxS2yVZlHY3kH4hR6x8Rqu3GNzXHeCiN4sm5cprvyQTjIZgiAbbH4vYkd1EWwrf0n+e6e3H1+dnU/2bWFkXNsBWRh86s0Jxx3E7X2fIBfJKJFiJtX0Ys9W9GOgKWpZZ3LCt7CfW2F+WXpDSAbPK1R9oHI9FfmM3ywQn05MyQm9oQzDk2ycFcsA8mW/+RxJPqoTx/NbKTgR7jvNAsXH37jl32pQRBUhe81q9xwXj+7jxAT4+uOUhdfKfW7lqV3+3GbEYFn9I3zXLCDSMLdf8jVu1yzl0ADyuOvImR6HcVMl8VDZ1BpEIb+pqddnMOjwvT3wqm6QtgnJPX7rcyAVrXnCCfwvKwN9XGGv0/j6qyB3ZtBjyIOZnFNtGAy1npOj6W0+G/d0f4Fde+P4yYsxILW/+cOUKXUJ3AFzGLWzYV7iHvhJ1YXh88nQZqG+2bVr2Rqp5h9Ea8Hd1xRB0+rMthRUSMqlqVQUe5OLYaGNdBc+BkzL3X8d/UgD9KaW7TJgSfXNYjUVOyXcy+fLHPk3kuk9+IFjmQ0fE5yfpxH8+1LWWiaYLzhvhxMr7xUfmrKVsvPzh3+v3GZXnv0I+R1U7rKhqR8nBvkkStP4OqS1KHi3O6bwKwEr0XuykjpzgjVndypdGRzQrdaL7SWVR5BAsRt9yZ+ze/bEAVsNgF0PMW/Q8N/qKZQZ3bw3PTR3vfoGmkmaJk+3nb+V8Xjs9bb/vOmyNcfHWmH+VL5HujZexEcf3mZ9fd/0XCIuHWyqEW88z2NRvfV2bXC5SHrrAEL6cYH3KZm5T0v8IdUgehxXlrPZzBw0UJg/RAS6x1k/jtBeCrWBbdbYBOsBtCCM5MrQ9Q3aqhVyhu4x0zhSZvhvbz8ugXmUkQFkgQTGNoWV7EO1RvYW7UUd8tJgn/5yGNzcxRAGwMO3rT4KhxzF/NMjMB88qNLMd/+ucbzHcezvyFMU5Dwe5l8/T9wwdnzx3IckLDAjXoL+ZP76sdPQ+Cy3XVBYjMxjdrYvBJW5DYm2OqMvvOHAa6G9nwX6zGZjTXLH7uyVwCZhG6uVsPs3fWl+wPdL94nH1FYlLUKh0WyEwI0IkDpkI+1LhmhPk4uO3PwtJmb9hHRSUlkb9iROrH2l3yXmxlZ9RNhzuOu2ccZEPgdT1gzJv80YHJzMGM5zW1QNXYxMkjpNBW+AW3J5JncWb51IX9LaHW2iXbr0yuRtP7cZCtW9+7EjvzfsPT+gvB9j/vSflwnbBPNUaknjSwmZNCWFOjJ+X8DK+z1N6fI3kM1GMdM3k3Gi27UJtEBBL/Qy6ZLz9qHyWwS9QlGv/WJXTGJ8A+q5vhJQt3Y4cN2r1z9i6mfXWFDGE5dM2bBsR9D+dq9BKvrOCSwCdzAkiD0GWZFfkKbHPf0vQF3nCEkUVRjOhH1Gq3z2nRAZPtbDt43+wUchR//y9SOrNAVU2mq5DnX8/z69h5KewDkL/xV1A3jTaPZ9H6zeSRP2HFHEK7xnGKR0ZpWzz4vJ80V2IdaV/+7M7uoqoPfO4KwMGRGBZ/4P8jUZ5Fn4bwYvmCJBZ2KAcv9PLkeCPGvQGUy6hmkFUDZ3Hm9IFIw7MSNp4WvAKN45tOxvKSOj9Ssj5dMYuZHc2FKrbn07qnbpVoXPBjzxh9YtmByBnoUMYq5t/BCqL+fzB4vuOiujH/9mAGxHfyHnlfPoXMBzytDmBxsfq4ebjbdyibUP4q4BLIv4TPhyWq6hpTsrS4xFhLkVM/j1RDzJTSOSEiZJoKIf5NXEXY3z+vB61K8H3j9VjOqMbWT0RfpVOh2jB9S2UmCu4OHzBJ8yONOEyQsVhOrZTvDw1RhW5Z3tWgKeEAZf/3PbQdmRXYQxwdGIKT8ZMl5R0gAkiWhmUPIRQXa1/I3e76xpAkaRLA+lpCf9YB/+FlZ8MRDaXBnNKNQMC3YaKCvmdKfuBJ3Lkug8a8ZqoJm7BbIuxoxbGu0KmgIqBgymAs9mUmrAZLeCeGbNybKOpMgA7y1A5y1wfiLVRdA5SMLDkMVxLxaA8CMkmsZBjemLyBfhrQR8Bqs4IEYsaBhvA6Y1u+KmFPHt4M+ygWCP2R2eIYEWG5tRDP1g7KxKgV0DRQpH1mkbOj7ZuRmUl6cPPa3vlwsFGp8kdo+nNuMkr8Zh83ckHQTo5d1a8wZqjsXIdgoLVKXaVp5ZhfHnhl6Bi3YnMnwV+c1wjkrCMfAxdEUfPHwhuzzNs0lvtGU0ppAcYImXyl0gT6zA7OFlH/MExAeSM3GejNPJt0

sdikiIhOaAjARERERF1lr08AXgGeBLcCvrbWbjDF3GmOuBTDGnGWMaQA+CtxnjNnUd/
pfAxcAf2+MWdf3sbBv38+NMRuADUARcNcIPpZIv/
7+XxM1APN6MafPxe7Yhj046MGdIiIyxHxuFyAiIiIy0VlrnwaePmrb7QNer6Z3auTR5/0M+NkJrrl8iM
sUOSXOrjoIhSEv3+1SRoS1ELeGHmvodjwkrCEz7Uycph7s21sJLCkk5DWEvB7CPkOW34Nngk0NFRFxgw
IwEREREREZFtZa7M46TFnluOz/1e0Y9qV9NGU8NGe8HMp4aXU8ZI5Z2yIK
Z17T+3Jn5xF7PAZyAx4Kgl7yg17KIz4qo35yA55x+TkTEXGLAjARERERERkezU3Q1QHzznC7kiERdwz1
aR+7Uz4a0j5aHW/fHkuWseR4HKb7U4SNJWgsYWPxG4sH8MW6KPrj/
9A59yxaF55H0rEkMpaulENXyqElnmFXZ4o1fYtFhn2Gqqif03L8nJYTIDfgPVFZIiIyCArAREREREkW
Di7Dvf/qnC5klPX6Rhqk362p/
w0pH04GAJYirwZqgMJir0Z8jwOvvcarJUVIVxQQP7alwguOhsbCR1ziGMtbUmH5niG5niG/
d0ptrcngW4KQ15m5AaYnR+kOKxv40RETpb+5hQRERERkWFhd9ZBNAuyc90u5aSkLGxP+dmYCLA77cNiy
PFkmOlPUelLU+Bx8JzC7MSu2WcS2bOd6LoVdJ198TH7PcZQEPRSEPQyPbd3CmlHyuFAd5r9PWlWHoyx4
mCMopCXOflB5hYEydbIMBGRQVEAJiIiIiIiQ85ai901tvp/
tWQ8vJkIsjERIIkhahxm+VNM8afI8dj3ff1UQQnxiilkrf0z3Weciw0E3/
V4Ywy5AS+5AS+n5weJpR32dqXZ3ZXilQM9/
OlADzW5Ac4oCjE12z9mPs8iIm5QACYiIiIiIkOv6R3o6YaySrcreVfWws60jzXxILvSfjxYJvnSTPOnK
PY4DHWm1DH3LEqe+w3Rt1fSddaFJ3Vu2OdhRl6AGXkBOlMOO9qT7OzsnSaZG/
CwpCTMvIIQAa+CMBGRoykAExERERGRIefs7Ov/
VT46AzBroTblZ0U8SGPGR9g4zAskmOZLExqC0V4nkioqI15WTXTNn+leuBTrD5zSdbL9HhYWhZhXGKSh
K01te5LnG7r584EeziwKsag4TNTvGeLqRUTGLgVgIiIiIiIy5OyuOsjKwWRlu13KEayFLSk/
r8dCtDheso3DkmCcKb70KfX1OhWd886i+PnHiKxfRfeiZe/rWl5jmJztZ3K2n6ZYmq1tSV4/
GGNVY4wzikKcXRohS0GYiIgCMBERERERGVrWcbC7dmCqJrtdSr/
DUx1f6QnT5HjJ82Q4NxinagSDr8OSxRXES6vIWv0K3fPPBr9/
SK5bHPZRHPbRkcywqTXJmqY4bx6Kc0ZRiKWlEY0IE5EJTX8DioiIiIjI0Dq4H+IxGCXTH99Je3mkM4tH
u7KIWcM5wThXhGNU+0c+/Dqsc+5ZeHu6iGxcPeTXzgl4WVoa5oPVUaqz/
KxtivPDzS289k4PyczwTe8UERnNNAJMRERERESGVH//L5cb4Mccw59iId5OBggay5mBBNP8KUZDj/
hkSSWJ4gqyV79Cz7yzwDc0o8AGyg54Oac0zOz8AG83J/
jzgR7eaopxfkWUeQVBPFo1UkQmEI0AExERERGRIWV31UFuHiYSdef+Ft5KBHigI5v1yQAz/
Ck+GOlhRmB0hF8AGEPH/LPxdnUQXbdyWG+VE/
ByfnmESysjhHwentnTxYNb29jRnsRajQgTkYlBI8BERERERGTIWCeD3V2PmTLNlfs3Zzz8oTvCvoyPEm
+aMwNJ8ryOK7W8l2RpFfHyarJXvUTP3MXYUHhY71cc9nFppZeG7jRvNyf4TX0Hk7N8XFyZRVlE3xqKyP
imEWAiIiIiIjJk7P4GSCZGvP+XY+GNeJCHOrJpyng5Oxjn4lB81IZfh3UsPBdPPEbWmj+NyP2MMUzK8n
NVdZRFRSHeiWV4aFsbf9jTRSw9uj9XIiLvh2J+EREREREZMvZw/6/SihG7Z2vGw+
+7I7yT8VHlTbEomCTsGRtT+1L5xfRMnkH0zdfoXrgUJytnRO7rNYYZeQGmZPvZ2JLg7eY4W9sSXFgRYU
FhSP3BRGTc0QgwEREREREZMnZXHeQVYMKR4b+XhY0JPw91ZNOS8XJuMM6ycGLMhF+HdSw4B+NkyF7x4o
jfO+A1nFkc4spJUXL8Hp7d281PtrWxrzs14rWIiAwnBWAiIiIiIjIkbCaN3bNzRFZ/
TFh4sifC0z1R8jwZroj0UO1PD/t9h0MmK5fumnlENq7G19LoSg15QS/
LKyOcWxqmI+nw09p2ntrdSXdK0yJFZHxQACYiIiIiIkPCNuyBdAozzP2/
mjMeHu7IZmvSz9xAgovDcaJjbNTX0TrnLsZ6fWS/
+pxrNRhjmJzt54OTszg9L8DGlgT3b25lbVMMR6tFisgYpwBMREREREESGhN3V2/+LYez/
VZf08dOObHqs4eJwjLmBFJ5x0K7KCUXomr2IcN0mAnvqXK3F7zGcURTiA9VR8oIenm/
onRZ5oEfTIkVk7FIAJiIiIiIiQ8LurIOCIkwwOPTXtvB6LMhvu7PI8jhcHo5RMspXeDxZnbPOIJ2VS+4
fn4CM+9M5cwJeLq6IsLRvWuRPtrXz3N4u4lotUkTGIAVgIiIiIi4zxlxpjNlmjKkzxnzlOPsvMMa8aYx
JG2M+ctS+Txhjtvd9fGLA9kXGmA191/
yOMVrSTYaXTaWwDbuGpf9XxsJTPRFejYeZ7EuxPBwb81Mej8vro33R+fhbmoi+9brb1QC90yKnZPv5QH
UWM3IDvHUozv1bWtnYEsdqWqSIjCEKwEREREREcZIzxAt8HrgJmAx8zxsw+6rA9wN8Dvzjq3ALg68DZwB
Lg68aY/L7dPwA+DUzv+7hymB5BBADbsAsymSHv/
5W08FhXlM3JAPMCCc4JJvCN4zg3XjmVeMUUsle8iKerw+1y+gW8hkXFIS6vihL2enhydxe/
rGvnUNz9kWoiIoOhAExERETEXUuAOmttvbU2CTwCXDfwAGvtLmvTeuDoeUdoeUdXAM9ba1usta3A88CVxphy
IMdau8L2DtF4GLh+2J9W7sw6MgZLyIbtmt2P4ZWcWu9M+lgTjzAmkmAhjGdsWXYDJZMj509Nul3KM
gpCXS6siLC4O8U5Pmge3tvHK/m5SjkaDicjopgBMREREExF2VwN4B7xv6tr2fcyv7Xr/
nNY0xnzbGrDHGrGlqanrPdPSJHc3bWQVEJJhAYkut1OoZfdGZxKOPl/FCc0/
wTZ6RRJjuXztlnEtn6NoG99W6XcwyPMUzPDfDB6iwmZ/
lZcTDGj7a0UteedLs0EZETUgAmIiIi4q7jjW1bqwsFSHjbp3nI8XSRuzTy2FcGtAC90yJfF/ID06V18M+TycUxrmksoIAI/Wd/
BYfQftyYn3+yUio58CMBERERF3NQCTBryvAva/
z3Mb+l6/5zWttT+y1i621i4uLi4eNGjRiaoiIiIi4q7jjWcZ7FCKE5076Gtaa+ff+CyefCgUOMdNbHakmLWD6B8yViQxAR7W/
LSddTH+liayV7zodjnvqiTs44pJURYUBtnZkeSRYUBtnZkeSBLa2sPNhDRk3yRWQUUQAmIiIi4q7VwHRjzBRjTAC4EaYZzR+/
XhikOc+C1xujMnva35/OfCstYK1cOB+GcmMOadv9e/Ax4fjuJFoK//
l8cDJWXv6zqdjuGRvvDrwnCMwgkafh2WqJhM97TZZK35E/
4De9/7BBd5jWF2fpAPVGdRFvbx8v4eHtzaxp6u0Tl6TUQmHgVgIiIiIi6y1qaBL9AZm0Bfm2t3WSMud
MYcy2AMeYsY0wD0Q/pTdEWw3c2bcN4GbgR0AdsAN4ZgQfSyYYZ1cdFJVi/
P5TvkbMMfyqM4vOvBroo78Olr7GcvIhKPkPfubUTsVcqCo38P55REuKA8EJuupDul308Rc
ZfP7QJEREEJjpr7dPA00dtu33A69UcOvVax4HEPAg8eZ/saYO7QVipyLBuPwYEGzLwzT/kaaQu/

7YrS5ni4MBRX+DWADQRpW7KcopefIHvFi3Sef6XbJQ1KZdRPadjHptYEm1sS1LUnubAiwoLCEJ6JsJSn
iIw6GgEmIiIiIiKnzO6uB2sx5afW/
8ux8GR3hH0ZH+cEE5ROwIb37+XIqZB73C5n0Hwew4LCEFdWR8kJeHh2bzf/
vbWNXR1aLVJERt6oHQH2pS99ye0SRESGlf6eExGR8cDuqgOvF4pLT/
5cC3+MhalNBTgjkKDanx6GCseH9jPPJ3hgD/lP/4qmv/
kiNhhyu6RByw14WV4RYW93mnWH4jyyo4NpOX6WV0YpDI3ab0lFZJx5zxFgxphPG2PWGGPWNDU1jURNIi
IiIiIyRjg7t0NxGcZ78kHG2kSANxNBZvqTzAyM/v5WbrL+AK3nXYG3o5W85x7rTQ/
HEGMM1Vl+PlidxYLCIHu6Uvx4SxsvNHQRS2vKq4gMv/
cMwKy191trF1trFxcXF49ETSIiIiIiMgbYnm44eABTdvLTH3enfLwUC1PpTbEwoClxg5EsrqBjwbmEt2
8k8vZKt8s5JV5P72qRH6zOYmqOn7VNce7b3MqaxhiZMRbqicjYMmrHm957771ulyBDRNO8RI5Pf8/
JRKZ/
G0TGB7trBwCmvOKkzmvPGJ7ojpDtcTgnlEA90Qeva9YZBBv3kfvyU6TKq0mVnlrvNbeFfR6WlISZkRvg
rUMJXtjXzeqmGMvKIswpCKpRvogMOTXBFxERERGRU2J31YHPD4Ulgz4nZeF/
uqOkrWFZKI5fOcfJMYbWpZeSCUXI//
3PMfGY2xW9L3lBLxdVhLmwPIzXwFN7unhgSyubWxJYjQgTkSGkAExERERERE6Js7MOSsowXu+gjrcWnu
uJcDDj45xQnByPAo5T4QTDvf3AOtvJf/
oRcMb2ypnGGCqifi6vinJ+WRhr4Yndnfx4axvb2hSEicjQUAAmIiIiIiInzXZ1wKGDJ9X/
a30ywKZkgLmBBJW+sR3auC1ZXE7bWRcS2lVLzstPuV3OkDDGUJXl58pJUc4tDZPMWH63s5OHtrWxvV1B
mIi8P6O2B5iIiIiIiIxef+n/
NbgArDnj4cWeMKXeNHP8WvFxKPTUzMXX0Ur2uhWkC4rpWbjU7ZKGhDGGydl+JmX52NWZYlNLgsfqOykM
ellSGmZOfhCfR3OI8jQjAAAgAElEQVRnReTkKAATEREREZGT5uysA38ACore89i0hd93R/
AayzlBNb0fSh0Lz8PX2U7uS78nk1tAYupMt0saMh5jOC0nwJRsP3u60mxtS/DMni5e2d/
NouIwZxaFCPs0qUlEBkd/
W4iIiIiIyEmx1mJ3bIOyCoznvb+leCUWojHjY0kwQVh9v4aWx0PruZeTyisk/
8lf4ms64HZFQ85jDFOy/VxRFeXiigi5AS9/
PtDD9ze28NzeLloTmk4rIu9NAZiIiIiIiJyc1mZob8VUTHrPQ+tTPtYmQkz3J9X3a5hYf4DmC6/
B8fspfPTH+Foa3S5pWBhjKIv4uKgiwlWTokzK8rPuUJz7Nrfy6x3t1LYlyKhPmIicgAIwERERERE5Kc6
OWgBMRdW7HhdzDE93R8jzZFgYSI5EaROWE8miefn1YC2Fj/
4Yb3uL2yUNq7ygl3NKw1w7JYs5+QEOdKf57c5O/mtjC6/
s76ZNo8JE5CgKwERERERE5KTY+m2QlQ3Zue963AuxMHFrOCeYwKu+X8MunZPPoeXXYZJJCn/
zAJ7OdrdLGnZhn4f5hSGunZLFBeVhcgNeVh6M8cPNrfxyeztbWhNkHI0KExEFYCIiIiIichKsk8Hu3I4
pr8K8Szf77UkfW5IBZgeS5HmdEaxwYkvnFXHo4mvxxHooevRHeLo63C5pRHiMoTLq58KKCNdOyWJeQZB
D8TSP7+rkuxtbeHZvF3u7UlhNkRSZsBSAiYiIiIjIoNl9eyGRgHeZ/hhzDM/
19E59nO1PjWB1ApAqLKX5wmvwdLZT9MgP8bY1u13SiIr4PMwtCHL15CwuKo9QGvayoTnOz7e384NNrby
8v5umWNrtMkVkhCkAExERERGRQbP1ff2/
yk4cgP0xFqbHGs4OJvBo6qMrkiUVHLrkQ5hEjKJHfoiv6R23SxpxHmMoj/
o4tyzC9VOzWVoaJur38MbBGD/e2saPt7Sy8mAP7Un1CxOZCBSAiYiIiIjIoDk7aqGwBBMKHXf/
jpSPTckAs/wp8jX10VWpwlIOXfpXYC1Fv74f//49bpfkGr/
HMCXbz0UVEa6fksWiohAO8PL+Hn6wqZWf1raxtilGd0pfsyLjlQIwERERERERERZFJuIw77dmIrK4+5PWni
uO0KuJ8Mcrfo4KqRzC2i67CM4/gCFj/
6I0PZNbpfkupDPw4y8AJdXRblmchbzC4J0pxyeb+jmextb+OX2dt5ujhNPKwwTGU8UgImIiIiIyKDYXT
vAcTDlk467//VYiE7rYbFWfRxVMlk5NF32V6RzCyj4/c/
IWvUyqBk8AFl+D3MKglxVncUHJkWZnR+gOZHhmT1dfHdjC4/
uaGdza4JkR8Od8BL/Aja+2/HbU/CDwMLAKagRustbuMMR8H/
teAQ+cDZ1pr1xljXgbKgVjfvsuttY3D+yQy3tn6WvD5oKTsmH1NGQ9rEkGm+lIUa+rjqOOEozRd8mHy3
3iRnFefxdfcSNtlHwKf3+3SRo3coJf5QS/
zCiwtCYfdnSn2dKWo6+jEZ2B6boC5BSGm5vjxvMsKqCIyOikAExEREXGRMcYLfB+4DGgAVhtjnrDWbh5
w2KeAVmttjTHmRuSbb9IZgPwd+3nedecDj1tp1A877uLV2zYg8iLWV2Jsv0e5hU
EmV8YIi/
ofe8LisiooCmQIiIiIu5aAtRZa+uttUngEeC6o465DvhZ+fk+7Cl/TOxT/
9LsEd25zu6pRyxhDSdjHWSVhrpuaxXllYbL8htcPxvjh5lZ+sb2NTS1xUo6mSIqMdhoBJiIiIuKuSmDv
gPcNwNkNknOsZamzbGtAOFwKEBx9zIscHaT4wxGeDXwNettfaE86Rr8zpxqXYLIRWw3R/
C7yoCu6JiCRUE6aOs4jiXHK4RkKj5MaigQSvw8LRpD8SHwhdaK5X3pcEdLhg/
jMWS8szt6QxJTcWQAFnMML8dCFHkynOZLu1GanIJ4dQ1NeYUUvPoHCn/
3EJ1nXUjneZeBRyOaTsRrDNVZfqqz/HSnHHZ2ptjZkeT3u7sINnQzJz/
IouIQhSF9my0yGmkEmIiIiIi7jjde5uig6l2PMcacDfRYazcOePzj1trZwIV9t08c88mN+Ywxpt4Y
XFxefXOUyoTh1WyEShbyCI7a/
Gg8Rt4bFwQRqizS2pHPyabz8o3RPm0P26lco+tX9eNua3S5rTIj6PcwtCHL15CyWV0QoC/
tY1xzngS1t/KqunR3tSY7zMwcRcZECMBERERF3NQADl9SrAvaf6BhjjA/IBVoG7L+RozKW1tp9fTx3
Wmv39f3aCfyC3qmWIqfEZjLYHdswldUMnH3blPGwLhGgxp8iT43vxyafj7azl9Ny7uX4Dh2k+OH/
JPL2Sq0SOUjGGEojPs4tC3Pd5CzmFQR5pyfNb+o7+NGWNjY0x8nocykyKigAExEREXHXamC6MWaqMSZA
b5j1xFHHPAF8ou/1A/
Hp7OaIzxAB+lt3cYfdt8xpiivtd+4GGpgIyKnyO7dCYkEpmryX7ZZeLEnjB+YG0i6V5wMidiUmRz84E0k

i8rIe/
FxCn7733g6290ua0wJ+XpHhV0zJYulpWEy1vLUni5+uKmVNY0x9QkTcZkCMBEREREXWWvTwBeAZ4EtwK
+ttZuMMXcaY67tO+zHQKExpg64FfjKgEtcADRYa+sHbAsCzxpj1gPrgH3AA8P8KDKO2e1bwOOB8sr+bX
UpP3vSfuYGkmp8P044kSyaL76OtrMuIrBvJyUP/
T+ib74KTsbt0sYUrzFMyfZz5aQoF5aHCXkNL+zr5oebWljTGCOtIEzEFerOJyIiIuIya+3TwNNHbbt9w
Os4vaO8jnfuy8A5R23rBhYNeaEyYTnbt0BpBcYfACBt4Y+xELmeDDX+lMvVyZAyhu7p84iXV5O3+hVyX
36K8Oa3aL/
kelLlk977fOlnjKEi6qci6qcxlmZDS4IX9nWzsjHGuaVhFhSF8KpxnsiI0QgwERERERE5IdvWAk0HMZV
/WSV0TSJIu+PljEASj75/H5cyWbk0X3QNzcuuwtvZTtEv/
4vc5x7D09XhdmljUknYxyWVUZZXRAh7Dc81dPOjLa3UtiXULF9khGgEmIiIiIiInJCzfSsApqo3AOtyD
CtiISq9Kcp8mho3rhlDvLqGg+XV5Kx/g+jmNwlvW0/X4vPpXnwBtm9EoAxeacRHSdjL/
p406w4l+O3OTqqiPpZXRqmI+t0uT2RcUwAmIiIiIiInZOu2QHYO5OQB8FosRBpYGFTj+4nC+gO0Lzqfr
hnzyV33OjkrXiS6fhWdZ19Mz9zF4FNwczKMMVRG/
ZRHfNR3pNjQkuDh2nbmFwS5sCJK1K+JWiLDQQGYiIiIiIgcl02nsPXbMTUzMcZwKONhfTLAdH+KbI+mb
U00mexcWs6/ikDTAXLWvUbeH58g+42X6FpyEd1zzwK/
grCT4TGGmtwAk7P9bGxJsKElwba2JMvKIywqDuFRfzCRIaUATEREREREjsvu2gHpVH//
r5d7wviAOQGN/prIksXlHLr0rwgcbCBn4ypyX/
o9WW+8RPfCpfTMX4ITyXK7xDHF7zGcURRiWo6ftU0JXtzXzYaWOB+ozqYsom/ZRYaK/
jSJiIiIiMhx2e1bwOuDskp2p3zUp/
0sCCQIamCKGEOybBKHyiYROLiP7M1ryHn9ebLfeInY6QvoOuNc0iUVblc5puQEvFxUEaahO83apjg/
2dbG2SVhziuP4NdqEyLvmwIwEREREE5hrUWp3YzlFeC18dLnSEixmGGP+V2aTLKJEsraS6txNfeQrR2
PZFt64lsWkuquJye2WcSO30BTjTb7TLHBGMMk7L8lIZ9vNUcZ2VjjG1tCa6qzqY6W1NMRd4PBWAiIiIi
InKslkPQ1oKZOYfNST+NGR/
nBON4NRBFTiCdW0D7WRfRsWApkZ1biezaRu4rT5Hzp6dJTJlBfNps4tNmKQwbhIDXcHZJmMlZflY3xfl
FXTsLC0NcVBkh5FWTfJFToQBMREREESO4WzdCECmspo/
xcIUeDJM9qVdrkrGAhsI0j1zAd0zF+BrbyGycwvhPXXk7dyGfeF3pMonET9tFolJp5EqrQKv1+2SR62y
iI+rJkXZ0JLg7eY4de0JrqjOYnpu0O3SRMYcBWAiIiIiInIMZ8t6KCxmnb+YzrSHi4MxtCidnKx0bgEd
C8+jY8G5+NqbCe+tJ7RvJzmvPQeA4w+QrJzS+1E2iVRpJTYUdrnq0cXX1yS/
OsvPqsYYj9V3Mq8gyaVVUYIaDSYyaArAREREETkCLazHfbtIXnmUlbEg5R505T6Mm6XJWOZMaTziujM
K6Jz3hI88RiBxn0EDzYQbNxHzq7a/
kPTeYWkistJF5aQKiwlXVBCOr8IfBP729fCkJcrJkXZ2JJgY0uC3Z0prp6s3mAigzWx/
wYREREREZFjHJ7+uLpqAXHrYUEg7nJFMt44oTDx6hri1TUAmGSCQMtB/
M2NBJoP4n+ngVDdJoy1AFhjyOQW9AZihb2BWDq/
mHRB8YQaMeYxhvmFISqiPlYe7O0NtqQkzAXlEXxaKVLkXSkAExERERGRI9gtG+gqrmANeVT7UuR7HbdL
knHOBoIkyqpJlFX/ZWMmja+jDX97C76OFvztrfgOvUOofivG/
uVrMhOKkC4oJp1fTKShdq3ALzj81veopCPKydFeetQnFWNMeo7klwzOZvSyPh8XpGhoD8dIiIiI
iLSz8Z6sLt2sPLCj+EA8wNJt0uSicrr6xvpVXTkdieDr6sDX0cbvs5WfB2t+DrbCO3YjHdTT/
9h1hgyOQWkikpIF5WTKiknVVxBJjcPzNjvneXzGM4qCVMZ9bGqMc5Pats4vyzC2aVhPGrYJ3IMBWAiIi
IiItLPbttESySP9dmTqPGnyPJYt0s
SOZLHSzonn3ROPjD1iF0mmegPxHwdrfg72gaMGuv9Wnb8QVLFZaRKKkgXl5MqqSBVVDpmR4tVRP1cVe1
ldVOcVw70sKMjydWTs8kLanVNkYHG5p9wEREREREZFs7WDbw2dzleA3P8KbfLETkpNhAkVVRGqqjsiO0
mncLX3oK/tQl/
6yH8bYeIbFyDJ937NW493t5QrLSSVEklybIq0oUlYyYUC3o9nFcaZlc0xdqmOA9ubeOyqihzC4IYjQYT
ARSAiYiIiIhIH5tMsP9QO7UzpzPHnySk0V8yTlifn1RhKanC0gEbLd6udgItTfbhbGvG3NBLe8jbR9at6
d3u8pIrLe0Ox0kqSpZWkC0vBOzpHVhljmJodoCTkY2VjjKf2dLGjI8kVk7II+8b+lE+R90sBmIiIiIiI
AOBs38qfZ5xPyKY5Xb2/ZLwzhkx2HrHsPGKTp/du6w/FGvG3NBFoaSS8ZR3R9W/
07vb6ekeYlfWNFCutJJNfhPUHXHyQI0X9Hi6uiLC1LcmG5gQNXa1cPTmbKTmjp0YRN4yqAOzee+91uwQ
REREZAfo3X2R0qt9zgL1liznTH8OvWVMyER0Ris3o3WYt3s6+UKy1sTcU2/
wW0bf7QjEgk5NHuqCkdzXKghLShSWkCoqx4agrj+Exhtn5QcrCPlYcjPHIjg4WF4e4qCKKz6M/
3DIxjaoATEREREE3OGkUvwpUk12sptpUU19FOlnDJmcPGI5ecSmHBmK+dua8Lf3rUTZ3kpkbz2eTLr/
1EwoQiavkHReYf+v6bxCMvmFOKEIDHN/
roKQlysmRVnXHGdNU5xdnSmumZxNaURRgEw8+qoXERERcZkx5krgPwEv8CNr7b8dtT8IPAwsApqBG6y1
u4wxU4AtwLa+Q1daaz/bd84i4CEgDDwN/
JO1VqmGnNDm2t005ZRwfs9evCbf7XJERre+UCyTk0d84HZr8XZ34Gtv6QvFmvE3N/Rgq+zHW9nG4G9O/
BuXcfAuMsJhEjnFZDJL/
pLMNb3qxPJGrJwzOcxLC4OUxHxsaoxzsO1bVxQHmFJSVgN8mVCUQAmIiIi4iJjjBf4PnAZ0ACsNsY8Ya
3dPOCwTwTGt1toaY8yNwLeAG/
r27bDWLjzOpX8A3AysIhOAXQk8M0wfQ2R0MHjJWLpmsXBKVU47cl8nng62
rH19WOt7MdX2cbvq52/Pt2E6rdgBnwMwrHHyCTV9jbhL+kovejuBwbDJ1yaRVRP1dVe1nVGOel/
T3s6EjywcnZ5AZGZ1N/
kaGmAExERETEXUuAOmttPYAx5hHgGmBgAHYN8PW+nx8Fvmfe5bsuxphyINdau7Lv9cPAtSgAk/HGZi+3MCGZ6AgAnXc4cQmJOA34rpKHwUIuCgqBCLqWj3jdAqPjuN
9J/zvfAPAVYwZtBMkDK01tGHS1V9D0F4SrxHT8QwARZjBZ1GmIVuoWDd+K9sPP9jmqv/JFUkVcJN/
MD2Ow/nxFK7cCb4bJOVOncGf3/Rb3a3R1pnXJewh57XWKD3WGy6x6jmOdN0/QH9dUOtcsZXH1SMXaQ5f1tfVjy/uLPcQQJ6XHWZMDWA7mhSeAv/8xpEJV3cjBSCk9KoQNaoYO9rCZ6KOsKiD3MH3tIXMXH1Ib29QCTIPc9xiS/1bNzb8+8SWK0iUhh6YnAVVy2DjQrd5SZjYfXwh3mDzVxUsTkJStfcxHY5rCmlq8BFKrYC/
wy8/
S5D0d7vUAPCyuV1BfN4hIM9ZixQz5p3o3onUqJIF7eLL8Xt5YOxTmFXTdYvTLQ6TdsLgHXdwXTXLE2u4F0X3xEkEjHMQWUZlllGEDWgsZ9gDJmZlPhCNAhUHXtqbBR7XX5eqRQlnTl/
qRu0rmfJaGO6vCY6QOjmFmHyxrFpu6DhDwT2lE2vP3zuZRl3QxXwnLw2/

G0w2vvxKg+tIeC4kLS732KiAw1j5dMdh6Z7DwSTD5yV6wbf2sTgeZGAocO9K1KuQqAdG4BicnTSUyuIT
FpGjYUfs9bGWOYlhOgNOxjVWOMP+ztYktrnKuqs8kLajSYjF8KwERERETcdbwfuR/
dq+tExxwAqq21zX09v/7HGDNnkNfsvbAxn6Z3qiTV1dWDLlrGj5WNMeJ4OG/
XatIXXeV2OSJyFCccJRGOkqiY0rfBwdfeQrBxH8EDewhvfpPo+jewHg/JqtOITZtFvGY2Tnbeu143y+/
h4ooIOzpSrGuO8+OtrVxUEeXMopBGg8m4pABMRERExF0NwKQB76uA/
Sc4psEY4wNygZa+pvYJAGvtWmPMDmBG3/
FV73FN+s67H7gfYPHixWqSP8F0JDOsbowxq2EjWUWFdOqbXpHRz+MhnV9EOr+I7pkLwMkQOPQOof27CD
XsJO+l38NLvydZUkG8ZjbxabNJF5Udt6m+MYaa3ADlER+rm+I839DNltYEH6jOpiCk0WAyvigAExEREX
HXamC6MWYqsA+4EbjpqGOeAD4BrAA+AvzRWmuNMcX0BmEZY8xpwHSg3lrbYozpNMacA7wB/
B3w3RF6HhlD/nSgBxyHZVv/RM+l17ldjoicCo+XZEklyZJKOhaeh6+9hdC+nYQa6sl+/
QVyXn+BdE4+8WmziE+bTbJqCniODLeifg8XlofZ2ZnizUNxHtzayvnlEc4qCeNRMC7jhAIwERERERf19
fT6AvAs4AUetNZuMsbcCayx1j4B/
Bj4qTGmDmihNyQDuAC40xiTBjLAZ621LX37bgYeAsL0Nr9XA3w5wsGeNBtbEizav4lQJEzne0yXEpGxI
Z1bQFduAV2zF+GJdRPat5Nww06ib79B1luv44TCxKeeTnzabBJTpmMDQaB3NNhpOQHKIj7W9K0Uuaklw
RXVWVRG/S4/lcj7pwBMRERExGXW2qeBp4/
advuA13Hgo8c57zHgsRNccw0wd2grlfHk5f3dBI3lnLefp2fB0esuiMh44ISj9NTMpadmLiaV7O0Z1lB
PaMdmIlvewnp9JKqn9YZhk2vI5BYQ8Xk4vzxMQ3eaNw/
F+WltOwsKg1xUESXs87j9SCKnTAGYiIiIiMgEs7Mjyc7OFEvbdxHMJGmdPMPtkkRkmFl/
gHh1DfHqGnAcAk37CTf0TpXM27kNgHROPonqaSSrTmNKWRVlkwrY2JpifXOCbW1JlpVHOKMohFfTImUM
UgAmIiIiIjKBONby0r5usnyGRW/+gUR5NU4o7HZZIjKSPB6SpVUkS6toP3MZvo5Wgu/
sJXiwgXDtBqIb1wDg+IOUlVQwr3IarxXN4oUGy1vvdLG8Mspp+WGtFiljigIwEREREZEJZFNLgsZ4hgt
NC8HONpoXnON2SSLiJmNI5xaQzi3oW1XSwdfeQqClEX9LI4GWRqrefIUb0y+wo7SGV+Zcwm/
ShslrNnP+rlWUprshEACPB+P1gscDjgUng02nIZPp/
XAykDn6fab3WK+378PXe62sbEx2DiaaDfmFmNJyTFkFJpLl9mdLxjAFYCIiIiIiE0TKsfzpQA+FQS9z1
rxMJhwhXnWa22WJyGji8ZDOLyKdXwTTZvdusxZPPEZuVzvXdu1kW6qFtwuq+VnxXzOjdQ/
nNbxFQawdm0yA44Dx9AZhXs9fwjGPp3f1SU/
fvsOvjek953Aglkph4z3YfXuwPT2QSv6ltqwcTPUUPNNnYWpmYbKy3fkcyZikAExEREREZIJY0xijM+V
wWW6a0M5tdM49q/
ebUBGRd2MMTjhCMhyB4nKmApU2ybYkbMufxPb8ScwJpDgnFKfA6wzprW08Bi3N2NZD0HIIu2sHmc3re3
eWV+GZewaehWdhItEhva+MPwrAREREREQmgJ6Uw4qDMSojPqZufR2MobtGC4WKyKkJGJgXTDLdn2Jzys
+WpJ9NST+nB1IsDcUpGqIgzITCUFGFqagCwFrbG4Q17ME27MJ5/
vc4f3wGM2cBnsVLMVVT1JtMjksBmIiIiIjIBPDawR5SjmVBno/IhtXEK6fiqJ+OiLxPIY/
lzGCS2f4UW1N+tif9bEkGmOZLsSQUp8qXYSjzKGMMFBZjCothwSJsazN22ybslg1k1q+F6ql4L/
kAnmpN75YjKQATERERERnnmmJp3myKMy3HT9nuTXjjPXTPmOd2WSIyjoQ8loXBJKcHkmxPBqhL+9jRlU
2ZN83iUIIZ/hS+YRiYZfILMedcgF20FFu3FbvhTTL//
X2cmtPxXvIBTFnl0N9UxiQFYCIiIiIi45i1lhcauvF7DPMLg0RfXEk6O49E6SS3SxORcSjUNzVyViDJr
rSPbckAT3ZHCRuH+YEkC4JJ8oa4TxiA8fsxs+Zhp5+O3boRu/
Et0vf9PzyLluK59IO9UyllQlMAJiIiIiIyjtW2J9ndlWJRUYhoy0ECB/
b8/+zdeXwV1f3/8dfnLlkhQICA7LvsICKiLuYNtfXdoq1dZqv9/
WXaF+9Wvbb7UWq7UWl2qrqKCWoiKtqFQWAVFUBBXZZYckZL3L+f1xb2ISgiQhZLK8n49HHvfOJmZz5z
MzT35zJkzHBo0kmq9J0lEpIyAQbdgmK6BMLsifr4MBVhZkMiKgkQ6B8IMTCygazMr5r/
FFkgiPU9BdejN+7DVUTXLCe68RP8ky7C11PjHjZkSoCJiIiIiNRToajj3ztyaJrgo1uTK/
Wk7UHyC3Sy+vQxORBsIMTgpEOCkQIT
dayKZwgE2hIPNzGtHIovRPLKRfQgFN/
K5695uQiJ06Ate5O9H3lhB5/gmivfvjP/diPTP/
Mwiij26QQyMsh+dMPyOvYA5eQ5HVoIt
IApfgcfRNC9A6G2Bnx82UoyHv5ibyXn0iHQJh+CYX0SAgR
rM5
B81tk4Jt8Ee7jtbgPVxPevgX/Rd/
D16Fz9e1E6gSf1wGIiIiIiEj1yyyMsGxXLu0bBWixVhoF/
Wi80Ri5Gkt0fgF0gwlnJ+ZyXkMtJ+ZD7kkCPP8hHaE/
XfhEL2R/z8MzeVhw814fWcZHaE/bhq6hRmPj++/
oPxTboAnCPy5B+JLP0XzlX/
WGRSe6kHmIiIiIhIPbR4+2EccrJvWvZJ9C9S1y8jr2J1wWWjOvQxMRKZYa7xXWJxhib9THplcqQTQwoT+/
Kgw
kWa+CP0SCumTEhEj3/
Fnw6x5S3yTL8rUBevovxbitmzCf9F3NUAEzQwVmA0l7E14sx4k42ZhnaHmpSUVVQxXF3PxeWk/ZHuvnDRyWLNNkX5LWJI9iwsiOPhVWm4v66cPybK8HzwGSTqVaiXQOpDdfiTYzBgTa2oJrTa5DJbjLzAtnW9Twc7Y85s9XK27ogcWaYGFm7yx8Ay/HqEbcjp0oQp0vxS2+jglIP1hlj+NWTjETPaEi4tLBD0pT5zeMKBQH3EALM+6ENmS4nk1Gx7MRfKw9mx6HV4AcXtvl0WjhKd9uTm6gr6E
MZc9gM8G7IGsnKzH3FwhSwbsuTBxf4tWOHolUR+EQGkHhPjf5FLNNMsuOt40VjSPhnb3B/
nJJH6hvyWWhuXuHD8NoZuNwqbWBJ6zCq7x6uw1ldZ6KcbtxGEumB4pmWSZ3jkbC1HKVyvzeQMlUwg1uWzvkLypESIFGPLDyQGlZcFlTFoXSYc3HLrwvNzdwcufeD5pvcbRgnmOT8/fe2xu0n8QnYa8Cbfqq6Ai/ejhVeuw5ni/bQiV5K2t5xv+0
...

```
W7mU8DOPEbj8aiwxqeYORE4Y9ecTERER8ZiZTTCzDWb2hZndXM7yRDN7Pr58hZl1is8fa2arzWxd/
HV0iXWWxLe5Nv6jAaDqqXDUsWBLNol+Y0jL2D9pgT07SfloJTnd+
+nJjyLS4CQa9EgIMSkllxFJeQSAxXkpPJqZxrt5ScccNN/
Xqx925jmwfTPhpx7B5R6umcDlhFICTERERMRDZuYHHn3qlZ0AACAASURBVAYmAr2B6WbWu0yxq4GDzrl
uwAPA/
fH5+4DznHP9gO8Dfy2z3neccwPjP3tO2EGIp979Opd9+RGGZiSR6PeBczR56x9EE5LI6n+a1+GJiHjGZ
9A+EGFsSh7nJOfSwhdlWX4ij2am8XpOMpmRo6dEfJ274zt7Auz5mvATf8RlZdZg5HIiKAEmIiIi4q2hw
BfOuU3OuULgOeD8MmXOB56Kv38RGGNm5pz7wDm3Mz7/
EyDJzBJrJGqpFbYfDrFiTx5d04K0SY3d+pi84UMSd2wma8AwXIJu2xERAWjhjzIyOZ9zU3LpEgjzcWEC
f85qzBs5yWQdpUeYteuI75zJkHmA8BOzcQf313DUUp2UABMRERHxVltgW4np7fF55ZZxzoWBTKB5mTIX
AR845wpKzHsifvvjHXaU57mb2Y/MbJWZrdq7d+/
xHIfUsPxIlH9sySY1YJzSIpbossIC0t5eSGF6BrldynYkFBGRxj7HkKQCJqfk0iUYYl1hAo9lprE4N7n
cWyOtdRt846ZAXi7hOX/A7dnlQdRSHZQAExEREfFWeYkpV5kyZtaH2G2R15RY/p34rZFnxH+
+V97OnXOPOeeGOOeGtGzZslKBi3eccyzccpiswijDWyUTjD/
erPGyf+HPyebQkLPAp6a+iMjRpPgcQxILOTcll06BMB8UxBJhb+UmkVsmEWYtMvCNPx+iUcJPPkx0x1a
PopbjoW9FEREREW9tB9qXmG4H7DxaGTMLAE2AA/
HpdsB84Ebn3MadsB84P85574sWsE5tyP+mg38DHwb+ecM7OmwD+BW5xz/
ykqbGYBM2sRfx8EJgMfn+DjBqyIyfEWztyaJcaoGfTBAB8uYdp+voLhJqkkzVopMcRiojUPY19jmFJB
UxMyaV1IMx7+Un8OTONDwsSiMYTYdY4LdYTLCWFyLOPEf18vbdBS6UoASYiIiLiofiYXtcDbwDrgbnOu
U/MbJaZTYkX+wvQ3My+AG4Cbo7Pvx7oBtwRH+trrZllAInAG2b2EbAW2AH8uea0Sk6U3HCUl7/
KJiVgnJaRjJmBi9L09Rfw5edxYMR4XCDodZgiInVWms8xIqmAc5JzSTbHG7kpPJnVmK9Csd62ltoolgR
r0ozIc3OIfvyBxxFLRQW8DkBERESkoXPOLQQWlpl3Z4n3+cAl5ax3D3DPUTY7uDpjFO9Foo5XvsomJxx
lbNtUEvyxMWpSP3iPpM0bOTTkLMJNW3gcpYhI/
dDCH2VMch7bI34+LEjkhcON6BQIcXZKHi2TkvGNm0L0368ReelZKCjAN3iY1yHLMSgBJjXq87/93usQ6
iTVm4iISMPmnOP1bYfZcjjEaRlJpCf5AQju2k7aO6+T164zOd37eRyliEj9YgbtAxHa+HP5IhTkk8IEn
sxqTN+EQs5INlLPmUR0ySIiC17AFeTjP32U1yHLt1ACTERERESkllu2O491Bwro2yyBLmmxcb/8B/
eRPv9JIskpHDptTOw/NRERqXZ+g5MTQnQKhvi0MIFPChP4rDCBYUn5DB41gcB//
kX0zX9AQT6+UeNjt6dLraMEmIiIiIhILfbpgQLe+TqXTo2D9E1PBMB3OIvmL/
0FohH2j55KNDHZ4yhFROq/RINTEgvpFgyxtiCBd/
OT+bAgkbNOm0SP4GKi77wJ+fn4JkzBTEOu1zZKgMkJ9+CDD3odgoiIiEidtCW7kH9uzSYj2c/
QjCTMDMvPo/m8Ofhyc9g35gLCTdK9DlNEpEFp7HOckVzA7nCYDwoT+EdeI9r0nczZjVrQeuW7uMJ8/
Oddgvn8XocqJSglKSIiIiJSC23JLuSFL7NoFPQxsnUKfjMsVEj6y08ROLCPA2dOItS8lddhiog0WK0CE
cYl53FqYj4Hoj6ebT+ShWOuIPOzz4i8+FdcOOR1iFKCEmAiIiIiIrXM1uwQL3yZRWrQx+g2KST6LXbb4
/OPkbBzCwdOH0tB6w5ehyki0uD5DLoGw7QP5PJZYQKf+KMEf2wFnaNHHYXt/QlgS8lddhiog0WK0CE
cYl53FqYj4Hoj6ebT+ShWOuIPOzz4i8+FdcOOR1iFKCEmAiIiIiIrXM1uwQL3yZRWrQx+g2KST6LXbb4
```

PnHpHy6htZmhFq3I69Dd3a17sLORi3ZHfXx2aFCPjoQS4gFDFqlBGiVHEuGtUjy0yIpQErAGtw4YkqAi
YiIiHjMzCYAvwf8wOPOuf8tszwReBoYDOwHLnPObY4vuwW4GogAP3XOvVGRbdZ3LhKBvB
zIzcHlxF8PZ0HmQVzmIVzmwVhPrsPZAETMR35CMrnJaWQ3b83hLkPIbtSMgylNORBM5YAlECH2j4IfRz
NflG7+EK39EVr6IwQa1v8QIiJS03w+Clu3p7B1ew4NHUXCvt0k7tpK0q5tpK18iybu35wMRBqlUZjRln
0t27O7aWv2JDdjX2Ey63LDhNw3mwv6oEmCn6aJfpok+EgN+EgJ+EgJGKnBb6aDPupNokwJMBEREREPmZ
kfeBgYC2wH3jezV51zn5YodjVw0DnXzcymAfcDl5lZb2Aa0AdoAyw2sx7xdY61zRrnMg/
i9u+NTZhBPKFEcbvawDmIhCEahUik1HsXiUCoEAoLobAACgtwoRLv8wviSa/
DkJ9ffhB+P6Q2htRGfNF9CG+dNIB8X5BC35HNYsORao7GvijdfCHSfFGa+aI09UV1a6OIiHjH56cwow2
FGW3I7j8MCxUSPLiX4IE9JOzfQ3D/
Htpt3kj7aKR4FQdkNWnJvhbt2N+kFZnJaWQlNuJAQipbA0nlfg9CrAdZgt8I+IygzwiaEfARe+8z/
BbbtiP2FV6UY4u9dwxpmUzntIQTXSMVogSYiIiIiLeGAl845zYBmNlzwPlAyWTV+cDd8fcvArMtdjn2f
OA551wB8JWZfRHfHhXYZo2LbviE6Gvzq2djfj8EE+I/
QQgEsWAQmjWHk9phySmQlBz7SU7B4q8kpxRfyW5caLQ+7CNojkSLkOiDJJ8j1QepPkeyjxKJLiPWmU6D
C4uISC2TnAhpjXEdu1AAFAA4h+Vk4886iC87E19uDom5h2mfm0XHHXsgVIiFCrHCQixUQAQjNyGFvMRU
Dg4cTlbPQeSHo+RFHKGoIxJ1hB2Eo46Ig4JQlIiLvS++pGVgGOAwDJ9BKOq+JfCaVakE2OrVq/
eZ2ZYTFUxcC2DfCd5HfaW6qxrVW9Wo3qpOdVc1qreqUb1BR68DOIa2wLYS09uB045WxjkXNrNMoHl8/
vIy67aNvz/
WNgEwsx8BP4pPHjazDVU4horQuXgk1cmRVCelqT6OpDo5kuqkNNXHkep7nVSorVepBJhzrmXVYqk4M1v
lnBtyovdTH6nuqkb1VjWqt6pT3VWN6q1qVG91Qnk305W9XHq0Mkeb76vANmMznXsMeOzbAqwOOhePpDo
5kuqkNNXHkVQnR1KdlKb6OJLqJKa8xpGIiIiI1JztQPsS0+2AnUcrY2YBoAlw4FvWrcg2RURERBoMJcB
EREREvPU+0N3MOptZArFB7V8tU+ZV4Pvx9xcD/3bOufj8aWaWaGadge7AygpuU0RERKTBqI2D4J/
wLvj1mOqualRvVaN6qzrVXdWo3qpG9VbLxcf0uh54g9gI63Occ5+Y2SxglXPuVeAvwF/
jg9wfIJbQIl5uLrHB7cPAdc65CEB526zpYytD5+KRVCdHUp2Upvo4kurkSKqT0lQfR1KdABa7eCgiIiI
iIiIiIlI/6RZIERERERERERGp15QAExERERERGReq1WJcDMbIKZbTCzL8zsZq/
jqQvMrL2ZvWVm683sEzO7weuY6hIz85vZB2a2wOtY6hIza2pmL5rZr5ZZ/Fzb7jXMdUFZnZj/
HP6sZn93cySvI6ptjKzOWa2x8w+LjEv3czeNLPP46/NPP46/NvIyxNjpKvf0m/
ln9yMzmm1lTL2OUhqOi556ZbTazdWa21sxW1XScNeFYbdz4Qwyejy9fYWadaj7KmlGRtquZjTKzzPg5s
dbM7vQi1pp0rM+BxTwUP0c+MrNBXsRZU8zs5BK//
7VmlmVmPytTpt6fJ8fTHjKz78fLfG5m3y+YHH/vTF1zPO2c+vpdc5Q6udvMdpT4/JtY
gYmAr2B6WbW29uo6oQw8HPnXC9gGHCd6q1SbgDWex1EHfR74HXnXE9gAKrDYzKztsBPgSHOub7EBqWe5
m1UtdqTwIQy824G/
uWc6w78Kz4tpT3JkfX2JtDXOdcf2AjcUtNBSYNVmXPvbOfcQOfckJoJreZUsI17NXDQOdcNeAC4v2ajr
FEVbbu+Gz8nBjrnZtVsiJ75ts/BRGJPee0O/Ah4pEYjq2HOuQ1Fv39gMJALzC+naH0/T57kONpDZtYcuAsYCukBV
T56kCu0hM0sH7gJOA4YCd9WTC4dPcnztnPr4XfMkR9YJwAMlPhsLyy5sqPmXWpMAI/bB/
MI5t8k5Vwg8B5zvcUy1nnnPua+fcmvj7bGKJiLbeRlU3mFk74Fzgca9jqUvMLA04i9gTe4Fzd/
Z0RAJLNLACkADs9jqfWcs69Q+xJ9o9Q+xJdyWdDzwVf/
8UMLVGg6xauCX/
vr0IjDEzq8ZPm8JyD5kwi2bTMdg7wpPvMl2y1Rm58hyN+5UMbGq0ktgXzMq0nJU+KL6x5o5A1rIA+iWJUNhbsEPcN0RInE3ErYEGXAxiEhYu5WPZt4YTvzmEKRe7W4O2EAeneY6G+JgbfGiBGsZ84zVwvmX2m7NLsr91GvhHnNsSOXlmYkNMXV2PtOuRsIvOBQeUyXCutuZgO4KzhVRpvzcebmYl3+n5O6yrTQCwn6mUMnj1ZrYdx5QL3jvDsZTq1s7U2aUDyKRsvGNSxkJzQZl8YJV2lXcfBMe4mSYmDUA5c2KK8TZk9Ckb1ZXbNOHpqrTfrHiNXBrnRXq51WlksnLkzJqsSA9LvH+zrmN3LpewfmeWUNs4BuOp8mNKZLu8b1zxAKlTZQ8XXdpDdtn4djomUKldlCIw/7r/Xn8lX6tuhuPXyXymH5vYAywWQJt/+HdUOGXmMKs/5+Q8OKKLnSHrnTcA1DVNKDuaGRvrWZfKfC99Xg1DUwHB6tcyn/k1lLtZQOkZhGeCiKdrV+MO67YQdOf1iTeyyXVCz7R+cZ/Swbaep9KUtNZoFMNuyI04yJ27hPrSJCgqKdUzEl4+31sOCa0hWZS0Wc28lzoGqcEptlpUJEMsSCRARMFN4Ox88GnmZimAlpgbD01zOBGJfaegl62y4/4hFlG0Y4d3LaEzQp7q3awA3PSE2c9ZQAXw2ZkxWcXLCPWwsnb3mgWBmhWnqOAr6xFfCc2oNBNoWmDwAB0+v3pfm+Fx6+3c6Z2S8VPYlF9xj+YiV9M4m8j8SjqVCtPEJtRiIE+Kq2VL+9rSY1Ppk6NhPhuMFnhQq2Z0KVjC7P1qqKcWq0gtdLKzbotRpL6VpH3jrjUO0ozDB1WOjdy/kVZa1KubGaHTuOE2PCx4h0LPB71PtBfNMe0SBRKSFPwz2uF/mbf/FECCRq7m7sCLpAUNRl6tmBMfzCS/Wi4oa1jtPS1bk9cZQWCfJ/w3xDUKTiIpKSUk3JRoE7pKmTzzM3ILoLbzvQWCt4b5G55Tlnk8SR9nHbcLtGr9NO+o7Vk0U1vD8LWKIlSEoIm2iEAo6hBJ3Ev8IxJ/DZrxZwCJHKQNYkqI/jhIRKnnZEspaC+kzfdb0nEIfTLa/ctVw6YmhrR0PqRiY9qj8XOgJlhqgEqGnQDCVeJ/FImETWBmjLz5V9AIr2qYJqN/e1sA8rIt5I8OYm0rt8O+pG8bKcz0YMaTPnBRCq7vhtTUg37KsrMeejrgZaUrT2CpXkrlbXt7hSLW5/vxG5sDQFGT3qlUpIMoXadEJbkeAOdfIyMN21ijNTNAt54zyRgUBLlAl/AEa2wCSjAEFgOxRLSGpVxs5g8ZGZZAZuxQmyvNVMfzrODnuFWq/iXHfsyB6N9wqu47C7oLVPf2QbNXFf1iWTW1I+2mbIsXmpOgmfZxZP2nCTaJ9hNeLrHbP2uQ6LJ8sNXWA58Bs4p3xM4hIBpKvIeufa6Bd9tjTL9hSLEaehG36lPkfeXOh56HBDm4A/5uGcqhD9Qr0T8hQ/SvVJw2K6B4L4oPAaMNoodugh82aBAtyoGSWVAiBd+eZ3iQH95dJJ0OP4nZZeEOR6aojL3ep4Kb9iMRlZyrDl1S5t1U6SMXrjPz0NK4X/8GVSiAE5jPGuJsOIrC5ilmEDTlvP6Ac1I+sg7S4QHPtqXzvgspOlE0c4f+E/uGlt5+GBLcX4YmNHCHbE8D6m6H2hQYx6yRw5DFcIXWwaKQo99vAPWAX2nsvO4ZEdRSX9BnoZEpAeg4A4oDDcqYzmb4F3U8lnpvfi2+K0vZrv6vVBrQBxBGYNBEnuhp9IaPK5F6RfHLsdwG7u1YfzSIEkDHHi87aJTiK19bi4KBZGtSOGkHQC8WgIIDTmNxi5eqn4fvBBRlLxcF6WnDbaDQaYg7Y5HZS6HRAcwYxG6oqczOSDAOvtP5M+tICIUhG7Vy0T9BwEnAlgCUxFE0NvrvLQPaR8cP/MeRjKzwXvpFBQqmS1OfPaX9iG3w2GvBhfS/p9gnL2MjF7fXVLPbaFVd1ra9PQGSGmkt9m3R2lFbaIcHHPR/ZqMiZ2uzfYbEb9+fnwflNOrN1yOPgx5Cn1IElgLpoz1OgbyrlxGtXEKRYhw5uoE3yO96gkvWGlJPGsAN1q6BMY2KnBQFa0RqcwlwIaKDn/l5wv8h/P8g8PfAwhZ/uD9ZrL82NlZi4d16Lzbww0kKLcP/8HC9vnK5MMMBtwIxgD/sBRM9w4+kjTnLBrBEOTy2XBr/QHwoPC4jcoBvnhVzDhxGgD5c+g0l9M1wVwT8l4Zf9J+4yBhBrWGPaQiIvz+E9D9CTSlwgvhDi/H4Jyfuez3PJdHnO4k5y8z0xKiiwyIABoGWSWWU/DR1ZJFHkSNkBHfkV7U8JP5+FL0LlRZIUaVsxpEGSe9gM6WKRSQGHCnYZOGAi4xgKzr3G5j+Ahm0jLA1Jn72E2d8/M1NdLqeiKTbLZk6vglKr5/6ymbVdGVPRyDyJ8iNxqYr4TD+BPd2DGjHJi4y4FQZ6YD1OT49UaIikgaRxewgz/Ubt6GBrQHz6Ix8XqmmSPuvBpUnSb4XDtkbs/5yZOJm1JrGnDRwKYz0j8Xrt+D+w0pRvv93oqYs8FPLrE3uUeLlyVd+05SR4J5fuURypQO+kNlG+5fr8+OzrlxjoGCjIUSyaAoNhSEUGBUp3EqDT4vSWrZiJWfK4NAn9FS4cuP6GUMO27LOMjDpj7fHx2I0yEG3BaKQNu6XUSbufTvY8WuXoK7BqUnlJrmRRcyfOHl2tyJF5e9ICMRI1x3h0IYr3U+hjhC8mvUBmn6wWr0/zBZtVcW1QG/EI3ZlYKyG93VdDPtbwiPkwqvfA8JRFWTQqZCEqT2/cvOzKaOGRuu02PyfB3jeQmXLHPXBuxpPbgdhyJ/RhXw8a7UESf1/sZjDDvuyO9Av0LB6HZCffp5L7iKk7bi0mPDe86q4i85mnvTsKTNcOhW+pgf3OsARx2HWFyq8oo6HyjrI2sOzrhkM49qAqhDhfUz35zdBQlMfUOObXx3odsv5rgCqk0rOE0fSm/0Fmp+dd/sGbprn9dP6IWiYvTgW6FZFAbt5dPk7Lhyww2RQoUStkDYPKDafXIdzXcDs4jSMXhXLBMFHBDOGGubBUqR6gsl9oLCkgqPhcPdE/O0VczaXSZaGYnSZ7ZXHWxHv5y71gTeHf5nL9dE7ujzMqIlCuB11c5a4o2UsTtPy7iUFkr7Q7TkDzvkC6nYtPCpBvw7otlTZPdMKRAXk/EufKtmJ3Hjfk6QzhAh2fqV8ytIfiwSCk0kJEbhzbSbnBIuaQSWzZFiqO7kFTUD4SNG2fa4sE98mzt1U3u8FZswQ1H1oVF4QYVG1Gkz1vOK58iCmADWNw2D4UHsc+6iw+ZdxLBhCnzDtCSxKqGzWq6jRo7zFEO8Ntz43kdeEqNG06bJUEMyEyyk+NYkuT3wszm3yG0f1XEPoOGJG97vG7dSwMZKHt8CuOvAbugFMyjrWSF7OSVBQHxnp0g2vB5SI7zaSh+aeylTaTUP+Nw+7DJy97zO64zwYbMcGvLK2Y/oDKTh3bjaaYZgHrgX2NIkJHe8j/T0yIR8akKWbiMjQx/W3H2BTrOC6fCPCTOkEqWZ7YsMrgDRDvHhcMVGNnPdZxmkUiZmHJ7cs2+Hc+MOE4nNOsm4BJdWsQzmh/ZsI2MSSJU6EaGsb78W0Wj46W5+xRtgn5d/Ng7a/8jHgGYOYbTHaHsUhJa8eZ4G9Ak2w7/lMvY0JRwWfxDgsP8NqWxQqRkpYVrw5ofCuMimo3m7dSBqYcbsnUjD+v/WRVjXnfhoyYE6q4w6XIS/8RS8nTwiuZqp+ptRYD5Vc8N4KhhJ/TECQCgmx70Dmt8Q6OvC0hChGoS4shFvRqjKgkgNaMGuU1Ac2Sxbc4vp6OnNEwxhtuK8zPF+e4P7NU7P6JO4o8zhYzeoaLuY4Bye3Mhce61U8EOuIZAm9jzkiFnG6QqTzcRdwyd8B/gXQYcZmLKmTU5SgCZlYlXb7hqiW3I9YvRo9rXGpmgkLwQVBnWrI5KuCaJqd7yF+FsOkPbpVExR0Hp1/SUUlsP0XQojqk3RwuTdrgtb3u/vx1PwEdFEmPLlyo5DVLYJzdlzMu4HHy26VoGnF5vfg/VjU9IYD8zGqNfhOA9C/zQ6QGoSd5xpXvp+pPpOT1nl0VAhL/eXqFe/RYfs7KoNpMqyq3bkbb/DFR0fCqUntK5kqGZlOUkg/fjLCXiwwnq4Wm/Oc6WCAd0m+IeTTEq+eGBb3mZL9GsAsMR6WwQ8U6xFW5M9Nf4KFkWlOsrBVsRQjrmn4z5VbqVm3zZAyjdeggSPW1rNZ7JovWyHM9Zbh2RkmbZfqCnZwQCi4RJkkEUsrLIHjijUVXmyyH/qLGSfu6VGeBqS9w8hlNUdHpN2+y3a3KE0d/Ai+YmIZwDqGgUjIi8T6ZMIOg4v+JB7QfULjwbdE19BhS1kGyxt/ZH8gWmk8gpU4pPPWgwF1IxgNfVIrMbz0Kc8QkKVjSCpOr8PkdtHr2bMuPfO7qjfmvGljM7WkTkBDrSCkfVF+kBlROgeh3KR4PyMKgDRH0pc2ltMBH3nV3Rg1UDR0RxBCf+JFTFsUMD3AYeWL+eHeeJ5kiZHS5BfX+3B6nX5dCVtE5PAHQe5YM5J3x3OLCH+rPGCN1t/s3VuxhTcw8y/YzB36+2zYbXAW9izZIGhDZFl8VvLN4X57X2OEpftW6Es1GcLDTtYYuwFCL0cyM+MBxZCp8qnDrG79CjAbw8DnGfu6BBkqTSi+vuaOGWvWALh6Ps+mEIkgpZh9HGTmKz1bTG0QdPzmKdRtAMD6vE+3j9ChfV5r8iHfSjd1DowMadx6z4MS3sWfNrA9wA0ScLhuU9Z8tv/S76hXqmAIcS0SQg8ybk6uCaIH2lcqd7Gz53BHEkIEFyUlmp3Yvb5m2ySmpPPEtGEBx+H2gYR+fvA==

```
i23+7xLxfxOcdNDOLzxsXn7epmvb71/IaTWbW2szC8WX9gEXA74HlFdjsp/
GyL8a31amydVeiYeXM7M0yy/
5VYtkVFd1mBfZZLQ1IERERqd3U1lNbr7q2KSLVSwkwEe+cBMyooX0tjb+eambB+PvT469Ngd7x9yPir/
+ppv0+E3+9wMySSsy/DPADHznn1jnn/
uac+5lz7vVjbdA5tzJednY1xTjGzLoDmFkP4Oxq2q6IiIg0bGrrqa0nIrWIEmAi3nHAL80speyCsl2ly
15RKnFV60Mz+52ZHTazT83sFDP7lZllmtkmMxsX3+SnwEEgGRgUn3d6fD580xgq1Sgys4CZ/
beZrTeznPg+fljOsSSZ2VMlyoyJz18M7ALSgEkly8ef/
1rfD+lusWb2SAze9fMsuLH9rGZzShz7Evi9fNVefVmZmPNbHU8pkwzW2NmF5aJ+xBgwLXx6Wvj04fK/
D7MzH5kZuvi2/vCzO4pauiZ2aj4fjeb2a1mtif+899Fvz/
grvjmvl8Uf5lYzonXc7aZPWNmCeXUs4iIiNQdauuprVeS2noiHlMCTMQ7LwAZwHXHsY1+wGnAeqAX8BZ
wMbHu5Z2BOQDOOQcsi68z0mJXwVoCjwFZwOlm5o9vC+C9+OuvgF8Tayi8ADQCHjOz75eJ4xKgNbGrj72
AV82slXMuAjwXLzMdwMy6Ay6AkOBKPC3oxzXQ8BIYt3l/06sQTe4nHJZwBMlpn8f/
ymaPwB4Kf4TBfqWWX8LsAS4wsyaAd8nVodbypSbAfwJaA88DwSA2+L7Kqkj8N14PbQE7o/
X9XJgRbzMekp06y/
hvniZAPAd4HvlHK+IiIjUHWrrqa1Xktp6Ih5TAkzEO88Tuyr338QaG1WRA5wT3wZAE+AiYg0jgLZm1jL
+vqir+wi+ufr3LrEv7BHAwHgcWcDHZmbA9fFy7xG7UrY2Pl22O/+Hzrnxzrnx8TIpJWIo6ho/
2cwaE28cAf92zu08ynEVdd1fSKwBMRq4pmwh59wBYFaJ6Z/Ffw7Et5EPvArcT6wh9j/
l7OsRIJ3Y7yM9Pl1WUT3c4Jy7Cjg/Pv0DK93dPwKMds5dCGwl1pgcEO/uX9Tl/2jd+n/
snLsCmBufPqWcOERERKTuUFtPbb2S1NYT8ZgSYCLeiQIziV09uv4YZf1Hmb/
ZOZdH6W7cG5xz2SWmU+OvZRtFOcCHxK5gdQOKuowvc85FgRZ801i7ErgBOC8+3a1MHJ+V874dHNuNbE
rYUnAVL5pFD3D0d0EfAQ8DqwDDgA//Zby5bkG+JrY1czPgD3Erl6WNR/YDYwl1oX/5XLKdIq/ro+/
Fh2jj9iVwiK7nHO74u+LficVbfB+UMX1REREpHZSW+/o1NZTW0+kxikBJuKtF4Ah5V9aZn5u/DUt/
lq2O3eRSNkZ8a7o5VkJhIh1xb8IWBEvWzRoatGVvqIu8fuINZwA+jvnzDlnxP5uDCmz7Z7lvN9eYt6z8
dc7iQ3CmgvMO0qcAKuccwOAZsAoYlf4/
tfMAuWULT5eMyv5N+0151x3Yo27i4HmlHNV0DkXItb4Ang8Pl3W5vhr0bGdHH+NAttKlAuX3PRR4jza3
92idU/I06FERETEE2rrlU9tPRGpceX9gRGRGuKcc2Y2kyPCPiA2JW72Wa2gW+6YR/
PvvLM7ANi3cOb8U3jZwWxL+Rm8en/lIjtYeAXwJtm9g9iV6qGAW8DV5TY/AAzeyP+fiCxRs9LJZY/
Q2yMiaKria+UuXJZ1j/i41R8SayrfyKwn3IagcSu6BUCCcDfzGyLc+6XwAdmtplY9/
SiK3eHylkf4P+IjQ+x+ijLHwZmA783s9AlzrmXvm0FERERqdvU1j
sqtfVEpMapB5iI9+bxzXgLR5C7GrhQGLdy58ou1IVlXzk9XsAzrlcvumSHeGbAtwBbgd+Saxb+neJNQ
Y2EBtDoaQXiHUpH0msy/
gFJbqH45zbwjdXH+Hbu8RDrIHShtgAoecC7wOXxQd4LcU5VxiPcS+xR24XDTS7mNjVu+/H41oC/
KC8nTnnDjrnFjvnDh4lnj8CPwZ2EOvWHyU2kOkNxziOkl4A3iB2m8L16BHcIiIiDYXaekdagtp6IlLDr
Jy/
MSIiIiIiIiIiIvWGeoCJiIiIiIiIiEi9pgSYiIiIiIiIiIjUa0qAiYiIiIiIiIhIvaYEmIiIiIiIiI
1GtKgImIiIiIiIiISL0WqEzhFi1auE6dOp2gUEREREESq3+rVq/
c551p6HUddoLaeiIi1DUVbetVKgHWqVMnVq1aVfWoRERERGqYmW3xbxOoa6QmO09ERERqWsq2tbTLZAiIi
IiIiIiIlKvKQEmIiIiIiIiL1mhJgIiIiIiIiIiJSrykBJiIiIiIiIi9ZoSYCIiIiIiIiUq9V6i
mQIiIiIiIiItKwZGVlsWfPHkKhkNehSAMTDAbJyMggLS3thp8MFeTjJyMgglS3tuLelBJiIiIiIiIlCsrK4vdu3fTtm1bkp
OTMTOvQ5IGwjlHbSADjuJJgSYCIiIiItXMFeTjPvuY6CdrITkF/
4SpWHKK12GJVNqePXto27YtKSkpXirPxI2lq5U2XR2ilVbmsSXYBzNAsL0zpjX2ljRs9SSe3F3kbeTS7XjJEtBeRITrc/Ay5lXQbFpnN0bhumtTt3KgEmIiIiIiJSW0S3byH/
jPv8MImFIbQR5uYS3bQdy7SosBWtQOwAAIABJREFUo7XXIYpUSigUIjk52eswpAFLTk6ulttv
vlQATERERERGpBtEdW4k8k8/SgEAliPXlinbtCyFezdRXTJIsKP/x7/
BdPx9ervdagilaLbHsVL1XX+6SmQIiIiIh4zswlmtsHMvjCzm8tZCCHNQhu3Ifvmqe6ThJldGGL+2Wa2tsRPvplN
jS970y+KrFsYE0ek0hD4/bvJfK3xyExEd/ki/ENHYllltMTuUU0SW/
tvrcEVEGhwlwEREREREQ8ZGZ+4ElgHNAHmGxmfcoUuwn4yjnXDfgL8AcA59yHzrkBzrkBwBnAIWBBifUuLVrunNtzoo9Fap/
oYlDm/Ez3qLB96OfUpo9Xf8sbYvI4/H84d7d/2di7v/U/GETL9w0FNPGo7mvebRrVEZVm59bmBvKSS8bHKZ8Ojq1KLtK/
IE42mw7vaPjfcrVSPrT0yr46I1cZAVmuvAwMuD7R1cRRvtmAsCTXz3nuupsp6gBWW5gsJQCIhxP
oAMiWc4NsG8lasi3ztRJqVjuHGYuEqHRQ9eBzIf9l6bFqaurgabV8g/bfjS+pQCZoLS1alxUERSrBa3bRAqhmrnqvycA
cOgsPmgfcC/ZNBFNh0cNU1eMqmWRAqbnQEUQpZTfkMdUmRTeUy9QuFXx+TjnIL/+zqp5Lr9lWNRJeqVWQ6/cHlFgAZoj/
BTvqzdMCb2Hx1tNhxi3qGpXLn2xGjFwyX+YWnXvbf8SGHM+Yl
gSL7rIdXjLBh5JxRFFY8ej12Ps/kJJTy8HTemOW98+wUjCSj3VpNp6hEXyXi1vHr9pW8/
zbkLUmVFGEpLNtD2ZBXdrMHRPT5ou4+LDFeGa5K5zgAk8hDt/
WKXS2ZF5JOVYmx2ojxAxbtxNVoeo2xdt+mk8m6AeJIUNePrAEXWeFQpomu1aY/
Fb3XsxtaCWspSyqvoD+RSGd3oGnYP5SuT3DXhf/
gwfD88mt/lbxLbCNdJdLdgmNqqRs9FDZmmVOZr2oBsKEVTBYXv5SsRpgjCMUK9uNzyFNr8/
r1sqg83+rbVPK85HiWo4KqxVfXnR7i8gKK5LE0MdPNkzAm6iFIkOfl9F9I7PxZJyTfLm7F2ZXlK+VEbGdLNZ3Lhn/
DRSeLRhLPDJh07qYbeKVdAqOqnhTCsHNcPhtsHdzL27egcJwgXTo/
pXWp0+gSpCUt5iCqhlQGgDA6RG8hN5HzexXumlBGtRRhstWw+Mv5OVwLQTEdx2MqLYtn2ybYjGAWX9A3PnRxS8PsmbLzIqRg1F8f4bRHF55b3cwBQbOhOh/
FD3dTPsnAQG+1gXfTpkaZDZ3AoB3xPjgmX4NT+8dkk5AOh5vAEctAxkuw1nuuKdv0C/
ui1IfZA1RhoV2UxvCaj/bYkpaDCH+J17Dj10Kcb41IJ60Sbhe3/
3DvG0DqyaGSt+n4q8CcPVCajYAtE6dL77YpqXnQ6lqf75/
RmJtHGxdcxtg2fyL/zsPBjuaxzGQZiZd3XGi/
iPxpHK7hFm0vXHM1Gy6i30XWKxxr28TB0AahgyKvkdwFpvoAA48eF+ii3eHPFAPx4pZjubq+ggJ/
mmntLgqF7dKE2okqGmvBAoEPxQh+s+f/
nYrmmTewYc2anQ75tbWtFu5A+nkr+Jm9DHLiwdsvqK2oydFzeIm9VAdaNY2x0jY/
NbLs/2a87jdlBRJxK1/iOjK6Tx5NLx0+yP4DQx3b/
nhMQvkAaSoQ23mfnF04MMh44/BAnTddUVBWHPggfbJS5p2lqeD2eCzNAuxQ5N6lX5cc+
gvUIYrcJxLmI6OXMJTFCejpB58smhIFqQCo8WWvJxd6h0gxJS5g/
VWNMQ+6Oq7YyBvpqG3hwCKAGGgJIgfbBsFfZVDDwRWUpWRUmFLjdKKggHaBo12WUqMq/
v3oFBMtsG4/Qz3JD1ASAgtZ3JdsbDJCsJjKgRIzF0SadHz+WEYY8sbaVUWjyPhu/
AK1UHTPCmmi2OEOVOnZ9vlw+jxJJRT/
qMTCnIxXQGD6ZWCNXPlWyAfr3OpBxX7ORO3JwnB/
H+hKqbjvZGUwc2p1eCi7EP+wfo4m7DhVhNGSXE5lqgw4HBm0HKI7I0yBd1M99xeTBtBpdEWcMNpShgaXvzevOtJdeFLZHvwxSEKTnBzIw==
l5eQA455gyZQrr169nzpw5/O53v+Ohhx5ixYoVVYpr69atAHTu3LlScTz99NPce+
+93HTTTbzxxhs88sgjdOvWjZycnFLbv/rqq+nfvz/
z5s1j4sSJzJgxgwULvhmHcNGiRVx22WUMGjSIV155hZ/85Cf89re/5frrrz8i1ssvv5wpU6Ywf/
58unfvzrRp09i+fTsAWVlZTJ48mS5duvDSSy/x4osv8r3vfY9Dhw4Vr/+b3/
yGGTNmMHXqVBYsWMCMGTO44447mD17dpXqrjICJ3wPIiIiInJUzrmwmV1P7PZFPzDHOfeJmc0CVjnnXj
WzU4H5QDPgPDOb6zZA2BmnYj1IHu7zKafNbOWxG6xXAtcWyMHJFLPuXCI8NynYk98HDUeCwSrtB0zwz
fkdKKvv0x02dv4zxxbvYGKnECR11/G7apsZ+XqYa3b4J8wtUrr+nw+br75Zq6+
+mpmzZpFjx49jijzwAMPkJOTw9q1a0lPTwdgxIgRdOrUiTlz5nDddexcOFCPvzwQ1asWMHQobEO1kOH
DqVTp0507dq1QrGEw2Gcc6xfv56bb76ZCRMmFG+ronGsXLmScPG8eMf/
7h4vQsvvPCIfU2cOJF7770XgPHjx7Np0ybuueceJk+eDMCdd97JqFGjeOqppwCYMGECALfccgu333477
dq1K97WjTfeyFVXXQXA4MGDadWqFQsWLODaa69l48aNZGZmMnv2bBo3bgzAuHHjitfNyspi5syZ3H777
dx1110AjB07ltzcXO655x5x5mzJiB3++vUP1VhRJgckw/
+9nPvA6hznrwwQe9DkFEROoA59xCYGGZeXeWeP8+sVsjy1t3M+UMmu+cG129UYqIc47Ighdh1w58oydi
aU2Oa3vW6iRo35nosiX4hp2JJJZT7rAoRqUbf/
e53mTlzJvfddx9PPPPHEEcsXL17M2LFjSUtLK74FsHHjxgwePJhKjxgwePLh4jK7333+f1q1bl0pYtW3blsGDB1coh
tWrVxMMfpM879C2/fpM879KlC2+99Val4xg4cCB/
+ctfuOuuuzj33HMZPHmkCy64OhRdeyE9/+lMikQgAa9asOeJ/18suu4xf/
vKXLFu2jEsuuaR4fsmEVPmzcnIyCjuAda1a1caNWrE5Zdfzg9+8APOOussmjb95sm4y5YtIycnh0suu
aTU7ZWjR4/
mV7/6Fdu3b6dj3c6djx44VqMGqUQJMREREREREREREESkAqJvvY77cBU28FSsfadq2aavzwCir39F9KM1+IcMr5Ztipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipipip
```

jUFPf1diIL58NJ7bABQ7wO51v5uvciumUTbsMnWO8BXocjUqcFAgGGDYs96GLYsGF06NCBM844g4ULF3
LJJZec0H2npqYW7/v0008nJSWF6dOns2rVKk4//fQTum/
5hnqAiYiIiIhIg+AOZxN+bg4kJeE78xzMV8v/
HTqpHaQ2IqrB8EWq3eDBgwFK3Yo4d+5c+vXrR2JiIu3bt+e2224jHP6mB+ahQ4f4wQ9+QJs2bUhKSqJD
hw788Ic/
rPS+BwyIJbS3bdtWav7WrVuZNm0a6enppKSkMH78eDZs2FCqzH333Ue3bt1ISkqiVatWTJgwgV27YmMF
LlmyBDNj0aJFTJ48mdTUVDp06MCjjz56RAzHOtYnn3wSM2PdunWMHTuW1NRUevbsybx580ptZ+nSpZxx
xhmkpaWRlpbGwIEDeeGFF0qVefzxx+nTpw+JiYl07NiRX//615Wus+pQy//ii4iIiIiIHD8XDhF+/
gnIycF39oTYLYa1nPl8WOfuuE2f43JP/G1aIg1JUeKrdevWACxatIjLLruMQYMG8corr/CTn/
yE3/72t1x//
fXF69x0000sXbqUBx54gDfeeIN77723Sk+P3bp1KwCdO3cunnfgwAFGjhzJhg0beePTRR5k7dy45OTmcc
8455OXlAfD0009z7733ctNNN/HGG2/wyCOP0K1btyNu47z66qvp378/8+bNY+LEicyYMMFCxYUL6/
IsRa5/PLLmTJlCvPnz6d79+5MmzaN7du3A5CVlcXkyZPp0qUL730Ei+++CLf+973OHToUPH6v/
nNb5gxYwZTp05lwYIFzJgxgzvuuIPZs2dXut6Ol26BFBEREfGYmU0Afg/4gcedc/
9bZvmZwINAf2Cac+7FEssiwLr45Fbn3JT4/M7Ac0A6sAb4nnNOg41Ig+ScI/KPF2D7FnxnjcOat/
Q6pAqzTl1xH38Quw3ylKFehyMCwOLth9md583YdK2SA5zTrlGV1i3q4bRp0yZ+/
OMf07hxY8455xwA7rzzTkaNGsVTTz0FwIQJEwC45ZZbuP3222nXrh0rV67kuuuu47LLLLive5ne/
+90K79s5x/
r167n55puZMGECQ4d+85l+4IEHyMnJYe3ataSnpwMwMwYsQIOnXqxJw5c7juuutYuXIl48aN48c//
nHxehdeeOER+5o4cSL33nsvAOPHj2fTpk3cc889TJ48ucLHWuTGG2/
kqquuAmK95lq1asWCBQu49tpr2bhxIb5mZcyePZvGjRsDMG7cuOJ1s7KymtfffjtG33XUXAGPHjiU
3N5d77rmHGTNm4Pf7K1R/1UE9wEREREQ8ZGZ+4GFgItAbmG5mvcsU2wpcAfytnE3kcHC655JLiYwqHw4we
PZrdu3cXb6emqAeYiIiIiLeGAl845zYBmNlzwPnAp0UFnHOb48uiFdmgmxe7HGA1cHp/
1FHA38Eh1BS1SV0TXryP6r4VYp25Y/
8Feh1NpZoZ17IJbvw6Xl4slp3gdkkiVe2B5qUmTJixevBgzo3Xr1rRp06b49sV9+/
YRCoVo1apVqXWKpg8cOADA7NmzufPOO5k1axbXXXcd3bp141e/
+hXTpk371n336tWLp59NKlS7n11lu55ppreP7554vL7Nu3j+XLl5eaV2TMnQA0a9a9aMRYsWMXPmTC699FKi0Sjjjxo3jD3/
4A126dCneX58+fcqtlX58+fcqtl23btt
GxY809iVcJMBERERFvtQVKjoK7HTitEuEsMg5V3R/
yvb4fo5gZj8CfgTQCQDBlS/
uenRYsWBINB9uzZU2r+7t27AYpvCmCkPPGFV9KYGJUnV8+c53zvkP//
v3p3bts5+1vpKSkFO97+cdnwdwEJ6k4OVV2xdj35vrE1z6Jj1MpX5cLTlKuE0xiQww2JmA
MZpLBgDCzBBKa5wHN6nna817v/aO35FarJXWrd+/dw/
Op6tLutdd612+1hbv70fv+3q99jauvvvrUPe666y6+9a1vnXH9yeWFjuNwzz33cM8993Dw4EEeeeQRvv
nNb9LU1MRf//Vfnzp/4HOcOHECz/Oor68HGNKzDtWqVat44YUXSCaTvPTSS3zta1/jj/
7oj3j77bdPjfXMM8+cEbgBLF68eFj3GiktgRQRERREpr8F+I7fDuH6WtXYlfbO97jPGzB/
OmNbaH1lrV1prVzY0jJ++SCLn4298j/zj/wH1DTi3fQLjjeN/
+69vhFillkGKjBLXdVmxYsUZuxc+9thjO7Dqlq0mbJ8ksv5fvf/z6+77N9+/Zh3e/rX/
869fX1fO973b3+FLli0sXbqUlStXnvYYxWFA0c+ZMvvWFA0c+ZMvvGNb7BgwQK2bt162ntPPPvnkGZ+vWLEC13
Uv6FmHIhKJ8KlPfYo///M/M/
P1XPqlWriEQiHDly5IxnWrly5lukLukETm1DHLHZmwqOS52sBQZb/7hH/6BO+64gz/7sz/j85//
PJs2beJb3/
oWO3fuZNGiRXXta1/j4Ycf5pZ5Z577uFb3/
oWO3fuZNGiRXXta1/j4Ycf5pZ5Z577uFb3/
oWO3fuZNGiRXXta1/j4Ycf5pZ5Z577uFb3/

8UM2su3h/
+WbnLkUlk27ZtXHTRReUuQ4bg1Vdf5SMf+QibNm1i2bJl5S6nqM7193CoP+tNjH8OERERERnHrLXPAc8
NOPbtfq/X0reMceB1bwKXnGXMvfTtMCky4Vlr8V9+Hv/
132LmLepreO9MrHbHp5ZB7tyGTacwoXC5SxIRGVcm1ncFERERERGZVKy1+Kuf6gu/
Fl2Muf6WCRd+nWRmz4d8DrtrW7lLEREZdzQDTEREREREExi3/N7/
Gf+d3mIsuxVx5LcYMtgnqBNE4FaIx/K0bcZZdXu5qRGSMufnmmxlOm6vJZmL+04iIiIiIiEx4/
sb38N9eg1mybOKHXxSWQTbNwu7difX9cpcjIjKuKAATEREREZFxxx49RP7Xj8GU6ZMi/
Dpl6nRIp+D4kXJXIiIyrigAExERERGRccUmesn94kEIhXFuug3jTJzdHs/
HTG0CwN+3u8yVyGSiZXVSTsX6+6cATEREREREExg3r+
+SfeBi6u3Buuh0TiZa7pJIy0RhUVWMP7Cl3KTJJBAIBkslkucuQSSyZTBIIBEY8jgIwEREREREZN/
zXXsTu3Ym55gZMw5Ryl1MWZup07IE9WD9f7lJkEmhsbOTw4cMkEgnNBJOSstaSSCQ4fPgwjY2NIx5Pu0
CKiIiIiMi4YDva8F9/
GTN3Ac7Ci8pdTvlMnQ47t2KPHcFMn1nuamSCq6qqAuDIkSNks9kyVyOTTSAQYMqUKaf+Ho6EAjARERER
ERkX8r99FgCzYlWZKykvM2U6FrD7doMCMCmBqqqqogQQIuWkJZAiIiIiIjLm+Qf3YTdvwCxbjolVlLuc
sjLRGMRr1AdMRGQYFICJiIiIiMiYZq1P/
oWnIBrDLF1e7nLGBDNlGvbAXvUBExEZIgVgIiIiIiIyptlN6+HIQcwVV2OKsBPYhDC1CTJp7NHD5a5ER
GRcUAAmIiIiIiJjls2kyb/0DNQ1YuYtKnc5Y4aZOh0Au393mSsRERkfFICJiIiIiMiY5b/
1GnR34Vx5LcaYcpdTdGkLx3MuH2Y99mU99mc9WvMOWXvu60wk2tcHbJ8CMBGRoRhTu0B+9atfPfX6vvv
uK2MlIlJK+m9fREREBmPTKfy3X4WZczFTppW7nBGzFo7lXT7MeRzKeRzNuSTs2eckNDh5FgSzLAhkmea
d2evLTJ2O3bcLm89jXHc0SxcRGffGVAAmIiIiIiJykr/
2DUilcC5bUe5SLpi1cDTvsjUTZGcmQE8h8Kpy8kxx81Q5WSocnyDgGosPJHyHHms4nnN5OxXirVSYWV6
W68IpZgZ+H4SZqU3YHVuwRw9hZswuzwOKiIwTCsBERERERGTMsZk0/
ptroGkWpq6h3OUMW8o3bMwE2ZgO0ua7uFimunmWehmmuXnCzjnWOLo+AMuCWdIW9mUDbM8G+HlPJYsDG
e6IJvuuL8yKs/t3gwIwEZFzUgAmIiIiIiJjjv/
+O5Dsxbn0tnKXMiwdeYe16RCb00GyGOqdPFeGUszycgQuoIVZyMCSwjLIHdkAmzNBjnR5fKr3EasrAAA
gAElEQVSilxmRKFTXYvfvgetvLf7DiIhMIArARERERERkTLG5HP4br8DU6ZjG8dH7qz3v8FYqxJZMEAP
M8nIsDmSpKczmGinPwNJglqlunrdSYR7truCuWIIFDVOwB/djrZ2QmwSIiBSLAjARERERERlT/
A1roacL59qbyl3KefX6hjdTYT5I9wVfCwNZlgSyRM+1xHEE6lyf26MJXktK3ktGeKo3yiemLWHxrm3Q2Q7Vt
aNyTxGRieDsW46IiIiISEkYY+40xuwuw2xnxjkPdvNMa8b4zJGWM+2+/
4cmPMW8aYYcaYPm+z3oPGmGH3GmA2Fj+Wleh6RkbD5PP7rv4X6KTC1qdzlnFXewrupED/
qrGJDOsg8L8cnowmuCGVLGfw6KWjgpkiSBjfPs/
HFbJ9+Efbo4VG9p4jIeKcZYCIiIiJlZIxxgR8CtwGHgLXGmKettVv7nfYh8EXg/
xpweQL4U2vtLmPMdOA9Y8xqa21H4f3/21r7+Og+gUhx2U3vQ2c7zi0fG7NL+g7lXFb3Rmn1Xaa7OZaH0
lSNcug1UMDAjeEUaxIhXrj8E9Se2EnTRSUtQURkXNEMMBEREZHyugrYba3da63NAI8Cn+5/
grV2v7V2I+APOL7TWrur8v9vliRRYP0/+dy9Bbf2Y3NUwa+G3iTA/
664gZQ03hJPcGEmVPPw6yTNwXSRDJJvmychcerPF6TcmIjIRKQATERERKa8m4GC/
zw8Vjg2LMeYqIAjs6Xf4fpOOZSvH3Oyv4zmXB7sq
eS8dZkEgy53RBE1evtxlEXYsdx58l5QT4Ml9Xfi2PGGciMhYpwBMREREpLwG+y1/WL/BGmOmAT8F/
sxae3IKyH8HlgNXAvXAX/Ve7ZXVKt5A+Cb8d/Zb7d9RJpWlrEQmP4ihnXwQPtSo+T0kmNk5p6jhlxacHEsDGQ1uF4j
U6d+9/Nrz3G2qhc4UMMgnq9JUMugWsqAv5npwm4F5LgwKEAZl/u3ZWEj
iI56EWM2OBqk/1o44Xfy8ZBtzbHzX2F5jyUZF4iVQSC5VoeB/yLRrpV/FdMBjaZuf3OWF9XsLKmRcAvOtWH9uzuEFYZJkZMsJa0QENJWJ5Q5H
EpACSFzS/+CAD6WH3K0YCNPEQ/nhiV3VGkJfHk1aSwmM0Ukh9KSYQ41iXwPJSzTNXYeSIwX02ZJqZdGkPDzMVQnrQdr7hvhIyFoKNFB9YmGhx
u+bmjZCEhB91I38FqGn9HSuFDK5pnDdFxNTYB3SucCdz4VYWVaC2mGo6nIh9N2tbmS4hH4n4aAwNTcaO/oQHMzhkKSuGkZ4OHKECqdh9t35
b/nYnWLk24Vhp+fYwSzVzFhsvOjzTqKL9xLn5f9qDq7hC5EIn+2ObLmL5x0XJLBUjcnm6HeqtLqcWs93KNFIJ8A6udHUpMYQh0JN9gLumh
TfdK7JjIYnIlkdFMdqZgZYb4bsZiMMUXPT1tQ6NDcNpVo/MCDUjS2/gaTR83xBTsChTZwY/x2cH1ShoQHiSgiKXJaGTTiU8WsjS6YYtpxI2
c+5I46gUI+OINzSh4ozNRcG+jkvZC5XoCfQTLM1yZjaoZWL5ut1gK4bHIDJgrTrjgAdJPK/W4A55Bm4rjiJhW6F7RmiG7jvlUFyqqq4a
0wZKfIXgDl8jfZOGe+zAmhgUKBfNcnbXXb1gUrf0tAPWYB+KgWUMq3gEQHiI4gNYtXX6t1Hmhw2ZXPw4e4WAmZtCghWYsmuw9AQRA
UmZhN6F1LzzxtxAvmxdq8GLr2JiIiIiIiIiKXRpR1Y+TtmvG5+Tq77HE0xH5cF+3AAnghCwE2nb7/H3vKxMHMDs/c7GBDxIFBAA
jJNjCMH8j9vZI8Obf/AjcAYVzCF+RSCCrxvyTDI4OW3FmFf3jLtbOB8Vq+FRaF/O8LPQbfPbUaEV62ODaAfFGKDSNA8jRKlKrm
JcHv2hKe3HbHGKCaBCzP43D+8UrdpIA09jJZvAqD0PfqU+6ytdn5J7OWTEgjr8uh+w+j2rgKFrFOd7rv/
oiZfsXSC3AjyCBi17zVEIqSi5uD5WmXUt2h9TzjXdYE8cP5Mtu3FSaJXBE5YpkNGAPKK/EZ7yD9xnwn8TN3Y1sDaIX41RHzO08LFI4kC/
PH3sxRyAPQsomh5FYC6kWXZoxU1+XfNLJiXJlWrhGxWdX4rdEEZpoYNoQ3SpNxCHXS45AISqXZDVmMNawlnjHqmjZ+J+3Y/
nV+FXVxFvfs8ZDO/XU2g5ObmdbtF+gPK8IzSBeWVzqFI8rW4IXSU97cWXEJvCL/KP3ZLrIHnkK+gKB1D3HqREtwy9evNWF4AkiJWS
TB6fBSuDPPE8aXKA23CNnyJgRF6LUYjm7YYSBHvFkk9EBhjkq8Sk+K8rRI7VnqXZWqvHIN4dcHgzWTd8tgrYM1V5wKAuBGtyd2PVbCdc
/EMfrj5OAPAqHoSK2eodNJ/
0emOBYIm4Tpvu/zN5UqhtI4Hq8h1yQuGsXuC1zhCbyoJ6RtUhS+LSFxkW5h3xfyOTXgGOaYy40GEJ8IyX7xmsXr5rG9xRfdLHC3SpQM5
JQNxb1l3mMPZhZ8e6dvPyq7MRKdm8Xn3nb5SjPfPjrxxzItFaE1vXOx34fTNt4tSvOiJYN7AMz7dqZgLFE3xMG3W0vQVVM2B9ZeCe48QdT9
bwQQCHhKbZL4MCj5EDRwZyk92bzoDPuH1dXxGNBzYWt71LQLBmTefkzX+nBp5GPSpqTKYIhDpdT2mUzLDoDVkhbrq5CgGjPAOyRMPREy2E3
Ir4AEBtXgaaXIoMAEg8FPmTzLAwBnTcnQkOI+0pAPoLaXnmCmnUaBvOIJwKBpsr5+HMB5oZYEfp2pgK+OpEAbWVDqUYPnqUlLCGcNnqNsSNC
ZIi9qYRj4oO+V/rL5ZZm3T8ydnRMvbKZMP2Hu7BqB5bAsxt0MvOhZcd8l4i1NBVk48Nc/gP+6ijNzA/DYAIuRbWvTjtCyqHBDGQJNU+jT7
U8hmCMKTXSbYQq7vlunjvaQqIrNOHXyFUJv3qcEvTjo6QsH9uy/+LGBEuUAQIGnrEH9rHfcOEkbFqPnHu1D8XKfv/
3dQ8qEyqGThbyRZXwEIhunoHFLGkX+oaEpE6/
PVXmbCrEqbZJ8Ig0i6VvKF5wFCemQMdCG4X5sx1dqPGUYw0Y6mgyiCwDvB1ejh8JIdlKKX7CMJTjeP6n59Ha7fwZDzWbRzfDx5EE+/
zVG7p1OP5BHq/cXFoBUS+K2F04YDqOlKLrYkhUIM6SprqM23Ez9EohMTq9b1LP0L7zchzmDeXvqiOImmgOKrUvEDUfUdZ5H9zF9VpAy0
ODY0mHVgI5rRB3aQtRLvJbQmUd49N5N3q1H9tJ4XoxKGyXCLAxpm2nFRb/qrzrnQY1uuSCYpNYRx7YoR2L5Zqm+nJhPkI9W40Rz
o7Tn1FfWCM9ABKrw3REAKVvkShvdm8+4KbVN2Ngi/mcAwppGjUI3HNY4cxuHXg0PV12jHpEf6QHu52Ww0ZpDHjHYYDBN4P1b
z2c0LfgBd3U7K+c19E5PM0Z6PTO9OsQFQGXA4hVVPuxvfTRo4hYzYeA9sGbs4aPPWmaPIZNmvh7x5NZyeH2VuKH4UvBs8IkkrTJAt2vqB5
UUp9ozlGzOn2xe1m7dM5e8e7R11sCE8Y6dxgqs54ftd+XPrOhIhQzuZxLUvD2Qu6lRT05sZ6ny3xRhwtS27RZH+PmfZ8OA4n8nyR0ijWxH
f4Di6t5Y3yBaVJS6ALSRGjjRVzCzGdn7wvnZEIARi/lsBbfEu5l9pELTT9rVy9BEZvMLYRS3OVQWt1PTjSv32SsuS7G2WU1Mz0D
sjxXEH4WkfSjPnnNMz0CDtzCfhnzuBtFVBgqqBBOtqqSFPr4H5f4Y1wM7e3fztJc3v0CAUY2JeE9+5RP/
xu3vJAxsBXNtr5A9Fzoub5Y6wsnh8kozTdDAYcxjtFzzf7N/Ssqw
g51xYZWKWP0p3lw5ad+UfDzjXOJB53QEUIsH/i+QJXT/
s+aK+hFA1RYjSLlrRvnMOiRN/8Wn+o8oFMnRX3qhRw4p71RXo2vE2KrHYyNjcz2g9HaDS4AbspdfAvz1gA/8cNlhZXyaqYZOdvz2
UZ6bfSX2vvgAGxENTbUvWNLpDfKHnlU5HQoFjhKDSmNyw/wPE+LdezkvR3v7zlUvXn3m7kYk5jspJyzz8PW8dsuUrKTkQp9A/
OhRlIzbKY3cQTJ7JJz3mFfXu72vaN4LrgiZOMWMl0L7C2wXB0u6PE7N1C1dWQvoF5yB+7r5rTaA3RVvx5Y3FMgMqlNUGkS/
mfPfIeR5RSWMNV4XyaHYnb4qzyiSpt2mTbg2oInQtByuaZDd6jB1pXyB9hJTXjRkSrNsGo/
3iX6dYSv/PKFf9b/7qbtnLbRuiE7rMPfDU8PIIVBSxSnJoB/1kEdgyzcbpJ6C3SEcNVGxO5Gz
FGb+lSL3Fsu1ti5BTKUZKqP/tMC+ut86crmwTLUiPRz1ZPvomdHDs3Lg2m8WO7IZXFExZsE1WOTsIYBiiMJ/y/LKc+LOwUBi
fMHezRHJH0XM8XTtyyUejvLDEzaP1/WAXkAP5vhBUXlnBfpEUxe8ODe6VM0JQfx+g0sHUnDFvHnJ6OdB9w
qZGqdStgNgYRsmLGqEv2Vfu8HDjdKS7zQEq9Jas2D06qmAI+ujRGoMrfgCDrLtBiRgG+vEjPlVqhIWJmJ8JiOk2zqmD6DbJ1WHlV4
KCx/7lrh2ms43jZDpsI6rPvJ0CFpzHkr4MMd+Tt2kGo+XFkz7RK+jD5g+zyRcESsVPdqzxU+YvVbo/MsjEy8yLEw
40ehrzOhdXv2BN3WtsOTHfCyXYjTBVi0pzqlhhRP+z5FLZdKrBWQJGsm3EO+QgMAuyhc4rbuWQFcqg4xjCoIcuORt2nFL3cF8W5Mg

```
K6EEF3jCQ7+RyxDW9R+dbLmGya3gXL6L7kavzw6WG1Y2B5KEODm+edVJiHuiq5KZpkeTBTlN5ch3Muv+
6J0W0NVwTTLNJuj8PnuuQqq/Fazj8DrCroUl1YBnllo/
5hQkQmnrE3x1pERM4qHo9z9dVXY4zhqquuoqpqdJoPl+o+E8VE+nqV4lmWLFlyatZXJBJh8eLFRb+HyH
jx5rEEIdewMB4sdylgLeHdW2h86D7ia54jU9fIiY//EZ1X3nxG+NVfk5fnjmiC6sKSyEe6KziRu/
BfM9IWXk2E+Vl3BXngo5Gkwq8RyMVrh7QEEvqWQR5J5OjUMkgRmYDG7AwwEREZ3O23386xY8dGfZZRqe
4zUUykr1cpnuXuu+/m/
vvv1+wvmdSOJXLs7c5yaW0Ir8zr+rwTR4iveZbQwb1k4zW03Pwp0tPnDPn6mGP5SDjF/
pzHhkyQB7urWBDIsCqcZpo3tDAlbWFLOsgbqTBJ6zDXy3J5KE1wjEyMG6+y8VrCh/
ZCLgte4JznzqoIsLEtzY6ODFdpFpiITDAKwERExpl4PM5XvvKVCXOfiWIifb1K8SxLlizh3nvvHdV7iI
x1bx5LEHRgUXX5Zn+ZTJqq371A9IO38UNhOlbeRO+CpeC4wx/
LwNxAjiYvx45MkJ3ZALuzQeqcPEuCGWZ5Oepcn6jT1zHfWujwHY7lXfZlPbZnguQwNDg5bginqHX9Yj/
upJSL1/XtBNnWTK5x+jnPrQw61IT6lkEqABORiUYBmIiIiIhIiTUnc+zszLCsJkigTLO/Qvt3En/
xl7jdnfQuupSuS6/GBsMjHjdo4JJQhsXBDAeyAQ7mXN5IhXmDvucMYLGAD/
iFYx6WWV6O+YEstY5flB5i0icb//
1OkOcLwKBvFtgHrWk60nmqQ8MPQkVExioFYCIiIiIiJfbOiSSeKc/
sL5NKUrXmOWJb1pGtqqHlts+SaZhW9PsEDSwMZlkYzJLyDe2+Q5fv0GsNDmCAmONT5/
hUOT5jZQ+AiSZXWY01zpB2goTfB2A7OtJcPSU6ytWJiJSOAjARERERkRLqyfpsbU8zvypAyC3tnlShPV
upfulXOIkeui9eQdclV4E7+r8ShB3LNCfPNNRcveRcl1xVNd4QG+FXBBzqQi5b2xWAicjEogBMREREREK
SE3m9O4ltYHA+V7J5OspeqV35NdPsHZKvrab3j42RrG0t2fymvbLyWYMvQAjCAmRUeG1rTtKfz1GgZpI
hMEArAREREREREKJOtb3m9JMSPmURkswewv3yeybT1Vrz2Pk07SdcnVdF+8AlyFGpNJLl5L5MPdmGwGGz
j/
sttZFQE2tKbZ3p5m1VTNAhORiUEBmIiIiIhIiWxuS5HKWxaPdu8vawnt20HV6y8QaDlOpm4KLR+5i1x1
/ejeV8akbLwOA3htzWSnNJ33/FjAoT7ssq1DAZiITBwKwEREREREESsBay9oTSWpDLg3hUZqBZS3Bw/
upfPNFQof2kauI03bdnSRnLUBbK05eucJOkF7r8SEFYAAzYx7rtRukiEwgCsBEREREREpgf3eWtrTPNV
PCmGKHUb5PeM82KtatIXj0IPlQhI4VN9K7YJmWOwq5yjjWGfpOkAAzKgKs126QIjKBKAATEREREESmB91
uShFzDrIpA8Qa1PpFtH1D5zst47S3kKuJ0rLyJxLyLsF4R7yPjm+OSq6ohMMSdIKFvN8jakMOOjowCMB
GZEBSAiYiIiIiMss5Mnt2dWZZUB3GLNPsreGgfVWueJXj8MJmahr6ljjPng1OC5voy7mSrhrcTJMCMWI
CNbWm6s3kqA5pJKCLjmwIwEREREZFR9kFLCoCF8ZE3v3e7Oqh69Rkiu7eQi1bQtuo2knMWq8eXnFMuXk
v0w11D3gkSYEaFx8a2NLs6MlzREBnlCkVERpcCMBERERGRUZTzLRtaU0yPecQCI5udFTy0j5qnH8bksn
Rdeg09S5ZrqaMMSbb6ZCP8E2SnzhjSNfGgSzzosKMjrQBMRMY9BWAiIiIiIiIqNoZ2eGRM5yVePIZn9FN7
5L/OWn+nZ2/Oh/IVdVU6QKZTLIVfXbCXKIARjAjJjH1vYMiZxP1NPyWhEZv/T/
YCIiIiJlZoy50xizwxiz2xjzjUHeDxljflF4/
x1jzJzC8T82xmzo9+EbY5YX3nu1MObJ9xpL+1Ry0gctKWKeYWrkAnso5fNUvfw01S89SXrKDJpv/
5zCLxm2XGU11nEJDGMnSOjrA2aBXZ2Z0SlMRKREFICJiIiIlJExxgV+CHwMuBj4gjHm4gGn/
QXQbq1dANwLfA/AWvuItXa5tXY58CfAfmvthn7X/fHJ9621w/
utV4qiM5PnQE+WeVVBzIX06PLz1Dz7cyo2vEX3kstpvelT2GCo+IXKxOc45Kqq8YaxEyRATcgh5hl2dq
RHqTARkdJQACYiIiJSXlcBu621e621GeBR4NMDzvk08FDh9ePArebmMNOULwM9HtVIZtk2tfaHB3MoL6N
NlfapffJLI7i10XHEDXVdcrx0eZUSy8dphB2DGGGZUBNjfnSWd90epMhGR0afvoCIiIiLl1QQc7Pf5oc
KxQc+x1uaATqBuwDl/yJkB2E8Kyx+/
NUhgBoAx5kvGmHXGmHXNzc0X+gwyCGstm9pSTIm4w29+by1Vrz5LdMt7dF1yNb1Llo9OkTKp5OJ1eF0d
mMzwZnPNjHnkLezpzI5SZSIio08BmIiIiEh5DRZM2eGcY4y5GkhYazf3e/
+PrbWXADcUPqK9W/
SvWQ53cuuHIXqZDLKxguN8NuGtyK6PuwScQ07OrUMUkTGLwVgIiIiIuV1CJjZ7/
MZwJGznWOM8YA40Nbv/c8zYPaXtfZw4ZiYPaXtfZw4c9u4Gf0LbWUEtrYmiLg9O2iNxzR9W9S+fZv6Z1/
MV2XXw8X0jtMZBC5kwHYMBvhG2Noinns6cyQ9Qfm8yIi44MCMBEREZHyWgssNMbMNcYE6Quznh5wztPA
3YXXnwVettZaAGOMA3yOvt5hFI55xpj6wusA8ElgM1IyqbzPjo4MsysCeM7QA6zQvh3EX32G5Iy5dFz5
EYVfUlS5injfTpAtw+sDBjCzIkDOwr4u7QYpIuPT8P45SkREREESKylqbM8Z8GVgNuMCPrbVbjDHfAdZZ
a58G/h34qTFmN30zvz7fb4gbgUPW2r39joWA1YXwywVeAh4oweNIwfb2DDnLsJY/
eq0nqHn252Sr62hfdbsa3kvxOQ7ZeM2wG+EDNEZcQo5hR0eGRdXaiVRExh8FYCIiIiJlZq19DnhuwLFv
93udom+W12DXvgpcM+BYL7Ci6IXKkH3QmiIedKgNDS3EMslean/
1INZxabvxk9jA8PuGiQxFLl5HqHngKuvzc4xhesxjd2eGvG9xhzGzUURkLNA/
K4mIiIiIFFFLKsfRRI55lQHOsvnm6fI5an/
9CG53F603foJ8rHL0i5RJK1vTgNvbjZPoGfa1Mys80r7lQI92gxSR8UcBmIiIiIhIEW1qTWOAOZWB859
sLfHfPkXo0D7ar7mVbP3UUa9PJrdMTT0Ageajw752asTDM7CjQ7tBisj4owBMREREREKRI8tayqS1FU8w
j7J3/R+3Y+68T27yOrqVXkpyzuAQVymSXrWkAwDsx/
ADMdQxNsQC7OjP4VrtBisj4ogBMREREREKRI9nZlSOQs86rOP/
srtHcbVWueIzlzPt2XXl2C6kTAhsLkYpUETgy/
DxjAjAqPRM5yqDdX5MpEREaXAjAREREREkSLZ2Joi7BqmRc+915TXcoyaZx8lW9tA+6rbYCi9wkSKJFtd
T+ACGuEDTIt6uFoGKSLjkAIwEREREZEi6M367OnMMqcygHOOQMtJ9FD7q4ewXoDWGz+J9YbQK0ykiLI1
9XjtLZhsZtjXBpy+gHdnRwarZZAiMo4oABMREREREKYIt7Wl8OPfyR+tT/dwvcHt7aL3xE/
jRipLVJ3JStqYBYy1ey/
ELun5GzKM763M0oWWQIjJ+KAATEREREREkhay0ftKSoC7nEg+5Zz4ute53wh7vpWHED2bopJaxQ5PeyI9
gJEqApFsAAOzuGP4NMRKRcFICJiIiIiIzQ0USO1nT+nLO/
AscOUvXGapIz55OYv7SE1YmcLh+rwg+ELrgPWNA1TI167OhIaxmkiIwbCsBEREREREZoU1sa18DsysED
```

MJNJU/Pso+TDUdqvvkVN76W8jCFbU3/
BO0FC3zLI9oxPcypfxMJEREaPAjARERERkRHI+pYtbWlmVgQIOIMHW/
HfPoXb1U77tbdjg+ESVyhypmxNPV7zMfD9C7q+Kda306mWQYrIeKEATERERERkBHZ2pMn4lnlnmf0V3v
4B0W3r6V52JZnGphJXJzK4bE0DTi6L29F6QddHPIeGsMuOjnSRKxMRGR0KwERERERERmBja5oKz9AYOb
P5vclmiK95lkxtI91LryxDdSKDG2kjfICZFR7NqTxtWgYpIuOAAjARERERkQvUkc5zoCfL3KogZpC+Xh
VrX8Pt7aZzxY3g6EdvGTuyVbVYxxlhH7C+WY87OyCtl0sAACAASURBVDULTETGPn0XFhERERG5QJvb+n
7xnzvI8kenu5PYutdIzFpIpmFaqUsTOTfXJRuvHVEAFgs41IZcdqgPmIiMAwrAREREREQugLWWja0ppk
Y8YoEzf6yuev0FjO/Tdfm1ZahO5PyyNQ0jWgIJfcsgjyZydGW0DFJExjYFYCIiIiIiF+BAT5aurM/
cqjNnfwWOfkh02wZ6LrqcfKyqDNWJnF+2uh430YPT233BY8zQbpAiMk545S6gv/vuu6/cJYhIGei/
fRERGY82taYJOL8PAE6xlvirz5KPROm+eEV5ihMZgmxNAwCBE0dIz118QWNUBV3iQYcdHWlWNkaKWZ6I
SFFpBpiIiIiIyDCl8j7bO9LMrgjgOac3vw/
v3ETw6Id0XboKGwiWqUKR8yvGTpAAM2Meh3pz9Gb9YpQlIjIqFICJiIiIiAzTtvY0eQvzqgYEXNZS+e6
rZOM1JOYuKU9xIkNkgyFysaoRNcIHmFERwAK7OrUMUkTGLgVgIiIiImVmjLnTGLPDGLPbGPONQd4PGWN
+UXj/HWPMnMLxOcaYpDFmQ+HjX/tds8IYs6lwzT8bY8zAceXCbWxNEw861IZO/
3E6eHAvgeaj9Cy+HBz9qC1jX7a2gcCxgyMaozroUBHoWwYpIjJW6buyiIiISBkZY1zgh8DHgIuBLxhjL
h5w2l8A7dbaBcC9wPf6vbfHWru88PHX/Y7/
b+BLwMLCx52j9QyTTXMyx9FEjnlVAQbmihXvvU4+FCEx58L6KYmUWrphOl5XB0535wWPYYxhRszjQE+W
VE7LIEVkbFIAJiIiIlJeVwG7rbV7rbUZ4FHg0wPO+TTwuOH148Ct55rRL/
0yWlTWxoDzKk8ffdHt72Z8L7t9C68BLwxtdeUyFllGqcDEDy8f0TjzKzw8C3s1DJIERmjFICJiIiIlFc
T0H/
90aHCsUHPsdbmgE6grvDeXGPMemPMGmPMDf3OP3SeMQEwxnzJGLPOGLOuubl5ZE8yCeR9y6a2FE0xj7B
7+o/SFe+/
gXXcvgBMZJzIVtfjewFCIwzA6kIuFQGHre1aBikiY5MCMBEREZHyGmwmlx3iOUeBGkBWdbay4GvAT8zxlQN
ccy+g9b+yFq70lq7srGxcXjfdPkcJ9R6YyB2ONyUF3KDsdcxzIoR6L6FsjrCUsCtUEiCBhRy3F3AeBrsgtEE3/gT8s33/wNkT/9hL+fMJE/HHSDC+9xsx2hK0uXqp7aOkLSNjhStHFrAQY2k4GHQv6vkrCbMzqgHMeUy5qBPC9GA8iTUeq1m2W+CRRqSXqeMCpPcV0ifBaqJ8sPI1jeq7YbWhvo2jfAsewPxQ9UgEaYnU4O/
tHsReL5ToGhiJ3iarYvU7M45WZvSTp/
nA2FZHjeTzq7QrbMrU9G+2a9VUzcNK9/pWbBCKmEASkRlHmEYz6HHPpUSWr8DQhzLoDIazPaQ==

fssYYwa7uTHmS8aYdcaYdc3NzSN5jnHpveYkvTnLspozc0Ov9QThA7voWXgJOGp+L5NTLl5LaupMYh+8
DX6+KGMaY7i4JkhHxmd7e6YoY4qInI8CMBEREZHyGiyYGjgl4pznGGOW0rcs8q/6vf/HhaWRNxQ+/
mSwm1trf2StXWmtXdnQMLl6XKVyPm8d79v5cUp0kNlfG97EOi6JBcvKUJ3I2NG76FLcni7Ce7YVbcwZM
Y940OH1Y72aBSYiJaEATERERKS8DgEz+30+AzhytnOMMR4QB9oKn88AngT+1Fq75+QF1trDhT+7gZ/
Rt9RS+nnreJJU3nJZ3Zmzv0wqSWTL+yTmLMIPR8pQncjYkZo+h1ysktiGt4o2pjGGS2tDtKV9NraqF5i
IjD4FYCIiIiLltRZYaIyZa4wJAp8Hnh5wztP0NbkH+CzwsrXWGmOqgWeB/
26tfePkycYYzxhTX3gdAD4JbB7l5xhXujJ51jUnmVMZoCZ05vLG6Oa1OLksvYsvK0N1ImOM49C78BJCB
/fitRwv2rBNMY/6sMvrR3vJakdIERllCsBEREREyqjQ0+vLwGpgG/
CYtXaLMeY7xpi7Cqf9O1BnjNkNfA34RuH4l4EFwLcKvb42GGMagRCw2hizdgAHAYeKN1TjX2vHU1ggU
trB9kzwPeJrX+LdON0sjWTa1moyNkk5l2MdVxiHxR3FthldSF6cpZ1J5JFG1dEZDBnNjsQERERkZKy1j
4HPDfg2Lf7vU4Bnxvkuu8C3z3LsCuKWeNEcrAny+a2NBdVB4kFzvz34PCerXjdHXQuX1WG6kTGJj8cIT
F7IZGt6+m6/k5sKFyUcRsjHtOjHm8fT3JZfZiopzkaIjI6FIDJsOz62f8qdwlFM5GeRURERIYmby2rD/
YQ8wzLBp39lafyjRfJVcZJNc0rfYEiY1jvokuJ7dtOdOv79F5+bdHGXV4f4vkPe3n1cC8fn11ZtHFFRP
pTvC4iIiIik8Z7zSlaUnmuqA/jOWdurhnd/B6BthN0XnYtOPpRWaS/
bN0UMvVTia17DbLZoo0bD7osqQ6ysS3NoZ7ijSsi0p+
+q4uIiIjIpNCZyfO7o71Mj3o0xc5cCGEyaSrffJF0/TRSM+eXoUKRsa/
zslV43Z1UvP96UcddWhsi6hleONhD3qohvogUn5ZAynndd9995S5BREREZESstTx3oBtrYUVDGGPOnP0
Ve+93uIke2q67EwZ5X0QgM2UGyRnzqHj3VRJLV+BXVBVl3IBjWFEf5nfHkqw9keSaKdGijCsicpJmgIm
IiIjIhLeuOcWBnhxX1IepGKTxvdPbTcW635GcOZ9Mw7QyVCgyfnRefh0mn6PyjReLOm5TzGNGzON3RxM
cT+SKOraIiAIwEREREZnQWlI5Xj3St/
RxXlVg0HMq33wJk8v19f4SkXPKV1bTs+gyolvWETh+uGjjGmO4sjFM0DH8+kA3OV9LIUWkeBSAiYiIiM
iElclbntrXjWcMVzUOvvTRaz1OdPNaehcuI19VXYYqRcaf7mVX4ociVK15ForYsyvsOlzVGKEllefVI7
1FG1dERAGYiIiIiExI1lqe/7CbllSeVVMjRLxBfvTNZal+/
jFsIEj3sqtKX6TIOGWDIbovvZrQoX2Ed28t6tjTYx6L4kHWNafY3p4u6tgiMnkpABMRERGRCendE0m2d
WS4tC7EtOjgez/FX32W4IkjtF9zG344UuIKRca33vlLyVbXEX/
5KZze7qKOvbw+RH3Y5ZkD3RxTPzARKQIFYCIiIiIy4ezsSPPqkQQzYx4XVQcHPSeybT2xje/
QfdEVpGbMLXGFIhOA49C26nZMKknNc4+Cny/a0K4xXD81Qsg1PL63i56sX7SxRWRyUgAmIiIiIhPK/
u4MT+3vpjbscvWUyFn7fsVffJJ0w3S6LltVhipFJoZcTT0dV95M6ODeou8KGfEcbpgWJZXz+cXuTpI5h
WAicuEUgImIiIjIhHG4N8sTe7uoCDjcNC1KwDkz/DKZNDW/
fgTrBWi77g5w9COxyEgk511E74JlVK5dQ3j3lqKOXRNyuWFalLZ0np8rBBOREdB3exERERGZEPZ2ZXh0
dych1+Ej06OE3EHCr3SK2l89hNfWTPu1t+NHK8pQqcjE07HiBjK1jVS/
8J+47S1FHXtq1OOGqVFaUnke3d1Jr5ZDisgFUAAmIiIiIuPe5rYUj+/pm/n10abooDs+Oj1d1D/
2I4KHD9C+6nbSU2eWoVKRCcr1aLv+Y4Ch7pc/
we1oK+rw02IeN0yN0JLK89CODk4k1RhfRIZHAZiIiIjI/9/
evcfIVZ53HP8+c9vdGXu9ttcFX8Ax1wAJ4RZIkyZ1YqAEBVxSGoyqlrZULa0f0jaRkrY
iSgNSglIgkJJaiASIWilpCwTb4mJjAwZsWGyMF3uv3pmdmfmP0j3N2GQ8z9trrndk55/
eRRuf2zjnvs+95z3nXNkZ3XORjlUJnCcHxnh09xxjLetKsW1lo2PmVPrif/
gfuJn1wkPfWXsPEmrPbkFuReKsu6GVw7TWkJsbpf+BuMu/
uOaHrX1HIcvnKAue+VIXYMlU7o+kUk3tQBJiIiIiId6UCxyn2vDLF5f5GzFuX49RNn/mVe3Mn/
fd/GyuVGFx3HaXlp7YW/f0/hA+ezbH/
uHqVY1S2RInJ06gATERERkY5LjT3Dxf7EHRkTPHZ/
u0aHrX1HIcvnKAue+VIXYMlU7o+kUk3tQBJiIiIiId6UCxyn2vDLF5f5GzFuX49RNn/mVe3Mn/
fd/GyuVGFx3HaXlp7YhtyLJUO4/mf1XXI9DeMXlW6+f0PUv6U5z5SkFerNpfvzGKI/
uHqVY1S2RInJ06gATERERkY5LjT3Dxf7EHRkTPHZ/
iusplLz2pTbkWSY7KoiUMXnE91Z4CS390Lz0vbQH3E7b+fCbF5avynLc4x7YDJe7ZPsTWA0X8BG5DROIn
0+4MiIiIiIjMRDVwth4s8X/vHGJ4MmD1/lLMVCMV4zJP7bl2ggwnfw6HKK7C7pdSWPd/+wPuvV2Ji/mrMx
KRjzN67iWQUdNXpFWqhYXXsv/y3WPrzR1n804fiTA4vSUuPFC+5Ocpy/
tJsVhQyb95d4ZfJrCm9uxJ6B1kP0D5Y7aIC6j25
cXGS0HLOlK89kVeU7OH96UTR0aI791E/nnnyEzPxbYT9d7/
FMvu+xbSU2eWoVKRCcr1aLv+Y4Ch7pc/
BJiqtOA10FItJeqRTjZ36UiVPOoPepyhs/h/
yzz9D8YzzmDjnAkqrzGO4dWGt8Yq7Bgq8cTAD8zF3WxpjfLotiMinU0
dYCIiIiJtZmZXAd8ct8E0sB33f2uuuVdwPeYHK/Lm7d1YUI5hg//
mKFPeMV3h4vc6AUPtS6kDE+3JfjtN4vx7/vp38jueo9x2bM/J0CP9cQZUcg5MbFY2/5RvzuOg3X6OcKtuzz8lbfrrVI3MoA/1AndcN8bsvt5ZJM8/
8fjcb0zkIx6P+uBxz/cKbP3HmRomnx8ln1vDKJu5MDxgoDq6IxVR5xpXDHkVOOWsIDqKHTDPOD54WJXp7mUyNK2Y1+Rtg98WBSbi
I7Tj2SqvmdZFxtr/T/
37cppmMz60FWeqgTjJ10k50wN94FL6vPCbDv2/57YqMk/PJFB81zmVu3CaESHA/
R4uhotgbQZbJcMgDPuDBj4oVnfaDmRP0lQeVLFdUCmL4/
tjjJafQmnnVgIfQ0U2bXPz70Tb4b0m2yHhTwtfxHFwmDDKe8tuSJkcyCrhdsaDJ8SAWnBrBzWLk/ENtfnu3sZFp/
VzGzyqfyIbYy5IROoF3T0MXfA6Fyd/gS0+2Xpr/gJDkzEdxKyvXDfw+NJD/
37cppMz60MMvqBRkOlgJ2j5V5c6zMayNlABblUqzIZ1heyLK0K4V/
PEGkl1r1ZhsgSlIkyW8FIpmg7n+dT4ZBFKpWi6CJOTEASAh8/
Ac7BMGjJZyGYhk85AvQ4wGSE6mIiIjU4+Fq7TEDnqvnzV8vrqAX+PbTzHzqg+D/
oTTXvtsqmh+/tXr1oKDMDCodn744OFI7Ng74z2Acmn+Rd7w3HGjxfo
yul+nauY38ts0AeCpNpW8VBi4i8GpPHs914dncYZ8gl8OzXXg6DZKr/
g0w8xYkjaW9GW4oC/DSAX2TlTZX6yye6zM9qNpPwDsLWJ5jaKqWadzVNMVJ4x5qGapVm8r8/
K0MGsszqXIp4fOBLg0R9jdeTLcIpbv/AXaGl0odNUCDUzrAqqF48KQ00+FxMJ00OxHT6Zp5Gax2OlOTNhpak/mkUodvd3r8/
XzUP3Mt7IwJIJgaBmFc7tF4zbLp2AMIav8mQd3f5vBpr52eShME0d8kynf6/aGl0odNUzs9/

```
Z1oaIalUuEyBzws6w/
kPQigUoHyJFTKeLkMU59KOZxfLuOVqfmTUedWMerQij6VyswqUCoddmxls5DNheWcStXsE+Cl4P2/
SaWCT0YdZc3kctBTgEIByy/
4YAdZV9f728tmsWg4NT3195raF6fHLTXvnsWnVoKIiIhIe10K7HT31wHM7AFgPVDbWbUeuCMafxj4Fwt
bleuBB9y9BLxhZjuj9TGDdbbcOxMVnto3QT4os3B4P33FUVZNjNI7McLS0UGWjg7SOzFMbXPZLUWQLxD
kF1BetYaJvqVUFy+lsngZ3pOfTtfV+nBEZFYy+OlnM3762Yy7kxobIfPevrCje3SI9Pgo2f17SB0aZ7Y
/oVcC50TjbikO5XoYKvQxlF/MUGExw4U+hvJ97Mvlmcj1UMx2N7l9Oh19skffaApu/
N8nWHHw7br5qZpP+vDhVGfMlKm3Wh5x6BB41AlX25lW85+Flok6PqbylXSpVHglViYTdUiGQ8tkobsHF
i6a7kiybC7siKrpXDqsoylaZunju43XgyoUi+GnNIEXJ6A4AcViNB7NHz4I+/
aG88pH6DQ7Bulrv0TqwstOyLpm65g6wDZv3jxoZrvnKjORfmBwjrcxnyU5/iTHDoo/yfEnOXZQ/
EmOv1Wxr27BNmZjJfBWzfQAUN9SnE7j7hUzGwaWRvOfrvvuymj8aOsEwMxuAW6JJsfM7OXjiCEOklwXO
5XKrPMkqsxub3cGToxElVlMzK8yu+MbrdjKjNp6x9QB5u7Lji8vM2dmm9z9krneznyV5PiTHDso/
iTHn+TYQfEnOf4kx16n0WUG9f86b5am2fxGrz1r+O94d/
8O8J0jZTAJtD92HpVZ51GZdR6VWedRmTWnd8KKiIiItNcAcErN9CpgT7M0ZpYBFgEHjvDdmaxTREREJD
HUASYiIiLSXs8CZ5rZGjPLET7UfmNdmo3ATdH49cB/
ubtH8zeYWZeZrQHOBH45w3WKiIiIJMZ8fAh+0i/BT3L8SY4dFH+S409y7KD4kxx/
kmOfFj3T6zbgccKnK9/
r7tvM7E5gk7tvBO4B7osecn+AsEOLKN0PCR9uXwG+7O5VgEbrbHVsHUb7Y+dRmXUelVnnUZl1HpVZE+a
utzOIiIiIiIiIiEh86RZIERERERERERGJNXWAiYiIiIiIiIhIrLWtA8zMrjKzl81sp5n9VYPlXWb2YLT
8GTP7UOtzOTfM7BQz+28z225m28zsLxqkWWWtmw2b2XPT523bkdS6ajRc3OS7N0VpXjWzmxqlmc+ax
P6PZrYj2rcfMbO+Jt89Yj3pBE3iv8PM3q7Zv69u8t0jniM6QZP4H6yJfZePdfkux1d/
s3Oc0mp+9J54nDMSZpOP04mwWzagNIes2m7SevNtr2VRG15BpiZpYFXgCsIX9P9LHCju79Uk+ZPgfPd/
VYz2wBc5+43tDyzc8DMlgPL3X2LmS0ENgO/WRf/
WuAv3f0LbcrmnDGzXcAl7j7YZPnVwJ8BVwOXAd9098tal8vZv5v5aYlT2ZvYZYAz4vrt/
JJr3D8ABd78r+qGx2N2/
Wve9JcAm4BLAgc3Axe5+sKUZmAVN4v888BN3r5jZPwA0in+6Ml4n+E8T/x+DZ70/kfHtbxcy+BlAfe5RuF0eoJ52gSfx3AGPu/
k9H+N5RzxGdoFH8dcu/Dgy7+50Nlu2ig8u/
2XkO+H0SUPels8TlmJM0nX6cTILjbQNK+xxv203aYzbtraRq1xVglwI73f11d58EHgDW16VZD3wvGn8Y
WGdm1sI8zhl33+vuW6LxEaCfnsbrUmyxW2QpwCfeOU/9EjxGb+ZH9TG9kT7YTUqAJrCvPowFQrxW96K4Co8Wk3Vrcl4Pd2pD9YaCyoPfCMwUbLC3yRUuDzZYl5q3/cNwRC7IeeWeHV9/mmrMntpDXxzbltxxxbqcw8IR7ymwXqgEaZlJsTzpeRUcYTeVNNZkMVo0iaaGfNR8JxVcHO6Y0Pls9W+KkLhx00XaN8sWUvAKVW6bRk9rNGsmpZrgzj7ZgM7G6wDYu6n9Ysz1gT3g3xXOiF6O0Ec/ERZG8yW1CVZzZ8vyQ2oi7q6NxNiP3szZ1mN7lL29XVmFrx3Oa+zPkGtVJ3fM9+8PvFZn0+hdVGFbHrK3V3pyNqyGA6pNGvAVPAnyzWI13ztVlvV+5GaG9XqbiGnE0sk7e9n8/0Xf3yTVzCCGO0EWx9N5u0Ab/IFEw53xn4Q9PnwK/tzo1DAvpGkYBn9HddD5qwwI0CuHYb+7gTXnHhxFN0N9Sl88uOyVd5e8+1tNl/+sNuXIK+R8/pGxjbhXTjNMFjJqL1QMbkFF+uaPKa+XP0sBPGVbvIj7UYB+v6Xfbjkr/EfuwhmTHdxNP5wsJ5zx8tHlphP17Khm23LUpIkh+tq+bRr55fDMXAaijYTHu8iBxsFpIzwA==
    "for col in distribution_cols:\n",
    "    ax = fig.add_subplot(df_numeric.shape[1], 2, i)\n",
    "    #violin = sns.violinplot(x=col, data = df, palette=\"muted\", inner = 
'box',linewidth=3)\n",
    "    box = sns.boxplot(x=col,data=df, linewidth=3, color=\"skyblue\")\n",
    "    #box = ax.boxplot(df[col], flierprops=dict(markerfacecolor='r', 
marker='s'), vert=False, patch_artist=True)\n",
    "    ax.set_title(col, fontweight = 'bold')\n",
    "    ax.set_xlabel(None)\n",
    "    ax = fig.add_subplot(df_numeric.shape[1], 2, i+1)\n",
    "    p1 = sns.kdeplot(df.loc[df.Response==0,col], shade=True, 
color=\"salmon\", label='Neg Response')\n",
    "    p1 = sns.kdeplot(df.loc[df.Response==1,col], shade=True, 
color=\"skyblue\", label='Pos Response')\n",
    "    ax.set_title(col, fontweight = 'bold')\n",
    "    ax.legend(fontsize=15)\n",
    "    i+=2\n",
    "    \n",
    "plt.tight_layout()\n",
    "plt.savefig('outliers')\n",
    "plt.show"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### IQR and STD"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 8,
   "metadata": {},
   "outputs": [],
   "source": [
    "def filter_by_std(series_, n_stdev=3.0, return_thresholds=False):\n",
    "    mean_, stdev_ = series_.mean(), series_.std()\n",
    "    cutoff = stdev_ * n_stdev\n",
    "    lower_bound, upper_bound = mean_ - cutoff, mean_ + cutoff\n",
    "    if return_thresholds:\n",
    "        return lower_bound, upper_bound\n",
    "    else:\n",
    "        return [True if i < lower_bound or i > upper_bound else False for i 
in series_]\n",
    "    \n",
    "def filter_by_iqr(series_, k=1.5, return_thresholds=False):\n",
    "    q25, q75 = np.percentile(series_, 25), np.percentile(series_, 75)\n",
    "    iqr = q75-q25\n",
    "    \n",
    "    cutoff = iqr*k\n",
    "    lower_bound, upper_bound = q25-cutoff, q75+cutoff\n",
    "    \n",
    "    if return_thresholds:\n",
    "        return lower_bound, upper_bound\n",
    "    else:\n",
    "        return [True if i < lower_bound or i > upper_bound else False for i 
in series_]\n",
    "    \n",
    "def plot_filter_by_stdev(df, feature, n_stdev=3.0, color=\"red\"):\n",
    "    lower_bound, upper_bound = filter_by_std(df[feature], n_stdev=n_stdev, 
return_thresholds=True)\n",
    "    if df[feature].min()<=0:\n",
    "        plt.axvspan(min(df[feature][df[feature] <lower_bound],
default=df[feature].min()), lower_bound, alpha=0.2, color=color)\n",
    "    plt.axvspan(upper_bound, max(df[feature][df[feature] > upper_bound],
default=df[feature].max()), alpha=0.2, color=color)\n",
    "    plt.title(\"Outliers in {} by {} standard deviations:\\
n\".format(feature, n_stdev))\n",
    "    \n",
    "def plot_filter_by_iqr(df, feature, k=1.5, color=\"red\"):\n",
    "    lower_bound, upper_bound = filter_by_iqr(df[feature], k=k,
return_thresholds=True)\n",
    "    if df[feature].min()<=0:\n",
    "        plt.axvspan(min(df[feature][df[feature] <lower_bound],
default=df[feature].min()), lower_bound, alpha=0.2, color=color)\n",
    "    plt.axvspan(upper_bound, max(df[feature][df[feature] > upper_bound],
default=df[feature].max()), alpha=0.2, color=color)\n",
    "    plt.title(\"Outliers in {} by {} k in IQR:\\n\".format(feature, k))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 9,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "['Year_Birth', 'Income', 'Kidhome', 'Teenhome', 'Recency', 'MntWines',
'MntFruits', 'MntMeatProducts', 'MntFishProducts', 'MntSweetProducts',
'MntGoldProds', 'NumDealsPurchases', 'NumWebPurchases', 'NumCatalogPurchases',
'NumStorePurchases', 'NumWebVisitsMonth']\n"
     ]
    }
   ],
   "source": [
    "# Don't Apply to binary variables \n",
    "\n",
    "non_binary = [x for x in df_numeric.columns.values if not
x.startswith(\"Acc\") and not x.startswith('Compl')]\n",
    "print(non_binary)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### comparing outliers method"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 10,
   "metadata": {},
   "outputs": [],
   "source": [
    "outliers_dict=dict()\n",
    "def add_outliers_method(method, idx_to_remove, outliers_dict):\n",
    "    \n",
    "    outliers_dict[method]= idx_to_remove \n",
    "    return(outliers_dict)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 11,
"metadata": {
 "scrolled": true
},
"outputs": [
 {
  "name": "stdout",
  "output_type": "stream",
  "text": [
   "Year_Birth Number of outliers:\t2\n",
   "Year_Birth Percentage of dataset:\t0%\n",
   "----------------------------------\n",
   "Income Number of outliers:\t7\n",
   "Income Percentage of dataset:\t0%\n",
   "----------------------------------\n",
   "Kidhome Number of outliers:\t0\n",
   "Kidhome Percentage of dataset:\t0%\n",
   "----------------------------------\n",
   "Teenhome Number of outliers:\t0\n",
   "Teenhome Percentage of dataset:\t0%\n",
   "----------------------------------\n",
   "Recency Number of outliers:\t0\n",
   "Recency Percentage of dataset:\t0%\n",
   "----------------------------------\n",
   "MntWines Number of outliers:\t15\n",
   "MntWines Percentage of dataset:\t1%\n",
   "----------------------------------\n",
   "MntFruits Number of outliers:\t52\n",
   "MntFruits Percentage of dataset:\t3%\n",
   "----------------------------------\n",
   "MntMeatProducts Number of outliers:\t23\n",
   "MntMeatProducts Percentage of dataset:\t1%\n",
   "----------------------------------\n",
   "MntFishProducts Number of outliers:\t47\n",
   "MntFishProducts Percentage of dataset:\t3%\n",
   "----------------------------------\n",
   "MntSweetProducts Number of outliers:\t49\n",
   "MntSweetProducts Percentage of dataset:\t3%\n",
   "----------------------------------\n",
   "MntGoldProds Number of outliers:\t39\n",
   "MntGoldProds Percentage of dataset:\t2%\n",
   "----------------------------------\n",
   "NumDealsPurchases Number of outliers:\t24\n",
   "NumDealsPurchases Percentage of dataset:\t1%\n",
   "----------------------------------\n",
   "NumWebPurchases Number of outliers:\t3\n",
   "NumWebPurchases Percentage of dataset:\t0%\n",
   "----------------------------------\n",
   "NumCatalogPurchases Number of outliers:\t4\n",
   "NumCatalogPurchases Percentage of dataset:\t0%\n",
   "----------------------------------\n",
   "NumStorePurchases Number of outliers:\t0\n",
   "NumStorePurchases Percentage of dataset:\t0%\n",
   "----------------------------------\n",
   "NumWebVisitsMonth Number of outliers:\t7\n",
   "NumWebVisitsMonth Percentage of dataset:\t0%\n",
   "----------------------------------\n",
   "----------------------------------\n",
   "Number of outliers:\t208\n",
   "Percentage of dataset:\t12%\n",
   "----------------------------------\n"
  ]
 }
],
"source": [
    "#for feature in df_numeric.columns:     \n",
    "idx_to_remove_std = []\n",
    "idx_to_remove_iqr = []\n",
    "for feature in non_binary:\n",
    "    id_std = df_numeric[feature][filter_by_std(df_numeric[feature], 
3)].index.tolist()\n",
    "    id_iqr = df_numeric[feature][filter_by_iqr(df_numeric[feature], 
1.7)].index.tolist()\n",
    "    idx_to_remove_std.append(id_std)\n",
    "    idx_to_remove_iqr.append(id_iqr)\n",
    "    cross_outliers = list(set(id_std).intersection(id_iqr))\n",
    "    idx_to_remove = set(cross_outliers)\n",
    "    print(feature,'Number of outliers:\\t{}'.format(len(cross_outliers))) \
n",
    "    print(feature,'Percentage of dataset:\\
t{0:.0%}'.format(len(cross_outliers)/len(df_numeric))) \n",
    "    print('---------------------------------') \n",
    "\n",
    "   \n",
    "# Flaten lists\n",
    "idx_to_remove_std = [item for sublist in idx_to_remove_std for item in 
sublist]\n",
    "idx_to_remove_iqr = [item for sublist in idx_to_remove_iqr for item in 
sublist]\n",
    "# cross_outliers\n",
    "cross_outliers = 
list(set(idx_to_remove_std).intersection(idx_to_remove_iqr))\n",
    "# keep unique\n",
    "idx_to_remove = set(cross_outliers)\n",
    "#print('Outlier ID: {}'.format(cross_outliers)) \n",
    "print('---------------------------------') \n",
    "print('Number of outliers:\\t{}'.format(len(cross_outliers))) \n",
    "print('Percentage of 
dataset:\\t{0:.0%}'.format(len(cross_outliers)/len(df_numeric))) \n",
    "print('---------------------------------') \n",
    "\n",
    "outliers_dict=add_outliers_method('3std_17iqr', cross_outliers, 
outliers_dict)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 12,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "image/png": 
"iVBORw0KGgoAAAANSUhEUgAAAloAAAFdCAYAAADbtsPPAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xm8HGWV8PHfIcEVEJCgEYiBEZ0BR1Ej4I6CyuK4L4ALCE7UV99XH
Z0RdVSc0VFxGx23iYqACG6Ioh9BkXFj1GhAZBFQQMBIgLDI6gae9496rqk0fe/t/f/t291Pdyf5fT+f/
tzup56qOl1dfe6pp6q7IzORnS8G007gAkSZLWVxZakiRJlVhoSZIkVWKhJUmSVpIkVWKhJUmSVImFliRJUiUWWpIkS
ZVMRKEVEYsjIiNifnl8ckQNcNIL1jmQ94xIRB0XEyXOcZ6+IuHQO/U+PiIPnGtuGICLml/
168RCXuTIi9uix70si4rtDWOebI+LjA8x/YUQ8ZtA41Dtzah3m1MZcnlM/
22x901ehFREHR8Q5EXFrRFwZER+LiM3nMP+lEbHXdNMzc5/MPLqf2Oai3/
VExGcj4siOtsdFxLURsXB4Ec4ax7ER8aeIuDkiboyIFRHx6KnpmXl0Zu4zw/
xDLwSGISIOLXEdPEOfe0bVfwvIvwiuVlk5r9n5st66Vv2ycM75n9AZv6gSnDrCXOqObWGiPhURPwyIv4SES+Ype+F5XlP3W6L
iBMHjWG2bTZLTG+PiKNajzeKiNdSsEUR8fuIuIuKz0uVOrT/s1vC4ivhUR9x/
0eQxizoVWRLwWeDfwz8A9gN2BZ+wKntp/sOEwdvY3A/wP2jYgnlvXeXeBfgE8NrMXDXMFUxEv6/
```

EdmbgJsDnwS+HJERA/LHdW2mpOIuCfNvnX+LF0/
DtwCbA0cBHwiIv62cngjM6mvj4bPnAqYU2v5GfAy4OezdSwHRJuU574ZcAXwxcrxzdVHgEOA5wObAvsB
ewPHdvSbeg23Aa6m2ZfGJzN7vtFs/JuB53a0b0LzZA4pj48C3t6avgewstz/DPAX4PdlWf8CLAYSmF/
6fBd4SWv+Q2j+8V4PfBO4b2taAq8AfgX8GgjgAyWeG4CzgQdO83z+uh7gYOB04L1lPb8G9plhWzyn9Lk
78E7g5Na0jYA3AhcD1wCfA7ZoTfsScCXwuxLD37XmPZZmZzqFppDYY4YYjgUO73h9Eti6PH4J8N1yf36
Z9n+Ai8rth6XtlvJaPAvYC7i0vC6rad5sL5ohhtOBdwAryvY+sfVcvwm8vKP/
L4CnzLC8TwJLy3IPnmE//DOwQ6vt+PY+19F/d+BM4EbgKuA9pf2K8vxvLreHAzsC3wGuLa/
dZ4B7tJa1Evgn4JzyfI8H7tyaflh5bX8LHFqWv7hMeypwFnATcDnw5tZ89yt9X1ym/U9rv7ysxHJYWX/
XfQJYAHy9PM8fl9flu63pOwHfBq4DLgCeVdofXeLdqGP/PrPcfztw1Gz7b9m3/gz8qWzPE1vbbI9y/
y7Ah4BVZZ3vB+5Ups247wFPockDN5VlvmYu+WsSb5hTzal3jGGoObX0+THwgjnsl3uWdd91mul7AZe2H
r8GOBe4T5e+3bbZS8v2uh740AxxtHPP39Ls5w/
t6LOYJuc8aprX8KnADeN8n891ROuRNInyy+3GzLwZOBl44mwLyMwX0vwj+YdsqucjZuofEU+neYM9k+Y
fyQ9o/
rm1PR3YjeYfyZOAxwL3pzkieR7NP81e7AZcCGwFHAF8arojmcz8InBGiWUpzY4z5Z9oKu3HAtvSvOk+1
Jr+dZp/6Pem2Tk/07H4A4G30VTsP+ol8HKU9iLWJKLpPJWmoPj7Eh/
AzuW1OKE83ha4K3AfmqOhj0XEZjMs80Xldh/WJGWAo4G/
DldHxMNotu0p0zyHR5a4PjnDugAeAPwhMy9ptf0c2Hma/
v9FU1xtRlPQfKm0PxagPPdNMvOnJf63Awtp9qcdgDd3LO+5NPv6DsDDgBeW+J8CvAp4As3+9+SO+W6m2
R73AP4BeFWZp+2xNAllv4j4e+DDNPvDNjTb997TPEEeAj9EUIfem2ScPmZoQEZsCpwLH0IwCPh9YFhEPA
P6XpkB6XGtZBwLHTbOervtvZn4U+DzlaDIzn9Fl3rcAS4AHAQ8BHgW8oTV9pn3v08Chmblpmf975bnNi
4jfRcTuM2ybSWVOXfM8zKlrDCWnDuAg4IuZ+fvZOkbE22jyyR6ZeUWPy9+XJnc+BHjBTKe9W/
YCfp2ZZ7YbM/NS4cZ8eYx3cXKoymhf4ymmmvQs4tdw/
immOvsrjS4G9OirSrkdfNMnm0FbfjYBbKUdgZb4ntKY/AfglzSjGRrM8n/Z6DgYuak27W1n2vWeY/
140/zxf1dH+K+BxrcfbAX/sFg/
NmySBu7eq8SN7fD2OBf5AcxT3h3LbvzW925HEY1vTp9oWt9r2Ks9pXqvtOmDJNDGc3vFaP6jEETSJ5Xe
UkSfgP5nm6KXE8jNg19ZyD56m7+Pb+1Npeznw7Wn6/5DmH/w9O9rvB+Qs2/jZwE9bj1d2bOP3Ax8u94/
p2BY7dW7fjmV/mDWja1MjWota0/8NOLb1eBPgdrockQMbA7cB92u1HdF6/
Z8PfKdjnk8bB2q9f5eV+5vTvMe2LY//
elTZ4/57eEef9ojWZcCTWtP2o7zvZtv3aEYCXgJs2sv7Y124YU7tnN+cOqSc2rHMnke0aPLMzcCj+iz
F817+YPA94HNZujbbZvvt3pr+ZeB108zbHtHtE6HDh9mn5fAj7a5TVM4BKmGYEd1W2uI1rXAFtNcy56ITNX
/f26L/DBUoH+jmYHDZojj/Cm/mbqTmf9D8w/
sI8BVEbFsliOHtitby7hvMu4Gu6dc
elZmb07wBdwU+MHWdwzR6WfY1mXl76/GtzLAdOpZ5GXBnYMtsqjfm2H22Y0Y2oznZt39Ntt6MDNCBDy/
HB3uzx2PNKf8X5qC5ic9xHczzZB+22Y0ozndvJim6LkwIn4SEftOt+CIuHdEfCEe7WB1n7C
2tvmPtxxW7SX/YiI+G5ErI6IG2gSUOey2qepbqbhVa7uTdNxG22zu5tPzW0Mm/tuDYsS5
fYFHTe2TZb98Hs37FprRq2dFxMY0pzuWZ+bKzpX0uP/
OZGFHXJex9nt5/pn3vGTSjB5eX7bhv/
0WfrdkyaHvT0zb5zjOqbLoTO5hjX5qtNCmtOyU6Zew+1pTivuOMf4hmquhdaPaI4intlUj/
sAp5WmW2iOXqZ0nu7IOazzn6AN8BLM3Pz1u2uZ2umfnD6ZaXmR/
KzIfRnEq4hiR8x3ycwraYaD96U5SrwHzUgGNIluyly2TzND42yaI5f9Zuo6yHqmsV3r/
iKafWSqIDiaZjTlScD12Zye62ZP4NnRfOLqSpoE98GI+GCXvhcCd42I7VttD+aOyRmAzLwwM/
enOWX2PuCEcrFEu0b9d7Z9ahXNP/
32dzqvFg1n5tZrKKO26Lts8BJwDbZeY9aE6RrrXsLIdk3ZZXhsG3nGbdV9FcznzD+n8DnNaxT26Sma8a8s
6z27rO/JzHzacLb9d7Z9ahXNP/
p2jL+dZR5KjMsz86k0r+PXabbnus6c2htz6txar8Oohmdn801NAc+x47otP1pwPYR8dB2YzSf8/Hw45V
KCtmxOK74G+K+IuHP9ELubU6GVmTfQnOf+r4jYOyI2Lk/
yizRvhKaT5sGRHbv7dJ0j4j4j4uERsVs5Mr+FZgjg9un6zyQz/wycALy6/
Jx4D8iYlGJaGaJt5u0Dxajv7Dk3/FdF4UEX9b/
jm8DfhCq2A4nea01ruZ+cjrBTSjTruU289oTve9pUvcNwJfBf49Iu4WzXzc0ccdP3kCQES8MCK2yse/
0FzgmTRFydVARkT7+W9Ks9/cEBHbaAa/rZQMUXwAOaW2Lt3ZM3xS4LjP/UBLT/
rMs74vA08pI2phtG7JvLM/
DPwFeBtEXHXiHgg5dqx4iRg54g4sLxvn4e9pkIp2J1WlOOp0lKj2DNdWydZtt/Z3tvHw+8JSK2iogFNNe/
dX3d2spzOjAiNivP9SZG/
74eOnNqz8ypc8+pRMSdykFlAbtHxF0ipipv8EZUTcF3gMvRVaZOZpNIXuVyNiSS/
z9Cszz6c5OD2+5K55Jc99ieb05Xemme9kmtGul9SMbyZz/nqHbC60fCPNJ0luBJbTHCHtmZl/
LN0+Q3Nx8qXAt2gukG17J/
CvZRh4xn9kmXkizQ71uTQ8NqP5KOf1NEOu4ZYR+n9NBcnnhYRN9FcJIpXcmJLiLhzHK8ZLG3zSmLePssOcnh4xYsp1sn1H/
TwMu3TNNeaXEHz5v1Rv0Bce9OrtwLHldfimbbZ27u4zNP8sV9GcvvrrP4GSHD4DPB
D47HQLyMzfZeaVUzeai7NvKP+Ipr4082utWV5G81qvLutempkXTLP4fYHzy2vJZl9cXp
7/
EprtsStNQXYSzQhUTzLzazSnV75Hc03LqR1dXg68s8TxRprCbKblnU1zcf0XaEZ9rmTtIfdOLwe2oPmn
+ymafW1qWTfQjFa9WtNGd1kB0iNTyhf5AqTy0OvRh2mU9DHlsO1L6nw5W5yHXiOhHpOx5RUH9NnnFu9rHIMZaJ0AkeX+o+CvXyTa+bUPLwJ+UEaCepKZpwD/

CHw9Inbpdb4+vZxmRO94mudyDs2p4md2nA3o9F7g9aXw3KG8viO7GD5mjk0aXEQcQvNx5j3GHYskrevM
qY2I+A+ag4TH9XGd2MhMxE/waP0VEXej+Z6ZZeOORZLWdebUtbyJZkRzor/
axUJrwsUdfxZh6jbnn5wZtYjYj+bU3uXc8VSHJI2cOXX9UT6w8KHM/
Na4Y5mJpw4lSZIqcURLkiSpEgstSZKkSiy0JEmSKrHQkiRJqsRCS5IkqRILLUmSpEostCRJkiqx0JIkS
arEQkuSJKkSCy1JkqRKLLQkSZIqsdCSJEmqxEJLkiSpEgstSZKkSiy0JEmSKrHQkiRJqsRCS5IkqZL54
w4AYKuttsrFixePOwxpQtwC3D7NpD/
B7XcaaTQ9mzcP7n73nrufccYZ12TmgooRjYw5TBqhW66B2/9cHmwE3HU4y51DDptL/
pq10IqI7YBjgHsDfwGWZeYHI2JL4PPAYuBS4LmZeX1EBPBBYF/
gVuDgzDxzpnUsXryYFStW9BKvtAE4BZjm/
XvKybBgn5FG07PVq2HvvXvuHhGXVYymvR5zmLQ+OeXtsGBxeXA98MjhLHcOOWwu+auXU4e3Aa/
NzL8DdgdeERE7AYcBp2XmjsBp5THAPsCO5bYU+FivwUhSBeYwSWMza6GVmaumjuYy8ybgfGAb4GnA0aX
b0cDTy/2nAcdk48fA5hGxcOiRS1IPzGGSxmlOF8NHxGLgIcBy4F6ZuQqaRAZsXbptA/
ymNdvK0iZJY2UOkzRqPRdaEbEJcALw6sy8caauXdqyy/
KWRsSKiFixevXqXsOQpL6YwySNQ0+FVkRsTJOgPpuZXy7NV00Np5e/
V5f2lcB2rdm3Ba7oXGZmLsvMJZm5ZMGC9eKDR5ImlDlM0rjMWmiVT+B8Cjg/M9/
fmnQScFC5fxDw1Vb7i6KxO3DD1PC8JI2aOUzSOPXyPVqPAl4InBMRZ5W2NwLvAr4QEYcClwPPKdO+QfO
x6ItoPhr94qFGLElzYw6TNDazFlqZeTrdr1kA2LNL/
wReMWBckjQU5jBJ4+RP8EiSJFVioSVJklSJhZYkSVIlE/
Gj0tIwHbf88q7tB+62aMSRSNJomPcml4WWNmgmJ0kbInPf6HjqUJIkqRILLUmSpEostCRJkiqx0JIkSa
rEQkuSJKkSCy1JkqRKLLQkSZIqsdCSJEmqxEJLkiSpEgstSZKkSiy0JEmSKrHQkiRJqsRCS5IkqRILLU
mSpEostCRJkiqx0JIkSarEQkuSJKkSCy1JkqRKLLQkSZIqmbXQiogjI+LqiDi31fb5iLPNK+
+KI+H1r2sdrBi9JszGHSRqn+T30OQr4MHDMVENmPm/qfkS8D7ih1f/izFw8xD3jvhcv2kcwBZxB/lEw1tJkgfvzqCEcYzCmBKvD73z+0nNIaDDmpsZSk/o/WMOIdeRKCCGTeqB1kDc+WTaDXRemw60rNS9iJoJ1wDfLgeqvd4NcO4aTVQ48kQyBzvmzB4MMgvOEKLRE4M+Fd8CC6HGM+0OXI1EtpKPaeNjHnfLRfaYvYJK9XmtM+aPiQSC2jRbKHjqnXQnLUHdnJwwFZQHXM/ym7c8fkZDrl6lqVLZJLNWXa3SatSfBn3Nb6J6eQnVvH3uUObHAu9tbuUrdkeUrb4GhBeDLGD1XUMbaBSqnMfeZ2x9vfsWhqcGL+pPrnnWWWvSxxA3WiQ1PgZj+3I+MTzaKALBFAO6Uj8HBj8uR84krk+Wf4fcXjvF5A8tyXNRuJyZWo8/1U5L4JI2yAhGGSkYjJSgBPSjTtFIDpuXC5+A1DkWQPaSqSC5eQ0Q5PTKaAeGk0+9FY+gmFB5TSQ3v5HaWkIbqTQbZHO+DqmRNRtq7LcfXHn1sEh9YL4NDf1OUFi3aHaY2sGhHgmBwHqBKm0COqXxKsKRkdZNNpJa3tUmu0NWmZa3kzRvNj9u6bN/5sJJ1aSbFHEIl0o3eW0FQsxaQ3DMm1rpwYC4hXhFiWnfXEoDRwBJGROPcH4YKqHZH11TwmTbp8UwDMg/7Ig5/NZnURj4WlVMKkUaYIx3PZQjOBBwQx0S1sXd0wSY8tqeQGv5CUv5TTOWU6b5pKsnqkKqkihpqxSXQEx9rYHtPPhJHf59CGPeYdJh9H/8TuKqwhfaU3EP5DSMUhgJVfGdzRzKsL9yV0AkT0u28t9FgpBXaLMlKqaHrbbWdBb/5kmtJhHJ8Ak35X7Xpb8l+3ZyxGz8W+lCeAeZvcxcEfgUhcmUWS7b1KZ+WRI9HApHHZaDCMDYNbQnJeBNn9TKPGcZUv0ZPKHxPW5ABF/i/1XGlhQGLOfGyQXITB3XCnO4rENzFvf5PxkXABPzjhbeb7fXXFDa3UQhLufa24RyCDzL8gR1ouuYcbnVwJNuZs0Sc1Jk29wzy+z/0kScAwQ93L6xBBSN5Q99P4VPTIjb1yNjC5A/bLAOmGfDjlGm4BYqfZ4KSmNkWY3X6PGuxEuYXKAbaPhzNvkd/TfWtn8XYOvdx1Ggx4Bn1f3pWjtu9TxTS7DD1wiQF0ThD/ENGBgv7YRd2v5fX33AqcDhd1PHq5V4aNR8FlRR7D7FbHKQUAqqcwHkr1J7FUqi6sVkJB8mP+9pYJ8aMGvGGlHqq/MTK0eAgSJxl+OoaiaAHJMrGfN/d3jQqSsBL25zAlR8AZ11QJgeB3rn1cuiI9ik2C3JjNsSdKi6f5T+V14I/f1k4wHNeovVwaW+PiX5+F+ILl7umdgbvDZsgmGR/zM3HNSgr0uUxOAlY2nNGJgWvfqrrC8VROrKvFeqUqWJ3lrzyFYg4HPYh6ZIWqIYtIOTaY9wpvg+4rUCN8rRQQMrRMbGu+x7hv+t2h4Ks8lE/ZeSrUINPnKG1qDR5pOxRhxd/pVhzaKdnZp9sAkTFK1bhKHvLEbKHI/E8Y2/mBGVbUfeZIcrTaabezxKAxXrSlQjrNIJwXSS0PJH2ntdx9cfg/bPK0xtf9U5Yuu4hAqfswsyu9DKKr6grQaRZJSQbcrlHpVhIp4ruvN1R4ysxQUpXbzHhbCxuGtj2VbWyxxjjkNBs9lMnmPfJ7YJYdpBDfI1DjsVoBsEi96aXELaVZOdmPp0AgS0RAiO9XSY4kgvmY5KWCTYsCvK1yaHnvSU1EwKN0bUj8DNbvL7RYNf8Ta7kUjLqRM9twC4KUjeXqFcTl6t+rgGJwIMnJE/vh56Mpp5uBwc8fKwspNnS1Ld8ejhZt0/YTqZr13nDKMQQGqI5UAWuyYGT8t2hWAPfrEO1Kup8VJWE87fa2z/uoIAkPrpkP0KKdqb2ThvnqAd6iU+oGR0LFp2AmIjxP+4dU1ZDKZQHeUW7OVh3MtVGV/KEKmKNUkFSh4vPHoCmzjOCuoj/H/Vm1r6I/y1LEB4Ip/7dJfsSJE2WDQmHpaT3JbwECUWxEAmkCGVuFtDO8H/KZkSu0Eb0tHg0nK9tnjNdl1xDmaFaRNNDcrSuD1l3f+Ehm1dhgAGd55cLgNVPImsd4s4PBnc0M0xNgHP2qT7+i8WVh3J/FKoBvXNv8RhR6nJ4u9IyO4mWXRdSfjhAV0Gv3H4BKFuY+ZnySvTwdt6kZrunuqJKfUaJfDcKXjkxg44x8GKHGT2O2DpSwLvyPF+3mCXBVR7QzBXQ91bmJMxfE2Ohq80eT4X+KcBhK4Yg8W2cbRxtP7iR9sAQU+l9TnZpdbLz+1dB6WL8/lMDqrvDJJrAIjlGhSpG26zrpmyDJu7YeNTRE6ZozrDqNQgDdFuDpUYxUYk0ZImLZuafTJJK+kIDALYmgBjxzqI1yy0tBHzWOxXDMkrlnd2eYSmjTkPlgL1Ql64OgbOX/HYLOSYaaSP2hfI5zjowgO2hHNGuHkLRPMGRE1QvIPtsXIGa/jJxvxhDyNnTiKS5WHKRnFB4JvGHiwtYqgWEi0AQY25O9b1J5l1cAqZrn/q/QdOcTRoYHlGKQFvfJLEnbIhdOF9ykC0ZgfBrTu3QBfSz+9IiVtAYS7ql3RZJlyjt1Dmp4KXWCUuKwlqwSu/OyFbh+JxG+pMXGwBYS0uyx1X3H5F39OW7DwI1F6PAmh3u0fEjJ2FIjrgRBtAvIn3o01IDg2aEhXtyjvVvUzTwajGO3YJp/OSiqEL9UJWUrQpSvtVLQ/4MyTVDpWxqUUIDmoMZGK4DTnn/NT6xXbSdcz4hfqT0pR/DFB0jL1SiOClZEhPl9xCtYkr9h5PmT1nqrTmq0zEg2qSAzjY5VdE9Nz7/QFtAzzJRpHxSpsIr42hrWxr/4t6tVTuXuyQN8yPhDn47UIcvxiV9wvJlGs2DrI/8mTXZl5Xh+Xs3sMGZSYzX+LcClzMy4NEMJZ5v7fH+lPuxT6ThJCWS+k6SZIkqSILLUmSpEostCRJkiqx0JIkSarEQkuSJKkSCy1JkqRKLLQkSZIqsdCSJEmqxEJLkiSpEgstSZKkSiy0JEmSKrHQkiRJqsRCS5IkqRILLUmSpEostCRJkiqx0JIkSarEQkuSJKkSCy1JkqRKLLQkSZIqsdCSJEmqxEJLkiSpEgstSZKkSiy0JEmSKrHQkiRJqmTWQisi7hoRP4mIsyPivIh4a2nfISKWR8RFEfH5iLhLad+kPF5Zpi+uuwmSNDPzmKRx6aVH6zbgCZn5YGAxsHdE7A68G/hAZu4IXA8cWvofClyfmQ8APlD6SdI4mcckjcWshVY2bi4PNy63BJ4AnFjajwaeXu4/rTymTN8zImJoEUvSHJnHJI1LT9doRcT8iDgLuBo4BbgYWJOZa0uXK4Btyv1tgMsByvQbgHsOM2hJmivzmKRx6KnQyszbM3MxsC3wcODvunUr/3c76svOhohYGhErImLF6tWre41XkvpSI4+Zw6TuTjqp91tEcxWNcEa2sxSWbYqw7XgDq2e4nfQ7hPubY6ysUMC3N/ON9Dv7oVbvugGAG4vk8uy+PvNOfRnRmREF/2X7Zl5O2q/k9lmqqdnZ5H+wsI0iG0BE5OfKKkbJyckjm1EdiZrqxqtTOhKJeLcmSJEn9stCSJEmqxEJLkiSpEgstSZKkSiy0JEmSKrHQkiRJqsRCS5IkqRILLUmSpEostCRJkiqx0JIkSarEQkuSJKkSCy1JkqRKLLQkSZIqsdCSJEmqxEJLkiSpEgstSZKkSiy0JEmSKrHQkiRJqsRCS5IkqRILLUmSpEostCRJkiqx0JIkSarEQkuSJKkSCy1JkqRKLLQkSZIqsdCSJEmqxEJLkiSpEgstSZKkSiy0JEmSKrHQkiRJqsRCS5IkqZLIzHHHQESsBm4Brhl3LEOyFW7LpFqftmd92Zb7ZOaCcQdRmzlsoq1P27M+bQusP9szY/6aiEILICJWZOaSccUxDG7L5Fqftmd92pY7i/Vpn61P2wLr1/asT9sC69/2dOOpQ0mSpEostCRJkiqZpEJr2bgDGCK3ZXKtT9uzPm3LncX6tM/Wp22B9Wt71qdtgfVve65jYq7RkiRJWt9M0hEtSZKk9crYC62I2DsiLoyIlRFx2Ljj6UdEXBIR50TEWRGxorRtGRGnRMRF5f8W445zuog4MiKujohzW21dY4/G4WWsfhYRDxlf5N1NsT1viYjflfE5KyL2bU17Q9mfCyPiSeOJuruI2C4ivhsR50fEeRHxT6V93o7PncF8z2H9zV+TvJ4OxXTyM/ffv0/8c6TJzNzbDZgP/Aq4H3AX4Gxgp3HG1Od2XAJs1WnzHuCwcP8w4N3jjnOa2B8DPAQ4d7bYgX2BbwIB7A4sH3f8PW7PW4DXdem7U3m+bQLsUJ6H88e9Da34FgIPKfc3A35ZYp6343NHv60POay/+WuS19OhmE5+5v7794l/jjTuI1oPB1Zm5q8z88/AccDTxhzTsDwNOLrcPxp4+hhjmVZm/gC4rtN2r9ifBhzTxRnBpsHhELRxNpL0ZinO2t2MAAAKzUlEQVT22mDAvcCxwLwC/GXUMcp/SSauAtdfX8WcMB+4X2g5H2Jflvw4dMOD4wU7tk/zXfcexgIn0bk+jW0z6+s/5e5+w6YbR+P7kDh4v0EUvUfz85HQAnV4G5oNjwNmWqbPeWH8bPJcgxgOpcnX8v4Vw/4+9B8Kb0k7rVr3N/PSgEdBbv6nm8CP3bIbFI7BlV1aqjHtbVVx1+RTMI4IqFTdb0aiVSTa3xWjxMwOfbqnvXQ7l2Xh7rXZ5KuN6efp3Ze+ejSyuqhfp/KcZ9XvbNbCX/6jGndl7XOI77JzfnQlS76Ubbta0NjP3v5gmzn0ajnHrIXfQ4HzxgcUQG0RyE3ydvfNtzwf14YnXyjJDZ+4uA5fjj3Ahhc8XLJxDHMbcPP/8gDqOz+7s0d9v1QQTn1Rl1kTMOM36Er5Rx66Yqv/fjN2fVMzXWa07Lz91zHe3i/CEcPvAKy+hWcFfxvz7J6Pn2gdORebV0U8/SMYyfH7x+n/sd+hvvc+zPMWEntd3HuBs3iEajHvvSB/Wr9PO7bN3ep7cvW5vu+PsmTCnIb0Oz/DuMXZHvzu/Y54u7x66M+HbN8/9pf/9/dGr85P/qa/+k/3vnv///0V0enNfwAAAABJRU5ErkJggg==

4LXAi8GLgA5n53qFEKEkVmMMkjcKwTh3uCVycmZcNaXmSNErmMElVDKvQ2h84vvX4lRFxdkQcGRFbDGk
dklSLOUxSFQMXWhFxJ+CpwBdL08eAv6EZkl8FvG+a+ZZGxIqIWLF69epuXSSpOnOYpJqGMaK1D3BmZl4
FkJlXZebtmfkX4BPArt1mysxlmbkkM5csWLBgCGFIUl/
MYZKqGUahdQCtIfeIWNia9gzg3CGsQ5JqMYdJqmagb4aPiLsBTwRe2mo+IiJ2ARK4tGOaJE0Mc5ik2gY
qtDLzVuCeHW0vHCgiSRoRc5ik2vytQ42NvyEmaUNhvttw+RM8kiRJlVhoSZIkVWKhJUmSVImFliRJUiU
WWpIkSZVYaEmSJFVioSVJklSJhZYkSVIlFlqSJEmVWGhJkiRVYqElSZJUiYWWJElSJRZakiRJlVhoSZI
kVWKhJUmSVImFliRJUiUWWpIkSZVYaEmSJFVioSVJklSJhZYkSVIlFlqSJEmVzB93ANK67Ljllw/
c98DdFg0rHEkaqbnkwOn6r+850BEtSZKkSgYe0YqIS4GbgNuB2zJzSURsCXweWAxcjCw3M68fdF2SNEz
mL0m1DWtE6/
GZuUtmLimPDwNOy8wdgdPKY0maROYvSdXUOnX4NODODocv9o4OmV1iNJw2b+kjQ0wyi0EvhWRJwREUtL27
0ycxVA+bv1ENYjScNm/
pJU1TA+dfiozLwiIiIrYGTo2IC3qZqCS5pQDbbLPNEJohSbM2dBIAWtRRdNYhyTVYg6TVMvAhVZEbAKcA
LW6M28E
Pgb8DbALzdHi+6aZb2lErIiIFatXrx80DEnqizlIlMUk0DfWFpRGxMk6A+m5lfBsjMq1rTPwF8vdu8mbkM
WAawZMmSHCQ0DY9f2jd6ndt84WZX8/i/
WzCmaDYs5rANjzlu8kz3mhy426IRR1LHIJ86DOBTwPmZ+f5W+8JWt2cA5/
YfniTVYQ6TNAqDjGg9CnghcE5EnFXa3ggcEBG7AAlcCrx0oAglqQ5zmKTqBvnU4elAdJn0jf7DkaTRMI
dJGgW/
GV6SJKkSCy1JkqRKLLQkSZIqsdCSJEmqxEJLkiSpEgstSZKkSiy0JEmSKrHQkiRJqsRCS5IkqRILLUmS
pEostCRJkiqx0JIkSarEQkuSJKkSCy1JkqRKLLQkSZIqsdCSJEmqxEJLkiSpkvnjDkDSHZ18zpVd2/
cZcRySNC7HLb+8a/
uBI45UIoSZIkVWKhJUmSVImnDjdg0w3LSStK6zvCqiDqu1HkkaNvOpcjGpcjF8RMwDPgI8EVgJ/
DQiTsrMXwxj+d0ucjxwt0XDWLSkRrV2BizLzksz8ew8E/
A54GmV1iVJw2T+kjQ0tb7eeKDQpsBZZa+e+bX8/i/
WzCmaDYs5rANjzlu8kz3mhy426IRR1LHIJ86DOBTwPmZ+f5W+8JWt2cA5/
YfniTVYQ6TNAqDjGg9CnghcE5EnFXa3ggcEBG7AAlcCrx0oAglqQ5zmKTqBvnU4elAdJn0jf7DkaTRMI

```
AJ4UK1tV9ZzDPCfHe3vYe0LQI8o9/
dj7QtAf1LatwR+XbbvFuX+liOObRFwEfDIjv5V37Ojvs1hXxpLDusz1pHns35j7ZjncEaQ3wbYrmPJd3
3GOtLc1yXOic2Fs8Zec+F9bMjjac7//pmm6jwUeBXNRXe/BN5FuUiv9H8TzacdLqT1iQyaCwx/
Waa9aRzxAf9Kcz77rNZtagdeQnMe/
GLgw+3nNKpt15rvcEoiqrXt+nhdXwCcV7bREa32oW+3Pl7XTWg+yXQeTaL558rb7tE0w9pnt/
ajfWkuRj0N+FX5u2XpH8BHSgznAEtayzqEptC5CHjxGGL7JHB9q++K2u/ZUd/
62NdHmsMG2O9Hms8G3a6t+Q6ncn4bwj4w0nw3wD4w0tzXJdaJzYWz3fxmeEmSpErWhYvhJUmS1kkWWpI
kSZVYaEmSJFVioSVJklSJhZYkSVIlFlqSJEmVWGipq2icHhH7tNqeGxGnVFrfsRHx64g4KyIuiIh/
bU37dEQ8YJr5/iki7lLuz4+I39WIT9K6xRymSeH3aGlaEfFAmi+oewjNN1afBeyda35+o59lzs/
M27q0Hwt8KTO/
EhF3BS4AHp2Zv7nDQtbMMw+4DHhgZv4uIuYD12Tm5v3GJ2n9YQ7TJHBES9PKzHOBr9H89MJbgWMy8+KI
OCgiflKO3D4aERsBRMSyiFgREedFxFumlhMRKyPizeW3sZ7Rw6rvSvMNwLeW+U+PiF2mjvYi4u0R8RPg
X2h+qf0HEfHt1vreFRE/j4gfRcTWXdcgab1nDtMksNDSbN5G82Oi+wBHlCPEZ9D8Xt0uNL9ztX/
pe1hmLgEeDDwxInZqLeeWzHxUZn5xhnV9ICLOovmR0mNyzY8Ot90DODMzd83Md9L8gOhjMnOv1vTvZea
DgR/R/NSCpA2XOUxjNX/cAWiyZeYtEfF54ObM/GNE7AU8HFgREdAcuU0NjR8QEYfS7Ff3AXai+U0sgM/
3sLrXlGH3TYHvRMTXM/MnHX3+BJw4wzJ+n5knl/tnAI/pYb2S1lPmMI2bhZZ68Zdyg+aHOo/
MzDe3O0TEjjQ/RrprudbgWOAurS639LqyzLwpIr5H8yOinUnq9znzhYV/at2/
HfdxSeYwjZGnDjVX3waeGxFbAUTEPSNiEbAZcBNwY0QsBJ7c7woiYmNgV5pfXZ/NTcCm/
a5L0gbHHKaRstDSnGTmOTTXPHw7Is4GvgXcCziTZoj9XOATwP/
2sfip6xvOphkyP6mHeZaVWL49a09JGzxzmEbNr3eQJEmqxBEtSZKkSrzITiMVER8Hdu9of/
pLsxhmitPHUqSJFXiqUNJkqRKLLQkSZIqsdCSJEmqxEJLkiSpEgstSZKkSv4/
zUVeZvDJzosAAAAASUVORK5CYII=\n",
      "text/plain": [
       "<Figure size 720x360 with 2 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAlkAAAFcCAYAAAD73atpAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xm8JFV58PHfI8MmiAwyKNs4aMCdCBkBo0YCGkGNkMUEIXFQEmLEL
RqjRn1dEl9Fk4hL1BcjAoZVXCBRjIggcQBXFQPZFRtZxBmaQVV04Hn/OOdiz6X7Lt19bt+Z+X0/n/
u53VWnqp6uOv3cp09V143MRJIkScP1iFEHIEmStC6yyJIkuSWrAIkuSJKkBiyxJkqQGLLLIkSZIasMiSJE
lqYK0psiJiQURkMypz8+MiEaBpz8+MiEUzsN0Z2c5sVPf3b3b406jtkoIvaOiGVDXXXsN8a/
XsK7Y+NiH8ewnb77t8RMT8ifh4RGwwah7Egd3Nybvb5cyGfexGTH2ZT5vEaOhrNEzOXrr+NPgZmuS63y2lnuRj7xdRGs9qPpJOyo0aB6Vrw8WjvvGZ0VuncrgOl6HYgp2fIm5FOt6P3NvAGJiO/HNsjEF4c2Hv2vVGzD2XwCTIuJh6x9eoSKu+n0Nd+ZtHbODDaD2b6yArchh9dUlhaN9hlcoP8QUiE1LTyg1oFcjr41GAtnLCDeoSDqtrzcOk8SgKi5dPa4/L2D6LdSyY2L+dyIYjsOYsTc1F2dyw4SM4VAEsVAOvq8cEFE0eapRWsFZbRyJBGbWYjgNU4mgR/mhEGr5oGTyy7KNw26W2oUrTzqTbAHARhFVsKWGV+YaeXOZPb4kKw2sTtRWAsMU0o7mlTwlp2jz9bXDf7XmU8fHLMCFKQDD5gvM7B+pfm7R9RgWy1Ly5LmVXERY7KLjRfdaYmrSchKEcP6MU8vuSOrtHWYA4L4k5FYSA5v+4BBmCd5b4bdzPUEROVV6k+3mPRy3dIOlsbd1hGXhuIv7BI5tNKjH0nW/W/7dEtL8Zy0GZ++S6D9cbuGz0E4vyVlyBJf6fyqY/WMgm8Lz+w4HRGkEvSmBSq4ZWCLBjMTHqtZJOHdpmpv4E1WAkZqdiQf3HQLKmQrbvOkF/DNYz3Bm1JTsDzPGYcHgK+NmdRGi4uk31+MOZXWrq+Vf/q2+SdlsBAE6Ff/XOdKaeG2cIJDqp7p3NpN9QYHGd+Hnjlm5GfuaALwLL5UzfsZqeCGVgSmVd2oxV8cYJTXrbvK+yv3OdmebGmvkOumr0BmY/MNPbzMvCcgd/vOaY83VDZwFEBnVnNzvKZh5uIn/hBUwfhwOONpVlzBdZMBYSP3h6nvuUwyRfwVZZM8g4ZhjmZDnYX4mpQhZHCzwVJJQOxYAg2eMaWaqoK/c7KCvv2+rCWL8SCgMrNg5kWNTuJkBmKCCY+tt7ya5V/nG/qWWxbeMQtfdNAtS3eMRdn6MjTHKkzC2Hko+KwDHe6lYG9mFOZK40K49azBBXOUtc9h0WmQuCXfpfKanU4iWcvTdUG5+Cj7kUe92Ho6QA4hIuaeSN5BbkscwzAO+L/HNmIj8/3xu3iyZfMbi4JpEaezSvvr34h4D/0h4+0PhDYA87Z8S/96sV8Ra7ZkayJD8JsJUPXtHhmmC1Ov60G3l/H/Nq/W9aD0mpBX5AHC8tkq5S7NGKOrO5vY7cb7oJ9mzKaIGrmTwV0s4WYBXZyaLU7c8tQ8O7PbN2EcWqo+S8FJdZvU5YNS6W4Y72G1X6vSa2s5RN4s1Xuy4E2vVI4kV+SyM/Ks0D2gxULaHvvlSeDXVr0vy0RvR//kDqLpWQSbYKDGkNIO2PhQd3lTCWy/V8jl98g2hUSkWTrQMRXpWV+CGLu9fHjwg1WbD4f3HJA8x+KYT+9hfx0x2mhtAPn2+7RNO/gP4Cb5e2ysFrqLiPUsVdfNMvp3VLb/qwHFwpCMnCXJFPp/dPpT/WdgLRD3zUnf/QFIb3bLzODv42lO7WtLx+rfIGTH/5Cm/AOArnpF0PeBsQ7Y+8U35jIFLvvxdTthohsaZmDPHtYqBHZKVqUqR0ZskWv+ycoqd8LCZX4xCpejiUP2VGsa/a0kMNAWLF4Y9PlUyH9Vz+JGGU0UH6EHkYNPJpW7B+Ml0YaCOHl0UwT/fmbsz/49S+JUHHsAuUf5zGTkMkmh86hQwkRq7QzE2u0rkVm2/8BlXeEPGq/oAiSO/nZrwJbNsaNYcqpsfjk9z6c34QSQV8g9pNEA/kM1Uo+0DmFWu+hSXVYdBVL4MCP+2OjHB6fTmkpdr5JUgCPMR8MlIpOvvBQB1VQYW+rk1b48hfM9Sk3dHCijC5F9B+BTyWK9LgPT1Gg/NjTlGr2IfeN/wJtEvNrXW9sKpy3GJ3UYo+PBa8EiURybbLhpZdv2efe8gNDw1Uy1vP3IDFRLXsvS6t1oxN5bUqdbxlfKSERIOR6bKVgPI/Ae8RS1tDYGtXX3TV4QKjnsYhjXMwOPhN0wu6KuGmGT/Kv6/zvK1pyLUtBQhsfyEtY1vCh4y1iBwNVRpiNQ58XdqhSFJjCvkt14zZTpWtK13z/GyJNJ+oR+smHq5WoRtnm3d2rIVk7DDl7tubWFI/Mdcy6uTtd+0Yz/fmU6RExuAyo6GsiC5sBFx8Xy/
```

DsBl1L8rddrBwKWjfs92/rQ4Xbg1cFtmru4yb0WdP2x/A3wwM6+q2/2/
wDMj4vEdbT6Ymbdn5r2UN+ajgCdT3pBXZeaKKW7rxsz8bJbrUI6j/GF/
7CDLRsS2wP7AazLzjsz8dWZ+py5zCHBMZl6UmfdThkafPe4c/JGZeXdmXkH54//
NzLwuM+8CzqSMgkBJRv8vMxdn5gNZrou4n3LqoZcj6367CTgKeEWdfhxwcESM9aG/
pHxafpiI2JFyjP7PFPbR5pRPwp3uohyvbh4Enh4Rm2bmiroPusrMczPzssx8MDMvpXxCe/64Zu/
LzHsz8xLgEkqxBfBnwAfqvrgZ+Pi4dX8xM5fXdZ9C+RS8R0eT5Zn5icxcXfvgn1EKmJsz83ZK0dHLXpS
kdVTtG6cBP+yY3/O4ZuaNlBGwA2vbfYBfZub5XfbP0sw8KzPvz8xVwL912T9d1WP8XOBtmXlfZl4M/
AelX4z5bmZ+vfb/L/CbffsA5Y/dUyNiw8y8ITN/
UmP6bmZO+bqjdZQ5dZrLrus5tV8R8TzKvj1tkqZbUE5H/oQyGjXV6y5/Dby/
7u+vU0ZNnzSF5bam9OU11L53G+VD35ivRsQ9lA9mKykjc2PtT8zMXacY64xoUWTdBmzd4zz9tnX+sD0e
+FhE3BkRd1KGXQPYvqPNzWMPMvPbwCeBfwdujYijI2KLKW7rlo71/
LI+nOqFd72W3RG4PTPv6LLMdpRRjLHlfk45ndP52m7teHxvl+dj8T0eeMvYfqr7ase6jV5u7nh841bz
FxMGa15fkQ8mTIKckaPdRxFeeONL566+TnlDd5pC8qw/
Roy8xeUUaPXACsi4ms1lq4iYs+IOCciVkXEXXW58X+gbul4/G9e4/Et+s+
+24+H7onPdr4yIizv269PHrbtz2UnX16XtTzPLR7Uu7Sc7rifym0R+cH3+MBGxTUScHBE/jYi7KZ9mp/
oHfDtKH+48TjeyZj8dv283iYg5mbkUeBPlE/TKGsNEfXJ9Y06d/rLrek7t1yLgS/U1T2Qvymj/
h8blncn8bNyHgc4cOpHbKH15DbXPb00ZFR9zYGY+ijJy9mTafMgYmhZF1g8olfwfd06MiM0onyzOrpN+
ATyyo8njxq1nOgf2ZuBvMnPLjp9NM/P7vdaXmR/
PzN+hDAfvQjmdNSo3A1v1+KbQcsobGXhoBXCGZXU5n5aOAzlD8cU7GCh+8LAOqn+88CrwMeU0deLh+37vHx9Fxfj21v
P26fdLaf7Lh+Edg7InYA/
ogeRRZlNC0p15RsQTm2E72GTsspfbhzxHE+U+yn9RPocyl9PSkXeaswp07fup5Tpy0iNqVc1jCVb3Z+k
5IPzo6IqY4qDuJbwP71WHT6E8ro2AXjF6gjk8dSrsmbtYZeZNXRivcBn4iI/
SJiwzoM+0XKRXFjw58XAy+OiK0i4nGUT7KdbqWcA5+KzwDviIinAUTEoyPi5b0aR8Sz6qjGhpTENHaR9
EjUYfUzgU9FxNy6z36vzj4ReFWU2xpsTBm2X5yZN/Sxqc8Cr6mvPSJis4h4ybg/
jOO9tca0I+UagVM65n2B8kf7LygXNPeyC+XU0DPrD8AfAl/p0vZcyrF4Q0RsHBGvq9O/
Pb5hRDw2Il5W35j3U0bBxo7jrcAO47559SjKp9v7ImIPyqjOVJ1K6WNza7Hy+o55m1H+4Kyqcb2KMpI1
2freEBE7RMRcygXqvfyAcl3CGyJiTkT8MWueipzwuNZTf+dSLgK+PjOv6rGdR1G/KBAR2/
PwP5I935NZTqF+H/
hgRGwSEbtSLmY9YYLXBUBEPCki9qn9+z7KSIG3hajMqdO3HuRUImITyml2gI3r84n8EeXi/
HMmaQdAZn6Ysq/
OjojWo0VfoPTlL0a5f9uGEfEiymUZH57gLMhRwAujj9v8zJQmt3CoB+cfKRXm3cBiSsW/
bz0HDmWnXkK5kO2brNnRoFTR76pDsH8/yfa+Qvnke3I9zXE55RNeL1tQ3hx3UIZrf8boq+G/
pFTsV1POM78JIDPPBt5N+XbHCsq3XA7qZwOZuYRyDcEnKa99KeXi0YmcTrmg9WLKRZCf61jfMsr1Pkm5
KLzXdldm5i1jP3XybfVajrGbE/5jbfsryvVDr6QkhFdThod/
1WXVj6B8k2U55XTG8ynfCoJSlF0B3BIRY6dTXgu8P8r5/P9DKXSm6n2UvnI9pb8+dK1EZl4J/
CulGLqVcnH99yZZ32cp39i6hLIPv9yrYX3tf0w5VndQTpF+uWP+VI7ricAL6D2KNfYad6dcA/
e1LjFN9p58BeVi6uWUAvo9mXnWBNsbszHliwW3UU7/bEPJH0TE8yJislMb6zxal/
W2ZxajX1TFMprvHdsRpSbhH5mXPtFwPHTOf2X5R5YXwW+FRFbTXW56ap9+AWUPr2Y8lq+QSmi3jfBcqs
oxei7ASLikIjoeV3uKMQ09rf0MBFxDOWi7neNOhZJWtuZU6GOiJ5JOYV76DSvC5tVLLLUt3rK4mJgt8y
8frTRSNLazZz6GxHxaMrp1FMz8+pRx9OvteZ/F2p2iYh/
opxC+Mj6ngwkaVDm1DVl5l2Z+f61ucACR7IkSZKacCRLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5Ik
qQGLLEmSpAYssiRJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyy
JEmSGrDIkiRJasAiS5IkqYE5ow4AYOutt84FCxaMOgyt9X4BPDDqIGbeL+6FbDn7Tbn7h
hRfelpnzGkY0Y8xhml0a5sLZkm9amEYOm2r+mhVF1oIFC1iyZMmow9Ba7xvAOvE3e3q+8X2YN3fUUcCq
G2C/
d025eUTc2C6YmWUO0+zSMBfOlnzTwjRy2FTzl6cLJUmSGrDIkiRJamDSIisijomIlRFx+bjpr4+IayLi
ioj4cMf0d0TE0jrvRS2ClqSpModJGpWpXJN1LPBJ4PixCRHx+8ABwfX9EbFOnPxU4CHgasB3wrYjY
JTPXw6uRJc0Sx2IOkzQCk45kZeZ5wO3jJv8t8KHMvL+2WVmnHwCcnJn3Z+b1wFJgjyHGK0nTYg6TNCr9
XpO1C/C8iFgcEd+JiGfV6dsDN3e0W1an/C8iFgcEd+JiGfV6dsDN3e0W1anSdJsYg6T1Fy/
t3CYA8wF9gKeBZwaEU8Aokvb7LaCiDgcOBxg/
vz5fYYhSX0xh0lqrt+RrGXAl7O4AHgQ2LpO37Gj3Q7A8m4ryMyjM3NhZi6cN289vLeRpFEyh0lqrt8i6
6vAPgARsQuwEXAbcAZwUERsHBE7ATsDFwwjUEkaInOYpOYmPV0YEScBPbR8Qy4D3AMcx9SvRvwIWZ
WYCV0TEqcCVwGrgCL+VI2mUzGGSRmXSIiszX9Fj1SE7/0aP8B4AODBCVJw2IOkzQqs+J/
F64vTlx804TzD97Ti2clzU7mL2n6/
Lc6kiRJDVhkSZIkNWCRJUmS1IBFliRJUgMWWZIkSQ1YZEmSJDVgkSVJktSARZYkSVIDFlmSJEkNWGRJk
iQ1YJElSZLUgEWWJElSAxZZkiRJDVhkSZIkNTBn1AHoN05cfFPPeQfvOX8GI5Gk6Zkof4E5TOsnR7IkS
ZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLLEmSpAYmLbIi4piIWBkRl3eZ9
/cRkRGxdX0eEfHxiFgaEZdGxO4tgpakqTKHSRqVqdzx/Vjgk8DxnRMjYkfghcBNHZNfBOxcf/YEPlV/
NWKT3Y15It6pWWu5YzGHrdXMX1pbTTqqSlZnnAbd3mfWvwFuBzh1AHB8Fj8HucDW0bEtkOJVJKmwRwmaVT6uiYrIvYHfpaZl4ybtT1wc8fzZXVat3UcHhFLImLJqlWr+glDkqbFHCZpJky7yIqIRwHvBN49aOeZeXRmLszMhfPmzRskFEmaNnOYpJkylWuyxnsisBNwSUQA7AD8MCL2oPzVt2NH2x2A5YMGKUlDZA6TNCOmPZKVmZdl5jaZuSAzF1CS0u6ZeQtwBvDKqi9rLuCuzFwx3JAlqX/mMEkzZSq3cDgJ+AHw5IhYFhGHTdD8TOA6YCnwGeC1Q4lSkvpkDpM0KpOeLszMV0wyf0HH4wSOGDwsSRoOc5ikUennmizNgEHv/zLZ8pIkqS3/rY4kSVIDFlmSJEkNWGRJkiQ1YJElSZLUgEWWJElSAxZZkiRJDVhkSZIkNWCRJUmS1IBFliRJUgMWWZIkSQ1YZEmSJDVgkSVJktSARZYkSVIDkxZZEXFMRKyMiMs7ph0VEVdFxKUR8ZWI2LJj3jsiYmlE/CQiXtQqcEmaCnOYpFGZykjWscB+46adBTw9M58BXAO8AyAingocBDytLvMfEbHB0KKVpOk7FnOYpBGYtMjKzPOB28dN+1Zmrq5PFwE71McHACdn5v2ZeT2wFNhjiPFK0rSYwySNyjCuyfpr4Bv18fbAzR3zltVpkjRbmcMkNTFQkRUR7wRWA18cm9SlWfZY9vCIWBIRS1atWjVIGJLUF3OYpJb6LrIi4lDgj4C/zMyxJLQM2LGj2Q7A8m7LZ+bRmbkwMxfOmzev3zAkqS/mMEmt9VVkRcR+wNuA/TPz3o5ZZwAHRcTGEbETsDNwweBhStLwmMMkzYQ5kzWIiJOAvYGtI2IZ8B7KN3E2Bs6KCIBFmfmazLwiIk4FrqQMwR+Rmb9oFbwkTcYcJmlUJi2yMvMVXSZ/doL2HwA+MEhQkjQs5jBJo+Id3yVJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLLEmSpAYssiRJkhqwyJIkSWrAIkuSJKmBSYusiDgmIlZGxOUd07aKiLMi4tr6e26dHhHx8YhYGhGXRsTuLYOXpMmYwySNylRGso4F9hs37e3AOZm5M3BOfQ7wYmDn+nM48KnhhClJfTsWc5ikEZi0yMrM84Hbx00+ADiuPj4OOLBj+vFZLAK2jIhthxWsJE2XOUzSqPR7TdZjM3MFQP29TZ2+PXBzR7tldZokzSbmMEnNDfvC9+gyLbs2jDg8IpZExJJVq1YNOQxJ6os5TNLQ9Ftk3To2hF5/r6zTlwE7drTbAVjebQWZeXRmLszMhfPmzeszDEnqizlMUnP9FllnAIfWx4cCp3dMf2X9hs5ewF1jQ/KSNIuYwyQ1N2eyBhFxErA3sHVELAPeA3wIODUiDgNuAl5em58JvBhYCtwLvKpBzJI0ZeYwSaMyaZGVma/oMWvfLm0TOGLQoCRpWMxhkkbFO75LkiQ1YJElSZLUgEWWJElSAxZZkiRJDVhkSZIkNWCRJUmS1IBFliRJUgMWWZIkSQ1YZEmSJDVgkSVJktSARZYkSVIDFlmSJEkNWGRJkiQ1YJElSZLUgEWWJElSAxZZkiRJDQxUZEXE30bEFRFxeUScFBGbRMROEbE4Iq6NiFMiYqNhBStJw2QOk9RS30VWRGwPvAFYmJlPBzYADgL+GfhYZu4M3AEcNoxAJWmYzGGSWhv0dOEcYNOImAM8ClgB7AOcVucfBxw4YB+S1Io5TFIzfRdZmfkz4CPATZTEdBdwEXBnZq6uzZYB2w8apCQNmzlMUmuDnC6cCxwA7ARsB2wGvLhL0+yx/OERsSQilqxatarfMCSpL+YwSa0Ncrrw/wDXZ+aqzHwQ+DLwHGDLOvQOsAOwvNvCmXl0Zi7MzIXz5s0bIAxJ6os5TFJTgxRZNwF7RcSjIiKAfYErgXOBl9U2hwKnDxaiJDVhDpPU1CDXZC2mXBz6Q+Cyuq6jgbcBb46IpcBjgM8OIU5JGipzmKTW5kzepLfMfA/wnnGTrwP2GGS9kjQTzGGSWvKO75IkSQ1YZEmSJDVgkSVJktSARZYkSVIDFlmSJEkNWGRJkiQ1YJElSZLUgEWWJElSAxZZkiRJDVhkSZIkNWCRJUmS1IBFliRJUgMD/YNoDebExTeNOgRJkjRUAAAQ2klEQVRJkjQNB+85f1rTHcmSJElqwCJLkiSpgYGKrIjYMiJOi4irIuLHEfHsiNgqIs6KiGvr77nDClaShskcJqmlQUey/g34n8z8DeA3gR8DbwfOycydgXPqc0majcxhkprpu8iKiC2A3wM+C5CZD2TmncABwHG12XHAgYMGKUnDZg6T1NogI1lPAFYBn4uIH0XEf0bEZsBjM3MFQP29TbeFI+LwiFgSEUtWrVo1QBiS1BdzmKSmBimy5gC7A5/KzN2AnzONYfXMPDozF2bmwnnz5g0QhiT1xRwmqalBiqxlwLLMXFyfn0ZJWLdGxLYA9ffKwUKUpCbMYZKa6rvIysxbgJsj4sl10r7AlcAZwKF12qHA6QNFKEkNmMMktTboHd9fD3wxIjYCrgNeRSncTo2Iw4CbgJcP2IcktWIOk9TMQEVWZl4MLOwya99B1itJM8EcJqkl7/guSZLUgEWWJElSAxZZkiRJDVhkSZIkNWCRJUmS1IBFliRJUgMWWZIkSQ1YZEmSJDVgkSVJktSARZYkSVIDFlmSJEkNWGRJkiQ1YJElSZLUgEWWJElSAxZZkiRJDQxcZEXEBhHxo4j4Wn2+U0QsjohrI+KUiNho8DAlqQ1zmKRWhjGS9Ubgxx3P/xn4WGbuDNwBHDaEPiSpFXOYpCYGKrIiYgfgJcB/1ucB7AOcVpscBxw4SB+S1Io5TFJLg45k/SvwVuCX9fljgDszc3V9vgzYfsA+JKkVc5ikZvousiLij4CVmXlR5+QuTbPH8odHxJKIWLJq1ap+w5CkvpjDJLU2yEjWc4H9I+IG4GTKEPu/AltGxJzaZgdgebeFM/PozFyYmQvnzZs3QBiS1BdzmKSm+i6yMvMdmblDZi4ADgK+nZl/CZwLvKw2OxQ4feAoJWnIzGGSWmtxn6y3AW+OiKWU6xs+26APSWrFHCZpKOZM3mRymXkecF59fB2wxzDWK0kzwRwmqQXv+C5JktSARZYkSVIDFlmSJEkNWGRJkiQ1YJElSZLUgEWWJElSAxZZkiRJDVhkSZIkNWCRJUmS1IBFliRJUgMWWZIkSQ1YZEmSJDVgkSVJktSARZYkSVIDFlmSJEkN9F1kRcSOEXFuRPw4Iq6IiDfW6VtFxFkRcW39PXd44UrScJjDJLU2yEjWauAtmfkUYC/giIh4KvB24JzM3Bk4pz6XpNnGHCapqb6LrMxckZk/rI/vAX4MbA8cABxXmx0HHDhokJI0bOYwSa0N5ZqsiFgA7AYsBh6bmSugJDFgm2H0IUmtmMMktTBwkRURjwa+BLwpM++exnKHR8SSiFiyatWqQcOQpL6YwyS1MlCRFREbUpLTFzPzy3XyrRGxbZ2/LbCy27KZeXRmLszMhfPmzRskDEnqizlMUkuDfLswgM8CP87Mj3bMOgM4tD4+FDi9//AkqQ1zmKTW5gyw7HOBQ4DLIuLiOu0fgQ8Bp0bEYcBNwMsHC1GSmjCHSWqq7yIrM78LRI/Z+/a7XkmaCeYwSa15x3dJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLLEmSpAYssiRJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIamDPqANZlJy6+adQhSJKkEWk2khUR+0XETyJiaUS8vVU/kjRs5i9Jw9CkyIqIDYB/B14MPBV4RUQ8tUVfkjRM5i9Jw9JqJGsPYGlmXpeZDwAnAwc06kuShsn8JWkoWhVZ2wM3dzxfVqdJ0mxn/pI0FK0ufI8u0/JhDSIOBw6vT/8tIlY2imUm3L/mQ25SP9Ymtj6H7OBu2/GQwbnvzvmtdgTfmsc7h0zWf70cnrwzYCLR1+9d8Dra//OALo3fe4emc8jPctuQyqXz3nfF3+x3fy0npOVPeb+29zJzlfv4JtwYzaaqMftrfQ6k5XwA/w+8T5uqgeOKxNYTXYP1OPsE8k1nNsgP/n/P+xDrdPbZ+bdv1uOKjKZc/XVfpMK+bIXtHT66NaLFtvp+tMn1Gk8++tTkVQFvE7cj7P+BdxV1f6gccD+vCcdzW1cMHkMHvc1NP4AJvrW+Dw8W7ButtdSlrJvL+8nvXzO+g/NXXOg5eHg9fvdnX3bTdxW8jvUnf6eo0lreHqfXm6brUxD+DmI1ff8C/lmS2RwcdHgOfxfZj+5NL0ejvx/ZPZyezQb9O/+sbc82vkyxU+PW/mE0jt03l7R7+nb30O6fLc4nZmTuzPO6Hb8FCrLwxWz7tJt+fPOnrL+FPTx8zx5k6+yGdWdwfLOyNm8xwXaeZM3XBbJp+h/MzPvIXjdWG5qNZ4C3dbSvJw9D5/wUQ7ZkNxz7WTGCPzxkXwWO2dP+P1hKPPcl8Zb2OKfzfJfzNn+t4LOfmTtFueftcrR8WJjAbe3s+Q2vX/x5eqxrzNV9A5Ib3yPdFbt2Ng+cwPzTvdtnV0ObaLHcm2SPWUUAOcPhx5XhL/UzrqXfzSPuf5wPxDlm8zT+m+u8e7sdqG5tGsrZR+p7t8fKvvj29tcOnNbfEdfPduvVKOZ13fX6Z5aW7Ko9Kb3/0bvd8F5iQcb9UkY9WOMqerNmknHj37LEVxrEbE8eb9d+PuHnuh/rKfXJT2VIyzFy+x+6b1PDnbXXFxbqnRTd/9w9jPWnCOo8/0cGevm/b39fT2uaIuaqrDdsbenhh+sn3A86tOkSbnivHOc8vA49Z99a37u0F8y92/fpTrP1yLuRJHfz3x1eJyXVMbZ9/ol3bRTB7lv2gEfDKf79kdzf1vaFcR5vv3dNuTxbz1T9V9/tc/nYOs9Xb9PmTbPG9eP5s9zvfoZ03l+9dy+P5Z5XtdZ5vfmqv62/c/qGp+N37WN5P35WjvXp6+jb8fM/nH7tzfMGZVzJQt5BhP8JHP6XRN8LrG+fb30iTv/bfWb+4ptnG+fbdz0nnm+/t9/S9P8ALj89nLcp2efH92Vzav/HnnleZnnc/nTOv07Vfj8nnbH/WK/6dO2PvtbtT7/fK/ftoHvp/93/EGfUrVzeB4fz4+LnWGWuv/2oDv4bw7W/frnrd/ZH/pdc2jfL1mXjc5X7/1G8z3v3/Xy/NrvXnfV3/rvffH/c+v/bP9vsdl+BfT8o/7fO/lzuuvfvh63P//tH/9zuh9tPu3DzNO8+vn+ddDeX/NlfL3/wC/t7j3Y33Tv9Xzbe5bUc/H8EHmPnVmt83WvH1tCs1utVz09H/p/fCnZ9z+D43bbH/h95/L/zz7/w=

```
w1ZkvpnDpM0U6ZyC4eTgB8AT4qIZRFx2ATNvw5cBywFPgu8dihRSlKfzGGSRmXSa7Iy8xWTzF/
Q8TiBIwYPS5KGwxwmaVS847skSVIDFlmSJEkNTPsWDhqNye547F2NJc1mE+Uw85fWVY5kSZIkNWCRJUm
S1ICnCzUpT1VKWluZvzRKjmRJkiQ1YJElSZLUgEWWJElSAxZZkiRJDXjh+zpisos7JWm2Mn9pXeVIliR
JUgMWWZIkSQ1YZEmSJDVgkSVJktSARZYkSVIDFlmSJEkNWGRJkiQ14H2yhsh7vUham5nDpOFyJEuSJKk
BiyxJkqQGPF2ogU10iuHgPefPYCSSND2TnSI1h2kQjmRJkiQ1YJElSZLUwKRFVkQcExErI+LyjmkfiYi
rI+LSiPhKRGzZMe8dEbE0Iq6JiBe1ClySpsIcJmlUpjKSdSyw37hpZwFPz8xdgR8D7wCIiKcCBwFPq8t
8KiI2GFq0kjR9x2IOkzQCkxZZmXkecPu4ad/MzNX16fnADvXxAcDJmXl/
Zl4PLAX2GGK8kjQt5jBJozKMa7JeDZxZH28P3Nwxb1mdJkmzlTlMUhMDFVkR8U5gNXDC2KQuzbLHsodH
xJKIWLJq1apBwpCkvpjDJLXUd5EVEYuAlwKHZOZYEloG7NjRbAdgebflM/
PozFyYmQvnzZvXbxiS1BdzmKTW+iqyImI/
4G3AyzLzlx2zzgAOiNINI2InYgggsHDlKThMYdJmgmT3vE9Ik4C9ga2johlwHso38TZGDgrIgDOz8zX
ZOYVEXEqcCVlCP6IzHygVfCSNBlzmKRRmbTIysxXdJn8uQnafwD4wCBBSdKwmMMkjYp3fJckSWrAIkuS
JKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqYFJ/
62OfuPExTeNOgRJ6ps5TJpZjmRJkiQ1YJElSZLUgEWWJElSAxZZkiRJDXjhu5qa7ELbg/
ecP0ORSNL0TZTDzF+ajCNZkiRJDVhkSZIkNWCRJUmS1IBFliRJUgMWWZIkSQ1YZEmSJDVgkSVJktSARZ
YkSVIDkxZZEXFMRKyMiMs7pm0VEWdFxLX199w6PSLi4xGxNCIujYjdWwYvSZMxh0kalamMZB0L7Ddu2t
uBszNzZ+Ds+hxgf2Dn+nM48OnhhClJfTsWc5ikEZi0yMrM84Dbx00+ADiuPj4OOLBj+vFZzA9sGRHbDi
tYSZouc5ikUen3mqzHZuYKgPp7mzp9e+DmjnbL6jRJmk3MYZKaG/
aF79FlWnZtGHF4RCyJiCWrVq0achiS1BdzmKSh6bfIunvsCL3+Xlmnm4CjXiZC+fNm9dnGJLUF3OYpOb6LbLOABbsVx4uA0zumv7J+Q2cv4K6xIXlJmkXMYZKamzNZg4g4Cdgb2DoilgHvAT
4EnBoRhwE3AS+vzb8OvBhYCvwSeFWDmCVpysxhkkZl0iIrM1M1/
RY9a+XdomcMSgQUnSsJjDJI2Kd3yXJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLLEm
SpAYssiRJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBuaMOoDZ5sT
FN406BEnqi/
lLml0cyZIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGhioyIqIv4
uIKyLi8og4KSI2iYidImJxRFwbEadExEbDClaShskcJqmlvousiNgeeeAOwMDOfDmwAHAQcCXw0M3cG7g
AOG0agkjRM5jBJrQ16unAOsGlEzAEeCawA9gFOq/
OPAw4ccBuS1Io5TFIzfRdZmflT4T4F+AmyiJ6S7gQuDOzFxdmy0Dth80SEkaaNnOYpNYGOV04Fz4FzgA2AnYDt
gM2L9L0+yx/
OERsSQilqxatarfMCSpL+YwSa0NcrrwBcD1mbkqM+8HTgf2AmM38NfBn4XWDLOvQOsAOwvNvCmXl0Zi7MzIXz5s0bI
AxJ6os5TFJTgxRZNwF7RcQjYErgXOAP61tFgGnDxaiJDVhDpPU1CDXZC2mXBx6EXBZXdfRwNuAN
0fEUuAxwOeGELjZoJ5jBJLXnHd0mSpAYssiRJkhqwyJIkS
WrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLL
EmSpAbmjDoArd9OXHzThPMP3nP+DEUiSdNj/
tJkHMmSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLLEmSpAYssiRJkhqwyJIkSWrAI
kuSJKmBgYqsiNgy4rSIuDoiroqIZ0bEVhFxVkRcW3/PHVawkjRM5jBJLQ06kvUx4BuZ+RRgF+Aq4O3A2Zm5
M2vu3BORK3eEN0FVkRsAfwe8DmAzPx1Zt4BHAAcV5sdBxw4WIiSNHzmMEmtDTKS9URgFXBMRFwUEZ9
uLjfh+2eTWfXsjwJZmPVCiXTE+AsBRRgpXhG1sdFx+1AuMA5pk4IHzGdhuPCFLeMnrNsDA7+Rwt1RTTG
AnFBZOGHdDTrMzNkRHDDrEexNBqjE3K7h8PQUuF7P2VDbCECZQJpBBx8RyX0lTZlfiszP6kKLH3A2t
OzN2AXzCNlhbKwZLBZNS3ZcM6G1eqptlfd6TnYpeYhEFbjMr9o5Bcup1rP7zxT/
zF86bN2+AMCSpL+YwSU31XWRl5i3AzRHxpDX+BK4AxgUZ22CDh9oAglqQFzmKTW5gy4/
OuBEyJiI+A64FWUwu3UiDgM+LqM8h6JWkmmMMkteQd3yVJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQ
GLLEmSpAYssiRJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBuaMO
oCZduLim0YdgiT1xfwlrlrV0cyZIkSWrAIkuSJKkBiyxJkqQGBi6yImKDiLgoIr5Wn+8UEYsj4tqIOCUi
NhqW+cNHrmsaCHeIJrgfxjxjLNpPaLKjMbI2ioZFnjgScnNRY7KtbWaNlqRaSGWtmFHCapiYGTB/NzmpYqa3Jq+8a8KP3A/L59
CZCHDGfRWLHNmSnhJwjJSQuoXuV2u1mVDW/W61oIqlsYGfhmSwYYgetaKZsYZ8kAjzeXXVfsHBxRyLiyyalMerZRMvnJALh9kcFI1/
1eQD7AKfVJscBBw6yQTjZ7RyAuKOdlAw7v/QrOPBvxA6+RLyZvMBFgDgVFX4cGzchmjXkWHvpKZd5ivHRqJJlcgL4cNSYdXV5Ycm8aALWtLtX9e/
zL+yc3KVp9lj+8IhYEhFLVq1a1W8YktQXc5ik1gYZyXoO8LKIuAE4mWKY8j2Z0B2B5t4Uz8+j
MXJiZC+fNmzdAGJLUF3OYpKb6LrIy8x2ZuUNmuDCvsmdDZ2aUNbAgAOAr6dmYcA5wB/
WpstAk4fOEpJGjJzmKTWBhnJWpO3AW+OiKXANxLlAqAdWOzIS4vWqSXpkWvNWJlQE4IlhTHEuSGxkTdtMaIrfLj+SChbMydIsE
aoYlFWUWgOSBZGCkyiP2+AKANGH8ry8CZ4lKDIJzQIY/
hhK1O2U6i5wyX3Chk+BGcNoVmIoRkrUXKIfScoBz0XJGEsHUJQRWsaExDlpKrhtWKFy2c4Dwgh5hTwOTngcDGfbhfGYpBq7hmv1iVJ
eRfVGwa7Kp2Y0qvFJ2ZmDFVR2HHf4ePZ0pdHQA9RvLYCGzIJTQN3Bi/
VzHyGRvHaITtCsnmA5Kz0O8v6l8hWOBL9hM3Ok8HxRb6BJiWpzmhygNuvnmMaxE0d1/
nfhZl5LnBufXwdsMcw1itJM4G5TFJrMxP7eDNzQU3eETJTLZiwYJ3GJ3RDhMQ/
guSZLUgEWWJElSAxZZkiRJDVhkSZIkNWCRJUmS1IBFliRJUgMWWZIkSQ1YZEmSJDVgkSVJktSARZYkSV
IDFlmSJEkNWGRJkiQ1YJElSZLUgEWWJElSAxZZkiRJDVhkSZIkNTBn1AFIEzlx8U095x285/
wZjESSpmei/
AXmsPWBI1mSJEkNWGRJkiQ1YJElSZLUwDp3TdZk58AlaTYzh0nrDkeyJEmSGrDIkiRJasAiS5IkqYG+i
6yI2DEizomIqyLiioh4Y52+VUScFRHX1t9zhxeuJA2HOUxSa4O
MZK0G3pKZTwH2Ao6ibCbwfOzsydgbPrc0mabMxhkprqu8jKzBWZ+eP6+G7gKmB74ADguNrsOODAQYOUpGEzh0lqbShz
K0rCZwyS1NpRrsiJiAbAbsBh4bGaugJLEgG2GsQ1JasUcJqmFgYusiHgU8CXgTZl51zSWOzwilkTEklWrVg0ahiT1xRwmqZWBiqyI2JCSn
VqwYNQ5L6Yg6T6T1MpRrsfDsYgYbs6f1tgZbdlM/
PozFyYmQvnzZs3bBiS1BdzmKSWBhnJ+mPgUOCyiLi4TvsH4EPAqRFxGHAT8PLBQpSkJsxhkprqu8jKzB8A0WP2vv2uV5JmgjlMUmve8V2SJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLLEmSpAYssiRJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLLEmSpAYssiRJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLLEmSpAYssiRJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqQGLLEmSpAYssiRJkhqwyJIkSWrAIkuSJKkBiyxJkqQGLLIkSZIasMiSJElqwCJLkiSpAYssSZKkBiyyJEmSGrDIkiRJasAiS5IkqYFmRVZE7BcR10TE0oh4e6vtSNKwmb8kDUOTIisiNgA+CewPPBV4RUQ8tcW2JGmYzF+ShqXVSNYewNLMvC4zfw2cDBzQaFuSNEzmL0lD0arI2h64ueP5sjpNkmY785ekoZjTaL3RZVo+pEHE4cDh9ek9EXFNo1ha2Bq4ddRBjNjI+uCVE0w7ZMJWM/r3fzIVsjRsD7ox5ZQ3/mfEgPNjK5ufXcvCmWhkgkbsNTTyU2vdLxvmq2cWnfd5x3vOerNl2M7wcwrwq/8vqvTF7S/MMx3zDHKUtjmfzZ7sHAAAAAElFTkSuQmCC
```

```
SJKkBiyxJkqQGLLIkSZIaWCtvRjrRDdwkaTYzf0nrD0eyJEmSGrDIkiRJasAiS5IkqQGLLEmSpAbWygv
fJY3G95b+rOe85zx6BgORpGmaKH9BmxzmSJYkSVIDFlmSJEkNeLpQ66wzL7tlwvn7P+NxMxSJJE3PZPd
TO3jP+TMUiQbRbCQrIvaLiGsiYmlEvL3VdiRp2MxfkoahyUhWRGwA/
DvwQmAZ8MOIOCMzr2yxPUnDMdmFoesD85e0dpqN+avV6cI9gKWZeR1ARJwMHACYpDRrTHY6cSKealynm
b806010OnHbLVZy3+oHes43f82cVqcLtwdu7ni+rE6TpNnO/
CVpKFqNZEWXablGg4jDgcPr059HxDWTrHNr4LYhxDYsxjMx45nYOhrPu6fT+PGDb6+JSfMXrPU5bDbFA
sYzGeOZ2BDjmXIOm1L+alVkLQN27Hi+A7C8s0FmHg0cPdUVRsSSzFw4nPAGZzwTM56JGc+sNmn+grU7h
82mWMB4JmM8E5tt8XRqdbrwh8DOEbFTRGwEHASc0WhbkjRM5i9JQ9FkJCszV0fE64D/D/
ATYAjsnMK1psS5KGyfwlaVia3Yw0M78OfH2Iq5zysPwMMZ6JGc/EjGcWa5C/YHbHVr/
1AAAHYElEQVTt49kUCxjPZIxnYrMtnodE5sOu55QkSdKA/N+FkiRJLWTmrP8B9gOuAZYCbx/
iencEzgGuAq4A3linvxfxf4KXBx/
XlxxzLvqHFcA7xoshiBnYDFwLXAKcBGk8R0A3BZ3e6SOm4r4KyjrOAuXV6AB+v27wU2L1jPYtq+2uBR
R3Tf6euf2ldNiaI5Ukd+
+Bi4G7gTTO5f4BjgJXA5R3Tmu+PCbbRLZ6PAFfXbX4F2LJOXwDc27GfPjPAdru+th7xND8+wMb1+dI6f
8Go88Rs/em1b4ewXvOX+cv81cfxYQbz18gT0BQSyQbAT4AnABsBlwBPHdK6t+042I8Cfgw8tR7kv+/S/
ql1+xvXg/eTGl/
PGIFTgYPq488AfztJTDcAW4+b9uGxjgO8HTiyPn4xcGbtwHsBizs6+nX199ia6z6eKyzXwA8uy5zJrD/
NI7DLZR7g8zY/
gF+D9h93Juw+f6YYBvd4vkDYE59fGRH2wd7ca9rulut9dr6xZP8+MDvJaadCnfvjtl1LliNv5MtG+Hs
G7zl/nL/DXL89facLrwoX9xkZm/Asb+xcXAMnNFZl5UH99D+UQ40Z2dDwBOzsz7M/
N6ShW8R68YIyKAf/YDT6vLHAQf2EeoBddnx6zgAOD6L84EtI2Jb4EXAWZl5e2beQflEsV+dt0Vm/
iBL7zp+GvHsC/MPA+4fQT7o+s2usWTmd/
MzNX16fmU+yr11M92e722Hvunl2Een844TwP2re21JvOX+cv8tR7nr7WhyJqRf3EREQuA3ShhDhwCvi4h
LI+KYiJg7SSy9pj8gLOjA08l9gS+GREX1jtKAzw2M1dM2dAdASazANn3Gs319PH76VBwEnNTxfFT7B7
TaxmReTfnENmaniPhRRHwnIp7XEed0tzvd90Hr4/PQMnX+XbW91mT+Mn+NZ/5aj/
LX2lBkTelfXAy0gYjNgS8Bb8Bb8rMu4FPA08EngmsAP51klimO3a0nDkaP51klimO30iz8nM3YH9gSMi4vcmCn0G4qHekPFlwB
frpFHunwlDHeX2I+KdwGrghDppBTA/M3cD3gycFGb9Lnd6SwzE8en+ftyHWH+miD0GYjH/DXVjZu/
muSvtaHImtK/
uOhXRGxISVAnZOaXATLzls8sx8IDMfBD5Le02+jDIvOGTe9p8xcXn+vpFyEuAdwax2iHRuqXdln
PMtYcyh4qvtyf+CizLy1xjay/VPNxP7otY2uImIR8FLgkDqEh3W/
ll9fCHluoFd+tzulN8HM3R8Hlqmzn80Ux/2X5+Yv8xf45m/
1qf8lY0u9hrWD+WGqddRLnQbu6jtaUNad1DOJx81bvq2q/nJ4RWjHThbnM+BRHY+/T/
nWxEdY82LCD9fHL2HNiwkvqNO3Aq6nXCQ5tz7eqs77YW07dsHii6ewn04GXjWq/cO4CzBnYn/
02kaPePYDrgTmjYt7HrBBffwEyjdm+tpur9fWI57mxwc4gjUvHD111LliNv5MtG+HsG7zl/nL/
DXL89fIk9CUgizfTPgxpZJ+5xDX+1zKEOGldHxdFPgC5eupl1L+Z1nnQX9njeMaOr7Z0ivG2jkvoFyk9
0Vg4wnieULtIJdQvpL9zjr9McDZlK+hnt3R0QL4RNy4CFHet6dd3mUtZMMAuBy+syn2SCr0DX9o8Ef
gY8umPajO0fynUUK4BfUz59HDYT+2OCbXSLZynl/P4aX3UG/qQex0uAi4A/HGC7XV9bj3iaHx9gk/
p8aZ3/hFHnidn602vfDmG95i/zl/mrj+PDDOYv7/
guSZLUwNpwTZYkdSJaxyJLkiSpAYssSZKkSSZKkBiyyJEmSGrDIkiRJasAiS32LiJ+POgZJ6+4OKI
kBiywNLCL2johzI+K0iLg6Ik4Y+4/mEfGsb/+ejv17aHRsRXI+K/
IuL6iHhdRLy5tjk/Iraq8w/4T2fyPiyaN8/ZLWXuYvtTRn8ibSlOxG+bcHy4HvAc+JiAuAU4A/
z8wf1n8uei/
wRoDMfEZNM+MiF3qeYvNWGRpWG5/UJ5W68b8vM3SLio8ArgaOAo4HXZOa1EbEn8EnAeqEYgn5l6oZLWOeYvNWGRpWG
5IDOXAUTExZT/R3LXMAUTEx/BZAc/8Rj8NEnb+c8FPlGnXnX0RN1L+8SjAOZl5D3BPRNxFh8ZRWHVQPRBwF/
FedfhmwaOs8vwu8MX6YRPK/7SfiwEaPQbDhX7SnwFMy0BUUlPGUbmRfaLQWb0Eh8dX2sZx1kw5a6SzB9LlWrf1PNjx/
MG6zkcAd2bmM/sPVZLWYP5SE16TpZG3ZauBraLiGcB1gcB1OsZ5gDnAYfUnyn/
8HNS9dPk9RHx8rp8R/MRvtwhe0nrN/
KWBWWSpmcz8FfDnwCci4hLgLMq1Cp8CNoiyIyyjXPByamff3XtPDHAIcVtd5BXDAcCOXtL4zf2kYIrPba
KgkSZIG4UiWJElSAxZZkiRJDVhkSZIkNWCRJUmS1IBFliRJUgMWWZIkSQ1YZEmSJDVgkSVJktTA/
weYcdRnN06cXAAAAABJRU5ErkJggg==\n",
       "text/plain": [
        "<Figure size 720x360 with 2 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAmAAAAFcCAYAAABvOwKbAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
```

i5vcmcvqOYd8AAAIABJREFUeJzt3XmYJFWZ7/
HvSzeLNEgD3SKbNI64oI5bK7ijMAroDOiIslw2UXRER68rbgPi7lVRZxSHEQQUREQURhFFBB0V0QYZWd
oZWoTutlkK2Tdlee8fcQqik6ysJatOdlV/
P89TT0VGnIg4kRH55i8jIzMjM5EkSVI9awy6A5IkSasbA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIqM4BJ
kiRVNu0CWEQsiIiMiNnl9g8iYv8K652S9UTEoyLi9oiYNcL0wyPi62V4pW1fVUTEDhGxfND9WFW19+Ek
Le+AiPj5ONpfFRE7TcJ6b4b4+IR09w3n0i4kf99kGTz5pqTZ2oiDgvIl43xraXRcQOU9ylaWXKA1h5srgk
Iu6MiGsj4qiImDuO+Xs+eWTmLpl5omZ+ZKp7eHqwZpqTR2Pi
HhRRJwbEbdExFWjtN2nhNfhvzvLY/kZ/fYjM5+YmedNeUbbotIn4SEdu3pg/
XoOHtuCoiDu13GybblAawiHgH8EngXcAGwPbAVsDZEbHWVK57DH0byCue8orvi8DLMvOng+jDNPEu4Pp
eDSLiicC/A/sCmwB3Akd2Ae+OZ/AVwCbA1sBnyX5jHwrI7mc8t2vAr4YET8XdXOjiYzp+QPeDhwO/
DqjvHr0TyxvrbcPg74SGv6DsDyMvw9rzf9bnAa9rzf9aYDFwE/BDYKvWtAQOAa4A/
ggEcGTpzy3A74AnjbA9D6wHOAD4OfDpsp4/
Arv0uC+uAnYCDgZuABa2pnVuz9bAT4HbgLOBfwO+3tF2/2f2f2BpWdb7W8taG/gcsKL8fQ5Yu32/
lvvweuAaYHdgV+B/gRuB97WzfZM4Lrh7Svj/
hG4uMf9tXXZh7sMHwsjtPsYcFLr9t8AfwXW79K2674u++SeMt/twH+W9sPbfhtwOfCK1rJ67v9e+7BM/
xZwbenHz4AntqYHcdBxwFnElTOHcCNgbOAG4Ffg18GPh5j/tlX+Dqst/eX/bHTqPtV+As4M0dy/
pv4JWtx89jyvDLgN6wm3S0vb38Pmu1eQ7wm3If/
AZ4Tsdj7cM0RfY24EfAvDJtHeDrpe83kmao6tir9YU21pubEamppsxNw1TiPuXOBw3pMb+/
DTcv+fmevfVaGDy/bf0LZL5e192GXedu152vAmV3aHAWc2+0YKON+Dbxr0I/
jlfo8ZQuGnYF723dAa9rrxwfDfK8HGMUCw6d1q3O7bjANgdWAI8AZgNfAD4ZcdOPBvYCHgY8FLgQmAuTeF
4ArDpGA60A2ietF8PzAL+iebBGT0OqZ1bs/5wA2ietF8PzAL+iebBGT0OvG+XB81TOqZ1bs/5wGdpHvgvKAdnZ7H4j9L/pwB/
Ap4BDAf+CXw4db9ei/wL8Cape2nC/X0gTHh5Xpl/
OygHlO8A7ehw73wNe0Xksd8l3OvCejnG3Aw8g/BEnA+sbAxGuBR5f2byvL2qL05d+H91mX7Rte9nC/X0gTHh5Xpl/
CLjmXdzINPOO0iuAPw5NLHv6U5tnfvdky37rOfl+GNaJ5k96V5nO5Vbm/
ceqz9AXgszXF+HvCJMu0NwH8C65b7/hnAw8u0Q4HvTVVNG/
Qf1lRr6gRramkzrgBGc2b1PmDrHm3OA15X7sf/
BQ7u0faB444mgN1NE1ZnAR8HftVj3Y4sEubF5X7bJ0ux8D2NO+QtF9Ifwn40kAf01O2YPg/
wLUjTPsEcHYZPo7JKxY/
AA5qtV2j3OlbtXbii1vTX1wOmu2BNUbZnvZ6DgW9yB4H3q00gWGNjmkPbA/
wqHIAzWlNP4mHFostWtN/
DexZhv8A7Nqa9lLKA67Cr3cBs8rt9cv8duvQT7FOCDZfg9wIlleKOy
T0Yqyq8Azup2LHRpew7wxo5xfwJ26NJ2xH1NlwDWZf6Lgd16rB8P/G0YPK
eZPZNlR4Fu6d1vs54Mhuj9HWfTYcwPYFft0x//
nAAa3H2gda097UOiZeS/Mk+Le99tdM/
MOaSsc2WFNz9Jramn+8AeyDwHlj2IefLftjr1HaPnDc0QSwH7embQvc1WPedgC7F9i5S5S5vHl3abtfbrz
WUfJc3Z1a6BflB/
U3kN2A3AvBGuC9i0TJ9sWwGfj4ibI+JmmlPAXAWzearNseCAzf0JzOvqLwHURcRcHyM67q2tZw+YHv8992FE
zIqIT0TEHyLiVpqiRMeyl7WG59m4Gysf4HTRvdwwbcb9m5m3A94E9S9s9gRO7rSQitoX
9g5FxC00x/e8bm1H6GPnNlzNyo/TkY7xr9G9Z01dmTV1lJrap/
1ozqyOZh+aF76nnP5nff5Om08jvAGmuO906Y0Qav9OJhHc/+/
kybUrlK1YioD2Pk0p3Jf2R5ZnmR3oTl7Ac0r7nVbTR7ZsZwcxzqXAW/
IzLmtv4dl5iPN4dl5i9HWl5mfiEzn0FzuxvixjOFCxQm6HtgReD4jYXyh+DbBhuY+GPWoc61hB8yBvz7tiPJ1sWUZ
zirt9X66TmX8aoX23fq8AKPOcT3N2a1+aJ9FutqF55fJfEXEtcBqwEtcBqwafmk14Iu7S+jecsAgGi+ImFtmlf
gD9FjX690TETEVjRvSbyZ5m2xucClNE88oxltH+4N7EbzanQDmu2lY9nt/gzRv0OLbcoTldv3qaRjq0HZOY9mfmhzNyW
A20jYl2aa8iGjbZfnwHsRsHsFRmBsCXW9sw2mO28zgd3aRjq0HZOY9mfmhzNyW
5jqyl9M8UawOrKkrs6aOXlMnJCKeSxP2qhDqcJPS/
aHpmZ92XmZ2je8nXFs8BfgQ8K8keZ+87TpgrN8
99GXgveXTCTcUBhHRbUdNKvmxMX5fEA/
4+3Gs4hvAByjfkMzC5P8k99jVkxmpe9j+8kT2T4fak07geZi1SfTXK/
QzaU04eGp5e91NPv/
qax8BmjYiTSvAp9fCtURwGnlTM5KRtnXcfYHY9uD7Nk+ifaZ4kPzbK8u6jCaKH
R8S6EbEtzQQXDIzkVeHlEPK98Ku4IVn6cj7Zfz6R5wjkC+GZm3j/CetYHbsznj/
ZuTRuiudB7pMftmcBjo/
kKkdkR8Rqaty7PXGPwC+12O7KP19UUQ8uRT6W2ne2un2trmf9Bq0SaeRuvHz8cpuMEgQsEi6dk5e7thK1/+H
ROz+wPf7lZLu7iHJhDNAb4WEVP99Vyf+8bYfjGAe2EtSmleGI3k4zZmOm3jwU2OfHuv2TURmLqMpgK+Ki
URmmLzO5qP6F5Uxk3E52nOcPwoIm6jKf7PGlO8

```
QGZeW9mXjv8R3Mf3F9u3wcPfBno80v7y2jehjiR5tXw+oz8CqfXvj4G2LYcY9/
NzMuBz9C8wryOpsD9ose2d+q1D08o6/8TzYW0vxrD8t5Mcxr9Wprre746UsNynxxCc4bqGprtbX+XWs/
9Wh6Xp9GcoTupR5/eBBxRlvEvNNenDC/
jTprrx35R7tPt2zNm5p9pnkzeQbMf3g28PDPH8hbaI2lC5q00b+H8lPKEGBHvi4gfjGEZ05Y1tWsfrak
j1NTiBTRvhZ5JcxbtLprjAnjgC1L3ad1eh+Zs0pi/
o62cdXolzYcVjp3KEJaZVwDPo3n34yqa67w+THOB/dk9Zv0+zf35eoCI+HJEfHmq+jkWw5/
akqZcRPyB5u2MHw+6L5I03VlTISK2oAmzh2XmMYPuz3hMu58i0vQUEf9I87beTwbdF0ma7qypjcxcTnN
WdtNoPpQwbaxSv3+lmSkizqO5xmffHtcUSZLGwJq6ssy8hOYt4mnFtyAlSZIq8y1ISZKkygxgkiRJlRn
AJEmSKjOASZIkVWYAkyRJqswAJkmSVJkBTJIkqTIDmCRJUmUGMEmSpMoMYJIkSZUZwCRJkiozgEmSJFV
mAJMkSarMACZJklSZAUySJKkyA5gkSVJlBjBJkqTKZg+6A73MmzcvFyxYMPYZ7rgD7rtvyvqzargLuH/
QnYBZa8KceYPuxQxwB1DpmL3jr3DfWnXW1TZrFsyZM+bmF1544Q2ZOX8Ke1TNuGpYtfq1itSQQbBurfr
uuAHuu2eMjdcAHjaVvWmMo4aNp36t0gFswYIFLFq0aOwznHUWzJ8RdbuHXwIbDroTMHQV7PyBQfdiBjg
LqHTMnvUDmL9LnXW1DQ3BzjuPuXlEXD2FvalqXDWsWv1aRWrIIFi3Vn1nfQTmLxhj45uA50xhZ4px1LD
x1C/
fgpQkSarMACZJklSZAUySJKkyA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIqM4BJkiRVZgCTJEmqzAAmSZJ
UmQFMkiSpslF/CzIijgVeDlyfmU8q4zYCvgksAK4CXp2ZN0VEAJ8HdgXuBA7IzIvKPPsDwz/
C9ZHMPH5yN0U1Xbz0Zi6/
YGnPNntv96hKvZFGZg3TsNHqljVLNY3lDNhxQOevUB4KnJOZ2wDnlNsAuwDblL+DgaPggWJ3GLAd8Czg
sIhYTX8NVlJlx2ENk7SKGTWAZebPgBs7Ru8GDL/6Ox7YvTX+hGz8CpgbEZsCLwXOzswbM/
Mm4GweWhAladJZwyStiiZ6DdgmmXkNQPn/
iDJ+c2BZq93yMm6k8ZI0CNYwSQM12RfhR5dx2WP8QxcQcXBELIqIRUNDQ5PaOUkahTVMUhUTDWDXldPy
lP/Xl/HLgS1b7bYAVvQY/xCZeXRmLszMhfPnz59g9ySpJ2uYpIGaaAA7A9i/
DO8PnN4av180tgduKaf3fwi8JCI2LBeuvqSMk6RBsIZJGqixfA3FN4AdgHkRsZzmk0CfAE6JiOApcAe
pfmZNB/
fXkLzEe4DATLzxoj4MPCb0u6owb8KFaSJp01TNKqaNQAlpl7jTBpxy5tEzhkhOUcCxw7rt5JUp+sYZJ
WRX4TviRJUmUGMEmSpMoMYJIkSZUZwCRJkiozgEmSJFVmAJMkSarMACZJklSZAUySJKkyA5gkSVJlBjB
JkqTKDGCSJEmVGcAkSZIqM4BJkiRVZgCTJEmqzAAmSZJUmQFMkiSpMgOYJElSZQYwSZKkygxgkiRJlRn
AJEmSKjOASZIkVWYAkyRJqswAJkmSVJkBTJIkqTIDmCRJUmUGMEmSpMoMYJIkSZUZwCRJkiozgEmSJFV
mAJMkSarMACZJklSZAUySJKkyA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIqM4BJkiRVZgCTJEmqzAAmSZJ
UmQFMkiSpMgOYJElSZQYwSZKkyvoKYBHxfyPisoi4NCK+ERHrMTWEXFBRFwREd+MiLVK27XL7SVl+oL
J2ABJmihrmKRBmXAAi4jNgX8GFmbmk4BZwJ7AJ4EjM3Mb4CbgoDLLQcBNmfkY4MjSTpIGwhomaZD6fQt
yNvCwiJgNrAtcA7wYOLVMPx7YvQzvVm5Tpu8Ypu8YEdHn+iWpH9YwSQMx4QCWmX8CPg0spSlatwAXAjdn5r2
l2XJg8zK8ObCszHtvab/
xRNcvSf2whkkapH7egtyQ5hXh1sBmwPo0L0UVMpDxsBmwBxgly5Nc3iWHtPayz04IhZFxKKhoaGJdk+SerKGSRqkft6C3An
4Y2YOZeY9wGnAnAc4C55XQ+wBbAijK8HNgSoEzfALixc6GZeXRmLszMhfPnz+
+je5LUkzVM0sD0E8CWAttHxLrlOogdgcuBc4FXlTb7A6eX4TPKbcr0n2TmQ149SlIl1jBJA9PPNWAX0F
yIehFwSVnW0cB7gLdHxBKa6yOOKbMcA2xcxr8dOLSPfktSX6xhkgZp9uhNRpaZhwGHG3Yy+EnhWl7Z3A3
v0sz5JmkzWMEmD4jfhS5IkVWYAkyRJqswAJkmSVJkBTJIkqTIDmCRJUmUGMEmSpMoMYJIkSZUZwCRJki
ozgEmSJFVmAJMkSarMACZJklSZAUySJKkyA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIqM4BJkiRVZgCTJE
mqzAAmSZJUmQFMkiSpstmD7oA0SCddsHTUNntv96gKPZGk0Y1Ws6xX04dnwCRJkiozgEmSJFVmAJMkSa
rMACZJklSZAUySJKkyA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIqM4BJkiRVZgCTJEmqzAAmSZJUmQFMki
SpMgOYJElSZQYwSZKkygxgkiRJlRnAJEmSKjOASZIkVWYAkyRJqswAJkmSVJkBTJIkqbK+AlhEzI2Uy
Pi9xGxOCKeHREbRcTZEXB+b9haRsR8YWIWBIRv4uIp0/
OJkjSxFjDJA1Kv2fAPg/8KDMfD/wdcAVwKHBOZm4DnFNuA+wCbFP+DgaPggWJ3GLAd8Czg
FwDEAmfnXzLwZ2A04vjQ7Hti9DO8GnJCNXwFzI2LTCfdckvpgDZM0SP2cAXs0MAR8NSJ+GxFfiYg5wCa
ZeQ1A+f+I0n5zYFlr/
uVlnCQNgjVM0sD0E8BmA08HjsrMpwF38OCp+m6iy7jsN1OiIgyNiUUQsGhoa6qN7ktSTNUzSwPQTwJYDy
zPzgnL7VJpidl1knzcuqpidt3wafny//pW+y1b828BrOhcaGYenZkLM3Ph/Pnz+
+ieJPVkDZM0MBMOYJl5LbAsIh5XRu0IXA6A6cAexfxu0PnF6GzwD2K58k2h64Zfg0vyTVZg2TNEiz+5z/
LcCJEbEWcCVwIE2oOyUiDgKWANAnuUtmcCuwJLgDtLW0kaJGuYpIHoK4Bl5sXAwi6TduzSNoFD+lmfJE0m
a5ikQfGb8CVJkiozgEmSJFVmAJMkSarMACZJklSZAUySJKkyA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIq
M4BJkiRVZgCTJEmqzAAmSZJUmQFMkiSpMgOYJElSZQYwSZKkygxgkiRJlRnAJEmSKjOASZIkVWYAkyRJ
qswAJkmSVJkBTJIkqTIDmCRJUmUGMEmSpMoMYJIkSZUZwCRJkiozgEmSJFVmAJMkSarMACZJklSZAUyS
JKkyA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIqM4BJkiRVZgCTJEmqzAAmSZJUmQFMkiSpMgOYJElSZQYw
SZKkygxgkiRJlRnAJEmSKjOASZIkVdZ3AIuIWRHx24j4frm9dURcEBGLI+KbEbF2Gb9Oub2kTF/Q77olqV/WMEmDMBlnwN4KXNG6/UngyMzcBrgJOKiMPwi4KTMfAxxZ2knSoFnDJFXXVwCLiC2AlwFfKbcDeDFwamlyPLB7Gd6t3KZM37G0l6SBsIZJGpR+z4B9Dng3cH+5vTFwc2beW24vBzYvw5sDywDK9FtKe0kaFGuYpIGYcACLiJcD12fmhe3RXZrmGKa1l3twRCyKiEVDQ0MT7Z4kjcgaJmmQ+jkD9lzglRFxFXAyzWn7zwFzI2J2abMFcHUZXg5sCVCmbwDc2LnQzDw6Mxdm5sL58+f30T1JGpE1TNLATDiAZeZ7M3OLzFwA7An8JDP3Ac4FXlWa7Q+cXobPKLcp03+SmQ959ShJNVjDJA3SVHwP2HuAt0fEEprrI44p448BNi7j3w4cOgXrlqR+WcMkTbnZozcZXWaeB5xXhq8EntWlzd+APSZjfZI0maxhkmrzm/AlSZIqM4BJkiRVZgCTJEmqzAAmSZJUmQFMkiSpMgOYJElSZQYwSZKkygxgkiRJlRnAJEmSKjOASZIkVWYAkyRJqswAJkmSVJkBTJIkqTIDmCRJUmUGMEmSpMoMYJIkSZUZwCRJkiozgEmSJFVmAJMkSarMACZJklTZhANYRGwZEedGxBURcVlEvLWM3ygizo6IxeX/hmV8RMQXImJJRPwuIp4+WRshSeNlDZM0SP2cAbsXeEdmPgHYHjgkIrYFDgXOycxtgHPKbYBdgG3K38HAUX2sW5L6ZQ2TNDATDmCZeU1mXlSGbwOuADYHdgOOL82OB3Yvw7sBJ2TjV8DciNh0wj2XpD5YwyQN0qRcAxYRC4CnARcAj8jMa6ApcMAmpdnmwLLWbMvLOEkaKGuYpNr6DmAR8TfAt4G3Zeato02iHYqY5vRGTEuInICo6aGhoaHgsaNHx67fNPe7Q1P0nqZQ9MkVWYAkyRJqswAJkmSVJkBTJIkqTIDmCRJUmUGMEmSpMoMYJIkSZUZwCRJkiozgEmSJFVmAJMkSarMACZJklSZAUySJKkyA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIqM4BJkiRVZgCTJEmqzAAmSZJUmQFMkiSpMgOYJElSZQYwSZKkygxgkiRJlRnAJEmSKjOASZIkVWYAkyRJqswAJkmSVNmEA1hEbBkR50bEFRFxWUS8tYzfKCLOjojF5f+GZXxExBciYklE/C4inj5ZGyFJ42UNkzRI/ZwBuxd4R2Y+AdgeOCQitgUOBc7JzG2Ac8ptgF2Abcrf8cBRfaxbkvplDZM0MBMOYJl5TWZeVIZvA64ANgd2A44vzY4Hdi/DuwEnZONXwNyI2HTCPZekPljDJA3SpFwDFhELgKcBFwCPyMxroClwwCal2ebAstZsy8s4SRoa5Ykm1zwBYEm8sHw/XiMrUh4kuYwaNG6cb6NKzYBv8A6AUAtAggyIAkq3+h9fSnvHv0i+TrZv3DApgX8KvXq88oMjIhZFxKKhoaE+uidJPVnDJA3MhANYRMyiuQVLTsBMDA==
SZUZwCRJkiozgEmSJFVmAJMkSarMACZJklSZAUySJKkyA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIqM4BJ
kiRVZgCTJEmqzAAmSZJUmQFMkiSpMgOYJElSZQYwSZKkygxgkiRJlRnAJEmSKjOASZIkVWYAkyRJqswA
JkmSVJkBTJIkqTIDmCRJUmUTDmARsWVEnBsRiyPisoh4axm/
UUScHRFXlP8blvEREV+IiCUR8buIePpkbYQkjZc1TNIg9XMG7F7gHZn5BGB74JCI2BY4FDgnM7cBzim3
AXYBtil/
BwNH9bFuSeqXNUzSwEw4gGXmNZl5URm+HbgUmAfsDhxbJjsW2KMM7w4clx1y4JfbCGSRqk
SbkGLCIWAE8DLgA2ycxroClwwCNKs82BZa3ZlpdxkjRQ1jBJtfUdwCJiPeDbwNsy87bRJu0yLrssb9
FkXEoqGhoX67J0k9WcMkDUJfASwi1qQpXCdm5mll9HXDp+6+XL/+vL+OXAlq3ZtwBWdC4zM4/
OzIWZuXD+/Pn9dE+SerKGSRqUfj4FGcAxwM0/Gxr0hnA/
mV4f+D01vj9yieJtgduGT7NL0m1WcMkDdLsPuZ9LrAvcElEXFzGvQ/
4BHBKRBwELAX2KNPOBHYFlgB3Agf2sW5J6pc1TNLATDiAZebP6X5NBMCOXdoncMhE1ydJk8kaJmmQ/
CZ8SZKkygxgkiRJlRnAJEmSKjOASZIkVWYAkyRJqswAJkmSVJkBTJIkqTIDmCRJUmUGMEmSpMoMYJIkS
ZUZwCRJkiozgEmSJFVmAJMkSarMACZJklSZAUySJKkyA5gkSVJlBjBJkqTKDGCSJEmVGcAkSZIqM4BJk
iRVZgCTJEmqzAAmSZJUmQFMkiSpMgOYJElSZQYwSZKkygxgkiRJlRnAJEmSKjOASZIkVWYAkyRJqswAJ
kmSVJkBTJIkqTIDmCRJUmUGMEmSpMoMYJIkSZUZwCRJkiozgEmSJFVmAJMkSarMACZJklTZ7EF3QFL/
fnDJtaO22aVCPySpl5MuWNpz+t6V+rEq8AyYJElSZQYwSZKkygxgkiRJlVUPYBGxc0T8T0QsiYhDa69f
kibK+iVpslQNYBExC/gizfXA2wJ7RcS2NfsgSRNh/
ZI0mWqfAXsWsCQzvwInA7tV7oMkTYT1S9KkqR3ANgeWtW4vL+MkadpZtDtF/t3J+Mp/
D1h0GZcrNYg4GDi43Lw9Iv5nyns1teYBNwy6E1NgHnym53btU6snk2+lfTaNt6PTPPjgdDgWtxp
0B0Ywav2CGVfDZlr96lm3puljfUbVq32m/
zE35vpVO4AtB7Zs3d4CWNFukJlHA0fX7NRUiohFmblw0P2YbDN1u2DmbttM3a6KRq1fMLNq2Ew7Zmba9
sDM26aZtj291H4L8jfANhGxdUSsBewJnFG5D5I0EdYvSZOm6hmwzLw3It4M/
BCYBRybmZfV7IMkTYT1S9Jkqv5bkJl5JnBm7fVK0qT3baZuVzXWr2lvpm0PzLxtmmnbM
6LIfMg1pJIkSZpC/hSRJElSZQawCiJij4i4hp/
+mOmfpzLBFxbERcHxGXDrovkyUitoyIcyNicNkG3zroPml2ikm6mSn1a6bWrYXo5bHWmUAqyAiXhERy4FnA9
X7N8J9jOQ7YedCdmGT3Au/IzCcA2wOHZ0/
nLGNtm7M+xZObPgBsH3Y/
JlJnXZOZFZfg2YDF+e7vGYYbUrxlXt2ZavVoda5UBTOPlz7FMUxGxAHgacMFgeyJVZ92aRlaXWlX9ayh
mqoj4MfDILpPen5mn1+7PFBrTz7Fo1RIR6wHfBt6cuj9atawG9cu6NU2sTrXKADZJMnOnQfehfehkjH
9HItWHRGxJk1BOzEzTxt0f7TqWQ3ql3VrGljdapVvQWq8/
DmWaSQiAjgGWgWJyZnx10f6QBsW6t4lbHWmUAqyAiXhERy4FnA9+PiB8Ouk8Tlm3AsM/x7IYOGWm/
BxLRHwDOB94XEQsj4BDt2nSfBcYF/gxRFxcfnbddCd0vQxE+rXTKxbM7BerXa1ym/
ClyRJqswzYJIkSZUZwCRJkiozgEmSJFVmAJMkSarMACZJklSZAUx9i4jbi4BW8O7RsQVEfGoiHhjjR/
CiLi0DB8iDBt2nSfBcYF/gxRFxcfnbddCd0vQxE+rXTKxbM7BerXa1ym/
ClyRJqswzYJIkSZUZwCRJkiozgEmSJFVmAJMkSarMACZJklSZAUx9i4jbW8O7RsQVEfGoiHhjjROzXpf2
CiLi0DB8QEf9Ws7+S1GYN0yD4TfiaNBGxI/CvwEsycynw5QF3SZLGzBqmmjwDpkkREc8H/
gN4WWb+oYw7PCLeWYafAf/HRHnA4d0zL5ZRJxVXnV+qrXMvSLikoi4NCI+2Rp/
e0R8MiIujIgfR8SzIuK8iLgyIv6htJkVEf8vIn4TEb+LiDdM9X0gafqyhqk2A5gmw9rA6cDumfn7Edp8
FfjnzHx2l2lPBV4DPBl4TURsGRGbAZ9rd5vCAAABjUlEQVQEXlymPzMidi/t5wDnZeYzgNuAjwB/
B7wCOKK0OQi4JTOfCTwTeH1EbN3ndkqamaxhqs4ApslwD/
BLmoLxEBGxATgxATA3M39aRn2sRVNwzsvMofIzIicCLyjt/wqcVYYvAX6amfeU4QVl/
EuA/SLiYuACACYGNgm762UtJMZQ1TdQYwTYb7gVfTvMJ7X5fpAfT6zau/tIbvo7k2MXq0vycf/
A2t+4fnz8z7efC6xgDekplPLX9bZ+aPRt8USasha5iqM4BpUmTmncDLgH0i4qBh024GbomI55VR+4xh
RcAL4yIeRExC9gL+Oko87T9EPiniFgTICIeGxFzcjG/
pNWINUy1+SlITZrMvDEUidgZ+FhE3dEw+EDg2Iu6kKSyjG
P0cXTnKzSn8i+KiACGgN17ziFptWYNU03x4FlQSZIk1eBbkJIkSZUZwCRJkiozgEmSJFVmAJMkSarMAC
ZJklSZAUySJKkyA5gkSVJlBjBJkqTK/j97VeU9ySLrxwAAAABJRU5ErkJggg==\n",
       "text/plain": [
        "<Figure size 720x360 with 2 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAlkAAAFcCAYAAAD73atpAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xm8HXV9//
HXhwQMkkKEBEEWgxVEtAo0IG61AlVCVBUFUdBg01J+pYrFVrEuyO+hFf0hqP0plhoENxYRhVpAAXFl0Q
CWLS4RWSJbWMKOSvj0j/kemdyce+
+5yfnec3Pzej4e93HPzHxn5jtzZj7nfeZZkZlIkiSpv9YZdAckSZImI0OWJElSJBlQD1J+pYrFVrEuyO+hFf0hqP0plhoENxYRhVpAAXFl0Q
CWLS4RWSJbWMKOSvj0j/kemdyce+
+5yfnec3Pzej4e93HPzHxn5jtzZj7nfeZskZlIkiSpv9YZdAckSZImI0OWJElSBYYsSZKkCgxZkiRJFR
iyJEmSKjBkSZIkVTDwkBURsyMiI2JqGT4T39EhHbR8Rjg+7HUBGxV0QsHnQ/
JqqIOCYiPt/H5R0aEReOof3f3tEfGS1VznkyLiwYh42irO8/
```

mt1+qDeWVN7Y01dPRFxWUQc1GPbX0fEC2v3aSIac8iKiIMj4pqIeLgU8BMiYsYY5r8xIvYcbnpmzs3MU
8bar7Fa1fWUB5vO3+MR8Uhr+MAafV3bRMS0clKOWGgiYl5E3Fz2/ZkRsdEqrOu0iHj/
qvd28svM32Xm9My8dbS23R64MnNBZr66Xg/
XbNZUa2otEfGKiPh+RDwQET8fpe38IffFwyWsP2d1+5GZf5qZl451vvJYkBGxZWvc8yLivyPi/
rJdF0TEnNb07cs8ne24ISKOWN1tWFVjClkR8S7gY8C/
ABsBuwFPBy6IiPX6370x9W3qeKynPNhMz8zpwM3Aq1vjvjIefVgLvA/
47UgNImIn4NPAG4HNgQA+Vb9r4ycipgy6D6rLmmpNrexB4ETgvaM1LE+G2vfFEcCizLyudid7FRHbAz8
EfkJznmwBnA9cHBE7tpoub23HgcBHIuKl495hgMzs6Q/YkOYOe8OQ8dOBO4G/KcMnAx9uTf9LYEm5/
SXgceCRsqx3A7OBBKaWNt8D/rY1/98Ai4B7gW8DT29NS+Aw4FfAb2geaI8v/
bkPuBp47jDb88f1AAcDPwKOLev5DTC3h31yI7DnkHFTgA8ANwB3AV8BZrSmvxS4HFgGXAm8uDXtMuCo8
v9+4FzgKWXa9sBjwNuAJcBS4F9a864PfAa4rUz/f8C6ZdpewGLg/
aVPvwX2BvYBfg3cDbyr120Ysr2dZR8N3FPm2b+1rbcA67TaHwhcNsI+3Q64tvRt8QjtjgNOag0/
pxxX07q0nQL8/7LP7gP+B3gW8A7gD8DvaI7Hr5X2HyzHwAOlL3/dWtahwEU0AW9Z2X97tqY/E/
hxmfc84D+Az5dpU4GvA3eUeS8GntWa97Sy3O8ADwEvATYtx8H9wKXAR4ELR9gv82keqJbSPHDfDrxktP
uVIeddGfeLcpxMoznXtizj9yv78H7gJuBfW/PcWdo+WP52Kvvswlabl9Ec+/fRHOu79HgObFD20T1l/
13embYm/mFNtaZ23wd9ramlzauAn4/
x+LwUeM8I0y8DDiq3twSuB94+TNt2HTqmbP+pNHXyamDHYeYbWnu+BpzVpd0XgPPa9+uQ6VcP17fq5/
kYdvhe5YCc2mXaKcCp5fbJDFMQup1EjFAQgH3LwfZsmgeo9wOXt0ZN4AJg43JCvBK4AphBUxyeDWw+zP
a013MwzYPt35WT4f8AtwIxyj5ZYVvKuCNpnjC2pKmTVwLb5oTu3PSX0bzwPanNA8olw
Afah04SXPSTwN2AX4PPKNM/3hZ70zgqcBPgfe17rs/AO8p+/
HtNAf9l8p6dgIeBbYYbRtGOC4+CqxXtu1hYJsy/dfAy1vtzwMOG2GfXgjMLcsdKWR9Gzh8yLjfA8/
p0nYfmoKxYdnvzwE2LdNOA94/pH3n6tg6wFtoCsHMMu3Qsi/
fWo6VfwJubM17ZWtf7FH2RTtkzaN5EJ0GnECrOPJEgHhBWfeTgG8CX6Y5vnekCWhdQ1aZ/
gDwwjLvZ8p90yluIx2bhwAXtZb15zTH5lRWLnR7lH24DrBz6fNereN0aIH7Y8iiCY33A28oyz64rGejH
s6Bw4Ezy76YSnMObFCmHQWcWbNY9vsPa6o1deTjoi81tbQZU8iiebL7WKf/
w7S5DDgI2Lb0ad4IbYeGrIeBvyrHxvHA94aZb2jtWQa8qUu7uTRPlqfSqkE0x+xLy30xt9V+AXDcuJzn
Y9jpBwG3DzPtGOCCCgXhPGB+q+065c55ej5REHZvTd8d+CXNJfd1Rtme9noOpvWADjy5LHuzUZaxwraU
cb9hxWdS25Q+B80DwX8Oaf994I2tg/afW9OOAL5ZbncKwszW9KuBfcvt3w7ZF/tQTiqak/
a+zj4BZpVlPb/V/
jqeeKAcdhu67IO9ygE8rTXuHMozwrLNC8rtp5blzBy6nDL9TcA3WssdKWT9GDh4yLi7gd26tN27bN+uQ
7eBLiGry/w/
B15Zbh8KXNuatnHZlzNoCtPQfXEWJWR1We5mNFchprX6cmJr+rQyfXZr3HEMH7L+DTi5NbxRmb9T3EY6
NjemuRqyeZn2CeCzrX78sdB1We/ngI+2jtORQtbfAT8YMv0q4AEzoF/
oDlful5JWdP+sKZ2W8YK29LDcWtNHaGmtuYfa8j6CHD+KG0uowmiNwGvHaXt0JD1rda0nYFlw8z3x9pD
E8gS+Msu7XYs0zZu3a/LaGpaAh9Z3f3fN1Vf/
G8p6su4CZw7xOv3mZ3m9PBz4VEcsiYhnNM+agebR2245bOjcz8Qjcz8Ls3LQp8B7oiIEyNiwx7XdXtrQ+Xm9P
H0tmICGAr4NxWn6+iKWSblO05qDOtTJ9D8+xmpX7QnDztPizPzLuGTi/
r3YzmYO+4iRX309LMfLzcfqT8v6M1/
ZHWskbahm6WZuajQ9bd2aYvAq+NiCdLdsAQLmfPkxzZagXD9JcmWr7E5orOUOdR/
PM5T9ojovPRsSw9215A+jVre1/
Js2z2Y6h9xE099PT6L4vOsudGhHHljdi3k8T3oIV9+strdublentce37eKinseL5cB/
NA8Gox2Zm3kNzBeMNEbEOzdW8ru+HiYgXlzfTLo2I+2geUGd2aztMH4duw9BjdbhzYAHNA+iZEbEkIv5
tDX/fmjV1FNbUFdY9ppq6qkp/
D6K5mjqaeTQvZ549xtWMdJ90lZnLaerZ5l0mb05z5W1ZGV6emTNoHhPeB7x8vN5jONRYQtalNJfjXtse
GREb0Fyqu6iMeojmWUvHZkOWk2NY5y3A32fmjNbf+pl5yXDLy8xPZ+af07ycsR3N+1LGRTaRuvPsp93n
aeUkuIXmqkZ72gaZeXwf1ns7TcHp2JpR3jy+itvQzcxywrfXfWtZ3m9onh2+mualty8Ns4wdaArRZRFx
O/
BVYHb5tFW3k+o64PmdgYjYAVhOc9l6pW3KzOMycyfgeWW+wzuT7220jYjvg32lePtu4nKiLaR6IRnMb3f
dFx9uAVwAvp7nKtH1nte3utm7fXoa3GmZ53db/x7bRfNpyI+j5fj2Vpmi/
jKZgXUJ3ZwCnA1tl5kY0V1o62zDa+X0rK6nnW0a9VjN5lOOH8zM7YG/
APYHDhhtvgnMmjoKa+oK6x5rTV1Vu9PUjW/
20PZfaa66nVKenNV2Ic15P9QbgB+2Qi8Amdl+2fVv63dvZT3vlPKs+Gjg36P5Ho91I2I2zRvvRlvDEHf0
zYO+I2DgiNgPeOWRRdwDP6HG1nwPeFxHPBYiIjSLib4ZrHBEviIgXRcS6NAX1UeCJsWWndu+hSUs7Rz
4NsZ7PL6h95cuGyAXR4ztc/lqs8+KawZdhHP6ja3NrPcFqOWEx/JJzfPldbmRMpGunZlPcD5m/
B1GU0A770Ma6svA6yJit3JV6mjg9CHP/ij93y0i5pRnMg/
RvO+ic1wmJ3SGudqLcoxPRahP9+Q6n07zEthRYJyIOpbmS1YtfOlyd6uyLl9Nc+u/
4E5pj8m6a9218eKSFlW35L+Docqw8j+ZNrsM5g+YZ7gsi4kll+e2iM9r9ejbNA+n7aN4PtNKDd3mWOx2
4OzMfjYgXsWLRuxOYEhHDhcFzgJ0i4rA8980NNcmKcAPSjnDEeuhdixvEbLOTXSEBUQOkJk46KH7utDdJ4WuH1tzH7Qe0KL+rrn2V
r19I8wxvOhsB/
0nya5SaaB7Nje92+Pvk4Tdr+bkQ8QHM1YGeAzLwBeB1NYb2r9PFw+vOlsB+k+XTHdTRF+celL6ti2G0Y
xo00D3i3AycBbyvb2vE1mqByRus4WUFm/iEzb+/80dyHy8vw4/

HEF2LuUtpfSfNgcybNg8w6PHF1aqgZNFdbltFc2r6J5lN80Hy8eZdyPJ5Wlvs5YCHNlaFtyu1RlZP5jT
RXqu6h+aRXuygvoAlvtwPX0Hz6ajR/T/O+iztoXu78wgjrvwp4F80+WULzKcP2M+UR79fyks45NG9s/
+oI23gocGxZxrtp7t/O9HvLeq4o+3THIfPfAbyG5gHrbuAfgVdl5jJGtwVNEOx86vNcmmBJRBwdEd/
oYRkTijW1J9bUVaipxStoXrY8i+Yq5CO0Qlk030f4utbwdJorqz1/31l5Mvgamg8XfK5m0MrM62muYu9
Gc54sozl/
Xp2ZPxhh1rNoPqhwMEBEnBwRn6zVz7bo8mRV6qty5eFmmjc39xIsJEnDsKY2ypXfS2k+FLCqVxmrGvjP
6mit8Cbg/
rW5GEhSH1lTgcy8kebT41tHxPoD7k5XA3m3vdYeEXEZzUfK3zzgrkjSGs+auqLyNomrBt2P4fhyoSRJU
gW+XChJklSBIUuSJKkCQ5YkSVIFhixJkqQKDFmSJEkVGLIkSZIqMGRJkiRVYMiSJEmqwJAlSZJUgSFLk
iSpAkOWJElSBYYsSZKkCgxZkiRJFRiyJEmSKjBkSZIkVWDIkiRJqsCQJUmSVMHUQXcAYObMmTl79uzeZ
3joIVi+vFp/JoZHgMcHs+op68IGMwez7knrIaDPx+xDv4fl6/
V3matjyhTYYIOem19xxRV3Zeasij0aFxO3fg2whgyaNWzie+guWP6HHhquA6xfuzeNMdSwXuvXhAhZs2
fPZuHChb3PcP75MGuNr82juAR4ymBWvfRG2Ov9g1n3pHU+0Odj9vzzYNbc/
i5zdSxdCnvt1XPziLipYm/GzcStXwOsIYNmDZv4zv8wzJrdQ8N7gRdV7kwxhhrWa/
3y5UJJkqQKDFmSJEkVGLIkSZIqMGRJkiRVYMiSJEmqwJAlSZJUgSFLkiSpAkOWJElSBYYsSZKkCgxZki
RJFRiyJEmSKpgQv12oieVnNy/
j+stvHnb6m1+w9Tj2RpLGxhqmicIrWZIkSRUYsiRJkiowZEmSJFVgyJIkSarAkCVJklSBIUuSJKkCQ5Y
kSVIFhixJkqQKDFmSJEkVGLIkSZIqMGRJkiRVYMiSJEmqwJAlSZJUgSFLkiSpAkOWJElSBYYsSZKkCgx
ZkiRJFRiyJEmSKjBkSZIkVWDIkiRJqsCQJUmSVIEhS5IkqQJDliRJUgWGLEmSpAp6ClkR8U8RcV1EXBs
Rp0bEtIjYJiIuj4hfRcTpEbFeafukMry4TJ9dcwMkaSTWL0mDMmrIiogtgHcAczAU4ADgY8Dxmbk
tcC8wv8wyH7g3M/JHF/
aSdK4s35JGqReXy6cCqwfEVOBJwO3AbsDZ5bppwBvKVL7lGHK9D0iIvrTXUkaM+uXpIGYOlqDzPxtRnwRBw
L3Aw8AnwHuAJYlpmPlWZLgC3K7S2AW8q8j0XKEfcAmwF197rs0rK9efvOI09/8gq3HqScaJOuX1kTWr8m
jl5cLn0Lz7G4b4GnABsDcLk2zM8sI09rLPSQiFkbEwqVLl/
beY0nqkfVL0iD18nLhnsBvMnNpZv4BOAt4ETCjXH4H2BK4tdxeAmwFUKZvBNwzdKGZuZRzvBNwzdKGZeWJmzsnMObNmzV
rNzZCkrqxfkgaml5B1M7BbRDy5vDDdhD+B64GLg9aXNPODscvucMkyZ/
t3MXOmZoCSNA+uXpIEZNWRl5uU0bwC9ErimrIeRbwkoiowZEmSJFVgyJIkSarAk
FHf+A6QmUcBRw0ZfQOa5e2jwL7r37XJGn1Wb8kDYrf+C5JklSBIUuSJKkCQ5YkSVIFhixJkqQKDFmSJ
EkVGLIkSZIqMGRJkiRVYMiSJEmqwJAlSZJUgSFLkiSpAkOWJElSBYYsSZKkCgxZkiRJFRiyJEmSKjBkS
ZIkVWDIkiRJqsCQJUmSVIEhS5IkqQJDliRJUgWGLEmSpAoMWZIkSRUYsiRJkiowZEmSJFVgyJIkSarAk
CVJklSBIUuSJKkCQ5YkSVIFhixJkqQKDFmSJEkVGLIkSZIqMGRJkiRVYMiSJEmqwJAlSZJUgSFLkiSpA
kOWJElSBYYsSZKkCgxZkiRJFRiyJEmSKjBkSZIkVWDIkiRJqsCQJUmSVIEhS5IkqQJDliRJUgWGLEmSp
AoMWZIkSRUYsiRJkiowZEmSJFVgyJIkSarAkCVJklRBTyErImZExJkR8YR4Igoj4Vfn/
lNI2IuLTEbE4Iq6OiJ3rboDbo/6JWlQer2S9Sng/
MzcHng+sAg4ErgoM7cFLir3AfYCti0/C4HP9bVjSRob9UuSSQIwasiJiQ+AvgAUAmfn7zFwG7A2cUpqdArylbO8NfDkbPwJmRMQz+t65JI3CsvqrkmUnmMNekCYIm36kjeGeEjIjFqvz07AyFZzYdjL5TgIWIgL8DmeG9o+crLlqHfTWLEA+XjMlhIjJzVnSwl+qfX9LFUaDCmtbRgjXlnuLGuB5UhfjiThTGRSzjL6JjP6tDVP9gRpgcH3z5VMDJdkBhRj/ZoUFpOQRqjVGv7amTnsKx7JBsHfJIyCdNalSNgZl6wAJ6kZSVTHVVv58/Evva2FQh4nrZwCxhdZz0qKW7yWTXUGGXU+F7ZLPbbz7JjOJ2jkPIOnRe5F2zNnEMoqN5cXZnzrE5YiTqIzHJZpKMfL3CDmxhOgpLA4Qbag6TLY0W8X3ezGKmIgIVT8Gz6TkJ8eiLHY5WKmKmhaWXkWWCg1AKWXZXqJYaw7KZbrI1Ab

```
JA1KL58uDGABsCgzj2tNOgeYV27PA85ujX9r+ZTObsB9ncvykjSerF+SBmlqD21eDLwFuCYiflbG/
StwDHBGRMwHbgb2L9POBfYGFgMPA2/
ra48lqXfWL0kDM2rIyswf0f19CgB7dGmfwGGr2S9JWm3WL0mD5De+S5IkVWDIkiRJqsCQJUmSVIEhS5I
kqQJDliRJUgWGLEmSpAoMWZIkSRUYsiRJkiowZEmSJFVgyJIkSarAkCVJklSBIUuSJKkCQ5YkSVIFhix
JkqQKDFmSJEkVGLIkSZIqMGRJkiRVYMiSJEmqwJAlSZJUgSFLkiSpAkOWJElSBYYsSZKkCgxZkiRJFRi
yJEmSKjBkSZIkVWDIkiRJqsCQJUmSVIEhS5IkqQJDliRJUgWGLEmSpAoMWZIkSRUYsiRJkiowZEmSJFV
gyJIkSarAkCVJklSBIUuSJKkCQ5YkSVIFhixJkqQKDFmSJEkVGLIkSZIqMGRJkiRVMHXQHZDU3XnX3D7
i9Lnj1A9JGquvXn7ziNPfPE79GDSvZEmSJFVgyJIkSarAkCVJklSBIUuSJKkCQ5YkSVIFhixJkqQKqoS
siNgrIn4REYsj4sga65CkWqxhkvqh7yErIqYAn6H5Gp8dgDdFxA79Xo8k1WANk9QvNa5k7QoszswbMvP
3wGnAPhXWI0k1WMMk9UWNkLUFcEtreEkZJ0lrAmuYpL6o8bM60WVcrtQo4hDgkDL4YET8okJfxsNM4K5
Bd6LPZsInht2mA8ezJ/
2zwv20hm7DUDPhA2vysff0QXdgGKPWsElUvzomWx2bbDVs0tWvA9f8Y66n+lUjZC0BtmoNbwncOrRRZp
4InFhh/eMqIhZm5pxB96Of3KY1w2Tcpgli1Bo2WepXx2Q7ltyeiW8yblM3NV4u/
CmwbURsExHrAQcA51RYjyTVYA2T1Bd9v5KVmY9FxD8C3wamACdl5nX9Xo8k1WANk9QvNV4uJDPPBc6ts
ewJaNK8ZNDiNq0ZJuM2TQhrWQ2DyXcsuT0T32TcppVE5krvSZckSdJq8md1JEmSKjBk9UFE7B8R10XE4
xGxRn9aYrL9nEh
EnBQRd0bEtYPuS79ExFYRcXFELCrH3eGD7pPWbNawiWmy1TDr1+SQu5Dlg+2JNCFYw9YQa0vtqvIVDpNRRFwIbNZl0vsy9vsy8+zx7k8lPf0kkiaGiJgO
fB14Z2beP+j+aGKzhmmiWJtqlyGrR5m556D7MA56+kkkDV5ErEtTpL6SmWcNuj+a+KxhmgjWttrly4Vq
8+dE1gAREcACYFFmHjfo/
kgTiDVsAlsba5chqw8iYr+IWAK8EPjviPj2oPPUBZ0XEkoiYP+g+9
cGLgbcAu0fEz8rf3oPulNZc1rCJaRLWr7WudvmN75IkSRV4JUuSJKkCQ5YkSVIFhixJkqQKDFmSJEkVG
LIkSZIq8MtItZKI2AS4qAxuBiwHlpbhXcs8uO21ZH8iqpMtLaLUs2taXfTqTpk1Pjt3Lt0ddMd18KEvjJyNgnFZ6ZmEtRBs20jEo1eRgO0Kx4EL7RdAN11pU6d6Sn2o+1+99UT7Vsw6TMHDZFGsrBjkI4E4P+7Lu7u6e+9IuoUSkhsnq2YGIuNYYMIxVyfMMUE6VCEKKDWdYXmE2H37yIkNzbHOEmuT2T0m5iECOPDADM6gnq7fXJsrSDT0EG6bP73y6/y2X7pM/R04MexAXAHPAcfPbQNAXBPgDYfg9xBtTxBzgN29Ckmm0hXB5XFMJXXHYp5C6S3L9NIzvsqytE/ou/SHA0HvU/tHzU5kzJxF2bQwtZ7ISEWbsO72NFHXMC33d9dnLeDgDcnNEcr7ahkZibHqRjQUQkaHMXhRHPtKakrs9+BbXG+3mnG0r8ybr7GMdDqiVLTUzNQ9pY7+NKmXzv6+znmPMX09CnPK9ORUh8j9ZP0JxTcvrXE9n9HfOHjZpNUVESO+LzNfSv4rWCK8sWIWJMSi2u+6Mg4vZuvzyEmKNLvK3u1FX1xM2LpX2YsxZmt+U1d7AxnMuMbm2DmqNzzlq8G+7LoXDYu5/sTJPDjhrqv8ixF4YVkEoTHAGrG8d+G8L1ABGvkdfBsNkZJZ/VRmIBvTWbSKIjcBWD6N3OXMx6aFW01+w8szNRuI9aHJXpSL3nBf/ZJjTbyeGaV7aFw7R6lZsOYIwkijHcrivcRq/HJIcB+mxSG8AotTAvw/UGj2wuqhGwHfGHcQAdZvGyPHhUfngdEx4ErP1LN16wrRiZD3O9EJ1uE1fr9NLBMcPZs1X0Z3nu5fRyL+kkJjTbCybLzqxcOa+8EtCeOpg0HcvUlOAnhqaP3Nn2fJ+hdP2mZFbMe1A3BQXQQpS7jEzIkOAS+8/nVZm4ZDmu3XKOeTR/K6vGSvpMBm8GDYYc7yA5vnBBRK4Ma7QkDrTD2N/u4vr3dfE1F8BeJyPyyK8XE/AePcedJLWwh3vfmjlrj9mR8gsjw/+dsTKfmOrDC9yWL5DWB2uFpWO4ywcjTe4j/ncWp5yCjWtswnw9mhMVRSCAs7ncn9txoCwBiAF/DlfvoZakrzTT8tFmmQBaYUwz8WAGkxWD8OrFe/6xIOTDWJTFCmutabM4oiMdXQOKMAWxhUDJ8oK1VpI/hj6Z5tNugmVDdOxkdZAjN1bGcK5EQfWI0w7MXJ+Rn3p9Xj/jz1xqbMvIrDRG2VMJJBsu2tQCmcowXFngqjAOxNdIq5nC7XnJdgQbZ8/i5eqTDe8XNXzbGn6QZTUzyWSTS/TmJvzZR2XLMcGHGsrvEbmH4r5FnqGYmvrRZRyVAyr7N5mdfYK7dvEA5Bdu2UvpHsZDTiCazSu
```

```
BJ45zvo8shzgDcB3gH8sy7ke2GeC92IVsFfr9ceAr7VeP67M6wbgVuBzwONb45cClwG/
AH4C7F2GPwE4BrgZ+BnwYWDeZGIENgc+D9xUxn+lDL+SJnmNtnsscDuwc4f12gNYDby3tFkFHFDGPbus
y/xW+z8GLpvgfdqubLt9RveBcdr9PXBy6/
VTgV8CG3do23EbA4cAvyrT3Qv8v9L+sPIe3wNcDfxRa17d3tPtgG+Vac8DPgN8oTX+34FbShzfBnZqjT
sOOBo4iyY57gU8ETizbPdLgA8B35ngfTkQ+Cnwc+B9tPY7mpOn0XX7OXAasHkZdw7w1jHzuhx4Veu4eV
p5/
jLgByWmG4EjWtPcUNreWx7PGX3PWm2eC3yvvAffA5475hj7EE0ivQc4F1hQxq0PfKHEfleZdstB5Kq58
sCcak6dYk4tbfYCVk1xX/smcPgE49vbbmHZzu/otq2AI2hyzwk0x/
hVwJIJltPOPScCZ3VoczTwzfJ8Ma19uQy7BHjnTB+/
7cegerKeS5MYv9wemJn3AmcDXSvLzDyQ5iB5RTYV9scmah8R+9LsnK8CRoD/
Ak4Z02xfYDdgR+DFwAuAHYBNgT+hSeKTsRvwY2ABzQF+TEREt4kiYiuaImJla/BHSww7A08DFgF/
V9rvSrNDvrPE+AKanRbgeOChMs2zyvq0r5NPFOOJwAbATsAWNImRsqzXt+bxXt+bxUuDmzLxsnFV6Upn/
ImAZsDwinp6Z36N5L9vb+fVlueP5J5rt98AEbSgxXz76IjN/QlMs7dChbcdtnJnLgZOAj5V96xWl/
U+A59Mk2w8AX4iIha35TfSengxcWsZ9iOb9aDsb2J7m/f5+WX7b64AjgY1pkvk/A/
9Lk8TeVB4dRcSONMnmQJozvCcCW7WavJ1m3/+DMv7OMv/
RuPcfM69tga91WNR9wEE07+XLgL8oxx007zOUs8jMvHBMjJuXeX66xPcJ4GsR8cQx78Ebad6j9YB3lOH
LaLbJ1mXaN1P2k4g4LCL+Y7z3ZoiYUzvHaE4doIjYluY9OWESbRfTnFh+JjP/
cZKLeCVwKs17fybNyehkvIjmRHWs04DnR8T6HeLbneakemVr2GcjYmavfAyiUqPZ+LeMM+4jwHnl+XGM
c9Y1tgruVKmydkV9NnBwq+1jaC4lbduqil/
YGv9C4H9outwf02V92st5A7CyNW6DMu8nTVDJ30tTuSdwPs0/ImjO/O4Dntpq/
xzg+vL8X4CjOsxzS+BB1j47259HK/pxY6T5p/
1rYLMO831yiXOT8vp04F3jrNceNAlpw9aw04D3l+fvBk4qzzcv22LhOPP6I+CcTvtAh7bnA28eM+xnwB
4d2o67jcfue+Ms6zJg6STe0206vBcn0+rJGjPfTcu0T2jFcx4Jr/
DyanrZntIb9PeP0ZNH8Azm19XpDmsJz9AzyGmDP1viFZf7zaYq6+3j0ODkSOLbV9pGzyQ7L/eTo/
knns8g3jMZMUwBeMmb6C4E3tI6xv22Ne0trn3gT8N/
A70y0vYb5gTmVMetgTp0gp7amn1JPFvB+4IJJbLtPlO2wf5e2j+xvND1ZX2+N2xF6HMe
0eUZp9+TWvnwXzUlY0vQ8xiCPxX4fg+rJuh1YMM51+oVl/
KBtC3wqIu6KiLuA0gOuEWtNjeOPsnMb9BU0f8M3BoRyyNik0nN1ku65bWfO4vTye68XLfzNyY5iB6Bs2ZC
jRnhxsAl7biPqcMh+bM/Scd5rctTbfzza3p/oXmDKpbjFsDd2TmnWNNnmpk30Vyu+eNyM+0+/
GaPS9udmXlf6/
VPaXZ2aC7vvKLckPpa4L8y8+axM4iIDWnOCt82wXLa7qW5dNK2CU0iW8tUt3FEHBQRl7Xe02fy6La8d
/TJ9P5vRid77yI+EhE/CQifsGjZ87ted/Yej5CUwC1h/
2U8T2Ztfft+1i7B2Fb4IzWel0DPExzye0emh6m/Urb/
Rhnm0fEbuVm2jURcTdNj9KCTm3HiXHsOvyUtY/
PW1rP7+fRY+pEmktVp0bETRHxsYh47CSXOyzMqWszp46TU/
t0EE2PXjcH0Jzcnj7F+Y89Ps5P18t9Ps52MtpCmm2vv/Aprt8g6a/
WNW5YpBFVkX0pwVvKo9sPxD3YfmzAOaM44NWk2eNGY+OYVl3gj8eWZu2no8PjP/e7z5ZeanM/
P3aLp4d2ASNwn2IzO/RXOmOdq1ejtNxb1TK+YnbXDN3mkQYNwKbT/
CJpONpzppfA1yYmT+bF6blW06ahuaexIo011I00t1ION3a29PcwbyXxFxC83lkIXlU0OLO7S/
Cvjd0RfRfL3A42jOoH/DBNt4rX2hdJP/K/BW4ImZuSnN/
RRdL1nQ3MPR6b0Y9Tqa+0D2ornsNbpe7Xm3/+a29Tjz67T8R9pGxAY0l9VG3Uhz/0j72Fi/
tW1PAfaPiOcOcAj6e5J6OTk2m6+LfOzCfQ3OsyuG7djtWbaP6RtW1Dk6gnlJm/
yswPZOaONJCNJfNXk7zz2Bd

ywYk7twJw6OBHxPJqCbjKF0xE07/XJ0/RBna/TvH9jvRa4KDN/
2R6YmQ9n5sdpbrl4yzTEN2kDKbIy826ae1r+KSL2jojHHln+Y/05zY9/
oznEZ8NKI2DwingT81ZhZ3cZ6NoDXU3QGcycZe7KPG+nH0jlyzX0YXbI9HUyvPPRmUDmdc5W5p8Xxf6u1gcpd0k+m7XMAl0z/
sVo2D7qXSbv2p6wyH6wf7+7EfDoyzDnbaqNDX3kbUqPkpzsdZTRFN/
VmXhaXbx5bWvq3lUXz8DGLHdtuM1v/aWm+bvQlw8+vcnX+Txfk/
6f7l5O+FkfMWLiOP/vcvw3ap/BbCQdROWwBmC6aRxv5xjpc4X/
9BLbOpgk4uFTHqq9CmN6k0lx+bDBk67FHBHsqK+r0/F7EJlTebEHcRXQVjrdb/
eucQK7Bn3zm0prZcVFAcGPBdgJkyHyw/qZtnEsyrrlDRhOCqcqL/KQ0TDm86hRFdhlzFq+Iqbff/
gSfebmAFRDtfHLvWQ/VX9g5GuPo/P/tjkgNwG/JuH8lvO0eXnZp/
YGv9C4H9outwf02V92st5A7CyNW6DMu8nTVDJ30tTuSdwPs0/ImjO/O4Dntpq/
```

LwJJv0azfv5ZwAR8bmI+FytOCcjMqfSm6xhFBF/B+yQma/
v2rj7vH5Cc8nh6/1HJklzjzl1sKL5VOlFNF81ccxMxzMVs/pndVRfNB+1PxhYPoB5/
THNJbhv9DsvSZqLzKmDl5mraXpVF8Yc+7b/
6f7WXs0iEfFnNPc3nJiZ3+5zXhfQ3HNz4AT3+EjS0DKn1pOZV9B8A/
yc4uVCSZKkCrxcKEmSVIFFliRJUgUWWZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFFlmSJEkVWGRJkiRVYJ
ElSZJUgUWWJElSBRZZkiRJFVhkSZIkVWCRJUmSVIFFliRJUgUWWZIkSRVYZEmSJFVgkSVJklTB/
JkOAGDBggW5ePHiyU9w333w8MPV4pkdHgB+PXGTeY+FDRdMSzTq4r7b4eFfTdDgMcDjpyuamTFvHmy44
aSbX3rppbdn5kjFiKbNlHLYtOWvSeSQmWDemt265rLpNo25cwo5bLL5a1YUWYsXL2bFihWTn+Ccc2BkK
HLzBP4b2GziJmtWwd5/
Ox3BqJtzPgwjiydocCfw3GkKZoasWQN77z3p5hHx04rRTKsp5bBpy1+TyCEzwbw1u3XNZdNtGnPnFHLY
ZPOXlwslSZIqsMiSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDIkiRJqsAiS5IkqQKLLEmSpAossiRJkiqw
yJIkSarAIkuSJKmCWfHbherNZTfcxdUX3zBhm9ftts00RSNJ3Zm3tC6xJ0uSJKkCiyxJkqQKLLIkSZIq
6FpkRcSxEXFbRFw5ZvjbIuLHEXFVRHysNfw9EbGyjHtJjaAlabLMYZJmymRufD8O+AxwwuiAiPhDYCnw
O5n5YERsUYbvCOwH7AQ8Gfh6ROyQmQ8POnBJmqTjMIdJmgFde7Iy89vAHWMG/
wXwkcx8sLS5rQxfCpyamQ9m5vXASmDXAcYrSVNiDpM0U3q9J2sH4PkRcXFEfCsinl2GLwJubLVbXYZJ0
mxiDpNUXa/
fkzUf2AzYHXg2cFpEPAWIDm2z0wwi4hDgEIBttvE7USRNK3OYpOp67claDXw5G5cAvwYWlOFbt9ptBdz
UaQaZuTwzl2TmkpGRkR7DkKSemMMkVddrkfUV4IUAEbEDsB5wO3AmsF9EPC4itgO2By4ZRKCSNEDmMEn
Vdb1cGBGnAHsACyJiNXA4cCxwbPlI9C+BZZmZwFURcRpwNfAQcKifypE0k8xhkmZK1yIrM/
cfZ9Trx2l/
JHBkP0FJs83J3X5rbZri0NSZw6RGtzwG5rJB8xvfJUmSKrDIkiRJqsAiS5IkqYJevydLGpiu9zvt5ncQ
SZqdJnWfkzlsnWVPliRJUgUWWZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJU
gUWWJElSBRZZkiRJFfizOkNuXfjJmnVhHaV1ybp2TPvTPMPLnixJkqQKLLIkSZIqsMiSJEmqwHuy1Jd1
7d4JScPD/
KXa7MmSJEmqwJ4sTWgyn3qRpNnG3KXZwJ4sSZKkCroWWRFxbETcFhFXdhj3jojIiFhQXkdEfDoiVkbED
yNilxpBS9JkmcMkzZTJXC48DvgMcEJ7YERsDbwIaPfJ7gNsXx67AUeXv5ql5kKX+lyIUbPacZjDhspcy
wlzLV4NTteerMz8NnBHh1FHAe8CsjVsKXBCNi4CNo2IhQOJVJJ6YA6TNFN6uicrIl4J/
CwzLx8zahFwY+v16jJMkmYNc5ik6TDlTxdGxAbA+4AXdxrdYVh2GEZEHAIcArDNNn4XiaTpYQ6TNF166
cl6KrAdcHlErAK2Ar4fEU+iOevbutV2K+CmTjPJzOWZuSQzl4yMjPQQhiT1xBwmaVpMucjKzCsyc4vMX
JyZi2mS0i6ZeQtwJnBQ+YTO7sDdmXnzYEOWpN6ZwyRNl8l8hcMpwIXA0yNidUQcPEHzfYGrgJXAvwJvG
UiUktQjc5ikmdL1nqzM3L/
L+MWt1wm8tf+wJGkwzGGSZojZJe5sDOW0n2ujmHwGRhneHxV2K1ugeHKqk8kM2pFVmVrrPydjUL5VeJxg
1jWQ1a8DzOn+XJiWwm3cwVEpaP3w25GxhLUiTXqO2fr5LMnIkZ5muU8MAVBWtCZwTn4M6xHsEnfHaNMpVx
jKF0OBAXWYKdBZ2iA8k57xRyjfhyNfVk3C2sZ7ZKbCxkUEbx1RaVpYmKWZHoN1YQ2Jsb6nsPVqQOxmQLx1
FoiLMkoq0/
BfKiITtHBAWFvDb1gPRGXgqaDe2qWLfIA6D/
GxxPHTdjSwsk+xjbmt6nnNqbdiaGXUd4LSVSVpfrD6OgdqJmSY1ZV5u52fJbzPsEnlRdoEO/
E7JkIRkKQrQhMXh5YxhlpaHrOkgx5XDOhwVH06Tv/kjXN7pvtXzXZu+ACH8fqSMtMw3z5MKrGpfdAkX4Yh
iNwTpeEpsgE0KnCs7/2ohoUcJUQ3rU8IGGBVcMncjUTxjVy1FLe4NR2Ogxu8s6ykqbltoFKZeZ91TbL+Mb
i14Q3ksCr01qfxZTh3pAkm9KJpiCMkOvQ4qoM6sDe9yAYjAPvXEkGqBNP0rjE0VWtD/mA+Y3hxcezsQZGF
zvTxb8ymStYt2C8ya6nXPO3hcmYKq1gvD08fyPF4DbtoZOuhQgsG+BHxHtlzL4Oqo5t1r5Ww4Mrjc7mOa8
9G66bHO5WbvQGeqkBo0C0vpyCDEijTQlN6/
8kJ6nBRklHK8U6cqaSQasEmdjSvVFMZo6lN8y+q0xQkhzPmvdbYDWxzeOoClgfzbSfXn3ETVLgFRjqm0g
A2wVIajhHtDrm3hUiuJ3s8AeuEcFQWnMRYyqFJgLwXKR0E9QLlm9C9Nyl1k5QY71C6dNJ5Kg8Vr0gjhDvv
YAtX/
SZIqsMiSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDIkiRJqsAiS5IkqQKLLEmSpAossiRJkiqwyJIkSarAI
kuSJKkCiyxJkqQKLLIkSZIqsMiSJEmqoK8iKyI2jYjI+JHEXFNRDwnIjaPiI4trTryd7NBBStJg2QOk

```
1RTvz1ZnwLOycxnAL8LXAMcBpyfmdsD55fXkjQbmcMkVdNzkRURmwAvAI4ByMxfZuZdwFLg+NLseGDff
oOUpEEzh0mqrZ+erKcAa4DPR8QPIuLfImJDYMvMvBmg/N1iAHFK0qCZwyRV1U+RNR/
YBTg6M58F3McUutUj4pCIWBERK9asWdNHGJLUE3OYpKr6KbJWA6sz8+Ly+nSahHVrRCwEKH9v6zRxZi7
PzCWZuWRkZKSPMCSpJ+YwSVX1XGRl5i3AjRHx9DJoT+Bq4ExgWRm2DPhqXxFKUgXmMEm1ze9z+rcBJ0X
EesB1wBtpCrfTIuJg4AbgNX0uQ5JqMYdJqqavIiszLwOWdBi1Zz/
zlaTpYA6TVJPf+C5JklSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJUgUWWJElSBRZZkiRJFVhkSZIkVWC
RJUmSVIFFliRJUgUWWZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJUgUWWJEl
SBRZZkiRJFVhkSZIkVWCRJUmSVIFFliRJUgV9F1kRMS8ifhAR/1FebxcRF0fEtRHxxYhYr/
8wJakOc5ikWgbRk/
WXwDWt1x8FjsrM7YE7gYMHsAxJqsUcJqmKvoqsiNgKeBnwb+V1AC8ETi9Njgf27WcZklSLOUxSTf32ZH
0SeBfw6/
L6icBdmflQeb0aWNTnMiSpFnOYpGp6LrIi4uXAbZl5aXtvwHfVOWvV0bEKuBUmi72TwKbRsT80mYr4KZOE2fm8sxckplLRkZG+ghDknpiDpNUVc9FVma+JzO3yszFwH
7ANzLzAOCbwKtLs2XAV/
uOUpIGzBwmqbYa35P1buCvI2I4TNBDzuzfpLjMvAC4oz68Ddh3EfCV
pOpjDJNXgN75LkiRVYJElSZJUgUWWJElSBRZZkiRJFVhkSZIkVWCRJUmSVIFFliRJUgUWWZIkSRVYZEm
SJFVgkSVJklSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJUgUWWJElSBRZZkiRJFVhkSZIkVWCRJUmSVIF
FliRJUgUWWZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFPRdZEbF1RHwzIq6JiKsi4i/
L8M0j4ryIuLb83Wxw4UrSYJjDJNXWT0/
WQ8DfZOZvAbsDh0bEjsBhwPmZuT1wfnktSbVT0XWZl5c2Z+vzy/
B7gGWAQsBY4vzY4H9u03SEkaNHOYpNoGck9WRCwGngVcDGyZmTdDk8SALcaZ5pCIWBERK9asWTOIMCSp
J+YwSTX0XWRFxEbAl4C/ysxfTHa6zFyemUsyc8nIyEi/
YUhST8xhkmrpq8iKiMfSJKeTMvPLZfCtEbGwjF8I3NZfiJJJUhzlMUk39fLowgGOAazLzE61RZwLLyvNl
wFd7D0+S6jCHSaptfh/TPg84ELgiIi4rw94LHAGcFhEHA/8M3AWM4LSIOBm4AXtXtNfiJJUhTlMUlU9F1mZ+R0g
zlaTpYA6TVJvf+C5JklSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJUgUWWJElSBRZZkiRJFVhkSZIkVWC
RJUmSVIFFliRJUgUWWZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJUgUWWJEl
SBRZZkiRJFVhkSZIkVWCRJUmSVIFFliRJUgXViqyI2DsifhwRKyPisFrLkaRBM39JGoQqRVZEzAP+Gdg
H2BHYPyJ2rLEsSRok85ekQanVk7UrsDIzr8vMB4FTgaWVliVJg2aOkjQEBCwz7ObstlMU5rrPJCpBfgEkShUo0trI8j5z1ZmJMd0zMbtNawMb2VQhWxk5gDUpd1ot5RYtMBpxhUF6jvE0/j7u3ZqbU5/S3qVDqBTrHDcn2/KE/DT2d1/Oozuh7KH2Xke0+gQn2z7B9/tmU3EXNOh9j+z3VgUwHPa2/0uPg2TZ4o1CE1oGf8aUQZ3gOm+tPKwmGuaL1FNvyUOkKPLGC2/MmkjqVRYgz2vfMjudv9aYoXG4hX2g2NsR6W+LdKzd3vGlfE9W+eqzHJBQcwYkYFQL5nKNtKWYS0H3PAPExpC2yGd9YTq8WBy2rNVSPUhbahYiVZKwXWMVZpoj5AZvWedw0VPhvdpJHPzVjlHQyeMZW5e0aZ0lwJ0NXrWeUpTrVKrjDX3w09XdZ9r1IXu84eTq3WaH9t0czwu3Ccnvwwc7TCzGJVHzJTO5mNJ3sTRUt6u9
```

```
       "text/plain": [
        "<Figure size 720x360 with 2 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAlkAAAFcCAYAAAD73atpAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xu8XGV56PHfIwFUBAIkYBouQUm9tiLmaBTFC16A+mmoFYsXiEhPv
GAvp9UerNpSaxWtV1pLDxUkUAURpQENAWRKoJGRS4iEhVISCARSJSLyOU5f6x3y2Qys2f27P3u2Tv8v
p/
PfGbNu95Z61lr1jzzzDtrZiIzkSRJ0sR61LADkCRJ2hJZZEmSJFVgkSVJklSBRZYkSVIFFlmSJEkVWGR
JkiRVMKWKrIiYFxEZETPK7QsiYvEkrHdS1lNTRLw+Ir42yeu8Hw8j5bxsJ5bWcE7YNCY8hIyCVzdmRHx0j77vjE
ivjkB6/zbiPj0O05/bUS8aLxxDDm1MGZUzuLiBdFxOo+
+076PpxqxlVklUR+dUTcExG3RsSJETFzDPcf9UUj/OzKXjbEf41lP2Ybf+RMSstvYrS3Kb1+dyNnlBjojrI+I1Lbf3L33a2+6KiBmZ+dnMfPkg2zCVRMTisp1
dE01E7BwR50TE3RFxU0S8boD1bPLio84y8wOZ2VfSj4hTI+L9bfd/
WmZeUiW4LZA51Zw6USLipLLND0XEG3v0vbZs98jlgYj48nhjGM8+jIjjIuI/
W25HRLwzIm6IiHsj4uaI+EBEbNPS59Ry7NwVEXdExPKIePJ4t2M8Bi6yIuKvgQ8B7wR2Wzd6
GIbwwvlz4LUt6/894DHjXOalwAtbbbh8A/LhD22WZ+cA41zUlRMROwLuAa3t0/
RTwG2A34PXjXAiRHxtMRhTRoLv0cmc+omzKnj90PgbcD3e3Usb5Yel5mPA7YHbgLOHG8M49mH7Yn
4I3AN4GPlPX8HDh4lLstbR8B3l4/6yL/
4EOAK4umWZ55fY2tve0xp32/54S9kfd5Z1R699Oc
+yDwndL3XGDnMu8rwJ+19b8KOHSUffKv92NAXW77a0nQ4c36X/
s4EVwC+B24CPlfabyZWRuBi4HfgF8FlgZttj/Y6yHRuBzwnm/+4ddunv8v8NAXW77a0nQ4c36X/
TmAtsKbs3wT2KfP+eaVvkeXuC4t7UCAN5V43l3W/9Iu27kLks/
zvAP7YdD08GlgN3N3AIzSp9kfabyz66q1yeCzwRuBi4HfgF8FlgZttj/Y6yHRuBzwOPbpn/
ImAtsKbs3wT2KfP+APhBiWMVcFzL/eaxl3W/9Iu27kLsKws/
zvAP7YdD08GlgN3ANdTnrs0L+S3Alu19P0j4KoyfRRwZwny6q1yeCzwRuBi4HfgF8FlgZttj/Y6yHRuBzwOPbpn/
lvgE2X/rCnT27bmBuCvaY69tcBRLeubCVzfb9wc3XGNZUVhN+o0m8+SbkpqynrYgtkOQ5R0lamm9TXz
```

```
EDgnlGKqAOBPyrfproVeB7w0Yj41w59fwLMaHk3B8070I4ny2fmDZn5WpqPqD4EnF2O007H3gdL+
+9n5g7AG2gSZT/Wsvm+aPU5mnOm9sjMHWnOP2tfdmtMmyyvvMPcpcu619N81NRt/auAb7Q93o/
LzLcCZOaPaJL5wTQvap/rsp7XAYtoPsrZkSaJ0bIdvZ7Pa2hejFpjXNPjPpQYv5uZi2gex/
+iebHZkphT25hTgcFz6qAWA6dlZq/
j6E6aEfLPRMT+ExxDJxcDe0TEs1sbI2IPmvNKNysKy2jVX9AUv+P90sTABiqySuX6D8C/
RMRBEbF1+VrtF2hOXh2prq8EDonmK/ePB/6ybVG3AU/oc7X/Drxr5FtkEbFjRBzWrXNE/
K8yerA1TWL6Nc2JczUdDbykjDqMVad9cSnNOUgvpBnSBrga2Bt4MYMnhK77coD99oaIeGopAt4HnF0+E
qAkgIeAjzL6O6430pynsG+5rKA5vt7d3rHs2y8B74uI7coTfFG35UfEGyJidjYfQ24ozQ/
SFCYPsek+355mpGxDRMxlbC8gZwFvbNkXf982f3vgjsz8dUkUvX524mzglRHx/
PLNsvfR5fla9veXgOMi4rER8VSaZDniPOB3I+KI8lzdujzOT2np8zmaE1gPoPu3iranKQRup3mh/0Db/
F7P5zOA90TE7Gi+nv93NKOFo4qIbaL5vZ0dM/
N+mpP7az+XJ5U5tStz6mA5deR582iaN0FbR8SjywhYt/
670+yDvn56I5ufZnk9cE5EPKef+wwqM39Cs48/
GxELy6j602hOe7gM+O8u91tO80ZuSc34RjPwTzhk5oeBv6X51scvaT7HXgUc2DLcejrN10hvBL5G822s
Vh+kSbobIuIdPdZ3Ds1IxJnlo4praN7hdbMD8B80FffIN7Q+0u/
2DSIzf5qZKwa8+3HA0rIvXlOW9xPKN60yc0Npe4jm5OsdaA6uQeIcbV+Odb+dTvP5/
a005zP8edv802hO+O76Ylo+n7915ELzDbVfjgxDR/
ODmBe03OVtNCesrqN54X5rZnb72YeDgGsj4i7gk8Dhmfnr8pHFPwHfKvt8Ic2L3H4053h9hTG8e87MC2
hOBL+Y5gTYi9u6vI2mMPwVTXEx6khM2Z5jaIqftTSPx2g/APh2mmH3W2kej8+0LOtXwMuBw2kSzq00j/
+2Lfc/g+aE1oszs9tHU6fRHBO30HybqP38tpNpzpvaEBH/
1eH+76cpoK+ieWH7fmnrxxHAjeV4fQvNKCMA0fwmzgv6XM6UZU7tGKM5dYCcWnyN5uOy5wEnlekD4Lc/
EtqeM48Avp2ZP+2x3N8qRcxRwLKIeFa/9xvQ24FP02z3PTT7+CaaLxCNdi7vPwN/
ExHbRsSeJV+0f9JQTfQeFZQGFxFHAksy8/nDjkWSpjtzaiMi3kfzrc4DRgrmqWhK/
a2OtixluPttNO+iJEnjYE59WGb+Hc1+WDjsWEZjkaUqIuIVNOc93Ub3E6klSX0wp24uM/
81My8cdhyj8eNCSZKkChzJkiRJqsAiS5IkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLL
IkSZIqsMiSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDIkiRJqsAiS5IkqQKLLEmSpAossiRJkiqwyJIkSa
pgxrADAJg1a1bOmzev/zvcfTc8+GC1eKaGe4GHHrf/6rbaG7WYNb/1bnLuBaXbM3v0beeHCb/
vtvtRVst13f3b/3ve/9IjNnDxDZlDL18teQc0dN5qVppnLeu/teeHACj/UxHF/
95q8pUWTNmzePFStW9H+HCy+E2dM+N/dwGbDT8Fa//kY46D3DW/8W50Jgmh2zF14Asw/uv//
69XDQQX13j4ibBohqypl6+WvIuaMm89I0UznvXXgZzJ7AY30Mx1e/
+cuPCyVJkiqwyJIkSaqgZ5EVEU+KiCtbLr+MiL+MiL0jYnlE3FCudyr9IyJOiIiVEXFVROxXfzMkaXPm
L0nD1LPIyszrM3PfzNwXeBZwD3AOcCxwUWbOBy4qtxkBqmzqSmhjxlwsPBbBqBS1Iv5i9JwzTWjwsPBH6amTcB
i4ClpX0pcGiZXgSclo3LgZkRMWdCopWkwZm/JE2qsRZZhwNnlOndM5MtQLnetbTPBVa13Gd1aZOkYTJ/
SZpUfRdZEbEN8IfAF3p17dCWHZa3JCJWRMSK9evX9xuGJI2Z+UvSMIxlJOtg4PuZeVu5fdvIMHq5Xlfa
VwN7tNxvd2BN+8Iy86TMXJCZC2Zv8b95JWnIzF+SJt1YiqzX8vBQO8AyYHGZXgyc29J+ZPmWzkJg48iw
vCQNiflL0qTr6xffI+KRwIuB/9nSfDxwVkQcBdwMHFbazwcOAVbSfJPn9RMWrSSNkflL0rD0VWRl5j3A
pa3tdppv67T3TeDoCYlOksbJ/CVpWPzFd0mSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLIkSZIq
sMiSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDIkiRJqsAiS5IkqQKLLEmSpAr6KrIiYWmZ
ENnB0RP46I6yLiuRGxc0Qsj4gbyvgbyvVOpW9ExAjkgSvRKjiroqI/epugiR1Z/
6SNCz9jmR9ErgwM58MPAO4DjgWuCgz5wMXlwMtZuAJBVEcPDdzaNLGOBRivSqydHvhHkVnzdpoT
OZG4BFwNLSbSlwaJleBJyWjcuBmRExZ8Ijl6QezF+ShqmfkawnAOuBT0fEDyLiUxGxHbB7Zq4FKNe7
5zgVUt919d2jYREUsiYkVErFi/fv24/f24NkKSujB/
SRqafoqsrYD9gBMz85nAr3h4aL2T6NCWmzRknpSZCzJzwezZs/sKVpLGyPwlaWj6KbJWA6sz84p
ad02Moxerte19N+j5f67A2smJlxJGhPzl6Sh6VlkZeatwKqIeFJpOhC4FlgGLC5ti4Fzy/Qy4MjyLZ2FwMaRYXlJmkzmL0nD1NdJxsA3g6dHxDbAjcDraaQ4s+ViIuAm4LDS
gY0jw/KSNJnMX5KGaUaf/
f4M+GxEbAP8DDiKpkA7wcOAVYC95S+kSjQs5i9JQ9FXkZWZVwILOiw6sEPfBI4eZ1ySNCHMX5KGxV98lyRJqsAiS5IkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEmSpAossiRJk
iroq8iKiBsj4uqIuDIiVpS2nSnSNieUTcUK53Ku0RESdExMqIuCoi9qu5AZu5AZI0GvOXpGEZy0jWizNz38xcUG4fC1yUmfOBi8pt
G4fC1yUmfOBi8ptgIOB+eWyBDhxooKVpaGvZAGZvyRNuvF8XLgIWFqmlwIvb2k/LRuXAzMjYs44HkeSJpr5S1J11WRfS1wYUR8LyKWlLbdM3MtQLneqrTPBVa13Hd1aZOkYTB/SRqKrfrs97zMXBMRuwHLI+LHo/SNDm25SacmyS0B2HPPPfsMQ5LGzPwlaSj6GsnKzDXleh1wDrA/cNvIMHq5Xle6rwb2aLn77sCaDus8KTMXZOaC2bNnD74FkjQK85ekYelZZEXEdhGx/cg08BLgR8AyYHHpthg4t0wvA44s39JZCGwcGZaXpMlk/pI0TP18XLg7cE5EjPT/XGZ+JSK+C5wVEUcBNwOHlf7nA4cAK4F7gNdPeNSS1B/zl6Sh6VlkZeaNwDM6tN8OHNihPYGjJyQ6SRoH85ekYfIX3yVJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEkSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEkSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEkSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEkSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEkSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEkSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEkSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLEkSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLE
```

I2lvyQNg/lL0lD0LLIi4pXAusz8Xmtzh67Zx7zW5S6JiBURsWL9+vV9BStJY2H+kjRM/Yxk7Q/
8YUTcCJxJM8z+CWBmRMwofXYH1pTp1cAeAGX+jsAd7QvNzJMyc0FmLpg9e/a4NkKSujB/
SRqankVWZr4rM3fPzHnA4cDFmfl64OvAq0u3xcC5ZXpZuU2Zf3FmbvZOUJJqM39JGqbx/E7W/
wX+KiJW0pyzcHJpPxnYpbT/FXDs+EKUpAln/
pJU3YzeXR6WmZcAl5TpnwHP7tDn18BhExCbJE0Y85ekyeYvvkuSJFVgkSVJklSBRZYkSVIFFlmSJEkVW
GRJkiRVYJElSZJUgUWWJElSBRZZkiRJFVhkSZIkVWCRJUmSVIFFliRJUgUWWZIkSRVYZEmSJFVgkSVJk
lSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJUgUWWJElSBRZZkiRJFVhkSZIkVWCRJUmSVIFFliRJUgUWW
ZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFFlmSJEkVWGRJkiRV0LPIiohHR8R3IuKHEXFtRPxDad87Iq6Ii
Bsi4vMRsU1p37bcXlnmz6u7CZLUmflL0jD1M5J1H/CSzHwGsC9wUEQsBD4EfDwz5wN3AkeX/
kcDd2bmPsDHSz9JGgbzl6Sh6VlkZeOucnPrckngJcDZpX0pcGiZXlRuU+YfGBExYRFLUp/
MX5KGqa9zsiJiq4i4ElgHLAd+CmzIzAdKl9XA3DI9F1gFUOZvBHaZyKAlqV/
mL0nD0leRlZkPZua+wO7As4GndOpWrju968v2hohYEhErImLF+vXr+41XksbE/
CVpWMb07cLM3ABcAiwEZkbEjDJrd2BNmV4N7AFQ5u8I3NFhWSdl5oLMXDB79uzBopekPpm/
JE22fr5dODsiZpbpxwAvBa4Dvg68pnRbDJxbps8rbcr8izMz2xgtSZrRuwtzgKURcQ81hRLMBXkKUJsUcWWIbIM6xYVjnVEZHtBt5Xz9xQeLVNUXZW
Zp4XET8CzoyI9wM/AE4u/
U8GTo+IlTTvAA+vELck9cP8JWloehZZmXkV8MwO7T+jOb+hvf3XwGETEp0kjYP5S9Iw+YvvkiRJFVhkS
ZIkVWCRJUmSVIFFliRJUgUWWZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJUg
UWWJElSBRZZkiRJFVhkSZIkVWCRJUmSVIFFliRJUgUWWZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFFlmSJ
EkVWGRJkiRVYJElSZJUgUWWJElSBRZZkiRJFVhkSZIkVWCRJUmSVIFFliRJUgUWWZIkSRX0LLIiYo+I+
HpEXBcR10bEX5T2nSNieUTcUK53Ku0RESdExMqIuCoi9qu9EZLUiflL0jD1M5L1APDXmfkUYCFwTEQ8F
TgWuCgz5wMXldsABwPzy2UJcOKERy1J/TF/
SRqankVWZq7NzO+X6V8B1wFzgUXA0tJtKXBomV4EnJaNy4GZEETFnwiOXpB7MX5KGaUznZEXEPOCZwBXA
bpm5FppEBuxaus0FVrXcbXVpa1/WkohYERer1q9fP/
bIJWkMzF+SJlvfRVZEPA74IvCXmfnL0bp2aMvHNGSelJkLMnPB7MvNGjJPyswFmblg9uzZ/YYhSWNm/
pI0DH0VWRGxNU2C+mxmfqk03zYyDFiu15X21cBLbcr5S1qWXK8XF2JBwX21cAeLXffHVgzMeFK0tiYvyQNSz/
fLgzgZOC6zPxPxYy6xlwO+Rg4t6X9yPPItmWVbu2cBzQXsxpeUmaMp5FVmZ+k87nKQAc2KF/
AseMMy5JGjfzl6Rh8hffJUmSKrDIkiRJqsAiS5IkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJ
kqQKLLIkSZIqsMiSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDIkiRJqmDGsAPQluNzV9zcsf11lzkiOR
pE11y08jzFOqwZEsSZKkCiyyJEmSKrDIkiRJqsAiS5IkqQKLLEmSpAossiRJkirwJxw0Jr2+Bi1Jw2J+
0lTjSJYkSVIFFlmSJEkVWGRJkiRVYJElSZJUgSe+q7rRTkb1/8I
kTQXmKdXgSJYkSVIFPYusiDglItZFxDUtbTtHxHxPKIuKFc71TaIyJOiIiVEXFVROxXM3hJ6sUcJmlY+hn
JOhU4qK3tWOCizJwPXFRuAxwMzC+XJcCJExOmJA3sVMxhkoagZ5GVmZcCd7Q1LwKWlumlwKEt7adl43J
gZkTMmahgJWmszGGShmXQc7J2y8y1AOV619I+F1jV0m91aZOkqcQcJqm6iT7xPTq0ZceOEUsiYkVErFi
/fv0EhyFJA+krh5m/
JPVj0CLrtpEEh9K+rrSvBvZo6bc7sKbTAjLzpMxckJkLbTAjLzpMxckJkLZs+ePWAYkjSQceUw85ekfgxaZC0DFpfpxcC5
Le1Hlm/
oLAQ2jgzJS9IUYg6TVF3PHyONiDOAFwGzBZEXE0cDNwWOl+PnAIsBK4BziqQsx6BPCHATV
RzGGqbbR8BeasR7KeRVZmvrbLrM79E3gmPEGJUkTxRwmaVj8Wx1NO93eNfpuUdJU5Mj8I5dFloaq1zC
7JA2beUqD8r8LJUmSKrDIkiRJqsCPC7XF8LwsHSdON30zcsjmSJUmSVIFFliRJUgUWWZIkSRVYZEmSJFV
gkSVJklSBRZYkSVIFFlmSJEkV+DtZekQY5Y5G8x/H0aScM2nr/
0MYcNnyNZkiRJFTiSJXXR+VIJXXR7R2k7w4lTQf+C8bwOZIlSZJUgSNZ0gQZ/
V3jJAYiSePkfypODEeyJEmSKrDIkiRJqsAiS5IkqQLPyZImwdevW8evH3hws/
xQ4hGksbHby72x5EsSZKkChzJksZoPL/
ALElTgXlscjiSJUmSVIFFliRJUgUWWZIkSRV4TpY0RBdcfWvWvXeX7zUNJ0NHK+15wd/
Fa1I1mSJEkVOJIlTVHdRrkeSe8CJW15Hkkj+FWKrIg4CPgksBXw6cw8vsZ6pEei0RJUN1ta4qrNHCYNx
1jy26yf38FvNj7029v777NLjZDGZcKLrIjYCvgU8DJgNfDdiFiWmT+a6HVJGr+uI2aTHMdUYQ6TtkzfW
nn7qPP333Hi11njnKxnAysz82eZeR+vgTGBRhfVIUg3mMEkTosbHhXOBVS23VwPPPqbAeSX0a5CPGRzBzm
DQN9RqpGoYaRVZ0aMvNOkUsAZaUm3dFxPUDrGsW8IsB7jcs0ylesoufnSTpaRTrtNmvM
K3ifW/NWPeqtNzx6pnDJih/TZZpdLz1NJ3yUi9b2OOyRWzLLHhvv9vRV/
6qUWStBvZoub07sKa9U2aeBJw0nhVFxIrMXDCeZUym6RQvGW9t0y3e6WayY12p2l
K2pcZ21Dgn67vA/
IjYOyK2AQ4HllVYjyTVYA6TNCEmfCQrMx+IiLcCF9B8/PmUzLx2otcjSTWYwyRNlCq/k5WZ5wPn11h2m3F
tNiiuL7FdIrXWOuZTvFMpVjDeTtPkjwsKBhrcxDBSlXT+ijjGbOjtqeKKDKFV+JyszvsRtcPvmDEy08
LpQkSapgShdZ30ExFYRFwbEX9R2t8bEbdExJXlckjLfd5e4r0+Il4+hJhviIirS1wrStvOEbE8Im4o1zu
V9oiIE0q8V0XEfpMc65NbxvDKiPhlRPzlVBnfiDglItZFxDUtbWMey4hYXPrfEBGLJzne/xARPy4xfTki
Zp4XET8CzoyI9wM/AE4u/
aDStjIijm1p3iGyLi4+WE+bKBxxcRt0XENW1tYx7PiDiotK2MiGM7rWuCYv1I6fUbSJCH1lpPb+MtU2YIu4qzG/AgNW0ePmRM0QBQ6f0CQ/ndRN1Eh1gPY4j
JFh1VHi69Y+2aZKHJ0k8LWI+F40v7YNsFtmrgUo17uW9qmwHWONbdgxv3FjVZ1tiY/
g0SeNP9qzUQGVa7Pr8LsNa+wy2erSGo7VKsOVNy/vTsO+3u5lgG5hIuNkMnaMf4dzUo5pSMWpoX72u+fBRW7oEZ5HQCt/o0n+pCnSqNWl5SI7udUQkJaHVLOxcERUwL3/7LZ8+EsaCtJEx41Flq+rC9xfaMGPzrMlHjNEpVRPpHvBkdm4b1r6VS3O8/0HR/GHe6kBFXz/OUGp3hVr9ajGjlgu8Mz94jq7KT0qiTsAALk4d1Jm+eJ89PWlHr0M1Zf08zHzmmuG7ovs5NS0LvZPwfdaaCmMH2NsI9j5SlEnCv5sFMh4s0d27dy3MxE4sHb2azMGC7i+lx09/q3F1HiYp3lLPOGeofJAiJO0SGKxDaI/ExcfEJz7y87EKY/
aTMDvNV4chwuMUJZoDGCkaVhHoVRzpeg7LPoxsWVSaQlnsuKm5OG8iX1bS9V8WtB2tkk+jHFhFzgnJQ8/s7X1LNsL+EoDeq7ikOr11GCG+l4AEUz1cf4dgbPdJXX2HE2WqXeGZx8E5n1UFXiVXRMd6nqYo/
fNUtx+3hYzTrWVZ5M4PJ/dTMAadLQmEpsbbK/jCoUTx+dT6GsOn+jt2SCFZYy+0Z/
Du3NA7OmHVHzgA1u5kqkq1Vjm8mCQh0U8czc6/RpvoMIWwIGXDwVjx7egYGQB7I0FZgtPnGZHNHkBFWfM/
bOHrg6KhgzWE6blbp6jhXkxyHnKsJSeSQyrxFG8vIx2mIsqZS2ihQL3kmkjgvLDkHmpg6aRA9yKOFW+LQRKL/
xMkrmu7pr3iZXFOdJmFtyWjUCJbInGo2bn3Jv0NyamLeZzmDNj2Yp9pRavR80Pw9z0tKuqaLvmhyTvC0/
KkFYwJpC+Ldi+mZ8JnKuEovE8Bhzr8yV3qsL/+Xl2Bbcg4bDUajbzSbOb2QN3y9e04A1y3vHjgUr/
a0r2D6ky2EyLgMk3tCTr0hGQlY7bdWrZDmLjbPpAYbUhOI6n1MSyhO2Scjz6bYgoeVqXG9+W+vgAB1JbCPKWLwg2DUbNqn
lu9xbBsblRe7AK9l29pI1rMe3oyLTOkIDdvQiwYCS08t4q/GoyuYvzbBQuRD0RMzwPpvbJfGbeNm0mwLjswe1Aea5uHe6tEF7
8BHQ/P7S6Hu6Oot+Wz6AsUFkPIs0k/XzBH4dKIq9E3i8hIL+
pA/1eUm89P2YdAp3N7RtqPgdTjUbwOEQmSVCKGhrJlNk6fhlBg/T4i79S0WqqxmapCEyFOjg8hIe/
X/Tb7zFzYLR2Nz2WhYrClV5+YGaKMv86IKyrswc47SxivKvWkh6JQxkBwtzYeTRxlLCu2Y1blSxe0Ai+EjbfHgRLKlgMEHYY/
g5q/sOP1lbRgh6Zdy6ZVb7O2CR/
g0SeNP9qzUQGVa7Pr8LsNa+wy2erSGo7VKsOVNy/vTsO+3u5lgG5hIuNkMnaMf4dzUo5pSMWpoX72u
Czcr1Tmd5pkmKdlserl46P7xb5WE6XONtinrI5q4/Yp01OG3BbJu15MqVHsjLzuszs9CN/i4AzM/
O+zPw5sJLmrzA6/
h1GRATwEuDscv+lwKH1t2B8cQ8hvqkSR78W0TyWsOljugg4LRuXAzMjYk6tIDLzUuCOccb2CmB5Zt6Rm
XcCy4GDJinWbwqb68ar+TffHcrrE2cuUyFm9TKec1suwc96ULrJG0elvL+aO0r4LsCEzH2hrr+ntZej0l
JFh1VHi69Y+2aZKHJ0k8LWI+F40v7YNsFtmrgUo17uW9qmwHWONbdgxT8fjVZ1tiY/

```
ldImz1XTLWb1Mt5zWy6Q8T4ZeZEXEf0fENR0uo1WJ3f72YqztA+sR94nAE4F9gbXARweMe7JNlTg62T8
z9wMOBo6JiANG6TuVt2MqHgPT9Xh9RNpCc08v0yXOVltKzuplOh5bk/Y8qfI7WWORmS8d4G6j/e1Fp/
Zf0AxhziijWR3/6mcs+o07Iv4DOG/
AuCdbX3+JNAyZuaZcr4uIc2iGb2+LiDmZubYMT68r3afCdow1ttXAi9raL5mEOMnM20amp9nx+oi0hea
eXqbCc3pMpmHO6mXa5LReJjPnDX0ka0DLgMMjYtuI2BuYD3yHLn+Hkc0ZbV8HXl3uvxg4t1ZwbZ+l/
xEw8q2GMcVdK75RTJU4NhER20XE9iPTwMtp9ukymscSNn1MlwFHlm+9LAQ2jgxzT6KxxvZV4OURsVMZu
n55aatuGh+varMFP5bTJU5g2uasXqZNTutlUp8nk32m/1guZeNXA/cBtwFfbZn3bpqz/
a8HDm5pPwT4SZn37pb2J5SdtRL4ArBtxbhPB64GrioPxJxB4x7CPp8ScbTF9ASab3P8ELh2JC6ac+0uA
m4o1zuX9gA+Vbbhalq+mVopvjNohpzvL8fr0YPEBrypHJ8rgaMmMdZpe7x62ezx3WIfy+kSZ4l1SuesP
uKfNjltwG2ZtOeJv/
guSZJUwXT9uFCSJGlKs8iSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDI0qgiIiPi9JbbMyJifUSc1+N+My
PibS23z4mIQ1tuXx8R72m5/
cWIeFVELIiIEyZ6OyQ9MpnDNEwWWerlbuDpEfGYcvtFrGxjUsDCHaWgsstSPC4A/KNOvpflxNwAi4rho/mDzkoj4WUSMJJfjgSdGxJUR8c/
AtygJqlyfB8wuvxK8N3BvZt4aES8aeYc5yrKJiDdExHfK8v9fRGxVLqdG8z9uV0fE/
6m6VyRNF+YwDcXQ/7tQ08KZwN+VxPH7wCnAC1rmPxl4mbA9cH1EnAgcCzw9M/
cFiIhtad5NbkOToL5B86viTwGeSZPAOum07H2AP6H5A9b7I+LfgNfT/
LLy3Mx8elnnzAnafknTmzlMQ2GRpZ4y86qImEPzDvBrbc3nZ+Z9wH0RcTvNx/RbroMH6ZJU
M+jSVCXdVl9p2UfCDwL+G5EADyG5s9Kvww8ISL+BfgK8LWBNljSFsUcpmHx40L1axnwVEqG2Vvc1zL9I
N2L98uAA4DtM/NO4HKaBPU8ur8L7LTsAJZm5r7l8qTMPK4s8xk0//R+DPDpfjZM0iOCOUyTziJL/
ToFeF9mXt1n/1/RDI+3+hbwZpo/
TYXmzzkXAnvSDJP36yLg1RGxK0BE7BwRe0XELOBRmflfL4L007zglCcxhGgI/
LlRfMnM18Mkx9L89Ir4VEdcAF2TmO2neBT4B+GDp80AZPl+VmQ+NYdk/Kl+d/
lpEPIrm39WPAe4FPlPaAN7V7zIlbdnMYRqGyMxhxyBJkrTF8eNCSZKkCiyyJEmSKrDIkiRJqsAiS5Ikq
QKLLEmSpAossiRJkiqwyJIkSarAIkuSJKmC/w+1eJH0nuvkrQAAAABJRU5ErkJggg==\n",
      "text/plain": [
       "<Figure size 720x360 with 2 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAlkAAAFcCAYAAAD73atpAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xu8XGV56PHfIwG1AgZIwJAA8ZJ6rUSMmh7rpeIFqG2oihesRIqN/
RRP9Wht0eqpVo+i1aq0FotCDSoi4oUUUaEo1aqggXKPlnCRxAQoIcnnOH+vdMJnM3jOz97x7Zoff9
/
OZz17zrnfWembNWs9+5l1rZiIzkSRJ0mA9ZNgBSJIkbYsssiRJkqwJIkSarAIkuSJKkCiyxJkqQKLL
IkSZIqGLkiKyIWRkRGxKxy/5sRsRLEf6RLy/jst6xmmiLgsIp4/gOW8W8JyyI+P4CQtkkRcU5EvGGAy/tsRLy/
x75bHD9TWOdzuJnU3OJQYNhTq3nwZZTy370uB767R0Rt0XEdtMR1yibcpEVa+PiEsi4o6I
uC4ijo2I2X08/
pqIeOF48zPzPdzU4u5nKespz+E1EzGlrv7Dsl7At7XM4WO3BEPD8i7is769jt3ycTI0BmPjkzzynLH
qmDOiIWRcSdE8UUjQ9FxA3l9uGIiEmsa8J9TpCZ38/Mx/fSt5SA+SA/2p7/
J9n5vvqRLdtM6eaU6ciIt4UEasjYkuZr0rr+RPv8TKpupxqucdFy4s8u4dZFqXEmbkqUvc+DiJAzaoQbeoFiiqhmjd0sVgDkEImfsT05K9SRsnSVyMGI45/h9vq8fqf+i9ig+y/2TR1uWmwP5nbLsruxw/
n5kgH9kWViOXUuyo31qYL1i1NbAyQfMuOD1dGlV8/
IS0oAawOc7Whvt1g+8GawLjPWjhALbTjjBxbWOH42vJYrOSLtJJI7XS3s93ZGmyF8zicn84zmm4/
AEaeGKvvYlJr6SGRvQyw9g07rNKnZ/6Dfe9g3nAysUVgdh00pzJF9Wbs6l5V8lsGpwe61Ggm2E6+vTNDHE8sjHXVlxRtJQ/
s5pdBC94vpXWX/QgfAKIGs1ANlQdyEXsTY9cX1kAXbO/
f9IcCuedUgV6d2LESm4VhEBcfwHV/k+yF3zXdS75EIWfG8HXQ5kmfsLx4ZsDB0G1Ca6Mo7B7K4h5OCWwAiYIsIJ4j+w8SFDOsf1yhd4Wqt30Fd5w0JqdbBWVEj1HMLI6Ae6GFBT3mPmpPh/KN7xuiWGq5
jnE1ORNYjV/
eyKIexbsSk3gWLq3+QdBxQ9u8wDb83t8NmfttY+GYKSfbn8Wzu0zB2qfvYE9B9M6rjp+h4/
+6yLZzPGMwoKWz4CzVEI8wL81bkC4HUyRl7d31Vr4k+84HMBJmlpKt9I1JRJo9fbqq8n30Ip1m/
wb3Gc2Ma1NdLdzuUL+BQn6Yk6puxThHMUQjmoHmhv9OGn27cACmW+3rsMLFKnr4O4rqeK9a2X5
TCBwc0OCN/9g2s1kPJLMvs0cyh6qL9A+pDRqyn8lxF+c1ks1IU6x7L9eo7QXuEvq0aByOrShnRUMxl+cUs5iNPz0KzlV8e/
zbHBv6c/F73sI71FHNK5Cvh6dE3/zY2C8JFpsbOqlwGNNqPhZM8Hy/
```

4wcHyXU1PnAjtHxBPLeehX0Rys7V4DvBfYheafzv8DyMznlvn7lm3xpR5iXEZzYM6m+efdk8z8FvABmn
9YO2bmvhHxCOAYmsS3E83re2GXdX8Z2JXmXcbXI2J7mud8wNg7iPJu8FU0yX8rEbEz8PfA23oI/
cnARS33LyptnbwNWE+zn+xBs9/kBPvcN4FFNAXGBWy9PTu+buV0xldo/
iHMoSlEnt36FIEPAnvSFCR70STU9mX/
Ac3r+BDg6zTba1eabfzycZ4jNMXLS2kKsyXAK9rmrwTuoSlWnkZzTLwhM++iOXZf09L3lcB/
ZuamDuu5EngOTdH2XuDzETEvM9fQFEg/
Kttzq3eOEfGCsg1eCcyjSZont3V7KfAMmlHKVwIvKe3vo0nIuwALaP65jC339Ig4qvNmmZHMqVsyp04i
p07By4HNNMXphCLiJTT7ycsz87s9Lv9Q4HCaHLsD8Fc9PObxwN60ja5l5n00effFHWLbrqznbppcM9Z+
cUQc2mOsAzOVImsO8MvMvKfDvI1l/
qC9EfhgZq4p6/0AsDgi9mnp88HMvDEzf02zkXcCnkDzznhNZm7scV0/
z8xPZ3NOeSXNP4c9ujzmc8BhPDCy8YsOfb6amT8u8X8BWNxlmXtGxM0tt1e2zPtRZn49M+8rz3eq7gOe
EhEPz8yNmXnZBH3Pz8xTM/Nu4B9p/
jksLdv3e8Ahpd8BNPvJ+eMs533A8Zm5rof4dqR59zzmFmDHcRL13TSv2T6ZeXc21xiN+0OdmXlCZv6qF
B/vAfaNiEe2dBnvdTsIuLxlW3ycZkRsbLlrM/
OszLwrMzfTbKvnta3+mMxcV17DpcD2NO9S787MU5n4NOorS991mXkjTTEDQETsARwIvCUzby/
F08doRg6hSeStRdahpa3T9vlyZm4o+9qXaEY2njlBXK1eC5yQmReU7fsO4Hfbrqs5OjNvzsxrge/
ywPa9m+Z02Z6ZeWdm3n/tV2a+NDOP7jGGmcCcujVzav85dbKWAydOlCeLQ4DjgIMy88d9LP/fMvN/
ynY9he6vEzywz3faxbSvDEYszQibqYZWf8I8Cetbxgz86mZ2TG/1TSVIuuXwJxxzlvPK/MHbR/
gE2MHB82phwDmt/S5/591Zn6H5vTNJ4HrI+K4MnLSi9Z/
lHeUyR27POZzNP+oXg+c2G25wB09LHNDZs5uuZ3SMq+XwqQnmXk7zbujPwc2RsQ3IuIJEzykdTvfRzNq
tGdpWgn8SZn+E8YfxVpMM9T+sR7DvI3mlMqYnYHbxkkK/
0DzrvbMiLhqohGPiNguIo6OiCsj4laaUwCw5T+18V63PdlyW2Tr/YjYPSJOjohflGV/nq3/
Wba+jnsCv2h7Tj9nfFusv63vPjQF28aWY+Zfad5JQnMa8+ER8azyT3Ux8LVOK4mIw8pFx2PLeUqH5zFR
jPfHVUZmbmDL43a87fvXNMf4j6P5JNef9rjOmcicujVzaqOnnDpZEbEXzZu/8bZxq7cAp2TmJX2upt/
XCR7Y5+d1mDePZuRtzLllJH0XmksSntNnfFVMpcj6Ec01JC9rbSxDpAcCZ5em22nOj455VNtyulXNrdY
Bb2w7QB6emT8cb3mZeUxmPp3mtNJv05zfriIzf05z3v0g2ob8a62y7X63bT3RY8nMb2fmi2h23p8Cn57
g8XuNTUTEQ2hO5WwoTV8HnhoRT6E5DTTesPvzac7dXxsR19EMH788Ii4Yp/
9lNKeTxuxb2rZSRqXelpmPAf4QeGtE7D82u637oTRD9S+kOR22cOypjRNHq41suS2i9T7NyFICT83MnW
kSZPtyW+PZCMxvG53bu9f1t/VdR3OMzmk5XnbOzCfD/
Yn8FJrRrEOB0zNzq08WlQLs08CbgN1KIru05Xl0O4Y30PwzH1veI4Dd6DwqsYXMvC4z/
ywz96QZdfmX6OEj5DOUObWNObXvnDpZhwE/
zMyreuh7CHBwRLxlwDF08jOQ1sayfV5Oc73mFsqbuL8AXhcRT5uGGCc06SIrM2+hOQ/
+TxFxQERsX4b/
v0yzUcYq7QuBgyJi14h4BJ4YSaN6ieVEc7OS7ucdqDXEELCAKO1lb7rDzh9Gh+WOjbmDjnbu03/
xfSrn23RSbdt3b6uhWVnJSL2iIg/
Kgn9LppRo4m21dMj4mXlXfbymPOBcjMO2muazgJ+HE5BdTJcTQXhi8ut0/
RXMD6knH6n0hTLM2PiD1prrv6bKeO0Xzk93GlWLm1PJex59O+nXcq8d9Ak1A/
MMHzbvcN4Mkt2+Iv2TIR70S5IDyajxx3+4f0I5prqP4yImZFxMuY+LTcKaXvgojYheYCdQDKaYYzgY9G
xM4R8ZCIeGxEtJ6uPInm3fZrGedUIc0FsUl51xgRh9OMZI25HlgQ43/67STg8IhYHBEPpdm+52XmNRM8
L8q6DomIBeXuTSWO2sfwUJhTx2VO7T2nUvLGw2g+4LJdRDxsnsnNHRVocxTi7tYAOwP03e+YseHzMpZUT/
r4B3RcShEfHw8jp8hmYk/Z/GedwNpc//rRlfL6b0FQ7ZXFT5Tprzn7fSfLJjHbB/
ufYCmsRwEc0pmDNpPj3R6oM0G/DmiJjwQrjM/
BrNx5tPLqdeLqV5hzeenWneOdxEc7rihhJrNZl5ZWaunuTD3wOsjK2vE+hVt23dauxCwhvKyNFDaIqWD
TSnDJ5H825gPKfR/
HO+CXgd8LJyLcGYlcDvMMGwdmbeUUYqrsvM62iS0J3ZXLs09oWYt7U85F+BfwcuoXntv1HaOlkE/
EdZ5o+Af8nyfTZsvc+dSLN//ILmk3PnTvC825/DL2neZR1Ns38tovkEzZj3AvvRXD/2Dbq8G8/
M39CMZLyeZtu+qstjPk3zibCLaC7Yb+97GM1FppeX5Z1Ky9B7Zp5H889yT5qLqzvFdDnwUZrteD3N69r
6HL9DM6J4XURsdUorM88G3k1zoepGmsL61e39xvEM4LyyH6wC3pyZV8P9X3b5zh6XMyOYUzvl1BaO
pxbtoPl16FM3I+a9LW+uXhN4/4h0Rv0szatbzVzeUIm9/4G9igF+8PM66vkSzPf4Pzf62kSYvPK/
L9YAfpymQnwr3f3Hsa2vG2snYx6SlgSoH8U+BR2XmrcOOR5JmMnNqIyJeTPPJxv0zc6JPa46EkftZHc1
8Zbj8rcDJD+ZkIEmDYE59QGaeSTPSv3TIofTEkSwNVLn+4HqaUwkHZG9fzSBJ6sCcOrNZZEmSJFXg6UJ
JkqQKLLIkSZIqsMiSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDIkiRJqsAiS5IkqQKLLEmSpAossiRJkiq
wyJIkSarAIkuSJKkCiyxJkqQKLLIkSZIqsMiSJEmqwCJLkiSpAossSZKkCmYNOwCAOXPm5MKFC3t/
wO23w733vTnuH4N3DfsILa03fbvsIa03fbwiDnDjmLE3Q5so/vk7b+Ge3vYJ/vcT84///
xfZubcKUQ2EqYvfw05Nzyo88Akj+9ejx2Nhj728V7z10gUWQsXLmT16tW9P+Bb34K5Mz43j+OHwC7DDm
JLm6+BA9417ChG3LeAbXSf/NYPYW4P+2Sf+0lE/HzyQY2O6ctfQ84ND+o8MMnju9djR6Ohj3281/
zl6UJJkqQKLLIkSZIqsMiSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDIkiRJqsAiS5IkqYKuRVZEPD4iLm
y53RoRb4mb4mIXSPirIi4ovzdpfSPiDgmItZGxMURsV/9pyFJmj2RXkqtGD4iLm
SRqmrkVWZv4sMxdn5mLg6cAdwKnA24GzMnMRcFa5D3AgsKjcVgAfrxG4JEnSTNbv6cL9gSsz8+fAUuCE0n4CcHCZXgqcmI1zgdkRMW8g0UqSJI2IfousVwMnlendM3MjQPn78NI+H1jX8pj1pW0LEbEiIlZHxOobbrihzzAkSZJmtp6LrIjYAfgj4Mvduo7TtvXvNGYem5mLM3Px3LlOm/M1RJl+AcSiqvJZbPzhc1+8b5tjpvbRK12WSjnL1OwuqSspiXmlO5zv4ntYf1v+bGxGlAtFqlKiYkEQzm/lM+QZHVw+vbnuf9iJxYWsAd5XU//mWG/8HlftZuGbZ+aSrqxCssTo9DQDa+c4rOwdwWrD2IVY+GtsOw2E7/UxP19zcRtg47NkQbSMMcvWGbpuhVf5eWYXu/eX/9ORX9ZyQAS5v+q/5uAXg7AlJPrP/pY9HKoaZNKQo/zKKjoaUS/2RXW+0RqIfV8KUM/Ay3ARJXKt0uDrbBWBHUNlNLKXPLPnzTWfwx/x1FadOLxO0P3Vbqx8+0UB7g2rT7FzSNQLoFpYZz0SJdxm6/1fXE+BrXYkHuBJcXPJ75MTBwcx7qEZVOBDM2rR90IxR/KmGF7l7zCBefWljsQl/7UexmV/HJqZvwVlmyvjG+j+GMrudEPlfxrn1g39ZHgG7SAiUgM9wkgkkVPNpuvrNOuFYNTNhbhOOGtMtiVNmXBaQZUbvzeKwTf6cagGfLPaiSdWJiVqhU6Z8GQcTFdPNMKLKOc7YvOPsDQ+CgjzeLxQCsc9ULcjFoOLctLW3Fbhn0Sz3JlH5I8yg2j6CwsJ/B8brYpJmQZ6dnwAeqk1DXqAtQqODHS9NR1EyPsN8hY40ZNf7a2tOlBRkNf8LRrTQTZtBr3K8udSstYBe44i/EBT1JSVfm8+9mDzX9+ImMNvKO9HIe0GIzpVbfaKvz2xe+S0TM5slL9XuTEPV+ddM3b0jr2oMofRMvHEZgIqrg04QXmq09D4vb/UWMwWkHD1WEzE9Ok5UgSgpLbMO6kKEQ9U6PK9VFK/JBnbeNLbOSPBROm45rvMdZ9NAs1EV/62fDJxp7zoFcl4eEhjyq+8lfvAL0Ha/3j7t6kx0pSmzVGLRPVELwb+dhW1ux+oRtiGH/bSO2X+w6oaRMaX0v8Cfsq9H6qgS+q4+dfdgbKJCYYb0m+nrjIvHWRhhYwhfBnAmHfShLA8qzAcmlEWVvO3d2ko4zv6tjKO1iqW4cyaKl8ZnWAvPWbyWWDRwiY+yQYw8y6pLGjjzdhb8XffTF9Q1o49MClpGkTwdXvp00ITEqrkzvsL4gFdaEJ6eP3pc5N/KTF4JGUbnvXbkpanJwQc0mRuOzwOeJYJ4Nt4Kqc0e0nMuSEgk/NwV1ynbhDEwFV9SRVoaZhMgBz7DN5RbHzBzncvejkVfD1Eck1Vv5OSw/aCTSqnqoDFzJ6Ivem8Ci4r2Fn2HtazvxoqOUO5JtK6S0ZYFRhT2JGmcV69H8hTjEZYlPCHLRWkU8XfP5Fxb/Wk1Hc/nGBv4zTx7YvdpNuvFS+YqqgcvDpixT3KlkKikhTAYMaaaEpwmBJ9KnjAmB60S51tmLDPLDF+UHOYd3j93ToXXyZ3aM8b4BpmaqW8mZY6Y/UTA5bkMcT+w0FyqJJr7Pc1mOoo7q+cD8/v4lpvj81tGwv/ti83KVdVQkqEFIMk+YfqTnRCcobjl4W7ubDfbQ5RS5PBxkAhlQKfbTbkCMNDvaHNJzYt1v5ODf0W4nfm+kh8i3E7hHTY2RVfB3iWXL0DwaVF6B1/kc1ga0IzrwC/dxKNV8V3GFlrnAhNBG+W+o8zFQEStX8gYfe/iMJ8JLx3Kk7LdCpI7nbFOKOqg6oazG6KjmxmcGf9rnjGYZGSyG0OqkLlkIqYbtXWjflXvlB/3ikH3HdQQJHcs9Or4bPq6ibjK3+lAf6FRsA7KRwFG+M4kXkxRtbxy6CAuzQuuzWXqGe4v4hSu4ABSk3mePZEjgc5R0KrKbMuDFGthuhW3GFEFH8UJHsXrAvbjWw3nbKrPQtIwZ1lA1P4DZoxglmXsHh3wGlxkp2XjO5CWaAsM7c/yb7jXGZ3tY7c5hSvNyD8JLsqfPvf4yGkAlhL+g1E8zmHrdWjEN9RSaS9MUcB7A09yedrgGcnfq8q9D+h8E0CJQR8cGgpQaTQdo/98gM2O+LZP6Iqi0Z4I/e+g3T/wbdHCQV2cLmgmhU+AHmEyBmdyRlvMhRx03oj1W+u1oNXxuTIdp+y7SqnEPQVH8JWV0WPQbOwmC4BIj3b8fd2rHz3PjI87BPMR7gLcdf8m4c8UbQa/L6/jMYdf+lLGX+TVM83Vu8mWsNAO0AV/6VDo6vV2qxDsRHOVHOyZNDhzZZxUl1KIXhpDV6+Yo3QOuGJVWK4Gj8YtL9nhtG3DUtwl8AU/Ntc1IWJn+KXWEaJ9cO+KUkQIhIHx89Yd5yc3mcYwqwhwnTIfBqQs9ToqQRN9t51WZUCDkAFHw9NEtXs1iYzRUBfBgAVWIPQUe/p8xUx7h7Ia6SRSUD8Sxcyt3QcaeLwLuDnXJmN5uL7NtVlwV9Ws8DFe0GPhtQkzk/3SJrfLkBwU0PkLCaAuxqGaPVPY2Ax5DwSW3XxVe0+wxJnK6uApzP+AJmEH2nE4cbt2szJ7O7OAJ1mNjhHAK4eOhCUmEKqZdXvUhjeo6qYHGsZgpPhAS6HhGoLEX1eobaDBXQc2QVIHTYHsGqR51mHE08KH0CUw0Yx1aeH5NHv3nPJLvb0ZDjSPmcC4LmgY9dM/vGUfhHs2XHXK2h0oCv9Ovb0v9V/v1R6RXQVHdgyNI4tIeHv9q+AvZOxyj0EGhfbR8Om2Cl5Q4f1b4oj7UnEmcZc5brRxPE9o8b3FOlqqx/KNdBL6YBMjAX4Ch1FbqgbkG0xVeWtPjaUQDB+4vwCrEHpp6cq0ZJ/I1W1yK+CBHzEqddSH3JZyT1xkJqnVbE4BnXjeSSn9DM8eUlVsU86dMRV3Y3MBRrfo48RMppN3mbCGkCN6uXDv4qjnlLBtBJxoqRUZVi1BtCoUmnMqJE2bT6/KTpuEbuk26K6uUC0Ee8j9dh+hBGDmWe/KZVNPs2gN0MAA1Tgm/yDDXy5y3f5MuC6P1rvmXdkOlx4yW0D4hJq0G4Zy3K1AGgB1MK8j2NVY0VyCDWjlkPXKf8AZCt/Q0BtYVw2WVFJYKXR+4x+14B6cuP+nBr+Zf6PRvXbvP6wqCKpzXFe6C8u4VdsHX9qjfFG/MRPbWPzfbb/L/DtNHOE4P9OWMPOl3OuadOYfYaTXm0xfB8GmIE4p7Pvvvs0lkRv8pqL4U57Xtp1JJWeR8+hjoFcvEelyjZTzPaHq5Ngc5X5jJNl8C5V6YxKF97TRqkvv5Y4yIq0u/KEf8u3+qq6Rzzj6GrJrY5a3O3AZFtcv2ZlXsfiwqbEUR9KMO1wX5YwP8XIF3THrDmyvD48VOHyWxWz1Bsq5V1+AF6uCcGzhyl3NM77yWKP0tN5hTlbmdm14CEJvQHNlNZyBjmQHTq3HwcBVEpFdl21ZpkKeRmP8H8pMHLO8QK2QsvK5eb/Tk9h7R2ZwV3HMA4wK5cHlkcXe62H4OHEbZwSOR4AxGxhHoLzKszBJWGyxTtUbv9kCxjkXYSc5mGBClLt8fbmZ9edA5bF8jLQFBs88trXYAGnb94P1pdjhB9bOVRB3HkJOWwP0GJcf1s+bdMqZW0q4nvYlhM7NAqCz3ElT8b/ogt9k9Wyst2DpqTsfHc5WM0i8lWmAX7FaOjhmDI/e94pvRtQwi6JgsJKflhZFLT7S5LlP2bk8h7r5yTcbZg/2v39VOTH7oXafEqDMxKa7hM3w9jtqMAY5cqnjOcCPC2VYfn+QXqjB6/ajQLuT7yCDqzP/pGJNv+rmNUAnAJqo0Y1U0y7bo4PTzXmFC92RkDlFn0DJVW6zW7t7hDGKBZsyJJqfOUeXPe8GhJKI1HHcJHGXcsSV6z0mSmZ4a1xU5J8PjXjZWUWwQ03fMdq1qdD84kQOXsCOoiFx9dI3OK9rB4kOLSoF1E98YaKFCb+G3s2sz9/kzLhU7n8U+NDyfAZYVaslOYa0YSzVTeI6Q1KwvDbR+xVCbTJOglxOmWd4/08Q4SmXp6RJFfCdAdeydtE0kPT2VQ4R6tBj9JJ8N3ASwKpG1/SDf5MK5AFC/R4y0Wzmap1QMaNvKc7m1OivfHfMAV0s6wInAg+bCo+A9aDt/2/xBL/NGrDUAXa4OHmIz9uSQfU6Zqr4vRyWVAV4QzYN9W4uCsqM4cgtIovpJe0hLtQg+V1DfpmBLwK7OaLXj3bX7GfLxdlxTgdX9aG4kmIv9tvSthp6c0D0ZbcGuxINyW1Bg0J2hkIg7H9dJtHFVPoMqGqjT7DFz6skSHL82HA9pNRAoG9DkdOxfDmlaaVNhXrqkQXzSDfuXYgjeIfy8K11E9thgcUPQW8uvuZa7w5xmK9yIsBwXZFeEOrTRMKt17Jl3FRrQDohMXSArExYZwgIaf9oHpj3s2wMLmQPYtmRuCYeDyKtNHwRRYAgD7uSa0iBrPLAFp8j5ZTL1xP4HAmj8Kqy1dHVuZUfrMMrAeUnu/pG0zYk4zMgBPm1aQZmIjugNYMlwyVqfa3TXr6TeL9BHTmF2JsWpfsm8GJvNSnZ0f5fHYE1xbp8jN6qqQGWiWOWQfi04FZnPrPQhEtBsAnMn6ky03iv0uJbtNhH+yRg00nWvZ3HH2DuuCt/8K4wpAFbqtBBJczuVL98eA9t0a3n68MeOXoY4F8xb/T0zWjLpaGrr/i+mAwZRRb4FbyivDtdlxFHEUTtbLJhdLnRg8zNgmjrmNL3VGU8ogrYDXAjnqNjAUQoJ3d39J+EcYlfhPkD2UFpqUbkdU+f4NpK35bNQL5xGxr7Qd0cvu2mzNpSB4Ui7E/OAd6Wwmlr1BOWaGj4fL5sdfr8A2N6hdV6x7YCJhdVV1+iwmHl4v36ZuQb8O2pEmv9r6nYe/3FxCyu6Ga0JLyN8eNj7FJyUfCHmBsYb+0bqY6jeWl+qi33/7L5OTCH0J4yEmbcATBy6Bk4axSGlmDyQ2w5XkV3Xl8aqLiVMDSjFfz8wgKE2ClNdjZoWX8RzC3RA4Q4RAJ2G5MQNoVlqdOu7Fz0/vF8svDmmY2MWPC6ph5t3rFYC1bQKjBSqNfoj2S2FSoB6lJDhM5xVtzCzL7mpvbnkZ/5MO5C/fFbkzk0K3hhSoWLVqJcwHm4mB+Pw6ccbT2wwGeFDyFiGHkdmqp4cUmuPw2lcdUIxeLrdS4SwJL1+VZ/yvObDbr8V4H1CTCy8h0eOCpF3jD4Vf/e0JWjnWz0SOg8ydjlFDPmzo0u3bdC8HbTWQTTTBaPvOIhLLDKCymvQzlIqzqTqq0bzPGRzvPkwaVHxjkuxB3bcZlUPRB1PVsPGdnFP8J7MTiWCfj4XBq44XNLYPEHgZQzyUNDv0fF1/Dc8ZqYy7EnCYJJ4dQWsZj0H3m/YxWqT7KtcOBPvJN4qfAh4vb7f7iwk9xwEqCUAr4L1/PEXuvD+m7Gnu3+JT2g+kOXm3kS2YPcB+HzrqMgOzQ0Nw1W0E6KYi4hv5LxpK/jeu82nsMZNfkKpAkA44IGqEQnb3jL6uKVvzHQfrLtSPS1tLcKAPeegA3wzZ2lnJ61JK6mnGjTBQFYVbIAvDmyvAQAcxCA/tmpf0CcM4rNPU4S6z1U4fwXtcIfkyF3J/jF9C/3VNkOuIYQqBR4bf30EGUvnoxh4p9wyw+ELEBbjQBEn4Mvdrv8w1+7rPUjaUBz9P8fkYBbk5MRYPDdN3lRGuzt9KjPj2n0+4fmL9sVgTVLhwHEwH3KMhI9f8fwp8xGiK02avBoHDtwsPB44x0l4mGIHUNP+jzbDLt0VlYBLPkHWCmsd2xLjkHx6xSFzGBGddvr6jUdVbEPd2t6jWV8LIs6Eyt7Yt7Gt7WyjbnDZHvCw4vo+yx6Xw94uuSfhKVWYAlhrQYJKhOfUUEXYOH+0d2FiUrIhJgvb34pSFQnUpOzUDHi6RkOl3vZ5FIjXyHeKMFlcBP8cy5kC5pgi/tpBLlIhmsBO6zWGRs/4aa6OcrZVbIVhcrXIMCBPyr4ZQyZGZ8yrHoXyiVQHxZ2dtTjl7lSi3fwHyfETTnR8eKTnMIE96b1kCbadISeg7MD8KXtifTGVKtJx4KVg2nx4q94Uq7sAD5l6oRkAw6h3IHDw4XPW8zRfqCftUNNYqdfmQuC3jUo2AnLQ4IgCEM7qI0bAWCBzApUOWPdhR9zW7cyCDr3NCFmnMMhSPE8KJeVyFv3ghx0u0zNMmD29TzPNDPc0yYp+aP7bs+a5HeC6tyxZhfg+Z4LI5kHrBsSeiQKhwkLnoMQwqeImB+Ak3iYhOdS9QC9P6z8eqjodkZMjNNi9YBaUSV/3BZn7e1DJVMlIrwwWEG6sE+Y9FvUDs9llM7UL5SWL36C5zQRWNFWS8HdWBv34iYMn6+bkWrKspADxlBrCgGQRqPCf5FoTBQ7JKvT2xdytKM3hpHA0AjipF/wp8AbD/C8BowdYnsCB+WJ4ylb6M2SsDA7MSEF/3vnQVFcVOa6VxILU3TsslnnmXjjT9kMW7VDPXe7+AHt4iyL5LLgqCeqxALLSCzt4Of8A9/d3u7GJ5BcQELc86w2xuD8BCA0H+nb8Kcfzlk6OqXJlqnAK3W9Zh6x8p+pHpgjiH0QY8kjgq3Nsz0U23C6sAL7OymIKlJhAZNkWf/Xk+rGe1C3bYeMuaTtjNZtYTNOz1O+q9PsO6xuGzMmDFhrwbyiNLRAa6wI8AtZVqU9WEnKDP4AR+0JPaRGt8VYqRpnoPNg8+8/WrEOwSeT8C+xIT85XVsXbMb4uDLQHV6ZmE6PEhIZrlY1TFnFVvBe4vlXyFOuvnt3ruUJzbzFKKJkzwtHvEN0C5Ee+4kYtUVvPSxBUKiuu2r0KEXa0g8dCLmtbITNuINyFBYXy8yY5dIrTzIR2g8q05NvG6HLwjRLKwyzvXVHZx7VfzjVBuoMG1G2RCGbDnJkLObfc3zS2TXD8iZQY/tZS4Zt3yS+YAsYKu93Ua5DdA6ChhWivlxA71E3ZDs6PP+4zjQ0X6/LRLG7Cy4zSPTCIm/vsbUn7dgQ2d6HHKlB+Rsze8sJV2F00ZmgX1RFzSjuhuaM+7WWwcNsmY1OhJ6LXtuFDZljGZ76cVN8n9rpiCMQw3kMHBDWlH1WlJ6ZOk3L4BdiKRjE3EZOsRwY0Clv3gcUfGm1P/WpmV6iJ0bz20oxnNMXUb7SDgzhD8PNDmFuCQwdZQV0ppmA8ZMKRDm2ypPrXiR/4NLC0eVRQ4xdrZaMYEc8G8v1AP3RxYxVYH7MnVnpnsKO9JIT6/pTGbWKtD2gz6YFfHj5ALS6RHbzjFAAdJnnKO0GaQZWdXyGhHlLgN0a+FbWVVixHDZTf4ap5Zc2p9qvfWVF0dmPxHU4qTYoLsOAa1yJXTMqlWrZ8mWy0+1hRSgGk8NAvk4e5PdU3dJt1AYzE6OC5r68c5+Xp9A2ChV1Q8vQxaZuQGvOwSmyWNvk1dWiAK3yPYMZCfZD53ujqmBGQiT0lcjOG1vkaJoSyxTYw2xwwOMxbcrdCf7qnBBOLEM4e0DngbRe5IdsgWvg0pK2MzdHCQ2Md4pX3MUo7OKUEUGUPVl8aLGeBlbeqi0dlu1QH0MaT4dCuZqFNlcEPmMmSiOH6MvX4E4IQjmyFMWa2QQAn0HjMQYShxwaNVg0V87SCJoidsnKyYfYXv2p7WvZuPcahKLT1TNWIwvObR4Ax9wEeG8QIIbGC5yqfjYFsLFfdufmvwbX0nOFXuMOVJ6RIoBvs5M8KKdpq8hgKNOTpF2M6JFOizXbwlunWkyHrCpJlVbaCKm5t4s2QZ6Fu9QV2Ofp+4kSfKDhnEXCHI7A+1EgSCCBSJUCw+KAaRGqoaEGDNW80bFZHuRTYcd48a/SxO4QTGeFV6nFAXumMp/NxrMh8ZZqVqsU+ESf97vwJDNqZZhKBcoTnq2XrSsXjPKlkxzn1zkyUsqdCnCG+dujdM4ftdKeOeSFCTa6Mv5HNUhtmxSVCtvH3i1fLxH0LZBE5ddGmgRW5tNr5ISxHC6eyTVOmOCB+RHJClXoTjgvDxagG9uVCchbtnxDaLMBi8tWSA2LfRGwA3EATr7V5XAwJBE3bvTqQBLiIqPYAdAqFEOH6uU3hxvy7Qdxvgk1Y2LEcyw7+eA7ocCYqD8URY08sLCVwhdZqvxsEkyiXUfjKxKUYMRw1aw9dfbDH16RC/SZvKEhS6dRrFWgRtgiPpzzLW9LUQZ2rD1oW2v8cYtBOi9UI0XnF+tgGjvB1S3L5W/UVBwOHeYMpWhdGRIsOZ8KZIOc81uNrRa97NjYbkRxzR3Kv8iGUfNX9v2uGoE1SgA3tcM44RaG4zoUYIzXVyiD9cJ2IWX7p6oTr5S+zmM3iBGzrdGbPz0+7k9B4OSZbfNsZfPuExxyOyhCqNG6eT+WfkWFbjL1gKIwpEkMQqHzPe8kbyumnEhIJXTEo9+PLovl70aZaG1FGhbJyrH3ufrn01cwHyJPBtGM59+aVZRvDsKxNEhnO/+f2q7vGmRl+QFTFc3yzmUKPxXMDNyLWm2iJ4bLtKhLrq0BD3ZeHTgN9EIJSG5pNLT0AwG0SQ9SGsjuLbjTs7H57XJMJ6LKI6LvHwLkQPFt2pt/1s73fwQW0f7XJf54i2tnsdbfI8oGCpXwVaYHBfo4lFgoeSSaJb74FoAxWFNSBDx4s24w1ApoLuk8jObHgUnMnaTmWNX6dl13eBzFzK7pEEfs2d6Ri0tF0zh6CHJG4Jm7kO9OF9lwjzRK1H7U3SVGwoC2TCn6JrPVt3Dou0xr5mHzttILxOf5L0hXS7Zw0YPtv9EQaOXRDwf2DB+MVs0CLlf7Q4zL7NxK18h3MJKu8NJVsKdIh0eRrXbvXxUsLdnjC0rq5qH8AE6JB4VL0ZcyT7jbrCHjYq6dygRVLKd1bN0OUgbNFtqj4rEo8ueEPIYCxaUQSOpNYlXnCHN3KnnfNNqq4uKAPQSvvFMjhTcGzLG7lthSijl3+ASiNRWc5qGhA2FpeBAUw+BxlGT5aIhPk3Z1bEeRTRiDqOMOGXSBgF0bz2j12ufZA6EtYOzEbu2CTjN3h0GyA7Ij11DnPXC5fOmcd8W4xNIZpuuHtW7p3fCcDsdmB9Ba7pj9U8wA8mLWsRvr7JmFUCHGIEvsRgFC+YW+6pJO6AtXaXQOTAjbl9Fz8iAe0jCSnUzQnqWrTWWj5P8ezmImyvxbdAO8v4+G0mGIQMa2jlOAnZ5HVsm3LIQkVdsLkTTQIZsZnafXQ4j6gxNL3JD8C8EhAvBIHPzCcnRrMhuW5Tv4EH6lwnT+KmlS9hA6P6Xk7B0q0BtJ4dYbZDZcjPHbjCU7VUVdnOsOZXhwq9nJRMFXS6lUh2jhSgxkFEnHbUldoYCmeFwAkvm6hBwmypEjK8TqtTdcl33Dfr3x5vS2sxHtWmXe3pp1h08HIzCLQAFb6nYAWRDF7xNOwQf4EMr6w5RrIdgt8RJ2Ytf7mcZv79cxDXnSwEjlvDQ6IRqNqljHDfNQkGK3QW8jHS95eGgaFGGaKNGHjcxbNzRxgEAwH4cGy1kF7P6JxcEABKBKa8Iw0OvEaR7bc7Tv6PTSaK04ZBTVDRHqyVAevy1RwOUpHFELXtv1lGcUw5wBLBSCNibt3xNLgqAuGnPXQPOTrYEu4XdqZv8RqZfxpCvGFD/4YbfFE4PJY5CyjrVhmIAsuxibS7CkVfKUAUHBh6v9j7uZzHbMG31cNWnoYlNkX5AQqsemy9ICNS6lzrLeF3mqjNO0b5lj0YKL0Bb4NXMdGFiSt9KrPrOjK0kDyBvPbPqvOBCfwaUvfDZUxENtrmFrTtn14PLFeErufJLGOcWEbHGs5YXj1KKk5rMJtYu2aPCGOn2nIsj1rR0P8tP3OvI3m4q63RqaRQ+C4oYnUKVN1slsbIWoQEMLl1vHfZHVk3fmyQHG59H1XhsQMKf8e5Iy6jgZo0Eg20X7HrN7yXNgvKk62ug9yrT+MnHwk1/KV8kzsddpw8fL37vv0yrY6cwWOV4sQIbIh9V6fK49oNqCHcZySLEwlPj2z5aY1D1vIDUY4aTzuJ4FkcaMwuCGX38lWcuH1TrJoKqHc95ni4RYJx1IC1Kh6f64nGYvhrkoUDaDc6nnyvK4nB5b6VuU1vQvttYkeYkgZEeMizDmsMmj3uovjqXH16jLh9MnIRtPcFDrcRAPOhpqP1fkw3dfRFEM6UzBj7EbVvaT5WmgWKVtaoapkN5QLAlAl8IC2UXn4fjKlzIVBvGfDeeNdAIjEfUg5hZfrm7+jh5cN0hvQMcmB5iRHaXl5Gd4uwIavwGEWT0bOdxMBkVhwpjr1uzeHcIhRYAPgWRFjNWnrHa4ZPmP5lUHZ9QfR4Q8DEqoLn4NdJ7oIbdFfyDUUpi5K8HZSmqgc+JGgTd7mIp47MIq0VWCfxJa5RbTMqV7jvTYTOS4gbbZFOFbc2eJFAgqHxEkSDWnqcpjpoU4zQJwLHiN87z0FyJPHu3Sg0K92ouUsYrNmNhzIWHyrL9cBoSD+Jbpe09m9OyYAPBt26LSYqafzH5xZcSvo5FCh/4AFbmrsmEQKp/MZTU0TM3BMZHTS9bs46edxdhzAHkWfNt+3ro7tU4kyNhNGUrJEmaQx36QvV/fVmoyo7PwKyt+z8gONYnYxuHwfhyXDfMMv/zefL+Ypr7YkaDnYdO7lPcG/XGdRq9Yn5dSLIw9cNaI+lXcMhCTTQsDWhlnlnKJ2CUfxfcT71CBEYdWpeThLvOi6cjHn5DRzE8UnW3bRjrPjIb9gudpxCAlTAqUUQPgxU9yONK5HtAxDDyIm7skqDI36YNY9vPzk2E1kJt3unCbdn5QvhUfFY4+dyJbAi89cCsKxNxWUSxCJENBFRCFhhEHoEdsA8d9ZxPH6bLhPiBl56Pw4/eHkdWDPqaP/x3UDyw3p1BgqWSw+ggVCyn1XZAgRtnqtuDnsr/BY2dhLVHtbiiD1DRzzmM5KPe6PbOfwa23EoFCBtvYbcTZ6qJ0hw8RPQXEAEmnBQE1lIc+RA/t2LBh01d+gIh9T/sUyW6pDBA+rAyv2ZoqmHnoCGnaDfywP2gBO29Eu0jCexqW5o8V+Q0vDE3OINoCQ1j/RXrWCyqlbKqr5zhy5o9VY7P2SuuITsFxJyrR6akU5JvrNxJdwbvFU2HT4Mhc5CT4NXbnpLeVm3Ag69S4h0kbhQoQlB2E4zb7iJ5/+yuR2a+Aztre44oERDqvaOjpHpPUbS72nxEqYV3VnlWEgf/4LEzCXNHoULPLHdQr76t5+gvBuMfyc0l4l7TEQ0hkFG/uC+ulbr5x0vEtkM3Bx3HjW6PFYmqp4RRtO45B1SGaSqMFz46ZZQqmhVXfb1hOfG6f0Op0OK3BeAvWXndOFtiuMCS39FFUb+zDwmgB+Q3nI1JF3/nc2Ym5WgQ5u7LoMkCdHjWyawLnNGzr9G2Zfq2AHMBZX3uw4NzLXP4pD8mhZhTHi8zNOdBlYJGQHlf8y0fiqzjMXMlPsOC+8l+Qya6cfgK5X6xbyLy5kKvZDjM4NlCpfqcaWrPvAVEydIZmRZjBcp7IQ4CbTN3vxBzjX0BwnZNzwtjUYH89DXm6gW11YdVkGfgE7J9mRZE/pjhN/XtChcb2vCr7dI9SSTnnQaY3D3uDpaPxFqRHuaSs2IMhvZa5acMG4fmrwUxiNzpcuFafcchKSN8FCuDEAiDCbbzz8zhCU3eAeuwiQCBu4yZiNfsiu7mXzqwbbEGHoHtpHX0LmAWTR+sAiAQ0uS8RrjZi56q4sGXwszxSFUmUDmDfYF7gyEFzRefGd9JjvKqvoo6bCwxOKh6m3h4P1OOSRrMA0P0xN0Yp6yBkWMCmuSi8YtSC94gQaLrPEjjUTqSoVB6JEuKRaMA/Bk+jg/WtZWmu1JfaJ9K3x1EVvtc72QLB0X19X0X+p3+6HbJKaiwknAAd6AgQ+xT0pjwmWSEDtOGFY0E/MyVkyMkn0X6zDI/GNOVlCTt0O5BnVB9O9SwoWIRkCwlQdDzBndAkDc47TnWMjqt1OXjvqh3X3Al0EhrCbqQ8xqQxR/DLXwBg8BdBqGpDkcbxj0KP7a4D0KEXXtkkpOwLX7lfbtFlsb5qMHNbD19Bpj0KYq8RCDlXyR1GkXWXK58+SNrl8yQgvcJTDTqV9SiI5z8bAdBd4RQ7mYzVB5A7h3ExUFOy9WWbL2qadwAAbDdx0FMgP2Rd9SL6mfq6HavlRtPajDSP01zZSZN45FcAGRwaFbNKPqBHLUVvVAY2uyMqSGH3jjC+bo+o5FsFC8YRUR5R5IFk0HI7TRzAv5mhNF0NwwyG8ITg/99TK9Q+T7wjEMuB91FqjCZNv/y0qj3iB5Y3wVW+hfJbkZeRbt8OQAlF7TQ5GAvcHVJ2sEjFMeGVFrjSOAd0KuvYYGUUo3RYnNV7Wfu3LBK02gc6tW7+12JpR7YavfUl00HY3FcpnDzxDZpJyUo6eDJsrk1T5M3wuXaFQxRZPgQtkPVEIH2YgAqP1IpQUdGMgxO3YAjmbHOd/3EuvRdT8RNFq6LBaI31QajTnawPq0XNLWFBDFTIwKxG+Qz8QfObkOHgd1TfJB0fWx5a4P5V6uWOq7U/S0dGUSf+ZXdtXuWZBN4PHvJGQk8pncUbJQ/XmJfvAvBM0XP7rAJrx4uYGkzWgGVWEnk1L0GBrY/vNWUvsAsdgmBL+3shoFcCT3v2yoAq1j2T8i1vjQ2mjUSL9wDnyfyMqZmBpYPzfyuuiqpT8AbqD5aq5c4jKzcQbhWM1LF+oQwkh7/CePGbzb5Eeu5xCbcB9iA33Nk3wZOYR3x9kIGJbPzMh2/5nPcKm0s4t4ZQQrDOfvb1DnWntKsc7aHvqzYxrM3tOVsABkIaSrCXFqpmq1nr0nFv5ru4czyQ2YOhJ/Fh3cEqmWp4SXVXwcKJAnYRgTLHPyv4y6sK0WDQHqsQeRl3Esm+UgMwsq8S0Y0Nt7/yk6U4qXW4IprfbKUKXyMvwmT7oYS6eFl3FPzPxN6kmEaiMH8BjfqqdSJoNc8uzxUdtufj3H9J2Mb+VqUmg7TqubyPHnYN+e0IH8bRrOdFuaTOwjJuUv7lChAeY2QCS+/oJGZ6hoX8cm51dpU9XFJzjpZIdb4RqxESsaGk7WUWQF92VW4FwwJtTxDnsjK3YIvOKHSPlbrG06lZ9kB2j1dhe2y3F9kTDX98MnMa0Mt9xM0WHhLRYfS1cMNXQjtVgJm7Kol8JnN+Ju0H2GcpDfwbSsDEkrqFMHFk0oeX7yaQYHqeOgMS8lvGo99MhzDgiCvbgfC4TdEbkj8vtBfNqQvzc3hDvmPdoBfNdV8Gg5KBBmoGGQZQtDm3M17xKmgKsF9YkUwQP7Z5zhTqsw4OPdBzHJkhk3vdFZNpsZ7wy7KXLbOV55yfvh5khbv59V+Y5mqYNzNpGUz3k01mtlG24S5m/sRPKG9r3PqUpN7kHlGbFDPO8kwuSeXQpJHiONeGdMlNk8DgARnr5K3OqN0yD4QRmYEzlqbvGCfrp4fp3y3XUKWTIsr+UI8yH9PxdxrWfhHkApxlP5+5zcOFE4shIgrDqJjozPwePu+LJGEwDqLxZ9hy1s8bX6MqC4e9x3jPBZ+Yx2r4/Cay+JCD04v8A3nFRCwZsx4s9NjBhnRAp9WFa4slXzLBL0jO3zmuTE5hFkKyr8IOJkD93vSzHGqIGdA5SZfvcdT6yK0B4O0mWxB8dX1N0TdpjK6zyu9kY9O9pi+NZnf2uW1dW7hPJDnVO14U2/rrd6rcSnn3Hq5u20UBeQxbaBfbJGxbl0D2cbCg8uOUJkJdF2eE01CzrJLXPUvuZxJuwwD7M4tbMFqtC0EACBRLIRd4r9w4ugh8KR4i9ku+lzbpYiIgMaJOnUtjtpNndAVZ0cozPNnRgSqb1mQ3TnPMtTQd2c6+G8P5ZGbYkZBeHaxdjn4JJG13A/TGmQlbMvtImlL1vvc0ISdYlzx7N85z0srqqr5Tc2i3qYpgvOGuXBnfMkyeGcU5AHcCfTBLmCoqe0ESbq7DqDqKl3SJ7sPy2CFS3OwRX00eJEA7e5GWx9zUbtiaqZozgc86dHE8jiJwb+w4lGy8F6URXLqSCNxFqHi/Ni2aeyqqq6Hg9FxEMnv2qDaXvKPMYVHXmOu7JmFZUu64ppWtFdXQxOKxFZGWH5IdmWnHF5t52oFBwBGCnbL29MYqtpoW6gmvYDHv/Ppf4PNrp86qjIehtTLnAK86IpRLHlDyqmiv0OyV6HXiGvTK6E8SIjRZMnd1MOK8ruDLtC8dhK6yBuDAI5FTaVJTcRpOxcjR5iAB4MhG4DF78OoJBBQP/+bn4P2KI1gOZW3lGPyE5T/SlSwPXF0Qmx2YYNVZqmCVrXhKi16oONZ+PkJG5FCgqC1PPtIyOzaX+DO3MhLGFrQ1IhHbo7GHh8uVYUVU3uNqiJ0sN4eHwY88qu1sUxzdUxfnJFTQD+XZbrGBdMqAQ0wO6rs9BldNqaPCM6XBSIQtM8T4QwCMOrlyA3TLKlGkk5OPJs5a1KM99bvSVL0DVy07vIVXQZg/D1h9PbqsdWxPzN5CrdV1A7eMfhFN0JZHfePuBjh4L3PfMbaUXJbbyLG4pr36DrrSkBQFv3F/hh7RHR7hoMSq6SkxDBG14GE5zJCpMqiG1edhT/VPHKuMdsh/VRwjMnhbnyIwMVSN+AOyiN+Y8cf9lxc4AJumcL8ihR9fTf5I6t5hS7Mf7eA88dzJ9Zr0lJVFDf0yzVBRgMxVJHm+9mBk8KovTiHo8Tkz3zcq86GWhRXz4DzlT7JzmWpSfVa3Zw7K5Hbr79mJ4t/q5TUt8AcsKqgYXyE5pMU9XqfXmkaaVN8HVw4t4nOzBMm8DJYAQw3eP7GJTf4WbmuHhn6jJMlSHNt7uVD9yVqbcNQ6ydktdq27ryF1J1hf2qUw+xjpC1cvbqCm2KNdoMOA+pHNxkCvoxr99rpyPJfvRfY4GTsNfb+dsCyV6mjrZNGPDk89Jfz8tHzyRKqVfpzs8Sx4dDLP8Yfsnqlhfk6zSTNiGMBk6YtAlbjLZtCM0YdZf3cRv9U0zvvDJaFlnjKLQFI9P4UgIVz1ZuqnS64eEnF3QGWDp2V7lI5Qgnn9WCdKBIAflbrXJFwdBBwpPWtFtkQ8SLTmYANXEZCRMu3LMLAKnRPzwpObv2L8PU7C2bEaS2PMmiOyw8+CpUZeQR3rCi1t38vOTMlNt8aAn3UEYPKvmAGYsMk4R3bB6UpJmmqsuHSKWWbSOvUMF3vIXtzwCEXMEZtvRT3V1lPoAXHQgWbhgQ6CKkpZp1dF/X1kewsEqm8H4jhXNQnXL7YdCm7Wnmk1BXwdbaIi0VkGVsGp6L6nQdNTmKqpaMIWi3wTbvHBcj5sW7TxRGBgjyGIkTrJ4nKwyKAjOmwEXaslT2VJjWDR9mO31HmQ1gY+V0q5K3JK+Mp79nUS0ZcTZsz6QMg2d7Bj+OhHkYRCnCIfBbMZtgHdxwFJSCgYRH5xvVMBwYWEjSsqo4Drih2EuaMaL2ZrGL+6c9WxfHXcAuPqWz2JBt4uThYFtnQLH5KSQmy3yr3jsGwdYqNQVd9K5afwQe3SlqGySDKS5X0z0bRzqfjDn9jQ7VSkwX/ks8p6rCH2kwoNkXf1dfl3t5G0hFyo5EHmwrh2pyiKHpUaF1MeFhoCq+GCF4DNk/A35YVF1NTZVGyLmPdEKyMhmJy+bhu5tTXk68FSLjXG0hWHjNzvCJlzyDJFtJPK9CAe57TMVbd+zdY59tpYxvEd/o76wJ3cbXOnA5dnmWVCDbt9BO2znPX5T2WRw6o00fq7XAxodShjyV1+Kr1DymIS4LiAPZKGwEhwF9VLQCqOCKNeJD3/l5Wt7CTLaPTI1LHpC2ghCJHbbhoG4MFYgc6BGyrrQbJYfzCRbcnLeFi2PHHOmRkqTKbtZHahm63BsJXnCQoV6MgNyVrc9cHV5IsnNxuNm3Avi/rTkNYXj8X3e1N3lE9JPrfK7EBRxFZUdEnQ5fD0CRaHoIGhPYmK0NCQz5j63cXafbpRcECl3Is1e3hJP1hpYHEiC1WGr8VC0WyM0v9C0mt9sBWAJhZzpAmU6m+Fv7tbQGmzZmJWq7hUhfZUlHlRxI2vFRPvtT7h2xBnqXUFe0e4fBxpmMW5V9GJ1JhfBXmTVYBz6tFazeRYbcY4G6DOGHQbXLCjDJwH8EjEapVzjvAwNmdBYUC7rIB5ttMJe8U2jcV1KOFuFh7P9kNMpaFb4vNLm9WR3fI8jFXfzOUY7W3H84K3Bq4oMB4rrAyxZJbqqcxFDzKvqEWl9mBtAv4ilOZAGJ6A61fQNVjRc2QtN3GfhWX6TfV5VjmsNb3fWkCaxOSuLoAIDpjAprNxvwAf3Lq20HgVAMGDsRlo64YDkKPoNCx4dLI7L1uC0SZ5s4pRPUvVFKiUjb7fuXLSyOs33jq9gd1AtNfn0aihq3UvFBk4c6BL7rX9mhUtQJ1Ny5JOnlwxNjtnmYMmCm6HIw1nDMsH8dODYbZ4bPXIj9yT95AVdFTp3Y3RXQQ/V+nzdAMZ6VGCVPTAlpsV9d4KQESlbb2UAkFiJvPnT2e0Vu5pNmxfE2jUJ4WlUbFtPXDBmObAu7vpkN2I3cNcIppc/uCFGq/sEdwHCkaKmQLAL4okXZK44pbsTMGNeAt+dCTLRUh26nnb0LAhgJrzKtE54Fq8ZqNyA/9EV0XyiJaj8PiMtYyL3nTvrCKj7K1Pvmj8XdtEmKqKKGYKhC87n1kd3M3T1qDAg19LgQ0oNcxWJ8uPjvIzD3u8nPTiT3Hll6gi8wZgXDv5MuHRpE8Dz4RsAiqHtE8aDhK5JfefEOG44GuOXOC0XbMXCzSNz5Cp3jQ0vK7bETzv4d7ULxotHFPrMWCLiobcw0LbdChJCdP+KNQ0LC2Dg9l97Bf1bxqLZdhaNVMbSw3ui6wfkk4pDPBVVPrU97IStKJ3rw0+nE7Zt1lFv7MipKmsCjFMxkIyW2LhOPDUIGBXCzA8lAbhr3xmh7kX1YP+S4a2pmlOyRLDPNyWzVi1bGDPSlCO2jP8vt9KDXxyTLlXcmgTFP06mPQPbPXcWF4czEd87n3TLO8iLS8fjEVBddTt2iIhE7MJS8fBsuwl0SvvSVkaDCSnNRVpj2I88Gqo7GFjD1EDdE5TygRY9zIVnFqJMEg4Ka7XILcXfjR0Y7fWCdHGX2Qyt27ZchJubAiO0LYXCzO3x3ZKD3MzMA+f1wL6AkEHWs4sQWZKHZAvkjNSrbFzfAlvU1JEEC5SzTRkjxRDADr7m1ZkvOX1rsi5cKqLxcDCp2dAYYtEmRpXDhAUbRlCOZS02hsNLNrrUuCFUL5mu8RXvnlMPIw2RnxXjfu4ieyP0uoTY21cAbdF9KBgjA1tZeeXNm0ZN/JTzIkeVE1Vg4BZnk/YWRC1dvm2Ak3xjyxhk9QyC6d3XTTLqYxiM2a9gI7Xj5avKLhDBb6fQUCs2dgbuSuyGh7fgOZsuPX5f9Dg1OpLvhFy14ZyxXyiPf7MGbtH19bP+s7pjmFmRizTYvJKvfKNXMQgwtKmqtXBeGvZhJ8RIuYRCXTH6cuCG84LL5xHdcjHVTfrJJpZ1L7CySGyeRvYgaMT2gwk/2UUe6nwC6eUaaXeWKTRMmLdfGoNIJqnsV7SE1JCUZLXRZNHyAKE6BvFqQHIbv3zC3ZqOqHsWpT8j7SHsCAE3HuFCvrd4rw2dXWb27t0qAmDQl5DT7c7cqgXjC8a4cmMbMF1e6fFWZO00k+8ip3mMR3HHXuKdEY5i8r6Yqu0cY6ry4nw4QeQzrl80GAqymbOKOtqTdvCmlh9WRBOUbgRgHWNiQTwNyRMsdJ2MdvZB6+V3b4bwbqCJsm8lHvxWGoJo4T5nhqmcwcCRw29+bbCK6bOmHyL5pMYbLJwcOXd5qtHqSfV+7qe6aSj9dEDjqlsNaSNLhKDbs+x1F37Wc13VRxBPtJKSD3uo9UwYjbEJ1kOFIdDh0GcWDo8M1sYr9AN1S5kHTcj9WJnvjDzz2GdMyJ7n40ZpDh8FPbXAJHfVzLKUxrK9dNnuBr4uX7uoGNsGmKWyc0YMnmyV/fNFvgEhJdLeD5yPVXXCVOX2kUtIGjQdymhoZ7MhzKkBpddVIwTlXeO5tEUEkmPzzdi8mo5DaGWfDUOD76/lAN6v2oA7N59hqvhdlI2hGGmoY0n2C8Bt91gdL1V1oW3l3VNqdYFhHKQ6XhKhmgxUIxlM6eWoTGQLeKxdjQvFmMSfG4RV1GTyQu1QFqmIx2IGRHm8cqqb1vVQnZ8Zb7fwvqr5lQ8xtuYEC4QAvbFNZ3g0bCO4H5tBcbZDqgaFMmk5kCWIGl0H1nWa4kXdESC8yYxENLO5DLx+yuZ0oVtPTq5cHoHt3uS8H3SHNlVXNvr2kpIoLe2eNNWcGLKP7b0+uWyk0G18ERMVlQmqf3L1jd0eK/Ov8ZbkeBydFfQqiv5A6Dx6d0u6LZOjpF6Zb6fY7mWkjKdXG6kmmJqYHBJzIbIe7cjiHkYmOKOBjbVkEqTWZAK2dqa5t9wqBq6YBmXX3bgvwn0JL5oqnbqUp1FcM8Vpk3dLEnGqpXtUIR14NRG2flK5LRJcUyeWEnIEOSyRAZXGtcyptf+oSOOw45F5YQjQEQT18g0vsfDZ4OxdWH4I0WuMiYuvXYnSNM0ZwEu20XsrBKbPMzsV6ZUajOw2Gvm+LhqJXBoemV5xq1IgPVRHQpkGSpJ0v94zw76UIBFHjZtPmlLczBgwo3oXzF8N+W3hdmbBHCLpjQY4wQnuJhpHMSKIq0q8C9eRrYbWW9x+NVF6JCVdt9Q7/aEWxLq9mUkvIiS8tYfhUPX5HjEsJItN/JKgDS6Ay8yGBUAOQ4+ZZ9fKKz8sIY1UI4rOMx1tw01MzX7cBFwAQTmeZBHmSYGJjeljH/lXaXAZ3T5XpMVDpdTQ/tJnIE1BnTz2gTbp0y3NCIzO5v62MRC3NTIpKP9JtHkuhgAHI0E5pp3iGiWU2J0T4Mc2vq3BzWb2qkWcBFhs9V9FQm/OOqwtOiPLjMpdnSWVsVpWQAeE1lyJo3nTsbl2cFL3VGBeQNrTIiRsO0zdr/kp+lJgA2gI+rk8J/zBsI5w6rN91vmOW6xexqNp4XTL+9vDNcJv5iefAoxhq8aJN8DnzcGGM+0AsgHSfXETK1MbWIuVLM+S85xXu6wkYvHe/PMr+CIYOMMtVJawmXFZEzBN0p52q1FffJU3QZzh3/9kCbL2l1O3cxzM3h3/CrEefX1Ajh5n4ruI9RSXOMMCn6f3Sy+nRHZ8XZ+2UJtpL/Ua1OKcT47fqyBdDLRk3oHHexWT/RKpgXO1mGbbe0A2vPcGwb2nyfQzT6hj8cJsABvZvcg6nxqG0I0MWQLBv1Fzqe95G4nETvkCJfl6NNpS4VTMCu1R6xmmL6o+XdS3HcR4blmHiasGdGfiHVcA3s+hpa1ExS0hWQq62Sa2jfKmNm1fzmm6SOVbUL+LKtvl5Jhjk6m+pxmw9obQ6rpk8MiY3wbEmRpLUMRYiHb5SpROiWu5LnUsSqJnCcPdB5HAFQQCHhI/uHkS1rojCSWG5hXQ8dGqqm4K4j9U/6sQNeN1W9AiPobPaRzEEtNmQJTNBGsTSwVlaBqJtT1e0gnpQiPPQL3bPpJmY2ZHl1cqzLN4cK0aEeGUlnmTNBe6sWcXHAbn4q7VjbGhAGfZPCsZy3kdk6qtjHqf9VZQBlIWdVvI25T4FC2f0XbCbJAlV0Cr5kRYpHAEyeWPRU7pFCAFwqcBKOs7Cf0rZXnRHO8iI0hmlCVU7dgCWmnbVOubOGw7Fir/ix2NwkaOZ4c0czc6dxYw5tdHWmcDxJzn41i1uPLDe34AMtdIhzOOPJtQnUsJrxN4VkNxfFGpDhFzCsdsX3C19mGdAAbHpcmjLnStoKZ8D3ftcx/y/LJDoIv/7eMr3hFbs2GrjKI6+6w6e4vXH1u+HuQ8rNJ07/Kh6sXF80AjdOOsDk1IgaHgAYfchM5nqsvEdCvRIl9C+9N6DnwYwz17BiE7dH6+Vz9CnWlM9IrIfPKbh/9hnfT6wZPE0kNxnrkNFBdHuxMb0KEtPWWTuQgVxQeOO+WYUaICC0dKjDrbINOKX6rVA6yjxF/3e6dFNkQ5NX0BTaBCLOu7dRXgFlIAj5g5p5sVQNRyx7mkAJvcNS6yHtbT33aQgGdDWQdOFNQbrfRbnk6Jy2dXcxRsQlRxJwqFHMqGKyFbJIbDDDZOOoDZxoQVb5ASaTH3Vo02A/Zd44r0yjEhmsG1UXDBDqVPupv03Hqxjwvd0DwT8JK7qWgvyCTtOdpqr1YRJsw6KQvEd4fjh2cE1xwe4nRZCAcbqS0I6OdqeCvpfWZ3Zm9lWdqhqF3LGB7WvG4KNBjWlJsWvoeEv8KDvqtJO2N2I3nz2wPMCNZ93hX3xVVd4aPDXYYAgXAtQPU1hTbX2J0Sy7XsQ9XM4Bc5Fr0P6MZ5+EoM3T4ju3TedYjebjGIP9dmsHkUhL0HXcEfbhgCHS09Q+l3XTlcbuXs0a0lPVGpUi0UwdFWs6hWAelpaC9bHGgUVZn2t+iD0HYj7ObH1qAVfW9zuqoTm1GsJmnEXlDDRmIXN1r8FMAOjlbHJXrK3HiChgSUmNPlrLYyv8ZpUjYkqHtH4Ltb7rBvFyKiBmCx1Ny4hcGOQEWmJyVuGVHfJn9O6jSSebeRsnX2x1EGh8MkU+b2NvJXIAnVvQiKD6upCq4vZqIHb7JfuuowY+NXpOlB6WoAylhiCrqiyp4d2o5q9uhfz5PfsLN1BL+4J9C8s1kxOijPSLc0eFvfgeCfJWSZpjVFBqvxJ+iuaGC0ZGKqFQZcEpnrrxjC0SbxDoMdYfPVI4pF0xG9jv8+zfH7xbrRXXQmG5RV2hCKZfsMzFzmm76ofY2TvWTG/bJQFkkQC2GGoMu3SbtNeyxp8mlDpZjFOZRYbkeZP23iSjrNyGEBDdX6v5PUiJwVV6GzbHDOHs/BTxkpHwKNCk0zKLG/rqeXs5ZDGG7NCqdZfcRSlqqyr5TDq7iO9V2Xw1+4dS8tYpqx4IBfVu3NWojgGfgWqf2r9rV0vHqHnaK8HOKBpUYBIyRfrCOlcRFKvcB8H7LobPRTx3Rdcyj4MEDUfQkZs9zAZB6Zgj6VPCGvjmVL2ZVlWbhgrTxBvhNZBPAbqgfX5P0M8Tqgj8z0DAHBkLoxLpvwTEdfNpffhgWpvdq8dPoCi7EjQSLFGJrBphn8yu8avvzO6uAOj0dUBk2PCw1JqbOIMWzjd3pSb5ZSwFrHpKLf9qGUi3BOHpl1qwbpeoDC6bXF6BydIQVrSDmHfFy3chWcctfUUQjbMgjhIAmyChqEdMKXoJIVZqhrkXXH0XQZcIUYhq4YKPUdzgTlHnwDqlvbdQqWd5fYiTbc5lODyRxqJPkddtEbbMbdSH0yAwUDrdUVS1cVQA5QCyHH3i7UcaBGbDxYSv8XvMvOSY3l0Gi3Vh0zjbq+/AGTn4ImXyC9d18t/Hd3fW7QLZdPuGfYiwD6rvsZJ4g0q6AywTz0RL8wtK11Ol4QAkzMjcFiq7hM4d02zV2tI8X9Jw2zeD5WOM84D7K2k2Zh1H2xUvIk3+O2s/E/W6fWeZc6PLZYCP7g5XIJXwDeTlzAYaz24f2FW0Kq9QbwRn8PQCmtjXbFkAHBNKiwkPoJkWyUFsXGYMcP0hsm1GgSKD0fnkGc41uAbnDjrDPgmLb4bdRgKYA8VZQGaqjb+FQ6gv/qK2J0Jl1BHfUSrVHCDPhYcPtKf6hyRcDSmhDtZRoOxfaT5ZTZ6EaqUU1UnzyubiCvL6OGCM3cPYSkN7vsqKiTwNH5lg1L6q5c6ai1D0CCCzNbhw2MNk1rCJ5tfkJGZcFx8EkNbS2Hhq7K8xvmiFNtbRdUcjhXoPSuqgPzm3s72e7N8d2dm3cAXgfIs44pXz5djvbjpc5JcihOg5UgTAh1IiwgcsPyRAW3rUmM4GIFqAZjpAtcyR0kHY6HAUG3jlBH3XJK8WlUfyqTn0P5MIZbU5f5UDfIFpFfMaUfSV7XzGCZqOYmDtU5Xc8uo3xMAtMLBm6XU9ks9bNZsKPA6WLgfTZGf9WzNWxmW4v15TbEqPZs4Z9hmXvtwi1MmU8zrS1M1rLzxbEw0qSPWExu3YtHY5YBCdvxbb8cItEaChymJY0fzwYaKFPGrbrkbI8MKQSAJDQudGDtyY3PPWmS0lrFUDhYvkhE6nTNX5j9d66qH25TGN4AhJvktbjzp5ezkJkJVO6NZ5oKImgD8sfMMXWoxXPwzb0FT7hRIDpZXqWjSCXdV9Y2VqBn7VcYTUANJmeEKSoVgeejyzuGl3W9YYK4y6UUdK3J6Aa3QAh3smsHtmamcb8e6pc2jmt3N7hnHuqlUF5F0rOfj7Cxg0SdHTq7ydW5d1V6lT8XRJeogTPfTMsY06BXXyp3txcRI63YGx6ycNeG5tZ4Ck0iYuy0I3tBuCNi5KnR4DD5PJfe8umbRAq7A3RY5ka4e8Ik5Knl2W4Sjf7gmHUX2VdeJKs3I8xfjLnK7bNH9C8qKlnH57wLIvYNlQixh3XRxSVwuHL4JjrpOdnpgBgOrX0Txg4zMnWRFuvsHeQSjtUi8lBFhijIvcA/6h6BYmWa3BcUzijnyKL6NVbbD62tyRDxkKxukJh5OZ9dqkQTbLkxyqKwNqPHGJMlIp0hwKXcRbO9ktJj6HVt1bVy5XwHYZgXWhyOPSzUOiuTB1jF1cQ2bdUDKnJ0y0ZpSKvMoLF60uPwTvoDZy8ENsvTb3N4YUAmAHVOFkFaBPl2tl6omSOB1h3QjYiiuTHUYEbgvEVw3Xs3fsQMzBv6YqjXspX3jKFD6UyI9dh2bAEMH0bbtfnBGOfYNzjg2svlxr0gFZ8SEpzPGh3UfHkGAAeMp8i9uFijqWwp9q8jtxGEsXD4oxK3OOnDrRH7T6Pmi9yzspvEbJa66NGxsuLaMnW4RaPmqEMBRvtxdDG0SyPo2AZv0Mt9ynjDMNv81mlxv8Lwl9tTxYXHBWwCDOzk8nVS6RphC7BvP0WfRdFkXQjyj3DiaUe0fDYqSgHKU5SMBvvwYHrDhXhXYxs1BQH3tbpl5eVxzqjeJrE1jJJ6mSGmMUfQWLGeJDUMNyvoZS0oUMnAmZRC5BD14xJcBSQRSkHPBDxshGeO4QTIWQfLcRndEAKE8NDYVm3HzPpfdnJsZS9XDVS1x0wTGRj8NTjzZ21Wx3D31Ag9JYHnqwTHCLRaZyRZM7EU+EmoGyrttrbl8jlVwMSrhbZRJsCcC17C7ymYhDRE6GWR2kKxbBW4GC9zqIxSIV2PpOTAIV4cKxcU0Zpq16RNsfKLYNcXrjmR8gQ0Zxhq0PylgMAwHlBfuwDVZAjCm9uFAWaZgHBmZaCEuUk8h9XajBR3bQTDEVHCzLGuJPUYBzIhWLpBHKJqOzYCPO95Tk67BQfmW9ZRhcVmsIwkBAF4Dr9f7TymOWrnL1CxkCtPUo6eZANmz7Kz2NV8W1Nq/VwAsJZ4CVEexdfEh5ZDmo0CqVIRThYkRwfGvLfjYHEIq9M6SsvPfa2B0dxbDEbG5Z3Ykdxbc6eWbjZsRPK6rG9ZCVF6wjVj4nFPF5a3s8BfRb3c4Ogl1m8fi7xHRH6+8nHzYcUEILS1u0NXXEr6Z2smFVN1J3kHiKrgwrEoJEzh9DAHDuPVxVnmLbFH8lVjIEvktqPAYiCzEhgOzKUj7xpUsyyOlDzUaJrnnLrwJu1lR4Tlz0Vw/Lq4zmLuBlXuvgNmVHxjk3xGnhFZsyjZfBsuiaSJSC2UB5b3RRdFIAgjJKgj6JYyLgsuw0ukTs/NVNcmBOGTXvyfO+5LXytvtGvqkgnxZ+Hk5cqHkGSBRJYMP5IH5XdEtVOxIcdzpqp44V5q5MXaKzuq2b9F07BQo0oGwuRMrqUe10KTvJkW7pDLhPkG7BXEUDKqa89EC2hACzugoXX8q7f8kfC1Dg5gRN6u4t7JqtM2JP3P0Oc5WXnkmFDSgQAvhX5RfU4tT/K3vB1dqEWDBIh5WyALJnHSnK8rJqoPtZCv3KP0Jkwy2Pc1E+rDnlrrBOXVvpqjYTNJnIlYFIXXTqXVWe9CGZ0ZnzQGVAQlmYlbGKp2Nwi91bRqnOspxTiDLVIoEDf9MmZTXvKFPwWq9QlMgXxqo9gS5qlMs9Ccpa2EJN76r7u8w3OMHU7j7oZ3w1nuH6C1cy32K55yT9jWWRjH5SaxsjSHMCSu8F6YZfAmi5VI5KnTp1Ywn1tTgDQ06+o8ZYPzp5FqOyRwEHXj+Z1ZQp6hhmVYhtFkp09G0unqqEGeHOVw66lvHGhMoNnGfd8CIMSaoRQjMT5HDJMwMmAMhV8ZRH9Kk6G4tNMsDAFgJVB6h0DKlJ+IhNAyGW6p8U9zVzFS2MZ7z63qsVUj8A6JKN9DEEQ4Nk4qJWWbpePoQIODp9D42RTqzgAEBsKCTk3sHaPx8S0TGObJdCYWcgJyMv7zL4DpsMgPzyV2ABV5ULu8mKm6kd3Z6ytaD7XSvaP8LE9NLpQkx1UYaYE6FQo44KRqQgmtgtjSQt76hFwIqSVRk8T9Vsrt6pzvVhu3cDHQ1dHIqDKFZqm7+6L8cUHu2bm9gm8swNWX6nfMO8tBrNr4PbftDArxLf7jWyT4Am2fk/Hmsba9D5+CzqcfDwGYydzqBLpqMyX9xjyNZ5MikahCUKM79DsvZGlsXnzqLvcYeNN4VTFzd36Bqqf3LCrdIIrm1rzSIjvIkz8h0vfiujumoHOpKWxEawlOBuIFQjThaE6CQDmL9WF7K8Bac4fw9xIP+DBUBDD4xXQ1Z0TxGzCHuzCZ0TOl2mwlPDxfVRnoLdMa7k2pWIf0VImX5S3SK1+iaQT3s/mo/2Iq8S+hM2KcsJL/PPO1DkLJ5BRZUyHr1HEbAjR7i30pdcZ1aQUzVm0Vm4gSyuDtHJPO8g8hxm1LIC+4NmzK8LjK9i7Bf8dMCbOvDbwrTyxfHNFT8Zk7ULhWyfQx/9J24bZzPa+jBhL0NuyH0+x6ijbxrMJhLJpmqJ9WUDVt9Wex5nipnMQc7XPGhTMzbQBH4LoFTRf4cb7RLr87pfaeQYU3Kkg9FazrMKWQRXibWiQHf6ABNPBHKgHjhU+c9Ez3UvAOOBJZNJlHcAx39v3qMQfBr2zDSxkkvBSi8c6ZzFm+FzMIGxbZ5kymmUugD87ZYoddRGAeAo4cwnh3eWYyiB0TSy1zYUaTkoo+ZcvdAeWS4P7ofLQfmOdfFbyIT3d1y14dx5AiNqBDGw9wR4DMShP2DqV5k0Z1CTu/3cBuhwtz1M5skdLBXfQvWq3NhTQeQHDBWzrYS8ujHcVaeOnn60bwxzOmLUX2T0q/7WCBjP5HP8q6xhX0Iu47r+r4dvWEVdfEzZQ8+vqGbUsb5d+xaPtqX0ZyVRtBX6rM+VbvdqcCbXXTN4S/eTQ/P3cDWjTtUOh6uEtXW4BhXkVBMQdRUpuF1smqwDyEgL9ihrU5A1sqXp9nq44uzUk3QcG4Qz5d/wg60hc2LJBYDpfRWz6HEfSGnS2kTVyNkjY94QsUQ1QY7tWD1CjVWkPeMHD+dqDR/ZIGBrqWspQGRsU5A0jUdHyP/Nn5bvJGHXcXS7aSVhvwCHnrAQIPgKB3pdeuA9kPNfd6aJEN2hDjVoZUgJcZx3WUKjnaMyA3Zc58fMS3tJHGVE25SbCCBJzotB3AD4hUCy5hnqbJ3RzMJPI0QCtpdm2d1dWsVm0SvQrOlgGhDaWHEG30e4C5iHwNcCYrcgqdbRkMFylnw8eAfrM9SXIM01WgWuG9ZTBhyfAG4q8V7aTELZSiXCSsn53wyrp0gUUNF6ApCRXNQbAHqgBtGJRDcSHxm8iwMECSgf9SlrMw8nDgoYyRVnBjyQr0XS6QSnWmF0vQ1kvNnwUFcwrQlS5NebhdJyzPmzDuXBgcnqqGJ3W1JG9Y6VDXgi0pV2KIqVUCfe1Pp6WCAwWPdpQe7ip9dNFbCe72NLzPX8o7uTU8CZIqNmgxXmvhYGm3rMR2aEnCnPTDTBvJy6hZiC1Xp5Vy1Q2FfFnQ8sHuEB6vV9Hm9FW6PMtaQ19z6dDV61RTa9VJYS7TCnmxfXrzHgVG9nJvoFuVXTQiTCrwFIf5CPwtvkd9UbK29mxjGTvOuDNNE7x0LH0Ym0e2pV0E8G3BjqjtAPpHQjCpv1yGtBL8uYFL7qwDppOaOBPtXVxCRXxlHfe0kK88SmfoGvPvZSMG5lZXa7DRp3WPpF3ikwZ5qZyBEhbgS0uBtRkC0xAvOsDpZD5fESjAFZd98jvnBDdCzF4WBRJuiHtdrEeIyxOjOJc3TdrRZJMmYZJbsFnzVzwJuyYyrPFYWOF5GC51IqiGhSg6BIbVE4CG6n6C09gzf6VNYrwZHHRdkKLbLeu4MC1T37zIj28PcKmzyPkzs0xBs5q2m3RYNSgcWmnHyXvaQqUfuqFZOvdbhnWbnbqYfDNqRrPYYmDXzqVlPmsjnqv30B6NoHQt11Cd61Pk8FYjJzR37xZfo3nqTP3UB8ytBdASAbYrW8PbxZnOOzCUsePsXHNPLkU2Uc3q6A6GCKNOyYAPUHsNefxxnO2dBDGGJLL1cjVDcjcdz6ZFA8vpNHlomSe4uCrEOfEFwm7Gh7TPdrRumSVvKYKiTIzsZ03Ppvnu04H/G5SdC09Pk6jIlzQ9uYPlGLw4crVsrlZXiCfjL32bj1TRvl2IcbStMX3z1TTEsCSRFHTg4R9Xm3DQhBUKW6fIP0QhIFR8wHAbehBo8cbz4uTvK1s7RqtdZ7b4eTbSB1pcOJEJ3FTHmdoyegqVQRcQYOVf36BfQxxMfs05EwSkwV0xvPNttBmhwrK7FP7AfGMEcUphGmGn41ZLbvJz27TGfOlLHdp20k0PU2kzahV4eoYkdOckYpH3oEBSWvlpN8AA/qL5BIOaz7+sT0B3QAJX3ZIn2MB0xKDjK3c9tzqTU7wnKBR2VgJtnyPJWwhhudNSJgCpFnXqC9RNrJmf19wpWRNUC7PJ3bl9ozB84DGXNkrLNK8TfPeBfMfb6wT8Rqs6DSjeYRsSn4uuzg5DkSvB2OpnQPRtCp9QpfoJaE0cUQOSNB0hvYkPF8tuXDlTGcJaOm7dLDr7lJXCZMUpwTozSzXYKrHfAoHBeP9rJcahDEj2PZKpg+3XgJa0XfWEZ9OktQ6xCwkjoFlAkQq9y8TM7A7BBq+d68W7Jl3t34i4f2DukoHiCU4XK3IjA5PuYMDAKYHxTUmG4lk5fU8CyX5BKWjuzsE6zO8w9KrLqtZ9yP1OjHM2SnPDvj3hKqHAa/NxLSp4SbqqZsh9PDJqVrtbIFxIhrYy8eslzb/LO9xadibJeNEdMcpeQpNKSYrKljUSkTC1Yy+xR2GH63G8zHsNcpPFawRUxBKvWNptvm5mS2Tw+ybrF2VmZIJlv0Xm2fLwGfnzdc4OkKtcI6UFeOQ5SW0ZQrn8s6T7bOxJhHAbdG3dWwOCv9Sz4dMaYB9nF4Fy6vPfJrfwhZvgMafSqkyDT5AMX23bnkSxcOfHt51Nt4q1vDWUcR3GEpxnjvvPjKYMeDA6Zpm3wEnQzhhC4Ey8mqR1sxyItzPqRFCVMmhCoJv5ZwpOJdhozRLY2XJNX0Y1c9JT08BW31lw3vzsDXOvoHjp2r7kz7Dj9c6Eri6SMKlkG1THiVqfSSOAbQUWpmqpPhcBOM2D2Ml1YTTrYxQhCPyrnTTtHK2WXPwpqzBWOs1Nm6UzB3hx5ZG0PU7uW1ukUNKPtlN29Tj0WJlNgt1PxSXLmyZ2fmWXa/xyJS2Q0hhBhL0Mtm8frXhaAsBSDypAvsyaTxqpd6tVvGAYmoXmEx9zTUuDi+l1J6HqCdzoYj+xCuxB8R2SeK0jt1rJQubWrNKHDHGrgVaDeiZYqwngFmKBoCWwBlOwl9lUtDWQgmpoABXwB4Kc3Hc5jrROfGe3HA5bFgnx4YIf4JU0Rnbm1Gy9d2yWEsVpkwlSDwsDXkL94P12HlBFCgF+L0Dqd2dbYhTvb7H8a8WyMYTcxTKuwmd2rvwzE4ye8BMcZ2ovY2TYLFHMdDCcZSFxJnAK6nFj1utgzvp3a4E7Z3IpDZ5oK1RTnBUjaaUYBu9SEEzo4XzSDcE40GpmZcwDa9d4tzJQqL1lSOuNwSBqCYX6nR1xwwFX0TjdQr3VV0Ksu3rs1KeBOGUn2ZSAmYGGfyPj0mxwhm8IrPRf9yQMMKIavcjfqKQqQPqZUjh1dxfb8XGw3gt3Qo1XMhumNUkLTl1VSlPWO4EADjUDyjpKzwUj3tNnfcn8yXpMGnW2CtaMmP4dYhWzxLlRS+LqRc8Ev5v0HA4tXsVCMkbNrbr6zGsmOUwvXZXh22cz+1gvm8wXOx2HxMpIRUIhoUv4ZJdkYA1BfCwGmQsRbDPWWIy8W7DSV8fyxzJ0FzP9VWMNcV1wNpyuovIqtCCi6nFu09xOJp9L2hu5HAJxBbm5OW8cI2vOAzxsJcVt3EmhU4fHCA3OK3Z34tsvnLvA9pKvsSC8amNPVMv9JtKHDjv8wzzQnAnnBTS4GpZ4dL9rbkKFCwEtbYsnA6N6e5tMmX8l0qjbPjd02ObOnYnqNIuXfWiVxvDSDaDGaolIvLWRfqqdPS0sDDU4rrmNKHJg2b7E5iutNYDWYBawz00R3Yi8I9AK8eZ7fTlYnXz8yfKPkI8rwG5ePdMmTs5JLivmSFy8F3p6iO4jIWr6gnCq85gZPX1SXBS1tPlVTq0GW6Kn0qU9UvpQjqVV0T6kfiuYPp43ALFQOF3KiRxEn0bzHExA3bjr0ypVsRZPZ6K8vWCvQVcSPcnBXtx1ZWWlJvhFbOk3FYwLB6KLnA/Nd3WuhAnwMbqQ0eKtDmhdh1mr6d8s94VkfkJzpRFiZ7QRmmp6yoSqXfPi08C+MFx30K3sxBAaYW1pa0l5Ynp2Fkm63BffvDa6ml8R0bLRHRyrIHDBL7YSr6pjJ95Fcc0lSoP29aHfY7BXPFptmc94IvUUjBQ8SQIc5lBYEbI8ZslKNujIZ92E8jw2ZfcHKVn1otNgmBvLlBy+tTKn3sCXMyBdJWuY0AuX0ZtpsB9rjL1KVHcGuTn9QKRWe9rEtsGhThbtMUOq1G1iBb3wRmJrKuMfFb6QQT4pHtS9kMbwWLYdDj2Z6gEpFkXYJDgGIc1UyZp8a3DC7QoN5O0QArWZNbdm4SQSPYMyl0j7QI7YmvAXtxtVi7yqS3HH64K+7dErsi5HsbjDuovlhFqx1OkNqJoO+s9j5xlFdTNbLoYJtjmMlFj/oSnvt/+GxpvqxZg0rE8m4NIyQuNUQ21R2EPOXM5NbaiqrHF7d4S0Z7TLcUEOWDmaMS8prr7xPKB9MtTGR1h51G5X72qt6X9FRvf+ekBfGgwnUCQeY6xpuB1uT/5VD4/PGaasTXYK5mrfEHWZUMXhC7UMmKeqhfjWf7FFHIqA7oC8Jy2WQHqBGgTaA3BrOppINppqfZ5e7Va2XSKcqwpbV3FLLj9sfMzUvo58u3Ko+Dn0Jsq0b5lwVV62MsLC3yfaNFmzFmtDF5LdFPEmRvgpVQOqfuI5FGm9DmXDl6dkTm4m17ufYE3DuM9QjcZ2N5xiXLcsLdjxaupxHmMVVOTL03uLk1xIt2KHm4+8yLhCvGJJ2wGXmVTvP3UvrwyvtIQNsW+jkJqOFVRrB7z+tjpWNmdK6xg27YpgUx8MJvvwY97mCWKAbazMuqZjq2JGOBUXBDEOOmyXJDK15fWBl4yfoSh+Wnl+a0rvG0u55K8dHufuLAEvswzbBfF3UplZtDvo7z4DTqrQRrE6Gb1hozoL4oBGctv5n5IyABPYL80+sRoO8Gs+OqqGyDdabOOrOppcGyVH1IB9rgsgnPL4ovNy95+7dzrN2w9BOi6fnNz7VcjMGQ/EVbt7RACcdbvfFGN+dGaw6jaGJdaWJwHWySBRqbtyuQJ/bVjuK8KfIXctMpkMj6c0bPZr5+zvr0Q5wmi0rSzT5kPYrEXswsgnnvMqAgsHzsoVHiLgtRF1A59i3Li1fI4x6T15RNh2G6W71R07rW2cH9yIP1YJ86gPHoNh1kV91aexLAsR33ZZ9WQaHzfQ4DuIKXPp2hfwgNAQtHShjPHTI+r9OWdAqLuSe1fiXBGnOZLxXqkFCqbuN3vd4z4F9mkRBMhDe6FwjJ7i1h9VtFpZqxBcXBfVSgp1g2NVFV1vYBTCkYA0nRgaGlU8J+FEIj8f0+9B20i9WSkM9lAodb3AbVR1jsE7yTYjg9xiNrhE8E6VBYtn6A6s37Mr0cv0BSGWyOzPcyLhgqMrz1vUjcAOnylRgZi8z11Rk3pRbsubOw3LmbCl1O2eV79qqvOfN0nm0pnzT2rUDRBx/kXpI0eE2upDZW3iiKaC8TJOVBtSBmsR6k8eM/2jmeFDgCkwj6m0Lvn/1U8HAv9sbJjSgvwv4fbiyeVThOCsRH+SwaxEIS3K4NmM+KlrT2qsp9blcC1cqC3gkL12RPwtRtNOxJeMYn5aJ4+Pl2yTnC2BRyNJ+yYzLTMuYjE0iR0+KrbiAS9H+x9a8b+XDqkZ/BuNe/YAq1GxtkyFyCHeMw1zJDKrJF6lo3Yf5kGnNuHcgH5zrLa9SzeUkgPh+7ksEpGjTn8Rw+XDSDWpa1PmSaCfmd5Lqk+mBm9XK8nzOtsGNdcHmN0ac2Mca7jAi5A5YzTM/9n12ntoDAHYqyjFyh6BjW3Y4IYoVIcDVEEifWQyIc9YcxYzPPsU76MgYZUQRDAJKZp0y9fsuDBsG9mFsFm5e11WfnSvbpkVJtmb6adbgq1wnbpEjGsuVaO4yFtH6r+t7sHEC2+zxCjK5WpmrLKRfmFD82mMr2pNxg0VRqIQXMYIiE7BOxcGSBB0v5qLTn0qB7Ms8ZDZlUOHf+nqoY3C4nixmfKphlRJfvR0Q4SMQaGTfvgoJH0IgNjQNMUPbaGQDeQlVbR/E0s4eeAsR2jwFKKm3GQ6WxXd3u2Fv3jwPiE8ZxcDIKhcq1zXuTUxO47BDqjYcBC3qDGiEPdcGBeu1G+0m98/tB8vgWLCT82FHi4O6y+zHu5cWKdUZw8JJaRTtxUfhcNb/qmP7/FCPzZvdeLhTrk1BjhXaERX2AgyCjVYnOUJdxOFgXs2HQRs5CYbjRUEGeQr3rRcPwrgfadG3DbFmMsTCRQ8kvhfSTZRBl79SLXRvfqjVzUBLhcAuuNmbVjDzzTeBYv7BRi0mwMrp5ZvLbBwpsE5bwVC5iRuwtAobYh14fSjt3QvQsnbn8mDq1CNV3wxHgyH1l2WWHnb+4vlI3RznRDf3Cdj7JcsrOrsgtwlPJz4aaWjgSNU4LHuMmMA7VEL+RhfFwBqSXTCJWfSTJ5wI2ZpJNOTyXkqzA5x3vKunGDAjnfTlBGDmyKaxmjD/HUV6nOYXxjqZcqNHDqeRXn1eFMiXK4+e1UIOCzOj0FeZg+Sf7DfXp66eG1TqgBOH2AvKtU9aWCZ0/2OMpIOyu9whyT99TSTdIiYSz2y7NI0YpxYoAVnhxmvWpWdzKC5ap5BEGtaeQgmhD6K9M/Kq8pt2FnRiCHdqxgCNb5CwTNvNGP79lSWJyiGQXtYNqPRwfKVEfvhXv9Tm25hUDNqy5Nn+0kCtrhR8YXUFYU3gsO/b/PBBp/SnWGUh6Fk3EAVIhEbdfvoDwqWZh2yz/zhv3gafLDM/Lvw7GZ+sQfk1+hf/WKQdAXhDo+d8ZHEq9QzbSWnx9f7m1bslzWgwqomV0yPyMtMyg7qa1L5h/Pk1XdYB7u1+8fzOQm+ZCcdHMXt6kbuXvHtS3t2ZV3lsHpkHV6YpSwy9TCWR9d/0oYhHCpFaAUYdj0AggrbQ62Q7i/Jr4eBRwMfMb79Dw+pWWNSb7uJKvRIM0+R7egMO4kDgcNxExHKF6xF4gxxOepn4YtlkF2f4uKHHXRaJGJPDFQaTrtZmTQDdOaeg/fMPAzUqtyeSlsn2HVCTqlfHt4p3J4aG/LG+TClsv7ZlSwODMCaZeTX/RkmYJnMV4Sg1rlxdL9RfLsnFWYBiMJU2YlPU3JfHTK8XWNp/w70mOHeO/EU5kMD/ym43U0VQqB1I4CMqWUY92obsnhx/oMGLf2wS86pB2d0xsUPMqZlJ3/zHJUfDAkQzemc0uu5kEOxl8TJpOU2YjHlwdfNlszzbGQtCOp2oYt3VsCx9VDGOQHH5qhNbWqE+k9xJ6y2IZp0odUyjtrwQGmGmq5VVNcQd9p3vBgjomCEcX7WTjbgSnrvkgM1eGp7+UWb8aUAAyD6cqMdjnLeWyuyf9VJJr6t9Y0sE7JgvXrLSDPqqXe1QOgPDzW41sZNRpR9pQWoiyDGpzHzWGcnYs9kqtPW09kCSWK6tpK+6OkxkR8KMj6O2BObbKOsrCeCW8Lyz5UTnzKDoa1TWrvsI4eDaLsDKUvXhaoj+N+MV3GVoXAsvY14WjdPz32VCxS38Il6jZJbOiY3AcfMNFmKTQCYZwcm1QuakAjBT4vjPvIIU6qXcvZ4/9CbYBAzvUmQZ9Ur8rnUSPcVqlBZP4qSYX5rfSb5AfvnclMTXr0Vl6fn47DuGivJHmg+yHOpN0PPPLCe8oz66CsdDSt7BwXbe8cEfD7Z2LEVQhP8wNvRUQAhvEhdqdvI8SQs7a0K0XUOPDa4r7uoS6VlqepCTKbLJPgfP1w5ve3Tcy/WNBrJqSOFLz6CJ5BnpzxB+DeaaBWcbqNTbg8vFdCgFo2L3Fe7wGp7FQCxhqO0fg6jtKL6GkGvUdTOvrVGP9L6t+oQmJLxIPwyqLzx1jz/vcHTFP8YHtixy5ILYbh19CwbfD0NYCN0nqtgLjpnmW3UAs2E4fyXSGNyBGaS04hzQGhpObGT2slyCPmhlQcbyQ0ZkcHGmAC1SNP+JuKHgYDr7TvZjtqSRnh3YnqwZ2Qny62UUlgzljCJ1mR7uhgNhKNhLrJn2dfLPBdUrOQ7Gk8pBkF1WVShJlSSXV2XHVmfsb79zMfMAp7VhFl5tPsdvzB8Hp+0zwYNQfKjGkk0vxdyxpRAN70ARZsfm2LcSIGPI4lTCC/IfZLnpzQYsm62rFsFyNKzBL63VJDYUiiZfFJXIQuSeHBUhdBkHWCJHSt+OVYtx5u3uGSM8B/DhiC2JFN/hUmHTg5eKzH3I9d3dp+9eQrbRKVlVOzP2flr13nE1XKvCu2/0WTixdCQjEYiSuPTkjomN6fM0N0cG3zkM7iEdRMK0xxJJx+iUrjzj8v6tZRiZI9iSGbYfZ0xU0cvt94nq2cbEuu7hc8ZNrmOXZRTqFFD71gwlAI/lCzQiK64i8MsDSmBlUo7lp3eYZY8Y4d6ENZ7rwXo9VTBfrOi/nmrYfs82xe6UkpAqXJYSpqTjGNUrzkS2OgPjLcAS+8Va/PMRuo4Ksp6N20cW6SNXK8YVpVlpYtpZ4LTPXPvPyIq1HKFOfF9rStudK9H4yzWK4PUIPkJz5ZzVVqMvWuHrB+vnpVJMuXJQ0RRGHxndWjHyd3uQZDHyXqRn8U6yAW8zBGLlj8RkJX1W5XGTYvX/SujTGkfxOk1d7ePGRqQYjbGbADOrB4b8D0XCKQyp/p9DOgmMlKE1qfUwvXFuJ8QA4Z9ZSgNS8cdDBrNmBnJnmAjuGvqnNKCSOiFyv8MqrY0eLEnl0DUymQT9N4YF/LX8QRDCgyzeT9dOyMVK1lfyVQX58Z4Q5gdw6C/KJlsHsbg+eemfZ3iDwptzcb4xU7/XHNPqx0VBpCjLQjUMQk/ijpn8c+hFCLlC25FS7gx0KpKPZkF6uHkdkPwgSbD0IkmZ3bcBCV9fjGrTpU2j+pyMV+0zi+DmuJsUR4csGLiqvS8sPD5KoMomzxnp9CVnjYCQG2cHOWcFkHzvqFBfhQaA72z/pQyv1aTxQqb7N2hXqFJGrAlgF8cq0u7t7h0LmOXqA3uzd2UNYyPiOTLbvfl0X1o01E+HuCgtPpMQ0oYWKxvpFqUeX4H5W0C7AQftuEErVuKeBkVgpIv4wuUEODR0XFxtvyxNxUBxbmGeBpbsR10tfn+oBCRhrV7QEZFb2ITrc+vXQqAYmpL0AfGWQjGgJcY/5l9vwZ7p0QBS+qaIP7cbtUjaGoKIKr+FcDb2xxE0HXhUdgMbFy69J40yN0TnupemD49ehsmWkiOVPUkqWdkGu00EyQCnhGbyjw55Uv3YDJOMjXlVzLtlGVhy/3bSBBLTpGBKx0h9vdspttpzc6nIo0ue1S9+rAe02UO3A+5njqe3sYYTQXAL6kuS16FkDBHiqJYhRvcgK9RVJsMNdSxBhvp6/v2vyR9VYdmwcoHm4LmoFiNGADGOT0Yxs6Pg0RTJ8AeN+HbOyfYZXZbqX7a4yzpybgSiRU2tKaXnYkXh8GE92XpC0SBMUM75grbgzSF6NkkNa90ybvh9O1Vy3uwrKuM41GWZWxjzW+dDmv9IeFZxqYvRqyhb0F4ZHhefbpsTa8c4tFB4cmXTa8u5S9PTd1kjrgPEhBHlvl3qAv88TMPyBq27WNZsJaTJgNXdKOq00BtYbBeH1ZpYT1wy7pMJZbtPeoGM03FvVlz1kGP8B6E1Gur7cwS9zQVR0LwDSkCOfhIGx1GfFk0gqjmu4h6hPzUXrIQo8C5flb4HwXkKcS3O7anNfBmk7ysEOJMoQLMtJr0YkfF/Vo1h3q9aG8v3A7gf5GNrl3o1AFAE5o1K7fkpQSIgMgE42dBL+oOPOp2bHhgqVxGvvNu2QPqZ2AoUg5B0l2E4nvvDVxlgsxt7D2NHdUDeAHS7Z1mshPwwPGSTDPQX8jOr2yDB0k8lzMcmAIr1xCd4CYCPBtYAkfHLXD0HyVVgJNBRYoBgm9Xmn86aS/l0E8tDdUsFmlgBvDtzW09BGk9lMlRj5Ogbn2ryGR9zGv5RZzLWN+ZUr4sJYoAoyuKEJwPiBJuIM8lB7DC8vXpKBLcpuy59/bgdT/J8PjXlKIVEYtCAKeOy8ALaZWg0FOVJ9YtxrpA4sp1P7sYtp1mndWqRRqHzOXw5b7VAczbJkDAR+TH1Qlkyk5cfwuNg4grSJPnPGIr8otDLx9Kpx8MkbsbsjhV/DWmtvY3SmUV4VhWpTG0hH8ZCn0lbGQVkAWfzOBj6k/0rcjYTfzv1nxvv9Q1kYDQAq1ufOTaEEBVBSxWuUHjUVExXGcaEaDnyoR/p9sdnSDWsKrs3VA/xgzjd4DzARvIwUTKxsC0AZ0nDfhrfwoEDugbBSMBDj/nf+J/Aw8SsiWIgSe5zyR1Ik8GXx1I3c6UwtNjBs4mAtyv4v9gfyKBw2Q2PwN3AbbvNA8VnRoTnbUIKw5ZzjKWgvQbG1PGuLSmfClGZ+WX38Bhkz5ZOeZ/bZG4iCovPMBZRsiWRLIpzuG97Nme93zmM/BIWXZLHcvJwuKDYzuxyTX5iYPlD29SmDSszWfKOY1eXmcbbNPQaKLfhvcXL3Idh/YVFQUlU8V9uNxn3VzWmafNFcPvfSDN6FjTTRmHBRtMW/5B3RzV3RUUwFfkzsqL3mZxvFBKnKLrTzLxrSVL+/qVRgvWdcLoVmwIsB/jqFm/D6Mj9fVS3m32oH6y5iaNEk10lJmfQ17AAIfNPnlFHp8Om2Di12DKEC+Xuyn0fBCujJFWlVcjl4FCCYH0r1j2bhj2Kxa5IUpVCWLItqKOHlxDOYuzFHQuKFTGQjD/DwH97lmjEs2nqdzY3A4o8xLPcPaRItxoZf/NqqrIKXCvtGaCr7I18iwewTb6/PxK2N9bgAV/FHehL9jYr4y7HSd6vBsavP6BpVpV5ZBYUUvJX4lGC2TdKvBakwjMmRxzmNBBDZHMsnFNPJT1Ieb2xbl6pJ9Ndmy3FwoaRZEGjPHR7lYuZ0x+pO/7hz29NLtMdxJaDBFlSvkyxrB/2IpLLQ2P0Kd8gCc1y3Bd7/eBsr3UCr/Sxgtf5KjDhIbkQCtbFllRwfGuNkXu/VvaFTNdAfeynSqZcXQg5FzZawa19RnS7jF2pWjJI3KwLqZJXVuDY1GQuH7AXEJzjZPxTp2D0/a/cAv/fWVYUMcqqo0Q2NDYdKGwQLH6E+XnPzjROvaZ6ifwamVZ0RODQNP52OXp4n9J6ZYTpBZYUEiDM94MlR1cohtP8O6Q6r0ARDDdP1LpPQbJW2fMI2e6LYa8Oiw8oK1UF19IIgl4QmeK7z/BRdYbamc4jdYfHtbrpPZGFEGC4OvmZ2zgVKhH93vwQ68ZhX81Ax7VxqPuVIzmHTmAZ2tYeIyvoNJcLz2ArjG25fvwD0KTZfeOqAPYg4rbBhmF7lzSEHTz3zLZWCXczjFE6GNWqVv3THagRwO3qYiPfIHs0u2ENv4MITWl/D7T9ZjiIp6DKr13dHnXbm7ZvUHxdNE5tMZgxlZ1KEfsDpubTQgYHiq5RjYqobB1w1e9cv4sU5AJRXp7HDgTWtSjrRwA7iaMgvj9aKVwJyR7OFC2AXyvWh6X2V1V6MqmemJwX0Ey0f+l04pmUC98lcCbxkRAeTJwiJIvbNR2vVyVIzhrVPgoUKIwOGmXe5knUvj7RZBN6Ijmig6TJyS1g9gkb48j+/J5JsX60R3VOvQm5pgdFVVRoV7jO+r0vn7g3zS3J6k73dUfBmsIe20H7l24tOvgMmhvSgYrXlZuC3QrQIIEXUjaGP1C6lutkqh92/bfT0oTQaYJpxaWRe9dBxzZKDK3/32ZfORh/KyaqV0DLVy+AXfPgm5DUvvdsEItavswxW0MmgzMmmDsBO/OGFZWh0o6HkAAyTEf7qe21NvlKSq/tYrSDDmrIHRBTHf6kzBaN4fdq+6Dj9Hdx59q1uyfiz+IZvxqs/d2tbt/31k9zdzNrw6HG0VD7ZQ89uBjHX2UnAezDmkUmjuq/c5RbhTxCd7ZSsTcUVRY8Ucm1A3yw7ho2ItsXBOqWN4tWONLYTkqKLpAjqIBTZ3wXaUV4TuHfjnlP5b04yAH0aDjuBIGxvHGRaO8M+5clzODFIsmG2cWXH0LpspydsRmQvhXavlOhWjZUZxgkTRHIUHeFaxiQIYhHrEm2rCbbYBD6BL3Yvkf5KjFT99PkqO+hFF5Jvm5lAunKl5dfYBGzQUuvvlAK2PSCTxFMd02RLs4EG6u5m5ypkxmKh7FpMULAnLHwyHaTALa4sm0oxoMAB2VGUHiZdngiHbyeDdfZMYjGEYu6rkx7xxv2rZYoNj69AMEE2X/YEf0dL3efxm1NWDjTX0uwJrWs+j0MW1Bgb/4KLHHxE4mV9mZ6LI/vBuK6hf5JDcfLCVu0vSpYq59L5rnjVR3o5pIjS+cbW6+s9jNEd05jZAa2bdJp7yiQl0hsUSqXFuA8zLB3xzeXUpcL+kA3JJ3YTTLUH4BpnNqzlrhsBYNEwE21mlb5y7SBjwdFrd4eXrmv5HRUWRMgLrJk3Qo0DVx06FjFspFPjYMkzhwwfl26BD0gY1H6U2HP5TL5Vm0UR4mdiqs3aVaUAYJi9g2ztIiNcy8U5CyJuRwYU0V5wsrhkyDAhbhrYbzYPW2mMHNqgeI6oQhVMHHU1NRbPV9qoVXG3m7r0Q4hFTuiqvMBn9Rdd+Mj6p7lGQcWZOGkZ2IzWZWmzGqBdwsW29EAp2onnLPVRAwW1I6cuxzoTw0cE1Q2nTmzmBdshlBOsmwc9kZZ7lLj1kH48I1qpwmlyfNUQu2hIrN+BaqhPpP87NrNxhyXYy8bhxPYiwA9Zy2HxbQI4SWBKIFsWjKn3pTq8d+t09lVR8hjptL4LF0Rn9mJKcL1cuuOw8q9dS5Xv8Hq8zaUGaKHEzRYyzTu2dHlzLTeqKxTPU2aWy1+2KHTZhIjHlQJ/2Ts3Cek3NnGiyhd5O2SbRJtWHXh0vkMi/QJpbSHUu+w3AXEwVJf0Q6lbCnGHQ9iXgGCDnJ7BX3VBLtgdx8CAjNo9gwJM8wTbwzfSx8ovOkxyYgn4x4ltIzXfUn1l4EE0lz7m2E8JYmqrfIDfJG71bKyiKNR2Ku7qS8vXuihXpJsGKyYgqJaSdAF3/CkiyhEbNlzQvYr+KrYL8eh7QhdxfoVCPHDd3NgNLd9GvQPAnaj0brFFFaf5NHjiGrInuM55G98yt8HAurrPUDh2ezQlNiwPXLeM+o6VMMBz2c9IANb7RY7EntIzNq52tC6rcM3mx1HkFUD0wQgYffCh6p8vCHDi2EPnj+Zr4pBQ80TEd0yimVMVYr02Z5xZeVtBmU8kiB2hp8I0bVZLcoVzyD7CvCr66H4xNRpKEIFsSF12bDdh9yMUF2e/lQjp1I3T4HygoIq6D0i5TqDBcVNdJh2dXGZhm+Ba8Mf8DnbqW4Lk7bf7JC6jz4lKbGzI7AJmgHOqjPdj0aPoJsbHD0yi8HuFuRkTKgz3wvZMuBkXRwY/8jTnBTAQzG7L6r4nL5LKKBbhjtMmyxuIIv2Gx0o5fBdxTUWp3SJxBFFwB0gf8nKkDj5r9iYxu3UVOODbeNSDG2l5XlPLp8NrsgshxLCCXj/nO1lm3OrTwGkyUxwOp1LpW4ieCVX0sPVdUuzYqAvOMrVzTVsn2+HJaz1X5rsdMz69qFkW0rk9SHV6vvJpQKq6PNtjwcdq+1eJYsbTbaEm7NSFdUvQ27akPDPfIP2v1YlPfIk2oM/9BnEOUY7RdnrzUFNE5pVCvpHuGQvP3SmwT0U9IDc0fYtGqnQoArbSapO03MzYdItN0vgiQE1sm61qoQ5CYcqMk6RFugZI7DkaDK0TJfCwWf2oCN6Y9dOKX2PTaBu2WXhJd5j4+BoiNsJ+Aw3lFb7G/+h8cl82Jfw4Fis1lJWn2u99bYl2r+z2AuxYZIVcNZr8QlizhJm4XJIrCwOfmaQJzRvkLi/fr8MUOwO7JU6dOBxxthzCSC26mmpbRT9jJhvsL3JBvIHHqPRJsD13Yy0EPFvdHmAzbIYjmmBaWDK4RwhfQZkm2fhR1rnWwmv7Xdy0Yb3a8qbvKRj3ZHNI3HXQFz3LixVSCfFsFE7qNVmujKqrENC2Uan8Gq6DIiPBLFNoltIGMObU4Ec1ESK8JcrIYyEb7OqDCnZDRTYQtqJrQTJe2YHjMrpGvZ9G1JKu+JNzq8x2eJD0BeCeuFwKiU8S6wadyKuAsbFeAyrA9TkdnZ5O8sF1G0Mz7ZvEP5nhNFoy36Q8TvfnPyjZ4+E3FJQZ/AyM7KTHKsXhpR4gJOs2TbD+tMnT8e9zKyENNuiCNIORA4iXtlUfSA8CWw2a5kSvEfb/oJxrPyBfbJKeAd4M4iy9eQYbT5nk7lt2j2k3YfadgbS0VzDvz3qSsx4IXeH0fmXDS8jp7J+C5mt26UxIAqvZVMdAXXVrOXV7C9GvEXPBv6VY3yJjlG6t8swYD0RR6Hov/0MpdCW9QpmuB6XuGyDtTfL9kmLNz46Ug+RMMM/TVmKXNjzhqJGoyMg43QpkQaUZ/yXqmH5GxTI9OjKgfQ9eN7UIjnhxVx0H1L0jkcZCg16A4lZ1yHuK4TV8W7S46Q3g7F/vRDChwhU8wN7S6E1yMFJo9Vvtl3CP6w5uJtG6Ov29e6BkYzWpGbvJBTVxsbFXMMdFnAb/ABFs1PMaIYoPkvjoUbp+J1dpwgv+ayNQAYKVjU4ZvH4jX5YNh+LVGBp2RazzzlGg1sIcJeeU/DqS2dCDCY11HPTtzpTEbBmVG3obABSmQ2xcKjRG+vLyyDkBpHmMJdj9M5ICMRqTrcuuy4kAyBj4b4RR1iyz1LDPvnMMiLtCX4cy43AKqBnl5aqvPvXNpnhNbSmsdVbGOn7yQ0HjA/pmyNa4YvQJuQq0OHCvVJb0SSV5G2KuuU2TQAlhYqUQ5hxTUV2zjhSFJDK6/l4uQmZHlmRaqx3dA4WIGFOhPPVyGqU1zvBcjxbr5nZi2EvTwjYYpNJP1jL3OeL+sKnhNsC2sKJlFlwKh6Wqk9h7ZXaEaB4KPmIgDtNoVU71iGOxaDzfIiF4lWGwCrkPPrnpA35tVlA5EKTE1ow4WNXhFOT4p2Pdl3ssFA8lYPGUxuRXrRqHl5rJ4mFr8RcQAhIi0UEiNi2r/sybFNQGlVm4GYBNljHyzBl3Yu0oxqeUsm6gTHPNz/4RiEI3Y7qTW/P0TlrhVf9fgJpp3eEh9ea6bBuo9jzr6vXQUdFbMTTsqF8p/fcIHPT40JnCJgGqOTG9B87TRd9yWwFuhpjxB1UAx6NxN4ny7UhPUrz2uwsu7HNXS8RuZGQ6aMDPxvdq2/N3IS7PCUIhFMrZHZ3QsEyNi3D0nNaD4W8WRHVr0Xxv2Jq6+SPIEPcK5j9eynhi8rBzCKTM6FV/p1lRXRaWuYbz5vRgqZ2Y0ggSW6dUtxEPJDYzdCBDOXmkkDHZjI7nYW7aaZh/E86fcUbuewOd4Z4+D3n29bYfVpYmbHn7XOXdL8TpQKMs8U5vYiQzBmxp2AUj4I0dc2tgjkGMU8I9aHjkmNGHdbR/t2g34nbcH0yLrzzlzhGOyQjiaVBrxmoy8f+FjuXR4u7Jll5NXhcaRVoLqX4w+vmG+PIxxnRjbfFDyyTo7aOKrtzz/NFNY1uGXgwxqrMBjBwFlfc9CbSxyBKsyRc+DOAgBKTArLqtFb6Y17A0rfmg2FH1SPzeyqWZzTLkpCZ2PsSZ0oyf0ULqrnYNkeeQXCPC/7rthYSsbm9AZ0fVqMYdM1p/kFYhu2kp12IXKZgYtYAMfzPJkOOIUx1+uvUzpsDBiHhBNeBSb6WKT6ZfPc/xpwuyOThz4VL4pVuo/8pWlXrRqp2Zu+J3YSyPWdeCskn9T1OxfFP7K89XHUEKqBLyESA95DNJEqmzsaiqjjEPWDSjYlUAfmDdg99QizGjUkXJ0B2RRvFThvx4kNsaOJfSKsXyrOAxvGUddPQfNyPBYJ9zTBK3JlMf+bqhrZf9QTuOXgGdk9RF5TZCEKytNAm9gUVLSwI1fC4Exzt3VyhsTGz3eclTl1S1etx7Sjz6fhP2rnzVb4jvqxc72CF18aWm1sAZTSaWoJwNJ0AIQFvH5txWhyBs+WxmOmBEu4UO8A0LzwEf6GaGP8tSdoZ8LUbHawBWXIfXhyF2awEPZHPh7p04AvVz2gIlEbvPDRtTt2ebd3P7qJgNlLTyIk8IBY4lC0oA0fUmMbnBHHMLjyPIP7yFaZqrY1SFdi+MhN6O8qJlbahPTALzrUytgNsnPTt82PdgeO3QTAhEWFBAgtbmJ/Kxcc1uBbJWAAdr7Ytz3zkcs8Kz9cyUIt6rwkA5dFtKc3cchRqAiH/B6WqDgIp6SZEAjGxB2vJ/oLzh9kuDc1C6g4EfEBKOBoR4zVmYpt8TgJ8EljM7NIbtUSEw7WJhuF3edvU3t1KMbpMq0o1u3wSm61q4z2UCoqAUgPxvNyWQoW24jZnvUnUFAeXVsV2Tmg2Mj+W/kaGQVGbWIK4bRQm5IvOTeO24ZjDRiOMqt5NRbS3MQ0UcHSBP3c5sjtGddE9J2oTnMjhx4DGyybdNj/OH4dZ6sGF3DJ7C0jUmUYwiWaHw0+fvmTrMwK/hESYrVYH0fPsPAHLmTMMsj9QYr8G1pZrrIbohPCqHmfPbAjUEpQn5SNiRKHB3ki0I5OxPkI44zqImWyNMTzLk6lZN9DiMkUrZvywmtRkTClFBfs9cxyqbxVhIY7Uz/+ja5E8j74ckvuUzthe7ogidDUY6FmKXjgaBuhHB0POrrm7q2Kt+UOHRq44tdSiWxjgkjWtNY9HWS07hhU3tCpEUyYAUkmR6iB8kpSlxTjDxGoS2tyLmu/F+bqS8GAqqSDdfj5uSKnvS2djXR7Gh4qStUFHGgmgzrfAXmXEjGBe3oYpFeuCtNuWCVV0y3OOlihm2dsUuuzk1VaY1O2XOh3E5FTaaHDqOC7TtRLpQW7vlYwMe5lq5yHCzNUDU8o3F+ORR8KRVsJlRySdpfTG9g5kVrNcAEWUZFhDj4ZtKMN3cqXWeFqZSlImtKVKqeR4WOeTYbaxpZGzvEtv0GrxQRUsvPKlU6FCWLUw2u0fL2eLPn+d4JmvjI0oRo9dUuzd3bPE6G5kNw7ToK5MaTMphupZBemZmWRBmgwT5PwiSBuCzZmzKn9ufvTlc71R+OcVhvRD76jjtZwt7PVQIU6FZRobbbi9i5u12MHRzQD5j1CWRCBG6tvyM0UEWxp53AJ3GZR1d7sFCg8T0lQUzCUcT2Pl1GTtEwjiwl16LhNXZnfRXGvj/bCH7ElBWe1MzEGKuALwp9EImJl8WwQ2eoIqobFAHtGRcMWNvRnpHkgz9YTs6pRrVzYOBVXmF0NYEutUNmbOJRc5GcqoJb6QqtZV0E4HE0G3o7wh3j0sEHN6LmRBkA05oU8uOHJ72N0g3kmgCDKk4NCJq8SiIJgXMwwUZk17WF/ctB9bVRsXIxTwnyTxf5lhXzlEm76Pl9R3h7eK0NlEVMZufXnNlbFzBL1vYIo5gl5lWcQ6ggqoawGe6UmkK33Vhd2fYNTNb06mthfIS4INQtJxYDnKoAUS/RZ+m8IewMI1NDtdgVUx4wmM8gdXlNXYEbGWTgtaETSHu+FSjZhoTZ45yfQQcifqqw2OZxltc2VHh5ut4iazXcOFNQbm42QS5uFPIUNfxJ3f9hhuvs4cBWbKOQUBGQjiwBtpdbf5kyRoC5K2FjHe69yeuB3xoJXL4Y2Vbu6Q/Fk6IqXxPuHUc3BsC+IShLCI0nPAIpwBIEOO6uhMtu5K6rEbspeLH9w3wZeqIeBe2CxzYTDKvaQZO7XpxWtnQwrC3Hbku3GlG+QJ5ZhZ+4AT0GZbc5N0kBpvPiMvD0fpLMyq8Q3kJRoj9qMyQFGC+KCnqNj8XKqDn5yZj+5YpoaX1svDJXN0dd5iaeASxNQ7mF70gbaNvC7C4Gq8Y1PKjsuu7Q6mrTQe8FEOlbXMVSCFFQUYvwNMLBOhBAjJhxXgrSFgrIyjuLqjqLsz0OUA4wPibVSwb4NMhH0rKaVjbzXPFD9FDhXmAbSnbbsQwtlmqmjr9ad3LYqTQ6dHXAhRmLH/mCdTsoXwMnxLkHcPNuaiOmbFQLrvnGEnVKDKMKcZXhlTQv9YAUSKt3f6QYj6L6JkUrm9t99JR2hYaTEK6n1bPdXQvXYuYjIxDYAhhpj0YaPu6JfdIgtwjmUHhmqQZLRFSUEUjIAqo0RdpPiIEw9gRVLIrSbJLLmfNmLxr6hkXxzvcmfG8uk5tabjVHNk88WDsaXyD/3B1xs6YltGpKeVyQTbq7b2O34yY4fEUbVlGGKrWr6mWLuN3sSEDaqVQvNx4TOutZeY2kZSJTKb/1XJG5yBA4PuKgMXxEPb5dDx6l1FPcvOSAwlUJ5Ejgl/k5TtMjnNQaRUJDtjdSNnbwcCWImRvBLYbMz5GAu4Y4xNJ2Zyf8Ir8S4UbKKDGLn7jJsU7zV0DdXXPsd9VfEaAIjPoIfGwm/ADVLaxCrxbeBmqn9B0EzBBy1TDz8bbDvdXGyfy8vY2pORh9xS2wjTrBXpnkakMApXZLfs6iSPMCwqPdNgvUYkrYiinCYDQVGBXCEo8EaoDzEdXN9kJ0T/GkxlQi1aIBYGqqPJrj+7mG0xtZqlxZXJPNvJRU6ptb9FTl0n5PSJuCJYM1oo8bbNjeSF6D/yeGK6aJPhNppvvVnE3Pm2DgBZMVobvG10L3tkW0G6Ux8SQoHEoqSgCHzpRUqdlhWBn5DC3dpB12kqtBUzbbtKINlsxEqSNnkiwS6q8m2iNUWQBkzOqNMzU6UBOHtOBXHuR/j6ydaIWb2hyOpaGkhcxePI8yvoEHtGG2p8j+fHbtL7T5SHIWCvi4qm/X4GM2/vFgDTsI3vq6a0TTiRUDEfc6hV7RUo3RJBHHmqi9NVsadQTLtsgnEyRbpfi4H0W6SiLz4FYBRhCaXJT92idKPDClAktvmu5Hpcq9QSkeEBbPHVRnjQ8S0NAMNX3bzS5w97zVn33ehYmfxWcGyZD4hiajHNhNszRJLDzO7FqeYy0DFCuRF5tHPuWNMY/HrmmD5PlCyw7U39IdB90f8LPJyt8mTUF5jTr0u2ez0vJRfH1HU5OYr6t2IgdJn5HfMqkNv+aGSCIcGIePi0lZNVNwsMwvGkvhlXVr2X7CYL8FDB6xoV5uD87p0Nf6ZvowI9r9J63jzWOeAKuaxaI+0kMBjxOKrohyiJvOnRgMqWR8IhQxf19U9mK4+FqBzZ4Pe2lSm90HDfB1bIMAfHrpwx5nqLKxD6d4AXq4M4TTsYiaUADfcKaOLVpJdkoqfmW8F2aWHd0JotPl9pC9iD0+sxYIqxM8BXO7C6oLGMsmEEJrhoBuaUGtlZ5ewoR8dgH5GlyQZ1N9ZRCvqlDwM04nVxcyUlcmkrVjbmVflJiYvs9v3LBXLMAwzqo5xsnqgkBcvPuCd5M4oOCI8JapwwXZR2Ip0aGMUiywxKmYW5vF8EMhfpvmOBV8QQOSZZTgE4VCyYA/Xta1IMJ1KWtBr8aMGyh5GTTyzPVDHb9DYZ8VG5gd1W/lMZYGWvbHpfpFPMTKunaGvVjXcsQNobp1cU6BtTCbEcwvrR4LdSOVAXeAtnGVLwZ3CQhF9s0DwBsFDDNjAcOQEDW1rAt8vY1FTJ/Dps5ZIW9AKP09zyWMnYW0y8jNdJdwcaasP1pvyAwmRoZ9RPSiIrmuvunhmBnuFXIO2hCcXtOMS6txCMNR73uAAyZAmFOwtjEKJWIA4rbzYvvd+w1FGS42ZFdXoFG8hmqRPZkZVpxlMq0KYw9wSs26TpQONKpadaytEGvKApW7cKqMTJUibQrB5Y8VpAGPBSgQdHPUZJ5E1pVmdIbAETZpCOHgP3Td2jQb9WIOMvhP1RQ39FH4n8EsiGOF2Yf5Jtbw3MIxzWwoJuYRaXFYQVN2jS2o4qAB7sNDGbAy/s2fgDW2fXHjbxfP5Y3hKpBYBxpBg7ywaOcW1bZZwOVgJ0xfIDrRBB4Zo+XeeYN4KV6BSxEGAABq8kq1Svi38kcL4PJ3TcBLkfYqakAa/DG7Tt5vD9dsdBpabYNfndMKY7ru/Cg9Mlb1pkbx6W0iMJ9jKqWbGRaTPcp9MM+7OVR0EVcX2RpPsxObYYLqubTAbaYGvvSUEOvsrXtvdpg6lRaxkG3TSVCNtDjqIxy5CnNT8MvRJzVQg/ThpULdaZFKS4MqQzoK7kWk2Rl3i21tayzfOqS3NQb2V26AKvU4ifU1xsK9RPwf+A6JqWONdgJAoUeZKgN7V3qtRfJeMT/Ig9wBbdt/M4EJ4d2d5m8ICxhJ0EYl8zVq9TQeWfCcGhoB1xO0g5YBlSGxtl7lDUkTp+vuIcx7Or1d0u9jyvRPF4PKTSTVBGNMbiDUq/Gs0ifDaCufIK4y9aD4qD4F5c+iPSSlvu01jq2DyA6mqrmSl2W06kgkIfm7uBGlsdmzdBPjv7TVjnTpuZIH8yjhqyyd5Wa+4sJsGS1hKP6pbjt4Yp9dr5IRjA4FTnfDLwUhgDlgpZwt1ioGJDzAEw7rlFy2mBwK4KTS3E8fH4ehfvpzzd7LvKMCy6WvMRHMOSL85RA7E/cAqdNsXyQ8gnjSDyiBeezpAGTOamDQtMprGUrWDlcy6NlYOhpnhHk6+kKzKNyeULS1tOIPp7nDm+HIXNtXzdV9COoGNGLm3AcAz3qmB2wwtN0BVjAxShK11A4DFAZJQSI/mUkdwJ94KX0HBJ2IrfOdlCv0lIuZU0PoEdnOnBgkrbeB1F98wbgkBBYyt7q9lq99pE7blJkAnNX6wxYN03UqaeVOUajlHoGSWRf2GJPxRR6dLQjXw4xE3vAUhvVNQ02KKkaRwj4yNthLXiGIbQvBpSnjqdYN2+eZzhlhW1cUZgqR8Q5XuZ0b2ha9apT4e1H9OXcNEJlpDMvN4bLp7EnnfIQbDwfs1BGtuOAZrUfbQDQsHKRPuBz4t4ArjAzTbvqqVQ8YZ6KVxH0w7R1bd34c28ZT7w1sZUcx4lLZTlsdzqglWIhNzxeHUaE8Oxk0yeEoSmzTQZWi9VNyd7DkU6ZwSSA7VvhQKuc0ysGOmB6fjEHsezDQXUvqL4/Wl2dPJNRTS1fdTF47AAxbMXRSKmOkAWfFPqm4NsDCmnRmHhMmx1zTo9XFNTcIX6BDU1cBfWgAzhRcL5AmNsxrwImdC8k2O9I8KwsYPbb08RJdmuDQtQaKu32CUcFFbOs7KYmpE8YNjIRNtBzrSy5dLRNWxsCY4KT4vlDPfB0NktWc4VHlPwdQCVXrJPLhkZbp56XPYAM8CoxehXMbn8RRJ9XP0eLwYJXVKVAGfahW4TqsDwmEmJdB9qPqYcPwaEhm4cYvUQuuaxeqQo6JvsNEwHsIq9AHXtLzMbS0oWHm8s9gvvnuj06r6lBMWU6GhDYgLqLotxe4SjrTI0eayBu8CXvuLQRuJqcxH2lAcq3FdLsILBjvd3BYhjUj4oBdfjw2zdWc9nqGdxMBXMFhuEBBVaPvTo45Rm5p8Oec5UqmF3QL+OZLmHkMhv9tvEGuMfPYntm1h7WHy3Ktcl2clMwb+EyLQhBhHT5rUr5bzyDxRNnvuVM/CewEtGUTh6WGCoTnaB7jFPHNNYDG0bJ6jSGmXXdEXm8jbyj5FCxgAUKxzpIgg9q8R1pkNiupw9G5NBDP8JIzv2X1OBQ77oQCGCt1XjSOVF1iVBH8p0BN4I6pO2D5wVLttfYJC+rtDMbpy2kuNgQN8XCfBumNiPLHsgmlYFD0vr/jG87MAwC82OGxTl/g3IvzsAo6IjUlMSpgDDjZoUUGMO3kfgOJWyqDU2K4MDTQfCeYhBU0wp/TG3vYOzZRj3ZnXDSQ2eAfqtQDh7qvkMG/I6NxZrBz9Jl8uv7Wl8CDQFw0vTwaXZCbBKqZ1+WU6lLRMI4d8IgLY2IQhPaBHfVwz4SNzKfWaltSWFn3zGsDrMRwW6pbzpiyr9gfPrrEEgI9x9cTbC15KglPaGvqdRrtu/g8C7WS0kl2H1ctTsZC5hxhc0IEXXhgqPAG3t6fKNKc0tkzTfVb8Bvr7BDRqWMRKAGXcjmR9cx6xhwFFqBDaMrIbvzkk18fWa1Q4XOLw1xHLvqT+ZYLDcUdEePY5DENHQBDUSWcnKDjMJ+4qJ5nzs6jpHv88w9Gnm+gvsG9m2f+mq4f5M3FDKr8wgUlEWJUkPbvxzd1YCoGk+QVg/BTqS0GkPGGmmpXvsMAXrz9FAVy7vCpuSxJNtBrFGjHyLG4vpUUJ9EkLnHyoNqfzNU4WM6iokcg3d7gejn2yCYVKOK7P3ecJP62Jpa6BpGQvpOOLv5bxOVvCKIYUMqb7QRRlOjmwbtmutnHEUm0dIYpGuRa9qqd8f3RLP9fNj0Qv3nhSHMuDiUODSMBVZMIUI6GuKnA7UDMqd2Fo1EX7VHpCDWLzQG4YftwDNnm1pVxlUWV6aRUTqxCdwjoHQZMfoBBaSNfzmwHYpkAzjmjSnEmpqIO7kgJAYJqlUAUGDMhMtDQNjrsqWmtcr9eRfypOWjJRXt2wBz7DmZxbbvZ6eblIBqG0Ch7ibQ8nRWWcK2dzGyZpZWCD9KR4HG3C9x9iFZQ6kVJCbfcJO2yjnJ+DXGHKPsPTmFR5CQQf0LzTj9VrgmL2ZfZhPrYXOItHlA3nNhHxjZUpl4Vo4s9F8TEbiQ7TYK8XCKcaX1CM/aAP3JOYwpN3CnfLxYEqX6Xe5DeQ6qcWUsIDXLJ4HsifmP1Tsgnh4VTcNctDFvhH2SNx40PfcrzNvsunq0q3otZ7VIBc5Ow2m8NdVJPXn6TAH2sS8O95oWQKYW2C9oiXqUn2G6cq5qQuEMKXxFk7hDOjfyNQrEz7L9xYx6BBBk8d3T+fQiGAuWZHaG40u0drsYGTmDbG/QXEeUV9P9S4b85AnsJPqnSmJQWxWrRfmLN7kKA8cOc+6FgHMoFEeH2fk4bjpPz6Pwh4hFv1C6FuJi5gFGMc0kmsmG7e2YVfbl0wC9o6PMcLvx4u7NQNK3ZD0K8wsJFJlvPuTqOiJAyLdTvvpPeWt2yLNaNoN0z1X2HD04n6w0EVg1X29bBc8XLy6Y2pq+XqnFNOmFbgVZcgX5RQFzS2iX3SBpmK2ApHmWv4rSMNEjGnlIaQ6gNY4nh4cCdK4P8eqOVm81uo3v8ZQpGrm99pjq1k06WxExf9eYdg1dBiqjGjoPSYDyJGNFmFzkAfDjpx2VUAt6tHUovJ2Tz7dr5MHsC1cK0a3iApbeHB1iPKAJFpQQ5Hu9YhBczONzPxWX8PJJdk7z8d9fwDuj7zUtT2Q3dfmLxNhG1Zv6NVyPdJQk5xZXf4IKfsi42M6CuOyg12pkcnJb1VFrQaZYcrMrHTCQDQ4LxV3eXLZ8t7HOtWPxAH6dIBCLtlcmSvOV7U3GVtJ7YhLVbx6NXjRqG4C4XvxYzuWsWWZvcfSmD15ZdjfYkiJzNGRtzxXFLjlDJFovIJQCZyxY7o5MFZ1TYaVcVVxdWx2ZM54UyUlT02gFzPkpf9aiWxbqIoYvnbJ0kUfZAnwVRhxyY9hHMxnrMXjoPsv8WHeDHsKs2ZQ7hOeMfk5O1vLXpnjKqEWdVaDD2uBVgCe43CQNfC5CDw1Ao3EaE6T1fAHsd4Qy0nB5oB0RxJu4fD2mZjRNdBzGMjHL8fQ73TU7WOAIt61Mj9aDTj7Q0SWaIyNmHe3b5m1Y2eCeEeV8aZjj9lDsBJKG0pzJ3Xek0VP11eKJzbGxNc3ne7nN43NbeB4C4AGyeq5FJRu7iTBsxTfpoLDeEhLYqITnmyGHWyEYyBnbsq2bfDjdKQOfl7SqxFbOl5cCY7NVqoSjAHN2Pv0tnjKyGtVSzUZnvjxNWblfMg+z1PCbFZ4/jh7K6bsyJrTgS6TsBGtydTNhWaTapGlZQmfahwsT9Q6Z+h1KP6cTCVtMCyNgoOcKV56hdE38zKnctk0Wl1nkEAVjTcb2xGJbnQ7y4+RDG8dfwwJJyCGoR0nmcbONxFx9CBDQXsz8pwnLxsOpoOGtO0GrLxY6CRUV3v9hEHSmQ8SbhWZ2m8CkqFd9R9oHfEUyEaqKQohPtuOVrZN5skrOaMwUsz3xkzcpD/3hL8w37C0Rvm8oI/oXwmzc9SrxgTnfAb1rkbq0zUo5nGT8hXIhPrSAmZTXnrJJZYK/bdrL8Ujv0tD8FRdCOwgvJgcLeg2y8bCI4B0IkdkNDWnkDeMQJkpNJWDGyPVOyHpYqYbIVfm1g99W8bTN2SBLn58R5LZR9nQM1ZUK64Wn79Ec6JuH2K33KUqPmqA91ht3Xv3EFeBLuKmlbq+Q8XhRN6ZfXwvZgyRbmkZHmQ0yOI5ITV6dsHMcqSKpiQSRLKnf3m6nN1ciM5D7Mf4U9R8bVCv2kfFqHtiZYLw16s0XGmIsyrM4MlHDuq1OOb6K8VOqtzC7f1BXHF1nCm3m6PNDzEcK1Sp6TX3wCvFYVTPe4KvqvMDH58IZ2oABe6KOGAoLd4AzQtZmGfu3zDJaRkGMuuyBk6nSFf5MJBpUBvFsvTHd5eo0ZyyuZjuEEOClELOYhTiXqRVXPCzlfl2KxehrKSx9cF2ZF+uPeu0vgTLdXfJiiPKJxLFGaiFA+DM9gQxlaUvGtXnRHTXd13FMnHPbC1LUYWv5SZS5ZkG/3pkjWItOW1wIl6dQ5Zp0xxmxTyxh/t7a1+Y/JGtY0SgGQbNm7KhjcvXSwLmsh3iaQADfF5ZcASq2J3W3RGhOLvRYfsqNNPHMcnOkoXzWIW+XR1CzTejNBn2TO8ljaGpyKgPrDGcFuaSnrFwZILqSKBhlVrgTrq/b5AwIUudCSXXvBt5EClKbXO1RPm3f6zQJDGp/hXsLyyGhmSfz4ndJ5ofZ9wjmfdu2Zi8N4eZwhjxGP62rd8uQFJbCRV5FzFjuPTrdzUaUpwSU0N38TV2HhQyAc4f97r8hsH5L6mnhyAZc+C2oSJ1Aj9HXpVJ2H5u9FMBNHc4o1iiRkLPV1BqAEwl0eeN5b8AsLvRmd6wfXX5vCOsjTSKdEP/Q8MvDdlxnjdbCVZcnHDm/2SvYNzjcgmzcc2n8BdmAh7VPGmIgwlHIOkWO1LQbmdo6rx0XvQWtqr4UWtOPCNKrGwr3DVGHZd7dFXt7C6uvCUR+kPAmDpytc64+xwzB9IA7Xn9Hdf1eIPgZQaTM4GPmzPIdgIuwtX5Dd7bDCW1NXvpg47bVOvmkHZRF0/d7J7DLXT5AbTYNMSOebPHGCehUr0CmxYZW3IgLyVqyadHOGH4ykuN3PEiGKfYzXhA59iEKOPl+LO6WGgEOw5kpYrJmYw12yBNaxaG8Ay4Z2l8GmIk2zypc6iQxaJqdJTR1FMJmn0UhG7tqY58kTObF4HyVd94HbYPsk5tjJIJzP0hMdkUKfhA5ZgS7DCOVK44vvuF3vHpfM9TJCkwCOhkjCQB3BRXFYyZmSeVTfdyRoJQqqYOtjsmqOb8XxOqQoNa4vJi2UqU17lGvPJcFt0E8Gwsrw4BrRwWk1FRhKo8Htn3PGbE9DC5QqACSUs9E5oS5TQHPK12a+cpOWtqcT7x0N9Vd9j8tb9sngbiqQ6S0TbFvl8vSPGlxFD+HmVwdRM2txyoa3l6Kv6LaMIPkRJlEUpOyx5PLl6a5kYMHoq2NNemtG0IKY5bYUkWvMlqeaXpn9T86xQT3RMNSkn/X09KA1vLpMh7x0HqjnGsWQr9xcR5D62SDp6ndZOZoM0U0P+uTwtEmU11ji2hGqxhnFWdgUOIxH4uInNj3fOhXSlvY82jOZ6VJtY2UyZH3IUKaunSU6Ff8KtlmhdeMTzIwcGvUQbqMO/1LhCxzIHHnDhC5vQHc94PAJbD6W9sHNk1DnHSnNfsv9wCh8L0PD0Bjlh1TMtMg+UNqzY4mxFi2+GJMxvdfMq9OfyEc6zjQXLkuKpR/U4F1EnW8TdOfq4CS2T7KfhXpnxrXnaGBWMxeZLC3bDi5b3jC8YEhI5B3tz1DFkDJH9RsJjaa1tdzsGKvqY5U9jkLvIw1MjrOyVCPjt7CnVqvfzylCppqtp7YYKlWhptRYT3uoltyqq/lnZBH0bNu2TPkCVSzmU7jTkFrqQKw0vXhVsxa3qlkHcmlQ0lMUJ9Uv4zqpGNDt7d7R7O8hT2ydl0hSbgr5kvB8Wat55efGn3dUa3XxbhXKH2wlJOAhSFyoOiFIx6sSrK38l3aQQVuOKfOmbkj0CAJ4ysPjGPvb6Nsf1+FoC4RoJ0NGQTmEC9AmaMW5Bk3QJZrgVwPFL1RmZapmrH47VpHGsAWh5XFZsOcIZyW4oxRFc4y0J6QgTHPPfUBbfw4QGJQOvvqahNcs5DEs2c05sf8AkwFM+xdoGBxEjrbB1kv1GcA8DUqVy16BLb6gn0HZJ1aJcwlaGJkbIiTJmiS6ER0C43DyBWd4XXeJVqL8Q5G3Yx4LYnXGAVUJBlDXbTUyMnS+tlEI0+4SL1dCeUlakk2kmlmkDBTR4JvEmzX7rnaCgWYzK2Sjt+Q2qDvfeT5c6DBi5hnt85sBpORqDlmCTzlafdIsbIXcD1kY2JN2C1GeqbMNUb3RFIrdhlW15aBKjaBmKePbDEWZ6SJT3IOoVdUx58oQ72HrM6uz5k5YNW+yHcGb8Ftn+WTBtXH1R5oCoOH2wFPQgOQyiDY0U5SN3AyrkETkYuqb0bkwTHYLhiVLYuk3FOVkJf2LM5ZwxD1jUKWSlJHzJmxZAUCpjb7sRZFvmXWYPK0MP8bS6RBYKWojsZ6LCn2V1Gd/XRPvHF9V81tJQBJkUQ84D1JJSJLvnfJ3TfOHXRtTFhDf36v1KNvy9Bu3WmfhpE0yAXhwmuOOlmllu7U9tgjFMW0g3Ysmt38QzBUa7BPpeyT0FKDH2fTYVQQJeLvYUmOdMhiXqDHivl4AhyR/LKpIqRgqfJyk5I0VMkyaPIu8khoJJTnexN6FLe5fwwgtxBD1aXXaWs0d5xfKsCmr0CaNGWIv6Q4Wd5bShO5FZGwX0OKmPyNEh4WkZ1vMkEqpAkBEU8ERjqNMUtvhwoKLKi3ObR29s9TmCxjxlx5Tq1P2cDzJsT8Ev2jyD9cwMn9xjvUq8eZ1bE8znzJgHvavVlvImQOKGzx5XnqDqG0XXJGUT3Vq5rMZbAoj9rq2KYg6tqR0eIBe2A9tW7XcAKeMnRO4NQaHzMKS5CFk13yP4iV3xP3WGqv41RVSxprzXaKrnPHMvG0J3S0Kq8CLgQ3hyuMQKlUVCXjZxzuJZRfQfMpb6rCNM0JIhKTwQkXC7xd3b1GOBiCPFQbCTQNPPbjuSU5fqfZIOUmkoyHF5lVNSqnNVBbhdPXJbENxGkSUGm6Ggt2wyc7MNvmLHy8crTIpzOk8zUrQQs6gp1d0gWRHzYK56TdrTaGZIxSxBGoDOHxhGOw9lfxBG2wX0BzG8FA1vQZH41IBvKWF3HSpjbNmu9oJT5hyWbfNTy1mQTq0D5xdl7i8hwLPshThT6i7i0b9ZsoyOwk56qpTd7nhT5gowhDtFlDTmCfX8OIb6ZBHUQG2W0WM81aeR00eLNSUI+qdfBLa2cdyKfpC8Fjkr0hgcQp0VjUp8I5HIR2R8ZoSMc7oDAPNg7qAJ0hHZg9dIrB4Emy4tVv2iHVqCAORZmMpRVSVDQlY2NHTDSRkGjr3rXrXp2u2rhWTpg7j8T66D4qmeZAOZn2zKHRpTYlI4O8rvKafoHftGU7CzG6xvc6oZLJhDxJDXZlWk1ZdBKI8R2vfWUnPEKPZWx4IGIKX6XnBGjXkFVnoFuuDiJqPO2qrKTrijK1GnVbGFK1hupRgyX7A6RhTyOT5apDtC0Pg3KcllebVWz7TiL33rydd1ywjbSTIeqtYeOZ8BnbtnUwUqkMkpxWTbPaz5jSXlJMb0ntnbYUPz3e4V4XMDAm2BfkDgOEdgp3BtqrnOZkxlgfi5dnFLXEXJaeiWa6JF6ACzcNwX0ESomGT95SeBY4yuOlnTVttOXBe7cTfWZO9xLwMM9gjuc6TYZKQKgj4qYsj7kp4JeJWutXN8wlsAaxyWfabyR09TFpXQZGbumGrdkfMgl8xJAUfPNPzmMrKW9krQXuZo9SzFe1zO2kx2EE5c4eVWJ99zrvaTdCbH1cCkrBqHI3lpZlhJLibBv7Zh2ytg1WNoilkbyNMl9A9FhjjmvnWdZYzFKsm5HEFWbc2ZgEHbNxvDmnSNg5z5dz1TOn0mXI2J73N0ouSi81rhxXwbdxIRDLcjhFmXBGMY5MNZ5HFkotSdd9b6l4blUPmYJ51DfhtodSxDwlaJGJmq4TabOqKDlZBbMo46lQHHL2L3Kl1BEa5BnnUAdlYVljRqWZCdlRhOq28FWzAMh7xTNF9VkIlYnn4ELdMcX8DDf9e6TlJbcUs3YixZUa6YhK1vjC1EQrtHx1ZZ5fh0eEdPaGjy2n7pWlkvmUc5Q01IgnV5mbJvG4eLTxCJaoTCMwTKqYeeqqi2hXFTH3NNLGEHqq9ClkoEXEqVlcNVKYVGWmxZkcRoBIdu9IpFcUkaQDwO2TjBmuBW6iRkSslJUTWT71IJmwJaOHLk5ZZEkVUIVVVTFO1KLBO2XErv4TvxHTcB9ZqiNTEDM5uhCtR6ZaDjLl5T58OqUIYJdnWZvUB5sTCLmknTsU7itWUYKOiQwqwjBuIN3iV6f7ukrcdxgLJ2grLv3YNVdwkmavIbtQt9nqy01kA1FItmGZGWaFFO2pY5z0DTTVd6YBZS8XQSlEKlabW0KUipPH6CUOyJTtmhIFLvZOmW4HvKLxbqYZRlyp6TzOK3oeCqJIAUjUVGyPCXHD1JWrgQrfL9Eig9qXMKAlVgUMSXWwfKeXKtqq0c2YzpaqrVAmYqzUbHeF2BJzlkGz9oV8FEkGYSJAF4hB9PIBxpVNm0wDVDb2ouXDIl8G7utyRxpqoj3Uzam7d3d6Ip4ZRVtT1e5zMYTjF8WDZlT9WkSnsE4dyJJ2lIYZTVZPzA8oD3FDJdXXJO8DdmlUqYC1Uh8hJMqPvZBwt1YD1rDKhXjx52Yqnvdkf6uXBFGD1plqX05a8F2D2QFmGj9dXLSilWtMxjq4xfpJi25PU1Ymn7o9J2rc5ap0uBIyi5cDHGKXuVSdYH7aZHj3a9bXz65gKGsp3qd62HBZXdhOQ2wD6pVKqjj9ULVuQ2EZapo4X0PYzdB8X63BKqxAeVGYeOVxPeolHRj6V9P5ogIWTYa8E2NZv1ObPRlbK2lGdVbyYJWEijp0mS40sMwQ5kbt2ztsdeL7h1kr6ZmRBQLCfP2Yk4zT1n6j3NBr6ZvV0F2yv0Vmvdq3lXkYUQVSMxVRJyfFb2BgWdVMb0Y1LtZFsSdSF2BsEJEDOK4c3NM1F8vvJ2MjDtZW9wRlPqH1QXNhUGp0fZyTEXsGBaYu1ZSj2qbFRu02Tay1TLR6mJUJCfnbg5ufFTaIbu9hbFrbh3l8YlnMtsvSRKEZKdTLb4FlOdSvrQ7lHFNVYd9Zz7fsF9KFmmpY2TxOnMDJJFGz1cUPBFlYdZ9pgzhebiVmLXflB3Lbmc27U21XLzqYdWt0cbT8NVcPFRJvVjWpk5uq2d9aUMVf9DYZKkYOGXp9cJD9ddl1Vo0DmJTd0yNJ2xYm6SqKSHpcJhgI2GRXAaaS6ZoWXnnE0YhkAmQDhT4V1NCOi6TS2o6aWXidyl0BlWbM0iZdLxB9zIRZMq8dtdnnimCVaRb2dzhgZ5MOiVlPdRYIGUFe6TGHB2JmIqdZRf3mJEMtNVxlSn4Li3G2VKB4dtBHMQEP8B9GHd8GiK1M3U9xmtLdQG0Ztmt5sREYm1Ww3nNJZ9ZIepm1qmlXEl5SVCT2daOLkDT8DMCHBRgjrE0F5bqi1bdbpkY5ZWCamVuwqwyvsZ9cbVxDhQ2Y6ZDgYTv2VjNxZcZ3sm1kdXDFdj6Xst3LmqFmapEPI6sLGw7HLFO9Ir7V7YpjSd9L6NJoBVvMSjzWqXUIbkYD1oVNDORZ0aWXZYQ4T3aZaD8cNzd0tjYdl9cGEBlnvwVtLUiDNZIGZKYIBLDAUCUKBWGE4Z5H8XbhtC6MLNiNj6IYp33alTjHVhSE0Hbl9O5X9DWTrlFYnRJMVTXfU9LVxZNzEW7ZrBNtI4iK3DXOtlZ0UObHDIVTYaBYGP8mb4iEz1mnMc2CpKmlTcWtj27CcUXJl2lqsMFXLZ4d7MSPLtBnH3daapKW0yUGDGH0DLkJnAyWeZNEF1Ia5l4LCnEMzTYo7ZXYSNkYXrh5qVL4llf9JLoKWp7xP1JY2pGcS5Zf49NGL3MiDSXCkj3btZUbiW7iHIJiZdrfZDLU1aTafjWbSTlJTFa2jkd7wCXB27XpLN7XYJD0W7JPYaXbQ6YdiQYRR2LG7zCH0wI6TpAMBbmmtZFmblIdrsaeJsX8DZUcd9TJXdL6HzgZljRn04BnTJMFFV9LqpJZpR9zWjJHXDhL2fq1JrcqJXNaDLl2QgrsLyf2fZ5ZpqSjkNLJD7YLmzgXJNnBjM9Ro8YtXWMbdsY6M4mVRvKlyWG4fVtrIdaCdgYw1X0Iuf8hW8GmGUYYV7ESTX0pbgWbuDdmdjVg1sH2VLYB4Aa39bwKbjjOmYV7bgZZSnb2WXdO3K4EtcL4fGRT1ZafdJ8I7PrbTZRLLYljKFVbJclXfkdp12T3VfY3SA0RXaXmX0r9aJlnl6hBN4Yj6lKFbHTpUvXqbvBC5VjM7VaxXKiL5crm7f4o4mxlRpwbJ0Rz1XnzU3ZYKnG9EjQnQXRkDJMdZgqN1lfbfkBbYZb7pKfjd4ORbH3vp1M7CnjDEIbsTEGQUp2n3DkBiqj6VXcEpY8kVK3vU5bqgXJnlM7wGaNq1JeP2jqqXZpZXHDJ0l9xAfqYtMnYWvQl3ZqxqZ5Y0Z3qo5dTDtXxJw5sUGaZZ6YpZyPl7TLnsM1HaKMRRGxEbOamvJKdFTxvDY0m4gdaXzOA8S9WZRUJAq0KV4PmaJ0hkkZkX2UVnd2JhZVN9Idpi9KiqiHQnqBlXuL7fYbbCVxnnXhD9Q5V4nNlpNN7qGyjQpSZaLD8BD0bJBMg1RBRbrC4iW1Sp7dA6q1aVDL9bc5tXZcZmVFiIDHy5m9dZ1UAAvZWmJ8kHvbXIMRYLCyaTdmD9OZnkK8AhgTtjhjmvjOHlAuZBRNZl9tLb9jy8p5W9JPJddL7kSbRHnTJ5k7HS9VljeQHgbWFWWyqNFlEnZm5DEhJvNJjC1aP8Kgrbf7XTcMpCzl0ajVMLZ8U0nTsDZQp1cYVm1dRHVXKcnpvuNwOy7PQ9M3FxkjaxJjnPBZYvbWrSeJ3SUeBJIcLadAvNnXSpLHdDsb0lmf7ZlRtjYYvnVcLMiUr8hXBmRdI7dIrxKtdnDnhbXCfw9rZDZHDY0nYBe89XSUTGm9qFFWtRbT3EJZ6WaItdZD4aNRT3iMuKCbjhCTVQmbVvbg6a1aPsIkr0lVs6Yeqj6QZB1ff6tJ1DSyZo3jDmu6dUUJnDITaK9qDCnbKl7mtqQLHWb8OrRQFR9aLTsWD3ZUdVZrFbmFMYJpkPrjOW1jJ1YzRbqZ0bFiDyrl8mQYeZfTNZ3dQg5tYqpNkRM7bMVaxkVh2i5B57tYmy7IOWmEXbWLUSKbK6YlanWJaGQsQrFRqZjcBWNV5cDfHkGtXDh3ZnPlMnqdgW5DsyTBjEi7R6iaBZ3Lu5HtrTC18J2g9Ul2JZWb4TDtpTRiD0xWbJvaTbRlbmLdK8ZbN5UwVnTNhqrFoR1XVKdHIZUtLCbJHT4FjRqR9Vbq3nJuWJjW2dKBbTbiLJUMMBz6G3L4RkdIRTrj6iaKVkSXG7kRHKXI7BZZhqbfZTYMJY1fUvxfnlXTlktqVbGEVs5lFM7dcd5JVSpY4v5bHVsZp5FaGZhWNa6FJkOlPRcQi0bN1kYhddLIXVLdFT4eaZMQwbwCn5DbRmXWTJlK27CZ0JiGrDJRFUBC7ldjcTT0pdVXzHGWTbqNDp9j7DKqJhZvjQJZ3I7BCb1bBvMZmt6CJ4kvXBpGPVoq4h5oGvd7TlDE2G5TZrkjDZFrCXKq3lmLKFTHRfaXDFjGdFVmxLV5Gq7vNtKRZLr5PXZbMv0NqjW5RpE2bFkkcQXmUUXbbZL0VCdBcbZTlDmxTjbV6m4HsDWK2I7HJbmmGQdWV47V3bcRUMFRJQlGnhvRYR3LZm1bZvVtaJhCdYHDBXMvDRMwm5YlQlbBx2KjnhXGZbFdO9nFp0MIRcdKpbWRKfaNaBbYGaBvA2mmVVmAcVZtTTUtaHKa7DVmsmLhplwmxTFnUXLMZi1pYMlhdGNbOVo6eZaKL2PYz2TGZQ1L9Zg0lHSfjZOjtnVb2dmaT7pGlZ1VbPUYYAuc7DROiMHqgHY9BVbhxlNxGxlbXctltLfkqV8ZZKhFZlZnmNTqKVLNbV92m4RYJmq7BfqEBGZeSVdRHV93bHYNjHjoBWqLXHTb0HLDMaLdmnDCiVVnxE6lEEUbMkHhZ1drGbnx0bEKBndlhpGbDVqdDjXVT1ZGF1HxLZfTv1aBcZBVRvFVhN0bXaVd9Eb8Ldbl0kYaT7lVVSDBMZfjEV0m9DtXcWb0hRnYOaLYjBpmbhn2n9LCFXYGcEJPMVx2bnH0XDdP1ZLnY0BmDZR1VWKqS1bWYGtfSIdFlCcHbZ9d1R6jTbaHtVfR2RFVF8VjBmtT4jDCYmPW2ldHGJUbjiZvUvd2jHJtP8ZaRdtOZJ0MG8YYNlXbl9ZqZ9XH7Uq7tGT6XJRGLUHFmhg7nhIhLK0zCVb1VjZXS7nXZjG5VpWdL6hUlKMd7cKJ8QjvGC5RHpZbjGZYX1bVWdBsmdQqNqjjjp3ZmbnUCcXVbDLT3VRZNTdnaWbdNB0VrXbCqZBiLdtFYjNnMVtHXW7ZrXmGdX14TQgdGSlfEm3ZTxnTZ6MRhXaHZtBYGBNKTT1sXpDpRmIJDZd9GBl5KZBHg1VbbP9Y0UXPYrnRvMGYZpXRftZ8L8nqDXZjZBq5FRGV4XbYb0tLnBXqsNYRTBTnLIrRt7lYbnWlmdblTRLHNYd19bRBHXVbw6k1JfEUcJZlR5N2YmWRZRKbGxdLfdl1pRlUU1HfQJ4BTnIdLRWJGFxZ6U2ZNBTP4UhSRbjxVt6R5MWdUmj3L7bNXjiD0t8VPm8pXa3JbOXfbtG2R20VKnLRnbbldjY7dXGJLVmRRDjtLN3tfEDHTbp1bEXdXNbHTXD3bNpL1rlmrY9dxGjBn4Xlvd3BlZGjd1b2mVkfhlrBFKlJ8xPFXjl1MbbFpnbJXVmjbLNtaBr9NjAZ1NhbD3GbzXV1bKRxnQlGdb5tzXfKrZdnRvRRVbbNhZYBjXRqlqBvJB5FbDDhdt5K5Ljk1HbLRdRjXtpdDbLXnVbLNtnH4VbkRK9RbR1ZlRNbbH1hlntjVbnZjRD3BlvlL3bxbDbtB5lDXZ7JVbJrbbnFvRH5j1bfV5n1XRFdhvD5r1Xl5b7N1bLbJ1hHtdl1HBDbRnZ5DvZNdR5XjN1VrdbtRDxJl5jH1r5hNt1lvbbVdVbJ1jNnRd1bd5X

```
kalp6KrMy8A9itre0Gmk/
rtPdN4MiBRCdJU2T+kjQsfuO7JElSBRZZkiRJFVhkSZIkVWCRJUmSVIFFliRJUgUWWZIkSRVYZEmSJFV
gkSVJklSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJUgUWWJElSBRZZkiRJFVhkSZIkVWCRJUmSVIFFliR
JUgUWWZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFFlmSJEkVWGRJkiRVYJElSZJUgUWWJElSBRZZkiRJFVh
kSZIkVdBTkRURsyPi1Ij4aUSsiYjfjYhdI+KsiLii/
N2l9I2IOCYi1kbExRGxX92nIEnjM39JGpZeR7I+AXwrM58A7AusAY4Czs7MRcDZ5T7AgcCiclsBHDvQi
CWpP+YvSUPRtciKiJ2B5wLHA2TmbzLzZmAZsLJ0WwkcXKaXASdm41xgdkTMG3jkktSF+UvSMPUykvUYY
DPwbxHx3xHxmYh4BLBHZm4EKH93L/3nA+taHr++tEnSdDN/
SRqaXoqsWcB+wLGZ+TTgdh4YWu8kOrTlVp0iVkTE6ohYvXnz5p6ClaQ+mb8kDU0vRdZ6YH1mnlfun0qT
tK4fG0Yvfze19N+r5fELgA3tC83M4zJzSWYumTt37mTjl6SJmL8kDU3XIiszrwPWRcTjS9NS4OAKmB5
aVsOnFamVwGHlU/
pLAVuGRuWl6TpZP6SNEyzeuz3v4EvRMQOwQwFXA4TQF2ikRcQRwLXBI6XsGcBCwFrij9JWkYTF/
SRqKnoqszLwQWNJh1v4d+iZw5BTjjkQa/
8V2SJKkCiyxJkqQKLLIkSZIqsMiSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDIkiRJqsAiS5IkqQKLLEmS
pAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLIkSZIqsMiSJEmqwCJLkiSpAossSZKkCiyyJEmSKrDI
kiRJqsAiS5IkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKkCiyxJkqQKLLIkSZIqsMiSJEmqoKciKyKu
iYhLIuLCiFhd2naNiLMi4oryd5fSHRHxxTESsjYiLI2K/mk9AkiZi/pI0LP2MZP1+Zi7OzCXl/
lHA2Zm5CDi73AbcMr0SOLil/
cRsnAvMjoh5U1iPJA2a+UtSdb0WWQmcGRHnR8SK0rab4SK0rZHZm4EKH93L+3zgXUtj11f2iRpGMxfkoZiVo/
9np2ZGyJid+CsiPjpBH2jQ1tu1alJdisA9t577x7DkKS+mb8kDUVPI1mZuaH83QR8t/
0Xw/
s1fLwBcCGDss8LjOXZOaSuXPnTv4ZSNIEzF+ShqVrkRURj4j4GncDlwKrgOWl23LgtDK9Cjisfero
nKXDL2LC8JE0n85ekYerldOEewNciYqz/
SZn5rYj4CXBKRBwBXAsc0vqfARwErAXuAA4feNSS1Bvzl6Sh6VpkZeZVwL4d2m8A9u/
QnsCRA4lOkqbA/
CVpmPzGd0mSpAossiRJkiqwyJIkSarAIkuSJKkCiyyJEmSKrDIkiRJqsAiS5IkqQKLLEmSpAossiRJkiqwyJIkSarAIkuSJKmCn
ousiNguIv47Ik4v9x8dEedFxBUR8aWI2KG0P7TcX1vmL6wTuiT1xvwlaRj6Gcl6M7Cm5f6HgI9l5iLgJ
uCI0n4EcFNmPg74WOknScNk/pI07XoqsiJiAfAHwGfK/
QBeAJxauqwEDi7Ty8p9yvz9S39JmnbmL0nD0utI1seBvwbuK/d3A27OzHvK/fXA/
DI9H1gHUObfUvpL0jCYvyQNRdciKyJeJeCmzKzPNbmzt0zR7mtS53RUSsjojVmzdv7ilYSeqH+UvSMPUyk
vVs4I8i4rgZJph9o8DsyNiVumzANhQptcDewcewGU+Y8EbmxfaGYel5lLMnPJ3Llzp/
QkJGkc5i9JQ9O1yMrMd2Tmgsxcug+Z/
JzO3eicoSbWZvyQN01S+J+tvgLdGxFqaYxaOL0uOpOpmde/
ygMw8BzinTl8FPL0Dn3tZ+c5nLNMoaQt3bNSIEzqbZTmQEfQxNxOS5lHvKzpYRRLbdm6QvS0GoFg5V/
g5SVhYUWnPzDLwTnAH8SSPGD0qS9kkPr5vqjRgmZkwdHOg5wtzYnDoLh0e8jBMqAHCrtoeFdDL/
uI6FSfoXcFbnj3isBqEqZ7QyIg6KMwOVcA2iNTA7ekOwswf76rXXYMWf2AYnoqRZXu9JTbj1egkbLiRJmDW5RqM/
4LJhMWoxbYH8Ao/QExfy+mh3iP6qY1OISrFW8UgEUGf5nnwIQPyWHo5S1/
pY8hq/Y8kr3AQVuF+lnmxiVnXgxkmUTNgAcE0idpRUEG/TrdjJMvBhX/
RSAHqtDFSgGLfCfM8i2+Ew/
pT0nrGPmRJ9uZ57eLuiIdZZnV/
pT08IeiHTIcUS8qP4E7s4lZ7DhVp9zvw8MBQEXfdCF+oX3rmH/
2vDUZd9Qi3WfoqAU5wSpqr2Qq+n3yqwJHgVdf5Yzs2X6ds9FHvrWzj3xMqwRaNoGPdfHAuD5XqC5UMfsKnx
Qe1xk5ZVNSGSLAxePVzz+WNuEj6PEUyWt8zcKSyj7ixbxCuK/NBrLZr9aedaSCR5CYtqh4ZDoIQHZAGjaycd5
b5wAaiu4sO3vxfxoFeEK67hn5GQhpYt6RSC8BqV2oCt4n4gVePf7i
NpODBD7CCAd0qd4JFa5uGPuh3Q4I4IhPqYhdaifOe4oYmlS27eZGapNFfFlTI5RkhbVZP+YfftZ5KEj3e4
/
0mDYgPFiVNk8n9QwVf7/7dbDwcscJ2KEZlMBy5sObyXVcOmAMRIBt0fqDBjDMaBHcnNbJo3MDN53krOEuaaU4
ZlWf7NxzhJ5+X4Ve8s6Z7c3F7QDB0q4VHVWIWmaPQiC3hvxQnK6dXffCBrK7hFhvLhBl
J/
KKIQDcmnhbdKpJYlkeWs+UPTNIxUGOBO1okhUFKUeQV1+xSDMa2NLCgnNXiUWMq3Lvdr4vIZJsqDUNCQFsV
5irx1kcaVSBRgI6gGgHpw4w5cfyoV5aqcSZ01vNrUzK0S8ZVLPp4rSnaK7Aux+5dNqmWl0+6SdKugFKIv2QK/
0S6RMPm4ZbJgEuC08hqqZbt/
5Kkb6VKdtwdX4CEVpRVhdQS9VVZWGKE3jWdUpjQdr2/
BJDs8KzN6Vp+mGdaWjEH4mr/9Li
qVXqU0UYqjf4Ww5KlSNhIlS4WTFcdqLzpaSYgb7n4Ex1SHN4YjR1Xlgp98yKthjPMk+6z5k8JfdcWlv5OD5aZ
w56m9zQ3F5uLNsaCxtR8jZDumxqRZLbE3U6JqwMi/7aFqL1sfHIxAKEFT7/O2xzU6T6UU4/
Y6bJxb+56LkfT1bRb+lq2pP+T3
```

```
3gBvbmpcBK8v0SuDglvYTs3EuMDsi5g0qWEnqlzlM0rBM9pqsPTJzI0D5u3tpnw+sa+m3vrRJ0igxh0m
qbtAXvkeHtuzYMWJFRKyOiNWbN28ecBiSNCk95TDzl6ReTPZnda6PiHmZubEMpW8q7euBvVr6LQA2dFp
AZh4HHAewZMmSjoWYZhZ/
UkMzyJRymPmrN+05AcwLenCZ7EjWKmB5mV4OnNbSflj5hM5S4JaxIXlJGiHmMEnVdR3JiogvAs8H5kTE
euDvgKOBUyLiCOBa4JDS/QzgIGAtcAdweIWYJaln5jBJw9K1yMrM14wza/
8OfRM4cqpBSdKgmMMkDYvf+C5JklSBRZYkSVIFFlmSJEkVTPYrHKSuWj+
+7ce2JYFf66AHF0eyJEmSKrDIkiRJqsAiS5IkqQKLLEmSpAq88F3Twt81lDQe84O2VY5kSZIkVWCRJUm
SVIFFliRJUgUWWZIkSRVYZEmSJFVgkSVJklSBRZYkSVIFfk+WhqLTj8SC348jafz80M58oVHnSJYkSVI
FjmRppPjNz5J6Zb7QqHMkS5IkqQKLLEmSpAo8XaiRNtEFsK2nBiZ72sDTDdK2o5cL5jsd450eN9lc8M1
Lrrt/es7VN/KMubtMajnaNjiSJUmSVIFFliRJUgWeLtQ2z1OCkqaq9TTgmAN/
51FDiEQziSNZkiRJFTiSpRmr12+FlqQx5g1NJ4ssbZMmSqSDTrInnXct83bexJ333At4CkHaFrTmiXk7
bwJ226pPp1OINf1g7Q1b3H/
247aOSaOlSpEVEQcAnwC2Az6TmUfXWI80aIP4zbTWxDtRwTVRgh5Eoda+fIu/
3pnDNCjthVGveimgOi17so+bzHKm4sFSMA68yIqI7YBPAi8C1gM/
iYhVmXn5oNclDctkR8N6fefbT4HUa1Gn3pjDNAomW5wNalmDLOC21QKqFzVGsp4JrM3MqwAi4mRgGWCC
0oPOoE6dyfr1AAAHk0lEQVQnTLY463Ver8XZg+TdpzlMM9Ygi7NBLbuXx9UcXRtm4VejyJoPrGu5vx54
VoX1SBqQiQqwOVffyG9uua/
jvNbk9exHDjysYTGHSSOo9uhejRxWo8iKDm25VaeIFcCKcve2iPhZhVj6NQf45bCDKEYslo+OUCwjsV1
GJQ4YqVje3U8s+9SMZAq65rAp5K8Req36Nkp5oB8zfJvPyNhncNzvHmj+qlFkrQf2arm/
ANjQ3ikzjwOOq7D+SYuI1Zm5ZNhxgLGMZ1RiGZU4wFgq6JrDJpu/
ZvL2mamxz9S4YebGbtwPqPFlpD8BFkXEoyNiB+DVwKoK65GkGsxhkgZi4CNZmXlPRLwJ+DbNx59PyMzL
Br0eSarBHCZpUKp8T1ZmngGcUWPZlY3S6Utj6WxUYhmVOMBYBq5iDpvJ22emxj5T44aZG7txF5G51TXp
kiRJmiJ/IFqSJKmCB22RFRGHRMRlEXFfRCxpm/
eOiFgbET+LiJe0tB9Q2tZGxFV4npPRPwiIi4st4O6xVXLdDzfLuu/
JiIuKdthdWnbNSLOiogryt9dKq37hIjYFBGXtrR1XHc0jinb6eKI2G8aYpn2/
SQi9oqI70bEmnLsvLm0D2W7zCSjdFz3a9h5oF/
DzBt9xjkyOaZfo5KT+jWUH9icBFwEPBR4NXElz8et2ZfoxwA6lz5MqxPUe4K8
6tHeMq+L2mZbn2yWGa4A5bW0fBo4q00cBH6q07ucC+wGX9rdu4CDgm0AAzwSumYZYpn0/AdgD2K9M7wgLMA/
Yr0zsB/
1PWN5TtMpNuo3JcTyLuoeeBScQ8tLzRZ5wjk2MGFPvI7+PDyGEP2pGszFyTmZ2+QHAZcHJm3pWZVwNra
X5m4/6f2sjM3wBjP7UxXcaLq5ZhP9/
xLANWlumVwME1VpKZ3wNu7HHdy4ATs3EuMDsi5lWOZTzV9pPM3JiZF5TpXwFraL4dfSjbZRsx3cd1v0Y
1D/RrWvJGP0Ypx/
RrVHJSv4aRwx60RdYEOv2kxvwJ2mt4UxmaPKFlWHs61z+M9XWSwJkRcX4037ANsEdmboTmgAF2n8Z4xl
v3sLbV0PaTiFgIPA04j9HbLqNqFI7rfo16fJ2MWt7ox0w/
lmbMPj5dOWybLrIi4j8i4tIOt4neiY33kxo9/
VzQAOI6FngssBjYCHy0n/tPZu4HHAj8bUQ8d3pXP2qCqe7jrGcdBr3iC4cy0S1y1TPf6Onl2Zu4HHAgcGRHPneb192oY22po+0lE7Ah8BXhLZt46UdfasYySG
XJc92vU4+tkpuSNfsyE12HG7OPTmcOqfE/WqMjMF07iYRP9pEbXnwsaZFwR8Wng9B7iqmG617eVzNxQ/
m6KiK/RDDFfHxHzMnNjGbdNI0hjbfuad9WmXn92PR07icRsT1NcvpCZn61NI/
MdhmmGXJc92vU49vKCOaNfszYY2lYOalf053DtumRrElaBbw6Ih4aEY8GFgE/
Zpp+aqPtfO8fA2Of3hgvrlqG+tMiEfGIiNhpbBp4Mc22WAUsL92WA6dNV0vTrHsVcFj5Fc7FJ5JMpS4Jaxoeda
hrGfREQAxwNrMvMfW2aNzHYZVSN0XPdrRv3E0IjmjX7M2GNpJuzjQ8lh03VV/
6jdaHaC9cBdwPXAt1vm/S3NJyB+BhzY0n4QzacrgT+tlJcnwMuAS4uL/
C8bnFV3EbVn+8E634MzSdSLgIuG1s/sBtwNnBF+btbtAvE/btrpfV/kWbI++6ynxwx3rphpQ/
WbbTJbR8WrViLNO+nwC/
RzNUfjFwYbkdNKztMpNuo3RcTyL2oeWBScQ61LzRZ6wjk2MGFPvI7+PDyGF+47skSVIFni6UJEmqwCJL
kiSpAossSZKkCiyyJEmSKrDIkiRJqsAiS11FREbE51ruz4i4cr4qIzRFxepfHzY6Iv2i5vzAifh0P/
Er7heW7d/qJ5Yyy3C2WLUnjMYdpWCyy1IvbgadgadExMPL/
RcBBv+jhcbOB9iRyZWYeVBm3zI4a0OYhsIiS736JvDQMn0Ys3MpZ5fo1NF9GB0BEvCeaH
wQ9JyKuioi/LLOOBh5b3u39w3gLLo8/LiLOBE6MiNdHxD+3zD89Ip5fpq+JiDnty46IeRHxvXL/
0oh4zkCfvaSZzhymaWeRpV6dTPPTPTCA8Dnkrzy+WtngC8hOZ3wv4umt+HOooH3vW9vfQbSyoXRsQnWx7/
dGBZZh7aYzztyz6U5lv7FwP70nyTrySNMYdp2m3TPxCtwcnMiyNIc07wDM6dPlGZt4F3BURm4A9xlnU
lSWJtFuVmb+eQog/AU4oifHrmWmCknQ/c5iGwZEs9WMV8BHgi233Z+F9rl/Sts8cpmllkaV+nAAcnZmX
DrmxsLgLI/ALOBE6MiNdHxD+3zD89Ip5fpq+JiDnty46IeRHxvXL/
0oh4zkCfvaSZzhymaWeRpV6dTPPTPTCA8Dnkrzy+WtngC8hOZ3wv4umt+HOooH3vW9vfQbSyoXRsQnWx7/
C3t0zfw5b75sO6PTgzvwc8l+Y6i89FxGF9rl/Sts8cpmllkaV+nAD8fWZe0mP/
XwE7TWI91wCLI+IhEbEXzfD9hMuoiH2ATZn5aZpfwd9vEsuOJ3UmO9hzI8lR3l0oSsIjSpIaRjFVhkSZIkVWCRJUmSVIFFliRJUgUWWZIkSRVYZEmSJFXw/
wGGta0qqMFsbAAAAABJRU5ErkJggg==\n",
      "text/plain": [
       "<Figure size 720x360 with 2 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
```

```
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAm4AAAFcCAYAAABx8jIoAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XnYXGV5+PHvLUFRWQIkYmSLS7SiVoqpxKVUhVqhtmCVylIJlDa2x
S6/2lrsJmpVarVW24qlBQ1UBNQiKUUUrRZCqBQ2K7JaIQGICieybbCHj//niekZPJvFuS98ycN9/
Pdc01c57znHOes91zn20mMhNJkiSNvscNuwGSJEmaHBM3SZKkjjBxkyJ6ggTN0mSpI4wcZMkSeoIEzd
JkqSOGEriFhHzIyIjYlbt/nxELARF0fEbw5x+q+IiFXDmv6oi4gTIuLfNuP4jo0yh/
k0RccBmmO59EfGMjRz2yIj44qa2kTU5RQ1EfGKaW7SZjepWx0G5asi4oGIuDUUiToqI2
ZOdyERBOjMPzMylkx3fxtqU6dR/fnW+THtRKrFRZzYTbyyMSS/G
+FtfzijWlv37jWC+q17OiIeLR+8d1T5+O1mzqtzWnUAkVEPD4irp+oTRFxRETcHBH3R8TnImKnjZjWJy
Lirze+tVuGZNw2M2+cqN6gfSAzP5mZr57eFo7ZHmOqMbV1oxJTI+KVEXFRRNwdETdNUPfIukx7rwfqsn
/
RprYjM5+XmZr57eFo7ZHmOqMbV1oxJTI+KVEXFRRNwdETdNUPfIukx7rwfqsn
/
RprYjM5+XmRdvzLADtru9ImJZnad7I+JLEbGo0b+3zfTm46aIOH5jpj1h4hYRbwX+BvgTYAdgEbAncEF
EPH5jJrq5NHealnwPOLwx/RcAT9wM410HvDm0dm6UQb+bzOMezz/
m5nbArOBU4CzByZUQ1jOo+pPgLXjVYiI5wH/
DLwJ2AV4APjHCaaxDPi9AT3tI3rm8B/3tgRuBn/0
8DTgc5R9+sV91WfX+XgD8BcR8XnAXrkBG1L7L+B3gbRub05zGycti4G2hFGhJCtGbk/0xgQ+4Cng6
8DTgc5R9+sV91WfX+XgD8JcR8QtTnmBmjvkCtgfuA36jz/r/3ej/CmBV/
Xw68GPgR8B9wF8C84EEZgNvbAYYrEpGh3kw0BBkOCuCR+fSf3HgW/
GQ6wNHAV4AP1Ol8DzhwnGVxE/AXwzW8A/ry2aX5jWfwT8d/
AvcBlwDMnmPe7xsWDZ2zHDRzZz2N6GfbU1QuBkzX4WnfdUGw/GL/
AvcBlwDNrv0tq3fvrsnhjb1kBHwOoq/W2qmV/BVzcmN5PARcB/PARcAdwDfaa4X4JeAbwH3ACuBExr9bqnTva+
+XtKb/0adJ9c6Cxtt+lPgVuVuD0Wue3gBV1+suApzWG/Hg4cmNZnwD8W6Nu//rfCfg4sLi8/
V9jxI2XZ67X4aGJgeZ3P24C/
G2N99ebhz4Af1PV32O33s3XYWY36rweuak6YPHde4ZcOtdWvgrSjVBHxLBfBAjXg9AEAjnE9UgcDb5S2B
A/6j1j8e+C5lu7/oWeF1jXEczzvZc2//lOuwFdR0118mn67q+mP7KdPq/
R7xPASC5lG33AGDnug3cA3wdeDeDeN7WnAvL4JuBm4nbLP3AAQcUPs9rjFvtI3rm8Dv9q
IB8/aTPvAS4Fv1GXwDeClfzC/
wRWBO7bcN8G+17XfVYXXcphpTMaaOGVNrnQOAm4Am8arM2CYi4B3jNP/
4sZymkfZfv94nG2wDoOoMSe0+p2BFw0aB3VsqV8/
MCRO31wCPNCfU6LcU+NREQaZ/4YyxkTUX9CF1Q34uMIuyY3+tb2dUDMJwK/
CFxOOcKJOty8Oq15JSQaZhyk7zlbA71A28hhvBVN27ufWYVZSjpT7g8wdlJ1hFvBJ4MxBK7tvZ3gpcFktO4gS
XH+TGmQoO91K4Jg63n0Og8O8/
zGuN5AeVL8KcpO9Eh42wnOD9Eh42wwR1ODTB3fH1A21h3quB6hnBV4Ql3Or6rT26eW/QNwSR1+
6vCTDTL/CZwF7Fi+//lB21Et+1/
gTfXzt2cicYLM4nkxkJN7r/PGIkbsFddBvvV8f9dXTe9gPmHwKXAbrX/
NYbDkK+GrfuO4CnjAgeL6Cjd8HdqJ8Dqs+NjCXHoXGqzJbh4vYzBxnf8DOaSi6HNhQnnkD6P5Xqv3ZBeo
DNwO0eSvD6Sk...
cTth3Vb2Qp4H3DpOMM2Y8+twDED6ryyLrNtBqyjRZQrMs0D8I8CH51oOUx0qXQO8IPMfGRAvzW1/+b2Z
uB9mXldne57gb0jYs9Gnfdl5h2Z+SAlUGxHOXKKOtyaSU7r5sz8l8xBI051Eub43ndMqXSe9o6PsD6
vx7Zn69tv+TwN4TNSQzvwbsFBHPqeM/ra/Kaykb+Mcz85HM/CbwWcqOZPEZuaPaPM/
NK4FOUHWs8iyLiLspGdzhlA7q79vsx5ajmobqcjwROzcxvZuZDZDwNuBl9T7T7UA4Crs3Mz2Tmw5Qv/
lsnmmeAiJhHOYv12Z2Y+nJlfHmeQh4fnFnRcScSzLwvMy+dmnrCuVA4g9R/c/
Wefhy5Rg9mu1fCnw67UNO1G+rM4Yo42vo+xs50xilralJDlNd1O20UHzMultNzM/
nZmr6zo+i3KGGpHkafudD2HBF7UI6Ie8viEkqi0Rz3qZl5b123JwdYDtD/
xVZt6fmVX6Y3lDZTk5ZI6/r+kbF89bwb+PDPhzD/
T8EnBDZp5e969tbB6+Ef23Z5GiPVmUbvH7JRWzEIwOv...
```

qHWU0JdMBPtoGdKTvHGkqw6PWLZjfjbx8rKUfFg56o26DdmXlDZh4OPIVy2eEztS2D7NjXb486H2Tm9y
nb9+sol8dOH2McCyinuP8nIm6lrPN5UZ4EnD+g/jU0jtKi/
FTFExjjpuhxtt315r2eHfkXypfQzpk5G7iax9bxeNYweFn0HAEcTLlssQNlfukbd7M96yin/
5vruDm+QdNvbh9Pomw7PSspl1ia2/Y2dR1BOdNxeES8hHKJ6aIxprMp+8B623djngad/
VlPPaPxzszci3J57rWUL5hBjKl9jKnFFhRTN0pEvIySJE4mGTuBkiyd0dLDVP9NuZWl369RkvkfNQvrm
fkPUi7NTniGrd+4iVs9xftO4B8i4jURsXX9svo05R6C3oq5AjgoInaKiKdS7llpug2Y7G8tfQx4e306j
4jYISIGLRBq/5+tR0ZbUzbmH1KO1qfTscCr+o48JmvMZVFP//485ebcfucBz46IN9X1sHWd9+fW/
ttRjrJ+WJ9iOaIx7DrKafqN+r2r6gzgmIjYOyKeQLncclm3kQ5I/
K8iPjVenTy+6wfSK4A9ouIPerlt7c35nkN8HngoxGxY52v/
Wrv24Cdm5fsIuLXI2Julkt2d9Xi8db3O6P8jMfPUb5QP93odxrlxu4XsOHReM/
VlIC5d339Zm3X3gw+Av4k5ajz52qAexflMs8GZ9wm2Hb7t5Pejc7r6rDHUM64Tah+MS7nsWXxcta/
BLgdJZm4nfJl8N4Jxvco5Qv2hIh4UkTsRXlibyyfAV4bES+P8tTku1g/9nwMeE9NTomIuRFxcKP/
+ZQvuHcBZ9V1P8im7APnU/
avIyJiVkS8kXK55bxx5ova3ldGxAvqF8Q9lEtPA7dJY+qYjKlbTkwlIh4XEdtQzjZFRGwTEz9RvRj47K
BYOsDDlETqycDpETHdv1n7TspTzO+p++x2EfF7lPsn3zHOcCcCb6vLYtImnJnMfD/
lKZIPUILSZZQvrP3zsftMTqc86XUT5Wmrs/
pG8z7gL6Kcjv7jCaZ3DiXrPzPKZZurKUeiY9mecibiTh57au0DE83XpsjM72bm8o0c/
ARgaV0Wv9bfMzO/
kpmrB5TfC7yacqloNeWUbu9GVyhZ+7si4l7Kk1NnN4Z9AHgP8NU63UVMUWZeSLk36bOUo8Fn1raQmT+g
7CQnUpb/AsrTd71hL6BsE1dSbnru/zJ8E2VHu57yJNsf1uGup5xtubG2+2mUm7uviYj7gA8Dh/
Vdfmi6lbJdrKYkVL9dx9lzDvUy3VhfGFnufbm196JcZvpx7X4UfvIjsD9X619DuaTyyTov2zH2EdV42+
4pwF51vj+XmdcCH6Qc0d5GCYxf3XCUYzoC2Le2/x2sf0nqtDr971NuMJ7oHhcoZ/
62pSzjT1CeYBuoLpPjKF9Uayjz2/wtqQ9Tzmx8sW6/l9a29oZ/
iJIoHsD498xs9D6QmbdTvoTeSlkPbwNeW7ftiTyVkpzeQ7nM+2XKZSMi4s8i4vN90zKmbthGY+oWElOr
/ShPuJ5POWv3IGU7B37yw7hHNrq3oZy9mvRvBtazXL9KOZN46nQmb5l5A/
ByytWWmygJ8Lsp9zheMM6g/
0lZnr8FEBEfi4iPTTS93hNn0hYpIr5LuYz03xNWliSNy5gYev/
9Vqi1WRLyecvnxS8NuiyR1nTG1yMxVlLPa86I8rLFZbem/3qwtVJS/
vdmL8vtFY90zJUmaBGPq+jLzKso/
KWx2XiqVJEnqCC+VSpIkdYSJmyRJUkeYuEmSJHWEiZskSVJHmLhJkiR1hJkeYuEmSJHWEiZskSVJHmLhJkiR1hImbJElSR5i4SZIkdYSJmyRJ
UkeYuEmSJHWEiZskSVJHmLhJkiR1hImbJElSR5i4SZIkdYSJmyRJUkeYuEmSJHWEiZskSVJHmLhJkiR1
xKxhN2BzmTNnTs6fP3/yA9x/Pzz66LS1Z/
N5EPhxO5Paamt48px2pjVU9wMdWPf3PwiPtrTuR8kUtsPLL7/8B5k5d5pb1IopxbApxy/
jyKabYtzYUvffLV0L8WvGJG7z589n+fLlkx/
gC1+AuV2I918DdmxnUutugtf8RTvTGqovAB1Y91/4Gsxtad2PkilshxFx8/Q2pj1TimFTjl/
GkU03xbixpe6/
W7oW4peXSiVJkjrCxE2SJKkjTNwkSZI6wsRNkiSpI0zcJEmSOsLETZIkqSNM3CRJkjrCxE2SJKkjWknc
IuI5EXFF43VPRPxeP+xROwUERdExA31xcfaPyLi5IkqOJJ1iuDJA1iDJM0KlpJ3DLzO5O5m2d2buDbwI
eAA4BzgeuDAzFwAX1m6AA4EF9bUEOKmNdkrSIMYwSaNiGJdK9we+m5k3A4cAp9Typ4BT5UuCQ+vlg4LQsLgVm
R8S89psqSRswhkkammH8V+lhwKfq510ycw1AZq6JiKfU8l2BlY1hVtWyNa21cgt0xS13ce1ltwBwxL57
DLk10sgyho2jGUfAWCJtbq2ecYuIxwO/
Anx6oqoDynI9Dyn0FGpMxTNKwtX2p9EDgm5l5W+2rXf5oL6vreWrgN0bw+0Gr04f
WWaenJkLM3Ph3Llzp7HZkgQYwyQNWduJ2+E8dokBYKD+qPpm1CLi7dzlCkobIGCZpqFq7
xy0ingT8AvDmRvGJwNkRcSxwC3BoLT8T8fOAhYQXl665i22ilJgxjDJI2C1hK3HwA2Lmv7HbKE1r9dRM4
rqWmSdKEjGGSRoH/
nCBJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZu
kiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJ
ktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJ
HdFa4hYRsyPiMxFxfURcFxEviYidIuKCiLihvu9Y60ZEfCQiVkTElRGxT1vtlKRBjGGSRkGbZ9w+DHwh
M38KeCFwHXA8cGFmLgAurN0ABwIL6msJcKFKL7ZSkQYxhkoaulcQtIrYH9gNOAcjMH2XmXcDBwNJabSlw
SP18MHBaFpcCsyNiXhttlaR+xjBJGSkLZzHH4+Ib0XEXEv0bEk4FdMnMNQP1/Sq2/
K7CyMfyqWiZJw2AMkzQS2krcZgH7ACdl5ouA+3nsksIgMaAs1xsoYklELI+I5evWrZuellLUhYRs/
PYJYVBYkBZblApYklELI+I5evWrds8LZWkDRnDJI2EthK3VcCqzLysdn+GEgRv610+qO9rG/V3bwy/
G7C6f6f6SZeXJmLszMhXPnzp22xkvSBkYwSSOhlcQtM28FVkbEc2rR/sC1wHnA4lq2GDi3fj4POLI+mbUvcHfvcoQkzbRjGGSRkUrf4dV/Q7w7xHxeODHwNGUxPHsiDgWuAU4tNY9H3gtsAJ4oNaVpGEyhkkautYSt8y8Alg4oNf+A+omcNy0N0qSJskYJmkU+M8JkiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR1h4iZJktQRJm6SJEkdYeImSZLUESZukiRJHWHiJkmS1BEmbpIkSR3RWuIWETdFxFURcUVELK9lO0XEBRFxQ33fsZZHRHwkIlZExJURsU9b7ZSkQYxhkkZB22fcXpmZe2fmwtp9PHBhZi4ALqzdAAcCC+prCXBSy+2UpEGMYZKGatiXSg8Gltb
fLV0L8WvGJG7z589n+fLlkx/
gC1+AuV2I918DdmxnUutugtf8RTvTGqovAB1Y91/4GsxtHFxTpCPP3wnGdQPyj8/Q2pj1TimFTjl/

LwOOqk9mLQLu7l2OkKS2GcMkjYq2LpXuApwTEb1pnpGZX4iIbwBnR8SxwC3AobX+
+cBBwArgAeCYltopSYMYwySNhFYSt8y8EXjhgPLbgf0HlCdwXAtNk6QJGcMkjYph/
xyIJEmSJsnETZIkqSNM3CRJkjrCxE2SJKkjTNwkSZI6wsRNkiSpI0zcJEmSOsLETZIkqSNM3CRJkjrCx
E2SJKkjTNwkSZI6wsRNkiSpI0zcJEmSOsLETZIkqSNM3CRJkjrCxE2SJKkjTNwkSZI6wsRNkiSpI0zcJ
EmSOsLETZIkqSNM3CRJkjrCxE2SJKkjTNwkSZI6wsRNkiSpI0zcJEmSOsLETZIkqSNM3CRJkjrCxE2SJ
KkjWk3cImKriPhWRJxXu58eEZdFxA0RcVZEPL6WP6F2r6j957fZTknqZ/ySNAraPuP2B8B1je6/
AT6UmQuAO4Fja/
mxwJ2Z+SzgQ7WeJA2T8UvS0LWWuEXEbsAvAf9auwN4FfCZWmUpcEj9fHDtpvbfv9aXpNYZvySNijbPuP
098Dbgx7V7Z+CuzHykdq8Cdq2fdwVWAtT+d9f664mIJRGxPCKWr1u3bjrbLmnLttnjFxjDJE1dK4lbRL
wWWJuZlzeLB1TNSfR7rCDz5MxcmJkL586duxlaKknrm674BcYwSVM3q6XpvAz4lYg4CNgG2J5yBDs7Im
bVo9LdgNW1/ipgd2BVRMwCdgDugdDuaKmtktRk/JI0Mlo545aZb8/
M3TJzPnAY8KXMPBK4CHhDrbYYOLd+Xla7qf2/lJkDj1glaToZvySNkmH/
jtufAn8UESso94CcUstPAXau5X8EHD+k9knSWIxfklrX1qXSn8jMi4GL6+cbgRcPqPND4NBWGyZJEzB+
SRq2YZ9xkyRJ0iSZuEmSJHWEiZskSVJHmLhJkiR1hImbJElSR5i4SZIkdYSJmyRJUkeYuEmSJHWEiZsk
SVJHmLhJkiR1hImbJElSR5i4SZIkdYSJmyRJUkeYuEmSJHWEiZskSVJHmLhJkiR1hImbJElSR5i4SZIk
dYSJmyRJUkeYuEmSJHWEiZskSVJHmLhJkiR1hImbJElSR5i4SZIkdYSJmyRJUkeYuEmSJHWEiZskSVJH
tJK4RcQ2EfH1iPh2RFwTEe+s5U+PiMsi4oaIOCsiHl/
Ln1C7V9T+89topyQNYgyTNCraOuP2EPCqzHwhsDfwmohYBPwN8KHMXADcCRxb6x8L3JmZzwI+VOtJ0rA
YwySNhFYStyzuq51b11cCrwI+U8uXAofUzwfUzwfXbmr//
SMi2mirJPUzhkkaFa3d4xYRW0XEFcBa4ALgu8BdmflIrbIK2LV+3hVYCVD73w3s3FZbJamfMUzSKGgtc
cvMRzNzb2A34MXAcwdVq++D7q7l/ltpfoojtqEtpL/VqEVzbqRBpE1JpmeJCFYC/3ZvIH4DF1lXJ4FLe9QsXhAOsX6AsQ/
EIyb1L8S7otbq6vWH0MoJWEUzNO5vxDhexf5dxrRMAE6EXUO1TlEUNBQ2FaQlAEcSOdEKsYzRo/
T/pctRw24ZJn7hvxnLV+ANt8B4ceMmcBFgHKPJkVIgyI2wwU7iEzOPgkP+KWgl41Zt6dRe4rbHq1xMsPCgT3aRvsN0DJ+CiVqcodo0WIYZsjcySa+/
CK8TLw8jb+m0V1ZbdN6vF2rWXNVnRVmSsf8Mwqh2a2S3ELg+FjXw6TmZmDdp29OPzwzvH1afM5Q/
xe3WPUjr53xHNnyNadaUMi1zcWUvtqDC/
ebsgBYXiSWPumxC/HZlt2xZ9ltw1GJ2BQ6K8V/
u4+kl0A2NeuiW5MtqBmGWY3YlT0XuXgbOH7uhu5cpEwM2NPvRg+HGCh0HR8JsGp+Q0WQ5ZHtZbFDUz1oDz5LthlmFBR9/
nyPA0NhHLSnvV4XcT1qGclHN3z4uF8Y6b9WFcuOx2fGGI+DfHX6ZwZ/
R4eYIQcSrZUqwrRDW1q1eE/
+o6mDN+v0m+lP/
lWlzSsb1dHpjbmnWJ5ggWUa6a2GF95ktg3A/
lNTAwyBESAHRMH2Dku3o4yNjwFA5sWwRpoC0z7x3/
AqswbO/
Or4gKBXXsixRdaV4t3+kNyrQ1oI5c5wJK0gnyIPxT6Lz+mkgBGEKyQ/
NKfwfpaYv/
hSoOsGJEJtFsDtrFdcq6/
PXBkS9ifJ3VfOwVk0bKMpbzP3Zz3IVHpFmEqpC3BFE7ZOrRgNUJR7Q9+rKkrnXfULDQ3fNmdqB6qs+n4FcG1sa/
RTrlzZWl3WSVVyJI8XjSgGDQvGb3D9A/
1B9ZQT2+ir9+ngZTYj1b1RL8zRkNzqlNvJyfF4zA7fCzq3bkaFAQrW1DlmMKPt4E/
x54v3rZvRMrtuTIhINTNyo2NWrXWfPxl3T4I0EJ1xGqFKkJnDt3RxqfFxP+2wMjNvHC2SC2+y/
sCXzWZMvd5NKN5T8CdYf9DHNVORdXrM2cGBwLsL4NJRH5vtlqXAyyUmaFXdscRu24xpm/
BIKEaXQfIkh4tj0iDjMtgYDE5AhvqXzJXwHC+JCwFuVpIpsu6pGdPO5vdsnmHa2i/
6Ij7ZZbAAB2+L1eLXaXcIhNyHGdJ5UTUpTtBVcmkS5JeeCfFgUIVpMM5M6aGaqL4ixYhUPi8KcEn4HZMP/
a5vlhTXJ3RWhHHJi+EWDIqDNYITtNy/
tp6KZ3Mri1ZOAcIAwPMHWI6uUWTi5y0C1Oy4CWNvQ6kAGzCPaTvZaUe4Vh9DnTB5xwbxd3zCmqRL2oWRtUJkzctMCSGp3B/
yYpR0xtfnI2xhUEKqQxS3vDbHOOJSr4GqCsgbW6vbLoA24I+AfhsMwCAAGbjKMmrFv6fO0wRzhmEgAcdPdg7+LkTJ5n2FLJQSXHrsMjuTA5WRZJ9pD7h4Y/
bqlHLfl7fpKAHFGXjNtYx/
h+Ny0DIXfhdNqLcaC6XHJxmXJHsmrwS+1ehEHyNH3kpC6hzzmLp0Gb1+mTu/
O8RQgHBCw/
EdFOzZ/
Lbv3Mdl8YbcbP4fXzB+vb6xbmb+CZPFmvSOpLoyaIw+FiNO9E2Dg+aN1Lfdnw8Dgel4x8JQghRSWAmvU3kvRHJvW5q3xcKSpvDafLDNsl1TWqGLZmJq93xGW/
5P5tzpPn+DYMYdNkgVZg+5NbMMqZYmkJ3MxESQwtgbfV1fVqLzN3I0DuuK3vPlCpX0U5aS9h2/
3Vz4lD+l5w+OiMvDp71b6xtgLi5tj0WTEhqgAHLsAB+4RkG5xwjQLzxXrsN7x1dIu5uK7LXSEkqbvutm/
1mUgsSkp4S5sJPBn+AyVv0NqrnI33Ej7m3b+NzHjnVFTq1dCUJgLY/
XTa+TZ0wxqU/
YlMWpkfm3M27C3C4mIlnRmqJ6CuEOYy4AzRq4UVtK1MDQZbsv/
NHq8IhYzMOfD+w+cmP2nrnPFT0rR5Pv4/
OhKZDCqkzLVAx3CdBjAT/
8iz5/
ZhMWgmpnsnDTBR9jS3gNm6qYxC+nXZ34PEyl5uyu0HQhEvYpHrWvbrk6ZnCfiE0/
lI26RjCEsmv3m5KbIAzhJMaCKRcbDFYVFmqDrpsqAFYWTXlMrWHuqIa7zR5ss9QePwpQYDmCkSxr7MvFbAVZqhe/
ZBktT5wZ5+u8xVIhUp8Y+x4LWvzJgMdl2w0aL+xA==

```
2O2Yoi5f9rDtw9HVtne13a3oaPzaHGb6djGT528mzxvMkPmLzA3ul5UkSdIIGuV73CRJktRg4rYJIuKE
iPh+RFxRXwc1+r09IlZExHci4hcb5a+pZSsi4vjhtHxDo9qunoi4KSKuqst5eS3bKSIuiIgb6vuOtTwi
4iN1Xq6MiH1abuupEbE2Iq5ulE25rRGxuNa/ISIWD7HtM2Y71/SaCeu9S7FmMrocjyayxcarzPS1kS/
gBOCPB5TvBXwbeALwdOC7lBuUt6qfnwE8vtbZawTmYyTb1dfGm4A5fWXvB46vn48H/
qZ+Pgj4POW3tBYBl7Xc1v2AfYCrN7atwE7AjfV9x/
p5xyG1fUZs576mfduZEeu9S7FmkvPT2Xi0kfM24+OVZ9ymx8HAmZn5UGZ+D1hB+Qucn/
wNTmb+COj9Dc6wjWq7JnIwsLR+Xgoc0ig/
LYtLgdkRMa+tRmXmJcAdfcVTbesvAhdk5h2ZeSdwAfCaIbV9LF3bzjW9ZvJ6H8lYMxldjkcT2VLjlYnb
pntLPaV8au90M4P/7mbXccqHbVTb1ZTAFyPi8ii/Ng+wS2auAajvT6nlozg/
U23rqM3DTNjONb1mynrveqyZjK7Ho4nM6Hhl4jaBiPjviLh6wOtg4CTgmcDewBrgg73BBBowqxykftlFt
V9PLMnMf4EDguIjYb5y6XZifni5sKzNlO9f0minrfabGmsmYCfv0jI9XI/
07bqMgMw+YTL2I+BfgvNo53t/dTPg3OEMwqb/
nGabMXF3f10bEOZTT27dPfxFNP56+t1Udxfqba1lXKAK/
rKL26hnRvIzNt6nzu+nWt6jeJ+N2UzINZMRmfj0US2hHjlGbdN0Hcvw+uA3pMty4DDIuIJEfF0YAHwdU
b3b3BGtV0ARMSTI2K73mfg1ZRlvQzoPd20GDi3i4fl4GHFWfkFoE3N27LDBEU23rfwGvjogd66n+V9ey1s
2g7VzTq/PrfYbEmsnobDyayBYRr4b9dESXX8DpwFXAlZQVPa/
R788pT6p8BziwUX4Q8H+1358Pex5GvV21bc+gPOnzbeCaXvuAnYELgRvq+061PIB/
qvNyFbCw5fZ+inKK/mHKUd6xG9NW4DcoN9CuAI4ZYttnHbua9q3n06v967FmknOU2fj0UbO24yPV/
5zgiRJUkd4qVSSJKkjTNwkSZI6wsRNkiSpI0zcJEmSOsLETZIkqSNM3DSmiMiIOL3RPSsi
sifrfRPb+O692NsjkR8XBE/ONGtm3viDio0X10bdsVEXFtRPzWxoy3Mb6LI2LhRgy33rxLGg7jl/
FrpjJx03juB54fEU+s3b8AfH8G4HXNroPpfxO0sbam/LbO01nZebelF/4fm9E7NLsGRFt/
FPIoHmX1D7j19QZvzrAxE0T+TzwS/
Xz4ZQfPAPgYgIk6I8ie+F0fEjRHx+7VxV8vq+XFxPPr0SMRMb8xrsMi4lbgUcr/wT2t9vsw8KHM/
EpE7EH5O5XnAtcDxDHx9RPvwaAVKoK+oRS8CXp6ZD0bEWwEy8wUR4/VFsmMb4DmW8wcR4nH7BTv
VPAFyPi2cDvAA9k5k9HxE8D35zEsvkI8OXMfF1EbDAVsO2De3wr8V2a+p9Z50iTGK2nzMH6NzfjVUSZuG
ldmXlkD1+HA+QOq/GdmPgQ8FBFrgV0G1On5AvBu4DbgrL5+BwTEdsr/so/
xm4A7A0IhYACWw9zvjfGBEvBx4C3pyZd9TxLcvMB2udlwP/
UOft+oi4GXg2sB8lkPXm+cpxOtPzPzKuCoOsyjwN1R/sev6RvAqRGxNfC5ZLxiEuOVtBkYv8Zl/
OooL5VqMpYBH6BxmaxhHocbnRxnnYCAzfwRcDrwV+Gxf78cBL8nMvetr18lxIoL8rM5wO/
DGwzTjvPqsPum5nnNMrvb3yO/
oGaTZxE+XjT33DAzEsoQfX7wOkRcdRUhpe0yYxfjzF+zQAmbpqMU4F4x6x/L+XSwyAfBP40M2/
vK/8i8JZeR0TsX/
uwGM3FB89yWmM5xLgyDqNZwNZwN7UP5wuFn+fMPplZ7bIuK5EfE44R+8iiIiK0iYvv+dkXEnsDazPw
X4BRgn41os6SN4/
wyfs0oJm6aUGbelpl/P5l6mZnXZfvffIqldF/8X0R8fdhgvA0Fn8zU5a/Yc2WVjQW6xlqAsWFmBlvwWK0y+QqeVBUlC64tFTjaPcS7R2Ae3BP40M2/
7uncBHga0i4irK5Y6j66WSk4Bt6yWGtwFfbwxzPHAe8CVgTaP8D4BX1nFdDjxvwLy/
ArgiIr4FvJ5yL4yklhi/
jF8zTWSOdXZViiRJo8QzbpIkSR1h4iZZJktQRJm6SR1h4iZZJktQR/x/7JJNBiMpXuQAAAABJRU5ErkJggg==\n",
      "text/plain": [
       "<Figure size 720x360 with 2 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAmgAAAFcCAYAAAB87EJvAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xm8JHV97//
XWwbQKMo2IqtjjlOuuSOYqiSZR0RvABcwNiXojoyEhi4nmxpgQowaN97olLmTRHy5xwAUR9UIUUYKicSM
OyioqgyAzDsIgm8qi4Of3R30P9PR0n3OGmT5dZ3g9H49+nOpvfbvbqU9VVn/OppbtTVUiSJKk/
7jHtACRJkrQhCzRJkqKSesUCTJEnqGQs0SZKknrFAkyRJ6hkLNEmSpJ6ZSoGWZFmSSrKkPf9UkhULMN8F
mc+WkuQVSd49j35nJnbhYhpxLyPPSfL+acx7xDDaRJzyxJ0OoxmjWkBaHGOB
+48+r8vyeu2wHzv8r6bZJ8kP06yzebG0VfmlPkxp847ht7n1E1ZT0nemeRVk45pS5tXgZbkhUkuSHJTk
h8keUeSHec7kySJ3nauPFVdXBVrZzv9O6qzZlPW4afJtl1qP3ctjEvm+d0Ntjw2z2z/Qn7d/IDOPf2/x/
t+q2qwkMZC4Z6Z9eZKj2eak9C3hJDk3+aKKcl+Sc5p+Sfa7C/
N5YZIvbl60W79N2XI9VT70xXF96mq2ycX4aYxp5pTJ60POTXJ7klOTbJurvd04EBq8FFJXra5cVTVH1
```

XV39+V1w4X60l2bPvrD9r+e8HwQUrbJm5uy/
CDdqB6n02d95wFWls5bwReDtwPOAB4IHBGku02dYZb0nyP4regy4DnDcz/0cC9tsB017V/
IDOPZ22BaQ7bsaruQxf/q5McNNxhCuuzl5I8CXjwHH22A04B3g/
sBKwETpn2PrEluT1Mhjl1A+bUrdvPgdOB/zlXx4EDqfu09fro9vqPTjjGeWv753/Q7a+/TLf/
vhx4U5KXDHV/VluO/YDHAX+zqfObtUBLcl/gNcCfVdXpVfWzqroc+O0W4O+2fhtcxsjAZZUkJwD7AP/
eqsm/GjGf4Qr195JcnOS6JJ9O8sCBcZXkxUkuAS5J561Jrk5yQ5LzkzqzPLcMZ+ZMxdJ/
qHN57IkB8+xvk4Ajhh4vgI4fmge70vyL0k+meRHSc5O8uA27gut23LtXfzObDPLwCncJPdM8v4kP0xyf
ZKvJdltoPsDk3ypzfMw0elM6rqK8BFwKPadDdYn63tV9r0b2h/f2Ugpgcl+XybzxnArgPjNrqcloEj/
STbpLvEcGl7/TlJ9h61XpLsmuQTbVmvTfKfSWbbXg9J8t0k1yR5c5J7JNm+vfbRA/HcvxA/Hcvx3ZLB2zzpcA/
wT86SzzAngysAR4W1XdWlXHAgGeOma6L2zx/ahta/8rycOBdwK/
3Jb7+tb3GUm+keTGJGuSHDMwnZmj9xVJrmjL+7cD4+/VtsHrknwT+O9DcRw9sP6/
meQ5QzF+qe1P1wLHtPfsH9p8vgs8Y7aVkuRxSb6epD45D45+Z7gzJ9Um+nOQxA3GdPNT37UmObcOD
++6Dk3y27QvXJPlA2tmnjMg32fjy3x7pjuqvTbI6yR8MzPOYJCclOb4tw0VJlg+M/+sk32/
jvp3kwNnWx4j1Y07dkDl1K86pVXVVVf0r8LVZ5jPOEcAX2v4xqyTbJvlQko9mxEHO4P40s06TvKxt41c
medE8Y3oB3b53eFVd1vbf04GXAK9LssPwC6rqB8Cn6Qq1TVNVYx/
AQcBtwJIR41YCH2rD7wNeNzduycDageeXA08beL4MqJnpAmcBv9+GDwNWAw+n+wf4SuDLA68tZ7o
jrd8AzgF2pPsH+XBg9zHLMzifFwI/A/
4A2Ab4Y2AdkDGvvRx4GvDtNo9tgDV0SbWAZQPr4lrg8S3+DwAnDsX/kHHramiexwvb8N/
CPw78Att3r8E3HdguS4F/ltbJ2cBbxhe1239PBG4CThwzPrcGbiObkNcQnd0eB2wS+v/FeAtwE/
Gohxo2UZfO/pjjQuAB7aYnnswHSH18vr6YqXbdvjV2d5bwr4XIt9H+A7A+/
zvwJvHOj7UuDfZ9nmXw68fVRMQ/3+N/CpobZPAC8b0ffewI3AQ9vz3YFHDmyHXxzq/
2S6o8d7AI8BrgIOG3o/39Xer8cCtwIPb+P+Pfx7Axey4b54OLBHm/bvAD+h7tltuAP2vv/
b2APwK+1aa1c1vPd+y7Q3FvB3yvrZttgd+i28de18bvD1wNPIFuG17Rto/t6fajm7hzm94GuBI4YMS+
+xDg6e11S4Ev0BXK8803n2/bxT3pkuZ67twfjgFuAQ5pMbwe+Gob91C6fX6Pgek+uA0/
Cbh+tnxqTjWncjfMqa3PksH3dD6Ptv5fOMv4Y+iuYNwL+GTbTrYZ0/
d93JmHnky3D762rYdD2vu30zy28ROBlWOW7zbg6SPeo73ae/
T2gf7PB86fax3MdYlzV+CaqrptxLgrGaj0t6A/BF5fVavadP8e2CfJXlX1vYF+3wdIcjbdCn1YkrOr
6uAxcTwBuGtVHd2en5HkA3RHuUdPuIyrwVvG+GT7k/gR3fr9nnj5m15U6pTpQ9+LOVemYeKSAFbIpoS4ZeB
uIfVJwC2/RWyFVzlcHSLwNVA3zdy/e/v18tKvkxQF+vjK+dQLxnuRQ3zqkHzoXQXmOOwnk+lKqVlVvoS+
gYQnEiKW2eg4Td4uVtoBzfwnjHWz3nYxtd4xlRwf0lh
dUzfHxRHw3fLVT7yQ4mKbG1ZTmDmqOQ1GU6F1ZtVaKzY+VX5Cs2n3XWd6ijvO4Vq59bmYuAMWDlJPIsZv8rk8y2Cs2D/
t/2vnWcvWs/tYFX2wVZjjg6+s4fK0H7G0DJ/wfLtnXsDLHmrGjVe2x/KbkXv3fXLLQ4lTnXOOKg9yLyVBAucB3iTp/wt9w9ah7/8sZv0G8cQ2X7ANIvpTdnIcA+Dc8f6Jo7x+0lOGq/1WOv+Yl0G/Oz+S97UAzgGjtxswqwgZ7Of1IcPXZFdNO5O+k1OzMelLt7NHcj6n/NnAN2qGv+Y7LMtf/gCwU+yZPnfcbrWqvXJwFJ7lN3sy8XKbO0BW/2WmF/
jdiGPu0YqgSMyoTUn9MfpBgDEyQDf5ahy/tlEnV/Cq4jVwfPH/XRbwVKCbRNMNjd+yH3GHEjfI7/TrMC/
1ywK0GHLuHcO7+8ODt6snnGqGEkz4G3cMDNFKG6GbJBHMNGg8+XLqDvnZ/5gfR1r3fNLUR5/
8gE6L/sZtGGpxe/gNEp5jUq5LSYkoq0HuN8s4NNw8o8G9Sz/
B4HazHcPMEiP5KRDwxcwxAwtVtR71O7bVdFHn4a9/Lzp2vJEnl4VS1mSgNgqGfbuSOmJDcy9hf7N6XF+
YsXTuZ6FQdJKRXI73I2k1dQx6XEGGNm4i5+mjbn/
Xz6Ek+kRPNLtnQLX1Rf6tDX+5Rw/MUZ4b/
6p5TMu1bnUX8vOJGw7oE6mx7U6Yjgz+Q8B9d3hZdGu9w5mM/+M3vkR6uhE6cGJPpcW7Y4/

s43VHpiekuX1xId2Q5zn3pEv91dKdhf8hdqFQ3RVVdWlWr7uLLjwFWZvx9EeM8gO56/I3AxXQ3Om/
xLzNs9y88E3gZ3br8K+CZVTVz6eX5dDd5X0t3Tf34gdfeAPwJXdL4Pl1yH/wE0lvo/uF/pi3He7jzI/
XHsOF62ZfuaOXHdP/
4/7Wqzpol9FPobmw+l+6G0fcMxLWW7v6moruBftyyX11VP5h5tOZrqruPhHRfyvmK1vendPdLHUGXTH6
P7pT2T0dM+h5063Md3Xr79baeoCvoLgJ+kGRmHf8J8Np09y+8uq2z+XoN3X5wGd16vuPekKr6JvCPdOv
zKroPInxpjum9i+4y0Hl063DsGY627L9Jd6nqOrrLuh8bGL+K7j60f27jV7e+gz5Id+P4uLNnM8u4P90
9f58cEdNc+eZ5dDd6r6Mrvv+uqs6YZX4ztqf7EMY1dJe/
7k+XG0nyq0nmuhwDmFPHxGhO3QpzanNzmyd0Vw9unhmR7gtk3znUfwVw/KZcsqzuO87+H/
AfSXae7+s2Vds/n0a3v55Ntyyn0xVgr5nldevp3tdXAaT7FP/
Y+5BnZNMu20qLU5L30t2X8sppxyJJi505tft6D+BTdMXzCzfxPri5p2+Bpq1du4R0LvC4qrpsutFI0uJ
mTr1TkvvRXQI+qaq+tSWn7Y+la6uW5O/
pLum8+e6eSCRpc5lTN1RVN1TVa7d0cQaeQZMkSeodz6BJkiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEm
SJPWMBZokSVLPWKBJkiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEmSJPWMBZokSVLPWKBJkiT1jAWaJEl
Sz1igSZIk9YwFmiRJUs9YoEmSJPXMkmkHsLl23XXXWrZs2fw6/+QncPvtE41n+m4Gfj7tIDa0zbZw712
nHcUi8hNgK99Of3Iz3D6wnW7CNnLOOedcU1VLJxTZglrY/
NWz3GBemMNm5oHhfUyTs4nb8nxz2KIv0JYtW8aqVavm1/n+m0HpVpHXZ/
FlYKdpB7Gh9ZfDQa+cdhSLyOnAVr6dnv5lWDqwnW7CNpLke5MJauEtbP7qWW4wL8xhM/
PA8D6mydnEbXm+OcxLnJIkST1jgSZJktQzFmiSJEk9Y4EmSZLUMxZokiRJPWOBJkmS1DMWaJIkST1jgS
ZJktQzFmiSJEk9Y4EmSZLUMxZokiRJPbPof4tT/
XfuFdfzzbOvuOP585+wzxSjkdQHw3lhhvlB6ngGTZIkqWcs0CRJknrGAk2SJKlnLNAkSZJ6xgJNkiSpZ
yZaoCV5aJJzBx43JvnzJDsnOSPJJe3vTq1/khybZHWS85PsP8n4JGkc85ekaZpogVZV366q/
apqP+CXgJuAjwNHA2dW1b7Ame05wMHAvu1xFPCOScYnSeOYvyRN00Je4jwQuLSqvgccCqxs7SuBw9rwo
cDx1fkqsGOS3RcwRkkaxfwlaUEtZIH2XOBDbXi3qroSoSoP29f2vfE1gz8Jq1rU2Spsn8JWlBLUiBlmQ74
NnAR+bqOqKtRkzvqCSrkqxav379lghRkkYyf0mahoU6g3Yw8PWquqo9v2rm1H/
7e3VrXwvsPfC6vYB1wxOrquOqanlVLV+6dO9OkEw5Yk85ekhbdQBdrzuPPyAMCpwIo2vAI4ZaD9iPZpqAO
AG2YuJUjSlJi/JC24if9YepJfAJ4O/
OFA8xuAk5IcCVwBHN7aTwMOAVbTfWLqZoTfWLqRZOOT5LGMX9JmpaJF2hVdROwy1DbD+k+FTXct4AXTzomSZoP8
5ekafGXBCRJknrGAk2SJKlnLNAkSZJ6xgJNkiSpZyzQJEmSesYCTZIkqWcs0CRJknrGAk2SJKlnLNAkS
ZJ6xgJNkiSpZyzQJEmSesYCTZIkqWcs0CRJknrGAk2SJKlnLNAkSZJ6xgJNkiSpZyzQJEmSesYCTZIkq
Wcs0CRJknrGAk2SJKlnLNAkSZJ6xgJNkiSpZyzQJEmSesYCTZIkqWcs0CRJknrGAk2SJKlnLNAkSZJ6Z
qIFWpIdk5yc5FtJLk7yy0l2TnJGkkva351a3yQ5NsnqJOcn2X+SsUnSXMxhkqZl0mfQ3g6cXlUPAx4LX
AwcDZxZVfsCZ7bnAAcD+7bHUCA7JhybJM3FHCZpKiZWoCW5F/Brw/m/
BrwHsAquqnVXU9cCiwsnVbCRzVhg8Fjq/
OV4Edk+w+qfgkaTbmMEnTNMkzaaL8IrAf+Lck3krw7yb2B3/6t/
57AmoHXr21tG0lyVUldt//tG0lyVJJVSVatX79+cksg6g6e5sIjnM/
CVpPiZZoC0B9gfeUVWPAQ37CnZcCRsmIthrVsaqOq6rlVbV86dKlbV86dKlmx+pJG1sIjnM/
CVpPiZZoK0F1lbV2e35yXTJ7qqZU//7t79UD/
fceeP1ewLoxJaxidJsqzGHSR2Sh7amaiRVoFXVlcCaJA9tTQcC3wROBVa0thXAKW34VOCI9k2oxwM3zJxGlqSFZg6TNE2T/pmnlwAfSLIVcBnwArqicFKSI4ErgMNb39OAQ4DVwE2trySNxa7BNkmPBO6yuczSl/
yRN05IJT/
PgA8k2Q74LvAlcAh7e+pwCh7e+wpCRHAAK7hew+pwGHAkaVO
YwyRNi78kJF24xNzLNdi8ogRJzcKxwiqsIaVO
pOOT5LGMX9JmpaJF2hVdROwy1DbD+k+FTXct4AXTzomSZoP8
vjpfBXZMsvs0ApSkMcxfkiZuIQq0Aj6T5JwkR7W23arqSoD29/6tfU9gzcBr17Y2SZoG85ekqViyAPN4
YlWtS3J/4Iwk35qlb0a01UadukLvKIA7vrrRPoFXVuvb3auDjwOOBq2ZO/bezBq2ZO/be/
V7fua4G9B16+F7BuxDSPq6rlVbV86dKlkwxf0t2Y+UvStEy0QEty7
wO4EDgVWNG6OacOnAke0TCyeTZMzrg1V1epKvASclORK4Aji89
T8NOARYDdwEvGjC8UnSOOYvSVMz0QKtqr4BLB/R68ASXb5JcH/
pI0Tf6SgCRJUs9YoEmSJPWMBZokSVLPWKBJkiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEmSJPWMBZokS
VLPWKBJkiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEmSJPWMBZokSVLPWKBJkiT1jAWaJElSz1igSZIk9
YwFmiRJUs9YoEmSJPWMBZokSVLPWKBJkiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEmSJPWMBZokSVLPT
LxAS7JNkm8k+UR7/
qAkZye5JMmHk2zV2u/
ZnK9u2ZpvNkmLT2rTi6XnT8CEEwIuSDqL3J8QmQK2ZMnSRwgHK9KtzK0q1TqQl1oFuDsyjPlL7zZv7g5
DD7hkhbCRAu0JHsBwzBw3e3Z4HeCpwcuuyEjisDR/
antPGH9j6S9JUmMMkTcukz6C9DXgVcFd7vgtwfVXd0Z6vBfZsw3sCawDa+Bta/40kOSrJqiSr1q9fP8nYJcn8JWkqJlagJXkGcHVVnTPYPKJrzWPchoaq46pqeVUtX7p06RaIVJI2Zf6SNE1LJjjtJwLPTHIIsDVwL7oj0h2TLGlHmXsB61r/tcDewNokS4B7A9dOMD5Jmo35S9LUTOwMWlW9uqr2qqplwHOBz1bV84HPAc9q3VYAp7ThU9tz2vjPVtUmR6CStBDMX5KmaRrfg/ZnwJ8lWU13j8a7W/u7gV1a+58BR08hNkmai/lL0sRN8hLnz1TVWcBZbfgy4IAoY14EnD4Q8QjSZvC/CVpGia/kqzQ6J8UueruUbJJCKnVJ3ybWxoQqqanh9FSGEh/1U/uQwiv7/e8fqQfn2yrdzLaOldvycpzNEm/ZeJWuyrq0IajnKiqNcIOqRZdTRs5bTfc0+QzWTk4r8SS7/lkLc3uNKGKK9sP5BZe10wvXNYuHEuvAZD09KvVyHKJDPkDtkEZ9y9VEMGrjxFiupb3eVg=

JMkSeoZCzRJkqSesUCTJEnqGQs0SZKknrFAkyRJ6hkLNEmSpJ6xQJMkSeoZCzRJkqSesUCTJEnqGQs0S
ZKknrFAkyRJ6hkLNEmSpJ6xQJMkSeoZCzRJkqSesUCTJEnqGQs0SZKknrFAkyRJ6pmJFmhJ7pnkv5Kcl
+SiJK9p7Q9KcnaSS5J8OMl2rX379nx1G79skvFJ0jjmL0nTNOkzaLcCT62qxwL7AQclOQB4I/
DWqtoXuA44svU/
Eriuqh4CvLX1k6RpMH9JmpqJFmjV+XF7um17FPBU4OTWvhI4rA0f2p7Txh+YJJOMUZJGMX9JmqaJ34OW
ZJsk5wJXA2cAlwLXV9VtrctaYM82vCewBqCNvCNvwHYZdIxStIo5i9J0zLxAq2qbq+q/YC9gMcDDx/
Vrf0ddbRZww1JjkqyKsmq9evXb7lgJWmA+UvStCzYpzir6nrgLOAAAYMckS9qovYB1bXgtsDdAG38/4No
R0zquqpZX1fKlS5dOOnRJd3PmL0kLbdKf4lyFC/
gacDFwOeA32rdVgCnteHTW3va+P+pqhq5/RdmhV4/
Rbg8EnGJEnzYf6SNE3+koAkSVLPWKBJkiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEmSJPWMBZokSVLPW
KBJkiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEmSJPWMBZokSVLPWKBJkiT1jAWaJElSz1igSZIk9YwFm
iRJUs9YoEmSJPXMkmkHoLufD559xQb/
+EfaYUiaS+Gc4PYI7Q3ZNn0CRJknrGAk2SJKlnLNAkSZJ6xgJNkiSpZyzQJEmSesYCTZIkqWcs0CRJkn
rGAk2SJKlnJlagJdk7yeeSXJzkoiQvbe07JzkjySX
t706tPUmOTbI6yflJ9p9p9UbJI0F3OYpGma5Bm024CXVdXDgQOAFyd5BHA0cAHAzs2x5HAe+
YYGySNBdzmKSpmViBVlVXtXX2/
CPgIuBPYFDgZWt20rgsDZ8KHB8db4K7Jhk90nFJ0mzMYdJmqYFuQctyTLgMcDZwG5VdRV0RCRC4f+u2J7
Bm4GVrW5skTZU5TNJCm3iBluQ+wEeBP6+qG2frOqKtxkzzqCSrkqxav379lghTkkba0jnM/
CVpPiZaoCXZli6xfaCqPtaar5o57d/+Xt3a1wJ7D7x8L2DdqOlW1XFVtbyqli9dunQywUu625tEDjN/
SZqPSX6KM8B7gIur6i8GRp0OrGjDK4DTBvpf2HcNTbCTYGZcx9wTkwr+2Jb0DakBpZ/tsFoM2CTEBlsC3R8
G4CTkhwJXAEc3sadBhwCrAZuAl40dwdgkaS7mMElTM7ECraq+yOHNG/
gBdPKh5J2hTmMEnT5C8JSJIk9YwFmiRJUs9YoEmSJPWMBZokSVLPWKBJkiT1jAWaJElSz1igSZIk9YwF
miRJUs9YoEmSJPWMBZokSVLPWKBJkiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEmSJPWMBZokSVLPWKBJ
kiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEmSJPWMBZokSVLPWKBJkiT1jAWaJElSz1igSZIk9cySaQcg
ffDsKzZ4/
vwn7DOlSCT10XCOAPOEtn4TPYOW5L1Jrk5y4UDbzknOSHJJ+Jrk5y4UDbzknOSHJJ+7tTa0+SY5OsTnJ+kv0nGZskzcb8JWmaJ
n2J833AQUNtRwNnVtW+wJntOcDBwL7tcRTwjgnHJkmzeR/mL0lTMtECraq+AFw71HwosG0g2g/
vjpfBXZMsvsk45OkccxfkqZpGh8S2K2qrgRof+/
f2vcE1gz0W9vaJKlvzF+SFkSfPsWZEW01smNyVJJVSVatX79+wmFJ0thGXVMzNpvVJJVSVatX79+wmFJ0pzMX5K2qGkUaFnNnPpvf69u7Wu
BvQf67QWsGzWBqjquqpZX1fKlS5dONFhJGmD+krQgpvE1G6cCK4A3tL+nDLS/JJ+
aZITgScAN8xcStDdi1+7oR4zf/
WEX72hrd1EC7QkHwKeDOyaZC3wd3SJ7aQkRwJXAIe37qcBhwCrgqueNGXXgiL4FvHiS8UjSfJm/
JE1Tnz4kIEmSJCzQJEmscCTZIkqWcs0CRJkknrGAk2SJKlnLNAkSZJ6xgJNkiSpZ6bxSwLSJvGXBSTN
x6hfFwBzhhYnz6BJkiT1jAWaJElSz1igSZIk9YwFmiRJUs9YoEmSJPWMBZokSVLP+DUbWnTGfZR+h+p
lzRorpwxw9yhPvEMmiRJUs9YoEmSJPWMlzh1t+MvE0jaUNMpLtCVZoGmGz94D5D5okSVLPeAZZNGjLtr/H43MVXc8ttt9/x/
OBHP2Ci85M0OZtyVm6a97B9afUPN2p74kN2mUIkmmGBpru9Tb2s4YcMJI2yuZdIB1+/
+327AzUP0O6+vMQpSZLUM55BkxaYZ+AkLRQvXS5eFmjSFrbQBdInbdNJGNCHLT6wzZ+fm8huOVZ
oEmbyY/mS5qUUcWY7h56V6AlOQh4O7AN8O6qesOUP4I2y1wF3PD43e7LNj/
lL0zK8j+562bX89Iafj+w76mzXJCzkWbWt8Qxerwq0JNsA/
wI8HVgLfC3JqVxV1zelKXpW7BtzPylrc0kxxVTG3u/
Bd70darAg14PLC6qr4LkOREcO4DABCdtIX24ZPK1oaP7J95visFsOeYv6S5aqLN6m2tk0Teh/
NW3Am1PYM3A87XAE16R52tSib9cJfxTLi+5p5xZLIQj9K9Ayoq026pQcBRxFl+d/
nOTbkw5w5sAe0KXDPtIAAIiLawXeEft8Jl2hrfp2ku06vm2/GBk4xiM2xq/oLp5K+
+bLt9ygs9Wie9iAP6E0tf4oBZY513/
oJ55rC+FWhrgb0Hnu8FrFvuVFXyxYotgXRlmn5tOPYklymxWFrXKYFtkn5a6GCGtaX97kvc
UB/YulLHNCfWPoSByx8LH37JYGvAfsmeVCS7YDnAqdOOSZJmg/
zl6Qtpldn0KrqtiR/AnyG7mvq3ltVF005LEnaKPOXpC2pVwUaQFWdBpw27TggG3CGRPSyjsZIuSMSuSZ
KmqG/
Cnya7mPq762qi6YcliTNyfwlaUvqVYEGUFWnAfNs/
vULhNMkMu0OLhM2sgm5q9p6cv73Jc4oD+x9CUO6E8sfYkDFjiWVG10D6skSZKmqG/
3oEmSJN3tLZoCLmbk3wryflJPp5kx4Fxf5NkdZJvJ/mNgfaDWtvqJEdPKK53JvluknNbXkPJ/mNgfaDWtvqJEdPKK53JvluknNbXkPJ/mNgfaDWtvqJEdPJ/
Lxkhye5KIkP0+yfGjcolymQYsp1kFJ3pvk6iQXDrTrTtnOSMJe0vzu19iQ5ti3j+Un2n17k4yXZO8nnklO
zctrmXtvZFvVyanyTHJPl+knPb45CBcSNJ5kgvaeljV2kbuBxOYdy9yy5g4prKN9CU3zR
LH9PadqloUD+B/AEva8BuBN7bhRwDnAdsDDwIupbtBd5s2/
IvAdq3PI6a9HEPL9HDgocBZwPKB9kW1zhuQ2VLtJ/G5o6MwI6GeB9R4+ie8QOT3/XJ0XqTtA/
R0CfIruO7AOAM6edvxjL8W9cJ9ATHzGhIr8HHLgAc+0eFhs4oezmMbgbu/
MNROOZaq5Abgc2HWobeR+MIF59yK3jIljKttIX3LTLHFMbd9ZNGfQ2wNgdNuLYVKJTVbe/
pVuu8Ygu6nVE6sqlur6jJgdNd1PrtzxsytV9VNg5mdXWgXmdXeqOqLq6qUV9SuWiXacBiinUDVfUF4Nqh5kO
14JXDYQPvx1fkqsGOS3Rcoju8AkJLX0j1fhx4JiXlMuuYKoG1YUmq
QlN80SxzgT33cWTYE25PfoKmgY/fMqe87SvhhsDcu0mGKdj92q6krodmTg/
q190S1nkmXA44Cz2YqWS3P603ZJ6L0Dl/
Cm8T5Pe9sq4DNJzkn3qw4wfj9YCCO3+c0gvN2LLG4kTqQuBdvQqn
ZpX1DzWaZRLxvR1ptlmqfFFOvmWFTLmeQ+wEeBP6+qG2frOqKtt8ulOXPNO4AHA/sBVwL/

```
OPOyEZOa9Ps87W3riVW1P3Aw8OIkv7aA894UC72eprqN9CU3jYhjauulV9+DVlVPm218khXAM4EDq10E
ZvafV5nzZ1cmba5lGqPXyzRP8/
rZm0XkqiS7V9WV7XT61a190Sxnkm3pEs8HqupjrXnRL5c68801Sd4FfKI9ncb7PNVtq6rWtb9XJ/
k43WWpcfvBQujFPlhVV80ML/Q20pfcNCqOaa6XXp1Bm02Sg4C/
Bp5dVTcNjDoVeG6S7ZM8CNgX+C8W98+ubA3LtJhinY9TgRVteAVwykD7Ee2TRQcAN8yclu+TJAHeA1xc
VW8ZGLWol0vzM3SPznOAmU/vjcs1kzS13JDk3kl2mBmm+/DZhYzfDxZCL/
bBaW0jfclN4+KY6r6zJT9xMMkH3Q14a4Bz2+OdA+P+lu4TFN8GDh5oP4TukxiXAn877WUYsUzPoavCbw
WuAj692JdpaPkWTaxDcX+I7lT2z9r7cySwC3AmcEn7u3PrG+Bf2jJewMCncfv0AJ5Ed/r9/
IF96JDFvlw+5v3+n9Dex/Pp/
rHsPjBuZK6ZcDxTyQ10nxw9rz0umpn3uP1gAvPvRW4ZE8dUtpG+5KZZ4pjavuMvCUiSJPXMornEKUmSd
HdhgSZJktQzFmiSJEk9Y4EmSZLUMxZokiRJPWOBppGSVJITBp4vSbI+ySfmeN2OSf5k4PmyJDcnOXfgs
V2SZyc5epbpvDDJP48Zd3mSC5Kcl+QzSR5wV5axTevJcy3TLK89LMkj7uq8JU2G+WterzV/
9ZwFmsb5CfCoJPdqz58OfH8er9sR+JOhtkurar+Bx0+r6tSqesNmxPeUqnossAp4xfDIJNtsxrTn6zDA
BCf1j/
lrbuavnrNA02w+BTyjDT+P7ssNAUhyTLofjj0ryXeTvKSNegPw4Hak+eZxEx48wkxyeLrfDDwvyRcGuu
2R5PQklyR505hJfQF4SJvOj5O8NsnZwC8nOTDJN9rR6nuTbN/
6HZTkW0m+CPzm0DL95cDzC9P9aC5Jjkj3Y7nnJTkhya8Azwbe3Jb1wUlekuSbrd+Jc61cSRNl/jJ/
LWq9+i1O9c6JwKvbKfTHAO8FfnVg/
MOApwA7AN9O8g7gaOBRVbUfdJcIaAmvveZLVfXiofm8GviNqvp+kh0H2vcDHkf3SwffTvJPVbVm6LXPp
PuWZ4B7AxdW1auT3JPuG6gPrKrvJDke+OMk7wTeDTwEXwBIT0YRS8I1WM+hRDL5zBAJABxPSjS3VHGpC
urk1u9o4EFVdevQckhaeOYvzF+LmWfQNFZVnQ8sozv6PG1El09W1a1VdQ3dD9jDm9+ZmUNmZSg5cIhpMbwJeA9
yX5A2Dw1P6ZVXVDVd0CfBN44MC4z7WkeV/g9a3tdrofugV4KHBZVX2nPV8J/
BpdUr6sqi6p7mc03j9u+Qc8FTi5LSdVde2YfucDH0jjyu8Bt85iupAkxf93B/LVIeQZNczkV+AfgyXS/
jTbo1oHh27mL21NV/
VGSJ9Bdjjg3yX7zmP5TZhLOgFuq6vY2nNlmOab9NjY8aLnnwLTm85toz6BLos8GXpXkkVVlopOmx/xl/
lq0PIOmubwXeG1VXTBnz86P6C4ZzFuSB1fVvX1auAaYO9NjHGUbwHLkjykPX8B8PnW/
qAkD27tzxt4zeXA/i2m/YEHtfYzgd9Osktbvj1b+y93+dGT1Ng2Rk4I
M3Uhh+q9H3mPrmlgQLYqYkVqX8bAeZnqDcVRHVGnQwNvZdM0U8I2BnkCwtuAWWi/Zy+dFnK+ni8I8M
y8SxY47T8RBvfjHHeYLjEX5Lq5TztwGxeJXpvNxqZ0JQVmtnZ8r0pxWH1ezwVHx
GFlmPXyD9tHjzgFBVXZD5I8bRVYHGNG0UqKiYfGX3Zym9S8RG2dI7YTfX9ISUxfTX
```

```
OPOyEZOa9Ps87W3riVW1P3Aw8OIkv7aA894UC72eprqN9CU3jYhjauulV9+DVlVPm218khXAM4EDq10E
```

7U678V1HzX3yafrvr6f0oef3Zj2CeBU4EJKvz4Y2L72gQeA7wB/T6M/
DVjXY4BbKX3zr+v+OHgcffci4A19y/oB8MpGrHh6Hf5d4Pu1TbcDJzfmGc8x8BLgyroNrgRe0hdX/
p4SuB8EvgzMqNM2B/
6ztv0+4Lt1OxlTjanG1BH6Rq1zMHDLaHUGzHMJ8HejTL+0sZ1mUfr2W0bpn704dHLdx2dS+uB1wNxR3q
cZe84CLhxQ51TgkkH7qJZ9B3jrmqx/Zo6Z1B0CPNZ8o8a0hcAnxwpA/RtnhE7W3NCH1478LGAa5aC/
rG9jXVw75lOA36EEyumUYPQsYNY4A9CvKAfOxsCfUjp5jLaDgR/
V99iY8uGwO6sHoHsoB8M04Gzg3EE7u47/Ya3/VsoBvnFj2uaUA21GXdadtY1b1XX/
OeUDdKO6Df4W2BT4NcrZyu/
U5bwJuBzYBdiMcrXok4P2RWPbfLMOTwPeSOnI29R9+xjlSsNmtR0voxzI+9SyfwW+XuefQQkIrwI2Af5
vnX+8AeiLwKeAbev8vzWoj9WybwPH1OEtgf1GCUCPAe+v7f0tyofCM+r0H7Jq0vM54M2jHCdfAH5/
UJv66l0AvK2v7CHgBQPqjtiv6TveatkRlCC8EeWD7eFG/eMYpa/X7dbbFgfUfd3cJ6+j9LnNgA/
SCMa1LfcD+9f33hw4lxIAt6Akoj9hhKQO2KtugwPq8t9f900vmI7Wd48FvtW3rPuAzQYE1gOB59Y2/
jrlQ6b34T2b0Y+B7SgffsdQjofX1vHtG3HlJuB/UY6HS4FT6rQ/
Bv4LeGrd9m+o6zeNkhR8wZhqTMWYOmiZa5TU1X7zOLDHKHUuBf6obpP/ARaMUvcWVk3qfgEcRumn/
wxcPsq8zdhzhzJ3D8gDovrdts8wH7aD/KnZzmyflHgY+OuR3G2Eh/
CNw5wrRTgIsnIAB9CTihUXejunK7NzbWyxrTX1Z3zn7ARmOsT/
N9jgOWNqY9tS77aWMEoHfUHXoIJRBOY/
UA9PHGfIcBa5vUz4sD6kd4upaZ1/gtr5l/
hXwH3X4euCVjWlzqgOZ3X4nNaZ9A3hlXb8vNnpCMSr/0GVPnmbXeTo19dB/
lxCIpV60HnhCN9hrrmbqfAjNGuMc/
q05f33YHPhQR90XEfZQzrgB2btS5vTeQmV+lXH7+N+CuiDgtIrYe53vjVwVjOI3VwyzHmOQs4inKQnjW
cimdd9RlZnku4GDKB+afAO+KiN+pk9GqMOXUs6CfquOQ9lmO/W2Wd9b/W9b/
rnGtOspZzS96YNcnpnTM3NGZu6XmV9pTFuRmb9ojO9EuX3WW5+HKIF05zqtub+yOT6GXYF7MvPecdY/
gXK15IaIuHKMB5HvzcyHG+O31rZCuV32vyNiNiS+DVwDcyc3n/
AiJiC+A9wJ+Ns30PUR5paNqacsa+ijXt1xFxbET8ICLuq+1xIxEZ/
vxOBt0VvuxhFxSkTcFBEPUAIdfctu7s+ZlA+PZtmjKy/f/
Q+hHtG7LuZ+SDlqsORte6RlKs4q4mIfevD1Dysi4n7KcTZjUN0R2ti/Dreyakwa6Zg/
i3K789yIuAOYhzG1nzHVmLo+HEu52j2Woykn0+ev4fL7+
+Dm43z+8aeUY7vfLEry1jzmZ1D69lsofXSTNWzjmEndt4FHKWc1K9UPs0N58uHThylnZT1P61tOrkGbb
gf+uHb+3uspmXnZSMvLzA9n5guAZ1M64JgPWK6tzLV8nzFYcBn1/
Oyf5WZn+bJ56dg9QD0NVYPQLcDP+7bZltl5mGN6Yf2Td88M3/
Cmu2blU3tG7+DEuSAlf1je8qBs5wSSHrTrfaDQmvT8q4Zb6eOtq5pOtV1cg5Uf8Pxvzfbf+iUvnsKlbtrdkX+PTKsQ+wPcAh/
UJv66l0AvK2v7CHgBQPqjtiv6TveatkRlCC8EeWD7eFG/eMYpa/X7dbbFgfUfd3cJ6+j9LnNgA/

57yJYiLR5n1i5Tt+X8AIuJjEfGxsd6v9+03SX0i4ibKbauvjFlZkjQqYypExC6Uk4C/y8zT1/fy/
e1XaYCI+APKLc2vtt0WSZrqjKlFZi6jXCmfFeWLI+vVhv6fq6XVRMSllGemjhnlGS1J0jgYU1eVmddQf
mFivfP2qyRJUgd4+1WSJKkDTOokSZI6wKROkiSpA0zqJEmSOsCkTpIkqQNM6iRJkjrApE6SJKkDTOokS
ZI6wKROkiSpA0zqJEmSOsCkTpIkqQNM6iRJkjrApE6SJKkDTOokSZI6wKROkiSpA0zqJEmSOsCkTpIkq
QOmtd2AiTJjxoycPXv2+Co//DA8/viEtmdi/Rx4op233ngT2GJGO+/duoeBKdpvHv45PN5Sn1kTa9i/
vvvd7/40M2dOYIsmxRrFL1jDGDaJ8aJT8WENjvepcnxpYrUQvzqb1M2ePZslS5aMr/
JFF8HMqfw5cBmwbTtvveIWOOQd7bx36y4Cpmi/uegymNlSn1kTa9i/
IuLWiWvM5Fmj+AVrGMMmMV50Kj6swfE+VY4vTawW4pe3XyVJkjrApE6SJKkDTOokSZI6wKROkiSpA0zq
JEmSOsCkTpIkqQNM6iRJkjrApE6SJKkDTOokSZI6wKROkiSpA0zqJEmSOqCzv/
2qyXHVbffxwytuA+CofXdruTWShkkzPoAxQppoXqmTJEnqAJM6SZKkDjCpkyRJ6gCTOkmSpA4wqZMkSe
oAkzpJkqQOMKmTJEnqAJM6SZKkDmglqYuIZ0TEVY3XAxHxpojYLiIujogb699ta/
2IiA9HxNKIuDoi9mmj3ZJk/
JI0rFpJ6jLzR5m5d2buDbwAeAT4HHASSgDgz5wCL6zjAocCc+loArm5ek45ek4TUMt18PAm7KzFuBe
cDCWr4QOLwOzwPOzOJyYHpEzJr8pkrSKoxfkobGMCR1RwKfrMM7Zu2ygPp3h1q+M3B7Y55ltUyS2mT8k
jQ0Wk3qImJT4PeAT49VdUBZDljegohYEhFLVqxYsT6aKEkDGb8kDZu2r9QdCnwvM+
+q43f1bkvUv3fX8mXAro35dgHu6F9YZp6WmXMzc+7MmTMnsNmSZPySNFzaTupey5O3b5fVbZPs9/
duc0hSS4xfkobKtLbeOCKeCrwc+ONG8SnAkZKNCmqrgb7wdKPyl4jqjzrveyQHYWqvFAjijmNJP1Iofa6AXXs0qjuv6gRQz+ZfJCS+h6+ycDeFfxbfLKv9VCBZSTJOeLVLnTrrLjUExmfsMoGeE8uj9BrK7kDWfc8/JnAkfAwKoAQLXr3cvGu7c4mqEtrAOV/gZpeq89v8SxbpEJLVrMe2WQ/ETKqWDCL76etCrBa7w/IcRuMf1rHa3yX5x/S4YgXKxXQdrM+qyXRsG4RK2bSW2tJCw9xpTqbYVE6I7JSekPPJxX+Y5zeKJJkOpZJKkDEumVLjUeNR74dO4rhU+dcBYUt8j/HeaSMeUh2pJGdlGwqKDaPc/7vrzJPX+rZJU8ymSkyehvVbMOZE6xFbY3Rc+WAN5W44MhGgaVCbzJ7NOZGSPbfqf+GoLFpMNT8qsV76FPAcd9j3y6Tqn8HL0bUDV6zqjM3HvRUG8IA2MbpWZbpbsb6xw2CCC/SHs+CSPsBeAB7TkvHc7dvkEfQ4xtyXV7DN/sG5WtF/jT83z4/a/YHjfm/UbCE3vw9fU9jqB9JiZZJMBTuRePS+pfVZ1QvWd5oZhp4q4bnPPVZo5ZZSbzmiL/M6ToU9X+0q/1tb+EXbFRqfa1DYE2ej3DRjoO4S+k8wurFN40AJ1m0qzu+9MqawjDy0yQj7Ga4AiytSLQPoEuOgTvvyU+eFXbKkq5+/0bkg2B0iu2hr/zAkZuNJnpt9+GKaJoVPGN0Wxjkr9nmt3tKpDoWmU4T+aqp4FwVUbyW3vD+JL9GW3ZotOotKxZzXWNDr1NAHD9XZD3+X4IaHlyMVNxOj9nbT56aVfGwGkfRvsmhEYyhiHEyZqNdHsvaSgzv8NFwXIsmydaJgu+zA+ktu4SK3lAh3bC9PB3aWPWJa8WoZy/uJWqGCpeMbgl+mSPMfkymr8QRfTSQeTBuTjH1zu/SknXJmptm47H+Xm3hn2bmqvP+rOpQ/T/KWXOk8QDWdQIP2i1r5wNKSGzm1Mk3MzPLm5Q8Z8VlWlP0xYkcKnsdk40TOXgtd1mcT5rJb7TDDn7zs3AtavQ8n8AS3uDfT3k+RiGQBo4QSTwiDxKbxa2J0CAyzrOqZfe+vEXNbdrgR2e8DjdEJ2v6wNZbsDA2bzfcSYJPLoYW0t7Lj2pdW/u8y8qAp0q5ax2t//DsS+rGdDK5mnK5y5etdWZB2AQGBf0mTGlHyIeo4v3bJHd2Ck5mtSYRx7fZCDtnS1ikwmyhCAFNz8rzJFYrL3ViHYmcmlKjtIv/8n+5UZZK1Lj+ZcBxjIw8pihKYzTjV4jMvkRDoI2KmRsKnfpGuk5ZDzcLDKJlJ2ZUXyzoHvHvHfUM98u6cr//3XH6i1NvsDZrt

QNM6iRJkjrApE6SJKkDTOokSZI6wKROkiSpA0zqJEmSOsCkTpIkqQNM6iRJkjrApE6SJKkDTOokSZI6w
KROkiSpA0zqJEmSOsCkTpIkqQNM6iRJkjrApE6SJKkDTOokSZI6YFrbDVB3nHPFbSuHj9p3txZbImkYN
WMEGCek9c0rdZIkSR1gUidJktQBrSR1EbFrRFwSEddHxHUR8cZavl1EXBwRN9a/
29byiIgPR8TSiLg6IvZpo92SZPySNKzaulL
3GPDmzHwWsB9wYkTsBZwELM7MOcDiOg5wKDCnvhYAp05+kyUJMH5JGlKtJHWZuTwzv1eH7weuB3YG5gGL
La7WFwOF1eB5wZhaXA9MjYtYkN1uSjF++Shlbrz9RFxGzg+cAVwI6ZuRxK4AR2qNV2Bm5vzLaslvUva0F
ELImIJStWrJjIZkuS8UvSUGk1qYuILYHPAG/
KzAdGqzqgLFcryDwtM+dm5tyZM2eur2ZK0mqMX5KGTWtJXURsQgmIZ2fmZ2vxXb3bEvXv3bV8GbBrY/
ZdgDsmq62S1GT8kjSM2vr2awCnA9dn5vsbkxYB8+vwfOCCRvmx9Vtk+wH3925zSNJkMn5JGlZt/aLE/
sAxwDURcVUteztwCnBeRJwA3AYcUaddCBwGLAUeAY6f3OZK0krGL0lDqZWkLjO/
gRMntFGSNA7GL0nDqvVvv0qSJGndmdRJkiR1gEmdJElSB5jUSZIkdYBJnSRJUgeY1EmSJHWASZ0kSVIH
mNRJkiR1gEmdJElSB5jUSZIkdYBJnSRJUgeY1EmSJHWASZ0kSVIHmNRJkiR1gEmdJElSB5jUSZIkdYBJ
nSRJUgeY1EmSJHXAtLYboG4654rbVg4fte9uLbZE0rAyTkjrl1fqJEmSOsCkTpIkqQNM6iRJkjrApE6S
JKkDTOokSZI6wKROkiSpA0zqJEmSOqCVpC4izoiIuyPi2kbZdhFxcUTP9uW8sjIj4cEUsj4uqI2KeN
NktSjzFM0jBq60rdJ4BD+spOAhZn5hxgcR0HOBSYU18LgFMnqY2SNJJPYAyTNGRaSeoy8+vAPX3F84CF
dXghcHij/
MwsLgemR8SsyWmpJK3OGCZpGA3TM3U7ZuZygPp3h1q+M3B7o96yWiZJw8QYJqlVw5TUjSQGlOXAihELI
mJJRCxZsWLFBDdLksZlXDHM+CVpXQ1TUndX75ZE/
Xt3LV8G7NqotwtwAFZOZpmTk3M+fOnDlzQhsrSX3WKYYZvyStq2FK6hYB8+vwfOCCRvmx9Rtk+wH39
25xSNIQMYZJatW0Nt40Ij4JHAjMiIhlwN8BpwDnRcQJwG3AEbX6hcBhwFLgEeD4SW+w1qtzrrht5fBR+
+7WYkuktWMMm3jNOAHGCmnQtGZBAAAL40lEQVQ8WknqMvO1I0w6aEDdBE6c2BZJ0vgZwyQNo2G6/
SpJkqS1ZFInSZLUAa3cftWGpf/
ZGEnqZ5yQ1p1X6iRJkjrApE6SJKkDTOokSZI6wKROkiSpA0zqJEmSOsCkTpIkqQNM6iRJkjrApE6SJKk
DTOokSZI6wF+UUKua/0X+qH13a7ElkoZZ/
y9OGC+k1XmlTpIkqQNM6iRJkjrA268aet6ilbSmvF2VHGDMnbr5IkSZ3glTpNWd6ulbQ2vHWrrjKpUy
7AlaTTGDMnbr5IkSZ3glTpNWd6ulbQ2vHWrrjKpUyeY4ElaWyZ56gqTOk0pPjcjaW0YO7QhMKlT54wUv
Jtn317ZkzSSQTFk1tZ384vHHgfg0Oc+bZVpX7rmzpXD/
dOkyWRSJ41gpMSvVz5r67t56bNmTnq7JE1d31r6s1XG93/69ms0XRqNSZ02GCNdwWvrqp1n99LU1Dx2B
02b8eN7+OX9TwDDlZSZMHbflEnqIuIQ4EPAxsDHM/
OUlpukDlrT525WkmzY9iGqT+RWtf5m4nY+k7STPqmvimR1EXExsC/
AS8HlgFXRsSizPxhuy2TnjTS2FnI4SBeYBBkRNion+5tz6Sgj764+U8F3ZuD3UZGCeM
MYwDTSZidiavve6tG1Nkr6x3se4NH5TJanbGbi9Mb4M2LeltkhDZaznewaZMVGNWQ+aAX7/
bVpsyPplDFOnTWSCOJW0Hb+mSlIXA8pytUoRC4AFdfShiPjRhLZqdDOAn7b4/pNlBrxvA1nPDWV/
Dtt6/s2aVN59olqxjsaMYeshfg3hvhvK+DBs22nY2gO2abzG0abJjV9TJalbBuzaGN8FuKO/
UmaeBpw2WY0aTUQsycy5bbdjom0I27khbCPA3Npsbxh6xBrSRDwPpfNxtVo+5rCJaRJ+1wCVRuxCpv
SdtVjlOqCHrK37BXxRNCP6KjLsVgLfsrlkFLZf4XsgXtBx+Qy3vaNBcSx6rSaVn5wY6sN
x6Y7F1ziIO+iJSW2nkAsBXNHaY94QCXF8Oyb+r7shOWN9qqxhmfFjqWzdZGtSqqDJ5LKCPpQhXaiLNA==
bFbSzWsgLWL08hPL9NUdrPpu+EhlbSSjmrtYPVxtnyQ3rCQ3/vZBRDJMd8nkfDFcwQPGUU69SUhs
mvo2hSZq33fQJIkSVPMVHmmTpIkSaMwqVsPIuKIiLguIp6IiLl90/4qIpZGxI8i4uJ4ZmZHoSK7Ev
xWBLXQnvDNPzMufsDKQ9CyjZfRZOYCpWFH8wT8tXj7VeOUaVDcoDaxFBHwlGQ2Y8WTGJUy40JaITyqAIWfFA==
bXVwvInnBQ/8tDydL9P2rNNJmtNr4mILY5QiUFxiyTJL1gD7TDkLDC9Bm8uDkJBOp1hRQsmhMlR+d8cm4BKmEm3AX4vLBrm7kMvYWlXb4I9Y
ylqLCObr5rTfHM9ZKkZ1+9vZl2SC9vNWuQZUFyYNJmmh9HHW6Xmw4lR0EBH0WTfsTU9eLNm/bhNIsZR7X4VKJMQ7MB+J6mjIMI6EaK4+yeyN4jnP
rb0ZVN/J8kCEe2D2ZTD4q8/aK0DrFxBuKZ0vtAqfRQWMwZ/hbQw6o97RX1fdwFTT3E9ZTG35LTNcSL5i4n2HZXmLQAqwP/dVqHv/a3J6U3Q5tm1NPGq4ISa==
JxbIlKlo4R/uvWvf/U41/6NPw2IbLoPFcwtXEMyZHfgGCmAggEu9z8xTzkIIeADUmF/MDGeY4HQpO2YxVMcS6BMVGy/MKmEpMzGJcDSi1hb4V3PTOFqR2VASG5QIbwUvP/S5dYfq/Z
NmzITeun26b4u6KiFmZubxe2r+7lk/ZdY+ITSgB6uzM/Gwt7tx6ds14409E/D/gC3W0rf03NP0mM+
+of+
+OiM9RboeN1N8n09Adc5l5V2+4jX40jLFpUJva3k5j8UrdxFoEHBkRm0XEHsAc4Dt04yeDurAOY1kEzK
/D84ELGuXH1m9g7Qfc37tFMMwiIoDTgesz8/2NSZ1azw1N37NEvw/0vtE4UvyZaEMRGyJii4jYqjcM
DZl24zU3yfT0B1zbfajYYxNI7VpCI+3VU32NzO6+Ko7dhnwKHAX8N+NaX9N+RbMj4BDG+WHUb5teBvwN
22vw1qu95Rfh8a6fJJyKf1XdV+eAGwPLAZurH+3q3UD+GhtyzXA3LbbP/w+Ti0H9f+p3OTbfbjYBPXLIENiQCHYcVsJ8s9hAr1NNuoU+h5LLZjFCmPnCNoCZLw4wOvw8k5BavKwvMiqE5aCE7T3yakL3LkV5Q1Pqcm64OfkQzfUmXr/BQ3Zfy5Pq5gW5o3K8ENdr3NfcUYQ2f4vK6XhdJmM9hCdwnmYwLOc5LsrWt0OeUPZ2U+tUchfaDgn/7dNXsLpl5qlg0ZE7JOvtXY+rKy2hYZQn1UtZRb0/wWMl7F+AA4qoX/2dxkfVb9CU8wg5oRoSa/MBhRF4lK8e6f7ghkcX9Nns9m+
+Csun+upnywzGpMGxh/JqFNrccGyrdvf1Bf1/XaMVJ/
n8B2DF1sGaFNrfWjYYxNo7Rp6I635stflJAkSeoAb79KkiR1gEmdJElSB5jUSZIkdYBJnSRJUgeY1EmS
JHWASZ1GFBEZEWc1xqyqdFxIqI+MIY802PiNc3xjeKiA/X/4B/TURcWf+Pz0S0+fCI2Ksx/
omI+HFEXBUR34uIF6/j8h9ay/n2jojD1uW9Ja0gjA5RvDOsykTqN5GHhORDyljr8c+Mk45psOvL4x/
hpgJ+DXM/O5lP/rd9/6bGjD4cBefWVvzcy9gZOAf+
+fISIm45dV9qb8uoKk7jN+afiV1JlWsqtHMXDQYeT1qHDVjk0rxV9DEFnCAXtZR9fU6xBKX8B3aYk4Wc7GqKbUBZmnX0fhWr8Xz9u1KVvqaKKpQKoU7Zo0dYgA==
+fISIm45dV9qb8jyNJk8cYtv4Yw6YAkzqN5UvA79bh11L+aSUAEXFylB80vjQibo6IP6+TTgH2rGeW/

```
wLMApZn5hMAmbksM++NiFdHxPvrst4YETfX4T0j4pt1+AUR8bUoP8j9373/5l3rXFTLvxERz4yIlwC/
B/xLfe89+9bl68DT6/yXRsQ/
RcTXgDdGxO4RsTjKjzQvjojdar09IuLb9cz87xvrfmDzbD8iPhIRx9XhF0bEZRHxg4j4TkRsA7wLeE1t
12si4rfq8FUR8f3ef76XtN4Zw4xhG442/
uOxr6nxAh4Cfh04H9ic8h+1DwS+UKefDFwGbAbMAH4GbALMBq5tLGcX4JY6//
uA59fypwFX1uHzKT8vtDPl52D+uS7rMmBmrfMa4Iw6vBiYU4f3Bb5ahz8BvKrx3ivHgSOAK+rwpcBHG/
X+C5hfh18HfL4OLwKOrcMnAg/V4ZXboY5/BDgO2BS4GXhhLd+a8hvLxwEf6Xu//
evwlsC0tve3L19dexnDjGEb2msyLtlqCsvMqyNiNuUM98IBVb6YmY8Cj0bE3cCOA5axLCKeAbysvhZHx
BGZuTgitqxneLsC5wAHAL8JfBZ4BvAc4OKIANgYWB4RWwIvAT5dy6EE5ZH8S0S8A1hB+Tmcnk81hl8Mv
LIOnwW8pw7vD/xBo/zdo7wPtc3LM/
PKuu4PADTa2fMt4P0RcTbw2cxcNsZyJa0FY5gxbENiUqfxWAS8l3Jmt33ftEcbw48zQp+qQfNLwJci4i
7KcyOLgW8Dx1N+K+8blDPMFwNvBnYDrsvMVR4MjoitgfuyPGMyHm/
NzPMHlD88yjw5wnDPY6z6+MLmveaNUH/
VhWeeEhFfpDyjcnlEHJyZN4w1n6S1YgxbnTGsg3ymTuNxBvCuzLxmnPUfBFY+XxER+0TETnV4I8rtkFv
r5K8Db6l/vw+8FHg0M++nBMmZUb/
tFRGbRMSz65njjyPiifoeEfG8Qe+9Bi4DjqzDRwPfrMPf6ivvuRXYKyI2q8+bHFTLbwB2iogX1rZtFeU
h5v5tsmdmXpOZ7waWAM9cizZLGh9j2JPlPcawDjKp05iyPBT8oTWo/zPgW1G+/
v8vwA7Af0XEtcDVlDPEj9Tq36Dctvh6Zj4O3E4NRpn5S+BVwLsj4geU+eUuc7Gjihll8HzKvl5wJvr
Q/u9j9kPJo/B46PiKuBY4A31vI3AidGxJXANo11vB04r67P2ZRg3mvza4B/
rW27mHIGfAklgF4VEa8B3lS3zw+An1OuAEiaAMYwY9iGIjLHvMoqSZKkIeeVOkmSpA4wqZMkSeoAkzpJ
kqQOMKmTJEnqAJM6SZKkDjCpkyRJ6gCTOkmSpA4wqZMkSeqA/
w+qW1e1dqq+rQAAAABJRU5ErkJggg==\n",
       "text/plain": [
        "<Figure size 720x360 with 2 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAmAAAAFcCAYAAABvOwKbAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xu4JVV55/
HvzwaRCNoqrbZcbFSSeImitsCMcULERCROQCMRENGXSCo0YTxcQkOtFRM/
ESM0aDgQAqAqIGBtFIUIZ4AwFb5CKxFYSWFhrkrqLgO3/
UOrA5vc91n1P7HPr7eZ7znL1XrapaVbv2u99atWrvVBWSJEnqz33G3QBJkqQtjQmYJElSz0zAJEmSemY
CJkmS1DMTMEmSpJ6ZgEmSJPVsLAlYkjVJKslW7flkhzSW1p8+fkpyfWS3p3ZpIfqXFqtdy910r+88l3dMkrfOsu6hHkshH/
2CSvxilDfdmxtSFZUztR9u2x8yi3i5Jbk2yoo929WVWCViSlyb5ZpIfJflBkg8kWTnblSSS5IsmzpppppeV
c+pqmNnu7z5GmU9bRt+mmSHSeXr2kG0ZpbL2eyAS7J9kne3ddyW5MokJyfZZYz5tnWH9ZyX5STuYr0vyy
SSrF3o945Zkt7adJMo91TXt8C6rq36vql2ZTt8WbL06a/
xVV9deL07r+GVONqctFklcmOS/
J7UmOmaHuko7HFqzrU9N8m57zi4Pslkuw4MP2lSe5s23Bzkm8wT+FHggsBfwSOCMJPdd6AIYP2/
Amw7ygKTbAN8HvgV4Ln42y7Gm8sqq2A34RWAm7f+aZxGT9H8CbgfCf+XO+AQZ/DmM2RAm8Z4q2LeezjfcDX5uhzmHAAAcCTgCfS7f+X
L3K7ejOG94dmwZh6D8bUpe9q4K3A0TNVNeUf3YF7K/C7k8yfF3/+AT5nKSNCtVNeUf3YF7K/C7k8q3A64F/
qA9PwZ468D0vYEN7fGHgZ8DP27Lej2wBihj2wBihgq1bnLOAPB+b/
A+BS4AbgX4FHDkwr4F+B7wI/BbwVWN+V7iU4AfcNeWaB0A9P2F3/
wUuCLwN+29VwN8AXrgw8/Tbm9+wNIwJ8q7mj3aHwTHY8gqgwpyvr/x2vaQnbqoo5i0XXF0OX5uhzmHAAAB29sg0TBpa1qu2XhzIQE9
q0I4DvtDZdAjyvlT8W+AlwZ9ufN04RY
4bsL69FqcCj5gbdpj2v68qW3jid097xb6D2OqMXUZxtRW563AMXM41u/
f1v1r09Qp4DHt8a8CVwG/PqTemiH7/K+BL7V1V1fA7YYYYp17M3d7520ff76SXXuA1wE/
Rfa+p+2oPFghh24L3DHxEZPmnYs8LGdgsBZspAG+1IKdA5d5dAYyy/50u0880weeJZwfJINg8WPwT2aO3/
KHDCsAsO2H+SsdlHaNANwjKdAHDs/
Flq2nyrZxksfkYXyFcA/50u0880weJZwGVtHSvawfJINg8WPwT2aO3/
KHDCsAOuPT9hpoO6besNwO+3Zb6oPX/IkO16Bd2H985tvi9Ms693oPsw//
```

```
BA228Cnt4OyPvRBYpTgO3b6/YfwKEzrYvuzXcz8Eut7moGkpAhweJnwAuArYE/
oQsuW7f5bqMlGW3Z1wJPnWJZD2ht3JmZE7CbgD0Hnq8Fbpmi7tuBD7Y2bQ08g7s/1K9g4PhuZX/
Q9tk2wHuBdQPTpjxG2mty88C++GO69+DEa/YYugRtG7oE52wGAmdry7q2/dsC96ULOH/
clveCtq+nSsBmOn7+BfjH9vo+FDgXeHmbdjTwtoFlHQ58doqYcCDwCLrj7IXtNV49LPhNjjHAM+k+oJ7
S9sPfA2dPeo+dRhcTdqH7oNu3TfsY3Qf8xPH9qwPznQYcsZAB1phqTGWZx9SBZc41AXsJXbI49PUffO3
aMXcVsMcU9dYM2effoetx3LY9f8cU8+7N3QnYL7fl7Dqk3luAL02OQXTH5eF0vWQPHah/
IXDwKPFgpkuQOwDXVdUdQ6ZtbNMX2suBt1fVpW29/wvYPckjB+q8vap+WFU/
pjvItqfbsWnzbZzlur5XVR+q7rrysXQH5sNmmOfDdAfWRC/F94fU+WRVndva/
1Fg92mWtwNdTwkASXZPcmO77jwxaPm3gG9X1Yer6o6q+lhb938dsrzfpftAvqqqfkiXOEz2viQ3At+ge
x1fOzDtlKr6UlX9nG7fvhB4Y1XdUlVXAO+iC1qzWdfPgSck2baqNlbVxdPsh/
Or6uSq+hnwbrpAtVd7Lc+m+8CG7gPsuqo6f4rl/DVwVFVdNc26JmxHFxwn3ARsN8U4sJ/
RHR+PrKqfVTemqaZacFUd3fbZ7XTB8ElJHjhQZapjZD/gkoF98V4Gjo+qWl9VZ1TV7VW1iW5f/
dqk1b+vvSY/pru8tTXd6/SzqjqZ6S/
NTvmaJnkY8BzgNVV1W1VdS9dTclCrcjwDl5OAg1vZsP3z8aq6uqp+XlUn0vW+zHZ8zouBo6vqgrZ/
3wj8p0ljht5RVTdW1ZV0H2IT+/dndB/
wj6iqn1TVXWPNquq5VfWOWbZhvoypmzOmLu2YOl+HAMdNFyebA4Ejgf2q6tw5LP+fq+o/
2jF7EtMfExMm3l/DjueNdCe1E/Zqr+lP6Holf6/
FPACq6olVNTS+zdZMCdh1wA5TjAtY3aYvtEcCf9feMBOXewLsOFDnrg/
Xqvo83WWa9wPXJDkyyQNmua7BD7YftYfbzTDPh+k+WF5KdyYz7XKBH82wzOvp82wzOvp9uVEO9ZV1Urg+XRn99D
1FHxv0nzf4577hIG6V02qN9mrqmplVe1YVS9uH+QTBufdgbt7UIatd8p1VdVtdIHmFcDGJJ9O8stD2rL
Zelug2tCWD10g/
732+PfoXoPNJNmd7ox66PiLIW6l6zGb8ADg1ikCxv+m60X4XJLvJjliqoUmWZHkHUm+k+RmujN9uOeH6
1THyD32aWvLXc+TPDTJCUm+35b9ETb/0B58TR4BfH/SNg07JgbrT3X8PJIumds48P78R7qeMOjO/
LdNsmf7cN8d+NSwlSR5SRtsPbGcJwzZjunaOHis3Ur3Php8P0y1f19PF0/
OTXJxkj+Y5ToXijF1c8bUJRpT5yvJznQnhlO9noNeA5xUVd+c42rmckxMmHh/DbtJYjVdb/
mEr7bj5kF0wxyeMcf2zWimBOwrdONInj9YmOT+dGfCZ7ai2+iukU54+KTlzJQBD7qK7pLGyoG/
bavqy1Mtr6reV1VPpRtM94t017gXRVV9j64rdz/gkwuwyDOB32z7dCpX0wXRQbsw/
ExxI1339WC9uRjct9dxd4/BsPVOu66q+teq+g26A/
tbwIemWe9dy0lyH2Anuu2G7rLXE5M8gW5Q7UenWMbedF3VVyb5AV23+
+8kuWCK+hfTDcCf8KRWtpl2tvq6qnoU3Vnya5PsMzF5UvWDgf25e7zHmolNm6Idg+6xT1tv3OA+fntb3
xOr6gF0wXPycgfbsxHYcVKv3nTHxHSv6VV08WCHgffmA6rq8XBXkD+JrhfsYOC0qtrsDqiWnH0IeCXdJ
Z+VdOMvJto4U7y4x/
uhvXcewvD3wz1U1Q+q6r9V1SPoeob+YfIddmqJMXVJx9T5egndZe7vzqLugcABSV6zwG0Y5jK6RP
TAwcK2f36HbnzoPbQTvD8Cfj/
JkxeyMdMmYFV1E9110b9Psm+SrVs3/8fpNmIia14H7JfkwUkeTpfRDroGeNQs2/
RB4I1JHg+Q5IFJDpyqcpKntTPZrW7t6zd83+YMtBAE8sBDWNlWt7dnmBH93eZdo6S9GrH/hYDN/Q+UE
AkWyV5IfA4ujErk50EvCrJTkkeRDfYeV7aZYSTgLelu637kXRd6xNf7TDlupI8LMlvtyB4O11v03Svy1
OTPL/1DLymzfPV1o6f0A0oPR44t11WGuZIukHqu7e/
D9IN3H32FPWPo0ukdkzyCOB1dGM2NpPutuXHtETm5rYtE9sz+TXdvrX/
eroP0f81zXZP9mng8QP74lXc88N3e9rg9HS3Tc/0wfgVujFHr2rHzvOZ/
lLflK9pu3TxOeBdSR6Q5D5JHp1k8BLo8XRn6S9misizPdGNZina2meRldD1gE64BdsrUdwQeD7ysXVrah
m7/ntMu50wryYFJdmpPb2jtWOx4cRdj6pSMqTOsa0wxlbZ/
7kc3FmpFkvtN0YM76CVMEUuHuBrYh267/2iW88xLuxLwJ8Cb2mu/bXt//
RNd7+TfTzHf9a3OXy5ke2b8Goqq+hvgz+iugd5MdwfKVcA+bfwFdEHjG3SXj5Hd+fFoLfTbfCNSf5kh
vV9iu4W7RPSXWK5iO7McBcoPoDsLuIGuu/
b61tZFU1Xfqarz5jn7m4Fj27743fZG+HW6PLwOeRjceYOLFfy5dgnA93WWU51bVsMsVH6K7y+
kbdHe+jHpG+T/ogvB36e5b0eebl33ae29mu6Sx6/
RnUVM5RS6D+6JgbHPb2MXJhxLd1v5lF3lVfWj1sPxg6r6AV2A+snE5YXwZ668As/
wj8X+CbdMfZp1vZMLsB/9aW+RXgH6rqrDZt8vF9HN2x+H261/Wr02z35G24ju7s7B10r/
VudHf6THgL3eDzp1D0iy2TFeVWcCfwF8gu6D/6D9tHcPQ5tJk8DzmnHwanrjrS0X/
bJbLmTdj6tA2GlNnXlfvMbV5E90dt0fQ9bj/uJUNfkHqXT11Sf4TXW/
brL9+oiWA+wBvyAJ+6fQU6zqRbn/
8Md1rv5Hu2Pi1mn6s43vpToqeCJBuCMOLR2nLxF1c0pLW3uDfAh5eVTePuz2StTJwZUztJfpPu7uh9qmp
dn+v2tyC15LXr86+lu/
V8iw0UkrQQjKl3q6rP0V0h2KvvvddsDpiWtj6u6+XkCQNpEmSemJ6ZgE
mSJPXMBEySJKlnJmCSJEk9MwGTJEnqmQmYJElSz0zAJEmSemYCJkmS1DMTMEmSpJ6ZgEmSJPXMBEySJK
lnJmCSJEk9MwGTJEnqmQmYJElSz0zAJEmSemYCJkmS1DMTMEmSpJ5tNe4GzGSHHXaoNWvvzK7ybbfBnX
cuanv68WPg5/2tbsXWcP8d+lvfsnEbsMyPp9t+DHf2eCxnnn39dVa1a5Bb1Yk7xC+YZw3qMF1
t8rJhHTFgq70HN3xyP+9nGsCWfgK1Zs4bzzjtvdpU/+1lYdW+I218GHtTf6jZdAfu+qb/
1LRufBZb58fTZL8OqHo+lqczhGEvyvcVtTH/
mFL9gnjGsx3ixxceKecSEpfIe1PzN8bifbQzzEqQkSVLPTMAkSZJ6ZgImSZLUMxMwSZKknpmASZIk9cw
ETJIkqWcmYJIkST1bkAQsysyYokX09yWnu+a5JzJgDM+eLHWyhnc0Vl/Fd0y6pPq5z7dk56pPQ
ZI0X8YvSeOwUD1grwZw/xfepwqNSvkadjdOfKT0AhIkqFGlm1f8R8NKZ6BO2xTkOrNOSi/yLh0I8VDEM
ExPeeSbBxH1M+FeyfLHAgGFBiEqRd3AvrV5pBbyHpiGBiFaFZaQ8vrzr9w2Prjt+/
Pz8uHXHN3V8exmOZrMqfh/2S/
lmTplrLayM2lIO6ehYSIwoHzDZ+QWi9X2y8VqUhFnWjMmU55a3Gj16/
Ch/
HBA/qIk9vgzU3OwlCNNu8HiK9ePHGLhHqCCxHdNpT9cgaM/
```

scBbwhlZ+XFUV8NUkK5OsrqqNo7RBS8fx51x51+OD99xljC2RZmb8WjoGYwcYP7RlWIwxYA+bCErt/
0Nb+Y7AVQP1NrQySVoqjF+SetHnIPwMKauhFZPDkpyX5LxNmzYtcrMkaUbGL0kLajESsGuSrAZo/
69t5RuAnQfq7QRcPWwBVXVkVa2tqrWrVq1ahCZK0lDGL0m9WIwE7FTgkPb4EOCUgfKXtLuJ9gJucvyEp
CXG+CWpFyMNwk/
yMboBqzsk2QD8FfAO4KQkhwJXAge26qcD+wHrgR8BL3ZI0CuOXpHEa9S7IF00xaZ8hdQs4fJT1SdJ
CMX5JGie/
CV+SJKlnJmCSJEk9MwGTJEnqmQmYJElSz0zAJEmSemYCJkmS1DMTMEmSpJ6ZgEmSJPXMBEySJKlnJmCS
JEk9MwGTJEnqmQmYJElSz0zAJEmSerbVuBuge6fjz7nyHs8P3nOXMbVE0nIzOX6AMUT3PvaASZIk9cwE
TJIkqWcmYJIkST0zAZMkSeqZCZgkSVLPTMAkSZJ65tdQqBeDt5V7O7mkufKrbXRvYw+YJElSz0zAJEmS
emYCJkmS1LNFGwOW5ArgFuBO4I6qWpvkwcCJwBrgCuB3q+qGxWqDJM2H8UvSYlvsHrBfr6rdq2pte34E
cGZV7Qac2Z5L0lJk/JK0aPq+BLk/cGx7fCxwQM/rl6T5Mn5JWjCLmYAV8Lkk5yc5rJU9rKo2ArT/
Dx02Y5LDkpyX5LxNmzYtYhMlaSjjl6RFtZjfA/b0qro6yUPTQZbaAAAK/
0lEQVSBM5J8a7YzVtWRwJEAa9eurcVqoCRNwfglaVEtWg9YVV3d/l8LfArYA7gmyWqA9v/axVq/
JM2X8UvSYluUBCzJ/ZNsN/EYeBZwMXAacEirdgjw6cVYvyTNl/FLUh8W6xLkw4BPJZlYxyeq6p+T
FV9dkkXwNOSnIocCVw4CKtX5Lmy/gladEtSgJWVd8FnjSk/
Hpgn8VYpQtBOOXpD74Y9xacvzhbkkLYfIPeIMxRUuHP0UkSZLUMxMwSZKknpmASZIk9cwxYOrd5HEZj
smQNFeO79JyZw+YJElSz0zAJEmSemYCJkmS1DPHgGlZ8TvCJC0kx6RqXEzAJEmaI5NyzZcJmDQNeRkfJcgBV7XOvTiFvX2wcg
nmDwDY4fIf8tObfg7A0x/
zkHE2SUuMPWCJJEk9MwGTJEnqmQmYJElSz0zAJEmSeuYYMGkevBNJWpm8aUCjZQImDXCCVWllMCnXuJmASYvMnjFpcTgppZYzEzBJkqZhD74WgwmY1CN706TZs4daS5kJmDQmnlTUB3+pppdzCzZtVImYJKkJWMxEiqTNI2DCZgkSbNgD5pGyQRM0rLmpR/o2GTrrgpxoTKI2aCZikeVtpdyiulMSqSx7wXnf9VIg2C2WnLe/R1k6m2y/Zvhx51tx1WH2/dF+sXgP/ff/s/+kU3nmaQwzQ1MqgvKDtTbzW+g1I3wfu/+vGuf/6kXBuL6W3/YnM4bsXO7b1F3yR/0brjNPHzpsoiXe5J5fpAudr5g9u9D+7/z+PAPHPr89rHvaf8yS+uBvOUS9Oc3Q4t9bl1WtTfiiuTqDUlbW3uMYUz/5sjHvzGt/+y0+OVmBtmhWU8cr2xQfdrk3zDs5fgcv+cAu7i+Q9zPrXzlR+Xo/9/ykR9LXz+eE7L/7YMfDH7xvGvfw3yQm9wq3+EOe6eXgcnvT5OKt6d8dN8tN4f6q7bnt3/oa9JWfqf9jwQ8Qdcq/L9zMekKR5ZDL/X8/W4P9eI+xbwsr1jOBfsI96ymJ9GMUj8Tf0drYuyRtg7fHMfPN6Eh5Yrt6bNfsTP9X/n9xZWyOD7bKgTZOHu94zl4YjVpfg8vyQ+6L/PHb07S7ueOBAJH6XPd2d7q5IZb6zgK12j6BNDKY1rEbBmMFmJK1SfVQlb7M6Cnh8xiO+cgr1q6f3M9b5T+JXlSVEgNb3wb4aEY+ejmlSP7epH/xiU5+3ZJr/JXe27ZN/i1z6s9lQ7iXHTp/ubFhTEpC15d/ZlPk4O39rruJXWw0DgsOpu0ybI8OxA9uHWm89cfNuUpHAJRVKFuUCSCnBU72cbHHNVmg2K/rk0uKSqi3fJhPF52FdrU+ddXBpoaIgbzUeKZt0c73ZUXbGiXYGQZ8yA/EHWRSJcBSYvfVjMA+WT8aovVnWrCx5nejZDgWXmwOaSDnN+0+mdKSJ0l1xxeQRCBqwKzW+0Fz7bKcJPO01f/LxkUW+RVVdkjy0cOiFaUivtNuDPG3RYkUUGR5V21A76wmyUl6wV5BGxETZhalfoKrCWNuoYz/wOtoXSHwbOUB6FkUxKJvPmAHH6SH8bZ9d+1pz4G/Gs6Lw+Lo/5rUPf9QzYCC1F8rSGhZmtzkgy0NyxWhB9YaM8Mx+G2JUBOJhhNd0m1p+ZvWPGMBWvQfQ5mP5y0jN7cqNS+qzkV8RxKwGiKz+xMVkC+ud7PIHvoYB99GgpYZc2ZzBLGwr+wWTFYbIsR4z+Txi/lGtcnE1hoy33nzQtE1yO4DNd16jJL1Gb1CS/+HM2M9+XwaAnQkVl6sVK4o+vMrQ7WHKvpN0uUTeHrAGuWXNHuy3dQ7CDADOqhx+ZwK/JcIKtunS7HPCCxwHVMXcnHgkYLq5dRKjg1Fm5p+fYaqk37WTfrYXJBoQqTJBqYHDzIxRCGb/+NvL+6eQCMOrUeGzfXS7NUNQ1jYyGYsPMbKx0nz0w4fBdUw8DnfKwHFcHfqB4ZS2i7+5qFN3XNRQ4v1z4+KZhsV6f8JWUxj0UqbwM+qX2gMeS+SaWlEp6oiVtV6DxVEoCWk69KUX6zdO5/+0u4kdrPiJtxb+Nn0aAN6Apqcj+dWpBmOVDlSl1rsyySoqqIIlJ+KDHOkhTrq9JpVxW5/yAvcQK6E0FsqRgL7lJqA5cdFWLlWexdeqo9Y6MaHGhbKXJRAhAtKnU6rZp1CCqrE+W9gxEBUXF8QsTbxbO9vf/IbjU4+EAjmqZzLHuRuv76zmtfcyO1dNCeHQGRx6jYeR/VcsWkmvHD4kPdv+h8x5vVXXJqC7vC9yzW3g7BJuGb/d+WlCUH9vuXUhHn0qPDQ0TiYmmpwSPTwwOEMzpTdp3ZwFW7vsMVxPMUJ8S0HwdM4Tdg+82aGPXAjPVgZ+xIP0rWxk7ZRPEMOmXrNWOI3s2FpWsh8gcoA4GLH+fWXmO2SQ57xrXIB2a9Kzxef5H2zhVefWfBjKMtHlKQ0gy1sCYVCpaPAE8YqgeTjpuC5Ul5VtGIjWrpFkO0iyF0N8DZo7t6+GTmx5bknmwOv8o9gsC6ah1z5dZdPfwDXmngkuqI+NaQz8OafV5k0VM2KXd3l1/ATOzs/Nj26P+9z+ATCVWfhAh8I0MeO84SQ3iGa0u/xqa8M8uGIgQ1thrW83MPf+7X7xNiL6Q8N4AhQd+YqC7+ezp/S5vKMjMY1s9qSfl3x0ZyM0tJhgG7awn/pJyADFl5yWMKVpnhvmSljsLpdfGbbrUhEsABoKH+ZT3O5mCJOoJ2SZ4lfvX18vRt4uZbNxhyMFm6fU8S2J2ZiUFtjXXqtGZZXDqY6I2eRgEKQzP6pqd44Dn+bkx/sSVEgHlLXMKJ48tY52E+OhXw+hW2hp1N5TMtOPiyfHLYGLeekMmnn+9+tTbkJWqeVSP7hGi/zDJPq0hHLW8Adhfwr0Ib6yvTrqvnXPVVSfNAmD9v8sY6F9G0KxPmGx8h8NGaepjOfaFY8V5ngtXmnNcyD8oxF3Q7KPGXzIYHmGBJ1xTOD4t6p6xLeJPb8HhUe/cXzK1ZJ0VF2jAGN5xbaXXp9vFdk3hLV5RoRh2XrbbKoVz1yHyZk5WKTtwrrXVutDEImBMCz8rHKhMEzEzxn7byvYJQAbqqWXEA6o2/Fu5uC1jt7cNi22SNtcWLiN+JbXKFmtlIW6MrrbIZ8unDvbSmZ1MmYfQMyvvmB+xVa+v+7Ip7s1U8hfHOxOFy6cjs5P/ZnTLbHGU6KbIdNQ9u7Zz9FJ8+eJ4+G6D0/b6c+HHFeLcj81YP9btjRxDnPNO40krylOvv1+dEQT4NZJbCJnKp/ThWg3EqTIVl4MN3eqsUVtlTWsA3fd/8nf9oepf6x7v0F3dqLKu76ecfN5kQ1FLPNOoAVddwa+68gP/ETuvaM+1J1oeK5xpf8PkPkFdfmajvM7N1XWLX8X6o3WtHDmyW7kk4+a9KafCQKdvuZPTuAYxgfVHgh2wRhaylW/1hZOeK4Vl/GxQmj0+ysqy9XNKsqj3Kqe8Q4YJwL2SE6v+nj5ngp5i8K+0pC63MXH4o0ah0mq4g6vcaKKdsBSTjB2sG2R5TdvrLdyz9v4S5X3QyekNl+h8I7w9dLDmLJZdTvZJ3W0NqLxAtaC1Vv0DF0ARfXNvM4Ia+xqqOqhPVkb7VyR1ucjh85VA4XfGMf78FqsWBazl7CyQAYHQ/kyQPT1K+nUHRexvmNoetr2BHnoiQmQh4L1yqxOUsaDOb3VZM+Xl9ydIRt0nuPZeUL0WwbOUehGHd4QXxnd9RSxULzbdi6fvgWnm04XdT8IqeAySZLO4P4e+aq2MmL0R+uxUpLUEJUrZ3Qzr2m6Rii8pXLa/Ks7S7FGgaIUDnwgMymNxS4Dt1thBcsiZ6uBr5rUjrjtIHDYkBjPfi+cNIDD/Rw08eHHtHRT0Y/4mPNbB+MvM08bzMZRU0Tl+1EvozJVxwmkgUCU3zNiLfuUM/WGoGUmLKVg8/kAnkCdyUSuDFvBB7YeJhsJg1X3C3zXhjoWk+c8fIaFW9d4H9YbsqXA04UpmsbD/s8I7N8gfY6NSQfiPPKqrbGy7Vw8TRa4MaXX4Zb2fzFzxvmeHc0dIVMKA9xtCJ4G2jb2lEntA17UJNafj9z1p6+VoLPb3pOn+x0iGvuKwwcbE4w/nOWVC46/9qGmHd4l59T2aeMN2/b0RaVJRzmWLAJMuOfyVjO2PWDtSKQu8qTtA+e7O1cAA5Amrj/N6UI49/NRsxTZtlSR6bBXYtb0/yuv2K8yQ+99bv3Z0ZP/6G1RG2/Wgg07iZXIAK7mPQVL9uHhP3xqfNfY3NjwkG3uz9/YtrPNKm1RVEUJ4d/xVhHkqWJmwaWE0bSPtSv2IxWOQe4zKmKQQg7YUaxb/6s+7SxN5RQuA/8AOU3/jCMVXDNSJUiTgbXMHxj7bX5XYBwAuSMvX6zNZqGsKcGuQyVS3vGBq8/7+1VkqJbkJ5FYt1cvcw2m+gz47lW1Tm0KGzHB0F4qqhT7obt3tBdMzQNZ3q+zS9+q/TiU+yD2U1WJkX4gnWMvtaKsdntP8YLWUCjR4HXNnHHZAbMnvjrcb/3xAvF9ihOlszKqp8n2YuKq6z30qzCX1TAkRmMlF0yORh8kqD/AGeaQ7V0W9+Ov1ugbEIDuYTnx0gLOtOD+1cs+WKAp+w4QZ3AI6VGw+gHbNc+X59Td6GtkPpNZhO0Sxuh9uyDqkMK3h2F2IGuYZDSxAtyXfmvbAbgG9aYGJ1xrSGzp7I3+y6yt7dX5YG3gK8Mrm9ahPxVf4OMzFsBNhbcEl4vvPJo

```
J8GPpYuCuAatV9bwka9syoTujm2zYb2NN9XtZE2MoJrtt4PGwdcy03N+ia/
dvA3+R5PHtMoGk5cP4Zfxa0uwB03SOBv5nVX1zlvVvoevSn3A88PQkvz1Q9gsDj8+mG2dBkr2B69rZ3K
Av0XW1M1F3js4GDkjyC0nuT/dj6v/eyp+XZNsk2wP/
tbXjPsDOVfUF4PV0A3O3m8d6JY2X8cv4taTZA6YpVdUGujEMs61/fZIvJbkI+ExV/
WmS5wLvTvJe4Bq6IPfWNsubgX9OciHwI+CQIYt9NXB8klcDn5jHNlyQ5Bi6X7kH+Keq+jpAkhOBdcD36
IIawArgI+1SQoD3VNWNc12vpPEyfhm/
lrpUTdWLKUmSpMXgJUhJkqSemYBJkiT1zARMkiSpZyZgkiRJPTMBkyRJ6pkJmCRJUs9MwCRJknpmAiZJ
ktSz/w8H12jq3Ucq4gAAAABJRU5ErkJggg==\n",
       "text/plain": [
        "<Figure size 720x360 with 2 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAoEAAAFcCAYAAAC3G2TUAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XvcbWVZ7//
PVxCPyEGWyFE0yWNbJBLMcpvkATKhEjMsl0Sh5TnbRdY2O6dtt4qp/
TAPYJrgmW2IEkqWCgKGCJKxRIQlCAs5KnhAr98f9/3AXA/
zOay1nsOca3zer9fzesYc455jXGPOWeqCkmSJA3LXVY7AEmSJK08i0BJkqQBsgiUJEkaIIt
ASZKkAbIIlCRJGiCLQEmSpAFalSIwyT5JKsm2/
fHHkqxdeeWuyHKmQZJXfmn1Y5jxqTFMyrJc5P8x2rHMamSvDPJXy7h/
DZpX+i55MFbuMy9k3w7yTab9+k5bBJi2fUtv0LbVFFY
H/BvpTkliTfTPKWJDsudiELbciqOqSqTljs/bT1Mu63kpy5ZAFuvLx+kpv734VJ/
ibJDsudiELbciqOqSqTljs/Dbxliynr8PVSe41Mu63kpy5ZAFuvLx3Jvl+kpv734VJ/
ibJDsuxvHniODPJd/sOfm2SDybZbSVj2Bol2TnJhoUSYZKX9WPuxiRvT3K3zVjWPuxiRvT3K3zVjWmUl+a/
Oj3fpV1eVVde+q+uFCbZM8Icn6Wc//66pa9DY2p5pTzalLI8kzk3y2H0tFX27z/
zdmuRHSXbZ0jh6/rh0U583+wSuj/vpJJ/s++mNSU5J8t8tCR6U/ocX+7t/
lKkqM2J+4Fi8AkLwdeDfwvYAfgIOABwlJttuchS6V0Y22QrYFXrKCy3tNVW0PrAGOom37z4wmzRXywq
q6N/DjwI7AG6zGDgX2ABwF/
tuyRrZA0g7slxZy6EXOqXs+7hFJTk9yyXdpVgFeMLGK7JCf2M5uLkhwwwM
q9jk3y1T/tykl8ftePJ/aHnUOgj0Gvl2Y+ij2AwPenoQR/
```

```
UVWn9u3zLuBRMxOq6n1VdWVV/aiqTqKdBT9mJP4HALv3+c6cOT8NuKxv89v6m/0HgGeMPO/
hSe5TVdfPUQzMuAZ4fb8afhLtje4Xqup7tNdy5qr4I2hdtx+dYz4vBs6uqvPmmD7q3sCNI49nhrcf03a
h13Aji9g35notDgLuyh3b4v20N8aZ+X6rqj5QVbf0N9i/Av7nrMW/s1/dvI12zP0U8L/7cfBp4P/
Ns02eCbyjqi7sBdmrZib0YuO3gZf1fe5m2jExc+b+HuDpPdECHNnHjds+/
1JVX+1n2f9GewMYe9VnjF8F/qWqTq+qHwD/B7gHLbnvAvwIOK7vz9f19d2Pdmzdo2+TewM/qqp/
r7r9B95vqKrfXWQMo8yp8zOnTndO3VxrgfdXu6g1n5+lFaZq2pTYvhgVX2+70fvfvph3jC9mZVpeNO96u
op2YzNi97OO3Ah8Cfq+qbj+ZqKqnVdWCXeQLFYHXArtk/L0Hu/
XpS+0BwBv6JfQbaJc4Qzujn3HFzEBVfZJ2dvMm4M4Ookx6d1uSzGN0fmc0sfnPOssbe7kLYzLlhhj3H1yP
CtfX6zx827fNp2uK4Pz7ut+iX0i/
vl9htoZ3zjCvd3AR8H3pvWxfaaJHcdmf7iqtqxqvaoqmdX1YbFrS4w8lrREvRX52n7zZHhW4C7547uue
ckOX9kXR85si5/QFvvz/cuj5kuwB4AB848pz/vRcB9Ft47cfZt4b/wnDTWbBm+eUzbhV7D2bEstG/
c+fAJw5Ej3wsk9kW0kye60IvCP51nOqG/TrkTNmBm+eUzbhV7D2bEstG/
M9VrszvhtMTPfeyb5/5J8PclNwKdpV7BGP3U7uk/sDlzfC7o7zW+M3Wc9f7TtGuCewHkjr/
dpfTxVtY52H+Yv9kLw6cxRBCY5JMlZaV1eN9D2k8We9O4+GldV/
ajHvActZ96F9gY44xbacb8b7YroOtoZ/wsWcya/
CObU+ZlTpzSnbq60W0SOYHFdwc8HPltVn9rExcze9gvthwDX004Sx31QaDdgdD+5sqp2pL0vHAc8cRPj
AxYuAj8HfI92afx2/
ZLwIdxx2fk7tOQ74/5sbKFur1FX0C4n7zjyd4+q+uxc86uq46rqJ2ndZz9Ou+F6Of0p7YrDaBKKdeRObb
ztskd6t8fO0LgqYZ1ul3avyh7QrJzv1neVG2oG9kX4m9mdV9XDa1YqnAc9ZREgLve6w8Wt1BbDY+yJu1
8/C30rrQr1vX5cL6etSVd+sqt+uqt1pZ/JvTrs34wrg32Ztn3tX1e/
0551TVYfRujU+TLvcPpc9ZnVr7U2/
B6WqzqJdcfhZ2tWlubotHkM7kL+c5JvAG4DHpH06dNxXk1zEyJl7H766qu7UNbfAa7jR8bIp+8YYVzF+
W8x4Oe3KyIFVdR9atyKz5j0az1XAT/l5v/bz/O/
PmOkSPgz4ci8MN5L2CewP0K7g7dq3z6kj67BQPruS9mqpcDJ9KuPvx
e2r1S5tTGnGpOXQq/TCvwz1xE2+cDeyfZ5A/vbKp+Mvw5WoE62zOBfxvznO/
R9sufSLudYZPMWwRW1Y20Pu03JnlqkrumfTrlfbT7VmZemPOBQ9O+9uL+tHthRl1N+2TjYvwD8Ef9EjB
JdkgyboPQp/9UkgP7WdZ3gO8CC37Nw5bobxwn0a7qzIzbQEvyv55km37mtMkH5zhpN7v/
JO2gup47PlAw37baHriNduawbZJXsvFVpdH5/1ySn+iFyE20S/qL2YbnA7/cr/
48GDh6gfYfBe6f5KV9nbZPcuAilnMvWuLb0OM9in4jdX98RO1ve0P+/J+PMlv9H33rn1/
eViS7ZI8O8kO1brsblpgne8HvLjP4wjgYbTCYMaJtKsnt410ncz2MVq2q/
FfTXIicHSShyfZCfgT4J3jZrzAazj7+/pzX5z2wYpf5o4upJl53/wrckHZ/
z51uZB5VVV+n3Rf2Z/01+RngF+d5ysAc/s2uefo/PsVt7fS7t+7H0CSPdI+7juutc/
DHFcBge1o3XwbgNvSPtwei/O1cB9M/dXi5wM/
EKSg3teejntZPqzPafeALxwJqfS7t6d6PC2nXtuPpfOBx9GuCuyAOdWcOt7Qcyp937g77ZPmd0n7UM6cv
SDdWtqHLxZzMnUz7f7dxydZsHt1CRwLrE3y4v567pT2wdvHA38z7glV9X3gtdxx//
OiLfj1DNVuOn4F7az4JuBs2tnAwSOXZ99Fu7s7QYR5W7Qz6M/OftIm+oMkN9POWE6kdRX99EzX2QLb6uO0O/
x5LvehJf7raZeTv9VjXW5/TjuQRv027Yz5W7Qz6M/OftIm+oMkN9POWE6kdRX99EzX2QLb6uO0ouO/
advlu2zcjTDq/sD7aa/vxbSzjcV8yejraGdrV9Muq797vsbV7tF6Eu1N/pu0e1B+bqGFVNWXaTv45/
qyfgL4zEiTnwLOTvJt2tWTl1TV1/
rynky7J+zKvsxX097goXUzXNa33fPp96DM4WzaBxGupd3n9oxZV+TeRUuic56xVrtP6Zszf7SrCD/
ow+SOLyzeu7c/jXZz/ador+HXmbuomu81fAPwjLRPOx7Hpu0bs9fh+7Sz6OfSjrlfZeMPjr2edl/
btcBZtO7YhRxJu0n8ur5+J86z/I/
1ZXyS1m06+8bzP+zjz+qv678ycs9WtXvbPke7OjM7T820uZlWjJzc1/FI2n41M/2/aFcUL+05bfdZz/
8KbV96I207/CLtQxzf701uot1AP5NTf4tWbB1M+6DIv/Z13J1WIL6qx7pjkn/
o8zCnbh5zKltPTh1Z5q3AW2hXDm+l7b8A9Jw6+u0He9C6TufMM7NV1Q207XxIkr9Y7PM2Ry94n0LLs1f
R9tW1wBOr6kvzPPXtCuWvwiQ9kXur5inPdBu+t3yqKWBS7vH5Bpg/
6q6ZLXjkaRpZk5tkjyKdrJ7ZFV9fKnnP7gvapWWye8A5Ww5WUnSEjKnAlX1RdrXAv1ElUELwr0SKG2hJ
JfRbqg+vEY+oi9J2nTm1JVjEShJkjRAdgdLkiQNkEWgJEnSAFkESpIkDZBFoCRJ0gBZBEqSJA2QRaAkS
dIAWQRKkiQNkEWgJEnSAFkESpIkDZBFoCRJ0gBZBEqSJA2QRaAkSdIAWQRKkiQNkEWgJEnSAFkESpIkD
ZBFoCRJ0gBZBEqSJA3QtqsdwErbZZddap999ll999rc4+98B374w2WNZ2ndCvxoy2axzV3hXrssSTRbl+8AU
7QvfOdW+OEW7guTbBP30/POO+/
aqlzjBGtiE3KX7CZOWwJ8sgM88k8NiOnbO3H9VBMUP4aXBG4zz77c0655y6u8WmnwWMfe0fj
4LLDTls1iw2Xw1D9ZimC2MqcBU7QvnPZZWLOF+8Ik28T9NMnXly+YlK3R6ZYT6Zx2bklK3
9uB6KCcpfdgdLkiQNkEWgJEnSAFkESpIkDZBFoCRJ0gBZBEqSJA2QRaAkSdIAWQRKkiQNkEWgJEnSAFk
ESpIkDZBFoCRJ0gBZBEqSJA3Q4H47WEvnPWdfvtHHjIw/
ce5UikbS1MK9IK8crgZIkSQNkESgJEkSJEkDZBEoSZI0QBaBkiRJA2QRKEmSNEAWgZIkSQNkESh
JkjRAFoGSJEkDZBEoSZI0QBaBkiRJA2QRKEmSNEAWgZIkSQM0UUVgkocmvQaAq8t7xmL6cqa0zC5+2/
U2yfJcUnWbkgyf6rvQ6Shsbo/4CeBW4APAPAcCZ1TAbt4P4XBQSqeIL/THAIcC+/
e8Y4C0rH7Ukmb8kTZ+JKgJnOnA5VdeiPdnI9SmJEQxxOXLOhTT3ljqiJESRrL/
79fF7AFeMPGd9HydJq8n8JWniTQXRmGQ74OnA5sOyPU0nMXcjVhK8Avq3UfLp+lhH4WZTJ2x/
CVpWkxkEUi7i5Ui7V+YLVX1f3z1TDJ/
39NH78e2GvkeXsCV9NUBa9asWcnyz8WJuK8iAqxAJjpw7cnJ6E6l+lAf5BDlw0gBF9/
VN2BwE3znSbIw16SxsQVgUn2TfIzwM/dfFX99gNYSsVtVsh8gm71u1mpsAmBzS0SEJq9r4M5/r3b3/
```

KnAocA62ifxjlrBUCVpI+YvSdNk4orAqroFuO+scd+ifdpudtsCXrBCoUnSvMxfkqbJpHYHS5IkaRlZB
EqSJA2QRaAkSdIAWQRKkiQNkEWgJEnSAFkESpIkDZBFoCRJ0gBZBEqSJA2QRaAkSdIAWQRKkiQNkEWgJ
EnSAFkESpIkDZBFoCRJ0gBZBEqSJA2QRaAkSdIAWQRKkiQNkEWgJEnSAFkESpIkDZBFoCRJ0gBZBEqSJ
A2QRaAkSdIAWQRKkiQNkEWgJEnSAFkESpIkDZBFoCRJ0gBZBEqSJA3QxBWBSXZM8v4k/
5Xk4iSPTbJzktOTXNL/79TbJslxSdYluSDJ/
qsdv6ThMn9JmiYTVwQCbwBOq6qHAo8CLgaOBc6oqn2BM/
pjgEOAffvfMcBbVj5cSbqd+UvS1JioIjDJfYDHA28DHA28DqKrvV9UNwGHACb3ZCcDhffgw4MRqzgJ2TLLbCo
ctSeYvSVNnoopA4EHABuAdSf4zyT8muRewa1VdBdD/36+33wO4YuT56/
s4SVpp5i9JU2XSisBtgf2Bt1TVo4HvcEfXyTgZM67u1Cg5Jsm5Sc7dsGHD0kQqSRszf0maKpNWBK4H1l
fV2f3x+2lJ9eqZbpL+/
5qR9nuNPH9P4MrZM62q46vqgKo6YM2aNcsWvKRBM39JmioTVQRW1TeBK5I8pI86GPgycAqwo9bC3ykD
58CPKd/
yu4g4MaZbhdJWknmL0nTZtvVDmCMFwcBK1YPTnJ0cDlwBG97anAocA64Jbei/
lL0tSYuCKwqs4HDhgz6eAxbQt40bIHJUmLYP6SNE0mqjtYkiRJK8MiUJIkaYAsAiVJkgbIIlCSJGmALA
IlSZIGyCJQkiRpgCwCJUmSBsgiUJIkaYAsAiVJkgbIIlCSJGmALAIlSZIGyCJQkiRpgCwCJUmSBsgiUJ
IkaYAsAiVJkgbIIlCSJGmALAIlSZIGyCJQkiRpgCwCJUmSBsgiUJIkaYAsAiVJkgbIIlCSJGmALAIlSZ
IGyCJQkiRpgCwCJUmSBmjiisAklyX5UpLzk5zbx+2c5PQkl/T/O/XxSXJcknVJLkiy/
+pGL2nIzF+SpsnEFYHdz1XVflV1QH98LHBGVe0LnNEfAxwC7Nv/
jgHesuKRStLGzF+SpsKkFoGzHQac0IdPAA4fGX9iNWcBO9ygbZbTUClKQ5mL8kTaRJLAIL+ESS85Ic08ft
WlVXAfT/9+vj9wCuGHnu+j5OklaD+UvS1Nh2tQMY43FVdWWS+wGnJ/
mvedpmzLi6U6OWjI8B2HvvvZcmSkm6M/OXpKkxcVcCq+rK/
v8a4EPAY4CrZ7pJ+vqgOq6oA1a9YsZ/
iSBsz8JWmaTFQRmOReSbafGQaeDFwInAKs7c3WAh/
pw6cAz+mfsjsIuHGm20WBFtt7quq0JOcAJyc5Grgc5GrgcOKK3PxU4FFgH3AIctfI
hSxJg/pI0ZSaqCKyqS4FHjRn/LeDgMeMeMLeMEKhCZJ8zJ/
SZo2E9UdLEmSpJVhEShJkjRAFoGSJEkDZBEoSZI0QBaBkiRJA2QRKEmSNEAWgZIkSQNkEShJkjRAFoGS
JEkDZBEoSZI0QBaBkiRJA2QRKEmSNEAWgZIkSQNkEShJkjRAFoGSJEkDZBEoSZI0QBaBkiRJA2QRKEmS
NEAWgZIkSQNkEShJkjRAFoGSJEkDZBEoSZI0QBaBkiRJA2QRKEmSNEAWgZIkSQM0kUVgkm2S/GeSj/
bHD0xydpJLkpyUZLs+/m798bo+fZ/VjFuSzF+Spsl/m798bo+fZ/VjFuSzF+SpsVEFoHAS4CLRx6/
GnhdVe0LXA8c3ccfXFV8GXtfbSdJqMn9JmgoTVwQm2RP4BeAf++MATwe35ucABzehw/
rj+nTD+7tJWnFmb8kTZOJKwKB1wN/
APyoP74vcENV3dYfrwf26MN7AFcA9Ok39vaStBrMX5KmxUUVgkmcC11TVeaOjxzStBUwbfd5jkpyb5NwNGzYsQ
YfFwR5NMFQqQpQ8bjk93uNqX2BBvK5W8Qu3+kZBeClTHSdNT6/Y0pMbyWQpcasHGDsBeyeUOO2P5HHXwz+pdNUJVI
NLrVCDghyTKJs6+YXoykE6MskUGxqnk6/2NCpaDrBqjrmSl4SPkZSXWRCbF1BIDhQmAnxTdfifx2iLkc7A69R9H4
AkAa9Rm6C8y2xMrr1kwBGA7lNnj2cXg8H8K33WpZI+Wks2yHgDkcH3VZ97/hakGVn
OXwH9RKbyVEzjJbRaiQ7Kr

ogi0BJkqQBsgiUJEkaIItASZKkAbIIlCRJGiCLQEmSpAGyCJQkSRogi0BJkqQBmqgiMMnbk1yT5MKRcT
snOT3JJf3/Tn18khyXZF2SC5Lsv3qRSxo685ekaTNRRSDwTuCps8awHW67AAANhElEQVQdC5xRVfsCZ/
THAIcA+/a/Y4C3rFCMkjTOOzF/SZoiE1UEVtWngetmjT4MOKEPnwAcPjL+xGrOAnZMstvKRCpJGzN/
SZo2E1UEzmHXqroKoP+/Xx+/
B3DFSLv1fdydJDkmyblJzt2wYcOyBitJI8xfkibWNBSBc8mYcTWuYVUdX1UHVNUBa9asWeawJGlB5i9J
q24aisCrZ7pJ+v9r+vj1wF4j7fYErlzh2CRpPuYvSRNrGorAU4C1fXgt8JGR8c/
pn7I7CLhxpttFkiaE+UvSxNp2tQMYleSfgScAuyRZD/
wp8LfAyUmOBi4HjujNTwUOBdYBtwBHrXjAktSZvyRNm4kqAqvq1+aYdPCYtgW8YHkjkqTFMX9JmjbT0B
0sSZKkJTZRVwKl5faesy+/+/ffjIA/
dexUgkbe1G880M844miVcCJUmSBsgiUJIkaYAsAiVJkgbIIlCSJGmALAIlSZIGyN8Oluaw8e8Mr2IgkgbjY1/65p3GHfIT91+FSDQEXgmUJE
kaIItASZKkAbI7WBs5//Ib+PJG3aB7r2I0kqaZ+USabBaB0hKYfR+P9/
BIWimfWfetO4173IPvuwqRaNrYHSxJkjRAFoGSJEkDZBEoSZI0QBaBkiRJA2QRKEmSNEAWgZIkSQNkES
hJkjRAU18EJnlqkq8kWZfk2NWOR5I2hTlM0mqZ6i+LTrIN8CbgSB64Jwkp1TVl1c3MmlufrG0ZpjDtF
r8gmnBlBeBwGOAdVV1KUCS9wKHASZQbRU2pWAcbbvL167jp9bstGxxrbTZb1iP22GVAll65jBNjc0pHC
02Jzt/TXsRuAdwxcjj9cCBqxSLNDXulJTmScrL1VaAOUy6k83JIyv1nK1Nqmq1Y9hsSY4AnlJVv9Uf/
wbwmKp60ax2xwDH9IcPAb6yBYvdBbh2C54/6bb29YOtfx239vWDTV/
HB1TVmuUKZnMtJodtZv6alH1gEuIwBmOY9hiWLX9N+5XA9cBeI4/3BK6c3aiqqjgeOX4oFJjm3qg5Yinl
Noq19/
WDrX8etff1gq1rHBXPY5uSvSdk+kxCHMRiDMcxt2j8dfA6wb5IHJtkOeBZwyirHJEmLZQ6TtGqm+kpgV
d2W5IXAx4FtgLdX1UWrHJYkLYo5TNJqmuoiEKCqTgVOXcZNbFE38hJyHHc2CbFMQgwwGXEYwyqZgvw1YxLiMIbGGBpjaJYthqn+YIgkSZI2z7TfEyhJkqTNYBE4gUn4ldAJOtyM8s8SJUE7/UaS8SWYLYa2ysra3uSTJ2iWOYUWPiy3JVav2/ltV/m3iH/
Aq4PdXO44lXqdtgK8CDwK2A74IPHy141qG9bwM2GW141C9Xk8sD9w4ci41wDH9uFjgVevdpzLsI5b3T
G4hdvoycC2ffjVc73mS73/LyZvAL8L/EMffhZw0hKv+27A/n14e+C/x8TwBOCjK/
A6zLt9gUOBjwEBDgLOXsZYtgG+SfuOuWXdFpub4HFpubh4CdgUv7/5368E5LGMOKHhebm6tW8/3XK4GacfvPV1
XV94GZn6/SBKuqTwPXPXzRp9GHBCHz4BOXxFg1pic6ij1rvTVJ6rqtv7wLNr3Da6ExeSN3/dqhhW+rjYzT/
cDBSbJUAVTVVVX1hT58M3Ax7ZdYJtGhSZVrWwcBXq+rryzT/
221BHnoKcHpVXVAV1wOnA09dqjiq6rSquq0/PIv2HbXLZo7tsBCLfi/Z1BiSBHgm8M+bM+9NiGG1v1gF/
FoGb74X9EvPbp727rRv381WTmaKHSfKxR4WqRL9pKVZoh9xKWWpRnqff/
xeSN29v0N+QbgWX5fa7e1fxo4Owxkx+b5ItDPPbbkEcuqroL1BAvdb5XiWy9Z2DC6V36RdbRpnqff/
PMc01ZiWywmD63k9ljJ42K2hXLVqr3/WgTOIcm/
JrlwzN9hwFuAHwP2A64CXruqwS6NcWfmUBOmmnzx8BtwLvn
mM1S7/+LyRsrkluS3Bv4APDSqrpp1uQv0LpFFHwW8EfjwUi+/
W2j7rtS22A54OvC+MZzXYRIsyxU5hxX+rSTV3JqcnS7JIHV9hHFPuWThOXD2WSKu/
QTftKuqK/v/a5J8iYHZ/
tOrG9WSuzrJqBQB8d1V9cPb00aKwPb00aKwqk5N8uYkv6vE/6Fq9qa2jFxFIvc/G7CK270rl2UOAL4weJyMxrsi2YHF5aD3tHsUZEwJnL
mUQq3RcjM57Mblq1d5/vRK4GWbdw/FLwIVztZ0iW/3PVyW5V5LtZ4aBJwMLvDc0XHWa2Q3cZZ4uZGPuxz8vz0mLYn8xxHLtt2xmGdgHv/P4
tRrG9WSuzrJblV1Ve9qumaA1pqVXFbHD4OlVdcvPWZ7I33g/HwC8GKmqQvYf9HaHlmD3nZa9HvEtHo/
KxWahnQBL4egWfQHbvH0g/OOe+zHr3/
qHR29PIn7mDRKMxvV9rqjyqmDbGcEYJhcV93jBSucsZRFnvpulyBNaxdSbvPhtQQAF3zJkGFjWBOHQtjBvFhsJ/
xFKe9K+wRJkaZ5JaH3drS/7+sPvW/BszOvO15XS/
19M3hjdH58BfHKuN+PNOe8vfBtwcVX93XxGX+0zF+SB3Tp
Msck6Q+hP7l5xaYcb7NZ6g67fq35acTKuCKUmmEEHKxDSGUPqYZPvL6tX01CyRbHJpSyLvU6tuvsCdrwXS5LYFjL8DPwjVrqMNHPY0vd/
cxy2JVTwuRue/mFy1eu+/K/Hpk63tD3gX8CXggv5C7bbaMS3Reh1K+2TdV4E/
Xu14lmH9HkTubNUXgYu2hnWkJfqrgB/QziaZH1Ueg1uwjdbR7ik6v//
NfBp3d+DUPrws+/4vAH8Oe2NF+DutG7JdcDngQct8br/DK3r7IKR9T90
N7mhX2dv0j7gMBPL8NrMHb7zoojwJv6tvoScMAyxHFPWlG3w8i4Zd0Wm5KHgMGKHgAOAfxx57m/
2fWMdcNQSx7Cix8Wm5KrRGOY6jlbiz18MkSRJGiC7gyVJkgbIIlCSJGmALAIlSZIGyCJQkiRpgCwCJUm
SBsgiUPNKUkleO/L4ZUmOW6K535Zz/0X0hFIZ35hKFb3jhtWyHdXcvsrEW7wfWYTntslM5r
vbnL2pTlSlo95rAtX662XhaBWsj3gF9OsssyzF91VbVfVe0LnAR8MsmaZVoWwElVtR/tW+r/
Osmui3lS/3JXjxdp+pjDMIdpPHcILeQ24HjgZbMnJHlkmeMPP52//+EJP+W5OQk/
53kb5M8O8nnk3wpyY+NW1BVnQR8Ajiiyz+3zOS/LxmW9eT/
LbSc5J+wH0DyS555jYXtzPlC9I8t4xy7qG9qWcD5h9Fpz2e6z79L+Lk7yZ9nubeyV5apIv9GWF5mLhy
c5M8mlSV48Mq8P9/gvSv9h8iTb9G13Yd8eL+vjfyfzeIH5eBhPYKPGmLSVZRb20/
cScvNHGYO0xz87WAtxpuAC5K8ZhOe8x/CcC5CH5hF/Pnwz6qRwE2EC/B5Y5bmnvL4oPhmxlnOY1Dbhq5Zhqc+Da7pE/4b/cQtqumWkFgazrQAaebLmz/
RboG4HDqmpDkl8F/or27ft9kpfqT5S9q3sr9x1nyOBR5YVd9Lsu7UZZK1DdEYexzrIDQlN5A3PPzC5L/
e+mnd2/FXh8VX0tyc4s+VB3BOKg8A+wB7VNUjey7fPnx57ck4dn6kPgZV8mh+1b/
S5IcCLwZeCHC5CLSumS9RpHr5PhQ4jJdBwoF2EbFm8+7nGN5q2Su1o+MpzCLIk+J6cdT6eh+Sjs7z/
PS/z8EeCRwetwpd2tdOukG5pk+bDv/
9bkBcC7gWYqIsmnW/OkzrrM+h53HoiMVBkHZy5d+4/Zwv1Kv2/
qbfYC9gWAjwoyRuyRkX2LgGR6U2/ng8srlXbafwXeW4DFAjbcwZGyrvKC5H3+EtQeVBsBfdNDkzhAQYMq5C72mEYcNxlZ0pgq0bsiTp3yt/hb18XNkO6mabQ+jPs9QbYtRWoLD/
IRp5h8QJPbKbc4LDMbl9H5WGqh4jmDuFJFq/Z9+kzH9h/qtmL9RQgUFppwzN1c/ns2W3bnTZb/xr+AArPp/+Bb2u8vIiEbyDcuSdM+Mc5bk5k9t4L7O+5Qd1e3e6+9c4lxvvbumGTl/
D/cv8Xz7tTlCe06Zo8g+q4tW9S9+lvz9Qwae+N9MJf17+TL0YaR/IAP47J3X6x+8dDb2x/y4tXhu2+L5Rq92ZDXyc2yRd2JnIdf1wwF+7+m4N9o3pvJVvr/UJ++JpzZ+/
UBq+9UvuVbvvvGhK4IUhjNT1h6lvB6LkeBumXVqvTxrTz0PoDqqDXvkFBWIZ6+CzV/3fqt5L3BE9UaS8v4RcJJsKLbhh0dpHP0QoQ7fjCx0wjGPGJXnQj7G9znq+2tPmT7Rr3ZPu8ARkkH/
8TFfrQYuh07q13zI/XetuO+2TC+TffzrG2MWZ5pfk+D7Oe6vy2J1Ld0Ltxd3Hu5RG0mfuWv8j5vLbvDTBZRj2IybOrE/tMS5v9bg5CaOF+tUXWvYr/
qT7d0+rtyBiTwmsRWiO5F15fRs13Z3s1n0YzD2/E+3MfIIIOcxjf0/xfp8a2T89eJhvdCtSlQzxOQ4iUnTovaFuH2EqXwOPL19Tt6Om4OFTG5Gx9uT2aSbvkxPXvA4p9xSUZyOjFz9v3e+tTlVJs/4MQ4e
Hbb3UJCsXPbOKPBVi2ih3s9wnxGiw3ZUMplMKAF4gF1EzAA8TcNeD4vN0Dr3QgWl3OESpwsE4EUD6VR2ofHV2WyoSKVA5m0jnr/
M0nSvL/s7fxzRHpHnlvAC0mScd9Lg/TeIJzuvGIpSFhztVr/2nFiA5ChSOzcaWDxrgSpSU3M4y5T9Lu7xq0+BN1PnG6E8eiVKmQVv6SjPA73ZvcVXCn6UrP9/9XHe4DFVW3/WzR3dPtO5RdM1UmT6lvy/
PcEo4iAf2c2RXzY/DXM0BiLz8/8Zs
m/WK5BvvP9YNMTn99u5tTFTk3c7Ym8/ehPjuj9VYwqfAxjP5Z1pODs+q6/HvWZfhVhdHjC2UaxfUkebMS+G5Pj6Nz1tDIumTiB1W75TqnT+Tra4VhEAjDh2XiPDUZT7pmqPtq9eGkq3D7/o7u5LnI5B5bPhd2Ar88DF0Xv+6X/
9D

```
otxSkHfXbjUz73sjwj0Ye/4j597tHA+fSEulFVfXYMW3eCRxeVV9M8lzavTGz/QLweODpwP9O8og+/
qSqeuGstrevR3f3keHvjAyH9hul44yu7w+BbZM8Afh54LFVdUuSM4G7V9X1SR4FPAV4AfBM2lWFG/
q9Phupquf3s+pfAM5Psl9VLccPvktbM3OYOUyzeE+gFqWfMZ5M67aYcRnwk334MOCuW7KMJL8CPJn2I9
xfAdYkeWyfdteRJLg9cFXvbnn2mPncBdirqj4F/AF3nG3P5TJg//7cz8D/
TPLA3nbnOdrN2AG4vifPm0QuVfUB4H6lnY1L2gTm
MMAcplm8EqhN8Vpg9Az0rcBHknweOIONzzgX62rwcuoiWds4Gv
07pmtp81z22Af+rPC+3TezfM02XyAeA5Sc4HzgH+e1yjfl/
PMcAHe5K+BnjSPOt2GvD8JBfQ3hBmumT2AN6ROz6p90f9/7OBtyT5E9qb0XuBLwJ/
l2Tfvi5n9HGSNp05zBSJA2QRaAkSdIAWQRKkiQNkEWgJEnSAFkESpIkDZBF
oCRJ0gBZBEqSJA2QRaAkSdIA/f/jNMifNUczPgAAAABJRU5ErkJggg==\n",
       "text/plain": [
        "<Figure size 720x360 with 2 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAnoAAAFcCAYAAABftxO6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XnYZGV17/3vT0CJMkuLjOKAiaAJGgSHmBAxUYiK8RUHjKLHBM2rU
RM9J8aTEzGJJ+qrcYx68GBAIyJGjYQgEee5BRRl0oCCgDTQyIgAuv9476Lrn54pp6eqt79/
VxXXXVV172nVrr1Xrb33XVWpKiRJkjQ8d5t0AJIkSdowLPQkSZIGykJPkSbSpCT5IkaaAs9
CRJkgZqIoVekj2TVJLN+/+/NPJzliCZa7JMuZNklekOSrUHUUn+ZdJxcGZa1tG0SnJskr9fj/
Nbo22h54sHreMy90hyU5LN1nL61b5v5b6/sSw4ZiTl1a05IvzKnrLsnFSZ6wyHFvSvSvKADR3T+raoQq+/
YWcn+VmSK5K8N8l2l2i13IQiuyqg6uqMWO7+1tS73JL8r4S70JPbJZxFVpmMzzx6MWwZVSSVvatxFkSvNLqSfmvcnYmhpSe0eyxFUNFvKSqVHQ2UfLUrO/
8Ipr4B+/4K9P/McthVjsbkeS/JTk/ybVJ/jPJ/caGVZKXJrkAuKB/
kLwtyVW9Kv5ekofO8XruxE4AF1tf/B7x6tiPvOS6pbTr/+ViQ/6hX9C5Jc2uM/
AqCqfgl8k5Z0SHIf4O7AR2e0/TJ8a7BcS+xCbBbeqWs2d9SFGS6vB62LRV0iwWnxIupLVi/CZsUNjk65Vk3WrWrhhI6
fx39G3rRuSnJnkcWPzOiar7493Ghn8xyRuSnUaJt+3Df2fexd/
nBs2IOSfKnHf3WSj44N7ySjEK3B7K2J0HBKxeBDsbi20nPDwBixW1s74/2XhB9jTBvdHdz/
mh4wNuzjJq9Py0fVJPtrfv1F6LGkGTdTU5tvtlSnlY/g+NpZwxHXsLWBkjrZLvf0O7bN7m+Q/
MsD+AI4JiqOreqrgX0Fw7pgD+dT/0XCnfH8lyxbDpdlwH8WKUV9dxdzWWcCoqsVL8swkX+
y7DmG39mFpO+j/5TkP/q6WGsPHls+jLoQ4pdIqAIPjRcbjZlgeqEzT6Uh+
mh4wNuzjJq9Py0fVJPtrfv1FOvQw4AbgS+BDwLMypM+dtTjWnjtbhZ6vqRFphvmhJAjwPWWNz/66L0r
y7DmG39mFpO+j/5TkP/q6WJ7kgYsM7c3AB6vqHVV1V1V/DXwLeN3kas5hVbw/
voil3GnhY60H0NL8J+YsdcbaInw9xZaQFU9D7gEeEqvsN883/
hJnga8Fng6MAn4PnDdSefsAJP0ArDc+YFTHkN9a+NNV4oQ7AhKzhzcEzfMOZyBvBFYL4Ne6HlfQ
+4N3A8LdE/EngQLcG/O8lWdfwv0xNQv/
9qv423XVRVo8tLxwG39Xk9nLZO8wZcNZ7QMwNMO739/
wDfWYPXdef7kWRr4aPAqbmaUzkFy7a0D8N/
yarLHX9HOwLaHtgNeFef7kWRr4aPAqbmaUzkFy7a0D8N/
gOcB7kuzTpsGeHFVbsvQ9y2vv1odlm0j8M/
gl4GbDQfwzuA3x37Pl3gZ2vLBbvDZvQS4Bbbqup9/V9/
NOBfYEdaOvnY0m2HJvfrbuSBAiqC2xGzaHdxfqYgfbLC1B1SJdcjgA2BH/fln0lbt3/
XX8uskjyJto/9HrAXCm5Zto+/
u+tO1rV+Bv+rCP0LaBkScCV1fVt2dZ1Xx/6Vt+/Z1FXAk2lHyy8E3pbkEw3Aw/
Wi631b7gEny4L6sV9Ly1Cm0wmv8jNwzgSfRjtZ/
nVbAPwa4Jy2XLAN2ouW7UU79qyTvmWvdgDllxWZUweeU9fB42j72McXGjHJI2jr48+q6oRFzv85tPW6
PXAh8IZFLOeetDzwDzwsVkGn0jbzmZOc7ckT6WtxwvH2k908Opq1FlrlQobcjLUneNsuwFSxwVL6WXgz8Q1Wd
35f7v4F9M3YE2odU1W3AL+kbFYfXfXkg5vSBALAL+kfZj8GpA+3YpFLuvHVfX+3mfnOGBn2kYxn78B/
izJsjV5Ud1FVfXXPfX1g/21V/
```

```
byqPgP8grYTA3wJ+K2eJB9HS87fAB411vYlgCQ70T6YXllVN1fVVbTLBONHJVcBb+9nZT9KS8Z/
MDb8nUmuoxUaK4C/
WIPXNf5+PBm4oqreWlW39qOV5WPjfrWqTunr4EPAb4wGVNXHquryqrqjx3gBsH8f/EtaYbFLn+/
oCPjJwMV9vd7WP9A/DjxjbLq9k2xTVdfO8YE/7zqqqp/T3q/
R2ZZ9aJdZT55jPi8HllfVmXMMH7cVcP3Y89HjrWcZ95e0D7QHVdXtVXVmVd0w14yr6l+q6qd9vbwVuAc
wftp/rvfiUcAWrFoX/0orGkfz/WlVfbyqflZVN9KS2+/MWPyx/SzlbbT96pHA/
+rb+peBf59nnTwT+OeqOqcXXUeNBvRt/0+AP+/
b3I20HDHa1o8HntqTKcDhvW229fMfVfXDfrT8JVqSf9xs487iWcB/VNVp/WzRW4BfoSXwkXf27fma/
nr3peXMnwH3Be7X1+9Xqqpo+93FVfX/
LjKGxTKnNubUjTenrq0jgH+tdnJqPo+jFZ9HVNWaxPCJqvpW368+TNvHF7IDrfaabZ9aQTsYG9mlb0O3
AJ8E/qKq7jxgqKonV9WCl7MXKvSuBnbM7P0Edu7D17f7Ae9IOxV/He1UZWhH7SOXjh5U1edpRzD/
BFyZ5Oi0yyOLccXYfH7WH241x7ij8c6hbYwLVtGzuHLs8S19fjPbRsv/Zn/
8UNqR5lf6xnrpWNuoL8n9aB/MK8bW2/+hHY2N/KR/
mIz8mHZ0OPLyqtquqnatqudW1co1eF2Xjj3enXYUOZcrxh7/DNgyqy6lPT/
JWWOv4aGsOpj4H7Tt4Fv98sToct79gANG0/
Tpnkv7IIV2JH0I8ON+meLR88Q23zo6Djh87FLAiT1ZrSbJLrRC73/
Os5xxN9HOKI2MHt84y7gfAv4TOCHtkuabk2wx14z7pZDz+2WT62hH9eMHZ3O9F7sw+7oYzfeeSf5Pkh8
nuYG2HW6X1S9rjW8TuwDX9qLtLvObxS4zph8fdxntjNiZY+/3qb2dqrqQ1i/
yKb3YeypzFHpJDk7yzbTLU9fRtpPFHrzuMh5XVd3RYx7PUzPX71a0nLklbR/
5TNrlxlEuMaeuOXPqwHPq2krrznEYi7ts+xLg61X1hTVczGz7+EKuBe6g7e8z7QyMbyeXV9V2tM+FdwK
PX8P4gIULvW8AP6ed8r9TP7V7MKtOH99MS74j92V1C12+Gncp7bTwdmO3X6mqr881v6p6Z1X9Ju0y2IN
pnZw3pNfRziqMJ8rRh9h862HRqupW2lmUJwM7V9X3+6Cv9LZfZ1VSupT2Pu04ts62qap9xma564xLKHu
wuP4OC723sPr7cSmw2H4Kd+pnF95Pu9x5775xn0NLRFTVFVX1J1W1C+0MxXvS+kpcCnxpxvayVVX9aZ/
u9Ko6lJag/412anwuc66jqvom7ezA42hniea6xLA/bWc9L8kVwDuA/
dO+WTnbz3qcy9gReH98ZVXd5VJZPyp+fVXtTTtz9GTg+aPB4+Om9cf7S9rZse37+ryevj4XsILZ18XIq
2hnBg+oqm1YdelrfPzxeFYA22fs25Uz5jfb8nefY9yraR/e+4y939tW67A8Mrp8eyhwXi/
+VpP2zeaP087E7dTXzyljr2GhnHU57QNxNL/0mH+ywHSjnPrNqnoA8BTgL5L8AeZUc+pYuGOPN/
WcuraeTjuo+eIixn0JsEeSNf7CzJrqB7zfoBWhMz2TflZ5xjQ/
p+Xzh6V1xVgj8xZ6VXU97frzu5I8KckWad8I+RitM/
HojTkLOCTt5yTuS+u3Mu5K2rcJF+N9tH4q4q+8CdHWJnWyH04Y9MckA/
s3EzcCuw4M8nrIv+wfFR2pmbUdtKWpL/oySb9aOjNd45Z/
gybV2OJ+Sv9rYrquqHfdkraJed3ppkm7Tr+Q9MMn457T7Ay/
t7eBjwENoH20LOAp7ez+I8CHjRAuOfDNw3ySvTOs1vneSARSznXrTkthJaR3l65+X+/LCs6vB/bR/
39r68Byd5Xn9tW/
Rt4iFJ7p7kuUm2rXZ57Qbm3zYWWkcfpJ3puG3sMsdMn6Zdgti33/6G1jdn35r9Zz0+CLwoyd5Jtgf+Gj
h2thkn+d0kD+sF4w20Syijec7cx7am9S9aCWye5G9Y/
czhfL7Rp3152pcZns6qyz2jed8CXJfW3+YunYfHVdWPaX2xXt/
fk9+iFThzORF4QV8n9xyffz9z9n5af7r7ACTZNe3byyMn0Pq5/ClznM2jdcS/
B2393Jb2pYHxvjFXAvdOsu08Mf5BkoN67nkVrTD4+hzjj+K/npY73pPWF3F01ut/YU41p85uU8+p9Pd/
S9q3tO+W9sWmOa9mdEfQvvCwmIOiG2n9aX87yYKXQteD1wBHJHl5fz+3T/vy1W8D/
zDbBFX1C+CtrOqPvGgL/uxBtY6+r6Ud+d4ALKdV/
AeNnWb9EK0fwsW0neOjM2bzD8Bfp50GnrfTbVV9ktbZOy0y0Ln0I5057INLfFfSzst/
NMe64b2t7Qdadyf0I58f0o7Ep436S/Cl2g7yvgO8NXeNvMnAJ5P+/A6j7Yu/
pXVTw0vp3Vsv5rWp+oZs501msXbaEddV9JOgX94vpGr9Zn6PdoH+RW0PiG/
u9BCquo82kb8jb6shwFfGxvlkcDyDfR+lK8oqou6sv7fVrfmcv7Mt9E+xCHdkng4r4tvYTeJ2QOC62j
D9ES5ZxHntX6Bl0xutHOov2yPyarfrR3jz7+qbRO61+gbb8/Zu7C6b609/
UG2uXJLwGjb4G+A3hG2rcd30m7xPtp4L/
6PG9l9ctsQfKzOZrnr8d30m7xPtp4L/
6PG9l9ctBc+oJ5em0Lw9cS+uPNv6FrLfT+qNdTbscduoiZns4rWP2Nf31fXCe5X+6L+PztI7HMzt7/2V
v/2Z/Xz/LWN/D/iH9DdpZz5m5aDTOjbSi4sT+Gg+nbVej4d+nnRn8Uc9bu8yY/
ge0beldtPXwFNqXI34x30rozu73p9A6qt+Tlj8Pol1ifR/m1BFz6iaeU8eWeQvwXtoZwFto2ygAPaeO/
6rArrTLnHPmmZmq6jraej44yd8tdrq10YvaJ9Ly7ApaXjwCeHxVnT3PpB+gnXl8CkDaD5a/
dp7xgdbRdt2jljYBaX0+rgIeUVUXTDoeSdqYmVObJL9BO6A9vKr+c33P3x8ylRbvT4HncyIkJ0kB56VaSJGmgLPQkSZIGykJPkiRp
oCz0JEmSBspCT5IkaaAs9CRJkgbKQk+SJGmgLPQkSZIGykJPkiRpoCz0JEmSBspCT5IkaaA2n3QAG9qOO+5Ye+655ImuPlmuP32DRbP2rsF
uGPh0TbbAu614waPZrrdDEzZe3jzLXD7It4/
zW4Nt+szzzzz6qpatgEjWjJrlMPWKX8tMscslrloLa1D/jLPTK812B/Wd/
4afKG35557csYZZyx+glNPhWXT+PnwdWD7hUdbeTE86a83dDBT7lRgyt7DU78Oyxbx/ml2a7hdJ/
nxhgtmaa1RDlun/
LXIHLNY5qK1tA75yzwzvdZgf1jf+ctLt5IkSQNloSdJkjRQFnqSJEkDZaEnSZI0UBZ6kiRJA2WhJ0mSN
FAWepIkSQNloSdJkjRQFnqSJEkDZaEnSZI0UBMt9JJsmeRbSb6b5Nwkr+/t90/yPMkFST6a5O69
R79+YV9+J6TjF/Sps0cJmnaTfq/bn8OPL6qbkqyBfDVJJ8G/8gJA9W1WdkOR9wb9Rb9VsDjgX/
b7a6vqQUmeDbwJeNakgh+K45dfstrzww/YY0KRSBsdc9h6NjMfgTlJWiQcTPaNXzU396Rb9VsDjgX/
t7ccBT+uPD+3P6cMPSpIlCleSVmMOkzTtJt5HL8lmSc4c4CrgJOA34Ht34IXFdVt/
```

VRLgN27Y93BS4F6MOvB+69tBFL0irmMEnTbOKFXlXdXlX7ArsB+wMPmW20fj/bkW/
NbEhyZJIzkpyxcuXK9ResJM1gDpM0zSZe6I1U1XXAF4FHAdslGfUf3A24vD++DNgdoA/
fFrhmlnkdXVX7VdV+y5Yt29ChS5I5TNJUmvS3bpcl2a4//hXgCcD5wBeAZ/TRjgA+1R+f1J/Th3+
+qu5yNCxJS8EcJmnaTfpbtzsDxyXZjFZ0nlhVJyc5Dzghyd8D3wGO6eMfA3woyYW0o+BnTyJoSerMYZK
m2kQLvar6HvDwWdp/
ROvrMrP9VuCwJQhNkhZkDpM07aamj54kSZLWLws9SZKkgbLQkyRJGigLPUmSpIGy0JMkSRooCz1JkqSB
stCTJEkaKAs9SZKkgbLQkyRJGigLPUmSpIGy0JMkSRooCz1JkqSB2nzSAWjDOn75JXdpO/
yAPSYQiaRNnflIWnqe0ZMkSRooCz1JkqSBstCTJEkaKAs9SZKkgbLQkyRJGigLPUmSpIGy0JMkSRooCz
1JkqSBstCTJEkaKAs9SZKkgbLQkyRJGigLPUmSpIGy0JMkSRooCz1JkqSBstCTJEkaKAs9SZKkgbLQky
RJGigLPUmSpIGy0JMkSRooCz1JkqSBmmihl2T3JF9Icn6Sc5O8orcfleQnSc7qt0PGpvmrJBcm+UGSJ0
4uekmbMvOXpI3B5hNe/
m3Aq6rq20m2Bs5Mclof9q6q+ofKxtaEVp4N7APsAnw2yX5VdftShixJV2NHxMncl0oOSZ9QIh5NJR6j
cCu80xyKHBCVf28qi4CLgT23/
CRStLqzF+SNgaTPqN3pyR7Ag8HlgOPBV6W5PnAGbSj5mtpSfSbY5NdxvyJVWvh+OWX3KXt8AP2mEAk0s
bB/
LVhmZOktTcVX8ZIshXwceCVVXUD8F7ggcC+wArgraNRZ5m8ZpnfkUnOSHLGypUrN1DUkrT+81efpzlM0
nox8UIvyRa0JPnhqvoEQFVdWVW3V9UdwPtZdXnjMmD3scl2Ay6f2cVVVVHtVVlm3uYBJ9aU37q9uuq/
ZYtW7ZhX4CkTdaGyF99HuYwSevFpL91G+AY4Pyq+sex9p3HRvtD4Jz+
+CTg2UnukeT+wF7At5YqXkkaMX9J2hhMuo/
eY4HnAWcnOau3vXZ4TpJ9aZc1LgZeDFBVZvyY5ETiP9o23l/qNNUkTYv6SNPUmWuhV1VeZvd/
KKfNM8wbgDRssKElaBPOXpI3BxPvoSZIkacOw0JMkSRooCz1JkqSBstCTJEkaKAs9SZKkgbLQkyRJGig
LPUmSpIGy0JMkSRooCz1JkqSBstCTJEkaKAs9SZKkgbLQkyRJGigLPUmSpIGy0JMkSRooCz1JkqSBstC
TJEkaKAs9SZKkgbLQkyRJGigLPUmSpIGy0JMkSRooCz1JkqSBstCTJEkaKAs9SZKkgdp80gFo43T88
u0nb4AXtMIBJJasxL0l15Rk+SJGmgLPQkSZIGykJPkiRpoCz0JEmSBspCT5IkaaAs9CRJkgbKQk+SJGm
gLPQkSZIGykJPkiRpoCz0JEmSBmqihV6S3ZN8Icn5Sc5N8orevkOS05Jc0O+37+1JcnSSC5N8L9l+u
+SZs2c5ikaTfpM3q3Aa+qqocAjwJemmRv4DXA56pqL+Bz/THAwcBe/TgSeO/ePrtgSXmxwsA/
TnAwcBe/
XYk8N6lD1mS7mQOkzTVJroVdWKqvp2f3wjcD6wK3AocfwfF7Tjgaf3xocAHq/
kmsF2SnZc4bEkCzGGSpt+kz+jdKcmewMOB5cBOVbUCWiIF7tNH2xW4dGyyy3qbJE2UOUzSNJqKQi/
JVsDHgVdW1Q3zjTpLW80yvyOTnJHkjJUrV66vMCfLDVfWJ3nzl6HJGv7+qt18
G7D42+W7A5TPnWVVHV9V+VbXfsmXLNlzwkjZ55jBJ02zS37oNcAxwflX949k949igk4Aj+uMjgE+NtT+/
f3PtUcD1o8sjkrTUzGGSpt3mkmNsT+Y4HnAWcnOau3vRZ4I3BikhcBlwCH9WnAIcAFwI/
A164tOFK0mrMYZKm2kQLvar6KrP3WQE4aJbxC3jpBg1KkhbJHCZp2k28j54ktkgLPUmSpIGy0JMkSRooCz1JkqSBstCTJEkaKAs9SZKkgbLQkyRJ
GigLPUmSpIGy0JMkSRooCz1JkqSBstCTJEkaKAs9SZKkgbLQkyRJGigLPUmSpIGy0JMkSRooCz1JkqSB
stCTJEkaKAs9SZKkgbLQkyRJGigLPUmSpIGy0JMkSRooCz1JkqSBstCTJEkaqM0nHYCG4/jll2/
PAD9phQJJLUmJe0qfOMniRJ0kBZ6EmSJA2UhZ4kSdJAWehJkiQNlIWeJEnSQFnoSZIkDZSFniRJ0kBZ6
EmSJA2UhZ4kSdJAWehJkiQNlIWeJEnSQFnoSZIkDZSFniRJ0kBtPukAtGk5fvklqz0//
IA9JhSJJDUz8xKYmzQcEz+jl+QDSa5Kcs5Y21FJfpLkrH47ZGzYXyW5MMkPkjxxMlFLkvlL0vSbeKEHH
As8aZb2t1XVvv12CkCSvYFnA/v0ad6TZLMli1SSVncs5i9JU2zihV5VfRm4wpZGjHwqcUFU/r6qLgAuB/
TdYcJI0D/
OXpGk38UJvHi9L8r1+aWT73rYrcOnYOJf1NkmaJuYvSVNhWgu99wIPBPYFVgBv7e2ZZdyabQZJjkxyRpIz
lj5cqVGy5KSbqrdcpfYA6TtP5MZaFXVVdW1e1VdQfwflZd3rgM2H1s1N2Ay+eYx/uqav+q2n/ZsmUbNm
BJ6sxfkqbJVBZ6SXYee/iHwOgbbScBz05yjyT3B/YCvrXU8UnSXMxfkqbJxH9HL8nxwOOAeye5DDgSeFyS
fWmXNS4GXgxQVecmORE4D7gNeGlV3T6JuCXJ/CVp2k280Kuq58zSfMw8478BeMOGi0iSFsf8JWnaTeWl
W2m2GbQaL/pALRpO/375JXdpO/yAPSYQiaRNnflIWnqe0ZMkSRooCz1JkqSBstCTJEkaKAs9SZKkgbLQkyRJGigLPUmSpIGy0JMkSRooCz1JkqSB
nSQFnoSZIkDZSFniRJ0kBZ6EmSJA2UhZ4kSdJAbT7pALRpO375JXdpO/
yAPSYQiSStYm7SUHbZ4kSdJAWehJkiQNlIWeJEnSQFnoSZIkDZSFniRJ0kBZ6E
RJkgbKQk+SJGmgLPQkSZIGykJPkiRpoCZe6CX5QJKrkpwz1rZDktOSXNDvt+/
tSfLOJBcm+V6SR0wuckmbOvOXpI3BxAt94FjgSTPaXgN8rqr2Aj7XHwMcDOzVb0cC712iGCVpNsdi/
pK0Oakhl6+wShKBs9u7Z5GDRUl+VVhWTbIWYqOpgn/7HD2I7z98wYHxe14hLcMJpF09b3szymLKZJxT4u7VmnvWlmDi0d5LgtM91kpfIxz5ZQpTEkQB9Xsq/
S2A13wS2S7Lz0kQpSasVW81A6skwKEb3r2nnpVTo7rzL1
V+1XVfsuWLVuzwLVuCsCRpQYvKX2AOk7T+HXwdXkDxc/
2RwUHBdX1Zy6GkAMz+3/DmSQ6YHRIYEE9+gbtGUqpTQv+fz+/Qq+qWuZtqpOL/
+7OFvzJ3q3dkO7BSe/5zHM2tFAhNfNtr4MkuoSO+JvQVbZrY1wGEBJH1K/
WWeRJY0yQIFNAh+P2r1O/4upBX3r7tqywe3O99PU/
XcSM6e6OXt5gjHqSCGH5Hq/Vtr75ElkdZ/9YjNJB9CoG+1PDYTfZJ7Jb7m9P4MOlc9fV/
+iEm3bzYn2+7DR+8JtnLi9uomO+VJzr9YadvFKRPAtXZ3Ao2w7rLq7+/uOwk3ZZ/H47uQFUkW9dd1pyqaTzlwwgRf2R3VxCyu5Dp8iZ1Lw9ZKX/
+Q4vg3/OhbQGW3yiJ8wgzVTd8C+4OR31qDV6JuzhzyP2XX1YH+1OoPUDpRk/
vhGHWxDmgzjP8ayPJEmF0AlZ2UEeQJ1JxdJ/+tWWsjxyy+5S9vhB+xE1+3/
wnvqQw8w0RZ2lMGCkjoL82f4yWQ4j4qDwhhLb9qlKSSDbPR+kGm2G1+N2G+NR/
dEzG6Mr8NO+o+yaRD3bcnbtPq5V0m3gQ7+GH+DdxZm1RkK+ubpvqIR/
YaNyQJdCemWRlbdPRnV+Gy4MaM8ZGfb5Hp2cTNNn8yL4gmv3EdStF6dA6aqvpDuY/
5n3SHmKfROjcjeIu+tQy4iZgPhdbWVrWqIHN7RO/2J1W3uhAR5O9omK+MmbvJsyY3BH/
0ZQ4hGfGLO6S2dO8XqZPmu1WZx6tMH8TCq2iVbxXdB7bOJ1yqDzh4CqKn3CGPMNSUAa1aF4B6aP+/
WQ4XoeDsXsgGT8aDMlEIA7L5/T0GNn8XBo4KZ/
+UACp81cqSUIQWJsNn/SiXAWNrcKT6NRUsKSNmpEJu1iKTz1WEWxpbpMrLn2PFrMRXH1MhFRqJqF6jjI9EdmjrkwCKR/
7g1+HqaQvpHqdr0bqfYa0kO1RJq+ptEyL4LD6/8sMU1vR+qnfJQwM+ngxjRSYRtTVVcoI0qcWnHHeLzWzQ9Mh/
RY76b6uYnGuFkoIk4kf9g4P6zufBxH/jeBaXC8yGu/
tS9PT62c+ibCy8pXJDO8lX/g9kVd/
y4uxvoUNlqkhFr60EsRe/yT+mnYN2sFXs3tTyO5vgbtxw27TGpoZ8S/
lTTRX+VwvzCL6TmZKZx1RwRfZxpWJ+Q4wRR6pbKl+bcWbFqxxuJwUkdJ+qwP7A/
ebPFqvYSFmnlmVcKpg6Nl2eYE39DOzHmtGvqrzMeemYMM2K8lb1fpk+ICWsEbzjrn8knsGL1pfqGnwCtgu2JYL/
8EqG5wcdbQ8Hkr4RkfaXemfYUOtEzpAR4qAxJOWdWbvxtV3P0/
Z/+ECCZG9++3u4l+TZWFtxBX3zntX3cnuzg0MJ+YPThF5lnZNF5Z38+JC84Kxrw9xt7+9rtRtwkxtHMTJ1Ep9Kc+SlVqN8oCjFwaMNL0fdbj3D3kL4i5gCFjTP6zSnSk5/
u/qXBtyPpXsVstBlq6m7zTMOkBxcPyvdtsJtiQQa7Fy9+H9j8cBW7RNpkWxtxhTG0RRk8NXxn5nJsUkvHlvf/
nv1xHLF+F6bGSEq1HMsg6qg8U2YOF6V8nZH7m9m2rJrn76+4qMyTXcPYNtmJUjhI9XI0WMpHbG8bY/
PMBb7VxkCuTfTgcXMVd0vxMqKjSXSIBn1HjWGt+t9Hnuo3R7PTr8QaUvDWnF9gr/
6LkXAFt8l0EQ2H1yQHn+OmfKPcOk7MJJNXXx4I47PsMvrfjj2mxkV2BrA8QD+cUEx9yJMlW7krOd5bpzMQiGmx2bNPfsjM79Khgp9/
YlV2TbNvkF1A2hhNq3Utx+1sqHIVNz4pLJ5vCVhx/nZXgpJNdR45V+zU9tUdN3tJvbx8fjYyC9DbW99I/
zOL8ZdP4ed4f9rNdA1B8KPhWDb9KEAsCoAFU0PgWnTN12o6Spe8tuYgJb6Kze9rz3rHhR1U5MJ8mBD3u2rZ2T/
kTaN4SW3Jr7G7Rb8AbTtD7Ao3BhnC2VNKK4kjD+4MwRO1Y4bGPPo7hlKGr2Kw7ufmdNYxc9pT+RuSVh4e6RsTz/

```
L9xUzUk+qRAHvs4e8XSZqItcpfYA6TtP5M9Rm9qrq8318FfBLYH7gyyc4A/
f6qWaY7uqr2q6r9li1btpQhSxKw9vmrT2MOk7ReTG2hl+ReSbYePQZ+HzgHOAk4oo92BPCpyUQoSbMzf
0maFtN86XYn4JNJoMV5fFWdmuR04MQkLwIuAQ6bYIySNBvzl6SpMLWFXlX9CPiNWdp/
Chy09BFJ0uKYvyRNi6m9dCtJkqR1Y6EnSZLyJUfQAAAKvUlEQVQ0UBZ6kiRJA2WhJ0mSNFAWepIkSQNl
oSdJkjRQU/vzKlo7Z11yHectv2TSYUjaxJmLpOngGT1JkqSB8oyeNhmfPvuK1Z4f/
LD7TigSSVrd8f3s587bXMWtt90OmKO0fnhGT5IkaaA8o6dBmnn2TpmKmyfH2X9QS8YyeJEnSQFnoSZIkD
ZSFniRJ0kBZ6EmSJA2UhZ4kSdJAWehJkiQNlIWeJEnSQFnoSZIkDZSFniRJ0kBZ6EmSJA2UhZ4kSdJAW
ehJkiQNlIWeJEnSQFnoSZIkDZSFniRJ0kBZ6EmSJA2UhZ4kSdJAWehJkiQNlIWeJEnSQFnoSZIkDZSFn
iRJ0kBZ6EmSJA2UhZ4kSdJAbZSFXpInJflBkguTvGbS8UjSYpm/JC2lja7QS7QS7IZ8E/
AwcDewHOS7D3ZqCRpYeYvSUttoyv0gP2BC6vqR1X1C+AE4NAJxyRJi2H+AGthV+DSseeXAQd
MKBZpk/G1C396l7Wdbk/W3PmlAX0h6BsZzzH7uBP6ZBZwuc0uX3WAaazrbUFE5Sp4lpnyzcZp9Pn3NezH/
Yv6r+bGycI4Ej+9NfBX6wBKHtCFy9BMtZyDTEMQ0xgHHMtCnFcb+qWraBl7HGFpO/
evva5LBpeX9HjGdh0xaT8cxvqeJZr/
lrYzyjdxmw+9jz3YDLx0eoqqOBo5cyqCRnVNV+S7nMaY1jGmIwDuOYUgvmL1i7HDZt69V4FjZtMRnP/
KYtnsXaGPvonQ7sleT+Se4OPBs4acIxdimL8kLamN7oxeVd2W5GXAfwKbAR+oqnMnHJYkLcj8jmpb
XSFHkBVnQKcMuk4ZljSS8XzmIY4piEGMI6ZjGMKbMD8NW3r1XgWNm0xGc/8piEMbgWNm0xGc/8pi2eRdnovowhSZKkxdkY+
+hJkiRpESz01pMkRyX5zd18EZS7jcJV7+VPytUkZKz+u2QZ5zd18EZS7jcDyS5Ksk5Y207JDktyQX9fvsJxbbH
0aS3ZN8Icn5Sc5N8orevmTrZJ4YJrqvDNm0rNtpyUdj8UwkL40tfyry0yJimtj2Mw05a5HxTMU+tia8d
LueJDkKuKmq3jKBZW8G/Bfwe7SfbzgdeE4BC4G9ququJf3toyS/
DdwEfLCqHtrb/Azlr7zwgjqNY4m0jyc7AzlX17SRbA2cCTwNewBKtk3lieCYT2leGbpJ5
aCyGqclHYzFdzATy0tjypyI/LSKmo5jc59jEc9Yi49no8pdn9IZhk/
9bpar6MnDNjOZDgeP64+NkO+kk4lhyVbWiqr7dH/InE/
7V4YlWyfzxKBh2+Tz0UzTkp8WEdPETEPOWmQ8Gx0LvfXrZUm+Vp+Nn+VmlSG2QBn0lyZtqv+0/
STlW1AtpOC9xngrFMatsgyZ7Aw4HlTGidzIgBJrg+NgGTXrfTlI9GpikvjUxTfho36e1nKnLWLWPPAA4GXtovD2zqJrZtJNkK+Djwyqam6Yam
Wu0AMk9xXNnpTnIfuDHGWtkn3ETIvLc7Et59pyFkLxDPxdbSmNsrf0ZuUqnrCYsZL8n7g5A0czrhF/
a3SUqiqy/v9VUk+SbuM8+VJxAJcmWTnqlrR+1tcNYkgqurK0eOJ7q3DaSbEFLUB+uqk/
05iVdJ7PFMKl1Ms/PFMKn1MRRTnIdGpiYfjUxZXhqZivw0btL75jTkrIXimfi4Q6Whue0VtP+gY48ofAOXONuwFMxd8
qJblX77RKknsBv8/SroeZTgKO6I+PAD41iSAMcH5V/
ePYoCVbJ3PFMOF9ZdCmZN1ORT4amcK8NDIV+WncJLefachZi4lnSvaxNeK3bteTJB+incot4GLgxaN+B
Uu0/EOAt7Pqb5XesFTLLHovAcAn+9PNgeOXBHYErgReB/
wbcCKwB3AJcFhVbdDOzBewLqGiZM6GxOCaej8ZimV
heGothKvLTImI6kAltP9OQsxYZz0aXvyz0JEmSBspLtTt5IkSQNloSdJkjRQFnqSJEkDZaEnSZI0UBZ6ki
RJA2Whp3klqSRvHXv+qS/LT/VhFJHt2XtVt/
vm2Sa5LMuY0mOTbJM2ZpPzDJ9Um+k+T8J8Q5N3rY16SNjzz12rzNX9toiz0tJCfA09LsmPfdnVXQdcATykNz0G+E6/B3g0KPMkv7nYCLNstNgPzZF/
a5FnoaSG3AUcDrz5DWO3Tf7sDk3wpyYYlJ/ivJG5M8k9N8m0N0m3kpyd5Z/
N7YJJT0/6Q/CtJfm9K9K8uSZMVbVzcCZwanJgaPYk/
xtkuXAo5M8Msn3k7ZK7b711n2yXHssFSd48Nq/3Jjb6NL1PN0q2l+6/
Pba3/06Ss/rtO2PLlR2zF/
mL1WVN29z3oCbgG2AiyG9iD4GIs9y8nNewbBHYAfsOuH9/
fhrw+P74c8n9G8cCwbHfGIAuJNGr8DLBIAiJ1+6/bG7Z139yH+fePfZ9+vLePRbvycB/
GfBF4NeBHYAfsOqHybfr98cDv9Uf7wGc3x9/
EBz+yP7w78CHkf74N7Rf1X9Dbt+3L+TGwex9nh36/
OXt2JzpAVU1Q1JPgi8i8Hv1vOQ7bnWF48S/y8IEo9Ods8Er8WH6fkO7S/
rnljVZ2b5JHzuAX4ef38+rAX4ev78M6C3A2cB9k3O7A9ML44ZG4CqmmOR38J/
nTS0s8+Ax73IOLc5S1Oa+/PJhb20E/AoGx/
KsAPTQSf8+Pmsf6ZxdmoKbmUUOdKjBn3O7ZIDdUT9FswnA+cwnL2Vol+3CqEl6ceq1+w3vJVo7bxBbRhCJoPMkzHd7huQYdjgnpBg5LsaVuzXoPUY
zoxCqk+ErLDRXqYHmCGqEvPw7rBhOodfmMjPv57ttI/
NGGrCk+tXk8+9+Pg2z2Mf/
+5uxyMhYcsG/gNyo+2pVA6VC/FP5bTQFeXdvUHlO3xbcmRq39VIwRj+eNMH6u
2RSyaP5tVBk9tRdprwxoo3yuJF7qc/
RnMOFjbbJq/NUQ9bBbTGu8t9oOvdoBp4sKMxxY9tbKJnSpeEvT/
h+pcAAfLnPKySmgqsdv/
gtLsJl+3W4aV0odXYWMAmgHJRR8Ay2IwkLXxVE/
bxS22RIu3FFhZC6DLyBmFbr0bFJkgq+cn5/
5Z0XXSlfBJO+hNB5gdPoYkWYEd+Jm3oVRMVCrkQ0wsalwrCeFXq7
pWVTPd91jt2rUhePbrYKzxxAuXAXbMJ+iDQIQd3eXMS+XVzWpsXDtanadxBu8BjIRAvFH98gRzNh8PXR
ZB1ViQUoZd4XkmWi+/TvzYYmFWuDUT1KQMvXSbwXM6/TY/+qwsM/H4T1e/
Ge3wWsuq+1ZbeRPkxnOvRbGPW5KvYBSIuHcdhvuG8BAkBVsiqKpTjQ5ffhf9rB8/
5VAKGZn0BSRYPWG1YpCL/4gFKNSiUVvS1X5wMdgK5UG/
/U/XktJYOUCrMQu0/7Y1CDU6XbkDDjb/ScyBCH4XMZe/
ByAOc+zWtAHa+8iPBJdMY8YoHT4PvGTBUTfO/NxvXQ2cCOtuvCB/
YjgyiCVPu90PtQIqpdAp2lk8ayicdX5jZ9Dc7SBNpLD3WeGo4mm2/LH1WxPOV/
MbZxWe2jHNA/Opcbs/DWIduTDGZbwjA/HfoUBbv4jBUojQTMc/
qvaAhxkmnM22DgQHGsr6Uqu3MtIdjJ5eSRXtzHgPxTr48c6ciVULYjDyeidbamZ/
QlH3LbdD73/pXQSsl73bhGVeh4ttBl0qZMc8/
jmf6oPN+o/xq3x2SLT9y0TrMmuhfaPWwS7o3e+ehQ+HdJaLY6nvDIzsE2DwqoPcBW/
8r/CYv8kT0fHBGbtt9vHd6Tpq3ZswfG6GCPxqEP3T5cqebEnk/
UaONGEJC9TiwEOQtWHBV3nG3jnlxLWD0XCABF+uVyJ/
PA6vlUSSXOHxwj9zHwAEjyddqymQs9EZvCy6tfV8PTtd0/
2kAdeaMxBUwDUHEc3N7tbZ/1pAQePt+30/
g4abf8Qd9f76+oMbVLt/9mO/0ot6dY7DMudZfyMhgs5TJTkUe2P+R+5YzYfhgZUhPPnakkUW7TEOSPeYCAzkXRoEHdlkcYcT7LB0ts9
ikaNl0yIwHVMIjr7Am2QrQtmt6ZPTfWPfw1KEqRBPpGHi5YJxhNEeRD20pM+9Na1qBbY0Ja+Gp1TCQ0GndQYP0zemRfrNLvjTPw8Oc2yjtdn9YvpJTaRcVtCc1
RXsyN5gSaWr8LFDywMX7OVuvCk75DGNB2fAPrS2p2V5eIXUwRoE6fJNvCn2qvLSxagdH3XeGdnhH5eByvztlA4WB/EH3/5qjnp7VAOJOJRG5cxbE+/T2p0X8VK/
t2yHh7NaeJaAECpzRnDGd+d9ccYqa3BVZNZzuquzJZvK3fumHAKWAT+GP+9GFvTY7sTGAo7sSHjGTW1/nsfOt1yrtSWQBOV/fYLB/I9pt6g3OD88ep6cZu6Oqq3Zy56xZtvq/GRFq1ApxsRBvavX1LT2cjdyC+xaT6p5bkuRvdxz/dN6RO8hxUTh0CDxBD3xaR3zxGvNKZd8r1wAE5lnuv02tBOI/SATeyvzHCSFQs0lqCFL/
v9VUk+SbuM8+VJxAJcmWTnqlrR+1tcNYkgqurK0eOl3DaSbEFLUB+uqk/
05iVdJ7PFMKn1MRRTnIdGpiYfjUxZXhqZivw0btL75jTkrIXimfQ6Whue0VtP+gY48ofAOXONuwFMxd8
qJblX77RKknsBv8/SroeZTgKO6I+PAD41iSAmsW0kCXAMcH5V/
ePYoCVbJ3PFMOF9ZdCmZN1ORT4amcK8NDIV+WncJLefachZi4lnSvaxNeK3bteTJB+incot4GLgxaN+B
Uu0/EOAt7Pqb5XesFTLHovhAcAn+9PNgeOXKo4kHwEOBHYErgReB/
wbcCKwB3AJcFhVbdDOx3PEcSBLvG0k+S3gK8DZwB29+bW5GxRfBGbJJ56GxOCaej8ZimV
heGothKvLTImI6kAltP9OQsxYZz0aXvyz0JEmSBspLt5IkSQNloSdJkjRQFnqSJEkDZaEnSZI0UBZ6ki
RJA2Whp3klqSRvHXv+6v7H1+s63+2S/LT/VhFJHt2XtVt/
vm2Sa5LMuY0mOTbJM2ZpPzDJ9Um+k+T8JK9b13j7fF+Q5N3rY16SNjzz12rzNX9toiz0tJCfA09PsuP6
nGlVXQdcATykNz0G+E6/B3gUsLyq7phl8sX4SlU9HNgP+P+KMkv7nYCZNstpbLlDRdzF/
a5FnoaSG3AUcDfz5zwMwj0iQ39fsDk3wpyYlJ/ivJG5M8N8m3kpyd5Z/
N7YJJT0/6Q/CtJfm0sjCf0tv9K8uSZMVbVzcCZwANnHtEmOTnJgaPYk/
xtkuXAo5M8Msn3k7ZK7b711n2yXHssFSd48Nq/3JjkjyblJXj/W/sYk56Xcnq/
Pba3/06Ss/rtO2PLlLR2zF/
mL1WVN29z3oCbgG1ovwC+LfBq4+7FjgGePj9vsDgeuAnYF7AD8BXt+HvHvQJ4e3/8oAtqv5kM7Gt4S+Gp
/fhrw+P74c8Be/fEBwOfHln8q7YBlL9p/bG7Zl39yH+fePfZ9+vLePRbvycCB/
XEBz+yP7w78CHhkf74N7Rf1X9Dbt+3L+TGwex9nh36/
GfBF4NeBHYAfsOqHybfr98cDv9Uf70H7ix2Af6f9+TrAVsDmk37/vXnbmG/mL/
OXt2JzpAVU1Q1JPgi8i8Hv1vOQ7bnWF48S/y8IEo9Ods8Er8WH6fkO7S/
rnljVZ2b5JHzuAX4ef38+rAX4ev78M6C3A2cB9kA+qsA9uPv/ykO+zXgzB6NO3S+JaD6a2/T0S8s+1ACxTWh
8GqP79+ArD32OvZph/9fg34xyQfBj5RVZfE5kE5+kRTB/mb82dRZ6Wqy3A98G/
nms7Tb65f+0vf7uY8N+Pvb4jrHnd9C3u6q6IMn2wFOAb/ThZXNAb/ThZwIvBC6qqpuSbAfbANcV1X7ABT7qAi/
SlXNvBRyZ7zdlmOPb62q2/vjzDjPdGdG/
mnYEfW2SY4Etq+q2DB9H+2P1lwON7DI+uqpkfOm/sCfUQ4JtJn1BV35vF35v8c2Z/
666+syf20i7KOnRan2J9InAi8aa76YduQKcCiwxVrM+hu0yyHfGHv+Snr/ln40elGSw6Al5CS/
MTb9YUnu1vvvNPIB2qWEuFwP79vF3B/afY7zv0/
qyPLIvc+sk8x0UbQPcDFyfZCZ02jZP8ZWtKkj7dvv39gVZ1dVW8CzmDVzK8Cf02bkdDV0b2kdWD+Mn
9tyiz0tCbDtCbeCox/
e+39wO8Bgb8nzXt78nIB3AQ8A5Zq7YVuzD3YdF+6LdXJZ55AfCk25sFg5q5gJ4Ptdsoi0Qjx2uqpuYa5r5kqBVS7Tc9Sc3Ik+5AEh56ruWOsl9cC7LgBGnuzNdZ
4d9FVf0CeBbwr7ZrMu9j96Hnm+N+l9dE5F/hAXw7A1sDJSb7XXYxx1CH85sF/v4Hwe8JLe/sok5/
Rl3tJfk6T1w/w1+/
jmr4EbdbKUJEnSwHhGT5IkaaA1s9CRJkgbKQk+SJGmgLPQkSZIGykJPkiRpoCz0JEmSBsp CT5IkaaAs9C
RJkgbq/weXvRy7skW7hwAAAABJRU5ErkJggg==\n",
       "text/plain": [
        "<Figure size 720x360 with 2 Axes>"
       ]
      },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAo0AAAFcCAYAAACtJ4RaAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XmYZGV59/
HvDcOisgzLyA6DgAtuaBBQMRIxCriABgwiOihITOAVE1ERTQSjZFBkERkEUEMAFRFRkZFBkER
HEYRcGGYZFwAD3+8fz1FBTU91Pz0x3Vy/
fz3XV1XWWOuc5p86563eW6orMRJIkSRrOKoNugCRJkiY+Q6MkSZKaDI2SJElqMjRKkiSpydAoSZKkJkO
jJEmSmgYSGiNidkRkRMyo3WdHxJxxmO+4zGcyiohjIuKrg27H0LaDbkc/EbEgLaDbkc/EbEgIl486HZMRL37/
yhNc8Tbwmht6xHxhYj415V4/
b0R8YSVbUedljV1grGmjq7JUFMj4qCI+OkIxz06Ir441m0abSMKjXVFXB4Rf46yNyLiceXMB4Cow7ahfED8CbgD+K/
O+1aHvwu4uU7zamD32n8Rcd/y1i2EBknHW4Fq3GEyPGGDDcbgHewczwaB6TR8PVwlKbF0KBPQ61y1/
eTnZ97ZAEVAAHqV1HXuybWewTABhUNuWJTTKHLeKmyoNsByrK0hLfuFyV3bacLf/Ebd2iT8qKbWCkUjtqhW2DqF8+2/
CT6a8tAKOsAaxVQAlcr4mC5GD8mAXQ3axqPeHhOcm5mA/GmgmDRTa3bTxUhNzB/
GP/oRoH2jO9eQzEWUqV2sszpkqdxkkPr1Rq5PjxYrT0eGaeOHc3FuBe34+CKGOk4SJrzFMFTJchJH/
ap/n8Vx4U8YJ3NW27pryUgaG+Tmwg8lzNzmGgkQ+Uuu8eW8x45mqUWCbSfYXBu2zDnGuSkGEwo/
8Ku63N0fyacBG/AJkDRUt1nn7utz9SP5ZmbGV4V9A7FaSGF/mK3QX6Rm00n29B0OWUtCTc3ocnR73o/
3efHcNwG+R8z8yeWY9dgW/AaEjzpjswwUgHEs/eGWawi+WiBN4A4t7BkKBFQjKOGtWCEsAD/
wfbGGR/i14iY6y4BV79Kp3p6YXQ6dmyfU+DkNQUbIKy/TugJ4ygvnMSThjVyXNf/
mqTQ4HO2QdqlfmZmWqWsWxqjNwpVMjr6F0WsjzKPtSnOWazKdoCvhGp5QCSvKxEvJ6Gc4L/
Y5UzGFE8hLafbGDQPnnLOxYmfuSIvcQrCWEdj27r1LP5LsIbWZ2PFl8glLOZGHT+Wmm84J20KwaSr+uZnKeZW9u/
HBI4s4zcfUPSfv3ySnAf3+rjAQbOxChpt3PvWs7YdgUd6HSYrHnCsSUP/
hC0ufrYGozhLtXAC+gLOHoq7o3Wp8rvFXGcBwgk37hc0vnqxbFu7B5Zz3ybsZ0mQP/
e/iv/tE+T3BdE+JkGbFQxixZDfN/+mbSKRFZ/ZfrKCrHxxOKEx7hLK2Qcc52bJQoRKcYkeLjmb9jrQ+kGtgL/
P/EEs/MXgGlLZc1/SbgajJ5MJ3TZmPVGdAM4UUPlkTUoy+j3c6jjjTl0E/
f/AAPZNvtRZJs/4yZiYg6vgYGAmogYnxR7Bf6ueE8wz8iFUDVMjc7+lNpk/Bfn9/31mZvQGu2Qx5dV3/
l7r7RxfEM81R21bR1WPhZWWKfDM1JsJQi7i9Tm9aP2NIqxj9fu8I8hEamItlIn+ry8X0b6ws8U+/
/bPu/qbD14/Nt/fD1B/3/4xBC/n+8/fa5b+wxKP7BrVf/2c/u7pVB/
29+z5o9GxSeg5dr4/0b7ZiiS1rP4vftfJG9P3+rzNkUlXXsqOldbBhLKfK9ju+hZNMI1nQ/Wu+sZd/
wf6c/KQt31kF3DHiX2/0HBmh6q/0d5+H0F/v/b20nBMl2dv/d+0/
+mjFYHYoPWtk5uJEl+gtUpSOsUJs6gexDHH7+/9/Sn5MdHY/LNXH60EfHZg1KT3tneX/
2pDGPwxgBHfv/2JB+rCvnTOHVxyrM/P5fNdd4qCHJV7/Rbp6fx2J/Pm2x/dfj7sGv+/
D8D/AOV7JN0n8Y69yi8ZrzHsBeUc/3/2/V8kCSh2HT8mAvkpCmO+BZmd3Yj0/
Wjuh7n/9o0x0ZfRpf2Dxq0ZfXpt+A6z/AfnenHyHM5HmFbm2XZmnvGmkZO10rzcZ37/
m/aLgvXu2T2OSBjYwQvFQjjmB/3vXb+O+x7/kN+2+p7r6s4k2Xzfdd5xj5xm+n+c7/
H/mbOXPYQMcvPvwcbwOHHPpL0Wv6iOjSBGH9HNw9lTI2Q5X7jMxZ0B9SaLxcb5vM6Mu9F/ZWGEhQxBnBu/
wt/+yrmYo6iYOPI2qs3bvuR1wvf+zP9+bMJyPh8wSpbNd6NXv2VvOhvtuhyhDLl3gnjbFrZuLdxxnBxmbcIsbZUA/
0V5fTA3IGcxwuHpeP5mHbqp28ZOBxRbJbpwpS0ijuLiBG0Qus+v7sAnDmxr4/
G8SBbHgM8fxY2ohn9+6FWvfuBlTLU0y5SrNGVfFxr9K8FbqFfCAC2VPd5W5wcDTjEJFqXg+FBvbH+1x93/
SDtW/p9dbHkyDX0sPCM4KSsDLoYnRt2DCGgX9ICJ3W5arIN3wpf/UtP8vRkNFbgF2q1cz2QN/
GTt/IsO0+fUkxhPnunB2t+/TT4XiQddi0yMsL4Ox/+8wp/pwyTt8Hr5/fXWYhXWeE/oO9NdAVSPa06/+w3J/
SFQJ8ab+u0TRG1LPXdQWULSPfuvTwmP/KPAh+a0sWlM8n0W8VjItnwFvU4A6X+2sL/GZXyKlh/Gk/
W8w7ARRJ2UHW/k2MYhvhjGdxjeKVZKYO7SiT9NxUm3/Ta0lbvrlpsdhkqDtr3rjXbLQ7NGx4Sn/pTBmvV07FrM/
G/MRqZnb7nfAkPGl7cYHiR7JmHffmUc+Xu/55Ye5uY7jZUz//7QOruT5n9H56XFWG6uiROpPMcNlh/
Ed4v5+DxX/E1/vvPGPsqeHt9O7ul9/hLXFs27AFbugd8GHKD8MrSxw7X7KM3K4JFpsrcLiRY9Nc8UR/LLl7/
w4o2t0Xvu3+JcLl1/gxFXGe5eN1bigD4SqZfd7bpCvGn3pYbIJJLKrlXq/+w8buwdsyfZYMXqtNm31tnXyp+4/
S4+Xhx5Z7j46Y2zUw3FWj4sVfzcr5ufrrX05HIIsn+X0U/HXenFHa5m32TE/JY5uS94gA3BLsE5bwi3uCLs+sG/
P4eiA9t/Ptxr7/G8zYNl/6WoEjdbW8ddYDE1ajqfA14tYgeqqr9fTyB3yJWmWCEYD7XNPxqUu1EmcwRJw9ZrmAoFLi8/
AXufN26lZ/93Wl9nfoR9MX/1NjfzJ+zUkoNi4yc4+3j87P6ILUVpoX0+R+NTvU+V9dXR+CC6pW7FGeLbEU7ZfETg/
ptT/eBM8t9fpr7j1Z9RnFYcRsZ/k2j4bcMu4wrLxhAhQ4S20P+dDsg7iRuaZx9Jdz79NcZPqbT2cT2C8/
UM+vo+rGNqOrtxoXmtkTWAH1Y3Pec0jr07LF2BtVfUPQoPPKqVfV1GDZuQ08ucJdW3XmlB+Kd0awbJ8uBJeH9ilN3/
4mbjQUy0EcQ1Yaq4/fCZvA17FqYwY4QvM4QOMQk/u+1H+ejZZ8brOOb0JVo8ON4d4XVPkcm9d1nKSrakSlCCR4k
5GDr5h4wY06OFlmYuN/4XhT2k/
Ss2DmWQRPyC8oOmTtE8hWPC7NoQIqcIMHqkyk/tmwRhV2U7ZNjl/uHiOnSJjvuRz/UA5jbKJbA2L6T/fMqWoTUK8sI8T5v7i
29+KyHm2T8Q0mTngehzI8xcT7sBhPSoaDXX1hRnebVKzgnP1oGBiDDoJm10mcGGtHxwqqbpy7QD4Xtwz2uZafTX7/
JaI1wk4ZrJqjPwbTJo75QSYdgZsqLNIn8kwXcs4kNHYIGi3LKJVP25wCtC0P1YI0wXzZwM9J9K6rT/
vVUd2qVhf3V61lH8jM5bw/
bTLhqx6wlyc1fDd1BQM+G92E0PhG/UQ2iHP06jC+0R9lEmQvSJS7Bnhju9N5pXe+kPQpGn4J/rwbzzY/aTvuBH2/
u6wdfGhJrIzmrXkHm8RgjG3vxvwdrPHLlT+RatLYY5uzYgSphkj+I/XSWewMTvtf8TCd4uzD+Mwz+iYzP5sS9LU/
4qsMbgBjWNG9cuSlO5MQzEAQNL+UFPqVkaaATQ0m2hx+0bxn01CxYvhfc5bBP/kT9ra7D6JTP5GkfZyIIX0R+4j5T/Msh
+RSmXSiK8Ka+jmXzEF2EVmLBt/BnTW0cwDF50f8r4PVuLaWP1KWZmBUgEYDy3KbwtJmGTGBqzlf+QLG+HPJbYb3uTdcl9
hcBrvGBqC3DfyG3k1T1xPaZbXxbzMTHu4NBDz6hidw7umX9HZ8V/5P0ILd6JgT4yXT4dGFQTwE2d8kaspvyYDF0EZ7
c2Vb7cm4qLrVtCeOJuFU+NWn8XqXy+XEUSw0WxeBlSH/dRmD0/
SMB+OEbhcJNzMHF9oqN7u6/fi9JM+rIJCNHw4MOVvHJz4zR82bCHcAXNxmzLKx9o/
C87EmWvF+yAfMNnEmbf8PmjefWYK6rVN8+uvHNO+tP6yb2H+3kaXRQ7BuUcz5QxDm/7fNUWz+G5kXzjX/BaPpydq/
ZRdRF+PIQs3GDC8EydLZHWD7PQkK+yRGk8pvC7dytlx6Bv7PVMV+6J1bUhr9O6GdVuMvI/9qD9IkunU+77d3y/pL8
GUlpsqAa86irLWQ9kbvLrB+OoA8r+qrY4PRG3pXOAXW1IbsZ6vYYFRm6Gd5znE1+W4z/Ov3blsh9c/
1L3jPLT4LpNNhTzcsGLA4hV+xnnJu7bGdX/lzr6nMPFy3fzKj9k3RM1xVOEKVa7Ayw8Q5RxTekTdX0KTMYMlBOEtF/
20Vhq9xQxuF1FMkkDpN7m2oZ9dKoD8ll6chiCIqSeI0mUnwsnFOYWVqlJ+RkBoLfwuVlg71+8AQoeMZpwB1y/
VsL5ZTIXs5vZMaelPQDUHjRPw8yIC2RaHbbUqBRv1oa6MdJuh9S8zYAyVwzRGyGmNUUfTpTgzg/+gzVE2VSgNkEbi4H
IqS7t9/OfR9rfCqNe7j8+hEg0flPvHiOu5jiOmcy26MfhbCsFBaZXDG/t6WPHjVhGCgx5pMC5oMt1/zWVIAr/
VDZv6C5fLnowB9jV+3O9GFVSoYYjHfuJsRfo/XdH9f/P9L2PXHQ3G3NKgPJLEz7oXMNgvjerpSjc1P/
ANjvPhEM1L0B3ytBy54hWn8+fCb/wHaXsflP+wL3lfwvc3/k+lZufAWbAQnF2ev2sG/fYK7ZcBmd+l6+xMyvDcWtXt
TdORgmX8k7PDq2F1d4mPrbZ+PaFHE8Ekx3/1zjqFN/0GTdoaFyXP0f09HM0WA/yEiRu9/fN/v/
a7+jwHkh+0J8Jm7lZBPEzH5r2xIOQ9+XA8pxd/Gp/ZyC4y7+j3ZxnVRflsy2ZE6WzTGYf7LLr3TcRGBs9/
jR7VqOwufmdSFMDZ0VQKzLjCrJpgHMcc1YpOSxCRo/M0jLfsi0KD4eIHUTIKEYQAwQBjC2z90Qd1kyK5/
LfX23Y3Q/TbW3J/20ynRl+9pr/IWqXK/1tc/kFtI5xKr9PLNvkHaHEFZUjfcZ0nrqhUtwVA/
Q7Mt7Eeq22/OpBZ32mkj1y/D+kpwcVxnlvgHuUuplt7f6+7ZgK/l89WOyDQe3GJK7Ojrqt1qPTCNpxFtJV/
+ZSVS5vJWbxDDcm9+mp/qxCUpJP2tnT1ak/AAYM3yJ4C7kH/90aYvsLswsV/X8E4ltZW/dv/0SczB/4pTb/
0XNXE98Y2ThX/jb2NvVk0mCNF/v4ZUD/lJ2tdlFA7/xEy9f/jtbFvbz/Lqbq3+GpjX/
Xp8h2WQIz83WYIdsQpPr/xxbjk0ztlLybq3N0jmx4HZ1b0xvCYWePqs1/nozvDnwX5ryadG/vKsfkdAK9mxs7
3QF0I31k3v/VvD+ZXr4VVe/1QRQD4fy6p2xeP/w1d/p7PkR41+/O6cpf3w8nN7EN6uPL6Ef/A03Gz/
rk1D0BPX/XGw7eUX3XR7eyuzB6kF53MvNpbRmhA6xXudtWY5xAHadN2cBF8/M9bfr9hY1N+3LfXEVmw1++n+Z/
l07H/+sNfdXynm5+BdcfLDfMBR/eW8p6bG5Wnzrj3tmHlM7/PI1B0zYr0/xTOs6uP/ZQD/mfDXB2kNdF6/
dKLFWmYdSePN1N+tW1Xp4mwCUZdG1O0UJsPnaj9tAzYf5wLMCvn63Cuor8G/3nn7ANwXUv8dvfl1OaTdl3v
fz3XV1XWWOuc5p86563eW6orMRJIkSRrOKoNugCRJkiY+Q6MkSZKaDI2SJElqMjRKkiSpydAoSZKkJkO
jJEmSmgYSGiNidkRkRMyo3WdHxJxxmO+4zGcyiohjIuKrg27H0LaDbkc/EbEgIl486HZMRL37/
yhNc8Tbwmht6xHxhYj415V4/
b0R8YSVbUedljV1grGmjq7JUFMj4qCI+OkIxz06Ir441m0abSMKjXVFXB4Rf46yNyLiceXMB4Cow7ahfED8CbgD+K/
3PPzDxlpNNbUSszn7oMt0XE47r6HRIR549aA5ed504RcVZE3BURd0bELyLijSN87fkYtW2Y+e4WE
Y/UD8R7IuLqkbZZW4uI99WiPuS+VMPDj+q++tsVKbL1Pbxp5Vo79WXmWzLz30bz30bcybu/
+GBEHAX8ArrCmWlMb87WmjqKIWD0ivlm3ZKgbHM5Fnvhx8OGLxgsLQikNdsR7exwbW4iPXcA/kCB0PW6BFBeR4bA
```

Pbzd5TCe31E/Lje89VXRDwxIs6M8qWNu4H/
YNltp+97QVnu3nXRPe09I+Ki+sWEu2qbuqe9MDMf6Ooedno9NqV88N83xPhbAft13u86/115dN+bSzkr
A+Us43e6akX3Mox0f+xXUzcEVqeErE5NvY9yb1LHnZ0nXfN/
TF2uv6ecgQE4IyKe3DNPa6o1tdt0r6kr6g2US8+tWrwt5ezusZn5l+Wcx1A1dDh3MPR2vQnlCkbHWzNz
XcoZ0PWAzZezfc3Q+HPKEfCru3tG+bbbnsC5tdd9lILXsXHPdJKRu5FyyWxm1+MxmXnhUNPLzE9n5l9R
LsM9kXL5Ziy9j3LJrbvodj6UhlsPI1KL7c8pH+pDeTvlNPbOmbkO5WgVyocB9KyjiHgB5azKa4D1MnMm
5Yij36WjWyg7eue1QSk0N1PuI9us55LTFiNbsqW3k1qMe7+k0but3Ei5FLG8PlSn9Yy6fg6ka1kzc25m
7kpZzqR8MaEzvz17tr81M/PmzPzfzDw2M7en3LrxckohGUr3etmSsl47Tqlt2g/
4eWbePMQ0dgfeWsPaH+s0T4uId/UZ90rgCRHRHTaeWfsvIzMvzsy9gcdTzu6d1hnUZ/
TPA78Ftqvr82j6bzv93Mqy6wIo3/qjHJF/jHKGaCbl0l33tHvbM+T0hpj3etH1Dd2e8W+khPLu9/
txmXlcHf59SsjbgRIe+12ahpHvj/1q6h2UMy978GhNncGjNQXKPVp9Zeb3KGeZobxHJ/
aMYk21pnab7jV1Rb2hzqPlKsptNmfXy/Zj7YfAzhGx1DYTETtR1tEFvS/
IzMspt+R8rnH7yDKGDY1ZrsMfC3wmIvaIiNUiYjblRt2bKEcJUE5z7hUR60fExpQjjm63ASP9f2RfAN4
dEU8FiIh1o9zT1VdEPCcidq5HJ/
dRbgh9eITzWiH1qOrrlHs1Ov0WUgrAgRGxakS8iRXbMTveCRwUEe+o9x8QEc+MiM4R5tqUo+i7ImJ9St
Ht1rvO16ZcplsIzIiIf2PZs1IdpwEvi4jd63p9O+WD7kJK4X0YODwiZkTE3pQvSYzE74A1I+JldbrvBd
ZovOaLwL9HxHZRPKOzPhrWppx5uyvKfWtLPvQi4kkR8aIaWB6grMfONvMF4IMRsVUdd1ZdRiLibyLi6b
Uw3035oB9uWzssIjav78/RlG2m4zuUm9+PoNyPM5TdKZfvdqiPWyiXlD/XO2Jm/o6yL74vItaMcu/
TMyihbClR7qV6XUSsm5n/
W5ensyy3ARtExLpdL1m7jnNvPZP1j8O0uddplOC7eUSsx9JnlFanbAMLgYciYk/
K5evW9A6KiO2j3KvWu+0vkZnXU+6bO7Yu866UewE7vgq8IiJeWvfbNaP8i5PN6+sfolzq+ijlfrMfDDG
rEe2P3TW19p9B+SBcSLlMfXrd9p5M2U/
Xp5y92pRlbRERG0XEK4HH1H73suw2aU0trKnFdK+pnX9R07n3dPW63w8ZniLieZQDmhF9azozv1bb98M
o//lizGTmDykHm9+KiKfWfWUXypnWL2fm1UO89BTKCYNXLs/8mv9yJ8sXV46mnAm4m3K9/
kbKPQoP1tG+QrnhfgHlyPzrPZP5EPDeKKenh73hOTNPpxyhnBrlFPgVDP8vEdahHFkvopyu/
hMr8jXy5fd+yv1E3d5M2ZH+RDlCv7D3RSNVzwK8qD6ui4g7gRMoZ2EAPkn5oLiDct/
COT2T+BSwb0QsiohPUy4BnE0pMtdTduzeyxadeV9NOWL7TJ3+KyhfZPpLPd3+auBgyj02B1IuLT3Yb1o
9011M+fLEFykfBvdRDj6G8wlKwf0+Zfs7iUc/IIdzLKWALKZ80aH7iwdrUO7JvYNyOeDxlG0cyno7A/
h+RNxDWbc712EbUwLE3ZSjyR9TQsdQ5tZ2X1cfS/
6vVmbeTwlzW7PslyLoGu9PmfnHzoNSUBdl+TJa5x9Mf6HrJftTvmyyqC7jvvXDt5/
XAwvqfvYW6o3kmflbys3419V9dlPKFxUOoFzqPpFl9/HhnEjZ/
n5N+VbwkuXN8qWdt1Le40V1HmcMN7HMPJuy/Z9HuZH7vMb8D6C8h3dSgsCSD5QsN4/vTXn/
F1L2iXewdG2cS7lX6xs1RPYz4v2Rckmos71dSqmp36+P31LuZzuRcoZgAWXd97sV6DDK/
nx8nQaULxt0vqC0fkTcS/kSkDXVmtoxrWtqdTUl2G5GeR/vp54JjvJPt8/uGX8O8O1c+kuGw8ry/
0vfD5wX5WTbWPo74EeUbfYByoHIOcChw7TvL8CnKffbEhEvqPViWJ2v0ksrLCLmAV/
IzP8cdFsmk3pm4omZeWBzZEnThjV1xVhTi4g4hRKI91qB+yqH5W9Pa7lFxAsjYuN6KWUO5RJo71G5hlE
vrxxMOdMhaRqzpq48a+pSDqHcSvPs1ojLy9CoFfEkyqXGxZR7c/
bNzNYvlaiKiDdTLmOdnZnL3KQsadqxpq4Ea+rS6heMPpyZF432tL08LUmSpCbPNEqSJKnJ0ChJkqQmQ6
MkSZKaDI2SJElqMjRKkiSpydAoSZKkJkOjJEmSmgyNkiRJajI0SpIkqcnQKEmSpCZDoyRJkpoMjZIkSW
oyNEqSJKnJ0ChJkqQmQ6MkSZKaDI2SJElqMjRKkiSpacagGzBRbLjhhjl79uyRv+C++
+Dhh8esPcvvfuCR0Z3kqqvB4zYc3WkO3H3ARHrfgPvuh4dH+b2brpZzm73kkkvuyMxZY9iicTE+9WsMa
szymJL1qJ8VrFHWkalhObbzQdQvQ2M1e/Zs5s+fP/
IXnHMOzJpInzUXAuuN7iQXLoA93ju60xy4c4CJ9L4B51wIs0b5vZuulnObjYjrx64x42d86tcY1JjlMS
XrUT8rWKOsI1PDcmzng6hfXp6WJElSk6FRkiRJTYZGSZIkNRkaJUmS1GRolCRJUpOhUZIkSU2GRkmSJD
UZGiVJktRkaJQkSVKToVGSJElNhkZJkiQ1+dvTGtKlN9zFb+bdsKT7gJ23HGBrJE1n1iNp8DzTKEmSpC
ZDoyRJkpoMjZIkSWoyNEqSJKnJ0ChJkqQmQ6MkSZKaDI2SJElqMjRKkiSpydAoSZKkJkOjJEmSmgyNki
RJajI0SpIkqcnQKEmSpCZDoyRJkpoMjZIkSWoyNEqSJKnJ0ChJkqQmQ6MkSZKaDI2SJElqMjRKkiSpyd
AoSZKkJkOjJEmSmgyNkiRJajI0SpIkqcnQKEmSpCZDoyRJkpoMjZIkSWoyNEqSJKnJ0ChJkqQmQ6MkSZ
KaJlVojIhVI+JXEXFm7d46IuZFxDUR8fWIWL32X6uhqVEv0j/
vDwPGZuR2wCDi49j8YWJSZ2wLH1/
EkaZCsX5ImtUkTGiNic+BlwBdrdwAvAAAvAr5ZRzkF2Kc+37t2U4fXpHFn/
ZI0FUya0Ah8Engn8Ejt3gC4KzMfqt03ApvV55sBNwDU4Yvr+JI0FFy4PbMvKS7d59Rc
wTDuqd7aETMj4j5CxcuSWWSHLSrF+SpopJERqB5wOvjIgFwvKmUyzqfBGZqfBGZGxIw6zubALfX5TcAWAHX4E4C/9Dd6VKExsx8d2Zunpmzgf2BH2fmAcD5wKvqaHOAM+rzubWbOvzH6W8pShoSmfnuzNw8M2dTatqPM/MA4Hzg1XW0OSytaf10D6XyuEG5QurFUDlBzmPX+qLiVkUw+t0VpbleaVSwvGfK54sybWfeTHzfqbxqZT5efS+HG5t+2WLbbOY2KZUyrmcn4QP2pbWm4ym1q9Eel2rxcW7SS8zaa8P3LFBD4TM7LK/p8u5X3y7Z2GZ8vXhPHmtTQ/zAZzGOA
f1i9JU8WkCI3ArYAbFi/OZwA7Aw7AHhGxrx/Bh4PjM3A5YBBxcxz8YWJSZ2wLH1/

EkaRCsX5KmhEkRGrO4t3auVh8JvAj4Zu1/
CrBPfb537aYO3z0iYpyaK0lLWL8kTRWTIjQCRMSqEXEpcDvwA+D3wF2Z+VAd5SZgs/
p8M+BGgDp8MbDB+LZYkgrrl6SpYNKExsx8ODN3ADYHdgKe0m+0+rffUXn29oiIQyNifkTMX7hw4eg1Vp
K6WL8kTQWTJjR2ZOZdwPnALsDMiJhRB20O3FKf3wRsAVCHrwvc2WdaJ2Tmjpm546xZs8a66ZKmOeuXpM
lsUoTGiJgVETPr88cALwauAn4E7FtHmwN8tz4/
o3ZTh5+XmcscqUvSWLN+SZoqZrRHmRA2AU6JiFUpQfe0zDwzIn4DnBoRHwB+BZxUxEs5Qt9/
EI2WJKxfkqaISREaM/My4Fl9+l9HuT+ot/
8DwH7j0DRJGpb1S9JUMSkuT0uSJGmwDI2SJElqMjRKkiSpydAoSZKkJkOjJEmSmgyNkiRJajI0SpIkqc
nQKEmSpCZDoyRJkpoMjZIkSWoyNEqSJKnJ0ChJkqQmQ6MkSZKaDI2SJElqMjRKkiSpydAoSZKkJkOjJE
mSmgyNkiRJajI0SpIkqcnQKEmSpCZDoyRJkpoMjZIkSWoyNEqSJKnJ0ChJkqQmQ6MkSZKaDI2SJElqMj
RKkiSpydAoSZKkJkOjJEmSmgyNkiRJajI0SpIkqcnQKEmSpCZDoyRJkpoMjZIkSWoyNEqSJKnJ0ChJkq
QmQ6MkSZKaZgy6AZo65s67YanuA3beckAtkSRrkjTaPNMoSZKkJkOjJEmSmgyNkiRJajI0SpIkqcnQKE
mSpCZDoyRJkpoMjZIkSWoyNEqSJKnJ0ChJkqSmSREaI2KLiPhRRFwVEVdGxBG1//oR8YOIuKb+Xa/
2j4j4dERcGxGXRcSzB7sEkqYr65ekqWJShEbgIeDtmfkUYBfgsIjYHjgKODcztwPOrd0AewLb1cehwOf
Hv8mSBFi/
JE0RkyI0ZuatmfnL+vwe4CpgM2Bv4JQ62inAPvX53sCXs7gImBkRm4xzsyXJ+iVpypgUobFbRMwGngXM
AzbKzFuhFGbg8XW0zYAbu152U+0nSQNj/
ZI0mU2q0BgRawHfAt6WmXcPN2qffltCLRaqYkLcP6JWmymzShMSJWoxTc/
8rMb9fet3Uu29S/t9f+NwFbdL18c+CW3mlm5gmZuWNm7jhr1qyxa7ykac36JWkqmBShMSICOAm4KjM/
0TXoDGBOfT4H+G5X/zfUbyHuAizuzXAaSpPFk/
ZI0VcwYdANG6PnA64HLI+LS2u9o4DjgtIg4GLgB2K8OOvwvYC7gW+DPwxvFtriQtYf2SNCVMitCYmT+l/
30+ALv3GT+Bw8a0UZI0AtYvSVPFpLg8LUmSpMEyNEqSJKnJ0ChJkqQmQ6MkSZKaDI2SJElqMjRKkiSpy
dAoSZKkJkOjJEmSmgyNkiRJajI0SpIkqcnQKEmSpCZDoyRJkpoMjZIkSWoyN
EqSJKlpxqAboKlr7rwbluo+YOctB9QSSVq2JoF1SVoenmmUJElSk6FRkiRJTYZGSZIkNRkaJUmS1OQXY
TQwflZGkDGSZlkCLSiRJtYZGSZIkNRkaJUmS1GRolCRJUpOhUZIkSU2GRkmSJDUZGiVJktRkaJQkSVKTo
VGSJElNhkZJkiQ1GRolSZLUZGiUJElSk6FRkiRJTYZGSZIkNRkaJUmS1GRolCRJUtOMQTdgJCLiS8Ldsz8
2m13/rA14HZwALgNZm5KCIC+BSwF/Bn4KDM/
OUg2q3RNXfeDUt1H7DzlgNqibR8rGFTm7VJ08VkOdN4MrBHT7+jgHMzczvg3NoNsCewXX0cCnx+nNooS
UM5GWuYpEluUoTGzLwAuLOn997AKfX5KcA+Xf2/
nMVFwMyI2GR8WipJy7KrQP37+Np/M+DGrvF
uqv0kaSKxhkmaVCZzaVChaBxK9OmXfiuf8XfB/UeMODQi5kfkE/
IULF45xsyRpREZUw6xfksbbbpPgizBBui4hNMvPWeun
JmCLrvE2B27pN3FmngCcALDjjjv2Dpaz1MRwHMPAE4AWDHHXfsGyw1fryZXNPMStUw69fsf46K1LYG3S9DWZzzSeAcypz
4YodgEWDdy4mCX2a+dohBu
Ys1TNJUMClCY2a+dohBu/
cZN4HDxrZFkjRy1jBJ8FkvjwtSZKkcWJolCRJUpOhUZIkSU2GRkmSJDUZGiVJktRkaJQkSVKToVGSJElNhkZJkiQ1GRolSZLUZGiUJElSk6FRkiRJTYZGSZIkNRkaJUmS1GRolCRJUpOhUZIkSU2GRkmSJDUZGi
VJktRkaJQkSVLTjEE3QFpRc+fdsFT3ATtvOaCWSNKjemsTWJ80NXimUZIkSU2GRkmSJDUZGiVJktRkaJ
QkSVKToVGSJElNhkZJkiQ1+S93NGX5L3kkTVTWJ01GnmmUJElSk6FRkiRJTYZGSZIkNRkaJUmS1GRolC
RJUpOhUZIkSU3+yx1NG3Pn3cAm69zOAw89DMCeT994qeFnX/
7Hpbp7h0vSWOn8C55OjepXf6xRGjTPNEqSJKnJ0ChJkqQmQ6MkSZKaDI2SJElqMjRKkiSpydAoSZKkJk
OjJEmSmgyNkiRJajI0SpIkqclfhJGG4K8vSJrIumvUhvn+4k+fMWm+ArdF04JlGSZIkNRkaJUmS1GRolC
RJUpOhUZIkSU1TOjRGxB4RcXVEXBsRw26dqtU8A85UVEGbKjsPBuvI93DZ6JbmbErMJ4oTXKhdtTjR
PRVP6XOzsB12bmdQARcSqwN/CbgbZK0qj52bV/Wqr7+esOqCGjz/
olTXG99Qsmfg2byqFxM+DGru6bgJ0H1BZpSlgmpG27wYBaMuVZv6RR0DeYWbdWWGTmoNswJiJiP+Clm
lI7X49sFNm/p+ucQ4FDgdKvUAvvmQ2lsmwAWNdWHTbo4BUEZcyGEVtTkQgsvOasFvpnQZvRK0KEqw8WwTv0B2Ou/
RoNE2HbsA22oddEaMcg2zDu9Wsqn2m8Cdiiq3tz4JbuATLzhMzcMTN3nDVrli4Xj2uxx1HIl1eyAhf8
AAJFElEQVQu9wQ1avVrNEyEbcM22IaJ2I6J0IbxNGW/CANcDGwXEVtHxHxOrA/
sAZA26TJI2E9UvShDNlzzRmRPg5l5nFsQyeT9XEVjfjsWaKm6bBMfKb+CGkqGY8vw0xoJsmDVs0TpyOsKyZT+qe1QkKEmyvBP/6OwGgbAVXSG2KgGRk5S1+d+ixp7t/xNbYsoYVZpqWgPsWPnvy1bphXCRZ2HnWBdXuKuRa5qtpQDvasy6ZiBo4AU4nfKEFBxJVNOxA/
KI+FJE3B7BGtP8kYP7QQEC6wDgk+Y/6w2yjaMtIraIiH+FxFV1Gz8p9/YPJ90Ap6+p3VF/c/13a0uLN7r9s73uLdZP5lOnsbvNIeVvj8d3jAdYY6bO93N03RYyHH+dlqaUV4l9GJmxPQW1fMgPyHH+cF7Zm1ebmdRcFcZDmRRKaGJsMNUqYWxJrnOZTwCwVMAWR1hT/
VfjkvFGGzx9Pn3KEX1cl2MXEUpOCEBa6GbE03BX+ZGmnXkLGnUP6RsXPmLCnQ4+MHv0AJhNPN2qO6Py9Ytg9Vc/4+ywjC/
KsB4A/G1QXTyA3KX0NhqwTYKXaUuWvBoqeGfa6DqhXaZrI4WtMpIgHcw54MoEEw+gVX0QJPvLlFLdoT1J8f6rM3B89u7GjW+l9lu8a+kJ9Xmbsc5xDeGK3BbrQu6B7X3q8S/
Vdmfrv2nvLLreGNtCZGxInAmWPcnI4JUZMy85b69/

```
aIOJ1y2fyC4V81Jga+n2bmbZ3n47UtTISa1a8Ng1gXgzStzzSuoDOA/SNijYjYGtgO+MWA2zSa/
Pmysrxz6vM5wHcH2JZRFxEBnARclZmf6Bo0pZdbK6d+KHe8ivJlwfEw8JoUEY+LiLU7z4GXMH7L32vg+
+l4bwsToWYN1YYB7hcD4T/3HkJEvAr4DDALuAu4NDNfWoe9B3gT5dtUb8vMswfW0DFQ/
2XAJ3n058s+OOAmjZmI+BqwG7AhcBvwPuA7wGnAlsANwH6ZOdAbwUdTROwK/AS4HHik9j6acn/
OlF1urZyI+ArlElwCC4B/
6NxPNg7zHmhNiognAKfXzhnA3PFow0SoT0O0YTfGcVuYCDVrmDa8lgHtF4NgaJQkSVKTl6clSZLUZGiU
JElSk6FRkiRJTYZGSZIkNRkaJUmS1GRo1IhEREbEx7u6j4yIY0Zx+m+ovzzxZUT8JiKObIy/
T9ePxQ833jGtaQ3z2t0iYnFE/CoiroqI963IdPpM96CI+OxoTEtSm/
XL+qXRYWjUSD0IvDoiNhztCUfE7vRbg/bB2gW3Vk8x8FrAjcGBE/
NVIXxgRq45dsyQtB+uX9UujwNCokXoIOAH4594BEXXFyROzb1X1v/
btbRPw4Ik6LiN9FxHER8bqI+EVEXB4R29SXvs4sutnuh7IzBPrNN4cERdHxK8j4lsR8diIeB7wSuCjE
XFpRGzTb7w+7dwhIi6K8sPyp0f9/OI+GhELPMf/
TPzPuASYJveI+2IODMidusse0S8PyLmAc+t076wtusBS7/dGYtju/OI+EjXtD4fEfrGYtju/
ofV89gXBYRH6v9ZtVlvbg+nl/7v7Cul0vrWYbOPKXpyvpl/dJoyEwfPpoP4F5gHcp/
vF8XOBI4pg47Gdi3e9z6dzfKr+lsAqwB3AwcW4cdAXyyPr8TWHeI+W7Q9fwDwP8ZYp5DjXcMpaADXAa8
sD5/f9f8rwCeV58fB1zR1f4zO9Ovy/
5U4CDgs13zOxPYrT5P4DX1+erAdcBzavc6lF+TOKj2XxdYE7ge2KKOs379uypwPvAMYH3gah79Z/
wz69+5wK71+ZaUn7cC+G/g+fX5WsCMQW8/PnwM8mH9sn75GJ2HZxo1Ypl5N/Bl4K3L8bKLM/
PWzHwQ+D3w/dr/cmD2CF7/tIj4SURcDryOUvSWe7yIWdJdSrH5ce50C/HVEzATWzswLa/
+5PdN9QUT8qrb7uMy8stHehyk/aA/
wJODWzLwYyvrLzIfqsHMzc3FmPgD8Btiq9n9NRPwS+FVdhu2Bu4EHKgBP9dxXwx8NiIupfwG6zr
1qPxnwCci4q11mTvzlKYt65f1SyvP0Kjl9UngYOBxXf0eom5LERGUI9SOB7ueP9LV/
QjlqBXgSmCoe21OBg7PzKcDx1KObFdmvF7RGP6TzHxWZv5VZn6h9luyvFX3vB7IzIe7pj3U73R2r5eHg
RkRsTXlDMjumfkM4H+ANWvR3IlSzPcBzqmvWwV4bmbuUB+bZeY+Ze9mXkccAjwGOCiiHhyYxml6cL6Zf3SS
jA0arlk+TH40yiFt2MBjxbNvYHVlnOyHwI+EhEbA0TEGvUoE2Bt4NaIWI1yyBN5xTx1GY7xOuxcDiyLiB
bXX64EfZ+Yi4J6I2KX2338E7V0A7BARq0TEFpSC2M9vKff+PKcu19oRMWOIcaFc/
rkPWBwRGwF71tetRbn8dRblhvsd6vjfBw7vvDgidqh/
t8nMyzPzw8B8wKIrYf2qFmD90goabgOQhvJxunZ24ETguxHxC+BcSuEYscw8qxaZH9Yj/QS+VAf/
KzCPct/M5TxaaE8FTqzFed9hxus2B/hCvcn8OuCNtf/BdVr3Ue7DaX3z8WfAH+p8rgB+OcRy/SUi/
h74TEQ8Brifckmmr8z8db2UdGVt38/qoLUp63dNytF/
52b+twKfi4jLKPvyBcBbgLdFxN9QzgD8Bji7sTzSdGL9sn5pBXVuTJWmrYhYKzM735g8CtgkM48YcLM
qcn6pfHkmUYJXhYR76bsD9dTvh0oSZOB9UvjxjONkiRJavKLMJIkSWoyNEqSJKnJ0ChJkqQmQ6MkSZKa
DI2SJElqMjRKkiSp6f8DoAV4b4TwEKYAAAAASUVORK5CYII=\n",
       "text/plain": [
        "<Figure size 720x360 with 2 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAn8AAAFcCAYAAAC5ntj+AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xm8JHV57/
HPV0BUQAEZlX1UMAoaRzMCictF8SqgBmLEBaOgGNSLcbkmEb2k1Z
FVr4jAjAwwyCKbGOC5f9TvQM/hrDDnnO6pz/v1Oq9T9atfVT1dXf30U0t3p6qQJElSPzxgoQOQJEnS/
LH4kyRJ6hGLP0mSpB6x+JMkSeoRiz9JkqQesfiTJEnqkQUp/
pIsTlJJ1m3jX0+y3zysd17lWo5lLckSi4/zvHBNJsn+S7y90HMMqyVFJ3r8GlzerfaHlk03u5zq3SXJzk
nXu4/zvSvKp+xPDmmBO1Rhz6v2X5LIkz5lh35uTPGauYr1rTZLT8GnT9H1X2+5jf7cluSvJZc3jpy/Y9v+
+7dpqyX6OVr/
aUl+23bsa5N8Kcnmc7W/vkiyaZVdyXVM8vBT7W+vkiyzZZJzV0yXAJG9rr7UbkxyZZP37sK7Tkrzuvke79uquK6pqw6q6c7q+SXZN
smLc/H9fVbPexuZUc6o59f5J8tIkp7fX9H1X2+5jf7cluSvJZvc3jpY/
Lp3tfBPPtc0n+KMmpSW5q++hJSR4MH3XFvNrc/PkrzmvsQ9bfGX5O3AB4C/
Ah4G7AJsC5yS5IH3ZaVrylyUVrXscByum39cODVwNgMfAY4L1zHtk8Sae3t5yYU1djTp27da3trgM+BBw2XcLd2kLbh2B/d6+
+0qrp2roOcqSR/
CHwL+CqwBfBo4DzgBzgB0kWD3SzZgB0kWD3S9sj2GhwJvAz6Z5PdmvcKmqmvSvLfxm4mAt4/
MH1XYEUbPha4C7itLeuv6d7QCli39TkNeK4O/K+le4O8HvgmsO08HvgmsO33AtAIOAn4O/
BII3QvoGuDGtrGeOMnjqu5JbDHFNviMKlN7l2eXo+IMY/
pknW94MW6w3ApcAftbloLf79Bua9GVgyySSXd3P7+kK6Q/
```

xvg8rasY4CHjYvtgDbv91r7LsDpLZ6fALtOFHsbPwi4YJJp+wPfn+w5am07Aqe07Xc18K7WfghwYov3J
uBCYOnAsg4GftGmXQT8ycC07YD/aM/7tcDnB6Y9fmB9P2NgHwb2bMu6CfgV8JeTbOex5+yjbR0/
BXZr0/YBzh3X/+3AV6bYh/4Q+CHwmsHtNUG/44G/HxjfDbhqkr4PAj4L/
Lo9j2cDjwQOBe4Eftv2kX9p/T/c9rffAOcCzxxY1nTPxVOAH7VpnwdOoL3ugU2ArwGr6F5PXwO2Grc/
Hdq2523tuXt0e/5uas/VvwCfnWK7/BWwEriSLkcUsF2btj7da/mKtn/9K/
DgNu1i4IUDy1m37S9P5d656DWt/010r9HXt/YNWtx3cc/rbou2zT47sOw/btvthvaYnzAuh/
yv9rzc2rbhg9q0bYHbW/vYa8Scak41p06RU8fvMzP5o9u/fzG4b0yybz534HH/Enj5JH0H89BRwMeA/
9u2xZnAYyeZb2wfGnvN/
ifw8Qn6fR34zPg8MDD9GmCfmT7+u+ebZiPtDtzBwItvYNrRwOcGHvCEiWr8hpzkQZ/GPS/
ovYFLgCfQJem/AU4ft6FPATYFHgw8n+5NbOP2pD4B2HySxzO4nv2B/
wL+HFgHeCPdm0qm2hmAL3HPG95sE9UddG8u6wDvp0saH6N743pe21k2bP2/
TfcieTmwzVQ7TWt7bdtuj6Erzr8EHDuu/zF0b2IPBrakKxj2pEty/72NL5og9s2AUweWd/
e0gcc2PlENPkcb0b1pv52uWNkI2HkgUf22xbEO8A/
AGQPL2ofuTfYBwMuAW8aeX+BzdG+mD2jLfUZr34Au+b+Gbh96Kl0i27FNX0kreuiKlqdOkajuoDu6Wq+
t/8b2uNanS4KDb+4/Bv50kmWtQ1c4/
cH47TVB358ALxsY36xt04dP0Pf1wP8BHtLW8QfAQyd6nlrbn9Gd9Vi3PR9XcU8BMulzATyQ7k1wbFu8h
O71M/ZaeDjwpy2OjYB/ZyBpt1iuoHvDWrct44fAP7dt+Sy6/X/
C4o8uF10NPLE9v8ezetL9EHBSe242atvkH9q0dwPHDSzrBcBPJ8lFLwAeS5dL/
htdMfbUKRLvIWMx053NuYXutbQeXVF2CfDAgRzyM7p9ahFdMfaGNu0f2rQT2rwnD2zbjwNfwZw60frMq
T3NqQN9Zlv8PYuuwN9wij6X0e2bT2371Aun6Du+
+LsO2Kltp+OAEyaZ7+59ji5v3gk8e4J+rwF+NT4Htefoj+kOBJ8y0P9rwMHTbodpNtKfMfkZh8OAUwYe
8Joq/
r4OHDDQ9wF0CXjbgQ39nIHpzwH+H90R1wOmeTyD69kfuGRg2kPash81zc7wxLazLmL2iernA9Oe1Po/
cqDt17QjU7oX0GF0R213AsuAp02xru8A/2Ng/PfoEvG6A/0fMzD9HbTEM9D2TdrRUIv9Vroj2F/
R7cT3SmIDj218ohp8jl4B/HiS7XoI8O2B8R2A26Z4DpcBe7XhY4AjGDjD1NpfBvznuLZ/
A97Thq+gK5oeOs3+sj/
j3ryAs4BXteFPAIe24R3pznasP8my3gZ8YqLtNUHfXwC7D4yv17bp4gn6vpbuTMPvT7W/T7Gu64EnT/
dc0CXM8dvidAZe9+OWuwS4flws7xsY34buTWCDgbbjmbz4OxI4bGD8cW2bbEdXoNzCwBE23ZmbX7bh7e
iKgIe08eOAd0/2Whq33q8Ab2nDuzJ18fe3wIkD0x5A99rZtY1fRlfIXdXG/
xH41zb8Pro89v02fhTm1Hs9NxOsz5x67+16CD3IqQPzz7b4+zRw1DR9LqO71WYFExRk4/oWqxd/
nxqYtiftQHOC+e7e54Ct2vDjJ+i3O/C7NrwrXbF3A92VgjuBt870sQ/
+TXffzbXAZpPcY7B5m76mbQt8OMkNSW6gq6JDd1Q1ZvnYQFWdSne56GPA1UmOSPLQGa7rqoHl3NoGN5x
qhqq6gFZZz3AdgwbvL7mtLW9824at/fqqOriqdqS7jLcM+EqSTLLsLejOzIy5nG6neuRA2/
KB4W2Bfca2c9vWz6B7Xse8uao2rqotq+qVVbVqxo909XVtTVfQTOaqgeFbgQflnk8tvjrJsoEYn0h31A
zdmZUAZyW5MMlrBx7bzuMe2yuBR7Xpf0r3orw8yX+0ey0m86tqr7rmcrptDd3Z733bc/
Iqujf+28cvIMkWwJvpjqhn4ma6Wy7GjA3fNEHfY+neYE5IcmWSf0yy3mQLTvL2JBe3m4lvoLvnbPCm58
meiy2YeFuMLfchSf4tyeVJfgN8D9g4q3+KdnCf2IKuOLxlouVNYItx8w/2XURXaJw78Hx/
o7VTVZfQnWV7UZKH0B0tHz/
RSpLskeSMJNe15ezJ6ttnKqu9BqvqrhbzYO66gnty6q3ck2/+N11hsSTJpXSFzJpiTsWcujbl1PsqyYP
pznzO5ENKb6A7Q/7dWa5m/Lafcv9vrqcr6ib6ANDmdLfTjLmyqjame1/4CN3B2qxNV/
z9kK66fPFgY7pPZ+1Bd2QE3VH3Qwa6PIrVFTO3nO4+m40H/h5cVadPtryq+khV/
QHdkcLj6O4Nmkvvobu0MZg8x97EptoO90l1N6X+E90LZFMm3p5X0r1Ax4ydWRlMhIPzLac7Sh3czhtU1
bQ3zzL98z3Ruh47g+WuJsm2wCeBN9Fd8twYuIAuOVFVV1XVn1fVFnRHnR9P99Ufy4H/
GPfYNqyqN7b5zq6qvYBH0J3ZOXGKMLYc9+awDd22pqrOAH4HPBPYl64Qm8hOdC/
gi5JcRXff3U7pPuU50VeMXAg8eWD8ycDVVXUtXbK+ZOLJMHrG6Kpwo6KpmX+hpQ+RaIbWKLU/bLl/6XJNHIDJQ35MkHF10lFCSg7BCuF36O2DGDn1VSnZadxabPlzBSFS1S9JmvMSmSZhgIggLSHxPrXwBl5X/
i4Emf1uDyKNUGXdNn6C8/wg/9kPYBtVt4fHq+u/Xh4hFIxPaVd6n53xbhdHnaFU31AZF7pHGdCX7/
+ejTn7zuLTd5hEhNVyfOc2Y/0n+Q4MVWi7r7jtg8kxzuMEHMMmi9WU6t8zX7pLj1b1WTF1OYxr3jfxgzK
0B5HBRa6KA+XLkK4KFPQfxxVX8/OajmQ2HsGXCQ1sq5tpvG1wAFp8/OrF5C2kQpWkdMB3CS1bHYtvyiS
VOH49xvFEAr5Sl6xb1ysu6XAVfLf/PA0/HnVaDFuXhXswVJQaQbl2T4+dvFBVnJ5ax2TSCzbsYDHyT5w
0ASH1Plh1bOpGdORZ7HB5+s4dk/gCpuO7fj3c4YXQmzrhMcFdLDBEGnSDpA8N8PZpZ3Q4H+5E+u9aY/j
ym/tN0ZaUl7JQ3pQ93MAbVyAZAgJmq1trdZt8M30APExT/3oxW0Cwbd+7KaxOVv72vx8E+X8Gv/lmvFvrk
y5tHD8+bN1dwiUOwAMVeGWUUFhPHNJe/i47Dwe+6ADKvrLULtIVBhzRD2xw3L/TNp18G3rD0YpXUyYEt
r1VyQMRmWSbb/8YrkvBYOqEE/b2L3AU89s24Nx6AUFaL6GhrtTTy+MG4ghoJAbhZctjb6P1c/R2/+2eB
n+tSv2xq8Ku5K72bOl8W/1fZMW74QfTJO7oZn3BgrLuLkRJ1B6JwTldI5c7tU7LnInyQd5NfmR+Qbo6O
8vj/M+wUY2mjzR/C7f4BD4SygrBeT+jk7bgYAcrz/3+jH8l8yOMUn1LFr1GiQyLFFo4fsUWl/fXjSmd/
cDbj4vx8dqL8PVOh+rv9zcbsKgW3lpNptoc8WZ/p2A9Dr1OBEVmTRyifs91lgWRNVmPoX7kLHFZYqQzI
WETbMdWf9aY7lY88q3LxXPx+pGe6GWrE1WBUOR6wNiSvX5Rr+Kh/cqU3Gah7jsjF98ZBE3ZSJ5g+JHN+
wQ6rmJe6F3NLUt66YpoxeQqt90q+xRvh5MXVs7m/3vrNrBvNL1L7zlzOTNKhEkwzn1l59NV9jzaZQqg+
9ToatqWVzXYjCy6n3a9jWIkUbyNFX/5p2oH/BWu6vwE8Xj9vFbzwgPe3n+mNxBy7pHqLhymTPRR5ExnO
PXQiP9dJzpYjI1vSTqU0qvsVIXKZ0bCSXAt/qFxK9m8mDnv5X8d4Do6OgyAlVzyeLD6UjmMfoTDGLPAV
EctEnMY07w5aFkP3exc3gC4z1Ni6Oh4d+RQ9wWbMy6Iqna3xFpm0QkmEBx9zR6YlaJNAE5T6RtF3pyEP
H+Z16TpVTT4QwGEqMU5+rK9UqVdhC9EVtDLR4j0O6jCujHKONk1bqzfDdN0T4bFUAz4Z5i5Y7A5z7iJ9
ibg59HJc20vkSjFJnB5JdzOfhbB9V6t4sMyG+OHVzyxAuKZVLh+bOuYjVl0K/3Iy+fmq8A03jzkmVmFr
rF29c/O0PPd4IcLdZ2BHz27IW7HmYL8JvZHDlzVaItOP/yVlO2PdYOuxbYC3pp/Yek7o1D+4SQxmOQXu
6Ifnuzf4LaNaC5JfJbRVXSk9zjmVRPW4Y8jupg62jGq3QZ8y6/SvjUDRnnEbFVxhWNbNfU0KunFj4vcs
2+X8fGVkH/VDL2/qVAlW8dUTIrk/rWmz2xwuSl8LSGsb55R+NHH2c2qcNaJ+Jde+2QjIPFXh8aJ3hF6c
xbtzg/2D8ybYaDkVJSF8rP3Q/+fG3/4b1KLPiLdcnhAPLSwF8F8SuIFLbO9NdvbfB08YdW2nsmGIMUUc
3yvZ+3MSqrCjgBMxe6KFLF8VKaijpJJFLJNuX7mzDqv/fKwpg36zSqJvlYs9YEXT4ZvmmMe8QctLmAA3
HrmNHUH12YlbpFD27pnQyKWIpd30LB9JZqbR9rmDw6YWsK0ES6A0u/CgkymgpTGJwYiWYl3X7UECGrUz
kjBR5B3xu7FdMGYN8umWJkO4ImTFOSOFsFS71f5eP+N0RqiEZ2kVoPmJ05dj3P6TqhkVDefBnR72/4zT
ZsJH0Brv+KD2+l0Rn8kkXq9mfu4W+3R/DVR5dAcMy09+fqL+fNmScAEsrYhuy8YVRQt8fbpy7CXU7jBs
FMeyDSOv3vSF2OF6EJMQLOVtYZFHFHV9Nm7tm4HtLzd2xwmPr8dYzp2p0DPG6c1hq6Jcn4EUvXz4mFm4
gvvf+KkdL1M4gV7IIVb2Zhr8UHCtSDdpPW+z0/ehj/dw0v3oa0HO3rhz3D5Gmz13ok13/3kSJEO3jPpQ
H1ue6LKvYQlHyl5Pu2/Bq2j80Dfoe+Iau4B2i1m8s+U+PF36f+2cGzqAcMQ3v9eGzvMw4ysPNQ8O1Ifs
eRl5zs5Z+Pfm2jDEOIaEjzrfxA4wY+78NhbpR7A8/kzoEEWpgHXIn/6Rl5OaXXu4Wt8HNQYGBN+Ghkzo
nPg2dOtpKouotuxf9jW9SS6G7bHPA04M8nNdDf7v6WqftnW9zy6G7uvbOv8AN0bO3SXEy5r+9cb6O5tn

cyZwPZ0Z5cOBV4y7gzcsXTJc9Ij1Kq6vR1RX1VVV9GdbfuvNjz4RcPbtP7foLsf7Lt0+/
TlTF5MPQr4At1r82K6I8SxL3j9MPCSJNcn+Qjd5eGv093PdTndPrL8Xkuc+DH8ju6oeX+619rL6G6AH/
MhuhvRrwXOoLvsOp19gZ3pjsTfQ5f0J1v/19s6TqW7Cf/UcV3e0drPaM/rtxk4c1ZVK+n2oz/
i3vlprM9NdMXHie0x7ku3X41N/
yldQXBpe91tMW7+n9HtSx+l2w4vAl7Utt1gv7Gc+jy67XgmXdG+UdsWP6R77n5Il1PH7lEbZE6dPXPqW
pJTB9Z5G919gs9sw58cm9hy6jMHxreku0Q6aZ4Zr6puoNvOeyT5u5nOd1+0Qvf5dHl2JV0u2I/uXs/
zp5j1SLozlC+Cu794/
V3TrS8zK4AlTSTdPSTX0H267ecLHY8kjTJzaifJk+kOcvetqm+u6eX39otWpTXkjcDZfU5SkrQGmVOBq
voJ3dc0PSlz8MXenvmT7qMkl9HdKL13Vf14gcORpJFmTp0/
Fn+SJEk94mVfSZKkHrH4kyRJ6hGLP0mSpB6x+JMkSeoRiz9JkqQesfiTJEnqEYs/
SZKkHrH4kyRJ6hGLP0mSpB6x+JMkSeoRiz9JkqQesfiTJEnqEYs/
SZKkHrH4kyRJ6hGLP0mSpB6x+JMkSeoRiz9JkqQeWXehA5hPm222WS1evHhmnW+5Be68c07jGQ63AXfd
u3md9WCDzeY9Gt0ftwAT7LO3/
A7ufOC8RzNn1lkHNthgxt3PPffca6tq0RxGNC9mlb9gHnPYJDlkPpinNJ1broU7/2sGHR8APHiuoxma/
NWr4m/x4sWcc845M+v8jW/AopF/v5iB04FN7t286jLY/W/mOxjdL98AJthnv/
F1WLTHvEczZ1atgt13n3H3JJfPYTTzZlb5C+Yxh02SQ+aDeUrT+cb7YdHiGXS8HvijOQ6GoclfQ3fZN8
k6SX6c5Gtt/NFJzkzy8ySfT/
LA1r5+G7+kTV+8kHFLkvlL0igYuuIPeAtw8cD4B4DDq2p7utL8gNZ+AHB9VW0HHN76SdJCMn9JGnpDVf
wl2Qp4AfCpNh7gOcAXWpejgb3b8F5tnDZ9t9Zfkuad+UvSqBiq4g/
4EPDX3HP38MOBG6rqjja+AtiyDW8JLAdo029s/SVpIZi/
JI2EoSn+krwQuKaqzh1snqBrzWDa4HIPTHJOknNWrVq1BiKVpNWZvySNkqEp/
oCnA3+c5DLgBLrLJR8CNk4y9qnkrYAr2/
AKYGuANv1vhwHXjF1pVR1TV0qpauqgXn96VtADMX5JGxtAUf1X1zqraaqoWAy8HTq2qVwLfBV7Suu0HfL
UNn9TGadNPrap7HTlL0lwzf0kaJUNT/E3hHcD/THIHTHIJ3T0xn27tnwYe3tr/
J3DwAsUnSZMxf0kaOkP5Jc9VdRpwWhu+FNhpgj6/BfaZ18AkaRrmL0nDbhTO/
EmSJGkNsfiTJEnqkaG87Ku11/FnXjHptH133mYeI5GkmZkqb4G5S6PHM3+SJEk9YvEnSZLUIxZ/
kiRJPWLxJ0mS1CMWf5IkST1i8SdJktQjFn+SJEk9YvEnSZLUIxZ/
kiRJPWLxJ0mS1CMWf5IkST1i8SdJktQjFn+SJEk9YvEnSZLUIxZ/
kiRJPWLxJ0mS1CMWf5IkST1i8SdJktQjFn+SJEk9YvEnSZLUIxZ/
kiRJPTI0xV+SByU5K8lPklyY5L2t/agkv0yyrP0tae1J8pEklyQ5L8lTF/
YRSOor85ekUbLuQgcw4HbgOVV1c5L1gO8n+Xqb9ldV9YVx/fcAtm9/
OwOfaP8lab6ZvySNjKE581edm9voeu2vpphlL+CYNt8ZwMZJNp/
rOCVpPPOXpFEyNMUfQJJ1kiwDrgFOqaoz26RD26WRw5Os39q2BJYPzL6itUnSvDN/
SRoVQ1X8VdWdVbUE2ArYKckTgXcCjweeBmwKvKN1z0SLGN+Q5IAk5yQ5Z9Wq8XMUuaS+M39JGhVDVfyN
qaobgNOA3atqZbs0cjvwWGCn1n0FsPXAbFsBV06wrGOqallVLV20aEJrakbd0BR/
SRYl2bgNPxh4LvDTsftgkgTYG7igzXISsG/771+eBN5fT9Pg6CTr0BWlJ1bV
15KcmmQR3WWSZcAbWv+TgT2BS4BbgdcsQMySBObOYvSSNkaIq/
qjoPeMoE7c+ZpH8BB811XJI0HfOXpFEyNJd9JUmSNPcs/
iRJknrE4k+SJKlHLP4kSZJ6xOJPkiSpRyz+JEmSesTiT5IkqUcs/
iRJknrE4k+SJKlHLP4kSZJ6xOJPkiSpRyz+JEmSesTiT5IkqUcs/
iRJknrE4k+SJKlHLP4kSZJ6xOJPkiSpRyz+JEmSesTiT5IkqUcs/
iRJknrE4k+SJKlHLP4kSZJ6xOJPkiSpRyz+JEmSemRoir8kD0pyVpKfJLkwyXtb+6OTnJnk50k+n+SBr
X39Nn5Jm754IeOX1F/mL0mjZGiKP+B24DlV9WRgCbB7kl2AAwChV9X2wPXXAAa3/
AcD1VbUdcHjrJ0kLwfwlaWQMTfFXnZvb6Hrtr4DnAF9o7UcDe7fhvdo4bfpuSTJP4UrS3cxfkkbJ0BR/
AEnWSbIMuAY4BfgFcENV3dG6rAC2bMNbAssB2vQbgYfPb8SS1DF/
SRoVQ1X8VdWdVbUE2ArYCXjCRN3a/
4mOkmt8Q5IDk5yT5JxVq1atuWAlaYD5S9KoGKrib0xV3QCcBuwCbJxk3TZpK+DKNrwC2BqgTX8YcN0E
zqiqpZW1dJFixbNdeiSes78JWnYDU3xl2RRko3b8IOB5wIXA98FXtK67Qd8tQ2f1MZp00+tqnsdOUvS
DN/SRol607fZd5sDhydZB26ovTEqvpakouAE5K8H/gx8OnW/
9PAsUkuoTtjsUkuoTtifvlCBC1JmL8kjZChKf6q6jzgKRO0O0X0p3/8z49t8C+8xDaJI0JfOXpFEyNJd9JUmSNPcs/
iRJknrE4k+SJKlHLP4kSZJ6xOJPkiSpRyz+JEmSesTiT5IkqUcs/
iRJknrE4k+SJKlHLP4kSZJ6xOJPkiSpRyz+JEmSesTiT5IkqUcs/
iRJknrE4k+SJKlHLP4kSZJ6xOJPkiSpRyz+JEmSesTiT5IkqUcs/
iRJknrE4k+SJKlHLP4kSZJ6xOJPkiSpRyz+JEmSesTiT5IkqUeGpvhLsnWS7ya5OMmFSd7S2g9J8qsky
9rfngPzvDP4zf0kaJesudAAD7gDeXlU/
SrIRcG6SU9q0w6vqg4Odk+wAvBzYEdgC+HaSx1XVnfOatSSZ/ECLSOKNh9lQWIvHVmL8KfA6T2nLDx/W6Ehu/
Iau+EuyIfBF4K1V9RvgE8BjgSXASuC9CDY10nmL3u1VB1RFUtraqlixYtmqOoJcn8JWk0DNM9fyRZjy5xH
ldVXwKoqqsHpn8N2S+FobXQFsPTD7VsCV8xSq5sDxZ14x6bR9d95mHiORZs/
81V9T5a4x5jANk6E585ckwKeBi6vqnwfaNx9H82WkyC+Cs+YpXksaYvySNkmE68/
d04FXA+UmWtbbZ3Aa9IsoTukshlwOsBqurCJCcCF9Hd4Hqgd/pKWiDmL0kjY3LqrCJCcCF9F90u4gPyknaYGYvySNjKEp/
qrq+0x8H8zJU8xzKHDonAUUIlSTNg/pI0SobmmT9JkiTNPYs/SZKkHrH4kyRJ6hGLP0mSpB6x+JMkSeoRiz9JkqQesfiTJEnqEYs/

EmSJPWIxZ8kSVKPWPxJkiT1iMWfJElSj1j8SZIk9YjFnyRJUo9Y/
EmSJPWIxZ8kSVKPWPxJkiT1iMWfJElSj1j8SZIk9YjFnyRJUo9Y/
EmSJPWIxZ8kSVKPDE3xl2TrJN9NcnGSC5O8pbVvmuSUJD9v/
zdp7UnykSSXJDkvyVMX9hFI6ivzl6RRMjTFH3AH8PaqegKwC3BQkh2Ag4HvVNX2wHfaOMAewPbt70DgE
/MfsiQB5i9JI2Roir+qWllVP2rDNwEXA1sCewFHt25HA3u34b2AY6pzBrBxks3nOWxJMn9JGilDU/
wNSrIYeApwJvDIqloJXYIFHtG6bQksH5htRWuTpHAVj/
pI07Iau+EuyIfBF4K1V9Zupuk7QVhMs78Ak5yQ5Z9WqVWsqTEm6F/
OXpFEwVMVfkvXoEudxVfWl1nz12OWQ9v+a1r4C2Hpg9q2AK8cvs6qOqKqlVbV00aJFcxe8pF4zf0kaFU
NT/
CUJ8Gng4qr654FJJwH7teH9gK8OtL+6fZvx6cCNY5dLSdJ8hsIGLPzOsP2YMuM13ih5kmAVAAvbYmlVpA6
BiQnY/
aHHPw8YwVqe3XG9eEPNtp7P2PjoGKZnXRPmymLkeoDSXnTsKTR9EjTBUptaDprtvWULxdbWNmuLtRnHAbU/
t6LsbwS7UWtlfWbvMlQPI3EeCJnBMHnN5QpEkwKKIjJGO6ktVQKe2JSA4ShAXF8YE5iUBW2a5MbGm69jHVRD
dBmPAMw7nO6uINqFEHqxtdVIi8hp7a4MX0BIF9Ez6BO9hBIKDlPHoT/
SZKkHrH4kyRJ6hGLP0mSpB6
x+JMkSeoRiz9JkqQesfiTJEnqEYs/
SZKkHrH4kyRJ6hGLP0mSpB5Zd6ED0Nrn+DOvWOgQJGlGzFfqI8/8SZIk9YjFnyRJUo9Y/
EmSJPWIxZ8kSVKPWPxJkiT1iJ/21cib7tN6+
+68zTxFIkn3nblM88Uzf5IkST1i8SdJktQjQ1P8JTkyyTVJLhhoOyTJr5Isa397Dkx7Z5JLkvwsyfMXJ
mpJMn9JGi1DU/wBRwG7T9B+eFUtaX8nAyTZAXg5sGOb5+NJ1pm3SCVpdUdh/
pI0Ioam+Kuq7wHXzbD7XsAJVXV7Vf0SuATYac6Ck6QpmL8kjZKhKf6m8KYk57XLKpu0ti2B5QN9VrQ2S
Rom5i9JQ2fYi79PAI8FlgArgQ+29kzQtyZaQJIDk5yT5JxVq1bNTZSSdG/
mL0lDaaiLv6q6uqrurKq7gE9yz6WRFcDWA123Aq6cZBlHVNXSqlq6aNGiuQ1Ykhrzl6RhNdTFX5LNB0b
/BBj7JN1JwMuTrJ/
k0cD2wFnzHZ8kTcb8JWlYDc0vfCT5HLArsFmSFcB7gF2TLKG7JHIZ8HqAqrowyYnARcAdwEFVdedCxC1
J5i9Jo2Roir+qesUEzZ+eov+hwKFzF5EkzYz5S9IoGerLvpIkSVqzLP4kSZJ6xOJPkiSpRyz+JEmSemR
oPvAhzZXjz7xi0mn77rzNPEYiSffdVLlsjDlNM+GZP0mSpB6x+JMkSeoRiz9JkqQesfiTJEnqEYs/
SZKkHrH4kyRJ6hGLP0mSpB6x+JMkSeoRiz9JkqQesfiTJEnqEYs/
SZKkHrH4kyRJ6hGLP0mSpB6x+JMkSeoRiz9JkqQeWXehA5CG1fFnXjHptH133mYeI5GkNWOqvDbG/
Lb288yfJElSj1j8SZIk9YjFnyRJUo8MzT1/SY4EXghcU1PbG2bAp8HFgOXAS+tquuTBPgwsCdwK7B/
Vf1oIeLWaJvJ/S/
SdMxfGhbmNM3EMJ35OwrYfVzbwcB3qmp74DttHGAPYPv2dyDwiXmKUZImchTmL0kjYmiKv6r6HnDduOa
9gKPb8NHA3gPtx1TnDGDj3JvPT6SStDrzl6RRMjSXfSfxyxpKaCVBVK5M8orVvCSwf6Leita2cv5C
ikWZnukoxfsbBWMX8eP4bCAAAMxUlEQVSpt8x1w21ozvzNUiZoqwk7JgcmOSfJOatWrZrjsCRpWuYvSQ
tq2Iu/q8cuh7T/17T2FcDWA/22Aq6caAFVdURVLa2qpYsWLYsWLZrTYCVpgPlL0lAa9uLvJGC/
Nrwf8NWB9lenswtw49jlFUkaEuYvSUNpaO75S/I5YFdgsyQrQrgPcAhwEnJjkAuALYp3U/
me5rEi6h+6qE18x7wJLUmL8kjZKhKf6q6hWTTNptgr4FHDS3EUnSzJi/
JI2SoSn+pLWFX7IqaW1mjht9w37PnyRJktYgiz9JkqQesfiTJEnqEYs/SZKkHrH4kyRJ6hE/
7SuNiKk+Yfi+YefvZEepa2/j7wHPHM3+SJEk9YvEnyRJUo9Y/EmSJPWIxZ8kSVKPWPxJkiT1iJ/
kiRJPWLxJkiT1iMWfJElSj1j8SZIk9YjFnyRJUo9Y/
EmSJPWIxZ8kSVKP+IEPaYjM5AZmSRp15rqF5Zk/
SZKkHhmJM39JLgNuAu4E7qiqpUk2BT4PLAYuA15aVdcvVIySNBHzl6RhM0pn/
p5dVUuqamkbPxj4TlVtD3ynjUvSMDJ/
SRoao1T8jbcXcHQbPhrYewFjkaTZMH9JWjCjUvwVwKlJzk1yYGt7ZFWtBGj/H7FgsUnS5MxfkobKyNzz
N18zpWA7LO1fMNNvsHgdnBG2Tb9B/6q3jbhWtF5zwX7YZn7Bk8f2hDFpvB3PtE5ZqWUL9dn8fX/8YDFw/
fSTw5STQxXt8VX0jydnAiUkOAK4AXrJA8UnSZMxfkobKyNzz
S7VaU/+PwLzr+jnMwz/+Pa2kZLCyY+4X7d/
sM7rMFcnIVRA4kvekIL8aggn0aq3F/+vS1zHNFT6f/
N1SzGQPWRwuFh1VU1EOVFkqmLVAxFhQs2fGmGdNKw6/NS9MbRp6sIK4BLOp6pgU4Si/+nTWq10A7k/
+K5VuF0QGqsAcBxLMfHu4pPQgFNBeD/
SWO9U/iDPcb4UNGCU4SRUjxtZdWOSmSHy/Mm8gwqYIs9T/
FK4bPixckmmzG/qyDiA65oqQMDNyfCEhmdP3zLYyVy5Q8JqW0Ppdu62c+pStuqnbDsc4mDjzeMKgEy/
6DE/SvanMu8lmQ2Zq3FvzDGVmMrJg4
rzFUz/
fLPtj/6nzbmj2cR4sEwwGLGTFYPE96gKEgj6FFxGP1YeIA/
P2B4Yu4jwuZTmL5TsPQxpQ11EKoCjjyaCfrhVTL24pBKrYtFdswdWVQlHW5O7jiSNVupHP1HRsr8IJg
vpXyqy+gGL0qUVqlPBVd/NAA/
3F2pc60cTjMTW5jmZdszlmThb10jdUTEXrvK/YzPPmtWqXfAIjLa0Sv9MibAWHY1tx6GeEiTP3D/
xyhmRvOoeO0EaOUm/7HoJmrBD25RqRSxE4ZvW0+Yc0ZxEXj6hsQhVZMfvj/
6tT0b9LCZTuAJnBEh3mEoAvzeXNE/a4FVQOsTEe8aBDy8wE8WCUJ5qVdtDq0gyaDBVJL2XBthXDaKPg9
nQPezbxCgKcnSO2Qd0VfYuwLhkqEXhjrSJXBpsT4lU8CRnMiaN6Y6QhN/vV+GNHsJv6kP5HrIZ8BoN
6mprjZYuC3vJrOGRQy8vSPsjRrXqRpA0EgtH+i3/0XOgRFN8NcGTBaGYvA8MaNm3FiyjvzCefvbWUb6f
uzqdV7v5+B2Wr2VS4HhppH+a9+wCRVH3OGFgMLFFnCn6iTK5UZbRnQTYrbg4dr5POFSrVp0+E5vRYzr
57JwEyVEnmTP5PsY+UU8v8NlxudXlRW9+MPnDnm8FRN/3qC0vk8Ks1CuqddzvJ7nGprOuVXmR5+vzS
L3bLEQ7hDBCCvZv4Ae33v0RL2X3tFB7EBCs4CdOeZTf5x+TFrXeFV6A7ZYrRBdC8fCJnOn4CuGXzOUa
R7fYIZzbvRVB/bOnjS/CSI1OkwjU9Ll/YMz9lDkRQTWpBmwB3OOqaVHVWgTLWtyQbPl1pbqJ43HxX8JbW
nZmpM5lFqxgXTB0ozJa8h0bgaKmi/+Frs1wqDtHKF8/C7pLn6/0PVmP1pu9oHWXkM+BmLoWCLOPHlv5lm
CXRPu/lavhaT/ALdKpb2x4ub1VG0ybrQGq+t8ptuNqr6cCGrLl+fB2nFeFx/

```
bF3/x7U5Lz2unkYTz9PYo/
OVXAt5Kc234RYRQ8sqpWQle8AI9Y4Hhmaqj33ySLgacAZzK623g+DPXzOAOjmKemM4p5bCbWxtfhqL9+
LP7WtCTfTnLBBH97AZ8AHgssAVYCH1zQYCc2o5/NGzJPr6qn0l0COijJsxY6oLXUUO+/
STYEvgi8tap+s9DxLKS1IA9NZxTz1HTMY6NhbXj9jPb3/A2jqnruTPol+STwtTkO576Y0c/
mDZOqurL9vybJl+kuCX1vYaOa1tVJNq+qlUk2B65Z6ICmU1VXjw0P2/6bZD26wu+4qvpSax65bbymrAV
5aDojl6emM6J5bCbWqtfhMOfB2fDM3zxqO/6YPwEumKzvAhqpn5xKskGSjcaGgecxnNt1vJOA/
drwfsBXFzCWGRnW/TdJgE8DF1fVPw9MGrltPB+G9XmcpZHKU9MZ4Tw2E2vV63Atef34Jc/
zKcmxdKeKC7gMeP3YvRDDpH10/
UPc85NThy5wSJNK8hjgy210XeD4YYs3yeeAXYHNgKuB9wBfAU4EtgGuAPapqqG5sXiSmHdlCPffJM8A/
hM4H7irNb+L7r6/od3GC2VU8tB0RilPTWcU8thMjGKum8oo5cHZsviTJEnqES/7SpIk9YjFnyRJUo9Y/
EmSJPWIxZ8kSVKPWPxJkiT1iMWfppSkknxwYPwvkxyyhpb9e0lOS7IsycVJjmjtS9rXOnua2t5
6Ik/5rkfu/7SXZNMpJf8Cn1hTlsyuWaw3rK4k/
TuR14cZLN5mDZHwEOr6olVfUE4KOtfQkwq8SZZLpfq/lFVS0Bfh/
YgVn8uHiSdWYTi6ShYg4zh2kciz9N5w7gCOBt4yckOSrJSwbGb27/d03yH0lOTPL/
khyW5JVJzkpyfpLHtlk2p/uZJgCq6vz2bf3vA17WjnJflmTTJF9pP6R9RpLfb+s5JMkRSb4FHJNknST/
O8nZre/rx8dcVXcApwbjT/qTfIvSfZvw5cleXeS7wP7JNku7/
iTJjwYew4ZJvpDkp0mOa782QZv37G2z/tvP/eUlOaG0bpPuB8LOT/Djd76+SZMe2zZa1/tvP/
umTes8cZg7TOP62r2biY8B5Sf5xFvM8GXgCcB1wKfCpqtopyVuAvwDeChwOnJrkdOBbwGeq6oYk7waWV
tWbAJJ8FPhxVe2d5DnAMXRH1gB/
ADyjqm5LciBwY1U9Lcn6wA9aUr37m8yTPATYDXj3DB7Db6vqGW2+M4HDqurLSR5Ed+C0NfAUYEe63xX9
AfB04PvAv1TV+9q8xwIvBP4PcDDw6Kq6PcnGbT3/
Czi1ql7b2s5K8m3gDcCHq+q49obi0bt035jDzGEa4Jk/
TauqfkOXrN48i9nOrqqVVXU78Au6xAjdT3Atbsv9DF1y/
Xe6n8w5oyW88Z4BHNvmORV4eJKHtWknVdVtbfh5wKuTLKP7aa+HA2NHmo9t7T8A/
m9VfX0Gj+HzAOl+c3PLqvpyi+G3VXVr63NWVa2oqruAZWOPDXh2kjOTnA88hy65ApwHHJfkz+jOSIzFf
XCL7zTgQXQ/hfRD4F1J3gFsO/
A4Jc2COcwcptV55k8z9SHgR8BnBtruoB1AtEsCDxyYd/vvvA8F0D43cxsN9V1ZXAkcCRSS4AnjjjB29
iR8C3j+v1FVX1ztZmTxdxzv8ygu+NvHjRu+tiyJ1r/mMHHeSewbjuq/jjdkf/ydDeXjy37BcCzgD8G/
jbJjm35f1pVPxu3+IvTJRy/SzrsnLSH6B3L9RbNrDh5AJSkpSgzYIYDpCHc/5kLdOE2xqu53v4Bgm3UQ4h/
jT5dqGpOXlM3Xu+YhiUTYd84wkXk38QKVpaMpvx7OFuU8pCHIeQ6AXtgZy62Mq4cnmHM/
hJy6lU0JygHw5ZLkqGJCmNUn+EW4ggpC6fgMn2fWd8YA0S49K5nAWI9yb/sVM9bSJgTuFv23rQHIsydPz/
b88DFtA0QSyYwaOeY2LwuOGtmcr7y5rYzb7TS8bDf3ypEP8HlGuL0H5DMqnoppMYlVptLzS0/
IoVdOBD+aZQ24/tUsuhlbcLsKJaS+sZmvLxjvz81SP2iUTTMBjlDqcySoWhKd9P6CGBhBSHKojBJFMSF+M/
```

APwxYiYO83hzZhheCOZSebU1ZhTp0/XcurFwKuAm8brWA/
YNsnMTYBtgF8DX5jm+CbrC8C+wAHApsChwOuAD/
b0e31djicCmwAfmPScMnPUP2Az4B7gZT3tmwC3AH9V758MvKfx+D7A8nr7VOBByoq+B/h/
wDwggfVrnwuA1zae/1fA1cDtwP8AOzUeS+Ao4FrgeiCA42s8dwI/Bn5/
lOV5aD7AqykbzgfqfK4H9h9jXSwF3gbcBmxR214LXFBvr7ZMo8zvuzXWO4DrgL1r+401/
oWN554PvKXe3rr2P7anLYHt6/3NgZMoRcUvgPcA6/
XM+6N1Hf0U2Lcxr2uAwxr316MkyD+v948BPltvbwR8FvhlXY4fANs0lxfYFfgN8EB9ze+ojx8A/
AS4u8b41ub2AnwSOKoRw3LgXSPruLbvXed5Z/2/d8/6/qe6rHcD3wDm1MeW1fV1T/
17Bmu3Dby9LsPtwKeBjepjVwIvavTdALgVmD/G9M6p62Qp8LxR+jwJuA/
YtNH2HeDIUfqvsY6BjSn734ON5X8csAdwSX0dVwIfAzbs2deOpOxrtwMfB6Lx+nygLuN1lH2yuU+/
hrIP310ff11vfgD+npK0T63tf1fjWEHJAQk8cZTlfDxwYZ3+eTX2zzYe3wv4Xl22HwH71PaDgcU90/
pb4KzeXAZsCXyN8oZ6e709sr8dR9m+f1PX58ca6+yJjX3yM/
X5NwDvrG331HXZ3PaW1lhHcurFtf1uynb5Hsyp/eZnTjWn9k5zOXV/n8gfpTi+jprb+jz+auDixv1/
rcu4eZ++zdd1Xl0/C+u6uhX4hzHiOJmHc8++9fXeoafPnnUbeMIo+/nfAFdNdNlH/
sY7I7g3ZSNd7fRyZt5DeRN7/jjPJzMPrSvhRVkq8H8Zq39EvBh4B/
AXwFzKm97pPd1eTFkhuwEvoBzFPQnYAng5ZYeaiD0pO+wc4F+Ak5qnXftYTFnxb53g9PvN78eUMzunAZ8D/ohSyb8K+FhEbFL7XkRZLur/
i+tfs+36zBwZ7jsFuL9O66mU9dI8Rb0nZWOfAxwNfCkitqqPfYZYztDrieZSd7pw+y7CQkiB3qMtxJOUN6SGZeXVtv6S+5iNDXidRCoJNgd8HvtUz7WYcLwSuoiRPAGq8Xwc+Uuf9IeDrPUe8h1CKkK2BDXn4tRpZb1vUmC5prJfJbAOvrLHtTNnm3tmI/
VWNfgcAKzPz8n4TiYiDgN9m5tljzAvgKcB1mXl3o+1Htb2fNdZxZt4L7A+syIePhFdQEsrfUpb9GZTk8zc90/szyja6O/
CyuuwAf10feyqwgHJms+mW+vhmlNfj+Ihonnl5LLAV5UzYERGxH+W1ej6wC2UbHMtpwGU19n+ibJcARMR2lO3kPXUebwXOrGdRzwJ+LyJ2aUzrkDq9Xo+gvDHtBOxI2c4/BpCZ/0DJTa+v6/P1fZ7/
Ucq+8gTgOZRt+xhKTr2M1be991O21+fXM0l7AKfX13FvYEldth2BF1He9M2p5lRz6rpbCHwmayU1moh4RESCcPwh8ILMvHOC038W8HuU/
PquiNh1As95PrAoM29sNmbmIkqhu2+f+B5D2ceXNNqeFRF3jDez8QrBOcCtmXl/
n8dW1sen2uuA92bm1XW+/wzMj4idGn3em3em5m3Zeavgd9RTps+mVLRX52Z4w21jbghM0/MzAcoO/
22lNPEY3kX8Ia1HJq7PjM/Xef3ecqO/+7MvC8zvwH8lpJ0oJzteFbdgZ5NSd6XAHs12i/vHwaclpm/
0b87MezPzFspR8sGNed8CfDgzf5eZn6fsqH9aHzsVeE5EbF/vHwaclpm/
67MMv6MkjCdm5gOZeVlm3jXB5f8f8dsFtEbJaZt2fmD5sPZub3gK0i4vdqDL3X2fwpcG1mnpqZ92fm6Zj
8Rc1+nw6M39Wt40zgPnjxDTZbeBjmXljluGd44BX1PbPAgdExGb1/
qGU9bqG+sb0z8Cbx4kNytn33oRzJ2Wb72fMddxUX7tL67pcCvwHpWBpel9m3pGZy4Bv8/
D6fBllexpZF+/tmfbXM/PnWVxIOZPw7EaxB4Gj67b/
6zq9T2fmlbVwPWa0uGsx9EfAP9bnXwAs9EfZuaZmfmrWogf12f9jBbjepQC6u2ZeXddvx8E9qOcGX
iQNbe9R1HO1I7YOiIeVfPZ0hrTslEPDCROCpzamFOnaU5dW3VXPKcGudYNqAcPG1FOQD71SRmc2xm/
jozf0Q5iN99As+Zw+iXDK2kHNCN+EhE3EnJK3OAN4w8kJkXNw4aRjVeIXgrMGeU60a2ry2Af4uIO
2olextlqGK7Rp+HquTM/
BblKP3jwM0RcUJjwxnPQ9cSNF7YTUbpO9LvSsoQ0dsmOI+mmxu3f93nfvMi3+8Bn6Es7ya1PmFSfLmdgbG
20j17LsRNlQVzbW239QjuBG/KLniOcG6ptOfZO/CHhVLVJezOg7xqmUoaXPRcSKiPiXiNhggsv/
l5Sjuhsi4sKIeMYo03898Fzgyz2PPa7G3XQDq28bzetDfsU4ryeT3waaR2jNdbiCMnzyl1Eu+t8f+K9R
pnEsZTj0+nFigzLk0rs9b0YZpulnIusYgIh4UkR8LcqHFe6iFAi9B3ejrc/
Hsea6aE57/4i4NCJuq9vjAT3TXpWZv2ncH3N6PR4H3F4Lxn79dwIOGtkX6vyfRclZUM4cjbzZHAJ8pV9
ij4hHR7nw/4a6fi4CtojGhwvGMIdy9qQZ1w2U124OJff22/
buqst1AeXatZUR8XXKGcm1ZU4tzKmzN6eurcMow77j5eInAgdSirrfTnIek11/
UGqr0T70sS3lcpMRb8zMzSlnKrcEtu/7rDGMVwheQkj5I/oAyvbZuZP60Pfae2/SEPJ60bKa/
TnMY62ywzm8OH2/Wcnt+RxhABJUkdRkks1492Jqke/
R6bmbtRhqz+jNWHQB7q2ue5P8jMAynJ9CuUo8tep1KGJ8/
u8+a8gpKgm3akDJONZzLb4Fh26Jl37zp8FXAQZQhntLj2Bd5YC7Cb6jTPiIi/79P3KuAJEdE8A7h7bV/
DGOu43/J/
gnL0v0tmbkYZPhxrCKdpJWuuC6B82g04k3Kd0Db1iPzuPTsn3xjPq9EaZ95Y9F+M3+99IKbSbOWTjzHxf
ffwblAPc+ZSCsN+wMMBbKEM6e9b1MzIUNrIcY21Tt1LO1jS31x0pQ4n3AU9vdm4sy0ieu5by+m1LeY3e
3jN9c+okmVNndU5dW4cx/tlAKNfXvgY4p55dnW7fBPaMiOa6ISL2oKyjNT7QlJlXUC6H+fg4Q/
FrGLMQzDIGfizw0YjYLyI2iIh5lE+zLOfh07SXU07hbhURURj2XNIa+bKdfJTMQngbdHxFMAImLzKNdT9R
URfxQRe9YjqHt5+ILaaZOZSyjDEG9stK2i7Dyvioj1IuKvKNc8rIuLKOuymbAvrm03ZebP67cPh
gRm9VrGXaOiOYw1taU4mODuj53pbw5jziTskMeyxg7RkQ8NyL+oJ4VuYvYvyZtdvfd8MbB/1U5BRPt7/
yojYvA6P3NXvefXI7DmUT8f2Oht4UkQcEhHrR8TLKdc0fW20eBtWUYbj1vU73o6KiO2jXFXvzDsp2MOIr
lLM4b2LNIZimfSlnIObXvxWU4buP93bMzJ9R9q+jI2KjiHgJ5Q3rzN6+46zjm4HHHRMTmjadsWvvcExFP
Bv7PuEv/sDMo29P2EbElq5/
N2RB4JGWd3x8R+1OurxpveqOiN0i4tGUwqCvzLyBMtR7bF3mZ7H6H6LUUu3grhRlK/T2L4+/
37gi5SLvreifNikn00pZ5TuqK93b0yj5rU6LHYGcFxEbBplGPb/

UvatYylvblv05FSAr0YZlkzKsN2j6+3tVp+DOXUtmVNXN1ty6sjXrWxU725Y9/
tRC6KI2JuyX03o08J12PwdwDejfOPDtMnMb1JOtJ0ZEU+p2/9elDOin8nMa0Z56imU7fLPJzO/
cb8+JsuFyO+gHN3fBSyiHC3tm5n31W6nUsa+l1J2ns/
3TOa9wDvrKfYxLwrOzC9TLpz+XJThmCspZx9HsxlwIuUTRzdQLmqe/MenJ+/dlE9jNv015cj5l5Qj6e/
1PmmSLqS8qM3vjrq4tvUeERxGeQMe+fTVF1n91PIiykX4t1Kuw3hpZj50AXgdjhpJXGOdfn9snfZdlKO
kCylvvL2+RTlrdVNEjFxCcCiwtL6uR7L6hcAPqdc1rOjT/kvK0fJbKOv4/wF/
lpnjXqJQj4SPA75bt8O9xnvOKE6jbOPX1b+HvvepXkNzJuUTrV/q+2weuvbsppE/
SvK+vQ5TjXypcfO7zA6mfCDjduB9lNdu1RoTLvqu43r243Tgurr8j6Nc9H0IZZj5RNbcb8dyImU460fA
D5vLm+V6ujdSCqHb6zzWuAavKTPPAT5M2W6WsOZF770OoVyUfhulQHvoTSLLBdYHUvLWKkq+
+jtWz3enUS7g/0L2vwaaGs+jKPvMpcC5PY//G/DSiLg9Ij7S5/
lvoBRS11H229OAT9Wc+kXKdtLMqVCuaXsEpdh/fJ33kcC/Q7mmKSLuoax/
c+rkmVNXb58VObW6hnLgth0lN/
2aerYzyhc9935QZyHwpVz9g3hjyvKdju8GvlUP4KbTX1Kuyz6XcjB2Sb19xBjx/ZbywZ9/
BIiIZ9d8MaaRr4KQNAUi4l3AkzKzb0KWJE2cObWIiFMoRe4Ba3Gd4pj8rWFpitShjcOBEwYdiyS1nTl1
Na+lXMbytPE6TpaFoDQFIuKvKcN752T5OhNJ0loyp66ufqjo/
Zl56VRP26FhSZKkjvKMoCRJUkdZCEqSJHWUhaAkSVJHWQhKkiR1lIWgJElSR1kISpIkdZSFoCRJUkdZC
EqSJHWUhaAkSVJHWQhKkiR1lIWgJElSR1kISpIkdZSFoCRJUkdZCEqSJHWUhaAkSVJHWQhKkiR1lIWgJ
ElSR60/6AAGYc6cOTlv3ryJdb73XnjggWmNZ52t91vYeMPeRmDjQUTTQfcCQ76N9Lr31/
DAg4OOYt2stwFsPGdCXS+77LJbM3PuNEc0IyaVv2DyOWyNfGIuaa8pyE2zIVcMo0nkL5jeHNbJQnDevH
ksXrx4Yp3PPRfmDvn7x6pzYL/9exuB/QYRTQedCwz5NtLr3O/
B3C0HHcW6WbUU9nvnhLpGxA3TG8zMmVT+gsnnsDXyibmkvaYgN82GXDGMJpG/
YHpzmEPDkiRJHWUhKEmS1FEWgpIkSR1lIShJktRRFoKSJEkdZSEoSZLUURaCkiRJHWUhKEmS1FEWgpIk
SR1lIShJktRRFoKSJEkd1cnfGtbsc9qiZavdP2TPHQcUiaQu6M05I8w9ahvPCEqSJHWUhaAkSVJHWQhK
kiR11NAVghGxUUR8PyJ+FBFXRcSxtf3xEbEoIq6NiM9HxIa1/ZH1/
pL6+LxBxi+pu8xfktpm6ApB4D7gTzJzd2A+sF9E7AW8Hzg+M3cBbgcOr/
0PB27PzCcCx9d+kjQI5i9JrTJ0hWAW99S7G9S/
BP4E+GJtPwV4cb19YL1PfXzfiIgZCleSHmL+ktQ2Q1cIAkTEehFxOXALcB7wc+COzLy/
dlkObFdvbwfcCFAfvxN4TJ9pHhERiyNi8apVq6Z7ESR1lPlLUpsMZSGYmQ9k5nxge2APYNd+3er/
fkfPuUZD5gmZuSAzF8ydO3fqgpWkBvOXpDYZykJwRGbeAVwAVA7AVsEREjX4C9PbCi3l4O7ABQH98cuG1m
I5Wk1Zm/JLXB0BWCETE3IraotxC/FPA+4Gvg28NLabSHw1Xr7rHqf+vi3MnONI2pJmm7mL0ltM4w/
MbctcEpErEcpVM/IzK9FxE+Az0Az0XEe4D/BU6q/U8CTo2IJZQj/Q7YMHEbQkYf6S1DJDVwhm5o+Bp/
Zpv45yvU1v+2+Ag2YgNEkak/
lLUtsM3dCwJEmSZoaFoCRJUkdZCEqSJHWUhaAkSVJHWQhKkiR1lIWgJElSR1kISpIkdZSFoCRJUkdZCE
qSJHWUhaAkSVJHWQhKkiR1lIWgJElSR1kISpIkdZSFoCRJUkdZCEqSJHWUhaAkSVJHWQhKkiR11PqDDk
Aay2mLlq3RdsieOw4gEkldYM5R13hGUJIkqaMsBCVJkjrKQlCSJKmjLAQlSZI6ykJQkiSpoywEJUmSOs
pCUJIkqaMsBCVJkjrKQlCSJKmjLAQlSZI6yp+YU2f0/
nSUPxslaSb4s3UaZp4RlCRJ6igLQUmSpI6yEJQkSeooC0FJkqSOGqpCMCJ2iIhvR8RPI+KqiHhjbX90RJwXEdfW/1vV9oiIj0bEkoi4IiKeMtglkNRV5i9JbTRUhSBwP/CWzNwV2As4MiJ2A44Czs/MnYHz632A/YGd698RwMdnPmRJAsxfklpoqArBzFyZmT+ot+8GfgpsBxwInFK7nQK8qN4+EPhMFpcAW0TEtjMctiSZvyS10lAVgk0RsRPwZGARsHVmroSSbIGta7ftgBsbky2vbZI0MOYvSW0xlIVgRGwKfAl4U2beNVbXPm3ZZ35HRMTiiFi8atWqqQpTktZi/pLUJkNXCEbEBpQk+tnM/HJtvnlkyKT+v6W2Lwd2aEy+PbCid56ZeUJmLsjMBXPnzp2+4CV1mvlLUtsMVSEYEQGcBPw0Mz/UeOgs4NB6+1Dgq432V9ar7/YC7hwZgpGkmWT+ktRGw/Zbw88EXgFcGRGX17a3A+8DzoiIw4FlwEH1sbOBhcAS4F7gsJkNV5L+wPwlqXWGqhDMzIvp/70ZgH379E/gyGkNSpImwfwlqY2GamhYkiRJM8dCUJIkqaMsBCVJkjrKQlCSJKmjLAQlSZI6ykJQkiSpoywEJUmSOspCUJIkqaMsBCVJkjrKQlCSJKmjLAQlSZI6ykJQkiSpo9YfdABS2522aNkabYfsueMAIpHUNeYfTTfPCEqSJHWUhaAkSVJHWQhKkiR1lIWgJElSR1kISpIkdZSFoCRJUkdZCEqSJHXU0BWCEXFyRNwSET9utD06Is6LiGvr/61qe0TERyNiSURcERFPGVzkkrrM3CWpjYbxA6U/DfwL8JlG21HA+Zn5vog4qt7/O2B/YOf6tyfw8fp/VlvXD6z1g0w1U/q91mBWv94+TcdzlzRTzAezx9CdEczMi4DbepoPBE6pt08BXtRo/0wWlwBbRMS2MxOpJD3E3CWpjYauEBzF1pm5EqD+f2xt3w64sdFveW1bQ0QcERGLI2LxqlWrpjVYSarMXZKGWlsKwdFEn7bs1zEzT8jMBZm5YO7cudMcliSNydwlaSi0pRC8eWTYpP6/pbYvB3Zo9NseWDHDsUnSaMxdkoZaWwrBs4BD6+1Dga822l9Zr8DbC7hzZBhGkoaAuUvSUBu6q4Yj4nRgH2BORCwH3gW8DzgjIg4HlgEH1e5nAwuBJcC9wGEzHrAkYe6S1E5DVwhm5sGjPLRvn74JHDm9EUnS+MxdktpoaApBPz+sE/p9DzSa3vU+G5/v0daPdZmHmtr8nGy25jPNTLaNmeQZ1nPb6fW5IcMlUB1/X7Rgue5hlyG7pjDVZ1CWWbqOAa/HjMtGsVZc+zUI5V7U/OKxvzDDtz9Kmc/ihTKH3NdcWuHnCkzI3hQ6IFOCxEtwRkxhqIgA70KOcmsQ8PmKMNaTR6tjuuUBd6ENf+bVxQRa7wo1jdE9G/7m1pqLNQpIT3p12OlnVRtz6mXlOe5UPYpjRoaZhYd9IqQWyl6c3gUcyGUfNmoMsE0iAXlYF9qBzJfzPnW+S5Xdk0AGbMjUOxNUG2tfGmFzHlUOoX2dtVGcEFf6gJGH0RzZ9FnqkbGZS/sDLwLg+Nm6jWzpPf+kl+v+Y9Ofv5Dl3iFZSj1Yi3OsSi0ZlBj6b4LrFfhA8XPlPS4ThNdm6xc+Aa4J5XnOLkybHkMgb0tnP23LEdr+4jbkHAeMQ91R+i5vXa7Sp04gt2CvbrOjEgHhxJ1WdNi96j9rzs9a8xc8qKTqD7tJaOgkw9FzDO5ffGpv8YKOc9tlCp9Lh+fr6jdUp5LKnKBfmnvUKSZ5OpTKdpjlSudoD9RvzmbWiOOj5o7VeDtRjq+VbqQrSqcxM6+Wyy5PKmEOr23vO5ydZ+RHKKcfaE9fqeXynOadCxkcz+0OOldPqW3C1kwcgZz2D2Twi7MlLNgxZu5VS5XpGUFUf6jRQcvmuNqQD3+sM4aIwAtvVz0m+f5cfk5ym5YWmsRz8Dgv2T7Pz3cmnpQXFDxpXb6ilpm8bkjrZcT11M9T1cH5rT7XrBJzDpx0l9OsgZ3NQ/6ZYSUYjm7KB6f6Tml+k31ie0fXjA2ec0ON2m1vjI6/1f6g5KDb+R4JO9bKZXUAIcCVdrlmLXfnOtWr0RqP3z/vqHOrcG8dCCzwyzL5mOcm7+XfBYNhFc3vaSfYr/vGpv7AfefvOrVvrqs8Sp9PLUxn5GOb1r0N3rB3LbR/zbUlwe1+v2bVVrYaAfyIrF93y5q07hnxm+7mDfPmv7fNXnq3A7ptPwjb9d/tfqO+Ww6+7Ofs9vWxN8qfr3MJ98etYljUVewr5ZCKJ2jxaGZC+N1hq3lNzstMZjrTtm6h5m7sfl7XmHWqV4k/qzTi4UyXnsbPbFtUazRDzIhHY6h4wU/VuU96/Xt5uQ+1OpW7ZLM4KBmnn3RNmSbaiYamnq5JBgTHMY8KA0wRt0mBPJq0F5Cif+zw79xRrJ7BQFVHQZmRYz+ddmLE/SYYgsjP6UXbGvX1XvI5dOBd7RldvNt1iJ11p7m9xbLsn3Ci9hBJHZ/MJwomCtFKkjpLQ/tRVZxDr0mONZUKOXBlRXl80zA3MTpN7JmYGH3/PM2Ea6c/yFTZkoyArVXjIbh8mIZaM7v6YZUXCEFbb4YHRlLxeNb7WvAFZb8eeFWFpm7ZmyNcH5AfSIAiZ0TTPvwwUyY5Uw30MhxGN87cnmBxGlvqwHJNbrfSp8/9N8JFfP5d9hvTuKD2a/jxIl/9W4psgB+bn81NxvPyA6O2PdUs0Oj0iT6+Eit5XMZHT2VZD63j6p/KtStl05QNsPdpkCzZxXd4h+CRXrfKQe4KM+BEvJx2b5cLEv6Oq2aF9mNPGljfmFy8Q4KUgM9DTP7tnDWZOdabt2Z9Xhw4zaXHy0Dt9WhA4qRqDmPQYAcJ+TZJhxvn8MD7D6YUAN6/kDOfbN/7C2Fr1sXNT0uGLP8OVIQHa3b+P+xjCCWGHyJv/vhA6FJpW0ATspygc6EEWC11k12TcpjHlqTT+vKcCc1T8oYyP+zzkLB/XMh05RECGMqZjzt7xsh+8XE2/M8kjmDBGtkfhiFIXF3HWfbO1VhXSX4mHDsX1TEIZkdrw/YS4ACCfLMnG30YYOmxPU0PS+88G0cTWe1+CIzGNBN61CQ6+LuaUlMjJXsZeTvzTJTR5C3cFAmyULrkmwGxIw3xdPdcTUMGGZhI20DNsg9wYKKj09pi73t8K5emixt9CzR0CHjYf5+0Dsqx7gRBfLb0WlZr8fSR+hYFPSr+eTOgF/Dx0xFa69JOkgvp3eo1vpMkhTuGrvLjGNG4+CX2vRB05ip1o/kKvwPdGNTyiUPkuh8kKYvA81XI8xg5dc/yq3Xbe18WJlW+9MRK7W16QA9mKAfDUkTtNWuR4NeFeRx11d9HUPXYkxWXYAG0pFpAkZnwDAiGt8EJAS6KhtAe2+E9wvVPgo=

```
AfYCFmXmg32ePtZ07wW+QePHu2tCfRbwtcw8KzPfN8bzF2fmG+vdfRrxjOUK4OWN+wcDP5pM3D3mAweM
20vSRJjDxmcO6zALQY3nfuAE4G97H+g9mo2Ie+r/
fSLiwog4IyJ+FhHvi4hXRsT3I+KKiNi5PuW7PJyk9gaO77n/vTq9nSPi3Cg/
GP+diHhyI4zn1bafRcSf1bbTKYlsxEuAczPzVxHx6oj4WJ3uQVF+a/pHEXFRI/
avRflh8COBv42IyyPi2f36V8uAjSJim3p2YD/gnMZ6mR8Rl0b54fQvR/
3h9Ii4ICLeX9fLz+o8NgTeDby8znckOe9W+18XEW9E0kSZw8xhGoOFoCbi48Aro2eoYhy7A28C/
gA4FHhSZu4B/CfwhtrnezycNJ8AfAFYUO/
vTUmyUJL4GzLz6cBbgX9vzGce8BzgT4FPRsRGwLnA0yPiMbXPwZTE2utdwAszc3fgz5sPZOZS4JPA8Zk
5PzO/M1Z/4IvAQTXuH1LOQoz4DPD3mfmHlCPvoxuPrV/Xy5uBozPzt3U+n6/z/
Xzt92TghZTfSD06yu9WSpoYc5g5TKOwENS4MvMuSiKYzFHcDzJzZWbeB/ycMtQBJYnMq7e/
C+wdEY8Hlmbmbyg/y7gJ8HTg+/X23sAXIuJy4D+A5u9PnpGZD2bmtcB1wJNrIjoLeGkdDprfmH/
Td4GTI+KvKT+rNZ6x+p9BSaKvoJGw6xvPFpl5YW06BfjjxvNGfnz8ssZ66efrmXlfZt5K+UXAJfXxy4DXANdn5j0
RsRlwR2bOHyWu3t9IHLl/
OvBOIICvZubv1nhi5pERsSflSPzyiBhtHuP2z8ybIuJ3wPMpZxEmcl0OPLxeHmDs/
bG5PsfrK2lN5jBzmPrwjKAmpP4Q9hnA4Y3mpZSjXoADgbU51X8JJelc0rj/Zuq1NfVI/
vqIOAhKso6I3RvPPygiHlGv2XkCcE1t/zawC3AU/YdUiIidM3NRZr4LuBXYoafL3cCmk+j/
LsrwyQMjDZl5J3B7RDy7Nh0KXNHqT8LQU3GB4HmJ+9OBJ4TEd8H9gTuXYtpfpeSjBbX
+5dQkuH3Gn1eCRweET8CrqIk7BHXUJLSOcCRdWiG+km9M4HHAM2Lopv+tV74fWXt0/
spuf8GXjJyofV4/
TPze5n5lT7zWVif+2PKEM+7R4lnxLcpF1Y3L7SWtO7MYeYw9YjM3rPSkiRJ6gLPCEqSJHWUhaAkSVJHW
QhKkiR1lIWgJElSR1kISpIkdZSFoCRJUkdZCEqSJHWUhaAkSVJH/
X+SDIJO7oqMwQAAAABJRU5ErkJggg==\n",
      "text/plain": [
       "<Figure size 720x360 with 2 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    }
   ],
   "source": [
    "for feature in non_binary:    \n",
    "    plt.figure(figsize=(10,5))\n",
    "    plt.subplot(121)\n",
    "    sns.distplot(df_numeric[feature], kde=False)\n",
    "    plot_filter_by_stdev(df_numeric, feature, n_stdev=2.0, color='yellow')\
n",
    "    plot_filter_by_stdev(df_numeric, feature, n_stdev=4.0, color='red')\n",
    "    plt.subplot(122)\n",
    "    sns.distplot(df_numeric[feature], kde=False)\n",
    "    plot_filter_by_iqr(df_numeric, feature, k=1.2, color='yellow')\n",
    "    plot_filter_by_iqr(df_numeric, feature, k=1.7, color='red')"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 13,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
"        text-align: right;\n",
"    }\n",
"</style>\n",
"<table border=\"1\" class=\"dataframe\">\n",
"  <thead>\n",
"    <tr style=\"text-align: right;\">\n",
"      <th></th>\n",
"      <th>Year_Birth</th>\n",
"      <th>Income</th>\n",
"      <th>Kidhome</th>\n",
"      <th>Teenhome</th>\n",
"      <th>Recency</th>\n",
"      <th>MntWines</th>\n",
"      <th>MntFruits</th>\n",
"      <th>MntMeatProducts</th>\n",
"      <th>MntFishProducts</th>\n",
"      <th>MntSweetProducts</th>\n",
"      <th>MntGoldProds</th>\n",
"      <th>NumDealsPurchases</th>\n",
"      <th>NumWebPurchases</th>\n",
"      <th>NumCatalogPurchases</th>\n",
"      <th>NumStorePurchases</th>\n",
"      <th>NumWebVisitsMonth</th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>0</th>\n",
"      <td>0.752577</td>\n",
"      <td>0.278172</td>\n",
"      <td>0.5</td>\n",
"      <td>0.5</td>\n",
"      <td>0.060606</td>\n",
"      <td>0.045546</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.009275</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.024922</td>\n",
"      <td>0.200000</td>\n",
"      <td>0.074074</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.307692</td>\n",
"      <td>0.35</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>1</th>\n",
"      <td>0.536082</td>\n",
"      <td>0.431806</td>\n",
"      <td>0.0</td>\n",
"      <td>0.5</td>\n",
"      <td>0.616162</td>\n",
"      <td>0.356999</td>\n",
"      <td>0.050251</td>\n",
"      <td>0.125797</td>\n",
"      <td>0.764479</td>\n",
"      <td>0.664122</td>\n",
"      <td>0.607477</td>\n",
"      <td>0.133333</td>\n",
"      <td>0.259259</td>\n",
"      <td>0.214286</td>\n",
"      <td>1.000000</td>\n",
"      <td>0.20</td>\n",
"    </tr>\n",
       "    <tr>\n",
       "      <th>2</th>\n",
       "      <td>0.876289</td>\n",
       "      <td>0.213971</td>\n",
       "      <td>0.5</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.686869</td>\n",
       "      <td>0.094441</td>\n",
       "      <td>0.040201</td>\n",
       "      <td>0.074783</td>\n",
       "      <td>0.011583</td>\n",
       "      <td>0.041985</td>\n",
       "      <td>0.146417</td>\n",
       "      <td>0.200000</td>\n",
       "      <td>0.259259</td>\n",
       "      <td>0.035714</td>\n",
       "      <td>0.307692</td>\n",
       "      <td>0.45</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>3</th>\n",
       "      <td>0.680412</td>\n",
       "      <td>0.446937</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.5</td>\n",
       "      <td>0.929293</td>\n",
       "      <td>0.543202</td>\n",
       "      <td>0.381910</td>\n",
       "      <td>0.248116</td>\n",
       "      <td>0.382239</td>\n",
       "      <td>0.522901</td>\n",
       "      <td>0.333333</td>\n",
       "      <td>0.200000</td>\n",
       "      <td>0.370370</td>\n",
       "      <td>0.142857</td>\n",
       "      <td>0.692308</td>\n",
       "      <td>0.35</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>4</th>\n",
       "      <td>0.793814</td>\n",
       "      <td>0.221981</td>\n",
       "      <td>0.5</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.474747</td>\n",
       "      <td>0.012056</td>\n",
       "      <td>0.000000</td>\n",
       "      <td>0.005217</td>\n",
       "      <td>0.000000</td>\n",
       "      <td>0.003817</td>\n",
       "      <td>0.034268</td>\n",
       "      <td>0.066667</td>\n",
       "      <td>0.037037</td>\n",
       "      <td>0.000000</td>\n",
       "      <td>0.230769</td>\n",
       "      <td>0.30</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "   Year_Birth    Income  Kidhome  Teenhome   Recency  MntWines
MntFruits  \\\n",
       "0    0.752577  0.278172      0.5       0.5  0.060606  0.045546
0.000000   \n",
       "1    0.536082  0.431806      0.0       0.5  0.616162  0.356999
0.050251   \n",
       "2    0.876289  0.213971      0.5       0.0  0.686869  0.094441
0.040201   \n",
       "3    0.680412  0.446937      0.0       0.5  0.929293  0.543202
0.381910   \n",
       "4    0.793814  0.221981      0.5       0.0  0.474747  0.012056
0.000000   \n",
       "\n",
       "   MntMeatProducts  MntFishProducts  MntSweetProducts  MntGoldProds  \\\
n",
       "0         0.009275         0.000000          0.000000      0.024922   \
n",
       "1         0.125797         0.764479          0.664122      0.607477   \
n",
       "2         0.074783         0.011583          0.041985      0.146417   \
n",
       "3         0.248116         0.382239          0.522901      0.333333   \
n",
       "4         0.005217         0.000000          0.003817      0.034268   \
n",
       "\n",
       "   NumDealsPurchases  NumWebPurchases  NumCatalogPurchases
NumStorePurchases  \\\n",
       "0           0.200000         0.074074             0.000000
0.307692   \n",
       "1           0.133333         0.259259             0.214286
1.000000   \n",
       "2           0.200000         0.259259             0.035714
0.307692   \n",
       "3           0.200000         0.370370             0.142857
0.692308   \n",
       "4           0.066667         0.037037             0.000000
0.230769   \n",
       "\n",
       "   NumWebVisitsMonth  \n",
       "0               0.35  \n",
       "1               0.20  \n",
       "2               0.45  \n",
       "3               0.35  \n",
       "4               0.30  "
      ]
     },
     "execution_count": 13,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# DBSCAN\n",
    "from sklearn.preprocessing import MinMaxScaler\n",
    "scaler = MinMaxScaler()\n",
    "scaled_var = scaler.fit_transform(df_numeric[non_binary])\n",
    "scaled_df = pd.DataFrame(scaled_var, columns = non_binary)\n",
    "scaled_df.head(5)\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 14,
   "metadata": {},
   "outputs": [],
   "source": [
    "\n",
    "from sklearn.cluster import DBSCAN\n",
    "outlier_detection = DBSCAN(\n",
    "  eps = 0.5,\n",
    "  metric=\"euclidean\",\n",
    "  min_samples = 2,\n",
    "  n_jobs = -1)\n",
    "clusters = outlier_detection.fit_predict(scaled_df)\n",
    "cluster = pd.concat([scaled_df,pd.Series(clusters)],axis = 1)\n",
    "idx_dbscan = cluster.loc[cluster[0] == -1].index.tolist()\n",
    "\n",
    "outliers_dict=add_outliers_method('dbscan', idx_dbscan, outliers_dict)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 15,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "\"\\n# cross_outliers\\ncross_outliers_ =
list(set(idx_to_remove).intersection(idx_dbscan))\\n# keep unique\\
nidx_to_remove_ = set(cross_outliers)\\n#print('Outlier ID:
{}'.format(cross_outliers)) \\nprint('----------------------------------') \\
nprint('Number of outliers:\\t{}'.format(len(cross_outliers_))) \\
nprint('Percentage of
dataset:\\t{0:.0%}'.format(len(cross_outliers_)/len(df_numeric))) \\
nprint('----------------------------------') \\n\""
      ]
     },
     "execution_count": 15,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "'''\n",
    "# cross_outliers\n",
    "cross_outliers_ = list(set(idx_to_remove).intersection(idx_dbscan))\n",
    "# keep unique\n",
    "idx_to_remove_ = set(cross_outliers)\n",
    "#print('Outlier ID: {}'.format(cross_outliers)) \n",
    "print('----------------------------------') \n",
    "print('Number of outliers:\\t{}'.format(len(cross_outliers_))) \n",
    "print('Percentage of
dataset:\\t{0:.0%}'.format(len(cross_outliers_)/len(df_numeric))) \n",
    "print('----------------------------------') \n",
    "'''"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "## SKLEARN OUTLIER DETECTION\n",
    "Winsorizing (resolver)\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 16,
    "metadata": {},
    "outputs": [
     {
      "data": {
       "text/html": [
        "<div>\n",
        "<style scoped>\n",
        "    .dataframe tbody tr th:only-of-type {\n",
        "        vertical-align: middle;\n",
        "    }\n",
        "\n",
        "    .dataframe tbody tr th {\n",
        "        vertical-align: top;\n",
        "    }\n",
        "\n",
        "    .dataframe thead th {\n",
        "        text-align: right;\n",
        "    }\n",
        "</style>\n",
        "<table border=\"1\" class=\"dataframe\">\n",
        "  <thead>\n",
        "    <tr style=\"text-align: right;\">\n",
        "      <th></th>\n",
        "      <th>Year_Birth</th>\n",
        "      <th>Income</th>\n",
        "      <th>Kidhome</th>\n",
        "      <th>Teenhome</th>\n",
        "      <th>Recency</th>\n",
        "      <th>MntWines</th>\n",
        "      <th>MntFruits</th>\n",
        "      <th>MntMeatProducts</th>\n",
        "      <th>MntFishProducts</th>\n",
        "      <th>MntSweetProducts</th>\n",
        "      <th>MntGoldProds</th>\n",
        "      <th>NumDealsPurchases</th>\n",
        "      <th>NumWebPurchases</th>\n",
        "      <th>NumCatalogPurchases</th>\n",
        "      <th>NumStorePurchases</th>\n",
        "      <th>NumWebVisitsMonth</th>\n",
        "    </tr>\n",
        "    <tr>\n",
        "      <th>ID</th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "      <th></th>\n",
        "    </tr>\n",
        "  </thead>\n",
        "  <tbody>\n",
        "    <tr>\n",
        "      <th>67</th>\n",
        "      <td>1972</td>\n",
       "      <td>46423</td>\n",
       "      <td>1</td>\n",
       "      <td>1</td>\n",
       "      <td>6</td>\n",
       "      <td>68</td>\n",
       "      <td>0</td>\n",
       "      <td>16</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>8</td>\n",
       "      <td>3</td>\n",
       "      <td>2</td>\n",
       "      <td>0</td>\n",
       "      <td>4</td>\n",
       "      <td>7</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "    Year_Birth  Income  Kidhome  Teenhome  Recency  MntWines  MntFruits  
\\\n",
       "ID                                                                       
\n",
       "67        1972   46423        1         1        6        68          0  
\n",
       "\n",
       "    MntMeatProducts  MntFishProducts  MntSweetProducts  
MntGoldProds  \\\n",
       "ID                                                                     \
n",
       "67               16                0                 0             8   \
n",
       "\n",
       "    NumDealsPurchases  NumWebPurchases  NumCatalogPurchases  \\\n",
       "ID                                                           \n",
       "67                  3                2                    0  \n",
       "\n",
       "    NumStorePurchases  NumWebVisitsMonth  \n",
       "ID                                        \n",
       "67                  4                  7  "
      ]
     },
     "execution_count": 16,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "x = df_numeric[non_binary]\n",
    "x.head(1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 17,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Isolation Forest\n",
    "from sklearn.ensemble import IsolationForest\n",
    "\n",
    "# training the model\n",
    "clf = IsolationForest(max_samples=500, random_state=0)\n",
    "clf.fit(x)\n",
    "\n",
    "# predictions\n",
    "predictions = clf.predict(x)\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 18,
   "metadata": {},
   "outputs": [],
   "source": [
    "x['isolation_forest']=predictions.tolist()\n",
    "idx_isolation=x.loc[x['isolation_forest'] == -1].index.tolist()\n",
    "x.drop(columns=['isolation_forest'])\n",
    "\n",
    "outliers_dict=add_outliers_method('isolation_forest',idx_isolation,
outliers_dict)\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 19,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "dict_keys([1, -1])\n",
      "dict_values([1571, 175])\n"
     ]
    }
   ],
   "source": [
    "from collections import Counter\n",
    "\n",
    "print(Counter(predictions).keys())\n",
    "print(Counter(predictions).values())\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 20,
   "metadata": {},
   "outputs": [],
   "source": [
    "\n",
    "from sklearn.neighbors import LocalOutlierFactor\n",
    "from sklearn.neighbors import NearestNeighbors"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 21,
   "metadata": {},
   "outputs": [],
   "source": [
    "\n",
    "clf = LocalOutlierFactor(novelty = True)\n",
    "# use fit_predict to compute the predicted labels of the training samples\
n",
    "# (when LOF is used for outlier detection, the estimator has no predict,\
n",
    "# decision_function and score_samples methods).\n",
    "y_pred = clf.fit(x)\n",
    "#n_errors = (y_pred != ground_truth).sum()\n",
    "#X_scores = clf.negative_outlier_factor_\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 22,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "array([1, 1, 1, ..., 1, 1, 1])"
      ]
     },
     "execution_count": 22,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "\n",
    "# predictions\n",
    "predictions = clf.predict(x)\n",
    "predictions"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 23,
   "metadata": {},
   "outputs": [],
   "source": [
    "x['lof']=predictions.tolist()\n",
    "idx_isolation=x.loc[x['lof'] == -1].index.tolist()\n",
    "x.drop(columns=['lof'])\n",
    "outliers_dict=add_outliers_method('lof',idx_isolation, outliers_dict)\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 24,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "dict_keys([1, -1])\n",
      "dict_values([1602, 144])\n"
     ]
    }
   ],
   "source": [
    "from collections import Counter\n",
    "\n",
    "\n",
    "print(Counter(predictions).keys())\n",
    "print(Counter(predictions).values())\n"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### mahalanobis"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 25,
   "metadata": {},
   "outputs": [],
   "source": [
    "from scipy.spatial.distance import mahalanobis\n",
    "import scipy as sp\n",
    "x = df_numeric[non_binary]\n",
    "#x = scaled_df.copy()\n",
    "\n",
    "inv_cov = x.cov().values\n",
    "inv_cov = sp.linalg.inv(inv_cov)\n",
    "mean = x.mean().values\n",
    "\n",
    "def mahalanobis_dis(X,meanCol,IC):\n",
    "    md = pd.DataFrame(columns=['mahalanobis'], index=X.index)\n",
    "    for i in X.index.values:\n",
    "        md['mahalanobis'][i]=mahalanobis(X.loc[i,],meanCol,IC)\n",
    "    return(md)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 26,
   "metadata": {},
   "outputs": [],
   "source": [
    "mahal_dis=mahalanobis_dis(x, mean, inv_cov)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 27,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "image/png":
```

```
"iVBORw0KGgoAAAANSUhEUgAAAnQAAAFcCAYAAABBfiMJAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzsnXl8VNXd/
99n1kwmKyEBNFEoAhppEKJs9mmxWJdKSxXElkXFhSBauwjq76k82qJPRbS21oVIFRBEQdBi8VG0WLqIu
ESE0iBSCkjYEkISksltnt+f9y5l1nuJEEgEDzv1ysvkrn3nnPumQn3k+8qpJQoFAqFQqFQKDovtpO9A
IVCoVAoFArFsaEEnUKhUCgUCkUnRwk6hUKhUCgUik6OEnQKhUKhUCgUnRwl6BQKhUKhUCg6OUrQKRQKh
UKhUHRylKBTKI4DQoieQggphHBEf35TCHfF35TCHFDB8zbIfO0Yx0LhBAPfslrHxBCLD7ea7KYZ60Q4pYUx84SQ
jQJIexHOWaHrP1UIvo5P+c4jrdTCHFpO8+Uqj+Mw538LIf5wDNf/Swgx4ljXoVAcT5SgU3wliT4Y/
imEaBZC7BdCPCOEyDmK61t9NR81zuiOl/
EJKmSGljJzstQgh+ghWr6MUEz8w0JhjZTyf6WUluI+Eas/
VqSU50sp156QxkUAwBfOYQQdwGzgRlANjAUOBt4RwjhOslrHKE4sStAp
vlIIIbKAXwI/
llK+JaUMSSSl3AuPQRd3E6Hlxf5ULIUYIIaqi3y8CzgTWiEwlBCiTgixWghxxdswx
KYS4XQixDdgmdB4XQQLIRqEEEJuEEP1T3T3I85j+GOEkI8IfcrawawrGK2dtdR
CPFnIURuzPmvRK2ZDUKIrwghr5Tzr9+WpVuYZ
```

LoT4KHrtR0KI4QnD9xZCfBg9vlII0SV6XaLL/
EYhxH+ic+wQQkxItV4gTQixNHruJ0KIAdExZgghViTc2++FEL9t5d5/
CNQDa1qZDyHEYCHEx9H9PCCE+E300N+i/
9ZHP5vDhBC9hRDvCiFqhRAHhRAvxlqjo5+D6dHPQUP0XtJijs8QQuwTQuwVQtyUsI6rhBAbouvYLYR4I
OaYsac3CyG+AN6Nvj5JCLErup5ftHGfeUKI16Pjfwj0Tjh+rhDiHSHEISHEViHEuOjrQ6OfIXvMuVcLI
TZFv49zlaf6zAkhpgATgLuj+/
mnmD27NPq9Wwjx2+j+7I1+744eGyGEqBJC3CX03+d9QojJMfN+VwhRGf3s7BFCTG9tPxSKVpFSqi/
19ZX5Aq4AwoDD4thC4KXo9wuAB2OOjQCqYn7eCVwa83NPQBrjAmuBW6Lf/
wD4N3Ae4ADuA9bFXCuBd4AugAe4HKgAcgARva5HivuJnedGIATcCtiB24C9gEhx7U5gPdANOBOoBj4BB
gJu9Afw/THn3wRkRo/9Fvg05tgC4BAwOHqPLwIvxxyfCORFj90F7AfSosceABYf6zzR/asDJkWP/
Sj6c17MXu0B+gNeYIUxb+z7Fz12GOgXPdYDOD/
FHj4Q3fOxgBOYDuyIft8D8AE50XMd0T0uTTFWFvA5UJS4Jxbnvg9Min6fAQy1+hxGXzsH+E50P/
PRRd9vEz4HHwJnRPdwCzA15vflQMyeLYmOf07M78XX0Y0DJdFzf5Cwlhei13qAYqAJ+GZ0Pb9B/
328NMV9vgwsi17fP/r+/SN6zAvsBiZH93YQcNB4r4DtwHdixnoFuPdLfuYeTFjXTmPNwK/
Qf48Kovu7DpgVsz/h6DlO4LtAM5AbPb4P+K/o97nAoJg56oFvnOz/M9VX5/
lSFjrFV42uwEEpZdji2L7o8eNNGfBrKeWW6Lz/
C1wgYqx00eOHpJR+dIGQCZyLLsa2SCn3tXOuXVLKeVKPBVuILiq6tXL+76WUB6SUe4C/
Ax9IKTdIKQPAa+jiDgAp5fNSysybosQeAAUKI7JixXpVSfhi9xxeBC2KuXSylrJVShqWUj6E/
OPtZLegY5rkK2CalXBSd5yXgM+B7MdcuklJL6gJnAOGGdCKEB/
YUQHinlPinlv1rZwwop5XIpZQhdoKShC6x96uh5V6B/
9ipSjDMLeE5KubuVuQxCwDlCiE5Syi/y2lfEdKGZBS1kTX+K2E056QUu6VUh4C/
sSRPR0HzI/ZswcSxl4rpfynlFKTUm4CXrIY+wEppS/62R4LrJJS/i36/s5E3+skou/LGOB/
otdvRv9MG4wCdkop50ff70/QRfrY6PGX0EU9QohMdDH1Uoo9ausz1xoTgF9JKauj+/
tL9D8qDELR4yEp5f+hC9p+MceKhRBZUsq66D0Ya8qRUh5zAojiq4MSdIqvGgeBrsI6nqdH9Pjx5mzgd0
KIeiFEPbqFSaBbxQzMh7iU8l3gSfRYqgNCiGeF7ipuD/tjxmmOfpvRyvkHYr73W/
ycAfrDVQjxsBBiuxDiMLqFAuIF8P6Y75tj5426nLZEXVr16LGLSeL5GOc5A9iVMOQuUuxz9JgzcR1R4X
IdMBXYJ3T37rmJa7UaU0qpAVXRtYAuQCZGv58ILLIaQAhxAXAp8Hgr88RyM9AX+EzoruVRqU4UQhQIIV
6OuvQOA4tJ3vvW9jRxz2LHHiKE+IsQokYI0YC+Z4ljx14fN150r2tTLD0f3fKWav6zgSHG71X0czUB6B
49vgS4Jur+vAb4REqZ+Plo72euNRI/
d7s48v4D1Cb8ARm7v2PQheYuIcRfhRDD2jmnQpGEEnSKrxrvAwH0/+BNhBBe4EqOxC75gPSYU7oTjzyK
OXcDZdG/
uI0vj5RyXarxpJRPSClLgfPRH9wzjmK+E8F4YDS66MhGd6eBLkxXpAh6jbbSCebNvFYhCH2a/0POju
5bMTXjsL3U1nUJRwLISFiJdSrpZSfgdd5H8GzGtlnlIeuCePQInQYyBHOoVsBHoCoaVCH2
o7tuxwghPrE6WUq5TUr5I3Q332xgefQzbPW5/
HX09RIpZRa6sGzPfoJutU7cs1iWAK8DRVLKbGCuxdixa4obTwiRju6Kt6IG3V2Zav7dwF8Tfq8ypJS3A
UgpK9HF1ZXon6slKeZp6zPX1u964ufuLI68/60ipfxISjka/X38I7p7WaH4UihBp/hKIaVsQHeJ/
F4IcYUQwimE6IkeX1PFEQvKp8B3hRBdhBDdgZ8mDHUHUA+Fo7p50L/
L+YQOtsIcS1qU4WQlwUtXw40YVlC3Cyy2lkogvhWnSh+79HeW0Y/
QHtEEL8D3q82PGe5/+AvkKI8UIIhxDiOvSYrVUx50wUQhRHhcSvgOUyoVSJ0BNDvh8VSAF0F1lr+18qh
LgmavX9afSa9QBSyhZgObqY+FBK+UWKMZ5FD/i/
IPo1F3gDPZ4yCSHERCFEftQiWB99OYK+xxrxn83M6D3UCyHO5Oj+OFgG3BizZ/
cnHM8EDkkpW4QQg9HFUWssB0YJIb4h9IzyX5HiORR9X14FHhBCpAshioHYmour0N/
vSdHfY2f0d+e8mHOWAHeix+y9kmJNbX3m2vpdfwm4TwiRL4ToCvwPuhW0VYQQLiHEBCFEdtRdf5iT/
3uu6MQoQaf4yiGlfAT4b+BR9P9EP0D/a39kNIYGdGG3Ed398jawNGGYX6P/
J17fVmaalPI1dCvKy1GXzmZ0q0EqstAtQnXoFoba6FpPJi9E17IHqCQqWNrJauBN9ID/
XegCNVWc2JeeR0pZi24Fuwt9z+4GRkkpYy1wi9CD3Pejx7rdaTGULTrGXnT3+LeAaa1MvRLdRWskZFwT
fUAbLERPHLB0t0bX3iyl3G98oQuwlmhMlhVXAP8SQjQBvwN+KKVsibrZHwLei342h6L/
ATMI3Sr6BrpIahdSyjfRkwTeRU/
seTfhlGnAr4QQjehCplULUzQW8XZ0obUPfc+qWrnkDnT35H70921+zFiNwGXAD9Hfq/
3ov2fumOtfQrd+vpvwOYilrc/
cc+hxbvVCiD9aXP8g8DGwCfgnemJRe4tsTwJ2Rv9fmMoR9zxCz6pNmQ2uUCQipDwaz5FCoVAojgYhxFn
obtvuUsrDJ3s9CoXi9ERZ6BQKheIEEY2p+zl6aRUl5hQKxQlDVe5WKBSKE0A0Bu8AujvvipO8HIVCcZq
jXK4KhUKhUCgUnRzlclUoFAqFQqHo5ChBp1AoFAqFQtHJUYJOoVAoFApFJ0cJOoVAoFApFJ0cJOoV
CoVAoFIpOjhJ0CoVCoVAoFJ0cJegUCoVCoVAoOjlK0CkUCoVCoVB0cpSgUygUCoVCoejkKEGnUCgUCoV
C0clRgk6hUCgUCoWik6MEnUKhUCgUCkUnRwk6hUKhUCgUik6OEnQKhUKhUCgUnRwl6BQKhUKhUCg6OUr
QKRQKhUKhUHRylKBTKBQKhUKh6OQ4TvYCOpquXbvKnj17lKBSKduMDIid7EceOzw8R7WSvQqFQHC/
sTvB2PeHTVFRUHJRS5rd13ldO0PXs2ZOPP/74ZC9DeNv8vO/
V5ax3k557sVSgUiuNFzU644r4TPo0QYld7zlMuV4VCoVAoFIpOjhJ0CoVCoVAoFJ0cJegUCoVCoVAoOj
lK0CkUCoVCoVB0cpSgUygUCoVCoejkKEGnUCgUCoVC0clRgk6hUCgUCoWik/
OVq0P3VUfTJLW+IMFwBI/
LTliThMIaLoedPK8Lm02c7CUqFAqFQqE4SpSgO4WJFV9Ohw2HTeAPRo5afBnjaJrGQV+QskUV5Ge4ufu
KfsxYvomqOj+FuR7mXX8h/
bplnnRRF3vfSmgqFMcXTZM0BcKEIxoOu40Mt0P9fikUpwFK0J2iaJpk64FGpk64FGHn9nK2NKi8jzuujidTF37
XbW/

ac2TnyFwxrVTQFCEQ2n3UZBhhuHwxY3zq0vfMzMUcXMWlVJVZ2fmaOKTTEHUFXn59YXPua1aReTn+k+a
aIqdr3HKjTbcw8deZ9KqCpONpom2dfg57l/7KDWFyLP6+Tmb/SiR7ZHfRYVik6OEnSnGLEP/
cff2coNw3txz4ojVrSnxg9iW3WTKb5y0hxsrW5i6uIK85y5E0s5t1smDoeNWl+QW1/4mPwMN30LMnjs2
gHU+0MUZLpNMWdQVecnGI6kFFV98jOo84eOSZC0JWqM9aYSmkczT1vC8HiKx+Oxnthzj7fwU2JSAdAUC
JtiDqDWF+K5f+zgp5f2JcvjPMmrUygUx4JKijiFCIc1quqa2VXrwx+KMKa0yBRzoIub25d8wtQRvamq8
6NpGnsPt5hizjhn6uIKqpsCAATDEfIz3Ey/
vB+Tnv+Q655dz6xVlWR7nBTmeuLmL8z14HLYU4qqvQ1+rn76PS6e/Reufvo9th5oRNNku+/
PEDWtjREMR1IKzaMh1T0c9AWoaQywp66Z/YdbLM+p9QWPaq5jWU/
iXO3Zo6PlRIyp6JyEI5op5gxqfSHCEe0krUihUBwvlKDrQDRNmmKipjEQ90DVNMnW6kbG/
+EDHnpjCyDoU5BhKW5yomIsFB3P6pxwRKOmMUBESuZcOyBJGD785haenjDIFHWGxSjP60opqqpj5mpN/
KS6z9ZEjXGNsRaDgUU5zL/xIiJSsrfez4EGf9LeWZF4DwOLcpg5qhh/
MMLmPQ3csWQDe+v9x0U8tof2CtWjEX6pPkuJtHfMLzO2onPhsNvI88Zb4vK8Thx29ShQKDo7yuXaQbTl
cquNSVaYfnk/bpz/ITNHFVOY64kTAoW5HpqDEWaPKaG2KUitL2h5js0muPrp96iq87N86rAkMfF2ZTW/
HN2fV6cNT8pydTnslmNme5wsnTKUen+IuWu3s2F3fZIgae0+WxM1xjX5GW7mjC1hxvJNSYkblxUXcO+V
59HYEsAfDHNGtseMFUwk9h4GFuUw/fJ+ca7r2WNKaAlFLO/
T5bAf9Xvbljsz1Z4mzmVYVGeOKibH4zT3Onafj9ZVfDRWz450Qys6ngy3g5u/0Ssphi7DrR4FCkVnR/
1Z1kG0ZSUxHrpTR/
Q2hcfctduZPaYkzoo2d2IpaU4bj67eyv7DLayo2G15zqJ1O8y5DOESS2GuB4fNRkFmGmfmppOf6TYf2H
leF/OuvzBuzGcmlrL84y+o94fI87p4bNwAyv6rZ5Igae0+DVGTuA4hhHnNht31PPLWVmaN7s/
vxw80xdzAohxuGN6L65//kNFPvcf4P3zAZwcaOeQ7YkEyLEsHGnQL5eKbhzD/
xou467K+SRbKe1ZsomuGK8lKOXdiKblHEUvUXnemsaeXFRdQPqmU5VOHseSWIUlzeVx27r6iH7NWVZru
8buv6IfHdWSfj9bilmrfrYTr0Y6t6FzYbIIe2R5+emlf7h91Hj+9tK9KiFAoThPUn2UdhCHYBhblMHVE
b9P6omkamiYRQlCY6yHH4zQfpht21/
Po6q3MHFVMn4IMdtU2E4pE+NG8DwD4ZGctv7iqmPrmEPNvvIhgRCPD7SAzzU7533cCuqsx2+M0rV6G1a
V8UimaprtlEy1KNpugX7dMXpt2McFwBCEEb2/
ey3WDz+aQT7cKPvu37dw5si85aQ5qGgOmdSrQijWoR7Zu7Ym1/jw+bgA2gZmsYVj+Ji/4iL/
OGGGOFSt0jTGnLq5g1uj+dM9Oo09+BttqmvjjJ7vj1vnJzlomDuuVNH5VnR+v28lvVv0rzhr2xJrPeej
qknYnYLQ3icNmE/TJz+Anl/albFFFSutXWJNJ2cczlm/
i1WnDkz5LVntshSEmE61ueV5X0rnHK4ZRcepiswmVAKFQnIYoQddBuBx2LisuSMpaLZ9USjCisae+hUU
3Dyai6dYTw93YPSuNiASHTXBOgZewJll882D+/nk137ugkAl/
+ODIWBNLSXPYaAlJLisu4O3Kan5x1Xnc9uIncW685mCEiCaZuvgT7hzZh15dvaS77XT1HrHS2WzCFCQH
GvwMPDuP65//
MM5l+adPqxADC+MEyou3DEnpWrTZBN2y3Mwa3Z90l10vs+KwMXbu+3HjPrp6KzVNAZx2mzlWrNA1qKrz
k+6yc+sLH7OsbBiPv7OV2y/pE7fOpycMYtaqf/
F2ZXXS+IGwxtuV1bxdWR037v3fa794ORoBVOcPmXtlnJco/
kJhzXK8UPhI0Hoq963HZY8T14ZQTxTorWW5ttc1rFAoFIpTC+Vy7SDyvC7uu6o4ycpUtqgCEDz/j/
9wyaN/5ZG3trBg8kU88P1iACY9/yGX/uavjP/DB1Q3Bvj50o288P5OJg3vlZTdWra4gk+rGhhX/
j53juxL2X/1pGumm/
wMd5xV8Ik128hwO5h+eT9mrtzMiEfXcs3T61JmPkYk3L7kkySX5dgLz0oSKA+9UclT4+PdmOWTSk1rkD
8YYfKCj7ju2fX4ghHuWLIhadx7rjyXF24ajMMmTLdpKKJZug3r/
SEzCWRMaVHSOqe9+AljSovixr9zZB9mjylhf4O/3a7IVByNO7M94i/VeM6YWEErl/
gLNw3mwOFAStevIdAT3euJWI2dypqn+GqgaZLD/
hCHmgIc9odUkoxCcYqiLHQdhGEpsXqgHzjcwg3De1HTGOTtymr+33fP45AvxMyVm+PEyU9e/pSHr/
k6Qgj2N7SkzIA13JFLpwxFIpM6QswZW0K6y54kLm994WNenTYcgTAtObkeJ2HN2mqU5rQlBe+/
XVnNj7/
dJ+71rl6XmTRguJZbs7p1y0pDSsk1z6wz17xg8kWUTyqNswYa1jYjCaR3fuqs4Nifi7p4mPHKJvIzXUl
jHq14yfU4WXLLEKobA9T6gqyo2M3PvtPPcoz2WL+s3KNzxpbQ1BKmq1emtLhJJNc/
va5N129bHI01T3H6owoRKxSdByXoOghNk2iatHyg1/qCzFpVycxRxVGLHaS77JbipHt2GjfO/
yhlBmy9P2SeG9FkypispVOGWo7fHIgw8bkPyM9wc8+V59Ity01Eg8uKC8jxuLj1m1/DbhM47ILD/
rDZecIQWAvX7WBvQwtliyoYWJTDnSP70BLW+E9NI0+s2cbgnjm8eMsQahoDZHucpms49h52HvSZ6zH+v
XH+R6y8Yzgv3TqUUERjV20zj67eSn6mnqBR0xggM816vC5el5mdu6JiN9trfNQ0Bfjfa75On/
yMNsVLqixWTZNsq2mKE1/lk0rpk59h+bBrTyxbolu63h/ikbd0F/
GysmFIKc01xAq1PXXNxy32LdbdrvhqowoRKxSdByXoOohaX5AH36hk9piSpPIZj67ealqSBhblYBOC5q
B1SQ27EHEZsFZjGec67Dbqmq3r1AXCmuX4Ow76zNIp01/
ZaI69+JbBNPrDTF7wEVV1fubfeFGSBfGeFZt48ZYhPPRGJQOLcpIsg8/
dcCHBiIyL+3tmYilAUozbvVeem7RmX0Bj/
Lz1pgv5dz+6gPrmUFLMXOx4z0wsZc7qz+J+7pHl5rVpF5vCrDXx0loZD6uEiLJFFSmtYu21fhlu6UT21
vsZO/d9y2QKFfumOBGoQsQKRedBCboOIhiO8HZlNTWNQebfeBEN/
hC1viCPrt7Kht31piXpN9cN4KE3Kpl2yTlJmanPTBjE4ZYQhbkeMwN20U2DqfeHyPY4efjNLeZY5RNLK
chwE45YC7fqxgDlE0spi2kZVj6plMP+EL8ZN4BJUZEERqFiuO3FI/
FpqSyINiH40eCz6ZmXnjTG3vqWJBF42+IKFkwezM3f+Br1/
pCZsNAcjDCutNC0CGoS0p02qur8pnD6y13fYtqLyTFzS6cM5b6rirHbBL/
8079Mi50x38tThuJup9BpLYv1y2SEtsf65XTYLN8zo3SIlTv1aDJZFYr2YhQijhV1qhCxQnFqogRdB2F
YUDbsrufu5ZuYfnm/OHflMxN0S9JtI84xhd8D3y823ZO1viC/

```
f3cbPx7Zl+duuJCbF37Mht317KxtZubKzabV6uZvfI3mYIQeOWk4HDbOyPYkxYnNGVtCQaabs3LTTWHi
tNs43BJixvJNPHbtgCShYhPEvVbvD1kXNBYwecFHli7d1CIQ7oqxBs67/kJy0h3kZZxtWgQN61rZf/
U0S7JEpLQcryWkMfI3f+Xdu76VlMFaVednT52fu17Z2K5eqgD5GfF9bw3RdiKsYpomaWoJJ4n52WNKWL
lhD+WTSuNK3hio2DfFiUAVIlYoOg/qt7KDiLWgbNhdz8J1O1hyyxAAAmGNOas/
o6YxaPZY3bC7nv2HA9wekwUKULmvkd9edwGLbhpMrS9IKKLx+LgB/
GzZRsoWVZiCKMvtNEtY5Ge4WVY2jHBEw24TeFx2cjzx7sa99XqcWlWd31KsaZK41+au3W7Oa4iOuRNL8
brtZixf4hip3Mh76/0sunkwAmGWT9l/uCXJ+mZY197YfICqOj8Hm6y7ZOxr0H+OpIhZ7OJ1kZ/
hjrNyxYq4iCZ58I1K0007Z2wJj7ylW1KNMQzBdLRWsba6StT6glz//
IdxZWbyMty88tEuRg88M6nkTX5mmmWpGYXieBBbiDgc0XDYbWS4HeoPBYXiFEQJug4ilQWl1hekutHH2
5XVlE8q5eE3t5ixcamyQHPSnXHuzIFFOTx67QDOyE7DbhN43XYzWD8/w82dI/
twVl46NY0Buma4cERbjcWKiVBEixNrifF5LofgmYml3BZ10eZnusjxuszg/eZgBIEkIiXzrr+Qx9/
ZmjRGYW4aT08YZAq12ESKMaVFzFpVyWvTLsZmE3Hrib13TZNmVmkoovG7H17AT17+1BzvsWsH8PCbnwE
w72//
sZxvzurPmH55Px5dvZVgOGIZJzd7TAk1jbqLsyWk8fh1F1BV18wL7+80s1iP1irWnrZahhvXcCsb7+9v
f3iBGXto7EVr8XoKxfF
CFSJWKDoHStB1IFYWlDyvC38wbHaJMNytM0cVU5DptrQwuR3JrsuIJhn/Bz07dc61A/
AFdLedTYg4d+acsSXUNAaYsXxTnJjwOO3Mv/
EiM7Ny5YY9zBrdn975XjwuB3leF2dkSZaVDSMU0XDYBNc9uz5pbUunDOWcrl4euroETdPMzMyIJjlwOM
CfK/
fxwk2DzU4OC9ft4PZL+vDA6/+Kiz+LLSocO749Yd6BRTn6OgsycNgED7y+2bSkLauoIjfdwdIpQ9nX0B
IXs1i5r5FZo/
vjctgt4+TuWbHJLBGTaBWLzWK12YQpzIPhSJJQjqU9XSWs3Lg1TQHCmrV7WXVwUCgUCgWowsInHZtN0C
MrjbkTS02X5Ibd9ZQtquDnyzYyZ2xyn1Z3NGjewGiLZWSn3jj/Q8bOfZ+WkGaKOThSsqQwN53Hrh3A/
oYW6v1BwmGN6sYAM1duNvuHXj3oTIq6eOiRlQbAvgY/
df4Q3bPSKMpNTykw9jW0sLW6iVyPk27ZHs7I8XBmbjqFuen0LvDy/QsKefjNLabwuffK83hx/
S4zmcOIPyvIcDN3YqnlvcfOa7QJswvonpXGz77TL+6aHwzSiwqPnfs+ZYsqTLFXVeenV1cveV5XyuSGw
i7pBMMa+Rlu87WyRRXU+Y8EiLe3lyu0r7CwVWHfOWNL2Fd/7EWQFQqFQnH6oix0pwD1LWGeWPM5ky/
uxdyJpWYHiJqmAB6XnUevHUDXDBe7D/kpzE0jGJEsvnkIOw76ePOf++jbLYPHrh1AF6+LOas/
azMT9ZAvyHXPrjezYQNeLanrxIzlm3j1tuH8+6Avvs7axFLyM93YbcLSgmbU1FtWNowzco4IEJtN0MXr
Jsfj4oHv94/WjXPw8JtbzFi12I4SDoeNc7tlmrF/
DruNggw3dSmSMTwu3dKWleZgWdkw7AJsNptpPbO6Jt2ttyNLldywdX8js1ZVmqVUjB6whpvWsMpZWd2W
lQ2je1ZanKWuPUkUiW5cp8NGU0s4zhWvslgVCsWXQdMkTYGwioc8TVEWupOApklqGgPsqWumpjGApuk9
RX807wMcNpg5qpilU4Yyc1Qxv3y9kh8+u5765hBFXTzsqW/hmqfXMeLRtbz04S4mDe/
JpOc+5LoZqzGyAAAgAElEQVRn1zN5wUfcMLwXA4tygCOZqLEU5npId+kCoqpObxcWTBGvFoxoyXXWFlf
wn4M+BCRZD2ePKWHu2u3RMifWdapsNkH3rDRcDhsPv7mFMaVFvHHnN3h5ylCyPU5qfUHTuuVw2Dgjx8N
ZeV7OyPHgcNiSLFiXFRfw0q1DOewPs3lPA3cs2cC48vc51BwyXZ+p2ll19caX/Eh1L/
es2MTUEb3NYx6X3bTKGfFuiXu3t96fZKlrb1ut2DZdBZlp9MzTXdjn5HtZVjaM9+65hNemXWyZoatQKB
RWGF0/fvvnz/nlqi389s+fs6/Br1q5nUYoC10HY7joHn9nK2NKi8yK/
2/8+BsEIxoZaU5mrapIsuLkZbjYU+fn3lf/aR4bU1pkJinAkdgvo+PEmsoDSUkBeuHdI7/
AVXX+lNa2SAq3an6mm1pfkHSXnQWTB1PfHEyqqWd0UrASHIYVyoizO+gL8sNoXJxVooDVta9Nu9i89kf
zjlxrWNNiY9PaSl6IPe4Phtmyv9G8F+Oec6LZx/Ouv5CwJk2hm6p8S60vyE+XfhoXH/
dlS4uo7FWFQnGsqK4fpz/KQtfB1PqCPP7OVm4Y3otZqyoZO/d9JvzhAyJS8qs/
VbKvvoU5Y0u4rLiA8kmlLJ86jBduGsxhfwinPT5+LFUWrGHxufLrPXjy3W1xFr8n390GHBEQusXJZhmv
5nFaN4r/oraZdJedB16vpLElSJrTzqxVlaaYe3rCIBat22EWwrXCECk2m82skWes/
9YXPm7XtQ67oPpwgMeuHaCX8Mhwm9Y0PSNWMy2hRsxequb0xpgZaQ5cdhv3Xnku5ZNKGViUQ2GuhzNzP
bw6bTj9umUSCidnBKey7iUmLcRa36zWoVAoFCcC1fXj9EdZ6DqYYDjCmNIiMxYKjnQ4mDmqGE1KXvtkD
7df0ofblxyxrD0zYRChhK4PqaxD3bPTWHn7xWS4HbxdWZ1UXPf2S/qY5867/
kJyPW6y3a6keDUgqZuEYQH7zXUDyM90Ud0Y5Gtd01ly61AimobdZuPJNdtYVlHF9cN7We6BpkkO+gK0h
CLYhEiq85YqezM2bi3NaWN/Q8DsPBG7tpxoj9iDvmBcQeXyiaX0yEkza/BZjX/
gcPyYc8aW0C0rjTNimpHHdnIwOnbMGt2fs/PS2VbdFGepTExaaKsOnUKhUJwIVNeP0x/
1TnYwxkPcsr5ctAPAlV/
vYYo549htL36C3SbirEErKnbzTIJl7ZkJg2hoDuF129GktLSw5We6k+KwEuPVALZWN/
K7NZ8zc1SxaSlcuWEPNU0B0pw2fvztPsxaVcl3Hv874+etp7ElbIq5y4oLEELExAnqbl7D5XzN0+v45i
Nr+eGz6wG4//
vFZuxfKiEUm026qeqwKTSNPbpnxSbuHNmH5mCE+64qTrL8lS2uYOPuBrbsO8whXyApdsSqrMiM5ZvIcD
uo9QXNe7Hb4uMHjf3wOG1xlkojPi42ZrKqrplfvLapzYzYk0FybOepsS6FQnHsGF0/8ry6e1V1/
Tj9OGHvpBDieWAUUC2l7B99rQuwFOgJ7ATGSSnrhBAC+B3wXaAZuFFK+Un0mhuA+6LDPiilXBh9vRYA
HiA/wN+IqU8ZZ5AqSwxsXXnEi1r9f4Qc9du59Fxya23qur0Pqnz3/sPi28eQoM/
REaag2Uf7jI7CtT7Q/z+3W3cfcV51DYFsAkRlzVriIzE7EurNUvgd3/+PM7CV5jrYdbo/
twwvGdSb9dYK2O9P8idI/syrvz9pLi4VKJp1uj+TB3Rm1mrKi0TBRKvS5XB27Orl2yPA3/
QukRIustO2eIKZo3uT/fsNMuivonXNAcjTHzuA/
NeFt88hEfe2hq374+8tZUnxw9Mio8DUhYt3rC7PqkO3cmiPUWPFQpF50V1/
Tj9OZEWugXAFQmv3QuskVL2AdZEfwa4EugT/
ZoCPAOmALwfGAIMBu4XQqiG/p0Nwrq374+8tZUnxw9Mio8DUhYt3rC7PqkO3cmiPUWPFQpF50V1/
```

3XVXMSx/sREYTG8r/vpOyRRVc9+x6yhZV8HZlNfXNelmSny37FJdDsPjmISyfOowXbxlCn/
wMgCRLTOKaf/js+riMWdDFzTkFGeSmOwlFNGaOOmJVG1iUw8PXfJ1zu2fyP987H38wEle/
zYiLSyWa0l12+hRksKxsmKWISLwuVQav22Gji9dtlghJPF7vD5nzJcbqpbpmx0FfnADdcdBHTVMgbt9r
mgK4HPak+LhURYuNrNlTpThwqqLHrcUyKhSKzoXR9aNLhpssj1OJudOMEybopJR/
Aw4lvDwaWBj9fiHwg5jXX5A664EcIUQP4HLgHSnlISllHfAOcEX0WJaU8v2oVe6FmLFOOm09HB0OG+d1
z+K1aRfz3j2X6MH23TNNC0+PrDTL8hbdMtNIc9mZMKwn+RluDkV7mcZiZFga89604GOEgIfe2MKEP3zA
4UDIUmwe9AVaFR7G2FJKxj27nm8/9ldmrapk+uX9GFdayL1Xnsu9r/
6Tb83R3ahhTYtzoxrCJZVoag5GOOQLIqWeWp/o8ku8bu7a7UllU56ZWErXdMOdkLoUSaywa6uob/
nEUp5Ysy1uvU+s2UZ5gqs7VU24VAI2J5pVFutePpkuz/
YUPVYoFArFqUtHO8+7SSn3AUgp9wkhCqKvnwnsjjmvKvpaa69XWbx+StCeh6NlKQrvkW8Ty1vkepxmf1
bDJfbYtQN4cvxA7liyISkxIHbecERy9xX9+NG8D/AHrQvhLrl1SKsZs4a4efCNyiTRN//
Gi5i84KOUbtSyRRWmcMnzuiifVBqXrDBnbAnpLjsFWWncv3KzWWg41uVniC1j7TVNAdJddh6+5uukOe1
08br429YD5HldSF8Ql8NOn/
wMXp02nOZAhB0HfTy6eis1TQFzj9oq6uty2LHb9Bi5WGqaAvTISWtX+ZFUxYQNC2NsnN3JdHm2p+ixQq
FQKE5dTpVoSKsnlvwSr1sPLsQUdPcsZ5111pdZ31GR6uHodNioaQwkiYBwWKO6SW8274xmmDoctjjBV9
OYbEG765WNPHzN181YrvxMNw+/ucXMFjXm/
eJQM10zXFxWXIAmrWvL2YV1Lbpsj5PlU4dRkOkm3WVPypitqvPjSmjHZbye7rKTjt0sg5IbNfF39bp4+
Jqv0z07DbsQ7D/cwgOvV/KLq87j5m98jckX98ImBPsbWuiW5aaLN76WnD8UYXt1Ey+u/
4KRxd1w2m3sqm1mZHF3y7g9vJDutvP4dRfECbvWivoaaJqME5LGuKkyZRNJFKJGR4yuXhevTbvY/
AxYvb8dGV9ntU7ViUKhUCg6Dx0t6A4IIXpErXM9AEMdVAFFMecVAnujr49IeH1t9PVCi/
MtkVI+CzwLcOGFF55wP1aqh2NTS5jrn/
8w7rVzunrZWt0Ul7gwd2Ip53bLxOE44hFPZfVLc9qZ+NyHFOZ6+MMNpfziqmKmfLM3tb4gKyp2c8PwXq
aAeXnKUARYi027LalEyVPjB9ESitAjO40e2Z6ULbQcKQoTNwcj9MxLZ+aoYp5Y8zkPXV1i1p6LLZBsnG
+0DZs1uj+TF3xk7kUorJltvPIz3eypa+aJNduYfnm/uFZYz0wYRH6Gm6o6vymIXr/
jYiIahMIaWR4H55+ZxZPjB1pa1VIlsnyZYsAG7b3+ZLs8j/U+FQqFQnFy6WhB9zpwA/Bw9N+VMa/
fIYR4GT0BoiEq+lYD/
xuTCHEZ8P+klIeEEI1CiKHAB8D1wO878kZaI5Xr7vtPvpdkgVk6ZWhSH9Un1nzO/
d87HzhS5iSV1a9Hdhp/nTECl8PG3no/tyyMF2RG43uA/
Q0tuB22pJ6gs8eUIKWkR04as0b3J91lp94f4oHX/0VNU4DXpl1s6fY0RGlBhjspm3bO2BI8Ljs/
X7bRnP/
+7+nixGocww1qWPaMvZi6uIKZo4rN7Nd+3TJxOezcObJPUi2/2178hEU3Debz6ibmrt0OwL76ljiRmsq
N2ZbLM5WVrD115drT6eFUcHmqjhQKhULReTmRZUteQreudRVCVKFnqz4MLBNC3Ax8AVwbPf3/0EuW/
Bu9bMlkgKhwmwV8FD3vV1JKI9HiNo6ULXkz+nXKkPhw1GuQJVtgwgnttQYW5XDD8F5cl9AKq09+RpIIm
juxlF/+6V+8XVnN/
BsvMgviGmPfvkQvI7KsoiouWWJFxe64khsL1+3goatLyPG46J6dliRqcj1O01Wc53WxYuowWsIaDpugI
MON02nn3G6ZvFI2jFBEw2YT7Ktv4ZevV5piTu9IYaemMUAgHCE33cnLU4ayv6ElqW1YvT8Ut0dGRwzDB
ZnnddGrq9dyP6sbA8xaVcnsMSXYbSKpVl0qN2aqRJbWXJ7HM+5NuTwVCoVCcSycMEEnpfxRikMjLc6Vw
O0pxnkeeN7i9Y+B/
seyxo4klQUm1l05sCiHR8aW0OAPMXNUMXPXbo+rVRZr9RNC8MDregLBwKIcirp4LAWO0YM0Nlki0VVZP
ulIfFt7kjGMzg41TYE493CPaEFiTZM0toTNZILCXA8v3DSYA4cDceM8OX4gUkpmrapMGjt2jwyBZ7ggb
TZBujt1soGRrLHkFutEDys3ZqzLc2BRDlNH9CbH4yQYjqTsSZtKBC4rG5ay1l8qlMtToVAoFMfCqZIUc
dqTKjj+nX/
t4+kJg3jy3W3cMLyXmS0aK8I27K43hUx+phtNk+w65DPF3PTL+7H7kN9S4HTLSmPJrUN5cNW/
TGuZ0arqrC7p/Lumid/
9+XN+9p1+lu7F6sYWy0LAM0fpnRimLq5gWdkws7sEWIsTieT6p9eZ4+RnuKnzhTgrL50FkwfjcggcQtA
S1uKEYKwQjXVBdvW6U7ptjXXaU8T26XWs4zEEd36GO0nwprK6pYp721vvp8EfOmpLnXJ5KhQKheLLogR
dB2ElcjRN44FVnzGutJD7Rp3P+Hnr44TTwnU7TIsdYFqKan1Bdh5spjDXw9QRvblnxSbyM9xJsXGPXTu
Aen+Qp//
yb24Y3ovKfY1myY80p43prxyJb6vc15jkXtQ0SXNALxAc66Kdu3a7WUdNL4uS3Ny5NZezIUITExrOzPX
QPdtj7pEEGvwh7r6iH0IIumelIZHmPiRmvRpirnxSqemqtCrrYrfQWIbg3t/
QkhSbZ+V61TSJEILlU4dR6wua1lTDtf3TpZ+eEh0grFD9ZBUKheL0Qwm6DiRR5NQ0BijM9bCsoooxpYW
WsXSxFrt5119Ityw3zcEwT6zZxuwxJbijJUOq6vw8uvpIO6ozcz3sq2/
hjiUbyM9wI6VkweSLsNsE6U47Uxd/
ElfexMoVWesLUtMY4O4r+jFj+RHxNWdsCVq0y1phrqddzZ1jXc6GCE1MaFg6ZSgRLRh18+ru2fwMN3df
0Y/pr2xMmaygaRJfIEx+posbhveKE4qPjxvAnLEl2ISIixe0em/
6dcvE67ZuKRa7N1axc7PHlLBw3Q4zq/
hoM1Q7SmSd7Hp3CoVCoTgxnMjWX4oEEjsB5HqcZmcCTUrm33gRS6cMpXxSKXdf0c/
SUrRxdwOf7W8kP9OFTUC3rDSzY8GG3fWULargrlc2IoCCLLfpQrz31X9y6W/+xqTnPqSmKcgvR5/
PwKIcBhblUD6plOVThyGEiOtOEAxHCIQjppgz1jFj+SYimjQTMwoy2rZC5aQ5mBvtrmAkOcRiiNKrn36
PvQ1+U3BMHdE7af7EllSGGHvg+/
2T9uxnyzaSn5kGgMtu494rz0uZaGCzCTxOh2Uni9hs01TtvO4bdT4rN+wxLXXtzVBtrVXc8Ua1+FIoFI
rTEyXoOgjjof2L1zaxee9hdtX62Nvg55yuXl6/42KyPE5mrtzMdc+uZ9aqSjLcDrMXqoFR0mNN5QHu+H
YfZizfxJ0vbUhqgTVnbAl3LNnAf2p8luU9pi6uoLYpyH2jzuP+7+slQR56Ywtb9zfyxaFmqhtb0DSJx2
XnzKjrtnxSaVwbr6Iu6SwrG5ZULy/

VvX9e08QTaz5n5qjiOBFqUJjroYvXRX6Gm+rGgLneVOIv0fplswlkiqLJRm/bmSs3Ewgnu4djsWr/
lZhtmip2rvpwC6MHnsllxQVHlaHakSLrZNe7UygUCsWJQblcO4haX5DH39ma5BIsn1RKfqbbbIUFR1yQ
RoFdAyOLc2RxN558d5vpXg1FNB4fdwHdstxsr/HxyFt6IsUTa7bx6LgBlg/
wdJedn7z8KbNG97dMBHjhpsEEQhq3LkpOOqhpCuCwCZx2W7vcdLW+oHl/
RiLHnLElcW7c2WNKmLP6M6Zf3o+WUMR0zxotstpTny1VJnFsb9u2SpG0J9u0tXlmrao86izXjhRZp0K9
O4VCoVAcf5SFroMIhiOMKS1KspaVLaogELJ+oPfq6k2yvM1du50zstO4YXgvZq2q5Lpn13Pvq/
8kGNFw2AWTF3xkxsZt2F3Pvno/lxUXUD6p1HTnXlZcYJb3SHfZLWPadtU2m2LOeO2eFZu4c2Qfnho/
kB0Hfeyq9VFV10y4DatXomDZsLueR97ayku3DmX51GHMHFXMo6u38nZlNfes2ITbYeep8YMozPWwpvIA
T08YFLcPRhuxRKysa7PHlJhFho37SIyHi3WDGwkX+ZluzsxNj3a2iO8mYbdBedR9nDhPVZ0fKa3LnKTC
EFmxHC+R1Zqb35hH1btTKBSKzo+y0HUQhqXHSrjZUvRRdTtspqXI6bDRFK3tlua0c9uLnySJrSW3Dk0a
5++fV/PjkX25LaZbwtMTBrH4/
V1mey4rt2a6yzo54JwCL3vrW8zWXYW5HsonltIvhes1VTZoTVMATUrGzn0/aY6umW5e/
mAnM0cV07cgg1+/uSUuy/aJNZ/
z4NVfRyBStunyB8MEwhpzVn+W1NvWEEpHmyAQDmvsbfBT1xwiJ93J0ilD2RctjLxywx6mjuhNntdlxiK
2V9SdqKLCqe6vT36GqnenUCgUpxlK0HUQeV4X/
mDYUrjZbFi247IJ4lyDXb2SV6cNpyVobdFr8IfMcfIz3Nw5sg+98r3sqPHF9TidZrhzL+6F26k3tr+su
IAxpUWmaJJY93xtCWncFc04NeYtW1zBkluGUJibDmBma3pc9qRiwkY26E8u7YvHae3+8zhtjDi3G/
Pf28HdV5zL25XVvF1ZHXe///
3dCBOf+yBl5mtNIzz4xqa4ci2Gi9sQSgd9gXZ3h9A0ydbqRtN1bJSFyXDbzZ65ca70iaX0yEkjx9O2WG
qPm7c9WbCJ59htHHX3C4VCoVB0TpTLtYOw2QRnZOuCItHdZbfZWLhuBzNHFbN0ylBmjipm4bod2GzJb0
9TS5hgRFq66PbW66VL5owtYdYP+jNz5WZGzFnLzJWbmX55v7ikht4FXrplu/G67PQ/
M4sfj+zLiord1PtD5HldnJGTxoLJF8Wt9anxg2hOISarGwMc9AXisjU37m6wzAa9/3vn09XrwmEXzJsU
7/6bM7aE5mCEnl3TuePbfcyCyYn3uuOgr9Ukgjyvi599p5+5r8unDmPJLUPoV6CLPqPGXnti1zRNsv9w
S1Kc412vbMTjcnD3Feclu9IXV7Bxd4OZrWrl2o0dvzWx1p4sWKtz9tW3WCbWqAQIhUKhOP1QFroORC+L
YWfW6P6ku+w0ByO4HTa6eHTx0ZbLrd4f5MDhFua/t8PSomd0lWgJacxYXpEkpIzuDoW5HpDw/
Sffo6rOz59//i1+v+Zzy4SNV6cOY0dtM/
X+EC+u38XUEb1TJgQUZKXFCbhUbtuWkMb0VzZS0xTglbKh5n7U+0NmS7FlZcOY9uInlgWTyyeWct8fNy
eNGytUDKvXQ1eXWAqlWl+QHQd9bSYIGELJFwhb3gtAbVPA8li6y86tL3zMq9OGU9sUtHTtAm26fdvTZ9
bqnLLFFZaJNSoBQqFQKE4/lKDrQGp9Qa5//
sMkAZHYpzWVS80fPFITrqYxyMxRxeR5XfTITuOFdTvM+mc9u6ZbCgyjr2v5pFIefKPSPKexJZQyYeOlW
4ciwYx9K4omJUyNickz3Kj3f+/
8uHlTZah+caiZ6Zf349HVW9lT3xInOAzCEc10EccWTC7M9eBx2c32YLHjJgqV1lppBcMRszhzoljM87p
Mq5k/FGZ/
QwtpTpvlvUQ0SXMwYnnMSDxpCWkpBRm07RZtTxZsqnOMxJrjGZunUCgUilMPJeg6kGMtTxGJqbNmFBEG
WD51GFcNOJMbv/E13A4bLSHNUmAY4lHTtLiYtOrGQMqEjb31fqa/spE5Y0t45K2t9C/
M4U+fVvHCTYM55AtS6wseiYlzxcfEzV273bI8iVH6ZOaoYmp9Qcu1OuxHBJRxr8b6czzHnkTgcuiiMFY
sNgcj9MjRixAnWs0eu3aAZRux5R9/
wbUXnZXyPgtzPdgFrb7vbX0m2lNqJNU56W67SoBQKBSKrwAqhq4DiS1PkdihYWetr81OAWlO6/
IWtb4g0178BBtw4HCAB17fzOwxycWGPS57tAyHLW6cuWu308XrshzbsDLNWL6JJ8cPpHeBl/K/
7+SuZRup9QXJ8TgZU1pEV6/
LFFqFuR4GFuVw58g+FOZ6eHnKUF6bNtwsT7Jhd71pMVxRsTupBMi86y+kIMOdsrxGbBLBe/
dcYlo4j0aoGJmlNU0Bs7tG92w9icHKfXnXKxtpagmb8XhLpwzlnHwvt3zzHHp28dKveybLpgzlL9NHMG
t0f1O0zrv+QmyClGVJ2lOypD3FjlOd09XrTlmCRaFQKBSnD0LK499e6FTmwgsvlB9//
PFJmduIx7IqMGxYwIwSG4Y1KrEhvFUPUUMk/eOeS/jhs+upqvMzsCjHLKOR7XFyd1SQnZmbjq
ZJdtb62FXbbMbyndsjg0NNIcoSXKnG2ADv3XMJLoedq59+L2mOM3I8dM/SrVs1jS1UNwbM0iqp7m/
W6P6kOW2c1yMTTeou5YiUpDntdPUeiQ07UdalVMkIe+qauXj2X5LOXzplKHe9srHV0iZWmab3rthkGZ9
4XvcsoO0YutbW2p776fy8BeSf7EUcO2+tg/
zck70KhUJxvKjZCVfcd8KnEUJUSCkvbOs85XLtQGJ7jo4rfz/OAjT/
vR08MraEQ74g9f4QayoPEAxH2FPXjMdlJ6xJQmGNblluXikbxp56P7W+oCm4CnP1frBWLtmlU4ZS0xSI
s/
oEwhozV26OExF9CzJYcssQQhHJF4ea48ScYTUyLEFWotQQIhFJUp28Gcs3mQH6RnHgnHQHdiFId9jZdt
AXVxLEGOtElNfQNEm9PxgnIGPFTyr3ZUGmm1mj+
+OOqbdnJaLyM93m640tYcaUFrFyw564WnpdY+aLjZ8UQmAXupA11tReodZazKBCoVAoTm+UoOtgrHqOD
izK4YbhvZi84COq6vTODr+4qpiDTUEaW0Jkpjm4PSZ2a971F9LF6+KnSz+Ney0tRV03CSy5ZQjBcISax
gB2Gzz+ztY4gfH4O1t56OoSCnPTqfcHaQm5zcQDK3enlSg1gvlT9VTtXeDlvXsuIaxJHnqjkrcrq817T
SwJYoyV53UdtdWpNQFkWCcPHG6Ji3mLtYpZFfqdPaaEny/baIpnY22pCvduq2lKaUk1ro/
9TBzNWK1ZCBUKhULx1UQJug4i1ioU1iQvTxnK7Df1LgaxrbcMcTfhDx/
EuStjCwMbpTASg92BJCFSPqkUt8PG+JjxyieVMu2Sc5IC/
DVNw2YTdPG6yfG4UgbTW4lSOBLM73RYZ4SmOe0IBNdFXbYAY0qLqGm0LvsRDEeOqpODsc+tXVPrC7Krt
tm0ThpzJQrILulOlpUNIxzR2LK/Mc5aaazNiLXLz3Cb4nh/Qwt5Xpdl/
b2Zo4qZtarSMoEjVWmSZWXDVHFghUKhULSJSoroAAyr0Nb9jVz37Hq+NWct01/
ZyH9/91wGFuXEZZjefUU/
gmGNx64dQPmkUvIz3MxYvompI3qb41XV+QmFNfK8LlwOuykugKRkgR7Zadw4/6OkciR1vlCS4AhHC+C2
x8XXWjC/wyaYMzY5KcNhE2amr5EU0qcgg+xoOZLEsYQQlmImtoBwIqmEkXFNMBxJWR/PEJBXP/

0eQ379LuPK9bZks1ZVWrYPC4Yj5Ge4mX55P7Ov7syVm6luDMQV9B1YlMPMUcWc2z2TZWXD6JOfkbSfqT
KgjfItVmtVKBQKhcJACboOwLAKGS4+0B/KP1u2kbkTB9EjO83MDM1wO5i5cjPXPbueWasqmX55P/
Iz3OTENKMvzPVgE7Bl/
+G4zNgt+w+jaZL8TDc9sj3YbdDYYl0QN91lT3qtwR+iqq6ZL+qa2byngTuWbEiZcdta5qU/
GOGRt7bGdb545K2t+IO6QLysuMAUQd9+7K/
MWf0ZT08YFDdW+aTSNst9WNFWaRiXw27WjYsllYB88I1Ky+4ehpi+c2SfpPp9UxdXcOfIPoAu5ox7/
dactYwrf59tNU1J+5lKIBvlWxJfV8WBFQqFQhGLcrl2AJqmUdTFkyQ08jPc1DQFeWLN58weU0IwrCUlE
9yzQk8maA7qgsRwj+46pNeHi8029Qcj7G9soVuGm931fg4cbklZk84YL/
a1NKc9zjU7e0wJKzfsYX9DC163HY/TYVrrbDZBn/
wM0y3psNsoyNDLYhg13oykDGN8w9p331XF5jyAWRNv/
o0X0eAPUZDp5oxsD3UpChO3JmZSJTREopbHPK+Ls/
PSk+rGzbv+QksB+XZlNbNG97d0P+d5XfTq6m21oG+sO904ZuUytYrbiy3fciw19xQKhUJx+qME3QlG0y
QHfUGqDweShMadI/
uYHRdqGoPMubbEUhz07Oplf4OfpVOGUu8P8ejqrdx75bmmmJt+eb+kbgfNwQjz39vB5It78cyEQXElRO
ZdfyHumDi3wly9T+vDb26JEx4L1+3g9kv6cPuS+Gv7dctE0yR7GxIwBqIAACAASURBVPQerrW+ICsqdv
Oz7/
SjX7fMlOLEEEJ2m7AUTvddVczZed44wWQ1jt0GBxr8RCRIKZNEVvmk0riM2dljSnjwjUoevPrrgB4DeG
auhxdvGUI4InE5bPTISkspIG02m2W8ms0mSHe3XtC3OWhtIU20MsbW1ksUju3pIqJQKBSKrzZK0J1gan
1ByhZVWPYkPSvvSIuuDbvr2V5j3Vs0zWGLc9cCptvQygJUtriCF28Zwg3DezFj+SbyM/
RyG2flpeNx2OierbvwlpUNY2+0/IlNQE1jkPJJpWbmq9dlN8WcMbaRkFHTGEgSTY+/s5UHr/
46BZlprYqQVFY0j8sRJ5wSxYzTYaOpJWxZ1y028aGr1xWXwWskNPz3dyNMfC7eAmkUADYSIo7WGtbVa2
1B6+rVrZU1jbTbypiq7IgqR6JQKBSKtlCC7gRjxHRV1ek9SRffPIQDh1uo94fYV+
+Pe9hbtcqaO7GUrhZC48zcNMonleIPWseMASxct8Oc26j/tqxsmCmsumel0RKK0NgSJifdyawf9I/
r0brwpsGWY7eEtKQyI0YWZ3MgguaVliLESLbQNC3JipZKOMWOU9MY4PrnP2TmqOJW3Zg2m41ZqyqTRNS
Ogz7LNZctqiAYjrTLGhabMGLUB8xKc7CsbBh2ATabLe6aLyMSFQqFQqE4WpSgO4FomkQIwfKpw6j1BZm
7djuhiMZd0di3caWFPDV+kGkFq2kK4HHZefGWIexvaCEU0fAHIxxsDpDtcfLSrUOwCYFNwP2v/
4vbRvQmJ91laQHSpOTeK88jx+NiWUUVoIuYVJ1BwhFpijnj3C9qmy3HTpWskOd1seOgD6/
bEVdcN9a6dv3zH1JVp9fae+nWoUgkdiHwuNoO8jfEcUGmu1U3ppWIKp9Yyn1/3Jx0TU40w9awmLVmDYs
tiZKf4ebuK/qZFtA7R/
ahV1cv6e54V6hymSoUCoWiI1CC7gSRqk2XEDB7TAkL1+1g9MAzeeov25g5qpg8r4suXhdLP9zFoJ55zF
27nemX92Pe37dbtgmraQwSDEtmvLIxyZU7Z2wJP1+6kZqmAE+NH8S26iazoG2sq6/
eH+TA4RZmrtzMY9cOSBJJT6zZRvnE0rh2YPOuvxCPy9pl2i0rjZaQD03TLO8/tp5eTWOQqrrmlMV9E/
ey1hckIiXzb7zI7DubOL8QR+rkJYoouw2zUHLsNc3BSLstZrElUWaOKjbFXGIMY+J9KJepQqE4WWiapC
kQNpPXMtwO9QflaYoSdCcIq3po96zYxNIpQ1m4bgczLj/
X7AxhZHkW5npYfPMQfrb0UzM2buaoYhau2xEXEzb/vR1MHdGben+ImqYAj67eyqKbBhORkt2H/
HE9U29f8olZ0LZ8YmmccPEHI6agqrdICKhpCtAjJ61dBYyfmVhKVV0zL7y/
k59c2hdhSy4BMmP5ERfn1BG9k8q4WGV/xva/HVNaZM7/
hxtKuWVhfAyfXRy5JrGOntWayyeW0iMnjRxP+yxmsSVRcjxOU9i1lcV6LD1WT9/+rAqF4kSjaZJ9DX6e
+8cOan0h8rxObv5GL3pke9T/I6chStCdIFLVQwP42Xf6RWu+xbf/mjqiN0LAPVeeizda/
PaM7LQkC93sMSXkeZ08/4+dpsv28+om8rwuJi/4KGnOPgUZzBrdn/xMN/sa/
KYwiMR0e5i7dnuSpa98YimhsIbNZov7D0DTJG6HjVmj+5Pu0uu6RTSN+e/t4Ibhvfjdnz/
nvlHFlvdv1NMzBFHi8cTsz1pf0LJv7NMTBjFnbAk2Iaj3h1i4bgcPXV3SaqeIY3V9xiZzGAK4rftoq3O
FQSoRerSdMhQKhcKgKRA2xRxArS/Ec//
YwU8v7UtWTG1TxemBEnQniFSZnEIIuqQ7yUpzmMdTlR65rLiANKfdsjbd0ilDmXbJOTT4Q8y/
8SKEAKfdxmXFBYwpLTKteSsqdrOrtpn8TDf3/fGfZv/
U+64qBvTab0+s2caG3fU8unors0b35+y8dOw2wZL1Oyn/
+07L9llGLFzsvRnWqpmjirEL0Wr9OyNLt63sz2A4wpjSoiQr2LQXP2HW6P5msofhNk3VKcKwmB2L6zM2
Ns9IYGnrPg76ApbrWTplaJvCrVuWW7X9UigUX5pwRDPFnEGtL0Q4op2kFSlOJKpTxAnCqpPC3ImlPPD6
Zob8+l321reY7bFSlR75xVXFNKfIYg2ENSY+9wGjn3qPyQs+4sDhAJt2H+LHI/
uabahmrarkxyP7UlKYxRNrPuftymqzV+z4P3zAN+esZebKzdx9RT8GFuVQ0xSgINON12XnoTcqKf/
7TnO+xPZZqaxvRnKEx2W37CQxoCib9+65hAFF2Sk7TcRiiB6r+XoXZJgtzgyx2VaniFg0TVLTGGBPXTM
1jQHCYS3u58RuDrGxeU+OH0i/7pmUFGVRPtG6k4SmSZoD1uvxhyL84rVNbD3QmFL0pcpgVm2/
FApFe3DYbeR54y1xeV4nDrt69J+OKAvdCSIxvc1UHNI/L2sXp1a9JeTwGvZVY2LpundOeZKlKZRlNtPwlukIvKy7gzpF948q2WLk3rRIccj1uy/
uoaQyw46B1bcHdh/
zcMLwXj7+zNaV7OiLbX8NOoVAoEslwO7j5G72SYugy3OrRfzFoPrfzqiZPoJxHj4n5mbjpQyTiQZCQ1liyrYVt
1k2a9z/
+EWHDaR1Ev0mQmDeGLNtrjzq+r8OB02a2GgSS4rLgAwS34MLMqhfFKp2Wu1oSXE5AUfsWF3PbW+oOV6n
A4bNY0BpCZN66JxbPaYElZU7KZ8UilnROPtYu9frw+XXNKjtePGOWdke1L2U00k1+Ns17mJrtkxpUVJZ
VtirZKtkeo+guEIT6zZxuwxyXv1xJpt3LNiE2NKi0z3dOJ+pzlt7bJiKhQKhRU2m6BHtoefXtqX+0edx
08v7asSIk5jlEzvIBKtWnPXbuep8QM55NOtcHMnlsZZh4zSJgPPyiErzcGimwdT2xSk1hekJaRZluAIh
a37tm6v8fHjkX3plZdOtsfJZcUFSUkGT40fxLjSQkYWd6Mg080LNw3m4Te38HZltSkkjDpyj107wLQuF

```
mS6yXA7aAlF+J/vnY/TJqjzh4464SAc1qhuChCKaDijfWEdDv3vDYfj/
7N35uFR1Hn+f1X1ne5chARQgiKDSMQwEOScnUFR1BFlEcSRS1AgiI6O64G7Dj/
djc6C6Dq6DhIZB5VjBEFXF0d0BmVnhsMjIowTDAyiJgokhFzd6fRV9fujU0VXd3USjhzK9/
U8PCTddXyrmqTefI73R2Zgz7RWo3mKonKgysvTf9qvW8Foc2Hjt41Pzba1SeNk0Gbaal3IlQ0Bw+QKwJ
CeNps20d1tHv0TCASCtiDLkmiAOEsQgq6DsMqSYQpEdqodiyyz+I3P9JTf2rkjqG0McaS+iZd2HOKeKw
dglSV+ubmUhZf9IDrRofkH00wArvzzFwmdqrHjrV6ZP5L/+N+/
8+A1Aw1NDRU1fu5Y9wkv3zpcf11rzCiaOAhZlrHI8GBzw0OWx85d4/
rrzRQQFY7xTQpt7cYMhxU+P9pguJ4VMwq4qEeqLura4uUWG3WLtYIxayKIT82a2bacbnoztolif6XXdH
pFq+lp6HINEMJKRSAQCLoeQtB1EP5gxBDVyk518LPnd+kP+HdLKyk93MD6+SPJSLHxyPWDyPE4ONrQxO
SCXO5ct9sgBsbn5bChcBThiMK+Iw161OdApTdpNCgYVni3tJLbx/
7ANBqlqvDkjYOp9YfYWnqUyoYAqS4rLllGUVRuGd2Xl3Yc0v3gnpw6mLf2fMug3hn0yUqhxhfUp1kcqW
uiR5qDbu7WxUilN5CQ7lywpoQNhaM4J8PVyt4nOJmGiPhpEptKyhNE8ummN2PrKM3GncWmp6HrCTcz2m
rDIhAIBIKOpVMEnSRJ9wBzARX4GzAH6GzAH6AW8AnQDPgFmqqoalCTJAbwMFADVwE2qqn7ZfJx/
BW4DIsBdqqq+08GX0ma09Fvh6hKKip0G6wzLs93Syt5+DoVl91qiPzsLq/
ly+pGPfKn0TvTRURR6Z3porIhYBqN+vp4I3Ne/IjxeTnceXl/
FjbbpWjRuj+XHU1I1a6YUaB30GrTIJa8/
TlV3gDFMwoMpr3xkZ1Ml40af4hQRGHxhDxWbDuoi8+KGv9Jt9a3tSECzKdJZLpshiYWiwRH6ptMZ7S2l
djIYnZqoknzd00EtWYLIxAIBILOocObIiRJOhe4CximquogwAL8DFgKPKPWqan+ghqhQo/
nvGlVVfwA81bwdkiTlNe93MXA1sFySpC7b/
qdFhMbn5dAv241FwrQXivC1x6OGvUm2GfuaANj4zNcCof6yKfl6o8o8Xkg
lxdzGlrKVxTwpRhfRI6ZBesKWFyQa7+/
f0b97JgbD99H+16tMjOpOXbGbP0fSYt387nRxuobGji8yMNbCop576rovYp2ppOtrXezComWZTNLG1ot
UZFW31TmKnFOxnxn+8xtXgn/
6jy6RYj8VYmJ0NbmkC6OicTBRUIBAJBx9FZKVcr4JIkKQSAIeBy4Fpze+/
BDwCPAdMbP4aU2jkReEVV1QBwFDgZ0ddA0nhSxL9M/2cPcVF1J+3I/
HYTXU1MXWu2lU1PgJhRW9yzM2Xbdy1jAyXTa9CWDZlHx6pjuRJYnnPgU28VlLB1Jg5
UenninTIWjO1HRoqN9fNH6ud6+k8Hoq+7bGR5zH3frBbJ9PWcmMiM5kenfa096M0iOwvWlOhjybQmkAV
j+1G0uZQVMwrI8ZxcxMcs6qaJuaqGgCESd6DKa5o2TDaybfGEvO9EJKq969tOJgoqEAgEgo6jwwWdqqr
fSJL0BPA14AfeBUqAWlVVw82bHQDnNn99LvLfq99qbcmRt63hgDX9EbdUXSCl05SfpNCPaFIzOj5+/hdxdwE/s1nM/
Pw46FoomDyO3mAiQe37JPTznCickSRxuayE518aY/AHTzyoNfGR7RpNDU/eOBiBi8HTWb2qo/
015ZNyefxLWUUbS5l5axhevt6bWOABWP7cdwX7aJVMfc/s1nM/
ediPY00Pzrta5fdQlVDgMZguEUzYk00XdQzlQ2FowxdrqeD1vkaK97WzR2RNG3YmmlyV45EdUR9W3zto
bBSEQgEgq5Bhws6SZIyiUbX+gK1wKvANSabarktsyeR2sRG8wJsbG1iKyPMshJNSabarktsyeR2sLrZuecD8wH6NOnz0mu+MyhKNFasQyXDW9Tm
FSnlfOzUnDaZHzBCHPG9KX0cIOhPk0zIzZ7OAfDEbI9Dh6fkp9gKHzvq3somjgowUA4duSULEsoiso3t
U2G6N+z04bw3PSh+sgxLXq4esch0+7aYHOtW6xo7J3p4uVbh3O0LsC81R+zeEJeUjNibX1ZbjspduspR
8DMBI2ZeKtsCCRNGyaLQGldsG2NRCWrF2zP+rmOqG9LFgX9LqaPBQKB4PtEZ6RcrwAOqapaBSBJ0mvAa
CBDkiRrc5SuN/Bt8/
YVQC5QUImUmSFUgHjse8rhG7jwFVVZ8HngcYEmxqsQbDnQaK/onLMF9QbGx/JTWBQ01s1v
hCDOzl0b+P7Za9fkhvw+sv7TjEBVlVm/
20FFjZ8V2w4mtVSBExYnmXjTjJPN0oZmESgtHRwbiWoptXmqUyhOl/
aqbzO71q6cdhYIBIKzkc4QdF8DIy8VJSiGach0HfAy8D0wh2ul6C/BG8/ZvNn+/s/
n991RVVSVJehNYJ0nSfwHnHAP2BDzvyvQk4GTTjF12a9Mn8kmS4bsixFLT6ax2J9U9O9Ooi7khuRncd9UAgx
haOWsYOWl27t+4N2n0CbbRZi0KF/
88VfMKGBTSblhuoU2bitWlK6cNYyea6jMGm+hvLjPkP37RPvlO1p1YiisuTtaIpZ66LtFX+cJCRLLaY
5rW0Sb5tKyvnNtKHcse4Tw/
6aKIsf2WaR4LFJ+YaoZkupzbZOoTjT9XjtUd8mbEoEAoHgu0Fn1NB9IEnSSRq4hndz4EdCGjwTAOADVbeVNFcHYoWVoO4NWohJjUOdwpVV8IWCN4CHhYRwwbPkqi9c06ZDM0YCu5eMyc7VLJQGpbGeBdIlRwWn1bmyWWJe+p9f5UbKDRvG9kw/ZoNPiDC3CCGBKRIGjuuXIA/
bM9bCgcxbe1fqp9QT19vOOL6pMWJoqi0hhoObXZEVMozGiP+jZhUyIQCATfDcSkiA4iWW3WE+
+UmT4g4x/OZoLg27omFk+4mH9UeglWCswh/+7Mrs4QXJfY7d6/e7qW9iNM9kxk3Aq5Z9Z3+4wv/2yrZPdbqMG0P9YazNrYiabyaeb5pyazMTCWWzwq/
I2IdzMkGgzWidNrKPXiOnPcif/
tkPWf9hOUUTB3F+dzduh4Xu7kSrjEyXjfO7p5gev9YfYs1tIzha30tP8T/e+PvetPG9kWXtfhAr/
YFeeyt0oQ06/LpQ6n3h5g2sg/f1hrXXDzT6FuXjGTi2CKRIGjuuXIA/
bM9bCgcxbe1fqp9QT19vOOL6pMWJoqi0hhoObXZEVMozGiP+jZhUyIQCATfDcSkiA4iWW3WE+
+UmT4g4x/OZoLg27omFk+4mH9Ueg1GwhU1fu5+5VOW3HAJvmCEen8wSC3xh/
iaL250XAgrCBJcO+re05ajATDEd4traSqIWiouevWbJLsD0YS1ly4uqRNAiuZOJZlWRdv4YiCNWYmbM8
0J3X+EL9Y/
+lpRa+qfUEOHfO1KNBOdwrF6ViPtGVE2skgbEoEAoHgu4EQdB2EJtDMIkUtdSSkjKtcTSPOPGSVTZgGf3JBM93Om7oR2Au5l06vgGmF2+9pvYvyhtg1n5ANotOGcnsm9lj+HqGyPtZ8wXBHSVyJLlAZiL8G2HVyqGJKAESQbBatKAm8Vh0nIxEHOnKM1FvK6s3gSh5JSifjKO+hKZyPqlgZ67QaeL/
lJwE7RF5hz1JIIwZxWIXG2hlPAgyg58JNjgXfsAnYmVFh3XEBJHjTsWUFMAtPGKeaxkWySFg6RQS6f5k1jGxpZY3r8
j2/ePqh66bSFh7JP8YAb8SOXZp/
zKwVpcrFqVn+FCT/RrBQQhxG3xcXjtcuMr8c8Ij5GbIDGhyUIzFJpjkKl99Es7XTxVnqd/
PAzCzJx/
jXJadkRs6l7PWxSPf9TnKWS5JjhxnIuI1AgR4/
mpJ2MSaRU7GOpOwPLvRzpw0m2MWGd86A6lJLwFoBiYvf/
N4lXN9n8UAkDXy/
oZO8N06Bq9RJXa2MYTt15jk7JZyu6Iz09sSyFB89bBxfk7rzrZJgSrDiKwRPqYTzV9fK+LyqjmmT9pRp
6B2+n69Xr3S3RqOuS8f4KSQXeAp8X/
k/
5S+JTY7LjGXPlU6bbhK4A4aPlF1aSXp5a9V9f9ZGkn2Zx2AmpwqGXLTNjdfsNPhqr/
KpiYTQ09GwwLH1E5OZdXLg1MBiLw+
UZ/
ejNBq29EYSQMdS7H7WTkaqCK5u09pqbX0oJd/
5X0otm+bidKIpwqGNZlTLjBsuhV+hxJ76zAHBvaUUaMLoK5iXUJy0+KN5fuhP1Dqu8bmOCqYGX1AEVrhuaGhGJqBtk5+T55dXtS6a0UXYPjv2IlR/XZ3xp/
x8TIuBNhrJ4XA/
YGBwp9wvO2Dib3LUe1evNTedaqHYsBbepv6XB1Ph94HoJDEeX0XzKCL
ccd4Qe9FsaK9bxwXXawj/
EyD2RCmEBd+QRyrFcvNmd5vGehHRSOBRzhRTP3jg7AKhHCE7V/
fFB5T/fP+BZF6dqKMu0RYXHGiZPeYt6nsfoUOFkOFbSXCh8MJtF7S5
mm2Q/lhJkq7BZj9qz5U/
wRsSDJr0JO+JebYKRMHFNBCS1d+RQ8MoOhjbRq5jt3pn0V7xHL8hLm/
GO7BzhVlATtFAUm5HhNADP6kfZAPAHMiTiSDLO0ntmT+90GcnUCyyHzCVxSYkCNKcqd
TUAtmpT4vJ40SwpsOWQKa+2OY+hL0ljk5HA2vT44/
RYH6MDAHH9r7eVf0OT9AaMxamK/
6Zxsfv3m4E+RF0QqK+XdJDvl1ZMPJoSmQoK8jqnj0UofGQ3Hgc1i9a5QEFLcKqtchPtr2Q3fnsC4kgfcIVzUtP3sFE4ecWw5SgeCVe3FoYvYBAHKnXT6GcKgTt5Jc0k2OqPvKQ4RFG5aE6UzJIUqEKGRY3tcO2MqNWmOyAiDhDUnm7EIH6FAxQXhfEWPrRzDIn9b7ThkFPJOlhlDB9lmKZEUGKGWaSa3HFzIH16rXAmxbfWiGuyyrnLqg0XoXxLqqHZn4xkqPJ7H3iMpVKCcaUPz6eHsfXjqPF
uTEWvguEIz2w9kHhPZpy4J61NoWjp3F2tZk3YlAgEAsF3A0lVO6Xps9MYNmyY+vHHH3fa+RVF5ctqH19VN9LAkWI+RFkebLYQMHlYkD9ulk3YG99M8dJJqL2MHFOFMaIr7QJ1EwZkTYtJmtK7ELKCvdvRUOd7tfXKoTLt0q3uiXDFmKAt8oXq5Rq6fvSyiu61P+z4HgQ/
uTEWvguEIz2w9kHhPZpy4J61NoWjp3F2tZk3YlAgEAsF3A0lVO6Xps9MYNmyY+vHHH3fa+RVF5ctqH19
```

```
VN5Jit9AYjHBeVgrnZ0U7CbTIjMtu4Wh9wNApuXjCxXxbG02Frth2kAVj+2FvnqZgNupr9a3D+bK6kUy
3jX9/s5Qqb0A38n194Riy3HaO1Dfxba2fUEQhoqjYLDKNwQgehxVFVbnp+V0Myc3QTYdr/
SF+2DudHuktz1htSZgc8wX4+zf1pmtuawo0WZfrpOXbE44Zb9VyOlQ1BJi0fDvZHod+TxqDEQbnprdpb
m1bj3+q96U9aG+z4tbZAmR34PnaiS07IDuzs1chEAjOFFVfwtW/bPfTSJJUoqrqsNa26/
DRXwIIhBUWv/EZNz2/i8VvfEYgrCSMxtpTXmcoRn+3tJJ/
VHq599U9FK4uYXd5LRkuG89sPUCm28ayKYmjvP5lwx4Wv/EZ/
mCEB64eQEXNCYPccCTCviP1TC3eyZQVO7l/414kSeKFv35BdqqDLI+dxmDEEGW76fldFG0uRZZb/
2cTG6XavugyXl84Ro8ydXPZye3mSlhz8cwCMpunTMSjKCpVDQG+qWmkqiEAkDBGK1m9V0WNn0nLt5/26
C44EbHS5vLe++oeeqY7yXCdmYhVV6xZ+z6MLBMIBILvOyLl2
sG01KEZ+7pZGvWZrQcMhr8qkJ1qx9sUpk9WCr+fNxJVVTlY5ePxLWV6A8P9G/
ey+tbhBoNcX1BJ8J9rDEb494mDqKwP4LJZGNInneIZBRS2sfYrHrN6Lm1yw1N/
LGPOmL6svm04siRR1RDg6T/tN6SDY/
dpKQ2pRZAiqsqq2ZfyzNYD+rVr1xzbGXw6USZthFtsnV52c3TwTESw2lKz1tkRs84+v0AgEAgSEYKug0
kWgQlHFLI9DsP81VcLR/
GrP0S92obkZnDXuP54HFZ+P28kgXAEiyxx5+X9DbV1K2YUGASNli6VJImXbx3O+g+/
YunkfBqaQqb+c89NH6rX3Gmi6XTqzuIf/
hYZfVxZfVMYWQrQGIzgtMm8W1pJ6eGGhPRiS9YZWW57gtjTplVodYOaebEWrbv31T2nXJcWO0os2+Ng0
TUXEQhH+PJYI89sPWC4b6ciclqrWevsGrvOPr9AIBAIzBEp1w5Gi8DE0jvThdNm4d9+ehEPvvY3rvivP
3Pzyl2EFYVHrs9jakFvHrh6AIvf+IzLnvw/bl65C1mS+PJYoy7m4IR/
3F3j+gMnDImLNpcy9oltzPrdh/w0/1ze2P0NlQ0BU/+529d+woKx/
XTRVOMPnXS6TUuPHmtoorymka+qfXz2bT0Pvb6Xw7VNjL4gS1+Xlnb2OKwMyc0wTS+2lIY8Ut+UIPbu3
7iX/542hKKJg/TGE+0+x0brqn3Bk/78Yufn3nfVAO57dQ+XPfF/
LH7jM+67agDZHscpHxtaTlXHnj9e3B7zBU7pfCdLsvOf6vUKBAKB4MwgBF0Ho0VgYmvHVs6K1jres2FP
gjA57gtx9xX9db827b3jvmDS7tbzu6fQO9Nlakh8x7pPGJfXgxXbDib1n8tpjo5poim+fi0cVgzfx9al
aRGch17fyze1TUz/7QdMWbGTos2l3DK6L09v3c/8nySuSxOSZh2/
ZiJ4fF4OKtAUMhd7EtAz3UmVN6Df56WT81mx7aDh2k4WTVya3dtFm/
bqYvh0at5aqllLJm4bA5HTrg9sC12xxk8gEAgEIuXaoWjpx24pNjYUjkJVVX3+aUNT2PRBmWK3EFbUhP
eqfUHsFtncj02SWDX7UqyyZHrMDJeNKm8Am2y+v8dh1b+2WeWTmkuqRXAWT8jTR2tp5120KTqmzGYxX5
cmduNr9OLTkOPzcvj5uAv52fO7TMeejc/
LASDVaWVD4SgkCT4/3JAQrWvNS82sVkwTl8nMnjNctnb1aUtWY3fomA+3w9runbDCl04gEAi6JiJC10H
EdrGO+M/3mFq8k0BYodob5Ppnt/P5kQbTVGxjMEIooia8t6mknHMynKbdrb945VOWvfM51mbBF3/
MXhku1s0biSzD0snG/
ZdOzqcpFNGFmlWW2jSXVEu5aRGcZIIny21HUROvp3emi17pTtNarPg05CPXD+L25jWs2HbQcA3j83K48
/
L+3PT8Ln609H2mFu+ktjHEeVkphmhda80d8V3HWpdspsvGylnD9A5gs8+rPX3astx2imcUJHxmz2w90C
FRsmQRZuFLJxAIBJ2L8KHrIMz8xVbNvlT3YhuSm8GD11ykT2XQxJnLbuEvZVVcP+RcqhoCVPuCbCop54
7L+uN2WPA4rESaZ7gerPLxzNYDANx31QBe2nGIW0b3NTQ9PDV1MOkpNm59MRpF21RSzuSCXN1jblNJOY
9cdzG25ohUVUMTn1bUkeGyEYoo9MlK4cePb0u4vu2LLuPczBSqGgI89PpeFl0zkFt+92GiN95twwmGIw
TCqqGZY/n0ofTp5iIjpfUI0zc1jYxZ+r7+vdb40T/
Hg9UiM23lroTzvrZwNBJSm5s7WvKDy3LbqfUHOVzbZOgALp5RQK8MZ5vGl50Ox30B9pTXkWK36J6EVd5
Ah3nVdXyXq/ChEwgEXZAu5kMnUq4dRGztkSZAzss6UcO2u7yWJW9/
zpIbLiG3WwqKonKkvol1u75m0tBzmf7bDwzCITvVTliB7u7oaKtvahqZ8+JHABTPLNBFnDZ6K8ttJ91l
wxsIceuLH+vRrfgu12VT8rFaZD3icswXpGhzqUF4jc/
L4d3SSv3aYlNumS4bd427kKVv70s6xzXLbafeH2D1rcOJqCpH6pp49r0DPDrpEsM9SyYc4tN+u8trKdp
cysu3DqfaGzCNDIbCCudmppzS5xV7nGA4EvXSczvIcNnP6NzUtpLhstMz3WlIQT/
9sx8SDEeoagi0+zrO9HgxgUAgEJw+QtB1EJoIibUKia//2l1ey4Ov/
Y11c0cwszm6tWr2pQkNEYVrSlg1+1KWvfO57ttmt1oYn5fD5IJc+ud4DMfURm+tnz+SLI/
D8N4T75SxeEIe/XM8HKj08viWMh65/
mKaQlFblMLVxvTqwrWf8PKtwyk93GBqq1HjD+kp2Xgx+cDGvTw6aRC1/
jD3bDgxU3Xp5HyqGoKEwop+v8zsMYpnFtDdbcdmlVk5cxjzVp94b8WMAtZ/
+BVDz89qU41Xa1Gm1mrFOtOLLTYFrSgKx3xBpsUIfmEjIhAIBGcfooaug9Bqj2KtQuLrv7SH8TnpLr1e
rF+O2zRSVOcPccvovjz1xzKqfUE9Mla0uZQDld6k9V1Om7GuTotuHaj0Uri6hCpvgFSnVRcIyc69eEIe
6+ePZP38kQbxEBvZ0sTklBU7Oe4LUuUNkOa0JdTgLdq0l7vG9TeILjN7jMLVJXxaUceDm/
Zis0oUTRzE+vkjeeLGwaS5rIy9qAebSspN72lsjZdZfdy+I/
UcrfPrXbuxtWJDcjNYNftS1tw2AlVVqW0MsO9wfUJ9XUd0mWpoUTJZlhNEt7AREQgEgrMPEaFrR+KjOP
2zPbgdFtMI2cCeqbjsVj3So6W0KhuaTCNFTaEID772NxZPyCMYjlDjRxdKmlCMTXeumFFARFFoDIZZNi
Vfj/ppdXW/
+sPn+nZL3t5HRY1fnyoRf+7KhujYK62mDKI1Z8Fms+NVsy9NqO9qDEYonlkAJHbsVtT4uSDbTVMouXB3
sQAAIABJREFUzLc1EawWGX8SO5IMl43JBbnMXvVRQmfro/
98CQ9fdzGyLOldxGbRs2RiUZtzq0W4BvRI5c07xyTUyi2fPpRn3zuQIKJOZw7tqUbThI2IQCAQCEAIun
YjmaN+lttuWv+VTAxYZSlBgC2bkg9EH9w/yPbgslvwByOmQvHCHh72H/
XiD0bwBsIsXrc7YdxXbrcUHrn+Yo7UNyFJ6PVxZsJQm8KgXU+G00pFTSOVDQFCEQW7VdYbPTTx081twy
LJZHsc1CQRiV80N3TcNa4/
fbJS9Nfjt6v1h0w7aN8treTh69pWJ5dMBGnHjRVnEQVdzGnbLVz7CYsn5BnqCGNFVEuCzTSV3EIzxemm
```

hgUCgUBwdiAEXTuRzFF/+fShvHzrcI77gnrH6j1XDkhq+
+APRnh8S5kuwGr9IR7fUsaD11xE70wXXx9vJBhxkt7sfxYvFFfNvpTC1SUMyc3giamD9TSqVlcH8MYdY
5j4m+1AtKEi9jiyBKtvG45FknDaLFgtEs9OG4LdaiHTZaOsskFP+ZnV+2niR4t8/
aC7O2E+7LIp+bz+yTeGBo3xeTksnz40YaxZusuKinRaIiaZCKr1h/R1a+IsmfiL/
7y087c2Gss0OrimhKKJg+gZZ9vSljFbrY0KEwgEAsHZgRB07YSZEMj2OJCAWc0ND1p0pn+2xzQyc8wXQ
AWqvAGDAOud6SLL42D1bcOp9gZ56o9l/
PvEixOiaZqnHEQFXo0vaCpkjtQ36d9rUTnN8iQ2MqhFknqlu5Bliarm1Kt2vIyU5Ga7mqBdO3cESOgCN
SfVwb9s2JMweUGLfq2afSkOq4wKPPZWKe+WVjI+L4fnZhToXnSa2Mt02dr02ZiJoNiZr70zXUhS9PNIJ
v66xURaY0VUS3Nns1MdSQViit2SkLZt7VhgbJDojAYNwdmHoqh4A2HCEQWrRcbjsIp/
bwJBF0AIunZCkhKjSHeN68/tcbNXC9eUJKRbYyMz2R5HQsr1uRkFPL5lH+
+WVtI708WTNw5GVeClHYcMkbyXdhxickEuELVKsVkS07crZhTwv59W6OfeXV7LSzsO8fB1F3PT81E/
N81mxR+KcNwXorYxxPlZ7gQrlvgoISRGvmK99CYX5JKT6qDKG0iaRp3/4370Snfqa9FeB1g3bySHa/
2EIgr+YIRv6/24bNZWBU2sCPIHw4QVlSVv72N3ea0u7izNu5uJv2VToiPEiiYOom93NykOC93d0RFdrd
W0tRQdjK99a2t9nLAREXQUiqJyuM7PC389RLUvRJbbxm0/6qv/
J08gEHQeQtC1ExaJhIhZnyzz2anxD+jYyExFjZ/
Ht5RRNHEQfbqlYLfKFG3+uy5qKmr83PvqHl67fTT3XDnAIDxWzCjAH4wwJDeDu8b15451uxl9QZYh5fv
M1v3ceXl/DlU36gLxnisH6Mcekpth6lWXkWIziJMFY/uxxMR7Lj7yVe0LsrX0KHde3p+Faz/
RBas2eSFe6OSkOoiYjD57t7SSB68ZyJK3P+e+qwYYbFDaYtuhiaDjPth/1MsDV1/
Ev14zkCP1TazafojHJuXr28VGwLRRbXdf0f+Uatpaig7Gp41FfZygq+ENhHUxB1DtC/HCXw/
xiysuJK2NEXKBQNA+CEHXTsiybIiYhSIKFpOondkDOj4ys7u8ljkvfsT6+SPJTnUYivGh2Tg3ojCgRyq
vLRxNYyBqMFvbGMRps/Drn/
0QuzU6P3VcXg895atF3oJhhYevu5iiiYOQZVlPHfbOdJkOob9/417Wzx9Jr3SXLk4yXDbeLa3UvedyUh
2ku2yGyNfy6UMJhBTm/+QCyo/
7yfY42F1ey+Nbyvi3nw5kxYwCw4zY4pkFnJPuotIbML1vEUU1Xd+8lz/
mzTvHEFFoMQ2pKCpH6wPcFzed48FrBhpq0GRZ0u9JMBxBslrokeqkxh/
icJ3fcPzWato0gah9ToeO+XjinTKqvIGE2jdRHyfoaoQjii7mNKp9IcIRJckeAoGgoxCCrp3Ictt58Jq
BfFXdCEAoouKwSRTPLNDrzuIf0FpHI5h3eDYGIyjqifc0QZbltus1XxISv/pDKbeM7suDr/
3NUP82Pi9HT22aRd5iI1uamPAFwqZRxYhqjF6FwtEIW6yR8fi8HBZdM5D5P+5HlseOtynRUPiJd8rYXV
7LjcU7+eBfL+e1haNpCilYJHDZLdFImtvO2rkjDOnan4+7kI0ff83lA3ua1irGW42YRe3MatTu37iX1x
aONmxn1pywYkYBz2zdr0c1Y4/
fWk2bLEvkpDpR3Cpuh1VvMjHbTtTHCboS0SkyNoOoy3LbsFqEpalA0NkIQdeOBMKKwcJj5axhDMgxPqA
zXTY98hNRVB59q5SqhqCpVUmPNKdeB7dq+yFu+9EFhtmvxTMK6O6xM2dMX9PpEuvmjuBglS9p5E0ruNe
iUWlOK2lOq+moL6ct+gtcE3/
HvIGENc8Z05fj3iAepxWrLCfUDy7atJclN1zCjBc+jDYiyBLV3qBBOL1863ACYcUw5uqha/
OwSBK3jLkAi5Qofu8a118Xc5ro9QXCHKlvomea09QEWaOixm+YWAHmwm/
BmhLduiS+WaGtNW1t2U7Uxwm6Eh6Hldt+1Dehhs7jEI8SgaCzET+F7URbOhTNIj9a1Eqrm+uX7cYiS7j
sFjJc0Uie22HlkesuZmpMo0Cs/
UV3j53smBFf2vsWWWJwbjrFMwqSGvcGwxH2Hak3RBFXzCgA0DtMf3ltHqGwQlVDgEyXjQNVXnyBsKm9y
tM3D6F3hovDdeZTJ3pluBifl8PdV1yIVZYS7tlX1Y26KB6Sm8Eto/
sa5tqunDWM388bwT8qfaTYLTQGI/
TNdrcpCtnWGrWWfOvi751A8H1GliV6pbv4xRUXii5XgaCLIeLk7URbOhTNRN+iTXtZMLafXjdnaRYe/
mBET8d2czsIq+YTF1LsFm5f+wl3jetveE8TKt3cDgb2SuOcDJfpeDAVEkZJLVhTwiPXD+KDf72cu6+4k
Gm//eDEyKvKBn38mGavctPzu/QxYi6bxSCe4s/
3dXUj9191Ed3ddoM5skasFUqyqKKqwuI3PuOm53ex+I3PkJuPnWx77T7GjvfS1mM2JiyiqKZr17p3Y+
+vQPB9R5Yl0lw2unkcpLlsQswJBF0EIejaiWQCJvah31rkRyv812aGPvT6XipqGvmmphGLJDE+Lyfh+J
r9xfnd3QahUjyzAEWJRtUAeqY5E8RM8cwC6pr3j1+Tqqqmc0MLV5cwuSA36VxaTRxlue0UzygwvL90cj
7PbD1AnT+ELMum9yzVadNfM7M2qajxU9kQMKzp0bdKKZ5ZQJbb3qKojq1R277oMl5fOMa0zu7Rt0oTru
25GQVsKik3vVaBQCAQCDoakXJtJ9rSodiSJ5mW6jxaHyDb42D0BVksGNuPypjGgDsvj0bhtML8WPuLo/
VNURNfQJYk3eokNu3YP9vDhsJReurEbpEo+bo2YU3j83JQgcageYNElttuGDfWO9Oli9JqX1Av5O+V4a
Ro4iB9zqvW3ZmT6iDLbUdRVNbNHWG4RpdN1q1Qks2WjR9E/25pJUUTBxFJMW8uiRXVrdWoBcMRQ/
eulk7ulebgsUn5PHydaFYQCAQCQecjqara2WvoUIYNG6Z+/PHHHXKu1uZwmtXQ/
WbaUJw2mRS7FV8gxOG6AL0yHATDqmEMljbN4cFrBqICX1c38szWA1R5A7qwq/IGeHHOcMqPNzLnxY/
08/
bOdPHmnWM4Wh8wzhSdWcCbuyv4af653LHuE70JQfOM00Z4xQukdXNHMK25rm18Xg53jbvQYD+iCUggcY
7pzAJ6pjsIh1WO+YKG2r3imQVkexz88n/+xuSCXM5Jd6Ko6GvTtmkMRFBUlVp/
iBXbDlLlDejNHa2NzmqNqoYAk5ZvT7jm1xaOprvb0eLneyZp7d/
S95stQHZnL+L02bIDsjM7exUCgeBMUfUlXP3Ldj+NJEklqqoOa3U7Ieg6lvgHc6bLRqU3wLe1ft10d+K
Qc1m0aS/ZHgd3jevPD3I83LxyV4KoWDwhj/45Hpw2GUWNio/KhgArth1kd3ktAO/
d+xOqGgLc9Pwuwzq2L7rMMH0BopG4R667mLCiIssSqqoSjKjcEuNbF99kUDyjgHMznQQjKqGwgiRJTC3
eaSqAclKd+vUrikJEhWBE4VCVD6dNNnTmavvFC0+tKcMiS9isMt6msGGUmtYNfH6WG1mWTlsImYnuZVO
i6VdvIHJaYvF01tBe5+qaCEEnEAi6IF1M0ImUaweS7MHcLcXGlBU7ASieWaCLOU08PXnj4KSpToBH3vw
7iydczM9/vztBEClqNOVaPLNATxduKiknEtdUMSQ3g9t+dIHeOasJl57pTn272LTqRT1T+aLKxy//
5zPdFHdAj1QqahtN19oUilqBaDYn8ffhuelDTTtzvYEI3VJsbCgchaqquigDOFLfpIs5bft4H7n4lKqi
qFQ1BNos8GRZokeaw5AqfnxLGXeN669332rnju9iPlO0pWNaIBAIBGc3QtB1IMkezBsKR+m1Xlrh/

+IJeXokLFntWHePg1/9Iepb1xgMJQysXz59KDYLOG2ynirVCvqdcfV7C8b2495X95Dtcei1Yo3BiH6uW
FFXtLmUtXNH8PbfDuuRQE1gJJuGIUvoNieV3gC+QJjFE/
L0aOLtaz+haOKghNRwMKxwuDZAYzDCeVkp9EqPNiaUHW1Ianoc6yMXG6Fz2S0crQswb/
XJRbr8wYhhXQApdovhXmnp3vawLmnrTFeBQCAQnL2ILtd2RIsGfVPTqEeFzB7MEUXVO05r/
SHG5+XQr9lLDTDtIP3NtKGEFYVLzknnmZuHYLNYSHVYeGX+CP7v/
rG8Mn8kqqpSftyfYOh7+5oSvjjmY/
n0ofoxs9x2PSpYtLlUtwAJRxTT7tTH3iplwdh+DMnN0I+riSYtJaltv2xKPj9ft5uHXt/
L50cbmFq8kykrdlK0uZT7rhrAkNyM5s7cFMN+y6cP5fEt+/
S1HK1votYf1IWxNp4sltimBy0iqnUJ7ymv08WctuZ5L3/
MMV8g4bNSlBOlCGbdtx6HlSenDibLbdejng9cPQCX/cxbl7SlY1ogEHz/
URSVen+I494A9f6Q4feUQCBq6NoJs/RqbPOAxvi8HB64eiBWWcJmkZBlCIaj3meKCv5gmG/
rmthaepRrLulFn6yUZm80hW4eB0frAwlRubf2fMPQ87MoXF3C+vkjE+rnANbPH8kLf/
2C+6+6CG8gTLbHwYFKryGNCFHhsGnBKD6tqDNEonaX17JxwSiqmxsZeme6eH3hGDKcVqp8AQJhBQmJI/
VNLH37c3aX11I8s8C0qUJrtlh923Cc1mg9oFWWOFTdiASGZof180cCMGbp+0lr+gb2SkOWpYSGhmT34i
8PXIY3EGbeyx/rdYt9u7tJcVjo7o6mNGM/y/F5Odw97kLDaDGtSeXRSZeQk+o8I/
+GNEQNnaihEwgUReVwnT9hSkevdNdZ8nugCyJq6M4OzNKrmj+a1smpdZDOXvWh/
v3Px11oEGhLJ+ezqaScOWP6kp3qYOnb+6hqCHLfVQOwWy36tto5Fq79hFWzL0WWJNbPH0mWx2GaAg1FF
CYX5GKRJTwOK6t3HuKm4eeZp/YiqqkQq/
YFyXDZdIGR6bJRVtlg6FRdOjkfiNboxUYdY4+f5bazdHI+//mHfTw66RKyXdEau/
tixpppnbsRFVw2iz43Vqvpy3LbyUix0819wug0PiKaLHUtS+hiLtlkidiZqvGNH5oh9OIJeQljw84EYq
arQCDwBsK6mAOo9oV44a+H+MUVF5IWM7VGcPYiUq7thFl69d3SSrq77ayfP5L180dy/
1UX6VYkAJMLchME2qJNe5lckMv9G/
eS5rRxz5UDuGtcfxZt2qtvE0tFTXTE19fHG7np+V08vmUfK+JSpk/eOBiP00rR5lIuf/L/mPPiR/
x4QA+OJ0lhOmwyxTMT066bSsr1yNyAHqnU+EMJxsOLNu3lgasHcN9VAyg/
7jc9frrLxhPvlPFuaSWBkMK3dX49+hV7nP+6aTAWCSRUfT1aTV8ooiBL6OPRIDFVuWLbQdN0sCw3T8Ro
YbKE1lxxbmYKapIpHVlue7ulQWPPr82LFQgEZw/hiKKLOY1qX4hw5Mz/
J1Lw3aRTInSSJGUAvwUGASpwK1AGrAfOB74EpqqqWiNJkgQ8DfwUaARmq6r6SfNxbgG0eOejqqq+1IGX
0SLJTINlWcYuw72v7knoXk02CUF7PRRRGNAjFbfDotfemZ3DZpF5ZusBICoiIZpubAorfF3diKKq3Llu
d4JgWjYlXzfxjY1QdXc76OayG0x/
X9pxiHuuHKCH+xVFJRiO8OSNgw1p2YoaPz3Tncx84UOyPY6E4y+dnM8DG/
eyuzxqaBwIK9Q2Bk3vQ2V9gHtf3cPSyfn8uewo6+aOQJIkZAl91m2s0Ik3d67yBshOdfDszUPwOK1YZA
mnVcYiyboZcluaD2xW2fS+56Q6yHTZTqqLViAQCNqC1SKT5bYZRF2W24bVIuIygiidlXJ9GtiiquoUSZ
LsQArwb8BWVVWXSJL0IPAgsAi4Bujf/
GcE8BwwQpKkbsDDwDCiorBEkqQ3VVWt6fjLSaS1SRErZw3jSF2TQRgkSwlqr9ut0bmoHoeVVbMvpSmss
HbuCB57q1SfAvHcjAL+55MKvfsUoKohiEr0f3j9cjyoqmroMIWocLFZZB57ax9FEwdxfnc3bruF7p5oN
EiWJXpnpuCyW+mV7mRon3xdrJjVeMWaG8uSREWNn4oaP0+8U8aSGy7hnAwXFlnisbdKdTG3dHI+/
mBYb3Ywuw+x6c1pv/2gResOs1RlhtPK/iovs1d9pK/
15VuHm34e2nljo26KouJtCrNsSr7um6cZHPdKc3KgytvmWrez2yxYIBCcDB6Hldt+1Dehhs7jEJVTgig
d
3hQhSVIasAe4QI05uSRJZcBYVVUPS5LUC9imquoASZKKm7/+fex22h9VVQubXzdsl4yuMilCUVRq/
AEO1wb0qQrJauhe2nGIu6+4kJ7pDoJhheO+kHGiwowCMt02QMIqww3PnajvGpKbwaP/
fDGNQQWnTdY7XmNFlyaoXpk/
kiN1TfrYrXuuHNCmwvtk0xRenDMciwwOq4VH3vyMd0srDY0MWgNCn6wUDtf6efLd/
SwY249NJeXcMrqvIZL3m2lDeeTNv+sCVGtw2L7oMs7NTGnzZ5JsrW/eOQaAw7VNhmaHeEGm7Z/
tcbBgbD/d3mVwbjoRBdNjm4lOMxFcPLOAATmpWK3if9xGRFOEQADN/
6EMhPVxjR6HVfwnsDMRTRFcAFQBqyRJGgyUAHcDPVRVPQzQLOq0yfPnAuUx+1c0v5bs9S5DS3NCowa7T
tIddl4tHBWtAZMl3HaZ388byXFfkBS7hWBE4aFr87BbJSY+u4MlN1zCg6/9zZAuLVxTwu/
njcTtkHlw015DWvPfJ15MfVOYppDCPRuMRrhapKtocynFMwr4j//
9u56iBSg93NAm89pkdiy1jUGmrNipz6WFaJ2gtraKGj9zXvyI8Xk53H/VRTx4zUUoqsq8f7qAlX/
5Qm926Oa2G6KJ8VHLWFqLeiVbqz8Y4dzMFDJc9habD7T9K2r8FK4u0V/fvugy/
VjxxzbizNrmilcXcK6uSPonZkifkmfAoqiUucPEYoo2Cwy6S6buI+C7xWyLIkGCEFSOkPQWYGhwM9VV
f1AkqSniaZXk2H2G1lt4fXEA0jSfGA+QJ8+fU5utWeYeKPbcEQlEFY4dMynz2JdPn0oa3d9xYaSCgA9L
ZjtcRgmN2hERUO0KSB+kHy3FDsL136SdNrERT1TKZo4CEVVdTE3JDdDjz4FwxGU5lFgyUhWL1jtC+rnW
bAmaqESjCgGQ167VSIzxcExbyDGz+0iHv3nS/QHc31TiB1fVOvHja2hC4YjVDUE9FR2a/
YeydaqCcNkIlz73LTtk+3fWspWI5mwrGwI4LJbxQSIk0RRVL6q9vHoW/
s42hCgR6qDX147kPOaR8AJBALB953OEHQVQIWqqh80f7+RqKA7KklSr5iUa2XM9rkx+/
cGvm1+fWzc69vMTqiq6vPA8xBNuZ6Zyzh5YtNs2R4HD1w9wFCHpaVAn33vAIsnXMzNI/
pQ2RBga+lRJAmW3ZiPw2phfF6OIZLWO9OFwyqhgu4Nt2LbQQB+/bMfRqNlSerzvqjyMefFj/
Su0ZasO5I9GM3qBZ+dNgRvU5j180fqTRKH65o4J8OpX7d2D2a88IFhv2PeIHarjMtmJdNlw2KBV+aPRF
FULLKEwyqTkWLTPf20NfZIc7Q6Iqu12sa2fG7x9XPxtZFtOXZLIrhX+pn1sTsbqPOHdDEHcLQhwKNv7e
OJGweT2cJnKxAIBN8XOsVYWJKkvwBzVVUtkyTpEcdd/
FZ1TFNEN1VVH5Ak6VrgTqJdriOAZ1RVHd7cFFFCNNoH8AlQoKrq8ZbO3ZE1dPFUNQR46PWoDcmFOR5mx
swhhegDfe3cERypa+LeZg82zatuYUzt2/
LpQ3n2vQN6I8Rvpg1BliRDfdyTNw7GaZNJc9n0DlMzE16LDHX+MKGIgsdppcYXMjUXbi31qkWw/

MEwKlBZ38Q9G074yC2bEvWjkyRJ95eLNxoekpuRIHJXzCjgma379WtdOWsYWR47NyzfkbDG9fNHMmbp+
wlri62zUxSVY74ATaEIFkky7Y41+9xia+OG5GZw17j+9Mvx4LIl1ka2pdFBUVT2HalP8Ox7acchHpuUL
yJ0Blqvoausb+LWlxJ/rn93yzBy0rqIQBY1dALB94suVkPXWdXXPwfWSpK0F/
gh8CtgCXClJEkHgCubvwf4A/AF8A9gJbAQoFm4FQEfNf/
5j9bEXGejKAq3jO5L0eZSKhsCpik3RVV1MQfRmrOFcaO7Fq79hAeuHsj6+SMpmjiIdJc9YbzXva/
u4bgvxHPvH+S56UOp8gZ44p0yiiYO4r17f8KSGy7h6a37CYQVQhEFp81CZoqdvF6pLJ6Qp4/00o7X2tx
QLVXpslup8QV1Maftf//GvdgsMhIn6szibUIWjO2nizltvwVrSphckKt/P+/lj2kKJRmhptKmUWA3LN/
Bjx/
fxk3P7+JofaCVTy36uS2ekMf6+SMpnhmtBZzz4kdYJBI84drqFyfLEgNyUlk3dwQbF4xi8YQ83QqmpWi
hwBybRaZHnAjukerAJiwdBALBWUKn9DurqvopUbuReMaZbKsCdyQ5zu+A353Z1bUfERU9QhafAtWiPhK
SwVIkmTea3SLRK8OJRZJQkhjdptgteh3eqtmXYrfKfFHl494Ne9hdXsuQ3AwagxG9yULrJt1UUs59Vw0
wdMC21TA3y22nMRg299NLsenmwmb3oCUfvtjvLZJkmq502uSElOfLtw5HReWbmkYkSeKpP5a1mJKNJxr
RC+qRxNhImstuOS3POatVTmoFIzg50l02fnntwIQaunRRQC4QCM4ShIFNBxI7YWDFtoN6N2pL9XTJat8
8TisRJVpcb5Fl07q6xmA0qrahpIINJRVsXDCKOS9+pG9jFhG7Y90nLLnhEoJhhWU35lN+3M95WSknFTW
yyuaCyyJLnJeVoosubXKDtobGYCSp/1zs9y67xbRWrbvbQXe3Q+9SddktHK0PMKs5Pavd16qGoMF/
r6XoozarNr47+NXCkRytD5z2fNWWOqEFbUeWJc7LcvPEjYNFl6tAIDgraVXQNU9juBsY0PzSPqJ1bC+3
58K+j8QWwmtzSIsmDuIHOR5uXrnL1FJkU0k5y6cPNdTQvTjnUg7XNRnqrzRbEK3W7Kmpgw0TDXpnushO
dbQpItYrw8UtzfV9vTNdrJw5jFp/
EH+w9bqwsqMNPPXHsoSJEMum5OO2W+nuiYqXWNH12sLRhMKKqVDTaugAXTRluOwt2otoAqmqIZDQJKHd
V81ypLXoY7JuVEWl1QYMQcciy5JogBAIBGctLQo6SZJmAb8A/
oVo04FEtAlhmSRJCFF3cpiNokqxWwgrSlJLkZuHn8eanV/
pNh+NwQhOm0WfdKBtu2BNCa8WjuKXE1QOVnp59eMKJg09l9W3DsdqkZAliTp/iJdvHc6St/
fxbmllQkRMS/
uqKnraF+BIfRM2q8zBKm+LhsOx3mqadUqW205Gih1ZQp86ASQVPfFCLdNl47FJ+Tx8XXLhlqwRIVaMxV
qx5KQ5GJKbQZU30GqHq5QkvRtWzNPc8dG+05kGISZJCE4WYTwrEJy9tBahWwhMUlX1y5jX3pMkaTLwCi
AE3UkQO4rKHwxzsMrHkrc/597xF5qKhoii0t1jZ8cX1WwoqdBr3Kq95rNOA2EFly06x/
W+q4zWILHp3N9MG8rPL+9PWFEonllA4eoS0+2enTaEQEjRmzS0lOVTfywz7cSMFVC7y2v1KNifH7iM3h
muNj1YzFKQrXXXmnnP9c/
26GIsWYdvrwxnqx2uFgnT+bO2JGnl+DFhrfninex1nWxKV3D2oCgqh+v8CaOhtHnLAoHg+01rLWBpcWI
OgObX0tpjQd93NMHisMrYrTJV3gBPvrufZVPy9Q5NzZpk/
YdfEQgrrLltBH9ddBmvLhhFTpqdFLvFtJvz0DEfigp3jeuvC5BkdXLf1jXx3LaDOKwyRRMH8V9TBydsV
+MLGTputZTl5IJc07ozLaUcvy6XzWJ4oCiKSlVDgG9qGqlqCKAop26dYzZx4ak/
llFW2cAjb37G0sn5hvuhbVO4poSIQtLUsba+iAp/Ljuqd7lq3ajO5vRw7GcWH+0zW9u8lz/
WDYpP9rrauq/
g7MQbCOtiDqDaF+KFvx7CGwh38soEAkFH0FqEzn+K7wmSoKXRAhEFiyyxbEo+cnOn6hM3DqZXupNgWGH
jx19z+cCe/GL9p4Y6NJfdwtsUOkNYAAAgAElEQVR7v2XFjAJ9BmxsE8XTN/+Qvt3drdbJ/SDbw/
+bcDE/a67dWz9/ZMJ2KXaL6b5Zbrtp3VlbTHtbiqjV+ENJ04ttSatqTC7I1esLqxqCLLsxv03p0WTrM/
PCa62OD5LX37VmAXO6+wrOTsIRRRdzGtW+EOGI0kkrEggEHUlrgm5gs1dcPBLRmayCk8BMLCybks+Stz
+nyhugeEYB39b6sVlkhp6flRAdu3/
jXoomDmLo+VlkpFgpmjiIFLuFWn+IJ94po8obwCJJOB0nmiFCEcU0NVjlDRg84cy6aZN1neakOkzrzmJ
TyslETrLI07q5IxImP2jpxZbSj2YTF7LcdkPq92CVr80juczWt2BNCRsKR/
Hwdape1xcrLpOltJJNg4go6imPU2urfYzg7MNqkcly2wyiLsttwyq8+ASCM4pWq6o0hgg1j57sCmUNrf
2kDwSuM/kzAchr36V9P4hN3x2pb0oQC/dv3Mt/
TxvCq4WjODfTyarth+jmthtEiYbmLZfhivq5OW0y9766h8LVJVR5A3oEr7vbwcpZwxifl4PHaeWpqYMN
qcFox6mFnulONi4YxZrbhtMzzcFz04catsvtFu1wjX2teGYBvdKcVPuCpinTZMa62n1oDIZNjYtjjZbj
04stpR+1qGDsGnOau3k1NHuUltKjGskiY6qqcm5m1L7lQJWXScu3M2bp+0xavp2yow2maeMst10fqaad
d+nkfB59qzQhdRqfhs502VpN6bbGmUxtC7oWiqJS7w9x3Bug3h9CUVQ8Diu3/
agvWe6o955WQ+dxCHcqgeBModWq/vpP+1n5l4MtPgM6mhZ/0lVV/aqjFvJ9JH4G6H/
dNJgnbxyszzbdXV5LRY2fOn8Il81CIKKweMLFbC09zOV5PU0jNFkeB6ByzBukR5pDj9I1BiOGrs8sj52
Hrs3jiypfQjTv8S3RaF7RxEHMefEjvWbPZpF4+dbhOG0yigoum0y6M7Hr9ECV96SK9c0ibFqKWDMujhc
4senFZCLLH4pwuM5PjzSHbn2irTG+mzg71cGrhaNQVLXFjtHWImPJxKWZXYksS3R32/
UOZS2Suru8loevO5E6bSkN3VK0syVEU8X3l5aaH3qlu/
jFFReKLleBoJ2IrVXtTdeyrGrNtqQBMJOdEtEhDqIxogW0h7/
WZTnzhQ8TBE12qp1wRGXW6hPvaeOlnpo62DAPdfn0oTy+ZZ9ey/
Xrm36I0yaT281FY1DBH4pQ2xiiMRjmwFEfz2w9QJU3wEu3DmfS8p0J60uxR0VKRU10nNjiCXkUbS5l2Z
R8XfTFiwAzb7f4f8zx9W4WOdGzTfODK9pcSvHMAp7+037D2jQD4aqGAFZZYtXsS3VBumLbQaq8AQ5Wen
VBunLWMHqkOfAHI9T4OWUx1Fod4MnWtsmybJhXq11bbOr0ZERiW2mPYwq6BsmaH35xxYWkuWykiekYAk
G7YVar2lXqm1uL0KV21EK+j2gP/8UT8hK6LBdtitbDnZeVwqxmE1/
tvcLVJRRNHMQzWw+w5IZL6JnuxGG1sGbnISYX5HLbjy6g1h/i+T8fZN4/9eOYN2gwHl46OZ/ff/
iVPr7r6+rGVicwVNT49QaK+zeeMN+NFwHaNcX6utX6QyhKtPDaLDJUPKOAbI/
DcP6KGj8De0br7TJdNu65cgClhxv0fV6+dThH6wM89ccybvvRBSx+4zND3WGK3cIjb5bqx5r38seGiGN
booZmTRat1QGebG1bWxpF2qMBQjRVfH8RzQ8CQedhVqvaVeqbRXFFO+KyW1g1+1LOy0oxfbjmdnNR5w8
lrZXbXV7LjBc+BOB/
7xzDjwf0SPBDOyfDyU3Pm0+Z0P5+ZusBnps+lNtjRJ8WhdOIFXiauNO+DoYj+sxSSZIo/

KfzE9ZSPLOA7FQnx7yJEbzCNSW62Io9n8tu1YVivIhSUZm1fAeLJ+SZNocsueESfXxX7D3TvtaEaJbbn
iDcgBbTkVodoCb6Dtf5kSQJiwSSHE1Lz4qdpGFS2xYrGLM8dt68c0zSSRvt0QAhmiq+v4jmB4Gg89BqV
V/
46yGoO7X65vZCCLp2QlFUjtYHWPzGZyyekGf6cC0/7sdmMTeo1eawQnTKQUaKXRdkcEK4rZ07wlQQatG
2DJeN7FQ7boeVF+dcikWSqPUHkSSJKm9AP5+WAgYYn5dDN7ed9fNH0hiMIEkwafl2XcCsnTuC6c0dqdr
5CleX8NrC0fhD5pGh87u7DWPI4n8A4g2Fv6lpNFxH/
PG6NTccaBHCTSXlCRFHRVFMhVuWx96mtLFZ3d9LOw5x17gLKZ5RQIrdQkQFh1U2dK2ebP1aW6J4J0t7H
FPQNYh9oMTW0InmB4Gg/ZFlSa9VVSrtzL5yTJfpchW/
AdqJ2BqmFdsOJkwbeGrqYHp3S0ECw4B67b1Mt12fcvDA1QM4Wt9kKmwsssT4vBwmF+QmiJvemS5kSeLn
4y40RJSWTs7nz2VH2VA4ClVViSgqa3d9yYKx/
eiZ5iQjxcZjb5Ua5sJqKdOKGj9VMR2psWsJhBQUVTUVqA6LpEfgtGiX1qUaK4S0qJYkRa/
LzE6ld6YLt8PKppJyfY3Lpw9lzc6v9FRwlttOWFF56o9l+r7ZHgdH6pqS+uvFpiPNatBORDz3c8dl/
Zn5O2Pd48CeaciydNL1a22xezlZ2uOYgq5B7ANFND8IBB2PLEvRWtUUG3ShmmQh6NqJ+DFYT7xTxuIJe
VzUMxWrLOGyW8hw2Tlc5+fxLWWGTshf/eFzVswYyusLxxAIR/jZ87uSRvnqGkPceXl/
Qw3d8ulDeWvPNzw3fSiZbjs/M0nJat2sGS479U1Brv9hbwrjjIqrGoLsLq/
lng17DAPtq31B07UoatRKIV6gLpuSj7P5epNFriAxDbpiRgH/+2mFqYnyul1fcv9VF+n1hM+
+d4B5/9SPYETRhfP4vBwevGYgt4/9AU2hCLIkce+re5Ley9h0ZLIatAyXjckFudyxzhgtLVxdogu2U6l
fMxt5drq0xzEFXQP9gSIQCATNiKKLdiJ+DNbu8lqKNpeSYrdybmYK3dxRjza71UKVN8CKbQep9YfIcNm
4a1x/bFY5GmWKqHqU78kbE/3kgpEI1d4gT944OFrH5nGwcO0nzBzdF5fdQiTJEHk4kRrc/
XWdLua09xdt2suCsf307zNiHh6bSsopnpHor/
bYW6X4Qwouu4WiiYNYP38kRRMHkZ3qIMNlb9FPLpmh76zRUV+t2NFbb+z+hh8P6MGcFz/
ipud3UbS5lFtG96V3N5cu5obkZnDL6L7M+t2HTFq+g6aYmbRaxNTgrzejAIuM7iWUbIxZrT+U1CNQE2z
J9u1K9WvCo04gEAi+X4gIXTvR1hqmLLe9uaOzyRDVWjlrGACHjkWnHOwur0VRVd1PLifVwXPbDjJz1Hm
GDlCtFu5IXRMuu4U0p800GvVVdSM5qQ6e3rqf2350QdJolLa9GrPvPVcOoFuKzdRf7aFr86isD3B+Vgq
KCnarTK80Z9IxXbFCyOy9iho/jcGIwfqjeGaBadfw7+edGF+2YGw/
wzaxadb4iKmiqhypa+LpTfu558oBDOiRavr5aTV0D11rHuGzWeWT+uw7C+FRJxAI2oI2EUGk9r8bCEHX
TrS1hkmWJTxOK7N+dyKytGBsP3yBMP6glc8qavWUoyxJeqdo8cwCrrmkl2mjRNHEQVT7ghStL+XNO8eY
ChNtVNjiCXlJ69S015dNyeeC7m62L7pMv45qX9DUX00C7tnwqUEotNXyI9katEkPmuBNFiFTY+r34psp
4q9Ri5jGWp0snZzPU38s47FJ+WSnOgyfn1b399ikfDKcVopnFujzYrV75G0K092tdvn6NeFRJxAIWqMl
A+uu8rtMYESkXNuRZGOw4gmFFV3M3XfVAIo2lzJlxU5uen4XP7koBwkomjiIHmlOPZW3YttB+iSxQ+mT
lcKKbQepqPHjD0YY0COVV+aP1FOWWjRNE0dmKcjfTBvKOelOFk/I4/
EtZYQiij76SmtcWDd3BOPzcoBoZ+zauSOoaQzpo71iU6pwInJlNs7K7L1npw3Bbbfw4DUXEVFUNi0Yxf
ZFl3FOhss0pem0W/
RjaAJOw2z817Ip+Tyz9YB+3xZt2svkglw9Yhj7+Z2T4aJHuovsVAc2m4Ve6U49razdo1m/+1C/
1tZGoJ1uqvN0jiM86gQCQWskM7D2BsKdvDJBMkSErgugRa7i04QVNdEJDktuuAS7VeZXfyjVu2V3l9dS
1RAwjWodrvXrI7XsVkvUW625ISB+2+xUB1XeAE+8U0bRxEFckO3miyofj7z5d93nrXemC0mSUBSVL6t9
fFXdqI8be+Dqi/
jVpEs42hDQrUxio4C7y2sNAskscgXRqFGa08qGwlFIElQcj3bNPvja3wxNEtkeOw6bbJrS7O520N3t4P
WFY1AUxRBFq/
IGyPLY+fVNPySiqOSkOviXDXsSvOyy3PY21br5gxGDr55GMBxJalp8plKdp3sc4VEnEAhaQxhYf/
cQgq4LoEWnfIGwaeTEZpFZ8vbnLBjbjzSnlfXzR6ICFilxPNhTUwfzqz98rhf6a4Ipx+PQU7fZHgd3je
tPn6wUanxBNhSORFXBZpVpCkXwOCwGj7pf3/
RDLBLU+oMcrW9KmNrgtlt14aStOXa0V6xQiO+8TCZOeqY7uXmlsTt3QbNBsdMm0zvTZZjfGpvS1I6fne
rUxaPNKuNtCvOL9dF08KrZl+rXqNE700VOqqNNtW7JRJHLbkkqts5UqvN0j9PVa/
wEAkHnIwysv3tIqnp2dbcNGzZM/
fjjjzt1DWYRHIAj9U1MLd6ZIBJiLUN6Z7oomjiIQeemk+W2U+sP4g9GCCkqWmym3h/
CF4xwQXd31GdOBVVVcdpkIhGVow2BhKkR/bI9SJLEb//
8D2aMOp+wEvWnO+YN0s1to7snOic1diqFtp61c0fwk2XbEq7zjTvGkOq04nFaTYUXRGfDaqbFscdcN28
EP3488Zjv3fsTvqpuxOOwcn5390kJodj77rJbOFofMIia4pkFDMhJxWpt/RdWMiGa5bFzw/
IdCdejCcsxS99PONb2RZdxbmZKm6/
jm5rG0zqOoqgc8wVoCkWwSCcsdLpuXcwWILuzF3H6bNkB2ZmdvQqBoE2IGro2UPUlXP3Ldj+NJEklqqo
Oa207EaHrYJIJgR5pDlRVZd3cETwaY+r73IwC/
nvrfobkZuhRtcO10SkIsiyR4bJztN54vKemDqa7x84v/
+dv3DK6r8HQeO3cEQmNFPdv3Msr80dikyV+mn8uN69MTJ0+OukSIqq5BYpFNp92kZPqoNYfYlazwDFLD
Sar53JYZFbNvpQUu0VvjKjyBjhQ6aVocynPTR9qmB9rluKMJz46mOGyn3LjQrL08eE6f9L6tGRRPYgK2
7ae/3RSpsn+/WW4RHROIBCc4FQMrEVXbOciYqcdTLJ02Z7yOsYsfZ9pv/2Au6+4kA/
+9XJeXziG3Ewn8/6pH/8x8WIWv/EZ4578Px587W8c8wV1IRN/vHs27KH8uJ/
JBbkJNXnJpjwoSjSSF2+YqzUKhMIKTlsSfzVZMm04kCWS+s5pRf3a9rGMz8vhmC/
I4jc+033mHrh6AM9OG6I3e9y+9hMi6gmBMmn5dsYsfZ9Jy7dTdrShTU0CrTWttNR4kExEJvOgkyQpoZF
Eu093rtt9UutuqbmkNVryAmwrwsNOIDg70Aysu3kcpLlsrYq5w3V+fv2n/fz75n38+k/
7OVznF78fOhAh6DqYZBGp2MHyhatLkGWZ7FQHaU47PdIcCVG1wtUlHKlvojEYJtvjoHhmAevnj9TNhTW
vuvhzaVMeYumd6cJmkQlFFNO1aY0C3d0OUyERQdWnXcR2fTaFzY8nobLvSD2Tlm/nznW7E8TgL6/
NS6jJu3/
jXrxNYb2JQbMpORMCJR5FUTnuC7DvcL2pUGxJRMaLLa37t6ohwGff1vPoW6XcfcWF7PzXyymaOIjHt5z

```
oOG7rumOjg9sXXcbrC8e0uSH
idDtcT0dACwSC7y+iK7bzESnXDiZZuix+sHxsZ6hFlkwfwt/
W+glFFB64ekDCqC1ZkvA4rAnn2lRSnjBKa8WMAh5+8zMmF+QmTZ1aZDhc56dHmiOhGeGYL0CVN6DX+Wn
72SxywvHG5+XgC0Z0wVZREx19VjRxEP1yPLhslqSiwxZTjBsb9TqTFhyaYDlSd6L5Qzum1ngA5pFHrSl
BE1uKonDMG0zo/n36T/
t5+LqLE7pkT3bd2u3wh8Ic86l0dye3xtE43Q5X4WEnEAjMEF2xnY+I0HUwZumyZVPyWbHtoL5N7NQBSD
5KqtoXJKKoupiDE9GsnulOghElwV/
ultF9yUm1s37+SP7ywGVsKBzFM1v3825ppel4seKZBUgSXP9sNCJz/
bPbqfYG6ZXu0j3pVEWleGZBQuQux5MY0Xvo2ryEtO/
u8lrmvPgRFinaoZrsehuDEf3r5dOH8tL2L4goUTPhIbkZepRy1exLcdlPzYJDEyyxkyU0NMHVmojUUrm
yLJuOVJtckEtENaaah+RmsGr2pURUtdU0pmYfU3akgZue38WPH9/
GDct3tClSdjrpWhAedgKBwBytKzYW0RXbsYgIXQejpcteWziappCCVYIqb8BgE7JsSj6xPwPJxlA98U4
ZD15zkekDNqKoOKwWXtqx3zCi66Udh5hckEvR5lJWzhpGtxQb75ZW6vs6bLI+XqwxGMFhlfWJEFMLejP
vxxdgkaVobYSq6g0U4/NyWDd3BJbmOjKtpiy2cSCiqNQ0hvS0b7bHwYKx/
chw2WgMRjtPFUXFIkPxjAJdDGmNHmFFZf38kdT6Qzz73gEmF+Ty6FulvDjnUqoaAgmj006lc1MTLMmmZ
7Q01SI+ypVM/
GS57ThjvPSyPY6EKGtLvnLVviBfVTcmjSC2FCk73SkWwsNOIBCY4XFYue1HfRO6Yj0OITM6CnGnO4lqb
zQS9OSNg1ny9ucG0fX6J99w1xX9+SbYqI+cik11SpLEI29+xu7y2qTC49AxH89sPcB9Vw0wdLlqQlATA
Ovnj9T3XzC2H3eu221qm5LhsjNj1HnMefEj/
VjLpw9l9AVZbCip4N3SSkoPNyQICi1apdmTLJ6Qx6aScp6dNgR/MGIQMdGZtgFd5BRNHMT53d3YLdL/
Z+/M46Oo7///
mtk7u7lJOEwEpCGypUGyEAL016IoHqBUA6gQEFAIIMV6AFZNtd9oKwLlW6qQSC3IZUHAYrGClpbaL4dH
oCAGA0XQhCNZQjbZe3Z35vfH7nyyszOTBMgB+Hk+Ht9HyR6zM0u+zov38Xph7sZDEhNgAHj0xzfho4pa
vHTvD2VVyubETXNbsaJgEdMzor+76EpWa3zc1MRPWrwBKSY9MUHmglI7mJbOnwuGmq0gtkTstu+lQD3s
KBSKEpezFUtpW6ig6wTEtl6axYAUsx7Pj+6HOjeHVz/8GgCw4K5sPBS5wWckm7B0/ACwTPgmHG/
SIBQCnrvHigV39YMg8FgxKRdzonzlVhba8Ku/
HCUh9KunDoaGZXCi1kXSG4CwAKh1+klOamz+qfiaVLMeM35yExFz4uNzNhzExhn5KLBlEGuRaEER7XfG
MgzSLAaU7jmJZ+7Mhi/
Ay0RYdNWput5LMlbXTMtTNAEWxWxQxU5FSdyIM3LLPq5EgS0TqWY9vFwQPRJN0GpZiWAR0zN6dzEjzqC
RzKi1psqlJH7emJiLjQdO42e5mcjuGo+0eAPO1HsuSZzpteHqaWdUyq72nNq2hOcFNHgDCIR46DQsElv
Y8qNQvu+IW7GUzoEKuk6AC4aQZjHgmTuzJRWvRQU50GtYEm4/
MDMJC+7KRnqCAQwYXHD50eBl8Hikiia+55PKGmx4bAhCvICzDi9cvgARQIeqHLjo5uDwBkjrFADxtYs3
auH2B7Fswi3olmhUXYoI8sqiKRji8eCbB0irWJxdCwZ5VNY6ZQH2r+2sxJJdlVg8Pkd2PLWqk9MXkFXL
FhXk4O19p7BqyiAYL6ENWOfmsOzjSpk/X9lkG/
p1S2i1YGlNlUs81uaioTjr8KLOzZFItQ+O1pAK3KX606Wa9eiZGkeEeEdXyq6kwnetwPMCvq1z4+UPjq
HG6UfXeANeGN0PPVPNVNRRKJSrEjqt2AnotRrMG5kl84hbuPUIuicaiZh78T4rAGDyW59hxJI9+MWm/
8DDhcVg9Htye6Vi0h8/
Ra3Tj8K3PsPqvaewYlIuEQUeLoSt5VVkQWJgZhJeihy7zsUhEBKg0zLwB0OyJYpVUwahR6IJBi2ruKgg
juCLyxjBiK3H2QavovXIvJFZOFTlQNVFr+x4YtUp9jMcngCW7Arborw3ZxjWTMvDTWlmvHJ/
DrLSLHD5gzLrEzVxwwVDiv58RevKiWVIS/
50aij5s7EsA0EQMK50P4rWlUuqo2IFTm1RRs2fjmUZ9Eo1I7tbPDbNzMcnC27FtjnDLjkTlqJOgzeAlz
84hqQ4HZ6/52b84vYsXHBxcPoDLb+ZQqFQOgFaoesEUs169O5iVqxG+YM8MpJNmDWiD+rdAdng+/
wtRyRRYNX1XvRJM2Pp+AHokWTCF8+PBBcSoNcw2DZ7GAIhHrwg4IXRVvzj2HmsnjoYZoMGF1ycLJO1e4
IR8WlabC4aCkEQJNUps0Eja+2umJQLl09qtxII8qhzc6hVMTDOTDHhk/
kjYDFqZe3InqlxivNZBi1LbFFIskZ8uFJS6/
Rhyp8+Q5rFQOYQPVwI6QnKbUDxmtp6U1MtgSG7a3yLiwTRVUFvIISTtS7iTwdAcZ6OZRmkmA2A+bJPmd
IMgRCPpDgdJg/thT/sPkGqdM/d0w/xBtp6pVAoVx9U0HUCLMsgzqB8kz/
X4MWighwYtCxCKm3OpKgZhYxkE6ouNs2blRXa0MUSFjP2mKzSlYU2LN71NdlyjRWKm2bmK2aB8ryARl8
Q6/d/
S+bxQryAVZ98gwJbhuRcgLAvmrjJGnt9VRe96H9DIoma2jQzHyEBMOpYdDGHBUt0uzPZpMNFL4eNM4aQ
3NEEg44sNQgA0iwGHKpySHzwPllwK1IVxI44M3cpLc7W0Jw/
W2sWCcSq4Jl6zxX701GuHJ2GxUODbyRiDgBqnH785m/HsGT8ACTTJRAKhXKVQVuunYRS6sKighws/
eg4luyqRGKk0tSSH9vicTlYvvsEgEjrcH05AiEebn8Ibn8QxWOsGJiZhOp6L2avL0eBLVN1+SGkYGEmV
p5qGvy4+0fdcdHNoabRh5pGHyYMzkSqxYCBmUmkYjd34yGcdfgkLV7xXFdMykXP1Dgkm3SorHESb7uJq
w6gziVvd6aa9fiu3oOvzjTinMOH4zUuuP1BnLC7SFLBQ28ewIK7sjEwM0nyHWlU9BjLMuiRaJL55i2bM
ADfXfTg2zo3qus9CAYvzQyzOX+21iY78LwAhmGwZdZQlE22kWuitiAdT6JJhxuSTETMidQ4/
QhQo1QKhXIV0mkVOoZhNAC+AHBGEIQxDMP0BvBnACkADgKYLAgCxzCMAcBaADYAdQAeFAThdOQYvwTwK
IAQgHmCIOzq+Cu5PIgf3exhcHNhj7bXdh4jbbYFW47g5Z/9UDb4/
r8P3gJBAPY8MwIalsG8d6R2HmkWA+o9ARIVFm1VAgDW7gnEjDe2QqWLtDCjUyDEJYJHf3wTircfJZ5pz
277sqnyNykXLn8Qojwx6lhMG94bq/
eeQvEYK1LNeqTFG5Bo0iLBqG+xmiVW33QaFjWNPklreO30PNl75285gpKx/UmVMno5QwmtlkW/
bgmkxXnW4YVOy+LJqGWT6CUJJWKtT0z6ltuqzS0SKLVsxcWPJ+/I/
l7ZgshtZQSwHfxPT5ZlYNSz6BpvkIi6rvEGSWIJhUKhXC105n+ZngBwLOrnRQCWCYKQBaAeAEYaAGyP/
WC4LwAwDLIq8DwzCIbEa4o6N4ff/
```

q0CdqcPP78ti1SN0uL10Os00LIs1k3Pw+6nfor1jw7B5s+rML5sPwrf+hQAZHYe80ZmyXJfF249gqdH9
cWCu7Lx8KoDeHLTf2RLBEvHD0Ct04cHVuyLyejkUWDLxNPvHiZedbF2I7M3HERavBEuf5B42b22s5JUA
52+IOKNWiTFhRcMmqtmReeEurmg7LMuujnF996YEodNM/NRMrZ/2MqEF5oNjxcFloYJD8BH++/
FLknEopRnWtPox9rpeZedwKAkchduPYKX7uv/vVp2UPpuq+s9nZIVm2TS44XR/
dA1IsTFTddEastAoVCuQjqlQscwTAaA0QBeAfAUwzAMgNsATIy85G0ALwFYCWBs5M8AsAXA65HXjwXwZ
0EQ/ABOMQzzXwB5APZ30GVcMdE38Y8qajEwM4lkmmpZBhPK9iua/
G4ur0Z1vRduf0CWqHBjapyi4OmeaMIjqz8jHm9ifuqNKXH4r90FXhCIHYr4nhlrv8DmoqGSJQK1dq3Dw
4FlGKTHG8hnRM+07V14KxngV1sSYBhGImqUZgjVZvPECplJr0FNo58kWKilLohVIACtWpKIrhrFnqf4X
W2bM+yy/
dnURK4gCFeFmGvOjLktURK2/7v7BIpH9+jwuTWWZdAz1Ywl4wdQLzoKhXLV01kVuv8FsACAOIySCsAhC
EIw8nM1gBsif74BQBUARJ5viLyePK7wnmuC2Jt4dKapoGKWKy5EZCSbYNBpkBYfTpD4ZP4IlIztj3MOu
R1IuPXHKn7Whcj2KMswqoIiPd5Ajima+cYev87N4el3D8Ni0JLnxXzVLbOGgmEYUmVRyxPVMOGWsZjJy
jAMRlnTJZ+1tbxKMTe2W4IRNyTHIcRDUWxFV9uiq0BzNx5CWtT1RV8TyzCy1w9f9E+cdXgVv6tAkJfM/
9W5uWarhNGo5ddeDbNzSlWz1uTGXg5KwvZCJ86tsSyDZBab+rsAACAASURBVLMe6QlGJF+nBsoUCuX6o
MMFHcMwYwDUCoJQHv2wwkuFFp5r7j2xnzmTYZgvGIb5wm63X9L5tifN3cTVnhMF1eJxOXhq02E8sHIf6
lwcEkxaWAwarN1/
WraMsKggB9X1HlXRUjbZhlSLHqunDpYtFwgAusUbiIjaXVEj8bgTlx12V9Sgut4Li0GDssk2jLKm45k7
s1GyowLjSvdjQtl+VNY4EYzYmqTE6bC5aCj2LrwVm4uGIiVOBwHAc/
fcjJIdFXjwzQN45E+f4ee3ZRFRl5FswpO3ZyM7XX3BoDXh8dFVoENVDnDBkOyaFo/
LgZsLorbRh0aftGokVgmV/t6AyxNAaiL3apidU5t5VGtJXwlKv/
dd6NwahUKhtAgjCB07m8IwzG8BTAYQBGAEkADgPQB3AugmCEKQYZihAF4SBOFOhmF2Rf68n2EYLYDzAN
IAPAsAgiD8NnJc8rrmPn/
QoEHCF1980U5Xd2k0510GQPZc2WQbUuJ0+Pq8C8t3nyDLEBnJJmybMwz+QAj+oACDlgHDMDhT7yWRXAB
kua5rp+fBw4Uwa708zcHu8pOh/
Cdu74vs9HjUewPggiH8+q9fkfk4hzeAreVVxArlvTnDkWzSocbpw7kGH+rcHHZX1GCktStSzXp0SzTif
/76FT6qqMUoazrmjexLPn/11MES3z3x2tZOz4Pd6YeHC6Fnahx6NePWL2bGxh4j2sftTL0Hwxf9kzwf/
l71cPmDiNNryHdmd/lRMrY/
usQbsG7faWwurwYQrjw+c2c23t53isSHpccbSHxYa85B7ffhctua7dkSjf2+RPYuvFXR5uZKUPr/
iY2P1SMjuee1Xx3buQ9IS+7ss6BQKG2F/TRw1wvt/jEMw5QLgjCopdd1+AydIAi/
BPBLAGAYZgSAZwRBmMQwzLsAxiG86foIgO/5Pl/
CIIgMAzzPoCNDMP8DkAPAFkAPuvIa7lcom+
+qRY93p87HF4uBJNegyAv4FyDF3qtBllpFtlM1rkGr6JPWSDIw+UPkRvh35/6KVlkEHl73ylsmpkPIFw
JESBgyp8+k22Mrns0D8drmnJfK845iRg5U+/BRxW1+KiiVnIOM3/
SB6umDEKySYcTdhc5j1HWdMy9LUtiSLyoIAd2J4cCWyYRc4B69BcvCHj1w69xqMrRojCK9nxLsxgwb2Q
WencxQ4BAkhtiZ/hK95zEkgkDML5M/
m+BOL0Gs9eX450Z+Rhp7YrSPSdxqMqBTypr8MTIvpL5xVVTBiErzQJvIHhZxsWXG6nV3D8M2kIEtWSM3
JYoR6/949oXcxQKhdLOXE3GwgsB/JlhmJcBHALwVuTxwCsiyw9WCIHzFMMxmABUIV/
seFwThqndfVbv5ZqVZJEJINAnunmRE90QTWJYhPmWtWSh4818nsWJSLl7/xwlSRUqLN8DNBWHUhW/
EgSCvKDxqG/2ShYZoMaJ2c+
+eaAQA1Lr8kvMosGUSMScea+HWI1g9dTB8AWl7VGwnK5kRP3NnNhGYzQkjURBsnzsM5xx+SfVRFDmpZj
3WTs/
Dt3UexOnDQfdxKrYjDm8gLJhDPEp2VJCq5aT8Xpj4x09lbciNjw3BSbu7wwQQ0LypcVtkrrbGGLktkQt
bKuYoFAqlJTp1MEUQhD2CIIyJ/
PkbQRDyBEH4gSAI4yPbqxAEwRf5+QeR57+Jev8rgiD0EQQhWxCEDzvrOi4FtZtvjdMne7xofTkOVzWQ2
bPKGideev+oYt5q7ELBSGtXfH22AU+M7Evm2Cb98VPUuTg88c5/
cP+KvcSPLpqMZBMxC45+TBQjSrNepYU2/
PqvXykuDKhtxTZ4A+AFSJYeSveclNmpLCoIGycv3HoEs0b0abUwcvtCkupf7NyXP8CjePtRPPjmARRvP
wqHOyCzHVlUkIPSPSeRkWwiG7eilYiGVV4iqXX6sXz3CcW/
o+YEkJgDW9PgxVmHt1XLFOJ7PFyTgXT0ubRVukRrjZEpFAqF0nlcTRW665LY2Sa1oX1/
pFo2MDMJs0b0IfNpGSkmTFv9OTYXDSWCz+7kiGFvjyQTuiUY4fByWHBXtsSEeMWkXPx+93FZS3XxuBw0
+oJw+oMy25NFBTl4becxLLgrm8zSxYqRVIueRHFpWQYX3OH2qd3JyWxF1KpudW4OJTsqsOGxIag45wxf
l8sPk16DVx/
4EXQaFunxBjy1+TCZFRTFZEuVoeayZLlgCBfcfsxYFyOq132BbbOH4c8z8xEI8Th9wYMlu8LXv2JSLlZ
98g15rZhzq3Zdh6ocWLKrkmTLhiuYpmZNiitrnFj2cSUeGdZbMueo1jpVMyIWq5htXRG83HYwhUKhUDo
GKujaEeUB7yGKQiDECxhlTZfd0EsLbXjQloFAqKk9Gp1bunfhrahzcwgEQzIT3jkbDqJ4jFUy75ZmMcB
i0JLXjrKm488z83E+ssAQPTe3eWY+wDAQhLAojZ2PU1qi2H7oDBYV5JBr2FpehdJCm6T1+cbEXLAMUDz
GCqOWxeaioTjr8KLOzeHX71cQQVI8xipZ/BDbunVuTjL0HyuaeZ5X9avTazWqM26+QAgT//
gpht2Uihk/uQnLHroFwZCAN/91kixEiMdQakOWTbbh938/
Lvk7Emf+lASZeM4sw8DlC2LBXTej6qIXaZYmLz+11qmaEXHxGCtKdlRcNRuyFAqFQukYqKBrR5Ruui9/
UIGyyTYUrWsSOEvHD8CqT77B86OtmBQ1l5VmMcDu9OO+gTdAp2ExypouEWeiELx/
xV4sHT9AUaTE3tRjkyQ+qqjFzJ/0wbjS/
bL3ciEBhW8dkIhRpdit4jFWFK0rJ4Li7X2nsLloKKlkJZvCFiV2px/xRi1e/
fAYPqqoJSIoOz0eDd4AfrHpPxIhu3z3cXKdYltXfF9L28AHT9dJhKX4eHixJKQo9thIG3VzeTU2l1eTb
dZ939SR14hCSWl4P9mkw5N3ZJOKo1qrVUnoLx6Xg/

nvHiHCWBTWaq1TtUpvv27xJEKNtkQpFArl+wMVdO2I0k3X7uQQb9RizbQ8sAzAC0CQD+FErQsAyOtFMR
FbrQPCIqzo//
XC5GG9EQjxWD11MBpUWpspZj15PCPZhKyuZtIKFO051KpZpy64JeJNrY0pmh2LAvLJO7LRLcEoERTdEo
wIhnjZIkHRunIykxUrjl65Pwcv3hsWM6KYE98nVq4AuZFw0bpybHxsCF7+oIK0pkVbEZZlYNJrZBm5i8
flQMcyEtF8qMohE6fRQkmpDSnf0JQLKyWhrySMxQqfTisfdVVr+Zr0WtoapVAolO8hVNC1I0o33efu6Y
czkRt4tJh47p5+0LJNG6yzRvQhYg4I3/RnrS/H5qKh+M39DM41+vHQm03Vsz9NHYT/
ffAWSZVLHOpfOz0PAFDn4nDRHUDJjgrJaz6pDJsFR1uLrJxkw6+2H5Vcj5rwc3gD5M/
dE43QsoysLcqyjOoiARcMKYqjVLMelTVOuP1BmU1KdOVK6ZgalsGrBTnwciGEBAFGnYZsCgNAWrwBJWP
7ky1Xk16D4u1HMW9kXwAglUAlcdocrZk1U6uuRQvjPmlmjLKmY9rw3nD5guhilkaAdfTmKYVCoVCubqi
ga0eUbrrdE414aNUBWXXmzzPyUXG2ASsLbZi9vlx1O1QQBHAhYPb6cjLrpWEZ8AJwY4oJJWP74wfpFgi
CgJc/qMBHFbV4wJaBZ949TOarYueu1k7PQ+mekygZ2x+ZKSacb/ChS7wez4/
uhzo3R7zXDp6uw5ppg1F10UuEUIpZh5fer2i2LSoKEbWqEgAEgzy0MZWoC+6wBUrxGKuqVYtWo2zjotO
yqGlsslAZZU3HC6Ot4AGcsrvx4ZfnMPOnfeDwcOBCPH79fgWAsDHx86OtePHeH8Kk1yDJ1Daty9gsWKX
2ebQwrrroxeO3ZmHDgW+x75s62Rydsl8bbbNSKBTK9xUq6NoRpZuu6kB+MIQZ6w7i6duzyKal2lC/
hwti2E2pKBzaE9PWfN5UVSu04QfpZtyQFBZJL93XH0/cziHBqMPS8QOQalEOoW/
wBrC5vBonal34w8O3INGkw/jS/bIqXsGgTNS7OZLmEK7k5eJ/
xv4QF1wcvFxI1hZ9f+5whPhwVcqk18gE7qKCHPz6r19h3si+uDki/
kThIwjhOcLSPSdl83CLCnLw0vtH8ezd/
RQrVVq2yZdvYGYSHhnWm7R7xfd7uSCZHVRqca+aMghJpiuveCnNzEW3z6OXS6K3Ve0uP4rHWLG5vFpxj
o5unlIoFApFhAq6dib2plvrFBSF2gVX2B9tU3k17s7pDgCyOS+xpRYI8Zj50z6Yulqa8jA70pIVqzTpF
gMuujmU7AhHdaVaDFg9dbAsNqzW6cfAzCQsuCsbJ2rdkvgtsYq3cUY+Tta6ZM/
NjmzShmfhhkmuPc1iwDmHT2KLsnZ6HjbNzCexYNFbtZtm5sMf5El6RbTQEW1AUs16JJp0WLDlCHnf+3O
HKyZqiOep1L4WzY2ba3E3Z857KVFbSjNzYvv8hTECzjq8yEgy4tm7b4bDGyDfCQBie9JepsQUCoVCuT6
ggq6D6WI2yCpKa6flwaTX4F/
zR4T91ywGsCyDFLMem2bmIyQARh2LLubw4+kWA840eBWrbYEQT36u9wawfPdxmRVKtNWI+Od5I7Mwf8s
R1W3ZYIhXjeYSRUeiSYcJtgyMtHZFkkmHVIsBr+08JhEyU/70GTY8NkRxq/Zcgw+BEC+x7Zi/
5QhKxvbHtDWfk6QGUcyJ7/NyIVmmqE7LErGm1r7WsgzWTs/
Dqx8eU31NbGWM5wVccPvh8Ydw6oIby3efIF59ama7ajNzgiAgI8kEtz8oE9JAWGx7uFCnzsa1Z0YshUK
hUNoOKug6mNg2rEmvQU2jH1PKmqpSojhIMRvAm5puqOKigVbLShYoRDKSTdBG3Wy5YAgFtkxZ5UnMa2U
ZBl4uiCXjB0CIPKdmBKzVsPBwynYfHi6ENybmghcETBnWS+I5J+a2Rgswjcq5i2bDYsVPfH1migmbZuY
TgSgeS3yfUvVKyzKkwql2TcdrXSjZEbaRSY6IUqUWt0hzZr7NVf
Oay0IVfx+6JhhkJs9i9FtbzfFdKu2dEUuhUCiUtqNTo7++r4ht2BuS4xDi5bYbYkSVeEO9f8VeDF/
0T9y/
Yi8qa5zgeQE6LYMVk3Il8VIrJuVKLC7EiopSdcjhCeAbuxtGnRYGLQu70xee7YrMq8Ued8P+U0g262TR
XKWRub03/
nkCJ+1uWdyWGNklkpFsgknHYmWhTXIccSM3ettTfO6k3Y2n3z0MlgGevCNb8j616pWXC+G1neE2bY9EI
96YmKv6eb//
+3FoNSzKYs4p9thqZr6zRvRRrOaJKMWlrZoyCMkmHexOP841eBHioRivFeKBcw3eFmPA2gO1mDoxPo1C
oVAoVw+0QtcJRLexQoKg2uprLnQdYPDB4TNYPXUwNCwDAYCPC8EXCMHu9CPVrEeqWQ8PF1SsDiWadPj5
O4dI5WXZhAF4feJAzN14CEt2VaJkbH/06hKHM/VerN//
LaYM64Xlu49j2vDepLp3rsEHpy9ARNyjP75J8VpEUSQKGYZhsOM/
1dg4Ix+1jdJZOrHiJ76+bLINXcx6vD93OIK8AEOQx+aiodAwAMuyqi1AvVYDu8tPKn0DM5NQMrY/
bkoz4+vzTvJ54sLEAyv3Ic0StjLp3cWMOIOGtLhFmrMbaW7OTc2EODZ1I7r6pVQdE02YY7eB2wu1622r
jFgKhUKhtB1U0HUwsTfq6MF8EdGSw8MFyZZmdL4rAwEalsF9AzMwbc3nSLMYZDmuq6YMQtcEA0w6Fm9M
zMXjG5s85t6YmItXP5TOtj25+TCWjB9AFg9SzHqs/Gc48ioj2YT7c2/
Aw3k90T3RhDiDBikmPTxcCG5/09auWmuzR5IJexfeKllYKPv3aXx22oFn7syW+OKJ5x39ekCeBtFS6y/
WMsbu8qNbohEmvUZi3RK9DFFd78W0NZ8jI1k5rkutddqaObfY5Ri7M2ypkmYxEKPn8w0+dE0wIMVsUBT
zomFyRnLcZbc8L2UmrrlWMYVCoVCuLqig62Bib9TLd5+QbbOWFtrw0vtHUWDLVMx3XVlowx92H4fdyaF
kbH9kpVtk3nYz1n6BkrH9wYV4bC2vwqsP/
Ajdk0z4rs4DloGiUW+3BCPMBi3Meg02ffYtRlq7YsLgTKSY9Sjd0yTu3pszHFoti6w0C2qcPmyZNRR1b
g67K2ok9iKi95sgCNBpWWjYcPsw2octenu1R5KpycTX3HRuovhp7QYqoO7TBkAi9NRa0kpVKMX81succ
+OCIaRZDDKrlLJCG5JMetXqWK3Tf9lpEJc6E0fNiykUCuXagQq6Dib2Rn2oyoHXdlZi08x88tiv//
oV7E4OZr0Gz4224pTdLdn8nL2+nCwOTFvzObbMGqp484/
Ta7D8wxNENKRZDJg3MgtJcXrFysupC27otSz2HKvBPTk3SKp6iwpycKLWhUNVDnDBEHhekLUMRb+6jY8
NgUHL4oKbk3i/RW/
XRvuwiWHyaokMLbX+1KpOaj5tWWkWbC4aikCIh5ZVNvlVqkK1pZmvXqvBvJFZsoWVovXhKDS16lidm0P
3ROMlfx6gPhOnJoypeTGFQqFcO1BB18Eo3ajtLj90WhZ1Lg5ufxB2Jyer3MQGtkcvDqhFcgVCPBbclY0
bkk3Y8NgQ8IKA8w0+rN9/
Cism5eL1f5wI+9NFWqyle05i3zd1eHt6Hh75k9TjTswXLdlRAb1Wo7ogsLloKLolGFHn5lC0TrogEZ1X
unz3cbx47w/x/
GirxKqltd+ZKLouteqkJERjTX6bq0JdjpmvkuBMNevRu4tZUah6uSAsRi3KJtvIdyj+Dry97xRyb8y5p
M8XuZyZOGpeTKFQKNcGVNB1MMkmHTY+NgS1Tj/q3By2llfhyTuySbJB8RirYuUmNrBdjIkCgK3lVbKb/
7IJAxBv0qLeHcDEVdKEhM9Oh20/
nhjZV2KTIVbh1DJXU816lBaGLT5qnD5VbzWWZSTiIXoGsEeSCbt+8WNwQQEPRmXRXm7r71KrTs2Z/

L54ryBpzdqdfiLCkoxa2N0cAiGeCNDWLCc0JzjjDMpC9dh5J0p2VOCdGUMkvytv7zuFJ+/
IvuyWJ52Jo1AolOsXKug6EKXqUNlkG5lFq673onTPSSyZIDX3FQVRVrolvESRYsLinV8DCN+Qn7wjG31
S47DhsSGwO/
0AgB5JRlSelyc7iAkJNY1NCQ7Rzy0ZPwAaRtknLtGkw+JdX+OV+3NaFAfi80pzYisLbdhx+EybtP54nk
fxGCvS4w2wGLTwBUI42+ADz/PEBNgXCEHDMDDpNc2a/IrmxLEirOj/
9cKYWzIwO0r8lhbacHPXljdOmxOcXcwGrJ2eh2/rPCQbN9msw6/fDy9tPLzqU7w/
dzhMei26JxqRe2POFbU86UwchUKhXL9QQddB8LyA840+uP1BFI+xksD7cGRW08zUoSoHzjm8RCwpZYz+
/
qFb8PLP+uPFewXwggANy+KCh8M3kdD5sQNvgN3JqSY7NHgD6J5kUnyua4IRJTu+kmWnrpyUSxIaXrw3h
O6JpmbFgSgezjf4ZNXG2evLsXrqYHx22iHZ3uX5ppQLpTZlrNgLCzZOsiW7qCAHW8ur0CfNjItuJ2asa
zq/sIdeXItVqlgRNm7QjSQzV7wGsarXI5Kbq0ZLbU5/
kJdk4y4dP0DyOqUUjMuls2fiaOoEhUKhtB9U0HUAzSUMiEsG0QJp6UfHyearUsZo2b9OYu5tWZizQbq0
8M5n3+LxW7Pwxj/
Ds3F6DasoXurcHJw+ZX+60xfc+KiiFnYnR7ZPk+L0sDt9xCcuOuFAaYtUbFWmmvWqolKrYSRCdZQ1HTd
3i8eZeg90WhYuXxCvfniMzPh5uSB6JJokFbELbr9sTk9sTVdd9Mqqk/
O3HMGyCbfI2tOxVapYEabWgg5Gxayp0VwlU6l69/
S7hyWt9bZuh3bWTBxNnaBQKJT2hSZFdADNJQwoCaTXJw5Edrd4bJszDDd3i5eJiQJbJhFz0ccrsGXi8Y
0HUWDLROmek4rJDmJCwodfnpMlI6yclIvlu08AAKkejivdD5YBXttZKRM/
0YkXokiITrZ4YOU+sJH2bTQZySboNCwRc6K576Q/
fhp+34p9qHP58dSovtBrWIR4ASftbpy+6CZpCTwvwONXN/
pVE5K8IKCLWS9LZIgWFaIIEwnxguI1aDUsORe7048z9R5ZooNaSkSqWd2aRDQqvp7aoTR1gkKhUNoXWq
HrANRu3OLNPlYgifC8gPOhJp83sU2r5p0mBsx3SzDiUJUDGw98hzm3/
kCy4frewTN4elRfdE8y4aKLw6sP/AhGnQZp8QaY9eF0hWjCUV0avD5xYLNtMrGlHHvTXr//
FFZOsmH2hqaK2IpJuQhEfSdKVchV//4Gc2/LkrQjF4/LQYpZT4x3T11wK1a/
HN6AanXSw4VIwoTDy8HLhVDt8MCoa0qGiJ012/LFdygttEkyaksLbUi3GFpMdGiuzalWvRO9/
q6nliRNnaBQKJT2hQq6DkCv1WCUNR0FtkwyL7a1vEpqpBuDWpv27X2nkGJW9pFzeAMYZU1HmkWPfzz9U
+g0LM43+PCbvx2D3eXHGxMHosCWgaffPSw55isfhJ/fNmeYbC5u7fQ8aDQM+KB6jqh4rtGpESJl/
z6N8YNvxIbHhoBlGPCCAAaAXtskuEQhGo1SFXL+liP488x8eDkPAODDL8/JZv3E7+jZu/
th1eRBshm6rglGJJt0OF3nRk2jT5auIVbrokWYSa+Bwx1Aydj+ZHkhTh+uqrYm0UGtzam2pNA90XTdCD
kRumFLoVAo7QsVdB1AskmHeSP7Yvnu42Qm7PnRVqQ1U4FRa9O+MyMfF91+LJswAE9ulgqzTypr8PPbsj
Ahyg5k8bgcvHifFb9+vwIX3QHFrVdxZisQ5CVCxqhncb7BjykRT7robNXoHFXxXIvHWFVu2iwaPAHMjp
r5K5tsw9rpeZjyp88UI8PUqpD+AI+Rv/
sXubb3Dp4hW67xRh3MBg1euT+HVD23zRkGX4CHhgFMeg2STGGrk2/
rPLLvYsbaL7BtzjCkxxslIszu9GPK6s9k1yV+T0rn2ZpEh85eUuhI6IYthUKhtC9U0HUA9d4Alu8+Lov
wKptsQ79uCZeUjnDW4cWDbx7AwMwk/
HlmPupc4W1WXyCkuI05f8sRlIztj1kj+qjOlYkzWzoNiwtuPwJBHgzDIBAUZEsHRevKicHwqimDkJVmA
RcMYen4AQiEeLw+cSDmbjwkqfCxDBPe5ozZ7t02Zxg2Fw1FvYeTtTRTVaqQLAtsmpkPhzeA1XtP4eG8n
iR/ddWUQegab5Z8n+nx8lQFLhhS/S48/
hB4syA5RnPtwitNdLgajHs7Yvv0+yReKRQKpTOggq4D4IIhFNgy5TFPEcsSpRs6o+IFJxoK211+hHgBH
i5IIrqaiwCLQ7hVqDZX9vrEgfi2zi2p+q2clEsix6KPlx4ffmzZx5V44va+ko3RpeMHYPG4HOg0LG5Mi
UOdm5NU+KK3ewNBHt0TTWjwBsBDICH1Dm8AK/ecxP8+eAt+sek/kvP57d+OkUSHlZNykRZvwKe/
vE1SMWwJvVb9uzh1wQ2zQVpZM+k1WD11MOL0Gji8AZTuOQm7y09ESVsnOnQkHbl9ejWIVwqFQrleoYKu
AxBv/JcyFK5hIJsPWzEpFwyA1VMHo3uSAXanHxnJJqyZlgenL4DESKVNSbABQGaKSVYJW1loA8/
zcPqCeHbblxLBOXvDQax7NA/
Ha1ykspaRbEJSXDh2rMCWKavgPf3uYZSM7Y+kOD3AQLFtHB0hJlZuzjf6JMcCgPGDMsncWopZj8W7via
Zq+L5lYztj26JxksSIKlmPXqmxmHlpFxJG1gUm69PHEhey/
MCahr9suWMrglGIiCz0+PbNNGhI7nUpA0KhUKhXJ1QQdcBiD5qzeWRylteLN7ed4rMhyXF6WTVqTc/
OUl+Lptsg1bDyGbrFo/LQVq8AclmHQJBAa/
tPCqphP0hMtentJhQXe9FbaMfJTsqSNXpkWG9odMwmGDLQN+uFiwdP4BUrcSc2T7pFmQkmXCuwdvsdq+
GBc7Ue6DXapBuMchmrNLiDRhfth9AuM0qirnoY2WmmODwBHC+0ae6YBILyzLolWrGBZefCEaHN4Aluyp
J5U1ESfDM33IE2+YMiyRVCKj3BqBhGfRIMiEz2YTcG5Mvq53YGca7dPuUQqFQrg+ooOsAWJZBj0STrDV
XVmgDywo4XeeWtCXF2bQn78jGjLVf4NUHfoSfv3NIVj0rHmPFRxW1pH1bMrY/
lu8+gVcf+BG6JRqhYRmY9Vp0sYRtPlz+ID6qqJUJo0d/fJPiYoLY4hUra6unDsbiXV9jxv/
rg8KhPTH5LXkr1e7yw6TTNGvL0SPJBF8ghPte3yu75ugZKwECeb/
a+VVd9Epm6LLSLKj3BloURSzLoIvFgG6JxmYH9dUETyDIt2m7srOMd+n2KYVCoVwfUGPhDkKrZdGvWwK
2zRmGPc+MQMnY/njhL0cx9vV9qGn0Ic0Sbm+JLa9GfwCpFj02zhiCzJQ41WWG6J/
j9BocqnKg8K3PcPvvPsFTmw4jEOJxriFccXF4OEWDXA8XQumek1g5KVfRhFg8foM3gEeG9YY/
GFI0Np43Mksx/ivWVNeoY4mAjb7mem9AYlScYtJj42NDsGXWUJj1GrwxcaDkWIvH5RAj5Op6L/
5ysEpibHz/ir2orHFKjH6jiR7Ub63JsPjZakkPl2uW21nGu80ZH1MoFArl2oFW6DoQlmXAgMFv/
laBAlsmnr37ZrKtOWtEHxStKwcADLspFeccPhRFZt3eLRqKd4uGootFj1DEIHjt/
tNksiRhPgAAIABJREFUQQKQzsoBwMDMJCy4KxsPRlmYvDFxoOKigS/
AY8mEAdBrGJSM7Y8bU+PwXZ2HLC+Ix0806bBgyxE8P7qfosDsk2aGxdj0K6W22ajWio1u8/
G8gBN2l8ywd/vjw+D0hSBAwFObDpPzG5iZhAfzeioKxebmwVoa1G/
ObqM119FaOqv1SbdPKRQK5fqACro2pDUzUDzPy+xLFhXkICEihAZmJmHWiD5EmAzMTIJRx8IXCOG3Udm

mL933Q9S7A9g0Mx8eLoSeqeEA94xkE9IsBiwePwBTVzcdY9aIPgiEBKRa9GQLNcWsR+mek9hcXi1JYlj
04TE8Mqw3SY0Qn1uw5QjsLj/
S4g2Kbbpj553EzkSsdCkJppbafGqpE+JW8I0pcTjf6JOkWswa0QcX3Vybi6LLSXq4nHZlZ7Y+6fYphUK
hXPvQlmsbIc5AtdTuCwmQ2Zcs3HoEJn1Y0M0bmSURJrNG9IGbC2HVv7/
BI8N6o2RHBV754Bi+rfOgaH05HnzzAIq3H4U/yOPG5Di8P3c4Xv5Zfzg8HBFzz9yZjZIdFRhXuh+T3/
oM8UYduicacdbhxYlaFzkPlmFw6Ns6/OreH+LGFBPemZGPf80fgY0zhiAj2YTnR/
dD8RgrNh44rdqebU2rsLk2n/g92p1+VXHGsgy6JRglx0g1hw2DldqjOu2V/
ZrHZtaKIr0t25W09UmhUCiUK4FW6NqIluwfxOpdICQ12BVfa9Cy2LvwVoQEAcfOOSWxWKkWvcTHrniMl
URWxX4WABStLyepDUo5qbMiz28tr8Lyh29BiAd4QYBByyLVosdDUW3a0kIbvFwIT27+DznGwMwk3G7tj
ndm5IMXBFRdlLZnW6qKiVWv9+cOh5cLISQIMOrClagLbj+WfVyJZ+/
u12zFKrZyxjAM3vzkpKLVi8sXRJcYs+C2oC3blc19JxQKhUKhtAQVdG1EczNQarmsogjKSDbBqNMgLT7
sLbe1vIoIE4c3gPQEg8THTs1iRBRR1fVelO4JixuDllV8bXq8AXNu/QGx4RDPa9mEAcRMWBR/
66bnScTci/
dZUe8O4KzDCw8XQopZJzl+bKtQqRUNADWNftlsWoJRiwJbJl798JhMnJVNtkkqVmLljOcFXHD78dw9Vt
idfrz6wI9g1GlIS3nfN3Uk7L6tbUEupV3Zmpa80nfS3puuFAqFQrn26fCWK8MwmQzD/
JNhmGMMw3zFMMwTkcdTGIb5mGGYE5H/
TY48zjAMs5xhmP8yDHOEYZjcqGM9Enn9CYZhHunoa4nmUrchF249glkj+shaa6lmPZ64vS/
xoLN2j4dBy6KLxUCOL1p4KH2WLhJ6f6jKgSW7KonZcOxrLQYt6t0BSaUvzWKAyx/
C4vE5KJtsw8DMJFTXe8ELIMdYcFc2vFwIxduPknavhwvhuXv6kWNHX49aK/
qC269Y0fQGeHRLMOKjilos2VWJ4jFWbJqZj+Ix1kiGbOxMYvj4D6zYhxFL9uDJzf9BokmHQIjH05sPY3
N5dfgaeP6SNmDbmta05Dtr05VCoVAo1z6dMUMXBPC0IAj9AOQDeJxhGCuAZwHsFgQhC8DuyM8AcDeArM
j/zQSwEggLQAAvAhgCIA/
Ai6II7Ayam4FSq9716xZu12WlWVDn5nCm3oM6N4e+aRa8MNpKqnJBnkeQ57F4XE64DbrnJPmz+FllhTY
kGbVw+YLkuUNVDize9TVKC22S1y4dPwC+gDTPVJy1K95+FLf/7hOU7KjAM3dmY5Q1HXotS47ZLcEoa/
fO33IE3ZOMitYfdW4Oyz6WCrNlH1fCF1D+TryBEJLidBhlTcesEX2IAfLW8iowClUqJRE0e8NBNPqCkg
3dkCBPrWgrscTzAuxOP87Ue2B3+hVFYmvEGjX5pVAoFMrl0uEtV0EQzgE4F/
mzk2GYYwBuADAWwIjIy94GsAfAwsjjawVBEAAcYBgmiWGY7pHXfiwIwkUAYBjmYwB3AXinwy4misvZhj
TptUg16xUNZbPSLDDqNfAFeGgZ4OWdX2HK0F5YM20wNAwDDxfC2ul5AIATtS78fvdxPHF7X/
z+78dhd3IkDYJlGBh1LElE8HAhGHUsXP4gfAGenJfSrN3CrUew8bEhMOnCun/
d9DywLKMoOngBuDElvGkrCpzwAgPIVm+axYB5I7Ow8O5+0DIMRlnTJSbHGckmmHQabDxwGnNvyyJed2J
EmV4jF3RqIkisEI6ypuOF0VbV2cUrFUutNQRuSazxvIAQL2CUNZ0kd4hC9nI3XTsjeYJCoVAonUOnztA
xDNMLwEAAnwLoGhF7EAThHMMw6ZGX3QCgKupt1ZHH1B7vNNTmqaK9zERR07uLGQIEOLzKlZttc4bB5Qv
i2zoPfpBuxuO3ZuHxjdLcUTBNdh4AUHHOieIxVhStKyePlU22SRYagLBw2vDYEPiDISwel4P5W46ozuW
BCV/X6r2nUGDLxM3d4hXFqTEi+mIFzt+f+ikRc8/
cmS2ZiSsttAEAiS9bNWUQTDoWub1SZcbFs9eXY9PMfCTFSb9bNbF8Q5IJn/
7yNlxwc5j4x09VZxev1BZErXUc633Xki1JnZvDBhUhm2ySzii2hs5KnqBQKBRK59BptiUMw1gAbAXwC0
EQGpt7qcJjQj8/wvvyz/
ijefhQjluzBAyv24ZyjKSVCpLreixAvoKbRh+LtR1FxzknEnPj8wq1HkGDUkSQH8fFYm4voZYro151v8
GHhli9hNmjx55n5uCHZpDhrd7LWjZoGH16674dINetx1uHF7x+6RdZa7mIOX0Nsa9HpC6hWAGetL8dL9
/
WXtGp1Glb1nEMKf7tKre7F43LgDYTAsAyJWov+3pRmFy8Hnhfg8beuTdqSLQkXDKkK2fooA+nWQufxKB
QK5ftFp1ToGIbRISzmNgiCsC3ycA3DMN0j1bnuAMReXDWAzKi3ZwA4G3l8RMzje5Q+TxCENwG8CQCDBg
3qmCn4GFiWQYgHSX8AItW19eEM1mlrPievzUg2gecFMqumVj0L8QJmjehD2ogZySakR5n+jrKmo3uiUb
EyFAjxAAAvF8JDGw6EzYgj1brYapY9EmIvZqa+PnEglowfgB6JRtI2Fqs+sa3FWqcfGckm1WsQBAE3JD
eV3bQaBilmfbNVwNjvtWuCgbSUHd4AXtsZPueNM4YofubN3eKxbc4wdDEbrqhaVefmcOqCW/
FcQ7wAnm+ySmnJ4kT8OXqmUZwhFDelL+Vc6TwehUKhfL/
ojC1XBsBbAI4JgvC7qKfeByBuqj4CYHvu41ABoirdldAEYxDJMcWYYYFXnsqkXtJtu7i1lWueE
FgbxWbau1ssYpWV5YNWUQeiSa8N6c4fj0l7fhidv74qzDJ1ugWDwuB/
FGLV4blwMNy6B4jBUA8NrOSqx7NI8sL4ityer6cE6seL5zNx5CQ6RqJFqBiAsBJr1021dc4PBwIdXN3G
i8kVzZNyZKjYvLCm2kChiLlwth2prP8eCbB1C0rpycs4ZhFD/
zG7sbTKTA29IyQ3NwwRCW7z4hO9dFBTl4+YMKWTVMzaAYCH+PohiPNoN+8M0DePDNA5e8kdvc1jWFQqF
Qrj86o0I3HMBkAF8yDPOfyGPPAXgVwGaGYR4F8B2A8ZHn/gbgHgD/BeABMBUABEG4yDDMiwC+jbzuN
4oLE1YraHFWcQSOr3Fxw+8lrRU+52LiwJbsqSRtxc9FQdEswEtFgd/
pRtK4cS8cPwGs7K8mShMMbwHsHz2DKsF6YtuZz2fHO1Hvx7LYvZeeYYtZj08x8OLwBlO45iVSzHnoti2
PnG0lbUxSja6fnkegyu8uPrglGJMZpUVZoIxVK8bUaFjhT7yHXrddqsO+bOpyodZFz9nAhdE8ySgRQ9M
A/o7JgYTZoZJ8pXufvH74F310M4tQFN5bvPgG7y3/
JM2Z6rQZ2lx8sA8n3KwrhF+9tvhoWu7TQPcGIssk21Db6Ze3pljJpY2kug5ZCoVAo1x9MeHn0+8OgQYO
EL774ol2O3dJW4aUMqvO8gGPnCfj41eSl+/Bi+KJ/
omyyDSU7KiQCbfXUwSjeflQm2orHWVt1xWTc
vH6P06Q5YXF43LQMzUOgZCASZGFg+jjbJszDAwY2fcQ/
f3otCxcviARftHbvSfsLsWt33pvAFwwBJNeIzPgLS20Yfnu4+Qc107Pgz/IY9nHlST/
NtpoOLqFHN1avhTRJP59nm/wKX6fzR1L7XchK82Cs41e/
OS1PbL37F14q6Q93Zrzuz62XHcCSOvsk7hydu4D0jrNWYlCobQ19tPAXS+0+8cwDFMuCMKgFl9HBV3b0
Fqx1hrRR0SPhsVXZxvJbNjuihoUDu0p2YJcOn4AjDoWj288JPncrgkG3Pf6XsXt0ren52Hk0n/

```
JrmHLrKHommDAt3UedEs0QsMw0GoYlOyokFW/Xn94IPxBHg++eUB2nNYID7vTj/
tX7FUUgxoW8HI8QrwAvYZFF7Me/
73gJt+tmiDdXDQUgiBAr9VAgIAHVuyTvaZkbH8YdSxe21kp8akTt4MvRzQ5vBzOOXyy6mNz1T616xfj2
9Sea63YvBq5fIFJBR2FQrkKucoEHY3+aiNaynIVaS4qKlYUjrKmY97IvpgVEQqrpw6WbUE+/
e5hlIztL/vczTPzUTbZhqJ15ViyqxIlY/
ujVxczztR7cM7hVWz9dk80wuEJkJZrRrIJKyflwu6UzoJV13vhD/Jkti/
6OKOs6WAYRtJGVbppc8EQ0iwGSauydM9JeLkQHB4OXFBAF4se7lAIQd6PvxysIp8TbYgcfU7RCxZn6j2
orvdKlgsc3gBu7mbBnA2HiJgT35sUSdS41BkzlmWQYjYgyaS/
pEzX5pYWuiearrt2KbVRoVAolPaFCro2oi22CmNFoVgV21w0FFyQR5AXFD8jKU4ne6yq3ou3/
u8bbHxsCDQRc2MNC0x+60ukWQyKM3nfXfTIUiBmbziouIUrCrDo44yypuPnI/
tiQtl+xZt2dIWGZRi8dJ9VUllcPC4Hem345h7keUyOaseumJSLz047cKjKoSgkY8WYXqvBKGs6MTUWj1
NWaENavFQYZSSb4OFClySalKpN0VmxdW4OySYdaRMrbbWqXUNLG7HXIq39Bw+FQqFQLo9O86G73rjUrU
KeF1Dr9OG7i26cqffgotsPnudlgu2jiloEeQGFb32Kk3aX4mckmnQYmJkkeczhDeCjilpM/
OOn5PEEgw6rpgyC3eUnVbvdT/8Urz7wIyzZVQmWUU6B6JkaJ9niXDZhALFKWbKrEkvGD8A/
nxmBBXf1w+wYWxbR+yw2y3R82X54uBDx4KuuD0eIhXjgYkzGbHW9F3M2HMSsEX0AQDH6LFaMpZr1eGG0
VbZcULS+HC+Mtso2aAdkJra6WqSUy3q6zi177OsaJ55/74gsu5XnBQgQsP7RIVg9dTAGZiaRa0g26WB3
+nGuIXzO3RNNso3Ya5Hr2UaF5wXUuznUNvpQH/ld74jPbPQGcNHlR6M30GGZxBRKe0F/
p68cWqFrIy5lq1Cp/
bRiUi7JMI2eVxtlTYeGAZaOHwC9lkFpoY20YMXK2qsfHsO8kVmyIX8gfNMUW7OrpgzCD7qYsbloKAIhH
lqWwdp9p1D279MAoFr5EgASOXbBxSEj2Qi7yw8AkS1WAya/
9SmWjh+getNWqtDM33IEi8floNEXJC1RBuotVfG7TIvXIyM5DhtnDIGGYaDTsBCEcMVMrGSxLAONSkyZ
hmWuqPqldC3f1nkkc33V9WHj5OIxVnxUUUvE7ftzh8sWOsoKbeieZESCQae4EHI9tCXFimlbxZpdLfC8
gG/r3Hj5g2OocfrRNd6AF0b3Q89Uc7v9nfG8gHMNXrz1f6dQ5w4g1azDoz/uje6Jpmv+94Ty/
YT+TrcNVNC1EZfSJlMSBHM2HMSGx4bgf8b2B3AUH1XUkhm6B988QG7w78wYomiR8dw9Vvzj6Z/
i2zoPeQxoqtZV13ux7ONKPHF7X4nNiBi/Vfbv0zh4ug4rC22kyiZGTy368BjZHn1jYi40GlZi5OvwhI/
fXCtUqUKTZjHAYtBKNmrLCm1gI/
5xscfpERXn9fCqpu9k8bgcYiYcLYB0Wlb1fK6kzad0LWoiNCkqtqu63gsvF5L93RetL8d7c4aj3htoVV
uytcsFV9OWa7JJJ5kHFX/
3LifW7GqiwRsgYg4Aapx+vPzBMSwZPwDJ7TTz6PIHyY0PAOrcAbz1f6fwi9v7IuEa/z4p30/
o73TbQFuubUhzxrHRqLWfgiEBLn8Iz4+24ovnR+Kl+/qTG6D4mv/
WuonhrGiim5FswvlGH+xOPzJTTKR6Jlbrjp9rxMdP/gTFY34oi8Katb4cE/
N74dNf3oZHht+EP+w+juIxVmyamY/
VUwfjDxErEPH1j288CC8XglHH4tUPv0bRunKSBiHO1MW2QpNNOoR4QdYunjcyC7NjljyK1pcjPcGg2FI
N+
+yxsmuYvyUc5xXb4nX5gvLjTL7y5QKl9rqacbIjKrYrI9mEkKA8B8kFQ822JXlegN3pR02DF8fON0pau
0qmw0pt4Us1J25L6r0B2e/yrMuMNbuaCIR4IuZEapx+ksTSHgRDPLnxidS5Awi242dSKO0J/
Z1uG6iga2eCQR5nHV58W+fGWYcXwSCvOm/33UUPbv/
dvzDpj5+ixumHoHDzX777BFYW2mTJD0Ydi7f+7xuY9Vq8N2c4PllwK0rG9sfB0xfx05vTMW3N5zjr8Co
KBrvTD5YNty0/qqhF0bpyPPjmAVx0c5L2b/
TrfQEez9yZjYGZSWSmLXo2b88zI7BtzjBkd41HvTeAlz+okIm9Xl3iFM/
nopuDlmXx55n5+GTBreQ4LMuoih6xEhbd4p3yp8+IqfKmmfkoGdsfSXFXXpRWymXtmRone6y00Iat5VX
k51VTBsGoU5+1VPu90GlZIs7+U90gE7RKGa1XW5br9TpDp9Ow6BpT7e0ab4BO037/
adVqWKSapVWLVLMO2nb8TAqlPaG/020Dbbm2I8Egj69rnLI2U3a6hViKxLYNgUilal05NhcNlbUM7S4/
Ek1axezS4jFW8IKAtHgDeF6A2x9EZkoPvLbzGIrHWCU5ryIZySbUuTl0TzSCYRhsmTUUdW4OpXtOqrZQ
69wckkw6PP3uYRSPsaJkRwW6Jhixbc4wBCKCNTbf9aOKWtidnKRdbNAot0RrIykXn8wfgRtTzeQ5nhdU
27FiRSS2xSt+lyJbZg2FVnNlLVe19joAyWPJJh1euT8HL94rfU1zs5ZKz2lZhjymlokbK4yuNgHV3Fbv
tUyiSYcXRveTzdAltmObyGLQ4tEf95bNG1kM9D/
nlGsT+jvdNtBvqx2pdfkV20ybi4YiOz0eGx8bglqnH2nxBpx1ePHs3TcTO5BDVQ5oGOUbPANIbERExOg
sICw6stIsqHX5iHVHmiXcyoyeWVtUkIO3953Czd2smPTHA5LHP6msUVzCeHvfKRTYMlFd70W/
bmFh09x8lngzP1TlIOIqI9mE9+cOl12fuNCRkWyS/
OtMbCGKbdToa1g8Loccs2yyjdiHNCdeo7mcWTM1P8HYx5Re09yspdJz5xqaKqutsWyJ/
s6vFgF1vUaRsSyDnqlmLBk/
AIEQD52GRaJJ166ziizLoHuiCb+4vS+CIR5aDQuLQUuHxynXLPR3um2ggq4dCYTkNiThWTkeLMvAqNcg
PcEAQQBW7z1FFg9E0cSoVILUxEp6vIHcIHlewAm7CxaDllh3VNd78drOcEv0xpQ4/
Nfuwtv7TuHxW7PwygcVEuG5cOsRrJ46GDu/PIe10/
Nw0c2hzs3h7X2n8Miw3kR0mfTaFqtdajfzJJMeSSY9ts0eBjcXwukLbhLBVVpoQ7rFQMSWNxDE+QYful
j0+NX2Y5JK32s7K7F0wgAUj7GiS0QcpZr1pAqaZjFg3sgs3JgaB7vTD5O+SdR0huFtc+bSSs9FizOlXF
8lYXS1Cajr0VtPhGWZdluAaO4z6bA45XqC/k5fOTT6qx056/
BiQtl+pFkMJK3Aw4WQk5GAWienWJkSlxzWTs8DAPRSsD9QEiFrpg2G2aBFKNKW1DBAQel+rCy04d4//
J/s3HY/9VMIEHDS7kZGsgmjl8tf89ef/xi/+stRPD2qL3okmaDTsDjf4MNv/
nas2TD72MxWLcsgEOQREkCiuURhIb7OqGPhC4TNk3UaFumW8FJJ7HW+MTEXb/
zzhCyKTGz9Rm+EBoM87C4fLrg4snwhLkZ0TTTAy4XAMAwxQo4+3qVmurbnNqlSgsgLo63EMPpa2HK9Mu
TRXzwvoMEb6LCqWJtAo78olOsLGv31/SHdYsCaaYNhd/pl1hy/
331cVhET80Sr671o8Abw83cOqVpWpMTpiJ9cbaMfdS4OU1d/
```

3mQ3MikXaZZwK1epmvdfuwtJJh1KdlRgw2NDFF+Tatbh2btvxtPvHm4698k2lBbmgmVZiUAQz4vneVxw
c4rzgU0iMDz4HyvWxMrkk3dko1uCUXGw//
GNB7F2eh4qzjll7xPbrSJaLQuNhpVt0s5Y9wVJv9gya+gVzZq1R4VPSYipVbeaE23NVQKvZTrD+41CoV
CudugKSTui1bJIMOpkqQdF68tRYMuUvDZ6U1NcDEizGMAFQzhT74Hd6UcwyJNtxyG//QcmlO3HWYcX/
mCIiC7xWLM3HMTSCQOwu6IGb0zMlWxfLirIwdbyKqTHG8Jh9VpW8TXfXfTKjlu0rhwsy0psWaItMk7Uu
lq0FXF4OZxv9MHtD6J4jBUDM5OIqC2wZZLXeANBRbHl5kJYMy0P/5o/Au/
MyEd6vB4FtkzSbo0mEFRue4txaWL7OppLmTVr623SYJBHdb0H39a5cfRsI55/7wgqa5wAILPEudqsSTo
KNe+3hmvcAoVCoVCuBFqha2fU5uhiZ5lEzzJxE1bLAs/dc7PEVLhssg2///
txmVhaM22w4mc4fUGMH5SBTyprZXNwc2/
LgssfBABwIQFaDSMzLH727ptbVb0SRc2wm1JxQ0ylT3xPnzQzNs3Mh1HH4pzDh6KYRQux3Zxk0iHNYsA
5h4/428VWDtMsepyu84BB2P+tR5Ix4vEW2YSNEnWMylasuD2lNJNWVmiDhpUfS4m23CbleQGVtU5JdXN
RQQ6WfVyJV+7PkVXbvq/5qJ3h/UahUChXO7RC186oeYulmPWSitiKSbmwdo/
Hsgm3wOHhoNVo4PJLs06L1skre2kWAwwqnxFv1GLVv7/B/
bYMJMXpcGNqHPp1T8DDeT3x4vav8KvtX4EL8XD6Akg06bC1vEpiWKxmlsswDKka8rwALhgic4KnL3gU3
6NhGQRCPFLMeiLmxOtauDVcwRNF7byRWShaX47lu0/
IvOtenzgQVRc9eObdw3jwzQMo3n4UF90cGr0BTCjbj2PnGiO5uOHMVAgC3p6eJ8lMXVSQA18gLLgOVTn
w9r5T2Fw0FHueGYGSsf3xwl+O4r7XW1ftutQM3+aoi2pVR383BbZMIhBFg+Ez9R7VCua17u3WEp3h/
UahUChXO7RC184obRsuKshB6Z6TKBnbH33SzDh23gm3P4jX/
3ECjwzrjWe3falYvYqt7A3MTMKCu7JRsuMrUmWK3uisdfrx+K0/AAC4/
UFoWBZaFuBCPLLSLRg78AZJZWrlJBt6p8Yht1cqUs163JBkxKrJgzBjXdO5lxba8Pbeb1D279NkXqxrQ
vgzL7o5IsKij7t4XA6e2nQYdpefzPZFCxHxusRZuOfusZKt3CW7KrF66mA0eAOoc3Nw+YLk+xHfO3/
LEaybnkfa2SVj+6Nnahz8QV7yva+clAuXP4jVe0/
h4byeAMLi68k7smHUsbLliNZUu9pym1St2ifa0cTO662eOviqsibpKDrD+41CoVCudqiga2dEu4Ztc4b
B4w/hVJQ1x7Qf94bFqEXJjgqsnJSL+XfejGlrPlddloiu7FXXezFvZBaZz7M7OSwelwOLQUuWAEZZ0/
HzkX3xUFTbdun4AUiJ02PeyCw8FMlDFT9r9oZyrH90CArf+pS8/+Wf9ceGx4bA7vSjzs1h+e7jeGRYb9
R7ghhp7Qq3PwhfQIe+XS04eraRpEUUj7GiT5oZVRfDVilituzsDQexZloe5r97WJI32z3RCC3L4JX7cy
BAINd4qMqBi24OD755AACwaWa+ougJRba1q+u9iNNr8G2dB8Xbj8rmCkvG9seTd2Sja4IBexfequj1Fn
3clqpdbWnHoeYdJ9rRxLZYl+8+IfPkux683VqiM7zfKBQK5WqHCroOgGUZpMcbwZsFmA1alBbmEguPIC
/g3Vn5qHMF0OANKA/wm3Sk0lW65ySZdUuNqnQdqnKg0ReULGAU2DIxO6a9+fS7h7FmWh5c/
oBkZk40M77g8qO63ouBmUl4ZFhvfHXWKRFGAFBxzom10/
Mw5U+fSeb7Dp6uI9W5onXl2DJrqMwAubreC4eHw4K7ssnma9lkG7onmiRLFtFVL7H1W13vVTXWPd/
gI392eAOqiQp90i3ISIp8VlMIBUx6DVZPHYw4vQa8ICDECzDqNGAYhszStbcNiFK1r2yyDT0i301sBe9
QlQOv7azEppn5AHCNW5NcGp3h/
UahUChXM1TQdSCi4W2szUVpoQ3Ldx9HgS1TUazckGzCppn5mLvxEKlqzfjJTdBpGKyeOhjLd58AAPRNt
2Dp+AFEoKmJmnD7lUHJjgqZ9Ye4nTlrRB8s3HoES8cPUDzGRTcn237d+NgQvPxBBYrHWJFq1qNbolE1r
aFkRwXWPZoHDcOge8SiRM2mw6TXEKEj5sZGV6WWTRiA3/zta0mLet7ILMXPNuk0ir55NY1+FG8/
ijSLAQvuypa0vVdNGYQfwwGJAAAaBklEQVSsNAtO2F2y1qra45djW9JStU+pgmd3+aHXXlmUGYVCoVCu
faig62DEtlmaxUAqZHanH9OG98ZrOytl82eLCnKwbt8pTMzvBbvLjwm2DBQO7Ulas2Gz3YHwBXhMjqqY
LSrIQSDEK4qaOL1GsbW74bEheOWDCgAgYrC5PNdoquu90ERaptFZpmrRXuHXs+iRYPz/
7d17fFTluejx3zMzmdxDQkhAIQpl4yXFKIQqYE8Faa3usqEUtu7DpWirEOtW66nX9rB3bbb7iLTHTT/
eUKvgBQuirRbrpVut9oCKXBQ1XthHtETABCRAQpJJMu/+Y81azGVdSYsL7CTw
HT5I1a828a4jJk+d93+dJGhBFBykFmVbdvfaOMFkZfp68fLI13Rbw4ffB7RedETOdfWJxTrfXtkVPZS6
ZXp5QZuayhzazdvEk1x2lyY5/2Z2mndWO62q9Xv8pJKyUUupvpQFditk7Qq/
99slxGxLGAzjrz4pzgxTlBrl27dtUTRnNLc/
UsHR2BUMLsrj4wU0xAcQXTW0J68VueGI7t194BnfPr3SmXaN3eLpl3UTg+vNP4X+eeSLFeUEevPhrPPv
OHteyHstf/CjmensxfnwwMrQgk5WXnEnDEatkSnQ3jOwMPwea27oMiOw2Zp1lwQZlZC/
pzMIRHWaiM52FWVnuAY80VOZybKa7Z20cUvVTtPOMnhetDBTSinVd2hAl2LBgJ+rpo1xMPzX/
yco3qV5fw13zxlN3qMWpzVZ/OIQxhgy/ONeNKyukaspoRhbnuAYVQwdlkjAHL1boBEkf1TW61hAYhS
pZ82iibS0hfEJ7D3UwsWTTe/CC1tYSc4tNft/
W7rZ1TPHMvIIblkBXwMyQ1yzbdOjunWYGeK4rNE4XCY6x5/m2u
fXLMFK9d6+1wS9elN7qqt9ZZwBcdFCYLeKKnMpNlJAN+3990vLd2mibL4A3UmnRKKaUswgpxYpzg4wa
kusaxJQNzmZd6SQe+sGZPPLap/gdkVV1boBEkf1TW61kIL+HyEsXrKLnxwE1N/
9QrXrdtOflaAcFXTsJ2bjDVNZfdlZ
FOcFXTsX7GsKUZIf5Kltn/HgxV/
jpZ+cw8w8ODzbwwd7DXQ2HK2V11lHB3sqc0RRtrNGL/q9ue/
7EyjNy3TO6c807F0136s
fc9e88exvDDlZPrduB0tnV+AXaAmFuWZtbPuuK1ZvY+3/HDr3/
FNSiw1R9ucfq02psHYnrUunSyWPzwFh5fPJFP9h+JWfd3+4WJWb3+p2KP
MriyjODdIc6gdn0+rUp20l/
mgybe3WGr2AT/
j8cAtDCzKd49BUMJUTh+Bh
/
9Rb12Sy2PvPZpTJTZcTc4n48mOcw74eS85zbimp8zxk9j5K+Lc8+n48mQSvJkQvdh8fSwAA8WrvjkLkYqXA7K5C9
pXmmpP/qR+vuc7iLe+Y3vVQWv5yVxr8y9Ev6Kq/eZbsF1j8Eb9
OmW6MNqIoGwPMumsDb9UedDoZVE0Znd8aP7Rl4/kD8TDd3ovgCfHvvH1cRZiL2Aff7Pgwa
0dsK6r+gMmj2m6KAvultD1ZTRrNq4k4WTG9G597zG3PvfoCoC+ZscNymZl+FscNymZ

/Y4gZd1gZxxl3bGB/Y4ih+VkA7DnYTH2kBVV8n9V40R0e7KxhT+rqPVJKKdW/
aYbOA25ZncKsADJuBMv/
0yrcG93P88654zmvvJQXauoAK6i74LTjYjIy23Y1UL3eKhlSvb6GFQsqKc4Nsq/
paJFeO3sVn8mzd8Mmy/
Q1tVrr3KI3DCTbPODWo7Y9nBhULpw8KiZjt2xOBXlZAQbnJq73ii7O3NIWxi9W3Thb9O7PwuwMZleWOf
dgrzNsbG1nxfzKmB6yXQU8yaZpV196FnPvf6Pbmw9SsWGhr2QKlVJKeUMzdB6JzgiV5GfS0NLuZLjiN0
xcsXorN15wakz2xS7LEX3szrnjOX5QFkumlzMk8ss8Ohto15aL3w0rItw1b7zT5aF65lhe+sk53Pq901
i1cScZfh/jygpjMnjJsnnxPWrvmDuOgE9YVzWJFQsqnQArfhzXrdtOexdZq/
2NIebe97qTLbN7rfp8wpiSPFZfehalBVZXhegAtnp9Dd/
59f9j+Ysf8dAPzuSpK85m9aVnMaYkz7UmnZ1Js3ckR6s90Ezd4VbXtXhJx93J+r2eFP89pcGcUkoNHJq
h6yPsdWDJMl8Hm63ODqcOyyc7GHAyS2sXT2J3QzP7m0L8/
On3nJIgaxdPcoKdk4fms3bxJDrCYdfuEKX5mTEdKAzg9wlZGX5uvOBU1mz6lKopo2MyeG4FflcsqGTNp
k+d5wkbQ1t7mJv/8J6znu1XF55OOG4a2L7HtvZw0venq12cB5rbmHv/
G5TkZfKrC093DWBfqKmjZs9hlkwv54rVWxN2gLpl0pbNqYhpXZasBl9nmw90w4JSSqnepgFdikWX9RAR
/
AI+n4+MgM9pW+W2uL3ucCvV62sSgpBhBVkcbG7jx2veipkmXbXhY+ZNHInfJwQDfoJ+YXdjm2t3iN0Nz
azdUsvaLbVOVmte1JTi0tkVFOZksG1XA6s27mT1pWfh9wkZfh9rF02k3UBWho/
B2UG+O74spnn8Y5s+ZeHkUQl17OwpZDtjV5wbjGmzFa+roMh+3N4kcte88YTa3WvE2UFzfEDlFjRet26
7U04meuNHtK42H+iGBaWUUr1NA7oUCYcNDc0h9jS0xKzjWjq7glc//
JyLzx7lFOx1W8e2auNO1zVfdgbu8cWTOBLqIOAXMvxCQdbwmHVeK+ZXcsdLOxKmWx/
54Vn8+x9rnOdLNi27ZtFEp5l9UXaGa923IbmZMeu4OoxxnUJe/
IjVJgxICPaSrS1LFhRlBHzOxgT78bVbapk1fjgl+e6tx+ygOT6gShY0ji7Ni7l3uwZfSV4mV00bw6ghu
RhM0mC0qw4PSiml1LESY3p2t11fN2HCBLN58+aUvqY9lbf3YEtCo/sRRdlOo/uSvEx+
+vencnxhFu1hQyCSBTPG4PP5XBe5h8OGfU2tNLW2s+9wiLAxHAl1uL7OkunlLH54S8z1f7jy6xxqbnOC
qnVVk5hzz2sJ9/
CX66dyXEEWXzSHaA51EDaGvQdbnOnIEUXZCd0d9h5qoaWtgx11jc70rm3DDVMRES5c8VrM5oXi3CDHF2
YzrMDaSWpnMzMCPlrbOvivuiZygn6OhDo4sTgHwHnvosuorKuaxNo3d1E1ZTRfNFldKp7YsouFk0exau
NOrvnWyQmBY/3hVmbdtSHhfXObmnULzjvb6DDQ2nL17P0+B5T05PC88dxGKCnyehRKqZ5S/wmc/797/
WVEZIsxZkJX52mGLgXsqbyuGt2X5GUS6ghz0b2vx6xLGxKVyYn+RZkd9PP5oVYn82Nn6U4szmHJ9PKYI
CrZDtTdDc3O+rlTh+Un7Xyw96DVYaIqKoBZNqeCf51Rzs1P17BtV4Mzhem2Fs3u4WoHf8GA38mIue2+v
W/BBDICwsUPHt0Je8/8Sh7b9Ckv1NQl1L2rPdDMbc9ZGzpGl+aRFfAxa/xwvh/V3/
ae+ZWUFmRyy6wK1wCju5k0n09oDxsnmLPf3846M3TWo7Uz6RgIahsypZRKPd3lmgJ24JJsZ6i9yN5tun
Pxw1t4q/Ygs+6ydnV+sr/J6cTw9q6Dzi/NcWWFZGX4WPLUu5z7q1eoXl/
Dtd8+mXFlhc7rFOfF7kBdOrvCCfqq19cQ8PvIyvCxIq6LxNLZFbS2d7h2kTjQ1EbVlNFOvbrdDc3sa2x
NWIt2wxPbnfPu+/4EirIznNpwbvd92cOb2fVFc8yxqkeO1rkrycuk7lAr159/
irN7dtuuBi5Z+SZ+ASSx9l3VI1Z2MtkO0OjSHxtumOpaEw+sgOVIa+9vdHDrvGHv7O3LUrWrVyml1FGa
oUsBe/2XW523O+eO586XdwDJa7vZxy97aDPVM8c65+QE/c7nVVNGc/
mjWxOCKLsu3bI5FRxqbqN65lhOKM5BgFuffd/JmC2dXYExhhl3bKAkL9M5b09DM798/
kNuvOAU17HlBP3k+wIsm1PBlau3Ud/YysM/PNP13FOHWcFScW6Q/U0h/
u2ZGpbOriAz4Ev63G7vRbJ6er98/kPqG1tjsn/
x13e2kxa6l0nb3xRi576mpGv6ekq69mfVXb1KKZV6mqFLAXsqL7rO2yvXTWHt4kkML8zi6mkncV55aUw
NN5u9iB8Sg5zojF+yYHBMaR5Lppdz23Mf4hMh1BEm4BNE4PIpo1mzaKLTWeKjzxupPdDsZLoWPrCJplA
H23Y1JM0uHgl1UJgTdNbS1R5o5pN9R1zPzQ4GnOxYqL2DF2rq+OXzHzIoO8P1/
OK8TCfDGP1eJNu4cdW0Mc4UaXT3iOjre2Jnaai9g1+/
uIOls2N7vt49bzyNLe09lkFL18CoN997pZRS7tI+oBOR80XkQxH5LxG50evxuImeyrtj7jjGDh9EWVEO
wwqyqG8M8fRbtVwxdQzLnv8gIUiwp0Xtr4+Ejv4yj24knyzg2lHXaPVezQ8SNlC9voZzlv2ZBb/
ZREtbmFuf/YDq9TVcPe0kfv3iDsaVFVr15CKB3uiSXFYsqGRYQRaPXnoW55WXOs+9bE4FZYOzufeV/
09VJDhcsaCSZ9/Zwz1x07bJ+rNu29XA9eu2u973bc+9z/
XnW9PGI4qyuXt+JU9s2ZU0eB1dmudMkRZlZ7BiQedj+LKCAb8TnC+ZXs6aRROpnjmWxtZ2vv/
ApmOaWowubCwizvttS4fASNuQKaVU6qX1lKuI+IE7gW8BtcCbIvK0Maam8ytTz20qr/
6wtdbMLnRbe6CZ+sMhlkwvpzg3yLBBWfziD0eLBd9+4elOvbraA83UN7ZSkm81jDdhw4oFlTEtw+yiuC
OKsrnpglNZENkgAEfXwK1ZNJFgwI/
fByX5wZgyIueVl3LltJNiatetWFDJzTPHEg4bsoN+jDHMGj88psDwsjkVHDcos9M2VNEbEOz6dr9dNJG
9B1vY3xRyNlDU7DnMY5dNxBjDcQVZ3DKrglB7h+t0Z3aGH5/PqmW3o76R5f/
5kfNeluZncvyg7B5ZlB899sUPb4kKQD88pgya22aCe+ZXAjgbQdIhMNI2ZEoplXppXbZERCYBPzfGfDv
y9U0Axpj/k+waL8qWJPPZgSOcvfRl1iyayEX3vp7wuF37zA4Q/nn1NsBaL2d3ezhjxCCGDrIyIeGwYc/
BZvYctMqF+H2CT4QjoQ5Gl+TyjWV/dn2N4UU5hMOG2gNHnNp1ACsWVDrBnC2+jEfdoRa+d/
fGhHOevHwypZHSI8nE7+Bsbe/g60tfTjjvL9dPZXjh0WCsq12U3S0/
cizssix2lw57c8mxvE6yca9dPAljzAAOjLRsiVKqD9KyJT1qOLAr6uta4Kz4k0RkEbAI4IQTTkjNyLrB
nnZM1h0iGPA7gUH94VbqG1udna/2Ob/70dnONT6f0GFM0jpynXUr8PkEv09iHk82tRmdgWrrcO/
G0NbR+eYD+zWjA5/6w62uY8yKZN6ir+ssA5SKtWc+n7h26TiWDFqycRtjGF6U0xPDVkop1U+l+xo6t1R
FQsrRGHOvMWaCMWZCSUnf+Uvfnrp7YsuuhDVk8YFBd9clZWUkWZDul4RyJMnWtdmSrcuLXsPVkwvg/
5a1V501ok/
VovzuljnpLt1MoJRS6svSKVeP2dOO4XCYDkOnU2vdKTLb2XQk0On18deeV17KVdNOiikmHF8gtqeLyPZ

```
EId10LWybruPufTrlqpTqg/
rYlGu6B3QB4CNgGvAZ8CYw1xjzXrJr+lpA1xuOJSiKv7YoO4MDzW1dBpF9rZtBXxxTd6TruHuXBnRKqT
6ojwV0ab2GzhjTLiL/
DDwP+IEHOgvmBoov22Yq2bVdPdexvF5v6Ytj6o50HbdSSilvpXVAB2CM+SPwR6/
HoZRSSinllXTfFKGUUkopNeBpQKeUUkopleY0oFNKKaWUSnMa0CmllFJKpTkN6JRSSiml0pwGdEoppZR
SaU4DOqWUUkqpNJfWnSK+DBGpBz71ehxxhgD7vB6ER/
TeBya994FnoN436L3rvR+bE40xXbbLGXABXV8kIpu709ajP9J713sfaAbqvQ/
U+wa9d7331NApV6WUUkqpNKcBnVJKKaVUmtOArm+41+sBeEjvfWDSex94Bup9g977QJXSe9c1dEoppZR
SaU4zdEoppZRSaU4DOg+JSJmIvCwi74vIeyJytddjSiUR8YvINhFZ7/
VYUk1ECkVknYh8EPn3n+T1mFJBRK6JfK+/
KyKPiUiW12PqLSLygIjUici7UccGi8ifRGRH5GORl2PsLUnufVnk+327iPxORAq9HGNvcbv3qMeuFREj
IkO8GFtvS3bvInKliHwY+X//Nq/
G15uSfM+fISKvi8hbIrJZRM7szTFoQOetduAnxphTgYnAFSJS7vGYUulq4H2vB+GR5cBzxphTgNMZAO+
DiAwHrgImGGPGAn7gUm9H1asjBjgxcjX/dFKEu/
9T8BYY0wF8BFwU6oHlSIrSbx3RKQM+Bbw11QPKIVWEnfvIjIVmAlUGGPO+CvzSg3GlwkoS/
91vA242xpwB/Evk616jAZ2HjDF7jDFbI58fxvqlPtzbUaWGiIwAvgPc7/
VYUk1ECoBvAL8BMMaEjDEN3o4qZQJAtogEgBxgt8fj6TXGmFeBL+IOzwRWRT5fBXw3pYNKEbd7N8a8YI
xpj3z5OjAi5QNLgST/7gC3A9cD/
XbhepJ7vxy41RjTGjmnLuUDS4Ek926Agsjng+jln3ca0PURIjISGAe84e1IUuY/
sH64hb0eiAe+AtQDD0amnO8XkVyvB9Xbj DGfYf11/ldgD3DQGPOCt6NKuaHGmD1g/UEHlHo8Hq/
8AHjW60GkiojMAD4zxrzt9Vg8cBLwP0TkDRF5RUS+5vWAUujHwDIR2YX1s69Xs9Ia0PUBIpIHPAH82Bh
zyOvx9DYRmQ7UGWO2eD0WjwSA8cDdxphxQBP9d+rNEVkvNhMYBRwP5IrIfG9HpVJNRH6GtdzkUa/
HkgoikgP8DGvKbSAKAEVYy4auA/5bRMTbIaXM5cA1xpgy4BoiWVr7sMLcjlcGC
GiHwC/
BY4V0Qe8XZIKVUL1Bpj7GzsOqwAr7/7JrDTGFNvjGkDngQmeX4PdnwglXfVBw4Hzsl9NPyYjIQmA6MM8Mn
JpZo7H+iHk78jNvBLBVRIZ5OqrUqQWeNJZNWLMy/XJTiIuFWD/nAB4HdFNEfxX5K+U3wPvGmP/
r9XhSxRhzkzFmhDFmJNai+JeMMQMmUeDilV/
gpMFJGcyPf+NAbAZpA4T2P9kCfy8SkPx5JSInI+cAMwwxhzxOvxpIox5h1jTKkxZmTkZ14tMD7yc2Ag+
D1wLoCInAQE6ZmG9elgN3BO5PNzgR29+WKB3nxy1aWzgQXAOyLyVuTYT40xf/
RwTCo1rgQeFZEg8DFwicfj6XXGmDdEZB2wFWvKbRv9uIq8iDwGTAGGiEgt8AvgVuC/ArVhTTj/ECnD/
0bsR9p4k934TkAn8KTLj9roxpsqzQfYSt3s3xvTqVFtfkeTf/
QHggUg5jxCwsD9mZ5Pc+2XA8sgmsBZgUa+OoR+
+r0oppZRSA4pOuSqllFJKpTkN6JRSSiml0pwGdEoppZRSaU4DOqWUUkqpNKcBnVJKKaVUmtOATik14In
IxSJyx994zZ9FZEIPj+Ky/HjIyVflFLKldahU0qpPs4YsxuY4/
U4lFJ9l2bolFL9goiMFJEPRORaRORDR4Xk+KyAYR2SEiZ0b+2ygi2yIfT456iuNF5LnIubdFPe/
dIrJZRN4TkZuTvLbrOSLyG4cLCJbReQdETklcnywiPxeRLaLyOsiUhH1dKeLyEuRcVwWdW/vRj7/
qohsEpG3ItePtP6cn3USmVnjSgU0r1J38HLAcqgFOAucDXgWuBnwIfAN8wxozDapb+71HXngFcBJwGXCQi
ZZHjPzPGTIg85zMMWfdOGefMWY8cHdkHAA3A9uMMRRcT0UdX4F8B1gEvAvInJ83GtVAcuNMWcAE7Ba
SSmlBjgN6JRS/cnOSO/MMPAe8GKkzdA7wEhgEPB4B4J4Nt1O/DVqGtfNMYcNMa0YC0y/
EIR2YrVquyrQLnLXtFmQ8DGGNeAopFFxkxJE6Isqa9eSfSqJ2Ajt2ce0tkDGAFmQ8DGGNeAopFZFDksaeMMc3GmH3AyyQ29H4N4CCcaIxp7
sb7opTq5zSgU0r1J61Rn4ejvg5jvaG9BXjZGDMWuBDISnJtBxAQkVFYGb7zjBmVwF/iziHSt9fVNYZ1KeYM2h4KLLisbtBfcAMdJZ6xJ1iG1hPU6mNEt/KZf2ZTO9J7/
gHISnJtBxAQkVFYWbVpkWzaM3HX0I1z7Oft4Oi6ZXEZu4n7GH/
c+sKY1cAMoBl4XkTOdXkupdQAowGdUmogGQR8Fvn84m5cX4C1rv+giAwFvv2ljnN1Hq0fzKQc8FVJXn/x0pd0onZStD7
YTBHJEpFirGbfb0ZfKCJeBprilYpNcDpLlel1EByG7BKRP4X8FJXJxtj3haDG77
MOS5+DjwoItuBI8DC2YWX5TgCqjTG7RWRk1OMXAfNFpA3YC/
yiG6+nlOrnxFpeopRSSiml0pVOuSqllFJKpTkN6JRSSiml0pwGdEoppZRSaU4DOqWUUkqpNKcBnVJKKaVUmtOATimllFIqzWlAp5RSSimV5jSgU0oppZRKc/8NELVck/Ww8aYAAAAASUVORK5CYII=\n",
      "text/plain": [
       "<Figure size 720x360 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    }
   ],
   "source": [
    "#PLOT distances\n",
    "n_dev=4\n",
    "\n",
    "plt.figure(figsize=(10,5))\n",
    "sns.scatterplot(mahal_dis['mahalanobis'], mahal_dis.index)\n",
    "plot_filter_by_stdev(mahal_dis, 'mahalanobis', n_stdev=n_dev-1,
color='yellow') #normalize\n",
    "plot_filter_by_stdev(mahal_dis, 'mahalanobis', n_stdev=n_dev, color='red')
```

```
#delete\n",
    "plt.show()"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 28,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "mahalanobis Number of outliers:\t13 with 4 std\n",
      "mahalanobis Percentage of dataset:\t0.74%\n",
      "----------------------------------\n"
     ]
    }
   ],
   "source": [
    "#dealing with outliers\n",
    "\n",
    "m_std=mahal_dis[mahal_dis.columns[0]].std()\n",
    "m_mean=mahal_dis[mahal_dis.columns[0]].mean()\n",
    "\n",
    "n_dev=4\n",
    "outliers=mahal_dis[mahal_dis[mahal_dis.columns[0]]>=(m_mean+
(m_std*n_dev))]\n",
    "\n",
    "idx_mahalanobis4=outliers.index\n",
    "print('mahalanobis','Number of outliers:\\t{} with {}
std'.format(len(outliers), n_dev)) \n",
    "print('mahalanobis','Percentage of dataset:\\
t{0:.2%}'.format(len(outliers)/len(mahal_dis))) \n",
    "print('----------------------------------') \n",
    "\n",
    "outliers_dict=add_outliers_method('mahalanobis_4',idx_mahalanobis4,
outliers_dict)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 29,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "mahalanobis Number of outliers:\t18 with 3 std\n",
      "mahalanobis Percentage of dataset:\t1.03%\n",
      "----------------------------------\n"
     ]
    }
   ],
   "source": [
    "n_dev=3\n",
    "outliers=mahal_dis[mahal_dis[mahal_dis.columns[0]]>=(m_mean+
(m_std*n_dev))]\n",
    "\n",
    "idx_mahalanobis3=outliers.index\n",
    "print('mahalanobis','Number of outliers:\\t{} with {}
std'.format(len(outliers), n_dev)) \n",
    "print('mahalanobis','Percentage of dataset:\\
t{0:.2%}'.format(len(outliers)/len(mahal_dis))) \n",
    "print('--------------------------------') \n",
    "\n",
    "outliers_dict=add_outliers_method('mahalanobis_3',idx_mahalanobis3,
outliers_dict)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 30,
   "metadata": {},
   "outputs": [],
   "source": [
    "n_dev=4\n",
    "dec='del'\n",
    "dec_1=''\n",
    "\n",
    "out=mahal_dis[mahal_dis['mahalanobis']>=(m_mean+(m_std*(n_dev-1)))]\n",
    "inliers=mahal_dis[mahal_dis['mahalanobis']<(m_mean+(m_std*(n_dev-1)))]\n",
    "\n",
    "max_dist = max(inliers.mahalanobis)\n",
    "ind=inliers[inliers['mahalanobis'] == max_dist].index[0]\n",
    "\n",
    "for_delete=[]\n",
    "\n",
    "for i in out.index:\n",
    "    if out.mahalanobis[i]>=m_mean+(m_std*(n_dev)):\n",
    "        if dec=='del':\n",
    "            for_delete.append(i)\n",
    "        else:\n",
    "            ind=find_nearest(i,out.mahalanobis[i], inliers)\n",
    "            df.loc[i]=df.loc[ind]\n",
    "    else:\n",
    "        if dec_1=='del':\n",
    "            for_delete.append(i)\n",
    "        else:\n",
    "            df.loc[i]=df.loc[ind]\n",
    "\n",
    "df_after_mahal=df[~df.index.isin(for_delete)]            "
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 31,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "(1733, 26) (1746, 26)\n"
     ]
    }
   ],
   "source": [
    "print(df_after_mahal.shape, df.shape)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 32,
   "metadata": {},
   "outputs": [],
   "source": [
    "#print('Deleted Observations:
{0:.2%}'.format(1-df_after_mahal.shape[0]/x_train.shape[0]))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 33,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "(1733, 16)"
      ]
     },
     "execution_count": 33,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "### checking unispatial outliers after removing multidimensional space
outliers\n",
    "\n",
    "# Don't Apply to binary variables \n",
    "\n",
    "#non_binary = [x for x in df_numeric.columns.values if not
x.startswith(\"Acc\") and not x.startswith('Compl')]\n",
    "#print(non_binary)\n",
    "\n",
    "#exploring number of outliers\n",
    "out=df_after_mahal[non_binary]\n",
    "m=out.mean()\n",
    "s=out.std()\n",
    "out.shape"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 34,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3EAAAEmCAYAAADMYBkqAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3X+8ZXVd7/
HX2xnwBz8CZMARGAcT66ol5gSUWeRPoBKtKwEm+KOLdfFeu1qG3NQsMzN/
XC3TOyYB6iAgUlSgopWmITIITIQIQIghcBsRhZITDD/mp4sDn/rG+R7Zn9vkxs/eZmcV5PR+P/
Thrf9d3rfXZe3/POvtzvt/
1XakqJEmSJEn98LCtHYAkSZIkae5M4iRJkiSpR0ziJEmSJKlHTOIkIkSZIkqUdM4iRJkiSpR0ziJEmSJKl
HTOIkaUCS5UkqyeL2/Lwkx26B426R42mtSY5NctmbvOcJNdvQv0vJnnZpsa2UCRZl+TgMe5vzvzu/
3pn6WM+xnk9vRlO0/k+Qlo8YhSVubSZykXkvysiRfS3JvkvkIL/Lk+ur6pSqOnSG7
Re35Hn5loh3Jkn2TPIf7T38Tlv+uRnqPyLJye11r0/yms045jbz+rdls7WjQUnemuTkKds/r6o+Ni/
BSdIWZBInqbeSvA74C+APgB8DDgIeB5yfZPutHNviLXS/
zQEkWzVLlbVW1I7AL8LfAJ5NkDvvdUu/VXN0JvBxYAvpYAuwKvvAs4Z4bX/
6fAcmAZ8FzgxJn+MdA32+DnI0kLnkmcpF5F5Ksj/B/
VNWnquoHHVXU9cAgrd7JSaS5McnJ3tmcpF5KsjPwuB/
m3JL898PwVSa5McnuSTyd53MC6SnJ8kmuBa9J5d5JvJ8k6vyR5LIkT5nm9fzwOK138YtJ3tmO840k
```

```
pW4H8AK5PsALwZuLaqTm77eliSE5Ncm+SWJB9PsuvAuk+0HszvtBj+y0BMH03y/
iSfSnIP8MxZPpbJmB4AVtElQUvavn47yb+15clep/
+eZA1wFfCFtvkV7bP4jYE4Xp9kIsmNSY6Z5fD7tV7AO5KcPfBaP53kdwcrJvl6kl8dEv93q+rq9joCPA
DsTvePgmGOAf6kqr5TVZcDJwEvG1YxyROTfKHFd0uSVW3VRq8/yaOTnNte++1J/
jHJXgP7+mKSt7Sewrva57TbwPqXJflmO84JU+L4uSRfbp/7+iTvS7JdWzfs8yHJIUmubrG/
t703QyV5VJKPtLivAJ4+Zf3e7fOZaO37+Fa+T7pe9R8bqPuz7Xdo8WA7auv+Ot0w0TuTXJTk51v5rwKv
B17S3s+LB96zl7XlhyV5U3uPbk53rti5rXtCew+OafufGHwPkxyU5JJ23JuS/
OV074UkzQeTOEl99fPAI4BPDhZW1d3AeXQ9IjOqqpcCa4Ffq6odq+odM9VP8kLgRODX6ZKTfwdOm1Lth
cCBwJOA5wG/CDyRrnfqN4FbZ4urORC4mi55eAfw4WR4r1ZVnQlc3GI5DnjVwVwOrXAr/
S4tgbuAd438D6fwL2Ax4DXA58ZMruj6ZLlncCLphL4Ol6rI4BrgVumaHqC4CfBX6qxQfw5PZZnNWe7w0
8Engs8DvABya/aE/jmPZ4LF2S8Z5WfgotsW8xPp3uvf3UDK/
jCuD7dG3sg1V125A6S4A9gK8OFH8VePI0u/0z4J/pevj2Bt7fyoe9/ofR9aouo/
vHxA+A907Z39HAscCewA50nzdJfgr467Z+L7r34zED220AXtPeg2cAh/
Cj7QYGPp8kewCfAE5o26yja6PT+RNgH+DxwGEtRlpsi+ja3UUttucCf5Dk2VV1A7Ca7nds8DWeUVUbhh
znQuCngd1afGcmeXhV/RPd783H2vv59CHb/jZdmzgY+HG6z2Tq+/vzwBOA5wNvSbJfK/8r4C+raue2/
hMDr++KJEfM8N5I0shM4iT11e7ALdN8sVvf1o/bq4A/V
r6or23HfBuyfgd64tv62qvou3ZfunYCfBNK2m+sQx29W1Yeq6n66BGQp3Rf16RwPPIuuR2jtlJhPrKpv
VdX3gD8GjkjysKp6oKpOrqq7BtY9Pf2P3qSzq+qCVvf7s8R8QpLv0CWK7wT+qPVmTedtVXV7e6+m8z3g
ra2n9Ry6pOqJM9Q/paq+XlX3AG8CjmzJ79nAk5M8vtV7KfXfDxadoPAFX1ZLrP77eA/
5im2o7t5x0DZXe07Yb5Ad3Qy6VV9b2q+tIMx5+oqrNbz+CddO3tl6ZU+3BVXVNV9wJnAvu38hcDf19VX
2qf24kM9JxV1UVVdWFVbaiq64CVQ/Y9+Pn8KnBpi+cHdENMJ6aLna5H/K1t+2/
SJZSTDgJ2rqq3VdV9VbUG+DBwZFu/CjgKut4yun9+rGKIqvpI+33bQJe0TSZVc/
ES4J1V9Y2quovuPTq6HXPSH7fP6RLgCuCprfwHdL2+j26/
PxcOxPTkqjpjjjFI0mYxiZPUV7cAu2f49TpLmbkHaHM9DnhvG4L2HeA2ui/Gew3UunWFyoar+he7L6/
uBm5KsnKUXadC3B/Zzb1vccZq6VNVNdK/
5iimrJoeLTsb8NaCAPZIsSvKOJNcluRNY07YZTIBvYO7eXlW70PWcCHQC8J+1vrd7efg5/
M2ec3gYcDu7VE5BN0w+sW0SUMU3sdN9K+wH8MeGOSYb1rd7efg5/rzsBd0+zydcB2wOp0E/
JMOyNpkh2S/G2Ste3z+Rc2/ufEtweWB9+bx/
KjbfFuuvY6ue+fTPLP6YbS3knXczZ134Pv5dT9PUDXGzedpWz8WUx6HLBssk22/dvl6HuwpPBN4ZpI9gV
8GvldVQ5PodENtr0pyB3A7XW/
kXP+B89gpcX0T2J42f19O19t+dZKvJDJDlsjeUpLEwiZPUVxfQ9coM/cQ9coMDrui9SIdCnyuFd0DPGq
gyuCQMugSmrm6AXhVVe0y8HjkklC+YP7K/qnpfG8r1ZLoepD/
YhOONwzrguVNifkT7cnoM3VC3Z9Fd7zXZgzE4bHNT3p9ug85lwJfphnJOW3WU40xjn4HlZXRtZDJ5OYW
u9+V5wO1VddEm7Hd7uqGBP6KqJuh6pJ46UPxUNk6mJ+uvr6rfrqqldL2nK5Psy/DX/
3pgX+CANmzvWZsQ73oG3oskO9INOZz0f+mGzz6h7ftNbHyN22BMU/f3MLrhoNP5Nht/
FpNuAK6Z0iZ3qqpfgx9e5/
kvdL2JR7PxkOXJGH6Zbvjob9ANV96VLqmefB2ztakb6RLKwRjvY+YeRlqMV1fVkXRDad8FnJVuUiFJ2i
JM4iT1UlXdQXet1l+1CRe2Szc9+5l0ictkL8uldLM37pbkMcDvTdnVTQz5cj6NDwJvmOyRSfJjSV48Xe
U2IcOB6SaMuIduaOD909WfJx8E3pZkWYtpjyQvaOt2oktybqVLdP9sXAdN8iS664mGJjNTtd62W5n7Zz
GdY1ov0w507eOMqpr8Mv9Ful6wv2CGXrh0k348o7WpRyY5kS4Bmi7pO5Wup26X9rpfAZw8zb6PyIOTk3
yHLtG4f5rXvxNd78/
tSR5Nl2jN1ZnA4e21PBx4Kz+a1OxEN+zznnST2Uy9Hm6qf6IbOnx46/3+Xwz0WA1xBt0snbu0tvfqgXU
XAPcleV262zMsSvJT7TrFSavorqP7daYZStlewwa6Hujt6IYDDw4FvglYPt21pHTJ4WvT3RtyJ7r2f9o
sQ4ABSPLSJLu3unfQvbezbidJ42ISJ6m32kQkJ9Jdf3Un3SQHNwDPHrh+6yN0E01cD3wGOH3Kbv4c+KM
2rOv3Zzne2XQJwMfbELTL6Xr9prMz3cQUt9MN1bq1xbolvZtu8o7PJbmL7tqun23r/
o6uN+JGumRruuu+5urEdDMBTk4u8yG6a53m6s3AqvZZ/
PqstYf7CPBRup6jRQwk7S2Z+wjwFGCme4U9EvgA3ef2LbqJNw6bHFqX7obTgxOZvJGu3d1A14P051X12
Wn2fSBwUbrZPj8JHD9wDePU1/9uuh7SW+k+mznf5Lr1hL6GLpn6Fl3P2ODQwNfRJUl30fXKTf29mLq/
m+iuTfvLFs8yut+36byZ7jO4vsV96sC+NtD1AB/Q1t/
SYhgckvr3dMMV11bVdP8IOBf4LHBN28+d7ZiTTqfrQb0tyVeGbP+hVuffgevo3ou53uPvMODK9jv1TuA
3q+o+gHQzeP7mHPcjSZslD/
6DUpKkh7YkrwCOqaqDt3YskrQnviJEkLQpJHAf+dbiZGSZJ6yyROkjQnbZjY3UMM2/
QjdhxVpmGTooSdK2zuGUkiRJktQj9sRJkiRJUo+YxEmSJEmSj5jESZIkSVKPmMRJkiRJUo+YxEmSJElSj5jESZIkSVKPmMRJkiRJUo+YxEmSJElSj5jESZIkSVKPmMRJ
kiRJUo+YxEmSJElSj5jESZIkSVKPmMRJkiRJUo8snq1Ckn2AU4HHAA8AK6vqvUl2A04HlgPXA0dU1e1J
ArwXOAy4F3hZVV0y0zF23333Wr58+VxOQ5IkSZJ6YdmyZZx77rn8zM/8DIsWLeLBBx/kkksuYcWKFXzj
G99g11135XWvex0nnXQSt99+O29/+9s5/vjjWbx4Mffddx8HHnggN910E2eddRYrV65k1apVzzbvPZ+4
JfhGUx5aoGoGm+Tpm3c1M3sb7vWmeF7xdLVqkgqbh4Oh9p3d0L6yycQaTaPQ4PUsg7DddN0+4b8uLX/ctc
JbnvgadSmzhcJx0g33brFgJ6+xJ5pLJjYWm1XbnVgCpzGr8zB/qd+yiq+Ph+jBumqcSPXbIxoEgOs5jK
7q3XgYSAaIwDm1m1Hj4CRe7GeUCmdZqdQgpFJTXOcR4Cd+4XBc1tU5oNQpKjlXM1p4C+IJ/
0U2XBQkMzfB0YP
6t4AHokaomqcodDPo1n/Jf3h+J0Cmr2NHwLTgrbvCVBE1BbV4H0kAp9WsEatPB1z9ZGm/rHDv3eEh6HB7BtbUZ7Chu/aKP98Hb9d2m8uHyMmDyf8//K29+gLAh0zu8aUf/
OB4lkmnSDj11APiHmIFF7J7Kh/Ou9SymgHRRJOsqpaPDaw/
6H3rDeg7TXvaSkmX1nBiJSsERE+9YuY4pjU1qFd+F0yB1iXTW
RWAQ6jqOLJV9dP9jy0g0HYMxKcx9Mq29Ry2jSRLy6arpm6J4x4HObiyEZqF30tl5lwkkwPDMi+JWvvTLpu
2JYB3tWS3J5AvQn+o2dAgcaigtjT3Rs6GSRNJ0hbHkMvZZ6STRaTeYpbySMiMFKRJ0g+dVDyGRJUKltSbM
60tGz8cf+jVbWWXunlBzVEM2qUasmiX6H2fnc07vGXRPyYBA4OOCeGYB6
4h21bXjpcbE/LxpOLyGG6uRIXvpdXYOBs/kzYFvHOE3Ynf8PYdM/FSjT0UHgHk4PnLcC+6a7yMHYHt4/
CUp5Ez3NAWzkRZ0ZQ1Zwg/e/yzkKXSJ0q22mDNpmXSVxpo8LXM0GvuPb9s8qS6oltiiNQiOZc1mvLbL8
Eb6qu/5r7WJw6ZBBcc9PBB5ghHTpwxV7mF90XVoVyPB2/ZHwZR4WQJuu3bTcoTOmbs09ixBO4ZxyQhHP
T+lkwAz0d5nQwVRrJHqHkw9jv46dsQq9bO9Sw7RoH2FqmaoBgvqVsSwmhscMeR6UiUiBE9cx9Tv31B7/
G8hKYeh80fvLtGsQkYVmQz0SNtpTvJQZhoSmW/b56Okr+7QyITw/7k9eB/2HbULnnzT2b0/
pT0pCy5VK+rY2+vqNUnn3NXIQ0a7/KNoS8qvLTdY8pwY2dJsZ3IuxJlRO+ElQ16vqKCaInT5Tv6SoqUx
```

Xrt3aIczq6AOXbe0QJG0h9sRJkiRJUo+YxEmSJElSj5jESZIkSVKPmMRJkiRJUo+YxEmSJElSj5jESZI
kSVKPmMRJkiRJUo+YxEmSJElSj5jESZIkSVKPmMRJkiRJUo+YxEmSJElSj5jESZIkSVKPmMRJkiRJUo+
YxEmSJElSj5jESZIkSVKPzJrEJTkpyc1JLh8oOz3Jpe1xfZJLW/
nyJN8dWPfB+QxekiRJkhaaxXOoczLw18CpkwVV9ZuTy0neBdwxUP/aqtp/
XAFKkiRJkh40axJXVV9IsnzYuiQBjgCeNd6wJEmSJEnDjHpN3DOBm6rqmoGyfZP8Z5LPJ3nmdBsmOS7J
6iSrJyYmRgxDkiRJkhaGUZO4o4DTBp6vB5ZV1dOA1wKrkuw8bMOqWllVK6pqxZIlS0YMQ5IkSZIWhs1O
4pIsBn4dOH2yrKq+X1W3tuWLgWuBJ44apCRJkiSpM0pP3HOAq6pq3WRBkiVJFrXlxwP7AdeNFqIkSZIk
adJcbjFwGnAB8BNJ1iV5ZVt1JD86lBLgF4HLknwV+ATwO1V12zgDliRJkqSFbC6zUx41TfnLhpSdBZw1
eliSJEmSpGFGndhEkiRJkrQFmcRJkiRJUo+YxEmSJElSj5jESZIkSVKPmMRJkiRJUo/
MOjulJElSn6y6cO3WDkGS5pU9cZIkSZLUIyZxkiRJktQjJnGSJEmS1CMmcZIkSZLUIyZxkiRJktQjJnG
SJEmS1CMmcZIkSZLUIyZxkiRJktQjJnGSJEmS1CMmcZIkSZLUIyZxkiRJktQjJnGSJEmS1COzJnFJTkp
yc5LLB8r+OMm3klzaHocNrHtDkjjVJrk7y/PkKXJIkSZIWorn0xJ0MHDKk/
D1VtX97nAuQ5EnAkcCT2zZ/k2TRuIKVJEmSpIVu1iSuqr4A3DbH/
R0OfLyqvl9V3wDWAAeMEJ8kSZIkacAo18S9OsllbbjlrqlsL+CGgTrrWtlGkhyXZHWS1RMTEyOEIUmSJ
EkLx+YmcR8AfhzYH1gPvKuVZ0jdGraDqlpZVSuqasWSJUs2MwxJkiRJWlg2K4mrqpuq6v6qegD4EA8Om
VwH7DNQdW/
gxtFClCRJkiRN2qwkLsnSgacvAiZnrjwHODLJw5PsC+wHfGW0ECVJkiRJkxbPViHJacDBwO5J1gFvBg5
Osj/
dUMnrgVcBVNUVSc4Avg5sAI6vqvvnJ3RJkiRJWnhmTeKq6qghxR+eof6fAX82SlCSJEmSpOFGmZ1SkiR
JkrSFmcRJkiRJUo+YxEmSJElSj5jESZIkSVKPmMRJkiRJUo+YxEmSJElSj8x6iwFJkqT5tOrCtVs7BEn
qFZM4SZKkh4D5SIaPPnDZ2PcpaXQOp5QkSZKkHjGJkyRJkqQeMYmTJEmSpB4xiZMkSZKkHjGJkyRJkqQ
eMYmTJEmSpB4xiZMkSZKkHjGJkyRJkqQeMYmTJEmSpB4xiZMkSZKkHpk1iUtyUpKbk1w+UPaXSa5Kclm
Ss5Ps0sqXJ/lukkvb44PzGbwkSZIkLTRz6Yk7GThkStn5wFOq6qeB/
we8YWDdtVW1f3v8znjClCRJkiTBHJK4qvoCcNuUss9U9U1Yb29MvA3vMQmyRJkiRpinFcE/cK4LyB5/
sm+c8kn0/
yzOk2SnJcktVJVk9MTIwhDEmSJEl66BspiUvyv4ENwMda0XpgWVU9DXgtsCrJzsO2raqVVbWiqlYsWbJ
klDAkSZIkacHY7CQuybHArwIvqaoCqKrvV9Wtbfli4FrgieMIVJIkSZK0mUlckkOAPwReUFX3DpQvSbK
oLT8e2A+4bhyBSpIkSZJg8WwVkpwGHAzsnmQd8Ga62SgfDpyfBODLbSbKXwT+JMkG4H7gd6rqtqE7liR
JkiRtslmTuKo6akjxh6epexZw1qhBSZIkSZKGG8fslJIkSZKkLcQkTpIkSZJ6xCROkiRJknpk1mviJEn
SxlZduHbs+zz6wHHnjHhJkiRJ6hGTOEmSJEnqEZM4SZIkSeoRkzhJkiRJ6hGTOEmSJEnqEZM
4SZIkSeoRkzhJkiRJ6hGTOEmSJEnqEZM4SZIkSeoRkzhJkiRJ6hGTOEmSJEnqkcVbOwBJktRZdeHase7
v6AOXjXV/
kqRtg0mcJOkhb9zJkSRJW9OchlMmOSnJzUkuHyjbLcn5Sa5pP3dt5UnyviRrklyW5GfmK3hJkiRJWmjm
ek3cycAhU8pOAD5XVfsBn2vPAZ4H7NcexwEfGD1MSJEmSJAnmmMRV1ReA26YUHw6c0pZPAV44UP5HUH5qdb4M
7JJk6TiClSRJkqSFbpTZKfesqvUA7ecerXwv4IaBeutamSRJkiRpRPNxi4EMKauNKiXHJVmdZPXExMQ8
hCFJkiRJDz2jJHE3TQ6TbD9vbuXrgH0G6u0N3Dh146paWVUrqmrFkiVLRghDkiRJkhaOUZK4c4Bj2/K
xwD8MlL+0zVL5dODOyWGXkiRJkqTRLGp5pKg+Ng4tf/ewqgZ8TRMTm0HbfUqmrVuT3qaw5bYnBA4k6Vap
x0zgkKGwt4ijJFKvHPMw/cfJAV7rEN+jbTbZXpVAeV9Gr5+lgoarHMZAKF9TK+vaNRhwRo+iuBqIwQXx
DhAbADyQkKTVE8xOCJGRYVlyR9MXZk8+U9M7DHm4NkpJJKOBs0RhJ1YHbiOM0J/0v0IdoZBwl7LwKq+
nuXGcvVBaV8Rkt8+rzNwfnhXQbhUmEgWMW5uTZtTJh0bQKq6wcUkVf+OIWmz4MpHJ6OTqkKgfnYlNJUpo
Pg==

```
dAos1N+EciQVedufjiSJEmSpJmMZXZKSZIkSdKWYRInSZIkST1iEidJkiRJPWISJ0mSJEk9MvLNviVJ/
THKDWclSdK2wZ44SZIkSeoRkzhJkiRJ6hGTOEmSJEnqEZM4SZIkSeoRkzhJkiRJ6hGTOEmSJEnqEZM4S
ZIkSeoR7xMnSZIk9cx5X/
v22PeZR459l5on9sRJkiRJUo+YxEmSJElSj5jESZIkSVKPmMRJkiRJUo+YxEmSJElSj8xbEpfkkCRXJ1
mT5IT5Oo4kSZIkLSTzcouBJIuA9wPPBdYBFyU5p6q+Ph/
Hk6SHqlUXrt3aIUiSpG3MfN0n7gBgTVVdB5Dk48DhQK+SuPn48nT0gcv
Gvk9JkiRJC8d8JXF7ATcMPF8HHDhYIclwHHt6d1Jrp6nWEaxO3DLOHf4knHuTH0y9rakBcl2pHGwHWl
cbEsPSW/
c0ge0HT3ocXOtOF9JXIaU1Y88qVoJrJyn449FktVVtWJrx6H+sy1pHGxHGgfbkcbFtqRxsB1tnvma2GQ
dsM/
A872BG+fpWJIkSZK0YMxXEncRsF+SfZNsDxwJnDNPx5IkSZKkBWNehlNW1YYkrwY+DSwCTqqqK+bjWPN
smx7uqV6xLWkcbEcaB9uRxsW2pHGwHW2GVNXstSRJkiRJ24R5u9m3JEmSJGn8TOIkSZIkqUcWXBKX5KQ
kNye5fKDsqUkuSPK1JP+YZOeBdW9IsibJ1UmeP1B+SCtbk+SELf06tHVtSjtK8twkF7fyi5M8a2Cbp7f
yNUnel2TY7Tn0ELap56S2flmSu5P8/kCZ56QFbDP+tv10W3dFW/
+IVu45aQHbxL9t2yU5pZVfmeQNA9t4PlrAkuyT5F9bu7giyWta+W5Jzk9yTfu5aytPO9+sSXJZkp8Z2N
exrf41SY7dWq9pm1RVC+oB/CLwM8DlA2UXAb/Ull8B/
GlbfhLwVeDhwL7AtXQTtSxqy48Htm91nrS1X5uPbbYdPQ14bFt+CvCtgW2W2+Avwc3b0VzwMO3dqvzce22
5YG1p8FnAn8fnvuOWmBPzbxnLQYuAx4anv+aGBRW/
actIAfm9iOjgY+3pYfBVwPLPd85ANYCvxMW94J+H/tO/
U7gBNa+QnAX7Tlw9r9r5JsBBwIWtfDfguvZz17a869Z+fdvKY8H1xFXVF4DbphT/
BPCFtnw+8Btt+XC6E9T3q+obwBrggPZYU1XVdV9wMdbXS0Qm9KOquo/
q2ryPolXAI9I8vAkS4Gdq+qC6s5WpwIvnP/
otS3ZxHMSSV5I94dscMZfz0kL3Ca2o+cBl1XVV9u2t1bVD9W
1XdTtf+DtmCL2WbtuCSuGlcDrygLb+YB29Uvhdww0C9da1sunItbNO1o0G/
AfxnVX2frs2sG1hnO9KkoW0pyQ7AHwJvmVLfc5KGme6c9ESgknxtvJgoAAAFe0lEQVQ6ySVJXt/
KPSdpmOna0SeAe4D1wFrgnVV1G56PNCDJcroRSRcCe1bVeugSPWCPVs3v25vBJK7zCuD4JBfTdfve18q
HXQtQM5RrYZuuHQGQ5MnAXwCvmiwasg/bkWD6tvQW4D1VdfeUQW4D1VdfeU+rYlDTNdO1oM/
ALwkvbzRUmeje1Iw03Xjg4A7gceS3fJyeuSPB7bB7bkZokO9IN//
+9qrpzpqpDyvy+PYt5udl331TVVXTDS0jyROBX2qp1/
Ghvyt7A5LC46cq1QM3QjkiyN3A2cExVuK19G1nUm2IwEztqUDgf+a5B3ALsADSb4HXIznJE0xy9+2z
1fVLW3duXTXTX0Uz0maYoZ2dBTwz1X1A+DmJF8CVtD9ku35SAN3duXTXQX0Uz0maYoZ2dDTwqar6AXBzki8BK+h6TjwfLXBJtqNL4D5WVZ9sxTclWVpV69tQyJta+TrgcQOb7w3c2Ixb+
XTft9cBB08p/
7f5jLtP7IkDkuzRzJRfj4M+CPgg23VOcCR7fqSfYH96G78fBGwX5J9k2wPHNnqaoGbri0l2QX4FNw3T
CGqvrSZP02lOCuJAe1GeCxNAf5hiweubc50bnvPcq9K70F6+UYB65AP50gJVjGhbeWbhjy+yYNvcYMgNG+KBBlVb17YNU5wOQ+Ak8/
y4PnlHOCY56o56NPA89LsByBy9zBdGEDfZyuQHbqnLsAqJNGqghk+9QkXzDqKorkpwBfB3
YABxfVfe3/byariEtAk6qqivQgrEp7Qh4NfAE4I1J3tjKnldVNwO/
C5xMd1H4ee2hBWIT29JMzsdzkmNsdS/1IpUVy8QVJTb1yQNqQXZ3jrqTzb0Z
9zqeU5awDbxfPT+tnw53bC3v6uqy9p+PB8tbM8AXgp8LcklrexE4O3AmUmOA9YCL2nrzgUOo5tc517g5QBVdVuSt9KdZAH+pKpu2yKvQNuK6drS0cAT6Ca9AvjjNhHBeABGyUl5Z2L3l6Ej
DlAVd2W5E/
pzlUAf9KuuuxSQbgIqSZIkSVIfOJxSkiRJknrEJE6SJEmSesQkTpIkSZJ6xCROkiRJknrEJE6SJEmSesQ
kTpIkSZJ6xCROkrRNazA/
WKSQwfKjkjyqXk63eTfCPJpUmd0GpP5FvbeMxQD+IkaWsaZBKFmY9qN2GEZvPAtl3dpfFxbvy9WrSeI1xXHx9smJH8+pFf2JjCA8UzbvSSS35hHU2HT8ZMEXzU5ByNdqpEZ2Ejq/
wKQrS3+r1S3JnzLyT+uuE5c4CWYuvXmu7+CPpBmU0vh5c9ZTOCBBGVYhV/
9PLvy7yBVkfpgSS0pyA3b35LgqjUSKOfvMyWFF+c8RrHbl0qlLhOmPgetWq6ofQw/
QEwk6G4aLt3NJFTaH+gKsqOkdvIgSkUfiL3CrcTq/
iFIMBS6d7Hdn9zTeFfJLuj8gUJDyCOCrskq4ehsTKgQUqfKvAEWN2qgaOYCeMa7WnxFm5Hw4SVhuRNxs6+
T2oZSh+UbR0k4ZrpHhBS7BwzPM8cFgJFWxxp85ExaHD92QKOU7+hCiLtrGebaNBKWAjPQT+WOxUYqrOfN
Kbg2jqPN8ltH43CRBMyDIJEDa1MuC9AQZLL8FbLxPUS2CHuPLoEG7dX+gnpvyZsKXZ7Pn9lX8Ao9pf5+Y9
jbtmftMhX5PZBwByBtSfxEuiShNCr9VZfWiVb0IV7QduGQzSBYNSTNgXPtdKQvX1o7YdmI6Ps+SSr+cz
v99tMcvzvV9XLmLcUsIh9BQ
vN3WbVmPwLb7d/jf0+mqLOlvbhZMdmgVJWVf0lybUm0T4qmZ1ohuPR4Wb1fEBJoJ1lu1+qJc5mq+yVn/
K9ZbPn0rTq4MvcZFm6M/BWTtIBS+3l6Hr2f/Zdcc9U3m6fVW4p2r4tLCAm+KwIq4Gb89+/vHRe6wGmN9
e+xkuAJ8mHUWtfQwU8SQO1UrzGQAaVZn0wGY9dwDMNA4TLyW5zXW8X/Fa5Pp+pQWmV1+FG8fVT2p7ZPHH
bj7ovgR6fxaMzgOcdqvOrZvWUZ9MwSDYF7yKDKdX48X8t+ThxnUO71Gy8zHIh0uGBQwH7zuoIk8u/d/
X1Kv6Xtu/VRL0CK4gzvqO0qFzYYl8GqHu4ZqB9vyqQSFxXo/ACgvb2Tp0YGs5BTIZ1S/K/MBnc3tX6ghy/
5KZ7oj3dlBe03t2MBK6bb9S7Pzq8pAvw4ldmZlY1tEA7pdiprWv3+sd/j2GDIqU0qaawvt9V7TJ5hEbLK
lt1Hk4wyDmndJ5HAnwq+D49qGdSN1OAV8hYxomxxAZYb6sZxeewdLyqb2ZXE7wuzVnoxF6v8pjgxkfxM
```

```
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XucXVV99/
HPVyIgKgImKBAwaEEftFZpFNRerFQFtcb20RZBxUuL92q9U+1jfVlbL32qtbZaFBStqBStUOuNotXeiA
YUAUHJAwKRAEHuYlHg9/yx18BxciaTzJmZk53zeb9e85pz1l5773XWJPPMd9ba+6SqkCRJkiRt/
e4y7gZIkiRJkjaPAU6SJEmSesIAJ0mSJEk9YYYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCStIWSrEhSS
Za0519IctQinHd8n8n+dMk/zAP5/xAkj8zAkj8ZYf+bktx/
1HZI0tbOACdpm5fkuUnOSXJzkSiuSvD/JLluw/w+S/
OZM26vqsKo6YX5a5gUSX6jjYXrkvwoyT8aO7NRzjPba5gSVrjzvUb7N+kRzRwK2vYjQ3FsnxmSaSWmp
J3WSyX5VL0Z/IGTLdOYvmy3Tw1tfZoW+Rkq7zMs6Ue8a7aM+LBrcCwS+yLQGOhyCdNptDKM0VujQxhK
Sr0jU6ikL98DOGPNshavN/
AqtbMTUxiKDc/0HmPO3v/ec+mcyDCnGZo5pU5N8+U4YNV6j7l2vPCAKRqJL5IDxVaeXeOOqsHhtxVw/
3HexQQhNkBYsUB9d4eD7YyuqvFWZONZzRWE8qMpCyz5ApCDgnYHrBoGr8Fp8rKzrJeUK8Gp0OXi97e
VrE8Re+cmGnxRCgrMD77KT6nUG1Jo00wvXSEeltLHi+jw1Ok9FvYYOs5vMxYpHSKEtzEUgm/jGVUiu3
bVHcXVT32KmXtXnVVi8R1KTP8DWbeRfqWdV+FEjUlfTZW4fDNQ8dYGKUh6YM6RrpONN0n+LjOTc2FPr
cy3V8V8NcpfJrNSy5Ff4VZ6QL7rs+QQ6s4jJXMY9ZZ8bV2nVCJdxoAjZAI3cTIdbvVUWc7EKTCFtEiW
F9CjmrrLNdj+GPPaPMD5BfEQEV5qcdCYSp6CmXR2oSQgvxZOnE2ZSn8zKfoGnDFg+q7BqU/97ehwaq6q
L6udUWAg8HA5Hj6IuoO3r5GpWSCx/2zjvJAlRqsKqfq5LYmZFMAuoNbYVO8VgVaAPcAODUOZb7FDgoq
rVrm7IVrX07BTHAbZoQQBbkEnfIhHnORMc4Y5ERKRLE7ptnuIjwfNEZ+m9OGeq6Jfd/Cmk6ZWnEw85HT
Q+bkNDCbQqPc8PFNENVCX4/RGEhLQmH5NM8WBFOe+1BDvgc8Z+VlfDXf1aM+ZQeGoiKbFJagJAFS06C
WqBn0yXbjahj+6o6iMY6uPDR3cxMdfQsGXSo3sXhLRsUy7kTqVO1rnFPg5qAf9WMV9CnZPpY6htPHtxX
+ZKHlEEqBSyqqo84nETfOUn5x0pnsfdHyzsZ02VLwnGWiMTV3pJhNugoUGF5FDBzYcP9Ft8fNF1X9S/
g2T3W3Ekc8mv3dVDgu7pcBm5sM+pNn7cOl/sJpTGjOTPoYQx8b67P9Lpx3dMBiaeqJ/oUBdCTjZQmpR
cjwsmcd5Gh7ggnUv9zrcHgiV35JOeOXaGRM4MrOQyXydkyZTQaj/
dWo3NM5sOFxkNiatKgbb0oPlm6zwLtN1GWnDgFDPRTuHR/bBQjKC0P5m6mtbGWqyfDeZbMvCu7N/
BIFjuXi6BlW4FvLjYO7/6Xe4ux50qW3ZtAN5NxJc9XRaNUU9GXSNmldDQ6CezhjcbW0YDcpoZ2QrL/
l67ylzGMT1/2iBqdgS5EwrvHgrBZpAHI/qUpmusaAgJy9FJoW1sNdU5iJNCuDgnE5vPK/
Wj+9QsDJNanHXxnGK2yRzNQBhsrJHsrkTg8ayyLEeOxpDeUmJUkKxjhW0Tr1bCnNuDa63KCd4m+x4Xi/
UMEfa/C2Tkq7NstWbl6W/rnL+gCsGNYnFUIb2Jaeo/
mgM1LQXeKPzO8ZfitNN3ISMvhe5gpxNPjyl0rsGt/3fVhbC3LGFX5ecmrEE/WjtX/
WjMnxEjrpy0Ph00evu7QN/gyaU0J7Be9bzfrtr/6/EsENo/rIKB6wO/
cE0s/NWwPHw8ujqwPZpCVrIzZPzQlvOLWxBUIQRd5LTqSAB3qe3AN3G0rQ+WfQqyUZ3A2j9tVzqvdwJ
gA5K5MQTfJYkwAeXmUKbYyGnwZ+Eta7PKZlz6LKyGdoz9uOeevhycS2J1zWcaAoS2yfZvxRlkWKgJC8
dqAAkR4fFSPSJvFfH0l+NaqKV9pP3f8cdkkpqDWQhUYc2mrZ9hmCXKx5rhS4gJcUSyxf6y3oUthYSpcv
i8IXc1n5NFu0vKM/tIqC+G02bWjgNSm3AHu9hJwxaIJZp/TchYwZ8D4JZ5MR2Ek/
/Ns67hQMz7LSXTvVf4qBMhXvcpRaiozAlMx8fedaIqHMzQrj/pQtGh1yzpd9Kv7EQ/1rk/m8HJwEAaG/
xXtaw/gbaKvOgfNt9rRZ0qXE/jNFfT/SeEK0Q1HGjM/JNsuK/aRK12nZbdwOqE1ZSXmoQNVyXcg8IRQ
PoXiOVqJIQgTmbkgWU1nuDOgthCzcBuYv/
UtVp6M4A/LKoOvqd4GuDRPHjK7p4B4smBWcDD4qrDwqXiYXRGOM63qEbXVlIiIgsf8h2rxV/ZBV6Lz3
OmGvYsnYQqV7zVpbDFvcNrKSTE9M53GspOpdN4Pq8FJB/GfQJf09n/
f9mxKq9+bi4FuETRBR2ZfaebXnfjLuwKaZVjQkcA/1xwj0ADwtP1ZbeK6bC0jGAd9MaNXh1bW/
s0qXWWhGgzkkUyWVhnKKLP3VmMytuZM9KwJ9mpX49o5ztqvgW+lNIUp1bRhIVBIxGAgbrk9t8whIM3h
oYbAYUzdMqlKUB2k2fYh1/
HL8lf1xHsCK9d5N1f81wS2cn6IHhQFM3HLpmdlqJoXRy1kjzmwuXz7WWbNW5aXQ7nqEsDcq51sXOs5j
JTUGwq4F7fkqBYEupYtpwUAjxNpYz0Jzsd2VfM3UH0nqZi/FZI4WiSLGrUBt+y/
Wvs1mHwI9XTZNDYZeJeLGKxA0w54UY7lW90bVSU4SMOqPu3U2sYEL2oUcfGEzWXTmsm3HOqMYrOk9QU
6o+Y9Aq4udNBXJaQr8ewdRw4COh7N7Sr/
H8xIcc5/eB6R72j8ZXpqOI9B9KdAZZS0Ue+bwbeXXUUmzhpMlx79Wwf9GLWGu7KqiBsPxbhRDDE4fm
I8SvIq49eZPYk/FQhAeVkb/kbBj1qufdfSwqJLnLvvfUJ5/
QA4AmsDrkmr4+mBzRj8jfMGVmo8qQUZCDeKBfm/
WKEY1gukdtWQUs/
SjvBmzv2nXc8XKP53HdenwjvOTqL1Dnv01CPNm9f7dI3CMEGbCyrxEk/NvA/ZCEapvuP8j/
mQWSRZX0BLbFpsxN+xa0FNFMBLsIFP3sO43gYGfzWSbBKi56Ps1wAMyc4NYeXLwzGX8Bam/
E0NB8sDLcUvu5iarZU3SOVu1ZCk1AR26FnwQt/
w48qYQsiUBdLPiYbdUY+CQKRlS3LAaxbiWqhbXy6S3zHFR1J8AiTZNQwa9+h2HUOX38CoAk6N9jD/
4BvpmRQhlzb9Nu8YyRx5JIbGBGgbgrcbn0l3yunuWpKmFxl+MOEDPPgAnuduzkPD2kp0e/
F81iJxMnymEAlVh1nhFG8jTPnKJ2B1mbXAUhEepKKqA1vu+U4m0PCD+1gtgJtI3hipcomnqP+BC8oVf
7vnIGrE9dXPAcKGUF5jnSY/
eWbW+PTZMsqsx7nGYnCy6T9YWlsKXukZfIeRr2DqdfUCbXFQ0WamoCV8UwFYcHMj0BMLlLPcAO7+xVz+
a97Tuaxiz2wN8VHFxCkJCoWWwx/
```

```
CLqbgFxDF6zuCMxVdRndDWb+mC5EXkY3ozz4+8aJdDdK+ccZrk+ltedudLNpZ9D9zAb9NfD0dHeRfO+Q
/V9O9weRi4D/
aOc8fpbXRWvnq+lmd6+hu+7uJXDHTUxu8iYmksYtVVuyMkiSpK1TkuPp7vb4pnG3RZKkheIHeEqSeq8t
jf0d7rzLpSRJ2ySXUEqSei3JW+mWqr6rqi4ed3skSVpILqGUJEmSpJ5wBk6SJEmSesIAJ0mSJEk9YYCT
JEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9
YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPXEknE3AGDp0qW1YsWK
cTdDkqQJ9WPgtnE3QjP48U9/
wm11+7ibIW0ztstdufv2S8fdjI2ceeaZV1fVstnqbRUBbsWKFaxZs2bczZAkaUJ9EZj1dwaNyRfX/
hfLdtp13M2Qthkbbv4Bh/
7Cm8bdjI0kuWRz6rmEUpIkSZJ6wgAnSZIkST0xa4BLcnySq5KcO6385Um+l+S8JO8cKD8myd27YkL0W
hJkiRJmkSbcw3cR4D3AR+dKkjyG8Aq4KFVdUuS3Vv5AcDhwIOBPYF/TbJ/
VXlltCRJkiSNaNYZuKr6OnDNtOIXA2+vqltanata+Srgk1V1S1VdDKwFHjmP7ZUkSZKkiTXXa+D2B341
yeokX0vyiFa+F3DZQL11rWwjSY5OsibJmg0bNsyxGZIkSZI0OeYa4JYAuwIHA68FTkoSIEPq1rADVNWx
VbWyqlYuW+atiyVJkiRpNnMNcOuAz1TnG8DtwNvwNvvdAveXA5aM1UZIkSZIEcw9wnwUeB5Bkf2B74Grg
VODwJDsk2RfYD/jGfDRUkiRJkibdrHehTPIJ4LHA0iTrgDcDxwPHt48W+ClwVFUVcF6Sk4DvArcCL/
UOlNLW6cTVly7KeY44aJ9FOY8kSdIkmDXAVdUzZ9j0rBnqvw142yiNkiRJkiRtbK5LKCVJkiRJi8wAJ0
mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BOzfoyApMX7zDTwc9MkSZI0M2fgJEmSJK
knnIGTtjKLOdsnSZKkfnEGTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqSe8C6Ukba
UW646kfvagJEn94QycJEmSJPWEM3CSNOGc6ZMkqT9mnYFLcnySq5KcO2Tba5JUkqXteZK8N8naJN9Jcu
BCNFqSJEmSJtHmLKH8CHDo9MIkewOPBwb/dHsYsF/
7Ohp4/+hNlCRJkiTBZgS4qvo6cM2QTe8GXgfUQNkq4KPVOQPYJcke89JSSZIkSZpwc7oGLslTgR9W1dl
JBjftBVw28HxdK1s5/
5BhH083Ssc8+Xhchbau8vkqSJGn+bHGAS7IT8EbgCcM2DymrIWVU1bHAsQArV64cWkeSNtdiBUVJkqRx
mssM3AOAfYGp2bflwFlJHkk347YHN3lwOWjNlKSJEmSNIfPgauqc6pq96paUUr6ELbgVV1BXAq8Jx2
N8qDgeuraqPlk5IkSZKkLbc5HyPwCeC/gQcmWZfkBZuo/iS0/
nngImAt8EHgJfPSSkmSJEnS7Esoq+qZs2xfMfC4gJeO3ixJkiRJ0nRbvIRSkiRJkjQeBjhJkiRJ6gkDn
CRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6
gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTswa4J
McnuSrJuQNl70pyQZLvJPmnJLsMbDsmydok30vyxIVquCRJkiRNms2ZgfsIcOi0stOAh1TVQ4HvA8cAJ
DkAOBx4cNvn75JsM2jl/
5BhH083Ssc8+Xhchbau8vkqSJGn+bHGAS7IT8EbgCcM2DymrIWVU1bHAsQArV64cWkeSNtdiBUVJkqRx
mssM3AOAfYGp2bflwFlJHkk347b3QN3lwOWjNlKSJEmSNIfPgauqc6pq96paUVUr6ELbgVV1BXAq8Jx2
N8qDgeuraqPlk5IkSZKkLbc5HyPwCeC/gQcmWZfkBZuo/
nngImAt8EHgJfPSSkmSJEnS7Esoq+qZs2xfMfC4gJeO3ixJkiRJ0nRbvIRSkiRJkjQeBjhJkiRJ6gkDn
CRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6
gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTswa4J
McnuSrJuQNl70pyQZLvJPmnJLsMbDsmydok30vyxIVquCRJkiRNms2ZgfsIcOi0stOAh1TVQ4HvA8cAJ
DkAOBx4cNvn75JsN2+tlSRJkqQJNmuAq6qvA9dMK/
tyVd3anp4ZkKpdTi4ZqDdF7SthieXgJyCvb3gbsYiRJkiRpYmWVknwCeCywNM
k64M10d53cCAtgtCcAZVfWiqjowVdAd+mWVr60qm5bqMZvZZbkkiRJ0iSZNcBV1TOHFH94E/XfBrxtlEZJ
kkSRubj7tQSpIkSZIWgQFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk/
```

NOblVOAJ42yjkkSZIkSZ1RZ+DeA7wOuL09vzdwXVXd2p6vA/
YatmOSo5OsSbJmw4YNIzZDkiRJkrZ9cw5wSZ4CXFVVZw4WD6law/
avqmOramVVrVy2bNlcmyFJkiRJE2OUjxF4DPDUJE8CdgR2ppuR2yXJkjYLtxy4fPRmSpIkSZLmPANXVc
dU1fKqWgEcDnylqo4Evgo8vVU7Cjhl5FZKkiRJkhbkc+BeD7wqyVq6a+KOW4BzSJIkSdLEGWUJ5R2q6t
+Af2uPLwIeOR/
HlSRJkiTdaSFm4CRJkiRJC8AAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEm
SJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9sWTcDZAkSZt24upLF/
T4e+x8Ff9z620c9ov3XdDzSJJG5wycJEmSJPWEAU6SJEmSesIAJ0mSJEk94TVwW4GFvrZBkiRJ0rbBGT
hJkiRJ6gkDnCRJkiT1xJwDXJK9k3w1yflJzkvyila+W5LTklzYvu86f82VJEmSpMk1ygzcrcCrq+p/
AQcDL01yAPAG4PSq2g84vT2XJEmSJI1ozgGuqtZX1Vnt8Y3A+cBewCrghFbtBOBpozZSkiRJkjRP18Al
WQE8HFgN3Keq1kMX8oDdDZ9jn6CRrkqzZsGHDfDRDkiRJkrZpIwe4JPcAPg28sqpu2Nz9qurYqlpZVSuX
LVs2ajMkSZIkaZs3UoBLcle68PbxqvpMK74vAVaM1UZIkSZIEo92FMsBxwPlV9VcDm04FjmqPjwJOmqP
jwJOmXvzJEmSJElTloyw72OAZwPnJPl2K/K/tj4O3ASUleAFwKPGO0JkqSJEmSYIQAV1X/
AWSGzYfM9biSJEmSpOHm5S6UkiRJkqSFZ4CTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmS
JEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BNL
xt2ArdmJqy8ddxMkSZKkifCfa3+0KOfZf89FOc2CcQZOkiRJknrCACdJkiRJPeESSkmSBMAXzrli0c51
2C/ed9HOJUnbEmfgJEmSJKknFmwGJRJEmSJKknnFmwGLsmhwF8D2wEfqfqbJ8zQsS4JJsB/
wt8HhgHfDNJKdXW1Xcx4nySJEnjtJCBdM0V13CvHW4H4DG/
cO8FO480k8W6O6Q2z0ItoXwksLaqLqqqnwKfBFYt0LkBLKvYDLBp6vAw4arJDkaODo9vSm
JN9boLZsylLg6jGcV/b9uNjv42Pfj499Pz72/XjY7+Nj34/
PFvb9nyxYQ0Zwv82ptFABLkPK6ueeVB0LHLtA598sSdZU1cpxtmFS2ffjYb+Pj30/Pvb9+Nj342G/
j499Pz6T1PcLtYRyHbD3wPPlwOULdC5JkiRJmggLFeC+CeyXZN8k2wLPBE5doHNJkiRJ0kRYkCWUVXVr
kpcBX6K7jcDxVXXeQpxrHo11CeeEs+/Hw34fH/t+fOz78bHvx8N+Hx/7fnzs+/GZmL5PVY27DZIkSZKk
zbBgN/KWJEmSJM0vA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScM
cJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIk
qScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAk
SZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJP
GOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIk
SVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDA
SZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKk
njDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMk
SZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1h
gJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIk
ST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAn
SZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6
wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIk
SZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQB
TpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk
9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUE/bLGN/14mxDAAAA
AElFTkSuQmCC

```
fcqrpl5iNt5EjgBe2Y5wGr5rflkiRtLFXDVpVIkiRJkrY2zsBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBj
hJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPfH/AZNzCHAtwVauAAAAAElFTkSuQmCC\n",
    "text/plain": [
     "<Figure size 1080x288 with 1 Axes>"
    ]
   },
   "metadata": {},
   "output_type": "display_data"
  },
  {
   "data": {
    "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3cAAAElCAYAAABH6hvDAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XmcJlV97/
HPNwygorI448I6qGhEE40iYFxf4gLECFFRlCgSvKjXJUZzFdG4xUTNNSEajQbFiBsuqIFERA2KmhshDg
RBRMNIECaDMGwji8r2u3/
U6eGhp7unp+te+bM5/169avrOXWq6lTVUzPPt8+pelJVSIkSZI2bb+x0A2QJEmSM2e4U6SJEmSOmC
4kyRJkqQOGO4kSZIkqQOGO4kSZIkqQOGO0mSJEnqgOFOkiRJkjpguJOkGUqyNEklWdRefzXJ4fOfOw3Q2ynSS7JrkhyRa
TzH9bkk+16Tvt+8YiyZOSrFjodmyskrw4yb/N4frW63gnOSPJS+ZguxckedIMl318kp
Mtg2StDEy3EnabLQPtucnuSnJz5N8KMl267H8bbbGb8PSQ5Ncm2SJ1bVpV
196q6be5au+lK8pokFyf5RZKVSY6dKswm2S/
Jj9v761tJdpvBNtcEaE2uqh5aVWdMp277I8TpIWkOFO0mYhyeuA9wD/
B9gW2BfYDfhGkq0Wsm3rzKWjftn4JFVdU/gYcDDgVdPVDHJYuBLwJ8D2wPLgM/
NUzvPzvnxcbWSytJWpvhTlL3ktwTeBDvwqqo6rapurqpLgOcCuwN/
t6GLr59gO3cacpbk9N6E16R5CLgogyOyVcdPNgwyMkXkv285/
JzlgGsfkKOCvgadadBfP2yTJ6xZ/OaZbkru06uTbJj4BHT3Ib85bYDIvAiGdCO8CBgO+B5wNXraezD/
AThvD1V8DxSTJ/ZcdfAw7AX8DXgC8CBgO+B5wNXralezD/
AThvD1V8DxSTJF/ZcDfw7sV1XLpqj3GeDstt4/BYa6z+9xwIOB/3HlIK38TQ+/
oIxh6vPYG3jyy3H0ZzslOwFuAjzCE7EcBj2/run+r+2qGY/
VEYEfgWoYex8nct7V5p9bm45QiTfVc1ZA0FW
+YZKqDwV+MPaiqm4Efta6f4pTFe9k8PY9tAlXLnjVTYWv6DwUSlWKY/
zwcArgUdX1T2T2ApfseFxKhsDEhPhhhoDT/hFN2D7EKgCCwFBGO+B5wNXralezD/
ATHvD1VsDxSTJF/ZcDfw7sV1XLpqj3GeDstt4/BYa6z+9xwIOB/YC3JHlIK38TQ+/
oIxh6vPYG3jyy3H0ZzslOwFuAjzCE7EcBj2/run+r+2qGY/
VEYEfgWoYex8nct7V5p9bm45QiTfVc1ZA0FWmhdIIr2tz2GlvS8P4E17VxhTlV/yx-
+YZKqDwV+MPaiqm4Efta6f4pTFe9k8PY9tAlXLnjVTYWv6DwUSlWKY/
```

```
WVVr9dxJkiRJktbfhvieuzcAr02ynOGeuuNb+fHAvVr5a4GjN8C2JUmSJGmzNJthmWtU1RnAGW36YmDv
Cer8CjhkLrYnSZIkSbqzDdFzJ0mSJEmaZ4Y7SZIkSeqA4U6SJEmSOmC4kyRJkqQOGO4kSZIkqQOGO0mS
JEnqgOFOkiRJkjpguJMkSZKkDhjuJEmSJKkDhjtJkiRJ6oDhTpIkSZI6YLiTJEmSpA4Y7iRJkiSpA4Y7
SZIkSeqA4U6SJEmSOmC4kyRJkqQOGO4kSZIkqQOGO0mSJEnqgOFOkiRJkjpguJMkSZKkDhjuJEmSJKkD
hjtJkiRJ6oDhTpIkSZI6YLiTJEmSpA4Y7iRJkiSpA4Y7SZIkSeqA4U6SJEmSOmC4kyRJkqQOGO4kSZIk
qQOGO0mSJEnqgOFOkiRJkjpguJMkSZKkDsw43CXZJcm3klyY5IIkf9zKd0jyjSQXtd/bt/
IkeX+S5UnOS/
LIudoJSZIkSdrczabn7lbgdVX1EGBf4BVJ9gSOBk6vqj2A09trgAOAPdrPUcCHZrFtSZIkSdKIGYe7qr
q8qs5p09cDFwI7AQcBJ7RqJwAHt+mDgE/
U4ExguyT3m3HLJUmSJElrzMk9d0mWAr8DnAXcp6ouhyEAAvdu1XYCLhtZbEUrG7+uo5IsS7Js1apVc9E
8SZIkSererMNdkrsDXwReU1W/
mKrqBGW1VkHVcVW1V1XttWTJktk2T5IkSZI2C7MKd0m2ZAh2n66qL7XiK8aGW7bfV7byFcAuI4vvDKyc
zfYlSZIkSYPZPC0zwPHAhVX1NyOzTgEOb9OHAyePlL+oPTVzX2D12PBNSZIkSdLsLJrFso8FXgicn+Tc
VnYM8G7g80mOBC4FDmnzTgUOBJYDNwFHFHzGLbkiRJkqQRMw53VfVvTHwfHcB+E9Qv4BUz3Z4kSZIkaXJz
8rRMSZIkSdLCMtxJkiRJUgcMd5IkSZLUAcOdJEmSJHXAcCdJkiRJHTDcSZIkSVIHDHeSJEmS1AHDnSRJ
kiR1wHAnSZIkSR0w3EmSJElSBwx3kiRJktQBw50kSZIkdcBwJ0mSJEkdMNxJkiRJUgcMd5IkSZLUAcOd
JEmSJHXAcCdJkiRJHTDcSZIkSVIHDHeSJEmS1AHDnSRJkiR1wHAnSZIkSR0w3EmSJElSBwx3kiRJktQB
w50kSZIkdcBwJ0mSJEkdMNxJkiRJUgcMd5IkSZLUAcOdJEmSJHVg0UI3QJIkSVJ/
vnr+zxe6CWvJXRe6BRuWPXeSJEmS1AHDnSRJkiR1wHAnSZIkSR2Y93CXZP8kP0myPMnR8719SZIkSerR
vIa7JFsAHwQOAPYEnp9kz/lsgyRJkiT1aL577vYGllfVxVV1M/
BZ4KB5boMkSZIkdWe+vwphJ+CykdcrgH1GKyQ5CjiqvbwhyU/
mqW09WAxctdCN0Abj+e3XYvjrjebcHrbQDeiL122/5uzces1tdLxu+7YY/
mxTO7+7TbfifIe7TFBWd3pRdRxw3Pw0py9JllXVXgvdDm0Ynt9e+eW775bntl+e2X57bvvV+fud7WOYKY
JeR1zsDK+e5DZIkSZLUnfkOd98H9kiye5KtgEOBU+a5DZIkSZLUnXkdllVXXy2o
XMOZ+2b57dfntt+eW775bntl+e2b12f31TVumtJkiRJkjZq8/4l5pIkSZKkuWe4kyRJkqQOGO42YUkOS
XJBktuTTPpI1yT7J/lJkuVJjp7PNmpmkuyQ5BtJLmq/t5+k3m1Jzm0/PshoI7a26zDJ1kk+1+aflWTp
/ejKtGrteXLEQ7tX6SfCzJlUl+OMn8JHl/O+/nJDRMzeN8/
ukJKtHrtu3zHcbNTNJdknyrSQXts/
KfzxBnS6vX8Pdpu2HwHOA70xWIckWwAeBA4A9gecn2XN+mqhZOBo4var2AE5vrydyS1U9ov08e/6ap
+t
jmtfhkcC1VfVA4FjgPfPbSs3Uevw7+7mR6/
Wj89pIzdTHgf2nmH8AsEf7OQr40Dy0SXPn40x9fgH+deeX8Cv8IoJ/
l3u8vo13G3CqurCqvrJOqrtDSyvqvour6mbnbgs8BBG751mqWDgBPa9BXN+ErBfksxjG
zVz/jvbqar6DnDNFFUOAj5Rg+8B27TzOB7ZLcb35ap9maxvnVJqqqLq+qc9r09cCFwE7jqnV5/
Rru+rcTcNnI6xWs/
ebWxuc+VXU5DP9AAfeepN+DGazrX4Zo6VXUrsBq417x417y0TrM13X9nn9nn92G/
pyUZJf5aZo2MP+P7d9
jkvwgyVeTPHShG6P1125z+5z+B3grHGzurx+5/
V77rT+kvwrcN8JZr2N29WNBO+mObOb9b9gW8mOb9+qfjo3LdQcms3LW6ZrOuf
tn4MSq+nWSlzH00j5pg7dMG976XLte3ofl/OAXarqhuSHAj8E8PQXG1Ckmzr2HMGlWbOYLXyzxP3mPn1CqgXPZymADZ/vIAg4F
o5mKoeMM83ZLd3vLKDtamNtjmMbQuxGksZ/P4DEEgLzSrYGuUVPDl0bdL+m5xbG8sV/
J/
M2jzGfN4JBVmUPHqCwK7zc4Xm7fKdPHxqNiE76buTauKTAb9WYUXsDdWzGFaCgNFZ3P7TI2u2jgJ2vBOAZJw
JkrqR5IaR6QOTXJRk1yQvS/KiTfFLDNv7TNZcLDV3t3kS9uPb6N5yfkGxlOOZG0HS4kTMRkYG04eeLydEsl8ng8m4hM1/0oQRb2aVNJ7KGNLAt3X2OG1zEd/UIDTC6ZfmVCrOuNwjT3r
QIdZGX6m+vkFIXfUNvVXUUMWT+z5QGtGDmSmO7ONcwkU9q5TvuHNpWm2VcfF2btNM38X0QCLUfsv/
MNkZWBxKFgtpKiH0GkRbVnW0ZBEtrmtmdLcmk3fDeD3GCSEy1gvEA51iV3uHSG4D2mqjD5J0X66A1lNQpjwC/
lMsGvjWBh2PAXo8LI8KTdrF75Op8sQz7/
dmiX3PFQ1Rt/
3o5A2vZbyG04ZOuGFpJRyJrd7K9NryJYbLBBdSBzCYWvCo6Spy0Z6Hz10H9Ak4CPIXyepG/
bLYzJABeiVpQFMHg9zB0sO8P50XDwI53j4mhvsPsQtYL4BmHcjjGdOlqSHd6+kNnCxxmB9jcFSnWDqdeyfjG7aKuv37d8ow2QRPXjXf0Ec9yyw
+LykMYPffcG1wS61W8VxgDVDIiapnXPyxM69TkwNjVpG98T7vOeuJdWxSGA53iSZzG+7Qaon4gMtBgrtRiQXBQ5j1F1fDTndQjQ/
ffaJiNVRtkbd1l1cDFsxW6fLv4dyBOwoXi5T4JWg8Ytw7EuqLoUjY+Oi9Lre4NmuWUnrp+rmAG5ZJ3OX9hMQQb/
dmp3zuW4ZkgOzV9Bo9q0Qz4IuOVwApgXaodCxUlaVjs4J0PUjJjcWC6uUw8nrvg0ZeyPpulRZYHnHSGBVBZnNN/
sFsnIbvAdq+LMGc6TNTFP3wyjZr9ybPMUx8fe3r7xFfvU0Cvb/UXA1Dr1cMSDjJ7LNT8lATKJ4CGtCOhfx6h/
7T/eGF4Hmrx0SKYtkqUW+DNY4+T8mQ9EYFwWVGUX6zH7w/ZdB6a8ZHWe3nTQCWEDxMVJlk3Wtjc6xTvEk82G/
eKzYQqsyrlQrMgFhWcH7oYQeFA/
T7q3N4R1idzvqQVqPsiZcHaEwX7zdKXJ+7s9DSkK2JOW4qgx7ae+tuiZjPPhQBowddtNfdVCKaBeOU/
TjEtcXFkqbjlCbO3Ma8tcuUCxrzzlgR1CbSUP2Ml6m2kkw4EExwCrmyg7fPgS7k9LLZ3SS+ItELgBZqP6Uqm2cfDUBqi/+8Ap8
VLdQRQQOqnoaAkJaIRpMlKg9vCYqk1s0CN45GZ2hTgAzJ5XkEJpzJvkEgvuvN9mHYw9bI6gg8kGkdl8u8HV1Pf1KvxkPdt7rPenv8AkS7
3dBd1kcrO2q+6bi4Uk7AdiWHcfMGIQgGh9tiNpLEx5KOaHcb8hfD8J/
+xeTWDaOx3Q90wJf4PGFV7I0PQ0KwjXJRY4uJV/
6d4cZxPPH6jgjAdaKrjoF7zCxaFQrRmfVi3yhZAEZnQHxPLzJsVNX/
t1nKtnwBkcBHbn23pI/
g2qnVmvJuaRbqHCZHrpWZwxGAAvCtcyypz4BiWl1AHwYoutwexO75lcTG4a2ft35G1ztOUWvUbwsTuSmmL+CrGeyUVoi2ncNEgU9MIsyaC1WmCHnqIs5z
T7+NPpkWpT91m/
3e33M67kCXScOO9dhFDrgB1ZS8VbwH+Q7jHZVZM0wd6r2DwyQvm0LiHwcxg2wtE6FjNFHN2ldAewQIDHFMb7n3CmjUeKCB+eZSlfzJdzbCPCBpd+
oQZRuGEVajtnA1EJO0j++8wJlNuYf7P6d9iZDx4rn1IJBvZ9F6KXtKmuiS1GIXnOC/
lfTyy4fBG5gw9jS1J0WsNsVcTKnGgOSp9ePyv6ObdAZDOgE8VnKzyGdAQgBrDxm9JYFqt0qfChsE0yIgnTlCGkMR4BL8J0Nqz8Dn9rS7ge
KfwVKrr8Uzt1ifTJNAxH3M1I0uo7qLLNQzGJBrj9wW8FUOcfQw4lOvh4xk3uGuZeW7C/CLPcAvEtG8wI4fMjm7YGa/
ijUMyqRPd0h4JBfp6dN0fFTrQXCqQhOGWqbtm2SGXGUH+gzyS2tqF2tE1tg3ZSYJM6Li4zg8a/
EBIgvGb3DE3ZJFm5QNW4gnkXpyA7z9mA8yWy+7zmCbmKqQlAH3bBUVcRdqWJhTLqJM5fppYAUlbb1CHdqyXiALzbJ46qJAGNBW/
PWvlQ8Cj1OPNS2mXPNAHsW6jBwaLSf1nBN2RMSmIqEwFkOmHz+i53mw1n1zqNj9XHnJmjyYBl/V4fHRZ4vuTOtlkPhQEsGrhjlhE1O/
Fz5GOqVoTTq3OUKiw35Nj/mlCCtOvtQsRKtMfIvm3EOEtIDg6b2C3yqUqZ3eFT2fShxbMdeNfCaN/
OUDALUMRXw3gqFtQ8+kYk0QLkEwJjDWxVq2BDhKpGJEjZCFjR2ttF0RSOt4vkvuMb2r0pN7ZtoKrhpYYnlhPMhjzxbEi3bPTYpbm7tAmBqJD
dQ+LW7Y5POHqVeGqGvoCptHxaZH8dB0sqc8c9Vp0rPHrGAsdpkaE+EILLrjwE/
o5QHDCzpK1Q7CjdBTR7oBiO8pQtR0aW5gIYKhDyO0ZqWWNYqCCg46lnB4TdGFJ6lEamTPiwZlHlhH0rlKHVUZJSa1WoKyNJfmhy/
ngtBQVIjyNxQHeN1ly2ww8fCxaFUcYQAGHDSeLHbtOM8mxSVWqOiv8N1mFCGvZvRtOrNf7hvtTgeQ8pnSWsHYmqgThsXxTHRxAlV3sMM1gShLuP
wNpYMa+KgWhz5ZnShHHhdhgB/
xFtL2kQVrjqTWAhjw+J2iOIPnlOtt7y1qkYTMN8Ad0vhhw2LuTCDWhIv0eeJaLJ1ArqbdeHw80IhcJEMyhD3cEuktyTkhOZhf5NTJ55X4
uM1SMmcrJhcvzTdwwLyYF+PZU60MfNGIjd73nCpyQdIg+2UlOKpCGwaRgtgEbCA3J+zGqF7IZqvqA9XTJaP3WhR3b2M7xu7fw3XVM0nHNY7+ah
KLXMw/rODC0xkNXKZaXZ1H1mM3vKJ+tP1lTfRASWTuD9JrcIeH+O1Xe/
0ORbw8d4Z9NrZgD8G6Kfwhx1fIzMWS41cyO8Kbk9NpEGyEWzSFjM3iRB7uJfbT/N7oVW0wqtKtaafE4Dbm3cRItHmJIALEl+1jq5w1/
BHpaIfmXsHdyxUW5ZvYKTqn5gyW31rAZQdjdPjlzF8vJdWp4JxbhYpZjGqfwqHpX7ObQrxRCbFb82cHiNw3QTOaQ0z7xTgTNgf
EwHlAO7g3Yqc/
Z8ODrZG8gXq1fXxKWi6kqo1yUlagJpUcPcLfRhA2WF5X5QMfRQrRNtZjaXRUXLkiI7xrGQeBz3hBxMCqIybtQ2P2sUItT9dPgtQpFr0HYMd
ykWTlyVHmVP+2oxMyvGlYfsOu8o1LHe+T3yhEK2h0fWdw7B3yBLbRfgDCYQrjqfHNXbTcwl+4i/
wPu+qk4bXo7tJw5gyCm51w70XAC0Etsm6hE6JaQSr3NI89/BvtXx0bRd5/
5vdD8V4EdPhcCLvFxdhhyaxh3UXpvnXglU6qbx1J8vVHkTmEhhYpqzs0OKcBFDSxbNYS+KZVaoW4FhXPJa44PpOFtp4kkSJ8JJxdZKvMnKkGc
WVV4gtcNGxn2dqrNLjF6ecCsByBsdLl6JAEBqs+6K5+6Gtg/
tTqvCRoCjT8qvUwXTE2Uvf3HJ7aXQdN0XoNUo8zAH4w95KqZTsPLevz3bUKLQsgq5bTJaSIDZ7Gb1VFMRgWHR3vEDSuRvb4MxjgsCU6e1v
xE3xzOf/
WVVr9dxJkiRJktbfhvieuzcAr02ynOGeuuNb+fHAvVr5a4GjN8C2JUmSJGmzNJthmWtU1RnAGW36YmDv
Cer8CjhkLrYnSZIkSbqzDdFzJ0mSJEmaZ4Y7SZIkSeqA4U6SJEmSOmC4kyRJkqQOGO4kSZIkqQOGO0mS
JEnqgOFOkiRJkjpguJMkSZKkDhjuJEmSJKkDhjtJkiRJ6oDhTpIkSZI6YLiTJEmSpA4Y7iRJkiSpA4Y7
SZIkSeqA4U6SJEmSOmC4kyRJkqQOGO4kSZIkqQOGO0mSJEnqgOFOkiRJkjpguJMkSZKkDhjuJEmSJKkD
hjtJkiRJ6oDhTpIkSZI6YLiTJEmSpA4Y7iRJkiSpA4Y7SZIkSeqA4U6SJEmSOmC4kyRJkqQOGO4kSZIk
qQOGO0mSJEnqgOFOkiRJkjpguJMkSZKkDsw43CXZJcm3klyY5IIkf9zKd0jyjSQXtd/bt/
```

```
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XmcJVV99/
HPV0YEQQVhUGQbDLgQ9xDELfqIMUAiYJSIW9Bg0MQYjcYEjRvGPFFj0JgYDIoKeRRBNIoJagQ0ahB0QA
QRlREVRrZhG2RRtt/zR52GO033zJ2Znu4505/369Wve6vq3Kpf3bo1c799TlWnqpAkSZIkrf/
uMdcFSJIkSZLGY4CTJEmSpE4Y4CRJkiSpEwY4SZIkSpEwY4SZIkSeqEAU6SJEmSOmGAkyRJkqROGOAkqUmyKEklWdC
mv5Dk4FnY7qxsZ6YkeViS2+a6jsmS7J1kyVzXsb5K8ookp8kp8zg+lbr/
U5yRpIXzcB2f5zkCWv42mck+e7a1iBJc8kAJ6lbSV6S5LwkNyW5PMmRSbZYjdf/
NMkzpteVftU1TEzU+OnU+301nQ7SW4Y+bkjyc0j0y9cF7XOF0n+OslPklyf5OdJ3p1ko5W03yfJj5LcmOSU
JNuvwwTbfmeTDa1f5hq+qfq2qvrmqdkk2ab+QufNYVNUpVfXodVuhJK1bBjhJXUryOuBdwOuBBdwOuB+wF7AjsB
X06y8RzXtmA2tlNVm0/8ABcDzxqZ9/HZqZ9/VMMm2wPEMn8Wtge8D/
2+W6pwVs/WZliStmgFOUneS3Bc4HHhVVX2xqm6tqp8Cf8AQ4l7U2n0syT8MvO4uI4klOS7AU
mqK7Xw1yctGpv8v8Jrk3ypSQ7jSyrJK9MciFwYQbvTXJlkuVJzk0r38yZk3y5qn8NVQZHsXPtN8r+FbyR5T9vOT5Lss
4bv00ZJ3pzkoiRXJfn4aA9Zkyf5W5bz6KcBzx2mvZKabSY7HXJZTvr/gvxH4fWAh8HXgu
EnNDgAeD+wGPBP4LeAhwBbA84CrV1VX83jghwy9Oe8Gjk6S1Fn2mvt1/hpGrqdNm5Ktb6szn7/
qfq4qrmx2fQAgvwhFbCWQqeHv8/xFmDzTSaFT+C4EnrUm3rkJkS9YfwvK3D6mwHGBN0
1H9r2a/0Lmfjyb5q9ZKwYWMPd4RyP/BBsWUl9dvBwqPbJQi+aMJ10xsQxTcyvIV8OyZCNVcMdGnFjlaOyWZHGL7ae0
Y/Jag46UlxzTLeP6tiaDWxb5bNspEwqPOkcTBTTDqH1lsYA6YaE+DiU9mG/PN+rMCUmDH5rSSSy5kMyYsZHazwG/V
JBDRqTt6KXl3t12y5XZJbpbX2bbZVq6W3cfZjRZEk2WyEwIoJkhQnyh1k5Y0mr+GmGFTtPwIPy8XPVp1S13wx/
Fhmb8XYqMnzjqaEcJoSPKAXQT6xEKxmw6EvSb4Q0EC1Tx81fSHqFHIP/l2Pi5TRIFlv4lp1kVl/
Nh+h5FmGzdWbH+jCIdwWgl/S+KgRIUKZCGvMD9y8+vNFEQMOvKgb91ngwXDJ2N/IhEJw6MtKMq0MqXcKq+7RP/
oeCPEfizuzNMUO6n5j5xmpabl8Lx2m5O2W2ZcmUOPwL1ybEOy+MKekOn5crDkNw/
Al5o9hRoftxQLjvH3aBPt7XWqf8VJ4Zs+MU/x/+U+3rhzaqVbXyuq8uIEkDLpaKhrhivm5Z+yv1fvKDcBVDhUdvT8
6vKK1OQfIx+2/VFYa0+Wdr1L1CuwoRUs0tDoZkXLlJbHMzLP7kvhDRwB47rO+nPbYTtiTBhyKMvmBULqzEL1f8xq0
ZcXRtxfJtVzuinLl2zdO9N/8FHlF6P8cVhxR5rcWPUvTzTu3WfZn+ABcdSZFqDhrDBEx58gE4NEXnrfn/5i4U/
c4KiWaE0d/GJpNSbgh73HVEYWHHdtSsoKI/TlBaQ13svV6XBYm2Nt7R1YUTtDJO+7kS/
zYbR7vvnBLAcYv9sPy9xk/AnUM6p6FTWqHWbtvZYyqk9FIcSGktuXUFYyhYtUhb0JImUDa3fSO/
M7tDIe7QOePt5hNyPv8JBMLiOqbEt6wEw+82Ntx7Uf5mUXlNgLgvD7G0F5g8hYk/
hvJjQ7yO+uYlx6dPMDTDOwWqx8lHwHmRqDXgFH8f/73OoxMPgWORmVIWhcCf56m4dHyt0N1Th+hsOXq/qs/
2yHm6xMdbZZBz5hZmZUdJ3yy8C7Tf4bz9jfWsEPFxXcv7Q4pf9Z05qawwx+Zp2Ohun3EVZ6iu+6JjnnMdBN6YQf/
```

```
kmyZ5Dkj9X+T4Zw5Evh8G8Y7lfsAy6vqhnZu/vHIOn7FMJR1unP868A9krwmyYIWap/J8O/
ISiXZM8nubRTAjQzXV872+S1pnjLASepSDTcdeSPwHuB64EyG3+rv1b64wRDkvgv8FPhv7n69098zfIm
8LslfrmJ7/8HwZws+2YZqfY+ht28692XoHbiWYVjW1a3W2fRuhmvATstwM47TgccBVNVFDDepOJxhyOn
PGHoQZuL/hbcwXE93PkOI/t9Wy5qYdh+m8VOGoXiXM9wc5aVtXyd8iuHGKyeMfE6m8n/
aPtzAcIOPTwNvm1iY4Y6ZzwGoqksZrps6gmFo7SNo19pNYVPgHxne88sYhuS9pS37JEOP8TVJTm+9jH/
JEMSuZrhJzskrqXmylzMMe7yCYajfR0eWfZ7hLo0/Bi5q9Ux3jd+EN7V2FwP/
xRCGp1TD9Z4HAe9r630AsHhk+XEMQ4w/086nc7j7zYeOY7ipzSdWUtNfAC9LcgPDcOXJ5/
hbGG5Mcl0LwKM1/pLhZiTPZXh/jwCe166lW5UtgI8B1zG8fz8D3g+Q5JAkZ03/
UklaO1lx6LckSRuuNpTvYuCgqvrGXNcjSdLqsgdOkjSfPB+43vAmSerVVHdwkyRpg5Phj3YvYriroSRJ
XXIIpSRJkiR1wiGUkiRJktQJA5wkSZIkdcIAJ0mSJEmdMMBJkiRJUicMcJIkSZLUCQOcJEmSJHXCACdJ
kiRJnTDASZIkSVInDHCSJEmS1AkDnCRJkiR1wgAnSZIkSZ0wwEmSJElSJwxwkiRJktQJA5wkSZIkdcIA
J0mSJEmdMMBJkiRJUicWzHUBAFtvvXUtWrRorsu4mxtvuZHb6/
a5LkNz4mbgjrkuQuupjXJPNtt467kuQ5K0Vm4E/
J43G2685RZur43nuow7bZSN2Gzjzea6jLs566yzrqqqhatqt14EuEWLFrF48eK5LuNuvrjkiyy89yrfQ
22QTge2nOsitJ5adtNP2XuXN811GZKktfJFwO95s+GLS77AwnvvM9dl3GnZTcvYe5e957qMu0nys3HaO
YRSkiRJkjphgJMkSZKkThjgJEmSJKkTBjhJkiRJ6oQBTpIkSZI6YYCTJEmSpE4Y4CRJkiSpEwY4SZIkS
eqEAU6SJEmSOrFgrguQpN589+LruObqi+e6DABe8Pgd57oESZI0i+yBkyRJkqROGOAkSZIkqRMGOEmSJ
EnqhAFOkiRJkjphgJMkSZKkThjgJEmSJKkTBjhJkiRJ6oQBTpIkSZI6YYCTJEmSpE4Y4CRJkiSpEwY4S
ZIkSeqEAU6SJEmSOmGAkyRJkqROGOAkSZIkqRMGOEmSJEnqhAFOkiRJkjphgJMkSZKkThjgJEmSJKkTB
jhJkiRJ6sRYAS7JXyQ5P8n3khyXZJMkOyc5M8mFSY5PsnFre682vaQtX7Qud0CSJEmS5otVBrgk2wF/
DuxeVY8ANgIuWuBQ5pLzkEuLaqdgWuBQ5pLzkEuLaqdgHe29pJkiRJktbSgtVot2mSW4F7A5cBTwde0JYfA7wN
OBLYvz0HOBH4lySpqpqphmiVJ0gbkE2dePNclrOAFj99xrkuQpGmtsgeuqn4Ov6rqtta
s6XAdu35dsAl7bW3tfZbTV5vkkOTLE6yeNmyZWu7H5IkSZK0wRtnCOWWDL1qOwMPAjYD9pmi6UQPW1ay
7K4ZVUdV1e5VtfvChQvHr1iSJEmS5qlxbmLyDOAnVbWsqm4FPgM8BS9vzpcAOAG35/
YBrZrRqSZIkSZqHxglwFwN7Jrl3kgB7Ad8HvgI8t7U5GPhce35Sm6YtP83r3yRJkiRp7Y1zDdyQ1cjO
Rs4r73mKOCvgdcmWcJwjdvR7SVHA1u1+a8FDl3rvPvSJEnSvDPWXSir6nDg8EmzLwL2mKLtb4Hnrn1p
kiRJkjTZuL8DJ0mSJEmaYwY4SZIkSeqEAU6SJEmSOqEAU6SJEmSOOmGAkyRJkqROGOAkSZIkqRMGOEmSJEnqhAFOkiRJkjphgJMkSZKkThjgJEmSJ
KkTBjhJkiRJ6oQBTpIkSZI6YYCTJEmSpE4Y4CRJkiSpEwY4SZIkSeqEAU6SJEmSOmGAkyRJkqROGOAkS
ZIkqRMGOEmSJEnqhAFOkiRJkjphgJMkSZKkThjgJEmSJKkTBjhJkiRJ6oQBTpIkSZI6YYCTJEmSpE4Y4
CRJkiSpEwY4SZIkSeqEAU6SJEmSOmGAkyRJkqROGOAkSZIkqRMGOEmSJEnqhAFOkiRJkjphgJMkSZKkT
hjgJEmSJKkTBjhJkiRJ6oQBTpIkSZI6YYCTJEmSpE4Y4CRJkiSpEwY4SZIkSeqEAU6SJEmSOjFWgEuyR
ZITk/wgyQVJnpDk/km+nOTC9rhla5fdBkiRJkuaHcXvg/
gn4YlU9DHg0AcAFwGHBqVe0KnNqmAfYBdm0/
hwJHzmjFkiRJkjRPrTLAJbkf8FTgaICq+n1V/RLYHzimNTsGOKA93x/4eA2+CWyRZNsZr1ySJEmS5plxeuAeDCwDPprkO0k+nGQzYJuquhygPW7d2m8HXDLy+qVt3j0kOSTJ4iSLly1btlY7IUmSJEnzwTgBbgHwR8CRVfVY4NfcNVxyKpliXt1jRtVRVbV7Ve2+cOHCsYqVJEmSpPlsnAC3FFhaVWe26RMZAt0VE0Mj2+OVI+13GHn99sBlM1OuJEmSJM1fqwxwVfUL4JIkD22z9gK+D5wEHNzmHQx8rj0/CXhxBnsC108MtZQkSZIkrbkFY7b7M+DfkmwMXAS8hCH8nZDkZcDFwHNb25OBfYElwE2trSRJkiRpLY0V4KrqHGD3KRbtNUXbAl61lnVJkiRJkiYZ93fgJEmSJElzzAAnSZIkSZ0wwEmSJElSJwxwkiRJktQJA5wkSZIkdcIAJ0mSJEmdMMBJkiRJUicMcJIkSZLUCQOcJEmSJHXCACdJkiRJnTDASZIkSVInDHCSJEmS1AkDnCRJkiR1wgAnSZIkSZ0wwEmSJElSJwxwkiRJktQJA5wkSZIkdcIAJ0mSJEmdMMBJkiRJUicMcJIkSZLUCQOcJEmSJHXCACdJkiRJnTDASZIkSVInDHCSJEmS1AkDnCRJkiR1wgAnSZIkSZ0wwEmSJElSJwxwkiRJktQJA5wkSZIkdcIA
J0mSJEmdMMBJkiRJUicWzHUBAFtvvXUtWrRorsu4mxtvuZHb6/
a5LkNz4mbgjrkuQuupjXJPNtt467kuQ5K0Vm4E/
J43G2685RZur43nuow7bZSN2Gzjzea6jLs566yzrqqqhatqt14EuEWLFrF48eK5LuNuvrjkiyy89yrfQ
22QTge2nOsitJ5adtNP2XuXN811GZKktfJFwO95s+GLS77AwnvvM9dl3GnZTcvYe5e957qMu0nys3HaO
YRSkiRJkjphgJMkSZKkThjgJEmSJKkTBjhJkiRJ6oQBTpIkSZI6YYCTJEmSpE4Y4CRJkiSpEwY4SZIkS
eqEAU6SJEmSOrFgrguQpN589+LruObqi+e6DABe8Pgd57oESZI0i+yBkyRJkqROGOAkSZIkqRMGOEmSJ
EnqhAFOkiRJkjphgJMkSZKkThjgJEmSJKkTBjhJkiRJ6oQBTpIkSZI6YYCTJEmSpE4Y4CRJkiSpEwY4S
ZIkSeqEAU6SJEmSOmGAkyRJkqROGOAkSZIkqRMGOEmSJEnqhAFOkiRJkjphgJMkSZKkThjgJEmSJKkTB
jhJkiRJ6sRYAS7JXyQ5P8n3khyXZJMkOyc5M8mFSY5PsnFre682vaQtX7Qud0CSJEmS5otVBrgk2wF/
DuxeVY8ANgIuWuBQ5pLzkEuLaqdgWuBQ5pLzkEuLaqdgHe29pJkiRJktbSgtVot2mSW4F7A5cBTwde0JYfA7wN
```

```
kiRJkjphgJMkSZKkThjgJEmSJKkTBjhJkiRJ6oQBTpIkSZI6YYCTJEmSpE4Y4CRJkiSpEwY4SZIkSeqE
AU6SJEmSOmGAkyRJkqROGOAkSZIkqRMGOEmSJEnqhAFOkiRJkjphgJMkSZKkThjgJEmSJKkTBjhJkiRJ
6oQBTpIkSZI6YYCTJEmSpE4Y4CRJkiSpEwY4SZIkSeqEAU6SJEmSOmGAkyRJkqROGOAkSZIkqRMGOEmS
JEnqxIK5LkCSJEnSzPrCeZfPdQl3yqZzXcGGxR44SZIkSeqEAU6SJEmSOmGAkyRJkqROGOAkSZIkqRMG
OEmSJEnqhAFOkiRJkjqxTgJckr2T/
DDJkiSHrYttSJIkSdJ8M+MBLslGwAeAfYDdgOcn2W2mtyNJkiRJ88266IHbA1hSVRdV1S3AJ4H918F2J
EmSJGleWbAO1rkdcMnI9FLg8ZMbJTkUOLRN3pDkh+uglp5tDVw110Voxng8Nyxbwz+uF8fzhXNdQj+
zcsM3I8Pa/WG56fG46t4c0ey1XbaZxG6yLAZYp5dbcZVUcBR62D7W8Qkiyuqt3nug7NDI/
nhsXjueHwWG5YPJ4bFo/
nhsNjObPWxRDKpcAOI9PbA5eug+1IkiRJ0ryyLgLct4Fdk+ycZGPgIOCkdbAdSZIkSZpXZnwIZVXdluT
PgC8BGwEfqarzZ3o784DDSzcsHs8Ni8dzw+Gx3LB4PDcsHs8Nh8dyBqXqbpenSZIkSZLWQ+vkD3lLkiR
JkmaeAU6SJEmSOmGAW08kOTDJ+UnuSDLtbVaT7J3kh0mWJDlsNmvU+JLcP8mXk1zYHrecept3tSc5pP97
sZz2yqnMtyb2SHN+Wn5lk0exXqXGNcTxfkmTZyPn4srmoU6uW5CNJrkzyvWmWJ8n727E+N8njZrtGjW+
M4/m0JMtHzs23zHaNGk+SHZJ8JckF7Tvtq6do4/k5Awxw64/vAb8PfG26Bkk2Aj4A7APsBjw/
yW6zU55W02HAqVW1K3Bqm57KzVX1mPaz3+yVp5UZ81w7BLi2qnYB3gu8a3ar1LhW49/O40fOxw/
PapFaHR8D9l7J8n2AXdvPocCRs1CT1tzHWPnxBPj6yLn59lmoSWvmNuB1E/
glVP8W+v5OQMMcOuJqrqgqn64imZ7AEuq6Aq6qKqugX4JLD/uq9a2B/4Jj2/
BjggDmsRatvnHNt9BifCOyVJLNYo8bnv50bkKr6GnDNSprsDxxbgzOALZJsOzvVaXWNcTzViaq6rKrOb
s9/AVwAbDepmefnDDDA9WU74JKR6aXc/
cTQ+uEBVXUZDP+gAdtM026TJIuTnJHkgLf+GOdcu7NNVd0GLAe2e2mpXqtLrG/
bfzOW1Iz4lJdpid0rQO+H/lhucJSb6b5AtJfn2ui9GqtcsKHgucOWmmR5+cMmPG/A6fpJTkFeOAUi/
6mqj43ziqmm0ffgZgjKzueq7GaHavq0iQPBk5Lcl5V/
XhmKtRaGOdc83zsxzjH6vPAcVX1qySvwOfffo6r0zrgufmhuVsYKequiHJvsBnGYbfaT2V
ur6yYuneInn52oywM2
iqnrGWq5iKTD6W+HtgUvXcp1aQys7nkNvkmuSLJtVV3WhgZc0Lm2PFyX5KsNvqwxwc2+cc22izdIkC4D
74TCg9dUqj2dVXT0y+SG8prFn/l+5ARkNAFV1cpJ/TbJ1VV01l3VpaknuyRDePl5Vn5miiefDHAIZV+
+DeyaZOckGwMHAd65cP10EnBwe34wcLce1iRbJrlXXe7418CTg+7NWoVZmnHNt9Bg/
Fzitqvwt4vpplcdz0jUY+zFcu6E+nQT8YbvbG+765Xr/
xVmgvtOB0NXFBVR0zTzPNzBtgDt55I8mzgn4GFw4GFwH8lOaeqfifJg4APV9W+VXVbkj8DvgRsBHykqs6fw7
I1vXcCJyQ5BLgYOBAgyW4/AAgw5+IeEVVvQx4OPBvSe5g+A/
pnVVlgFsPTHeuJXk7sLiqTmI4/4/rfkyxh6Hk7aO4q1sqMeTz/
PMl+DHdRuwZ4yZWvrJVKchzwNGDrJEuVPl3BKiqo/BmBR7m8HCSJJvTs/IYJ+ud2JEmSAUi/
6mqj43ziqmmOffgZgjKzueq7GaHavq0iQPBk5Lcl5V/
XhmKtRaGOdc83zsxzjH6vPAcVX1qySvYOhdffo6r0zrgufmhuVsYKequiHJvsBnGYbfaT2VZHPg08Brq
ur6yYuneInn52oywM2
iqnrGWq5iKTD6W+HtgUvXcp1aQys7nkmuSLJtVV3WhgZcOc06Lm2PFyX5KsNvqwxwc2+cc22izdIkC4D
74TCg9dUqj2dVXT0y+SG8prFn/l+5ARkNAFV1cpJ/TbJ1VV01l3VpaknuyRDePl5Vn5miiefnDHAIZV+
+DeyaZOckGwMHAd65cP10EnBwe34wcLce1iRbJrlXe7418CTg+7NWoVZmnHNt9Bg/
Fzitqvwt4vpplcdz0jUY+zFcu6E+nQT8Ybvb3Z7A8okh7epPkgdOXF+cZA+G765Xr/
xVmgvtOB0NXFBVR0zTzPNzBtgDt55I8mzgn4GFwH8lOaeqfifJg4APV9W+VXVbkj8DvgRsBHykqs6fw7
I1vXcCJyQ5BLgYOBAgw5+IeEVVvQx4OPBvSe5g+A/
pnVVlgFsPTHeuJXk7sLiqTmL4T+rfkyxh6Hk7aO4q1sqMeTz/
PMl+DHdRuwZ4yZWvrJVKchzwNGDrJEuBtwL3BKiqDwInA/
sCS4CbgJfOTaUaxxjH87nAnySP5DbgZOMhflq23ngS8GDgvyTlt3huBHcHzcybFc0CSJEmS+uAQSkmSJE
nqhAFOkiRJkjphgJMkSZKkThjgJEmSJKkTBjhJkiRJ6oR/
RkCStN5KshVwapt8IHA7sKxN31RVT5yTwiRJmiP+M2pJUheSHA7cUFVHzHUtkiTNFYdQSpK6lOSG9vi0JP+Z5IQk
P/ytcbJ9l/gPawbB8ec/LyStwuXFTHY/aJ6VztAVa0rtUTZBNuH2sl+LJW3xWD7ad8KAWrwMMMesNw6Lwsf/LELsw8KANCT
Zhbx5kz5PiTSyJLFM8zbvV5F58xFSN6Tu5NSaXRN1h1h0VzrlWnV5g0hCB8s6AoPo+2A==\n",
```

f1Rp+HS0z099O2e2zX9fj3PPN331Kmq7711C+6nz6m6qSokSZIkSQvf3UZdgCRJkiRp/
RjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0nrIcmyJJVkSXv82SSHboD9b
pD99EmSfZOsGnUdC1WSP0vyX3O4vbv0eif5cpI/n4P9XpRk31mu+
+gk3x+2BklaiAxwkjZK7UPsBUluTvKTJO9OsvVdWP/yJI+bbnlVHVBVJ8xNtdMbZj/tOfwiyc/ba/
CBJPea6xr7LMlLk1yW5GdJrkry1omQPk3//ZJ8r72vvpTk/
rPY5+uSfGi4yjd+VfWQqvry+vRtf1x50MC6X6uq3eetOEkaIQOcpI1OkpcDbwL+Brg38Ejg/
sBZSTYbcW3ThoN58qSquhewF/
Aw4NUbeP8L3X8CD6+qrYA9gYcCL56qYA9gYcCL56qY5LtgI8DfwdsC6wAPryB6twgRvD+lCTdRQY4SRuVJFsBrwdeVF
Wfq6pfV9XlwNPppQtyzW78PJPnHgfVunyaW5IPAzsB/
ttGrV06xnztNE0vyvCSXJLkuyecHR2ba6MCRSS4FLk3nrUnWJLkhyXeT7DnN87l9Px
WJ/Xpap+AnyeLshNbHvztq0rklyd5D1J7jGw/
KAk32mjUz9Isn9rv3eS45KsTvLjJP+YZJP1qTHJtkne30a7rkvyidZ+YZInDfTbNMk1SW6vd4rX5jWtz
+VJntXaHtGey5KBfk9J8p1pXpcfVNX1E12B3wAPmqov8CfARVX10ar6JfA64KFJHjxNfUe11+fGJN9vo
3f7A68B/
rS9t85vfQ9r758b24jg8we2s2+SVUle3t4zq5McNrD8PknOaMfpG8ADJ9XxEJXn0wLLXJTkty
YeS/Az4syT3aOfHdUkuBh4xzesxY3HpxuVvCHJO9vrOLh8ynOjvd/ePKnvJ5O8rP1+
+yh4kr2TfD3J9e35vzPtjzFJvtpWP7+9pn+aSdM+k/x2O5euTzc188kDyz6Q5F1JPt1e/
3OTPLAtS9bzXJWkDcUAJ2lj83vA3elGSm5XVT8HPgs8fqYNVNVzgCto1dV9c/r6p/
kYLoP5X8CjAFfA06Z1O1gYB9gD+AJwGOA3YCtgT8FfjpTXc0+wPeB7YB/
Bo5LknWvAkl2BA4AVg40v6nVsBddaFkK/
H3rvzdwIt0o5tat3svbeicAt7Z1Htaez+A1T+uq8YPAFsBDgO2Bt7b2E2nhujkQWF1VUwYv4Lfa9pcCh
wLHJtm9qr5J91oOjJudnt/1OKckzW3i5hm4E7j+m6foQ4PyJB1V1E/
CD1j55m7sDLwQeUVVbAn8IXF5VnwP+P+Cfhwe289tK2yBngisBVwGPDWJA+f9Hzv3Z7v4cC7kmzTlr0L+C
WwA/C89m/QN+mO8bbAycBHk9x9YPlBwGl0x/
kk4Gi6EPjAVve012CmG5X8GPC3dMfjBpav69w69dOoUu7oN+Ou2j98F9gP+CqCqHt
P6PLS9pncaFU2yKd1I65l077kXASe1YzThGXR/
+NmG7hw5prVPe6629813p3ttJGm+GOAkbWy2A66pqlunWLa6LZ9rzwfeWFWXtP3+f7ogcv+E7BX7nx91Buq6tqq
+gXwa2BL4MFA2nqr13NfP6qq91bVbXRBagfgvuvo/
4kkNwJX0oWEo6EbWaGfB0utUuqcNre5D2nqHA8dX1VlV9Zuq+nFVfS/
JfemC4Eur6qaWkMXwg4Z2OeUNSbZoa37gqq6ro2OfqWt8yHgwHQjqADPYR2hq/
m7qrqlbePTdKOstH1OjLRuSxdCTp5uI1V1cptCuRvwHuDqabreC7hhUtsNdMystuAzYE9kmxaVZdX1Q
/WUcOn22hgtedzJvDogS6/Bv6hvWafAX4O7J5u5PMpwN+343Fhe/
6D2/5QVf20qm6tqre0ugbDz+rap+DbwN+MnA8nWdG18Dau
B5PrXVctUUr895VXVOew6X04Xs319HXYMeSXfs3lhVv6qqLwKfogttEz5eVd9oNZ7EHSPV056r7X3zO+
tZgyTNGQOcpI3NNcB2mfpanh3a8rl2f/
YB8p10IydXJzl2IL/YPPx1V1c/
t1XTcmObiNAO1L9yF0IsCO0Y2EnTdQ9+daO8BOdKMpk90f2BRYPbDef9CNbNbDef9CNbMxU407AtVV13eSNtg/t/
w08Jd3NZg6g+yA9nevaCNiEHwH3a79/
CHhSuhu2PB342voE5Kq6FLgI+PdpuvycboRs0FbAjVNsayXwUrpplmuSnJrkfpP7TUhyQJJzklzbXtMD
ufMfG3466Y8SN9O9pmPAEgbeX3SvxeC2X96mMN7Qtn3vSdseXBe613Ha7a2rb1XVpHWnPTda31O5I0g9
k2mOeZLdknwq3c14fkYXBNf3jzH3A66sqtw9Mek6D5+dg6Jx4bYc9VyVpXhjgJG1svg7cQjdl63ZJ7kkX
Cs5uTTfRBZgJvzVpO3UX9nkl8Pyq2q/i/
d9Lvd6KYqzps2qvMBYOKao2uAXwAPGaj53u2GJxPP6YFrb4kr6V7f7QbW26qq1ppGOM2622b6u4FOj
9jW4k5sfr2NY27ZhO2Bm4CqCt93Xgj1m/
kbxBS5j6eUMX7iamPE68px7Y2tfSRmj+H12IKbopqzDpvZBkc7ppiG8G7ltVWwOfYdK1ZNMYp5vOutNA
284D2340cBRdkN2mbfuGSdue/F5fPd32pnCnvm1kd3Ddmc6NU4CnthG5feheh6m8G/gesGsbLX0N6/
f6QPe+2CnJ4GeenYF1vb9ut6HPVUmaiQFO0kalqm6gu5bl35Lsn+n+5mGMuAjwKruOPD/
Hfopuxtm+S36EZLBl0NPGA9d/se4NVJHgK33+TjadN1TnejjX3atTk30V2/
dNt67msYbwMen2SvNhrxXrprrbZvdvS1N8oet73HAYeluvHG3tuzBbSTrTOAtSbZqyx6hC/
nmSbdmweM9DlE8DDgZfQXRM3k9cn2ayFlCfSHeMJJwKvKvBP4PcPp0G0jy5wPPfw+6u3SePU3304E9090U
5e501wt+t6q+N8V2d0/
y2BbbOfkkXlieO8dXAsoFAsRndtMZx4NZ0N315wsxPH9oo01Y8Dr0uyRXsOg9esCUgbUkX8MaBJUn+nrVHESf
7CN37eZt27eSL1tH308BDkvxJG/V+MXf+Y8g6z42q+nar7X3A5+uOG8pM9MBl/
rfD2X7jx7ZXvP7Qs8iamvtbuTEZ6rkjQtA5ykjU51Nx15Dd2Ixs/
oPsBdCexXVb/
G2b+vWKGfZ3Ot3oyqlteteFdKN909mKLjxdRzeV66fcMTI2b6pqnC7Y/F1rOoruhg3ntLq/
QLs2qqq+QbuZBt2IzvXGiqXpi5uz+E0uump6+M5dNcVfY/umrzbg3O7/
upjwC5MugnNFH7S9n0V3bS7F0wKUqe3ek+fNNVyskcBFyS5iW7U6zN07x3g9i+Tfrarb734/
c7X/g3aHHgj3UjnT+immE5cyD5rRT/n5CN8r6/
oFln6cLzf9L9177JWtPmZzs9a3vD+nOjWlHMKvqGroR0zfSvY+ALX0L0uN
9KdO5PP19cBJ7Tz9emDC6rqFrqwdgBdQHkXcOhA+Pg+XQA/k9VfXvuR7AV+jdz0aN/DDGGNYHsYXOk/
6N4+YKv1q4P9QR3I1E6kAS/Ch0k2bK3IKSYZdtbUQ87F/fgpgi9iC7l4a/iKDUTTV1bxYxiQhWrzx+p5bw+HDFXNpfDLr5LI3QG6uMmbrAASy8ILUKekOqC2BKrk5AHAaQ9T3q2oOD1xQFnnKW38FzpA+TnIOGaAzOA0o2JrvNPgZSSu/ZBS0yu/U0EnBmYxJCcTngYHyNKpXT8nPXtEi7NVoN/J9ZNUsUfN+d6oU2PbdKr7g==
oFln6cLzf9L9177JWtPmZzs9a3vD+nOjWlHMKvqGroR0zfSvY93pZsKO7F8fc6NU4DHsY7rFIFX0L0uN

Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiR
JUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6okloy4AYLvttqtly5aNuoy13PSrm7itbht1GRqJXwC/
GXUR09okm3LPzbYbdRmSJK23m351DbfVr0ddxoC7AfcYdREagU2yCffc7J6jLmMt55133jVVNTZTvwUR
4JYtW8aKFStGXcZaPrfyc4xtMeNrqI3S/wDbjLqIaY3ffDn7P+hvR12GJEnr7XMr/5GxLZaNuowB1wG/
N+oiNALjN4+z/4P2H3UZa0nyo/
Xp5xRKSZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJ
IkSZLUEwY4SZIkSeqJJaMuQNJdd/
4V13PtT68YdRm3e+Y+O4+6BEmSpEXBEThJkiRJ6okZR+CSHA88EVhTVXsOtL8IeCFwK/
Dpqnpla381cDhwG/
Diqvr8fBQuSZKk6Z187sKZqQGw7X1GXYG0cVifKZQfAN4JnDjRkOQPgIOA36mqW5Js39r3AA4BHgLcD/
hCkt2q6ra5LlySJEmSFpsZp1BW1VeBayc1/
yXwxqq6pfVZ09oPAk6tqluq6ofASmDvOaxXkiRJkhat2V4Dtxvw6CTnJvlKkke09qXAlQP9VrW2tSQ5I
smKJCvGx8dnWYYkSZIkLR6zDXBLgG2ARwJ/
A3wkSYBM0bem2kBVHVtVy6tq+djY2CzLkCRJkqTFY7YBbhXw8ep8A/
gNsF1r32mg347AVcOVKEmSJEmC2Qe4TwCPBUiyG7AZcA1wBnBIks2T7ALsCnxjLgqVJEmSpMVufb5G4B
RgX2C7JKuAo4HjgeOTXAj8GjisuoNjLyU5DbiI7nICL5t+ZpWRpmQCWxRkiRJkqS1zfVNTCRJkiRJ88QAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjg
JEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElS
TxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSemKoAJfkr5NclOTCJKckuXuSXZKc
m+TSJB9OstlcFStJkiRJi9msA1ySpcCLgeVVtSewCXAI8CbgrVW1K3AdcPhcFCpJkiRJi92wUyiXAPdI
sgTYAlgNPBBY4rS0/
ATh4yH1IkiRJkhgiwFXVj4E3A1A1fQBbcbgPOA66vq1tZtFjBB0qvWTHJFkRIV4+Pjsy1DkiRJkhaNYaZQ
bgMcBOwC8A+4J3DAFF1rqvWr6tiqWl5Vy8fGxmZbhiRJkiQtGsNMoXwc8MOqGq+qXwMfB34P2LpNqQY
EbhqyBolSZIkSQwX4K4AHplkiyQB9gMuBr4EPLX1Ort45HAlSpIkSZJguGvgzqW7WMn5wLfbcx0LvAp
4WcrA9dr/YsnIAzQNgDzR0I9LmHxxAT/DSTPGJK1G5Z7B5EB0
7Tvr9c08lO+ytt9X4d64YCM1IlDqZjEXZwGzFC5Yln87KhVPTFLfvT87
sJcpzTAuDBP8M7yUhl8gVh4oQ3W0nQLx7hjmMdR3iGxEwJhTg/
ATh4yH1IkiRJkhgiwFXVj4E3A1fQBbcbgPOA66vq1tZtFbB0qvWTHJFkRZIV4+Pjsy1DkiRJkhaNYaZQ
bgMcBOwC3A+4J3DAFF1rqvWr6tiqWl5Vy8fGxmZbhiRJkiQtGsNMoXwc8MOqGq+qXwMfB34P2LpNqQTY
EbhqyBolSZIkSQwX4K4AHplkiyQB9gMuBr4EPLX1ORT45HAlSpIkSZJguGvgzqW7Wcm3gAvato4FjgJe
lmQlcB/
guDmoU5IkSZIWvSUzd5leVR0NHD2p+TJg72G2K0mSJEla27BfIyBJkiRJ2kAMcJIkSZLUEwY4SZIkSeo
JA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZI
kSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPDBXgkmyd5LQk30tySZLfTbJ
tkrOSXNp+bjNXxUqSJEnSYjbsCNzbgc9V1YOBhwKAK8Czq6qXYGz22NJkiRJ0pBmHeCSbAU8BjgOoKp
+VVXXAwcBJ7RuJwAHD1ukJEmSJGm4EbgHAOPA+5N8O8O8n7ktwTuG9VrQZoP7efauUkRyRZkWTF+Pj4EGV
IkiRJ0uIwTIBbAjwceHdVPQy4ibswq5VW1fGxsbIgyJEmSJGlxGCbArQJWVdW57fFpdIHu6iQ
7ALSfa4YrUZIkSZIEQwS4qvoJcGWS3VvTfsDFwBnAoa3tUOCTQ1UoSZIkSQK6aZDDeBFwUpLNgMuAw+h
C4UeSHA5cATxtyH1IkiRJkhgywFXVd4DlUyzSpIkSZLWNuz3wEmJEmSNhADnCRJkiT1hAFOkiR
JknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAF
OkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTQwe4JJsk+XaST7XHuyQ
5N8mlST6cZLPhy5QkSZIkzcUI3EuASAwYevwl4a1XtClwHHD4H+5AkSZKkRW+oAJdkR+BPgPe1xwEeC5z

```
WupwAHDzMPiRJkiRJnWFH4N4GvBL4TXt8H+D6qrq1PV4FLJ1qxSRHJFmRZMX4+PiQZUiSJEnSxm/
WAS7JE4E1VXXeYPMUXWuq9avq2KpaXlXLx8bGZluGJEmSJC0aS4ZY91HAk5McCNwd2IpuRG7rJEvaKNy
OwFXDlylJkiRJmvUIXFW9uqp2rKplwCHAF6vqWcCXgKe2bocCnxy6SkmSJEnSvHwP3FHAy5KspLsm7rh
52IckSZIkLTrDTKG8XVV9Gfhy+/
0yYO+52K4kSZIk6Q7zMQInSZIkSZoHBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkq
SeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAky
RJkqSeMMBJkiRJUk8Y4CRJkiSpJ2Yd4JLslORLSS5JclGSl7T2bZOcleTS9nObuStXkiRJkhavYUbgbg
VeXlW/
DTwSODLJHsCrgLOralfg7PZYkiRJkjSkWQe4qlpdVd9qv98IXAIsBQ4CTmjdTgAOHrZISZIkSdIcXQOX
ZBnwMOBc4L5VtRq6kAdsPxf7kCRJkqTFbugAl+RewMeAl1bVz+7CekckckWZFkxfj4+LBlSJIkSdJGb6gA
l2RTuvB2UlV9vDVfnWSHtnwHYM1U61bVsVW1vKqWj42NDVOGJEmSJC0Kw9yFMsBxwCVV9a8Di84ADm2/
Hwp8cvblSZIkSZImLBli3UcBzwEuSPKd1vZq4C3AqUkOB1YBTxhcHb2Gd5TZUNlLRJkP4BFM8ajjv88qTunAzgj+Ud3hbqNRnkHs0dSpRSG1L5qKpG9Xz5pfd7fkpW8ZvK/
```

{
"data": {
"image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAACLNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xu8HWV97/
HPVyJ4AwMmUG4KSrygLUhTQKlwWpSpQWzitKHghWk7jOWKtra2ix9ZbL2hrLbSWU6pooIoi1hcpIspBKa
0IGFquIiWCkJRLIjflquDv/DHPhpWdtbP3TvbOzmR/3q/Xeq2ZZ54188zs2cl89/zs2cl89/
PMrFQVkiRJkqRN32NmugGSJEmSpIkxwEmSJElSTxjgJEmSJKlnDHrEEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJEmSJP
WEAU6SRkmyW5JKMqfzVJzKMqfNfzXJoo2w3Y2ynemU5PrxV33RVJvr6Rt3l+kv+5MbfZJ0l+kORXp3B9Ez7eSV6SZOUUbH
ODzqvN4XdLkkYY4CT1XpI3IbkbkyyX1Jbk1yYpK5k/
j8Oi9wq+rgqloyNa0d24Zsp+3DT5LMG1V+WQPZVkj4H5a508ZmD+gFZndNk9SeZU1Wer6hXrsw
8zLcm8JN9KcnuSu5J8Oe8kB66i/VZKTk/yonXd/sJ7bXeOYa22TOa+SfCDJP436/
Eb5HZakjcEAJ6nXkrwT+AjwR8CTgf2CAk9gBpwHnJtlyhts/
zzw+A1c5wXAruwMvzMvzqGNwRZLDRq+gqh6Oqmur6mdwR5/
OvC5R4Z1JTkVeCrdhfo9Sd41ZDtrDBlLL8ttJrklyYZ5KvJXnawLJKckyS64Dr0vl4klVJ7k5yRZLnjbE/
j2yn9Sr+e5K/atu5nwsHv6Icr2B4GjBuYXAAaeM2sZnknwiyVeS/
DjJxUme0ZZd0Kpd3/3Sq7+3DQGSCS7ooeZEzU4RlYBBuX6vIiV/OIhDAGAjtoWtpbB+oVAgmgLxCHrHBtyMH/F
i/Wf0sBDwAmtfAktyLdt7gXsDJw91oqSXF9V3tH9TR
WlqqcRfG3ZS72VoWZm87UDKsDGIgNd1bn9F/Ne3t9eXJHeAH1/
RqS0+jpUrFyNQT2dJnJ7nGnqOlj8WgkNYiXJ0FZj3vmDt2YY/
RjiR3jSs5Mrf+v2nPqzKsqgjJ3yGsmc7Vq5OWCUxnYz66/
UnJZdT+X+5GNjzXhKqOpRJ7JwWyP5sfg3dXy4Qh8b6
a8Lk7Nu3pm+5t9yVg5x4DV6qF0FPwSUJvLsvUFoBBOYAt/cQnh7pqzYXXzO/Zv2cF/
AgE0eSU7wVl1WqUncfeIG2KfpqTAUgHGb05JBBcIsGmaIbkGDgvF3HUN9h5iUg5WeCtg2pyXp0u7
bQJbKrjFuJx4p8d3aa+VyxrP+2XKUE1hAG2eHKZewVaZBQC9Cg1a7TUyGFFhFXbmRwW7yP8hSuXB/
ZHO8WjKy1rRhmmP5l2UVH7wRTNx2CNk+f7FhdcNQSm0b3hVmeJ1yr5iRZOkebXp8umu4Pfp/
8aTz0XhVIE2oKRmGGuY1KZ0R+4Fg06LwJFeHUR6SbSh59L3GKRuJ3AC8IvTkeaeY4CXK5wMLJxOpXT1vqmLB8v7BKwT5FB/
oT6kZA63ppSv/aI5r6C0lWT9JxYpJXGWAqUcCybSi8U+8SYlXrZ9y1n93FF8Rr4+kuA+
ZvJ4ZsXv1R/F7nsV2ChQDdGJgT6/RKGmcdzmN+XmO1L6DsBkc1ZDoSRPQy/Ghg6qgoH8X6XaoI9DfBmHEzNM9jkIvHyabYc8Pd
Q/76z2lVVxxQkMgCQYmcXe0t4kKOSRiOqkhcLKdXjNAS0wDwFsA7mL5DHcw2DDQmOyqNrgMgApUqyxYFCoGu5v3Rq70Mu4j9NL
oNfGyJv7IqydcTcUlsjQzoDLHfAUgvEUUb+y2UXHpXRSCp+kD5W1ufPmdqKpdk+dfHeUCKxKiUWjJV8/vzoXWoFZWAOnJFu
9QmF2SmpcIEfYAmJGbIBDwl4Q8ZSrd/wQe/0GUjw+LWFJ6HovMS5dwDr+5zSTvSDA7kjj6qGfdr4AfTzVHfTTOA+8H7CqzbM
EjO5+gyNTmMFqW4rDQCn/Qzr7H4QOJ9efaLa0WSn0xsP8/8VeHd+w3FLCgZBxsSUqnQQPEuA84SWepYLXj3dyt7LTfLnWOw
Hrc9Erqc7upawELUVvA8dVyM7HxPAb48wAjmC9pI4t7p2gkIaQ6MX25bhD0gVRzYGtPC1l04MoTw0Ywm+Ou3Qa3uB0HSDk8ub
rfJxvPRnusW9fz/DgQLqdXwZm8k8s0sGoaaL1Y82pPnOrJKfybB/
g+qhu7r8tTi5+PPT1ePcsVpQrA0LM3/
+uQ6G+87CLpQXl80pkq7NPgWZvWF+dQdN0w0SSVrFjvX3nW2hYojRZb03vmB8+7C3J81b3Ya
V8oBu4i6D5/Sv73PrsjpHXpe/M88bmPjm+gtd0yO1y6nPLC4OevtZnGZb9BfuN/s3bv+pTn+DU5aKeDuyYRGr3SMfy3YoE
ADQb/7IK4wTH2cO6zqRUzQF3Bp3/Stp5Rl8TDkqSeHOaoP/P1ZdPmJhwy8knzMnnhX6nHN9MZdHlzBJW61l3/
zP1kQ2Yx1HqTewWLfxnFQtI4WTBZcVmOg1xBbEuWKy1XZbD4UOIE7CxGhRsCUmzGlj2cMAmo1SLS/
eX3f4Bj6WnB1OV8Q6uzq/xpM5ezXm9ohyxP6bJMGWvfCRZ1fWYDXeqZr8Y2LiUBUg6SGGHm+6AtLd/
2B3UpXjWUVtvuqG9TFPtiO8WNbL1EVeRKfrH33ufFe6xKAXeSrq9vs8nrLqVU5PtW5IFktSvC9evHZ4Ccb+H
EEsR8e/+BJRhkOEyBZXhyvSDQiuu2EcS/V3Nv1gzgy/XoQh/PlbEBnLvWTvSczMEOWcTbSJd/b1SXtw3A14y+
x5AwZWTwKlmUi3yxwkPevhDGpkjFnYOODbbx7P9/s0ZBZuyeSm4TD4QS5pukafXhE8Nsk5cjCg/
3iF4ZWThO5cj3u+yQXDyoItdDgLSp1h/u2f+yKdKcwh9Z0rwiFaS2+Ld/rL7UYeKg2fJGdQLnD+nHY/
m6N+tCfoxWO1s+9VJlB1k0Pq0ZWnR4A8gg6dw/bVhVDjv8c5/1GeA9zCG2I9Z8TbsQVqtYsXlCCjL/
fN97k6PNR8fmWl/J5yfgWWHRJ7JN5rkf0cHq3UXOtdJDGdZDW+f9NeR8bxDJNeVqFbb39PGeLjf0RMaK4nmWuxHUy8Znvb+5
gHtK8HqY3wOAbo2C3RHd2/8jv13qZDvB2+ZBNnw5xfaIQYtHFf48x7NUDlrL3U2W9rsLd8s8YMdCyTd6Z7S14w08rPJ+gBfuwa
Ylp+K0jZ/9PTkI9DMVy7mB2YKHhwuFtD1ug8IsUgZU/P2x5qUIx4sLf5vx9yE1ua/mUvOAtGEdbn8NFsbVR+uEjDVk5XKdHh
h2q9vE8AUVqkLrhyzNKZLaNSZLnIW1YyNL0rMdiQbK8AdzOidMXSQ8MmhKJdLlkY3sBJPNfrk0VNNwW7+Oq+vLHMdh9LkD1X
6fsvySRjU70bP4G+J/KW3zUHkAGPfnvx/NHSl6t8HlpnHeb5aUMZ89yyXG1jr3eHD2nsCMbLfIkPU/f7y0q+ldsNKY8NzMNL5N
HMuRCz3yCPyvqrQaKTrBCKfBpqqnNpbCYTRfrYt4QJLKbYhu6Hhd0eTJLbIL6MvN3kL/XyJ/tHyWbW8Tp3b7RUr1rW+EhdB
9vsrlWtvVIqFnDbxQyHqAaQpnUG2OZpk4TAhfQLkmxvD7tnq3Dg2AL66fO8eE/TYIGVlGHfdIRyCLOg6dL4Fp5vtgcj2zE
0ZOrmx4Yyhba/fLUWJEpsU5hS5v0fVBnZZ1mFyRu6tXEBrytGCyZ1eH0dYVW0BgSnkd6ZP/ckQqlmtlGUJ4r1Jmp5DOUM7
7kQO5rGy7bpmz0kh5f7hVu7PqqhWUU7r99w/YQqjUq+XRTaEXD1qfOi7gKqLvIbfDjyV1I4qcFqy3ZhupAGg0mWKr+iGKBX
lzmzDGhBuyJTj8M1oFqyVqKL6/L2AC2V3n/E0n0rZKI6LUoQ/yMPTxqzmYsKqpP5RF0M3mrdFF4d8Bi4Kdyd7Bd4/1F2vA
qNnMt9I1cl0nq4RzSNl/ncF/ArTA7e/WZPPl/YWsgpUfS3Fnb+YVbn7y5fXqXuuyi7KyHn7SCjK/iuwkHg2kHXXZ8TYj12tt
GRJ+jgRUMOUYFIrD2wRr9ghCMkq7+eQLqR3tzN56ZwkMsCJV1HcmH0hdJdQXy+TcvRd/LKTXHvs4nm8cgdVBvnqLlhGibCpn
hX/jPOqj3GfubWDWnpjLUfXv+L+zMwcvOtQNbvlWhOqBOoCyGKlGxSY0jMTnnz8S0hdl4Hd5XytoZSz0RmAeG1iYg4UYwpz1
MM2GgOMFjfwbAr9yKvbSCdwGcGlJIAd5v8vGKuGpNbDN+vQnIvQGxqfx+9dm6GcT8FJPc8ebVmmJyVIc4VtEufkgB7TyHk/Xfx
kk6Zk83GkNJXVWlE2Nbb4VhINlqlL+IjrxYxSqm8Hjg0K2EG2ghBwLJTvbDlMz7F2cxkCsgw9a9d+3xoVOlAlnJbr7kGl+zj
7bFlL7Ap6WQ28szIPbuT0znwPvK5q1WYXBNVONFzzIRIOjNnA5+fVIy3UFh8oPN6tTc+lhO2T4w9M/ilI+Wk/QF+ohJJmbsCZWgI
Z+/90K8M1Kk+A/0Sb80Q0oUJOM5cOa7gU/Vlt/9gOhGW8Y6mXTPPjyBFUU1VzxkrWvqa+NDQJwcSyEcbFewC/bp3Q1H8/a0d
i6wy04OnT1vhFR5XZPKU9g5hnvbOXb5Ey/sHgxhPAQRxaGjajEO5fTdK9gYvTfyXd6SgfvPNXTA/qkMdiKpkwOsmCuoNPFyAbaK
P/aIvhrH8mxeSnZfP1PtzRI+tAoO9g0jFkmWoGsSD2iHuHejCP2irMeUA2pMfUhyDUMFfcPHw7QHadzF1Cp+xnqLYn0wVDD79c
4y1AvQFDq0ZyUu8+5jIHFL0Bp0y/6xyKpjq8zA2uE+vMkH/4qTLqAGf8L8tI6hNc6bSvq0I1Gt55l4r0ldkXzaO0J2S2EUf0v
HzH+Ut4frI1V2mnVpd9JfhShVdKzBNySOXXw0gTT2lH+ZP2ukKA0KdXVbV2MrZKD5EvfHPAFz2xOmrUSmmAhzpoEPyKX4ch+Yl8M
8U3R8Myk11DcgdPVR4tepVfPXXeE1/8N4HR8YMvWrbA2+NxMhdX6rAdrrflz9Gph8Nh/i1dI0Sm6hzjHgbBthaCA0gE/WsYM7
hdYExwMgK/1nxE4H/hwvvYqPudPfLPnvvpRmFfCfsmvUl+DGI/xLIy9BCWd1tjZ2c/lqeUMbVHL/PGDb8uUmLetDHz7LLQb
yUXEj9ETW4Cr71MyD0bbLYZT8oFiXCZxPpm/UejGSqHO9OQehfqCRCgfiUTVOb2qQzQKeo2UHTSUr4lHGO/WPxSNeWDzl
Ca0xj+9ApHMoPfUgHMWgwSwOq7zK0xyvtiu+P4+PC4/FLGjPhmXeFaY2UHhsiYFXNbfIWOeeX3uk5p8zUZBd0ukTrOn90OZ/
G3crz9szYjTYz6Px6cK+1LSJtcfxYaLz/7n+9YB12Hz97iDqXM7F/8PR6Vx2u7vSYzVJW08bu5dMP+fDjsmujD6ci3iEEcjK/
2ll/UG5R3pn23mjJ+Cmeri4p8eUfiFOKUnDB5Oj+RWaU76fw5MODwSBiMbnCr6u/WrtODVGvs9H+sN4pA3LTSRyVkDhcmVPlF+
Rtse9f6s7VJdiLQf2fGOvTQIcF4qHC6Gm4uXmydbxVZJK+yeyz9J/ZHqXFVb7zvutdCaH6HAQHH4Ca3Pam7eZzBh+B9yz9ky2EmtE
C68+SSS+8Xi4e6hpsIjzXjGnf0dppRgSgmk1cmD9/4v9uMWSp7ddZqEdB/fb75YzDuHeqxxgcxmk8kGvzbm5DfWw+rSOFyczfu
sp2VWpOytb/V8qt22t6wAgyaD6YqnxWT9Y2l2anU1/TrMsovEa+S9BgOw8A05MT6N2YUJZQrLjw4uQA/dW2TTgc/b69vcg+1
JffOPXeq1HBLW1HJBxz4P8/0jEp3sOx1XCF0ojSwFvjqDUuWQVPBvrjNpO0PK2ACe08UVY0P1AaHEk9D1Wg6SqNXpcsEnB8gZ
xi8aRZDJw/rPTXo46xthgmZKgGANb0D5Ut70azmjNyaCGLQG95+1Y1mb1vt3ITmGCb/Z+qt0BzRcRGuEz8m8sN/RxuQ8BCg
ZbxpVX2vIe1Ax4lRoMHfXmX97qgJOkFtfz7pHEk3+Xu4XMu9uA3kfVePvNtfUgB7XL7TQDYN/pM2jnlmZ9zXM9JBk/wZMlPDQhy0
DzG4NDDSMgxo1TGhIQ4HPaR1mhTP55I4+xQfoWc7o9wCaakjrI9hi3vL8dPF8tHb/qIk7Mj8+fgvmOdvK6UOD6ybN8GwSFKBf
5MgLhf/e2qL++hkvUdxuUz2fcUb6+nKKyd1SX5dPpoyoPNjEbuFnfQcyS4+f6a3JTqK+hKh/X3qs/VEXbP1f9T77FB7ugMqE
A3qkFLifaj1cCRAbY1Gy1g0hSnEuAO0M1J2Fx9bHMSg3rXgYzHzRc4qHgiz5cYKlVHtHl3KE8WJ7CYMDNoQa+8cXgp83JXi
DlpE2HTRzxQJjBMNP8mqvgJ63T2QGVmfx3Vj1w0WRTuBQqaqwBOYBIdsA8Ot7VTgbCTe1yHmbbgmUnbF/bhz6q5z7mKDDwe
JtezBMUE9oV3OQm1LhOf5rTiiSx6pmIq3gY4vuvmGQGx4eO18fIpEKzWuJYsA5yzFPZ9ll7ZdJjOyGBYWE3SaiFLzOcMfD+X
mzeHyF5f3k+gBD/lBcoURFjRrDrHELCNbwfqHzLxyEqVEHKrUfJzXk7bL8DBaKxyKhKDY1Vfa73DDxwC1DgDXFyXL/2jNLdXt/
YbH+8JqIP6/+AJNoA3Hb8v/ZD2jgHp1s4CBCL3+Dv6hlBgi+0Z8Ti/VnuwRtP57TquvHF0WjNBpdWyp38cZDIcxzCUM+mJo1/
6lnOvNw68/LH8zt0srPEl3BrrjEOXBOTOmcEN29oeYhTEPJKHvt9bN1DnbN/oHg7QOYLxiwWf+2xBWUrwHGOo3Xz8DAT1xWo6q
xkmpZZOoEsYRzNHbc89Fb7cNbj/sfVgjGhzCxfoCWnLi2yeGWthm/1v1LOo3QLPnF1IuRttqzqmnb2tSz6Dn57IC/3eY1Zlc
6HdrBLfTs4mwvImzHpHgxcg21rS31Kyr0Hm4F0Hz5RIJNyDfcbHxs+ey5G8S4NUPkXd0Z0+pyKU7X9q04XwMgb2jhGSrAYEa5
LbKSAgx4ud1dOW/Vh+Ig3dx8nfZMd+VIPm1uZSQvWtKW2oqczwQ+fP94aHP4hgU5x6xZ2ZMk2gKL3W2v1FxJxyCUHdYGd4jSV
JHFldBnuf2IfLiAo1i1YLJ2Djdc+IdZoM6Qg/bQmiFfb0ax1BhM2o3Q2ogFz49L7fm9dj5iiuFwH8cnM6Bj9yfLSJTnG8SGHF0B
4yEQvK+TqXTr2RRyGBXtBCr4PTO5gDa9IdmyK8N8EODCg/x8kMB6x5x41x5TV+kLjpz1B87GONdxwZWgYj3Kh9uvVH1T8F4hlpL
+Ewy+tW/4KbDhhZnSndxs9iOIvU5bD7EA13mK+4mpgfE/kfBZAYbqWrKw3OjC9Jx+bV3OpK1yhY3xbS3K9Ioh3ZHWdwDdNl+
h8+FBCDzunu1DqVIHsBNNqYm/m7hZIZDNW8CAANrAZuoXgyg5Bv+RBmS/AeOYdtsUtt0DVOgCPY1KbSeVxhBI1aDgI8SmfcOcO
JoVE4M4k8MMqHgj3bXqNSP1MDuCFUMjdQ0fqD5Lm9xTEQn3E2SvQhTg7dUflqSrNrtBS2jSXmx9zmKtLIqq8+SgoqJRQeIHn02
cL/GwM1vBGJ8Ek2W1AWjX6+qeVpY4KXkG5H8/yNgjPWl+mD0tTx8sf33oqmsbx5XIvwAjUf+9HDzk8QWMmTy+ggT8KbhBrRqeur
+rwf5J0iV0Li8iqj6sVYnJMpJZMl/vPhSH+SfGXyHCrS0TGU6WqGIkdOyYdvjgpOOM9KHfF3QoDkgErt6gHZFA+96pfDSDIg0
Fj3fgMqzrUJlIZfGoX7BQR9P6X9RLs8T1U2GTkVUCzrkTGQJ1PfvsNuB4rZk8EW7FNwYq3Zav+d4TkXbTqrpmzg1b3RbPQA
Z8Phz3rYPu2s23rNVADppg5oxhNtmyBybxuZmN2+pBoCDbEixNu4+y+3sgrycSP+fhxF6vEFrS5h+3b9P+Mnbby98o1i5LtS3
Hkvz8rHa7K4pVdh49TJuoI0OvzrNyt8hr3B7J+fxHj4tIpg7dEoehPsfVSdBM+xs1UZx5edM8PQqJwP/qMX+wrx2xO9kxTiCWd
hdS6eUD3ti0VAb/kehnqbkd02q/GvdKuzIHkF3NtVNCKf5GwlNAVemIdF57v2a4vg30TN1MGJh5O1Js/RPKtvwsgnl5YAqAjkUV
XK82frk05PMQOAbr0rl9RwSZnKvn+EvCTsCD9IMH8vr1Oc5udzzEg1+jcTpcFOmP+ctyhYlyPxH9rUe26IxDUNxyWbn2wExlcdp
p4bYgZ7Xh9FKCXUtrSgGV2lL/lGydG7Xgh9sVTSJ5Crhvv6ux0f0WRRpvpKCjCnrWKpY7x5t2X1pQrcKYX7oTuPAUcrrBc8n4
UHGC3ZeQYWGLM0qhPWA7cVlUsZc9JUzVkkJE3gFJ7p6GDIUS5EhaATMylOEHVqIZgEDUHMnXJ9qXx/+EMrJ/HFOgmwQfHO
0W5KhrHzUh1aKGvcxoX4TQ4tvsuFnBEFf2kv35NK8uuEgvz4Zo7rA0VxGxDHFdk5NOZc9r+zVnB1Fxv4chF85NUfd/Y8WFxuB
8kGjmuLiExYs0uB8sVJ4GcCuGkCOAV2HW41pZeJ/1+fgqJ8sE0XjQNDWEq9ybHI2z8+L3Ks9Np+o7IR2WAnPW03ofnJkgYO
YtCpSYZ/kcAAaNykOfBEYqPMqLhvtKOXTLmD0ltpYdrlkGn5OK6Vx7GmaHL8NGpW3ug0Ey8tYtPuE2L6Ic4HU8SBW4W4cxUW
7XyAXzWU7cFjsNLBuubtqZ3G9dn7fwVvT3OMBLW5bIP12cXn0sRP8Gmp9nMYdDkbe6ftvc0NaG2/aqCyqyzJbh/q5Cxgm9nrG
gKIp1QIjoDjRzr3mVq8zOmh+P+ul6ZjW9/ISkB1Za46x1y0oy60hDWsIq0o8GqKHW3Do7Vvr1gTKOz40aa+QfdDfEyYvn8
KB4dEdd8ZJhU1NFSq1jk1mDXKA0xq8tj4cOFgw+VCNnHALJnD5ArTvSj1mAS6ylUOjZlU8S7GKnkYALs/fTnlpf0

3XznUdy8ket1PpwtOtdPfkvX3U8lOAn2f4Q11GbEU3ZPN2unsHDwF+rT1gY+TLpAd72N5P91CPG+ke9v
KX7SEaw/wScHGSe+gejvJ7VXVDW/YB1jzmf0P39Q8/
pHswzVjrXEtVXQ0cQxd+bqE7foNfpP2HdL1bP6Y7vqN/
F0av74fA4cBxdMdlAY+G+GE+SHc8bqD7XXskMLdA/et09+vd0Pbvk3TDH0csbdu4rd1/
NszX6B5S9F9tWw+w5rDNL7b325P8x5DPn9zadUFrxwOsGTTX5SDg6vZzPB44oqoeAGhDY18/
wfVI0nrLkNEJkiRtVpIcBSyuql+e6bZIkrQh7IGTJG3W2rDKtwInzXRbJEnaUAY4SdJmK8kr6e6Vuo2x
76mSJKk3HEIpSZIkST1hD5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIk
qScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAk
SZIkqScMcJIkSZLUEwY4SZIkSeqJOTPdAIB58+bVbrvtNtPNWMu9P7mXh+vhmW6S1DP9GpbyI
Y3nilvNmuhmS1DP3Al4DbS7u/cn9PFxeA43YVK8NLr300h9W1fzx6m0SAW633XZj2bJlM92MtZyz/
BzmP2HcY6jeuBDYdqYboY1s9X0/4KA93jfTzZCknjkH8Bpoc3HO8guZ/
wSvgUZsqtcGSW6cSD2HUEqSJElST4wb4JI8K8llA68fJXlHku2SnJvkuva+baufJCckWZ7kiiT7TP9uS
JIkSdLmb9wAV1XXVtXeVbU38IvAfcCXgWOB86pqD+C86pqAXBemwc4GFjQXXouBE6ej4ZIkSZI020x2COOWBwPer6
kbgUGBJK18CHNamDwVOqc5FwNwkO05JayVJkiRpFptsgDsCOK1N71BVtwC09+1b+c7AioHOyiyO
MmyJMtWr149yWZIkiRJ0uwz4QCXZEvgN4Avjld1SFmtVVB1UlUtrKqF8+f7lCNJkiRJGs9keuAOBv6jq
m5r87eNDI1s76ta+Upg14HP7QLcvKENlSRJkqTZbjIB7kgeHT4JsBRY1KYXAWcOlB/V7kY5H7h7ZKilJEkSZIkSdL6m9AXeSd5AvBy4C0DxccBpyc5GrgJOLyVnw0cAiyne2ElLm6estZIkSZI0i00
owFXVfcBTRpXdTvdUytF1CzhmSlonSRvo8pvu4o7bb5r27bxuv6dO+zYkSZIm+xRKSZIkSdIMMcBJkiR
JUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMB
JkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqS
eMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6okJBbgkc5OckeR7Sa5J8oIk2yU5N8l17X3bVjd
JTkiyPMkVSfaZ3l2QJEmSpNlhoj1wxwPnVNWzgb2Aa4BjgfOqagFwXpsHOBhY0F16LgROtMWSJEmSNE
NG+CSbAO8GPgUFX9pKruAg4FlrRqS4DD2vShwvShwCnVuQiYm2THKW+5JEmSJM0yE+mBmBezqwGvh0kv9M8sk
kTwR2qKpbANr79m39zcAYB/
gxKp6PnAvjw6sHCZDyup4lZLFSZYlWbZ69epJNFeSJEmSZqeJBLg5wD7AiVX1fOBe1h7YhrJhJHj1SZSV
vOvD5XYCbp6a6AWgSVrQwIw72cFgNWLnLkVkvTL1cp8XCtvPiLhK6x0H7Dhd0L1+ICQP5skJvApNnMCYFEm
-deleted-

```
2jTPwauAXYGDgWWtGpLgMPa9KHAKdW5CJibZMcpb7kkSZIkzTKTugcuyW7A84GLgR2q6hboQh6wfau2M
7Bi4GMrW9nodS1OsizJstWrV0+
+5ZIkSZI0y0w4wCV5EvAl4B1V9aN1VR1SVmsVVJ1UVQurauH8+fMn2gxJkiRJmrUmFOCSPJYuvH22qv6
5Fd82MjSyva9q5SuBXQc+vgtw89Q0V5IkSZJmr4k8hTLAp4BrquqvBxYtBRa16UXAmQPlR7WnUe4P3D0
y1FKSJEmStP7mTKDOAcAbgSuTXNbK3gscB5ye5GjgJuDwtuxs4BBgOXAf8OYpbbEkSZIkzVLjBriq+ne
G39cGcOCQ+gUcs4HtkiRJkiSNMqmnUEqSJEmSZo4BTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJ
PGOAkSZIkqScMcJIkSZLUEwY4SZIkSeqJcb/
IW5K06fjcxTdtlO28br+nbpTtSJKkybEHTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZI
kqScMcJIkSZLUEwY4SZIkSeoJvwdOkqbAxvp+NkmSNLvZAydJkiRJPWGAkyRJkqSeMMBJkiRJUk94D5w
kaS0b656+1+331I2yHUmSNhfj9sAlOTnJqiRXDZRtl+TcJNe1921beZKckSZKk2WQ
iQyg/
Axw0quxY4LyqWgCc1+YBDgYWtNdi4MSpaaYkSZIkadwAV1UXAHeMKj4UWNKmlwCHDZSfUp2LgLlJdpyq
xkqSJEnSbLa+DzHZoapuAWjv27fynYEVA/
VWtjJJkiRJ0gaa6qdQZkhZDa2YLE6yLMmy1atXT3EzJEmSJGnzs74B7raRoZHtfVUrXwnsOlBvF+DmYS
uoqpOqamFVLZw/f/56NkOSJEmSZo/1/
RqBpcAi4Lj2fuZA+duSfB7B7YD7h7ZKilJEkzxa9FkCRtLsYNcElOA14CzEuyEng/
XXA7PcnRwE3A4a362cAhwHLgPuDN09BmSZIkSZqVxg1wVXXkGIsOHIsOHFK3gGM2tFGSJPWRPX2SpOm2vkMo
JUnaYBsr8EiSt9LkwwEmS1DP29EnS7DXVXyMgSZIkSZomhJvb9/T5tQiSNgf2wEmSJElST9gDJ0mSJEk9YGDA
kiRJPWGAkyRJkqSe8GsEJEnSUJvb9/T5tQiSNgf2wEmSJElST9gDJ0mSZgW/
AF3S5sAAJ0mS1EPTGUh33GYVDzz0MAf//
M9N2zYkrR+HUEqSJElSTxjgJEmSJKknDHCSJEmS1BPeAydJkqShvnrlrRtlO95rJ02cAU6SJGkKbW7fn
ydp0+IQSkmSJEnqCQOcJEmSJPWEQyglSZI0o7zXTpo4e+AkSZIkqSfsgZMkSdKsYE+fNgfTEuCSHAQcD
2wBfLKqjpuO7UiSJEmbmo0VFCdq2a138OStfrbenz9gj6dMYWvGdMYWvG9q3lt2+U7Txzp42ymWkz5UMok2wBf
AI4GNgTODLJnlO9HUmSJEmabaajB25fYHlVXQ+Q5PPPAocB3p2FbkiRJkqbRxuoZ08RMR4DbGVgxML8S2
G90pSSLgcVt9p4k105DWzT15DWzT15gE/
nOlGSJMwDz7mOau+8d9a9ZHnrXrkj2HTO2efNpFK0xHgMqSs1iqoOgk4aRq2r2mUZFl
VLZzpdkgT5TmrPvK8VR953qpv+nrOTsfXCKwEdh2Y3wW4eRq2I0mSJEmzynQEuO8AC5LsnmRL4Ahg6TR
sR5IkSZJmlSkfQllVDyV5G/
A1uq8ROLmqrp7q7WvJEmSJEmboOkYQilJkiRJmgYGOEmSJE
nqCQOchkrygST/neSy9jpkYNl7W9S9TKlic5dmZaLj3Kc1KbqiQ/SHJl+/
d1WSvbLsm5Sa5r79u28iQ5oZ3HVyTZZ2Zbr9kiyclJViW5aqBs0udpkkWt/
nVJFs3Evmj2GOO83ayuaw1wWpePV9Xe7XU2QJI96Z4s+lzgIODvk2yRZAvgE8DBwJ7Aka2uNCM8J9UDL
23/vo58B9GxwHlVtQA4r81Ddw4vaK/FwIkbvaWarT5D93/9oEmdp0m2A94P7AfsC7x/
JPRJ0+QzrH3H3ewmZ0XWuA02QdCny+qh6uA5XT/
IO8LLK+q66vqJ8DnW11pK1pTnImBukh1nooGaXarqAuCOUcWTPU9fDJxbVXdU1Z3AuawdKqQpM8Z5O5ZDgc9X
1Z3AuQy/
uJamxBjn7Vh6eV1rgNO6vK0Ngzh54K9lOwMrBuqsbGVjlUszxXNSm7ICvp7k0iSL9kOVXULQHvfvpV7
LmtTMtnz1PNXm4rIrN5rrWADeLJfl/
Sa4a8jqQUbujDM4C9gVuAFvtdvgdT2a1388iqah3l0kzxnNSm7ICq2odueM4xSV68vsi8qrqey+oDrw+0Kdusrmun/
Iu81R9V9asTqZfkH4Gz2uxKYKNYBxbsAN7fpscqlAN5Wd3Xd0oaerWrVP
Ze1KZnseboSeMmo8vM3QjulR1TVbSPTm8N1rT1wGmrU/RX/
Axh5ks9S4IgkWyXZne5m5UuA7wALkuyeZEu6hvtgCxVu6bsw2S6N4TmqTlOSJSbYemQZeQfdv7FJg5Al9i4Az
2/RS4Kj2lL/9gbtHhrBJM2Cy5+nXgFck2bYNW3tGXyFK5M2ms3tutYeOI3lo0n2pusu/
gHwFoCqujrJ6cB3gYeAY6rqYYAkb6P7G/paiFDknaRO0AfDkJdP8Pf66qzknyHeD0J
EcDNwGHt/pnA4fQ3Vy1NjCbAAAC7klEQVR/H/
Dmjd9kzUZJTqPrPZuXZCXdk5wnm9Rjfg7Cykpb7ofRGYkBk3wgWk+kmVzHGZqTGTOgJhCdK9FHfZhq0FWyYh7Ji8ot+v6qBJbsMuaaTatSDDJYcabn1z+2CQObdyLH/dx2D7DTHfmyFbBY7FgpxPoEg6SxwPatT59+Xf8p6fiJvZ0B62cJ8+8ctqI+WL7cn6K+uPcUL+5kyi6VEbyHmKWBPXfnCtfeyftLn3ZzGsd7ZMEQVx2O4T4R0ZAvLgD8Jkhs/2E6ZXE0NbRp6/e7rD3+x+Ndbl7bSLbeKP/l+P+J8V6Gjb9hnbCTWCFAQeWwcpMdJbqT+ZXN+K6frDX5FNTNbBVDEHcZGtKfW0pzdtTFg/d/oYQLJaFxxUg84fNGCdrCMaEzgvFoMvQCHvLTQp7iT+cp94hWCNW5kqQ28VWJfn/b8+gV7rqS7Og+eVZ7I40rD/ZwVDcZsxcoVG1ehrx/DOz43iCPPJbknR1hPYWi4+q6kIB0FRQZ+jMu2eH3tMFFYnh0f2nE2qCTa0+PQ3g5AXIZpujNUtp8/gvZxsECtFsyA+46WS2NGLQXaR1Brld7KUlt1QXmEzUX2lIg2LwJq7tx2zX1WF3XDUebFtAkc7WsQPZP9OGiwGDORKoWZ8TbCJlySmgtCdjsP7YDkN7Z6MWfd5oCD9/zYa/fFNG2oNfEE/+jsGLZJV4iPe9sp0E8oKr5SgjMTZjWPpTFgJ7G/ntcF7Hm3rnwKhwj/55pl0pH9eFrpzVmVbFSzvqHxJqZwUZLo1OTHwOiXMOLMxhKqZlfxM1VZAhz5rNwRJ9V0oMnJUSo9Grn1j8b3qlEH9Pd6RCW0tdOmB4bkvsEXi4JEcPSbPJv1/yAvNvTUV/Mw3BvRzG6YoODgx1QGWkbXdyunVdKgv6aDQgGDnGnqH2+H92aXlUQlzLM9EM5wsnh6fvLiI+xGuHTL02vAd2qqxGtWjoU1T1DLgOZYebjvVqkvF9KsNqiDpUM/UrV+DW8kOJ+xJjy8iIY/uAFzm/BItnLuiJQdcN6ewj4Ki/B+FmBbZ3btm4tA+J3S2BjCJFdhT2bv4sTKSnOrU6uVvFb4qUSn9idSYTHgXpGlxhg0IqEKO4Mz3OvtW1h/LcKR/Lq2Lmm/mhJp+Mio/e0wz5KiIeOJm+Yt9HOCkELkvuxZQPKugfK5KgE1Hjk0KP3ILqB3t6YMKuYd4ePvTuX3KxB0wNR3Yx8nDyMBNjZFHT1hLi3Bx+b4Ow4vnQTglQ9ru+nIjtvx9oOAaZB7wkmFG52gFB3BWY7zKQgqlSjFa7uDCB4Z/LzDxh5ooywd/iNCvRoB4y9ISqb7xqOCWoQXe2PdQ0nOlyGxLhqfpCwIQE1nd7VEsZz+1p46iKzJZLbXSZ6Yc6WQTJ0+WEmlAFvMlYJCIcQRb/4c5UxaODT0iJmfphGBQ6AQRPNzAC+PLb/nw6kPYn8uJdGcp2uU3W3a2JXwOCcbMb1zpIIs0+hYzaNfJYNJnqJNt+ywHMkGrpDj6wm/LiqRlJ5mmhG8PeWYMuHQb2cT3TprIgHf/xd2yc3I3d+NfGDbRk1nj8vu9vqgZzDMe6fU6CMLTdjgQ3ULTg4hGnJaVbjh6U35QyGpdPRNlY5fmBnNmmJ78AmqW7zvZmk2OsR9U0zz+LL1RwoARP+LC+FgMzbgy3DGe7pr1yqXgCqkxXEH3MfQYjMgkIqiRnxsnQcJfAhbJvyj2OYrttvcCIYRrqMm7Q/ZJ4sFeIHZh0WzBSB7/37Kb8ggtqB8LnG57t/cCGHRnyqBsE6sSdUmaZgvKbU4EiFUyqRu1d7i3YgAiEFOVs9y8+vO3Uf2XIqk9eU+Hq9kmvT0pGtbgM/mUe8gYeUmxkiqfdsH0odlswB0UVOdQiJFHBkhzh0mnJMgWjbh8ZDGLbJcm6zKBWF0ZcM/cnfjWhgt/lT0lHRBGeUbKsldMuKX1s3gfyO1mSkqOHnFttQeERyC+G6Rgh0TMBOSrVnWbZmBjXjjlXnmXckWz7n2zVFSdgf0nAFJQ8zGbRRPgdOyIzw1GlgaTYUYRG7QgULDi+uFUwlWVwsDe4o0YNXY0IYZB/wBw0zzHq1a5JFCZBB0sjt/cC6FCEZuM6hrQ2hWk/WrYHqVhwmJ4CRYfvmQ+ppi94ZmUXA5YTSgR8Lgcz1PtHA5pA2mJxvuTgFsa+aNaS8qrkAZ3vvq8UfmVPAc8/NRgEs/zSx6OJtc5EzuUuvWJW6+Ih8xkzQO/x8uObHxmOm5mzQw0dQu5CJjtr4Ujte8/pPnvNVfCHvhkaA6/pAxq1+qR16JDO5fsNIUKwO/w2X2LjPAl3eX/MzdjuCDkUIXuhzhKyubpmpHlvP/FIb5Py0ovqY8gXA/7PCjdkqA0IHN0XLgcCMGsVVrGEPfaJwaSwSzyLUu2uSmb6lUMH8ZYGSg4WKpwfi6YFvyEYhAj9c6f7Z6dNQqK6S0DtH8TZk6i1D/8fR5zytu/K6Cu92Fj3CaJIH5d2iG5kqDe4e82y3wV4xiLqkfnLEnuAnyT+WJB2e0Fl0L0Cmr1VXBp9U0hLdZ/wSwbp7mxvzXMtF8U0y3DjZm2/xT0KeMeeU1fZx7jCuR1tsvzRtVdTu/KbbL9WONX0wN1x47zM9w8zh1PKvkvLvC5DbWD8QHBh6/T8h8tHzpAAa0Ex14TCUS4xTd6ZBUQv/8TkHB0jS9E7kl7LhKQqbTENj16q76oLjfG5MrCWQ39vBa6Ae1dIQ8jWDKGHv69fhKsWNHbdp3A/+8ZpwT3VJ3VdHKBIP4J7Qh5n6tZs9QVKzOPe/JA9g4Gb6s/XGZkzDGFi2w33gmVnQ//6oYzh+lQ/mP+zfkQG4cAYyqT/eDunQ1LYANSm0jEKp8FFE8KIlBPMdvFAHHi40x4Qy1OOHjRZ2DZ2ZAXYxwxgRLF0ksxGOjJTdK/QiUz4t7C9zwSZVKgL+B3mGJmSFxEHzTrIxIjm87gPKvx3yuTSmrTxlO6PlP2vwZv8kTQDM12KoMcdvCVhW0aBVqr5Jr5t+QJhA7JGrOPmDOk8Lm5Tf9PCHzcLNI1AvmvP0rbgpz4ou2VZGY3wAS2hsIEjOCxAUTzkBaAEnVRdJrbZ0P/QCu/r7Uj81/lYn9Ts8J9Qv5dTn6YApH5Rd0lnL7rvnaIiWrADavGhnKxYhp/sPxkeCVk5ZMrH4SNhYjvhLPX0/Em1HxP9ukKBnSSRtzC0nVlJkEJHAAnmt5Mm2OyXqf3+pKjMAp1R7BoEPWQE6WVIPngB4wFuqKPz7WKSBaHKcmzUbRBD2Q5+3VmbvzgrMR6n0mk/+hs+e+QIbDz1+u8Zqlr2fxpvT2JIR2Tyke4Eh+WAvF3jWHObKdoRPK9X1N0sUXYpq1cyNKzNcHu2XQoZuzMZZTK9aZEOW/jBH5hj5HR0P+T0pmdw1gUVEBIkDp/bDR/mn8lGn8kWNQXnUjXXRvw1LQGM6k7WJ1JzHZbvnnAZVh0AgkZUTL4g2FM2Q7XQANoOyBKNVcDvBg+C4rUUNaqR+hLzmLAwW5pCP6I7bF8lGOPxDJ7Ik5wXjvPQ6fhNVKZvSQnlDXoTqo2KvVZuE7FSV33Z5f0o1P2AIHJgpUPuUqQ0DsNkOwmFN2Vj8tAjcWlXH8Mz5NDV6Cv6lIWj/nNrDDPQEgTt3/dJHRGyOP6GDcoUe2tFHo4LUaXiStCx2oNPlfhJw/3Yy3yR6TQpKjZEBGoVBYUSHUWq3A5qHMAz4BhWsB3P9o0BWxN1zGVgkEf8vP4ScQGtONjRyKYRDgdOKUDwH2m7jRtv3JZtQYgD3Qn0xFjgLACNBf46m7sTeDtHsaE0Hl4xUG5CpTBRQTx4nFfr5KArw7fL1ko2+tS0IOsGN6y3IdYPFT4zyCt1I5g5ehLK1UGlo1rgqMKfpmsBvT1flzWzKIf1lUqi2UNbzHpZZ0Tb8ESOtWMnZTknpkQyRE3MrItjx0J+4ZXmPqqqMfcKwKjSfYhXpwAVrFjfLxkJVbb9y6Yi+OvBTDB2CwS67ykMSkRnaJuw+c5e6hMrLMuIqQqHdKOUj/n1nRQ8WK57QL4ewx6bPehKhjAUqCH0N1xPu/Q79DZdYdSVUv/NmTjF7LuXqX05ZRYB2PyJiqkklXSHL3XXtWnEl7JEHyVUhQP8JtAPJMOq6XYJ9RUSZ5aupSW9fpFGIn0H8gPAqXNz2d7PwdaK41URbDmPXZzVbH4zE/dANRpK/53vd2Qbne1dy1kjEFZ8zlBBVkUwcEf2H5s+uWLxPp7vnLmtKMzOqlqDpaXvk5GBPYg1kLYhqmRWwj2wCpSZAkvT8WT5bGntXbjMDdggdtFkMOWWSqpPfvBqmIdPexo1NjRgNQ+vF4m3O1RKmU4+Sm8Lz/KOO3kZVV/hlDmgFtPEqUdYXvGVxOy0fcVj1cETLmNx/2ul1kBb+I4KrDq/WbHtBrL8V0x3zGM6N2wZ+ZX8RFJCu/vFXnMKCoIoR/OvUhiKJuxOEAkJw9drFtvzRLy7ixqyYcQp0dp0tH4+WXPr2W4N4QbMWwHTtHGoVgA8xcwhE9fwqFwaVNySyYXrhbjb1m2ONCAx6+cOk2eOUqHbIHuIf5n4bxj6PbgIhBsXTALWLWsXUdaHhW/jZd7sqkHnPy3lIDfwVUZqZ0cR3YnrHtiQT9qKHXsD7d+1pSxP9TPnM7u9FPaZSlg+aJiW/dc0RHNkdQTEfZqQ7wZ+9n9XpFwMCVuDlI7GSCNRoVUQqnd5NUo/ejmXwGKXnumUTD7lHhTYfgPm8ySOOcXlsmoSuETqKXkJvPUpf1yVRP0f0UKeqU+5srpZEbqw3tTKD5vjTjxmPEy6QPQBCtU2Eu3OBspzXHP3L5F9FNdI2wsmw6fBVCpiubhGwLBE6QSUFKUxGbx3SRuywhd1brE14m1O1Xx4Rj4C0Gy0zumPMYF0QWO6btxD38bGMgOcl4OpaGOFXoTqPCVx3zV2LcDYkd8ymXvB1EJmSHOX/dw9NMnm7xqbg6pzyYqEyrGJJe2OORgrDnEGOjwRbBCqbFZ2S4OwnCm5F8OVbFkAYrSJXsIlQvqvJdWcoO4LUbsgcWzFj43DNgyN8y0uIYpVuqAnvUcJg7zAhW1l4cyt8rQkwYvpz5X5Gb6ZAJZhGMvjJcgSWtY+K2q8mQBCvVkCKE3mrJwB8rs/ECG5Dwq4Ii/zSPmZyw42X/XqaanjHcWbPNtOEAL0MSLHjQkrzPYbOqCZLVwZKk8tIj2zZxkBmEyWRuFBKERNUH2YBmIs32WVU7hjaYtnxpvsjIjAGqJZyRGH6ZV3TgGDGzuhHzJBRvO4rOpSfUgqpeYwMMhh4Hq3xbyAPQPBC+ZVStyuFLlhqcRukqlBi+NNFHkcu3lCbe1X7Mg8Rku0CyAq1bdr/eMB6ATExTMw/Wgd7AeIUJEoLhOzmHTRy9LK6AlBWYXCVIWKOzyCGzGUrqjCP8FT3vTdD+oMGOJcnK7UOB5F0lLz/vlDGQS2MDfbVhOGm5XjGnuhxX8jXWQMxq/z7Fh+OAPrd1vMP0k3gXnFgvcuP8lS9Tl/ShR82IiszHTr7u9Bl0zpPt+7Iuz2jT/Z4cK/G4Ks5A+EgMHdDl6Dy95F+tvBPSoJRq9qf9RhHzGV0vd0AqsCUoyIXH1QQ5Q74ozzvNcrw0T5SubVGS3nk8oMqBUeuE1dHbkLewS3r4P2cO6/LqZdVFqRTUBNENwGVVcTYnT5+lTaIeUfyJd1DIqJ/uGStfZQzTbNV5w2uvXRMhYjTPcGj7ejAUz56xaQ2DOR+6Tke6f8GW+TwgnBaPaTG1PzSYYPO7Jlc3oN0tHgF1z+wu5Dp9+3AsdmCJJ7tAFm6qrVEafL8+XcFLAOH5qvAkHyJSubzu8v9KCFkBjp9nIRt5ybLo/J2GXmfKrt3C8mvqB2MJkMdDz42TXtQdmgBiCRkO+iMBHQKffgOnrBFvTUxU7GiXb5V1mtNPCRr1sd6GPQ9mF8ssqJn0YyF+FPChVvWxHV6jcs9BF5fHkzVn4UE/q/AlGSrsqc9zJDTOKYZp+0vNfhTKpv39NrGb/6eH5kIXKzSnsq44KL6ekHSlkZzo9bO8n7gaRULkh/2ZO12SY6IGJPiKpF5tFbHm0yUXFLvwXzq5JOX+GkCpMl1KCXp39UNlDUSXZPK6ynIa4HgIsbU+i6QnaTTu6L4a0KzORcSSE8qAKmbLOQm+x6A8dzPCPNsi9PCjRq1BPFFPO4Ue4g/F+1aeC5X3NlsFLjRd5QVgqR7zTX7sYTyP2wkQWZkPjbxLc1zOPbSyOCQDDDzEHtnNL5znJbHGZFjeaXKf2C7ZPp4Njlp2L+aMTlW4h8XtGEW6OdzHvaAHTMljV6DqwchSJpK8SSJMGkQxvMpa3Kr2Bi9D3JAxUXSObmqXkkDxjF6WpA5DwwApAVgTJ4Tv3pG49KIuNvYmHh9HPq5uJJkJxwpcAuFcXUnPNYzU1Xz8uVLrmqJY1dCR3QyHm/wlrPIMAdWuJHWDvdyR6wcexcA/Y2sd2rNfWOtWUe8nc1AFzRgGeMt0Yfu9DglMDZF+lM38Xx3EdHs6fQUyrxp2L4B3kM6fm7Q/nCEKpQ6M9tgHnxqBljh2AQJVJJjZrQeuVdCFAIAUpemxD9h4ClMQUBEphVlTYzAIcW4fMyoiUjJzcjEXQ5Li2EWwrj5Lmb+rEi5VPHU7glnNFv2SNdL+LCAoVhZ6CQx3M2YebBOdQcsoXwmAGsvsD6jtTPIkJZxEpfjwEiHtkR3zMC3bL7hh7PJxQOm5sczRj4xFEu7SplqXi7UKmGUXN0Z4oNJR7WXDN0ZGrYUR4OjG8EoWmQ7bN0Mn6bLxzJgKyGxcuFaDk0ff8fHVqGp4BBL7P8PRuqwvGGfqxIU5sL0GFHS2p/Uh3brxbFL2QNFsdE4gd6Q1yN3iqS6MVTxsUoE7LeLOu4aMJ06Ev5ohFzEuAD5H8ySI+DcrtNmF0r1iIcDiXHySMiHuIb2jlm5X3WmpdpCVSRe8vGvCxVQwCzMd4m8Gp8ZPxQFIcEkWJEmYSN9ZuE3sCtB0o6Jtp1nj3JAoEgOVmjbo3FqsoJ3fjTV4qvBcVw1QuWsZHGeqXBlOLJmM0vB1pNflABHQ6bkg7mD5YO6iM0xmNzcLNGQtkv2bG2SKfXmPYbKhI0lPRLTOXlvdwzaMwhH6h8IIEXFlUy0dJX2cYT/2IDjq33SI0odSLwOG+XdCLmfmu8hA0rpYaYc/cyYOfdJEfUjc14NE6xSPpVFyJ3vDhO1EkkyKwOoLhK1xBo+dTR7S+gG1ufIxYDyPyZQ5WSjFXIRjBLFB2mZEpSUJcULClS4BJfzkY2xZH9eDD/xWWsrg68hG7JTfNcA+xqQbmaNtM4LXyPNFb1bDDVoF0CB2zTwOa6AuEmdAakD/ASSrgmYpdI/hJJKyCc6s9whPf/kWVjGmjzyBHZDr0+aD5gJZwNYA+ZDw8LKq5/PPqMKIqlomQMWhXzn/kgNx9kNfLlvz0uyFfzCjnDlHsBlt2j7NmOIxazPh1qG7skdHRgp0GgODCqzmsdVm+0xjAvspxxjR+sJYyR2rSNBnBNl/4ty5v+ZSqNdHugmp9ETuUZ4zFoxcVzqBbZ4BYX2JZsV2P6cRxDwVcNqxmQRl2jV/tO84QnTjSE3SOaIzbA1Y3I1Ipjk1A+aBmP7/Qy5W6B7n5XT+EeSoIA9IdC2g9EAMlgGmGAwAvfxLsR5m1nrh/2Yjw6+8ymGu5N0rL/NDhQ3vgbzG2XTSkm+CZ+8lTbU4qkwxc5G+dB4T1u+wJDT8kR7LhRDFzdFBS3VgtlSvYuMDiQRgo1tDFx3uP3MMGjtnupHjRuTDlVxJJm5rHMTMjlSdv3u8RQ8HtOB6K9hlGUqpvZ8ZAdHyYnm/JjRHz8ZgOvFHXSk1BJMM0mqbmSWEMgcBb6uQ9ht7LmXRxqHJXX1JDflpPi7sJXS1emPHwc1rp6qUyaNBvyUmwdXWdpGMHM/JKVNjDSGW1Wfg0ti3Y0BjL3UjkjdsfDwV4HVWE95Lvj1YJDHpJjZWdaHYgNpwwdG0VpIfChI7oEGJWzjuyN0Ul7pITLa8AHxNPpWaaQ4G2tcsvRK6jQMdMP/M7i09OH6v6EAjnuGkhb0fGbp9H9bqdW0dmXNgb7V/48Lsu1WOIfg/K1KLjlv9XWGEHyyUzUXN6d4yTCWIROmlPK30Z14Ym7Ts6hfnmDE35N5iuZuOFtPbE8pE7a3iyv2IwcO7SHVtcBRG5dE8MAsGWkU9fHdNcX19MpdtUixg7tn4y7o+bkxhMNJHx0Tu8X7y4PH7iEfmQLhQGXT8mM72gDRtWOrnWuLQyuV1XwDvBTxfDA0A5RIlKMW4oFYdmdYxZVjX8vYMCNZGmctLRAOVT0ShaWVLXUuECzKgjhMhcsP1ihk3KSAwhsY6IQ6AcmWJRXCzFMkOhQOVQEcfqU8yJR2hLqshGE2QtgxGRBs8jPgGjQLJDTAAzy5+8ZIpY3RjQ2z2NuOUVhJrYLtArbXuIY7Qtt4rrqGypUnBo7aCvOUsCnT4rCpwTwVmCHEY9Gch09qdbPR1P9U7RoVD0edp6P3l0I1T8HB6Y5Xks+gFuqTTUjM9ZKq8qWWMF9Nrxn9rcHTy0+zv+XPQsWNsdFd9n3i8XbA0sgWJ2ZOQImJBWH9o2s6IKEwArRcOUl7MC5pbqSjWcKC9VQAAZyGKmgK8ERQhAhk4Wz4kPbfoOjv7cIx3OgMELQqkQmkjbLoRXh07uX+SoK0dnoJ7aJQrUl72h5d0T7zHmWW9x6OTJdPaGqajsvhZ1rF9qHSF1I8tTyFEUS8bLkHNYhfSL7QgFd0iW1rkkfJ7TI7yNPk/EcyqS7y3Bk5KkCPPsiR3CJyyWb2hVxiZFT5Yr2QM7mBMM0k/qjBMgdMS9SKvsqtZvD9O2V6WiYJ6o5YEZl0GdexjXWrzdQ9aGeAPy8nfe5T+i0jhBKiTbsDKvSBl9yeE3zI6D5y1WqVzNvYY2mtNGMTZGYaZlaC3v+Py2fXCUEm3eHkBoKPXvyG7jArRgbfmX3hxF8s+5kMV+4cTdIDG1yeMeHtd28Jv7AQzSAt1yMjB3sP8QeC3Rm3VT3pGfVvJBzvXIEqEM4X/Kvvw7dD5s5m2zfaBbtD3Td1hTEiSGAOodmZbDDGMb9xGz9crWW7Qq8MEIuuYqTzwlO2PdnzTtAAUkD4RUZ/ViQPZlvIpJUH0fGF9kpfTQmlGvjIV9iFk8YmWJKmsrCXAcvKmU0KM3u6f/GtoTQwrN1bX8DCW8GW+s1yo3sQ4YqvzZJdo5FL8m4PAFr4CX5chg+fPMPQMzqHW1K/TYiOdwa4LYaBZodRyBzQm3bOtGF6sA8nzLHo9T0gzRn3cx3ZGVBgGuBjcuH12nJWWp1D/yzRiV60Z/vZqy9RQD3ZVF8ioA6J3mRtRBOm9qFZADp0iYcJWJHdmNrYrUEP/0vm+gT+ZsqcCUZ5Tcq3z9UWmiDc1DJ2sXJzLRnH7PjsjjpIc0AH2fGBLOuHKyvDAJT8Hp/Z40q1yoczfNwfxqzO7hRbTuDRKkdD3d2fbqKkKsoZeENsCk/rSS2G5l6YmzJz5MI8zi07D0e+5E7fPMdBzc9IyTp9VDATMVULJjTHNdMCuWVwIedQrT8SY5Wp0SPGJGvm2h+TzFHATIyXcNHuz4GOqeaVXLBvQ3ZS8lNxuxDwzfmcDaTp4KzDA3GhhnRoqcfxKOnXZVhC5d5l+pGoRL3pnfTBSn8NCcaA4w3L1F72WDT4l1eRV1DQeIyXAnGnNmLOo4DHhfD2O3IVjl3i1rEEA5Mh5D8xbjWVpfeDTCc7PlHu2sCTZChCZRTM3W2XuHhGnxEOKFmQrqq5tgRsYZf7i9Fgy9Vy49y7JsWxPUl9VHdm4HovrS3m1jIuPLbcEeMJIfnGTjGo4QG5UK2gNbltaFAIJ0yVNvXpcwJrpLXYPWx+X5HV5Uqz/t1l0QKC0g1M2xIsmWBkOGsIfuXdKN9PSgVwG9t23bKQVE27U0LgWPGbFkTn7UZZmMSqpJTM1QKXBdKmyHrUmSzrdCm0rY6JH+s3kZwYa5+1cwROWL2oUlT3OqVhN7H2pCWGvRZVCF1oOmD5lmL9OErj9BZwGrK9ZBfBJNMbEg4QxlI2Lhzy4TjA+NLxBs2t6JYs7MbxDp9xZx1sxx1p5PHhAB1xxbYWVD1+jR8wNFVB3N+6TrDQEU5fQmrPuzGS4yXhFuJpUuxm+kpZB7z2c81v02bd2xT6iE5UXXa3NjrD6TYyhVCBTYZdiEgcNsbkvpmWmR9XgFYxx+xbbHc4odqdTtXzN4bfDGZkn49yPBUfPDOVwYOmahpfcnE2nDkCZwWdbdX2RXm1UOIm1nmR40YfhtMbvPOhR5kVkJzJTpbmDS5ViTlQJefHEmdrIrMSgaWSU0EK88R9gxLH0s4aCmTG7lNSh7X0wjLkEL/7gMcYgSkjcL2P8TY3vaebJdAmXlXVT2ebgY7hmDWWIeOLGSVf1M4Aza03cfHkhe/lHEPmsaAoqQfPRuhlH4AwMEIe5m6ChgIPNQaxPEUi5g/eNjWXnF8izQFoWz3ggMR92uqtQHOxGtpUE5KzvfS5o1PUCmjwO2U7DJwFAe9qoqXq6Co2nRPL8+fP1jIH5ta8U2d4a2AFlLvJq6Zsq5HZn/nWGYmJEx7SDkuiDkVV5+HLqa9DWNU/pJr/fGMhfrdTeW3cE1tpwoMvGADDGGjLP0UhIuhxFGd9I5MJ3YkKxlnR7H2Nrg5LzugQxK6A1BLGypFGWuf6mqgeAlOfKdpyyDeBvoDjuCK0cBfmzpGqeYL7A/41y1CJW6BWYoKnSfSRM5k/nzfLxvt0dKIMuxmS6bd1ETFhUvkXLf9t/2pMZTHyeIE97ACzeRZsrBYJRuqeQ2Msbn4CEMmCoh/5EXS9y7ScHUcTq0bYGHI70dWqBj4B+nFOqgMqCeIGFavAZgzWm/F9kY/TFTpZRhntKcfG+TQ0OzNY8zsHSbdfZ+/WcP/Y5X2G9UsNPRI8VScSGT/fZBXx4bVm8pKHfm2WkICwHa7zD4PyEDCOqfP+hzCdHGLsbtrAEqfXTHuVlp1nxBtwtx1Mdoqi8yqtnp4NLQU4V9OlSVkaeeKCs1N/3kFMRQVTnOmHHYqb6n3WtLEVdYRvajUSYi1ZaWXtV6ql59nbzLGGhf4uNn0CxIoPv6oaEKEkf1mlxBxK3FqtRb5GlHjfmPYITcJ6Gad8gwqb4I0uoQhvd/DrzvOvn8qEMSuFQXX5qrSVdQ+AFjg8uHHrTF7FSWWZ0MrNm87yVfrNfEdvPeU9Crx2JzqmX1W4pNvhnSMeRWtIwWN7s06VBNUuE7qvs2pPxAeB5xgJJiVDUVYfSS8tv6WZp6j54MUYD7rUvmyY5m8eVsvvvd/zeLHGp0nkO2fQh+gIXHP7YJNhEIZp/AiXJ7+BaP7SeVU20h4hjzHH+9tAmFgIkJ7wYtWlSEVxZ9K03E+FEHSw1Jz7Pyc6RvZuwp0YWiylz4Mlqm5L5aA6tmRBWrd1UU63fNVn0Qhd9oOPCrxpm9SO+8j0VEZDG+QGtW9spGHZOJZKsqKNnRf6RN3aAQXDEsujT18lhaB6t3xKmaNYwdQRqBO7A2zsRLQtGGmrmOUAf/BRYCgIvfgPFEBMc8b7NfAUEyV6eL5dpvMpjW7t6VcdHuOO80aaiaw6Q7DXtIdR1MqVWY9N5vzRgmX1kVNsAVbaoMJswyPrNtEmT4vFw6s4xDnkwm3Mwi5ERTBGzmoRo9EoT1ahkfL8QU7kVQ/J/rMXqVPwp9C8d5W8o1mJRk2Ysrjo8G1AvH6bOaGl0R8fdXgO9RjfDTx2sH0R0rBlTUXfsnEbPvGNRswakJQ3KYjYM0qpxD6yjBuWlAZ7oC0PpZiIgO7ff9vJNwcn8Os2QMXu1Da/0nqD1IzCHkUVIJMT8J76GRWN0Wpr1p7u6VjBXLHbArQhMnkb+Mok5Dy3zuPdGRMCR9JwgHkgMu7CFh/d0qT3MzwLeWfbydLVvUpsVVPmh3Wcz8Z24Ppy6CU2AKb8tKZzi1/a0tYhw9++M0gnK4btCcgsAn5h/ATyDwHD3IMb7FDCh/Kob4g7lN9A3lFMGyUZQVFiBp1K0pIZ6cE0lW6lGf3g5hHZtmRyDXnoe0Cn+uQ==
```

[END OF PAGE]

```
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xu8XWV95/
HPtwTEG4RLQK5GJdZLLYipMHXqWPECVAl1iqAdiZSZOC22tVJbdNqq05taWxOCjUQFVEvJAqohS11A
tIsMhFtETkEhNJ5C4gCP7mj/Uc2Dk51+ScnKxzPu/
Xa7/2Ws961lrP3nvtnfU9z7NWUlVIkiRJkrZ+vzDTDZAkSZIkTYwBTpIkSZJ6wgAnSZIkST1hgJMkSZK
knjDASZIkSVJPGOAkSZIkqScMcJI0iiQLk1SSeW3+80mWboH9bpH9zNhW5cmmfjqnWIwjf1nD5ngPjyZ/
nkKmjQrJflwkr+awWuN6v1u35/9NnOf+yb5SZJtNnH9NyX5OOa0QZK2JgY4SbNGklcnuTLJPUl+lOSUJ
PMnsf71SV4w2vKqOqyqlk9OftOeS0e3Oftpr+H+JLsOK7+TvK8qKc1Oftcn5/aMSC2NjjxTvK8JD9vJ9JDj3/
ZlDYCVNXTq+orbdtbRQhL8s9J1ia5M8l/Jvmf49T/o3ac3ZHk9CSP2IR9fmW8/
cx1VXVjVT2mqh4cr247TlcPKW/9vqsr3WNKsYYCTNCskORF4O/
AGYEfgYODODxwAVJtpvmvbsbwrv8AfCKgf0/9rLKgf0/A3jkFGx3Tt5
B6p8rfAguragfgCOCvkjxrpIpXJXgycBpHw8pRPOPOBmcAyc9ooFYl6uv8PrWg3Z068G6E3j1WO91m78+y
QuSHAq8CTi67evbA6/7uHa5b4vr+YbmJBGxWuBVhyjIqT31yaQWzxJKSOqBpTaxAS1AXg3csATS
mADBcAN0D14e9RXmnJ/RWaqKo+XDVzMUrLw2bBVdBwV8o+GZgP7Us1g2NOnYeDyuSX+f1ahmRsNL6DHIsT
JwT64kAsYOMPmQZqLsc/p7SsfGWD/p0QO0MgAZEH8gHrpBqnHI/wrU8fBTCGpd4dtXbHgBZRJw5uqqEgzm
jyA6O/dwCXw6ZhtSpTa8yaR3xlV9yXI9X4XCQY5SmQeiN5i5mwB/yBYs1RQXrq1ReZkCtB/ZQlL5cOC1bmMcC4
r+ZVGU5fUJetBY5QrMK1sJYnJUd6fRowjyYXMEHdfJ6K3Qi8NHrQHe6qpCHk/1/HPxfeLlU3h5oX5XSBFbPrRk
Q+DUMtNQDYkg8PncAAqp/SXFXh0HFRyFWmDxoFaQXXJfixTUkl/mmfd4hjzyHn71mnsXNWKmHZQRe3bjVu9cjs
e07Yk9rnNO1oKaHrPkGMzzqlxi41WgWtYvb/Wsit5fI9/
Xh74NmAuc2GR59zAMmC9MMJ1ZyRjqxrw3q9ePvpC4E/
rYqk8wYnNVm+d7mn/1pUo+gjHkK/
iXexOk/AD3xF3nKqMyFOmGKx3dPxFzEYlNaWdhPlCqbIdtB9H8GWl+CTfA9YaLeb+2ZIo4rcOf2yLbPEuNaV2
Z4iQ5eqEbSbvt9A/EKvZ1jZaj+OX8b8hfV9RJ9qQ+kzo0Hg/1tvMiHkOfVwAw6VHJMHEV55aq4OeZyFKH4Udzm3
ib7qKGYq1u8DI8BbsLUs+5ppF08VhA4WptJCPj7lYYn/qQO3vapRwkCa3BvW4vFt9prjg5ruzqrawJ/
xTf2V5M9C8yt9XLDVgnZU/x/x9zUnItrGLOZT/
rgqPcjuN0Ed0mF5R8MvhUxA5kW9nnGhS4Z1Q3nBJBPppjeAU3XUjEEh1bb/8hAFBo/
hgj9kmNbcKBFsAUmoWa1iyHpsVGPBOq2UIAqm7cpHz5/h0vL0jpqWl6kkvgDAuN/gaxUi/
zd6cvXjZ0zuBkGdt4n79e5A1wLuBdktTUxD+1fgeGMCp4q/
R9hBXaDxHSOJMJabIuVW57MdPCVdnVP4i/G0dx6/z+F57+H4mTkr8gaRwN5w2H1dNomelerC6/
JZIvLm2+4P2ZFqlNzPnw4Dbxlf+ygGU91s1SyZ7ZkF8B8bMEyjzbWLEnTg2wqJ4RDQeWBHmbjHZdudjqL8+
b0Nb8KVKkeBKZ4AvlY9i4v1ltevwQrsTDp1E/
ZfgbBjN2MXJNsxtozVXPvNmnRsJ8Nel3vT9b9pwUfmb0TxY6X4GSjSv3D7Tx+ZcLfjPncSqbm3Kpx2evC4p
Q4xmr6xp3bLqeTKvtCRjFPgXbGLmwQx1GLFdPUyE5yj3eqpDfm+s/dYbOTCAh6A14DIpt2qPkrOaW+FjxWw
jxrjn6rFAaOhBdG4SV1ACsAAEfcd+cIz6CfG/Fm5XXpb4KT7p+uM04kmRSexvlJM0j6+R1bSv1VPh/
ab1S3hRTjhcxEQ4dDqlAUO/A5vK7eAO8gtV8YhGidyRywDT2xCGXrT+MFjMqH9kRDm8x6oGLKzKzhcjCZ0kE/
PUL7LNftbQRjsCezw7Uq8hvb6A1Pj7+kE6Y9ZHmvl+Mu1Dh1/vCLoQ41ru9Nt7/Jm/f/
RY0SlxqZkiRktUDLFsoXBQbGE8LqE/4X4Fq74ZZYukO6jIcvLgy8FBeDkNg+v8rS5ib9Be8RBuCtmxE/
tF/1MWL5BXHCOnAEg5RBG5PNT4O3qRHwuFjqBW/HNzH0Dmgt0aeJ/
Ldvt6XTGf+xKBf1SE7yTV1j0mqLfXntOq0cfzW3TzLgtJ3kkPaThzx49dB5qzNP7Q7HXt4wuGtx3FWitYM/
Ji8NrI8qzr1+vFD3eaBFJ1S3wDfmpB3Snu5oq6GSgIqlmaA5JaBXN6sT3dfoqhO7r5Hv1eNlU/
fCzJJMlNzAKAh5xuuf40i7gCF17CmAh3sBrbOyApWewlmsO4fyJRLs0o7S3u0uQuSFVXPa84ETl/
Dze5HPH9LWbYVGaSQVuKXjbMpx7jJEV2o1kU4UJ5y7x5C+9K+F+6nvJKntc1r4R4pmfW1SzTMbWeibZFP
s8pLHLaD12CNlIdktyXCWg3xtoztP4eCWUUpT0yXPJp4i4LFDOzR3BmZP4t1rl7xj8Nt/
8ZRCgwaHu0eHaeCCt1xs39u/uIrQtBkAY2bLeKq8E5MPUtB/Ch/03Bl5ZP+kGzwdnnVdQTQHpnzbbeM53vQ
EZwGu4EhNRjSdcEZpgVjBTPf1DA8ymKTV2tFnl/lXNWE/LNOIL2K37KRpZ0nCpqRZGGdV/
uqkfdiDvH6RuN53Fww43RbhqRcHv/Uxe+vFRTbN/YqkKRXqe/
jXVzOn6IWMvH6aTTkrxfN5EPbX1FBIi+FNgo1OKAsNBxPdOvJehsmBqTwEMOpaVYvNzsi9cE/
Sdz8Pyq2/S1Ch3pI8gF77rVBhV6u5jcz9t82bgMcfzGhoRfeMwCCU6Uwd3ATm40cgZxYYbkbmMS89Nb6wXs58/
A1IB4hmfdo0L4qvfnb4wYmqfdbHQOTN7HaPgx/72S4Qn9vDLuGrr/kjWs7p+Zvnl/
NhynejR7D7jcS2BE2ZSt/
Q6N+Z3U7aNNjJgWc1ZXSGE0CY5HTcNShWeWl6UmrDqyhRrqCGWSwXdXq0yxbHpKO6RUNXF9JDQvODyH+2NcXR7GR7A7Ea71cmMNSdYeF7ORXAzvlPT09gC7OiEUtnyfbX8+Ad/
fI18h+MmAHoTpO6CIHhaG9ivhZAGi9+vmDp+s7SU+0bKXX7cN3jVxAlT9awbV9vAeHVk/
JPWzerKq+5yGFbBPm9/WiuuOQFPMNFCE2zrcR2D0PDnOlf7EHpPH9fHE79Xt2+Cx8ZKTuxD2y8ydQ4ZExB1fL7D5j1BeWrmODHu7pyC33VxiNE1D8B/
B1/BCfPuV3trl2sPS3DSJv9O6mm+xg+MjqsP0aIB1/VRNf6G+JMMP0u+Jph0S0N8ceXxW0eepTcw81hW7/
fEMaTm2OMg8jt0/TrcZ0VD74a+fHyXF1UP7tw+YX/
QAvT/uMrzkD8iyLw8Bhz7X7tu/
XWU3KG9TXqhtFvpu/CLZ5bNdVsLcKnyuNRF6w/GrwFDHzO0W8bZ6Wh5/HxpYvtaFtz6C49tVT8VNp19P1tmNxd/
F4BIqWTk8vnUJqGpo+Wu6Z7yWsb6Ud4XS/FoQXv2k4J8NDIabDz+HHS4PeE+hU7SNOTpZVcRsNVyzTd/
W2pa3OAuAUTujUkoTM20zGXTBkzsv87qjAZU4xdiuHFWTTwRe/WqPGsD9ObZFiVuAmw/tL7HH8KkaaVW/
7Q7WzRPhJVrlLg6/AEGNkVgXeXEBsn1M84AVYZJuQAgxBR8LyU9q+iEt5qGf+LyXmUtN75/SjVMkyOiG5A/
l3V3fsrGEUDaeQQxdrnzZL+HflT/vJCT5b9A6Mjl4FNzXfYxk8Um6sKe4b+zjRPczWiNLOLHl7S5qLi7/
IiNpvoCYwMwZ/wZo9/JdlnxVzQRZEQkxIEWHwCHIVMWpGkWRJvNDgHelNnJgFKc16zCmFHOGn4cmxKnHNoNxjjpHVCUtWiNLb7cGpEKvRMDKTcW5tBbN/
z9lw3MSvv6dzBB43iOUEbnTJnXbG0LkL1rKN0ZGgH6QGdMG41Fy+FwAYb0rwGpqY/
6uGAGs/Jj1Aw5yzyHQnkStZZ4R3RIuOfHpzl3ZaABUxLONfuM/
/Gz5+ro2fzq1rs+BOYkh+zLF2Lm24UIBjUh4ilTHsaz0hhz/
Ck7qa2hBJK2mq7mBHDH3P29ZgWMRfz1VgHlzpmwhV3fN0egPAQ/
zyVSTAcp7qLCsHoWVAuOB0eFAjzXXsDgHCF8wH/
KMqqmxArxT8AVTk8FzBfRRsE3rVu9BtN+Cvlox6CXAkw8ON3UnyExwm8q9vzX6bekKJGmZh8VR2A8aNfEeixo9P3fR+T3YmfTsjHb/PgbP33Gg9+o/
YFvkWhz08ZW6A8vAWEeN7KhT7LS35lzYLyyYoS5/xQHv2/cCfpqjSnJc1rSBUjv9//
ppPDycJtWHPR9SZwqjFtkRYvp4qT6B0MR3UVlMr1J5rPWLrDB9/
bn2QL+e9u2Lm4dmBtQ9oRIGyXyDwTf/M0SNkN3DRRkFVt6/tv9bn47vvvxz3L/M0q/
hZWjx/Ci8nm8F5/oNzVUwhN55kQ5T3yr1Hz7X+uCgaPjWcHjGEm6/Jdu/
AgD9P1uXFPmmMeoGRMlhV9x03yCgnWDVPRSmOp/FVXtPPEvJ2jwfcnKgqqu5aGz6x3SFKUjuhz7hl/
Hz59nKxvi9x03Xft4Qz7pvVjMgkwNXMcsqtGmbIoL/+eUOIeHGN5D8LgFNgmgKxMbdj0DLjt2+u9ceSrfNJ/
Rp8ZldV43UuPBQHmfwj9Vtff1D1ScW0lP4Lu48bdvrtlE/
5/Hg9TlGNjOGg1DE3i0x0dsEwDmg0v//cwevI8+dwx16/
y2yyS8MFIAT7TxOVWdyW2Edgrlu8uWIEs1wUt2Ht2uFZH9Ln7JdROZqoX2VExkvuDZA9ydT18r81vOdh6b/
fDRJKmjULhwuDAAQDmA8+YgaIqMSV7s3BYCzuI4RL2Kw8XkbA6NAuO56jLBPwHztlELwJeWpiQTyvkTjYLRuXa3bbo2wTyqxc/
w0ivH6p4v+zPhThX8V6dHwOX1yOxhdL7JH86EE2BZH6KbzdJbNuDGXcq0ltSkrAy9/
yUfQnqEq2kqHKwLS/yPvR7Eqg3PLzs/
pegqhuggD2lXBfqD69JdTsttbOC5Rb/
3zaj7Hvqxb9qfu4xAkxCNFkWNA0bE/
GdF80F08eIGMzcZXnfRr93u4v6gxOjF2+I55q2fdOZ+4CZtsVIjcuqzP09xUywW0+eCrdPUV1y04krwYuOh5YBUaOimp6WS8zH5CXUeH3Hh/
sTMD7IHxuIUeTxt5cu48VjFlQLDKAE+CaIyA4j3ehVSfl+Cv4V7IYaB5WEE4vNzZJUCo1B+xdWEq86lBEgQp
cmaYZeGr0hBZnfGzaa0xa0tRCgJl8VEqTNFtX6aChVpIfNuDTXXPcWDBq8YBBLu96L3DWAg6bS8ihPsGQtBmVGKTzo4XB7aH9aUTqF+XeEp4Kyt
aYDr3QzT7Dwu0IyGdgP4yOTCwZc9fX2VwxAUBGd9Ak6aRdkeuWsF4Ze2cO8o2VPOh4dh6J+r6h5etp9UbjI7KDUm8MP2HfmuFLn8G1gp8GOXsFKGCNZSgNP5RJSjqHcGHtSTZmMJkkpJIZ6Jmjv2
+3tNT91YNn1Sf64fT/
vaMfV9m3Zru09uz3JrUn+PYZcSTPAHx5Js8Gv0p2ofmqwsKp+QndC98LxNlBVrwJuEf
SBY+XAQuAfwc+NqzakcBBwNOAFwHPBZ4MzAeOBm4Zr13k13NQcD36E6e3wGclirj1Lkf
BY1PiSUOaqSuS0WNGK3hw1R9OUibiYhIqGwgPsdx9VnXV93fSD7YTbqH8bNFvyW3+x1WsoZJpu/
ywvpl/B/HAYl5j7jySLlbtWkLkK38wpJn/AUvEd/
8aw2x47WS1+MJKY3C2L9q0LV2aCafZuaA8wXXFAqjcAvrFk+4tvkAt5ejDdDDMRBv6o5EJ0e+N7cyQr0CgrL3AvDlULU6Ajc+A3cr8hp5cs4GSlTmgI54+6Lu2BD6sP7Znm7+3l8t/9RT5+a2YYHM/
Hhgqbu+4k8D5Tb4xtGpAugVZKQr8jwHJv7bPwq1NMwaoLkHd+NmzCUvEwpxiuE+aGpl7HUHYB+vA4xAUjrYBC/
89/Ayj8OqnG1JufW5HFmFkmNlwAGMtvfsAuXBvgsZfmRPwJBW/KQmvuH1tb/
t77eoVYPu1hTp0GKxbsHhOZAxsl+lhjsmNyY1q1SChTEbDe0eiIEuIRphYbd1aI3oZqIaMHx95HwS9ZZk3L
RzjI8Bdr4gm9e5XQ1/c2VTpLmhQ6UsR0PU4klGrDbgJMALqR3oUAXGHPjCrgDJSbrU1KRcC1uP5PNoNXsxw+
6ZA1mIZwlmSlPQxldXA+/
mXmZ7nydnkwDd2Tzo1Vy+i4HMNxiujeQfR1UZWLvRZ/
ngy2VQd+uZBGCKH6b85V4m39MtX2CewzeD7z/XvyMOeESzoOFXiKgN6FpKYqOOAm5H37FEUWQqhyQXfDNbJ2q0LGpJqFZBKQlU1wHYqLpgM02HyLPh9PkoN5jLcxF5zcmh23Zcy1XGnd7y6Ulz9XMK4vhVDdlGzb6KzHx3vZQpPxBaLMbzEgtD0SMR0Uox09KR/
vc4ZjZU4W4Z5GYC4PKnC6znOcW7rf+IOpuntsKEpEuNB7p/rt6AzG/
9NvoKHKGDU6CA7rpZIjTj1K9yDWkfaUAX/
hJLJr/jcZZMpvPRwxkDKcSpdWhfZmmjQmQzqz2XJTgp+//
rTK0tBcBLQ/UIbO6dd8ECDfYvYjmXwd69Yoth2iJ2rHvtpG4yAYQw1s0Omt7AlSIaMpxk5l5PZaK1Y29W8rp+
/5C4Yx6YfYqKd7hbB5Mg7jlYuhQOzvqdSTbqFHwaEwyxjUavjyqrrjO9A1J4FmvFwUcyvF1Zn1DmVr6h2p+
XW1i9RnP6pUp1S4Yrqjr+bwIWFxkX3bxHlWG48oSzi0VEx+8Rx+rjAD4p1m7xJxT1PUuOcEsW3fgnNRGLO8G8V7rvrQGnaFODD8qjfvtNDJ/
CxUa1a5/D6sd5ASFh3LmDPN38a3Mbb6dBF1qMwMbF4/rHm3Fhy3f6pyqNR/RFbrfUgDWsCEwYQ2TrwUqKvQE+
QfwIchNqpJrgj7mJVHFn66sCvjIbZ5A5EHu3a4+Vq+ZdMrZeZxzRNP37+Dg0OZUpb7+xNjb6HpnCT4h+VfK3d7fe8mZH5qexkWgW1U6G1P+
Da4Y3CCRq+P0b+W+L8hTZDp0OX0SN2+aBaAz+NNNTzGfA/
p2BYdvDPhPNIsT7W0F67u+mNKt6s4kdkKE6GlFQh+cDOWcjVDbj4x3hLzjJmdhPbAVLYp2JZhRk/
OCSV5tr0OtVwZtT9EkpmB/
m35MAFh+/nXjV6fGS+rRQoHT/0aj+f5v+3nKOdOwdO34tsbc6SH2e1UDc+SBSFOH2xlFdN52d7Z4/
jZcVjqeZw1DJG1PWyNQPe9KaZhWS+GMHF4fGqWRXQ/
DFlCEd7+wQ/V2KLDdn0Jc2x8Yk7RNl/cPpiPqzPgWS9V4+rAG5XLjcfQJDBnrnSrG5ViFFVf9ohL4d9E+gl+gLDJLDO4k8DzRC3KtWuKyECzuH6OF9HgbQ3tAmBMZqtKX6c
RRa+RHfSQeDf9q4cG0H3WGU8oQUu/
Cr5DpwvJ1Y4HGkZ9ZAq6XJH4ToF0Kcd/XYzUaDdD7AxS7cMlSWaCkgdSqnXEsA44c05kkPJf8qJhGsqdIe1nFPmMr+N09mQdUjOG30VtvBwRqdu80mWvHYT/
h9WLoJrhYBY8kt0Ot7+k+oRLXaSPT4Dh8J3LLxz71aqLMRyRE0RKb0XuVHbPVB9lzwJ0rmxsCR4rOFpFzhGuhB+VvqTmcRBDhYQ/
mUt+4RzU/pX1Dj3Y3/U7WtKMfsi0J5SHspoopT4Ou1V2OfmFPffe4B3LsfIv1PUEsKE/
gG4Z36fR3MPT/l/Kj1hMKAWQnbOr4PE4Kh0IhHdKJsB1Yb3A7kPM8MRHxQ1eEWfMa3AFM/
+E0yX0/
Hcbl8M4NQ3yjpCOIUh4pAHxoDJhcd89Qnyy8LLxAP/
I2H9bx8TmwAmgwwdB1n2KzSGoYGa8Cc1ShFbxddP/
T9s1qUxBq0tvbLMlnwXqwS+ZV0oIM4F1Mi3/
nHqV9AI5y5R5cB7vq4hiSDH9eprL8D8qxVvd70pmaKmhIB3bzMAGfbJwAxMrgxNBiu0MQwVsqrAwvZ8+9DeTXKNgrR5DBiWZHtUH1AY3QdfUpMzj3wQb+ki+SXBVw5Nx3NIB/
xhLfdLHCYnjcY4SHcXE5t2Sy9JdIUv98L/
5BxTQSL4PbOBfkDdwZu+4Pa3mtgOuOJSzIFQ23zXAbn0/wdfYpT0S3dTtw7K8nSlqrFRrr1nzUBjRMxlm32wcKUvwwDCpN5g7DVUOXQXS2TQ88GsbvFQrOK/
O/xKNj4rwEAzv0tdYvJaF7F/u70AQs6E5ORG0vo+PRmJyWY8n1Ab5CUkJWOw8E3Ni+dGCKHXPlePzYlQoiLB1/
0QZzrUFfRJPBsIkP5sw9WhzPo6ZNhy5Rn8+V9/+10MnqBYqCgbs0DqXb3ONQc6Tgx7Wr2RrEGNZ9xobCL6vw2ANNYvmbt6gLZe+
HV/
wZ7RutfP29KYRZJDPpbs1hrejo2LOVw8ZfkiRANJfFdU30AQjbNTxTxOxpKpfWS2tPcy3cZsIfhHNRz3RB/
MDGgsLw6WUAxwc+AcadcTZv6+BSi10xvSZxHZ1xfH4HbtT9kiOpvS22JHspw2Gqx0+4W+P0gBTTw+ndOzKP+5/
xdgZfbbULNvbvPyeEYd6xFHmAMnuMKWTXmMZRjKHVyF3/jaI9SYy9F+0QjSFLW7k6XlkO9Sd5iajdS2GySZkgSB3s1u8IXU2vpmJJsX5e3Ec/
KM1tN1J91QvKHXM/x9fizwALAemJfkL9iwp28s32jr/
```

```
kG6m4C8DHj2sG3fC9yeZGfgzWNtrP0RYCXw1iTbJfmvdMFlNGfT3cDmaa0X7aHtt56uD9Jdr7YbQJK92
vs85Cy6a0V/
l1F634Dt6IaUrgceSHdDnxcNLL8Z2CXJjmO08TeSHNK+iyfSHS9fH6X+Q5K8JMl+LfTdSfcZTvd3WJI2
YoCTNCu0m468ie4v83cCl9D1kh1SD99Z8Ey6m01cT3fdzPCbc/wt8GdtiNcfj7O/
T9PdlOGsNhztKrrevtHsQHcCexvdEK5bWlunTbtOaOUmrv4WYPkI17pN1Hjv9aBPtOdbknyL7t+mE+l6
S26lu05rrOuLzqUbcnkb3U04XtaubxqyHHgGYw+fLLrgsLpt553A66rqXNjgP5PeFx66+co7gC/
TfZ43MHogehxdiLyTbpjgv/HwTWXeA/
xWurtCnkw31PLzwH+2bf6UCQ5Prar76XqhX91ew9Fs2Pv6brrrvX5MF3DPn8BmX0l3E51b2+sbbTguVf
X5to8v0Q01HB5+/7SVX9y+M//KwLV97ZrFb9D1Uo54vLRr5/6ALojd1tq3YmD5d+l68q5rx+6ew9b/
Ht1Q2vfSvQ8vpbtx0f1jvQnNotbmn7R2vr8e/
r8MP5DkAxPYhiRttmw4VF6SpNmlha7vAo8b6+YhkiT1gT1wkqRZqw3LfD1wluFNkjQbjHTHNkmSeq9dQ
3cz3VDEQ2e4OZIkTQmHUEqSJElSTziEUpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkq
ScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkS
ZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9cS8mW4AwK677loLFy6c6WZs5O777+bBenCmm6ER3Qv8f
KYboR7YJtvy6O12nelmSOq1uwHPB7ZGd99/Lw+W5wOanK313OCyyy77cVUtGK/
eVhHgFi5cyMqVK2e6GRs5f9X5LHjUuO+hZsTXgZ1muhHqgfX3XM+h+/
3ZTDdDUq+dD3g+sDU6f9XXWfAozwc0OVvruUGSGyZSzyGUkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOki
RJknrCACdJkiRJPTFugEvyi0kuH3jcmeR1SXZOcvQ5IkSZJmv3EDXF
V9r6oOqKoDgGcB9wCfBk4CLqyqRcCFbR7gMGBReywDTpmOhkuSJEnSXDPZIZSHAN+vqhuAJcDyVr4cOL
JNLwHOqM7FwPwke0xJayVJkiRpDptsgDsG+Fib3r2qbgRozeZ2kwHHAG8cbyqI5TVRgVVpwKnAixevHij5ZI0Fb594+3cesuNk1rnlQftO02tkSRJ
2jyT6YE7DPhWVd3c5m8eGhrZnte18tXAPgPr7Q2s2dyGSpIkSdJcN5kA9woeHj4JsAJY2qaXAucOlB/
b7kZ5MHDH0FBLSZIkSdKmm9AQyiSPAl4IvGag+G3A2UmOB24Ejmrl5wGHA6vo7lh53JS1VpIkSZLmsAk
FuKq6B9hlWNktdHelHlHF63gBOmpHWSJEmSpIdM9i6UkiRJkqQZYoCTJEmSpJ4wwEmSJElSTxjgJEmSJKk
nDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEm
SJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxj
gJEmSJKknDHCSJEmS1BMTCnBJ5ic5J8l3k1yT5L8k2TnJBUmubc87tbpJcnKSVUmuSHLg9L4ESZIkSZo
bJtoD9x7g/Kp6CrA/cA1wEnBhVS0CLmzzAIcBi9pjGXBZQgzkD9woeHj4JsAJY2qaXAucOlB/
VV1O7AEWN6qLQeObNNLgDOqczEwP8keU95ySZIkSZpjJtID90RgPfBPSf4jyYeSPBrYvarWArTn3Vr9v
YCbBtZf3co2kGRZkpVJVq5fv36zXoQkSZIkzQUTCXDzgAOBU6rqmcDdPDxcciQZoaw2Kqg6taoWV9XiB
QsWTKixkiRJkjSXTSTArQZWV9Ulbf4cukB3c9DDQyPa8bqD+PgPr7w2smZrmSpIkSdLcNW6Aq6ofATcl+
cVWdAjwHWAFsLSVLQXObdMrGGPb3SgPBu4YGmopSZIkSdp08yZY7/eBjyZdrgOOI4u/
J2d5HjgRuCoVvc84HBgFXBPqytJkiRJ2kwTCnBVdTmweIRDNdkiRJkqRhJvr/
wEmSJEmSZpgBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIk
SeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4
SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPTCjAJbk+yZVJ+yspXt
nOSCJNe2551aeZKcnGRVkiuSHDidL0CSJEmS5orJ9MD9elUdUFVDN6s5CbiwqhYBF7Z5gMOARe2xDDhl
xJwIVVtQi4sM0DHAYsa0JlQfkZ1LgbmJM14OHDlmJ9ljM/
YjSZIkSWLiAa6ALya5P5ALya5LMmyVrZ7Va0FaM+7tfK9gJsG1l3dyjaQZFmSlUlWrl+/
ftNaL0mSJEltOVa1JshtwQZLvjlE3I5TVRgVVpwKnAixevHij5ZIkSZKkDU2oB66qfthe1wGfBp4N3Jxk
D4D2vK5VXw3sM7D63sCaqWqwJEmSJM1V4wa4JI9O8tihaeA3gKuAFcDSVm0pcG6bXgEc2+5GeRBwx9BQ
S0mSJEnSppvIEMrdgU8nGar/L1X1+SSXAmcnOR64ETiq1T8POBxYBdwDHDflrZYkSZKkOWjcAFdV1wH7
j1B+C3DICOUFnDAlrZMkSZIkPWRzvkZAkiRJkrQFGeAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk
9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wk
SZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPTCjAJbk+yZVJ+yspXtnOSCJNe2551aeZ
9MOMAl2SbJfyT5bJt/QpJLklyb5ONJtmvl27f5VW35wm16DZJkSZI0hQTxmBO9ZQ3m0tTl6Mo/eFmTlXrA/
eHwDUD828H3lVVi4DbgONb+fHAbVW1H/CuVk+SJEmStJkmFOCS7A0cAXyozQd4PnBOq7IcOLJNL2nztOWHtPqSJEmSpM0w0R64dwN/BDzY5ncBbq+q
+cA5rcpy4Mg2vaTN05Yf0upLkiRJ0jYx/7H2g2g+cA5KkiRJkbDRHvg3g38ZVmL7CjFDr8VmfXV/J/jsv
+bH+5PgdzDE+zfSc6pW+c+J4x5G7ozGrdmh7yXGJz7ffnv24AtE1Hhn+WJRQD+C7zQtlyqnHxQ8GzrR/1
vbHmxgm0ldvBRqNNb5WqdFXIi/ZFSrgSgJoBrrrGIIlwqOprPtJ0wDmRoHRQWgx38t/2nWZ/r6aeFglL/BhAxz7E0ZTrl8GiUiD+/lW+TFrXlz2BKg3aVSF4/h4gPh6VWkbZ8Dmnmq0B/EJ0kd7Y6nHnyRkpSEa/3+gdhQXVdhdlmt9i+T0wiJTbWhDpP/jFNJ8Ckm00xhc9fKA9G+Q9kSFL7e3UA
eLJnrmmYfLhvL7jKkAA4tWhzYQ2TTKdGk/h0BhJGw0k2KCYVZUSjYUXm8PtYV94AVVdzE/R/FJLhQf2B/MdJ5d4TcdNjKSd7WSHJy7nMLk7ZKrfkMxmk2bRvUZ+5dCTpeC2C+JcVmdaiWSvjmxOMqCrfxY4t8ShRZg3mgjNs6QiwOWLDxDK3BhEfXlHBPavnDl3QPwu/rZ0dmSyxYWgQSASW1fRBTd9IOmtHhjD55pG9SN8p5DHVzp6PUNf0bqyHBNn5Ol3Cmv5Hq7bNbm0yZU/FqMK2W0KCWvlmSrrmBT7oJPU+rvIAF1rLQO+9Ll7dR4q3PFAwrOyjr+MpvM9Q+eOU08o7ed1uwdm/bWBZrqXZHH/EFWKMKSJ/ZEYgcOpPuU4jFmQeB0AAZZWUTuDnd3UGdR3Fy5cP6+8oPJnYbHjNHWG1QRWkd5v8FmD19j3YMpg+Zb1aQv/pXIC+dsS/eVEdOnZ09mZ2Aly2M1LjQkH+OHX8sVL+5DW8D9zCBzyJeJ+SknLuXEF0F1oK2QJ+SmmNEd4VNuNe39PzM2Ud+5w4vg/kS4GjWN3UEzTY3gO6OoFY1WYjTgJ7IqLzhbm3wvtsqkMqxnjX0dx1LQIDHaGyzQxvNEIpE2n1RUsKpAHyP/c1u6XuIfdDDZzD9ESwWUnjlO0Vf9K9YnLQrYD2e1tK9Gvp3fuDNKAHUtFrwbTl3sfL6c=
N2zDS0W5IkSZLmnHEDXFVdATxzhPLr6K6HG17+U+CoKWmdJEmSJOkhk7oGTpIkSZI0cwxwkiRJktQTBj
hJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJkt
QTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwki
RJktQT82a6AZK0tfnoJTdOep1XHrTvNLREkiRpQ/bASZIkSVJPjBvgkuyT5MtJrklydZI/
bOU7J7kgybXteadWniQnJ1mV5IokB073i5AkSZKkuWAiPXAPACdW1VOBg4ETkjwNOAm4sKoWARe2eYDD
gEXtsQw4ZcpbLUmSJElz0LgBrqrWVtW32vRdwDXAXsASYHmrthw4sk0vAc6ozsXA/
CR7THnLJUmSJGmOmdQ1cEkWAs8ELgF2r6q10IU8YLdWbS/gpoHVVrcySZIkSdJmmHCAS/
IY4JPA66rqzrGqjlBWI2xvWZKVSVauX79+os2QJEmSpDlrQgEuybZ04e0jVfWpVnzzzz0NDI9ryula8G9h
lYfW9gzfBtVtWpVbW4qhYvWLBgU9svSZIkSXPGRO5CGeA04Jqq+oeBRSuApW16KXDuQPmx7W6UBwN3DA
21lCRJkiRtuon8R97PAV4FXJnk8lb2JuBtwNlJjjgduBI5qy84DDgdWAfcAx01piyVJkiRpjho3wFXVx
n5ujaAQ0aoX8AJm9kuSZIkSdIwk7oLpSRJkiRp5hjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJP
WEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJE
mSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ6YN9MNkKTZ4KOX3DjpdV550L7T0BJJkjSb2QMnSZIkST
1hgJMkSZKknjDASZIkSVJPGOAkSZIkqSfGDXBJTk+yLslVA2U7J7J7kgybXteadWniQnJ1mV5IokB05n4y
VJkiRpLplID9yHgUOHlZ0EXFhVi4AL2zzAYcCi9lgGnDI1zZQkSZIkjRvgquoi4NZhxUuA5W16OXDkQP
kZ1bkYmJ9kj6lqrCRJkiTNZZt6DdzuVbUWoD3v1sr3Am4aqLe6lW0kybIkK5OsXL9+/
SY2Q5IkSZLmjqn+j7wzQlmNVLGqTgVOBVi8ePGIdSRpNvM//
5YkSZO1qT1wNw8NjWzP61r5amCfgXp7A2s2vXmSJEmSpCGbGuBWAEvb9FLg3IHyY9vdKA8G7hgaailJk
iRJ2jzjDqFM8jHgecCuSVYDbwe8VbwbeBpyd5HjgRuCoVv084HBgFXAPcNw0tFmSJEmS5qRxA1xVvWKURU
LeAEza3UZIkSZKkjU31TUwkSdPIG59IkjS3beo1cJIkSZKkLcwAJ0mSJEk9YYCTJEmSpJ4wwEmSJElST
3gTE0ma5bzxiSRJs4c9cJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST3hXSglSRvZl
DtXTpZ3upQkafLsgZMkSZKknrAHTpI0I/z/
6SRJmjx74CRJkiSpJ+yBkyRpCtijKEnaEgxwkqTe2BI3VwGDFRhIJWlr5RBKSZIkSeoJe+AkSZohWTyW4zwEmSNMyWGqopSdJkGeAkSZohWyooGkg3zdD7tscO6/
jpAw9OaJ3DnvG46WySJE1PgEtyKPAeYBvgQ1X1tunYjyRJ2noYFO0HzV/5o0utsqdC3KW3bUrbUe/
C1VbdMep3n7LfLVrsfzU1THuCSbAO8D3ghsBq4NMmKqvrOVO9LkLiRpLtqaw9im2NTXs/
JHt7LjI34+xa3RTDH4Tsx09MA9G1hVVdcBJDkLWAI
Y4CRJkoaZbWFsttmUULE172e22ZT37cl7TkNDtqDpCHB7ATcNzK8GDhpeKckmb/UmS703R/
ncFfjxF21J/
eRxoyK7w9x4L8jdBQzwWBB4H4s+HJramY+HxE6k0HQEuI5TVRgVVpwKnTvnOk5VVtXiqt6t+8TjI/
gceBHuaxIPA40MP6eCxMx3/
kvRrYZ2B+b2DNNOxHkOaxhkiRJkuaU6QhwlwKKLkjwhyXbAMcCKadiPJEmSJM0pUz6E3Esqoe
SPJa4At0/43A6VV
19VTvZwxTPixTveRxoCEeCwKPAz3MY0HgcaCH9e5YSNVGl6dJkiRJkrZC0/KPeEuSJEmSpp4BTpIkSZJ6ouRjJkktQ
TvQ1wSY5KcnWSnydZPGzZG5OsSvK9JC8eKD+0lKt2y
L7PbUmuT3Jl+x1Y2cp2TnJBkkmvb804z3U5NrSSnnJ1mX5KqBshE/
93RObr8RVyQ5cOZarqk2yrHgOcIck2SfJF9Ock3LDX/
Yynv9u9DbAAdcBbwMuGiwMMnT6O58+XTgUOD9SbZJsg3wPuAw4GnAK1pdzT7vqqoD2uM8GP24mMlGavr
4fVfz6+13YOiPfCcBF1bVIuDCNq/Z5cN0v/
GDRvvcDwMWtccy4JQt1EZtGR9m42MBPEeYax4ATqyqpwIHAye0z7vXvwu9DXBVdU1VfW+ERUuAs6rqvq
r6AbAKeHZ7rKqq66rqfuCsVldzw2jHhWaAkGeZteDhw5g23RNKiqi4BbhxWP9rkvAc6ozsXA/
CR7bJmWarqNciyMxnOEWaqq1lbVt9r0XcA1wF70/HehtwFuDHsBNw3Mr25lo9W9nlt6/Y+fWCIlJ//
3OLnrQK+mOSyJMta2e5VtRa6f9SB3WasddqSRvvc/
Z2YmzxHmKOSLASeCVxCz38XtuwoAl+Rfk1w1wmOsv6RnhLIao1w9M85xcQrwJOAAYC3w90OrjbApP//
Zy89bz6mqA+mGw5yQ5LkzRtdfydmHs8R5ijkjwG+CTwuqq6c6yqI5RtdcfClP9H3lOpql6wCautBvY
ZmN8bWNOmRytXz7w0Kzj5/3HFdVa9rzuiSfphsOdXOSPapqbRsSs25GG6liY6SMAA
DgklEQVQtZbTP3d+JOaaqbh6xh7kiyLV14+0hVfaoV9/
p3YavugdtEK4BjkjwiyROArFoLkL8JnApsCjJE5JsR3eTgxUz3F5tAXsAJmwZbKemwbBxyr9Jd7MbGP240Ozk930OS/
LoJI8dmgZeRPdbsAJY2qotBc6dmRZpCxvtc18BHNvuRnkwcMfQ0CrNPp4jzE1JApwGXFNV/zCwqNe/C1DNR4jzD1JApwGXFNV/zCwqNe/
C1t1D9xYkvwm8F5gAfC5JJdX1Yur6uokZwfPobvzzzAlV9WBb57XAF4BtgNOr6uoZar6mzzuSHEA3DX3X09
8BqAsY4LzT5V9YDf9zltd+DT3b/bzAM+WlXnJ7kUBgNOr6uoZar6mzzuSHEDX3X09
LmfBxxOd8OKe4DjtniDNW1GORae5znCnPMc4FXAlUkub2Vvoue/C6naoZ1SpIkSZJGMBuHUEqSJGM
qSRnDszPS7I+yWfHWW9+kt8bmF+Y5N4kEfTmC9
+cDwkPX9qjpg4HH/4MIkY/5fqVV1eFXdPsq2JUmaFgY4SVLffB74jTb9CuBj6Um+kuS6JH/
QFr0NeFLrafu7k/Diz/bJLntenrk+w6fNtJ9khyUZu/
KsmvTemrlyTNaQY4SVLfnAUck2ufwrwYuDZwJuTbAucm9bm9o9YZC1+VJ3jew/
rOAJVX1ygm2Z/
i2Xwl8oaoOAPYHLt+UFylSdLWpqquSLKQrvfvftvBGqfK6q7gPuS7IO2H2UTX
hazhVlTVvZvRxEuB01tw/ExVGeAkSVPGHjhJUh+tAN7N6FPqoYQXqMHSQLTfUycWqiAY2ZNxYR3WQH/
l9uOtXFUXAc+J9U/zPhBL0zxFJmmbE/kbZRqxSNSzRasnHUcsJUytQnrD9iBuqaz49UwXfvG+hRWFlCo58+GTfBG+
1wMHJPmFJPvQDcscc9tJHg+gmaVHDpsbCaBaGcBB27ACfiVJGpvNVq4H3TKL+LUm+luQqupugvG+8dZ
AT8ArgSuAr41gW1fBbwhyc+AnwEp2XWi1WAdIGSpIkSVJPGOAKSZIkqScMcJIkSZLU
EwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST3x/wHeaJzztk2CjAAAAABJRU5ErkJggg==\n",
      "text/plain": [
        "<Figure size 1080x288 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xu4JVV95vHvGxq8cWkuDXIVL43XREI6gDE6KmqAmIBRIoEGTJtE
ohx4oyikyiaiZpMMowkSoYEtDEiEpXQUYISlJgYQRpFEIGhRaTbBrq53xQEf/NHrQO7T+9z6z6nu4v9/
TzPeXbVqlVVq/
auvc9+z1pVJ1WFJEmSJGnz9zObbugGSJEmSpOkxwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQ
OcJEmSJPWEAU5SLyXZO0klmdfm/znJ0Rthvp4/ckbbyX57U24/5ckWbmp9r+5S/
LmJP8+i9ub0fM9W+dHkqu5vGQ9131Rkms3tA2SNBMGOEkbRfuyd2WS+5PnOSUJPNnsP4NSV4+0fKqOq
SqlsxOaye2Iftpx/Bgkp3GlV/ewuje09xOJXnGwPxLWtnnxtV7fiu/
aH3a025bawXmGnJxbmGnABck2WoTt23CL9Fz5PvA6wf2/ezAlW/AflH/
c8AfAzsAy4BPb6R2bhSeD5K0/gxwkuZ0m0sIS/
B9Z7pOckynJHki8O9O9mC0v80kgtVOkPdz4bpXRh+5pNm0oSIvJLknynNSJnt6WfbVV+3Z7Ll7X5h8E/
hE4stXboj3Hnxy37WcluSDJ7UmuAKBGH47kBs2ELPUrN2Ni/Ovs4u+PVjbfmmtHpzsuA9uqEB4NYQcpg2
0jSSaxYWjyjeQ/HVSvf5Isldr+4D5YkTq3UUkyUtnnY+tQTa0m+01MvjTkG4k+cNQmhJXXwRS/
lmlX0zPPL93uKfeqM/PJ+A6Sg/UgQffHqM7d5Bkw8FmvBAkEmohB8LqqbZyZO9nLJCZ41r79Uf76KfWGT
Pb5AXQtWC0mvYNN1pvr7lQ6udnKlOtc9yiLmQ4bjemeP4AXoa8a+P71gTs+iY1vmDw+2sWHdiIpMMDbAR
/Qi/UNHs1yvEDAMY6F0X9HEXP/4n7cBHWq7VOAd7tgGRQz/8/9X4p7/
g4b/wgE7H0j6LWJq0ON42WebGL7ZOvkxTqgVC0/2ZxDi7Cg0T6OMLIChHYL9SCtzWbCZxAwBgTXq+vx/
qhgYSzg2GPKJzpcp+Y0bLTY8LAb63K3etA7TwQoqQdNpj50dQH8wqTs4JFzPzFYx6KYTZPCH/
f8zzNqIXtaXWZlOMUGtgydq4qKxAxk3yQMJ+P7fe13Zfw5mk0XQSM/nAjfRzF9bdTKs6PTK/
uX+O0cYzaO2ahAKxnx9PkrO8Mi+uyFGEsGNyEtu/Uoug7sO2A/Vd+FF5fyUDBLhhEtsRqVZLGqNqJfR/
MGbdM+3TZ/a8QZ8wVU5X84nqbf9r5lz/eNPaOD+BD2wHLRz55OIsXOqCCaY8Ad5bXBQOAi6SUWzMO0UX
pqn5bq1x77/B/eYX6pXpu53mF+AdNfj/2XppYzOtGbhh4q2mdI6uDmaegUAGJo2Pm+OSDLCSFBaRtD0Mbs
GRZ1GjXeW8UT26zfH18xRuXV+lQh6L5djqGc+Bk18lgkT/SUTzVwrHgIybwtD4RtLvYqRyGOLbYHdm0Lht
F4X4fLzvJPXiRFhbqlg0PuXcl/Te1OtXc2KG+HeKoDcnyjMlVKwNmTnC5MKmJeCGwtF7VpYeG6PG0Sw7Da
lZy2Mhm1JJcvydk50pWxe/Nb+hDwKy3APupzgJ1XSGUmgqsfW7f8qR5RkT9oqUhrzP1QOiYGgQhJVdg+w
M2HjRnrlMZKfKyOxKyTOJHYOAeFeGFeowP4YwQu09YZdGYV2I9hIHGoQ7owe/
4rh/Qq/0oZdnJQ0UUoyWpydNgKkZb8Zc3q9ZhbIdHMTxBGeNk+GOXgpnUVAGDu+WrK6dyaLjpcPGnQyRR4
Qb/sszX22bQc2tj0hsbN9Zn1NMpcaWUgqq8L8+0txYuw85Kb1/pGswJbXjIlmAJnSpzD0ngMQFUddJ4/Qn
LCIbP3cy9P5nxhkP53rC7OP9s6PGmCMNR+7XMXKmtEnpnYHnw4nS3uzdP/v1tuJ2GCFx3/yJ3vgb04KTJ9
jQxNX0bfP5uzwq6ARY2L/SNIt+d/H4rnn76zjttyGXoGjEPj/BAuaGdV7tqVS71MGe6gyvFL1IsFCu3Av/
/LPKTwV9ygp8ddo5wXrpkLVc4Mw6Fr0OwfgB/k/Z/iTaeTDHYMMT5+LJRWfg/+0mhCdQgP/Mt8SmkMwGRM/
BNL0jfL7tfp/xEgiS74zfUOaSe/2Ed8bBW9C8IWxsI4cOkbMLbI8Zzhl70rx3vbwx6D/Sx+9e38rVBiSiv
CtnbL+4Z7WqT1dEGnKl3+dCGJ02i5f3cD/tcNn+bDv/yfs4XzsWvbmN9Cu07FnCPz7mJH3eDMvsa94g8cR
dIkyaLPX4JUHmuRu8l7TI1tMzemUUaMzEyk+0Y8D/oo/nhpTFVLb/YKXC+qtG71vrP2B8ofPbTRC+Xfy/
k6dFoZ1GmRIMCtVXQ3SlfDVu13rOvKV9tvQ99LHS4+0Yq5/JTiuAkxn9e1h5wKAVrz3pvUJqu2ftjgCxZ
o28XQgcOH9jOHVOy3YpW4qBFJhn2tsb9GG7pz+eFsZmK0yh6aWVZzeAmU/OfDKDgIgW7lIXhK2fS+fzhM1
ZnCofVtemYTLYWwJMH9HQOuPcgPF5n/wn5/ygEkqYkWtOKIP97ROrk6NZ1hyptHoNbJBNj3YbjvTX8k/
AlOcMgu4t7XUr0fwuY44fSFbUsRmXapr4L6lHwfLO6jbvkMCNCHvTuKqzOryYYdz5p7otJ3Gh/8+pfHsOy
mIDoAbVzbBO5qWthUOmJYBzC5R+tnLPYrz+LJ2Rm8FwFbazx5fHxEdzTnrqr7BfvKgYJ/
crrK0RE7N7GTTrgh6fRT6wAfQ62zDRsqWczmn8f/1QvGRH4rJ+KI/
o2t0U2iuvKmwRAwPjWqpfbMAc46JOYhDHIa3AUdp/9ZoXNKe2SmIpuiTaLTWlsu6zaSmz0ff9wsvzjOBk
Qp2imSTbadSCr5uezYShT+tEx61SNcAUcb3lfqUOyYrV2eW7QoHzHqEDtyGoUDOG4kiodrqehcnYNrUG
0yL4tDVBtUwJ7FSaB5u3ZM2/dsbBuKPLkJ/GD9HZLGDqVxnujj6x1EDf4V8Y6bWa7uExzYL+GzEzbWenW
nD8G5fK+ao7ylfqw7l4qTwaSiRfYSTXJeoVgHWAoeAiXZT5e3lpo3VjltRrDoVP+EIHtEPaCZOGBBqUbI
4fcHs6o9ixHEHXdgprXwGGE5RCLbq5/ayp5VvsRk7/ETvq6sjVPuA/cllVDSvWOzVmx0gzBTHGmn+N4cYo
M+Sgj+9mj2mpq1+GgBfyv2DE/a3S9+y5RkYR9BsmbSE9Rf2JPNO8hPdzZL93I8iQ2dRT2m3l8NjX6BUpWU
bnPRj/R5M/KGZwyg2SF1IwPW3F+fnXR5cxyWoyAnhAeVxbT/
9xBEAupJIM7mYN8acFrtQ22kFtAnUoFUo9VgsVhGAT7a4V0TApmtaGkHjK7a7EVvaZFoc9XzI1oWqT6V5y
V3VMJu+3R6DWEMKdsCLb6g/Mk4enrZbGQbTxejSO/O2rj+IcsgGc7mrZ1+yaZ1KPdtWbdTQYNx//2/
QlUUe2dE4qgUqsoyGYR+MiMAn49XLPQf/59uzQmF5YodiPa3jZXTYFYRyG67ywIKcx/2SwfwXoIcIqdMJBx
xe5OffZsHJ+z2ObFk5nP03nrWPRtbuCYbGuvunAI5m9fuZ1i40/m4tTQ1rOmHbW8pW4/0UTsXqRTcgTkN1
TMrfUiNNNr2xVedncGUIMlVuj2/n6P9c8euf+mWfV4H4i4Ld9u0s0WRr4Kh3X9Z2Gyjp3DdjjkuTiGx4H
ueYZ06t3+IqQVc6otw5Xcpx3V/mvV8m6Q6l+xe3D5Qyyr6TfCZLu3wTQ9AvV0xjoYk+yEn8bHvZ3UzD34
vIp4QZq3Pn68+VbI1/ow+4RdzdlTO+i1mX+4jlwhNaILtyuj+rq+P+EmJmFLaC4EWHbjQudhKvH7AN6oX
eB/0uGw0ck+IAiFXDq3VCJDLV6uSMFDVPn8kfxwiD4ynd1CUHEHlQWPIxK9LNVx+rRyVAKrDjeY6B6Z/
pr5IbMc8/qmlEIO0i/h7q8ZtONH+PrPFK9/XruvQgR7wkmJuBCz16RMZzzlIWKqqzVEMIRj0/
yyb9eazwCe1ORybPoAzrfu8qxMvh+aE0TDY2k2/aZRrrW+rlYIgPbGUrIuKRRkhU2EVgUOBdAUV7ia+zoe
SoxDHTKNF5i3A9TH3d7tm1zz91r+BI9qr/QQ1ojd+L+/dj+b1TpH/9e3Rj/
D/g29J+9trw+3/f4G7m3ybtAZD49bUeoH4pLh6mqxx6OcOaeKBCtqrj3drdBuT3hoqo7X+Umu1rf87dpM
7U/VsDo0twJN91WbAx2Z+A6Gpn/57Ll5hoJXs/
Zk3N2OotAmvJs/3yHqJ/Ek+V2yaysjZEJ6jEztbaJvq7nBnZtC4bUvdLrbsKaTj5A3q/7xqM+IKDvhtP/
iBRzVQkQc8/s/yBUG7ItOYnrzkIczn3hC/rh7DvLT9vP7+mSm88aBUjWkPNxVbcqFN7KevrUEM/7b/
FXqh+nzh1rA/ErFIabxuIQWCF+rHepS5QgQnv8cmVMuJN2w/tsYa/jYxbKvdzU+UC29I/
PfjUWx9qwMO/S4sXJ7nOsz8mHBjPKgN8qKDF62MBFOsXQ6wmmvdOE5mB8CMWvFd5Xl9nqzdx/
rUrFK5ssdAV6rd9ZUIv9L2bz7TmL2nN/6gk2rbb/N+q+CehHzUXmgXWeD+Cb2TzL4v/
mqfvhM6LcWCq2GeCULiwbu4+vHfwefvQ35pfUAfyFLNuUyk/23TVu7Qk7Njg2xj/9/
4Cqbf2sqdyfwYTtjRXlkqYwVeAt9EltJA//uN+fbTOOtR+lg13C/7N2Oo6PCnC/
cK0TIkhfAWAFdV2g/
PhGyFQxk5tn8qsZGyucJgSVDQm0yFzLYSlcAX99t/MmPiqk6TRnfDKJDrV2DYwfHhS6NXRxpwoYaDIWsv
cmeImwt9DrwyEOQiAGn3fqk/D3udQ30DyRnPuvzrWwUv7UzwGxDUZMqS+U6+ftHmJmuwt2hA/
xrkk+HJ+6PVk3CL5Et4Q/TN/5t9pLLPUg8P7nhVLE9xkXVfJrP9r5PWU4N9ON3kiGuCu/
rkVvrt36K0Qh05ZEaadbmtIImOskaYIhWbZvtc4+OKnu5QpoGXXytrJy6sbFZM+wa09bT8R5Et6TDYPjrh
cKVi9B/bPn4Xs5Vdmd6uvvEw5/Uzf7lE/HI6f2e1Ve5Hfhyvmpe8fFoscaSlxXW8+z3wnGzq6j/
T9iUm0dj9jPqVqIzjsGQ7zDhJhXB6TMWywHe8brvjHzlSphnnlLDHojiD2uhTC6Z6sH06OufkK+08y3cyjF
m5FSnEz/dqhJYS5/T7gVtjkK17TD+aNxD1jzd+Fwqvz7R4jumxZDudRc0rv2/0IOXYR1Rj/4/
Cg4eUSG2/SEZCzIjSwvwL+nxurB1HJRzJ2uzIfcZ7cNP+r5D+69vEaSHMl6WqWGJ8I9OsEX6sV4qoL7LBY
lrxkFqtlj9mGhTIk4t7J5/wA0wUvbGNs/3PUfHlGVYrc8+cpNJanlgaP9k6eurZ94zA2kYQCxCRTJNNXI0X2t
VgWuq/OZ5dhLP1z9ntI8WPH3oN9w3zBHXzyfVeZ69LQVJHI9CPPHYswzSMUUCZmDlWP55CVwmH0+P7OMfb
rvrbcNadAPbLXXfaAf8Hrz08P4A9tf5x0aMzPmSi6/GTdV5SqpKUO6HUBhHLpWaVsgMEVD/VdGzW7fnUiIk
1UAf0JwmY22Htk3PNM0zYxr2rb8UaEoJdwZ3ptOOSbj8tWt6M7OrnvvyKqrTb+9RdrbO3CKQDZ2xnm7cA
d16YuG+kQlKLvgDjVk6DTnaXB3eRc+7R2bkk1p6XCp06T8Pe1rNCOQsrhGeapw9QMmt+9sJxzmCGQD9lnt
k1O8OQhdHWh/nwuN0eCZ6SH/LPZa+6rXaiRSzVT2nOVAudCx3e5Zu6OUoD1PZeHPIG0xHWV/BkdH9SEGm
ZZ3FRPF6/3bCbpaHvLHrW6bD1iu3VeWQEefUkU0sLRqxtRk1zO7KLzT/uLKdE8s4q56cxLzh7EKMsRvJU1Q
+3U8q7Tw6a0cWHtmkX5h0W3ZB5+FkGTzmLJUdDz4q4y7GjfKSGOPH1S0sbMtx5ohxl2nRCxv9VeHbnd9tt
2jFT6c1LhmXVBCPvN8WNMjw5+r8RhO3BwgBHSrS5ljXhZakVOmJ8crbbeAn2Ehg6VqfwnSd3DyfmMpHzQ
t6C8jfNvcK4+ZScq6N8vA0tmW8rnx4fk1v+i9ZgXxb1r3sptH/Y+tW6Uec6cY9Ko3fNs0gMFTOSE8qx5G
tlc6kUpDwMbfrcT3wGQMvK0JVJ47fBqoPQJpjwrNmUxGkFzuVAi26/kRNB+lBoYn4ymSfN3vQXYpP1q69
rUN8FVpoM6AK/D9uEPfBgVbWuCS7mrHWPk7bQe2R1NfJMUtnF1pn5vjbB7Gdmc4tF0ps7+Hmx0hAeuWLG
i3pFMbGrA/BbYvMgAVD6+PpBCQ3DWYYhsAlJk8+sUFoP7MYlXAwWGmpsR8Zjq5TwYAlkvC5+7E1QKbRPrVJ
l1fnf3qaHgf51d9KwDWkiF2mygsK1W/6ThLVdbpsX+4cwYnLsF1rMx8gvZQUrtgvq5UF6a4W9bOLk95HDL
3vUfX0dnh1sRqD96dzcMjW2uLxf+M6WUDrg5A+aLF4drsQ1a5uxuUbNyW3eXX5gLvRA8t8Wq3rMhMPNSPoYu
BgzD1RYsT+wFNOmE7eeuc2b+Y1Qub5hlW2UaIA8Bc3zSRIpfLZKOFhLq/4PHk93uq+zJgpd3UBDQbFeCep
Xb9opmA47iT6cunJpxk2tlUd1MjSNDU+9hbqKeMiqk8K/mF3eBaCuBQ7HbcKPbHJ1E3C2ls4Tb/+5kTmBYv
JQYP0A8VLnKDjsADD7Mbd0gmVYkH/lzCw1B5yY3X7cT9OF3S3mKemYAxg0ODNVxG6hNkYObOa6YU5dDz6G
2c7MW25lX+L6DT29j0PnREMRbvLCiKy31Ii2EN3PQ6OL5MjGsO/q6H1eB1Q5QQU6vhxKe1TXtzmy0PLLXYR
YqNL+TvO/vtsbg/RKxzlGHLlB8MPHv3JtTh9qwG+bhn3ahzNyiF4j7HcsF9k/QL3d+4iYgNRPuv72mEH/RX
9TlsiCr4Y1bs1S0P3/jhSMKwOsGz3KPxmx6zD0xtmQUcJyZuc9TYYxqQQWjjxD8qcvPfPCmhMr/KB/sa9cw
+vRF+OGqOBf7ATO5NvbtFrC0+dmBF0WyIU6hJaLmJBq2J2oe6nY8CrVrWdT+jW2JIhOC1+8dxo5FFSg8vL4
NXpuhkg71FIRo+uzfyJRe4HJ0nHt/ukb/4wl4z/6yLhU+dxjXFgT3/WCbxcSKIE6e0Ew6iAc4M28+iNMM
tOOR+B0xKJ+tf1ci0TDs9bD/xFOm6qdQK91yH2tyuVo0XwvRvqUS+k/nYMbE8EZvbeyYmo3xDxtVY/4Vb0
LIPmQyRu1OMzsrnaWtjdXh2PtQr3YO4+vTQn+gVgxjPgVjqS+9xhkWttAQiLoh6Le4+Hrpm6vHTGJCX/
N74l3Wxmj8BWsmBojhR26WQ4tyoTmk3pZoJb9wk9yl7fHl5dJdCcv6rfl6K66kgQnsFZwqvbU6/
Rk37PbZK/fMZUBm7lQ9GbydaVh9D1QnxB5eeI1ZHBOcE1FJCGlFyxRzm9h/
A7l4S8MJLHj6YGPRfLvz+hWJTJtbl/
xQmhx6L3r4oNQ4qn6Y9MJ0G3FKcaG1ll8RMxe71dT6vVyd6YBW0GIDmYBeapsnkMP0yHBL99v7TENvn+6G3hZfS
1RB0ZMhakySYpemnH7jkxtabYqH1O39OLLKjeJknvG5CuKRdeYr8g9NWSVIj57fzgkyDx9rupP0fx8iLrT
Nbs0MKL98eA4aL9/dxUuMDHYFCvjcYHfPGwzeRxZVRl0T9oJeyhz9kn2x8MtF4gvcaa63ZYsBPJ6lRIh+e1s
TMzs4AozYbdewTNM60Onjg8jsGcfYM3rY2ZUeXUDO+/L/HiKpOQV0iVU/NUMF/eD0+SScpNrz/JOW2/tmvqaZ
LN9rNt4R9rqpK5t1GuaN1vfZL0etQaIEAB7yd4Cn9zLq/rzXnp21WdAijKupOe0bifGlC0RjcwoMJRH+X4e
4NUsKDTHn6LcuaX5JR4dUMqNzbqY5OX19ZAxC99RFlCaG6M8OUdqBJVz08xfGdJ2T9dLO/TPt+R8h1Yj+H/
7oGD7hDMdvFY4bP37GXq7tDAB8N6I38ROQtmyCcpRT76rWKM3VxgswDnFkkAMXyTAsBiJMFB7WKA6rH0Wb
XrmNbAbNQG0EbrefWMkM+vycJDDmkW+Zhc4KlxcSkCEJCBhvMLJq9I24rXLdM8LNrfG9Li7uORJ9Hz9zs8B
oLtXpHsCmXmr6gXs1x8vg/nDiCdWg7YGLiQvV1Y3H7L5tdEuKbIPSVlPa1MLE8g/yAPqmyRV1c+Lts/lF+
qkYMSSeRKRi1KiGRZPdvxGMhLyLtB/JIWK8qf+qjTkBl/AmLDX4l9/m3hDBAqrtTQZYB8R2FPeuDvEYvhK
jwmf9wM4jIwPUpDAeMcf4wBNl7oN+U6M0mkQQxvGgZI+6sOqZpF4yp+pRyMuc+cTAq4iRJ5mDNPzpWc8Fq
SRDf8qQBpbBeIfhj+EjAbyxDnRNpKZqs+HIKjKaURG+HAi/gvpCYd/xRU4Ib7nG4hjeFG3E+wrVADuh03QI
Pvv3xhEKqN7xAf+yIjAArN+2ESdt+MTsZ9A/lB+fADzr1eENkb9GQK6/jUjO30BvhIDOaiYj/z/M8UWIkAh
Mqeu6b/Kl/81u0dqi2dhuTaNprzl4uDW+nB27IGJ+OFdPUZdQ53fdj77zr/5HkuPr1VvMmwz1uSXTGahdP+
b1OJdnYmvpPlYp4AiHeX6EAkCWKDt2B2BqFdfGwpywbxBTbJwNg1rzUN8w+GCs3BOJqvLIiLx8PUqy63S0jy
Wqaz7cJ0MdDX9MNdrDqMOM2K6thfBPfJ0+8WF8QyM3zU3XR5Vx5GOFUMbj/9iJBZYIJKa4aP8F8DpzJ6qqD
OEgaWlDgoBDtMXkmDTKpiXXOhTeJA1gNbVFz48rgQL+LomfJu5+I7yOUPVV1TNeDZ8mAQeZqo9P4wZ9tkae
vWC1B3DABDmDWMnq4R9Za/dvnhRbpdgJnefbx6D5ZfmU8xlXXIFE94zOSH8j0YLHwVNv7ZqJ5rNn7hkXbhN
3RL2z47fhmn+w9vJqU9L7oY+LZ9NGPQWeDhg7gPgUfg26yUBDV9hGTK1vE0rbwJQI5sw+AT9n+K1QbZ6FD
h/rGqFLd+8NBswY5O29nyIbfO7Kug5QhuRn/6sWAd4dXRIUQeYXKnzh+e4ImHmC+ZeV+0dqDuNK73UYnZiN
xTNS5hKyx6PPzB5bWnI6X7IN4Ls6uRUDVF0Ds1lR7dJPWnn79avrn+7uVyq4IydBWJrlc7wDmAz6vlzzbTW
cc6DDgzbzYZXLZRj7egDAhs+HEc9r4qUlnAc8lXSE+fBs4FYFllCWK6wGxZPGq83tpfW/GR5eCfjzjM7B/
6P1qJMRlKNRSaJpDqnf/cgWH5UiOm/BJGwgSDL9DmtGGsXzPG7h4IGzjSIBWmtR44Gol9kP0kS8PeNvaApq
Bq+CMYvlbdYTEJM+1KA6WEhjxWqWh4OD/tfRqhbLyQpwcSAsxiFcRxjQTjyO3xHCiZnKK/0hzEPMq1ZKbLg2
anvzGvD7j09x6ncqAKb5t09gbEmWvOB+4M8YLyOnm0U2PiBvcY4QILk/tpi4Upn9JB3Zi+u0ZXhxVs/XbfE
SyRmktUuKzdxVPSNZbJkfMUPSkDxbrsmqF/7blGkYYFaMGKdTHu9VAjPw52tvB/B6nbHtvUi2CE6sBr4MMR1
2ZP+QyFrtw2Vs8blS6ud42L6Qe6xvfkrGpIc6aTdr5VJTmGmdBLxo3vqY/xXJLGbOZpr0G44eWP1UZyVOo
```

Ou552bqqfrctPxNYCuxZVdvR9RKNDQedyfM/
Zvw6q+i+aAOPnAM70vVA3kQXxMaWZXCeyc+PFXQ9j8PuarpOu6vquqp6Pd0wtz8DPtPaMsz245bt1Y6D
qvoh3fn9auBNTDJ8coh5jLuGbMBVdEMsgUeep6e38nW0Hppfpntui+6YYNyxJ3kcXY/
rXwC7VNV84DzGXUs2gTXAQ6z9muw1sO0XAe+kC7Lbt23fNW7b41+LtV7zwe0NMdX5MdV7/
lPAa1uP3AF0z8Mwp9D1ii9svaXvZnrPD3TnxZ5JBr9b7cXwHvZ1bMzPIEn9ZoCTNKfacLr3AX+V5OAkW
7Yhc/8ArOTRL72XA4emuxnFk+l6FQbdAjxtmrv9G+BdY9d2JdkuyRETVU53Q4oD2jUs99Fd5/
PwNPe1vo4FXjaud2e6Jnwuqur7dEO+/seQxZ8H9knypvY6bNmO/dlt+TZ0PVk/TrI/XU/
FmDV0QyKn+xoMcyZwTJJ9W5j4AHBJG6r2BeC5SX6j9da+lbVD2uXAi5PslWQ7uuGXY8d8E931lB9Nsn0
7rrHrlW4BdmzrAJDkt5IsaD0lYzcWmez1fl+SrVpIeRXduTvmDOAdwM+ybo/nI5L8dpKd2/
RzWvsvnKD6OcDz0t0U5fHAe4ArquqaIdt9ZpKXtefzx8CPBo7lFmDvgUCxFd2wxjXAQ+luuPPKSY77EW
2I8OeAE5M8sR3D4DVr29AFvDXAvCTvYd1exPHOpnufbp9kD7prxiYy1fkx6Xu+qr7V2vZ3wBfr0RvKjL
cNcDdwb7qbxvzuuOWTfQ5dQvf58Y52Dr4E+DWGX2u3lk30GSSppwxwkuZcdTcdeTfdX/
7vpvuiswI4qF0LBV2Q+zZwA911OeNvm/5B4I/aEKn/
NsX+zqHrhTirDYP6Dl1v30S2Bf4WuINuyNNtra1zpl2HtGw9Vz8RWNKei98cv7Cq/
n2C63vuofvCfiRdb8HNdM/T41qV3wPen+QeutBw9sC699PdcOFrbb8HzrTRVXUh3a3xP0vXo/
L01haq6lbgCOBDdM//
QuBrA+teQHdOXAFcRhdGB72J7jqia+hu1PG2tt41dL0v17d27wYcDFyV5F66G5ocOW6o56Cb6c6LVXTD
7n5nXJA6h67n65wpwvgLgSuT3EfX63Ue3XsCeOSfSb+xtXkN3fVmf9r2fcDY8zTE4+ies1tbW3ce2O5Y
0LwtyTfb6/9Wutf1DrqAvnSSNo93PN2Qv5uBj9PuLNp8kS5E/z+699CPmXoI7Pta3e/
Tvecn7MGcxvkxnff8p4CXM8l1isB/o3te7qH7TBj/
OXQiE7z3qupB4Nfbfm+lGyJ71LDgPcSEn0FJ3phkaO+rpNGUbmi4JElaH0m+Rzd871+mrCxJ0gayB06S
pPWU5DV013Z9eVO3RZI0GobdFU6SJE0hyUV0/0fwTePuPChJ0pxxCKUkSZIk9YRDKCVJkiSpJwxwkiRJ
ktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxw
kiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk/
M29QNANhpp51q77333tTNWMd9D97Hw/Xwpm5Gz/wI+OmmbsTI2yJb8qStdtrUzZAeA+4D/D0wE/
c9+CMeLn8PSNp8ba7fky677LJbq2rBVPU2iwC39957s2zZsk3djHWcv/x8FjxxxyudQa/
kPYPtN3YiRt+b+Gzj4GX+0qZshPQacD/h7YCbOX/
4fLHiivwckbb421+9JSX4wnXoOoZQkSZKknjDASZIkSVJPGOAkSZIkqSZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeqJKQ
NckmcmuXzg5+4kbb0uyQ5ILklzXHrdv9ZPk5CTLk1yRZL+5PwxJkiRJeuybMsBV1bVV8V7Qv8AnA/
cA5wAnBhVS0ELmzzAIcAC9vJEmSJI2amQ6hPAj4XAPAj4XlX9ADgMWNWNLKlwCHt+nDgqczEwP8mu
s9JaSZIkSRphMw1wRwKfatO7V9VNNAO1x51a+O7BiYJ2VrWwtSRYnWZZk2bYDEmSJEkaPfOmzWzHJ
VsCvA++aquQslqnoOpU4FSARYYsWrbncN067/12cvttN067/
hsO2GsOWyNJkqTZMpMeuEOAy6qqm/Ghke1e4GvZVAXcXlaW5cjXWn/dTGKBR/
NFt+mjg3IHyo9rdKA8E7hobuBVoCrqvuBHceV3rxdQK6xbxZ7Q4s4blZaJ0mSJEl6xEzv/
CDg7ybHAjcARAAARrfw84FBGOd0dK4+ZtdZKkiRJ0gibVoVoCrqvuBHceV3UZ3V8rxdQs4blZaJ0mSJEl6xEzv
QilJkiRJ2kQMcJIkSZLUEwY4SZIkSZLUEwY4SZIkSZIkSeoJA5wkSZIkSZIkSZIkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIk
SVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSZIkSeoJA5wkSZIkSZIk9YQBTpIkSZJ6YloBLsn8JOcMZIkSZIkqScMcJIkSZLUEwY4SZIkSZIkSeoJA5wkSZIkSZIkSZIk9YQBTpIkSZJ6YloBLsn8JOcMJ9JJk2Sq5O8
IMkOSS5Icl173L7VJcnpSdYkuSLJgiPuyOlDmQGlEiXWOZSyyxs2I25mSJE/JeizP2qcW5sDH/l73LO1zZLb/lhGnyzLx8JYDd3/
hyQXJLmuPW7fypPk5CTLk1yRZL+5PwxJkiRJGhUz6YF7aVXtW1Vn2vvdHyDSI4PeSntF/EiM1Oh7sMlLQSIk9DK2JkbXE/
q7GSJEmSNMo2ZAj1YcCSNr0EOHyg/
IzqXAzMT7LrBuxHkiRJksT0A1wBX0pyWZLFrWyqroJoD3u3Mp3B1YMrLuyla0lyeIky5IsW7Nmzfq1X
pIkSZJGyLxp1nthVa1KsjNwQZJrJqmbIWW1TkHVqcCpAIsWLVpnuSRJkiRpbdPqgauqVe1xNXAOsD9wy
9jQyPa4ulVfCew5sPtewdpJrRwbpteChzV7kZ5IHDX2
FBLSZIkSdL6m84Qyl2Ac5KM1T+zqs5PcilwdpJjgRuBI1r984BDgeXA/
cAxs95qSZIkSRpBUwa4JjMDvSIDfk3ApIkSZKkjcgAJ0mSJEk9YYCTJ
EmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YY
YCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJ
Ek9YYCTJEmSpJ4wwEmSJElST0w7wCXZIsm3kny+zT81ySbtfLHHtfnlbfnec9N0SZIkSRotM
+mB+wPg6oH5h7PwNOqqqFwB3Asa38XWOCOqnoGcFKrJ0mSJEnaQNMKcEn2AF4BfKzNBzgQOKdVWQIc3qYPa
DZPW35Qqy9JkiRJ2gDT7YH7P8DbgNbgAXwPg7X8S2BO6vqoTa/
Eti9Te8OrABoy+9q9deSZHGSZUmWrVmzZj2bL0mSJEmjY8oAl+RXgdVVddlgcZCqNY1laxdUnVpV
aMGCBdNqrCRJJkSNpqm8a+qGngNCTf4s/6R3Ts/Yeh/Wr4aQ0/43ixc4hvq1Nar5qpEzqAmWH8AAx4DSyyrv/
zJQ9cFX1rqrao6r2BoxEvlxVbwS+Ary2VfsZ2VCXrYiZIeUvAlvSbUjvXe60S8dBadcLHpRz3fhg1FRTmdbWL1g/
svBPGzFyYpsqdqQMZh/p3HN0t9ZAaAEbe80EG1OmZqwLLnzd

22mt/
DRgx1b+h8AJG9ZESZIkSRJMbwjlI6rqIuCiNn09sP+QOj8GjpiFtkmSJEmSBmxID5wkSZIkaSMywEmSJ
ElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4ww
EmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSp
J4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqiSkDXJLHJ/
lGkm8nuSrJ+1r5U5NckuS6JJ9OslUrf1ybX96W7z23hyBJkiRJo2E6PXAPAC+rqucD+wIHJzkQ+DPgpK
paCNwBHNvqHwvcUVXPAE5q9SRJkiRJG2jKAFede9vslu2ngJcBn2nlS4DD2/RhbZ62/
KAkmbUWS5IkSdKImtY1cEm2SHI5sBq4APgecGdVPdSqrAR2b9O7AysA2vK7gB2HbHNxkmVJlq1Zs2bDj
kKSJEmSRsC0AlxVPVxV+wJ7APsDzx5WrT0O622rdQqqTq2qRVW1aMGCBdNtryRJkiSNrBndhbKq7gQuA
g4E5ieZ1xbtAaxq0yuBPQHa8u2A22ejsZIkSZI0yqZzF8oFSea36AlweuBr4CvLZVOxo4t00vbfO05
V+uqnV64CRJkiRJMzNv6irsCixJsgVd4Du7qj6f5LvAW/At4LRW/zTgE0mW0/
W8HTkH7ZYkSZKkkTNlgKuqK4CfH1J+PdQ0DnCRJkiT1hA
FOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJki
T1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnC
RJkiT1hAFOkiRJknrCACdJkiRJPTFlgEuyZ5KvJLk6yVVJ/
qCV75DkgiTXtcftW3mSnJxkeZIrkuw31wchSZIkSaNgOj1wDwFvr6pnAwcCxyV5DnACcGFVLQQubPMAh
wAL289i4JRZb7UkSZIkjaApA1xV3V32zT9wBXA7sDhwFLWrUlwOFt+jDgjOpcDMxPsuust1ySJEmSR
syMroFLsjfw88mC5VdRN0IQ/
YuVXbHVgxsNrKViZJkiRJ2gDTDnBJtgY+C7ytqu6erOqUtqWrBgwfq2X5IkSZJGxrypKiQJcBpwdVX
974FFS4GjgQ+1x3MHyo9PchZwAHDX2FBLSZunMy+5cUb133DAXnPUEkmSJE1mygAHvBB4E3Blkstb2bv
pgtvZSY4FbgSOaMvOAw4FlgP3A8fMaoslSZIkaURNGeCq6t8Zfl0bwEHD3Aa2S5IkSZI0zozuQil
JkiRJ2nQMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJ
PGOAkSZIkqScMcJIkSZLUE/M2dQMk9c+Zl9w4o/
pvOGCvOWqJJEnSaLEHTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEw
Y4SZIkSeoJ/w+cpDnn/42TJEmaHfbASZIkSVJPGOAkSZIkqSemDHBJTk+yOsl3Bsp2jBkuva4/
atPElOTrI8yRVJ9pvLxkuSJEnSKJlOD9zHgYPHlZ0AXFhVC4EL2zzAIcDC9rMYOGV2milJiRJmjLAVd
VXgdvHFR8GLGnTS4DDB8rPqM7FwPwku85WYyVJkiRplK3vTkx2FNXC7VNVNAO1x51a+O3DTQL2Vre4JuTLE
uybM2aNevZDEmSJEkaHbN9E5MMKathq4kHbN9E5MMKathFavq1KpaVFWLFixYMMvNkCRJkqTHnvUNcDc
F6ewCr1r95kiRJkqQx6xvglgJHt+mjgXMHyo9qd6M8ELhrbKBIJEmSJGnDzJuqQpJPAS8BdkB
Hg7CTHAjcCR7Tq5wGHAsuB+4Fj5qDNkiRJkjSSpgxwVfX6CRYdNKRuAcdN
taKMkSZIkSeua7ZuYSJIkSZLmiAFOkiRJknrCACdJkiRJPTHlNXCStLGdecmNM17nDQfsNQctkSZIkSRJ2rz
YAydJkiRJPWGAkyRJkqSeMMBJkiRJUk94DZykkTTT6+y8xk6SJG0ODHCSHWPYnkiRJfeMQSkmSJEn
qCXvgJGkaHHIpSZKkinspSZI2BwY4SRoRhlBJkvrPIZSSJEmS1BMGOEmSJEnqCYdQStImMNOhiltqkD
Y4CRJveF1fJKkUWeAkyQZZGjxQBZpM2EQyilJ2FVdJUDHCSpFlhAJ2ef77y5hnvP+RnnzxHLZEk9ZE
BTpL0mOUwFWQBTpKkx5CZ9VZ9vCtD3sFJWnTmZMAl+Rg4MPIkE9drtuu5ofP/
TwJmpNZ2MEspmarE3Lbr6d7R7307XKXviMHWe0/
a8tv21G9We6fUnqs1kPcEm2AD4CvAJYCVyaZGlVfXe29yVJkmTgkzRK5qIHbn9geVVdD5DkLOAwwAAnS
dIImmnAkqSZmOlnzD67zVFs5lcCB4yvlGQGQxsLjN3pvk2jloy1zYCbh1UzdCmsJO8Jeep
9rc+XmqPvA8VR94ns7YH2/qBgzzlOlUmosAlyFltU5B1anAqXOw/
zmVZFlVLdrU7ZAm43mqPvA8VR94nqoPPE9Hy8/MwTZXAnsOzO8BrJqD/
UiSJEnSSJmLAHcpsDDJU5NsBRwJL2D/
UiSJEnSSJn1IZRV9VCS44EyEv0v0bgdOr6qrZ3s8m1LthnxpJnqfqA89T9YHnqfrA83SEpGqdy9MkSZIkS
ZuhuRhCKUmSJEmaAwY4SZIkSeoJA9wEkpyYY5IdJLm8/
hw4se1eS5UmuTfCFbR7YNC1Jrmyfocta2Q1JrmyfocTa2Q5JLkhyXXvcvpUnycnt3L0iyX6b
tvV6rEpyepLVSb4zUDbj8zrJ0a3+dUmOHsKHJ0a3+dUmO3hTHoseuCc5Tv5sKMMBN5aSq2rf9nAeQ5Dl0d9Z8LnAw8NEk
WyTZAvgIcAjwHOD1ra60vYZOvb/
iU4ALqyqhcCFbR6683Zh+1kMnLLRW6pR8XG639+DZnReJtkBeC9wALA/
8N6x0CfNko+z7j64Rjm9GIVBrj1cRj3vSVIAAAGQklEQVRwVlU9UFXfB5bTfXjvDyyyvquur6kHgrFZX2
B9UHhwFL2vQS4PCB8jOqczEwP8mum6KBemyrqq8Ct48rnul/
b0nqZ4DydiN9NR4wBbnLHtyETpw/
8ZW13YMVAnZWtbKJyaWbZNVMG2OpFXLmzLr/uyRmq2aBtvXyiLtUqqUEDqlbR5ytp/lRqrtF3OPcXlnrW/
FrcxXZSebUTbkSAK0UBBPVXR4P6xjCp5B8Ktp8BksvNfGtOb1hyfR9A6DkVJTdo/
Jq8QmOqNxDK4TRSDQr3wyAAATYl4Qj0hJQ5exy3uB9Vtbn7ZcpQAYpq7C5ewWxrGPAhezJTqm6/
G1hQw8vT8K12uhN+7TZ6HmfB8HBkTB9gkSwfcRTUl1krb8XmZzHYkRoBR6zrjvPcl/
DbJrJULH2j0gaxfAa6XoeFKtXzmHpLXBJEyutBUBWXTD9ZXwiLaj0tGOGhVYb+ZbVHPvGPHnoDe4hx2zrBUiJRZPHWGOA0C/
Y/
h+nbrD/
e1UvB7lhCQjSSXyvYjnDWp0pcBUtD4UJWEmp+PWhOWUXx7Uf8gGMVfLTXvcZ4NtR0QUjnFQrEG4jUG8BnmH9SGsXj3LT3+SvMcv9sPzLvWrIhMuNjc+F0KWs+ZO9v4KEC3bFykO0TK2wcqPKK13zDwJ/
YjgnqYmVFOLNxfjn6Zl/
SdEwYHhwwYs/
SF2I+YSjJaaR7GSj5BjGU1n8enUiSJEnSYb4kCvFoLLWQQF5/
XvmzfEXojbW3ihn1ZN7FWUnrEKtjt2rGxPkH6QaGrUqFfBKEmNk0R6nMQymuNdQWfwxhUkNaMiAlw3gcQnSMBCnJ8/
oLD/
oAGj1VsN1Svfwxfh+Kbg7THPkkaCF4v9C4GCvpVjT9KWR+vOrTKLM0wADaj+Qw6/
NT9i53v1QWdaAK9fjNrkCKwkD/
y1lZN1C6gDJ0R1PBXknR+9PDg7glOCHq/MjkxW6Bx0hqOiqfujFVCR0xdZW0x7b+s0mKfl/
N8H47/
pRi16DyPHAN12o0RNBc/
NRA5MDF3Bf66IVLJIvz8K3Dbw+dXhjAr+QPGXhE+wPKpMJaNmbSq4U2HBkAr4m+eRBC2mWEvSkUtV+3mntpCYEPX3/
NuBWrMF2V7Br8Ua2b7fu0l4N9M7ak6RPSxNaKJm4EM+tTjrDszqUHNB8Kt9rT+e4mTXDydNxTjWaPz+3EXz/
pQxRnd6vZBkRyQk8ZRxZwoJ2U1VvBd4FDKEMVkZq1yR4Qd0qOJykQvMHdjCBUwFQbNQfLwZn2Wx5bYHOHs4eZXWlYkbvRPv1KhSjDJaTG7ipVvpAbvjTmTLVVB/
pWH8UFuWFI6jOpG+Xs4mMvNJHx8BxS7V4DqfK/KEKO3JQgdLQL0W8S0ZmAU+PhhVj9A79VwUjmKWzNw8jbxmYOkIQLvGbW0uhpaAS+K3EVhm0X9WHZp3/
YCFl1j6aQE/WBaMhDR1DCmA2wq2/6AWxtNVnJgj6jRq6B3g6+0MnMaQ0WKpRqW3eGCsv53tyaE8mOTSxXq1C5HM4M+8xmCY/
g1+pl6Zyhu8+YgzyDNQqz1FFQAVuMd9hmE+2GOJFzMdpqEw9/
oTuCzLA+6tqujeckKY0wXn6Er+bCiBVDoWVJEmSpD5wCKUkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkS
ZKknjDASZIkSVJPGOAkSXMmSSX5xMD8vCRrknx+ivXmJ/m9gfmXTLXORoyxBwAH6ItyszVIQMzYx7Z9Fwi2rn0Kd6uuSCGm/
5ta2y5N8N8l/WZ/tDmzvoiSL1mO9tY5dkqRBBjhJ0ly6D3hekie0k8/q+lpMRcAQVKTJxlF2yQ3JTbGdyOJbNnR08q/
NHABvyP432pfsfX4M+XVX70v3/
pQ8k2WVwYZKN8f9Thx27JEmAAU6SNPf+GfjVVVNv164FNjC5KcMOT01lt1fZK3tkUfAp7eesP+Vyv7EXD1

```
QK/
W64CzB7a1IMlnk1zafl7YyvdP8h9JvtUen5lkK+D9wOvaPl432OCqWg18D3hKa+OpSb4EnJHk8Uk+luT
Kts2Xtv08IclZSa5I8mngCQNtu3dg+rVJPt6md0lyTpJvt59fGn/
sSXZN8tU2/50kL1rfF0KS1H8b4y+JkqTRdhbwnjZs8ueA04HBEPIs4KXANsC1SU4BTgCe13rDSLL3wLa
OTHIz8DCwCtitLfswcFJV/
XuSvYAvAs8GrgFeXFUPJXk58IGqek2S9wCLqur4to83jzUoydOApwHLW9EvAL9cVT9K8naZRqrZJM8Cv
pRkH+B3gfur6ueS/BzwzWk8NycD/1pVr06yBbD1D1kGN/O/
DFqvrTVueJ09iuJOkxygAnSZpTVXVFC2CvB84bUuULVfUA8ECS1cAuQ+qMOR/
4E+AW4NPjlr0ceE6Ssfltk2wDbAcsSbIQKGDLSbb/uiS/DDwAvKWqbm/
bW1pVP2p1fhn4q3Zs1yT5AbAP8GK6QDZ2zFdMsp8xLwOOaus8DNyVZPtxdS4FTk+yJfCPVXX5NLYrSXq
McgilJGljWAr8BQPDJwc8MDD9MJP8cbGqHgQuA94OfHbc4p8BXlBV+7af3avqHrrA95Wqeh7wa8DjJ2n
np9u6B1TVOQPl9w1MZ/xKg02cRvlk+193xaqv0oXDHwKfSHLUTNaXJD22GOAkSRvD6cD7q+rKada/
h25I5TB/Cbyzqm4bV/
4l4PixmST7tsntePTGKW+e5j4m81XgjW0f+wB7AdeOK38e3XDRMbckeXaSnwFePVVB+Id3QS5JskWTb8e
1K8hRgdVX9LXAasN96tFmS9BhhgJMkzbmqWllVH55B/
duAr7WbdvyvccuOQUTku8DvtPI/
Bz6Y5GvAFgP1vwI8d+xGHsC7aM66Xo8ePW5+DIPNzTRm3cqmQLgAOQOksy8FjAsdugDh5kJ6RQ7mWTYwuq
AF7atnUZ8Nwhx/
4S4PIk3wJeQ3etnyRpRKVqotEekiRJkqTNiT1wkiRJktQBjhJkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCAC
dJkiRJPWGAkyRJkqSeMMBJkiRJUk/8f3+hv4WXXd2cAAAAAElFTkSuQmCC\n",
       "text/plain": [
        "<Figure size 1080x288 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAACLNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xm8JWV95/
HPN7S4Y7M0yNLSKO2CJiLTUaIzBiVGQCPoiBESJYSZ1gSzjJoMMUbNJE6IJhqJDg4KscGFEIxDRxEluC
UmEBtlFZUWgW67hWXUBT4zR/1XDx9+y6n+67V9/
N+vc7r1nnqqaqnqs6593zP81TdVBWSJEmSpPnvZ+a6a6AZAIkSZKk4RjgJEmSJKknDHCSJEmS1BMGOEmSJE
nqCQOcJEmSJPWEAU6SJEmSesIAJ6n3kixLUkkWteefLcLGx3VrYzZK8z8KkHh6j3hsT/
bTbaNMa235bkw3Ox7YE2VJL957IN89Xo99o0rXPo4z1dr48k70/yJ1NY/gdJHj/
VdkjStjDASZp1SX4jyZVJ7knzyvSSSnJJlm8Fctfn+SXxptfVYdX1arpae34rKdtg8/
TrLbqPLL2gfaZUOuZ7MPv0kOSfJA+4A58vin1t7/
XVVTCmYDH+BH1n19kpOmss6ZMB9CWCwCJLntdf5HUluTfKnJNHtPUH9Zks+13tp/
pHmjTfkm+2LLsvAnQCKl9F1JPCbVXUvcDbumaOZ8rEOQy/
GPA1YFfgj4FzkyyZ8VbOEl8PHCSZk2SnYA/
BX6nqi6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8BVXq6oqp9U1b8
```

8It2XMscPzB/
z90IL3KcAh7fz+GzgsrZvj2uh9HGTHB9JC5ABTtJs2g24paruG2PeRkZ9uz5NXgP8RVVd07b7v4EDM9A
L1+bfVlU/BH4CPBp4MpC23MYht3VDVX2gqu4HVgF70oWFiYz0wr0A+Abw3THq/GNV/Udr/
0eAAydZ517tw9/I4xVj1PkJXaDav6rur6pLq+qugfl/V1XfasfknDG2eQtwG/
BB4KSqumhg3uDxfBFwbVWdVVX3VdXH2n7+Svtw+vPAn1TVvVX1JeCfJtm3Qf8NeHNVfbM6l1fVeGH7J3
TnY9/W8/svVTVRgPvLtg83An/
DT4e6rgKOzU97715Fdw7HVFU3tiGUuwFvptv3sTwKuHNU2Z10r8Xx9ueAJDtV1e1V9dUJ2nBpVV3cjv/
1wP+lCxqDTq6qO9r+fp6fnu9XAH9TVeuq6jbgL0at+1NV9e12/
L8IfJaux2rEA3S9ive218Mr6F5bV7XA+bbx2j3E6+PXgfOr6vyqqCqLgTWAEdU1T3AebTz1oLck+mC3
ejjc2tVfbyq7mkB+u1jHJ/x2jjyxcsfVdX32/
H9a7rXxYiJfi88ADwtycOramLramNVXd3adGNVLW7nQ5I2Y4CTNJtuAXbL2NfC7NnmT7Fg8G
YS60YmqupzdN++vw+4Kclp6YZ+DuN7A+u5p00+apJlzqLrGfgNRg2fHGu9wD1DrHND+/
A38jhnnO1+Bji7DWV7R5KHbMU2d6uqnavqKVV1yqh56wam9wJuGDX/Brrjvxdwe/
sgPzhvWEuBbw9Z9510vZefbUPWJrvxyuA+3EDXVqrqEuBu4BeTPJluSOQWoWC0Fn5WAeeN8/r/
AV0v1qCdgO+PURe6oZVHADe0IYa/
MN62kzyxDQv8XpK76L7EGP1lyXjney+2PBaD6z48ycXphpbe0do0uO5NVfWjgecTrm+UyV4f+wJHD35Z
Afxnut8l0PW2jQTvY4H/N/
C+HNyHRyT5v234413Al4DFLZxNZje6HurBdo28vkeM+Xuh7dev0vV+b0w3TPrJQ2xT0gJngJM0m/
4duJduOOOD2lCiw4GRXpy7gUcMVHnsqPVM1HMy2jq6oWaDgebhVfVv462vqk6pqv9EN3ztiXQ3XJkRVX
UD3c1MjmDU0NKZ1Hqh/rSqDqAbuvViNr8eb0qrH5jeQ9Dj6HoaNwI7t/M/OG/
EZq+D9oF68FqzdcAThmpQ1zvyhqp6PPArwOuTHDrBIktHtWnwWrZVdL0/
rwLOHRVQJrKIbkjqWF8IXA08Pslgj9vTW/kWquorVXVkW9//
o+slhbHfG6fS9fwtr6qd6IaPTjS0d9BGtjwWACR5KPBx4K+APVpP4/mj1j26PeOubxyTvT7WAR+uqsUD
T6WAecNeq9/ciqOrnN/yzdF0YH0gW5sYZPQje89knAs9rxGRmCO7IfE/
2+uYWuN3TwNT7y+p5UVX2mql5AFzq/AXxgmOUkLWwGOEmzpqrupLuLHTJbkIelul/
8PdNcnjQxFu4zuJhK7JHks8PujVnUT3fUmw3g/8EdJngoP/8EdJngoP3nDg6PEqJ/
n5JM9qvVF3Az+iu4ZoJp0APH9UT8OwtuZYPCjdLe5/
toWiu+g+hM7Efp4PPDHJsUkWpbvRygHAJ1t4XQP8aZIdk/xnunA14lvAw5K8qJ2PNwMPHZj/
QeDPkixv1xT93MC1dZsdlyQvTrJ/uybxravE+3vH6S7ucVS4PeAwesLz6K7Ru7XGb/XlCQvS/
KkdDdAWUJ3/d/XWm/cZqrqW3Sv+7emu8HMS4GfowtIo9e7Y5JfS/
KYqvrJwP6M7PeuSR4zsMijW50ftB6e35pgv0c7B/jdJPsk2RkY7Lncke58bALuS3dzjl8eYn2/
keSAJI8A3jpexSFeHx+mG4wnQ3W3lYuhun7NOWvw84l673dRfgwnE29Wi6697uSHfN5ug2jfsea8Mi
zwHenuTRbWj26xn7WtbNJNkjyUtaQL2Xrhd2pn/
XSNoOGOAkzarqbjryJrpv7e8CLqH7Jv3Q6m4SAd0H5MuB6+m+RR99c46/AN7chk1tcXONUdv7BN2/
LTi7DY+6iq63bzw70X0LfjvdUKhbW1tnTLuGaM3kNcf0NmDVBNe6jeexdB9u7wKuAb7IEB86t1a7Ju3F
dL0ctwJ/CLy4qkaGyx5Ld5OH2+g+OJ85sOyddDfb+CBdj8bddEF/xLvoPjx/
tu3H6fz03zC8jc2Py3Lgn+k+JP878H+q6gsTNP08uptnXEZ3o4zTB9q1HvgqXc/
Mv0ywjr2BC+iGQV5Jd73TS0dmpvtn0u8fqP9KuhuF3A6cDLy8xrk5Cl3v3/
XtNf1a2o1VquobdDfpua7t+150N/
c4trXjA2z5fprIB+iG2l7e9vnBXuJ2vdjv0p2D29s2JhxOWlWfprum8HN0Q1o/
N8n2J3p9rKO7wcyb6ELkOrre8sHPNh+lu1HKP9TY197S2vNwut60i+nO2aD3AC9PdxfJ0cOFAX6H7rV5
HfCvbZtnTLJftHa+ga539za66+5+Gx68ickP4k1MJI0hE1/DLUmSRktyBt21hm+e67ZIkhYW/
6mmJElboQ37fRndrfUlSZpVDqGUJGlISf6Mbhju/6MbhjuO6vqO3PdHknSwuMQSkmSJEnqCXvgJEmSJKkn
DHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknD
HCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTyya6wYA7
LbbbrVs2bK5bsYW7v7x3dxf9891MzSUHwIPzHUj1BM75CE8fb3csfd5roZkhakuwE/W/TB3T/
+IfeXny22R/
P1c8Cll156S1UtmazevAhwy5YtY82aNXPdjC1csPYCljxi0tdSc2WavsPgFwsPYCljxi0mOoeeHfgJ3nuhHqiU33XM9h+795rpshaU
G6APCzRR9csPbfWPIIP1tsj+br54AkNwxTzyGUkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCAC
dJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTi+a6AZI02y6/8Q5uu/
XGbVr22Gc9bppbI0mSNDx74CRJkiSpJwxwkiRJktQTBjhJkiRJ6olJA1yJA1ySJyW5buBOBxV5LfT7JLkguTXN
t+7tzqJ8kpSdYmuSLJQTO/G5IkSZK0/0Zs0wFXVN6vqwUXsOcDiwvD1WAqfORMMlSZIkaaHZ2iGUhwLfrqobgCOBVa18FXBUm94S
a18FXBUmz4SOLM6FwOLk+w5La2VJEmSpAVsawPcK4CPtuk9qmojQPu8eyvfG1g3sMz6Vva2EmyZ
tOmTVvZDEmSJElaeIYOcEl2BF4C/C/C/
MNkVccoqy0Kqk6rqrhVVtWLJkiXDNkOSJEmStBuD4RGkrfj90oMDwbuuHBlqKUmSJKqSFbmsC3DH8dPgkwGpgZZteCZw7UH5c
ZTkEcALgNcMFJ8MnJPkeOC7wNGt/Hy6Wwhcy3dHSneNWUWSpIkSZJWA8kxbLdaatJUoCKVMmSJEnadouGqVRVPwR2HVV2K91dKUfXLeCC2J4uh
a2TJEmSJD1oa+9CKUmSJEmaIwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDAS
ZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKkn
jDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9cRQAS7J4iTnJvlGkmuSPCfJLkkuS
EKSXZJcmOTa9nPnVjdJTklybZIrkhw0s7sgSZIkSQvDsD1w7wE+XVVPBp4OXAOcCFxUVcuBi9pzgMOB5e
XusBE6d1hZLkiRJ0gI1aYBLsiPwC8DpAFX146q6AzgSWNWqrQKOatNHAmdW50JgcZI9p73lkiRJkrTADNMD9
umBezywCfhQkq8l+WCSRwJ7VNVGgPZz91Z/b2DdwPLrW5kkSZIkaQqGCXCLgIOAU6vqmcDd/HS45FgyRllt
USBJkiRJ2jrDBLj1wPqquqQ9P5cu0N00MjSy/bx5oP6+A8vvA9w4PY2VJEmSpIVr0gBXVd8D1iV5Uis6FL
gaWA2sbGUrgfPa9GrgVe1ulIcAd44MtZQkSZIkbbtFQ9b7HeAjSXYErgNeTRf+zklyPPBd4OhW93zgCGAtc
E6td1aumaVJEmSJC1AQwW4qroMWDHGrEPHqFvAa6fYLkmSJEnSKMP+HzhJkiRJ0hwzwEmSJElSTxjgJEmSJKknDHCS
SZJkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9cTQAS7J4iTnJvlGkmuSPCfJLkkuSEKSXZJcmOTa9nPnVjdJTklybZIrkhw0s7sgSZIkSQvDsD1w7wE+XVVPBp4OXAOcCFxUVcuBi9pzgMOB5e
XusBE6d1hZLkiRJ0gI1aYBLsiPwC8DpAFX146q6AzgSWNWqrQKOatNHAmdW50JgcZI9p73lkiRJkrTADNMD9umBezywCfhQkq8l+WCSRwJ7VNVGgPZz91Z/b2DdwPLrW5kkSZIkaQqGCXCLgIOAU6vqmcDd/HS45FgyRllt
umBezywCfi7JF9L8sEkjwT2qKqNAO3n7q3+3sC6geXXt7LNJFmZZE2SNZs2bZrSTkiSJEnSQjBMgFsEH

```
eC7mD8/F/
OG5AFK1xeVpkiRJkqR5aCaGUEqSJEmSZoABTpIkSZJ6wgC3HUlydJKrkzyQZMWoeX+UZG2SbyZ54UD5Y
a1sbZKTZr/V278kb0vy3SSXtccRA/
PGPC+aOb7m51aS65Nc2d4La1rZLkkuTHJt+7nzXLdze5TkjCQ3J7lqoGzMY5/
OKe19ckWSg+au5dufcc6FfyvmQJKlST6f5Jr2Ger3WrnvjVk2wbnwvTGKAW77chXwMuBLg4VJDqC7G+h
TgcOA/
5NkhyQ7AO8DDgcOAI5pdTX93l1VB7bH+TD+eZnLRm7vfM3PG89r74WRL5pOAi6qquXARe25pt+H6H7XD
Brwzo8VAAAGsklEQVTv2B8OLG+PlcCps9TGheJDbHkuwL8Vc+E+4A1V9RTgYODEdsx9b8y+8c4F+N7Yj
AFuO1JV11TVN8eYdSRwdlXdW1XfAdYCz2yPtVV1bVXdDi71dXsGO+8aOb4mp+fjgRWtelVwFFz2JbtV
lV9CbhtVPF4x/
5I4MzqXAwsTrLn7LR0+zfOuRiPfytymUFVtrKqvtunvAA9cAe+N7Y9ZNcC7Gs2DfGwa4hWFvYN3A8/
WtbLxyTb/XtaEWZwwMD/P4zz6P+dwr4LNJLk2yspXtUVUbofsDuw+Z61beMY79r5X5oZ/
K+ZQkmXAM4BL8L0xp0adC/
C9sRkDXM8k+eckV43xOGPNTl2kqTnJdTgScABwIbgb8eWWyMVXn8Z5bHfO49p6oOohuGdGKS58
51gzQm3yuzz78VcyjJo4CPA79fVXdNVHWHWMMs/HNBrjXPjeGGXa/5G3ZlZV/
dI2LLYeWDrwfB9gQ5ser1xbYdjzkuQDwCfb04nOi2aGx3yOVdWG9vPmJJ+yG4p085w2c
mEZ79j7XpllVXXTyLR/K2ZXkofQBYaPVNU/tmLG3NgrHPhe2NL9sAtDKuBVyZ5aJL96V0
gK8DyJPsl2ZHuQtDVc9jO7dKosfEvpbvZDIx/
XjRzfM3PoSSPTPLokWngl+neD6uB41q144Dz5qaFC9J4x3418Op2x72DgTtHhpNpZvi3Ym4kCXA6cE1V
vWtglu+NWTbeufC9sSV74LYjSV4K/
C2wBPhUksuq6oVVdXWSc4Cv093h68Squr+1eS1wIbAIOKOqrp6j5m/PTklyIN0QgnXA7wBMdF40M6rqviS+/man1N7AJ/o/
kazCPhoVV2Q5CvAOUlOAG4Ejp7DNm63knwUOATYPcl64K3AOxj72H8aeDHdDQa+wPYgNZ
VsyJ5wCvAq5MclkrexO+N+bCeOfiGN8bm0vVghgqKkmSJEm95xBKSZIkSeoJA5wkSZIk9YQBTpIkSZJ6
wgAnSZIkST1hgJMkSZKknjDASZJmXJJKctbA80VJNiX7y55CTLLLU7y2wPPlyX5YZLLBh47JnlJkpMmWM9v
JHnvOPOuT3JlksuTfDbJY7dlH9u6DplsnyZY9qgqB2zrtiVJC4MBTpI0G+4GnprkYe35LwHrt3ScrcT
R5V9u6oOHHj8uKpWV9XJU2jf86rqq6c6AauuvvzWmDMvatPHAB8bmZHk
bUnOSPKFJNcl+d0262TgCa2n9ZRdg3+Wa6bzA7Y9T/SPK/
klwC/EKSQ5N8rfXKeYm3eYUm+keRgfZGeN2qc3Djy/
KsmyNv3qJFGlhWDTXDZAkLRhnA29pQwx/
DjgD+IV23h8SbX6z0Gf/SofcnnTg5LYqxFp3PXGM6MyMqvbv2FmLcmvzRgy/
RpVPVdW9VXULcDe2irGhxCOTaqAXwZ+FW4H9h2Y9/w4MDn28qqrKrKofAV8V8H9h2Y9/kWCncC/qKV3Q98vE0/
CfhOVX2rPV8FGqqtqgI+PN7+D3g+cG7bT/rvA/
cNsV5J0gJgD5w4wkaTatBv4KOATVKt/wPXT+8k5H2fSvFvTkeBbXhd0WadbABBPHa59b/
0ZV1WuTPItuuOZlSQ4cYzvj+v3PGwlUA35UVfe36aWt/QIcEvjj5sRklPE3xN7KXvWbMnbGYJa5jt3i6t/
MF9TfIzwNKq+jzwh3Q3c3nUNOyHJKnnDHCSpFlTVeur6t1jzDoVmIjK53s3pa2j2vEj4HjgH5JcCTwAvH2mXktmleSbPjBfEPmbPKQXE9aLaOifI+LJkvY5m7ls1NR/
yzaP8rlh9rBTx3Tbc3c1b7ZnlG8kLRl6+YK9YIrbj8Ww0tzwfZWjgCBqeQ5+n2jRIaGm8IwRDAEE9Bc8lPFjrN3lFZOPQEAbFO7M41uoRS+3aNGNDuDcXVP0Ja8VMQRCOymCKVdnP9n2SG0nqGSMN+0OxzaXpDB
j4PUv0+UpqQNCW00L55tw0E/04M6CGfy3cN0CeBK8i5eAJ9pUaF8V8cGwrvR5v7CBsTGwr0CqkSLUnpYPy1Ye+NxlYKV
a2j2vEj4HjgH5JcCTwAvL+VrwQ+1W5icsPAYh8HdmlDM38L+FZb19XA24EvJrkceFerfzbwB0m+BiwHP
ty29TXg3VV1x1T3Q5LUf+mG7EuSJEmS5jt74CRJkiSpJwxwkiRJkiRJktQTBjhJhJkiRJ6gkDnCRJkiT1hAFOk
iRJknrCACdJkiRJPWGAkyRJkqSe+P9SrEfxjDoP5wAAAABJRU5ErkJggg==\n",
       "text/plain": [
        "<Figure size 1080x288 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XucJVV99/
vPVwa8cZcBuYrBiQZNJGQUDI9KRKOQREgiQTGKhJwxTzDqiTEhnMSo5zHBXDQSDXlIJA4qIl54mCiiZL
yhAjIogggcRkRmBJnhfhMQ/J0/ajXs6enL7pnu6a7pz/
v16teuWrV21apdu3bvb69V0akJEmSJElz32NmuwMGMJEmSpOEY4CRJkiSpJwxwkiRJknrCACepN5N5LsnsSSSLGjzn0tyzCbY7ibZjiaW5MtJ/
nAWt39wktWztf25LsnrknxtGtc3pdd7ut4fSa5McvuGcKdy2rShePVxH2uLXqvGfc2kT+z0OHSSyo+5L8OMkpS
bafwvOvT/
Li8ZZX1aFVtXR6Wju+jdlO24cHk+w0qvyqyFkb3HnI9leRpo8pOTPKDJPckWTq3kvSg0xOKDJPckWZ3k4xvSxg0xOky3stcleb
```

```
i15662j7+5qdo0jLkSwpK8Ocl17XW6Mcl7B1/LMeofkuTqdi59KclTNmCbb0/
ykY1r+eavqp5ZVV8epu7o87KqLqiqp89Y4yQJA5ykGZLkLcC7gbcC2wEHAk8Bzk+y1Sy3bdwvyjPkB8C
rBrb/i8DjN2aFrUfwNcCLq2prYDGwfGPWOU0ubO3ZHvggcFaSHUdXmoVjMNf8F7B/
VW0LPAt4NvDGsSq28P9p4K+BHYEVwCYL65uC7wdJGp4BTtK0S7It8A7gT6rqvKr6aVVdD/weXYj7/
VbvQ0n+18DzHukdSfJhYC/gv1qPzp+PsZ11hkwl+YMkVyW5PcnnB3sp2l/
Kj09yLXBtOu9NsibJnUkuT/
Kscfbnke2MDBNL8o9tOz9IcugkL8mHgdcOzB8DnD5qGx9K8oEkn01yd5KLk+zTln21VftOey2OAp4DfL
6qvg9QVT+uqlNb/V9LcsXAuv87yTcH5r+W5Ig2vVuSTyVZ2/
bljQP1HpPkhCTfT3JrksEwNtKmO1qbnje4P1X1M+A0uqD6cyPHNslfJPkx8J9tG/
9XkpVJbkuyLMluA9t/Set1ujPJ+4EMLFunN2l0j2CSHZP8Z+vduj3J/0nyROBzwG6tzfe0/
X9ukhWtN+zmJO+Z4FiO9Hzekq539dWt7DntuYM9kr+b5LKx1lFV36+qO0aqAj8DnjZWXeB3gCur6hNVd
T/wduDZSZ4xTvv+IsmP2vvomtZ79zLgROCott/faXWPbefM3el6BF8/sJ6RY/
aWdp7clOTYgeVPasfsrvb+2mdUO96XZFVbfmmS5w8se3uSTyb5SJK7gNcleXw7D25P8j269/i4Jnp/
tOVjfh4k+bck/ziq7jlJ/
rRNP9Lz394bFya5o+3/+9P+ADXWeZlRPbxJfiHd58cd6YZmvnxg2UTnfDLk55Ok+ccAJ2km/
CrwOLpeg0dU1T10X6BfMtkKquo1wA3Ab1XV1lX19xPVTxdITqT7srsQuAD42KhqRwAHAPsCvw68APh5u
t6io4BbJ2tXcwBwDbAT8PfAB5NkgvoXAdu2L3NbtG2NNZTtVXTBdwdgJfAugKp6QVv+7PZafLyt87VJ3
ppkcVvviAuBpyXZqQWKZwF7JNkmyeOBXwEuSPIYup6g7wC7A4cAb07y0raeN9K9Zi8EdgNuBz7Qlo20a
fvWpgsHd6Rt9w+Be4BrW/GT6XqQngIsSfIi4O/ogv2uwA+BM9vzdwI+BfwV3ev8feCgcV/
h9X0YeALwTGBn4L1VdS9wKHBja/PWVXUj8D7gfa03bB/grAnW++TWnt3pgvipSZ5eVZfQvX8G39u/
39oxpiRHt/ByC10P3P8ep+oz6Y4RAG0/vt/KR6/
z6cAbgOdU1TbAS4Hrq+o84G+Bj7f9fnZ7yhrgN4FtgWOB9ybZf9T+btf29zjgA0l2aMs+ANxPd+z+oP0
MugTYj+6YnwF8IsnjBpYfDnyS7PA3dK//Pq3d4153Otn7Y5LPgzxa3R3oPg/OHGNTWP/
d9vG8+jOkT+Gcc/
LwTZuSXd+fYHuPfgnwEfbMRox5jnPBJ9P7X1z+XivjaTNnwFO0kzYCbilqh4aY9lNbfn6uh94V1X9vE3XIFXOYH5UNggnO+zV1Vdv
u3wL7Zd1rhf6uqm6rqp8APwW2AZ4BpD3vpiG39cOq+veqehg5Bi5+K9MwNuuPo5t/q
cS4GrgR2PU+XRVfbO1/6N0X37HVFUfoftC+FLgK8CaJCe0ZffTDbN7Ad3QysuBr9F9wT0QuLaqbqXr4V
hYVe+sqger6jrg34FXtsh/qmp1VT1A1/Pzikw83AJHcAP6b7cvrbVXVnW/
Yz4G+q6oF2DF4NnFZV32rr/0vgeemuCzwM+F5VfbKqfgr8c1vnpJLsShfst/qiqbm89wF+Z4Ck/
pQXeqrqnqi6aZBN/3fbhK8Bn6QIodO+Fkd7lHemOzRnjraSqzmih8eeBfwNuHqfq1sCdo8rupHv/
jvYw8Fhg3yRbVtX1I72047Ths603sNr+fAF4/kCVnwLvbK/huXSB/OntDwa/
R9c90eq6taqeqiq/qm1azC8XFhV/6eqftbeD78HvKudo6uAk8ldN5O/
Pyb6PLgAqIH9fEVry41VtZ41jvD6XVtVFbR+upwvZL5ygXYMOpDt2J7Xz64vAZxgYTs345/y4n0/
tffNLQ7ZB0mbIACdpJtwC7DTOTOF/1d2/Lp9hTgfXW2o0h3AbQn4/S/1e1/
CzUlOTTf0cxyG/0cxiPfFGsqvva5NaTPOfDwNHA6xg1fHKs9QL3TbbOqvpoVb6i/
0fwS8c6D37CvAwXQh7ivAl+m+eL6Ou028pq11+1EHg2jTwHOHlh2FV1AmCisXlRV21fVTlV1YFX
998CytS1cjtiXrtdq9ceXBt4/WRC4b5o0WRC4b5o0BVXQtcCfzrOFXuoeshG7Qt
cPcY61oJvJkubK9JcmYGhqWOluTQJN9IN2TzDrqwOXjcbh0VVO+9fm8Ss30J+wQtwV1X9rS7ATqPcNhAi
QVpC3aL1Uvrm2Me/
fh3DB+FqqKb/ypmE5Yy7uXA6WQJ3+KPcptU/0+Zh9rHWrexrS7+rzPrZN0w6nH8wRiaP/
XjHRZE/
rRuiQg/gQQuK4LQFCJYD0hz+6HXHf6aHVsE0ek6Hbt5Z0qTGz6JLeTlw6ydwBxvt7wHj7D4LW1FXFvuiWQg0R4dbh6R7NR63BYfxJXBiS2tD/
ae49h2N1J3HDcQNbQ2zaVH7b2tYdWPB3J7IUH0j7NGbWPDnwqmCVQhuYZ9HuaKd0IR1Vrac9YFj9wKhjJPkK2eMU8cNvNrJnIPz2tVBF/
ZuvNRrJnwMvmGvt4jcF4wPfj2jkkMN5wtYs6i4AUUBmIY7bVqBfoyMbDAczwdmDqHZlIe+Fwh/
t/FvBiH3vgDgptTS/lIHPUwrNPy/JUGlH+V2SmWE+vZ0iZ6J9dKC5g2gIHhPQ8x/
ukLDf6r5/eSgVXf4p3+b8vH3k9LW5CLncqy3HE3vAqs0MSZbGV8AugJzvQ3U1=
```

DodYqjPZbuNbultXXngfWOBM1bk3yrqu6mCz5ntfUeTXe8h/UGuiF/PwY+RLuzaPN5uhD9/9GdX/
cz+RDYd7S6P6D7PBi3B3OI98cwnwcfA17MBNcpAn9G97rcTfd5Mfoz6u2se14OtvFB4OVtu7fQDZF97V
jBewzjfj4leXWSMXtfJc0P6YaCS5Kk6ZDk+3TD9/570sqSJE2RPXCSJE2TJL9Ld23XF2e7LZKkzdNEt4
KWJElDSvJluv8x+JpRdx6UJGnaOIRSkiRJknrCIZSSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSes
IAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJE
mSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknFsx2AwB22mmn2nvvvWe7Geu598F7ebgenu
1mbKZ+AvxsthuhabJFtuSJW+00282QtI57AX+HTbd7H/wJD5e/v6Q+m6vfWy699NJbqmrhZPXmRIDbe+
+9WbFixWw3Yz3nrTyPhU+Y9DXUBvkGsMNsN0LTZO191/Oyp/3VbDdD0jrOA/wdNt3OW/
kNFj7B319Sn83V7y1JfjhMPYdQSpIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTp
IkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPLJjtBkjqv+/
ccAe33XrDUHWPPmCvGW6NJEnS5sseOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4
wwEmSJElST0wa4JI8PcllAz93JXlzkh2TnJ/k2va4Q6ufJCcnWZnk8iT7z/
xuSJIkSdLmb9IAV1XXVNV+VbUf8CvAfcDZwAnA8qpaBCxv8wCHAovazxLglJlouCRJkiTNN1MdQnkI8P
2q+iFwOLC0lS8FjmjThwOnV+MiYPpsku05LayVJkiRpHptqgHsl8bES2vbLZjP7Vv3QTQHndu5bsDqwaes7qVrS
PJkiQrkqxYu3btFJshSZIkSfPP0AEuyVbAy4FPTFZ1jLJar6Dq1KpaXFWLFy5cOGwzJEmSJGnemkoP3K
HAt6rq5jZ/
88jQyPa4ppWvBvYceN4ewI0b21BJkiRJmu+mEuBexaPDJwGWAce06WOAcwbKX9vuRnkgcOfIUEtJkiRJ
0oZbMEylJE8AXgK8fqD4JOCsJMcBNwBHtvJzgcOAlXR3rDx22lorSZIkSfPYUAGuqu4DnjSq7Fa6u1KO
rlvA8dPSOkmSJEnSI6Z6F0pJkiRJ0iwxwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmS
JPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOc
JEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknhgpwSbZP8skkVye5Ksnz
kuyY5Pwk17bHHVrdJDk5ycoklyfZf2Z3QZIkSZLmh2F74Tn4N4HnFdVzwCeDVwFnAAsr6pFwPI2D3Aos
LAFOmdYWS5IkSdI8NWmAS7Ie8ALgQ4CqqgeYE7gMOBpa3YUuCINn04cHp1LgK2T7LbtLdckiRJkiRpnh2F74N4HnFdVzwCeDVwFnAAsr6pFwPI2D3AosKj9
LAFOmdYWS5IkSdI8NWmAS7It8ALggwBV9WBV3QEcDixt1ZYCR7Tpw4HTq3MRsH2SXae95ZIkSZI0zwzT
A/dzwFrgP5N8O8l/
JHkisEtV3QTQHndu9XcHVg08f3UrW0eSJUlWJFmxdu3ajdoJSZIkSZoPhglwC4D9gVOq6peBe3l0uORY
MkZZrVdQdWpVLa6qxQsXLhyqsZIkSZI0nw0T4FYDq6vq4jb/SbpAd/PI8gGXBMKzsGOKdNLwNe2+5GeSBw58hQS0mSJEnSh
lswZL0/
AT6aZCvgOuBYuvB3VpLjgBuAI1u5vdc4HDgJXAfa2uJEmSJGkjDRXgquoyYPPEYiw4Zo24Bx29kuyRJkiRJ
owz7f+AkSZIkSbPMACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkD
nCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeGCrAJbk+yRVJLkuyopjOT8JNe2xx1aeZCc
nGRlksuT7D+TOyBJkiRJ88VUeuBeWFX7VdXiNn8CsLyqFgHL2zzAocCi9rMEOGW6GitJkiRJ89nGDKE8
HFMJ+6BzOK7zoCiRRiKW9ulkTrRyHxNcqcXr9oZcM9eLLBhe8Sa2tyyM9LcZLSd2QLU+i2/27zLIbmmwy1
cmm1I72c9qP2Yc0s6JLqpAo7Ya5o18GwY0GXEZqCALwS+sEa2dxSdLuxe9U9eW0B+Wun/vrh1UeS9ChuE6
LS0TpIkSZL0iI35NwKSJEmSpE3IACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTB
jhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJk
tQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeGDrAJdkiybeTfKbNPzXJxUmuT
fLxJFu18se2+ZVt+d4z3RA+m0gP3JuCqgfl3A+
+tqkXA7cBxrfw44Paqehrw/zWX3lZPkiRJkrSRhgpwSfYAfhP4jzYf4EXAJ1uVpcARbfrwNk9bfkirL
naCMP2wP0z8OfAz9r8k4A7quqhNr8a2L1N7w6sAWjLb2/1S7Z1JDZx5rmvmu7amWw/Eg9y+P34dm1zqdLNkYdIAl+Q3gTVVderB8hlg+
tdkmRFkhVr164dqrGSJEmSNJ8N0wP3fOlllqq3rSXY7sY6P8G8tdrVTHVkf5LTeR21Kg/wd5Ulw+
zNRWcqmn3FyDSb4qiyh7bkrXqMagcJfEbNkGEw70Wez1SMQhuv8tJt5sL/hh8qRfixavwJ0hdzSGYj+
ccrWWnW1+b6eqZDJ/tY6gCRhkUDsabg8kwLXKaE+/gF3ZF3WqKcJK3uKR/bKwNDqDJ9A4eq3tW9tzFkwTA/
b5le25XvP7C5IkiRJ0vwwTA/
cA8CLqurZwH7H7Ay5IcCLwbeG9VLQJuB45r9Dbq+qpwHvb+UkSZIkS+9KVU4Yr9Y8Dbq+qpwHvbfUkSZIkSRtp0gBXnXva7Jbt5wdbdw
BI9r04W2etvyQJJm2FkuSJEnSPDXUNXBJtkhyGbAGB/4PnBHVT3UqqwDm/
TuwOrANryO4EnTWejJUmSJGk+GirAVdXDVbUfsAdwAPALYx1r/hAhUPZ/uSJEnGoMhsFmRZMXatWuHba8kzVtTb/QaOKeqq/hWAxOKSkN9cl/
kzVtTugtlVd0BfBk4ENg+yYK2aA/gxja9GtgToC3fDrhtjHWdWlWLq2rxwoULN6z1kiRJkjSPDHMXyoVJ
tm/Tjwd+FbgK+BLwilbtGOCcNr2szdOWX1BV6/XASZIkSZKmZsHkVdgVWJpkC7rAd1ZVfSbJ94Azk/wD
8G3gg63+B4GPJFlJ1/P2yhlotyRJkiTNO5MGuKq6HPjlMcqvo7sebnT5/cCR09I6SZIkSdIjpnQNnCRJ
kiRp9hjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4w
wEmSJElSTxjgJEmSJKknhgpwSbZP8skkVye5Ksnz
kuyY5Pwk17bHHVp5kpycZHVrdJDk5ycoklyfZf2Z3QZIkSZLmh2F74N4HnFdVzwCeDVwFnAAsr6pFwPI2D3AosKj9
YBy9s8wKHAovazBDhl2lstSZIkSfPQpAGuqm6qqm+16buBq4DdgcOBpa3aUuCINn04cHp1LgK2T7LrtLdckiRJkjTPDHMXyoVJtm/Tjwd+FbgK+BLwilbtGOCcNr2szdOWX1BV6/XASZIkSZKmZsHkVdgVWJpkC7rAd1ZVfSbJ94Azk/wD8G3gg63+B4GPJFlJ1/P2yhlotyRJkiTNO5MGuKq6HPjlMcqvo7sebnT5/cCR09I6SZIkSdIjpnQNnCRJkiRp9hjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknhgpwSbZP8skkVye5Ksnz

```
dckiRJkuaZKV0Dl2Rv4JeBi4Fdquom6EIesHOrtjuwauBpq1vZ6HUtSbIiyYq1a9dOveWSJEmSNM8MHe
CSbA18CnhzVd01UdUxymq9gqpTq2pxVS1euHDhsM2QJEmSpHlrqACXZEu68PbRqvp0K755ZGhke1zTyl
cDew48fQ/
gxulpriRJkiTNX8PchTLAB4Grquo9A4uWAce06WOAcwbKX9vuRnkgcOfIUEtJkiRJ0oYb5h95HwS8Brg
iyWWt7ETgJOCsJMcBNwBHtmXnAocBK4H7gGOntcWSJEmSNE9NGuCq6muMfV0CJ1C/
g+I1slyRJkiRplCndhVKSJEmSNHsMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1
hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9cSC2W6AJI3njItvmFL
9ow/
Ya4ZaIkmSNDfYAydJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6olJA1y
S05KsSfLdgbIdk5yf5Nr2uEMrT5KTk6xMcnmS/Wey8ZIkSZI0nwzTA/
ch4GWjyk4AllfVImB5mwc4FFjUfpYAp0xPMyVJkiRJkwa4qvoqcNuo4sOBpW16KXDEQPnp1bkI2D7Jrt
PVWEmSJEmazzb0GrhdquomgPa4cyvfHVg1UG91K1tPkiVJViRZsXbt2g1
shiRJkiTNH9N9E5OMUVZjVayqU6tqcVUtXrhw4TQ3Q5IkSZI2Pws28Hk3J9m1qm5qQyTXtPLVwJ4D9fY
AbtyYBkrSTDjj4huGrnv0AXvNYEskSZKGt6E9cMuAY9r0McA5A+WvbXejPBC4c2SopSRJkiRp40zaA5f
kY8DBwE5JVgN/A5wEnJXkOOAG4MhW/
VzgMGAlcB9w7Ay0WZIkSZLmpUkDXFW9apCHmIPpJmz0eG1U/
AADeU4Lcn1+fNT4Yx/Lhk4zfn3mjtYZ/h6xAnVW/
eYAQXvYWf/IPFRTeXnT4cJF7Qik7Kl6HnV/
gRgRlVp6Kq7qImYhtjFbz1NMsxjjXoLBeqc2PSr3YTLa4yXKO7Og9TXKmMdRS79VBcrtbW/
sQEbZsnc48DjXzzhjN16RkvrEC5Wn8DBGYjAYKEVNAUxmbscbDk7/uBzyA7VLbO8rnlKKOdl6E0LLCG7B/
a7KXd81Zk4iTMKUMTOJ1lLA6ssSdVb0RIX9YjRsxrfIBlLAa/
cZu3AYLUNaMAtzbMMwCYcqXk3zgQqrvZeWpjmzJqkJAkWpt51NsfbBtNAt+eq1/
cEq6g7V2D89o6jv/
nkaLv8pPx8/
xHs3IBWE4uhLjKIwMjYN+01NaMYuvVu4pzd0Z5sdrkfW0bW+fSnAXVV0P3/
MEkMMD4U/
eBb3lzcDuMvkMvP4Onuzc0M3hBbM/x3NONwnl1t8XgyzFpNDR3uZyUzMZ4CjmA8MTdjXk8dHGBwt9p84D/
ywrWWGLxB5BGNMYxhG7JGl0TaxzpfRYNUl4h3duaaY4sKVNHmLTKSuW4kUpPsOWLrr/
EOHhbS9DCpO6AAVkgq3+/
MMd0vXkY+HVNj8jbVSkWvzbuZgxvkTx0/
UijuLnFSZt4B5e0yNvBN9E4Ub1wO8EW8D4FbxO6C6S4Ijb/
WTcUN+hwXqRHO6CpgM9QHnVU9cnn4D2lmgwBaFU7S7Ra0W1yOzeZIkSZKlbmLQkxyWXlNVxVeNQXWc81ZGcH
SF3VeAX1IdHJA8jwbTZT6Zg8WUHLACNLG0jrmZ2LIHhW2A1qHMhvaGqB3nVF8fGdsOpvs9d/
zHn5rnN+H6M6U/
ucGLa2ib9tbhPWdttx8TGfSWVcMBhuqCm87DIKP1IQs2SYbhTb1sBwTLW/
i2kT4DgtdRx8vHUB/HfZXhqvkeMgw+zT1PqdSHYOq8eOnTpdDqgsM/qrVkTZ+dZfwgf9b8fsCeLkUTTS5/
oNYyUbaa9OhwvjmoqTMTNDzWaqj/
m7dDhVF3GbQ5jbOMT1h/
XhKB/
U+a7w7X0Lw4fLM1Q1b5E4uWAz7DcT43eqjNYe6mMcz5t6d6I4NOfjQ5bSPDt3o0+AT1Y7cQvz7ZRtYLK8Ha9
h5/
```

```
1j38oXHjTRvnPrrrrzqpCSfpbsu7qIkL66qqyd7niRp8+E1cJKkmXIa8M6qumLSmp276YZUApBk/
yS7tenH0A3F/GFb/
FXgz9rjt+mGYz5QVXfShbqFI3eOTLJlkme2Xq0fJDmylSfJs8fa9hR8A3hlm3418LU2/
fVR5SN+COyb5LHtGrdDWvnVwG5JntPatk27Scro12Sfqrqiqt4NrKAbiipJmkcMcJKkGdFuOvK+KdS/
Ffh6+7cB/wDsDPxXku8Cl9P1Xr2/Vb+AbvjkV6vqYWAVLTxV1YPAK4B3J/
kOcBnd0EnowtRxrfxK4PBWfibw1nZjkNE3MZnIG4Fjk1wOvAZ4Uyt/
E3B8kkuA7Qb2cRVwVtufj9KFz5E2HwX8S2vb+XS9c1+iC3yXtWv53txen+8AP6HrnZQkzSOpmnTEhiRJ
kiRpDrAHTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeqJ
/x/aBPQ2Gg8IdQAAAABJRU5ErkJggg==\n",
       "text/plain": [
        "<Figure size 1080x288 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XuYZVV95vHvG5qLBKS5tIgN2Cg4EY222gGeGBMFjYAI6IggUdEwg
zPBqCMxorlhEiaaUVE0ksFAuEQEgho6ChjCJXgDbBARRMYWEFo60Nxvijb+5o+9Ck5XV3VV3V11aa+n
+epp85ee+2919lnnarz1lp7V6oKSZIkSdLM9yvT3QBJkiRJ0vgY4CRJkiSpJwxwkiRJktQTBTBjhJkiRJ6
gkDnCRJkiT1hAFOkiRJknrCACfpSS/JgiSVZE5bPj/Pj/JYevhuOvvvOvlOOtbkkuT/
LdR1q1yrqe4HRM6VpJjkvzTVLWr75KckuSv1+H+1up8t9t9d050kec8ckDyXZYILbfzDJP0ymDZI0VQxwk
macJG9L8r0kjyT5zyQnJJm7FtvfkuSVo62q6ZkJvfkuSVo62vqn2q6tR109rRTeY47n8PMk2w8qvaR9wF4xzP6t9GE6y
ZKPt2M8nOTWJOck2W0ibR3j+Jcm+Jmn+Vn7MH1Xki8mPkJPmkJDk/40WbAfq/6/
Wp+9PcnKSjSdwzFEDtDpVdWtVbVZj41Vj3NbZvyUaNbgbeEB9wBbAHsAzgQuTbDTNbZvyUaVhbgbeNHD8XweeMpkdtsBwMfDrwH7AU4Hn
AmcC+05m32CxAnaUZJChTwEeB9wBbAHsAzgQuTbDTNbZvyUaVhbgbeNHD8XweeMpkdtsBwMfDrwH7AU4Hn
AmcC+05m32vwzqraDHgOMBc4bpS2TWi0ZJr9DbCgqp4K7A/
8dZKXjFQxyauBo4G9gAXrad2Trl0/
FwhSVPMH7SSZowkT6X7QPuHVfV2iqm4Bn3KvwT/BXwfU1/QjHdgd2BP61jfr88QjHWWUEI8nvJ
7khyb1JvprkmQPrKsmRSX4I/
LB9SD0uyZ1t9GXVn/k8hJn2SLJaUlWJPlxt0b/BvXC+Uvjm27HZHD29v4xEZN2nc4aLqSJmHNtjbMcMQNMg8+G+j/PTOvVf3fS+FV0
Bc4HntHO50NJpnFh0z6T7N/
OvSwZvqWmYo
2+nknxiLM7IA1j9gZNbOTS/UoIOYPvcejrPWO7yNNZGcAQWpQP0V+pOj5Ek1kZqnl/d4nqAfjoWVY+Un
PYPiY6UNHWPl+JRg3SYRbaRwX+wPGM8fAWLk4d17R9/uyMJ/I8dp3LiHO
V39/Xjc9s7IBkLsBcu8k0l/ArhmGKpCzKJ5sESEMhuLM+9hDmRAyIOAJjl8r+Zt/gQTfDWBDhnmrS/
F23QDrx8TNlu0tk8Tm69Vvn/
ExnA9/xi9v9bVPf6J61B3ehwPtBLQsGGXzYfJtJA9wJbRoWYNXrEyCw5xq57IWB7ERbr/IW/
qqb+Cfu9Ht9V1jC+iTwLZjuDv57f6dtJJw
Qn4i9y/P7Xn8puyZEN9vwUOoGbJ1iU1/O1RcFBpPhYiSG1HtEkbsA0PRA/XHc1ZQFnbk/Yuz8kfKJGoBMYCNoBMRsBinOrXA03
s52s+ocsQaYs+NhrXWF/Dh2TZfd7dKYTinNU7Ij3PtezZgv95x7QGQ1jFvcjpGg1WQbmtnMDFLuWUz
JH4fjPQMgZNPQG5n4rXEEJgTv4Y/vxZmyPGDjqxpOCJsiFXHTkmrLgUyP5Fh98cUZRFeuBDKtxK2iHUcmQvCzlJ1UwWvudadLZXnUSd+Z/
uuDoZCTpBbu
BbmjSz3yL2bp4fNl8bPIJEeVmKXr8jZJhQ2p9VSgZkhmWHWTjNzbmbPGSytJ9Mh6hP4YRWFr+UEaSpQhx4Xo/
LTsXD7Wi+ozVJH4Jg58c3i40ieqXwzP51+AsF1Sqs3+1JmjvUiI3/
bEvD2aOUh34LcBsN29R2Uo6p6+G0ODcMCo6Hy3PrLdLRe+NgAK2XFT5g5tBaQObLgwZbtN4c4WzCc8LqIWKZq0ZUXVAYD6vbT1DMBA4Gcu+Hyn
8UUi49iW1E/
Sf6Vh+fZCZOVWiYMQsBqw7iR9nwjYbHspzHqG5ucUWk/8iVgIpPz1+Vn8IAbOPncTZJQx7FtcrUPNyZLfEtF3vcOcnpwO5nxA+Zrc1bc6SxcHrgWrJFrXDaWoAHoa9pi2qUi0XVKepqMQc7O2VoTsuIPUUzXKkA9Zb2
tYGCahGLKUMRL8YuK3C0YPcajCOdXEXhqp5jwz4SJOzSi7RMrUVJF
1VY
+Xcz1gu81TQNnxxFj8YXJvJa6MDc9nuaAFn4j6O6pdaEbgDfKXrAQSf76Oxhl6k3Z4qXgIrN54Ze2XkMBMzRKUP1VdvLJLQGfZDZX7U+9Oz3nn2GG9o53IUjtL9Q0+rZu3Hxf
vuaBzX4+zFcF+AhBbw2oAKdAnd7IhNVO+7+4kG0FOJSrUAJgWlkIVyHXdtYu/Yze77b8H14lJPDzHsIRwqcm0rBfVdI+3dNjWo3vbwVhpcBXLNq1odJSCHAnk3ABVYVkyBjZU1Z8AaCvAW9g2TpwELAuiB0q6bSiqBzC0eGJQCEKwmoLsMsjmDgzSDcmrAxCQGbzQo7Qd/
s33HbBSL+u0aCrcxq4o1WuMsbojGkfuTXiyqlKqHRapTKIKLBzBm4gvxzRA0VVdYVyjvpEoVmnkzl6o4JJlQnr6BOGr0ZmtE4Sv3MbqTGRqG80zMfj6HPaLrjNdBBKd0a1
bsPQSEAYrrk6U0Ca1cpSgO2FvC
```

wXQjVcvTTSn9tRHastpxW3hc1vYPXbh+c3v8ZtYw+jawj8eq6ut001P/
5yjVHqIbARoy9PjBEeqeDnwVOLNNLfzbNkI4oiRHtSmC97d+vAWr/sFjeB/
ZpL3PngH8ZChUNI+f1ySbJvm/6aazPkAXbudm1esVB1+TZwD3DhvhHalPDNYfrf/
MAzYFrhp4f17QyqmqpcANwGtbiNufUQJckn2SXN6mMd5Hd73neP8gtMr7ofWX21j1/TDae/D/0I2K/
1ubunn0OI8pSaMywEmaSb5FN3rx+sHCNj1uH+CiVvQw3Qe7IU8ftp9i/
G4D3tECxtDXU6rqm6Ptr6qOr6qX0E2Jew7dDVemRFX9mO5mJvsybGrpBF0E/G47p6O5nS7YDtqRkUf/
ltNN8xustzYGz+1ddCMWg8cePO4aj1VVX62qV9EF1B8An13DcR/
fT7smaXu65w3dlMIXpLu2cT+6Uc3xmsPo18BdzxMjX7THd1TValNw22jNh6pqV7qRnv144nrIVfpjuuv
d3k83mrVlC+T30/0hYizLgfnDpvIOntej6Ebydq/
uRi1D03IH6w+2Zzmw5bD+taY+sabX9C66KZvPG3hvblHdDXGGDE2jPAD4fgt1q0h3454v0I2cbdvOz3k
Dz2GsnxervB/
audqBkd8Pq2gjyUdV1bPoRrDfm2SvsbaTpDUxwEmaMarqfrpruT6VZO8kG6a7Xf4/042QDI2EXAPsm2S
rJE+nuzZl0B1011CNx98DH0jyPIB0N9E4aLTKSX4jye5tNORh4GfAmLcqn6TDgT3XdN3aGgw/
F6fRfWj+UpLnp7sxyCZ015QNOQ94TpJD240hDqa7/u/LI+z/bOBdSbZPsiXdXRYnpE3vOxs4Nt2/
Ongm3XTLoev+Rj1Wuht87N+Cw6N0o11rel1ekuT1bRTqPW2by1s7fgacQzeac2VV3TrSDpI8LckhSTZr
5/HVdGHi4lGOeRpweJJdW/v/FDhllH2/
Ismvt5GuB+iC7dDzGf6abg6sBFYAc5L8OauO9K3Jt9q272qv9euBwX8nsTldiLqvXRv5F2vaWfuDwxLg
Q0k2SvJbjDz1dsjZwNvaOdl0cP9tpOuzdNerPQ0gyfx2noecSXdd6v9klNE3ulHdjenOz8p0Nw/
63YH1dwBbJ9liDW18TZK92vv+KLr+8s1R6j8uyX5Jdm6h7wG613Cqf15IepIzwEmaUaq76cgH6f5a/
gBwBd0o2V71xN3+Tqe7nuoWumtZzhq2m78B/rRNu/
qjMY73JbobJZzZpohdRzfaN5qn0n2ovJduWtXdra1Tpl27s2SCmx8DnNrOxRtbOHkF8H26G5U8QHdjld
+gG8GhjQjtR/dB9W7gj4H9qmqkKayfpZvq913gaiY/SviHdMH4JrqbmpwBnDyOY/1Ka+/tdNNgfwdY0/
VF59JNubyX7hq717frm4acSvevFtY0fbLogsOytp+PAu+pqnNhlX8mvSNAVV1Ad/
OaS+j6zo8ZPRA9nS5EPkA3TfA/eCLIfhJ4Q7q7Qh5Pd07OB/
5f2+fPWHVa4uhPoOrndCPeb2vP4WBWPa+foLve6y66gHvBOHZ7KN0Ne+5pz2+0qb9U1fntGBfTTTUcHn
7f38ovb+/Pf2fg2r52zeK36EYph/
8cGKrzIPAuuiB2b2vf4oH1P6AbybupvU+eMWz7G+mm0n6K7jy8lu4mST9f00lodmltfqi18zNVdSlAuj
tq/
v049iFJq8iq094lSVILXT8Anr6mm4dIkrS+OQInSdKAdk3ce4EzDW+SpJlmpDu9SZI0K7Vr6O6gm4q49
zQ3R5Kk1TiFUpIkSZJ6wimUkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJk
qSeMMBJkiRJUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAk
yRJkqSeMMBJkiRJUk8Y4CRJkiSpJ+ZMdwMAttlmm1qwYMF0N2M1D//
8YR6rx6a7GbPET4FfTncjNIoNsiG/utE2090MSdPqYcDfievDwz//
KY+VvxOlqTJTP9dcddVVd1XVvLHqzYgAt2DBApYsWTLdzVjNBUsvYN6mY55DrRPfBLac7kZoFCseuYW9
d/7T6W6GpGl1AeDvxPXhgqXfZN6m/k6UpspM/
VyT5MfjqecUSkmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElST4w7wCXI
Ml3kny5Le+U5IokP0U5IokPKNWvnGbXlpW79gapouSZAvRu4YWD5I8BxVbULCcoC9weCs/
HLi3qnYGjmv1JEmSJEmTNK4Al2R74DAP7TlAHsC57QqpwIHtscHtGXa+r1afUmSJEnSJMwZZ71PAH8M
bN6Wtwbuq6qVbXkZML89ng/cBlBVK5Pc3+rfNbjDJEcARwDsuOOOE22/
pPXgu7fexz1337pW2xy6u+9rSZKkdW3MEbgk+wF3VtVVg8Ujr9K1xrHuioOrEqlpUVYvmzZs3rsZKkiRJ
0mw2nhG4lwL7J9kX2Ar4Kt2I3Nwkc9oo3PbA7a3+MmAHYFmSOcDjgLsm3PbA7a3+MmAHYFmSOcAWwD3rvOWSJEmSNMuMOQJXVR+oqu2r
agFwCHBxVf0ecAnwhlbtTMO9nhxW6atv7iqVhuBkyRJkiStncn8H7j3A+9NspTuGZJ+GreTWvlJwNat/
L3A0ZNroiRJkiQJxn8TEwCq6lLg0vb4ZmCr8TEwCq6lLg0vb4JmC3Eer8DDhoHbRNkiRJkjRgMiNwkiRJkqT1yAAnSZIkST1hg
JMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkS
T1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9cSYAS7JJkmuTPLdJ
Ncn+VArPyXmUmuaV8LW3mSHJ9kaZJrk7x4qp+EJEmSJM0Gc8ZR52Fgr6p6MMnGwOVJvtLWvbuqzhmqvw+w
S7u9CDip3UuSJEmS1sGYI3DVebAtbtxutZZNDgBOb9t9G5ibZLt1b6okSZIkzW7jugYuyUZJrgHuBC6s
qiva8+8leHbL7jNkaV8Ab2+H/4OOMk12ZsK3uo6hLA71Ak1Ysc1KD4eDnc6L6RrZ7W8vpMjrzwfpR3+OvGAs9ExD9WUCEQX5aO
Rae+qzhlWfx9gl/
a1O3BC+y5JkiRJmoQxR+Cq81BpOq96qmdL3lBPoPbTenOX1SqXL4P8tlekJsvhmkqPy7QXbgpNaN12jXeBC6sqi
vaqmPbNMnjkmzcyuYDtw1svqvqVSZImYVwBrqoeeq6qm6FwFwPbG3wA++DXgcB2MLkh
yRZEmSJStWrJhQ4yVJkiRJPmlmru1BW1X3ApcDeVbW8W8TFhPhHYLdWbWMVbmj
dv3oQaL0mSJEmzyXjuQjkdkvRpJmkXGcxfK7YBTk2xAF/
jOrqovJ7k4yTy6LFPZR6R1BLtXUtbVRrKnSBk2T69+2wa8FUSavJDDaUKXlpGJzPqsSlJeC4ZNVUSJmE2zmU+ItkNeaNF5+/
nQWl0DJ0mSJEmaPgY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSVJPGO
AkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZKknjDASZIkSV
JPGOAkSZIkqScMcJIkSZLUE2MGuCSbJLkyyXdTXJ/
kQ618pyRXJPlhkrOSPNTKN27LS9v6BVN8DJIkSZI0K4znCtzDwF5V9XxgN2DvJHsAHwGOq6pdgBXA4a3
+4cC9VbUzcFyrJ0mSJEmSJmnOAFedh9rixu1WwF7AOa38VODA9viAtkxb/4okWW8tliRJkqRZaswAB5BkoyTXAHcCFwI3AVuqqlVbv0yYH57PB+4DaCtvx/Yej22HJEnSpPXa/LUvbRSD+9jn/A4Z0ewWxJDSSZtvBuyBwABAFmAOvyvN
2wG7Ac0eq1r6r6l2A9m3VvbbZctx0sg3uL7+XtHxc2i08XhWqNajAg3nEKsn4Gs3U+w8Pvnv4PVPRNm
AW78FcM+6aKwkSZIkzWbjuQvlvCrCRz2+OnAK8EbgAuAd7Qqh0GnNseL7LtPUXV9VqI3CSJEmSpHEzZ+w
qbAecmmQjuhbJL98FolwdWs3uB0Nh0HCSSZIkSZIFnSpLUzZ+
qbAecmmQDusB3dlV9Ocn3gTOT/
DXwHeCkVv8k4JNJltKd+TtkPbZfkiRJkmatMQNcVV0LvGCU8pvproWIIIIRqU6mTkMEZEfzI0hJYjXI5kXDLCSmMhN2JSb+XNLfG4Cvn+zb7vgRGDvxFqAtS5mlLdrQDgFAmSEdzhJjXGpmPbDD+3iVIOGHLMOLzW3dKiRJetxaXQMnS
ZIkSZo+BjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJ

wxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJk
iSpJwxwkiRJktQTYwa4JDskuSTJDUmuT/
LuVn5Mkp8kuaZ97TuwzQeSLE1yY5JXT+UTkCRJkqTZYs446qwEjqqqq5NsDlyV5MK27riq+uhg5SS7Ao
cAzwOeAfx7kudU1WPrsuGSJEmSNNuMOQJXVcur6ur2+EHgBmD+GjY5ADizqh6tqpuBpcBu66KxkiRJkj
SbrdU1cEkWAC8CrmhF70xybZKTk2zZyuYDtw1stowRAl+SI5IsSbJkxYoVa91wSZIkSZptxh3gkmwGfA
F4T1U9AJwAPBtYCCwHPjZUdYTNa7WCqhOralFVLZo3b95aN1ySJEmSZpvxXANHkg3pwtvnquAF
D6zwJfbovLgB0GNt8euH2dtFZSb5xxxa0T2u7Q3Xdcxy2RJEl68hjPXSgDnATcUFUfHyjfbqDa64Dr2u
PFwCFJNk6yE7ALcOW6a7IkSZIkzU7jGYF7KfAW4HtJrmllHwTelGQh3fTIW4B3AFTV9UnOBr5PdwfLI7
0DpSRJkiRN3pgBrqq+zsjXtZ23hm2OBY6dRLskSZIkScOs1V0oJUmSJEnTxwAnSZIkST1hgJMkSZKknj
DASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZ
KknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6YswAl2SHJJckuS
HJ9Une3cq3SnJhkh+271u28iQ5PsnSJNcmefFUPwlJkiRJmg3GMwK3Ejiqqp4L7AEcmWRX4GjgoqraBb
ioLQPsA+zSvo4ATljnrZYkSZKkWWjMAFdVy6vq6vb4QeAGYD5wAHBqq3YqcGB7fABwWnUuB+Ym2W6dt1
ySJEmSZpk5a1M5yQLgRcAVwLZVtRy6kJfkaa3afOC2gc2wtbLlw/
Z1BN0IHTvuuOMEmi7pyeiMK25d62OO3d2fIZIkaXYY901MkmwGfAF4T1U9sKaqI5TVagVVJ1bVoqpaNG
/
evPE2Q5IkSZJmrXEFuCQb0oW3z1XVF1vxHUNTI9v3O1v5MmCHgc23B25fN82VJEmSpNlrPHehDHAScEN
VfXxg1WLgsPb4MODcgfK3trtR7gHcPzTVUpIkSZI0ceO5Bu6lwFuA7yW5ppV9EPgwcHaSw4FbgYPauvO
AfYGlwCPA29dpiyVJkiRplhozwFXV1xn5ujaAvUaoX8CRk2yXJEmSJGmYcd/
ERJIkSZI0vQxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiR
JUk8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMB
JkiRJUk8Y4CRJkiSpJ8YMcElOTnJnkusGyo5J8pMk17SvfQfWfSDJ0iQ3Jnn1VDVckiRJkmab8YzAnQL
sPUL5cVW1sH2dB5BkV+AQ4Hltm88k2WBdNVaSJEmSZrMxA1xVXbcM879HQCcWVWPVtXNwFJgt0m0T5I
kSZLUTOYauHcmubZNsdyylc0Hbhuos6yVrSbJEUmWJFmyYsWKSTRDkiRJkmaHiQa4E4BnAwuB5cDHWnl
GqFsj7aCqTqyqRVW1aN68eRNshiRJkiTNHhMKcFV1R1R1U9VlW/
BD7LE9MklwE7DFTdHrh9ck2UJEmSJMEEA1yS7QYWXwcM3aFyMXBIko2T7ATsAlw5uSZKkiRJkgDmjFUh
yeeBlwPbJFkG/
AXw8iQL6aZH3gK8A6Cqrk9yNvB9YCVwZFU9NjVNlyRJkqTZZcwAV1VvGqH4pDXUPxY4djKNkiRJkiStb
jJ3oZQkSZIkrUcGOEmSJEnqiTGnUErSk9EZV9y61tscuvuOU9ASSZKk8XMETpIkSZJ6wgAnSZIkST1hg
JMkSZKknjDASZIkSVJPeBMTSb03kRuSSJIk9ZEjcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6w
gAnSZIkST1hgJMkSZKknjDASZIkSVJPGOAkSZIkqScMcJIkSZLUE2MGuCQnJ7kzyXUDZVsluTDJD9v3L
Vt5khyfZGmSa5O8eCobL0mSJEmzyZxx1DkF+DRw2kDZ0cBFVfXhJEe35fcD+wC7tK/
dgRPad0nqvTOuuHWttzl09x2noCWSJGm2GnMErqouA+4ZVnwnwAcGp7fCpw4ED5adW5HJibZLt11VhJkiR
Jms0meg3ctlW1HKB9f1ornw/
cNlBvWStbTZIjkixJsmTFihUTbIYkSZIkzR7r+iYmGaGsRqpYVSdW1aKqWjRv3rx13AxJkiRJevKZaIC
7Y2hqZPt+ZytfBuwwUG974PaJN0+SJEmSNGSiAW4xcFh7fBhw7kD5h7fBhw7kD5W9vdKPcA7h+aailJkiRJmpwx70K
Z5PPAy4FtkiwD/
gL4MHB2ksOBW4GDWvXzgH2BpcAjwNunoM2SJEmSNCuNGeCq6k2jrNprhNnrhLoFHDnZRkmSJEmSVreub2IiS
ZIkSZoiBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJ
8b8R96SpIk744pb13qbQ3ffcQpaIkmSngwcgZMkSZKknjDASZIkSVJPGOAkSZI
kqScMcJIkSZLUEwY4SZIkSeoJ70IpSTPMRO5cCd69UpKk2cAROEmSJEnqCQOcJEmSJPXEpKZQJrkFeBB
4DFhZVYuSbAWcWcSbAWcBSwAbgHeWFX3Tq6ZkiRJkqR1MQL3iqpaWFWL2vLRwEVVtQtwUVuWJEmSJE3SVEyhPAA
4tT0+FThwCo4hSZIkSbPOZANcAf+W5KokR7SybatqOUD7/rSRNkxyRJIlSZasWLFiks2QJEmSpCe/
yf4bgZdW1e1JngZeYtGhRTbIdkiRJkvSkN6kRuKq6vX2/K3/E/
gSsBtwR5LtANr3Oyfx7XaXXz8Z3Bg0ayoXCn84mG9DgJNTSiOQ/
9nVNUFSb4nnJ3kcOBW4KDJN1O5SJEmSNOEAV1U3AS8cBWA0ncm8KqAZ83q2czSv8O/
JNEqSNHOdccWta73NobvvOAUtkilSrrIvRbAO/9H4CRJkiSpJwxwkiRJktQTBjhJkiRJ6glBJXsOMRMg7SgRptV/
eeEtltfI3cTaZ+jipJmOq+BkyRJkqSB3BvrezBZa3zhb3b0F8IU9Ov0pL/
vIctNv7liOteuvPWa30sSU8uBjhJkrReTfFZnqyfZ8JM1sUxbgkuwNfBLYAPiHqvrwVB1LkiRpNfM0rvjG
0rvXepuJjNpN5DgT4YiSWilamJMAl2QD4OBVwDLg20kkWV3X3p+J4kiRJGtn6ZPbBgZMzUxTNQK3
G7C0qm4CSHIGcABggJMkSdJqZjrKg4Yp4bq4RKo5K5V5GKBQ4ZnP6c/IOtS83a7TR+hZzrg7cbRRKuO9O24m+xbxzC/
...

```
cOBe6tqZ+C4Vk9ryQA3Barqhqq6cYRVBwBnVtWjVXUzsBTYrX0traqbqurnwJmtrjTd7Jua8arqMuCeY
cUHAKe2x6cCBw6Un1ady4G5SbZbPy2VVldVy6vq6vb4QeAGYD72YfVA64cPtcUN21cBewLntPLh/
XeoX58D7JUk66m5TxoGuPVrPnDbwPKyVjZauTTd7Jvqq22rajl0H5CBp7Vy+7RmrDad7EXAFdiH1RNtN
tk1wJ3AhcCPgPuqamWrMthHH++/bf39wNbrt8X9NyX/B242SPLvwNNHWPUnVXXuaJuNUFaMHKT9/
w6aCUbrs1Jf2ac1IyXZDPgC8J6qemANgxL2Yc0oVfUYsDDJXOBLwHNHqta+23/
XAQPcBFXVKyew2TJgh4Hl7YHb2+PRyqXptKY+K81kdyTZrqqWt+lld7Zy+7RmnCQb0oW3z1XVF1uxfVi
9UlX3JbmU7lrOuUnmtFG2wT461H+XJZkDbMHqU+A1BqdQrl+LgUPaHXh2orsA+Urg28Au7Y49G9Hd6GT
xNLZTGmLfVF8tBg5rjw8Dzh0of2u7k98ewP1D09Sk6dCu/zkJuKGqPj6wyj6sGS/
JvDbyRpKnAK+ku47zEuANrdrw/jvUr98AXFxVjsCtpXjO1r0krwM+BcwD7gOuqapXt3V/
Avw+3V2n3lNV57fyfYFPABsAJ1fVsdPRdmk4+6ZmuiSfB14ObAPcBAPcAfwF8C/A2cCOwK3AQVV1T/uw/
Gm6u1Y+Ary9qpZMR7slgCS/
BXwN+B7wy1b8Qbrr4OzDmtGSvIDupiQb0A0MnV1Vf5nkkXQ3PtsK+A7w5qp6NMkmkmwOl013reAxxSVTdN
T+v7ywAnSZIkST3hFEpJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkqZVkkpy
+sDynCQrknx5jO3mvDYWW7JPlykh8luSrJJUl+e4z9vC3Jp0dZ91D7viDJT5Nck+T7Sf4+yYR/
hyY5JskfTXR7SdLsZYCTJE23h4Hnt38CC/Aq4Cfj2G4u8Hi/9f6CvAiVX17Kp6CfCHwLPWUTt/
VFULgRcAuwIHDq5MssE6Oo4kSaMywEmSZoLzgde0x28CPj+0oo1WnZzk0iQ3JXlXW/Vh4NltVOz/
AL8HfKuqFg9tW1XXVdUpbT9bJfmXmNcmubz9A9pVJNkpybe9SfDvJX43U0KpaCXwT2DnJy9so3xl0/4iZ
JO9Ncl37es/Avv8kyY1J/h34LwPl72qjetcmOXM90NkCQJOBP48zZt8gXAycDLBtb/
GvAKYHPgxiQnAEcDz2+jYiT5Hyo7xIeA7VXVgkj2B04CFw+p8Ejihqk5LcuRIO0myKbAX8OetaLfW
jpuTvAR4O7A7EOCKJP9B9wfTQ4AX0f3uvRq4m1/NLBTVT2aZO4a2i9JkiNwkqTpV1XXAgvoRt/
OG6HKV6rq0aq6C7gT2T2HasfSb5UhsF+2Ir+i3g9Ha8i4Gtk2wxbLOX8sTo3+nD1j07yTXAN1p7zm/
lV1bVzQPH+FJVPVxVDwFfpAuiL2vlj1TVA8Digf1fC3wuyZuBlROnS7OYInCRpplgMfBR4ObD1sHW
PDjx+jJF/f10PPH7Dkqp6XZJFbZ/QjYgNV+MsgyeugRvu4YHHIx1jrP2+hq7d+wN/
luR5bZqmJEmrcQROkjRTnAz8ZVV9b5z1f05z5z1H6SbUjnkDOClSfYfKNt04PFldNfJkeTlwF1tNGzQN+imOjJU
dy1dBhyYZNMkvwq8DvhaK39Rx4bWvHrwA7VNUlwB/
T3ZhlswkcV5I0SzgCJ0maEapqGd01aT/g3eSbyS5Dji/qt6Gd01aOOtf3eSbyS5Dji/qt6XZD/g40k+AdxBF/
L+um1yDPCPSa4FHgEOG2G37gbwbOSPJu4AsTeA5XJzkFuLIV/
UNVfQcgyVnANCcP6UIdwAbAP7WpnAGOq6r71va4kSZr9/D4QcgyVnANcCP6UIdwAbAP7WpnAGOq6r71va4kqTZI1WjzeiQJEmSPJ0kTqGUJEmSpJ4wwwEmSJElST
xjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSeuL/
A0dveniAQA3SAAAAAElFTkSuQmCC\n",
      "text/plain": [
       "<Figure size 1080x288 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XmYJWV9//33JwyIAjIsAyKrxolrHhEnghqNihpA4mACEUElSBxNc
EviY9AkxiULmhgjJpIHRQUVBRVkoojwQ4m/mIAMyCoqI7KMbCPDqbLA9/mj7oYzPaene2a6um36um36um36/
r6utU3XVX1beqTp2u77nvqpOqQpIkSZI08/3adAcgSZIkSZoYEzhJkiRJ6gkTOEmSJEmSUJEnqCRM4SZIkSeo
JEzhJkiRJ6gkTOEmSJEnqCRM4STNOkt2SVJI5bfzrSQ5bD+tL+vpdjL+vpgySTfSfLZ6Y5jxEyLZ1CSP0ry39M
dx0w12cduTfd3kmuSvHgS1nt3kbyHJjlrXXWoJDCBkzzQJ2gXVZUnuTXJTkm0Tzx2D+Vd7gVVV+1b
VCZMT7djWZT1tG25Ostl A2R8nOXfSAlx5fZ9O8sskd7W/y5P8Itp2J9q4nj3CS/
aBe3P0tyapId1mcMG5IkH0xyfZI7k1yb5K/
GqX9Iq3dPkq8k2Xot1vnpJH+39lHPDlW1eVVV1vPV690V9AtXk/V1UvndoIJc0WJnCS1kmSvwA+APy/
wJbAXsCuwNlJNpnm2OaObaOxmqmOB55TVY8AXgIcmOTVowi3+ymxQgjyl9Gjo4UOyrpr
3HzhVMNFxtaMw+TYLZtyYtrEjHtYTw7o8ydcWmsUJ0MhR7shTRrFHL3bYzKbV4D0Z5WHsQP9a/QHOrfG/
4eZ1kD9PNq5PYPfxxOdMpzFoQlIYqDKtrSvkIaW4rcY5MQ9b/
...
```

nqCRM4SZIkSeoJEzhJkiRJ6gkTOEmSJEnqCRM4SZIkSeoJEzhJkiRJ6gkTOEmSJEnqCRM4SZIkSeoJEz
hJkiRJ6gkTOEmSJEnqCRM4SZIkSeqJcRO4JE9McvHA351J3pZk6yRnJ7mqvW7V6ifJMUmWJrk0yR5Tvx
mSJEmStOEbN4Grqh9W1e5VtTvwTOBe4DTgKOCcqpoPnNPGAfYF5re/RcCxUxG4JEmSJM02a9qFcm/
gx1V1LbAQOKGVnwAc0IYXAidWbpIdJiVaSZIkSZrF1jSBOxj4fBvevqpuBGiv27XyucSpQxWq4qlpQVQvmzZs30TAkSZIkadZakxa
4fYGLqurmNn7zSNfI9npLK18G7Dww307ADesaqCRJkiTNdmuSwL2Kh7tPAiwDDiwGnD5S/tj2Nci/
gjpGulpIkSZKktTdnIpWSPAp4CfCGgeKjgVOSHAFcBxzUys8A9gOW0j2x8vBJi1aSJEmSZrEJJXBVdS+
wzaiyW+meSjm6rjLTKCVJkiRJkqSHrOlTKCVJkiRJ08QETpIkSZJ6gkTOEmSJEnqCRM4SZIkSeoJEz
hJkiRJ6gkTOEmSJEnqCRM4SZIkSeqJcRO4JE9McvHA351J3pZk6yRnJ7mqvW7V6ifJMUmWJrk0yR5Tvx
mSJEmStOEbN4Grqh9W1e5VtTvwTOBe4DTgKOCcqpoPnNPGAfYF5re/RcCxUxG4JEmSJM02a9qFcm/
gx1V1LbAQOKGVnwAc0IYXAidW5zxgbpIdJiVaSZIkSZrF1jSBOxj4fBvevqpuBGiv27XyHYHrB+ZZ1sp
WkmRRkiVJlixfvnwNw5AkSZKk2WfCCVySTYCXA18cr+qQslqlqoQq4qlpQVQvmzZs30TAkSZIkadZakxa
4fYGLqurmNn7zSNfI9npLK18G7Dww307ADesaqCRJkiTNdmuSwL2Kh7tPAiwGDmvDhwGnD5S/tj2Nci/
gjpGulpIkSZKktTdnIpWSPAp4CfCGgeKjgVOSHAFcBxzUys8A9gOW0j2x8vBJi1aSJEmSZrEJJXBVdS+
wzaiyW+meSjm6bgFHTkp0kiRJkqSHrOlTKCVJkiRJ08QETpIkSZJ6wgROkiRJknrCBE6SJEmSesIETpI
kSZJ6wgROkiRJknrCBE6SJEmSesIETpIkSZJ6wgROkiRJknr
CBE6SJEmSesIETpIkSZJ6wgROkiRJknrCBE6SJEmSesIETpIkSZJ6wgROkiRJknpiQglckrlJvpTkB0m
uTPLsJFsnOTvJVe11q1Y3SY5JsjTJpUn2mNpNkCRJkqTZYaItcB8BzqyqJwFPB64EjgLOqar5wDltHGB
fYH77WwQcO6kRS5IkSdIsNW4Cl+TRwPOB4wBfGq6pdVdTuwEDihVTsBOKANLwROrM55wNwkO0x65JIkSZI
0y0ykBe7xwHLgU0m+l+QTSTYDtq+qGwHa63at/o7A9Q/PzL2tlK0myKMmSJEuWL1+
+ThshSZIkSbPBRBK4OcAewLFV9QzgHh7uLjuQljMhpTVKgVVx1XVgqpaMG/
evAkFK0mSJEmz2UQSuGXAsqo6v41/iS6hu3mka2R7vWWg/
s4D8+8E3DA54UqSJEnS7DVuAldAldVNwHXJ3liK9ob+D6wGDislR0GnN6GFwOvbpSRJkiRp7
c2ZYL03A59LsglgrdM4D9gKXAva2uJEmSJGkdTSiBq6qLgQVDJu09pG4BR65jX
JIkSZKkUSb6O3CSJEmSpGlmAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInS
ZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJP
WECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST0xoQQuyTVJLktycZIlrWzrJGcnu
aq9btXKk+SYJEuTXJpkj6ncAEmSJEmaLdakBe6FVbV7VS1o40cB51TVfOCcNg6wLzC//S2KOCcNg6wLzC//
S0Cjp2sYCVJkiRpNluXLpQLgRPa8AnAAQPlJ1bnPGBukh3WYT2SJEmSJCaewBVwVpILkyxqZdtX1Y0A7
XW7Vr4jcP3AvMta2UqSLEqyJMmS5cuXr130kiRJkjSLzJlgvedW1Q1JtgPOTvKD1dTdTNkLJapaDqOOA4g
AULFqwyXZIkSZK0sgm1wFXVDe31FuA04FnAzSNdI9vrLa36MmDngdl3Am6YrIAlSZIkabYaN4FLslmSL
UaGgZcClwOLgcNatcOA09vwYuC17WmUewF3jHS1lCRJkiStvYl0odweOC3JSP2TqurMJBcApyQ5ArgOO
KjVPwPYD1gK3AscPulRS5IkSdIsNG4CV1VXA08fUn4Ae0sPeQ8gKOnJToJEmSJEkPWZefEZAkSZIkrUcmc
JIkSZLUEyZwkiRJktQTJnCSJEmS1BMmcJIkSZLUEyZwkiRJk
tQTJnCSJEmS1BMmcJIkSZLUEyZwkiRJktQTJnCSJEmS1BMmcJIkSZLUEyZwkiRJktQTJnCSJEmS1BMmc
JIkSZLUEyZwkiRJktQTE07gkmyU5HtJvtrGH5fk/k/CRXJTk5ySat/
BFtfGmbvtvUhC5JkiRJs8uatMC9FbhyPWaj5wG3BEKz8CuK2qngWB8uNWTJEmSJK2jCSVwXYCX
gZ8oo0HeBHwpBAwCANrywjdOm793qS5IkSZLWwURb4vEafBvr4P4VeAfBri9qu5/48uAHdv36SdN36H
a3+SpIsSrIkyZLly5evZfiSJEmSNHuMm8Al2R+4/UZqaouHCweUrUmMO3hgqrjqmpBVS2YN2/
ehIKVJEmSpNlszgTqPBd4eZL9gE2BR9O1yM1NMqe1wu0E3NDqLwN2BpYlmQNsCfxi0iOXJEmSpFlm3Ba
4qnpXVe1UVbsABwPfrKpXAOcCB7ZqhwGnt+HFbZw2/ZtVVZMatSRJkiTNQuvyO3DvBN6WZCndPW7HtfLjgG1a+duAo9YtREmSJEkSTKwL5UOq6lvAt9rw1cCzhtS5HzhoEmKTJEmSJA1YlxY4SZIkSdI0MoGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknjCBkyRJkqSeMIGTJEmSpJ4wgZMkSZKknpiwQmcJEmSJPWECZwkSZIk9YQJnCRJkiT1hAmcJEmSJPWECZwkSZIk9YQJnCRJkiT1hAmcJEmSJPXEhBK4JHOTfCnJD5JcmeTZSbZOcnaSq9rrVq1ukhyTZGmSS5PsMbWbIEmSJEmzw0Rb4D4CnFlVTwKeDlwJHAWcU1XzgXPaOMC+wPz2twg4dlIjliRJkqRZatwELsmjgecDxwFU1a+q6nZgIXBCq3YCcEAbXgicWJ3zgLlJdpj0yCVJkiRplplIC9zjgeXAp5J8L8knkmwGbF9VNwK01+1a/R2B6wfmX9bKVpJkUZIlSZYsX758nTZCkiRJkmaDiSRwc4A9gGOr6hnAPTzcXXaYDCmrVQqqFlfVgqpaMG/evAkFK0mSJEmz2UQSuGXAsqo6v41/iS6hu3mka2R7vWWg/s4D8+8E3DA54UqSJEnS7DVuAldVNwHXJ3liK9ob+D6wGDislR0GnN6GFwOvbU+j3Au4Y6SrpSRJkiRp7c2ZYL03A59LsglwNXA4XfJ3SpIjgOuAg1rdM4D9gKXAva2uJEmSJGkdTSiBq6qLgQVDJu09pG4BR65jXJIkSZKkUSb6O3CSJEmSpGlmAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk9MacVagaS

```
JEk9YQInSZIkST1hAidJkiRJPWECJ0mSJEk98f8DF3wFeo5gz0YAAAAASUVORK5CYII=\n",
      "text/plain": [
       "<Figure size 1080x288 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XuYJVV97vHvGwY0cldG5DagiFE0Ec3IIMaI0XjE6EETURgvxBDRH
Ih6jp4cYnIimpgQj0qiSQYiEhExhDgwhGGLmDgjL8zh+1GvY0fZvp3fRU9/
fzPP3s2qtWVa1dVbt7v3utqk5VIUmSJEna9P3SbDdAkiRJkjQ1BjhJkiRJ6gkDnCRJkiT1hAFOkiRJkn
rCACdJkiRJPWGAkyRJkqSeMMBJ2uQl2SNJJVnQnn8pyWEPwXXfkU1sapL5BFcAxr0ObTs
yjTdWwj92G7u8kK5M8fwjbvTPJ4zZy2VclOWu6bZCk0Qxwkoaufdi6OMlPk1yf5Pgk223A8hN+
+KqqA6vq5OG0dnzT2U57DTcK2XKg7A+TfHVoDXxgvc9McnuSzQbBKPjxO2T8NYXtfTXJ3+3D7kySfSbLT
dNc7XyV5T5JV7Xhdk+TPjqm/tNW7K8nnnkjkcqubBzmpdnYxcoLRxz2O2CuZ/hP+9PiT7X0X9nJJ8w8Y0U/
ZGrLfqyqXjCzLZQ0HxngJA1VkrcCfwv8b2BbYD9gd2+DsZ4ZdDeDsWMxjjzlmQsNNTAdThW7WN9RcNWrTJO
8EsHSdKDGeAkDU2AbYn9Sb0KQ9Ajk0W8GBfmgjvpm50Jvuu2t12/LzbOWQa5QP5MLHAsAOw3YdKFS9yLL1j
tUJtOgdJ4oWsoMzhJyHrCk8TObBNg3.......
```

```
J7EG2D4Dd1yl2xcjlgIHAc+nGwq4x8hmB5s6ML2WbnjvbuOsb6zt3183ySPoeqxGrAIOHHXMH15VP27z
Pw4c2sL6LwNfGWc7p9INj92tqrYF/
mngNUz2O+s6uiA5aBHw4zHqrqf18L6zqvamG6b+YrqhnJLmKQOcpKGpqtvoeg4+mOSFSTZPsgfwKbpre
0Y+xF4IvCjJI5M8BnjLqFXdAEz1fy/9E/CnI9cwpbs5x8HjVU7yjPZN+uZ0YeNuum/
jZ0xVraAbUvemgbK1dB/
eXt16KP6AjQgyo5xLty8Hw+s3Wtn11V0vRRtGdxbwviTbpLvJw55JBoeDPRp4UzuGBwNPAs6YQhsupLu
pxiNaYDp8kvpfBB6T5C1JHpZk6yRLprCdLek+NK8FSPI62o1U2vODk4xcB3VLq7uube8J6W56sXn7eUa
SJyXZIt3/7tq2uhvD3M7E58Zk++ijdD1g9w4M4VxP2/
dvSLJ9OvsCR7L+dYCDPga8JMmzW2B6F92Qvwf1wE1yro9+j024PydSVdfQXe/
5zrYPf4P1hwZuTfeFwU104f6vJ1nfOrrraI9p59HePPiaukH/Drw4yW+ku9Ptu1j/880/
Ae8eGSaZZGGSgwbmn0EXrt4FfLIN4xzL1sDNVXV3O05LB+atpRu2Od7vrTPozrulSRYkeSXdNbmTXr+W
5LlJfjXdTYZupxtSOaO/syRt2gxwkoaqupuOvB14L92HjWV034A/b2AI2Sl0106tpAsSnxy1mr8B/
rwNeZrwBiBV9Vm6f1vwiTY86xK63r7xbEPX03AL3RCmm1pbZ9q76D4kD3o9XY/
ITXQ9JN8cvdAG+hpdqBgMC99oZaP/fcBr6W6UcBndvvh3umGuI5bR3XTiJ3Q3l3h5VU3lZi/
H0fU83UA3jHDM4WgjWvD4bboP/NfTXXf13Mk2UlWXAe+j6/
W9AfhV4LyBKs8AlqW7McjpwJur6uq2vRfQDZW7rm3zb+l6saAb7riynUtvpF3HNo7J9tEpdCFost63l9
ENI70D+De6G658cGRmursaPru97ktbuz5Gdw3e1sD/GGe9E53rJ9Jd63drks9NYX9OZindTU5uputx/
ujAvI+27f+Y7nz79hTWdxTdEMLrgY8A/zpexbZPjqTrIVtD93pXD1T5e7pz4Kwkd7TtLxlY/
h66wPh8xr95DHT7+V1tHX/BQO9sG1L6buC8tk/3G9XGm+h6zt5Kdxz+BHhxVU1lWPlj6N6ft9MN//
wa3XlCkrcn+dIU1iFpDsn6w/
clSdIwJPllupD19Kq6crbbI0maG+yBkyRpZvwRcL7hTZI0TGPdKU6SJE1DkpV0N7h46SRVJUnaIA6hlC
RJkqSecAilJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1B
MGOEmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJE
mS1BMGOEmSJEnqiQWz3QCAHXbYofbYY4/
ZbsaD3PXzu1hX62a7GZuQnwH3zXYj7rdZNmfLLXaY7WZImtRdgL9LAe76+c9YV5vO71FJmo821c+QF1x
wwU+qauFk9TaJALfHHnuwfPny2W7Gg5y54kwWPmLSfTiPfBPYfrYbcb+1P13JCx//
57PdDEmTOhPwdynAmSu+ycJHbDq/
RyVpPtpUP0MmuWYq9RxCKUmSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnq
CQOcJEmSJPXEpAEuycOTfCfJ95NcmuSdrfyxSZYluTLJJ5Ns0cof1p6vaPP3mNmXIEmSJEnzw1R64O4B
fquqngrsA7wwyX7A3wLHVdVewC3A4a3+4cAtVfV44LhWT5IkSZI0TQsmq1BVBdzZnm7efgr4LWBpKz8Z
OAY4HjioTQP8O/
APSdLWI6k5ddm101p+6ZJFQ2qJJEmS+mJK18Al2SzJhcCNwNnAj4Bbq+reVmU1sEub3gVYBdDm3wY8ao
x1HpFkeZLla9eund6rkCRJkqR5YEoBrqrWVdU+wK7AvsCTxqrWHjPBvMF1nlBVi6tq8cKFC6faXkmSJE
matzboLpRVdSvwVWA/YLskI0MwdwWua9OrgZ0VhJkiRJms+mchfKhUm2a9O/
DDwfuBz4CvDyVu0w4PNt+vT2nDb/v7z+TZIkSZKmb9KbmAA7AScn2Ywu8J1WVV9MchVV9MchnwiSR/
BXwPOLHVPxE4JckKup63Q2ag3ZIkSZI070zlLpQXAU8bo/
wquuvhRpffFDRw8lNZJkiRJku63QdfASZIkSZJmjwFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk
8Y4CRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1xILZboA0W05ddu20ll+6ZNGQWiJJkiRNjT1wki
RJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk8Y4CRJkiSpJw
xwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk9MGuCS7J
bkK0kuT3Jpkje38mOS/DjJhe3nRQPL/PL/
GmSFUmuSPLfZvIFSJIkSdJ8sWAKde4F3lpVFyTZGjg/ydlt3nFV9Z7BykmeDBwK7A3sDPxnkidU1bp
LgkSZIkzTeTBriqWgOsadN3JJcD3JLkc2GWCRQ4CPlFV9wBXJ1kB7As8awSS2/
dMmiIbVEkiRJD5UNugYuyR7A04BlreMGTS4DxlEDQOwAuNwDBOq+YdfH2yRw2uKo8L12C0qFM3Ym2qScyHSBmuGHkYW4O+Y5k2x/sSZbnJRZKhGpTvdaF9/aP1ZU1HCf3bJOhyDZj+fIRw0tY4Hbg7l9TQvmWYb5SAp2+mGj9gJn46YnYSmGPVGhwxhNBy7z2x9zJyJ3AcpZbr8RJDjg5KV6OTuyd3frAaaHmYDwVO0wIc3fGQ0ar8m0+j9tnpDVfA8vwTrbMzOTLdPNXuIVrLkk3Hp+EyZs7S4/4gz6xbeJoYMAdUYKeRhpFJm7OK3e/qkLjBgTMyVTlSMmYGYrSPXUtEBzMbHjmTDxZ1MqrOzJjamVO1WpKbqQJwtE7eAHDEFixyh1T30yiPLEMJs0qxP7D54bPJTHjrHAxrnbZH2O3xsPBlfUgLGGJXfZoKhsKVtuIqHOAoBJ6EHTYAQvXW3y2ZSzXtYvLYwRF7o5kiTLXMM2wNfgQHUfnwg/
```

wYuDGqnpKKzsGeD2wtlV7e1Wd0eb9KXA4sA54U1V9eQbaLUnTcuqya6e1/NIli4bUEkmSpKmbSg/
cR4AXjlF+XFXt035GwtvewCHAk9syH0qy2bAaK0mSJEnz2aQBrqrOBW6e4voOAj5RVfdU1dXACmDfabR
PkiRJktRM5xq4o5JclOSkJNu3sl2AVQN1VreyB0lyRJLlSZavXbt2rCqSJEmSpAEbG+COB/
YE9gHWAO9r5Rmjbo21gqo6oaowWV9XihQsXbmQzJEmSJGn+2KgAV1U3VNW6qroP+DAPDJNcDew2UHVX4L
rpNVGSJEmSBBsZ4JLsNPD0ZcAlbfp04JAkD0vyWGAv4DvTa6IkSZIkCab2bwQ+DhwA7JBkNfAO4IAk+9
ANj1wJvAGgqi5NchpwGXAvcGRVrZuZpkuSJEnS/
DJpgKuqQ8coPnGC+u8G3j2dRkmSJEmSHmw6d6GUJEmSJD2EDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEA
U6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJ
PWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTyyY7QZIUh+duuzaaS2/dMmiIbVEkiTNJ/
bASZIkSVJPGOAkSZIkqScMcJIkSZLUEwY4SZIkSeoJA5wkSZIk9YQBTpIkSZJ6wgAnSZIkST1hgJMkSZ
Kknpg0wCU5KcmNSS4ZKHtkkrOTXNket2/lSfKBJCuSXJTk6TPZeEmSJEmaT6bSA/
cR4IWjyo4GzqmqvYBz2nOAA4G92s8RwPHDaYkSZIkadIAV1XnAjePKj4IOLlNnwy8dKD8o9X5NrBdkp
2G1VhJkiRJms829hq4HatqDUB7fHQr3wVYNVBvdSt7kCRHJFmeZPnatWs3shmSJEmSNH8M+yyUGaNszLN
pYVSdU1eKqWrxw4cIh0OOSJEmS5p6NDXA3jAyNbNbI83tvLVwG4D9XYFrtv45kmSJEmSRmxsgDsdOKxN
Z8fqD8te1ulPsBt40MtZQkSZIkTc+CySok+ThwALAkywHNA3RNXOOcIGU4HRLtnSCKD7K2Bud9HqmA9
mSJEmS5qVJA1xVHTrOrOeNUbeAI6fbKEmSJEnSgw37JiaSJEmSpBligJMkSZKknjDASZIkSVJPGOAkSZ
IkqScmvYmJJGnTc+qya6e1/
NIli4bUEkmS9FCyB06SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGO
EmSJEnqCQOcJEmSJPWEAU6SJEmSesIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1
BMGOEmSJEnqCQOcJEmSJPWEAU6SJEmSemLBbDdAkvTQO3XZtdNafumSRUNqiSRJ2hD2wEmSJElSTxjgJ
EmSJKknpjWEMslK4A5gHXBvVS1O8kjgk8AewErFVV1y/SaKUmSJEkaRg/
cc6tqn6pa3J4fDZxTVXsB57TnkiRJkqRpmokhlAcBJ7fpk4GXzsA2JEmSJGnemW6AK+CsJBKV7Vh
VawDa46OnuQ1JkiRJEtP/
NwLPqqrrkjwaODvA6a6YAt8RwAsWuTtqCVJkiRpMtPqgauq69rjjZCRJ88JGB7gkWybZemQaeAFwCXA6cFirdhjw+ek2UpIkSZI0vSGUOwKfTTKynlOr6otJzgdOS3I4cC3wiuk3U5IkSZK0cQGuqq4CnjpG+U3A86bTKEmSJEnSg/l/4yRJkiSpJwxwkiRJktQTBjhJkiRJ6gkDnCRJkiT1hAFOkiRJknrCACdJkiRJPWGAkyRJkqSeMMBJkiRJUk9M9x956kqRJkqShsIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknpjWEMslK4A5gHXBvVS1O8kjgk8AewErFVV1y/SaKUmSJEkaRg/
cc6tqn6pa3J4fDZxTVXsB57TnkiRJkqRpmokhlAcBJ7fpk4GXzsA2JEmSJGnemW6AK+CsJBckOaKV7Vh
VawDa46OnuQ1JkiRJEtP/
NwLPqqrrkjwaODvJD6a6YAt8RwAsWuTtqCVJkiRpMtPqgauq69rjjcBngX2BG5LsBNAebxzbpzsB4NAebxxn2ROqanFV
LV64cOF0miFJkiRJ88JGB7gkWybZemQaeAFwCXA6cFirdhjw+ek2UpIkSZI0vSGUOwKfTTKynlOr6swk
5wOnJTkcuBY4ePrdtdICrqquAp45RfhPwvOk0SpIkSZL0vSGUOwKfTTKynlOr6swk
kyRJkqSeMMBJkiRJUk9M9x956kqRJkqShsIAJ0mSJEk9YYCTJEmSpJ4wwEmSJElSTxjgJEmSJKknDHCSJEmS1BMGO

```
eXwDMmaO+WwCVV9RdJtgB+ALyyqs5Psg3ws1ZvH+BpdD2TVyT5YFWtAv6sqm5uvXfnJPk1YDXwMuCJVV
VJtmvr+HvguKr6RpJFwJfbvnobcGRVnZdkK+DuCfewJGnOMMBJkoamqm5P8lHgTTwQZCZzflWtAUjyI+
CsVn4x8Nw2fR5wdJLHAiur6u50tgJ+HfhOm94f+FS7XA7gYQPbOa0Ns7wyyVXASO/
cs5N8D7gPOLaqLk0yUYBbB3y6Tf8KsKaqzh95/e11AJxTVbe155cBuwOrgFckOYLub/
BOwN7AZXQh7F+S/Afwxbb+5wN7D7yebVpv23nA+5N8DPhMVa2eoL2SpDnEACdJGra/A74L/
OtA2b20YfvtZiRbDMy7Z2D6/oHH9/Pge1Lxu/ayuMRVoN9nd7ber1urap9x2lXjPP96VY0eU
nl/e5uHD0zfXVXr2nTGWO9Yr2sdsKAF0LcBz6iqW5J8BHh4Vd2bZF/gecAngyAhwFF0PYe/
BDyzqkaH4WNb0HsR8O0kz6+qH4zTDknSHOI1cJKkoaqqm4HTgMMHZCPilfS9Zvv3dgH3HqfcDumvdntG2uXXWSib4c3Qa4C7g
tyY7AgW25rYBtq+qM9ppGQuhZdGGOVm+f9rhnVV1cVX8LLOeB3kRJ0hxngJMkzYT3AYN3o/
ww8Jwk3wGW0IWYDXUesBtdYIEuwD2OFuCaVwGHJ/k+cCldWB/k+cCldWBxxBfA14Et018lNdN3YecDVdMM430vXo/
ggVfVz4JXAB9s2z2b93rrR9b9PdwfNS4GT2nYAtga+mOSi1saRG8G8CVjcbmxyGfDGVv6WJJe0bf6svS
ZJ0jyQqvFGfkiSJEmSNiX2wEmSJElSTxjgJEmSJKknDHCSJEmS1BMGOEmSJEnqCQOcJEmSJPWEAU6SJE
mSesIAJ0mSJEk98f8BEVEdBjSRBucAAAAASUVORK5CYII=\n",
       "text/plain": [
        "<Figure size 1080x288 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XmcJlV97/
HPVwZF2ZdRkUWMoAluaNiMMRKXBNQEVNxARIMhi0S90USiJqJXEzTGLXr1oqiQBBV3QsRoVNS4IAMq60
VGwzIywsgygo8Lt/nNPwTE9vM9NDd01/3q9Xv/p5qk5Vndqeru9zTlWnqpAkSZIkzX/
3mOsKSJIkSZJmxgAnSZIkSQNhgJMkSZKkgTDASZIkSdJAGOAkSZIkaSAMcJIkSZI0EAY4SXMmyW5JKsm
i/v6MJEfeDcu9W5YzT3W8Ou2m9N8OXN8yqz2ObYmOS/Kvc12PdRfWtLkOzb33a2ndfcz/p4KrNPDMyJWuNrD7/IkyVKzO6I/s3PCykTbXVJrJZCkZqBfKolKb8Z8GA7wqfUSVqCfUmNzhRYPXSnb0bNWDnuztd14RK+Oa4bYa73ZwsdXf8ZUYn6hfXcBdN71GHhpHwsf3e3OfArPB6Dc7/xmhoDy+ylp+Scxfn1w3/ZSrWy2Jrw1gppB3mK4v1Hc3tk5lVQk+zL0wiu6ewCwkFCR30H/zpFIP/pB+pOrW9jmmmmC+SsMaN8nqPOSv8nq/V2jrVdgYsY3iSMaNyfv/9V8mngIA82n6SlrQWWnx8+LGoIsOEPHCkb43+QEbPfbngs/GVTBpT+8BeqFfHvqXnqo9e68CD2TDOYNu6a4u+6UCyzECrPIj8lkFRtedbFL2ix3Nd49t+hmjMPKSNb+G0o7zagnYfSm+qgxAbuX12ap4d4BrQFo+PKnJsdTm+xF0hPdUp8Wf8PmQgC6QA0EaUPfiVfuq6QHNcfXTdXKqwyBHT1DspWXLbZdnR+Rg6E2JLKM/ACg2EbrJOoBCSNMHj82cD3OS4Mb/SnD4fHcs6RASc2I2q3hxxeEAr5EAgvUCfm/lPhGTR8VXHQ2rwPZP2kYOEYXlzxkp4BKLu/OJPzSzadPkmGNYgKgmwlh7eKHoo3vVxKG61OikN4SNUdfxPFrnxgyMhjmFGGsDPeNHW4E/UUCQWu+MQbJALcV39KaUW==
```

p479SVWu0wEmSJEmS1s76/B+4VwN/mWQp7R63E/vwE4Ht+/C/
BI5dvypKkiRJkmBmXSjvVFVnAmf21z8G9p2gzC3As2ehbpIkSZKkEevTAidJkiRJuhsZ4CRJkiRpIAxw
kiRJkjQQa3UPnKTZdcpZV6zztIftt+ss1kSSJElDYAucJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmS
pIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCT
JEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkD
YYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mS
JEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaiGkDXJLNknw3yQ+SXJjkDX34
g5KcleTSJB9Pcs8+/F79/dI+frcNuwqSJEmStDDMpAXuVuCJVfUoYC/
gwCT7A28B3lFVewDXA0f18kcB11fV7sA7ejlJkiRJ0nqaNsBVc1N/u2n/KeCJwCf78JOAQ/rrg/
t7+vgnJcms1ViSJEmSFqgZ3QOXZJMk3weuAb4E/
Ai4oapu60WWATv11zsBVwL08U0SuB7SeY59FJliRZsmLFivVbC0mSJElaAGYU4Krq9qraC9gZ2Bf4jYmK9
d8TtbbVGgOqTqivatq78WLF8+0vpIkSZK0YK3VUyir6gbgTGB/YJski/
qonYGr+utlwC4AffzWwHWzUVlJkiRJWshm8hTKxUm26a/vDTwZuBj4KnBoL3Yk8Ln+
+rT+nj7+K1W1RgucJEmSJGntLJq+CDsCJyXZhBb4Tq2q05NcBHwsyZuA7wEn9vInAv+SZCmt5e15G6De
kiRJkrTgTBvgquo84NETDP8x7X648cNvAZ49K7WTJEmSJN1pre6BkyRJkiTNHQOcJEmSJA2EAU6SJEmS
BsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6S
JEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2E
AU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmS
JA2EAU6SJEmSBsIAJ0mSJEkDsWiuKyDp7nXKWVes87SH7bfrLNZEkiRJa8sWOEmSJEkaCAOcJEmSJA2E
AU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgpg1wSXZJ8tUkFye5MMnL+/
DtknwpyaX997Z9eJK8O8nSJOclecyGXglJkiRJWghm0gJ3G/DKqvoNYH/
gpUn2BI4FvlxVewBf7u8Bd9HA++b9VpLkiRJ0gI0bYCrquVVdW5/
fSNwMbATcDBwUi92nEBIf30wcHI13WG2SbLjrNdckiRJkhaYtboHLslS4NHAOcAOVbUcWsgDtu/
FmkhzDD7VdVyaCEPuG8vthNw5chky4D7VdVyaCEPuG8vthNw
5chky/
qw8fM6OsmSJEtWrFix9jWXJEmSpAVmxgEuyRbAp4BXVNWqqYpOMKzWGFB1QlXtXVV7L168eKbVkCRJkq
QFa0YBLsmmtPD2b1X16dQBjgRuLiq3j4y6jTgyP76cEkinXkjAx6Bm+uChWg/UYpDsPBBg3Zyby
76SOBzI8Nf2J9GuT+wcqyrpSRJkiRp3S2aQZnHAUcA5ybf/2fh/2GuB44NQkRwFXAM/u4z4PHAQsBW4G
u4z4PPBVYCvwcePGs1liSJEmSFqhpA1xVfYOJ72sDeNIE5Qt46XrWS5IkSZI0zlo9hVKSJEmSNHcMcJIk
SZI0EMY4CRJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2E
TcT39cG8KQJyhfw0vWslyRJkiRpnLV6CqUkSZIkaee4Y4CRJkiRpIAxwkiRJkjQQBjhJkiRJGggDnCRJk
iQNhAFOkiRJkgbCACdJkiRJA2GAkyRJkqSBMMBJkiRJ0kAY4CRJkiRpIAxwkiRJkjQQBjhJkiRJGggDn
CRJkiQNhAFOkiRJkgbCACdJkiRJA2GAkyRJkqSBMMBJkiRJ0kAY4CRJkiRpIAxwkiRJkjQQi+a6ApKG4
5Szrlin6Q7bb9dZrokkSdLCZAucJEmSJA2EAU6SJEmSBsIAJ0mSJEkD4T1wkuY177uTJEm6iy1wkiRJk
jQQBjhJkiRJGggDnCRJkiQNhAFOkiRJkgbCACdJkiRJA2GAkyRJkqSBMMBJkiRJ0kAY4CRJkiRpIAxwk
iRJkjQQBjhJkiRJGggDnCRJkiQNhAFOkiRJkgZi0XQFknwIeDpwTVU9vA/
bDvg4sAS4HHhOVV2fJMC7gIOAm4EXVdW5G6bqkjRz3zj2VF3pIvUTWdC/YYvHnoGwy
GwvdG4sBtwGfCcq+SYBKxY8uoGjCh+Nuo5kS9Z1zuNGPN66T+AhEv9Nm6Sv41esTZxy8Zk5iM0b7PyckOZ
LOVaFQBuzPzZw5+YQsM8Y23+6ljFNEpiFOL9H9+mP7bf3o4rZhqY0dNhP0DS89HQg4/
MdYJsk085WZSVJkiRpIVvXe+DuV1XLrv+/bhOwFXjpRb1oetIcnRSZYkWbJixYp1rIYkSZIkLRyz/
RCTTDsCsJipYVSdUld5Vtff8fiixYvbTFbDsNYdtGySDJO6WwJy8sPEaZp+Fx1fEB1Xr9lT2Ot8uKbIh/
9M0hxJ+eKLFcZhTe5M9ItODeNdmB1SurAhoQxByjefDhJS9QEPNnH6aPEDPbU6w/AkOYgHFHtGz2HaRO0Ev
gSRkbrQtmLIVJkSZIJJEkSZJEknLvA8yVLLbbcMWGZ+4j4OxrCK3CvA5HZcKRgZQQpgMInb4Q6UZqYTSRoAD
UE/VkbBeqUBhSdT1ZAmpuENAAvQcp7z2Ga2MlOnNuPg3QnRowdmA1UNtsTJkz2cW9RMMkdFnFsQm2m2I0SJc
yCrSp+9lmj93SlD/fD/V5Sr1MAzAShIbR8W6ZXbmPNxxWmPqnk+xiDLktL+9Q/AX6kRH/gzpK8UD/ZB6r
LgoHLxqT8z89ebT51GoKZxF+mRIbJYfW8r9B5H6uVH+xAxnEsXvyCxkT07EQ+w/7/Ja2Yz7BsqFhwTIxtyD/
zIp9xpLySBvcEHAENvYeB7iAwaB9mEJGHsaxBaI4SW6tu9pAlpF8w+a8ioWL9Vh3W1WJ2bxhg9/BmPqPoA/
WoZh3K1y2PA1+c5qDdm4xKzMUT0kkwOwd7m/68cW3CXV/sfP2Y9Fc4iOX+PIu9yITNk4Ir0yPhDm1lEZlVZ1T7Yr
tMQdyoH6lO/xhflXG2Fb7lUa2Z5IOy4R6j1Qs/MxS5hPS6qafZ2JWzOLIaqfQU6+DttBQDCOqGE/
nOA7b+eO7Mq/h3Xm2wnpwF/+lGRKvB5MOJRPn4/
YrWXqnkufzpHVjGPZTJYNlQYoSwv9tYK/dQPq06D/+Q8uWeXsCHtNBo3PYMq9eaEQgy8cnVBMsadgOwEIc/
HN3h0Ye6O/b4Q+LtDnjZ23nCLuqgWmm26+Hrn8q/U/4x+IzVg1BRhpF5hX6Vgk1ehWQ2XWdM+TDzjmk2zB/
K2S24FuzNd9qVfl1JW6rV/YLqq/VJj9UvT86/Avmpzm4BIWgEI+CxQgZiRQ7XdMu9bs7/7F7xQyyYlwT/
ruM8rnkKGm5gr2Bb8AHqPoDZgaG1M/0nByZPDu3lrqgLbXeh38DYvAbhMC/Q1BAIDPJFXxJWUHaV6UAxcp/
eAoO3ZRCYPXA6HV9Wn3rnF6pk2a3zNMiY6MbqEBP47QXc/vDFsaqPR5QOlL/
IpNgy1IyhjCDdhyT9mQeUeCxRkQbUjdiyuOuFMCE/NdLlA/Wm1BP0Em3pwjXZnSjHGpgBtBpIjZPDpaFNHb/
PRCG2AGEP4ZJ6Mg7f0ZMNNw1xzl5z/wdJMqJyPTPm2b6kxNQRT+v/a7sSVNi+nwWgxzYTPb8qfL/Ge5ODTQeo6/
Nvo0x4pkrHZ97Hl6Xak/x6lTfiAXpF9N5uE2Nx/jrTq3P09rYHSk/3c4P3XDyHa9EmZ/IuW9OqgnzUJPMzX/
GEc4hUSAzXTMa1pMjDpvBmX/j1txHbqlgfqevUBdBNsr+xfNe+A1+rYF+l/
tcpOmHHf4c12DUX2E1v5/z7dAqxLcIUvXhQiKq5EMgXJb9/TFzKK47oQUVVdcrKdn0X9wv0qMKtHoB8EZeT+
pJuW5yI9lepO7DnZj6QebP8oYHPGJMgF6KrBbPf3y5zMr3WDOmmO+9s3M7iW4pk4QkfkVnpu6GmjvQPHq7WJ
/cycC/VwmPbcM3dD7J3kzFOFr9gc6w+hHQXXQVJyg1Xsa9XV9jT3yxejN9m9Yh1H9hLtz5c7WujB0Nde/
2Vzk7Jd6M5jl+p4iI1pOOEcqdmJ3G1J9+YojxjbfqCKShb3GN4BlsBH4eXyPdKTgf0rjIjp7RA6wbaO9Iy7X/
9rzTmYl5KPyMYjIMrPcplqt+Ww2cCYZKNO+HAexeYF0CktCPAlvlG8hgsF6/sbbQ7Yc03UBHpSA9u+xoV/
3BxnShgnbYhR5EZi3ysOuz3DxmRA8DjwZpbrQcQSgGvJ3pKy5gwKaSjQMZhnJmfO7/
kEiFqbMKbXbXP2MMmq6ePSdNoz3VZCvKhdP5Gpvp4JRmNDvAQ2cTzbdY7W8+Ff0xVbBtRmW3UW3O5cOVahVNLNqq/
ncs6OuEH2TTj4UDeVtbMLK3eUDZBybi81QRb9QrhBVnwwT3p4EOKaW3zHeUj6+JkBwa3X0rMaKb7Ba6mYw3a7Ywz4
aeoyb7bM8mZyD4WMxjyTz/yTAC6Jp4HoXIW7CTm+WxFG6kvodqK2tQ1RQLhwhdw3GhWJ/
zTVSyaZVfkEZjh7S5Vp4cLzjzGt8g3Kl2jVu8mJ/jo/pN8OcXpdh4wSrH/
pnbPwZWUJfpEl+Dpf8Kq0uqSYLTPm8Pd3lFZvQhxo1d2SjULdk2A1g8RrOz8o/

```
kbemVlVPnkm5JB8ATt/A1dH6WQbsMvJ+Z+CqOaqL1lJVXdV/
X5PkM7QusV+f21ppLV2dZMeqWt7v97hmriukmamqq8de+/dufkuyKS0A/
FtVfboP9twbgIn2nefexsEWuHmkfwiOeQZwwWRlNS+cDeyR5EFJ7gk8DzhtjuukGUiyeb+pmySbA7+H5
9sQnQYc2V8fCXxuDuuiteDfu2FIEuBE4OKqevvIKM+9eW6yfee5t3HwKZTzSJJ/
oTVpF3AZ8Cdjfcw1P/XVWmDFAAAFX0lEQVTH774T2AT4UFW9eY6rpBlI8mvAZ/
rbRcAp7rv5LclHgQOAHYCrgdcDnwVOBXYFrgCeXVU+LGOemWTfHYB/
7+a9JL8NfAM4H7ijD34N7V4zj315bIp993sc++Ie6u3Zb4k88f8y4PWDO1xx5N4Y9/sOnQ4rrUp1sRQXX7TvsJPbjtgCoFs18LEO7V5eM7qvhkcB+b7TJd80ZDeWc8pR4Ocgq4XtmJpZLPJ6S9v9gaM7PScsq9wn18H3rgM5/JH8+ivXAD9+h4Hm5DqROAGnFjgB3jUnOQWUpzJXBgAGAdTt3NftfYNzmNvzqlKMjkm0G7l7LpvH+6+mn5NaPVEdqOMptv/sqB8x2hJGrRIuJAZu3lbujOrojYrdIOUMzWngV0Qnxd+/0s/8b67mnoRdRyMxAnqH9QAUdjNvpSs3eUBFbjgXgTaDO+yFGeT1ZyeTnbuMzKBoYrDlh7VrEvSnfDKIbaYvB4jdd2Pjef0Xbm5FsKOt/m3amvJ8cOt1VmMaE8XcjPZ77+bexi9E/ILK5fsnOVcx6/1+Ng60x94MmA4jGP5HwzFfJlEtLaF6ka7XXoO3pe2+y0x9dT4EY5IhgFcNkeOAcnzGWRKPHzUt4IoKKv03ngmEFfHrmQfsH/rVDL+0ejo2ZH0A8C2Ruue3rD1umdQoy7wZefRmWUTOGxvX8XFqY4WqWu0ZNaiVQN5r4LQnE7/qdRkOMTTLBZTqjYqbXhVL2cgbafpoj+4ydFXK/cIvgBFLa7cnrrYD1fWHVlsFbbytWj8AgdQpH0G9WHUsAOUH1XtS3r+KYvbEnhxiwZIDNtRuVZfj/SaLl2vtzyNOC/JV8dvlaxRd/2t/XmLVEMv8vdrJp0cy5sgbkaHQNT4//+ZVV9IzknyKhklEWyV1tWoBW0J9jUq5hN+31vMCwAXdNUThT+vAkpk1xf0qOvHK+bmEoOhHbn/wPsdnxEHLLgOj+FpnpK1lD4PnOp2YrFPe2QfzcFqJEfwsHqQnQ3+cqK2xFObG1E7ul0AIMAzKpPAeD5tdqzBXVPtK+8+7/2Epb8ffMAt3tQFl17Dq0JPzHfcPsuWMkLcPvvPoEZn+1VP3mI+s+jkeMTVBl/ktePUUqr3Cm3W+HXMBn8pP3bPvPVgyA0ArV4zHJH4/q4tb6rvnZkaF7l5y+ayvSXqQbDk9pyJ8Nj3mUtP5cz63sBNB7oqKP86uW/xmJsHq2/zfO2X4DfEFcG4iz4Rf6C/3O2Sd/NbPD0h6nqbM6vSDIvxdcwpVnLGJ8FZzXYm53pW/AR7aA/mM4PQVNTUvYK1gAfFfUEzAOYmwG6oBhf7Wj8ZoQdEjiwnmTOBAmYKeTUzyJbhzvWn7wvNVtYXRtm/5r8kQiRJ/jR7TbU5TAHZrAqa6tjrGaKWGpFb9iMRbSQZG26zJM6o+ozLNf2c7zWnD2YHywxrA3w0iANV2l4gLRR6Y0dXJ3Ug6p0LJBoXL3LqJYrLgbH9EUgiAvWqUZLz3zFSzqbbAqC24l3j4kLg6V1SSj5NQmBdnZ/dKiVJGQwjhjqPvqSXgfx2qCzw1/9BX9HrIvEWX4Yw5D+5mo8dBOP9ljWLB/54l9Ld6M4lHk5nhGQ9vA1zbvcCd5qlYbA+6fWYcmAlT0+ebUgTaUlqI8s2xSjKrnLjTSlxjXXgvzVPrJgiXuxZ9vrNVsvRp4gUuGb8Xi2SBxrSv3V3K1WmFF2YGHIsplUHbGG1jCOw2rqjDmgf8mKGU4MvGZXy5ZuWMq3R0kwnuhPd3Ul4yRMxZa5ZyH9NcyNWfbWgUuj2lGUvmx3vqVIZ5IXoVONH1YGH/7wCfmtxVOeUlUiI2VQKhkkQFlFU2I3pUqG3RyVp3y5rxPq8eXHbCxy1pQr68PSCJFH0A5YHN96V5Rq7cCHGt5f8EYkxmY5tu+Zql3FY+dTnY9Lq0XxkLG8BAbDeSfrmAuIx4cQixbmfgEkKy7HpfpjFDnRzqmK82H8zG/6+Ut8Gt3C5HnKDC60wGDO2twrbp+ZyOF0pJS89KEG9QGTRTsnJpMYwHZ0CGH6pP7TwDZ0Pw0tB8jKT+VZUUoeXwBhX/9sSLLRPDfPlwWWl4MgQ+V2fXdSbSwr80G2QNoZt+Rml29Aw4lE9nPLOfMKMSTJPqK5G+CpLS8MeoLnAWwJ/E9RTWV/3e2tF6cRAKp61WL1AkdLR8c5VbV6JVRlgIrF1JwXxJWYLKnY+s+DZ2hQrs8BN4Qj+YL1XgWq5YY6K8vwHHmgUSnBmJPWmPgw7uuVF0nmVNsPvwFtvlYT0tV+sXnKNhiEWkBOHyGmjbPTQ/KWyH1VHjlGOW/C1ILzjmW2KPlHBR0kRXlS2dRiaT0/Y1X2SiqjZYKPN3uwd1+9BHrgD6F+u/rjjlsqhfa6+d8h4++OFzmzFf1Ej8qWs4YkRZfeeiklzfCQNvlNHFWB/9G4GH4ZnY4k+r+E0fdtRStFO9lBX/Co=
kbemVlVPnkm5JB8ATt/A1dH6WQbsMvJ+Z+CqOaqL1lJVXdV/
```

TbLrsJWuqluArwFPH71eg9ty4P1y+6iV7ZjkjCS3tJ7M9ww0sW6L984klyaZN7CsQ5P8ok27LMnLB6Zt
l+Q/236/KclJA9OeOtDez5P85cC0Pduy7kxybZK/
G7beD1XPJ1sbP0uyWyvcN8n5oyq+I8k3xtiGP6+quweKHgC2G6PNA4BvVdUPq+ou4B+BP0+y0bDghh3/
SQ5uy3lnO0a+NYHtucJzIsmT2va+M8kZwOajYvn3dD30tyf5YbpEdGTaF9P13J+a5G7g+Uk2S7IgXa/
kucCTx9geI8t4dTu+b86oHsx2/I+s281JTk7rtUzynSSHjKr/
07QEuh2v27XXL0lyYYtpSZLDBmYbdt6NPvafk+S8tg3OS/KcgWlnJflgus+BO5OcnmTzNm39JF9qsd/
W5n38iraHpDWTCZykyXoOsD7w9cHCdlF5Gvl5Bn4y2gql4NXAO8tA1V+siK6ifZB3gP8OfAHOD/
A748qto+wHxgB2B34E94qJfolcDN48XVzAd+Tnch+hHg6CRZQf2FwFnAii74x2vvIroetROBr9AlatvR
JcOfSrJhq3s28Okk+yXZZtRy/qT93rht0/8CXtt+ng/
8PrAh8KlR8/0p8DTgRUm2BP4D+Cdg07ZOX0syZ3TQ7SLzL4ALV2JdH9xHLfH4HvAd4Iltfb8/
UPdldNtiY2DBqLh/AfwxXe/
vB4Av5aGhnB8ETgc2AbYCPtni3QA4g24bPw54FfCZgYTiaOANVbURXVJ65grWYz5wJd0x8n7g6y0xWAA
8KcnTBur+FV3P6VAtwbgLWAps0OIbZkfgpyNvquoXwG/pjvHRhh7/
VXUUcALwkXaMvLTVX9H2HFnfsc6JE4Hz27QPAqPvJz0N2J5um1/Q2h+0P/
AhYCPgR8Cngd8AWwCvbz9DJdkB+Cxdr+QT6c6hrQaqvJXumPvTNv3WtvyRuF81alnb0h3/
o91N19u9MfAS4E3tMwmGn3eDMW7alvmJFt/
HgP9IstmobfA6um20Lg99lhxIt0+2bvO+Efh1W+6hSb491raRtGYxgZM0WZsDN1fV/UOm3dCmT9RVVVX9vqruB46lu3Ac7/
8BPkTcA/7eqLm/t/h9gpwz0wrXpt1TVr4Hf0V0QPhVIm+/6CbZ1dVV9vqruB46lu5Ac77/
e7wPeMizRmYBfVtUXWnsn0V2sHV5V91bV6XQX6SO9MvvSJa//
CPwyyaIkz17Bsg8APlZVV7YE+93Afll+CONhrUfv13TJxqlVdWpVPVBVZ9AlqHsO1P9Ektvokonrgb9d
iXUd3Ed7Ab+qqo9W1W+q6s6qOmeg7o9aHPfTJUDPGJlQVf9eVde1GE+i69X+i69HbuU3+Hd2F+BPbckd6QvYC
rmrb+r6quoCuB/EVA/PtkOQxVXVrmz6WG4F/bb3PJ9ElNy+pqnvp9uFIL/
SOwFxgzAvtqjqC7lh9VlvP28eouuGQabe3eUdbqeN/
nO0JY5wT7Z8Izwb+sR2vPwS+NWrZx7R9ey9wGPeqeqDF/
RfA+9oxeUlrbyyvAL5dVT9o6/x3wAMD098AvKeqlrblHwa8IslIknZMVf33wL6ZN6r9w6vq7qr6MfBV4E6A2wT
nQFcQ16CXBFVR3fjrsvAz8DXjpQ5wtV9d/tvDgZ2KmV
44ucduuqu6vqvOr6o4W0xFVtdcEY5DUcyZwnDUcyZwkibrJmDzDL+PaYs2faptC3y8DSO6DbgFCLDlQJ0lIy+q6
ky6HptPAzckOSrd0M+J+NXAcu5h4Iau5pLzcco+5IvUvoLtIPnWAbgwbvYft1W97osg1b+a1VdWhV7UiXVC4Cv
rGCHsInAlcPvL+a7p69wYR0ycDrbYF9R7Zz29bPo9uvI95aVRtX1ZZVdUBVLZvwmi7f1tZ0PT9j+dXA6
3uA9fPQE0pf05LXkRifzkP/OHgn3bFxbrqhlyM9ONsC80et2wHAE9r0v6BLVK9uQwL/
aAWxXVtVNfD+arIbBxAyqzoV0+/
oDY1S7Cxh9DD8GuHPI8lbq+B9ne8LY58QTgVtHDQN98HhLslaSI9oQxjuAq9qkwWUPHhNz6I7PwbLB43
e0J7L8eX83y/e0bwucMrBelwP3A4+vqjvpesb2a3X34+G9yPrMT/JD5IsS3I7XU/
YRP9RNfocHFmnwc+u0cf6yOfN8cB3ga8kuS7JR5KsM8G4TqmqR1XV51V1P3ADnCSJuu/
gHvphjM+qA1RezEPDYO7G3j0QJUnsLxi4pbQDW/beODnUVX1k7GWV1WfqKo/pBt6/UKvpJ
cDf8PyF2YjF7Yr2g6rpKpuAv6GwBHc4fsBwAzSKC1xN8A/A/
U3DtB6TzwOHAJtV1cbAJXRJG1X1q6r6m6m6Il0PzGfavUxLgP8ctW4bVtWb2nznVdXewB/ANh/0tY82zk7Kzbw2w/wd/jbA/
UclzdvQbWuq6my6XtM/phsaN+bwySHWZuxtcikDvZDpHnG/
HvDfwyqv4Phf7jgZb3uO43pgkww8hZVuW4zYH9gbeCHdUMC5I80Ohjrwehnd8bn1GMsb1v6DdZM8mq7H
asQS4MWj9vn6VXVtm/
5l4FUtWX8U8IMx2jmRbnjs1lX1WOBzA+sw3uHVJ3Oa2H9wNVtQPd0PW96IZySpplTOAkTU
pV3U7XS/DJJHskWSfJXODf6e7jGblgWTQXTsmWTTJE8A3j5qUTfQ3Zc1EZ8D3j1yv1i/1KSxybZd6zKSZ7d/
mu+Dl1i8Ru6/7xPm6paTDd87q0DZcvovgo6JLasbN3uIXsTsLiqbbqa7+H2A5bfpl
4H/ne5BExvSDT09qYYPfwX4EvDSJC9q8a6f7uT0RbU4ZfYGTw0cTp1zn+L07nXuXk6q3djlbtaRb/5jlwd59tIA+ZbIPW9Z7r3pt6dTZtYOSePyNTWSGOXfWRGdLswBNBjB1M+2EGsc3AZEE5cQrzjKh/Aa36OJfyOgyxl3qlemaJNmUnh7zbhKULzE2pwMm9Vzn73j9DAijDhM/
4H/ne5BExvSDT09qYYPfwX4EvDSJC9q8a6f7uEzW41Rf9AiuodqPLolTAeNU//bwBOSvD3Jekk2SjJ/
Au1sQHfRvAwgyetoD1Jp7/
cdiPfWVvf+1t5T0j30Yp328+wkT0uybrrv7npsVf0OuIMVHy+PA97alrEv3T2E2Epw5MP46uB+y+gSGcy0
n3gI03JNkknZ2BN7P8fYCDTqDbN3/cEqbD6Yb8PawHbpzjf/
R5t8LtuSJVdTXdENsPtG34PJYfGrgR3T97bqZL7v/POMu7n+7e2sPacbQDD7+nbtBXgb2SPC/d028PZ/
nrnM8BHxoZJplkTpK9B6afSpcHU53XgwOvxy0EXBLVf2m7af9B6YNO+8GnUp33O3fzttX0t2nO+79a0
men+R/pns65x10Qyqn9XNM0iOTCZykSavuoSPvesBugM4h+6/3bsNDBc7nu4+qavoHipx0qjF/F/
gH9rwphU+AKSqTqH72oKvtKFYl9D19o3lMXS9CrfSDVe6ucU63Q6nuyAe9Dd0vR830/WG/
GT0TCvh0XT37txG9xCNbeke9jEytO1DwI/bNt0FOIZuP/
wQ+CXdhfxbxlp4VS2h6zF5D92F6ZIW+0T+dhxJ1/
N0A90wwqHD0QbaupPugTcvpRtCdgXdw1ZWqKouAz5K1xN8A/A/
gR8PVHk2cE66B4MsAN5WVb9s7e1ON1Tuutbmhbmh+l6saAb7nhVO77eSLuPbQzn0D2Y4ya6bf6KlkSPOJ4u
CRqv9+3ldMNI76RLnj/ZfoAHv0z6j9t6X9riOoHuHryNgP81xnJXdPwfTXev321JvjGB7Tme/
ekecnILXS/0cQPTjmvtXwtcRvcQnvEcQjeE8FfAF4EvjFWxbZM30/
WQXU+3vksHqnyc7hg4Pcmdrf35A/
PfS5cwvpCxHx4D3XY+vC3jfQz0zo5x3g3GeDNdz9k76PbDO4G9Wg/6eJ5Al6TeQTf88z/
pjhOSvCfJaSuYV1IaJMsP25ckSVMpyaPokqxnVdUvvUMx2PJKnf7IGTJGl6vQk4z+RNkjQVhj01TpIkTYE
kV9E94GKfcapKkjQhDqGUJEmSpJ5wCKUkSZIk9YQJnCRJkiT1hAmcJEmSJPWECZwkSZIk9YQJnCRJkiT1hAmcJEmSJPWECZw
kSZIk9YQJnCRJkiT1hAmcJEmSJPWECZwkSZIk9cTaMx0AwOabb15z5z586586d6TAe5u7f3s39df9Mh6EZ8Wv
ggdXS0lpZhw3W3Xy1tCVJkkbcDUz/dd7dv/

```
+dvMaPuS1Hf2wEmSJElST5jASZIkSVJPjDuEMskxwF7AjVX19Fa2KXASMBe4CvjLqro1SYCPA3sC9wCv
raoLpid0SZL6Z6aHMEqS+m0iPXBfBPYYVXYo8P2q2h74fnsP8GJg+/ZzMPDZqQlTkiRJkjRuD1xV/
TDJ3FHFewO7ttfHAmcB72rlx1VVAWcn2TjJFlV1/
VQFLEmS1Ecz3fvqA2SkNcOq3gP3+JGkrP1+XCvfElgyUG9pK5MkSZIkTdJUP8QkQ8pqaMXk4CQLkyxct
mzZFIchSZIkSWueVU3gbkiyBUD7fWMrXwpsPVBvK+C6YQuoqqOqal5VzZszZ84qhiFJkiRJs8eqJnALg
AP
b6wOBbw6UvyadXYDbvf9NkiRJkqbGRL5G4Mt0DyzZPMlS4P3AEcDJSQ4CrgH2bdVPpfsKgcV0XyPwumm
IWZIkaaXN9ENEJGkqTOQplK8aY9JuQ+oW8ObJBiVJkiRJeripfoiJJEmSJGmamMBJkiRJUk+YwEmSJEl
ST5jASZIkSVJPjPsQE0mSJGkyZvoJoPvP32ZG25emkj1wkiRJktQTJnCSJEmS1BMmcJIkSZLUEyZwkiR
JktQTJnCSJEmS1BMmcJIkSZLUEyZwkiRJktQTJnCSJEmS1BN+kbckSZLWaMO+SHyLx9zIb+67f9rbzqO
mvQnNMvbASZIkSVJPmMBJkiRJUk+YwEmSJElST3gPnCRJ0iww7D4wSf0zqQQuyTuBNwAFXAy8DtgCOAnY
DpsBJwFzgKuAvq+rWyYUpSZIkSZqKIZTPr6qdpee38o8P2q2h74fnsvSZIkSZqk6bgHbm/
g2Pb6WGCfaWhDkiRJkmadySZwBZye5PwkB7eyx1fV9QDt9+OGzZjk4CQLkyxctmzZJMOQJEmSpDXfZB9
i8tyqui7J44AzkvxsojNW1VHAUQDz5s2rScYhSZIkSWu8SfXAVdV17feNwCnAzsANSbYAaL9vnGyQkiR
JkqRJJHBJNkiy0chrYHUBJNkiy0chrYHfgEmABcGCrdiDwzckGKUmSJEma3BDKxwOnJBlZzXzv2Z0k5wEnJzkIuAbYd/
JhSpIkSZJWOYGrqiuBZwwpvxnYbTJBSZIkSZIebjq+RkCSJEmSNA1M4CRJkiSpJ0zgJEmSJKknTOAkSZ
IkqSdM4CRJkiSpJ0zgJEmSJKknTOAkSZIkqSdM4CRJkiSpJ0zgJEmSJKknTOAkSZIkqSdM4CRJkiSpJ0
zgJEmSJKknTOAkSZIkqSdM4CRJkiSpJ0zgJEmSJKkn1p7pAKTZ7qfX3MYtN18zY+3vP3+bGWtbkiRJK8
ceOEmSJEnqCRM4SZIkSeqJaUvgkuyR5OdJFic5dLrakSRJkqTZYlrugUuyFvBp4EXAUuC8JAuq6qfT0
6kVXfiOTN3/50kSZJWznT1wO0MLK6qK6qqvK6vqt8BXgL2nqS1JkiRJmhWMBwe3
tXkp9PUyxasc2Bm2Y6iFluc/io+2Dmzbo4G6/
wAAAKjUlEQVRz4YCZDuDhZt0+eASa9n3wCDzuHok8F2beFO+Df5y6Rc0es/
E82HYilaYrgcuQslruTdVRwFHT1L4mKMnCqpo303HMZu6DRwb3w8xzH8w898Ejg/
th5rkPZp77YGzTNYRyKbD1wPutgOumqS1JkiRJmhWmK4E7D9g+yZOSrAvsByy/zYprYkSZIkaVaYliGUVX
VfkkOA7wJrAcdU1aXT0ZYmzWGsM8998Mjgfph57oOZ5z54ZHA/zDz3wcxzH4whVTV+LUmSJEnSjJu2L/
KWJEmSJE0tEzhJkiRJ6gkTuFkmyT8n8n+VmSLKckmTjMepdleTiJIuSLFzdca6JkuyR5OdJFic5dMj09Z
Kc1Kafk2Tu6o9yzZZk6yQ/SHJ5kkuTvG1N6InV2T3N6O/UVJ3jcTsa7Jxvt8SecT7Vy4KMmzZiLONVWS/
zFwfC9KckeSt4+q43kwDZIck+TGJ3JcMlG2a5IwkV7Tfm4wx74Gtzh4GtzhVJDlx9Ua9ZxtgHXhutRmPsg8OSX
DvwmbPnGPOu8FpqtvAeuFkmye7Ame1BMx8GqKp3Dal3FTCvqmbbFyhOiyRrAf8N/
Bnd12ycB7yqqi4bqPO/
gD+oqjcm2Q94eVW9ckYL2QLYoqouSLIRcD6wz6ju3BEHBe5kFYWV4ce3thkcEoGsvGyrf8Vhn7o3+Ujk8+s7N+C32FKd9uJV7uDl/Z6w/ZVxxhU8bBhgcl1Bfr7BZYOkC5O5TEVFXdcT+z/DdtfSeA1dDJ0r3/l3aKeZ71Ypt8t7EV9Dr+Epp5E2f7JU9aZ9n2UOGUUo1dzn+4b7Pd6dr+qGn9mqhN1Wz+ZB1mXuW8pQNlL/eYxfPMtG+Kbn1kx2SVyjScHHl2/l1nJ0ofJBozA3nr6Gy6mOe+X5Tql0CUbgXuNXAVMXzP7NaoaRctsSzD1v2RSvUCnR6+o1dQ3SIsXobTnr0nPD+TOUbNK3r7YjLHi+R8BLkQxvaBiQ3zBMWgxd0+2Nj1/hrQt81swmVAdp/W+t4+X+Nmc2fs/cO3cSWQjSo/Il6kmr3W6PBm7Y6GULyx9OfqDXLh7HzJxtHR4+Ci+CqIT+6BJ8GNh+B6LRoEZ9TRu/qi3fVAcABJ9hh4+bV9c1fYqaU2p2lVwTKjr4fvBWx5X5RzuXp01UkOc+1/1Aks6JvRi9Hi1hFoW7LujpG7tBf7Q8rXd0nJzrjA1+J+Xad3BqCv7YbBxkcTVlRH82X3eBW+9Y01KGMYbX4MJ8s1RdjYaGfR4Vcm3+Hi0MWlXaWd3CUUp/E1hjr3SK5P4v2aOfKVTZvwDKEqp6Ynf2JlJOwu+jPtSl1tXK8Dx0HAdPrUuAUPSjtJaGFi4hM1aHBuF9EFlSuONg0HyQt5Hp5EE2eA8y6wVdw24Dd6+/cbW
/dE/7lfOlqDDPWHvtsx3yuxXb2Q1zrVzB4i3ff+Fd5Oeqjja7r6lJnMVfTgwPvvwvkZs2lvU7EkXZNlIBwNNDy1hPQdF7adONVwqGOdpzMNZIwMZTfxxbDlNlXLQq6fWuZ
```

```
DPxHVZ02gXU4CSDJRsCWVXVKi+E3VXVPq3NuVS2tqgeARSPrBjw/
yTlJLgZeQJfkAVwEnJDkr+h6N0fiPrTFdxawPrAN8F/
Ae5K8C9h2YD0lSWsoe+AkSVPlX4ELgC8MlN1H+2dhGyK47sC0ewdePzDw/gEG/
j5V1XXAMcAxSS4Bnj6k7QwpG+lVu3tUvbdU1XeXmzmZy0P3wA16MP5m/
VHTR5Y9rP0Rg+t5P7B266H7DF0v4pL20JeRZb8E+BPgZcA/JtmxLf8vqurno5Z9eev5ewnw3SR/
3RJYSdIayh44SdKUqKpbgJOBgwaKr6IbwgiwN7DOyiwzyR5J1mmvn0DXY3YtcCew0UDVHwIHtHq7Aje1
XsHRvgu8aWCZT0mywQpCuBrYIcl6rUdvt2GVWlLk+zTlrteG4o5lpFk7aYkGwKvaPP9HrB1Vf0AeCew
MbBhi/stA/fJPbP9/n3gyqr6BLCA7gEskqQ1mAmcJGkqfRQYfBrlMRgk54E/TXIuMJ/le8MmYnfgkiQ/
pUti/r6qfgX8gC6xWpTklcBhwPr/
Ay4DLmi9ef+PFYxGqaoldEnpRcAJwIUriPXVwFtbDD8BnrCC5d5Gt20uBr4BnNcmrQV8qQ2rvJDuCZy3
AR+kS34vanF/sNV/
Jd32WQQ8lW4YqyRpDZaqGr+WJEmSJGnG2QMnSZIkST1hAidJkiRJPWECJ0mSJEk9YQInSZIkST1hAidJ
kiRJPWECJ0mSJEk9YQInSZIkST3x/wNyBYU/UozefAAAAABJRU5ErkJggg==\n",
      "text/plain": [
       "<Figure size 1080x288 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA3AAAAElCAYAAAClNgC6AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XuYJVV97vHvGwY0chUZELk4BwBgKiYzJBAhqJFEjoDngBYMoEkOCJ
pjoefTkGI9H0aOJuSjGxGjwoKIRkCgqMUjkoIIXRAeDXERkBISRAQaQq4ow/
M4ftRpq9vRtprvpKfr7eZ5+du1Vq6rWrq7dXe9eq2qnqpAkSZIkbfx+Yb4bIEmSJEmaHgOcJEmSJA2EA
U6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJG1UkixJUkWteefT3g1q/vfklz6C8+Dkq
zNY/o1J/u806g1q/67vfklydZJnzWWbhqy9px8/
i+ub9v6e6e6THeW8+JkQzk3TQGG5JKzUg7OBo4yU+SXJ/k/Um2WY/
lJz0Rq6oDq+rE2WnfYrRUkCvwGaynfYabkiyea/sj26/ZmqN2VRHA4SrAuYB0ZLiBWQOlk2a3aHFTY1W5mjXCRkq
U6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJG1UkixJUkWteefT3Lkg7DdB2U7G5skf5Dkq
zNY/o1J/u806g1q/67vfklydZJnzWWbhqy9px8/
i+ub9v6e6e6THeW8+0jvVJlr80yf4zbYckGeAkzUg4OBo4yU+SXJ/k/Um2WY/
lJz0Rq6oDq+rE2WnfYrRUkCvwGaynfYabkiyea/sj26/ZmqN2VRHA4SrAuYB0ZLiBWQOlk2a3aHFTY
LMtq3zgB8BL+xV3AQ4HBjrTTs2yb+26a0kd7Q2vr/Ub29+27Ok0/
Rfb5InAh8AfrP9vy9o0baA0y/8a1J1c2ff7bfpXmBTDYFIfl0RvlRJkO1zXEMOqWVF97DbzMBRRQXHRRKMW1/
mOJF9Isl2bPRZ0b21t+9+C2ZH3Fvk+7Qek+ixFr/9bWl+vd9bGfbTs0vSlOq8Fs4NEWLKyVbGkJ3OLBO+/
11rlpkpuSLB1dQVXdXXV1UBAd+/
2dD3G757o9SfZLckX2+/yeeZDEuGnYGrfYvq5+/ypiQf7IjlA9VHXAcP4r8DYXWt6klf/
0c73q5L8ocj7Xhukv9q2lBvXFKR+n9ngLXfGLucZ8ZsxF9dUTDG8i3J0eO4dLp7hPpdRa75KpYXqKY4XAj/
5vAbiPzn5DkrCS3JLk8yu/
1urf1uSc9OCc5Kj6cL0X7T9+e+SiNn3/sd6e/
1urf1uSc9OCc5Kj6cL0X7T9+e+SiNn3/sd6e/
JCuTvC7de39Vklf0XSAmCAk7Sh9gMeDqw1I9RAfYyV74+s0XYAWmM/
JCuTvC7de39Vklf0tjvZe0XSAmCAk7Sh9gMeDqw1tK2q7gQ+Dzx7qhVU1RHANNcDvVdUWVfW3k9VPcgjw
RuAFwGLKgK8DJI9UAfYBL9gR+ly7U7AfH8B727bfDf4A1wAvLKqtRYoh+eV9sjSHz7E8WwGnAy
nLgy8CGnkztA1wEPAo4ia7X5X99frX99MuuqqqV7frWJ+h2y/
9oWD7AFfSvda3AKcR7+yhdj9uYZwZWwb8vlj9LcPG5yhdOzE6vsFJwAvLKqtRYoh+e
+hXbi3tNvx3OAS+l6q4BuKCHwH8B727bfDfxH1u6IOxx4BTAWesd+V2P7bZvWpvN6+2wsFJwAvLKqt
MvanX9pf16h0ErKqqCydaUQ2PwP+EfircCartAaypqn5P5HeAiXrg
gH4h6raqXxFY+3usBA4DHAU8G/qC1/QC/QC6ffftsYHe6Y6bvLrf5f5TbAc4E/
ae/tvme07T4n3RDS99MF08fQ/
X53nuA1QtcR+TNgR+AP2w+tbZsDZ9G9G9x7YHXgL8c5InVdU3U+vb7tgW/
TPlCoquPb9N+2/
fl74yz7v+hGLCwF9gLBJeDRdO+lnYBR8+lnYCjgPcleSPwXMPmnlsQbNoTeIDOw1NM8+cGPWNnpuMQHkRc
9Xmz7ZXAn9dVS4f4f2/5LVNCHVAGWCPdRhq5SoNWmzmbV+2aQpr44Gq0LDN6DHE2AbdugtBBAQ
XlRzVVV9eG2vU/QnTC/
rarurqov0PVCjfXEXtd2PvOrA0XuTAfaOwRbk9XhAuWW57Z5obgxaqyZEkVbFQqRd+PL71cSRaLjvf8+BlU66
HwOekWTshPnwlwEmtJ3DUPXQn14vqjVVdUFV1Wobet6AfK81OLP3tiP1OYzIU6x8wBemcTAVkf6bDyO9m4G
```

FVX1saq6t6pOBr4H9E+eP1xV32/
Hxql0J8+TWd9j4J+q6to2tPQddOEA4F+Bg9L1WkMXRD422YZbsN0aeDXwXxNU2wK4baTsNrpjfjz3AI9
Psl3rsfvGJNtfUVVnteNvNV0gfsZItfdW1XXt9f47D+zPF9Pt60uq6i5Ggl9VfbmqLq6q+6rqIroPYUb
XfWw7Xn9KN6T0c1V1blXdDfxv4L7x2t16z14IvLktfwmtt7h5HnB1e6/
d246zT7Vt0NrykrauLenC9uiHRGOv40NVdUdr07HAXkm2Hq/
uOF5K9/6+se3ft7J2z+k9bf49VXUGcCfwy715475Xqmqb1hMr6SHMACdpQ90EbJfxr1HZsc2fbY8F/
qF9ynwrcAtdT8FOvTrXjk1U1ReBf6L7RP6GJMf3TqKncn1vPT9pk1tMUHes3iXA54A3THMbfTf0pn/
a1jdaNrb9b7TpX6HrPflK6/m8tlc2NizusXQ9Zqt6+
+1f6HoNxvyoDdkb80O6ng6q6pq2rpe1HsBDWPuEuO9jwH8Cp7RhYX+bZNNpvv4X0p0s/zDJOekNYxxZ/
6uB3wY+PTLvMa3dfT9k7WPj+t70T5ji98n6HwPX9qb7+/
A64GvAC9swxAMZGf45nhZ+PgB8NN2w2FF3AqPH81bAHROs8ii6XrvvpRti+ryJtp1k+ySntCF6t9OF0N
EPZSban49h3X3RX/c+Sb6UZHWS2+h6ZEfX3V9+rfW1/TJRT/
piuutRJ9r+Y4F9xt4L7f3wUroeL+h6217QhjO+APh2VY0eVyTZJMk7k/
yg7Z+r26zpfnA1erzef7w0N498ONbfv9N5r0h6CDPASdpQ5wF3053k3K8NUToQOLsV3QU8olfl0aytmL
5r6YYObdP7+cXWOzPu+qrqvVX163TDyvagu+HKXHoL8MesHRzuao+T7Ydpq6qfAd+i603Ysaq+12Z9pZ
U9mQcC3LV0v6ftevtsq6rqD7PbaWRo4K70hifSBbaX0504XjXaO9Zr1z1V9daq2pNuiO3zWHv45f1Vx1
n2W1V1MF2w/AwPDO/r+xjwp8AZvUA15jq6k/O+Xemu4ZvK+hyDk9llZNuj+/BlwKF0w0en0y7o/k8/
grWPpzHfBxYl2b1Xthfd8NJ1VNUVVfUSun38N8An2/t1vNf/1638yW3I5cvoPiyZjlWsuy/
6TqK7Vm+XqtqaLqSOrrvfprXWl+QRdD2941lNN1x4ou1fC5wz8jdki6r6E4Cq+i5dmDqQyYdPHg4cTDc
8dGtgyVjzxmn/
eEaP19HjZULTfK9IeggzwEnaIFV1G92wn39MckC6ZMsAf4NWMkzcOvHVnVDcAvTXOz
HwD+snezgK2THDpR5SS/0T7t35QuRP2M7qYQc6aqVtANAZvbJ/
R8ycmOFDXAu3b7sh9evtrLrq+oHbdurgC8A70qyVZJfSHeDiv6Qte2BP2+/w0Pprj06ozf/
U3QnxG9l4t43kvx2kl9tw9hupxvqNd7+vgHYOe1OpUk2S/
LSJFu3oZm3j7dcVV1FN9RuvJtYnAHskeTwJIuS/
D7ddZCfm6i9PavphuEuRDV38MXDZaN3WE
3Ua8LYkmyd5Kl2oGHd4ZpKXJVlcVfcBt7biN/
+rek6+G7NclOrN8HH6cCf5DuKxEeQfehRt+WwC1V9bMke9OFOcl8Enhekqe1q1Y+ZtTHD+0oa7ngYcm+QR
7fq5/vcPfo7uODmiHe+btr8TT+zVOYnu/ftbdH/
PxrMl3QcjN9MF7NHrFKf6u3Yy8KYki9PdTOfNdL2ck5rue0XSQ5sBTtIGq+6mETIG
q+6mI28E/
p7uROJ8uk+4n9muC4HuZPI7dEOMvsDaJ7XQfdL/
pjacadIbgFTVp+l6Dk5pw5YuofukfCJbAR+kOwH+Id3J1t9P9/XNwNuA0Vvv/
zHdSfDNdL2BXx9daD2dQxe8+te7fLWVjX59wMvpbtrxXbp98Um6Ya5jzqe7GcNNdNduvaiq7h+i1oLCW
IibbOjfo9u6b6cLHOcw/knpF+l6ia5PMjbU9gjg6vZ7fRVr3/TjflX11TYkcbT8Zroev9fR7eO/
AJ5XVVMO5W29ee8AvtaOw32nWmYCJ9Ed41e2n/vvvtqu5foU3Q0/Tht36c42dCf3twE/
oLvu8YDW6zr2ZdL9G8j8KfCLdNcxngz8SVWN2wNHd8ORS5PcSXdDk8Oq6mcTvP630gXO2+huDjNZm9dS
VZ8H3kP3e17Bujek+VO60HHkXXCZtAepvZ5j6PbvKrpjeOUki7ysOWmOoxbn8LIDwiPC
0/1NeVhv+ZOB/
YEvTnL8fJTub8qP6N5Xo9cTnkB3ndqtST4zzvJvp7vx0UXAxXQ3Qn7OPXGM+F7Jd1dL58+zfVIGqisf
dmDJEmaC0neDOxRVeOGU0mSpsMvyJQkaY61YZVHMcF3tEmSNF0OoZQkaQ4l+Wd8WOocWfr6rR4a2SJK0Xh
1BKkiRJ0kDYAydJkiRJA2GAkyRJkqSBMMBJkiRJ0kAY4CRJkiRpIAxwkiRJkjQQBjhJkiRJGggDnCRJk
iQNhAFOkiRJkgbCACdJkiRJA2GAkyRJkqSBMMBJkiRJ0kAY4CRJkiRpIAxwkiRJkjQQBjhJkiRJGggDn
CRJkiQNhAFOkiRJkgZi0Xw3AGC77barJUuWzHcz1nHXz+9iTa2Z72Y8KDbJz9l8s83mau3A5nO0bkkao
ruAhfH/ZS7d9fOfsqbum+9mSBqYTbIpm2+23Xw3Yx0XXHDBTVW1eKp6G0WAW7JkCcuXL5/
vZqzjzBVnsvgRU+7Dh4TVP/k8Bzz+wLlaO3DAHK1bkoboTGBh/H+ZS2eu+DqLH/HI+W6GpIFZ/
ZOrOeDxb5rvZqwjyQ+nU88hlJIkSZI0EAY4SZIkSRoIA5wkSZIkDYQBTpIkSZIGwgAnSZIkSQNhgJMkS
ZKkgTDASZIkSdJAGOAkSZIkaSAMcJIkSZI0EIvmuwGSpJk56fxrZryOw/
fZdRZaIkmS5po9cJIkSZI0EAY4SZIkSRoIA5wkSZIkDYQBTpIkSZIGwgAnSZIkSQMxZYBL8vAk30zynS
SXJnlrK39ckvOTXJHkE0k2a+UPa89XtPlL5vYlSJIkSdLCMJ0euLuB36mqJ9bSqJnDbQl8dLuaD2YQuxJJlhCiIEmY4hYMBBEJuqtP6V5bljR0zkSpvh8zd39N2Gs+hSYnjWZbTphGbgTJjO6N9BpQuwuIEUyrBo8fUQRlQp/
AEbDLqpkkCJD0ibTc3QQ6CQEWYt0GNRbBQgmB/yK6EYGfDktlSeRhvEQfMOT4AuSJcB5Q5pAW3Qj+cV2+
9b4sa9zH8B8SmYnaxmTkjIeXTYNhh0wa/QQ+WRnJpKjZ2Bmd2qm8YAtVe7dqiK/
1ukAECsyh3/gFd6Y9XGx/jhp3HgebXOwHxtBYcD7Y/kjDmYgwyxPdVQ+Lv35/
SNqzvN4cSDEGdJHvXybB3iDa1/BlDv5jE3OjS8ZIMDC+ujKnTt6uQfMqtTxBw0tdhW3u+L+ThFa5b9mt

fKd+xVez5wSZs+HTgsycOSPA7YHfjm7DVZkiRJkham6dyF8qnAEcDFSS5sZW8EXpJkKd3wyKuBVwJU1a
VJTgW+S3cHy2O8A6UkSZIkzdyUAa6qvsr417WdMcky7wDeMYN2SZIkSZJGrNddKCVJkiRJ88cAJ0mSJE
kDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgpvM1ApK00Tjp/
GtmvI7D99l1FloiSZL04LMHTpIkSZIGwgAnSZIkSQNhgJMkSZKkgTDASZIkSdJAGOAkSZIkaSAMcJIkS
ZI0EAY4SZIkSRoIA5wkSZIkDYQBTpIkSZIGwgAnSZIkSQNhgJMkSZKkgTDASZIkSdJAGOAkSZIkaSAMc
JIkSZI0EAY4SZIkSRoIA5wkSZIkDYQBTpIkSZIGwgAnSZIkSQMxZYBLskuSLyW5LMmlSV7TyrdNclaSK
9rjI1t5krw3yYokFyX5tbl+EZIkSZK0EEynB+B5e4HVV9URGqX+CYJHsCbwDOrqrdgbPbc4ADgd3bz9HA+
2e91ZIkSZK0AE0Z4KpqVVV9u03cfAVwG7AQcDJzYqp0IHNKmDwY+Wp1vANsk2c8x6XQOXZ
AnwFOB8YIeqWgVdyAO2b9V2Aq7tLbaylY2u6+gky5MsX7169fq3XJIkSZIWmGkHuCRbAJ8CXltVt09Wd
ZyyWqeg6viqWlZVyxYvXjzdZkiSJEnSgjWtAJdkU7rw9vGqOq0V3zA2NLI93tjKVwK79BbfGbhudporS
ZIkSQvXdO5CGeAE4Kqendv1unAkW36SOCzvfvfKXt/4tR7gvcNjbUUpIkSZK04RZNo85TgSOAi5Nc2MreC
LwTODXJUcA1wKFt3hnAQcAK4CfAK2a1xZIkSZK0QE0Z4Krqq4x/
XRvAM8epX8AxM2yXJEmSJGnEet2FUpIkSZI0fwxwkiRJkjQQBjhJkiRJGggDnCRJkiQNhAFOkiRJkgbC
ACdJkiRJA2GAkyRJkqSBMMBJkiRJ0kAY4CRJkiRpIAxwkiRJkjQQBjhJkiRJGggDnCRJkiQNhAFOkiRJ
kgZi0Xw3QNIwnHT+NTNex+H77DoLLZEkSVq47IGTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAG
OEmSJEkaCAOcJEmSJA2EXyMgbeS8fb8kSZLG2AMnSZIkSQNhgJMkSZKkgTDASZIkSdJATBngknwoyY1J
LumVHZvkR0kubD9eb9ZZIVSS5P8py5argkSZIkLTTT6YH7CHDAOOXHVdXS9nMGQJI9gcOAJ7Vl/
jnJJrPVWEmSJElayKa8C2VVnZtkyTTXdzBwSlXdDVyVZAWwN3Qmgfe+VGSJEkbo5lcA/
fqJBe1IZaPbGU7Adf26qxsZetIcnSS5UmWr169egbNkCRJkqSFYUMD3PuB3YClwCrgXa0849St8VZQVc
dX1bKqWrZ48eINbIYkSZIkLRwbFOCq6oaqWlNV9wEfpBsmCV2P2y69qjsD182siZIkSZIk2MAAl2TH3t
PnA2N3qDwdOCzJw5I8Dtgd+ObMmihJRJgmncxCTJycD+wHZJVgJvAfZPspRueOTVwCsBqurSJKc3w
XuBY6pqjVz03RJkiRJWlimcxfKl4xTfMIk9d8OvH0mjZIkSZIkrWsmd6GUJEmSJG1EDIIjZIkSZIkrWsmd6GUJEmSJD2IDHCSJEmSNBAGOE
mSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNB
AGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJE
mSNBAGOEmSJEkaCAOcJEmSJA3EovlugNR30vnXzXh+
+z6yy0RJIkSdr42AMnSZIkSQNhgJMkSZKkgTDASZIkSdJATBngknwoyY1JLumVbZvkrCRXtMdHtvIkeW
+SFUkuSvJrc9l4SZIkSVpIptMD9xXHHggJGyNwBnV9XuwNnOcCBwO7t52jg/
bPTTEmSJEnSlAGuqs4Fbh4pPhhYbYWe4Fq6kpPhg4sU2fCBzSK/
9odb4BbJNkx9lqrCRJkiQtZBt6DdwOVbUKoD1u38p3Aq7t1VvZytaR5Ogky5MsX7169QY2Q5IkSZIWjt
m+iUnGKavxKlbV8VW1rKqWLV68eJabIUmSJEmjZ9ucMiE1F0C3gr8WXRmVkFEWCJwWjXeHFI94X7HCSfHTHFXbJ2/8+ghnUkt0L6MEyk0fsX7
Zm6v4bPjBlTQ1Pl8AbRe9qIVq0N9NjklBMDg0vL4iFgIwzWuwJOmAIPeOLWF0OMTXMgvsTWrbJqp7/
DmSZIkSZLGbGiAOx04sk0fCXy2V/7ydmG5fB2ht3Ok5z3S25VfgsjfdjPKhuTsT1LqtMWTnA/yuVenmbs0CdJ53
Wc5kqT6Sy1xDLKBOe2Ssoo+eMhONN0WvApQvVkZ6n+pbyTzOVPOGEYt4xV3pzE1pEykJzYg8Pj+ZB0Cd7kD/Ce8DKFxr7wSbYMrT2nGZ+7Plz+W2OYNYPjOD
7ydjfKfYHbxoZaSpIkSZJmZtFUFZKcDOwPbJdAW4J3AqUmOAq4BDm3VzwAOAlYAPwFeMQdtliRJkiQtSBJEmSJGlds30TE0mSJEnSHDHASZIkSdJAGOAkSZIkaSAMcJIkSZI0EAY4SZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGwgAnSZIkSZIkDYQBTpIkSZIGYtFMFk5yNXAHsAa4t6qWJdkW+ASwBLgaeHFV3TKzZkqSJEmSZqMH7hlVtbSqlrXnbwDOrqrdgbPbc0mSJEnSDM3FEMqDgRPb9InAIXOwDUmSJElacGYa4Ar4QpILkhzdynaoqlUA7XH7GW5DkiRJksQMr4EDnlpV1yXZHjgryeXTXbAFvqMBdt111xk2Q5IkSZIe+mbUA1dV17XHG4FPA3sDNyTZEaA93jjBssdX1bKqWrZ48eKZNEOSJEmSFoQNDnBJHp5ky7Fp4DnAJcDpwJGt2pHAZ2faSEmSJEnSzIZQ7gB8OsnYek6qqs8n+RZwapKjgGuAQ2feTEmSJEnSBge4qroS2Guc8puAZ82kUZIkSZKkdc3F1whIkiRJkuaAAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDYYCTJEmSpIEwwEmSJEnSQBjgJEmSJGkgDHCSJEmSNBAGOEmSJEkaCAOcJEmSJA2EAU6SJEmSBsIAJ0mSJEkDMWcBLskBSb6fZEWSN8zVdiRJkiRpoZiTAJdkE+CfgAOBPYGXJNlzLrYlSZIkSQvFojla797Aiqq6EiDJKcDBwPfmaHvz5qTzr5nxOg7fZ9dZaIkkSZKkh7q5CnA7Adf2nq8E9unXSHI0cHR7emeS789RW4bgUcCP/cGwsYTR2+mNg/djxrwdtpPthW1k+2krcbp2xvxiVWLFy/OD4KDtuU/gNdPp85kJ0G2aOWPKyAGbGzFBuYddAZd0Wb5d1hP5Ly6v72vHtrrqOwzbz98jR+vK1EUdOeZUMsmM+k1aNbPO6+ZrfUuFkdMV4uWM3X6X9ru7dlwNO3fPr5ifjsBO8VnmtsLyJckF0pD9cX3mvdZ6+BdfXPkJMcOT3B6v5vE4DJ26b/iDJ1u4BOeAMIgW7xhHCyv2XVqmUFzs/Zn9Ti4f8C9eNxP+aUeJyLVt35j5aLsmVIInaFN9bthfptWP/V/2W6XH8C5l7PiNyqWPOeUcbrhIx4T7GHVSbsIzBaK7Kjtj2ul8Kmx1zzlHnX3tq+Tk0X+Q6xzSjMP7JDh+2+6JTgEYqbgxPmS7/T0IJc7X3vHY+jHjaMYyCvXn6A+DT9B7i+qn2NvgUtrdCSC/VWwMr6A9/FqQpNDR2u/b55LQ4aZctD1gbVuaIJIUnKvj1ZfxjPB7PjQsBvQv05YT5fJ2JJwD2cvLFt5G7G+Qc9VJzm6GCZVxbwNkS/yPPp67rCqBrqxGTYpvyEOGwjPNQGkRJ/e8+aDYaeSDM6DP6BhFd/qXg3Ru/7++bq3i3eprvPy1tNm94/p69uDPzeSi+iTTEbP7P9rn79h0H2vLq7pCwwrw/a/0O9vNcaOaXfOeOjOj3QN8kvKFuTtoo5qLwnzjO5HkcyfkpHx4xlxVOOp4czt4b0g/hG9jDqSPqn5Z+pSyMa+2M9hiqzsP91Hn4lvUZ6wjd8o/E/t7W5v84u3C5b/Nr4xz53W6b3yR+zdDDCzz9y3P4Hkq6uPlrsX+9HZUDfdXW43w+qDj7MZTp6OwdPeDzpuEMcz/hM4DzMYDn5y/mqHlOYaJfXe1vKdzy/4uvYLEyXlQhOVbTUHCXRr2gY+HK1Pxm35QI/lY0PQHmAUDq9ct0K86Iw0c/5X5AWBY43q+xvMEb4fn+Tgi+c3fhfC7/xAt0tr/Yx5Nw1DWRDvL7+BPsmPNq3/dZ+1GC+x8RifVyhyF/YMUcaHpbBdgjDp3lV0uHOqR/UF2Y70cTEBvRCsy8BDvNs9k+VmDBN/eoh6Oeg9/U7vmxSq7sTTYV3mh7IaX/cbU4S/wSK0obp6SsL69UIZ3rLLM3wnUzV1W/vEhz3QzK8Q6lLBUb8adw1HWRNwmTUdy/ILMtNqbBo4G6AqrWSwGHVbs1Dq3nE/fjXBRo/VWZOWd1R1kX1l1F2e6uq7v+oLcz7l2K+r/YpPo1ZuItUq8uI9XT+eDo5prF5N+PeZiFtL2TrH1lDbuxIiMRKbgiy1L0cP2QIJNaVLw2N0MrIbnhmFxF57KbEO2/I6Z9CRl4MbNqxFaDF0YF7NW5bVgvRcBPo9I7fZGqsl2YXkpOEGM1GbZHlaEkkjQXc2PIyW6ZjT7x05ybspV6LNDj7Ez4eDI83z6vZCHqRHxVqHOb3fQQmMpl/VVKHe+r+IfhYYkDNS8ZHjn1hWLP+nK0XTKxEyjxgMdfKmh0+RvpEdXFWaW59qq6hTGtJwWtZIaZhzVr6N6kl6fwSM3k8+hhD+0ZYYSHrdN1dO9AdYR72Tmy0x3tmY5tM0+hu5L6zk+NR4/TaJnyAMJ31vs5xFmbqoxYR5FNnvxDY4vgIeiVmc7fvBK5YPHPbHbcgqUr4AM4vM7LkNOcOgRvtIYp3F82G7qjZ99z4l1Ar3x6xs4C3QB6ivhz6pHGtjBzSB8G0tcdVkfBoTkTKXE8AxqJdcUq+8UqzKb7R+7EJpBp45b2JBdDrB2s5ub1oeFf5RhEPLbZzRz1CAf7IcS9V+MK6CWfKG1zKObw9ugeiRgzpCHVlxD1LRsK3LkuFJmEmufMWQdIXmMXbQGu2lQWmmbIsq/MMMoNf2XnPxuRy3r9O7rfG7VKfvYmpBvgzfPrKPcrlGNbW5K7VoDDl7yPRtZWUqT4nJJnj5yxKh2qGNjOzxZG2kzHqNWkeYHG1tyXXuSDAdQ4wC46tcAe1aSg0hHWJ1mcJQkS8kcNQDKVgX3UxqeFBbp8dBUGvRN+Z4APD81NfJjdLsXOIa3gZg4BIf0Dhn2Q4jOH1g9+dMzTCxWPw1vtmnFZYtWjZFSFy3SzewSj5k8VtJ31Xp2M7vE5sMEdmcQm/eCi5xPb3X8pKpW60Ct/Se8QbfJiaZzS7u8h0JdSdQ8PJjMTNF8FOtpL9n5DnzHrOXIGWjWO+wzcJ7cFIT4SV6kfpcJc2eEUKu8iLQFBwWNF+VCvBUcKFaFMGV7Z8APWqdBDvrjGYlLzPlnkKPTM8kGI5xpG7LZIFiVGXNLm7gSNxKqXuh/xEPN8NwGf8izGgdNVrMx6ZhOsPt3ZuSHvMzn68JlwzJhlgm4C3TrSGHR2Ex8cK9UqkJWiPCmJ1XnYsPnXrr4FtEcyCk/+zV+Mtn8jlRrSQ0tQzHq3qL+4JNbPB7pHEIVNuKKNNfQR5RYnqK1Mtgr4vaESQ3Mqm0FCXEQvxm1wKsO+z9oU5hvL+YomaOfQRp2AELvIrIeDqwd8mcpD3GgyQ1T9n9YkNNDW0CI3Q4lHwe4RlajXz3TiqaZx4JkSTfr2cvbVPd6wvNZyqxP6t/fJxS/BuX8rfI3P3qiu5nQCF3F/qnbOFVjH8tXo8XBnYupJbB5qV0UfSYqxoebjW0htQ6F9DdEpqjzcp0UyaI6SUtNbIrqXwzLdHuaOLNyrTw5M1TJ1X6Ed3fH4PBM8yBJaq8kmPdBdnpk8J8bdnJVfZqbvHmRZMAAV4J3WA0+NWShJb1sUGwP7gGdaqWgCFsJc3i8V5lXmPcpvf7hALwdSLrmB5ssSk6XhVL4Z0SgfvmBc8WMZPnKQuDFqm3IHJQvWa8yfClxJvP+yGnn1p7e2G0u+8eYrNf9FdOr0tAJD+vAmn4+tr5uw/2tbpD9JWFJ4ch1zk3t8eGvWGVDz2DpV9kA1mjK1T6N9nDbfBYRwVXP8pyVQ7fNKjVdtbzhBtSh08kvaSzexLwcCzx74n/jTOLNcqiiKmeMl3dGnzAnN5sPY0VvTaTJiwIXZZpYQM0m9C2XiYSWxb0n2JySvrk+dKlx19rVUuWy3+bMkJjwjlXdXdn3LUTlOeZ6r/t0pNjmSyPDUvW1pBT09PkQ3MlQQzOmqPeWP0TwyvS2xuS4p6CUnNCvPEr1+1WJ/XIO6Myc8Z3Uoi6tWNNiHAWwAgE3ZqAoPj+vfH1F7t1nIbfnQSr3TBmu4lH7Dp5F8WzXUQmmK5aFoEbiWnSzsrbBLDvX5CDKw2zPZKFYjVt1sMS6l7NMgAiAnAl7gmqnn7B+5+7cYNdYHFbbvTTfn3X8NJv+J6SNYlqV7UW2F2ju5Bf8LprcXZ8cHu1dHxwg0n79+7VfCzM/hKZYPaexFfRcH2NBA0QZHUSyPjdjuKFlSv+U4j6ABXB9KPtpyFqRO8XlBD9DUzzNKwXrpSdLYE2j9JrmpsyQY0+3SgmJ4N29dkA==

```
qXLE3ELWbvv7HmAT4ENV9Y55bpI0LUl+ia7XDWARcJLHrzZmSU4G9ge2A24A3gJ8BjgV2BW4Bji0qrxZ
hDYqExy7+9MNnyzgauCVY9cTSRuTJE8DvgJcDNzXit9Idx3cIP/
+GuAkSZIkaSAcQilJkiRJA2GAkyRJkqSBMMBJkiRJ0kAY4CRJkiRpIAxwkiRJkjQQBjhJ0gZLUkne1Xv
++iTHzsJ6t0lyc/v+HpL8ZtvWzu351kluSTLh/7EkH0nyopGyzdt6tx4p/
0ySFyf5b0neMMk6lyV5b5veP8l+U7yO/Vu7j+qVPaWVvX6yZSdZ59L2FTBjz4/
d0HVJkobHACdJmom7gRck2W42V1pVtwLXA09sRfsB/
9UeAfYFzq+q+8ZZfLL13gV8ATBhkrKyFuacBn6uq06vqnZMsv7yq/rw93b/XnslcDPx+7/
lhwHfWp90jlgIHTVlLkvSQZICTJM3EvcDxwH8fnTTHTJHaA5bkzva4f5Jzk5ya5P0r2Jr9RbtnMe1kUbJJu1Rb
7GAwFpP+C4kedfb+vbLcmZSS5I8pUkT+g141mt7PtJntfKTqYLUWOeD5xZVT9J8gdJ/
qmt99AklyT5TpJze23/XJIlwKuA/57kwiPH69+cw3w8CQ7tB7FA4DP9/bL0iTfSHJRkk8neWQr/
3KSv2n75fttG5sBbwN+v213LBju2epfmeTPkSQ9ZBngJEkz9T7gpaPDEq/
Aa4FeBI4A9qmpv4P8Cf9bqfJ0HAtsvAf8GLGvP96MLeNAFyD+rql8HXg/
8c287S4BnAM8FPpDk4cCZwK8neVSrcxhdqBv1ZuDXPxn+6MLeNAFyD/
6M6rqauADwHFVtbSqvjJZfeCTwKGt3d+m67kc81Hgf1bVk+l6697Sm7ZOVe0NvAZ4S1XdDXfBNwI7DCN9kqqSBmjRfDdAk
vSQ8B66nqUP98rupX1Q2IYObtab1++Buq/3/D7a/6aquqINJ/w94Lw2/
wLgFcBVVXVnkq2AW6tq6QTZ50Fq16VZB+63rsLk0y0jSnrV9X1Se4Bnk3X8zida
+fggf2yhsn/Z/f351R1JUkDZg+cJGnGquoWul6mo3rFfV9P1lAEcDGzIsL7z6ALPeb3nr6Vd/
9Z6/65Kcih0QTHJXr3lD03yC+26ul8CLm/lXwJ2B45h/OGTxA9hyPeq/
mW6o5Jqxgqq6Dfhxkqe3oiOAc5jcWtuBjhJ0mx5F9C/
G+UHgWck+SawD3Bqza3RBaHl7fh5dEPt6r85LgaOSfAe4lC4sjrmcLhB9HnhVG4ZJu3vlp4BHAf0b
jvT9XbupyiWtzuidI/
8deP7YTUymql9VX6+qz4yznSPbshfRDed82wTtGfMlupEkrQxsgdOkiRJkg
bCACdJkiRJA2GAkyRJkqSBMMBJkiRJ0kAY4CRJkiRpIAxwkiRJkjQQBjhJkiRJGoj/Dwawv/
3dTPCHAAAAAElFTkSuQmCC\n",
      "text/plain": [
       "<Figure size 1080x288 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    }
   ],
   "source": [
    "for feature in non_binary:    \n",
    "    plt.figure(figsize=(15,4))\n",
    "    sns.distplot(df[feature], kde=False)\n",
    "    plot_filter_by_stdev(df, feature, n_stdev=2.0, color='yellow')\n",
    "    plot_filter_by_stdev(df, feature, n_stdev=3.0, color='green')\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 35,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "Year_Birth total: 1 right  0 left  1\n",
      "Income total: 1 right  0 left  0\n",
      "Kidhome total: 1 right  0 left  0\n",
      "Teenhome total: 1 right  0 left  0\n",
      "Recency total: 1 right  0 left  0\n",
      "MntWines total: 1 right  0 left  0\n",
      "MntFruits total: 12 right  11 left  0\n",
      "MntMeatProducts total: 12 right  0 left  0\n",
      "MntFishProducts total: 15 right  3 left  0\n",
      "MntSweetProducts total: 26 right  11 left  0\n",
      "MntGoldProds total: 29 right  3 left  0\n",
      "NumDealsPurchases total: 41 right  12 left  0\n",
      "NumWebPurchases total: 41 right  0 left  0\n",
      "NumCatalogPurchases total: 41 right  0 left  0\n",
      "NumStorePurchases total: 41 right  0 left  0\n",
      "NumWebVisitsMonth total: 41 right  0 left  0\n"
     ]
    }
   ],
   "source": [
    "counter=0\n",
    "mais=0\n",
    "menos=0\n",
    "n_std=4\n",
    "\n",
    "idx_mahalanobis4 = list(idx_mahalanobis4)\n",
    "#to check number of outliers per feature\n",
    "for col in out.columns:\n",
    "    \n",
    "    mais=0\n",
    "    menos=0\n",
    "    for i in out.index:\n",
    "        if df_after_mahal[col][i]>=m[col]+(s[col]*n_std):\n",
    "            counter+=1\n",
    "            mais+=1\n",
    "            idx_mahalanobis4.append(i)\n",
    "            \n",
    "        elif df_after_mahal[col][i]<=m[col]-(s[col]*n_std):\n",
    "            counter+=1\n",
    "            menos+=1\n",
    "            idx_mahalanobis4.append(i)\n",
    "            #df.drop(axis=0, index=[i], inplace=True)\n",
    "    print(col,'total:', counter, 'right ', mais, 'left ', menos)\n",
    "    \n",
    "outliers_dict=add_outliers_method('mahal_uni4', idx_mahalanobis4, 
outliers_dict)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 36,
   "metadata": {},
   "outputs": [],
   "source": [
    "#max value without n_std\n",
    "def valid_values(col, n_std):\n",
    "    \n",
    "        m = col.mean()\n",
    "        s= col.std()\n",
    "        valid=col[col<m+(s*n_std)]\n",
    "        valid=valid[valid>m-(s*n_std)]\n",
    "    \n",
    "\n",
    "        return(valid.min(), valid.max())\n",
    "\n",
    "\n",
    "\n",
    "#to change oultiers by max or min value admisseble\n",
    "for col in out.columns:\n",
    "    \n",
    "    bottom, top = valid_values(df_after_mahal[col], n_std)\n",
    "\n",
    "    for i in df_after_mahal.index.values:\n",
    "        \n",
    "        if df_after_mahal[col][i]>=m[col]+(s[col]*n_std):\n",
    "         \n",
    "            df_after_mahal[col][i]=top\n",
    "            \n",
    "        elif df_after_mahal[col][i]<=m[col]-(s[col]*n_std):\n",
    "            df_after_mahal[col][i]=bottom"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "## compare models with different outliers methods"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 37,
   "metadata": {},
   "outputs": [],
   "source": [
    "from sklearn.linear_model import LogisticRegression\n",
    "from sklearn.model_selection import cross_val_score, KFold\n",
    "from sklearn.metrics import classification_report, accuracy_score,
recall_score, average_precision_score"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 38,
   "metadata": {},
   "outputs": [],
   "source": [
    "n_splits = 5\n",
    "outliers_df=pd.DataFrame(index=range(len(outliers_dict.keys())*n_splits),
columns=(['method','recall', 'accuracy', 'precision', 'f1']))\n",
    "CV = KFold(n_splits=n_splits, random_state=seed)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 39,
   "metadata": {},
   "outputs": [],
   "source": [
    "n_splits = 10\n",
    "scoring =['recall', 'accuracy', 'precision', 'f1']\n",
    "entries = []\n",
    "\n",
    "scaler = MinMaxScaler()\n",
    "l=pd.DataFrame()\n",
    "\n",
    "for score in scoring:\n",
    "   \n",
    "    entries = []\n",
    "    for key in outliers_dict.keys():\n",
    "\n",
    "        y_train = df['Response'].loc[set(df.index)-
set(outliers_dict[key])]\n",
    "        x = df.loc[set(df.index)-
set(outliers_dict[key])].select_dtypes(include=['number']).drop(columns=['Respon
se'])\n",
    "\n",
    "        x_train = scaler.fit_transform(x)\n",
    "        accuracies = cross_val_score(LogisticRegression(n_jobs=-1),
x_train, y_train, scoring=score, cv=CV)\n",
    "\n",
    "        for fold_idx, accuracy in enumerate(accuracies):\n",
    "            entries.append((key, fold_idx, accuracy))\n",
    "        \n",
    "    outliers_df = pd.DataFrame(entries, columns=['method', 'fold_idx', 
score])\n",
    "    l[score] = outliers_df.groupby('method')[score].agg('mean')\n",
    "#l.append(cv_df.groupby('model_name')[score].agg('mean'))\n",
    "   "
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 40,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>recall</th>\n",
       "      <th>accuracy</th>\n",
       "      <th>precision</th>\n",
       "      <th>f1</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>method</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>mahalanobis_4</th>\n",
       "      <td>0.363787</td>\n",
       "      <td>0.888055</td>\n",
       "      <td>0.756229</td>\n",
       "      <td>0.490480</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>mahalanobis_3</th>\n",
       "      <td>0.366343</td>\n",
     "      <td>0.889461</td>\n",
     "      <td>0.743908</td>\n",
     "      <td>0.489563</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>mahal_uni4</th>\n",
     "      <td>0.363533</td>\n",
     "      <td>0.888880</td>\n",
     "      <td>0.747445</td>\n",
     "      <td>0.487802</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>dbscan</th>\n",
     "      <td>0.355371</td>\n",
     "      <td>0.884017</td>\n",
     "      <td>0.712129</td>\n",
     "      <td>0.472843</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>isolation_forest</th>\n",
     "      <td>0.336427</td>\n",
     "      <td>0.897517</td>\n",
     "      <td>0.774820</td>\n",
     "      <td>0.462530</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>3std_17iqr</th>\n",
     "      <td>0.305082</td>\n",
     "      <td>0.897910</td>\n",
     "      <td>0.757804</td>\n",
     "      <td>0.430748</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>lof</th>\n",
     "      <td>0.281110</td>\n",
     "      <td>0.888879</td>\n",
     "      <td>0.718861</td>\n",
     "      <td>0.403502</td>\n",
     "    </tr>\n",
     "  </tbody>\n",
     "</table>\n",
     "</div>"
    ],
    "text/plain": [
     "                    recall  accuracy  precision        f1\n",
     "method                                                   \n",
     "mahalanobis_4     0.363787  0.888055   0.756229  0.490480\n",
     "mahalanobis_3     0.366343  0.889461   0.743908  0.489563\n",
     "mahal_uni4        0.363533  0.888880   0.747445  0.487802\n",
     "dbscan            0.355371  0.884017   0.712129  0.472843\n",
     "isolation_forest  0.336427  0.897517   0.774820  0.462530\n",
     "3std_17iqr        0.305082  0.897910   0.757804  0.430748\n",
     "lof               0.281110  0.888879   0.718861  0.403502"
    ]
   },
   "execution_count": 40,
   "metadata": {},
   "output_type": "execute_result"
  }
 ],
 "source": [
  "l.sort_values(by=['f1', 'recall'], ascending=False)"
 ]
},
{
 "cell_type": "markdown",
 "metadata": {},
 "source": [
  "### method for outliers --> MAHALANOBIS 4STD"
 ]
},
{
 "cell_type": "code",
 "execution_count": 41,
 "metadata": {},
 "outputs": [
  {
   "data": {
    "text/plain": [
     "(1733, 26)"
    ]
   },
   "execution_count": 41,
   "metadata": {},
   "output_type": "execute_result"
  }
 ],
 "source": [
  "df = df.loc[~df.index.isin(outliers_dict['mahalanobis_4'])]\n",
  "df.shape"
 ]
},
{
 "cell_type": "code",
 "execution_count": 42,
 "metadata": {
  "scrolled": false
 },
 "outputs": [
  {
   "data": {
    "text/html": [
     "<div>\n",
     "<style scoped>\n",
     "    .dataframe tbody tr th:only-of-type {\n",
     "        vertical-align: middle;\n",
     "    }\n",
     "\n",
     "    .dataframe tbody tr th {\n",
     "        vertical-align: top;\n",
     "    }\n",
     "\n",
     "    .dataframe thead th {\n",
     "        text-align: right;\n",
     "    }\n",
     "</style>\n",
     "<table border=\"1\" class=\"dataframe\">\n",
     "  <thead>\n",
     "    <tr style=\"text-align: right;\">\n",
     "      <th></th>\n",
     "      <th>Year_Birth</th>\n",
     "      <th>Education</th>\n",
     "      <th>Marital_Status</th>\n",
     "      <th>Income</th>\n",
     "      <th>Kidhome</th>\n",
     "      <th>Teenhome</th>\n",
     "      <th>Dt_Customer</th>\n",
     "      <th>Recency</th>\n",
"      <th>MntWines</th>\n",
"      <th>MntFruits</th>\n",
"      <th>...</th>\n",
"      <th>NumCatalogPurchases</th>\n",
"      <th>NumStorePurchases</th>\n",
"      <th>NumWebVisitsMonth</th>\n",
"      <th>AcceptedCmp3</th>\n",
"      <th>AcceptedCmp4</th>\n",
"      <th>AcceptedCmp5</th>\n",
"      <th>AcceptedCmp1</th>\n",
"      <th>AcceptedCmp2</th>\n",
"      <th>Complain</th>\n",
"      <th>Response</th>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>ID</th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>67</th>\n",
"      <td>1972</td>\n",
"      <td>Master</td>\n",
"      <td>Single</td>\n",
"      <td>46423</td>\n",
"      <td>1</td>\n",
"      <td>1</td>\n",
"      <td>2013-09-18</td>\n",
"      <td>6</td>\n",
"      <td>68</td>\n",
"      <td>0</td>\n",
"      <td>...</td>\n",
"      <td>0</td>\n",
"      <td>4</td>\n",
"      <td>7</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3828</th>\n",
"      <td>1951</td>\n",
"      <td>Graduation</td>\n",
"      <td>Married</td>\n",
"      <td>71107</td>\n",
"      <td>0</td>\n",
"      <td>1</td>\n",
"      <td>2013-02-17</td>\n",
"      <td>61</td>\n",
"      <td>533</td>\n",
"      <td>10</td>\n",
"      <td>...</td>\n",
"      <td>6</td>\n",
"      <td>13</td>\n",
"      <td>4</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3409</th>\n",
"      <td>1984</td>\n",
"      <td>Graduation</td>\n",
"      <td>Single</td>\n",
"      <td>36108</td>\n",
"      <td>1</td>\n",
"      <td>0</td>\n",
"      <td>2013-10-15</td>\n",
"      <td>68</td>\n",
"      <td>141</td>\n",
"      <td>8</td>\n",
"      <td>...</td>\n",
"      <td>1</td>\n",
"      <td>4</td>\n",
"      <td>9</td>\n",
"      <td>1</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>9451</th>\n",
"      <td>1965</td>\n",
"      <td>Graduation</td>\n",
"      <td>Married</td>\n",
"      <td>73538</td>\n",
"      <td>0</td>\n",
"      <td>1</td>\n",
"      <td>2012-11-25</td>\n",
"      <td>92</td>\n",
"      <td>811</td>\n",
"      <td>76</td>\n",
"      <td>...</td>\n",
"      <td>4</td>\n",
"      <td>9</td>\n",
"      <td>7</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>6211</th>\n",
       "      <td>1976</td>\n",
       "      <td>PhD</td>\n",
       "      <td>Together</td>\n",
       "      <td>37395</td>\n",
       "      <td>1</td>\n",
       "      <td>0</td>\n",
       "      <td>2014-05-02</td>\n",
       "      <td>47</td>\n",
       "      <td>18</td>\n",
       "      <td>0</td>\n",
       "      <td>...</td>\n",
       "      <td>0</td>\n",
       "      <td>3</td>\n",
       "      <td>6</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "<p>5 rows Ã 26 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "      Year_Birth   Education Marital_Status  Income  Kidhome  
Teenhome  \\\n",
       "ID                                                              
\n",
       "67          1972      Master         Single   46423        1         1  
\n",
       "3828        1951  Graduation        Married   71107        0         1  
\n",
       "3409        1984  Graduation         Single   36108        1         0  
\n",
       "9451        1965  Graduation        Married   73538        0         1  
\n",
       "6211        1976         PhD       Together   37395        1         0  
\n",
       "\n",
       "     Dt_Customer  Recency  MntWines  MntFruits    ...  
NumCatalogPurchases  \\\n",
       "ID                                                ...                        
\n",
       "67    2013-09-18        6        68          0    ...                        
0   \n",
       "3828  2013-02-17       61       533         10    ...                        
6   \n",
       "3409  2013-10-15       68       141          8    ...                        
1   \n",
       "9451  2012-11-25       92       811         76    ...                        
```

```
4   \n",
       "6211  2014-05-02       47        18          0    ...
0   \n",
       "\n",
       "      NumStorePurchases  NumWebVisitsMonth  AcceptedCmp3
AcceptedCmp4  \\\n",
       "ID
\n",
       "67                    4                  7             0             0
\n",
       "3828                13                  4             0             0
\n",
       "3409                 4                  9             1             0
\n",
       "9451                 9                  7             0             0
\n",
       "6211                 3                  6             0             0
\n",
       "\n",
       "      AcceptedCmp5  AcceptedCmp1  AcceptedCmp2  Complain  Response  \n",
       "ID                                                                  \n",
       "67               0             0             0         0         0  \n",
       "3828             0             0             0         0         0  \n",
       "3409             0             0             0         0         0  \n",
       "9451             0             0             0         0         0  \n",
       "6211             0             0             0         0         0  \n",
       "\n",
       "[5 rows x 26 columns]"
      ]
     },
     "execution_count": 42,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df.head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# 2. Missing Values"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "## 2.1 Dealing with missing"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 43,
   "metadata": {},
   "outputs": [],
   "source": [
    "from sklearn.metrics import mean_squared_error\n",
    "from sklearn.linear_model import BayesianRidge\n",
    "from sklearn.tree import DecisionTreeRegressor\n",
    "from sklearn.ensemble import ExtraTreesRegressor\n",
    "from sklearn.neighbors import KNeighborsRegressor\n",
    "from sklearn.model_selection import train_test_split\n",
    "from sklearn.metrics import mean_squared_error\n",
    "from sklearn import model_selection\n",
    "from sklearn.preprocessing import MinMaxScaler\n",
    "from sklearn.linear_model import LinearRegression\n",
    "from sklearn.linear_model import LogisticRegression\n",
    "from sklearn.linear_model import Lasso\n",
    "from tqdm import tqdm"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 44,
   "metadata": {},
   "outputs": [],
   "source": [
    "def clean_missings_test(df_test, df_train):\n",
    "    # Sample that we are going to imputate\n",
    "    #impute_metrics = {key: [] for key in df_no_miss.columns}\n",
    "    \n",
    "    df_no_miss = df_train.select_dtypes(include=[\"number\"]).drop(columns
= 'Response').copy()\n",
    "    \n",
    "    scaler = MinMaxScaler()\n",
    "\n",
    "    models = [ExtraTreesRegressor(random_state=seed),\n",
    "              BayesianRidge(),\n",
    "              DecisionTreeRegressor(random_state=seed),\n",
    "              KNeighborsRegressor()]\n",
    "    models_names = [model.__class__.__name__ for model in models]\n",
    "    mod_dict = dict(zip(models_names,models))\n",
    "    \n",
    "    df_test_no_miss = df_test.copy()\n",
    "    \n",
    "    # cols that have missing\n",
    "    null_col_test = df_test_no_miss.columns[df_test.isna().any()].tolist()\
n",
    "    \n",
    "    for col in tqdm(null_col_test):        \n",
    "        \n",
    "        # slice with nulls\n",
    "        test_null = 
df_test_no_miss.loc[df_test_no_miss[col].isnull()].drop(columns = 
[col,'Response']).select_dtypes(include=[\"number\"])\n",
    "\n",
    "        best_error = np.inf\n",
    "        best_metric = None\n",
    "        best_model_name = None\n",
    "\n",
    "        x_ = df_no_miss.drop(columns=[col])\n",
    "        y_ = df_no_miss[col]\n",
    "        x_ = scaler.fit_transform(x_)\n",
    "\n",
    "        x_t_ = scaler.transform(test_null)\n",
    "\n",
    "        for mod_name, model in mod_dict.items():\n",
    "\n",
    "            model.fit(x_, y_)  \n",
    "            sqr_err = model_selection.cross_val_score(model, x_, y_, 
scoring='neg_mean_squared_error', cv = 5)\n",
    "\n",
    "            if sqr_err.mean() < best_error:\n",
    "                best_metric = model\n",
    "                best_model_name = mod_name\n",
    "                best_error = sqr_err.mean()\n",
    "        \n",
    "        print(col,'\\tBest metric:',best_model_name)\n",
    "        prediction = best_metric.predict(x_t_)         \n",
    "        #impute_metrics[col] = best_metric\n",
    "        df_test_no_miss.loc[df_test_no_miss[col].isnull(), col] =
prediction\n",
    "        #print(prediction)\n",
    "        \n",
    "        return df_test_no_miss\n",
    "    "
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 45,
   "metadata": {
    "scrolled": false
   },
   "outputs": [
    {
     "name": "stderr",
     "output_type": "stream",
     "text": [
      "\r",
      "  0%|          | 0/1 [00:00<?, ?it/s]"
     ]
    },
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "Income \tBest metric: DecisionTreeRegressor\n"
     ]
    },
    {
     "name": "stderr",
     "output_type": "stream",
     "text": [
      "\n"
     ]
    }
   ],
   "source": [
    "df_test = clean_missings_test(df_test, df)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# 3. New Variables"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "* Age\n",
    "* Days_as_cust: # of days as customer\n",
    "* Mnt_tot: Sum of all purchases mnt\n",
    "* Frq: # of times the client made a purchase\n",
    "* Childnum: total # of children (kids+teens)\n",
    "* RatioMntFrq: Monetary over # of purchases\n",
    "* RatioMntIncome: Monetary over income\n",
    "* AcceptedTot: Total # of accepted campaigns\n",
    "* RatioDealFrq: Ratio of purchases with discount\n",
    "* RatioWebPurchWebVisit: # of purchases over visits\n",
    "* Each expense in percentage\n",
    "* Ratio channel of purchase"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### Age"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 46,
   "metadata": {},
   "outputs": [],
   "source": [
    "most_recent_obs = df['Dt_Customer'].max()\n",
    "most_recent_obs\n",
    "\n",
    "# test\n",
    "\n",
    "df_test['Age'] = most_recent_obs.year - df_test.Year_Birth"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 47,
   "metadata": {},
   "outputs": [],
   "source": [
    "df['Age'] = most_recent_obs.year - df.Year_Birth"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 48,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Year_Birth</th>\n",
       "      <th>Age</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>1972</td>\n",
       "      <td>42</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "    Year_Birth  Age\n",
       "ID                 \n",
       "67        1972   42"
      ]
     },
     "execution_count": 48,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df[[\"Year_Birth\",\"Age\"]].head(1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 49,
   "metadata": {},
   "outputs": [],
   "source": [
    "# remove Year_Birth\n",
    "#df.drop(columns = ['Year_Birth'], inplace=True)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### Days_as_cust"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 50,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Days\n",
    "df['Days_as_cust'] = most_recent_obs - df.Dt_Customer\n",
    "df['Days_as_cust'] = df['Days_as_cust'].dt.days\n",
    "\n",
    "# test\n",
    "df_test['Days_as_cust'] = most_recent_obs - df_test.Dt_Customer\n",
    "df_test['Days_as_cust'] = df_test['Days_as_cust'].dt.days"
```

```
 ]
},
{
 "cell_type": "code",
 "execution_count": 51,
 "metadata": {},
 "outputs": [
  {
   "data": {
    "text/html": [
     "<div>\n",
     "<style scoped>\n",
     "    .dataframe tbody tr th:only-of-type {\n",
     "        vertical-align: middle;\n",
     "    }\n",
     "\n",
     "    .dataframe tbody tr th {\n",
     "        vertical-align: top;\n",
     "    }\n",
     "\n",
     "    .dataframe thead th {\n",
     "        text-align: right;\n",
     "    }\n",
     "</style>\n",
     "<table border=\"1\" class=\"dataframe\">\n",
     "  <thead>\n",
     "    <tr style=\"text-align: right;\">\n",
     "      <th></th>\n",
     "      <th>Dt_Customer</th>\n",
     "      <th>Days_as_cust</th>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>ID</th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "    </tr>\n",
     "  </thead>\n",
     "  <tbody>\n",
     "    <tr>\n",
     "      <th>67</th>\n",
     "      <td>2013-09-18</td>\n",
     "      <td>284</td>\n",
     "    </tr>\n",
     "  </tbody>\n",
     "</table>\n",
     "</div>"
    ],
    "text/plain": [
     "   Dt_Customer  Days_as_cust\n",
     "ID                          \n",
     "67  2013-09-18           284"
    ]
   },
   "execution_count": 51,
   "metadata": {},
   "output_type": "execute_result"
  }
 ],
 "source": [
  "df[[\"Dt_Customer\",\"Days_as_cust\"]].head(1)"
 ]
},
{
 "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### Mnt_tot"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 52,
   "metadata": {},
   "outputs": [],
   "source": [
    "mnt_features = [x for x in df.columns.values if x.startswith(\"Mnt\")]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 53,
   "metadata": {},
   "outputs": [],
   "source": [
    "df['Mnt_tot'] = np.sum(df[mnt_features], axis=1)\n",
    "\n",
    "# test\n",
    "df_test['Mnt_tot'] = np.sum(df_test[mnt_features], axis=1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 54,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>MntWines</th>\n",
       "      <th>MntFruits</th>\n",
       "      <th>MntMeatProducts</th>\n",
       "      <th>MntFishProducts</th>\n",
       "      <th>MntSweetProducts</th>\n",
       "      <th>MntGoldProds</th>\n",
       "      <th>Mnt_tot</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>68</td>\n",
       "      <td>0</td>\n",
       "      <td>16</td>\n",
       "      <td>0</td>\n",
       "      <td>0</td>\n",
       "      <td>8</td>\n",
       "      <td>92</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "    MntWines  MntFruits  MntMeatProducts  MntFishProducts  
MntSweetProducts  \\\n",
       "ID                                                                    
\n",
       "67        68          0               16                 0                 
0   \n",
       "\n",
       "    MntGoldProds  Mnt_tot  \n",
       "ID                         \n",
       "67             8       92  "
      ]
     },
     "execution_count": 54,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "pd.concat([df[mnt_features],df[\"Mnt_tot\"]], axis=1).head(1)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### Frq"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 55,
   "metadata": {},
   "outputs": [],
   "source": [
    "df['Frq'] = 
np.sum(df[[\"NumWebPurchases\",\"NumCatalogPurchases\",\"NumStorePurchases\"]], 
axis=1)\n",
    "\n",
    "# test\n",
    "df_test['Frq'] = 
np.sum(df_test[[\"NumWebPurchases\",\"NumCatalogPurchases\",\"NumStorePurchases\
"]], axis=1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 56,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>NumWebPurchases</th>\n",
       "      <th>NumCatalogPurchases</th>\n",
       "      <th>NumStorePurchases</th>\n",
       "      <th>Frq</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>2</td>\n",
       "      <td>0</td>\n",
       "      <td>4</td>\n",
       "      <td>6</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "    NumWebPurchases  NumCatalogPurchases  NumStorePurchases  Frq\n",
       "ID                                                              \n",
       "67                2                    0                  4    6"
      ]
     },
     "execution_count": 56,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
"df[[\"NumWebPurchases\",\"NumCatalogPurchases\",\"NumStorePurchases\",\"Frq\"]]
.head(1)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### Childnum"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 57,
   "metadata": {},
   "outputs": [],
   "source": [
    "df['Childnum'] = np.sum(df[[\"Kidhome\",\"Teenhome\"]], axis=1)\n",
    "\n",
    "# test\n",
    "df_test['Childnum'] = np.sum(df_test[[\"Kidhome\",\"Teenhome\"]], axis=1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 58,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Kidhome</th>\n",
       "      <th>Teenhome</th>\n",
       "      <th>Childnum</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>1</td>\n",
       "      <td>1</td>\n",
       "      <td>2</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>3828</th>\n",
       "      <td>0</td>\n",
       "      <td>1</td>\n",
       "      <td>1</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "      Kidhome  Teenhome  Childnum\n",
       "ID                               \n",
       "67          1         1         2\n",
       "3828        0         1         1"
      ]
     },
     "execution_count": 58,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df[[\"Kidhome\",\"Teenhome\",\"Childnum\"]].head(2)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### R_MntFrq"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 59,
   "metadata": {},
   "outputs": [],
   "source": [
    "df['R_MntFrq'] = np.divide(df['Mnt_tot'],df['Frq'])\n",
    "\n",
    "# test\n",
    "df_test['R_MntFrq'] = np.divide(df_test['Mnt_tot'],df_test['Frq'])"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 60,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
     "\n",
     "    .dataframe tbody tr th {\n",
     "        vertical-align: top;\n",
     "    }\n",
     "\n",
     "    .dataframe thead th {\n",
     "        text-align: right;\n",
     "    }\n",
     "</style>\n",
     "<table border=\"1\" class=\"dataframe\">\n",
     "  <thead>\n",
     "    <tr style=\"text-align: right;\">\n",
     "      <th></th>\n",
     "      <th>Mnt_tot</th>\n",
     "      <th>Frq</th>\n",
     "      <th>R_MntFrq</th>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>ID</th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "    </tr>\n",
     "  </thead>\n",
     "  <tbody>\n",
     "    <tr>\n",
     "      <th>67</th>\n",
     "      <td>92</td>\n",
     "      <td>6</td>\n",
     "      <td>15.333333</td>\n",
     "    </tr>\n",
     "  </tbody>\n",
     "</table>\n",
     "</div>"
    ],
    "text/plain": [
     "    Mnt_tot  Frq   R_MntFrq\n",
     "ID                         \n",
     "67       92    6  15.333333"
    ]
   },
   "execution_count": 60,
   "metadata": {},
   "output_type": "execute_result"
  }
 ],
 "source": [
  "df[[\"Mnt_tot\",\"Frq\",\"R_MntFrq\"]].head(1)"
 ]
},
{
 "cell_type": "markdown",
 "metadata": {},
 "source": [
  "#### RatioMntIncome"
 ]
},
{
 "cell_type": "code",
 "execution_count": 61,
 "metadata": {},
 "outputs": [],
 "source": [
  "df['R_MntIncome'] = np.divide(df['Mnt_tot'],df['Income'])\n",
    "\n",
    "# test\n",
    "df_test['R_MntIncome'] = np.divide(df_test['Mnt_tot'],df_test['Income'])"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 62,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Mnt_tot</th>\n",
       "      <th>Income</th>\n",
       "      <th>R_MntIncome</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>92</td>\n",
       "      <td>46423</td>\n",
       "      <td>0.001982</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "    Mnt_tot  Income  R_MntIncome\n",
       "ID                              \n",
       "67       92   46423     0.001982"
      ]
     },
     "execution_count": 62,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df[[\"Mnt_tot\",\"Income\",\"R_MntIncome\"]].head(1)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### AcceptedTot"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 63,
   "metadata": {},
   "outputs": [],
   "source": [
    "Accept_cat = [x for x in df.columns.values if 
x.startswith(\"AcceptedCmp\")]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 64,
   "metadata": {},
   "outputs": [],
   "source": [
    "df['AcceptedTot'] = np.sum(df[Accept_cat], axis=1)\n",
    "\n",
    "# test\n",
    "df_test['AcceptedTot'] = np.sum(df_test[Accept_cat], axis=1)\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 65,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>AcceptedCmp3</th>\n",
       "      <th>AcceptedCmp4</th>\n",
       "      <th>AcceptedCmp5</th>\n",
       "      <th>AcceptedCmp1</th>\n",
       "      <th>AcceptedCmp2</th>\n",
       "      <th>AcceptedTot</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>7832</th>\n",
       "      <td>1</td>\n",
       "      <td>0</td>\n",
       "      <td>1</td>\n",
       "      <td>1</td>\n",
       "      <td>0</td>\n",
       "      <td>3</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "      AcceptedCmp3  AcceptedCmp4  AcceptedCmp5  AcceptedCmp1
AcceptedCmp2  \\\n",
       "ID
\n",
       "7832             1             0             1             1
0   \n",
       "\n",
       "      AcceptedTot  \n",
       "ID                 \n",
       "7832            3  "
      ]
     },
     "execution_count": 65,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "pd.concat([df[Accept_cat],df[\"AcceptedTot\"]],
axis=1).loc[pd.concat([df[Accept_cat],df[\"AcceptedTot\"]], axis=1).AcceptedTot
==3].head(1)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### RatioDealFrq"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 66,
   "metadata": {},
   "outputs": [],
   "source": [
    "df['R_DealFrq'] = np.divide(df['NumDealsPurchases'],df['Frq'])\n",
    "\n",
    "# test\n",
    "df_test['R_DealFrq'] =
np.divide(df_test['NumDealsPurchases'],df_test['Frq'])\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 67,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>NumDealsPurchases</th>\n",
       "      <th>Frq</th>\n",
       "      <th>R_DealFrq</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>3</td>\n",
       "      <td>6</td>\n",
       "      <td>0.5</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "    NumDealsPurchases  Frq  R_DealFrq\n",
       "ID                                   \n",
       "67                  3    6        0.5"
      ]
     },
     "execution_count": 67,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df[[\"NumDealsPurchases\",\"Frq\",\"R_DealFrq\"]].head(1)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### RatioWebPurchWebVisit !!!!! Visitas sao so no ultimo mÃªs"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 68,
   "metadata": {},
   "outputs": [],
   "source": [
    "#df['R_WebPurchWebVisit'] =
np.divide(df['NumWebPurchases'],df['NumWebVisitsMonth'])"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 69,
   "metadata": {},
   "outputs": [],
   "source": [

"#df[[\"NumWebPurchases\",\"NumWebVisitsMonth\",\"R_WebPurchWebVisit\"]].head(2)
"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### Ratio Mnts specific vs Mnt_tot"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 70,
   "metadata": {},
   "outputs": [],
   "source": [
    "for feat in mnt_features:\n",
    "    df['R_'+ feat] = df[feat]/df[\"Mnt_tot\"]\n",
    "    # test\n",
    "    df_test['R_'+ feat] = df_test[feat]/df_test[\"Mnt_tot\"]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 71,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
      "    }\n",
      "\n",
      "    .dataframe tbody tr th {\n",
      "        vertical-align: top;\n",
      "    }\n",
      "\n",
      "    .dataframe thead th {\n",
      "        text-align: right;\n",
      "    }\n",
      "</style>\n",
      "<table border=\"1\" class=\"dataframe\">\n",
      "  <thead>\n",
      "    <tr style=\"text-align: right;\">\n",
      "      <th></th>\n",
      "      <th>MntWines</th>\n",
      "      <th>Mnt_tot</th>\n",
      "      <th>R_MntWines</th>\n",
      "    </tr>\n",
      "    <tr>\n",
      "      <th>ID</th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "    </tr>\n",
      "  </thead>\n",
      "  <tbody>\n",
      "    <tr>\n",
      "      <th>67</th>\n",
      "      <td>68</td>\n",
      "      <td>92</td>\n",
      "      <td>0.73913</td>\n",
      "    </tr>\n",
      "  </tbody>\n",
      "</table>\n",
      "</div>"
     ],
     "text/plain": [
      "    MntWines  Mnt_tot  R_MntWines\n",
      "ID                               \n",
      "67        68       92     0.73913"
     ]
    },
    "execution_count": 71,
    "metadata": {},
    "output_type": "execute_result"
   }
  ],
  "source": [
   "# ex\n",
   "df[[\"MntWines\", \"Mnt_tot\", \"R_MntWines\"]].head(1)"
  ]
 },
 {
  "cell_type": "markdown",
  "metadata": {},
  "source": [
   "### RFM Score"
  ]
 },
 {
  "cell_type": "code",
  "execution_count": 72,
  "metadata": {},
  "outputs": [
    {
     "data": {
      "text/plain": [
       "dict_keys(['Recency_bin', 'Frq_bin', 'Mnt_tot_bin'])"
      ]
     },
     "execution_count": 72,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# 1) bin Rcn, Frq and Mnt\n",
    "feature_list, n_bins = [\"Recency\", \"Frq\", \"Mnt_tot\"], 5\n",
    "rfm_feature_dict = {}\n",
    "for feature in feature_list:\n",
    "    bindisc = KBinsDiscretizer(n_bins=5, encode='ordinal',
strategy=\"quantile\")\n",
    "    feature_bin = bindisc.fit_transform(df[feature].values[:, np.newaxis])\
n",
    "    feature_bin = pd.Series(feature_bin[:, 0], index=df.index)\n",
    "    feature_bin += 1\n",
    "    \n",
    "    if feature == \"Rcn\":\n",
    "        feature_bin = feature_bin.sub(5).abs() + 1\n",
    "    rfm_feature_dict[feature+\"_bin\"] =
feature_bin.astype(int).astype(str)\n",
    "\n",
    "rfm_feature_dict.keys()"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 73,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Year_Birth</th>\n",
       "      <th>Education</th>\n",
       "      <th>Marital_Status</th>\n",
       "      <th>Income</th>\n",
       "      <th>Kidhome</th>\n",
"      <th>Teenhome</th>\n",
"      <th>Dt_Customer</th>\n",
"      <th>Recency</th>\n",
"      <th>MntWines</th>\n",
"      <th>MntFruits</th>\n",
"      <th>...</th>\n",
"      <th>R_MntIncome</th>\n",
"      <th>AcceptedTot</th>\n",
"      <th>R_DealFrq</th>\n",
"      <th>R_MntWines</th>\n",
"      <th>R_MntFruits</th>\n",
"      <th>R_MntMeatProducts</th>\n",
"      <th>R_MntFishProducts</th>\n",
"      <th>R_MntSweetProducts</th>\n",
"      <th>R_MntGoldProds</th>\n",
"      <th>RFM</th>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>ID</th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>67</th>\n",
"      <td>1972</td>\n",
"      <td>Master</td>\n",
"      <td>Single</td>\n",
"      <td>46423</td>\n",
"      <td>1</td>\n",
"      <td>1</td>\n",
"      <td>2013-09-18</td>\n",
"      <td>6</td>\n",
"      <td>68</td>\n",
"      <td>0</td>\n",
"      <td>...</td>\n",
"      <td>0.001982</td>\n",
"      <td>0</td>\n",
"      <td>0.5</td>\n",
"      <td>0.73913</td>\n",
"      <td>0.0</td>\n",
"      <td>0.173913</td>\n",
"      <td>0.0</td>\n",
"      <td>0.0</td>\n",
       "      <td>0.086957</td>\n",
       "      <td>122</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "<p>1 rows Ã 42 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "    Year_Birth Education Marital_Status  Income  Kidhome  Teenhome  \\\
n",
       "ID                                                                   \
n",
       "67        1972    Master         Single   46423        1         1   \
n",
       "\n",
       "   Dt_Customer  Recency  MntWines  MntFruits ...   R_MntIncome
AcceptedTot  \\\n",
       "ID                                          ...
\n",
       "67  2013-09-18        6        68          0 ...      0.001982
0   \n",
       "\n",
       "    R_DealFrq  R_MntWines  R_MntFruits  R_MntMeatProducts
R_MntFishProducts  \\\n",
       "ID
\n",
       "67        0.5     0.73913          0.0           0.173913
0.0   \n",
       "\n",
       "    R_MntSweetProducts  R_MntGoldProds  RFM  \n",
       "ID                                          \n",
       "67                 0.0        0.086957  122  \n",
       "\n",
       "[1 rows x 42 columns]"
      ]
     },
     "execution_count": 73,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df[\"RFM\"] = (rfm_feature_dict['Recency_bin'] +
rfm_feature_dict['Frq_bin'] + rfm_feature_dict['Mnt_tot_bin']).astype(int)\n",
    "df.head(1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 74,
   "metadata": {},
   "outputs": [],
   "source": [
    "# test\n",
    "\n",
    "feature_list, n_bins = [\"Recency\", \"Frq\", \"Mnt_tot\"], 5\n",
    "rfm_feature_dict = {}\n",
    "for feature in feature_list:\n",
    "    bindisc = KBinsDiscretizer(n_bins=5, encode='ordinal',
strategy=\"quantile\")\n",
    "    feature_bin = bindisc.fit_transform(df_test[feature].values[:,
np.newaxis])\n",
    "    feature_bin = pd.Series(feature_bin[:, 0], index=df_test.index)\n",
    "    feature_bin += 1\n",
    "    \n",
    "    if feature == \"Rcn\":\n",
    "        feature_bin = feature_bin.sub(5).abs() + 1\n",
    "    rfm_feature_dict[feature+\"_bin\"] =
feature_bin.astype(int).astype(str)\n",
    "\n",
    "rfm_feature_dict.keys()\n",
    "df_test[\"RFM\"] = (rfm_feature_dict['Recency_bin'] +
rfm_feature_dict['Frq_bin'] + rfm_feature_dict['Mnt_tot_bin']).astype(int)\n"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### Channel Ratios"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 75,
   "metadata": {},
   "outputs": [],
   "source": [
    "channels = ['NumWebPurchases','NumCatalogPurchases','NumStorePurchases']\
n",
    "\n",
    "for channel in channels:\n",
    "    df['R_'+channel] = df[channel]/df['Frq']\n",
    "    # test\n",
    "    df_test['R_'+channel] = df_test[channel]/df_test['Frq']"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 76,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>NumWebPurchases</th>\n",
       "      <th>Frq</th>\n",
       "      <th>R_NumWebPurchases</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>2</td>\n",
       "      <td>6</td>\n",
       "      <td>0.333333</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "    NumWebPurchases  Frq  R_NumWebPurchases\n",
       "ID                                         \n",
       "67                2    6           0.333333"
      ]
     },
     "execution_count": 76,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df[['NumWebPurchases','Frq','R_NumWebPurchases']].head(1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 77,
   "metadata": {},
   "outputs": [],
   "source": [
    "channels = ['NumWebPurchases','NumCatalogPurchases','NumStorePurchases']\
n",
    "\n",
    "for channel in channels:\n",
    "    df['R_Mnt_'+channel] = df[channel]/df['Mnt_tot']\n",
    "     # test\n",
    "    df_test['R_Mnt_'+channel] = df_test[channel]/df_test['Mnt_tot']"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 78,
   "metadata": {},
   "outputs": [],
   "source": [
    "#df['R_WebPurch_CatPurch'] = 
df['NumWebPurchases']/df['NumCatalogPurchases']\n",
    "#df['R_WebPurch_StorePurch'] = 
df['NumWebPurchases']/df['NumStorePurchases']\n",
    "#df['R_CatPurch_StorePurch'] = 
df['NumCatalogPurchases']/df['NumStorePurchases']"
   ]
  },
  {
   "cell_type": "code",
"execution_count": 79,
"metadata": {
 "scrolled": true
},
"outputs": [
 {
  "data": {
   "text/html": [
    "<div>\n",
    "<style scoped>\n",
    "    .dataframe tbody tr th:only-of-type {\n",
    "        vertical-align: middle;\n",
    "    }\n",
    "\n",
    "    .dataframe tbody tr th {\n",
    "        vertical-align: top;\n",
    "    }\n",
    "\n",
    "    .dataframe thead th {\n",
    "        text-align: right;\n",
    "    }\n",
    "</style>\n",
    "<table border=\"1\" class=\"dataframe\">\n",
    "  <thead>\n",
    "    <tr style=\"text-align: right;\">\n",
    "      <th></th>\n",
    "      <th>Year_Birth</th>\n",
    "      <th>Education</th>\n",
    "      <th>Marital_Status</th>\n",
    "      <th>Income</th>\n",
    "      <th>Kidhome</th>\n",
    "      <th>Teenhome</th>\n",
    "      <th>Dt_Customer</th>\n",
    "      <th>Recency</th>\n",
    "      <th>MntWines</th>\n",
    "      <th>MntFruits</th>\n",
    "      <th>...</th>\n",
    "      <th>R_MntFishProducts</th>\n",
    "      <th>R_MntSweetProducts</th>\n",
    "      <th>R_MntGoldProds</th>\n",
    "      <th>RFM</th>\n",
    "      <th>R_NumWebPurchases</th>\n",
    "      <th>R_NumCatalogPurchases</th>\n",
    "      <th>R_NumStorePurchases</th>\n",
    "      <th>R_Mnt_NumWebPurchases</th>\n",
    "      <th>R_Mnt_NumCatalogPurchases</th>\n",
    "      <th>R_Mnt_NumStorePurchases</th>\n",
    "    </tr>\n",
    "    <tr>\n",
    "      <th>ID</th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>1972</td>\n",
       "      <td>Master</td>\n",
       "      <td>Single</td>\n",
       "      <td>46423</td>\n",
       "      <td>1</td>\n",
       "      <td>1</td>\n",
       "      <td>2013-09-18</td>\n",
       "      <td>6</td>\n",
       "      <td>68</td>\n",
       "      <td>0</td>\n",
       "      <td>...</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.086957</td>\n",
       "      <td>122</td>\n",
       "      <td>0.333333</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.666667</td>\n",
       "      <td>0.021739</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.043478</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "<p>1 rows Ã 48 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "    Year_Birth Education Marital_Status  Income  Kidhome  Teenhome  \\\
n",
       "ID                                                                   \
n",
       "67        1972    Master         Single   46423        1         1   \
n",
       "\n",
       "   Dt_Customer  Recency  MntWines  
MntFruits           ...             \\\n",

"ID                                                     ...              \n",
       "67  2013-09-18        6        68  
0           ...              \n",
       "\n",
       "    R_MntFishProducts  R_MntSweetProducts  R_MntGoldProds  RFM  \\\n",
       "ID                                                                \n",
       "67                0.0                 0.0        0.086957  122   \n",
       "\n",
       "    R_NumWebPurchases  R_NumCatalogPurchases  R_NumStorePurchases  \\\
n",
       "ID                                                                   \n",
       "67           0.333333                    0.0             0.666667   \n",
       "\n",
       "    R_Mnt_NumWebPurchases  R_Mnt_NumCatalogPurchases  
```

```
R_Mnt_NumStorePurchases  \n",
       "ID
\n",
       "67               0.021739                        0.0
0.043478  \n",
       "\n",
       "[1 rows x 48 columns]"
      ]
     },
     "execution_count": 79,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df.head(1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 80,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "Trainning shape:\t (1733, 48)\n",
      "Testing shape:\t\t (448, 48)\n"
     ]
    }
   ],
   "source": [
    "print('Trainning shape:\\t',df.shape)\n",
    "print('Testing shape:\\t\\t',df_test.shape)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Coherence Checking"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 82,
   "metadata": {},
   "outputs": [],
   "source": [
    "df['Incoherent'] = 0"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 83,
   "metadata": {},
   "outputs": [],
   "source": [
    "# 1\n",
    "df.loc[(df['Frq'] == 0) & (df['Mnt_tot'] > 0), 'Incoherent'] = 1\n",
    "# 2\n",
    "df.loc[df['Year_Birth'] > df['Dt_Customer'].dt.year, 'Incoherent'] = 2\n",
    "# 3\n",
    "df.loc[df['NumDealsPurchases'] > df['Frq'], 'Incoherent'] = 3\n",
    "# 4\n",
    "df.loc[(df['Mnt_tot'] == 0) & (df['Recency'] >= 0), 'Incoherent'] = 4"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 84,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Year_Birth</th>\n",
       "      <th>Education</th>\n",
       "      <th>Marital_Status</th>\n",
       "      <th>Income</th>\n",
       "      <th>Kidhome</th>\n",
       "      <th>Teenhome</th>\n",
       "      <th>Dt_Customer</th>\n",
       "      <th>Recency</th>\n",
       "      <th>MntWines</th>\n",
       "      <th>MntFruits</th>\n",
       "      <th>...</th>\n",
       "      <th>R_MntSweetProducts</th>\n",
       "      <th>R_MntGoldProds</th>\n",
       "      <th>RFM</th>\n",
       "      <th>R_NumWebPurchases</th>\n",
       "      <th>R_NumCatalogPurchases</th>\n",
       "      <th>R_NumStorePurchases</th>\n",
       "      <th>R_Mnt_NumWebPurchases</th>\n",
       "      <th>R_Mnt_NumCatalogPurchases</th>\n",
       "      <th>R_Mnt_NumStorePurchases</th>\n",
       "      <th>Incoherent</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>11110</th>\n",
       "      <td>1973</td>\n",
       "      <td>Graduation</td>\n",
       "      <td>Single</td>\n",
       "      <td>3502</td>\n",
       "      <td>1</td>\n",
       "      <td>0</td>\n",
       "      <td>2013-04-13</td>\n",
       "      <td>56</td>\n",
       "      <td>2</td>\n",
       "      <td>1</td>\n",
       "      <td>...</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.2</td>\n",
       "      <td>311</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "      <td>NaN</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.0</td>\n",
       "      <td>1</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "<p>1 rows Ã 49 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "       Year_Birth   Education Marital_Status  Income  Kidhome  Teenhome
\\\n",
       "ID
\n",
       "11110        1973  Graduation         Single    3502        1         0
\n",
       "\n",
       "      Dt_Customer  Recency  MntWines  MntFruits     ...      \\\n",
       "ID                                                  ...       \n",
       "11110  2013-04-13       56         2          1     ...       \n",
       "\n",
       "       R_MntSweetProducts  R_MntGoldProds  RFM  R_NumWebPurchases  \\\
n",
       "ID                                                                  \n",
       "11110                 0.0             0.2  311                NaN   \n",
       "\n",
       "       R_NumCatalogPurchases  R_NumStorePurchases  R_Mnt_NumWebPurchases
```

```
\\\n",
       "ID
\n",
       "11110                    NaN                    NaN                       0.0
\n",
       "\n",
       "       R_Mnt_NumCatalogPurchases  R_Mnt_NumStorePurchases  Incoherent  \
n",
       "ID                                                                      \
n",
       "11110                        0.0                      0.0           1  \
n",
       "\n",
       "[1 rows x 49 columns]"
      ]
     },
     "execution_count": 84,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df.loc[df['Incoherent'] != 0]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 85,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Frq</th>\n",
       "      <th>Mnt_tot</th>\n",
       "      <th>Incoherent</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>11110</th>\n",
       "      <td>0</td>\n",
       "      <td>5</td>\n",
       "      <td>1</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "       Frq  Mnt_tot  Incoherent\n",
       "ID                             \n",
       "11110    0        5           1"
      ]
     },
     "execution_count": 85,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# Search for Incoherent indexes\n",
    "df.loc[df['Incoherent'] == 1][['Frq','Mnt_tot','Incoherent']]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 86,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Delete Incoherent Observations\n",
    "df = df.loc[df['Incoherent']==0]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 87,
   "metadata": {},
   "outputs": [],
   "source": [
    "# We don't need incoherence column anymore\n",
    "# remove date customer\n",
    "# Year Birth\n",
    "df.drop(columns = ['Incoherent','Dt_Customer','Year_Birth'], inplace = 
True)\n",
    "\n",
    "# test\n",
    "df_test.drop(columns = ['Dt_Customer','Year_Birth'], inplace = True)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 88,
   "metadata": {
    "scrolled": true
   },
   "outputs": [],
   "source": [
    "# original dataset size -> 2240\n",
    "#print (\">>> Deleted\",2240-len(df),\"Observations so far\\nDataset 
size:\",len(df))"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Categorical Variables"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 89,
   "metadata": {},
   "outputs": [],
   "source": [
    "def chisq_ranker(df, continuous_flist, categorical_flist, target, 
n_bins=10, binning_strategy=\"uniform\"):\n",
    "    chisq_dict = {}\n",
    "    if  continuous_flist:\n",
    "        bindisc = KBinsDiscretizer(n_bins=n_bins, encode='ordinal', \n",
    "                               strategy=binning_strategy)\n",
    "        for feature in continuous_flist:            \n",
    "            feature_bin = bindisc.fit_transform(df[feature].values[:, 
np.newaxis])\n",
    "            feature_bin = pd.Series(feature_bin[:, 0], index=df.index)\n",
    "            cont_tab = pd.crosstab(feature_bin, df[target], margins = 
False)\n",
    "            chisq_dict[feature] = stats.chi2_contingency(cont_tab.values)
[0:2] \n",
    "    if  categorical_flist:\n",
    "        for feature in categorical_flist:  \n",
    "            cont_tab = pd.crosstab(df[feature], df[target], margins = 
False)          \n",
    "            chisq_dict[feature] = stats.chi2_contingency(cont_tab.values)
[0:2]       \n",
    "    \n",
    "    return chisq_dict\n",
    "\n",
    "# There are infinites\n",
    "df = df.replace([np.inf, -np.inf], np.nan).dropna()\n",
    "\n",
    "continuous_flist = 
list(df.select_dtypes(include=[\"number\"]).drop([\"Response\"], 
axis=1).columns)\n",
    "categorical_flist = list(df.select_dtypes(include=[\"object\"]).columns)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 90,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Marital Status e Education sÃ£o vÃ¡lidos, vamos ver quais sao as 
categorias importantes e ober dummies\n",
    "\n",
    "def describe_cat(df, list_cfeatures, target):\n",
    "    cat_list = []\n",
    "    for feature in df[list_cfeatures]:    \n",
    "        cat_list.append(df.groupby([feature]).agg({target: 
['count', \"mean\"]}))\n",
    "    return pd.concat(cat_list, axis=0, keys=list_cfeatures)\n",
    "\n",
    "def categorical_discrimination_plot(df, list_cfeatures, target):\n",
    "    rm_df_cat = describe_cat(df, list_cfeatures, target)\n",
    "\n",
    "    cutoff_ = df[target].mean()\n",
    "    cutoff_list = [cutoff_, cutoff_]\n",
    "    \n",
    "    for feature in list_cfeatures:\n",
    "        df_cat=rm_df_cat.iloc[:, 1][feature].sort_values(ascending=False)\
n",
    "        color_t = ['grey' if x > cutoff_ else 'lightgrey' for x in df_cat]\
n",
    "        plt.figure(figsize=(15,5))\n",
    "        ax = df_cat.plot.bar(color=color_t,\n",
    "                             alpha = 0.9,\n",
    "                             title=\"{}% cutoff line on discrimination 
ability\".format(round(cutoff_*100, 2)),\n",
    "                             legend=False)\n",
    "        ax.set_xticklabels(df_cat.index, rotation=60, size=9)  \n",
    "        ax.yaxis.set_major_formatter(mtick.PercentFormatter(1.0))\n",
    "        ax.set_ylabel(\"Proportion of respondents\")\n",
    "        ax.set_xlabel(feature)\n",
    "        ax.plot([-1, len(df_cat)], cutoff_list,'r--', lw=2.5, 
color='firebrick')\n",
    "        ax.spines['top'].set_color('none')\n",
    "        ax.spines['right'].set_color('none')\n",
    "        ax.spines['left'].set_smart_bounds(True)\n",
    "        ax.spines['bottom'].set_smart_bounds(True)\n",
    "        plt.xlabel('Model',  fontweight = \"bold\")\n",
    "        plt.show()\n",
    "\n",
    "def categorical_merge(df, list_cfeatures, target, merge_top = False):\n",
    "    tmp = df.copy()\n",
    "    rm_df_cat = describe_cat(df, list_cfeatures, target)\n",
    "    cutoff_ = df[target].mean()\n",
    "    clean_dict = {}\n",
    "    for feature in list_cfeatures:\n",
    "        df_cat = pd.DataFrame({'Mean':rm_df_cat.iloc[:, 1]
[feature].sort_values(ascending=False)})\n",
    "        to_merge_levels1 = df_cat.loc[df_cat['Mean']< 
cutoff_ ].index.values\n",
    "        to_merge_levels2 = df_cat.loc[df_cat['Mean']> 
cutoff_ ].index.values\n",
    "\n",
    "        # create dictionary with values of categories merged\n",
    "        zero = len(to_merge_levels1) * [0]\n",
    "        one = len(to_merge_levels2) * [1]\n",
    "\n",
    "        dict1 = dict(list(zip(to_merge_levels1, zero)))\n",
    "        dict2 = dict(list(zip(to_merge_levels2, one)))\n",
    "\n",
    "        tmp_dict = {**dict1, **dict2}\n",
    "        tmp.replace(tmp_dict, inplace=True)\n",
    "        \n",
    "        clean_dict.update({feature: tmp_dict})\n",
    "        '''\n",
    "        if merge_top:\n",
    "            tmp.loc[tmp[feature].isin(to_merge_levels2), feature] = 
str('_'.join(to_merge_levels2))\n",
    "        tmp.loc[tmp[feature].isin(to_merge_levels1), feature] = 
str('_'.join(to_merge_levels1))\n",
    "        '''\n",
    "    print(clean_dict)\n",
    "    return tmp, clean_dict\n",
    "\n",
    "def encode_categorical(df, list_cfeatures):\n",
    "    for feature in list_cfeatures:\n",
    "        df = pd.get_dummies(df, columns=[feature], prefix = [feature], 
dtype = 'int64',drop_first=True)\n",
    "    return df\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 91,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA4sAAAFzCAYAAACXTZw+AAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3Xu8pnO9//
HXG+MwjmHIaSSJJDpMFO0O2iSb2OpHOkm1VWqnNp2lg7TblY46jShK0o5QSUkHqXY1JCmKHKIRxmnooM
Hn98d1Le5Z973Wumeste5l1uv5eNyPdV3f63td1+e61zWz7s/
9PVypKiRJkiRJ6rTcoAOQJEmSJE09JouSJEmSpC4mi5IkSZKkLiaLkiRJkqQuJouSJEmSpC4mi5IkSZK
kLiaLkqQpJclOSS5PcmeSvZOsn+S8JHckObpH/S8keW+7/C9wSSrJI9rlzyR5xzf/
4VJvruU+07oe9r+nh8+Uccf4ZwvTXL+KNu/
neSAXnUHEa8kDYrJoiQNWJLXJpmX5K4kXxzHiJ3jvbpOJfR6mzY5JftInVxUme0rFtuyS/
TbIgyRs6ymck+XmSTcbtohaP6b5EqE/
vAY6pqtWq6nTgIGABsEZVHTraj3lX146ra8gGEO3BV9aqqOnKcj3lSVe26lPuO23ua5IdJXjHs+KtV1ZX
jcfzxUlXPrqoTRth2X7ydRI0rLIZFGSBm8+8F7g+JEqJNkceB5w/
Sh11gbOBD4IrAV8APhGkoe0Vf4bOAzYDjg8yYPb/Dlv/
XVXVgOJ5UEuywqBjkCQ9OJksStKAVdVpbQvazaNUM4wZ4M/
DPUersCNxQVf9bVfdU1ZeAm4B92u2bAd+vqj8DlwOzkzwUeB7wDqiQvbcsXay3q7L
aX5Ly2+Ndt97392vL/SHJFkluSnJlkw7b8j8DDaZLcO5OcDBwAvKldH7FVtd3/6Umu61i/
OslhbSvr7UlO5SbJyx/Y9klzUXtNPk2w7yrF3TPLL9ji/TLJjx7YfJjkyyU/
aVt3vJll3lGO9Mcn1SeYnedmwdwbZ3datdN8s02vluS/DjJcu22TZKcluSmJDcnOabj/
f9Jko8kuQV4V4+ulJXk4DTdfe9oY988yc+SLEzy1SQrr7muQhbbw3Jbm1Xd643XYU8C/
AMe3v8piOWIa64K6Z5MR2/2uSHN5xvS9Ncn6SD7XHvirJs0d5j9+S5I/t9f0uyb93V8kn2mu4LMkzh/
0+X0EPQ/EmOQh4Ifffm99of6+nDqv/iSQfHSlOSZrKTBYlaYpL8v+Af1bVWNVbV/Dy7Zply8Bdm0/
vD8M+CPwceBNVbVojBhmA98GPgHMAh4LXDRW7FX11HZx27bL96kkLw1AC4BvhKW39z4E/
Anm39/YGTgA+0698b65w97AvsRpMsbwu8tL2mSWAf4LHBmkpV6V6XP/
awLdo3q91gA8D30qyTke1FwHbAX3ojz8+D5CbNe/
cwYCPa97C1A3BlG8tRIxx+d14ABPVke+CbNe/
cwYCPa97C1A3BlG8tRIxx7N+AJwJOANwFzaZKfTWjumX4Hiavne0rzueLzNK3Bs4G/
03zRQVW9Hfgx8Nq2S/xre8Tw/4A12+v+tPb4BwKfazy6+ueRbCwuVN0/Ynl2ptSMMRbxbA+RRzzy9Mxt4pPydKeMSUZJnr/AuPSxkKBMXa4XpIL3/
aHYUbvpGQ0r2gMaNF4r2LZ+QLC3n9Z/VcgF4VzDpxXZE1kdggzhHQ53YJXOtJ4tVzkzs3cKKl/
38PfknpNWqaetGx2Spc3gHLy5K8x1KBSgYeqmbL37BduqImA0xsLd6VrGVq0P49CVXvrc18IRzpf3P52Qx
QpRdonzsnZm1nHzbrt4vvBH4HCLdKDPH0BQR9qUSO8B7vrBPzPEtrU/X8AqT8+UbhyTbgrs+tswbkB/
awNfCn1OLhG2/dSpLBHyDncaOcuw98KbSJOyB4Jfz2qjCdlkU8gWyD3fv9DnZqHmC1MNSpQVG7oaymMP8yp4f8lptm+x4/
hhHSy6I4dgE+mKyMaMt3kl+2+nTAzxvD3rgQBjkUqsXn4pcXpRFT/
ohpKy2JR0tSRNpPRgRw3zupPiozXkaldTw4MPw/f3p4S07CXNMbH7FZEqs/Rz9X+ivVyTsqsCrVvgFVd/
rRRQpoiNNkLEV/HqnNd9wBRkrpwBD2s2Bs7b/y2lsLLGcYtu7UXBA2dSo/E/W+qXrBPu/eXaBEGKpDm9lCMXpk9BJDyG5n3EZJZjjmm3PHQwr0F3yu9r/
5OH+AgM5NFXnXhbTNs1XsW03bM2ZZ5TT5emRrZqr3tmOyvc0Ttb/
LUkYd+AyOFW46JEQ5HZdB/4Yo7TSZ7eXCXZkOpsrmMXzpjc6SnUMZkrsw/GWz6q1Hb+iVl4RCMqiWEgb4MJSQxMvn4Klw1M0/Sp4uVAHbSUIadvS1Hb7KcqR7ehq1gxCoUpHCQbHqqjFt1FR3vDhIX9xf+jr0Zm+qWlprwZx6w9/
ncH+ssZ0uTLWIj29rHg3LvxCc97ULa11pHD1kzBD3kbaaYMkx01KKxZMh5jxQwf4yLySc/
IbcjUJ17gcpYEG+Tgc0e4f+r5KRVwh5nuTIRgL77n13VTUZcUvVd3RB3Z12wEqbpPtzKkK8Vl1QG1Ax6ao20JKUV0dR0Crvnrm1VT5E0bQjVzQ3y4f5bb5wVv0iWMwT2vvz0Kp0VVhm5JpJ5TrLXRVsJbnWc5bJqgKTtmwGQJ4mkQhb7Mw+eGf1eBx+8ji8jRqxwG5bk+YBq0Pu4xHC+sXN9wbDDu1rsNJyqUk4zT4IVq8cMAhffd2J4EPhkOShQKQ9lSXe2+vhP/9Tcq0GdH9N3GJHp1ynHh7YI+O5ZUK2f9XWnM7XRHpjmnq4UnWT1uJ/6bfXY1XPhiL4/gn+5OJYJ3h2+Xb3PhZqTV7X8j5X5eH2gfxIEpo2OmdX2n8Nf2LxE9O59WFZ0XNy7iJYLTtdEbUtzejBPtwXAsSl9VfufJpWmbpQvDQYGTdoSDmGb8bPjj7p7rcADx3yEdtAwmqKZ8JhSnQnrxmQXeNmCA3PwVfZ62cE6rvC4fI4Ox5hqdwHkIGKNKd7lNb60J6dVNu1NP8mlnvKCBzaFJsyUQNPkHmKBtWZxbUBtJF8BU6P8dpIvu2NX2YCQZx34UgeYRjV0fNcDDOb8mLEnfOyQg0Q2w
ZODDJY9vxge8Dft52O5xMxwKvSrJDGqsm+bckq/eoexbwqq/
P2BrmnGDS+qrwEuTbJ1kJs14uZ7STMDzpHBtW87vr+Ne+UkOy1FLONtdZpWydvaFurh1zb8
XrhP27X0q8BRSVZvE77/
ohkHuKRWpUnkbgJIciDNpDrD3w9eTtEhuE0
H7DfQtNt7e9t2dAYsL8MvWgShVvbrptDD3D/
```

TMex3kTTQnMtzXiu4TNAQpNoHtJ+OIdmzODraB5X8b72PItpP/DuTtNydAtNgrhdu/
kjNLO03kDTBW94S8q7gBPa7oD7VtW5wDuAU2kSns2B54/1Jo23qppHM27xGOBWmu6eLx2h7s00rUSH0n
SZfROwR1UtWIrzfhv4KPD99pzfH6X6FjRdie8EfgZ8qqp+2P7u9qRpBf4TTYvwfksaywT4KLAKzT34f8
DZw7Z/DHheO5vpx3vs/580LdVXAufTJFwjPlJmJFX1O5rxjj+juS8fA/xkWLWf07y/C2jGVj6v/
T0vieOArdt7+/SO8hPac9oFVdKDWnxslSRJ0vhpZw++DHhoVS0cdDyStLRsWZQkSRonaZ4L+V/
AV0wUJT3YjTQwXpIkSUugnazpBpqZVXcbcDiS9IDZDVWSJEmS1MVuqJIkSZKkLiaLkiRJkqQu03HMov1
uJUmSJE1n6aeSLYuSJEmSpC4mi5IkSZKkLiaLkiRJkqQuJouSJEmSpC4mi5IkSZKkLiaLkiRJkqQuJou
SJEmSpC4mi5IkSZKkLiaLkiRJkqQuJouSJEmSpC4mi5IkSZKkLisMOoDJtttuu3H22WcPOowxHX300YM
OYZly6KGHDjoESZIk6UFl2rUsLliwYNAhSJIkSdKUN+2SRUmSJEnS2EwWJWJUmSJEnS2EwWJUmSJEldTBYlSZIkSV1MFiV
JkiRJXUwWJUmSJEldJixZTLJJkh8kuTTJb5Mc0pavneScScJe3Px8ywv4HtHUuT3JAW7ZSkrOTXJLk4I6
6c5M8bqKuRZIkSZKmm4lsWbwbOLSqHgU8CXhNkq2BtwDnVtUWwLnt8zTqF0+mKSrA28E9gB2B54Z5tUPgu4ANg
WOKitux2wXFX9agKvRZIkSZKmlQlLFqvq+qq6sF2+DbgU2Ag4FCzihrXYCsHeP3Z8FnFNVt1TVrcA5wG7
AImAVYIWOukcCR0zIRUiSJEnSNDUpYxaTPAx4HPBzYP2quh6ahBJYr8cuGwHXdqxf15ItKn2ha/8KSQ6
HuKCq5o9x/
oOSzEsy76abbnqAVyNJkiRJy74Vxq7ywCRZZDTgVeH1VLUzS1249yqqg7e0B53vBvAd4DlPgzMBk6sq
jN77DgXmAswZ86cWqoLkSRJkqRpZEJbFtuE7lTgpKo6r6rS2+IckG7fYNgBt77HodsEnH+sbA8NbDg2m6s
T4Z+CewH3D4+EUvSZIkSdPXRM6GGuA44ZfRM6GGuA44NKq+nDHpjOBA9rlA4Azeuz+HWDXJA9pJ7bZtS0bOvZDgD2AE
4GZwL1AASuP93VIkiRJ0nQ0kS2LOwEvBnZOclH72h14P7BLksuBXdp1ksxJ8jmAqrqFZuKaX7av97RlQ
44A3ltVRZNEzgF+Axw7gdcjSZIkSdPGhI1ZrKrz6T32EOCZPerPA17RsX48cPwIx35Dx/I/
aFoeJUmSJEnjZFJmQ5UkSZIkPbiYLEqSJEmSupgsSpIkSZK6mCxKkiRJkrqYLEqSJEmSupgsSpIkSZK6
mCxKkiRJkrqYLEqSJEmSupgsSpIkSZK6mCxKkiRJkrqYLEqSJEmSupgsSpIkSZK6mCxKkiRJkrqYLEqS
JEmSupgsSpIkSZK6mCxKkiRJkrqYLEqSJEmSupgsSpIkSZK6mCxKkiRJkrqYLEqSJEmSupgsSpIkSZK6
mCxKkiRJkrpMWLKY5PgkNya5pKPsl/lNW29eR/n/n/XJ/lNW29eR/n/
JLk4yYkdZS9OcshEXYckSZIkTUcrTOCxvwAcA9/yX2FXVfkPLSY4Gbh9l/
2dU1YKO+msCO1bVtklOSvIY4ArgpcBu4xu6JEmSJE1vE5YsVtWPkzysV1mSAHsDO49wmHuBFdv6qwB3AZ
BIe8FVmz3XQVYBLwR+HhVLXpg0UqSJEmSOg1qzOo/K/gu0kuSHXdAZwKWK/
Aq4iqZV8olVdcZYJ0tyUJJ5SebddNNN43MFkiRJkrQMm8huqKPZDzh5pI1V9QHgAwBJPge8I8krgF2BX1X
Vt0KgO/ZCCwVp/l/
0hSSIaWIeUZZY7fG0Xhl/
Mav/gZcyIOr4a96Xj0rtvrN6Ok9tPrBGKTsdeJmF5wvXB2nehUVtUbyvyGRBZ/
ILG8TNkXebK9ua7kMeuJp7sHecf+l0eBiLG1r6mu/
aVJDpwWKcgGHy5FQHdsTMp6h77MwgoLrqdwfPvk+62jf/ahcxvNvqCeV/OKZ1g9a1ocgTzNhM4Cwmx+
I2UOUL4kvQJ1evbJrmi0iWfq8HRzvVgPz/o00LRd/
6kmbzHm4bw+JVEt2G/dEWzL6W6I9EUg7DQ1VBZoNhd43kQNQ/LZ2BFd/ZUt2
8SPM+Vd2t2TomunyTnfp1zbwlYUnxYfK4vvhcemaD8E88cGOU+YJQaG1htpqhpPBDZmDFwsW4+SHtQz
VjzHuBCNKeLHmZ2/
fcvrHcsN+SuDo4M6C7l1IsHrCN2Y4efO3vUsA3AHI/M5d4Gxc+4HqkErgEMxbnWI+WwBW7sF3Y32LPc
mdvVO4DjE7Ne/LdjAHtT2TddoHqI8lbnBGSKN0wbwHNSMJ9Xn1OSEIj4GdotvY3JthvLFIN/
ONXBT6EgXuGx0B93kDwVf0d0qknwktVvYiZRR/
7WGn3ZuwKU0qpSG9gW/
KFKRiwKqGQi4wvMOgKXHkqA9PL2ToS1CCGB6hIgC2ccbWOoKVaZ6hXzUmOi3n0O+LNHeP6MTl6WMhNMbd
/OBBdqz3hEF1VB1Gwc74yd1Ooa/lrtBd2egF3P2CJvQ8crtEd+nfkWeDRd/B55ISDSHcF0Xd/
7zq69+ecrgLbeH1UYjSq3MFzPtjHF/ybbFVnGH0ch4FvyKu/Fwg/KmJnYP2nYN7H8ctNpjKsdDBJnzzJ
vlf6fJbBaTzAkUqf08tiesUEo+Vna8Bn7UhgYwSSaUbPNcptqxr7XPUsVsVZHPhi3XFrjGVYp81ipv1J/
n4/0jXmJzCXW0tHVUDWmzBLBi+5NT8m+uaRuxhF6DJCmnC/eWwXfYmXSZ1n9QnKHk1qCAnfb1q81ZIP9
o60rVdzxX6cvG7jp6X2UXnW1RPtrIOeQhV9fQNAkgTkU7iizS2HBmuUtq6Apn9N2xIdU1jWcpgqn4v6
zEXsDXPMg0+AlS7BN5aTmtO7Uz05FwrBAEZ8nOyj5UcddmAltrWXyhdJPTQkYfXs1c0b0nHY0C0Rrf1F/
FqAjTY3RpN0OsHBj1kf/0oLsfp9X6ycTdcNRlUPxvsZvgZ+XqsHZMUdwXcZ3e2dddPgPs1WrvvpxeubHX
3LeGyDb7Fx2MXBr0OlsX2nn7f2UVzKHIrD2/5wTnzVIcz/A0eq4UrNefTDz4Gp+aWLcXr71iKk4FHt2/
8l1fvbbq93rOdmTX8mB0gL7YbfyKWvfW2b+1v0eyD1XN4Dq/TbU9fXFOt8+9T/kfM/xFt/
1PW8ftkVRK4K+VvFH5TCV1dy2tzvS7HtwbTJXNxx3LMcSCnnJ3YurTvm1XnfSf+dc3zrGdz3nvAX5GK
KdNhl6fa6/5lWWtB3GqGXe09gBkF4V8i9Ln/LMUhpnP6aNpfSzVQ2IGg6/+VX9dTdzQTXXG/Q6HKBJ+/
rfmSStWl0ZqF0oMnkaOHXjyCymRKuKD/YZbn/
a1qjXxEH8EPK5tfVfd/z77aEDLjODzhpoXqNdm1GEfJ0rFnu6u8aGNtWPYo7bdGN2jvH1/
aFk9X8CdnX2AbgefUzGyv3rSusQJ9dM2T+3R/32Q3Wg5pfjN5P3Ld6ZtbSUM8sMjyI+PyOE2mSXFZ+
kyXvhsu2IUupTHmYNqbzv1YUspzPXsFt/ay5ZlvX/sOb33t/
r1UQGDkU/ZqYWk9kBDuTp8OmK3nNj9nbwW7q2qDn78TcmkMn1o+k9NTDOa0a9ibLL3CF3MBqkYH4lVhO/
ACUMT+2tY0OR7pGn8Mk9PzrIZtVR1rMgbuHu7BNvs8zZlNy9Ycmee57NRs8zWZ4GFPsJQXdkGvhXmMDsY
-

NFD9zIZ6UpILgGfSDITcu6pGf3iHJEmSJOlBbcRkMcnaHas3Aid3bquqWyYyMEmSJEnS4IzWsngBzTjF
ALOBW9vltYA/
AZtNeHSSJEmSpIEYccxiVW1WVQ8HvgPsWVXrVtU6wB7AaZMVoCRJkiRp8vUzwc0T2+ceAlBV3waeNnEh
SZIkSZIGrZ/
nLC5IcjjwJZpuqS8Cbp7QqCRJWgqXXXbZoENYZmy11VaDDkGSNGD9tCzuD8yieXzG6cB6bZkkSZIkaRn
Vz6MzbgEOmYRYJEmSJElTxJjJYpJHAocBD+usX1U7T1xYkiRJkqRB6mfM4v8CnwE+B9wzseFIkiRJkqa
CfpLFu6vq0xMeiSRJkiRpyuhngptvJDk4yQZJ1h56TXhkkiRJkqSB6adl8YD25xs7ygp4+PiHI0mSJEm
aCvqZDXWzyQhEkiRJkjR19DMb6gzg1cBT26IfAp+tqkUTGJckSZIkaYD66Yb6aWAG8Kl2/
cVt2SsmKihJkiRJ0mD1kyw+saq261j/
fpJfT1RAkiRJkqTB62c21HuSbD60kuTh+LxFSZIkSVqm9dOy+EbgB0muBAJsChw4oVFJkiRJkgaqn9lQ
z02yBbAlTbJ4WVXdNdZ+SY4H9gBurKpt2rIPAnsC/wT+CBxYVbf12Pdq4A6aFsy7q2pOW/4/
wLOBi6rqJW3Zi4G1q+pjY1+uJEmSJKkfY3ZDTbIy8BrgXcARwKvbsrF8AdhtWNk5wDZVtS3wB+Cto+z/
jKp6bEeiuCawY7vv8kkek2QV4KXcP/
mOJEmSJGkc9DNm8UTg0cAngGOArYEvVjrVTVZ0H3DKs7LtVdXe7+n/
AxksQ673AikkCrAIsouki+3Ef4yFJkiRJ46ufMYtbDpsN9QfjNBvqy4BTRthWwHeTFM0zHedW1R1JTgV
+BZwL3E4zU+t7xiEWSZIkSVKHfpLFXyV5UlX9H0CSHYCfPJCTJnk7cDfwpREW7VZVVdcqqq+UnWA85JcllVnVd
VHwA+0B7jc8ARSV4B7ApcXFXvHeF8BwEHAcyePfuBhC5JkiRJ00I/3VB3AH6a5Op24pmfAU9L8ps6uvFy/
pCZMcQDPxzQurqnrVqar57c8bga8D2w87xuPaxT8AL6mqfYFt2ol4eh1vblXNqao5s2bNWtKQJUmSJGn
a6adlcfgkNUstyW7Am4GnVdXfRqizBc2+10VZpWw+FdTY+kaSmcASzflt0LzByvWCVJkiRpOuunZXE
F4C9VdQ2wGbAXcHtVXdOW9ZTkZJpWyC2TXJfk5TQ5KxO07X0oiSfaetumOSdtf1gfPbcZG/
AL5VVWd3HHdv4JdVNb997MbPkvwGqKoaj7GUkiRJkjTt9dOyeCowJ8kjgONopn76MrD7aDtV1fN6FF83
6s4fOl5VXQls16teu/104PSO9cOAw0a/
BEmSJEnSkuinZfHe9nEX+wAAfrao3ABtMbFiSJEmSpEHqJ1lclGR/
4CXAN9uyGRMXkiRJkiRp0PpJFg8EJBEngwcVVVXJdkM+NLEhiVJkiRJGqQxxyW1e+SvBmy/
ogOTJEmSJA3OmC2LSfYf+nMJEPbpKxFXyV5UlX9H0CSHYCfPJCTJnk7cDdw0ghVdqqq+UnWA85JcllVnVd
iRJkiQNUj8ti/8JPBq4C/
gycDvw+okMSpIkSZI0WKO2LCZZHLHnh3Vb0RePvkhCRJkiRpiuhnzOKv2k
dl/C/w16HCqjptwqKSJEmSJA1UP8ni2sDNwM4dZQWYLEqSJEnSMmrMZLGqDpqDpyMQCRJkiRJU0c/
s6FKkiRJkqYZk0VJkiRJUpcRk8Ukh7Q/d5q8cCRJkiRJU8FoLYtDYxU/
MRmBSJIkSZKmjtEmuLk0ydXArCQXd5QHqKradkIjkyRJkiQNzIjJYlXtn+ShwHeA50xeSJIkSZKkQRv1
0RlV9RdguyQrAo9si39fVYsmPDJJkiRJ0sCM+ZzFJE8DrgA+CXwK+EOSp1nphOTZIkSZI0IP08OuPD
wK5V9bSqeirwLOAj/Rw8yfFJbkxySUFJDu6oOzfJ4/
qJSZIkSZI0tn6SxRlV9fthlar6ZcjCjz+N/
AdhtWNlbgHOragvg3HZ9MUnWBt4J7ABsD7yzTSqfBVwAbAsc1Nbdliudliuqn7VZ0ySJEmSpDH0kyzOS3Jc
kqe3r2NpEryTxtV1VbxlWvBdwQrt8ArB3j12fBZxTVbdU1a3AOTRJ5yJgJeD+ijTbPMxdHmGDGK7Q6m
8UiSJEmS+tNPsvhq4LfA64B5yy/
qq4HaH+u16PORsC1HevXtWXnAA8Ffg58IMlzgAuqav4DiEeSJEmSNMyYE9xU1V004xY/PPHh3Ce9Q6m
7gRcAJJlB+1iPJB8GZgMnVtWZXQdLDqLttjp79uwJC1qSJEmSlhX9tCyOtxuSbADQ/
ryxR53rgE061jcG5g+rczBNK+aTgX8CzwXe0UjIZdl2j0CNdYLUzy7sR8w+N2yLrkVlGaOTI/
ryxR53rgE061jcGhrceHkzTjfXJwD+B/
YDDe52wquZW1ZyqmjNr1qwHGL4kSZIkLfsGkSyeYeCRzQLh8AnNGjzneAXZM8pJ3YZte2DIC2bMB
O4FClh5AuOWJEmSpGljQpPFJCJJCcDPwO2THdkpcD7wd2SXI5sEu7TpI5ST4HUFW30Exc88v29Z62bMgRw
HurqmiSyDnAb4BjJ/J6JEmSJGm6GHPMYpJHAm8ENu2sX1U7j7VvVe0/wqZn9qg7D3hFx/rxwPEjHPfQjuW/
rxwPEjHPcNHcv/oGl5lCRJkiSNkzGTReB/gc/
QtNrdM7HhSJIkSZKmgn6Sxbur6tMTHokkSZIkacroZ8ziN5IcnGSDJGsPvSY8MkmSJEnSwPSTLB5AM2bxp8AF7WteP1EaxpbCfzc3wDH0chv+Bz1b
VVlsNOgRpWugnWRyaufSNHWUFPHz8w5EkSZIkTQVjJotVtdlkBCJJkiRJmjr6mQ11BvBq4Klt0Q+Bz1b
VogmMS5IkSZI0QP10Q/
00MAP4VLv+4rbsFSPuIUmSJEl6UOsnWXxiVW3Xsf79JL+eqIAkSZIkSYO3XB917kmy+dBKkofj8xYlSZ
IkaZnWT8viG4EfJLkSCLApcOCERiVJkiRJGqh+ZkM9N8kWwJY0yeJlVXXXGLtJkiRJkh7ERkwWk+xcVd
9Pss+wTZsnoapOm+DYJEmSJEkDMlrL4tOA7wN79thWgMmiJEmSJC2jRkwWq+qd7eIRVXVV57YkTnojSZIk
RJkiRJA9XPbKin9ij72ngHIkmSJEmaOkYbs7gV8GhzWHjFtcAVp7owCRJkiRJgzPamMUMUtgT2AtVh83O
IdwH9MZFCSJEmSpMEabcziGUm+Cby5qt43iTFJkiRJkgYGZs1DGLVXUPsmiRJmiJG64Y65KdJjg
FOAf46VFhVF05YVJIkSZKkgeonWdyx/XlER1kBO49/OJIkSZKkqWDMZLGqnjEZgUiSJEmSpo7lxqqQ
ZI0kH04yr319KMkakxGcJEmSJGkwxkwWgeOBO4D92tcC4PMTGZQkSZIkabD6GbO4eVXt27H+7iQXTVRAkiRJkqTB66dl8e9JnjK0kmQn4O8TF5IkSZIkadD6aVl8NXBCx1jFW4EDJi4kSZIkSdKg9ZMsLqiq7ZKsDlBVC5JsNsFxSZIkSZIGqJ9uqKdCkyRW1YK27H8nLiRJkiRJ0qCN2LKYZCvg0cAaSfbp2LQ6sOJEByZJkiRJGpzRuqFuCewBrAns2VF+B/DKiQxKkiRJkjRYIyaLVfV14OtJnlxVP5vEmCRJkiRJA9bPmMV/S7J6khlJzk1yU5IXTXhkkiRJkqSB6SdZ3KWd2GYP4DrgkcAbJzQqSZIkSdJA9ZMszmh/7g6cXFW3TGA8kiRJkqQpoJ/nLH4jyWXA34GDk8wC/jGxYUmSJEmSBmnMlsWqegvwZGBOVS0C/grsNdGBSZIkSZIGZ7TnLO5cVd/vfMZiks4qp01kYJIkSZKkwRmtG+rTgO9z/2csDimWMllMcjzNZDk3VtU2bdm/AhcBpwBXA+tW1U+AOckzvfMZzw0KS5IkSZK0dEZ7zuI725WT+YCqh3H+wrHAcD3gWdX1Z2Lxgff+vAPgf8hwsPJjOcPf9Nv4OLAOHF7w67qnzP8+v5QHwRVfvlX8uW4gS7/DPXhsfYtm8yAH9eaGAA/1ACAbGy3PERC3w==

dZ/EGS5wNfbdefB3zrgZy0nZBmnWFln+lYPgY4ZpT99+1YvhHY8YHEI0mSJElaXD/
dUF9JMwPpP9vXV4D/
SnJHknGZ7EaSJEmSNLX0Mxvq6pMRiCRJkiRp6uinGypJngM8tV39YVV9c+JCkiRJkiQNWj+Pzng/
zeQxv2tfh7RlkiRJkqRlVD8ti7sDj62qewGSnAD8CnjLRAYmSZIkSRqcfia4AVirY3nNiQhEkiRJkjR1
9NOy+N/
Ar5L8AAjN2MW3TmhUkiRJkqSBGjVZTBLgfOBJwBNpksU3V9VfJiE2SZIkSdKAjJosVlUlOb2qngCcOUk
xSZIkSZIGrJ8xi/
+X5IkTHokkSZIkacroZ8ziM4BXJbka+CtNV9Sqqm0nMjBJkiRJ0uD0kyw+e8KjkCRJkiRNKSMmi0lWBl
4FPAL4DXBcVd09WYFJkiRJkgZntDGLJwBzaBLFZwNHT0pEkiRJkqSBG60b6tZV9RiAJMcBv5ickCRJki
RJgzZay+KioQW7n0qSJEnS9DJay+J2SRa2ywFWadeHZkNdY8KjkyRJkiQNxIjJYlUtP5mBSJIkSZKmjt
G6oUqSJEmSpimTRUmSJElSF5NFSZIkSVIXk0VJkiRJUpeBJYtJrk7ymyQXJZnXY3uSfDzJFUkuTvL4tn
zLJBck+XWSJ7dlKyT5XpKZk30dkiRJkrQsGu3RGZPhGVW1YIRtzwa2aF87AJ9uf74+4LnAq4
EvVtXfJjpgSZIkSZoOBp0sjmYv4MSqKuD/kqyVZANgEbAKMM9BNYlGQtYE/
gWYMLVZIkSZKWLYNMFgv4bpICPltVc4dt3wi4tmP9urbsk8CJwEo0rYxHAEe1SWVPSQ4CDgKYPXv2uF2
AJEmSJC2rBjnBzU5V9Xia7qavSfLUYdvTY5+qqj9V1c1dOr6snA34ANgcuSfDHJKUke2WOnuVU1p6rmzJo
1a9wvRJIkSZKWNQNLFqtqfvvzRuDrwPbDbHNKxvjEwf1ido4B3AK8DTgLe2b4kSZIkSQ/
AQJLFJKsmWX1oGdgVuGRYtTOBl7Szoj4JuL2qru84xtOAP1fV5TTjF+8F7mmXJUmSJEkPwKDGLK4PfD3
JUAxfrqqzk7wKoKo+A5wF7A5cQdPd9MChndMEoGAV5FFYQAMVEa3HCc7kj35ChaY
zoGtZ+r5yu1TfBiNkKhp2aAfD4nHp9Lmt+nYTmbFkXGLRU+9LNZCK6+iBU3IHVWqWA4iC+aYwd/
Bp3FkOeD9/HHsBBc9p5wv8ZIk8BawQBmzUSk70ECxcXVnLv8mt/
8pmA7RGv/
GUzPQbOpgOWp1yeAAAAAElFTkSuQmCC

Au6qqj2AjzWbTRQ1NaSxHM03kU8FHlZVJwBHAlcONDhpcUPf2H4Y+DXwHeBu4DlVdZ2JoibT0MRfSXYA
3lpVV9FMtPRxYAHwiAGGp2lmaO6BJDOSPKeqXgX8O/DUJFcl2XmwEU4PjtlRX5I8tKr+kuRlNBOF/
BLYIckfgG9W1emDjVBqukhX1UKa6bW3AxbSdJ/
6UXvv3lxVPxxgiNJi2u6nD2mXPwaQ5KfAV5LMqap5Aw1Q00rHJCL/
BZzSlv0jybU0k9tcDz7GRZMmNF+ovQe4oU0e76GZ3XwH4IYBxjZt2LKoMSXZFjgtyf7AZsBLquowmmcu
bUfTzU+aCp6Q5HDgbGDrqvokzT36e+AKmg9A0sC1U73vBVBVtwLXJfl6ko2BrYGZJooahCTr08wseWlH
8dHABkMJoomiJkPbRf+hwFOq6qPAB4GXAl+oqu9W1W8HGuA0Ycui+vFIYD2aPxa/
ofnQfUJVfSPJhcBfBxmcBPd1V7kYeDbNPbt5ks2q6qokJwDXVNU/BhqkdL/
Vgd8kmQNsUVVvSHIITdfpn9D8fysNwq3AWcBz2hkoHwXMdqyiBmQGcHeStwB3AO8Hzm2fPXvnYEObHpz
gRqNK8iaaPxRnAP8B7ATMAy4HPl9VvxhgeFKXJM+geXD06sBjgL8Ds4F9/DZcU0k7i/
QzgOcCt9A87PzPPgNUg5LkmcDGwFeBt9A843M1mr/
3Fw6f6E6aCEMTf3Wsrw+sXFXXJPkYcG1VfWhwEU4vJosaUfuP8wKa2SNvaMs+ABxD8ziCnWkmYfARBBq
ojkdlvAi4taq+1Y4D25ZmgpsLq+pbg41SanSMAX8R8BfgGprZJp8MzAfe4/+rmkwdj295OvA/
wIer6pSOceDSpOgcD5vkI8CaNPMPfLCq/pzk/
VX1loEGOc2YLGpESR4JfJJmAPEXqup7SX4CPLf9GMXAE0Z7YOjvwfsBTyOpnVxflWdPdDApA5J1qGZl
fdhwFpVtWNbvirNs0CXdxImTaYerTizgf2AL1bVXwYXmaajjscJvZrmC99jgdOAu2iGQL1voAFOQ05wo
xFV1R+APYDTgYPbmU8vHPrjYaKoKeY5wCKaqd0PpJmgYb8kKw80KqlDVd1cVQfTPJt2s3acIjTdpR8N/
HhgwWnaSTKr/
WD+mCTfS3IA8AKaZ9l9IomPytCkSTKzvR9nAvvTPHv2QOB17bL34wCYLGpUVXVXVX0NeAXweWCrJO9tx
9pIU8nXgW8Au9P8YbkLuNNJbTRVDD3DrvUqmhbwHZL8Cvga8A/
Hg2myJNkc+FSSJ9HMfHoszaMKrgNuA/
5B84WxNFk+kuTLwK7AbjTPnN0I+C3N+O4jBhjbtGU3VC2RJFsDO1bV5wYdizQkyRNoksNU1W+SrAacC+
xZVTcONjqpaxOf9J8GL+iqn6W5LHAJlX1jYEGqWklyRdoHoF1bK9JldrHuHwImFtV35/
k8DTNJHkDsDsDnNF2fvBr5IM6Z7F2Ab4HdV9Z+Di3D6MlmU9KCUZEZVLUqyqK/B24CKagfDfp/mW/
I6qumyQMUpDOsbhHAo8FriJZoziecDZVfXTgQaoaoaaVtTTy8qvZo14cmuFkH2LSqLmzLPwccUVXzBxiul
nHthIq/oplQ8fr2i4yVgD/
SDC+ZC9xUVXcPLsrpcCLwf+RvM80J2BZ5goaippE8U1gb2q6sXAqjTjEzcEnjD
Q4DQd3Qj8umN96LnbAd6VZJN2/TATRU2/TATRU2CNWm6mr43yeuADapq/
6o6nKb76TYMioNjsijpjpweikJG9vx9y8j+aDz9OBPWmSxh80Ij+C3N+O4jBhjbtGU3VC2RJFsDO1bV5wYdizQkyRNoksNU1W+SrAacC+
xZVTcONjqpaxOf9J8GL+iqn6W5LHAJlX1jYEGqWklyRdoHoF1bK9JldrHuHwImFtV35/
k8DTNJHkDsDsDnNF2fvBr5IM6Z7F2Ab4HdV9Z+Di3D6MlmU9KCUZEZVLUqyqK/B24CKagfDfp/mW/
I6qumyQMUpDOsbhHAo8FriJZoziecDZVfXTgQaoaaVtTTy8qvZo14cmuFkH2LSqLmzLPwccUVXzBxiul
nHthIq/oplQ8fr2i4yVgD/
SDC+ZC9xUVXcPLsrpy26okh50kqxQVYva1XcCLwf+RvM80J2BZ5goaippE8U1gb2q6sXAqjTjEzcEnjD
Q4DQd3Qj8umN96LnbAd6VZJN2/TATRU2CNWm6mr43yeuADapq/
6o6nKb76TYmioNjsijpweikJG9vx9y8j+aDz9OBPWmSxh8OLjRpRPcCb0uyFbB+Vb2D5tvz0wYblqahW
4AdkxyVZNWOL99eCFxVVde2reG3DTBGTRMdEyp+G3gRsGaS5ZI8ZI8Drilqs4ZaIDTnN1QJT2oJNkQOBV4F
HA1cBzwJeBlwD3AU6tqn4EFKPXQzip5b1Vd2Y6p/TiwCnBDVb1+sNFpOkoyC3gTzWNc5gF/
Bl4KPL+qFgx/
pIY0GZKsDbwEeBbwFGDvqjp3sFFNbyaLkh502meDHNTxRgEbm8AP7gPcDyXpvvvp8jSz+Z1dVVcMMMDypS5KX0zzs/
HPA24CdgNWA73W06kiTomMM7XrAljQfzn8AXF5VvzRR1KC1EyruBUs053JoqQHjfbB5fdU1T+S7
APMqqrPJtmF5kP4UVU1d7BRSo0eDzufBRxN86Dp91fVWYWnCRJfTBZlPSgkOShNGO7rgLOoBmneAzwo
6p6TZIAK1bVXQMMU+qS5K3At3kar6rq4nb9v2kmbkNhzsJFpOul8fMuw8hm2bksaiRPcSHqwWJtmgpBHAq8GZ
gAn0HwG2rj9EPTPAcyYn3aFTqQGTLDE9UKrrPg2vqWVyKwMFJ/
n97dx+qZ13Hcfz92TlqUCEaBaMp5nPoZqnFVmhZFZ5mgZUmtDEibTibDL0m3l2fs+PQ+rOBp42fz6LIkf5J
1ld07uUgnPvOJyAUjCGpLAkQq6XcYhWp11nzFHg2J5K7aHP2KBByYXxLuLaTmkQNrPkS9g7IwZMm04VZwTbJ
8xCjYyen1ZghuVTD6zoAdTU2VrufPvj+p3Tze4z132fs107nfcLbu5712/XxfeCG875nN/
3+v3emmQ5XfvpxX3Wp6VlYGuMJyW5KMm7krwSwSwKAo6bE4syhp0UhyAt2qp+cBe4EtQMWVxh5MrW2BrdkgpnwVOKrVfaMX
OYBdwFd2ztS+iW633dOC2qtrcW4hNdNg9aVkWQWmqdRwv2cCCcXYnerSjn6Lxd9Sae4UgB8gjOfyVmDBLVf
9ViX9V5LHA9fS/+fS/WL+GeCqqnoVWaGD7H9IRT8Ffad7F1bJY/L5Vh6QuIBa1Wa5nDB4+mjaw4q1hxgERFzq6q+ksR15yBFxZUhkV8RhFtLLKyxCz+nhyTVfGQEFIHE9AgdhUh3TIqgoBWRBtrd3
79A2BXVd2d5Hjg0VbhYQMR1OF5ByRnBWu8dMXgMSHJpjFyzZCxTeePtpdNdbWPDt7WRGuiSKeTeq7mNHM0ze1AY7VMTu3SKyWnffqD+ZPsuNykYgt0EhWWLkHH+BXxKBBTt9DhhFbdT
7ga1X1z/4qlHSc4EbSZIn6s/+fjF/zSkLhDdTHzzyYFO5ILd7bzjBG9yoZ8ubte4Jv0NHyYNqJbk39s/
ATdPrQbNVV9VTx5PbE98BhMIs7xwmyKyP/PxLsnjMd/F1u9lsv/Y/qDnCqt+wc7EBNWtXd4/XaWsk1kAD/
gV8Db6bp43qUV/T6cVgvDy2ZzeE5B6wVJ1yKMkrGoa/iB8AXf1xeBm/
MBPZlQsrZPUYBbKEp+DtXgMJEqm9WvQ+nRGBAyahLkcsPzDHV3NvsP/ykjVZNvcdQzIAyU1U6fUhRtm/
Gn6UWjCmqA+Jzjl3XIkJt5rWJ8ZXhSSMrM5uL6SOdKTuRS+/pTGXd6+r+Ajr1o7X+9Jd5Hj/QcCwHo1jkB
mEzG7Cq9nHsdJqZL5VE8wgS0SFDtMiFGyjSlfprYrYSlVSFYxA/

```
b5ILBq4Lwb2vtG4CTgJcAlVbXvyN2FJElzc2ZRkqR5qKpr5ji8gy4Evhl4GfAzurbTfyd5P7CGrs10F3
AX8Kx2rSuTrATOBz5NN2M51/
UlSTriUjXSdlCSJEmSpCXANlRJkiRJ0hDDoiRJkiRpiGFRkiRJkjTEsChJkiRJGmJYlCRJkiQNMSxKki
RJkoYYFiVJkiRJQwyLkiRJkqQh/wHt1n4hQCk7LwAAAABJRU5ErkJggg==\n",
      "text/plain": [
       "<Figure size 1080x360 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA4sAAAFrCAYAAAB4yBzIAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3Xm8bvXc//
HXu1nllAY0alRCGRpENwmp7gZ3UgqFHxnujBlCCRE3SuhGoVsRZS6kgSJjKhlKJU2apNFJUaf6
P5Ya9d19rWHq9O59tqd/Xo+HtdjX9+1vmtdn3XtdfZZn/
UdVqoKSZIkSZJ6LdR1AJIkSZKk6cdkUZIkSZLUx2RRkiRJktHZFGSJEmS1MdkUZIkSZLUx2RRkiRJkt
THZFGSNK0keUaSS5L8M8kLkjjwqyZlJbktyyBj1v5Tkg+37/0hy8dRH/eAkqSTrtO8/l+SA+bz/
lyQ5dR63Hep32v6v6e1xrW/
sf5zJcn+fkE63+YZK+x6nYRRryR1xWRRkjqWZJ8k5yS5M8mXJqh3YJtUPHeCOk9P8P8ps2sfpDki161m2U5
IIkNyZ5S8/
yRZOclWS1+XZQc8d0XyI0oA8Ah1fV0lX1XWBv4EZgVlXtO9GVfWzqlrvQYTbuap6bVUdBH1
3eWxVbT2P28ypjm0jipz853pcn+XmSj7f7f7vjzJthN8x/
ZrSXnEW0Xt0EydWorHZnZGBjbaAlxrmzfewvpe2JrLgyvjXJRyDqNsG9a5CaPdZGvYSdJG41Q0mS/
9Z3UDqqAJVRJiq7uWTSU9e90ofvIfVUA/
eCrl/xbf8uRDf+7t0y5qlqm6azCeh8u+dCXl+0+6YSn6gGGVbK9GtbTuu+
Jo6vqlbwW+VVVXPcjjmF8eA1wwwqvyynTKBJbAaFeVVKyfGjKQGXEpDDEObEpPOptDoidcK6mx2wGrA
Hrq+qb1TVPVX1FeAGYOd2/
ZrA6VV1DXAJsGC1YEXAp+YLM4kWyT5Zbk1yV5OXt8sfn+UUsHHqQJHeqG4Ghk6HEqOc5xeeUcb8/lI8+
GT1dvmlwFo0Se4/k3wN2At+Oqs/86O5lIemn8cu1ke/
2dc7sMbk2ljDDyKX9IzmTkm2HOr8E/2sYGcWh4qJx4oOucBDBE2W84Pe2TZTo/Nk/qfCmoi5sP5VjB1tsW/
ZrA6VV1DXAJsHqS1YEXAp+YLM4kWyT5ZZJbk1yV5OXt8rlai3q77+7b73m7t8lcn+UuSm5OcmGTLd2tcD3
GTldvmlwFo0Se4/k3wN2At4R1set1W13X7LJFf3lK9I8r8lr2lfUfSY5PskTP+u2T/
K49pl8m2XCCfT89ydntfs5O8V7sg3SiGmtr26xJ1lSTYTO6Vh9+0PS+
+VVV3VNVtNInqsybYz33aBHg34F1VdVtVtVXQEcAryspk9qRqrHsdhS/6ru5VuG1z//Z9w4P+ubsgfqH7/FqWkKdNxVVv/pcnD/Jqtq4vbRI8qpn+/
DDxbhseT4gQKKASvmi9L++jXA6Y35U5uFmQt9eCA2+r7/qLLtxcFNtYIHa6J1r1gtdHYhrqF7uSLNQHhwdcZqmlnfXYFzx4ufJ8KnbvD79qM7sbH7g62mRDFMF0ZjlI25OOdB+FJDgDI47X2w2hvo1S3/
hvstd+3BxfXBBONgrqbbWVqRaxCJjn3R0WJEFBGGoBD7ZL6hFV3sMsCxiHMESnfzlTFLoevp1U80lDt5vB54RHYNhf24Tmxr1xFkwpN/
GBMrR/nNoa9NNN6lQNTu7d8UYoBuZoAXGFDNafvI3uI47Yj+rCTpqZ6Vt0lC68T3pXs60C/
pYOeWtBdw3hBjm8pYt59x2fcNtqzUXPRonqpKA31Or9dvaJFW76epbHQr7O7yRr8pDAVXx7t5hc/
vM2E6M0wJHD7VuJtPWkTl40DqAqr4mT/YdFrN1WPhR+rjX4/5aJRakpK
HMmyLmsNbNeqRyuDcxLLM/
1B5fT1UH0vJG1HQTTP5P6gETr5W/sI5vYz5Y6mYzh5+2z2dIbZCfRfOSN1Ikt+f9ztgW5tOpUTUS71hF/
vDzpDTAUyLCvWK+jYoTPyX+tatZ+h1GItZFsAmlwNm/
Q0sOTNc5RR86SlQe7Z2qd8EV1Z3DJ+7F+yrhQU0PWXf6cMWFBtS/
cz+vcJnJAUNCKPKjQEoljbjTU9B46wBhBJ+I9mTovQP9fXfrpHxfvPjvnZ/
2kfFaGlMBpy4mrj2ynuefT5CvvR7Mw4P1HBRrzD7ijt/
```

mxfDqqjplVJ0NgC2Bz7aLLge2SvIomjF0fx1j18cCz02yaxvv8klGuln+Dti5bVVaB/h/
o7a9nmYM2oivAq9I8qR2fODBwFltt8Op9HngtUk2S2OpJP+Z5OFj1D0JeGySPdrj3w3YgGbc4AP1deDl
STZIsiTNeLkxpZmAZ502qZkN3NO+fkOTdH6kjXuJJM+Yh1jmt4fTtEre2rZQjz620efCfdqupV8HPpTk
4W3C91aacYAP1FI0idwNAElewf1jd0c8kuZGzKJt9+vH0fyeH4i+46mqfwPfpDnPf1NVY/
17kqSHBJNFSere/jQX2PvRdFv7V7tsZAzY30ZeNInCLW3XzZEHuH+uZ1/
voGmhuYpmPNfoGSChSTTf1F6cQzNm8I00j6s4uP2cubQXvNvRtBzdTJMgbtSu/
gTNLK3X03TBG92S8j7g6LY74K5V9WPgAOBbNAnP2sCLJ/
uS5reqOodm3OLhwC003T1fPk7dm2haifal6TL7DmD7qrpxHj73h8BhwOntZ54+QfV1aboS/
xP4FfCZqvpJ+7vbgaYV+K80LcK7PdBYhuAw4GE05+CvgZNHrf8ksEs7m+mnxtj+DTQt1ZcBP6dJuMZ9p
Mx4qupPNOMdf0VzXj4R+MWoamfRfL830oyt3KX9PT8QXwQ2aM/t7/YsP7r9TLugSnpIi4+tkiRJmn/
a2YMvAh5dVbO7jkeS5pUti5IkSfNJmudCvhU4zkRR0kPdeAPjJUmS9AC0kzVdTzOz6jYdhyNJD5rdUCV
JkiRJfeyGKkmSJEnqY7IoSZIkSeozE8cs2u9WkiRJ0kyWQSrZsihJkiRJ6mOyKEmSJEnqY7IoSZIkSep
jsihJkiRJ6mOyKEmSJEnqY7IoSZIkSepjsihJkiRJ6mOyKEmSJEnqY7IoSZIkSepjsihJkiRJ6mOyKEm
SJEnqY7IoSZIkSeqzSNcBTLVtttmGk08+ueswJnXIIYd0HcICY9999+06BEmSJOkhZ8a1LN54441dhyB
JkiRJ096Ma1mU9ODY6j1/2fItSZKmqxnXsihJkiRJmpzJoiRJkiSpj8miJEmSJKmPyaIkSZIkqY8T3Ei
SFghOvjR/
OfmSJMmWRUmSJElSH5NFSZIkSVIfk0VJkiRJUh+TRUmSJElSH5NFSZIkSVIfk0VJkiRJUh+TRUmSJElS
H5NFSZIkSVIfk0VJkiRJUh+TRUmSJElSH5NFSZIkSVIfk0VJkiRJUh+TRUmSJElSH5NFSZIkSVIfk0VJ
kiRJUh+TRUmSJElSH5NFSZIkSVIfk0VJkiRJUh+TRUmSJElSH5NFSZIkSVIfk0VJkiRJUp+hJYtJVkty
RpILk1yQ5E3t8uWSnJbkkvbnI8bZfq+2ziVJ9mqXLZ7k5CTnJ3l9T90jkzx5WMciSZIkSTPNMFsW7wb2
rarHAU8D/
jvJBsB+wI+ral3gx215PkIgQ2BQ5sk8rnA+cCGwJ7t3U2ofCWJ7t3U3AhaqqvOGeCySJEmSNKMMLVmsquuq6
rft+9uAC4FVgJ2Ao9o9tqRwMvdQZ0AnJBk86xiarAFf1lK9ul50GPLrdz0eT7AicW1XXDi1
4SZIkSZqBFpm8yoOTZGngW8Cbq2p2koE2G2NZVdXdXdwB7tfhcFTgF2THIosDpwTFWdOEYMe9N2W1199dX
n6TgkSZIkaSYZastim9B9Czi2qr7dLr4+yUrt4+x6dXAaj3lVYHRrYevp+nGujlwF7AbsP9YcVT
VkVW1cVVtvOKKK87r4UiSJEnSjDHM2VADfBG4sKoO7Vl1IrBX+34zv4IQxNj8F2DrJI9qJbbZul43s+xH
A9sAxwJLAvUABS8zv45AkSZKkmWiYLYvPAF4GbJXkd+1rB+AjwLOqbz2TZOMkCoqptpJq45u31
9oF024r3AB6uqaJLIjYE/Ap8f4vFIkiRJ0owxtDGLVfzxh57CPCcMeqfA7yqp3wUcNQ4+35Lz/t/
07Q8SpIkSZLmkymZDVWSJEmS9NBisihJkiRJ6mOyKEmSJEnqY7IoSZIkSepjsihJkiRJ6mOyKEmSJEnq
Y7IoSZIkSepjsihJkiRJ6mOyKEmSJEnqY7IoSZIkSepjsihJ
kiRJ6mOyKEmSJEnqY7IoSZIkSepjsihJkiRJ6mOyKEmSJEnqY7IoSZIkSepjsihJkiRJ6mOyKEmSJEnq
84CSxSQLJZk1rGAkSZIkSdPDpMlikZVkKeBuZ780FwzUkL0e9e0bRRe9Cel+YKckJ12mS2nndaIQX53pGGNPFbb2vX0
o5IkSZIkdWqQZHHRJIvSJIsnVNWcICckSZIkSerYIMniEcAAVwFLAmUkeA/
xjmEFJkiRJkro1SLL4vapapaq/oC/
gq8cshxSZIkSZI6NEiy+K3eBqaswHjeQpswHjeccCRJkiRJ08Ei461Isj7weGDZJDv3rFoGWHxYgUmSJEmSujdusgisB+wI
QTWA7YHlgV26Fl+G/
DqYQYlSZIkSerWuMliVX0H+E6STapqrgZ8OiRuSiVZ0AnJBk86r61RTGJEmSJEnq2EQtiwOt6Uiv4kSWArBmcrQWB7SQPg
UmSJEmSujbIcxZvTLI/
8BWabqkvBW4aVmCSJJEmSpk4MqkFIuu3iDxQa5GIS2jHTBgk7kOVH9WWkiP9y6B+kiIjgOcFBN1q3UCrxxBZg1YiC6H1f4zUhANTFlKy6MvqjSCmF54vUp7y5Nj1Yn8DQ3C9+Vqr1tLowZQZB2DSRQ
1VzIaUNu8SyPH+Ye5GdEn7amHgyl14JZQOcFE8x1jy8Txkgdzm/
gkSZIkSeOYNFlM8ljgbcAavfWraquJtquqM5OsMQ8xbQr8paouaz//
OGAnmlbNhyVZCFgMuAf4APDeefgMSZIkSdIEBhmz+A3gc8ATB2ufJHsC5wD7VtUto9avDdJ8aVU6K
2KyqLkzyV+C3wJeBdYBU1XnzISZJkiRJUo9BksW7q+qz8/WkvF1bBN9Jid4gxDnSzqQB+cWKwM5ASW37u
yfeA1yR5D7ARcFpVfX6sD02yN7A35Bx3EEw444L71//jTn7jggx+cNPinf/Wrc5V/
uccek27z+P33Z5kNNrivfP5BBzH7wgsn3Ga1nXeeqzzroouYddFFE25z5worcMMWW9xXXvzGG1nx5z+f
NL6rX/CCucqrfve7k25zwxZbcOcKK9xXXvHnP2fxG2+ccJvZ66/P/P7PXXv688lcc0zN/Tarvscl/
5qm9+k6u+PfFTZWY97nHT/tyb7JhWveqqucqee/
ebl2P6x7bbeu4xf47Jc+9+8+OYfnnuuX3beO41PKb7eUwNj6nhMTUeasc0kUGSxe8leT3NBDd3jixsz
I+IFV1/cj7JJ8Hvj9GtWuA1XrKrwpLwX9lZoJ7Q5B1gKeEJV7ZrkzCHTHVtUdY3zukcCRAOsuvniN/
gLnzJ7NTWed9UAPZ6Bt5syePVd59oUXTrrd8pttd50dmzWfLaa8epPbaF7rzzAW8DDLTNQnfeOVd58
RtvnHS7f6288lzlqTymqfo93XHNNQ/4PJru595Yx7TkJJ/ruXe/Qbbx3GvMj2Py3Lvf/
Dimm8bYh+fe+J/rMTU8pobH1PCY7v/c6XxMEkkWdyr/fn2nmUFrDXwp7SSrFRV17/XF/
wLOH6Pa2cC6SdYErgFeGFeDNyXVidZlGbCnne2BdL1nstfDSSzPrcY+ba9mis2Y9oC9txCDbL
Dpr1lzl0Z89liVXWQWuvPK+8pxZs7hj1EXHaL13hwHuXXzxSbcZyyDb3Lv44hN+9ljmPoepvKYhvp7G
lWe7LMeEufeqPLoz7pqjJbFXp579xtkG8+9xvw4Js+9+82PY1pttdUYzXNv7P16TPfzmMb+7LF4TGPv1

2O631Qd00RSVZPXmgdJvgZsCawAXA8c2JafRJPgXQG8pqquS7Iy8IWq2q7ddjvgMGBh4Kiq+lDPft8M3
FJVRycJ8FXgCcBJVfXOyeLaeOON65xzzplfhzk0hxxySNchLDD23XffrkNYoHhuzl+en/
OP5+b85bkpSQu0sYb+9RlkNtRFgdcBz2wX/
QQ4oqrmTLRdVY31LMYvjlP3WmC7nvJJwEnj1D2s530xwDMfJUmSJEkPzCDdUD8LLAp8pi2/
rF32qmEFJUmSJEnq1iDJ4iZVtVFP+fQkvx9WQJIkSZKk7i00QJ17kqw9UkiyFvPneYuSJEmSpGlqkJbF
twNnJLmMZiDkY4BXDDUqSZIkSVKnJk0Wq+rHSdYF1qNJFi+qqjsn2UySJEmS9BA2yGyoSwCvB7ageeTF
z5J8rqr+PezgJEmSJEndGKQb6jHAbcCn2/
LuwJeBFw0rKEmSJElStwZJFtcbNRvqGc6GKkmSJEkLtkFmQz0vydNGCkk2A34xvJAkSZIkSV0bpGVxM2
DPJH9ty6sDFyb5I1BVteHQopMkSZIkdWKQZHGboUchSZIkSZpWBumGugjwt6q6ElgT2An4R1Vd2S6TJE
mSJC1gBkkWvwXck2Qd4Is0CeNXhxqVJEmSJKlTgySL91bV3cDOwGFV9RZgpeGGJUmSJEnq0iDJ4pwkuw
N7At9vly06vJAkSZIkSV0bJFl8BbA58KGqujzJmsBXhhuWJEmSJKlLk86GWlV/
SvJOmkdmUFWXAx8ZdmCSJEmSpO5M2rKYZAfgd8DJbflJSU4cdmCSJEmSpO4M0g31fcCmwK0AVfU7mhlR
JUmSJEkLqEGSxbur6h+jltUwgpEkSZIkTQ+TjlkEzk+yB7BwknWBNwK/
HG5YkiRJkqQuDdKy+Abg8cCdwFeBfwBvHmZQkiRJkqRuTdiymGRh4P1V9XbgPVMTkiRJkiSpaxO2LFbV
PcBTpygWSZIkSdI0MciYxfPaR2V8A7h9ZGFVfXtoUUmSJEmSOjVIsrgccBOwVc+yAkwWJUmSJGkBNWmy
WFWvmIpAJEmSJEnTxyCzoUqSJEmSZhiTRUmSJElSn3GTxSRvan8+Y+rCkSRJkiRNBxO1LI6MVfz0VAQi
SZIkSZo+Jprg5sIkVwArJvlDz/IAVVUbDjUySZIkSVJnxk0Wq2r3JI8GTgF2nLqQJEmSJEldm/
DRGVX1N2CjJIsBj20XX1xVc4YemSRJkiSpM5M+ZzHJs4BjgCtouqCulmSvqjpzyLFJkiRJkjoyabIIHA
psXVUXAyR5LPA14KnDDEySJEmS1J1BnrO46EiiCFBVfwYWHV5IkiRJkqSuDdKyeE6SLwJfbssvAc4dXk
iSJEmSpK4Nkiy+Dvhv4I00Yxb27zzzKAkSZIkSd2aNFmsqjtpxi0eOvxwJEmSJEnTwSBjFiVJkiRJM4
zJoiRJkiSpzyBjFiVJkvQgXHTRRV2HsEBZf/31uw5BmhEmTRbb5yq+/
2q2mqIcUmSJEmSOjRIy+I3gM8BnwfuWW44kiRJkqTpYJBk8e6q+uzQI5EkSZIkTRuDTHDznSSvT7JSkuVG
J64DvAnSMLq+rmoUUlSZIkaegcTzt/LWjjaQeZDXUvmjGLvwTObV/nTLZRkqOS/
D3J+T3LlktyPtp2p+PGGfbvdo6lyTfS0/6yTZPtLkRMKaflBjZE4rk8eOOTkJ8zfJq8jdY9M8uQBjkOSJEmSNKBJk8WqWnOM11/
PtLwDajlu0H/
Liq1gV+3JbnkmQ54EBgM2BT4MA2qXw+TaK6IbB3W3cjYKGqOm+AeCRJkiRJAxpkNtRFgdcBz2wX/
QQ4oqrmTLRdVZ2ZZI1Ri3cCtmzfH93u652j6jwfOG2km2uS02iSzluBh42K+SDgtZMdgyRJkiTpgRmkG
+pngacCn2lfT22XzYtHVdV1AO3PR45RZxXgqp7y1e2y04BHA2cBH02yI3BuVV07j7FIkiRJksYxyAQ3m
1TVRj3l05P8flgBARljWVXV3cAecF9r5ynAjkkOBVYHjqmqE8fcYbI3bdfV1VdffShBS5IkSdKCZJCWx
XuSrD1SSLIW8+d5i1Kr5Trae8KjC69fD1NN1YNwfuAnYD9h/
vQ6vqyKrauKo2XnHFFecxdEmSJEmaOQZJFt8OnJHJHkJ0l+CpwO7DuPn3cizeyqtD9PGKPOKcDWSR7RTmy
zdbsMgHbZ9sAxwJLAvUABS8xjTJIkSZKkUSbthlpVP4ZE6yLrAeTRfRi6rqzkk2I8nXaCazWSHJ1TQznH4
E+HqS/
wf8FXhRW3dj4LVV9aqqujnJQcDZ7a4+MOqZju8FPFlhVleQU4L+BPwKfG+iIJUmSJEmTGjdZTLJVVZ2eZ
OdRq9ZOQlV9e6IdV9Xu46x6zhh1zwFe1VM+CjhqnP2+pef9v2laHiVJkiRJ89FELYvPoulyusMY6wqYM
FmUJEmSJD10jZssVtWB7dsPVNXlveuSrDnUqCRJkiRJnRpkgptvjbHsm/
M7EEmSJEnS9DHRmMX1gccDy4zqt7ISbDy4watzgLZx6VJEmSpAXaRGMW16N5RMWyzD1u8Tbg1cMMSpIkSZLUrYnGLJ
6Q5PvAO6vq4CmMSZIkSZLUsQnHLFbVPcDzpigWSZIkSdI0MVE31/BG/
THI4cDxw+8jCqvrt0KKSJEmSJHVqkGTx6e3PD/
QsK2Cr+R+OJEmSJGk6mDRZrKpnT0UgkiRJkqTpY9Ln3SZBE4iu
ZxGbu2r9nA/w0
zKEmSJElStwYZs7h2Vb2wp/z+JL8bVkCSJEmSpO4N0rL4ryRbjBSSPAP41/
BCkiRJkiR1bZCWxdcBR7fjFgNfAPcDOw11KgkSZIkSZ0aZDbU3wEbJZnVlmcPPSpJkiRJUqcGmQ11+SSAn
4CnJHkk0mWH3pkkiRJkqTODDJm8TjgBuCFwC7t7t++OHGZQkSZIkqVuDjFlcrqoO6il/
MMkLhhWQJEmSJKl7g7QsgsnpnpHkxiRJkiQt
gAaZDfXhUxgSJEmSJGn6GGTMYvZJEmSJGn6GGTMIkl2BJ7ZFn9SVd8fXkiSJEmSpK4N8uiMfJkLaAG
aVncDnhSVd0LkORo4Dxgv2EGJkmSJEnqziAT3AAs2/
N+mWEEIkmSJEmaPgZpWfwwcF6SM4DQjF201SUAkmSJEkdmTBZrKpK8t2qeipw4hTlDbOC1Sa4Abqfp
ilpVteEwA5MkSZIkdWeQZHHboUchSZIkSZpWxk0WkywBvBZYB/
gj8MWqunuqApMkSZIkdWeiMYtHAxvTJIrbAodMSUSSJEmSpM5N1A11g6p6IkCSLwK/
mZqQJEmSJEldm6hlcc7IG7ufSpIkSdLMMlHL4kZJZYLY/
Mhjpr6NFJkiRJkjoxbrJYVQtPZSCSJEmSpOljom6okiRJkqQZymRRkiRJktTHZFGSJEmS1MdkUZIkSZL
Ux2RRkiRJktTHZFGSJEmS1MdkUZIkSZLUx2RRkiRJktTHZFGSJEmS1MdkUZIkSZLUp5NkMckVSf6Y5Hd
JzhljfZJ8KslfkvwhyVPa5eslOTfJ75Ns3i5bJMmPkiw51cchSZIkSQuqRTr87GdX1Y3jrNsWd9bQZ
8tv35GmA/
4ArgI8ALgdcBX66qO4YdsCRJkiTNFF0mixPZCCTimqgr4dZJlk6wEzAEeBiwJzEmyLLAD8PzuQpUkSZKk
BU9XyWIBpyYp4IiqOnLU+lWAq3rKV7fLPg0cAywOvAZ4L/ChqqrhhyxJkiRJM0dXyeIzquraJI8ETkty
UVWd2bM+Y2xTVXUlsCVAknWAlYGLknwFWAx4b1X9efSGSfYB9gFYffXV5/OhSJIkSdKCp5MJbqrq2vbn
9cDxwKajqlwNrNZTXhW4dlSdDwHvBd4IHAsc2L7G+rwjq2rjqtp4xRVXfPAHIEmSJEkLuClPFpMsleThI+
+BrYHzR1U7Edg/HhAHHBmV2XqlAU0lEQVRPoelu+t9Jn
jlqfcbYpqrqr1W1ZVVtDtwBrAxclOTB4xEHH+HogkSZIkLYg6SRar6tr25
9+B7wCbjqpyNbBaT3lV4NpRdT4EHAC8TgWOLB9SZIkSZIepClPFpMsleThI+
+BrYHzR1U7EdiznRX1acA/quq6an6nn08C7imqi6hGb94L3NsWUBMWbxUcB3kox8/
ler6uQkrwWoqs8BJwHbA+h6W76ipGN02y4P7Bru+hImpbFRWhmRpUkSZIkPUhTnixW1ihT1WXARm
1zP+wL+e5ztC3heT/

lC4CnzP1JJkiRJmrm6muBGkiRJkjSNmSxKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJE
mS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mC
xKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJE
mS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mC
xKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJE
mS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mCxKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mC
xKkiRJkvqYLEqSJEmS+pgsSpIkSZL6mCxKkiRJkvp0kiwm2SbJxUn+kmS/
MdYvnuT4dv1ZSdZolz8jyR+SnJ1knXbZsklOSZKpPQpJkiRJWnBNebKYZGHgf4FtgQ2A3ZNsMKra/
wNuqap1gE8A/9Mu3xd4IfBu4sjiRJmhkW6eAzVwGu6ilfDWw2Xp2qujvJP4DlgQ8DRwL/
Al4GfJymZVGSJEmSNB9lqntvJnkR8PyqelVbfhmwaVW9oafOBW2dq9vypW2dm3rqPBN4AfA54CCaVsd9
q+r6MT5zb2DvtrgecPEwjm2GWgG4sesgpDF4bmq68tzUdOb5qenKc3P+urGqtpmsUhUhcti1cDq/
WUVwWuHafO1UkWAZYBbh5Z2XZJ3R/
YDTgcOBBYA3gj8J7RH1hVR9K0SGo+S3JOVbh5bmq48NzWdeX5quvLc7EYXYxbPBtZZNsmaSxYA
XAyeOqnMisFf7fhfg9FET2OwF/
KCqbqEZv3hv+1pyqJFLkiRJ0gwx5S2L7RjEfYBgIWBo6rqgiQfAM6pqhOBzwHHJPk7cDNNQglAkg+ah8SPLQpRJm
mRx63bRocC3gLuA3afuSCRJkiRpwTXlYxa1YEmyd9vVV5pWPDc1XXluajrz/NR05bnZDZNFSZIkSVKfLsYsSpIkSZKmOZNFSZIkSVIfk0UtsJJsk+TiJH9Pst8Y6xdPcny7/qwka7TLt0xyXpKzk6zTLls2ySlJMrVHIUmSJEnTlMmiFkhJFgb+F9gW2ADYPckGo6q9Erilqtah+V3P/2mX7wu8EHg38Np22fuB/yoH8UqSJEkCTBa14NoE+HtVXVZV9wBfB7YfVWd74Evt798CnpNkJeAeYHHgwcC9SR4J/HNVnTFlkWuekTxN2LoZd76+fRRLAAAIj0gwx5S2L7RjEfYBTgIWBo6rqgiQfAM6pqhOBLwJfTvIXmhbFF49sn2RJm
mRx63bRocC3gLuA3afuSCRJkiRpwTXlYxa1YEmyd9vVNV5pWPDc1XXluajrz/
NR05bnZDZNFSZIkSVKfLsYsSpIkSZKmOZNFSZIkSVIfk0VJM0b72B1J0oCSLNT+/I
PvqKaTkfNTw+MXLGmBNNwhk2ThcpC2pqvC2pqkkOyXZsOs4pF5JXgFJqAeQ+MgzA9B4o5oOC4PMq/
o5oOkmyX5JFVdW9bNqZEr9YPSi9dxiTPC7JM5Os1WVMUq+qqiRLAYcl2QD8T0XTS3shvg7wtiSvT7JM
1zFJACMX4sC7gFuq6gpobr7ZwqiObQmcneQNcP+56nk5/3nBpAdrpNXmncDbgT2AVydZJMnCnUYm0fzH
UVW3AxcCT4LmPX/
Q9E0cldVHQL8FHgezY2Y2N3TqOSeq9sXY+sHGSbydZqarusYVRXaqqdwCvA16X5Nwk07fLPS/
nM5NFPSjtRffKwAuAvYFVgROApwObdhmbZraeZPBxSTYBrgBekuRjSTQ6+3T4TAz4T+B44Ax
g6ySfT/K4biPUTNaemwsBP6iqJwK/
Bs5K8v6OQ5MAdgH2AT4OvCf5Jq5DimBc4iXQegh6b2AmfkYjvAScCzgb8Cv6W52Nm1o/
Ck3ruLLwFeQ9PyfS3wcoAk7zBhVNd6zsHdgTur6ri2V8bdwI7AHZ0FpxmxmrHeN9T5LtaS7I70hya1W9O8
mxwBM6DlEzXJJtgNWq6vS2fC7wJeAxwOUdhrbAsWVR82aWxcWtRjgXgzeeH+Si4GNaVoWpU4keelGag9BwHeCBwK3At
cmWQ1YJmqOqWz4KTGT4DfJXllkmmPOo1qAWTLoubW1TFJTsRAcFs+SacvaeH+Si4GNaVoWpU4keSxwAXALsE5V7ZPk68Cnuo1
MM9VIr7YkywN30fRkWxN4B7AuzXAozWfx5rrmVTvGZjNge2AW8KWq+mXP+th6o6nWe94leTawM1
Kv8PWA3YvqrsoqJO9XTz2xbYAVgf+AzNzbbbgburanaXMUpJjgCeQTMmbDbN389XdhuVZqKev5lPounB
dhlwG02vjKuARavqpi5jt5XFCZLOoB6bmrsyjw7Ko6NcniNBc7OwHnVtVh3UapmarnmWDL0Uy69HDgzKo6
r13/rKr6aadBSj2S/
AbYjqa15iyaCW6WGHlEgTSVei7IVwIWB64H3ktzo+1a4InTkb22XsWpmSnIq8D7gxcDNwEeBx7ILj6CbNwEeBx1bV7
7qMa0FmN1TNq1cDhyc5B3hyNVX2zveiZA7YqqjMj59wRNI/
KmAU8I8I8nJVXWUa1ZEA6+ooH1tCquQ/Mw1JWArwJnJPkccGtVQc+50bdaM/
PxwBLV9V7q+rNwEeA5yVCw5yV5ZMfhSfc90qX9e3oxcANwCnBRku2uJ6ZG9pZ5yLxZfKs7vXhffvRABu4iUuXbZGaFGwy8FUmuFwAAZGmntywY3UpBh1FkVHqhAXBUS6yaYBrucH3m9P94ZT1i2kjPSTgYqEVuE2YJTH1gsxprc/
6CRkm4FmcSyRPGJJhyMjw2gfY4jYMcjCPbRBy/WtevZ4cncB8WwQBHJQCfSNNPnWgzl4Bmk1AI5YnSm1sc+HKHDM2xxO
gA9sHqKV30JLrO5XZmCmYhFPayr8Zp6+vqxpW2WXRGMSi/
mebbzp0OwFIRdVmIfQpzRLMQN0HH/1aSmV62uHXt+6mF5ru0Sb9ZAiLX2HGHUKORP0+5QOFDAz9LBaIz6BXU2oX6DdZgEk/
3ozbDLSR41MOdvpZSfIRsA4Ew11pttP3GBS7oLMPZQhiJqs98cOmkpHSAJsm+PGoC4uF8pZgHJH3IcPZu7f9tgnQMHdbpbAw+HtwSWaL/
NkKjBZqcfbs3ggHbWpUcRgX9pBOBz/
iNwEkCp5FFDKCRsddHawp4wCsMsvd4AbADs26D+gZZAbGR0KBzi33zkjy3k7j2WI30p2VP+cRd8L9+WRSCKcqFaxvlbrmLjHB9zt3Jv/
pjKMcRbwpk+kP2dtiKqAnwvdYMKvdtD3EHsVtPSLfR5xa9WX/zVJZ6OOgvVfnedJ08B+6OYYGmQLLnTDMrPhjvg4ppS+e+oV/
r0Nyh6gTL25JvCpkS8CjZhmoOTZbjGEfnMqgAm32rL2OQ7TWqKpjKJqdiqJhk9QpsL8ALnrMCK4+HzmUdRbTqEHpU9ZLRvx/
A/lUfBZkT3wpdhe7Ytq8VBlgcXz4zQE0cAAwpjsQprPDkH1ml/
SPhe4YbcB3hnQfdb52Jw5hS+o1FZxVU7m4iLN2xkqWSm3qDwtBvKr2G8IE6wz03v+DStOScTLcxLwAFzm5Ljqx5y0X24ggrRlJoa5jtA1/
Fxs0Bt76Sgx4dOScnaNG1vL4cFZzUJmlKcqqWqY7ny7bMa/
9rH4Jr8ynnyxhv3gnaA8Wmlg1Wku5WV4cnzZaKp0zQlWVFBdO2DF6Q3IJw4QpJyyXBjtexH0Zw46ybf4FzlndRX0vs2zlxW7dVMRXEj79dLXXS/
rJx4qTmNI9muRBYtL1Crc0bRczU5jUnvFQ5hGTm3KrnN1wWtrivYbFN0H1sN7Ao4kAvSJTZTlqHTQcLNGUoaNm18DJPuVJqYqO3pa/
wsy2xSrRVWn3+aFYgcn9JmvLXCL44L4fdQVmw8HpmL/
0/d8T3/1ox+TD6b1OngzPDoeBzXHxQnR5NQXSPPmGLMLtv8kSlYLJPHlMjOrM2eVQgaVezwqrMsGVN1YG5AF9JNcE0cfs5FbeXRmz7rpgGF
sEdEk/4ZzgPVP9oyDRM2gUq1obIrMDcV8FQIrKX9XMQQWBr5YaBXQqoMYJWvlkSXKfDpjLRJVT7gK3+G/
YEgT9Wy5N8TMtSqaOT/ZRVnjtA7cqcq8T/lw8tyOjvTAzDoPYjqdmeqC5vf8IjhsQ/
NVMhXkHLmTh4H8VvvuXOKWJfLyTmWpGqHPaZvGlnrTx9LpWtgEy3EtJGRsMbwBibjgSPOzH3YTNAaQDgTAdSg8/cT6Qi66gHSc9VUjZK3CkfvvAr1E/
HjjP07wBbNeL7DyhnEmOLkPjTx+EUfDxnlv/
81x3Y7Mh8Y48YtX6M7+fR8+NuF4ob0LYrH1PHXmK1AIYsh2sUpIXv+6ltRSQnnOcQlc0bsRA+j4fwyFPq93aakfmP+mwJSxXYTUhp3ro2+IH/
8uEl2Q13x5qMxtaXFZSWP5ZNcYT9i0hsbN0slpUe8fVDzLbm+jDTenXXHDCYUnRcM7K0tSgc5MaHq5IY50gJLQkzQF4rnzDFTC59L/
Pcjxmc2H3TTSxUEHJs2X3dYxP/
bRH5WVTnndl7jHspu9dmzdDV6IV8yWRsoejlPnDHbZ0vv4lrBa7fvbZdlzQqMT8HmkbYbaN4ZIxjBkYM8IX6NByBKkUD+aoaOKW2B+/
KHMqL4xkFgjtEx8+w6CV+kvUWvnndtLfKzTm+l6JUrBeGK7yqjVmxoPiRv5D0mgD1wyAl00d7jcHF8xMTqIZv+hqEGv8jxSX/
qlUq5TL+ZIpltW61qgrnVC2RXDQOvtzNtY9smEGXtXcD2ufKWebCVQ3SfhO4DDG1zBPnx5gzn/

```
JemgyQLV9U97fMUN6QZ5/154Hiac/
VWmpknpSnV8//2KsCXgd1onvf5ROBl7XATqTNVdXiSOcAhSbYG9q+qf3rNOfVsWVSfJJvRtNZ8qar+Bf
yW5i7jLcCbgf+oqt+AdxzViccmWbSqTgV2AG4AXgL8imaSpRW6DE4aUVX3tG8Ppbk7/g/
g+8C6VbWtNzXUhVFjvU6iOT+3phmnuB/
wqbae14jqRJKnJlkfOJbmGcoBftNOtqgpZsuixvJK4Kiq+neSl9NciC8F3EhzoXNRh7FJxwMk+QbNg8x
Po3lQ75Or6tMjkzZI00GSbYF7qupjbflMmu6oP7ZnhqZaz3iwVWm67H+UZpKl9wJ7A7+sqnPaevdOtC9
pfmpvAs9pWxHfDZwPzKLpzfYWYBknUuyGyaLG8gvguW3Xqc1ppir+WZLDgWur6vJuw9MMtyvN7LxnAXf
QzCS5BLBjEqrq010GJ41yFvCfbY+N39K0MG4I9szQ1Os553akuWmxOc2DzbfqLirNdO3zkue0xQOBvWg
aLtYCdgbWdx6C7jgbqvokWY5mopBHAr+uqh+1D5I+HXhxVV3hHXFNtSSLAo+qqquTPIOmu9QXquqEJOs
BqwK/qqo7Og1UarV3yK8GtgCeRHNzYzPgzVV1bpexaebpaVXcGngp8EGai/
G3ANcCn6uqs7qMUTNTkuOBPwDH0fQU+hlNt+gtaLpFHz0y/
ElTz2RRYxqdDCY5kqZV8X1JFrJ7iqZaktcAj2uL3wD+TNN16peO/dJ0007z/
k5gqaraL8mTgQLmVNUF3UanmSzJh2nOw/e25b2ArYB/Am/3hpumUpKVgW/R/
P9+BfBF4Cs0LYv3AM+sqp07C1Ami5pYOxB+VZqWxsPb/
uS2KmrKta3bTwTWobkTfhFwPfAiYJ+qOrHD8CRg7htt7WQMH6Z5Buj7vcmm6SDJWsDraFpurgcOopnkZ
i/gO1X1/
Q7D0wyU5LE03U1vAl5I07NtYZrZo0+uqr90GN6M50xXmlA1rgI+aaKoLlXVHVV1VlUdW1UbA8fQDID/
OXBXt9FJjbab38btxaL0czmdzPw/G4j00w1MqtpkkXaGSb/
TTNh3U40z7G7GPg1zY04u6FqyiRZKskSVfnmt5CC1XVNjS9MpYF7jJR7J4ti5IkPUjt7JKbVtW3kzwH
eAdwHrA28CzguqraqMsYNbMlORB4DlwAnA34HDgZ9W
1X+3PdsWq6o7OwxTmCxKkvSgtZMsXQesB6zcTry0JE2rz9wiC46vqSUmeQjOj
9J+BD9s9Wl1IsgFwJLA4zXjZg2kmAlsTOLidzM7ebNOAyaIkSQ9CkhVoxMV6vqSUmeQjOj
mSvJI2meS7sL8AjgvVW1Z7tuHZqxinv2PLJAmlJJFge2BPak+Zv5nqq6odOg1MdkUZKkByHJycBvaGbz
uwa4AHgUsDxNy+IBVeW4Wk2pJJ8B/
lZVH2hbuT9PczPjm8Bzgd9U1SHOcK6uJVkeeAVNL4xzgf2r6p5uo9IIk0VJkuZRkjcDp1Cj62qfdryJsCLa
bqjfgxYvKpO7TBEzUBJNgZOBX5K8/
zEU9rl29LMNvljHzmk6abtmrp5VX2x61h0P5NFSZLmQZJH0Uxi8+Squn6khaZ9xuJnaMbdXNZtlJqJkv
yQ5mHm/
wL2A64GPl1Vvx9VzzFhkibkozMkSZo3y9A8vuVjSbYd6crh+A0M7U3K46rqh9W1U+A7YA/
AR9PcmiSR4zUNVGUNBlbFiVJmkftBA07AA0AC8DbqBpxVkN+EBV7dBlbFKSRUcmsEmyCvBu4ENVdW23kUl6
qDBZlCTpQUqyHLAX8Hxgc+C/qur0bqOSmq6mNNd79/Yus1VR0iBMFiVJmk/
aCRqeV1Wf7DoWqZeznkqaFyaLkiRJkqQ+TnAjSZIkSepjsihJkiRJ6mOyKEmSJEnqY7IoSZIkSepjsih
J0gOQZI0k1b7271l+1MjyB7i/i5NUa9LOuDaxA83iM24ETq+pnXcam
8wfZJsn72v3vMi9xS5L0QJksSpI7oORpKk+clkUAi7oRpKk+clkUZKkeXMMZsBawJbJL0EHYU8ClgcWAb4JB2+Xb
tz7dW1SVJNgP2oEkMtwTuBfapqruS7Ams2tbfvv25W/
sCeHSS5YZ6FJIkjcFkUZKkeXcc8AngauC0MdaPN3FN7/KM8f4lwN/
b9wsBdzyIGCVJmid2Q5UkaR5V1Wyaqivqap7e1b9oP15aJI3ADsClwJ/Bs4AFgYOT/IhYJWe7b7X/
twLWA14FnBAVf17eEchSdLYbFmUJMJOlBqKrjx1j8JZok8NXAVsDZNN1O5yQ5CFifppvpd4BLgHXbfR2d5
NHAa4DP0rRYjrV/
SZKGLlUP6HFQkiRJkqQZwG6okiRJkqQ+JouSJEmSpD4mi5IkSZKkPiaLkiRJkqQ+JouSJEn6/+3XgQAA
AACAIH/rAVYoiwBGFgEAABhZBAAAYGQRAACACZLjN4RYMMSlAAAAAElFTkSuQmCC\n",
      "text/plain": [
       "<Figure size 1080x360 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    }
   ],
   "source": [
    "categorical_discrimination_plot(df,
df.select_dtypes(include=[\"object\", \"category\"]).columns, \"Response\")"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 92,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "{'Education': {'Graduation': 0, '2n Cycle': 0, 'Basic': 0, 'PhD': 1,
'Master': 1}, 'Marital_Status': {'Together': 0, 'Married': 0, 'Single': 1,
'Widow': 1, 'Divorced': 1}}\n"
     ]
    }
   ],
   "source": [
    "cat_merged, clean_dict = categorical_merge(df,
df.select_dtypes(include=[\"object\", \"category\"]).columns,
'Response',merge_top = True)\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 93,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Education</th>\n",
       "      <th>Marital_Status</th>\n",
       "      <th>Income</th>\n",
       "      <th>Kidhome</th>\n",
       "      <th>Teenhome</th>\n",
       "      <th>Recency</th>\n",
       "      <th>MntWines</th>\n",
       "      <th>MntFruits</th>\n",
       "      <th>MntMeatProducts</th>\n",
       "      <th>MntFishProducts</th>\n",
       "      <th>...</th>\n",
       "      <th>R_MntFishProducts</th>\n",
       "      <th>R_MntSweetProducts</th>\n",
       "      <th>R_MntGoldProds</th>\n",
       "      <th>RFM</th>\n",
       "      <th>R_NumWebPurchases</th>\n",
       "      <th>R_NumCatalogPurchases</th>\n",
       "      <th>R_NumStorePurchases</th>\n",
       "      <th>R_Mnt_NumWebPurchases</th>\n",
       "      <th>R_Mnt_NumCatalogPurchases</th>\n",
       "      <th>R_Mnt_NumStorePurchases</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>1</td>\n",
       "      <td>1</td>\n",
       "      <td>46423</td>\n",
       "      <td>1</td>\n",
       "      <td>1</td>\n",
       "      <td>6</td>\n",
       "      <td>68</td>\n",
       "      <td>0</td>\n",
       "      <td>16</td>\n",
       "      <td>0</td>\n",
       "      <td>...</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.086957</td>\n",
       "      <td>122</td>\n",
       "      <td>0.333333</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.666667</td>\n",
       "      <td>0.021739</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.043478</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "<p>1 rows Ã 46 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "    Education  Marital_Status  Income  Kidhome  Teenhome  Recency
MntWines  \\\n",
       "ID
\n",
       "67          1               1   46423        1         1        6
68   \n",
       "\n",
       "    MntFruits  MntMeatProducts  MntFishProducts           ...
```

```
\\\n",
       "ID                                                        ...
\n",
       "67          0               16                 0           ...
\n",
       "\n",
       "    R_MntFishProducts  R_MntSweetProducts  R_MntGoldProds  RFM  \\\n",
       "ID                                                               \n",
       "67                0.0                 0.0        0.086957  122   \n",
       "\n",
       "    R_NumWebPurchases  R_NumCatalogPurchases  R_NumStorePurchases  \\\
n",
       "ID                                                                  \n",
       "67           0.333333                    0.0             0.666667   \n",
       "\n",
       "    R_Mnt_NumWebPurchases  R_Mnt_NumCatalogPurchases
R_Mnt_NumStorePurchases  \n",
       "ID
\n",
       "67                0.021739                        0.0
0.043478  \n",
       "\n",
       "[1 rows x 46 columns]"
      ]
     },
     "execution_count": 93,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "cat_merged.head(1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 94,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA4sAAAFMCAYAAABiYSlGAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xu8bXO9//
HXOzbZcsmlRO6JVKg2CqeLznEkyk9S6ki66HI66YQuJ1Gh0+kc1YlKihPlViUUiolp47aSiiKXMIWNr
IVaePz+2OMxdxrzrXW3Huvueey1+v5eMzHGuM7vmOMz5hrsdd7fb9jzFQVkiRJkiR1etSwC5AkSZIkTT
2GRUmSJElSF8OiJEmSJKmLYVGSJEmS1MWwKEmSJEnqYliUJEmSJHUxLEqSppQk2ye5PFJLk
hyd5KjevT/QpIj2uW/S/LbJV/14klSSZ7ULh+b5P2TfPxXJ/nuIu470Pe0/
T5vNKjjj3H01ya5cJzt306yb6+w6hXXkobFsChJQ5bkbkUlmJ7kvyRfG6XdYGyr+fpw+2yX5WRusLk2yQ8e2LZP8OsncJP/
a0T4jyUVJ1p20i1qwpoeCUJ8+BBxTVY+pqjOB/YG5wQbJV6tq08Uod+iq6s1VdfgkH/
PkqtppEfedyQMv9W9qKpOHGPbQ/V2/
qFCkpZGhkVJGr45wBHACWN1SLIxsCdw8zh9V/
w7cBCwJXBIkrXa9ncZ1TVDYt5HZNlfeDXo9Z/
U1U1pHoe0ZIsO+waJEmn6ZFSRqyqvpaO4J2+jdjrTb1jcAbDabd+jUeB/YxIRhcmdbbsqk+UmSdk+UmSPY/bk+7Pk2zHSQ5P8r/
tqO53k6wxzrEOTnDzJzkjTLJTnNvQYj+e02jWkjbs+XJTU8/P8mNTnY2ewwRdu+ds2GvhbjsgzjX6KWV8AAlwEfn6jOJDsk+UmSPyW5Iclr2/YbP23+bv0+XPCqbb/77ov0/Fuh0MIVXhO1eP/YFRos6p+0luaBt/lU7fe8bsbk1yd5I4kZydzu23/YbJwk/
SBCwJXBIkrXa9ncCZ1TVDYt5HZNlfeDXo9Z/
U1U1pHoe0ZIsO+waJEmPTIZFSRqyqvpaO4J2+jdjrTb1jcAbDAbdU1Veq6oGq+hJwG7BHu31D4AdV
dRNwFbBekvWUb5Nm0+FVtvlZIs+6FT6kUFj6WTPrjl5K4+wkCTrH9xvFRLsbjS6mj/N+pWe01/
PbARTcj9c5JTgX2Bd7XhTYcwa/aRfA46Hk5P8r/
tqO53k6wxzrEOTnJzkjlJXjdqW+e02jWSfLOt7744kP07yr7ukm+luS2Jcn0abj/f/
fJB9PcgfwR5TKSvJW9NM9727rX3jdD9Mi/Jl5Mst7ThbtFaZLHtvXeeXunTOdvmJ7bYgb8Djm/
l8d01DIyBXeVJCe1+1+f5JCO0631tkguT/Fd77GuEgOQvT/Fd77GuTvGic9/g9SX7fXt9vkvy/
7i45ur2GK5O8cNT38w30MFJvkv2BV/Pwz+Y32u/rGaP6H/rGaP6H53kE2PVKUlTmWFRkqa4JC8H/H/
```

lZV50zUtX2Nbntau3w5sFP7y/
sGwO+BTwLvqqr5E9SwHvBt4GhgTWAr4JKJaq+q57aLW7bT905PsiPNKOdewBOA64HT2v4bA38Admv77w
2cDHy0Xf/
eROfsYS9gZ5qwvAXw2vaankkzmvsmYHXgs8DZSZbvcf2rAd+ieb9WBz4GfCvJ6h3dXgXsBzwOWI5mFLd
Lkp3bbf8AbAKMF4APBG6kec8fD/
wbUEmWAb5J895tAKxD+x62tgWuaWs5coxj7ww8C3g28C7gOJrwsy7Nz8ze49TV8z2l+b3if2hGg9cD7q
X5QwdV9T7gx8Db2u/l23oc92hgFZo/GDwPeA3Ne9p5Xb8F1qAZOT8+yeif+RG/
pwmnqwAfBL6U5AmjjnVNe6zDgK+13+e+VNVxLPizuRvwJWDnJKvCQ6O6rwC+2O9xJWkqMSxK0hSW5DHA
h4F39NH9J8DaSfZOcx/ivsDGwMx2+0HAW2imqv4rsD1wN3BNkrOS/
KgNpr28GvheVZ1aVfOr6vaqmjAsjnOsE6rqF1V1H/
Be4DlJNljE4E403kk1U1p6ruAL5BE3QB3gh8tqouakdiTwTuowlPo70YuKqqvlhV91fVqcCVwG4dff6nqn
5XVfcCX+44z2vr6X/AB8Yp/b5NIF6/fZ9/3E7HXcbYG3g4Kr6S1X9tao6o6H9gyp6qObmu9d4xj/
0dVzauqX9P8IeG7VXVNVd1F84eBZ4xTV8/3tP25OKOq7qmqu2mC6vPGOc5D2gD8CuC9VXV3VV0HHAXs0
9Ht+qr6XFU9AJzYvjeP73W8doR9TlU9WFWn04ymb9PR5VbgE+37ejpNCH1xP7WOpapuBi4ARv472hmYW
1UXL85xJWlYDIuSNLV9EPhiVeFiVV07Ucequh14Kc09iLfQ/KL6RKarq+qrapapaqeCZxF8yCZg4D/
Ak4HXgJ8bIzRlXVpRmomw9o0I2Ijdf+ZZgruOpN0/NH+2LF8D/
CYdnl94MB2iuefkvyJ5jrX7nGMBWpuXc+CNY91nl7H6rw/dPRxO/
0ncDXw3STXJHlP274uTXC6f4z9+rn/
9JaO5Xt7rI9VP4xxrUlmJvlsO4V0Hk1wWrUNghNZg2ZEtvP9GPM9rqp72sWedSZ5TR6eYvwnmtHSzqnB
N426D/Z6en/vF9aJwD+1y/+Eo4qSHsEMi5I0tb0QeHuSPyb5I01+HKSd/fqXFU/
qqqtq2o1mhGZTYGf9eh6KPD5Cw+PXgKsNUa/
EXNoghoASVakmdp50wT7TbYbgCOratWO18xzg21x21HC0BWpurcei1Xwzzfex8zg9tSNsB1bVRjSjmO9s7627
geae07EeXjOshwEdSPMzt21VrQyMTEMemSo6Xl1zaUZSO9/
nRXqPk6wPfA54G7B6Va1KM3raOWV1nVFTWNej+T4vjF7XcyawRZKnAbvbSTFWVpEckw6IkDVmSZdsHhCw
DLJPk0R0h4IU0IyJbta85NPfYfWqMYz2jnYK6Ms2I4Y1V9Z1RfTYHng98pm26FtgxyeNp7qH7Q49Dnwz
8fZK92npXTzIyzfISYI92VOlJwOtH7XsLzT1oI04B9kuyVXt/
4IeBi9pph0vS54A3sJ9k2jRWTvDjJSj36ngM8Ocmr2ut/
BbA5zX2DC+vLwGuTbJ5kJs39mHfI9m2Js39cj2leQDPk9pQMw94oH39jCZ0fqSt+9FJtl+EWibbSjSjkn9qR6hHX9vo
n4WHtFNLvwwcmWSlNvC9k+Y+wIW1Ik2Quw0gyX40I0+eF0XU9VfVX4Ks0P+c/
q6pe/z1J0iOCYVGShu8Qml+w30Mzbe3etm3kHrA/
jrxogsKd7dTNkQ9wP7bjWO+iGaG5geZ+rtFPgIQmaB7Q/
nIOzT2Db6f5uIoPt+dZQPsL7y40I0d30ATELdvNH6d5SustNFPwRo+kfAA4sZ0OuFdVfR94P3AGTeDZG
HjlRG/SZKuq2TT3LR4D3Ekz3fO1Y/
S9nWaU6EECaKbPvAnatqrmLcN5vA58AftCe8wfjHGsB+uqh+237vdaEaB/
0AzIvyKha1lAD4BrEDzM/h/wLmjtv83sGf7NNNP9tj/X2hGqq8BLqQJXGN+pMxYquo3NPc7/pTm5/
LpwP+O6nYRsAnNqOaRwJ5VdfsiXOtDPMCOByGEZI5ehZhmNl+8p5zD8UaZYzAvyOo3GJv1hfPkpekDFGOnk7swvq+/TVfmcaXqdxmsrZ07vCmi/9s86kPu7qRz9arCcFr21TzDeWqc5tVzC15/trh4R9dexO1lVdeMqtp1fsSKp2nvsJKrFW0gqn4kHuT8sOU3k+LdvWpDT3HOZOKA9/fI5BqLNp8JNHgb5zwuPsjFy/Gv5i7OjdG3TuhbO3a4wzz7tStbgwb8TJHkdNxG7AmlhfM2g/
LSyDqQB6PAyGJ3OzsTDyVzrKwedmtM83oOFXGDAJOuzdKTMkQJMAQUPi/
bK7nn2xqMbx4jPOzd+G4l6DDoGcNpWPHkk1f7hT6PzVehPsTeu+XzFtRHOWN+Pmy28yzSbkHpXVxvC/
PGl1r6r/EW9S2K+O2B7bXzz87Ewm6t30NeTPb9ec/
9vatMmDPkYOdHw0SLjbpA0aeL+3f/Mv7Ow4gSTIlDh6pxq2/KT0g9o6WBsOXz1oPbrXVddy+WkNRbLl/
2htmtz5vVPIjtSdzjPfjOzzOM+PIYq1Wqr+oBdx+Uxdnvzf9Kr1zZ+rI3u2KxtL5/
Z/2mcRyeXvU4vyAlLO05GgsWWP0u3ANqMDvTxNjPc6W2/vVPdc+8P5Pr9KQ9HXFbd9x/
fu1m/
bj8/
ndPcrvSKvt2GL6Xr5XR1TuXN5f8x/0/
dL3e+Bm+bmQ/
X2Z1J3HjbH6EoPvW7PfTgKUSaL53yNgt9LdT/
yPfGmu2jvX3c5Nd/
dC7XeMu80eoRx1fZnTYP21+QX9cL9+1PPzVh86ESvSiYz2mIyR+jdrlmuFlTvkDO3VKKE9fSVKqZW4n7
Sut6Ojd7RvGUd4v9m7Pr/
3nfKW7aJkt7/
D0uqqqdfxqLFtpK6HMkBQGkmVdw6wprdZBf0oyVSTjBqmg/
4z8MZ7ibJqq1TGtCVVy3Xd+Pq8LRjL1WIQakt4+qfnbl+Hq4v8+XcT+M/
tsvn1vWV6ju89qmu6ibt9ko0RWSSdjvpaXtlrJzcBkFRJ5ZDvRz/
0cSmD2X4TqVtzlnvFPqeEczvqCtyGLmSPBMc2jjhJHpdXG3MHOzrwt2PbH5qUdl2a/
PA2zgznOTfOn/
YVr6c2GRPzptk8G3N+7Tm2Q0Gjt+17u5WfkG0tBSWBLzjhc6kYF5tZp2NmMLl/
cVeW5p1zMCi+yPyzG/
Ic+NKHaaFXPqlVfjbXNuaZQB0mT7oV0jH6GwnpIXmbFmQK7Ss6tcn9uPQrm7n4prmlH/
rsGHptfw5KNfQGIVOu9Oi7uoG8x58NC2c7NS/
BDmvhypoalOBLaoTOBCr7bnmTZVpQ+SnWMSGZncBR7ywRlKm31xu7zTS/
lzBvmv5y1PRFi/
I7HQT4Gl9O3s6m9yrw8cedNldf71ddbP3OLdXv7CkWp9Pk8Bb+/
OnlmSv7KZNpbpk8bcSG5OF2u0DmtHb/
1dPd1ilpj19J7+pQ2a4v6rQu+pnF5SJb2ShVB68RcjZhG3AvdbFi/
fTfXW8PL3DGW3p8DI1HOqEMPzrdnCe2sOVXzT3GhOuMi0oZZeIsYXphe3gAgdrNvBvFH51CmC/
drUt/9NxrO/
Hu07MYBvS+eTmXx3BumEd5y9XGZHrAkWAlvmq4rp3/
6kJHtD7Gq4X/
vFGR/
L+v2vqaKAaPm7tZ+vNXx+GFrXuW4/
Lm8n8UsX0wk3rD5O8a/
X2k8N9H7tzHAsPnp4T9fkkY5Ubz+S+HBSqy43B+lVcL1zS1xzdj7qCXHnxNq/
lSHM7nFqdTYXsL51oTk4Nz5zWOMVrfFvT2uqdyaJKWp31E9y0SrN4PXW1wbV1r7c0HqPUDz+3ob/
ZMyXdk8HJwFW1qYpQNk7+3e6M6sN2dN1Pz09bhHV7c3p38ZYBDGw5fEVzl+tOk5aOuFyAE2L/
gfFv+sZTF5M3eY5xF0iqcC4+6V1cDa/XYpfHlRFLZVrEmBG3tvBw4ZPmZ5WZMyT3VwT2/
/ecTpy5M5K5i4MOnVf+k9+J9QqCfQeMnXFXqYRG9gOKHGQzoTcvAA5a/7J7P4E3BB/
+oudX/mmjtpUdJ+2V+rbJmT49k79D5UDW0PAMutjMBYyfQ6kJkx/
4b3FmOX3+Hu86XWO0TDvNfKeWjFs4/
ybYThW92tHj9Djtn9Bp37D+/Ud+tT9nn8M7bPnNx5rjJ3tM/
K5U/b6M1gO2QQ2yKlmH1IFFgyTi8YNU5WXZpXmBL2ovO/
y+4Mi3bbX/
N7q+0pnDkr+w9rn0tRUUJNDfvy9CB1hl7b39t2wxjbpGuB4zYAPj21QxvNFWgvbBTTcEFbMtgZf4Hs6T6/
u0bQZhbnpvDXwfGa53oTBxDnKThVPfbzTHhi7DVsaJ8+NndpcqMzD/
K0rDPQ8nrbb+p4nEFTiFTkFcY6N/QxsB5jd8S5j/
hZxLTvPt9m/
Lj2lzjb2rqBSXLP+6qvkHn6BMSo/j2H/
l/
X2qOQWjn+LM5DFcUO7jc5SyKnk88gVy88sY1qXqF0KSUXcdj/
2q/
mzX8ckXDwX/uL/
h8QdK/gf8Um2Ll2+o+a/
9G/
/PcjexuGeN+gXX8xvP+HZQqNrQ/
4Tt3RP/bbmlYx8m4A/FPSZmBmyxxCM/
/2+nZGexZMkHtmBxlRT89sD4BzAcL8vPfm3fWeNNb9j/5JoFZ2m7OFbJwXDkxQnB4t0b/
dMkyqKHr3LvJY+a87JrgaLJ57lU8Z6WUc4ZHWVG/
AMuGbW+lJvqwc5YzdsXtL+/
AeJKb3L9CKxz4DmR3J1Lb9fbmTL2MO/
fCOCbv0P8DVe8x3qIH9NnyFPS7f/
ae4r+ZxHTbwPxXtXLbyXtV6aT8vw5/
yQ2/
q0TvDt3EvvLGD0t85Ml/
h8d4Oox9J09gPeX+3+IJ2ucYsevaYnzn1NzTZHnu5eDPrHxNnn+FeeXLn5H8zkUbX/
l9FK7gV9oCwG3ng5cEa3W6C98XWxNqafxd4Ga2PnfvM9x+XLTl8tsyxfOmDfZuDuR5Vr8nfnRPtHqK/
LQk7yPnlfNfCRZ3n3z+5yznv2sM9n8DNo/v75Xz7zHqaDTHt+ssdZ3JPB+wZyV8+Tb7a0nT5N5ZP1b/
v6nNtbNcGZOwQH1vemvYdNnZxtnvlXAK1J9bpY7Pa9Dq1Tr5zLJ7fvcnG6F5UqRfDbXTrqnpu9HHH1PZ/
v6WsT7+Pq59nrj5w+Vnw7jXd2dc1/
UHvdlUl/
n5QxSjQ1BkF5uutSUmb9OLcHD7hZP5iF/kd7fAp6OQZGCzfwr2TdbYr0jeRsnkqdrS9ohk6tbsxrlqeHdvxGmtfHyn0rXPA4XjZsz97Tm7o+
6dHmTnEnSQFnqwrn5WnnRj2ffe/
0zr3nqtfTS/
8cL/
5/
RfAtRJ9Z+Uc5Uf6emwgq2Ohv8dcTOb6uCTBhrmb18tf9h+rk/
/ThPlZtHX/
NePnXjCAx69sRYRz3k/
9/
nm5vTGPzXzjlVdrnr/
5DeOdfzN5xbP98t8xZ0HrrOOJhz8dCpr99eUcUrGM5hnv5zwX/
3OPzfH//
SkdXmvz/
nl3vaxf+v5fjqbM+6OOvHNeJnJn27CAR2x8++zP5wfnFvfrj6NhNZf3cx+L//
AfrfXbwznoH7dOfB5HTPT+bPaBxu2bNpOOT+7v32uJfLtn2iv7BFjvf39p5YjtyTd3wmhcu84/
rTnZ+PR+7xyVLjTrHe3PjqRu/
V7HUZf2cK4t/
nt/fr6uHt7/tX5VMe2fbbc8ejxvVu+84i82VJOVp0L5XfQYzRDbHzvfk8VOuU9q4PemtNaNQm+
zn6/
S/HLNPNr3/
X2+/
vTrm0/
7vp6kNwWpJIpC21/nH/zsjdYrntmd/
dqs5fT9kaLBc5t5svPt9sY7ozsb3dqX5Lzs2vPmw/
CkNoGAwM6j2ZbTsH4sHWD1Yc9ndLc4N3YDkOLLi0LPM/
XD/
4t3iWRFYbWi2dRJlPtfb8yHjv2dJYI8fXfzQ6fIvk1RpbDP3/
vaj7mJ/
S/
2Xbbv06jDkZfHRXP/
RmnTtJ2ut8Ed/
iYEAlmoaI5lKz/
TvfMvTN9Hnj73aPfa1/
7uF6rnn27lL34y8nTbYlIa7Wkcv7GrnHpLTW/
ilibe7x1xjcdyxNHh0w6vr/
47Bs/
5rRTIlMk5r8D0HPP+Hm9iKeT82jd/
/
4y74Hvd+K2b7tl35PnKN/
wW5MiHWVfN2ftdnaZMyO8LFuu+b/7DcpFoCV/GE/
7r3T7w/
5hAvQYXzfkQ+0PT28jU/
v3mXrE+/
LPPw8JUA7OOdT19fscFO3f28NW/
7bynRHl9P9H4C1h+HWa8Q4xBwNrw2+63/
mt07m7BbbFy+brWnA+8flw9F+GH4P86u4eH0eXr8iyhCrpmL6rXC/
8bA6Y0ueF8+L0zXyn0tRm90cP9bpnO/HkOTc8PmOzdxwKLxOgjfvrdxSHQRvC+/
q7//
+O7w3/
tZ3AbcP27g9rh3lPKpcOTvBQT2h/
+dtX1rDG3HUwWN+ukAqq3O7rvHZmVGE0OeJ2Y0mqPmYs0bNf/
+U4Fvbrek9gQ7u4h6EUKP0iUyYvwTzy78M9Fm/0u/
wFTq4nC1JGknR7n7qsbXB0Xhhr4wnCd4P7ji/
+ce7T8ZvZWd7I4mrpPbPm0yJtfdnV99Dzq+J1/
zTYHEfaLnPbm6/k6H+bCP/
wgZOnLeT3vCr5yWYdwS/YdW8mS+RfOYMRuyVZbPPN3c/
OtmLdoQ9Px9z88nDvZPlHlxVWGLX1ruX/
xYKnUbvNF1rn+Ub6wX9pBrb5uOzRLOdX3ZnvgOzXK55vyOuFqe7j5WH4W3ZYOZbzrzZLGjR6BcPtB0c/
Tb8evEPXd7cFHLq4ZNiR18fd/lnsr1/
+rWYXWvfuM1/
tlVxrm2YZ3n8PHrPzhQHS3Ppfi2v9HJtNRVwbiL1lbDxF8Ou99QUtnft5O0dnN/
vmVfx9uarhBXjnFbqN1Hf/
vnBbLQ4xqYXLRz7p+Otjq/
1rzk9UgZQOPVDT/
FXCy7rrHrX5x7m1H7d6mK1IK+JHsv7AXDhZ7S1JvnHHrZFfbnNmnL/
lZV50zUtX2Nbntau3w5sFP7y/
sGwO+BTwLvqqr5E9SwHvBt4GhgTWAr4JKJaq+q57aLW7bT905PsiPNKOdewBOA64HT2v4bA38Admv77w
2cDHy0Xf/
eROfsYS9gZ5qwvAXw2vaankkzmvsmYHXgs8DZSZbvcf2rAd+ieb9WBz4GfCvJ6h3dXgXsBzwOWI5mFLd
Lkp3bbf8AbAKMF4APBG6kec8fD/
wbUEmWAb5J895tAKxD+x62tgWuaWs5coxj7ww8C3g28C7gOJrwsy7Nz8ze49TV8z2l+b3if2hGg9cD7q
X5QwdV9T7gx8Db2u/l23oc92hgFZo/GDwPeA3Ne9p5Xb8F1qAZOT8+yeif+RG/
pwmnqwAfBL6U5AmjjnVNe6zDgK+13+e+VNVxLPizuRvwJWDnJKvCQ6O6rwC+2O9xJWkqMSxK0hSW5DHA
h4F39NH9J8DaSfZOcx/ivsDGwMx2+0HAW2imqv4rsD1wN3BNkrOS/
KgNpr28GvheVZ1aVfOr6vaqmjAsjnOsE6rqF1V1H/
Be4DlJNljE403kk1U1p6ruAL5BE3QB3gh8tqouakdiTwTuowlPo70YuKqqvlhV91fVqcCVwG4dff6nqn
5XVfcCX+44z2h7tX0vr6q/AB8Yp/b5NIF6/fZ9/3E7HXcbYG3g4Kr6S1X9tao6o6H9gyp6qObmu9d4xj/
0dVzauqX9P8IeG7VXVNVd1F84eBZ4xTV8/3tP25OKOq7qmqu2mC6vPGOc5D2gD8CuC9VXV3VV0HHAXs0
9Ht+qr6XFU9AJzYvjeP73W8doR9TlU9WFWn04ymb9PR5VbgE+37ejpNCH1xP7WOpapuBi4ARv472hmYW
1UXL85xJWlYDIuSNLV9EPhiVV07Ucequh14Kc09iLfQ/KL6PZqRKarq+qrapaqeCZxF8yCZg4D/
Ak4HXgJ8bIzRlXVpRmomw9o0I2Ijdf+ZZgruOpN0/NH+2LF8D/
CYdnl94MB2iuefkvyJ5jrX7nGMBWpuXc+CNY91nl7H6rw/dPRxO/
0ncDXw3STXJHlP274uTXC6f4z9+rn/
9JaO5Xt7rI9VP4xxrUlmJvlsO4V0Hk1wWrUNghNZg2ZEtvP9GPM9rqp72sWedSZ5TR6eYvwnmtHSzqnB
N426D/Z6en/vF9aJwD+1y/+Eo4qSHsEMi5I0tb0QeHuSPyb5I01I+HKSd/fqXFU/
qqqtq2o1mhGZTYGf9eh6KPD5qroFeDowux1RuhHo9eTSG2hGKw/Cw+PXgKsNUa/
EXNoghoASVakmdp50wT7TbYbgCOratWO18x21HC0BWpurcei1Xwzzfex8zg9tSNsB1bVRjSjmO9s7627
geae07EeXjOshwEdSPMzt21VrQyMTEMemSo6Xl1zaUZSO9/
nRXqPk6wPfA54G7B6Va1KM3raOWV1nVFTWNej+T4vjF7XcyawRZKnAbvSTFWVpEckw6IkDVmSZdsHhCw
DLJPk0R0h4IU0IyJbta85NPfYfWqMYz2jnYK6Ms2I4Y1V9Z1RfTYHng98pm26FtgxyeNp7qH7Q49Dnwz
8fZK92npXTzIyzfISYI92VOlJwOtH7XsLzT1oI04B9kuyVXt/
4IeBi9pph0vS54A3J9k2jRWTvDjJSj36ngM8Ocmr2ut/
BbA5zX2DC+vLwGuTbJ5kJs39cj2leQDPk9pQMw94oH39jCZ0fqSt+9FJtl+EWibbSjSjkn9qR6hHX9vo
n4WHtFNLvwwcmWSlNvC9k+Y+wIW1Ik2Quw0gyX48fO/uiMfR/CFmRjv9+ik03+eF0XU9VfVX4Ks0P+c/
q6pe/z1J0iOCYVGShu8Qml+w30Mzbe3etm3kHrA/
jrxogsKd7dTNkQ9wP7bjWO+iGaG5geZ+rtFPgIQmaB7Q/
nIOzT2Db6f5uIoPt+dZQPsL7y40I0d30ATELdvNH6d5SustNFPwRo+kfAA4sZ0OuFdVfR94P3AGTeDZG
HjlRG/SZKuq2TT3LR4D3Ekz3fO1Y/
S9nWaU6ECaKbPvAnatqrmLcN5vA58AftCe8wfjdN+EZirxn4GfAp+uqh+237vdaEaB/
0AzIvyKha1lAD4BrEDzM/h/wLmjtv83sGf7NNNP9tj/X2hGqq8BLqQJXGN+pMxYquo3NPc7/pTm5/
LpwP+O6nYRzfs7l+beyj3b7/PCOB7YvP3ZIjSaoO/SpIkafK0Tw+
+ElirquYNux5JWlSOLEqSJElmw6KSJEnST5ZqDeU6kkp0MJlRRiDr9R4DeqBwUNfTvSbvUcZjvUjA1OmvJ/wCHlk1pNXafL8cnqmuifHeWvBkzQkCSgb/BWFG8pyTL0Rnmb5jWTqkjXJg8w1fMaigz3AGDhQJNQKeZDuTNmdBj8JDv4NXwrXcWsqAxjqFz6WvPj3z6m96yo+72tNHn0Y4ySCzWmsMqxXTdazxG/
1aTHB3fQdB8oOdH1fS0ZdgeHmLQPmmMsmQyDSNsK/hbXW8nGrx5Q2A2fO24kM6ipdlw8vMAQQkUAn+vODMq4UJY4/0Zd0BWmhAkQYsVeZWlrt1vmf7ZLxRQR24OXQB/
xmH6Jy8Zn3pwhx5zqjlWOxR8SW/h7uQE8r+wsRSrZvf0C9jOkEY0zE4pVyeTl2e/
LSyDqQB6PAyGJ3OzsTDyVzrKwedmtM83oOFXGDAJOuzdKTMkQJMAQUPi/
bK7nn2xqMbx4jPOzd+G4l6DDoGcNpWPHkk1f7hT6PzVehPsTeu+XzFtRHOWN+Pmy28yzSbkHpXVxvC/
PGl1r6r/EW9S2K+O2B7bXzz87Ewm6t30NeTPb9ec/
9vatMmDPkYOdHw0SLjbpA0aeL+3f/Mv7Ow4gSTIlDh6pxq2/KT0g9o6WBsOXz1oPbrXVddy+WkNRbLl/
2htmtz5vVPIjtSdzjPfjOzzOM+PIYq1Wqr+oBdx+Uxdnvzf9Kr1zZ+rI3u2KxtL5/
Z/2mcRyeXvU4vyAlLO05GgsWWP0u3ANqMDvTxNjPc6W2/vVPdc+8P5Pr9KQ9HXFbd9x/
fu1m/
bj8/
ndPcrvSKvt2GL6Xr5XR1TuXN5f8x/0/
dL3e+Bm+bmQ/
X2Z1J3HjbH6EoPvW7PfTgKUSaL53yNgt9LdT/
yPfGmu2jvX3c5Nd/
dC7XeMu80eoRx1fZnTYP21+QX9cL9+1PPzVh86ESvSiYz2mIyR+jdrlmuFlTvkDO3VKKE9fSVKqZW4n7
Sut6Ojd7RvGUd4v9m7Pr/
3nfKW7aJkt7/
D0uqqqdfxqLFtpK6HMkBQGkmVdw6wprdZBf0oyVSTjBqmg/
4z8MZ7ibJqq1TGtCVVy3Xd+Pq8LRjL1WIQakt4+qfnbl+Hq4v8+XcT+M/
tsvn1vWV6ju89qmu6ibt9ko0RWSSdjvpaXtlrJzcBkFRJ5ZDvRz/
0cSmD2X4TqVtzlnvFPqeEczvqCtyGLmSPBMc2jjhJHpdXG3MHOzrwt2PbH5qUdl2a/
PA2zgznOTfOn/
YVr6c2GRPzptk8G3N+7Tm2Q0Gjt+17u5WfkG0tBSWBLzjhc6kYF5tZp2NmMLl/
cVeW5p1zMCi+yPyzG/
Ic+NKHaaFXPqlVfjbXNuaZQB0mT7oV0jH6GwnpIXmbFmQK7Ss6tcn9uPQrm7n4prmlH/
rsGHptfw5KNfQGIVOu9Oi7uoG8x58NC2c7NS/
BDmvhypoalOBLaoTOBCr7bnmTZVpQ+SnWMSGZncBR7ywRlKm31xu7zTS/
lzBvmv5y1PRFi/
I7HQT4Gl9O3s6m9yrw8cedNldf71ddbP3OLdXv7CkWp9Pk8Bb+/
OnlmSv7KZNpbpk8bcSG5OF2u0DmtHb/
1dPd1ilpj19J7+pQ2a4v6rQu+pnF5SJb2ShVB68RcjZhG3AvdbFi/
fTfXW8PL3DGW3p8DI1HOqEMPzrdnCe2sOVXzT3GhOuMi0oZZeIsYXphe3gAgdrNvBvFH51CmC/
drUt/9NxrO/
Hu07MYBvS+eTmXx3BumEd5y9XGZHrAkWAlvmq4rp3/
6kJHtD7Gq4X/
vFGR/
L+v2vqaKAaPm7tZ+vNXx+GFrXuW4/
Lm8n8UsX0wk3rD5O8a/
X2k8N9H7tzHAsPnp4T9fkkY5Ubz+S+HBSqy43B+lVcL1zS1xzdj7qCXHnxNq/
lSHM7nFqdTYXsL51oTk4Nz5zWOMVrfFvT2uqdyaJKWp31E9y0SrN4PXW1wbV1r7c0HqPUDz+3ob/
ZMyXdk8HJwFW1qYpQNk7+3e6M6sN2dN1Pz09bhHV7c3p38ZYBDGw5fEVzl+tOk5aOuFyAE2L/
gfFv+sZTF5M3eY5xF0iqcC4+6V1cDa/XYpfHlRFLZVrEmBG3tvBw4ZPmZ5WZMyT3VwT2/
/ecTpy5M5K5i4MOnVf+k9+J9QqCfQeMnXFXqYRG9gOKHGQzoTcvAA5a/7J7P4E3BB/
+oudX/mmjtpUdJ+2V+rbJmT49k79D5UDW0PAMutjMBYyfQ6kJkx/
4b3FmOX3+Hu86XWO0TDvNfKeWjFs4/
ybYThW92tHj9Djtn9Bp37D+/Ud+tT9nn8M7bPnNx5rjJ3tM/
K5U/b6M1gO2QQ2yKlmH1IFFgyTi8YNU5WXZpXmBL2ovO/
y+4Mi3bbX/
N7q+0pnDkr+w9rn0tRUUJNDfvy9CB1hl7b39t2wxjbpGuB4zYAPj21QxvNFWgvbBTTcEFbMtgZf4Hs6T6/
u0bQZhbnpvDXwfGa53oTBxDnKThVPfbzTHhi7DVsaJ8+NndpcqMzD/
K0rDPQ8nrbb+p4nEFTiFTkFcY6N/QxsB5jd8S5j/
hZxLTvPt9m/
Lj2lzjb2rqBSXLP+6qvkHn6BMSo/j2H/
l/
X2qOQWjn+LM5DFcUO7jc5SyKnk88gVy88sY1qXqF0KSUXcdj/
2q/
mzX8ckXDwX/uL/
h8QdK/gf8Um2Ll2+o+a/
9G/
/PcjexuGeN+gXX8xvP+HZQqNrQ/
4Tt3RP/bbmlYx8m4A/FPSZmBmyxxCM/
/2+nZGexZMkHtmBxlRT89sD4BzAcL8vPfm3fWeNNb9j/5JoFZ2m7OFbJwXDkxQnB4t0b/
dMkyqKHr3LvJY+a87JrgaLJ57lU8Z6WUc4ZHWVG/
AMuGbW+lJvqwc5YzdsXtL+/
AeJKb3L9CKxz4DmR3J1Lb9fbmTL2MO/
fCOCbv0P8DVe8x3qIH9NnyFPS7f/
ae4r+ZxHTbwPxXtXLbyXtV6aT8vw5/
yQ2/
q0TvDt3EvvLGD0t85Ml/
h8d4Oox9J09gPeX+3+IJ2ucYsevaYnzn1NzTZHnu5eDPrHxNnn+FeeXLn5H8zkUbX/
l9FK7gV9oCwG3ng5cEa3W6C98XWxNqafxd4Ga2PnfvM9x+XLTl8tsyxfOmDfZuDuR5Vr8nfnRPtHqK/
LQk7yPnlfNfCRZ3n3z+5yznv2sM9n8DNo/v75Xz7zHqaDTHt+ssdZ3JPB+wZyV8+Tb7a0nT5N5ZP1b/
v6nNtbNcGZOwQH1vemvYdNnZxtnvlXAK1J9bpY7Pa9Dq1Tr5zLJ7fvcnG6F5UqRfDbXTrqnpu9HHH1PZ/
v6WsT7+Pq59nrj5w+Vnw7jXd2dc1/
UHvdlUl/
n5QxSjQ1BkF5uutSUmb9OLcHD7hZP5iF/kd7fAp6OQZGCzfwr2TdbYr0jeRsnkqdrS9ohk6tbsxrlqeHdvxGmtfHyn0rXPA4XjZsz97Tm7o+
6dHmTnEnSQFnqwrn5WnnRj2ffe/
0zr3nqtfTS/
8cL/
5/
RfAtRJ9Z+Uc5Uf6emwgq2Ohv8dcTOb6uCTBhrmb18tf9h+rk/
/ThPlZtHX/
NePnXjCAx69sRYRz3k/
9/
nm5vTGPzXzjlVdrnr/
5DeOdfzN5xbP98t8xZ0HrrOOJhz8dCpr99eUcUrGM5hnv5zwX/
3OPzfH//
SkdXmvz/
nl3vaxf+v5fjqbM+6OOvHNeJnJn27CAR2x8++zP5wfnFvfrj6NhNZf3cx+L//
AfrfXbwznoH7dOfB5HTPT+bPaBxu2bNpOOT+7v32uJfLtn2iv7BFjvf39p5YjtyTd3wmhcu84/
rTnZ+PR+7xyVLjTrHe3PjqRu/
V7HUZf2cK4t/
nt/fr6uHt7/tX5VMe2fbbc8ejxvVu+84i82VJOVp0L5XfQYzRDbHzvfk8VOuU9q4PemtNaNQm+
zn6/
S/HLNPNr3/
X2+/
vTrm0/
7vp6kNwWpJIpC21/nH/zsjdYrntmd/
dqs5fT9kaLBc5t5svPt9sY7ozsb3dqX5Lzs2vPmw/
CkNoGAwM6j2ZbTsH4sHWD1Yc9ndLc4N3YDkOLLi0LPM/
XD/
4t3iWRFYbWi2dRJlPtfb8yHjv2dJYI8fXfzQ6fIvk1RpbDP3/
vaj7mJ/
S/
2Xbbv06jDkZfHRXP/
RmnTtJ2ut8Ed/
iYEAlmoaI5lKz/
TvfMvTN9Hnj73aPfa1/
7uF6rnn27lL34y8nTbYlIa7Wkcv7GrnHpLTW/
ilibe7x1xjcdyxNHh0w6vr/
47Bs/
5rRTIlMk5r8D0HPP+Hm9iKeT82jd/
/
4y74Hvd+K2b7tl35PnKN/
wW5MiHWVfN2ftdnaZMyO8LFuu+b/7DcpFoCV/GE/
7r3T7w/
5hAvQYXzfkQ+0PT28jU/
v3mXrE+/
LPPw8JUA7OOdT19fscFO3f28NW/
7bynRHl9P9H4C1h+HWa8Q4xBwNrw2+63/
mt07m7BbbFy+brWnA+8flw9F+GH4P86u4eH0eXr8iyhCrpmL6rXC/
8bA6Y0ueF8+L0zXyn0tRm90cP9bpnO/HkOTc8PmOzdxwKLxOgjfvrdxSHQRvC+/
q7//
+O7w3/
tZ3AbcP27g9rh3lPKpcOTvBQT2h/
+dtX1rDG3HUwWN+ukAqq3O7rvHZmVGE0OeJ2Y0mqPmYs0bNf/
+U4Fvbrek9gQ7u4h6EUKP0iUyYvwTzy78M9Fm/0u/
wFTq4nC1JGknR7n7qsbXB0Xhhr4wnCd4P7ji/
+ce7T8ZvZWd7I4mrpPbPm0yJtfdnV99Dzq+J1/
zTYHEfaLnPbm6/k6H+bCP/
wgZOnLeT3vCr5yWYdwS/YdW8mS+RfOYMRuyVZbPPN3c/
OtmLdoQ9Px9z88nDvZPlHlxVWGLX1ruX/
xYKnUbvNF1rn+Ub6wX9pBrb5uOzRLOdX3ZnvgOzXK55vyOuFqe7j5WH4W3ZYOZbzrzZLGjR6BcPtB0c/
Tb8evEPXd7cFHLq4ZNiR18fd/lnsr1/
+rWYXWvfuM1/
tlVxrm2YZ3n8PHrPzhQHS3Ppfi2v9HJtNRVwbiL1lbDxF8Ou99QUtnft5O0dnN/
vmVfx9uarhBXjnFbqN1Hf/
vnBbLQ4xqYXLRz7p+Otjq/
1rzk9UgZQOPVDT/
FXCy7rrHrX5x7m1H7d6mK1IK+JHsv7AXDhZ7S1JvnHHrZFfbnNmnL/

```
g24DvAMsAJVfXrJB8CZlfV2cDxwBeTXE0zovjKkf2TzKQJizu1TR8DzgD+Buy95K5Emrac0i1JGjb/
LZKWgPiJE5IkSZKk0YYxDVWSJEmSNMUZFiVJkiRJXQyLkiRJkqQuhkVJfWk/
skaSpCUuyd8nOSLJ9sOuRZpODIuSxpVkvSQrjHx8jaFRkrQkJfkgsB9wE/
CfST6bZIOhFiVNE4ZFSWNKshbwP8BBI3/
NLR+hLElaQpLMANYC3lNVnwF2AK4Fzkmyz1CLk6YBw6Kk8RwK/
BX4PbBrkn9JshnAyFdJkgbofuAq4Ngkz6qqB6vqI8DLgU2c7SINlp+zKGlMSWYCy9L8YWk7YMt20+OBJ
1fVLsOqTZI0fSR5E7A+zaji2cAmwEeqaoehFiYt5QyLkvqWZF1ga+C/gDdW1feHXJIkaRpo/
3j5fGALYA/gMuCLVfXDIZYlLfUMi5IWSpK9gJ2q6g3DrkWSNP20wXFmVc0ddi3i3S0s6wKGmhJFmG5h/
pu4ddiyRJkgbHsChJkiRJ6uLTUCVJkiRJXQyLkiRJkqQuhkVJkiRJUhfDoiRJCyHJBkmqfR3S0X7CSPt
CHu/yfvZJ8oH2+HsuSt2SJC0sw6IkSYtuvzRWBF4F4+7GIkSZpMhkVJkhbNNcBGNB8U/
gpgBnATQBsg35fk+iR3Jzk/yVPbbasm+VaSO5N8od3vIUnem+Tadr/
vJNloSV6UJEkjDIuSJC2aK4CLgNe1rzOBP7Xb9gOOAC4F3gdsDZyVZAZwGLAL8BWacPnkkQMm2Rf4cHv
cjwBbAF9eAtciSVKXZYddgCRJj2AnAJ8Elgd2Bo5q23dpv76zqq5Ksi3wKppg+HzgQeBtVfW3JK8Bntj
237X9+or2BbBWktUGehWSJPVgWJQkadGdBnwcuBE4r8f2f2sR5c09meHsuvBm5tlx8F3LMYNUqStEichip
J0iKqqnk0U1DfVFUPdmz6Vvv1Y0n+BXgJ8Hvgd8D5wDLAMUmOBNbp2O8b7dd9gXWB5wHvr6q/
Du4qJEnqzZFFSZIWQ1Wd3qP5CzQh8I3AjsDPaaadzk9yOLAZzTTrwNXAZu0xzoxyVrAm4DP0IxY9jq+
JEkDl6qF+jgoSZIkSdI04DRUSZIkSVIXw6IkSZIkqYthUZIkSZLUxbAoSZIkSepiWJQkSZIkdTEsSpIk
SZK6GBYlSZIkSV0Mi5IkSZKkLv8fpSUyvsQZkCEAAAAASUVORK5CYII=\n",
      "text/plain": [
       "<Figure size 1080x360 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAA4sAAAFMCAYAAABiYSlGAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3Xu8rnOd//HXGzslbXIoh/
Z2SkkNHUTFVKNJO0P6dSCa2pkpHacTlZlIhcYcqOlEGiaUUqmoRCqNTI1iMqVoSA4b0Ua2IjY+vz+ua3
Hvdd1rrXtv+173svfr+Xjcj3Udvtd1fb73Wuz1Xt/
vdd2pKiRJkiRJ6rXKqAuQJEmSJM08hkVJkiRJUodhUZIkSZLUYViUJEmSJHUYFiVJkiRJHYZFSZIkSVK
HYVGSNKMk2THJZUn+kOTFSR6d5Nwky5sk/7zyQ5rF3+8yS/mv6qH5gkleSx7fIxSQ5ezud/
ZZJvL+OxQ31P2+/z5sM6/wTXfE2S8ybZ/60k8/
u1HUW9kjQqhkVJGrEkb0lyQZI7k3xmknaHNB4Bfj1n9ZVTWieh7Ukqw26hokaP26D1c+S7NSzb9skv0iyMMk7erbPSnJ+kj
nLrVNL1nRfEBrQB4GPV9WaVfgIIC7qvaf7MCq+kFVPf4OGqjp0OZ/
zc1W1yzIeu9ze0yTfT/Lacedfs6quXWdQ4BQUmAvA66fpM06wOnAvwBrA/8MfD3JI9sm/
UYMkWwAvA66fpM06wOnAvwBrA/8MfD3JI9sm/
wgcAGwLHJRkg3b7O4FvVFVhZMJqgPEeAJqfJxHYlcLxFmaRCs+EvvaJ79VvyfCFcjrmsWlZ2FwC5RG6G
nvDdPDWvgMm4vEf8IsL91uWMDmtejYpNVoYbFrRSdL7HS6LEQAyu+XnbhwjoV4xNzbP1ALGXgW+TmSKF0C6TDPXDJsSwTNLPd8TQUhGCU9kB+Lo2j+mw6KUg+Y+9A
SvLMo8/dfMXGUPw9JmXsLlEGqMlxvXf2kSdMqqRZeHyYU/
RkIuq0jBpUHmo8EXKbG6ZAO9/0O7OxdEwVTKl0KSRjlpwsCAi44FLx3tfoIEnEDngDxAW0SHGkxXbgKV/
YnjpWEfKjmY5JqvNlZPUTAhb+ZKE8uCmnS08DvrI14Vfcw3hHp8bvYdNuqIx/jvAw/IUwC9bgffVj7mwUvPIA1ODq8AX9RMsNEHJ6qS8Pb5rXx9e9d+ZE6XaxmswoMJ4/
oNRFNMqpbfTohmvQBcsZt2mj7JOMhpyTHOZZkMaWWqSDtyxUcAx+/4tG+UAsVjXVsHqWKYjeyhJjUFBX3+9C1rZ09FH5jnLy7HnOF5Lp3zmAQBuKRkaHHoaKTsYuuPIQ7KEkzZMoU4bZDyMkPaeKVDUVZxkGJ+yk9uEc0N2Z5lzV2JCN8/
BvYPLQ6W8sHpKf0KtfQ3qj0JxFQyCkdtAq5tYzBxvOjiLXdQzZmhzSKDDxZiWe0WLmhQfaq8DUspCcuDxCoYuCLdVRMZRuiG5JaWRpb3K+2xIVxVc3E+2ZSgrQ33BWVl2WXBrQyjQ2rXaYt1AqJYT8l4AHZmp+8X8Oh4l/6Qnm3A7pwJq0HNSmtNjTz1SxGlNrF1RRIUpXt0MLvk2Ju5NswhRkOkJU1M
RFNoxcmPSD8A+JQBSwgUZlx/WFDxIgc3ty3bt7kxVhY54ZfFs2JSc5eFfoCWFphvAoTTC84x8hs8cL+hC
AIaOhZ7FoEMTqFnjhkG3x3XxnngZvLqtkw1lrW0Gqj8Y7GXF30zyX80/PlgsqPQHbdFKC0lVWWTVPtMGdLFc0svctnUOujYfKn6p4qe0VoVrKBnyijgpOVJwD8Rkd8gvVOJr8a/Ekx7Eyp4sgoU+oXrPrxnsL+EKHhlhpv4CsNvubzGnPzQ2pr5e0OTr3SBVuMvTpvC/W9kcKlyLuspc
47eOm9YZHKvzw7nTGBu2VnusAyG4xV5vMWGX70LmkvyBEsGV1TEQNbzvLt8KY9MTeugMftA/SZXkH6+/
n/n5Fq4wMXzCuJV37Sd+30jh96KNCJ43hh1/dXJW4wePnZHxuv+/ZW/
L0gGP9AM2r8/nG2b2BOA6aDTSyUubk/9sHxPHvP8D98+O/
Ot4R0H0N/xTL9EXOfhVGHSDzW7EA1g1CWNSBhPDAgFcuBwgYcvhDdm4l7Uzl7zhypm/
XtGmsPJTnmdAAcRYv1zoiw9oVE/lXsRGo9U9BGRt7TbFoN4AP2Rq/3ZOWjfwtiR9gRx7owMqNvyYyXH+Pw/
lF2Yu1XMe2ERo7fOZ6WFHbMl5TRMhVtpc9O2WWX0uP5u1UTq2THDCUDF/BKPyq6JP0dgnb0Aut0kMJvfTGg1lTW/bxHD9OeWOLvG8/
q1ytyB9b/T4N+2/
JXOwSK3tI3DR6ZxeNRxOeJ04vpnsgXwi1YOvTofHOWmpeTv+B2Eo7MrQ+tuuvTTTTUbmOg2eRD+yqGrbsHbshS1t4pp0tX6i7tTQdRUjx8tTpIxLcX2BanRQDw5sx8rUT+pWZtpVBfc0swsgAD0p4XMfpwyrD8agEqU7ZYtBzvnStL1B6xHzL0JF4Vp4fCHfgFlXu2yAlmdWnSg0b4Do
mSJ9NRqv5N6G7BkFfOaX/
gHWGEFzCqlFf+d4Mg7WXGVNMQAI/fsetZi7sLQTjrZuGe9UMSY/jYbAlzF9J2xMZ3ko1FozLanUkT1u5/
z93v3o3vxuf2tSnsP9UaGwmOuptnsmWibEFIPmTrJzfx2sBoNJvRQHk+JKMuIBV0mkA8hXGmEaFOjHTvXrPhxvaeuNXUaqVdiX1stewG7Ha9Wnpmrzj5u2PxvGhw8WaaTfs6jW6sH1JoEBr2yHosFL
+ZHOFy/3MFA4Qhbdsk29UO6NK0yt+SatnxnqfwKCj5tAVVaEEmI2aK1bbOdCx6O6lAe2+YBcTg18gafiO
+pZgJgtbH9A/cWTO2o4c2X3VxfMZn8GXrGZV1uJ0JdH
mT6CXpcn0hncvVcpAznZeqT8u3zdhNKBl16PmmbX4Dcmn8Ka2s0IDb9p8/
aWnX0XwDMB7g/B0/fzBZt7AJy6gPQOO1N8rQ2hn2FQVDaqdnfRsdq3gE//
Lu9+TNvu8wmbRo62o+TfRFnFxJkI7kUTvw0wLtzX74UVeV9T1Vf0vp/
Ojgp98sc/kqn7bVUz9cS7Nb8Vcy4v+AN67uGv7ySl1zZvA3KtnUoKd0wQvUt8JhaNwxJHYdeA4Q9PDgO6NFuC5VVvqfw9WWN1RPvPKunl1ROkQFqPW51Qyf
/j2wHPwqtW8lJ/uMuyrdB5DoMNqUkwBsXMrR+rvRT+xtVDW0//
d9VaGVWQbmlGgj0B8rGO87d+ryvT3SV0u3Bdra81Ddpd1eJc61mUnuIbhw1D1cTdHfu/
ySbZS7bYnpfSbbw/sdmR2ZeLV8z1ZqpbhqR0n5XA1ReAudWdNOv3TVwg6U6+k8M9nirR9BA4WIgn+JapOJ4ElGzsAgegKuzQ2rAOZ0u8tsQX/RyFpa7/XXrH9l/
6HAjKeEm9hRlBF+XIhJBPdRiC3zMV6nNOtR/5CMJlDMEuX/
dAGwHndP7/+MM6j+RBWCqCHt52kMnGzrvU2PRpNAHyY0n1KR+TjIZW7QfPdlP8I+UuAJVSbqcQb4s+B7NC1WTWhHaJzqN0Syo1e7wfdHA9xeWhdwbxc/6cFWo0ho+KYjBYekZ+ZqL9
+/AUmUYkwSd6nXrE0eszDwSUmAPSBpW2kn/4dxlq/
55Zdzfwjo+X9PhVS/oRE8JNqIlbBTLZGdFwHhs+VrJhbrdtm9q9j4MYbDVS+6fN3grfZ8DHq+g/wVb2yfkeTGgpSb/+70YZ7+Gjz3fQzjiQKOm2TVOpLrq+xTmxTR3qVRo/
jzhuVzHgSmLc5T5ahd6mKo+oOMrj6I3MdT3jE52/JgZfgcycRr5GLp1ovZ3HeUMP/mZk2PbS+L/
oahP/M8D+M1Y/hUVecR7ZwIwKj8LUcEFaZEOqYkmJu51JQ+rvp8NSwrr5NRyOa5j8KTWOlB/8sL7Zh/
mcZP25fyyJdyG35OHsvFqOEb5bgkvo9VRd3rEXuWbexlm/
oPWvsCWMqBXn8IG0u8yq/v4+DQ9oXoKPtXRdgGqfpxa8H0qfbmVJJOT7Sqe8SN3/
68i/x9Cyq9uqrPEqV3g4cD4TSsB84jEmRPxy5+kk6qRdUTT2fTTlZaPw3aZ4HUibkVuQtTk79eG+PDYHiBdtMV6uVyRQ55TYeFDdHYtSt+A5JZOyW3wP6OuBDDq/
ToNdbWbJoTcYWzXo/H12nAB+nEUdW4qUkkZO4+E9ewC3+9Cp3/
oDMYIVNLgvfyxIHNL4q5Fj7O8fHkyoK3pXZ6zexWLDpjJ0HnGDxxQjq5sfSnlvPgH4vdIMh41idhENO40RXCL0e6GxfiRUP2+GH4ZOdt96flFb0ugPXf4WLinE2f9W+fsGgL5kVbwgWwpwxQ3fiMdE4EYnDycj2e2wd
p7AMaMHJ+TbA/e9CB+4AL7+BfbjbhbybPj5b2ghKj23P6L9+yv8ncaZw67B1vhsaEdVvTi4SZRL4P/
+Y/SDqh9Bca5d6jvA2mk68GXPOmJifaVqMZ3G0UZRERAmP1pQ+KJFjnRgn+iw1aFd3hCdSF5YjqsKWLt5QdGd8TE96ZfFLkyR
o9eIXqIm4P9n5Tz2hB5NMBd3mR4V9z5rh6HVX/
H5f7sA/o01EPj7M0SwnF3cq3TS7G9VsJmd2qTJ+TKKZb6bHNv7y36NPvZJrFkNzkk2VIGW+x3jtbpnm0lrmX70/aq+X/tYZXQrvt3gu1BKNKUQ6L
+aTVPXL0/
p1bXM9k87W3yqnGmxybr9e8qLfUCPPJfKlPfvz6+5GW7htNxVTrzb9bYUWsjgvDk30w9Jp/ZwbubhY95Ua/
JL+hbbPXgQrvDGW+kfpQYcyPWHvfzE3bXrR4P+oeL7Gcd6BUPzYzb/
Vw5stwYGmXJ12SUnnOKyVpf2tPz+DJAAFD17mIn2QI2vX+YgDaFpiMBrTMS3HiZ+NoevB9Mm7+FQ2NX/
BuzRI/ya4eQCBEBerrCC/t3fX9aVeRLCuRLKc3GvR+rWc8+Ma5zDPAaEhKVtd5nA9nAL6oFkSC3m2CWDNHz49Iq6vV+7hMHZD0lVwNRgWm1dr8UXfuRzfz/
1sCe3WaufwTPnUh7D3ef6Kx95fT6sh9GbQBW/
fJJ4aqJeRjMUBD8pVbZbTkh0WOU9v3aT8rw2cH8eBG8f5p8BEJ/
n5Duuue3e27TMtMLAU1cD+1LzTM8pIxvG4tQdPr4p2vaG1Fly4Ok8RZTjpAX3Ydg1sw4PDNP78rOu2xpx/
fYjMNupLpxz8eJsr+dfJbt/ZswfFMGNpnUo6j8Jh3TjHFu1N+/
Bba2JH4vxNiD7y1pl+iuFHbEp2gy61tIJ3dMHG2sW33fCPw7mw7WnDmTVbgixmD/
a76+PTF+AxvAq36UbUI8yBJkHx4hNkOm3GLlTYVqpBRxV8aPn2s3c0B+lc12SOqtK2KZyM0YSVJjd9A3t2h4evMlgDTf4yakLI1DYlyfZEE7xOn53rMf+dVPulSB
a/7KSuAg5fcMZAOS2zvWqqNc6udUBGiPMGlMjWMP77f5EAKtIFiwJQd/
mF5TuUlRgZmMGanbi8YGr3abTQ9J+oiTF3P/
4RJNftUP0pS9ttQgVTLR2X1XpfFDKSEjoNeA9Qh4iWE11kW2wlhvlG1onFNSyC7/
AwYuXtlIgdvJoIRNhU2vBBVYgsaVAXfDEGl9tf/5vHR/fa+wrpFuNvtwnMVBdRd5/
Q3bVrCuSLX6wNpZNT8hhs3upmK8o4JU1ByW7qqX/ybgaYcx46CK/IrlJ71hXdlD/bmdWLkIbGdt1W9KC/
l6ufhqbVP2xo4XbPmvlBCxbMdg/+aspZOMFwXzZMEJBYOvb9+4T/U6EeauCVR9Uqsb2MRsJSR/
sfhhu9LD55Dd/86LC9uX8mLdVkVfOjzSKRwUAtzS7PZt9dkDWkTbUrPDt0kk9Gq71bl+BDRxqv+h4zdBnAPOVJJ6Lw/
GtIa3TYB/oQdXd5C5h/
SwzRjvMaBTx2iP4QdnZ0J2e4yQgaJXz+eScYMEBbbDyJGJWIkw3Efb09E/Ibh/rvHlULXOi9zLd8FcYHm/
3TTqp/MhEQXC+W7d/kpP7lUB+QVS8p5kCbrnJqPLeNaMY4SsCkKfAvRr+h80bsLkOP/6oTK/
Hd4u4+Nw5b4FqH8ZqE9l4XDJB2CVmZ5rz8pxZFqPE63bX+bK2+xiNUrOZMP1EFoLJh/
MJQb06sb8/SG3CDaE1Vh1FYrL86/
4VOAZrnNfOwFtT+lU0vMS7PJLx5NrP1rLl/jP6Qw8xYHFr/
4r/IOyZjX5SVGdsA/yDgUWJPq8cvC2sPvbHh0kyE+oJ6YuvftRPTqvWrLZtLXk+R2lg+iTfqpPfP8MN52FVyqHLWaa+eLuRWGmu1k6/
AasXf8QDhLvbUvLSLsUCYwQHm5gcg8etgOGZTPLvTPP+PKZ5/
aSRRL6Ry4ZKjLltyGiVGyotpfiilG4DYmobJ3FQ0GUVWSDBwKVtlDzJZ0zaYSt9WLbvP/
t8XmLTrGm9euy5TbmlDwl4SzlVt2PpEqw1YaqZIMJW0eqm5hzzaPl2e14yd4ZejlZ9nJSjqQzKOHH1xTNH8KdWfCr+
GHYspbYl+wvgLsltRdTCP5QW8/e/kuOQDJ/xpmzt4MU0SMCxwbBMWNuzWbW1DnJdyX9xxu9Ptty8f6Vw/
kDwlljg4IOd+pjHDcyi5OS4ZHpz8vv/RPYwffcTJFaW90hzCEcsqnqkVc2QXMVpgyK6Pb+Eu/NyxB6qiEdVhEU/2Zcr6H3y
DeL3f6/z48wdIUktr/
oWdO7oKmYWbvhMSeyjxBuODyXeVx7I5hHhaBYGWAHxcbT1tRlPyP7KXgMw4Cr07V4Z8PXP3C0PA2iDUxbNGp54dHrRNYoR0IgqGyBo
ezXjiXcBRQ3ZJwVIiskcWtWPnjyQ3aFMh6d6K8i2jnywkAZtDzPJmjw4F1pG5Pxmrb2/
kRSK+o0D6/7RXFgbpTQtyuZUJU+OjqWj9Rtf0kCCHhLJ+8ZNtXGTCHGYAbrOPmHJ2Cw4QNfrzbD5Vg3nIDEa3+yxnn1Ii
PW8/mghRI76pnwQqLGDnXsw0HJRrMRvyL+9kYzHI4vFV0Ui/uBd/BOMHwzUnwu1EOsKibrPuG9Lyz/
3ck16c7yxVJldpQ9NgqfTH5PxywU0x5PkhlX1S2fypx+KT6SfTOVb0XCV5+RfXrPaw9RTUlGLz7BX6fH9
+W4f+7xsUmKMe08XBUg4LLGkHQ36+5lUhuwXbE8pHcO1pnB/mRVWjpAUG5AYN2jPd4ZdxoeSVbdz7DRfH
EPPzWhEnYsWrnPOLzmJJ8+qhYkYTvCp5GZh+MVQHSRNO8kWSUY0jNhAVSEGBO+h9kg90wQxNXA0DmqPt
7fr9CBmX0TYrOL7GHgP/BZkaLTG8zStpbUQbi+Un8G/ARZ9uS0DGG9b1m4EzS6oNUf7Zp/+zkydR/
47wfGhWaTYfu3HRkIWjjBoOhpSuW1qa5VP/nBtiw1F2rNNd+Y9tjcgWPNAPKdPiqlE2GV3Zg3ySgcu6k7
Z5jHTBsqhvIFgWDTyqjAMhKpSaqMJwR1bpYcd8wXWGHRYUZLS2HPfQf7ZQqZxCd6ZfGRUqVxDE3frmvxxlF
Vfs6/1FafuiNMCcZf9AM3eXxL+ORi/ErJjnOK9fvAb6fA96EWh4tIedkvwCTn3bxPkxj7jTfTwRdm46JVPU2jR/
GwnRyUqaVmpzaV67GpRfDbh6Ymz8n6y+Ft44/
DKrfvf3LvQmMwgD3nPj96OnM3LdpUsVXfzbw7pquE1z6O/Mb6bPjbTVvPb7yHYT/
wHLf0wqVfOWK4sSOEHh6mDtHxtlwJ3nPU4W1ZwRsDqrLHDdg7Y9fmPNBsl/
X1b9PmMMIw9H1f7QlO8O6QUhzbhcdX7Gh43X4BuRTtrtHwU6t5s6JhnTSS7f7aLqMbt3e7zhV3H1QHFPzRdtqxJ75ltfd0NF
04rOjfeVpfa2TEsGrkvwiKbQQkA/
WbaRdt1vgtDf8V3KxD99RSNkBOqSe70s9F4ftCNM6ydWGpYeMLN/
TLuVuM3ij6+4VbObz3WKuLuefHy2T7JOdHLPmhySMmK2YVYhoNuYRFnVtvg3MvmdSN1EqnPDPE/
sXrSf53aUxwsfAOoyq/yq2ErHGwFaTUuEO5yq80IHMfC+fcWYj2+Ppg7vNX6Ueo5HJfYh
4KfxD/HVvvRNf/
oe0HyRqX+Bvt4Dt8zuZRGEUhk04FNr3OV7Hm8fVU05o9dPeXlIRVYuB4yFHFntTq9jbyj06Kaly/
EuCLEsSOVsSwlrW7tqfP3sfdvtcstDk6vf8X0ipvPyx9Vh4zDhDUFhmXTwC0c5rtPdL/
rlxfH+28uvvqbTHuXfnJ8z0Lvh1V0J/2V0u3sI95kTMj/
nAE7ZfvRQDhzh4W+OTyOu7ROmMbrjZ85jvWY18H7GCeXzTPwPo4aPfXkJGfFvfu+Lw+PZ8W9pTW0xrlgubqfJrqs2ioXWh2
74pzWmgnLMzTbmm5SAWrlBs8fTPRiz3U1QkRr4F0s+/
SVpupzaKnnv4XKZGKvVV4V9wsyZjsvKc7K5+FDbvxnf1dmNdRFHlv5hrVswz/
m5TNVGCq+PuVkXZZlxvsJzZ5pxS0qYrTUn1x5FDw2XGX9xR0Eqlnf6EE9b8ll5qSJJKuVXpfbdv/
BoZJ8CkPpAhfDhPK1DRvXSGNwQ8SxhDNwcOKHHSw1SMk+STvq5/DAb5wtcOBNe2TGhzyKEQtevC6tdzY7U/2LNXfBekF7s3sV9k9Mt6ZukI5/
Ca6uHxOPfxawOyecLmaWiLgyUgg6KlEFXiZt0xA79NzqKCrmcpd3NuK/4ezrOeD9vUzu2qftnrQ/
fU7yJQfVfwEQrIAE7o7AqtsWYc0Pcq7+kVZpPQvlfg3b9pLwQtmhlH1GnUmMXcz6Dg17YcStoVCmgEIsR90GadpudbzHbn/
eXdYS9rJp6HkWVoiFj3n2+3yJDIxn3rvTHaZMpbH4vwR0WtZSl9iNJu32HnjPiUTBKy8qbl4uDzXxcscI6pfRz0BgqQqPrZ1wS7ys8qfNvIj1e+6Yt+Mhn+
IWmumuKZAMZrQKMh3VJqqHGn5GZ+lLPM95R8b0SA0BBR+8kyyzYp6V+tOjnrc1iw1+fpR2rbN2rAMK+MhM2NYlCPymqGrX7/
gBnt2XdPmvdr8RjU5RX10GKaOwLSa/S8bVu2iY26+kjjMpjb35ao5Q7EaR/
TS5ZGl1qeVNXqNwM+9E9TBkZM3DfHqdO7ld6KvHOt/RdB2YZg/vpyS+Rt/
RV6V7uXlNaLwM7pCFVy4WbpZa8LWcNLmEzp4OWsD3fDVN6t/VLpflhLvKL9NajKGsKv2nMjN+SlCrpx4zR7SPIhe8KenzvLf1/
+s1dj3MypVDWM3Zes+QBC5EKOcT7F7ICkFKf9jRjBk+GdvE4HaNJZNbF4Oan0ejcbP1hJlHexJT/
zRwD8AlWRV4Bs0792mwMa072FrB+CKtpbDJzj3POBpwDOAdwPH0oSfOTQ/M3tPUlff95Tm94r/
oBkNngvcQfOHDqrqvcAPgLe038zVo038u39Dnvx4C1aP5g8Bzg1TTvaW+/fgWsRzNyflyS8T/
zY35NE07XAj4AfDbJhuPOdUV7rkOAr7/BZYF6SteG+Ud29gJMGPa8kdRU/22DazyuB71TV56t5Mx
uAK5KcluQ/22DazyuB71TV56tqcVXdVFVThsHSds
D3wzCSbLuP5pvLRqrquqkuKwf+kCU/j+J22JcC/-
Du4wzmQCtwY8yqUY8zp7I3wvPW4sRGLOh59LYUPUh+PSg6vMfC5BA0vKdOTeCDKwVRxcGz6hUHFgD8Uc+H/qsNL3afR+Bnb7aIJNOu4W+/gSeAP/fS83Lrcf8Kq6Ac1ECSl8mHr0gt2hmUJlVSGZpdz4sn69XAAsSGtZsBX1ANUpZXF5a7qvwoXiD4+9rFgj0aD
6qqRVX1C5o/JHtqy1Q8yjk5+k4gHY4qHTR3DQGJFlGAK41PzfxrfNeD0o0OUaxNt3Fx2IxyBZs3gPKMdBcpOCR9vFHkrEw/ArMsqnnpLqx+/gRTBsm/6gvOvnjoqqRo9Smyd6zg2lLuzU6wgDY+gqS95L9hwp9iQ6BtubHW5IjyYaa3KpT2oVWEAHnpfzQXXh8+
jDwlEnq6vuetj8Xp1bV7VV1G01Qfc4k57lPG4D3Av6+qm6rqiuBI4FX9TS7Qe7qqo+XVX3ACe0782
WG/
rqrurapTaEbHi9PwPKRxxFzv47mgcsrKoLH8h5JHh8ADipqX
```

VcOqugnYg+YexBtoflH9Ds3IFFV1VVXtWlVPBU6jeZDMAcC/
AqcALwKOmmB0ZQ7NSM3ysBHNiNhY3X+gmYK78XI6/3i/
7Vm+HVizXd4E2L+d4vn7JL+n6edGfc6xRM2tq1iy5omu0+9cvfeHjj9vr38BLge+neSKJAe22+fQBKe7
JzhukPtPb+hZvqPP+kT1wwR9TbJGkk+1U0gX0QSntdsgOJX1aEZke9+PCd/
jqrq9XexbZ5JX5/4pxr+nGS3tnRp87bj7YK+i//d+aZ0A/HW7/Nc4qijpQcywKEkz2/
OAtyb5bZLf0oSELyZ5T7/GVfWfVfX0qlqHZkTm8cCP+zR9H/
DvVXUD8GfABe2I0gKg35NLr6EZpeznj9w/
egmwwQTtxlxHE9QASPJwmqmd105x3PJ2DXB4Va3d81qjHTUcb4maW3NZtpqvp/
k+9p6nr3aEbf+q2pxmFPOd7b1119DcczrRw2tG9TCg/
Wl+5naoqtnA2DTksamik9W1kGYktfd9Xqb3OMkmwKeBtwDrVtXaNKOnvVNWNx43hXUuzfd5afTrz9eAb
ZI8CdiNZqqqJD0oGRYlacSSrNY+IGRVYNUkD+0JAc+jGRF5cvu6juYeu09McK6ntFNQZ9OMGC6oqrPGt
dkaeC5wdLvpN8DOSR5Ncw/d1X1O/TngL5Ps2da7bpKxaZYXAS9pR5UeC/
ztuGNvoLkHbczJwL5JntzeH/
gh4Px22uF0+jTwhiQ7pPHwJH+V5BF92p4BPC7JPm3/9wK2prlvcGl9EXhNkq2TrEFzv1xfaR7A89g21C
wC7mlfP6YJnUe0dT80yY7LUMvy9giaUcnftyPU4/s2/
mfhPu3U0i8Chyd5RBv43klzH+DSejhNkPsdQJJ9uf/e3TGPovlDzKx2+vUTaL7PS6PTn6r6E/Blmp/
zH1dVv/+eJOlBwbAoSaN3EM0v2AfSTFu7o902dg/Yb8deNEHhlnbq5tgHuB/
Tc65304zQXENzP9f4J0BCEzTf1v5yDs09g2+l+biKD7XXWUL7C+
+uNCNHN9MExG3b3R+meUrrDTRT8MaPpLwfOKGdDrhnVX0XOBg4lSbwbAG8Yqo3aXmrqgto7lv8OHALzX
TP10zQ9iaaUaL9aabMvhvYraoWLsN1vwV8BPhee83qvdTdJ8S5qpxH8AfgR8sqq+337vdqcZBb6aZkR4r6
WtZQg+AjyM5mfwv4Ezx+3/N+Bl7dJGP9Lc7/gjmp/
LPwP+a1yz82ne34U091a+rP0+L43jgK3bn+2v9Ww/
ob2mU1AlPajFj62SJElaftqnB18KbFBVi0ZdjyQtK0cWJUmSlpM0nwv5TuALBkVJD3YT3RgvSZKkpdA+
rOkGSmierzhtxOZL0gDkNVZIkSZLU4TRUSZIkSVKHYVGSJEmS1LEy3rPovFtJkiRJUmSJElS
h2FRkiRJktRhWJQkSZIkdRgWJUmSJEkdhkVJkiRJUodhUZIkSZLUYViUJEmSJHUYFiVJkiRJHYZFSZIk
SVKHYVGSJEmS1GFYlCRJkiR1rDbqAqbbvHnzOPPMM0ddhiZw5JFHjroE6UFv//
33H3UJkiRpBbDSjSwuXLhw1CVIkiRJ0oy30oVFSZIkSdLUDIuSJEmSpA7DoiRJkiSpw7AoSZIkSeowLE
qSJEmSOgyLkiRJkqQOw6IkSZIkqcOwKEmSJEnqMCxKkiRJkjoMi5IkSZKkDsOiJEmSJKnDsChJkiRJ6j
AsSpIkSZI6DIuSJEmSpA7DoiRJkiSpw7AoSZIkSeowLEqSJEmSOgyLkiRJkqQOw6IkSZIkqcOwKEmSJE
nqMCxKkiRJkjoMi5IkSZKkDsOiJEmSJKnDsChJkiRJ6jAsSpIkSZI6DIuSJEmSpI6hhcUkc5Kck+SSJL
9I8rZ2+zpJzk5yWfv1kRMcP+e221TiJG/
qaXtskqcMqy+SJEmStLIZ5sji3cD+3cD+VfUE4BnAm5NsDRwIfIfCG
wDbBf23ZbYJWq+ukQ+yJJkiRJK5WhhcWqur6q5w6VqdWu6u/qddvg24BNgY2AM4oW12AvDiPoe/
ADi7qm6m+uqluAs4F5wGLgYcPBd43lE5IkiRJ0kpqWu5ZTLTIp8BTIESeFSfQzYGrulZ
X9BuOxvYoD3PPyd5EXhVV03tOIlSZIkaW02tRNHpgkawKnAm+vqkVJBjqmqm7ZraLOAl6U
5ChgLnBiVZ3ep7d5n6IUmSJEkr6GOLLaB7lTgc1X1lXbzDUk2bPdvCNzY59BrgDk97U2Aa3sbJHkT
cPDk23ZbYJWq+ukQ+yJJkiRJK5WhhcUkAc4Gl4xbqPZAXcJ5AZsnhbsnlLDGgAdvmX5tbHPYWYS7
40cP30QzjfWZwF3AXsBB/
eqoqmOraru99ddf1u5IkiRJK5VhjiwmfgLcaU3ICkzgZnuAh97Qv26m1j5
34ksBtwIrAGcC9QwEOXdz8kSZIkaWU0zJHFHYFXATsnuah97QocDDw/yWXA89t1kmyX5LiRRU0kpjmE9DDXAccElVHdWz63Rgfrs8Hzitz+FnAbskeWT7YJtd2m1j5
34ksBtwIrAGcC9QwEOXdz8kSZIkaWU0zJHFHYFXATsnuah97QocATw/yWXA89t1kmyX5N8BqupmmgfX/
KR9fbDdNuZ9wGFVVTQhcjvg58Cnh9gfSZIkSVppDO2exao6j/73HgI8r0/7C4DX9qwfDxw/wfnf0bN+F/
wbnf0bP8J5qRR0mSJEnScjItT0OVJEmSJD24GBYlSZIkSR2GRUmSJElSh2FRkiRJktRhWJQkSZIkdRgW
JUmSJEkdhkVJkiRJUodhUZIkSZLUYViUJEmSJHUYFiVJkiRJHYZFSZIkSVKHYVGSJEmS1GFYlCRJkiR1
GBYlSZIkSR2GRUmSJElSh2FRkiRJktRhWJQkSZIkdRgWJUmSJEkdhkVJkiRJUodhUZIkSZLUYViUJEmS
JHUYFiVJkiRJHYZFSZIkSVLHUoXFJKskmT2sYiRJJM8OUYTHJyUlmJ3k48EvgV0neNfzSJEmSJEmj
MsjI4tZVtQh4MXAGsCnwqmEWJUmSJEkaraGmGkiRJkiSN1CBhcVaSWTRh8bSqWRXWTRh8bSqWjzkmiRJkiRJIzZIWPwUcCXwcODcJG4BhDcJJsA
tw6zKEmSJEnSaA0SFr9eVRtX1a5VVcBvgNcMuS5JkiRJ0ggNEhZP7V1pA+MXhlOOJEmSJGkmWG2iHUm2
Ap4IrJXk73t2zQYeOuzCJEmSJEmjM2FYBLYEdgPWBv62Z/ttwD8OsyhJkiRJ0mhNGBar6mvA15I8
s6p+PI01SZIkSZJGbLKRxQVflvA4tSPbuL9rFz4nNp12jTlehxCUsHHOBwfh2wUkjmwPngYsHfH3B2UpapdoXuMDmQVpkRZiNBhhPLqbb42b7bphnDzv
aaxJkiRJkkjsRJkjQuwbWvowT8Ns4M8P5aGjqMwSZ+IZSvXz8xFSg7rT2k3TtSjuRrtsBpbKZkwl5DPx4xASFsL+HKFgv4Xf1+wyUIb0EmGjmJs2nIx5rRPLsOIj2KoJSpJGVNUkoVbG7cNSCmSnqgV7RWmKJJgEpgHNUDndScqMbvp3S+
aaxJkiRJkjRik40sjrk8yT8Am/
a2ryofciNJkiRJK6hBwuJpwA+A7wD3DLccSZIkSdJMMEhYXKOq3jNz3jP0SiRJkiRJM8YgH53fjSSS7Dr0SdKMMUhYfBtNYPxNYPxTkkVJbkunaNiFSZIkSZKkDsGZ8ppqFX1iOkoRJIkSZI0cw5spjGXyc5uF2fk2T74Z
cmSZIkSRqVQaahfhJ4JrBPu/
4H4BNDq0iSJEmSNHKDPA11h6p6apKfAlTVLUlWG3JdkiRJkqQRGmRk8c9JVgUKIMn6wL1DrUqSJEmSNFKDhMWPAF8FHp3k3wHOAz401KokSZIkSSM11qlVVaqVlVLjkiRJKqqlBnob6uSQSAS8DArY4qi4ZemWSJEmSpJGZMCwmWc7
lBwuJHga8Cj0pyOHAe8KGhViVJkiRJGqlBnob6uSQXAs8DAry4qi4ZemWSJEmSpJGZMCwmWadn9Ubg87
37qurmYRYmSZIkSRqdyUYWL6S5TzHAXOCWdnlt4Gpgs6FXJ0mSJEkaiQnvWayqzapqc+AsYPeqWq+q1g
V2A74yXQVKkiRJkqbfIA+4eXpVnTG2UlXfAp4z1UFJjk9yY5KLe7Ke7a9P8m1SS5qX7tOcOy8JL9KcnmSA3
u2fy7Jz5J8qGfbwUn2GKAfkiRJkqQBDRIWFyY5KMmmSTZJ8l7gpgGO+wr8/2D1fVk9vXGeN3th/
T8QnghcDWwN5Jtk6yDUBVbQP8eZK1kmwIbF9Vpw1QjyRJkiRpQIOExb2B9Wk+PuNrwKPabZOqqnOBm8
IzvbA5VV1RVXdBXwB2ANYDDwsyAQ4B7gA8C71uGa0iSJEmSJjHIR2fcDLxtOV1vY+C3PevXADtU1SO
bvzFwTc/6AmCHqrokydXAw3TxDwsySwS6AHX7oIC0gP5V6fB0gTf0jWB4B3WjFI7C3R2fDG91TchNg
uq2nkZrnc0cCjNU1YPBY4E/mb8JT19eB3lu7ScqoB0BcJTm7zSWBE6tJ3mWcMmgWFDDmKtrbe+b/
QA2X3NNLj70UJ508MH37b/kF7Mzp2zLUe8SgUjkW2MfVJbhmOZKnHy7lDn6erdE8+iKaLmiF4l+lyBpt/
3iQw9l0SWTf0zlnJe8hDkve9l969d8+ctc85XJnyk0+wlPWCH69Jhr7v87wZ3rrcfvdtrpvvXVFy5k/
fPOm7K+BS9+8ZLn/NrXpjzmdzvtxJ3rrXff+vrnncfqCxdOesyirbZi0VZb3bc++9JLmX3ppZOM/
uZ58aw+jTDy+8sHPMivL/iF726X72qWGfGvapYZ/

uZ58a9qkxvk+TmTIsAl8CjgH+nWbq5zKrqhvGlpN8GvhGn2YLgDk9648Brutt0D7Q5gLg4cCTqmrPJOc
m+VxV3d7nuscCxwJsufrqNf4NXLxoETedf/
5S92eQYxYvWrTE+qJLLpnyuHV32GGJ9duvvXap63uw9mmNSc6xyp13ssZ1103Sor9BjlnlzjuXWF994c
Ipj7tjo42WWJ+1aNFS12ef7mefGsujTzcNcN0H6/8jprqufWrYp4Z9atin+69rnxr2qWGfpjZIWLy7qo
4e+IyTSLJhVV3frv4/4OI+zX4CbJlkM+Ba4BXAfbE6ySyaabG7AVvSjjrS3H/
5EKATFnutuuaazH7CE5bYNmv27KV608YMcsys2bOXWB9/7X7W2HjjzvpU11pR+nTNuJHFXveuvjq3j/
sleRCDHHPv6qsvsT7+2v0sHvc+LJ49e8pr2aeJ2af+1+5nqj7NmTNn/CErzP8jJjuvfbqffep/
7X7sU//z2qf72af+1+7HPvU/70zv02RSVZM3SN4P3EjzgJv7/
gTe3ss42XGfB54LrAfcABzSrj+ZJuBdCby+qq5PshHw71W1a3vsrsBHgFWB46vq8J7zvh24papOSBLgZ
OBJwBlV9Z6pOrzddtvVBRdcMFUzjciRRx456hKkB739999/1CVIkqSZrd+tfx2DjCzOb7+
+q2dbAZtPdlBV9Xti6nETtL0O2LVn/
Qyg87Ea7b6P9CwXAzyZVZIkSZK0dAZ5Gupm01GIJEmSJGnmGORpqLOANwLPbjd9H/
hUVS0eYl2SJEmSpBEaZBrq0cAs4JPt+qvaba8dVlGSJEmSpNEaJCw+vaq27Vn/XpL/
HVZBkiRJkqTRW2WANvck2WJsJcnmPMDPW5QkSZIkzWyDjCy+CzgnyRU0j1jdBNh3qFVJkiRJkkZqkKeh
fjfJlsDjacLipVV15xSHSZIkSZIexAZ5GupDgTcBO9F8vuIPkhxTVX8adnGSJEmSpNEYZBrqicBtwTwMfa
9b2Bk4CXD6soSZIkSdJoDRIWHz/
uaajn+DRUSZIkSVqxDfI01J8mecbYSpIdgP8aXkmSJEmSpFEbZGRxB+DVSa5u1+cClyT5OVBVtc3QqpM
kSZIkjcQgYXHe0KuQJEmSJM0og0xDXQ34bVVdBWwG7AHcWlVXtdskSZIkSSuYQcLiqcA9SR4LHEcTGE8
ealWSJEmSpJEaJCzeW1V3Ay8BPlJV7wA2HG5ZkiRJkqRRGiQsLk6yN/
Bq4BvttlnDK0mSJEmSNGqDhMV9gWcCh1fVb5JsBnx2uGVJkiRJkkZpyqehVtUvk7yH5iMzqKrfAEcMuz
BJkiRJ0uhMObKYZHfgIuDMdv3JSU4fdmGSJEmSpNEZZBrq+4Htgd8DVNVFNE9ElSRJkiStoAYJi3dX1a
3jttUwipEkSZIkzQxT3rMIXJxkH2DVJFsCbwV+ONyyJEmSJEmjNMjI4t8BTwTuBE4E4GbgXePsyiJEmSJE
mjNenIYpJVgQ9U1buA905PSZIkSZKkUZt0ZLGq7gGeNk21SJIkSZJmiEHuWfxp+1EZXwL+OLaxqr4ytK
okSZIkSSM1SFhcB7gJ2LlnWwGGRUmSJElaQU0ZFqtq3+koRJIkSZI0cwzyNFRJkiRJ0krGsChJkiRJ6p
gwLCZ5W/
t1x+krR5IkSZI0E0w2sjh2r+LHpqMQSZIkSdLMMdkDbi5JciWwfpKf9WwPUFW1zdCqkyRJkiSNzIRhsa
r2TrIBcBbwwukrSZIkSZI0apN+dEZV9u/Rm7SUYuHXpkkSZIkaWSm/
JzFJM8BTgSupJmCOifJ/
Ko6d8i1SZIkSZJGZMqwCBwF7FJVvwJI8jtlmYJEmSJGl0BvmcxVljQRGgqv4PmDW8kiRJkiRJo
zbIyOIFSY4DTmrXXwlcOLySJEmSJEmjNkhYfCPwZuCtNPcsnsv3f1jkC5eG1+2DyKj6anYJPe9lW18xDrkiRJGolLL7101CVID2pbbbXVqEvQcjLI01C/
BBwDfBq4Z7jlSJIkSZJmgkHC4t1VdfTQK5EkSZIkzRiD3LP49SFP49SRvSrJhknXGXlMdlOT4JDcmubn2zpJ
zk5yWfv1kRMcO79tc1mS+e221ZOcmeTiJG/qaXtkcM0A9JkiRJ0oAGCYvzae5Z/
CFwYfu6YIDjPgPMG7ftQOC7VbUl8N12/fQltED0E2AHYHjikDZUvaK+9DbBf23ZbYJWq+ukA9UiSJEmSB
jTlNNSq2mxZTlxV5ybZdNzzmPYDntssnAN8H3jOuzQuAs6vqZoAkZ9OEzt8DDxtX86HAG5alPkmSJEnSx
KYcWUwyK8lbk3y5fb0lyaxlvN6jq+o6gPbrX/VpsxGwoGd9Ybvt28AGwPnAB5O8ELiwqq6d6qJJ9ktyQZILFnb
ro/
q02Ri4pmd9QbvtbGAD4Hzgn5O8CLiwqq5bxlokSZIkSRMY5AE3RwOzgE+2669qt712SDWlz7aaqruBfa
AJsMBZwIuSHAXMBU6sqtP7njDZj3bq6ty5c4dStCRJkiStSAYJi0+vqm171r+X5D+X8Xo3JNmwqq5Psi
FwY582C7h/qirAY2imq/
Z6E8001mcCdwF7AT8C+obFqjoWOBZgu+22q2WsXZIkSZJWGoM84OaeJFuMrSTZnGX/vMXTgfnt8nzga33anAXsmuSR7YNtdm23jV3/kcALgJOANYF7gQJWX8lkRUJ7JS6GDTXk1XK4r8wgQ0jvo0LTAnV9PTTB9SqK/
v1tD5tzgJ2SfLI9sE2u7Tbxq7/
SGA34ERgDeBeoICHLmNNkiRJkqRxBhlZfBdwTpIraKaSbgLsO9VBSU6kebjNekkW0jzh9Agnqf/P0PhmuYHXhlAmuaevc8rZfs5T0gSIs3+qcCRJf/e/OM2Ts3Rdh
WMjw8vxCOUenMyaLn1KRp7/mRG+YhMTgFFaQ4MKOtWQSFnJ+qY/zrCbmEsuMUELUdSp4zA4Cx5Dpa+C72ZaGtgJz/hu5lR6XAP8RKp0s6rL1P08QG0mUZoT9Khp/GBj/fCOdH8sSH1vJUj0gb4SYbDy6VNXRsX/
hOePuvWsC5NrdnQ1tOoWA3cX6ps3JS+vdvpcGX8LGvbWhKcYvTWHsxHl0hrXMvSGUAkFI6CZjHXZP/RjIb+jIVkiVJkhsHtt5V6J8y4W8IYdu8HoM0XVgfbxGUoRfAZZGUkHaLM25Ol+4qOjGmuG5gGZvkNOAi9fuGpdPXs3Qx0QbDhzEUJ1nYFG8j0b+8GYvS8sWkBQX9fIBMiLfaHlwfEHiG1jTrkl5jpMN4Xr0PR8/SL2SEwPEbKwsVtGWaDmTfRjcNNdDa7bQaNBu9T02J8h/VXxIKCRhTpLIdhkT7Fxyn3tt5Ozrq+PnwwF3HADT5qaCzknfLyQFLYm/dTJ5dRQb9/7UMqnX5+wg3uMMkBZfAmHmtwnhmEJQUnvYEUJ0jMGC+0vx59Urlmk/Ey0FhfEnujPsrc3avZWYBOWGxDEnPbQKnXLbUtkb3jCP7P2ky9HSqvQIIcpGrk3apUsXttqkNntvFp4w1jVQqpo+WqUSa09xHFl9cTtr2RbtuMSqnk7jTUtzbYnWpVPq1D4OGi6XbVYZHAi7CEBa3cbtN1zbN/8vtYCBdazcKZVEP7CpUXJL6zfxdwyiY8+NmMYHGo+V4UP/lHbiSe4B7+n+T/3TDM6E0Wb97WDkfE6NKL1MT3Kj0oe9TLyiwb3UOBQDoYf4jBmpz8nyg/

```
HJNNQ5UkSZIkraQMi5IkSZKkDsOiJEmSJKnDsChJkiRJ6jAsSpIkSZI6DIuSJEmSpA7DoiRJkiSpw7Ao
SZIkSeowLEqSJEmSOkYSFpNcmeTnSS5KckGf/Uny0SSXJ/lZkqe22x+f5MIk/
5vkme221ZJ8J8ka090PSZIkSVpRrTbCa/
9FVS2cYN8LgS3b1w7A0e3X1wMHAlcCRwAvBd4InFRVtw+7YEmSJElaWYwyLE5mD+DEqirgv5OsnWRDYD
HwMGANYHGStYHdgReMrlRJkiRJWvGMKiwW8O0kBXyqqo4dt39j4Jqe9QXttk8AJwKr04wyvg84vA2VE0
qyH7AfwNy5c5dLByRJkiRpRTaqB9zsWFVPPpZlu+uYkzx63P32Oqaq6uqeW1XPBG4HNgIuTXJSklOSPK
7fxarq2Krarqq2W3/99ZdrRyRJkiRpRTSSsFhV17Vfbw+Cmw/
rskCYE7P+mOA68a1ORw4GHgr8DngkPaOEQBJAAAHLklEQVQlSZIkSXqApj0sJnl4kkeMLQO7ABePa3Y6
8Or2qajPAG6tqut7zvEc4Nqquozm/
sV7gXvaZUmSJEnSAzSKexYfDXw1ydj1T66qM5O8AaCqjgHOAHYFLqeZbrrv2MFpDjwI2LPddCzNyOJqN
E9GlSRJkiQ9QNMeFqvqCmDbPtuP6Vku4M0THF/Ac3vWLwWeOspaSJIBc0KgrZ6eHZ/xr6acNKVDq2vr+dl/
A83vWLwGeuvwrlSRJkqSV16gecCNJkiRJmsEMi5IkSZKkDsOiJEmSJKnDsChJkiRJ6jAsSpIkSZI6DIu
SJEmSpA7DoiRJkiSpw7AoSZIkSeowLEqSJEmSOgyLkiRJkqQOw6IkSZIkqcOwKEmSJEnqMCxKkiRJkjo
Mi5IkSZKkDsOiJEmSJKnDsChJkiRJ6jAsSpIkSZI6DIuSJEmSpA7DoiRJkiSpw7AoSZIkSeowLEqSJEm
SOgyLkiRJkqQOw6IkSZIkqcOwKEmSJEnqMCxKkiRJkjoMi5IkSZKkDsOiJEmSJKnDsChJkiRJ6jAsSpI
kSZI6DIuSJEmSpA7DoiRJkiSpw7AoSZIkSeowLEqSJEmSOgyLkiRJkqQOw6IkSZIkqcOwKEmSJEnqMCx
KkiRJkjoMi5IkSZKkDsOiJEmSJKnDsChJkiRJ6jAsSpIkSZI6DIuSJEmSpA7DoiRJkiSpw7AoSZIkSeo
wLEqSJEmSOgyLkiRJkqQOw6IkSZIkqcOwKEmSJEnqGElYTDIvya+SXJ7kwD77V09ySrv//
CSbttt3TPKzJD9J8J8th229pJzkqS6e2FJEmSJK24pj0sJlkV+ATwQmBrYO8kW49r9rfALVX1WODDwD+12
/cHXgr8A/
DGdtvBwIeqqoZduyRJkiStLEYxsrg9cHlVXVFdwFfAPYY12YP4IR2+cvA89qRw8XAw4A1gMVJtgA2rq
r/nJ7SJUmSJGnlsNoIrrkxcE+gJgh4naVNXdSW4F1gX+ETgWuAN4Ffcv/NCOLk0qyH7Bfu/
qHJL96IB2QVnLrAQtHXYQmdsABB4y6BEkaNv8tkh6YM6tq3lSNRhEW+91bOH4Kad82VXUR8AyAJM8Grm
sWcwrNqOP+VXVDnwOPpQmZkh6gJBdU1XajrkOStPLy3yJpeoxiGuoCYE7P+mOA68a1ORw4GHgr8DngkPaOEQBJAAAHLklEQVQlSZIkSXqApj0sJnl4kkeMLQO7ABePa3Y6
8Or2qajPAG6tqut7zvEc4Nqquozm/
sV7gXvaZUmSJEnSAzSKexYfDXw1ydj1T66qM5O8AaCqjgHOAHYFLqeZbrrv2MFpDjwI2LPddCzNyOJqN
E9GlSRJkiQ9QNMeFqvqCmDbPtuP6Vku4M0THF/
```

```
    "# train\n",
    "df.replace(clean_dict, inplace=True)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 96,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Deal with strange categories\n",
    "\n",
    "clean_dict_test = clean_dict.copy()\n",
    "\n",
    "for feature in clean_dict_test:\n",
    "    \n",
    "    for category in df_test[feature].unique():\n",
    "        if category not in clean_dict_test[feature].keys():\n",
    "            clean_dict_test[feature].update({category: 0})\n",
    "        \n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 97,
   "metadata": {
    "scrolled": false
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Education</th>\n",
       "      <th>Marital_Status</th>\n",
       "      <th>Income</th>\n",
       "      <th>Kidhome</th>\n",
       "      <th>Teenhome</th>\n",
       "      <th>Recency</th>\n",
       "      <th>MntWines</th>\n",
       "      <th>MntFruits</th>\n",
       "      <th>MntMeatProducts</th>\n",
       "      <th>MntFishProducts</th>\n",
       "      <th>...</th>\n",
       "      <th>R_MntFishProducts</th>\n",
       "      <th>R_MntSweetProducts</th>\n",
       "      <th>R_MntGoldProds</th>\n",
     "      <th>RFM</th>\n",
     "      <th>R_NumWebPurchases</th>\n",
     "      <th>R_NumCatalogPurchases</th>\n",
     "      <th>R_NumStorePurchases</th>\n",
     "      <th>R_Mnt_NumWebPurchases</th>\n",
     "      <th>R_Mnt_NumCatalogPurchases</th>\n",
     "      <th>R_Mnt_NumStorePurchases</th>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>ID</th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "    </tr>\n",
     "  </thead>\n",
     "  <tbody>\n",
     "    <tr>\n",
     "      <th>2895</th>\n",
     "      <td>0</td>\n",
     "      <td>1</td>\n",
     "      <td>49980.0</td>\n",
     "      <td>0</td>\n",
     "      <td>1</td>\n",
     "      <td>79</td>\n",
     "      <td>104</td>\n",
     "      <td>1</td>\n",
     "      <td>54</td>\n",
     "      <td>13</td>\n",
     "      <td>...</td>\n",
     "      <td>0.066667</td>\n",
     "      <td>0.046154</td>\n",
     "      <td>0.071795</td>\n",
     "      <td>422</td>\n",
     "      <td>0.333333</td>\n",
     "      <td>0.111111</td>\n",
     "      <td>0.555556</td>\n",
     "      <td>0.015385</td>\n",
     "      <td>0.005128</td>\n",
     "      <td>0.025641</td>\n",
     "    </tr>\n",
     "  </tbody>\n",
     "</table>\n",
     "<p>1 rows Ã 46 columns</p>\n",
     "</div>"
    ],
    "text/plain": [
       "      Education  Marital_Status   Income  Kidhome  Teenhome  
Recency  \\\n",
       "ID                                                                    \
n",
       "2895          0               1  49980.0        0         1       79   \
n",
       "\n",
       "      MntWines  MntFruits  MntMeatProducts  MntFishProducts  \\\n",
       "ID                                                           \n",
       "2895       104          1               54               13   \n",
       "\n",
       "               ...              R_MntFishProducts  
R_MntSweetProducts  \\\n",
       "ID             ...                                                    \
n",
       "2895           ...                      0.066667            0.046154   \
n",
       "\n",
       "      R_MntGoldProds  RFM  R_NumWebPurchases  R_NumCatalogPurchases  \\\
n",
       "ID                                                                   \
n",
       "2895        0.071795  422           0.333333               0.111111   \
n",
       "\n",
       "      R_NumStorePurchases  R_Mnt_NumWebPurchases  
R_Mnt_NumCatalogPurchases  \\\n",
       "ID                                               
\n",
       "2895             0.555556               0.015385  
0.005128   \n",
       "\n",
       "      R_Mnt_NumStorePurchases  \n",
       "ID                            \n",
       "2895                 0.025641  \n",
       "\n",
       "[1 rows x 46 columns]"
      ]
     },
     "execution_count": 97,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# test\n",
    "\n",
    "df_test.replace(clean_dict_test, inplace=True)\n",
    "\n",
    "df_test.head(1)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 98,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "array(['AcceptedCmp1', 'AcceptedCmp2', 'AcceptedCmp3', 'AcceptedCmp4',\
n",
       "       'AcceptedCmp5', 'AcceptedTot', 'Age', 'Childnum', 'Complain',\n",
       "       'Days_as_cust', 'Education', 'Frq', 'Income', 'Kidhome',\n",
       "       'Marital_Status', 'MntFishProducts', 'MntFruits',
'MntGoldProds',\n",
       "       'MntMeatProducts', 'MntSweetProducts', 'MntWines', 'Mnt_tot',\n",
       "       'NumCatalogPurchases', 'NumDealsPurchases', 'NumStorePurchases',\
n",
       "       'NumWebPurchases', 'NumWebVisitsMonth', 'RFM', 'R_DealFrq',\n",
       "       'R_MntFishProducts', 'R_MntFrq', 'R_MntFruits',
'R_MntGoldProds',\n",
       "       'R_MntIncome', 'R_MntMeatProducts', 'R_MntSweetProducts',\n",
       "       'R_MntWines', 'R_Mnt_NumCatalogPurchases',\n",
       "       'R_Mnt_NumStorePurchases', 'R_Mnt_NumWebPurchases',\n",
       "       'R_NumCatalogPurchases', 'R_NumStorePurchases',\n",
       "       'R_NumWebPurchases', 'Recency', 'Response', 'Teenhome'],\n",
       "      dtype=object)"
      ]
     },
     "execution_count": 98,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "np.sort(df.columns)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Variable Worth\n",
    "---"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "* Chi2\n",
    "* LinReg\n",
    "* Random Forest\n",
    "* RFE (Logistic Reg)\n",
    "* Extra tree classifier\n",
    "* Decision Trees\n",
    "* VI\n",
    "* Eli5 Permutations"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 99,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Encode Categorical\n",
    "#df = encode_categorical(cat_merged,
cat_merged.select_dtypes(include=[\"object\", \"category\"]).columns)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 100,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Split data into features and Labels\n",
    "x = df[df.columns.difference(['Response'])]\n",
    "y = df['Response']\n",
    "\n",
    "# Normalize Data\n",
    "from sklearn.preprocessing import MinMaxScaler\n",
    "scaler = MinMaxScaler()\n",
    "x_ = scaler.fit_transform(x)\n",
    "x = pd.DataFrame(x_, columns = x.columns, index=x.index)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "#### plot importance"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 101,
   "metadata": {},
   "outputs": [],
   "source": [
    "# 4 rows 2 cols side by side"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 102,
   "metadata": {},
   "outputs": [],
   "source": [
    "def plot_importance(df,measure, top = 20):\n",
    "    to_plot = pd.DataFrame(df[measure]).head(top).sort_values(by=measure)\
n",
    "\n",
    "    # 1 font\n",
    "    plt.rcParams['font.family'] = 'sans-serif'\n",
    "    plt.rcParams['font.sans-serif'] = 'Helvetica'\n",
    "\n",
    "    # 2 axis style\n",
    "\n",
    "    plt.rcParams['axes.edgecolor']='#333F4B'\n",
    "    plt.rcParams['axes.linewidth']=0.8\n",
    "    plt.rcParams['xtick.color']='#333F4B'\n",
    "    plt.rcParams['ytick.color']='#333F4B'\n",
    "\n",
    "    # plot\n",
    "    my_range=range(1,len(to_plot.index)+1)\n",
    "    fig, ax = plt.subplots(figsize=(5,6))\n",
    "    plt.gca().spines['right'].set_visible(False)\n",
    "    plt.gca().spines['top'].set_visible(False)\n",
    "\n",
    "    plt.hlines(y=my_range, xmin=0, xmax = to_plot[measure], color='grey', 
alpha=0.4)\n",
    "    plt.plot(to_plot[measure], my_range, \"o\", markersize=6, 
color='#007acc', alpha=0.6)\n",
    "    plt.yticks(my_range, to_plot.index,fontsize=10)\n",
    "    # set labels style\n",
    "    ax.set_title(measure, fontweight = 'bold')\n",
    "    ax.set_xlabel('Importance', fontsize=10, fontweight='black', color = 
'#333F4B')\n",
    "    ax.set_ylabel('')\n",
    "    # change the style of the axis spines\n",
    "    ax.spines['top'].set_color('none')\n",
    "    ax.spines['right'].set_color('none')\n",
    "    ax.spines['left'].set_smart_bounds(True)\n",
    "    ax.spines['bottom'].set_smart_bounds(True)\n"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### Chi2"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 103,
   "metadata": {},
   "outputs": [],
   "source": [
    "continuous_flist =
list(df.select_dtypes(include=[\"number\"]).drop([\"Response\"],
axis=1).columns)\n",
    "categorical_flist = list(df.select_dtypes(include=[\"object\"]).columns)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 104,
   "metadata": {
    "scrolled": false
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Chi-Squared</th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>AcceptedTot</th>\n",
       "      <td>1</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>AcceptedCmp5</th>\n",
       "      <td>2</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>R_MntFrq</th>\n",
       "      <td>3</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Mnt_tot</th>\n",
       "      <td>4</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>R_NumStorePurchases</th>\n",
       "      <td>5</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "                     Chi-Squared\n",
       "AcceptedTot                    1\n",
       "AcceptedCmp5                   2\n",
       "R_MntFrq                       3\n",
       "Mnt_tot                        4\n",
       "R_NumStorePurchases            5"
      ]
     },
     "execution_count": 104,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "target = \"Response\"\n",
    "chisq_rank=chisq_ranker(df, continuous_flist, categorical_flist, target)\
n",
    "chisq_rank\n",
    "df_chisq_rank = pd.DataFrame(chisq_rank, index=[\"Chi-Squared\", \"p-
value\"]).transpose()\n",
    "df_chisq_rank.sort_values(\"Chi-Squared\", ascending=False, inplace=True)\
n",
    "df_chisq_rank[\"valid\"]=df_chisq_rank[\"p-value\"]<=0.05\n",
    "# chi \n",
    "chi_sq = pd.DataFrame(df_chisq_rank['Chi-
Squared']).rank(ascending=False).astype('int64')\n",
    "chi_sq.head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### Linear Regression"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 105,
   "metadata": {},
   "outputs": [],
   "source": [
    "r_squared = []\n",
    "coef = []\n",
    "p_val = []\n",
    "\n",
    "for var in x.columns: \n",
    "    x_ = x[var]\n",
    "    mod = sm.OLS(y, sm.add_constant(x_)).fit()\n",
    "    r_squared.append(np.round(mod.rsquared, decimals = 3))\n",
    "    coef.append(np.round(mod.params[1], decimals = 3))\n",
    "    p_val.append(mod.pvalues[1])"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 106,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>LinReg</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>variable</th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>AcceptedTot</th>\n",
       "      <td>1</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>AcceptedCmp5</th>\n",
       "      <td>2</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>AcceptedCmp1</th>\n",
       "      <td>3</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>R_NumStorePurchases</th>\n",
       "      <td>4</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>MntMeatProducts</th>\n",
       "      <td>5</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "                     LinReg\n",
       "variable                   \n",
       "AcceptedTot               1\n",
       "AcceptedCmp5              2\n",
       "AcceptedCmp1              3\n",
       "R_NumStorePurchases       4\n",
       "MntMeatProducts           5"
      ]
     },
     "execution_count": 106,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# DataFrame\n",
    "LinReg = pd.DataFrame({\"variable\":x.columns, \"R2\": r_squared, \"coef\":
coef, 'pvalue':p_val})\n",
    "LinReg['valid']  = LinReg['pvalue'] <=0.05\n",
    "LinReg.sort_values(by=\"R2\", ascending = False,inplace=True)\n",
    "LinReg.set_index(\"variable\", inplace=True)\n",
    "'''\n",
    "print(LinReg)\n",
    "clrs = ['gray' if x else 'lightgray' for x in LR['valid'] ]\n",
    "plt.subplots(figsize=(7,12))\n",
    "plt.gca().spines['top'].set_visible(False)\n",
    "plt.gca().spines['right'].set_visible(False)\n",
    "sns.barplot(y = LR.index, x = 'R2', data = LinReg,\n",
    "            orient = \"h\", palette=clrs, edgecolor = \"black\")\n",
    "plt.title(\"Dependent Variable: \"+target, loc='left',fontweight
= \"bold\")\n",
    "plt.xlabel('R Squared')\n",
    "plt.ylabel('Dependent Variables')\n",
    "plt.show()\n",
    "'''\n",
    "LinReg_ = pd.DataFrame(LinReg.R2)\n",
    "LinReg = pd.DataFrame(LinReg.R2).rank(ascending=False).astype('int64')\n",
    "LinReg.rename(index=str, columns={\"R2\": \"LinReg\"},inplace=True)\n",
    "LinReg.head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### Random Forest"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 107,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>RF</th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>AcceptedTot</th>\n",
       "      <td>1</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Days_as_cust</th>\n",
       "      <td>2</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>R_Mnt_NumStorePurchases</th>\n",
       "      <td>3</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Income</th>\n",
       "      <td>4</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>RFM</th>\n",
       "      <td>5</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "                         RF\n",
       "AcceptedTot               1\n",
       "Days_as_cust              2\n",
       "R_Mnt_NumStorePurchases   3\n",
       "Income                    4\n",
       "RFM                       5"
      ]
     },
     "execution_count": 107,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# Random Forest\n",
    "from sklearn.ensemble import RandomForestClassifier\n",
    "from sklearn.metrics import accuracy_score\n",
    "clf = RandomForestClassifier(random_state=seed)\n",
    "clf.fit(x,y)\n",
    "preds = clf.predict(x)\n",
    "rf_ = pd.DataFrame(clf.feature_importances_, columns = [\"RF\"],
index=x.columns)\n",
    "rf = pd.DataFrame(clf.feature_importances_, columns = [\"RF\"],
index=x.columns).rank(ascending=False).astype('int64')\n",
    "rf.sort_values(by='RF').head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### RFE "
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 108,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>RFE</th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>R_NumStorePurchases</th>\n",
       "      <td>1</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>AcceptedTot</th>\n",
       "      <td>2</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Days_as_cust</th>\n",
       "      <td>3</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>RFM</th>\n",
       "      <td>4</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>R_MntMeatProducts</th>\n",
       "      <td>5</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "                     RFE\n",
       "R_NumStorePurchases    1\n",
       "AcceptedTot            2\n",
       "Days_as_cust           3\n",
       "RFM                    4\n",
       "R_MntMeatProducts      5"
      ]
     },
     "execution_count": 108,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# Recursive Feature Elimination\n",
    "from sklearn.feature_selection import RFE\n",
    "from sklearn.linear_model import LogisticRegression\n",
    "model = LogisticRegression(random_state=seed)\n",
    "rfe = RFE(model, 1)\n",
    "fit = rfe.fit(x, y)\n",
    "rfe = pd.DataFrame(rfe.ranking_, columns = [\"RFE\"], index=x.columns)\n",
    "rfe_ = rfe.copy().sort_values(by='RFE',ascending=False)\n",
    "rfe.sort_values(by='RFE').head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### Extra trees classifier"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 109,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Extratrees</th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>AcceptedTot</th>\n",
       "      <td>1</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>RFM</th>\n",
       "      <td>2</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Days_as_cust</th>\n",
       "      <td>3</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>AcceptedCmp1</th>\n",
       "      <td>4</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>AcceptedCmp5</th>\n",
       "      <td>5</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "              Extratrees\n",
       "AcceptedTot            1\n",
       "RFM                    2\n",
       "Days_as_cust           3\n",
       "AcceptedCmp1           4\n",
       "AcceptedCmp5           5"
      ]
     },
     "execution_count": 109,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# Extra Trees Classifier\n",
    "from sklearn.ensemble import ExtraTreesClassifier\n",
    "model = ExtraTreesClassifier(random_state = seed)\n",
    "model.fit(x, y)\n",
    "extc_ = pd.DataFrame(model.feature_importances_, columns =
[\"Extratrees\"], index=x.columns)\n",
    "extc = pd.DataFrame(model.feature_importances_, columns = [\"Extratrees\"],
index=x.columns).rank(ascending=False).astype('int64')\n",
    "extc.sort_values(by='Extratrees').head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### Decision Trees"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 110,
"metadata": {},
"outputs": [
 {
  "data": {
   "text/html": [
    "<div>\n",
    "<style scoped>\n",
    "    .dataframe tbody tr th:only-of-type {\n",
    "        vertical-align: middle;\n",
    "    }\n",
    "\n",
    "    .dataframe tbody tr th {\n",
    "        vertical-align: top;\n",
    "    }\n",
    "\n",
    "    .dataframe thead th {\n",
    "        text-align: right;\n",
    "    }\n",
    "</style>\n",
    "<table border=\"1\" class=\"dataframe\">\n",
    "  <thead>\n",
    "    <tr style=\"text-align: right;\">\n",
    "      <th></th>\n",
    "      <th>Dt</th>\n",
    "    </tr>\n",
    "  </thead>\n",
    "  <tbody>\n",
    "    <tr>\n",
    "      <th>AcceptedTot</th>\n",
    "      <td>1</td>\n",
    "    </tr>\n",
    "    <tr>\n",
    "      <th>Days_as_cust</th>\n",
    "      <td>2</td>\n",
    "    </tr>\n",
    "    <tr>\n",
    "      <th>Recency</th>\n",
    "      <td>3</td>\n",
    "    </tr>\n",
    "    <tr>\n",
    "      <th>RFM</th>\n",
    "      <td>4</td>\n",
    "    </tr>\n",
    "    <tr>\n",
    "      <th>R_MntMeatProducts</th>\n",
    "      <td>5</td>\n",
    "    </tr>\n",
    "  </tbody>\n",
    "</table>\n",
    "</div>"
   ],
   "text/plain": [
    "                   Dt\n",
    "AcceptedTot         1\n",
    "Days_as_cust        2\n",
    "Recency             3\n",
    "RFM                 4\n",
    "R_MntMeatProducts   5"
   ]
  },
  "execution_count": 110,
  "metadata": {},
  "output_type": "execute_result"
 }
```

```
   ],
   "source": [
    "# Decision Tree\n",
    "from sklearn import tree\n",
    "from sklearn.tree import DecisionTreeClassifier\n",
    "dtree = DecisionTreeClassifier(criterion=\"entropy\",random_state=seed)\n",
    "dtree = dtree.fit(x, y)\n",
    "dtree_ = pd.DataFrame(dtree.feature_importances_, columns = [\"Dt\"],
index=x.columns)\n",
    "dtree = pd.DataFrame(dtree.feature_importances_, columns = [\"Dt\"],
index=x.columns).rank(ascending=False).astype('int64')\n",
    "dtree.sort_values(by='Dt').head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "## WOE AND IV"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 111,
   "metadata": {},
   "outputs": [],
   "source": [
    "import pandas.core.algorithms as algos\n",
    "from pandas import Series\n",
    "import scipy.stats.stats as stats\n",
    "import re\n",
    "import traceback\n",
    "import string\n",
    "\n",
    "max_bin = 10\n",
    "force_bin = 3\n",
    "\n",
    "# define a binning function\n",
    "def mono_bin(Y, X, n = max_bin):\n",
    "    \n",
    "    df1 = pd.DataFrame({\"X\": X, \"Y\": Y})\n",
    "    justmiss = df1[['X','Y']][df1.X.isnull()]\n",
    "    notmiss = df1[['X','Y']][df1.X.notnull()]\n",
    "    r = 0\n",
    "    while np.abs(r) < 1:\n",
    "        try:\n",
    "            d1 = pd.DataFrame({\"X\": notmiss.X, \"Y\":
notmiss.Y, \"Bucket\": pd.qcut(notmiss.X, n)})\n",
    "            d2 = d1.groupby('Bucket', as_index=True)\n",
    "            r, p = stats.spearmanr(d2.mean().X, d2.mean().Y)\n",
    "            n = n - 1 \n",
    "        except Exception as e:\n",
    "            n = n - 1\n",
    "\n",
    "    if len(d2) == 1:\n",
    "        n = force_bin         \n",
    "        bins = algos.quantile(notmiss.X, np.linspace(0, 1, n))\n",
    "        if len(np.unique(bins)) == 2:\n",
    "            bins = np.insert(bins, 0, 1)\n",
    "            bins[1] = bins[1]-(bins[1]/2)\n",
    "        d1 = pd.DataFrame({\"X\": notmiss.X, \"Y\": notmiss.Y, \"Bucket\":
pd.cut(notmiss.X, np.unique(bins),include_lowest=True)}) \n",
    "        d2 = d1.groupby('Bucket', as_index=True)\n",
    "    \n",
    "    d3 = pd.DataFrame({},index=[])\n",
    "    d3[\"MIN_VALUE\"] = d2.min().X\n",
    "    d3[\"MAX_VALUE\"] = d2.max().X\n",
    "    d3[\"COUNT\"] = d2.count().Y\n",
    "    d3[\"EVENT\"] = d2.sum().Y\n",
    "    d3[\"NONEVENT\"] = d2.count().Y - d2.sum().Y\n",
    "    d3=d3.reset_index(drop=True)\n",
    "    \n",
    "    if len(justmiss.index) > 0:\n",
    "        d4 = pd.DataFrame({'MIN_VALUE':np.nan},index=[0])\n",
    "        d4[\"MAX_VALUE\"] = np.nan\n",
    "        d4[\"COUNT\"] = justmiss.count().Y\n",
    "        d4[\"EVENT\"] = justmiss.sum().Y\n",
    "        d4[\"NONEVENT\"] = justmiss.count().Y - justmiss.sum().Y\n",
    "        d3 = d3.append(d4,ignore_index=True)\n",
    "    \n",
    "    d3[\"EVENT_RATE\"] = d3.EVENT/d3.COUNT\n",
    "    d3[\"NON_EVENT_RATE\"] = d3.NONEVENT/d3.COUNT\n",
    "    d3[\"DIST_EVENT\"] = d3.EVENT/d3.sum().EVENT\n",
    "    d3[\"DIST_NON_EVENT\"] = d3.NONEVENT/d3.sum().NONEVENT\n",
    "    d3[\"WOE\"] = np.log(d3.DIST_EVENT/d3.DIST_NON_EVENT)\n",
    "    d3[\"IV\"] = 
(d3.DIST_EVENT-d3.DIST_NON_EVENT)*np.log(d3.DIST_EVENT/d3.DIST_NON_EVENT)\n",
    "    d3[\"VAR_NAME\"] = \"VAR\"\n",
    "    d3 = d3[['VAR_NAME','MIN_VALUE', 'MAX_VALUE', 'COUNT', 'EVENT', 
'EVENT_RATE', 'NONEVENT', 'NON_EVENT_RATE', 'DIST_EVENT','DIST_NON_EVENT','WOE', 
'IV']]       \n",
    "    d3 = d3.replace([np.inf, -np.inf], 0)\n",
    "    d3.IV = d3.IV.sum()\n",
    "    \n",
    "    return(d3)\n",
    "\n",
    "def char_bin(Y, X):\n",
    "        \n",
    "    df1 = pd.DataFrame({\"X\": X, \"Y\": Y})\n",
    "    justmiss = df1[['X','Y']][df1.X.isnull()]\n",
    "    notmiss = df1[['X','Y']][df1.X.notnull()]    \n",
    "    df2 = notmiss.groupby('X',as_index=True)\n",
    "    \n",
    "    d3 = pd.DataFrame({},index=[])\n",
    "    d3[\"COUNT\"] = df2.count().Y\n",
    "    d3[\"MIN_VALUE\"] = df2.sum().Y.index\n",
    "    d3[\"MAX_VALUE\"] = d3[\"MIN_VALUE\"]\n",
    "    d3[\"EVENT\"] = df2.sum().Y\n",
    "    d3[\"NONEVENT\"] = df2.count().Y - df2.sum().Y\n",
    "    \n",
    "    if len(justmiss.index) > 0:\n",
    "        d4 = pd.DataFrame({'MIN_VALUE':np.nan},index=[0])\n",
    "        d4[\"MAX_VALUE\"] = np.nan\n",
    "        d4[\"COUNT\"] = justmiss.count().Y\n",
    "        d4[\"EVENT\"] = justmiss.sum().Y\n",
    "        d4[\"NONEVENT\"] = justmiss.count().Y - justmiss.sum().Y\n",
    "        d3 = d3.append(d4,ignore_index=True)\n",
    "    \n",
    "    d3[\"EVENT_RATE\"] = d3.EVENT/d3.COUNT\n",
    "    d3[\"NON_EVENT_RATE\"] = d3.NONEVENT/d3.COUNT\n",
    "    d3[\"DIST_EVENT\"] = d3.EVENT/d3.sum().EVENT\n",
    "    d3[\"DIST_NON_EVENT\"] = d3.NONEVENT/d3.sum().NONEVENT\n",
    "    d3[\"WOE\"] = np.log(d3.DIST_EVENT/d3.DIST_NON_EVENT)\n",
    "    d3[\"IV\"] = 
(d3.DIST_EVENT-d3.DIST_NON_EVENT)*np.log(d3.DIST_EVENT/d3.DIST_NON_EVENT)\n",
    "    d3[\"VAR_NAME\"] = \"VAR\"\n",
    "    d3 = d3[['VAR_NAME','MIN_VALUE', 'MAX_VALUE', 'COUNT', 'EVENT', 
'EVENT_RATE', 'NONEVENT', 'NON_EVENT_RATE', 'DIST_EVENT','DIST_NON_EVENT','WOE', 
'IV']]      \n",
    "    d3 = d3.replace([np.inf, -np.inf], 0)\n",
    "    d3.IV = d3.IV.sum()\n",
    "    d3 = d3.reset_index(drop=True)\n",
    "    \n",
    "    return(d3)\n",
    "\n",
    "def data_vars(df1, target):\n",
    "    \n",
    "    stack = traceback.extract_stack()\n",
    "    filename, lineno, function_name, code = stack[-2]\n",
    "    vars_name = re.compile(r'\\((.*?)\\).*$').search(code).groups()[0]\n",
    "    final = (re.findall(r\"[\\w']+\", vars_name))[-1]\n",
    "    \n",
    "    x = df1.dtypes.index\n",
    "    count = -1\n",
    "    \n",
    "    for i in x:\n",
    "        if i.upper() not in (final.upper()):\n",
    "            if np.issubdtype(df1[i], np.number) and 
len(Series.unique(df1[i])) > 2:\n",
    "                conv = mono_bin(target, df1[i])\n",
    "                conv[\"VAR_NAME\"] = i\n",
    "                count = count + 1\n",
    "            else:\n",
    "                conv = char_bin(target, df1[i])\n",
    "                conv[\"VAR_NAME\"] = i            \n",
    "                count = count + 1\n",
    "                \n",
    "            if count == 0:\n",
    "                iv_df = conv\n",
    "            else:\n",
    "                iv_df = iv_df.append(conv,ignore_index=True)\n",
    "    \n",
    "    iv = pd.DataFrame({'IV':iv_df.groupby('VAR_NAME').IV.max()})\n",
    "    iv = iv.reset_index()\n",
    "    return(iv_df,iv)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 112,
   "metadata": {},
   "outputs": [],
   "source": [
    "final_iv, IV = 
data_vars(df[df.columns.difference(['Response'])],df.Response)\n",
    "IV.set_index('VAR_NAME',inplace=True)\n",
    "IV_rank = IV.rank(ascending=False).astype('int64')"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 113,
   "metadata": {},
   "outputs": [],
   "source": [
    "transform_vars_list = df.columns.difference(['Response'])\n",
    "transform_prefix = 'WOE_' \n",
    "\n",
    "df_woe = df.copy()\n",
    "\n",
    "for var in transform_vars_list:\n",
    "    small_df = final_iv[final_iv['VAR_NAME'] == var]\n",
    "    transform_dict = dict(zip(small_df.MAX_VALUE,small_df.WOE))\n",
    "    replace_cmd = ''\n",
    "    replace_cmd1 = ''\n",
    "    for i in sorted(transform_dict.items()):\n",
    "        replace_cmd = replace_cmd + str(i[1]) + str(' if x <= ') +
str(i[0]) + ' else '\n",
    "        replace_cmd1 = replace_cmd1 + str(i[1]) + str(' if x == \"') +
str(i[0]) + '\" else '\n",
    "    replace_cmd = replace_cmd + '0'\n",
    "    replace_cmd1 = replace_cmd1 + '0'\n",
    "    if replace_cmd != '0':\n",
    "        try:\n",
    "            df_woe[transform_prefix + var] = df[var].apply(lambda x:
eval(replace_cmd))\n",
    "        except:\n",
    "            df_woe[transform_prefix + var] = df[var].apply(lambda x:
eval(replace_cmd1))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 114,
   "metadata": {},
   "outputs": [],
   "source": [
    "woe_columns = [x for x in df_woe.columns if x.startswith('WOE_')]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 115,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>WOE_AcceptedCmp1</th>\n",
       "      <th>WOE_AcceptedCmp2</th>\n",
       "      <th>WOE_AcceptedCmp3</th>\n",
       "      <th>WOE_AcceptedCmp4</th>\n",
       "      <th>WOE_AcceptedCmp5</th>\n",
       "      <th>WOE_AcceptedTot</th>\n",
       "      <th>WOE_Age</th>\n",
       "      <th>WOE_Childnum</th>\n",
"      <th>WOE_Complain</th>\n",
"      <th>WOE_Days_as_cust</th>\n",
"      <th>...</th>\n",
"      <th>WOE_R_MntWines</th>\n",
"      <th>WOE_R_Mnt_NumCatalogPurchases</th>\n",
"      <th>WOE_R_Mnt_NumStorePurchases</th>\n",
"      <th>WOE_R_Mnt_NumWebPurchases</th>\n",
"      <th>WOE_R_NumCatalogPurchases</th>\n",
"      <th>WOE_R_NumStorePurchases</th>\n",
"      <th>WOE_R_NumWebPurchases</th>\n",
"      <th>WOE_Recency</th>\n",
"      <th>WOE_Teenhome</th>\n",
"      <th>Response</th>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>ID</th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>67</th>\n",
"      <td>-0.242439</td>\n",
"      <td>-0.068242</td>\n",
"      <td>-0.205974</td>\n",
"      <td>-0.172861</td>\n",
"      <td>-0.306854</td>\n",
"      <td>-0.298514</td>\n",
"      <td>-0.015082</td>\n",
"      <td>-0.367438</td>\n",
"      <td>0.00566</td>\n",
"      <td>-0.554797</td>\n",
"      <td>...</td>\n",
"      <td>-0.046292</td>\n",
"      <td>-0.705227</td>\n",
"      <td>-1.194377</td>\n",
"      <td>-0.293236</td>\n",
"      <td>-1.097764</td>\n",
"      <td>-1.207494</td>\n",
"      <td>-0.058463</td>\n",
"      <td>0.895478</td>\n",
"      <td>-0.016888</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
       "    <tr>\n",
       "      <th>3828</th>\n",
       "      <td>-0.242439</td>\n",
       "      <td>-0.068242</td>\n",
       "      <td>-0.205974</td>\n",
       "      <td>-0.172861</td>\n",
       "      <td>-0.306854</td>\n",
       "      <td>-0.298514</td>\n",
       "      <td>0.045369</td>\n",
       "      <td>0.084984</td>\n",
       "      <td>0.00566</td>\n",
       "      <td>0.138909</td>\n",
       "      <td>...</td>\n",
       "      <td>0.044835</td>\n",
       "      <td>0.233421</td>\n",
       "      <td>0.782468</td>\n",
       "      <td>0.650298</td>\n",
       "      <td>0.662987</td>\n",
       "      <td>0.025566</td>\n",
       "      <td>-0.058463</td>\n",
       "      <td>-0.258705</td>\n",
       "      <td>-0.016888</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "<p>2 rows Ã 46 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "      WOE_AcceptedCmp1  WOE_AcceptedCmp2  WOE_AcceptedCmp3  
WOE_AcceptedCmp4  \\\n",
       "ID                                                          
\n",
       "67           -0.242439         -0.068242         -0.205974         -
0.172861   \n",
       "3828         -0.242439         -0.068242         -0.205974         -
0.172861   \n",
       "\n",
       "      WOE_AcceptedCmp5  WOE_AcceptedTot   WOE_Age  WOE_Childnum  
WOE_Complain  \\\n",
       "ID                                                          
\n",
       "67           -0.306854        -0.298514 -0.015082     -0.367438   
0.00566   \n",
       "3828         -0.306854        -0.298514  0.045369      0.084984   
0.00566   \n",
       "\n",
       "      WOE_Days_as_cust    ...     WOE_R_MntWines  \\\n",
       "ID                        ...                      \n",
       "67           -0.554797    ...          -0.046292   \n",
       "3828          0.138909    ...           0.044835   \n",
       "\n",
       "      WOE_R_Mnt_NumCatalogPurchases  WOE_R_Mnt_NumStorePurchases  \\\n",
       "ID                                                                 \n",
       "67                        -0.705227                    -1.194377   \n",
       "3828                       0.233421                     0.782468   \n",
       "\n",
       "      WOE_R_Mnt_NumWebPurchases  WOE_R_NumCatalogPurchases  \\\n",
       "ID                                                         \n",
       "67                    -0.293236                  -1.097764   \n",
       "3828                   0.650298                   0.662987   \n",
       "\n",
       "      WOE_R_NumStorePurchases  WOE_R_NumWebPurchases  WOE_Recency  \\\
n",
       "ID                                                                  \n",
       "67                  -1.207494              -0.058463     0.895478   \n",
       "3828                 0.025566              -0.058463    -0.258705   \n",
       "\n",
       "      WOE_Teenhome  Response  \n",
       "ID                            \n",
       "67       -0.016888         0  \n",
       "3828     -0.016888         0  \n",
       "\n",
       "[2 rows x 46 columns]"
      ]
     },
     "execution_count": 115,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df_woe = df_woe[woe_columns]\n",
    "df_woe = pd.concat([df_woe, df.Response],axis=1)\n",
    "df_woe.head(2)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### Eli 5 Permutations"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 116,
   "metadata": {},
   "outputs": [],
   "source": [
    "import eli5\n",
    "from eli5.sklearn import PermutationImportance\n",
    "clf = RandomForestClassifier(random_state=seed).fit(x, y)\n",
    "perm = PermutationImportance(clf, random_state=seed).fit(x, y)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 117,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "\n",
       "    <style>\n",
       "    table.eli5-weights tr:hover {\n",
       "        filter: brightness(85%);\n",
       "    }\n",
       "</style>\n",
       "\n",
       "\n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "        <table class=\"eli5-weights eli5-feature-importances\"
style=\"border-collapse: collapse; border: none; margin-top: 0em; table-layout:
auto;\">\n",
       "    <thead>\n",
       "    <tr style=\"border: none;\">\n",
       "        <th style=\"padding: 0 1em 0 0.5em; text-align: right; border:
none;\">Weight</th>\n",
       "        <th style=\"padding: 0 0.5em 0 0.5em; text-align: left; border:
none;\">Feature</th>\n",
       "    </tr>\n",
       "    </thead>\n",
       "    <tbody>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 80.00%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0251\n",
       "                \n",
       "                    &plusmn; 0.0024\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                AcceptedTot\n",
       "            </td>\n",
       "        </tr>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 80.45%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0242\n",
       "                \n",
       "                    &plusmn; 0.0016\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                Days_as_cust\n",
       "            </td>\n",
       "        </tr>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 81.78%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0219\n",
       "                \n",
       "                    &plusmn; 0.0044\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                Recency\n",
       "            </td>\n",
       "        </tr>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 82.86%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0201\n",
       "                \n",
       "                    &plusmn; 0.0037\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                RFM\n",
       "            </td>\n",
       "        </tr>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 85.65%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0156\n",
       "                \n",
       "                    &plusmn; 0.0034\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                R_NumStorePurchases\n",
       "            </td>\n",
       "        </tr>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 85.65%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0156\n",
       "                \n",
       "                    &plusmn; 0.0013\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                R_DealFrq\n",
       "            </td>\n",
       "        </tr>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 88.45%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0114\n",
       "                \n",
       "                    &plusmn; 0.0009\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                Marital_Status\n",
       "            </td>\n",
       "        </tr>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 88.70%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0111\n",
       "                \n",
       "                    &plusmn; 0.0026\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                R_Mnt_NumStorePurchases\n",
       "            </td>\n",
       "        </tr>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 90.05%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0092\n",
       "                \n",
       "                    &plusmn; 0.0048\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                Income\n",
       "            </td>\n",
       "        </tr>\n",
       "    \n",
       "        <tr style=\"background-color: hsl(120, 100.00%, 90.94%); border:
none;\">\n",
       "            <td style=\"padding: 0 1em 0 0.5em; text-align: right;
border: none;\">\n",
       "                0.0081\n",
       "                \n",
       "                    &plusmn; 0.0024\n",
       "                \n",
       "            </td>\n",
       "            <td style=\"padding: 0 0.5em 0 0.5em; text-align: left;
border: none;\">\n",
       "                R_MntFrq\n",
       "            </td>\n",
       "            </tr>\n",
       "    \n",
       "    \n",
       "        \n",
       "            <tr style=\"background-color: hsl(120, 100.00%, 90.94%);
border: none;\">\n",
       "                <td colspan=\"2\" style=\"padding: 0 0.5em 0 0.5em;
text-align: center; border: none; white-space: nowrap;\">\n",
       "                    <i>&hellip; 35 more &hellip;</i>\n",
       "                </td>\n",
       "            </tr>\n",
       "        \n",
       "    \n",
       "    </tbody>\n",
       "</table>\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "    \n",
       "\n",
       "\n",
       "\n"
      ],
      "text/plain": [
       "<IPython.core.display.HTML object>"
      ]
     },
     "execution_count": 117,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "eli5.show_weights(perm, feature_names = x.columns.tolist(), top=10)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 118,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>Perm</th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>AcceptedTot</th>\n",
       "      <td>1</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Days_as_cust</th>\n",
       "      <td>2</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Recency</th>\n",
       "      <td>3</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>RFM</th>\n",
       "      <td>4</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>R_NumStorePurchases</th>\n",
       "      <td>5</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "                     Perm\n",
       "AcceptedTot             1\n",
       "Days_as_cust            2\n",
       "Recency                 3\n",
       "RFM                     4\n",
       "R_NumStorePurchases     5"
      ]
     },
     "execution_count": 118,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "perm_df_ = pd.DataFrame(perm.feature_importances_, columns = [\"Perm\"],
index=x.columns)\n",
    "perm_df = pd.DataFrame(perm.feature_importances_, columns = [\"Perm\"],
index=x.columns).rank(ascending=False).astype('int64')\n",
    "perm_df.sort_values(by='Perm').head()"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 119,
   "metadata": {},
   "outputs": [],
   "source": [
    "import xgboost\n",
    "import shap"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 120,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div align='center'><img
src='data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAABkAAAAWCAYAAAA1vze2AAAAGXRFW
HRTb2Z0d2FyZQBBZG9iZSBJbWFnZVJlYWR5ccllPAAAAdxJREFUeNq0Vt1Rg0AQJjcpgBJiBWIFkgoMF
YhPPAIVECogPuYpdJBYgXQQrMCUkA50V7+d2ZwXuXPGm9khHLu3f9+3l1nkWNvtNqfHLgpfQ1EUS3tz5
nAQ0+NIsiAZSc6eDlI8M3J00B/
mDuUKDk6kfOebAgW3pkdD0pFcODGW4gKKvOrAUm04MA4QDt1OEIXU9hDigfS5rC1eS5T90gltck1Xriz
o257kgySZcNRzgCSxCvgiE9nckPJo2b/
B2AcEkk2OwL8bD8gmOKR1GPbaCUqxEgTq0tLvgb6zfo7+DgYGkkWL2tqLDV4RSITfbHPPfJKIrWz4nJQ
TMPAWA7IbD6imcNaDeDfgk+4No+wZr40BL3g9eQJJCFqRQ54KiSt72lsLpE3o3MCBSxDuq4yOckU2hKX
RuwBH3OyMR4g1UpyTYw6mlmBqNdUXRM1NfyF5EPI6JkcpIDBIX8jX6DR/
6ckAZJ0wEAdLR8DEk6OfC1Pp8BKo6TQIwPJbvJ6toK5lmuvJoRtfK6Ym1iRYIarRo2UyYHvRN5qpakR3
yoizWrouoyuXXQqI185LCw07op5ZyCRGL99h24InP0e9xdQukEKVmhzrqZuRIfwISB//cP3Wk3f8f/
yR+BRgAHu00HjLcEQBAAAAAElFTkSuQmCC' /></div><script>!function(t){function e(r)
{if(n[r])return n[r].exports;var i=n[r]={i:r,l:!1,exports:{}};return
t[r].call(i.exports,i,i.exports,e),i.l=!0,i.exports}var
n={};e.m=t,e.c=n,e.i=function(t){return t},e.d=function(t,n,r){e.o(t,n)||
Object.defineProperty(t,n,{configurable:!1,enumerable:!
0,get:r})},e.n=function(t){var n=t&&t.__esModule?function(){return
t.default}:function(){return t};return e.d(n,\"a\",n),n},e.o=function(t,e)
{return Object.prototype.hasOwnProperty.call(t,e)},e.p=\"\",e(e.s=189)}
([function(t,e,n){\"use strict\";function r(t,e,n,r,o,a,u,c){if(i(e),!t){var
s;if(void 0===e)s=new Error(\"Minified exception occurred; use the non-minified
dev environment for the full error message and additional helpful
warnings.\");else{var l=[n,r,o,a,u,c],f=0;s=new Error(e.replace(/%s/g,function()
{return l[f++]})),s.name=\"Invariant Violation\"}throw s.framesToPop=1,s}}var
i=function(t){};t.exports=r},function(t,e,n){\"use strict\";function r(t)
{for(var e=arguments.length-1,n=\"Minified React error #\"+t+\"; visit
http://facebook.github.io/react/docs/error-decoder.html?
invariant=\"+t,r=0;r<e;r+
+)n+=\"&args[]=\"+encodeURIComponent(arguments[r+1]);n+=\" for the full message
or use the non-minified dev environment for full errors and additional helpful
warnings.\";var i=new Error(n);throw i.name=\"Invariant
Violation\",i.framesToPop=1,i}t.exports=r},function(t,e,n){\"use strict\";var
r=n(11),i=r;t.exports=i},function(t,e,n){\"use strict\";function r(t)
{if(null===t||void 0===t)throw new TypeError(\"Object.assign cannot be called
with null or undefined\");return Object(t)}/*\n",
       "object-assign\n",
       "(c) Sindre Sorhus\n",
       "@license MIT\n",
       "*/\n",
       "var
i=Object.getOwnPropertySymbols,o=Object.prototype.hasOwnProperty,a=Object.protot
ype.propertyIsEnumerable;t.exports=function(){try{if(!Object.assign)return!1;var
t=new String(\"abc\");if(t[5]=\"de\",\"5\"===Object.getOwnPropertyNames(t)
[0])return!1;for(var e={},n=0;n<10;n+
+)e[\"_\"+String.fromCharCode(n)]=n;if(\"0123456789\"!
==Object.getOwnPropertyNames(e).map(function(t){return e[t]}).join(\"\"))return!
1;var r={};return\"abcdefghijklmnopqrst\".split(\"\").forEach(function(t)
{r[t]=t}),\"abcdefghijklmnopqrst\"===Object.keys(Object.assign({},r)).join(\"\")
}catch(t){return!1}}()?Object.assign:function(t,e){for(var
n,u,c=r(t),s=1;s<arguments.length;s++){n=Object(arguments[s]);for(var l in
n)o.call(n,l)&&(c[l]=n[l]);if(i){u=i(n);for(var f=0;f<u.length;f+
+)a.call(n,u[f])&&(c[u[f]]=n[u[f]])}}return c}},function(t,e,n){\"use
strict\";function r(t,e){return 1===t.nodeType&&t.getAttribute(d)===String(e)||
8===t.nodeType&&t.nodeValue===\" react-text: \"+e+\" \"||
8===t.nodeType&&t.nodeValue===\" react-empty: \"+e+\" \"}function i(t){for(var
e;e=t._renderedComponent;)t=e;return t}function o(t,e){var
n=i(t);n._hostNode=e,e[g]=n}function a(t){var e=t._hostNode;e&&(delete
e[g],t._hostNode=null)}function u(t,e){if(!(t._flags&v.hasCachedChildNodes)){var
n=t._renderedChildren,a=e.firstChild;t:for(var u in n)if(n.hasOwnProperty(u))
{var c=n[u],s=i(c)._domID;if(0!==s){for(;null!==a;a=a.nextSibling)if(r(a,s))
{o(c,a);continue t}f(\"32\",s)}}t._flags|=v.hasCachedChildNodes}}function c(t)
{if(t[g])return t[g];for(var e=[];!t[g];){if(e.push(t),!t.parentNode)return
null;t=t.parentNode}for(var
n,r;t&&(r=t[g]);t=e.pop())n=r,e.length&&u(r,t);return n}function s(t){var
e=c(t);return null!=e&&e._hostNode===t?e:null}function l(t){if(void
0===t._hostNode&&f(\"33\"),t._hostNode)return t._hostNode;for(var e=[];!
t._hostNode;)e.push(t),t._hostParent||
f(\"34\"),t=t._hostParent;for(;e.length;t=e.pop())u(t,t._hostNode);return
t._hostNode}var
f=n(1),p=n(21),h=n(161),d=(n(0),p.ID_ATTRIBUTE_NAME),v=h,g=\"__reactInternalInst
ance$\"+Math.random().toString(36).slice(2),m={getClosestInstanceFromNode:c,getI
nstanceFromNode:s,getNodeFromInstance:l,precacheChildNodes:u,precacheNode:o,unca
cheNode:a};t.exports=m},function(t,e,n){\"use strict\";function r(t,e,n,a)
{function u(e){return t(e=new Date(+e)),e}return u.floor=u,u.ceil=function(n)
{return t(n=new Date(n-1)),e(n,1),t(n),n},u.round=function(t){var
e=u(t),n=u.ceil(t);return t-e<n-t?e:n},u.offset=function(t,n){return e(t=new
Date(+t),null==n?1:Math.floor(n)),t},u.range=function(n,r,i){var
o,a=[];if(n=u.ceil(n),i=null==i?1:Math.floor(i),!(n<r&&i>0))return
a;do{a.push(o=new Date(+n)),e(n,i),t(n)}while(o<n&&n<r);return
a},u.filter=function(n){return r(function(e){if(e>=e)for(;t(e),!
n(e);)e.setTime(e-1)},function(t,r){if(t>=t)if(r<0)for(;++r<=0;)for(;e(t,-1),!
n(t););else for(;--r>=0;)for(;e(t,1),!n(t););})},n&&(u.count=function(e,r)
{return
i.setTime(+e),o.setTime(+r),t(i),t(o),Math.floor(n(i,o))},u.every=function(t)
{return t=Math.floor(t),isFinite(t)&&t>0?t>1?u.filter(a?function(e){return a(e)
%t==0}:function(e){return u.count(0,e)%t==0}):u:null}),u}e.a=r;var i=new
Date,o=new Date},function(t,e,n){\"use strict\";var r=!(\"undefined\"==typeof
window||!window.document||!
window.document.createElement),i={canUseDOM:r,canUseWorkers:\"undefined\"!
=typeof Worker,canUseEventListeners:r&&!(!window.addEventListener&&!
window.attachEvent),canUseViewport:r&&!!window.screen,isInWorker:!
r};t.exports=i},function(t,e,n){\"use
strict\";Object.defineProperty(e,\"__esModule\",{value:!0});var
r=n(101);n.d(e,\"bisect\",function(){return
r.a}),n.d(e,\"bisectRight\",function(){return
r.b}),n.d(e,\"bisectLeft\",function(){return r.c});var
i=n(19);n.d(e,\"ascending\",function(){return i.a});var
o=n(102);n.d(e,\"bisector\",function(){return o.a});var
a=n(193);n.d(e,\"cross\",function(){return a.a});var
u=n(194);n.d(e,\"descending\",function(){return u.a});var
c=n(103);n.d(e,\"deviation\",function(){return c.a});var
s=n(104);n.d(e,\"extent\",function(){return s.a});var
l=n(195);n.d(e,\"histogram\",function(){return l.a});var
f=n(205);n.d(e,\"thresholdFreedmanDiaconis\",function(){return f.a});var
p=n(206);n.d(e,\"thresholdScott\",function(){return p.a});var
h=n(108);n.d(e,\"thresholdSturges\",function(){return h.a});var
d=n(197);n.d(e,\"max\",function(){return d.a});var
v=n(198);n.d(e,\"mean\",function(){return v.a});var
g=n(199);n.d(e,\"median\",function(){return g.a});var
m=n(200);n.d(e,\"merge\",function(){return m.a});var
y=n(105);n.d(e,\"min\",function(){return y.a});var
_=n(106);n.d(e,\"pairs\",function(){return _.a});var
b=n(201);n.d(e,\"permute\",function(){return b.a});var
```

```
x=n(59);n.d(e,\"quantile\",function(){return x.a});var
w=n(107);n.d(e,\"range\",function(){return w.a});var
C=n(202);n.d(e,\"scan\",function(){return C.a});var
k=n(203);n.d(e,\"shuffle\",function(){return k.a});var
E=n(204);n.d(e,\"sum\",function(){return E.a});var
M=n(109);n.d(e,\"ticks\",function(){return
M.a}),n.d(e,\"tickIncrement\",function(){return
M.b}),n.d(e,\"tickStep\",function(){return M.c});var
T=n(110);n.d(e,\"transpose\",function(){return T.a});var
S=n(111);n.d(e,\"variance\",function(){return S.a});var
N=n(207);n.d(e,\"zip\",function(){return N.a})},function(t,e,n){\"use
strict\";function r(t,e){this._groups=t,this._parents=e}function i(){return new
r([[document.documentElement]],R)}n.d(e,\"c\",function(){return R}),e.b=r;var
o=n(283),a=n(284),u=n(272),c=n(266),s=n(132),l=n(271),f=n(276),p=n(279),h=n(286)
,d=n(263),v=n(278),g=n(277),m=n(285),y=n(270),_=n(269),b=n(262),x=n(134),w=n(280
),C=n(264),k=n(287),E=n(273),M=n(281),T=n(275),S=n(261),N=n(274),A=n(282),P=n(26
5),O=n(267),I=n(70),D=n(268),R=[null];r.prototype=i.prototype={constructor:r,sel
ect:o.a,selectAll:a.a,filter:u.a,data:c.a,enter:s.a,exit:l.a,merge:f.a,order:p.a
,sort:h.a,call:d.a,nodes:v.a,node:g.a,size:m.a,empty:y.a,each:_.a,attr:b.a,style
:x.b,property:w.a,classed:C.a,text:k.a,html:E.a,raise:M.a,lower:T.a,append:S.a,i
nsert:N.a,remove:A.a,clone:P.a,datum:O.a,on:I.c,dispatch:D.a},e.a=i},function(t,
e,n){\"use strict\";var r=null;t.exports={debugTool:r}},function(t,e,n){\"use
strict\";Object.defineProperty(e,\"__esModule\",{value:!0});var
r=n(61);n.d(e,\"color\",function(){return r.a}),n.d(e,\"rgb\",function(){return
r.b}),n.d(e,\"hsl\",function(){return r.c});var
i=n(218);n.d(e,\"lab\",function(){return i.a}),n.d(e,\"hcl\",function(){return
i.b});var o=n(217);n.d(e,\"cubehelix\",function(){return o.a})},function(t,e,n)
{\"use strict\";function r(t){return function(){return t}}var i=function()
{};i.thatReturns=r,i.thatReturnsFalse=r(!1),i.thatReturnsTrue=r(!
0),i.thatReturnsNull=r(null),i.thatReturnsThis=function(){return
this},i.thatReturnsArgument=function(t){return t},t.exports=i},function(t,e,n)
{\"use strict\";function r(){S.ReactReconcileTransaction&&w||l(\"123\")}function
i()
{this.reinitializeTransaction(),this.dirtyComponentsLength=null,this.callbackQue
ue=p.getPooled(),this.reconcileTransaction=S.ReactReconcileTransaction.getPooled
(!0)}function o(t,e,n,i,o,a){return r(),w.batchedUpdates(t,e,n,i,o,a)}function
a(t,e){return t._mountOrder-e._mountOrder}function u(t){var
e=t.dirtyComponentsLength;e!==y.length&&l(\"124\",e,y.length),y.sort(a),_+
+;for(var n=0;n<e;n++){var
r=y[n],i=r._pendingCallbacks;r._pendingCallbacks=null;var
o;if(d.logTopLevelRenders){var
u=r;r._currentElement.type.isReactTopLevelWrapper&&(u=r._renderedComponent),o=\"
React
update: \"+u.getName(),console.time(o)}if(v.performUpdateIfNecessary(r,t.reconci
leTransaction,_),o&&console.timeEnd(o),i)for(var c=0;c<i.length;c+
+)t.callbackQueue.enqueue(i[c],r.getPublicInstance())}}function c(t){if(r(),!
w.isBatchingUpdates)return void
w.batchedUpdates(c,t);y.push(t),null==t._updateBatchNumber&&(t._updateBatchNumbe
r=_+1)}function s(t,e){m(w.isBatchingUpdates,\"ReactUpdates.asap: Can't enqueue
an asap callback in a context whereupdates are not being
batched.\"),b.enqueue(t,e),x=!0}var
l=n(1),f=n(3),p=n(159),h=n(18),d=n(164),v=n(24),g=n(55),m=n(0),y=[],_=0,b=p.getP
ooled(),x=!1,w=null,C={initialize:function()
{this.dirtyComponentsLength=y.length},close:function()
{this.dirtyComponentsLength!==y.length?
(y.splice(0,this.dirtyComponentsLength),M()):y.length=0}},k={initialize:function
(){this.callbackQueue.reset()},close:function()
{this.callbackQueue.notifyAll()}},E=[C,k];f(i.prototype,g,
{getTransactionWrappers:function(){return E},destructor:function()
{this.dirtyComponentsLength=null,p.release(this.callbackQueue),this.callbackQueu
e=null,S.ReactReconcileTransaction.release(this.reconcileTransaction),this.recon
cileTransaction=null},perform:function(t,e,n){return
g.perform.call(this,this.reconcileTransaction.perform,this.reconcileTransaction,
t,e,n)}}),h.addPoolingTo(i);var M=function(){for(;y.length||x;){if(y.length){var
t=i.getPooled();t.perform(u,null,t),i.release(t)}if(x){x=!1;var
e=b;b=p.getPooled(),e.notifyAll(),p.release(e)}}},T={injectReconcileTransaction:
function(t){t||
l(\"126\"),S.ReactReconcileTransaction=t},injectBatchingStrategy:function(t){t||
l(\"127\"),\"function\"!=typeof t.batchedUpdates&&l(\"128\"),\"boolean\"!=typeof
t.isBatchingUpdates&&l(\"129\"),w=t}},S={ReactReconcileTransaction:null,batchedU
pdates:o,enqueueUpdate:c,flushBatchedUpdates:M,injection:T,asap:s};t.exports=S},
function(t,e,n){\"use strict\";n.d(e,\"e\",function(){return
r}),n.d(e,\"d\",function(){return i}),n.d(e,\"c\",function(){return
o}),n.d(e,\"b\",function(){return a}),n.d(e,\"a\",function(){return u});var
r=1e3,i=6e4,o=36e5,a=864e5,u=6048e5},function(t,e,n){\"use strict\";function
r(t,e,n,r){this.dispatchConfig=t,this._targetInst=e,this.nativeEvent=n;var
i=this.constructor.Interface;for(var o in i)if(i.hasOwnProperty(o)){var
u=i[o];u?this[o]=u(n):\"target\"===o?this.target=r:this[o]=n[o]}var c=null!
=n.defaultPrevented?n.defaultPrevented:!1===n.returnValue;return
this.isDefaultPrevented=c?
a.thatReturnsTrue:a.thatReturnsFalse,this.isPropagationStopped=a.thatReturnsFals
e,this}var
 i=n(3),o=n(18),a=n(11),u=(n(2),
[\"dispatchConfig\",\"_targetInst\",\"nativeEvent\",\"isDefaultPrevented\",\"isP
ropagationStopped\",\"_dispatchListeners\",\"_dispatchInstances\"]),c={type:null
,target:null,currentTarget:a.thatReturnsNull,eventPhase:null,bubbles:null,cancel
able:null,timeStamp:function(t){return t.timeStamp||
Date.now()},defaultPrevented:null,isTrusted:null};i(r.prototype,
{preventDefault:function(){this.defaultPrevented=!0;var
t=this.nativeEvent;t&&(t.preventDefault?t.preventDefault():\"unknown\"!=typeof
t.returnValue&&(t.returnValue=!
1),this.isDefaultPrevented=a.thatReturnsTrue)},stopPropagation:function(){var
t=this.nativeEvent;t&&(t.stopPropagation?t.stopPropagation():\"unknown\"!=typeof
t.cancelBubble&&(t.cancelBubble=!
0),this.isPropagationStopped=a.thatReturnsTrue)},persist:function()
{this.isPersistent=a.thatReturnsTrue},isPersistent:a.thatReturnsFalse,destructor
:function(){var t=this.constructor.Interface;for(var e in t)this[e]=null;for(var
n=0;n<u.length;n++)this[u[n]]=null}}),r.Interface=c,r.augmentClass=function(t,e)
{var n=this,r=function(){};r.prototype=n.prototype;var a=new
r;i(a,t.prototype),t.prototype=a,t.prototype.constructor=t,t.Interface=i({},n.In
terface,e),t.augmentClass=n.augmentClass,o.addPoolingTo(t,o.fourArgumentPooler)}
,o.addPoolingTo(r,o.fourArgumentPooler),t.exports=r},function(t,e,n){\"use
strict\";var r={current:null};t.exports=r},function(t,e,n){\"use
strict\";n.d(e,\"a\",function(){return i}),n.d(e,\"b\",function(){return o});var
r=Array.prototype,i=r.map,o=r.slice},function(t,e,n){\"use
strict\";e.a=function(t){return function(){return t}}},function(t,e,n){\"use
strict\";var r=n(1),i=(n(0),function(t){var e=this;if(e.instancePool.length){var
n=e.instancePool.pop();return e.call(n,t),n}return new e(t)}),o=function(t,e)
{var n=this;if(n.instancePool.length){var r=n.instancePool.pop();return
n.call(r,t,e),r}return new n(t,e)},a=function(t,e,n){var
r=this;if(r.instancePool.length){var i=r.instancePool.pop();return
r.call(i,t,e,n),i}return new r(t,e,n)},u=function(t,e,n,r){var
i=this;if(i.instancePool.length){var o=i.instancePool.pop();return
i.call(o,t,e,n,r),o}return new i(t,e,n,r)},c=function(t){var e=this;t instanceof
e||
r(\"25\"),t.destructor(),e.instancePool.length<e.poolSize&&e.instancePool.push(t
)},s=i,l=function(t,e){var n=t;return n.instancePool=[],n.getPooled=e||
s,n.poolSize||
(n.poolSize=10),n.release=c,n},f={addPoolingTo:l,oneArgumentPooler:i,twoArgument
Pooler:o,threeArgumentPooler:a,fourArgumentPooler:u};t.exports=f},function(t,e,n
){\"use strict\";e.a=function(t,e){return t<e?-1:t>e?1:t>=e?
0:NaN}},function(t,e,n){\"use strict\";function r(t){if(d){var
e=t.node,n=t.children;if(n.length)for(var r=0;r<n.length;r++)v(e,n[r],null);else
null!=t.html?f(e,t.html):null!=t.text&&h(e,t.text)}}function i(t,e)
{t.parentNode.replaceChild(e.node,t),r(e)}function o(t,e){d?
t.children.push(e):t.node.appendChild(e.node)}function a(t,e){d?
t.html=e:f(t.node,e)}function u(t,e){d?t.text=e:h(t.node,e)}function c(){return
this.node.nodeName}function s(t){return{node:t,children:
```

```
[],html:null,text:null,toString:c}}var
l=n(83),f=n(57),p=n(91),h=n(176),d=\"undefined\"!=typeof
document&&\"number\"==typeof document.documentMode||\"undefined\"!=typeof
navigator&&\"string\"==typeof navigator.userAgent&&/\\bEdge\\/\\
d/.test(navigator.userAgent),v=p(function(t,e,n){11===e.node.nodeType||
1===e.node.nodeType&&\"object\"===e.node.nodeName.toLowerCase()&&(null==e.node.n
amespaceURI||e.node.namespaceURI===l.html)?(r(e),t.insertBefore(e.node,n)):
(t.insertBefore(e.node,n),r(e))});s.insertTreeBefore=v,s.replaceChildWithTree=i,
s.queueChild=o,s.queueHTML=a,s.queueText=u,t.exports=s},function(t,e,n){\"use
strict\";function r(t,e){return(t&e)===e}var i=n(1),o=(n(0),
{MUST_USE_PROPERTY:1,HAS_BOOLEAN_VALUE:4,HAS_NUMERIC_VALUE:8,HAS_POSITIVE_NUMERI
C_VALUE:24,HAS_OVERLOADED_BOOLEAN_VALUE:32,injectDOMPropertyConfig:function(t)
{var e=o,n=t.Properties||{},a=t.DOMAttributeNamespaces||
{},c=t.DOMAttributeNames||{},s=t.DOMPropertyNames||{},l=t.DOMMutationMethods||
{};t.isCustomAttribute&&u._isCustomAttributeFunctions.push(t.isCustomAttribute);
for(var f in n){u.properties.hasOwnProperty(f)&&i(\"48\",f);var
p=f.toLowerCase(),h=n[f],d={attributeName:p,attributeNamespace:null,propertyName
:f,mutationMethod:null,mustUseProperty:r(h,e.MUST_USE_PROPERTY),hasBooleanValue:
r(h,e.HAS_BOOLEAN_VALUE),hasNumericValue:r(h,e.HAS_NUMERIC_VALUE),hasPositiveNum
ericValue:r(h,e.HAS_POSITIVE_NUMERIC_VALUE),hasOverloadedBooleanValue:r(h,e.HAS_
OVERLOADED_BOOLEAN_VALUE)};if(d.hasBooleanValue+d.hasNumericValue+d.hasOverloade
dBooleanValue<=1||i(\"50\",f),c.hasOwnProperty(f)){var
v=c[f];d.attributeName=v}a.hasOwnProperty(f)&&(d.attributeNamespace=a[f]),s.hasO
wnProperty(f)&&(d.propertyName=s[f]),l.hasOwnProperty(f)&&(d.mutationMethod=l[f]
),u.properties[f]=d}}}),a=\":A-Z_a-z\\\\u00C0-\\\\u00D6\\\\u00D8-\\\\u00F6\\\\
u00F8-\\\\u02FF\\\\u0370-\\\\u037D\\\\u037F-\\\\u1FFF\\\\u200C-\\\\u200D\\\\
u2070-\\\\u218F\\\\u2C00-\\\\u2FEF\\\\u3001-\\\\uD7FF\\\\uF900-\\\\uFDCF\\\\
uFDF0-\\\\uFFFD\",u={ID_ATTRIBUTE_NAME:\"data-
reactid\",ROOT_ATTRIBUTE_NAME:\"data-
reactroot\",ATTRIBUTE_NAME_START_CHAR:a,ATTRIBUTE_NAME_CHAR:a+\"\\\\-.0-9\\\\
u00B7\\\\u0300-\\\\u036F\\\\u203F-\\\\u2040\",properties:
{},getPossibleStandardName:null,_isCustomAttributeFunctions:
[],isCustomAttribute:function(t){for(var
e=0;e<u._isCustomAttributeFunctions.length;e++)
{if((0,u._isCustomAttributeFunctions[e])(t))return!0}return!
1},injection:o};t.exports=u},function(t,e,n){\"use strict\";function r(t)
{return\"button\"===t||\"input\"===t||\"select\"===t||\"textarea\"===t}function
i(t,e,n){switch(t)
{case\"onClick\":case\"onClickCapture\":case\"onDoubleClick\":case\"onDoubleClic
kCapture\":case\"onMouseDown\":case\"onMouseDownCapture\":case\"onMouseMove\":ca
se\"onMouseMoveCapture\":case\"onMouseUp\":case\"onMouseUpCapture\":return!(!
n.disabled||!r(e));default:return!1}}var
o=n(1),a=n(84),u=n(52),c=n(88),s=n(169),l=n(170),f=(n(0),
{}),p=null,h=function(t,e)
{t&&(u.executeDispatchesInOrder(t,e),t.isPersistent()||
t.constructor.release(t))},d=function(t){return h(t,!0)},v=function(t){return
h(t,!1)},g=function(t){return\".\"+t._rootNodeID},m={injection:
{injectEventPluginOrder:a.injectEventPluginOrder,injectEventPluginsByName:a.inje
ctEventPluginsByName},putListener:function(t,e,n){\"function\"!=typeof
n&&o(\"94\",e,typeof n);var r=g(t);(f[e]||(f[e]={}))[r]=n;var
i=a.registrationNameModules[e];i&&i.didPutListener&&i.didPutListener(t,e,n)},get
Listener:function(t,e){var
n=f[e];if(i(e,t._currentElement.type,t._currentElement.props))return null;var
r=g(t);return n&&n[r]},deleteListener:function(t,e){var
n=a.registrationNameModules[e];n&&n.willDeleteListener&&n.willDeleteListener(t,e
);var r=f[e];if(r){delete r[g(t)]}},deleteAllListeners:function(t){var
e=g(t);for(var n in f)if(f.hasOwnProperty(n)&&f[n][e]){var
r=a.registrationNameModules[n];r&&r.willDeleteListener&&r.willDeleteListener(t,n
),delete f[n][e]}},extractEvents:function(t,e,n,r){for(var
i,o=a.plugins,u=0;u<o.length;u++){var c=o[u];if(c){var
l=c.extractEvents(t,e,n,r);l&&(i=s(i,l))}}return i},enqueueEvents:function(t)
{t&&(p=s(p,t))},processEventQueue:function(t){var e=p;p=null,t?
l(e,d):l(e,v),p&&o(\"95\"),c.rethrowCaughtError()},__purge:function()
{f={}},__getListenerBank:function(){return f}};t.exports=m},function(t,e,n)
```

```
{\"use strict\";function r(t,e,n){var
r=e.dispatchConfig.phasedRegistrationNames[n];return m(t,r)}function i(t,e,n)
{var
i=r(t,n,e);i&&(n._dispatchListeners=v(n._dispatchListeners,i),n._dispatchInstanc
es=v(n._dispatchInstances,t))}function o(t)
{t&&t.dispatchConfig.phasedRegistrationNames&&d.traverseTwoPhase(t._targetInst,i
,t)}function a(t){if(t&&t.dispatchConfig.phasedRegistrationNames){var
e=t._targetInst,n=e?
d.getParentInstance(e):null;d.traverseTwoPhase(n,i,t)}}function u(t,e,n)
{if(n&&n.dispatchConfig.registrationName){var
r=n.dispatchConfig.registrationName,i=m(t,r);i&&(n._dispatchListeners=v(n._dispa
tchListeners,i),n._dispatchInstances=v(n._dispatchInstances,t))}}function c(t)
{t&&t.dispatchConfig.registrationName&&u(t._targetInst,null,t)}function s(t)
{g(t,o)}function l(t){g(t,a)}function f(t,e,n,r)
{d.traverseEnterLeave(n,r,u,t,e)}function p(t){g(t,c)}var
h=n(22),d=n(52),v=n(169),g=n(170),m=(n(2),h.getListener),y={accumulateTwoPhaseDi
spatches:s,accumulateTwoPhaseDispatchesSkipTarget:l,accumulateDirectDispatches:p
,accumulateEnterLeaveDispatches:f};t.exports=y},function(t,e,n){\"use
strict\";function r(){i.attachRefs(this,this._currentElement)}var
i=n(382),o=(n(9),n(2),{mountComponent:function(t,e,n,i,o,a){var
u=t.mountComponent(e,n,i,o,a);return t._currentElement&&null!
=t._currentElement.ref&&e.getReactMountReady().enqueue(r,t),u},getHostNode:funct
ion(t){return t.getHostNode()},unmountComponent:function(t,e)
{i.detachRefs(t,t._currentElement),t.unmountComponent(e)},receiveComponent:funct
ion(t,e,n,o){var a=t._currentElement;if(e!==a||o!==t._context){var
u=i.shouldUpdateRefs(a,e);u&&i.detachRefs(t,a),t.receiveComponent(e,n,o),u&&t._c
urrentElement&&null!
=t._currentElement.ref&&n.getReactMountReady().enqueue(r,t)}},performUpdateIfNec
essary:function(t,e,n)
{t._updateBatchNumber===n&&t.performUpdateIfNecessary(e)}});t.exports=o},functio
n(t,e,n){\"use strict\";function r(t,e,n,r){return i.call(this,t,e,n,r)}var
i=n(14),o=n(94),a={view:function(t){if(t.view)return t.view;var
e=o(t);if(e.window===e)return e;var n=e.ownerDocument;return n?n.defaultView||
n.parentWindow:window},detail:function(t){return t.detail||
0}};i.augmentClass(r,a),t.exports=r},function(t,e,n){\"use strict\";var
r=n(3),i=n(178),o=n(414),a=n(415),u=n(27),c=n(416),s=n(417),l=n(418),f=n(422),p=
u.createElement,h=u.createFactory,d=u.cloneElement,v=r,g=function(t){return
t},m={Children:
{map:o.map,forEach:o.forEach,count:o.count,toArray:o.toArray,only:f},Component:i
.Component,PureComponent:i.PureComponent,createElement:p,cloneElement:d,isValidE
lement:u.isValidElement,PropTypes:c,createClass:l,createFactory:h,createMixin:g,
DOM:a,version:s,__spread:v};t.exports=m},function(t,e,n){\"use
 strict\";function r(t){return void 0!==t.ref}function i(t){return void 0!
==t.key}var
o=n(3),a=n(15),u=(n(2),n(182),Object.prototype.hasOwnProperty),c=n(180),s={key:!
0,ref:!0,__self:!0,__source:!0},l=function(t,e,n,r,i,o,a){var u={$
$typeof:c,type:t,key:e,ref:n,props:a,_owner:o};return
u};l.createElement=function(t,e,n){var o,c={},f=null,p=null;if(null!=e)
{r(e)&&(p=e.ref),i(e)&&(f=\"\"+e.key),void 0===e.__self?null:e.__self,void
0===e.__source?null:e.__source;for(o in e)u.call(e,o)&&!
s.hasOwnProperty(o)&&(c[o]=e[o])}var h=arguments.length-
2;if(1===h)c.children=n;else if(h>1){for(var d=Array(h),v=0;v<h;v+
+)d[v]=arguments[v+2];c.children=d}if(t&&t.defaultProps){var
g=t.defaultProps;for(o in g)void 0===c[o]&&(c[o]=g[o])}return
l(t,f,p,0,0,a.current,c)},l.createFactory=function(t){var
e=l.createElement.bind(null,t);return
e.type=t,e},l.cloneAndReplaceKey=function(t,e){return
l(t.type,e,t.ref,t._self,t._source,t._owner,t.props)},l.cloneElement=function(t,
e,n){var
c,f=o({},t.props),p=t.key,h=t.ref,d=(t._self,t._source,t._owner);if(null!=e)
{r(e)&&(h=e.ref,d=a.current),i(e)&&(p=\"\"+e.key);var
v;t.type&&t.type.defaultProps&&(v=t.type.defaultProps);for(c in e)u.call(e,c)&&!
s.hasOwnProperty(c)&&(void 0===e[c]&&void 0!==v?f[c]=v[c]:f[c]=e[c])}var
g=arguments.length-2;if(1===g)f.children=n;else if(g>1){for(var
m=Array(g),y=0;y<g;y++)m[y]=arguments[y+2];f.children=m}return
l(t.type,p,h,0,0,d,f)},l.isValidElement=function(t){return\"object\"==typeof
t&&null!==t&&t.$$typeof===c},t.exports=l},function(t,e,n){\"use
strict\";e.a=function(t){return null===t?NaN:+t}},function(t,e,n){\"use
strict\";Object.defineProperty(e,\"__esModule\",{value:!0});var
r=n(219);n.d(e,\"formatDefaultLocale\",function(){return
r.a}),n.d(e,\"format\",function(){return r.b}),n.d(e,\"formatPrefix\",function()
{return r.c});var i=n(117);n.d(e,\"formatLocale\",function(){return i.a});var
o=n(115);n.d(e,\"formatSpecifier\",function(){return o.a});var
a=n(225);n.d(e,\"precisionFixed\",function(){return a.a});var
u=n(226);n.d(e,\"precisionPrefix\",function(){return u.a});var
c=n(227);n.d(e,\"precisionRound\",function(){return c.a})},function(t,e,n){\"use
strict\";var r=n(65);n.d(e,\"b\",function(){return r.a});var
i=(n(118),n(64),n(119),n(121),n(43));n.d(e,\"a\",function(){return i.a});var
o=(n(122),n(233));n.d(e,\"c\",function(){return o.a});var
a=(n(124),n(235),n(237),n(123),n(230),n(231),n(229),n(228));n.d(e,\"d\",function
(){return a.a});n(232)},function(t,e,n){\"use strict\";function r(t,e){return
function(n){return t+n*e}}function i(t,e,n){return
t=Math.pow(t,n),e=Math.pow(e,n)-t,n=1/n,function(r){return
Math.pow(t+r*e,n)}}function o(t,e){var i=e-t;return i?r(t,i>180||i<-180?i-
360*Math.round(i/360):i):n.i(c.a)(isNaN(t)?e:t)}function a(t){return 1==(t=+t)?
u:function(e,r){return r-e?i(e,r,t):n.i(c.a)(isNaN(e)?r:e)}}function u(t,e){var
i=e-t;return i?r(t,i):n.i(c.a)(isNaN(t)?e:t)}e.b=o,e.c=a,e.a=u;var
c=n(120)},function(t,e,n){\"use strict\";var r=n(238);n.d(e,\"a\",function()
{return r.a})},function(t,e,n){\"use strict\";e.a=function(t){return t.match(/.
{6}/g).map(function(t){return\"#\"+t})}},function(t,e,n){\"use strict\";function
r(t){var e=t.domain;return t.ticks=function(t){var r=e();return n.i(o.ticks)
(r[0],r[r.length-1],null==t?10:t)},t.tickFormat=function(t,r){return n.i(c.a)
(e(),t,r)},t.nice=function(r){null==r&&(r=10);var i,a=e(),u=0,c=a.length-
1,s=a[u],l=a[c];return l<s&&(i=s,s=l,l=i,i=u,u=c,c=i),i=n.i(o.tickIncrement)
(s,l,r),i>0?(s=Math.floor(s/i)*i,l=Math.ceil(l/i)*i,i=n.i(o.tickIncrement)
(s,l,r)):i<0&&(s=Math.ceil(s*i)/i,l=Math.floor(l*i)/i,i=n.i(o.tickIncrement)
(s,l,r)),i>0?(a[u]=Math.floor(s/i)*i,a[c]=Math.ceil(l/
i)*i,e(a)):i<0&&(a[u]=Math.ceil(s*i)/i,a[c]=Math.floor(l*i)/
i,e(a)),t},t}function i(){var t=n.i(u.a)(u.b,a.a);return t.copy=function()
{return n.i(u.c)(t,i())},r(t)}e.b=r,e.a=i;var
o=n(7),a=n(30),u=n(44),c=n(253)},function(t,e,n){\"use strict\";function r(t)
{return t>1?0:t<-1?h:Math.acos(t)}function i(t){return t>=1?d:t<=-1?-
d:Math.asin(t)}n.d(e,\"g\",function(){return o}),n.d(e,\"m\",function(){return
a}),n.d(e,\"h\",function(){return u}),n.d(e,\"e\",function(){return
c}),n.d(e,\"j\",function(){return s}),n.d(e,\"i\",function(){return
l}),n.d(e,\"d\",function(){return f}),n.d(e,\"a\",function(){return
p}),n.d(e,\"b\",function(){return h}),n.d(e,\"f\",function(){return
d}),n.d(e,\"c\",function(){return v}),e.l=r,e.k=i;var
o=Math.abs,a=Math.atan2,u=Math.cos,c=Math.max,s=Math.min,l=Math.sin,f=Math.sqrt,
p=1e-12,h=Math.PI,d=h/2,v=2*h},function(t,e,n){\"use strict\";e.a=function(t,e)
{if((i=t.length)>1)for(var n,r,i,o=1,a=t[e[0]],u=a.length;o<i;+
+o)for(r=a,a=t[e[o]],n=0;n<u;++n)a[n][1]+=a[n][0]=isNaN(r[n][1])?r[n][0]:r[n]
[1]}},function(t,e,n){\"use strict\";e.a=function(t){for(var e=t.length,n=new
Array(e);--e>=0;)n[e]=e;return n}},function(t,e,n){(function(t,r){var i;
(function(){function o(t,e,n){switch(n.length){case 0:return t.call(e);case
1:return t.call(e,n[0]);case 2:return t.call(e,n[0],n[1]);case 3:return
t.call(e,n[0],n[1],n[2])}return t.apply(e,n)}function a(t,e,n,r){for(var i=-
1,o=null==t?0:t.length;++i<o;){var a=t[i];e(r,a,n(a),t)}return r}function u(t,e)
{for(var n=-1,r=null==t?0:t.length;++n<r&&!1!==e(t[n],n,t););return t}function
c(t,e){for(var n=null==t?0:t.length;n--&&!1!==e(t[n],n,t););return t}function
s(t,e){for(var n=-1,r=null==t?0:t.length;++n<r;)if(!e(t[n],n,t))return!1;return!
0}function l(t,e){for(var n=-1,r=null==t?0:t.length,i=0,o=[];++n<r;){var
a=t[n];e(a,n,t)&&(o[i++]=a)}return o}function f(t,e){return!!(null==t?
0:t.length)&&w(t,e,0)>-1}function p(t,e,n){for(var r=-1,i=null==t?0:t.length;+
+r<i;)if(n(e,t[r]))return!0;return!1}function h(t,e){for(var n=-1,r=null==t?
0:t.length,i=Array(r);++n<r;)i[n]=e(t[n],n,t);return i}function d(t,e){for(var
n=-1,r=e.length,i=t.length;++n<r;)t[i+n]=e[n];return t}function v(t,e,n,r){var
i=-1,o=null==t?0:t.length;for(r&&o&&(n=t[++i]);++i<o;)n=e(n,t[i],i,t);return
n}function g(t,e,n,r){var i=null==t?0:t.length;for(r&&i&&(n=t[--
i]);i--;)n=e(n,t[i],i,t);return n}function m(t,e){for(var n=-1,r=null==t?
0:t.length;++n<r;)if(e(t[n],n,t))return!0;return!1}function y(t){return
t.split(\"\")}function _(t){return t.match(Ue)||[]}function b(t,e,n){var
r;return n(t,function(t,n,i){if(e(t,n,i))return r=n,!1}),r}function x(t,e,n,r)
{for(var i=t.length,o=n+(r?1:-1);r?o--:++o<i;)if(e(t[o],o,t))return o;return-
1}function w(t,e,n){return e===e?$(t,e,n):x(t,k,n)}function C(t,e,n,r){for(var
i=n-1,o=t.length;++i<o;)if(r(t[i],e))return i;return-1}function k(t){return t!
==t}function E(t,e){var n=null==t?0:t.length;return n?A(t,e)/n:It}function M(t)
{return function(e){return null==e?nt:e[t]}}function T(t){return function(e)
{return null==t?nt:t[e]}}function S(t,e,n,r,i){return i(t,function(t,i,o){n=r?
(r=!1,t):e(n,t,i,o)}),n}function N(t,e){var
n=t.length;for(t.sort(e);n--;)t[n]=t[n].value;return t}function A(t,e){for(var
n,r=-1,i=t.length;++r<i;){var o=e(t[r]);o!==nt&&(n=n===nt?o:n+o)}return
n}function P(t,e){for(var n=-1,r=Array(t);++n<t;)r[n]=e(n);return r}function
O(t,e){return h(e,function(e){return[e,t[e]]})}function I(t){return function(e)
{return t(e)}}function D(t,e){return h(e,function(e){return t[e]})}function
R(t,e){return t.has(e)}function L(t,e){for(var n=-1,r=t.length;+
+n<r&&w(e,t[n],0)>-1;);return n}function U(t,e){for(var n=t.length;n--
&&w(e,t[n],0)>-1;);return n}function F(t,e){for(var
n=t.length,r=0;n--;)t[n]===e&&++r;return r}function j(t)
{return\"\\\\\"+En[t]}function B(t,e){return null==t?nt:t[e]}function V(t)
{return gn.test(t)}function W(t){return mn.test(t)}function z(t){for(var
e,n=[];!(e=t.next()).done;)n.push(e.value);return n}function H(t){var e=-
1,n=Array(t.size);return t.forEach(function(t,r){n[++e]=[r,t]}),n}function
q(t,e){return function(n){return t(e(n))}}function Y(t,e){for(var n=-
1,r=t.length,i=0,o=[];++n<r;){var a=t[n];a!==e&&a!==ct||(t[n]=ct,o[i+
+]=n)}return o}function K(t){var e=-1,n=Array(t.size);return
t.forEach(function(t){n[++e]=t}),n}function G(t){var e=-1,n=Array(t.size);return
t.forEach(function(t){n[++e]=[t,t]}),n}function $(t,e,n){for(var r=n-
1,i=t.length;++r<i;)if(t[r]===e)return r;return-1}function X(t,e,n){for(var
r=n+1;r--;)if(t[r]===e)return r;return r}function Q(t){return V(t)?
J(t):Wn(t)}function Z(t){return V(t)?tt(t):y(t)}function J(t){for(var
e=dn.lastIndex=0;dn.test(t);)++e;return e}function tt(t){return t.match(dn)||
[]}function et(t){return t.match(vn)||[]}var nt,rt=200,it=\"Unsupported core-js
use. Try https://npms.io/search?q=ponyfill.\",ot=\"Expected a
function\",at=\"__lodash_hash_undefined__\",ut=500,ct=\"__lodash_placeholder__\"
,st=1,lt=2,ft=4,pt=1,ht=2,dt=1,vt=2,gt=4,mt=8,yt=16,_t=32,bt=64,xt=128,wt=256,Ct
=512,kt=30,Et=\"...\",Mt=800,Tt=16,St=1,Nt=2,At=1/0,Pt=9007199254740991,Ot=1.797
6931348623157e308,It=NaN,Dt=4294967295,Rt=Dt-1,Lt=Dt>>>1,Ut=[[\"ary\",xt],
[\"bind\",dt],[\"bindKey\",vt],[\"curry\",mt],[\"curryRight\",yt],[\"flip\",Ct],
[\"partial\",_t],[\"partialRight\",bt],[\"rearg\",wt]],Ft=\"[object
Arguments]\",jt=\"[object Array]\",Bt=\"[object AsyncFunction]\",Vt=\"[object
Boolean]\",Wt=\"[object Date]\",zt=\"[object DOMException]\",Ht=\"[object
Error]\",qt=\"[object Function]\",Yt=\"[object GeneratorFunction]\",Kt=\"[object
Map]\",Gt=\"[object Number]\",$t=\"[object Null]\",Xt=\"[object
Object]\",Qt=\"[object Proxy]\",Zt=\"[object RegExp]\",Jt=\"[object
Set]\",te=\"[object String]\",ee=\"[object Symbol]\",ne=\"[object
Undefined]\",re=\"[object WeakMap]\",ie=\"[object WeakSet]\",oe=\"[object
ArrayBuffer]\",ae=\"[object DataView]\",ue=\"[object
Float32Array]\",ce=\"[object Float64Array]\",se=\"[object
Int8Array]\",le=\"[object Int16Array]\",fe=\"[object Int32Array]\",pe=\"[object
Uint8Array]\",he=\"[object Uint8ClampedArray]\",de=\"[object
Uint16Array]\",ve=\"[object Uint32Array]\",ge=/\\b__p \\+= '';/g,me=/\\b(__p \\
+=) '' \\+/g,ye=/(__e\\(.*?\\)|\\b__t\\)) \\+\\n'';/g,_e=/&(?:amp|lt|gt|quot|
#39);/g,be=/[&<>\"']/g,xe=RegExp(_e.source),we=RegExp(be.source),Ce=/<%-([\\s\\
S]+?)%>/g,ke=/<%([\\s\\S]+?)%>/g,Ee=/<%=([\\s\\S]+?)%>/g,Me=/\\.|\\[(?:
[^[\\]]*|([\"'])(?:(?!\\1)[^\\\\]|\\\\.)*?\\1)\\]/,Te=/^\\w*$/,Se=/[^.[\\]]+|\\
[(?:(-?\\d+(?:\\.\\d+)?)|([\"'])((?:(?!\\2)[^\\\\]|\\\\.)*?)\\2)\\]|(?=(?:\\.|\\
[\\])(?:\\.|\\[\\]|$))/g,Ne=/[\\\\^$.*+?()[\\]{}|]/g,Ae=RegExp(Ne.source),Pe=/
^\\s+|\\s+$/g,Oe=/^\\s+/,Ie=/\\s+$/,De=/\\{(?:\\n\\/\\* \\[wrapped with .+\\] \\
*\\/)?\\n?/,Re=/\\{\\n\\/\\* \\[wrapped with (.+)\\] \\*/,Le=/,? & /,Ue=/[^\\
x00-\\x2f\\x3a-\\x40\\x5b-\\x60\\x7b-\\x7f]+/g,Fe=/\\\\(\\\\)?/g,je=/\\$\\
{([^\\\\}]*(?:\\\\.[^\\\\}]*)*)\\}/g,Be=/\\w*$/,Ve=/^[-+]0x[0-9a-f]+$/i,We=/
```

```
^0b[01]+$/i,ze=/^\\[object .+?Constructor\\]$/,He=/^0o[0-7]+$/i,qe=/^(?:0|[1-
9]\\d*)$/,Ye=/[\\xc0-\\xd6\\xd8-\\xf6\\xf8-\\xff\\u0100-\\u017f]/g,Ke=/
($^)/,Ge=/['\\n\\r\\u2028\\u2029\\\\]/g,$e=\"\\\\u0300-\\\\u036f\\\\ufe20-\\\\
ufe2f\\\\u20d0-\\\\u20ff\",Xe=\"\\\\xac\\\\xb1\\\\xd7\\\\xf7\\\\x00-\\\\x2f\\\\
x3a-\\\\x40\\\\x5b-\\\\x60\\\\x7b-\\\\xbf\\\\u2000-\\\\u206f \\\\t\\\\x0b\\\\
f\\\\xa0\\\\ufeff\\\\n\\\\r\\\\u2028\\\\u2029\\\\u1680\\\\u180e\\\\u2000\\\\
u2001\\\\u2002\\\\u2003\\\\u2004\\\\u2005\\\\u2006\\\\u2007\\\\u2008\\\\
u2009\\\\u200a\\\\u202f\\\\u205f\\\\u3000\",Qe=\"[\"+Xe+\"]\",Ze=\"[\"+
$e+\"]\",Je=\"[a-z\\\\xdf-\\\\xf6\\\\xf8-\\\\xff]\",tn=\"[^\\\\ud800-\\\\
udfff\"+Xe+\"\\\\d+\\\\u2700-\\\\u27bfa-z\\\\xdf-\\\\xf6\\\\xf8-\\\\xffA-Z\\\\
xc0-\\\\xd6\\\\xd8-\\\\xde]\",en=\"\\\\ud83c[\\\\udffb-\\\\udfff]\",nn=\"(?:\\\\
ud83c[\\\\udde6-\\\\uddff]){2}\",rn=\"[\\\\ud800-\\\\udbff][\\\\udc00-\\\\
udfff]\",on=\"[A-Z\\\\xc0-\\\\xd6\\\\xd8-\\\\
xde]\",an=\"(?:\"+Je+\"|\"+tn+\")\",un=\"(?:[\\\\u0300-\\\\u036f\\\\ufe20-\\\\
ufe2f\\\\u20d0-\\\\u20ff]|\\\\ud83c[\\\\udffb-\\\\udfff])?\",cn=\"(?:\\\\
u200d(?:\"+[\"[^\\\\ud800-\\\\udfff]\",nn,rn].join(\"|\")+\")[\\\\ufe0e\\\\
ufe0f]?\"+un+\")*\",sn=\"[\\\\ufe0e\\\\ufe0f]?\"+un+cn,ln=\"(?:\"+[\"[\\\\
u2700-\\\\u27bf]\",nn,rn].join(\"|\")+\")\"+sn,fn=\"(?:\"+[\"[^\\\\ud800-\\\\
udfff]\"+Ze+\"?\",Ze,nn,rn,\"[\\\\ud800-\\\\udfff]\"].join(\"|\")
+\")\",pn=RegExp(\"['â]\",\"g\"),hn=RegExp(Ze,\"g\"),dn=RegExp(en+\"(?
=\"+en+\")|\"+fn+sn,\"g\"),vn=RegExp([on+\"?\"+Je+\"+(?:['â](?:d|ll|m|re|s|t|
ve))?(?=\"+[Qe,on,\"$\"].join(\"|\")+\")\",\"(?:[A-Z\\\\xc0-\\\\xd6\\\\xd8-\\\\
xde]|[^\\\\ud800-\\\\udfff\\\\xac\\\\xb1\\\\xd7\\\\xf7\\\\x00-\\\\x2f\\\\
x3a-\\\\x40\\\\x5b-\\\\x60\\\\x7b-\\\\xbf\\\\u2000-\\\\u206f \\\\t\\\\x0b\\\\
f\\\\xa0\\\\ufeff\\\\n\\\\r\\\\u2028\\\\u2029\\\\u1680\\\\u180e\\\\u2000\\\\
u2001\\\\u2002\\\\u2003\\\\u2004\\\\u2005\\\\u2006\\\\u2007\\\\u2008\\\\
u2009\\\\u200a\\\\u202f\\\\u205f\\\\u3000\\\\d+\\\\u2700-\\\\u27bfa-z\\\\
xdf-\\\\xf6\\\\xf8-\\\\xffA-Z\\\\xc0-\\\\xd6\\\\xd8-\\\\xde])+(?:['â](?:D|LL|M|
RE|S|T|VE))?(?=\"+[Qe,on+an,\"$\"].join(\"|\")+\")\",on+\"?\"+an+\"+(?:['â](?:d|
ll|m|re|s|t|ve))?\",on+\"+(?:['â](?:D|LL|M|RE|S|T|VE))?\",\"\\\\d*(?:1ST|2ND|
3RD|(?![123])\\\\dTH)(?=\\\\b|[a-z_])\",\"\\\\d*(?:1st|2nd|3rd|(?![123])\\\\dth)
(?=\\\\b|[A-Z_])\",\"\\\\d+\",ln].join(\"|\"),\"g\"),gn=RegExp(\"[\\\\u200d\\\\
ud800-\\\\udfff\"+$e+\"\\\\ufe0e\\\\ufe0f]\"),mn=/[a-z][A-Z]|[A-Z]{2}[a-z]|[0-9]
[a-zA-Z]|[a-zA-Z][0-9]|[^a-zA-Z0-
9 ]/,yn=[\"Array\",\"Buffer\",\"DataView\",\"Date\",\"Error\",\"Float32Array\",\
"Float64Array\",\"Function\",\"Int8Array\",\"Int16Array\",\"Int32Array\",\"Map\"
,\"Math\",\"Object\",\"Promise\",\"RegExp\",\"Set\",\"String\",\"Symbol\",\"Type
Error\",\"Uint8Array\",\"Uint8ClampedArray\",\"Uint16Array\",\"Uint32Array\",\"W
eakMap\",\"_\",\"clearTimeout\",\"isFinite\",\"parseInt\",\"setTimeout\"],_n=-
1,bn={};bn[ue]=bn[ce]=bn[se]=bn[le]=bn[fe]=bn[pe]=bn[he]=bn[de]=bn[ve]=!
0,bn[Ft]=bn[jt]=bn[oe]=bn[Vt]=bn[ae]=bn[Wt]=bn[Ht]=bn[qt]=bn[Kt]=bn[Gt]=bn[Xt]=b
n[Zt]=bn[Jt]=bn[te]=bn[re]=!1;var
xn={};xn[Ft]=xn[jt]=xn[oe]=xn[ae]=xn[Vt]=xn[Wt]=xn[ue]=xn[ce]=xn[se]=xn[le]=xn[f
e]=xn[Kt]=xn[Gt]=xn[Xt]=xn[Zt]=xn[Jt]=xn[te]=xn[ee]=xn[pe]=xn[he]=xn[de]=xn[ve]=
!0,xn[Ht]=xn[qt]=xn[re]=!1;var
wn={\"Ã\":\"A\",\"Ã\":\"A\",\"Ã\":\"A\",\"Ã\":\"A\",\"Ã\":\"A\",\"Ã\":\"A\",\"Ã
\":\"a\",\"Ã¡\":\"a\",\"Ã
¢\":\"a\",\"Ã£\":\"a\",\"Ã¤\":\"a\",\"Ã¥\":\"a\",\"Ã\":\"C\",\"Ã§\":\"c\",\"Ã\":
\"D\",\"Ã°\":\"d\",\"Ã\":\"E\",\"Ã\":\"E\",\"Ã\":\"E\",\"Ã\":\"E\",\"Ã¨\":\"e\",
\"Ã©\":\"e\",\"Ãª\":\"e\",\"Ã«\":\"e\",\"Ã\":\"I\",\"Ã\":\"I\",\"Ã\":\"I\",\"Ã\"
:\"I\",\"Ã¬\":\"i\",\"Ã\":\"i\",\"Ã®\":\"i\",\"Ã¯\":\"i\",\"Ã\":\"N\",\"Ã±\":\"n
\",\"Ã\":\"O\",\"Ã\":\"O\",\"Ã\":\"O\",\"Ã\":\"O\",\"Ã\":\"O\",\"Ã\":\"O\",\"Ã²\
":\"o\",\"Ã³\":\"o\",\"Ã
´\":\"o\",\"Ãµ\":\"o\",\"Ã¶\":\"o\",\"Ã¸\":\"o\",\"Ã\":\"U\",\"Ã\":\"U\",\"Ã\":\
"U\",\"Ã\":\"U\",\"Ã¹\":\"u\",\"Ãº\":\"u\",\"Ã»\":\"u\",\"Ã¼\":\"u\",\"Ã\":\"Y\"
,\"Ã½\":\"y\",\"Ã¿\":\"y\",\"Ã\":\"Ae\",\"Ã¦\":\"ae\",\"Ã\":\"Th\",\"Ã¾\":\"th\"
,\"Ã\":\"ss\",\"Ä\":\"A\",\"Ä\":\"A\",\"Ä\":\"A\",\"Ä\":\"a\",\"Ä\":\"a\",\"Ä
\":\"a\",\"Ä\":\"C\",\"Ä\":\"C\",\"Ä\":\"C\",\"Ä\":\"C\",\"Ä\":\"c\",\"Ä\":\"c\"
,\"Ä\":\"c\",\"Ä\":\"c\",\"Ä\":\"D\",\"Ä\":\"D\",\"Ä\":\"d\",\"Ä\":\"d\",\"Ä\":\
"E\",\"Ä\":\"E\",\"Ä\":\"E\",\"Ä\":\"E\",\"Ä\":\"E\",\"Ä\":\"e\",\"Ä\":\"e\",\"Ä
\":\"e\",\"Ä\":\"e\",\"Ä\":\"e\",\"Ä\":\"G\",\"Ä\":\"G\",\"Ä \":\"G\",\"Ä
¢\":\"G\",\"Ä\":\"g\",\"Ä\":\"g\",\"Ä¡\":\"g\",\"Ä£\":\"g\",\"Ä¤\":\"H\",\"Ä¦\":
\"H\",\"Ä¥\":\"h\",\"Ä§\":\"h\",\"Ä¨\":\"I\",\"Äª\":\"I\",\"Ä¬\":\"I\",\"Ä®\":\"
I\",\"Ä°\":\"I\",\"Ä©\":\"i\",\"Ä«\":\"i\",\"Ä\":\"i\",\"Ä¯\":\"i\",\"Ä±\":\"i\"
```

```
,\"Ä
´\":\"J\",\"Äµ\":\"j\",\"Ä¶\":\"K\",\"Ä·\":\"k\",\"Ä¸\":\"k\",\"Ä¹\":\"L\",\"Ä»\
":\"L\",\"Ä½\":\"L\",\"Ä¿\":\"L\",\"Å\":\"L\",\"Äº\":\"l\",\"Ä¼\":\"l\",\"Ä¾\":\
"l\",\"Å\":\"l\",\"Å\":\"l\",\"Å\":\"N\",\"Å
\":\"N\",\"Å\":\"N\",\"Å\":\"N\",\"Å\":\"n\",\"Å\":\"n\",\"Å\":\"n\",\"Å\":\"n\"
,\"Å\":\"O\",\"Å\":\"O\",\"Å\":\"O\",\"Å\":\"o\",\"Å\":\"o\",\"Å\":\"o\",\"Å\":\
"R\",\"Å\":\"R\",\"Å\":\"R\",\"Å\":\"r\",\"Å\":\"r\",\"Å\":\"r\",\"Å\":\"S\",\"Å
\":\"S\",\"Å\":\"S\",\"Å \":\"S\",\"Å\":\"s\",\"Å\":\"s\",\"Å\":\"s\",\"Å¡\":\"s
\",\"Å
¢\":\"T\",\"Å¤\":\"T\",\"Å¦\":\"T\",\"Å£\":\"t\",\"Å¥\":\"t\",\"Å§\":\"t\",\"Å¨\
":\"U\",\"Åª\":\"U\",\"Å¬\":\"U\",\"Å®\":\"U\",\"Å°\":\"U\",\"Å²\":\"U\",\"Å©\":
\"u\",\"Å«\":\"u\",\"Å\":\"u\",\"Å¯\":\"u\",\"Å±\":\"u\",\"Å³\":\"u\",\"Å
´\":\"W\",\"Åµ\":\"w\",\"Å¶\":\"Y\",\"Å·\":\"y\",\"Å¸\":\"Y\",\"Å¹\":\"Z\",\"Å»\
":\"Z\",\"Å½\":\"Z\",\"Åº\":\"z\",\"Å¼\":\"z\",\"Å¾\":\"z\",\"Ä²\":\"IJ\",\"Ä³\"
:\"ij\",\"Å\":\"Oe\",\"Å\":\"oe\",\"Å\":\"'n\",\"Å¿\":\"s\"},Cn={\"&\":\"&amp;\"
,\"<\":\"&lt;\",\">\":\"&gt;\",'\"':\"&quot;\",\"'\":\"&#39;\"},kn={\"&amp;\":\"
&\",\"&lt;\":\"<\",\"&gt;\":\">\",\"&quot;\":'\"',\"&#39;\":\"'\"},En={\"\\\\\":
\"\\\\\",\"'\":\"'\",\"\\n\":\"n\",\"\\r\":\"r\",\"\\u2028\":\"u2028\",\"\\
u2029\":\"u2029\"},Mn=parseFloat,Tn=parseInt,Sn=\"object\"==typeof
t&&t&&t.Object===Object&&t,Nn=\"object\"==typeof
self&&self&&self.Object===Object&&self,An=Sn||Nn||Function(\"return this\")
(),Pn=\"object\"==typeof e&&e&&!e.nodeType&&e,On=Pn&&\"object\"==typeof r&&r&&!
r.nodeType&&r,In=On&&On.exports===Pn,Dn=In&&Sn.process,Rn=function(){try{var
t=On&&On.require&&On.require(\"util\").types;return t||
Dn&&Dn.binding&&Dn.binding(\"util\")}catch(t){}}
(),Ln=Rn&&Rn.isArrayBuffer,Un=Rn&&Rn.isDate,Fn=Rn&&Rn.isMap,jn=Rn&&Rn.isRegExp,B
n=Rn&&Rn.isSet,Vn=Rn&&Rn.isTypedArray,Wn=M(\"length\"),zn=T(wn),Hn=T(Cn),qn=T(kn
),Yn=function t(e){function n(t){if(ec(t)&&!hp(t)&&!(t instanceof y)){if(t
instanceof i)return t;if(pl.call(t,\"__wrapped__\"))return Zo(t)}return new
i(t)}function r(){}function i(t,e)
{this.__wrapped__=t,this.__actions__=[],this.__chain__=!!
e,this.__index__=0,this.__values__=nt}function y(t)
{this.__wrapped__=t,this.__actions__=[],this.__dir__=1,this.__filtered__=!
1,this.__iteratees__=[],this.__takeCount__=Dt,this.__views__=[]}function T(){var
t=new y(this.__wrapped__);return
t.__actions__=Oi(this.__actions__),t.__dir__=this.__dir__,t.__filtered__=this.__
filtered__,t.__iteratees__=Oi(this.__iteratees__),t.__takeCount__=this.__takeCou
nt__,t.__views__=Oi(this.__views__),t}function $(){if(this.__filtered__){var
t=new y(this);t.__dir__=-1,t.__filtered__=!0}else t=this.clone(),t.__dir__*=-
1;return t}function J(){var
t=this.__wrapped__.value(),e=this.__dir__,n=hp(t),r=e<0,i=n?
t.length:0,o=wo(0,i,this.__views__),a=o.start,u=o.end,c=u-a,s=r?u:a-
1,l=this.__iteratees__,f=l.length,p=0,h=Wl(c,this.__takeCount__);if(!n||!
r&&i==c&&h==c)return vi(t,this.__actions__);var d=[];t:for(;c--&&p<h;)
{s+=e;for(var v=-1,g=t[s];++v<f;){var
m=l[v],y=m.iteratee,_=m.type,b=y(g);if(_==Nt)g=b;else if(!b){if(_==St)continue
t;break t}}d[p++]=g}return d}function tt(t){var e=-1,n=null==t?
0:t.length;for(this.clear();++e<n;){var r=t[e];this.set(r[0],r[1])}}function
Ue(){this.__data__=Zl?Zl(null):{},this.size=0}function $e(t){var
e=this.has(t)&&delete this.__data__[t];return this.size-=e?1:0,e}function Xe(t)
{var e=this.__data__;if(Zl){var n=e[t];return n===at?nt:n}return pl.call(e,t)?
e[t]:nt}function Qe(t){var e=this.__data__;return Zl?e[t]!
==nt:pl.call(e,t)}function Ze(t,e){var n=this.__data__;return
this.size+=this.has(t)?0:1,n[t]=Zl&&e===nt?at:e,this}function Je(t){var e=-
1,n=null==t?0:t.length;for(this.clear();++e<n;){var
r=t[e];this.set(r[0],r[1])}}function tn(){this.__data__=[],this.size=0}function
en(t){var e=this.__data__,n=Kn(e,t);return!(n<0)&&(n==e.length-1?
e.pop():Ml.call(e,n,1),--this.size,!0)}function nn(t){var
e=this.__data__,n=Kn(e,t);return n<0?nt:e[n][1]}function rn(t){return
Kn(this.__data__,t)>-1}function on(t,e){var n=this.__data__,r=Kn(n,t);return
r<0?(++this.size,n.push([t,e])):n[r][1]=e,this}function an(t){var e=-
1,n=null==t?0:t.length;for(this.clear();++e<n;){var
r=t[e];this.set(r[0],r[1])}}function un(){this.size=0,this.__data__={hash:new
tt,map:new(Gl||Je),string:new tt}}function cn(t){var
```

```
e=yo(this,t).delete(t);return this.size-=e?1:0,e}function sn(t){return
yo(this,t).get(t)}function ln(t){return yo(this,t).has(t)}function fn(t,e){var
n=yo(this,t),r=n.size;return n.set(t,e),this.size+=n.size==r?0:1,this}function
dn(t){var e=-1,n=null==t?0:t.length;for(this.__data__=new an;+
+e<n;)this.add(t[e])}function
 vn(t){return this.__data__.set(t,at),this}function gn(t){return
this.__data__.has(t)}function mn(t){var e=this.__data__=new
Je(t);this.size=e.size}function wn(){this.__data__=new Je,this.size=0}function
Cn(t){var e=this.__data__,n=e.delete(t);return this.size=e.size,n}function kn(t)
{return this.__data__.get(t)}function En(t){return this.__data__.has(t)}function
Sn(t,e){var n=this.__data__;if(n instanceof Je){var r=n.__data__;if(!Gl||
r.length<rt-1)return r.push([t,e]),this.size=++n.size,this;n=this.__data__=new
an(r)}return n.set(t,e),this.size=n.size,this}function Nn(t,e){var n=hp(t),r=!
n&&pp(t),i=!n&&!r&&vp(t),o=!n&&!r&&!i&&bp(t),a=n||r||i||o,u=a?P(t.length,ol):
[],c=u.length;for(var s in t)!e&&!pl.call(t,s)||a&&(\"length\"==s||
i&&(\"offset\"==s||\"parent\"==s)||
o&&(\"buffer\"==s||\"byteLength\"==s||\"byteOffset\"==s)||Ao(s,c))||
u.push(s);return u}function Pn(t){var e=t.length;return e?t[Xr(0,e-
1)]:nt}function On(t,e){return Go(Oi(t),Jn(e,0,t.length))}function Dn(t){return
Go(Oi(t))}function Rn(t,e,n){(n===nt||Vu(t[e],n))&&(n!==nt||e in t)||
Qn(t,e,n)}function Wn(t,e,n){var r=t[e];pl.call(t,e)&&Vu(r,n)&&(n!==nt||e in
t)||Qn(t,e,n)}function Kn(t,e){for(var n=t.length;n--;)if(Vu(t[n][0],e))return
n;return-1}function Gn(t,e,n,r){return ff(t,function(t,i,o)
{e(r,t,n(t),o)}),r}function $n(t,e){return t&&Ii(e,Lc(e),t)}function Xn(t,e)
{return t&&Ii(e,Uc(e),t)}function Qn(t,e,n){\"__proto__\"==e&&Al?Al(t,e,
{configurable:!0,enumerable:!0,value:n,writable:!0}):t[e]=n}function Zn(t,e)
{for(var n=-1,r=e.length,i=Zs(r),o=null==t;++n<r;)i[n]=o?nt:Ic(t,e[n]);return
i}function Jn(t,e,n){return t===t&&(n!==nt&&(t=t<=n?t:n),e!==nt&&(t=t>=e?
t:e)),t}function tr(t,e,n,r,i,o){var a,c=e&st,s=e&lt,l=e&ft;if(n&&(a=i?
n(t,r,i,o):n(t)),a!==nt)return a;if(!tc(t))return t;var f=hp(t);if(f)
{if(a=Eo(t),!c)return Oi(t,a)}else{var p=Cf(t),h=p==qt||p==Yt;if(vp(t))return
wi(t,c);if(p==Xt||p==Ft||h&&!i){if(a=s||h?{}:Mo(t),!c)return s?
Ri(t,Xn(a,t)):Di(t,$n(a,t))}else{if(!xn[p])return i?t:{};a=To(t,p,c)}}o||(o=new
mn);var d=o.get(t);if(d)return d;if(o.set(t,a),_p(t))return
t.forEach(function(r){a.add(tr(r,e,n,r,t,o))}),a;if(mp(t))return
t.forEach(function(r,i){a.set(i,tr(r,e,n,i,t,o))}),a;var v=l?s?ho:po:s?
Uc:Lc,g=f?nt:v(t);return u(g||t,function(r,i)
{g&&(i=r,r=t[i]),Wn(a,i,tr(r,e,n,i,t,o))}),a}function er(t){var e=Lc(t);return
function(n){return nr(n,t,e)}}function nr(t,e,n){var
r=n.length;if(null==t)return!r;for(t=rl(t);r--;){var
i=n[r],o=e[i],a=t[i];if(a===nt&&!(i in t)||!o(a))return!1}return!0}function
rr(t,e,n){if(\"function\"!=typeof t)throw new al(ot);return Mf(function()
{t.apply(nt,n)},e)}function ir(t,e,n,r){var i=-1,o=f,a=!
0,u=t.length,c=[],s=e.length;if(!u)return c;n&&(e=h(e,I(n))),r?(o=p,a=!
1):e.length>=rt&&(o=R,a=!1,e=new dn(e));t:for(;++i<u;){var l=t[i],d=null==n?
l:n(l);if(l=r||0!==l?l:0,a&&d===d){for(var v=s;v--;)if(e[v]===d)continue
t;c.push(l)}else o(e,d,r)||c.push(l)}return c}function or(t,e){var n=!0;return
ff(t,function(t,r,i){return n=!!e(t,r,i)}),n}function ar(t,e,n){for(var r=-
1,i=t.length;++r<i;){var o=t[r],a=e(o);if(null!=a&&(u===nt?a===a&&!
pc(a):n(a,u)))var u=a,c=o}return c}function ur(t,e,n,r){var
i=t.length;for(n=yc(n),n<0&&(n=-n>i?0:i+n),r=r===nt||r>i?
i:yc(r),r<0&&(r+=i),r=n>r?0:_c(r);n<r;)t[n++]=e;return t}function cr(t,e){var
n=[];return ff(t,function(t,r,i){e(t,r,i)&&n.push(t)}),n}function sr(t,e,n,r,i)
{var o=-1,a=t.length;for(n||(n=No),i||(i=[]);++o<a;){var u=t[o];e>0&&n(u)?e>1?
sr(u,e-1,n,r,i):d(i,u):r||(i[i.length]=u)}return i}function lr(t,e){return
t&&hf(t,e,Lc)}function fr(t,e){return t&&df(t,e,Lc)}function pr(t,e){return
l(e,function(e){return Qu(t[e])})}function hr(t,e){e=bi(e,t);for(var
n=0,r=e.length;null!=t&&n<r;)t=t[$o(e[n++])];return n&&n==r?t:nt}function
dr(t,e,n){var r=e(t);return hp(t)?r:d(r,n(t))}function vr(t){return null==t?
t===nt?ne:$t:Nl&&Nl in rl(t)?xo(t):Vo(t)}function gr(t,e){return t>e}function
mr(t,e){return null!=t&&pl.call(t,e)}function yr(t,e){return null!=t&&e in
rl(t)}function _r(t,e,n){return t>=Wl(e,n)&&t<Vl(e,n)}function br(t,e,n){for(var
r=n?p:f,i=t[0].length,o=t.length,a=o,u=Zs(o),c=1/0,s=[];a--;){var
l=t[a];a&&e&&(l=h(l,I(e))),c=Wl(l.length,c),u[a]=!n&&(e||i>=120&&l.length>=120)?
```

```
new dn(a&&l):nt}l=t[0];var d=-1,v=u[0];t:for(;++d<i&&s.length<c;){var
g=l[d],m=e?e(g):g;if(g=n||0!==g?g:0,!(v?R(v,m):r(s,m,n))){for(a=o;--a;){var
y=u[a];if(!(y?R(y,m):r(t[a],m,n)))continue t}v&&v.push(m),s.push(g)}}return
s}function xr(t,e,n,r){return lr(t,function(t,i,o){e(r,n(t),i,o)}),r}function
wr(t,e,n){e=bi(e,t),t=zo(t,e);var r=null==t?t:t[$o(ma(e))];return null==r?
nt:o(r,t,n)}function Cr(t){return ec(t)&&vr(t)==Ft}function kr(t){return
ec(t)&&vr(t)==oe}function Er(t){return ec(t)&&vr(t)==Wt}function Mr(t,e,n,r,i)
{return t===e||(null==t||null==e||!ec(t)&&!ec(e)?t!==t&&e!
==e:Tr(t,e,n,r,Mr,i))}function Tr(t,e,n,r,i,o){var a=hp(t),u=hp(e),c=a?
jt:Cf(t),s=u?jt:Cf(e);c=c==Ft?Xt:c,s=s==Ft?Xt:s;var
l=c==Xt,f=s==Xt,p=c==s;if(p&&vp(t)){if(!vp(e))return!1;a=!0,l=!1}if(p&&!l)return
o||(o=new mn),a||bp(t)?co(t,e,n,r,i,o):so(t,e,c,n,r,i,o);if(!(n&pt)){var
h=l&&pl.call(t,\"__wrapped__\"),d=f&&pl.call(e,\"__wrapped__\");if(h||d){var
v=h?t.value():t,g=d?e.value():e;return o||(o=new mn),i(v,g,n,r,o)}}return!!
p&&(o||(o=new mn),lo(t,e,n,r,i,o))}function Sr(t){return
ec(t)&&Cf(t)==Kt}function Nr(t,e,n,r){var i=n.length,o=i,a=!r;if(null==t)return!
o;for(t=rl(t);i--;){var u=n[i];if(a&&u[2]?u[1]!==t[u[0]]:!(u[0]in t))return!
1}for(;++i<o;){u=n[i];var c=u[0],s=t[c],l=u[1];if(a&&u[2]){if(s===nt&&!(c in
t))return!1}else{var f=new mn;if(r)var p=r(s,l,c,t,e,f);if(!(p===nt?Mr(l,s,pt|
ht,r,f):p))return!1}}return!0}function Ar(t){return!(!tc(t)||Ro(t))&&(Qu(t)?
yl:ze).test(Xo(t))}function Pr(t){return ec(t)&&vr(t)==Zt}function Or(t){return
ec(t)&&Cf(t)==Jt}function Ir(t){return ec(t)&&Ju(t.length)&&!!bn[vr(t)]}function
Dr(t){return\"function\"==typeof t?t:null==t?Ms:\"object\"==typeof t?hp(t)?
Br(t[0],t[1]):jr(t):Ds(t)}function Rr(t){if(!Lo(t))return Bl(t);var e=[];for(var
n in rl(t))pl.call(t,n)&&\"constructor\"!=n&&e.push(n);return e}function Lr(t)
{if(!tc(t))return Bo(t);var e=Lo(t),n=[];for(var r in t)(\"constructor\"!=r||!
e&&pl.call(t,r))&&n.push(r);return n}function Ur(t,e){return t<e}function
Fr(t,e){var n=-1,r=Wu(t)?Zs(t.length):[];return ff(t,function(t,i,o){r[+
+n]=e(t,i,o)}),r}function jr(t){var e=_o(t);return 1==e.length&&e[0][2]?Fo(e[0]
[0],e[0][1]):function(n){return n===t||Nr(n,t,e)}}function Br(t,e){return
Oo(t)&&Uo(e)?Fo($o(t),e):function(n){var r=Ic(n,t);return r===nt&&r===e?
Rc(n,t):Mr(e,r,pt|ht)}}function Vr(t,e,n,r,i){t!==e&&hf(e,function(o,a)
{if(tc(o))i||(i=new mn),Wr(t,e,a,n,Vr,r,i);else{var u=r?
r(qo(t,a),o,a+\"\",t,e,i):nt;u===nt&&(u=o),Rn(t,a,u)}},Uc)}function
Wr(t,e,n,r,i,o,a){var u=qo(t,n),c=qo(e,n),s=a.get(c);if(s)return void
Rn(t,n,s);var l=o?o(u,c,n+\"\",t,e,a):nt,f=l===nt;if(f){var p=hp(c),h=!
p&&vp(c),d=!p&&!h&&bp(c);l=c,p||h||d?hp(u)?l=u:zu(u)?l=Oi(u):h?(f=!1,l=wi(c,!
0)):d?(f=!1,l=Ti(c,!0)):l=[]:sc(c)||pp(c)?(l=u,pp(u)?l=xc(u):tc(u)&&!Qu(u)||
(l=Mo(c))):f=!1}f&&(a.set(c,l),i(l,c,r,o,a),a.delete(c)),Rn(t,n,l)}function
zr(t,e){var n=t.length;if(n)return e+=e<0?n:0,Ao(e,n)?t[e]:nt}function Hr(t,e,n)
{var r=-1;return e=h(e.length?e:[Ms],I(mo())),N(Fr(t,function(t,n,i)
{return{criteria:h(e,function(e){return e(t)}),index:+
+r,value:t}}),function(t,e){return Ni(t,e,n)})}function qr(t,e){return
Yr(t,e,function(e,n){return Rc(t,n)})}function Yr(t,e,n){for(var r=-
1,i=e.length,o={};++r<i;){var a=e[r],u=hr(t,a);n(u,a)&&ni(o,bi(a,t),u)}return
o}function Kr(t){return function(e){return hr(e,t)}}function Gr(t,e,n,r){var
i=r?C:w,o=-1,a=e.length,u=t;for(t===e&&(e=Oi(e)),n&&(u=h(t,I(n)));++o<a;)for(var
c=0,s=e[o],l=n?n(s):s;(c=i(u,l,c,r))>-1;)u!
==t&&Ml.call(u,c,1),Ml.call(t,c,1);return t}function $r(t,e){for(var n=t?
e.length:0,r=n-1;n--;){var i=e[n];if(n==r||i!==o){var o=i;Ao(i)?
Ml.call(t,i,1):pi(t,i)}}return t}function Xr(t,e){return t+Rl(ql()*(e-
t+1))}function Qr(t,e,n,r){for(var i=-1,o=Vl(Dl((e-t)/(n||
1)),0),a=Zs(o);o--;)a[r?o:++i]=t,t+=n;return a}function Zr(t,e){var n=\"\";if(!
t||e<1||e>Pt)return n;do{e%2&&(n+=t),(e=Rl(e/2))&&(t+=t)}while(e);return
n}function Jr(t,e){return Tf(Wo(t,e,Ms),t+\"\")}function ti(t){return
Pn($c(t))}function ei(t,e){var n=$c(t);return Go(n,Jn(e,0,n.length))}function
ni(t,e,n,r){if(!tc(t))return t;e=bi(e,t);for(var i=-1,o=e.length,a=o-1,u=t;null!
=u&&++i<o;){var c=$o(e[i]),s=n;if(i!=a){var l=u[c];s=r?
r(l,c,u):nt,s===nt&&(s=tc(l)?l:Ao(e[i+1])?[]:{})}Wn(u,c,s),u=u[c]}return
t}function ri(t){return Go($c(t))}function ii(t,e,n){var r=-
1,i=t.length;e<0&&(e=-e>i?0:i+e),n=n>i?i:n,n<0&&(n+=i),i=e>n?0:n-
e>>>0,e>>>=0;for(var o=Zs(i);++r<i;)o[r]=t[r+e];return o}function oi(t,e){var
n;return ff(t,function(t,r,i){return!(n=e(t,r,i))}),!!n}function ai(t,e,n){var
r=0,i=null==t?r:t.length;if(\"number\"==typeof e&&e===e&&i<=Lt){for(;r<i;){var
o=r+i>>>1,a=t[o];null!==a&&!pc(a)&&(n?a<=e:a<e)?r=o+1:i=o}return i}return
ui(t,e,Ms,n)}function ui(t,e,n,r){e=n(e);for(var i=0,o=null==t?0:t.length,a=e!
==e,u=null===e,c=pc(e),s=e===nt;i<o;){var l=Rl((i+o)/2),f=n(t[l]),p=f!
==nt,h=null===f,d=f===f,v=pc(f);if(a)var g=r||d;else g=s?d&&(r||p):u?d&&p&&(r||!
h):c?d&&p&&!h&&(r||!v):!h&&!v&&(r?f<=e:f<e);g?i=l+1:o=l}return Wl(o,Rt)}function
ci(t,e){for(var n=-1,r=t.length,i=0,o=[];++n<r;){var a=t[n],u=e?e(a):a;if(!n||!
Vu(u,c)){var c=u;o[i++]=0===a?0:a}}return o}function si(t)
{return\"number\"==typeof t?t:pc(t)?It:+t}function li(t){if(\"string\"==typeof
t)return t;if(hp(t))return h(t,li)+\"\";if(pc(t))return sf?sf.call(t):\"\";var
e=t+\"\";return\"0\"==e&&1/t==-At?\"-0\":e}function fi(t,e,n){var r=-
1,i=f,o=t.length,a=!0,u=[],c=u;if(n)a=!1,i=p;else if(o>=rt){var s=e?
null:_f(t);if(s)return K(s);a=!1,i=R,c=new dn}else c=e?[]:u;t:for(;++r<o;){var
l=t[r],h=e?e(l):l;if(l=n||0!==l?l:0,a&&h===h){for(var
d=c.length;d--;)if(c[d]===h)continue t;e&&c.push(h),u.push(l)}else i(c,h,n)||(c!
==u&&c.push(h),u.push(l))}return u}function pi(t,e){return
e=bi(e,t),null==(t=zo(t,e))||delete
 t[$o(ma(e))]}function hi(t,e,n,r){return ni(t,e,n(hr(t,e)),r)}function
di(t,e,n,r){for(var i=t.length,o=r?i:-1;(r?o--:++o<i)&&e(t[o],o,t););return n?
ii(t,r?0:o,r?o+1:i):ii(t,r?o+1:0,r?i:o)}function vi(t,e){var n=t;return n
instanceof y&&(n=n.value()),v(e,function(t,e){return
e.func.apply(e.thisArg,d([t],e.args))},n)}function gi(t,e,n){var
r=t.length;if(r<2)return r?fi(t[0]):[];for(var i=-1,o=Zs(r);++i<r;)for(var
a=t[i],u=-1;++u<r;)u!=i&&(o[i]=ir(o[i]||a,t[u],e,n));return
fi(sr(o,1),e,n)}function mi(t,e,n){for(var r=-1,i=t.length,o=e.length,a={};+
+r<i;){var u=r<o?e[r]:nt;n(a,t[r],u)}return a}function yi(t){return zu(t)?t:
[]}function _i(t){return\"function\"==typeof t?t:Ms}function bi(t,e){return
hp(t)?t:Oo(t,e)?[t]:Sf(Cc(t))}function xi(t,e,n){var r=t.length;return n=n===nt?
r:n,!e&&n>=r?t:ii(t,e,n)}function wi(t,e){if(e)return t.slice();var
n=t.length,r=wl?wl(n):new t.constructor(n);return t.copy(r),r}function Ci(t){var
e=new t.constructor(t.byteLength);return new xl(e).set(new xl(t)),e}function
ki(t,e){var n=e?Ci(t.buffer):t.buffer;return new
t.constructor(n,t.byteOffset,t.byteLength)}function Ei(t){var e=new
t.constructor(t.source,Be.exec(t));return e.lastIndex=t.lastIndex,e}function
Mi(t){return cf?rl(cf.call(t)):{}}function Ti(t,e){var n=e?
Ci(t.buffer):t.buffer;return new t.constructor(n,t.byteOffset,t.length)}function
Si(t,e){if(t!==e){var n=t!==nt,r=null===t,i=t===t,o=pc(t),a=e!
==nt,u=null===e,c=e===e,s=pc(e);if(!u&&!s&&!o&&t>e||o&&a&&c&&!u&&!s||r&&a&&c||!
n&&c||!i)return 1;if(!r&&!o&&!s&&t<e||s&&n&&i&&!r&&!o||u&&n&&i||!a&&i||!
c)return-1}return 0}function Ni(t,e,n){for(var r=-
1,i=t.criteria,o=e.criteria,a=i.length,u=n.length;++r<a;){var
c=Si(i[r],o[r]);if(c){if(r>=u)return c;return c*(\"desc\"==n[r]?-1:1)}}return
t.index-e.index}function Ai(t,e,n,r){for(var i=-1,o=t.length,a=n.length,u=-
1,c=e.length,s=Vl(o-a,0),l=Zs(c+s),f=!r;++u<c;)l[u]=e[u];for(;++i<a;)(f||
i<o)&&(l[n[i]]=t[i]);for(;s--;)l[u++]=t[i++];return l}function Pi(t,e,n,r)
{for(var i=-1,o=t.length,a=-1,u=n.length,c=-1,s=e.length,l=Vl(o-
u,0),f=Zs(l+s),p=!r;++i<l;)f[i]=t[i];for(var h=i;++c<s;)f[h+c]=e[c];for(;++a<u;)
(p||i<o)&&(f[h+n[a]]=t[i++]);return f}function Oi(t,e){var n=-
1,r=t.length;for(e||(e=Zs(r));++n<r;)e[n]=t[n];return e}function Ii(t,e,n,r){var
i=!n;n||(n={});for(var o=-1,a=e.length;++o<a;){var u=e[o],c=r?
r(n[u],t[u],u,n,t):nt;c===nt&&(c=t[u]),i?Qn(n,u,c):Wn(n,u,c)}return n}function
Di(t,e){return Ii(t,xf(t),e)}function Ri(t,e){return Ii(t,wf(t),e)}function
Li(t,e){return function(n,r){var i=hp(n)?a:Gn,o=e?e():{};return
i(n,t,mo(r,2),o)}}function Ui(t){return Jr(function(e,n){var r=-
1,i=n.length,o=i>1?n[i-1]:nt,a=i>2?
n[2]:nt;for(o=t.length>3&&\"function\"==typeof o?
(i--,o):nt,a&&Po(n[0],n[1],a)&&(o=i<3?nt:o,i=1),e=rl(e);++r<i;){var
u=n[r];u&&t(e,u,r,o)}return e})}function Fi(t,e){return function(n,r)
{if(null==n)return n;if(!Wu(n))return t(n,r);for(var i=n.length,o=e?i:-
1,a=rl(n);(e?o--:++o<i)&&!1!==r(a[o],o,a););return n}}function ji(t){return
function(e,n,r){for(var i=-1,o=rl(e),a=r(e),u=a.length;u--;){var c=a[t?u:+
+i];if(!1===n(o[c],c,o))break}return e}}function Bi(t,e,n){function r()
{return(this&&this!==An&&this instanceof r?o:t).apply(i?n:this,arguments)}var
i=e&dt,o=zi(t);return r}function Vi(t){return function(e){e=Cc(e);var n=V(e)?
Z(e):nt,r=n?n[0]:e.charAt(0),i=n?xi(n,1).join(\"\"):e.slice(1);return r[t]()
```

```
+i}}function Wi(t){return function(e){return
v(xs(es(e).replace(pn,\"\")),t,\"\")}}function zi(t){return function(){var
e=arguments;switch(e.length){case 0:return new t;case 1:return new t(e[0]);case
2:return new t(e[0],e[1]);case 3:return new t(e[0],e[1],e[2]);case 4:return new
t(e[0],e[1],e[2],e[3]);case 5:return new t(e[0],e[1],e[2],e[3],e[4]);case
6:return new t(e[0],e[1],e[2],e[3],e[4],e[5]);case 7:return new
t(e[0],e[1],e[2],e[3],e[4],e[5],e[6])}var
n=lf(t.prototype),r=t.apply(n,e);return tc(r)?r:n}}function Hi(t,e,n){function
r(){for(var a=arguments.length,u=Zs(a),c=a,s=go(r);c--;)u[c]=arguments[c];var
l=a<3&&u[0]!==s&&u[a-1]!==s?[]:Y(u,s);return(a-=l.length)<n?
eo(t,e,Ki,r.placeholder,nt,u,l,nt,nt,n-a):o(this&&this!==An&&this instanceof r?
i:t,this,u)}var i=zi(t);return r}function qi(t){return function(e,n,r){var
i=rl(e);if(!Wu(e)){var o=mo(n,3);e=Lc(e),n=function(t){return o(i[t],t,i)}}var
a=t(e,n,r);return a>-1?i[o?e[a]:a]:nt}}function Yi(t){return fo(function(e){var
n=e.length,r=n,o=i.prototype.thru;for(t&&e.reverse();r--;){var
a=e[r];if(\"function\"!=typeof a)throw new al(ot);if(o&&!
u&&\"wrapper\"==vo(a))var u=new i([],!0)}for(r=u?r:n;++r<n;){a=e[r];var
c=vo(a),s=\"wrapper\"==c?bf(a):nt;u=s&&Do(s[0])&&s[1]==(xt|mt|_t|wt)&&!
s[4].length&&1==s[9]?u[vo(s[0])].apply(u,s[3]):1==a.length&&Do(a)?u[c]
():u.thru(a)}return function(){var
t=arguments,r=t[0];if(u&&1==t.length&&hp(r))return u.plant(r).value();for(var
i=0,o=n?e[i].apply(this,t):r;++i<n;)o=e[i].call(this,o);return o}})}function
Ki(t,e,n,r,i,o,a,u,c,s){function l(){for(var
m=arguments.length,y=Zs(m),_=m;_--;)y[_]=arguments[_];if(d)var
b=go(l),x=F(y,b);if(r&&(y=Ai(y,r,i,d)),o&&(y=Pi(y,o,a,d)),m-=x,d&&m<s){var
w=Y(y,b);return eo(t,e,Ki,l.placeholder,n,y,w,u,c,s-m)}var C=p?n:this,k=h?
C[t]:t;return m=y.length,u?
y=Ho(y,u):v&&m>1&&y.reverse(),f&&c<m&&(y.length=c),this&&this!==An&&this
instanceof l&&(k=g||zi(k)),k.apply(C,y)}var f=e&xt,p=e&dt,h=e&vt,d=e&(mt|
yt),v=e&Ct,g=h?nt:zi(t);return l}function Gi(t,e){return function(n,r){return
xr(n,t,e(r),{})}}function $i(t,e){return function(n,r){var
i;if(n===nt&&r===nt)return e;if(n!==nt&&(i=n),r!==nt){if(i===nt)return
r;\"string\"==typeof n||\"string\"==typeof r?(n=li(n),r=li(r)):
(n=si(n),r=si(r)),i=t(n,r)}return i}}function Xi(t){return fo(function(e){return
e=h(e,I(mo())),Jr(function(n){var r=this;return t(e,function(t){return
o(t,r,n)})})})}function Qi(t,e){e=e===nt?\" \":li(e);var
n=e.length;if(n<2)return n?Zr(e,t):e;var r=Zr(e,Dl(t/Q(e)));return V(e)?
xi(Z(r),0,t).join(\"\"):r.slice(0,t)}function Zi(t,e,n,r){function i(){for(var
e=-1,c=arguments.length,s=-1,l=r.length,f=Zs(l+c),p=this&&this!==An&&this
instanceof i?u:t;++s<l;)f[s]=r[s];for(;c--;)f[s++]=arguments[++e];return o(p,a?
n:this,f)}var a=e&dt,u=zi(t);return i}function Ji(t){return function(e,n,r)
{return r&&\"number\"!=typeof r&&Po(e,n,r)&&(n=r=nt),e=mc(e),n===nt?
(n=e,e=0):n=mc(n),r=r===nt?e<n?1:-1:mc(r),Qr(e,n,r,t)}}function to(t){return
function(e,n){return\"string\"==typeof e&&\"string\"==typeof n||
(e=bc(e),n=bc(n)),t(e,n)}}function eo(t,e,n,r,i,o,a,u,c,s){var l=e&mt,f=l?
a:nt,p=l?nt:a,h=l?o:nt,d=l?nt:o;e|=l?_t:bt,(e&=~(l?bt:_t))&gt||(e&=~(dt|vt));var
v=[t,e,i,h,f,d,p,u,c,s],g=n.apply(nt,v);return
Do(t)&&Ef(g,v),g.placeholder=r,Yo(g,t,e)}function no(t){var e=nl[t];return
function(t,n){if(t=bc(t),n=null==n?0:Wl(yc(n),292)){var r=(Cc(t)
+\"e\").split(\"e\");return r=(Cc(e(r[0]+\"e\"+(+r[1]+n)))+\"e\").split(\"e\"),+
(r[0]+\"e\"+(+r[1]-n))}return e(t)}}function ro(t){return function(e){var
n=Cf(e);return n==Kt?H(e):n==Jt?G(e):O(e,t(e))}}function io(t,e,n,r,i,o,a,u){var
c=e&vt;if(!c&&\"function\"!=typeof t)throw new al(ot);var s=r?r.length:0;if(s||
(e&=~(_t|bt),r=i=nt),a=a===nt?a:Vl(yc(a),0),u=u===nt?u:yc(u),s-=i?
i.length:0,e&bt){var l=r,f=i;r=i=nt}var p=c?
nt:bf(t),h=[t,e,n,r,i,l,f,o,a,u];if(p&&jo(h,p),t=h[0],e=h[1],n=h[2],r=h[3],i=h[4
],u=h[9]=h[9]===nt?c?0:t.length:Vl(h[9]-s,0),!u&&e&(mt|yt)&&(e&=~(mt|yt)),e&&e!
=dt)d=e==mt||e==yt?Hi(t,e,u):e!=_t&&e!=(dt|_t)||i.length?
Ki.apply(nt,h):Zi(t,e,n,r);else var d=Bi(t,e,n);return Yo((p?vf:Ef)
(d,h),t,e)}function oo(t,e,n,r){return t===nt||Vu(t,sl[n])&&!pl.call(r,n)?
e:t}function ao(t,e,n,r,i,o){return
tc(t)&&tc(e)&&(o.set(e,t),Vr(t,e,nt,ao,o),o.delete(e)),t}function uo(t){return
sc(t)?nt:t}function co(t,e,n,r,i,o){var a=n&pt,u=t.length,c=e.length;if(u!=c&&!
(a&&c>u))return!1;var s=o.get(t);if(s&&o.get(e))return s==e;var l=-1,f=!
```

```
0,p=n&ht?new dn:nt;for(o.set(t,e),o.set(e,t);++l<u;){var h=t[l],d=e[l];if(r)var
v=a?r(d,h,l,e,t,o):r(h,d,l,t,e,o);if(v!==nt){if(v)continue;f=!1;break}if(p){if(!
m(e,function(t,e){if(!R(p,e)&&(h===t||i(h,t,n,r,o)))return p.push(e)})){f=!
1;break}}else if(h!==d&&!i(h,d,n,r,o)){f=!1;break}}return
o.delete(t),o.delete(e),f}function so(t,e,n,r,i,o,a){switch(n){case
ae:if(t.byteLength!=e.byteLength||t.byteOffset!=e.byteOffset)return!
1;t=t.buffer,e=e.buffer;case oe:return!(t.byteLength!=e.byteLength||!o(new
xl(t),new xl(e)));case Vt:case Wt:case Gt:return Vu(+t,+e);case Ht:return
t.name==e.name&&t.message==e.message;case Zt:case te:return t==e+\"\";case
Kt:var u=H;case Jt:var c=r&pt;if(u||(u=K),t.size!=e.size&&!c)return!1;var
s=a.get(t);if(s)return s==e;r|=ht,a.set(t,e);var l=co(u(t),u(e),r,i,o,a);return
a.delete(t),l;case ee:if(cf)return cf.call(t)==cf.call(e)}return!1}function
lo(t,e,n,r,i,o){var a=n&pt,u=po(t),c=u.length;if(c!=po(e).length&&!a)return!
1;for(var s=c;s--;){var l=u[s];if(!(a?l in e:pl.call(e,l)))return!1}var
f=o.get(t);if(f&&o.get(e))return f==e;var p=!0;o.set(t,e),o.set(e,t);for(var
h=a;++s<c;){l=u[s];var d=t[l],v=e[l];if(r)var g=a?
r(v,d,l,e,t,o):r(d,v,l,t,e,o);if(!(g===nt?d===v||i(d,v,n,r,o):g)){p=!1;break}h||
(h=\"constructor\"==l)}if(p&&!h){var m=t.constructor,y=e.constructor;m!
=y&&\"constructor\"in t&&\"constructor\"in e&&!(\"function\"==typeof m&&m
instanceof m&&\"function\"==typeof y&&y instanceof y)&&(p=!1)}return
o.delete(t),o.delete(e),p}function fo(t){return Tf(Wo(t,nt,sa),t+\"\")}function
po(t){return dr(t,Lc,xf)}function ho(t){return dr(t,Uc,wf)}function vo(t)
{for(var e=t.name+\"\",n=tf[e],r=pl.call(tf,e)?n.length:0;r--;){var
i=n[r],o=i.func;if(null==o||o==t)return i.name}return e}function go(t)
{return(pl.call(n,\"placeholder\")?n:t).placeholder}function mo(){var
t=n.iteratee||Ts;return t=t===Ts?Dr:t,arguments.length?
t(arguments[0],arguments[1]):t}function yo(t,e){var n=t.__data__;return Io(e)?
n[\"string\"==typeof e?\"string\":\"hash\"]:n.map}function _o(t){for(var
e=Lc(t),n=e.length;n--;){var r=e[n],i=t[r];e[n]=[r,i,Uo(i)]}return e}function
bo(t,e){var n=B(t,e);return Ar(n)?n:nt}function xo(t){var
e=pl.call(t,Nl),n=t[Nl];try{t[Nl]=nt;var
 r=!0}catch(t){}var i=vl.call(t);return r&&(e?t[Nl]=n:delete t[Nl]),i}function
wo(t,e,n){for(var r=-1,i=n.length;++r<i;){var o=n[r],a=o.size;switch(o.type)
{case\"drop\":t+=a;break;case\"dropRight\":e-
=a;break;case\"take\":e=Wl(e,t+a);break;case\"takeRight\":t=Vl(t,e-
a)}}return{start:t,end:e}}function Co(t){var e=t.match(Re);return e?
e[1].split(Le):[]}function ko(t,e,n){e=bi(e,t);for(var r=-1,i=e.length,o=!1;+
+r<i;){var a=$o(e[r]);if(!(o=null!=t&&n(t,a)))break;t=t[a]}return o||++r!=i?o:!!
(i=null==t?0:t.length)&&Ju(i)&&Ao(a,i)&&(hp(t)||pp(t))}function Eo(t){var
e=t.length,n=new t.constructor(e);return e&&\"string\"==typeof
t[0]&&pl.call(t,\"index\")&&(n.index=t.index,n.input=t.input),n}function Mo(t)
{return\"function\"!=typeof t.constructor||Lo(t)?{}:lf(Cl(t))}function To(t,e,n)
{var r=t.constructor;switch(e){case oe:return Ci(t);case Vt:case Wt:return new
r(+t);case ae:return ki(t,n);case ue:case ce:case se:case le:case fe:case
pe:case he:case de:case ve:return Ti(t,n);case Kt:return new r;case Gt:case
te:return new r(t);case Zt:return Ei(t);case Jt:return new r;case ee:return
Mi(t)}}function So(t,e){var n=e.length;if(!n)return t;var r=n-1;return
e[r]=(n>1?\"& \":\"\")+e[r],e=e.join(n>2?\", \":\" \"),t.replace(De,\"{\\n/*
[wrapped with \"+e+\"] */\\n\")}function No(t){return hp(t)||pp(t)||!!
(Tl&&t&&t[Tl])}function Ao(t,e){var n=typeof t;return!!(e=null==e?
Pt:e)&&(\"number\"==n||\"symbol\"!=n&&qe.test(t))&&t>-1&&t%1==0&&t<e}function
Po(t,e,n){if(!tc(n))return!1;var r=typeof e;return!!(\"number\"==r?
Wu(n)&&Ao(e,n.length):\"string\"==r&&e in n)&&Vu(n[e],t)}function Oo(t,e)
{if(hp(t))return!1;var n=typeof t;return!(\"number\"!=n&&\"symbol\"!
=n&&\"boolean\"!=n&&null!=t&&!pc(t))||(Te.test(t)||!Me.test(t)||null!=e&&t in
rl(e))}function Io(t){var e=typeof
t;return\"string\"==e||\"number\"==e||\"symbol\"==e||\"boolean\"==e?\"__proto__\
\"!==t:null===t}function Do(t){var e=vo(t),r=n[e];if(\"function\"!=typeof r||!(e
in y.prototype))return!1;if(t===r)return!0;var i=bf(r);return!!
i&&t===i[0]}function Ro(t){return!!dl&&dl in t}function Lo(t){var
e=t&&t.constructor;return t===(\"function\"==typeof e&&e.prototype||sl)}function
Uo(t){return t===t&&!tc(t)}function Fo(t,e){return function(n){return null!
=n&&(n[t]===e&&(e!==nt||t in rl(n)))}}function jo(t,e){var n=t[1],r=e[1],i=n|
r,o=i<(dt|vt|xt),a=r==xt&&n==mt||r==xt&&n==wt&&t[7].length<=e[8]||r==(xt|
wt)&&e[7].length<=e[8]&&n==mt;if(!o&&!a)return t;r&dt&&(t[2]=e[2],i|=n&dt?
0:gt);var u=e[3];if(u){var c=t[3];t[3]=c?Ai(c,u,e[4]):u,t[4]=c?
Y(t[3],ct):e[4]}return u=e[5],u&&(c=t[5],t[5]=c?Pi(c,u,e[6]):u,t[6]=c?
Y(t[5],ct):e[6]),u=e[7],u&&(t[7]=u),r&xt&&(t[8]=null==t[8]?
e[8]:Wl(t[8],e[8])),null==t[9]&&(t[9]=e[9]),t[0]=e[0],t[1]=i,t}function Bo(t)
{var e=[];if(null!=t)for(var n in rl(t))e.push(n);return e}function Vo(t){return
vl.call(t)}function Wo(t,e,n){return e=Vl(e===nt?t.length-1:e,0),function()
{for(var r=arguments,i=-1,a=Vl(r.length-e,0),u=Zs(a);++i<a;)u[i]=r[e+i];i=-
1;for(var c=Zs(e+1);++i<e;)c[i]=r[i];return c[e]=n(u),o(t,this,c)}}function
zo(t,e){return e.length<2?t:hr(t,ii(e,0,-1))}function Ho(t,e){for(var
n=t.length,r=Wl(e.length,n),i=Oi(t);r--;){var o=e[r];t[r]=Ao(o,n)?i[o]:nt}return
t}function qo(t,e){if(\"__proto__\"!=e)return t[e]}function Yo(t,e,n){var
r=e+\"\";return Tf(t,So(r,Qo(Co(r),n)))}function Ko(t){var e=0,n=0;return
function(){var r=zl(),i=Tt-(r-n);if(n=r,i>0){if(++e>=Mt)return arguments[0]}else
e=0;return t.apply(nt,arguments)}}function Go(t,e){var n=-1,r=t.length,i=r-
1;for(e=e===nt?r:e;++n<e;){var o=Xr(n,i),a=t[o];t[o]=t[n],t[n]=a}return
t.length=e,t}function $o(t){if(\"string\"==typeof t||pc(t))return t;var
e=t+\"\";return\"0\"==e&&1/t==-At?\"-0\":e}function Xo(t){if(null!=t){try{return
fl.call(t)}catch(t){}try{return t+\"\"}catch(t){}}return\"\"}function Qo(t,e)
{return u(Ut,function(n){var r=\"_.\"+n[0];e&n[1]&&!
f(t,r)&&t.push(r)}),t.sort()}function Zo(t){if(t instanceof y)return
t.clone();var e=new i(t.__wrapped__,t.__chain__);return
e.__actions__=Oi(t.__actions__),e.__index__=t.__index__,e.__values__=t.__values_
_,e}function Jo(t,e,n){e=(n?Po(t,e,n):e===nt)?1:Vl(yc(e),0);var r=null==t?
0:t.length;if(!r||e<1)return[];for(var i=0,o=0,a=Zs(Dl(r/e));i<r;)a[o+
+]=ii(t,i,i+=e);return a}function ta(t){for(var e=-1,n=null==t?
0:t.length,r=0,i=[];++e<n;){var o=t[e];o&&(i[r++]=o)}return i}function ea(){var
t=arguments.length;if(!t)return[];for(var e=Zs(t-1),n=arguments[0],r=t;r--;)e[r-
1]=arguments[r];return d(hp(n)?Oi(n):[n],sr(e,1))}function na(t,e,n){var
r=null==t?0:t.length;return r?(e=n||e===nt?1:yc(e),ii(t,e<0?0:e,r)):[]}function
ra(t,e,n){var r=null==t?0:t.length;return r?(e=n||e===nt?1:yc(e),e=r-
e,ii(t,0,e<0?0:e)):[]}function ia(t,e){return t&&t.length?di(t,mo(e,3),!0,!0):
[]}function oa(t,e){return t&&t.length?di(t,mo(e,3),!0):[]}function aa(t,e,n,r)
{var i=null==t?0:t.length;return i?(n&&\"number\"!=typeof
n&&Po(t,e,n)&&(n=0,r=i),ur(t,e,n,r)):[]}function ua(t,e,n){var r=null==t?
0:t.length;if(!r)return-1;var i=null==n?0:yc(n);return
i<0&&(i=Vl(r+i,0)),x(t,mo(e,3),i)}function ca(t,e,n){var r=null==t?
0:t.length;if(!r)return-1;var i=r-1;return n!==nt&&(i=yc(n),i=n<0?
Vl(r+i,0):Wl(i,r-1)),x(t,mo(e,3),i,!0)}function sa(t){return(null==t?
0:t.length)?sr(t,1):[]}function la(t){return(null==t?0:t.length)?sr(t,At):
[]}function fa(t,e){return(null==t?0:t.length)?(e=e===nt?1:yc(e),sr(t,e)):
[]}function pa(t){for(var e=-1,n=null==t?0:t.length,r={};++e<n;){var
i=t[e];r[i[0]]=i[1]}return r}function ha(t){return t&&t.length?t[0]:nt}function
da(t,e,n){var r=null==t?0:t.length;if(!r)return-1;var i=null==n?0:yc(n);return
i<0&&(i=Vl(r+i,0)),w(t,e,i)}function va(t){return(null==t?0:t.length)?ii(t,0,-
1):[]}function ga(t,e){return null==t?\"\":jl.call(t,e)}function ma(t){var
e=null==t?0:t.length;return e?t[e-1]:nt}function ya(t,e,n){var r=null==t?
0:t.length;if(!r)return-1;var i=r;return n!==nt&&(i=yc(n),i=i<0?
Vl(r+i,0):Wl(i,r-1)),e===e?X(t,e,i):x(t,k,i,!0)}function _a(t,e){return
t&&t.length?zr(t,yc(e)):nt}function ba(t,e){return t&&t.length&&e&&e.length?
Gr(t,e):t}function xa(t,e,n){return t&&t.length&&e&&e.length?
Gr(t,e,mo(n,2)):t}function wa(t,e,n){return t&&t.length&&e&&e.length?
Gr(t,e,nt,n):t}function Ca(t,e){var n=[];if(!t||!t.length)return n;var r=-
1,i=[],o=t.length;for(e=mo(e,3);++r<o;){var
a=t[r];e(a,r,t)&&(n.push(a),i.push(r))}return $r(t,i),n}function ka(t){return
null==t?t:Yl.call(t)}function Ea(t,e,n){var r=null==t?0:t.length;return r?
(n&&\"number\"!=typeof n&&Po(t,e,n)?(e=0,n=r):(e=null==e?0:yc(e),n=n===nt?
r:yc(n)),ii(t,e,n)):[]}function Ma(t,e){return ai(t,e)}function Ta(t,e,n){return
ui(t,e,mo(n,2))}function Sa(t,e){var n=null==t?0:t.length;if(n){var
r=ai(t,e);if(r<n&&Vu(t[r],e))return r}return-1}function Na(t,e){return ai(t,e,!
0)}function Aa(t,e,n){return ui(t,e,mo(n,2),!0)}function Pa(t,e){if(null==t?
0:t.length){var n=ai(t,e,!0)-1;if(Vu(t[n],e))return n}return-1}function Oa(t)
{return t&&t.length?ci(t):[]}function Ia(t,e){return t&&t.length?ci(t,mo(e,2)):
[]}function Da(t){var e=null==t?0:t.length;return e?ii(t,1,e):[]}function
```

```
Ra(t,e,n){return t&&t.length?(e=n||e===nt?1:yc(e),ii(t,0,e<0?0:e)):[]}function
La(t,e,n){var r=null==t?0:t.length;return r?(e=n||e===nt?1:yc(e),e=r-e,ii(t,e<0?
0:e,r)):[]}function Ua(t,e){return t&&t.length?di(t,mo(e,3),!1,!0):[]}function
Fa(t,e){return t&&t.length?di(t,mo(e,3)):[]}function ja(t){return t&&t.length?
fi(t):[]}function Ba(t,e){return t&&t.length?fi(t,mo(e,2)):[]}function Va(t,e)
{return e=\"function\"==typeof e?e:nt,t&&t.length?fi(t,nt,e):[]}function Wa(t)
{if(!t||!t.length)return[];var e=0;return t=l(t,function(t){if(zu(t))return
e=Vl(t.length,e),!0}),P(e,function(e){return h(t,M(e))})}function za(t,e){if(!
t||!t.length)return[];var n=Wa(t);return null==e?n:h(n,function(t){return
o(e,nt,t)})}function Ha(t,e){return mi(t||[],e||[],Wn)}function qa(t,e){return
mi(t||[],e||[],ni)}function Ya(t){var e=n(t);return e.__chain__=!0,e}function
Ka(t,e){return e(t),t}function Ga(t,e){return e(t)}function $a(){return
Ya(this)}function Xa(){return new i(this.value(),this.__chain__)}function Qa()
{this.__values__===nt&&(this.__values__=gc(this.value()));var
t=this.__index__>=this.__values__.length;return{done:t,value:t?
nt:this.__values__[this.__index__++]}}function Za(){return this}function Ja(t)
{for(var e,n=this;n instanceof r;){var i=Zo(n);i.__index__=0,i.__values__=nt,e?
o.__wrapped__=i:e=i;var o=i;n=n.__wrapped__}return o.__wrapped__=t,e}function
tu(){var t=this.__wrapped__;if(t instanceof y){var e=t;return
this.__actions__.length&&(e=new
y(this)),e=e.reverse(),e.__actions__.push({func:Ga,args:[ka],thisArg:nt}),new
i(e,this.__chain__)}return this.thru(ka)}function eu(){return
vi(this.__wrapped__,this.__actions__)}function nu(t,e,n){var r=hp(t)?s:or;return
n&&Po(t,e,n)&&(e=nt),r(t,mo(e,3))}function ru(t,e){return(hp(t)?l:cr)
(t,mo(e,3))}function iu(t,e){return sr(lu(t,e),1)}function ou(t,e){return
sr(lu(t,e),At)}function au(t,e,n){return n=n===nt?1:yc(n),sr(lu(t,e),n)}function
uu(t,e){return(hp(t)?u:ff)(t,mo(e,3))}function cu(t,e){return(hp(t)?c:pf)
(t,mo(e,3))}function su(t,e,n,r){t=Wu(t)?t:$c(t),n=n&&!r?yc(n):0;var
i=t.length;return n<0&&(n=Vl(i+n,0)),fc(t)?n<=i&&t.indexOf(e,n)>-1:!!
i&&w(t,e,n)>-1}function lu(t,e){return(hp(t)?h:Fr)(t,mo(e,3))}function
fu(t,e,n,r){return null==t?[]:(hp(e)||(e=null==e?[]:[e]),n=r?nt:n,hp(n)||
(n=null==n?[]:[n]),Hr(t,e,n))}function pu(t,e,n){var r=hp(t)?
v:S,i=arguments.length<3;return r(t,mo(e,4),n,i,ff)}function hu(t,e,n){var
r=hp(t)?g:S,i=arguments.length<3;return r(t,mo(e,4),n,i,pf)}function du(t,e)
{return(hp(t)?l:cr)(t,Su(mo(e,3)))}function vu(t){return(hp(t)?Pn:ti)
(t)}function gu(t,e,n){return e=(n?Po(t,e,n):e===nt)?1:yc(e),(hp(t)?On:ei)
(t,e)}function mu(t){return(hp(t)?Dn:ri)(t)}function yu(t){if(null==t)return
0;if(Wu(t))return fc(t)?Q(t):t.length;var e=Cf(t);return e==Kt||e==Jt?
t.size:Rr(t).length}function _u(t,e,n){var r=hp(t)?m:oi;return
n&&Po(t,e,n)&&(e=nt),r(t,mo(e,3))}function bu(t,e){if(\"function\"!=typeof
e)throw new
 al(ot);return t=yc(t),function(){if(--t<1)return
e.apply(this,arguments)}}function xu(t,e,n){return e=n?nt:e,e=t&&null==e?
t.length:e,io(t,xt,nt,nt,nt,nt,e)}function wu(t,e){var n;if(\"function\"!=typeof
e)throw new al(ot);return t=yc(t),function(){return--
t>0&&(n=e.apply(this,arguments)),t<=1&&(e=nt),n}}function Cu(t,e,n){e=n?nt:e;var
r=io(t,mt,nt,nt,nt,nt,nt,e);return r.placeholder=Cu.placeholder,r}function
ku(t,e,n){e=n?nt:e;var r=io(t,yt,nt,nt,nt,nt,nt,e);return
r.placeholder=ku.placeholder,r}function Eu(t,e,n){function r(e){var
n=p,r=h;return p=h=nt,y=e,v=t.apply(r,n)}function i(t){return y=t,g=Mf(u,e),_?
r(t):v}function o(t){var n=t-m,r=t-y,i=e-n;return b?Wl(i,d-r):i}function a(t)
{var n=t-m,r=t-y;return m===nt||n>=e||n<0||b&&r>=d}function u(){var
t=ep();if(a(t))return c(t);g=Mf(u,o(t))}function c(t){return g=nt,x&&p?r(t):
(p=h=nt,v)}function s(){g!==nt&&yf(g),y=0,p=m=h=g=nt}function l(){return g===nt?
v:c(ep())}function f(){var t=ep(),n=a(t);if(p=arguments,h=this,m=t,n)
{if(g===nt)return i(m);if(b)return g=Mf(u,e),r(m)}return
g===nt&&(g=Mf(u,e)),v}var p,h,d,v,g,m,y=0,_=!1,b=!1,x=!0;if(\"function\"!=typeof
t)throw new al(ot);return e=bc(e)||0,tc(n)&&(_=!!n.leading,b=\"maxWait\"in
n,d=b?Vl(bc(n.maxWait)||0,e):d,x=\"trailing\"in n?!!
n.trailing:x),f.cancel=s,f.flush=l,f}function Mu(t){return io(t,Ct)}function
Tu(t,e){if(\"function\"!=typeof t||null!=e&&\"function\"!=typeof e)throw new
al(ot);var n=function(){var r=arguments,i=e?
e.apply(this,r):r[0],o=n.cache;if(o.has(i))return o.get(i);var
a=t.apply(this,r);return n.cache=o.set(i,a)||o,a};return n.cache=new(Tu.Cache||
an),n}function Su(t){if(\"function\"!=typeof t)throw new al(ot);return
function(){var e=arguments;switch(e.length){case 0:return!t.call(this);case
1:return!t.call(this,e[0]);case 2:return!t.call(this,e[0],e[1]);case 3:return!
t.call(this,e[0],e[1],e[2])}return!t.apply(this,e)}}function Nu(t){return
wu(2,t)}function Au(t,e){if(\"function\"!=typeof t)throw new al(ot);return
e=e===nt?e:yc(e),Jr(t,e)}function Pu(t,e){if(\"function\"!=typeof t)throw new
al(ot);return e=null==e?0:Vl(yc(e),0),Jr(function(n){var
r=n[e],i=xi(n,0,e);return r&&d(i,r),o(t,this,i)})}function Ou(t,e,n){var r=!
0,i=!0;if(\"function\"!=typeof t)throw new al(ot);return tc(n)&&(r=\"leading\"in
n?!!n.leading:r,i=\"trailing\"in n?!!n.trailing:i),Eu(t,e,
{leading:r,maxWait:e,trailing:i})}function Iu(t){return xu(t,1)}function Du(t,e)
{return up(_i(e),t)}function Ru(){if(!arguments.length)return[];var
t=arguments[0];return hp(t)?t:[t]}function Lu(t){return tr(t,ft)}function
Uu(t,e){return e=\"function\"==typeof e?e:nt,tr(t,ft,e)}function Fu(t){return
tr(t,st|ft)}function ju(t,e){return e=\"function\"==typeof e?e:nt,tr(t,st|
ft,e)}function Bu(t,e){return null==e||nr(t,e,Lc(e))}function Vu(t,e){return
t===e||t!==t&&e!==e}function Wu(t){return null!=t&&Ju(t.length)&&!Qu(t)}function
zu(t){return ec(t)&&Wu(t)}function Hu(t){return!0===t||!1===t||
ec(t)&&vr(t)==Vt}function qu(t){return ec(t)&&1===t.nodeType&&!sc(t)}function
Yu(t){if(null==t)return!0;if(Wu(t)&&(hp(t)||\"string\"==typeof
t||\"function\"==typeof t.splice||vp(t)||bp(t)||pp(t)))return!t.length;var
e=Cf(t);if(e==Kt||e==Jt)return!t.size;if(Lo(t))return!Rr(t).length;for(var n in
t)if(pl.call(t,n))return!1;return!0}function Ku(t,e){return Mr(t,e)}function
Gu(t,e,n){n=\"function\"==typeof n?n:nt;var r=n?n(t,e):nt;return r===nt?
Mr(t,e,nt,n):!!r}function $u(t){if(!ec(t))return!1;var e=vr(t);return e==Ht||
e==zt||\"string\"==typeof t.message&&\"string\"==typeof t.name&&!sc(t)}function
Xu(t){return\"number\"==typeof t&&Fl(t)}function Qu(t){if(!tc(t))return!1;var
e=vr(t);return e==qt||e==Yt||e==Bt||e==Qt}function Zu(t)
{return\"number\"==typeof t&&t==yc(t)}function Ju(t){return\"number\"==typeof
t&&t>-1&&t%1==0&&t<=Pt}function tc(t){var e=typeof t;return null!
=t&&(\"object\"==e||\"function\"==e)}function ec(t){return null!
=t&&\"object\"==typeof t}function nc(t,e){return t===e||Nr(t,e,_o(e))}function
rc(t,e,n){return n=\"function\"==typeof n?n:nt,Nr(t,e,_o(e),n)}function ic(t)
{return cc(t)&&t!=+t}function oc(t){if(kf(t))throw new tl(it);return
Ar(t)}function ac(t){return null===t}function uc(t){return null==t}function
cc(t){return\"number\"==typeof t||ec(t)&&vr(t)==Gt}function sc(t){if(!ec(t)||
vr(t)!=Xt)return!1;var e=Cl(t);if(null===e)return!0;var
n=pl.call(e,\"constructor\")&&e.constructor;return\"function\"==typeof n&&n
instanceof n&&fl.call(n)==gl}function lc(t){return Zu(t)&&t>=-Pt&&t<=Pt}function
fc(t){return\"string\"==typeof t||!hp(t)&&ec(t)&&vr(t)==te}function pc(t)
{return\"symbol\"==typeof t||ec(t)&&vr(t)==ee}function hc(t){return
t===nt}function dc(t){return ec(t)&&Cf(t)==re}function vc(t){return
ec(t)&&vr(t)==ie}function gc(t){if(!t)return[];if(Wu(t))return fc(t)?
Z(t):Oi(t);if(Sl&&t[Sl])return z(t[Sl]());var e=Cf(t);return(e==Kt?H:e==Jt?K:$c)
(t)}function mc(t){if(!t)return 0===t?t:0;if((t=bc(t))===At||t===-At)
{return(t<0?-1:1)*Ot}return t===t?t:0}function yc(t){var e=mc(t),n=e%1;return
e===e?n?e-n:e:0}function _c(t){return t?Jn(yc(t),0,Dt):0}function bc(t)
{if(\"number\"==typeof t)return t;if(pc(t))return It;if(tc(t)){var
e=\"function\"==typeof t.valueOf?t.valueOf():t;t=tc(e)?e+\"\":e}if(\"string\"!
=typeof t)return 0===t?t:+t;t=t.replace(Pe,\"\");var n=We.test(t);return n||
He.test(t)?Tn(t.slice(2),n?2:8):Ve.test(t)?It:+t}function xc(t){return
Ii(t,Uc(t))}function wc(t){return t?Jn(yc(t),-Pt,Pt):0===t?t:0}function Cc(t)
{return null==t?\"\":li(t)}function kc(t,e){var n=lf(t);return null==e?n:
$n(n,e)}function Ec(t,e){return b(t,mo(e,3),lr)}function Mc(t,e){return
b(t,mo(e,3),fr)}function Tc(t,e){return null==t?t:hf(t,mo(e,3),Uc)}function
Sc(t,e){return null==t?t:df(t,mo(e,3),Uc)}function Nc(t,e){return
t&&lr(t,mo(e,3))}function Ac(t,e){return t&&fr(t,mo(e,3))}function Pc(t){return
null==t?[]:pr(t,Lc(t))}function Oc(t){return null==t?[]:pr(t,Uc(t))}function
Ic(t,e,n){var r=null==t?nt:hr(t,e);return r===nt?n:r}function Dc(t,e){return
null!=t&&ko(t,e,mr)}function Rc(t,e){return null!=t&&ko(t,e,yr)}function Lc(t)
{return Wu(t)?Nn(t):Rr(t)}function Uc(t){return Wu(t)?Nn(t,!0):Lr(t)}function
Fc(t,e){var n={};return e=mo(e,3),lr(t,function(t,r,i)
{Qn(n,e(t,r,i),t)}),n}function jc(t,e){var n={};return
e=mo(e,3),lr(t,function(t,r,i){Qn(n,r,e(t,r,i))}),n}function Bc(t,e){return
```

```
Vc(t,Su(mo(e)))}function Vc(t,e){if(null==t)return{};var n=h(ho(t),function(t)
{return[t]});return e=mo(e),Yr(t,n,function(t,n){return e(t,n[0])})}function
Wc(t,e,n){e=bi(e,t);var r=-1,i=e.length;for(i||(i=1,t=nt);++r<i;){var o=null==t?
nt:t[$o(e[r])];o===nt&&(r=i,o=n),t=Qu(o)?o.call(t):o}return t}function zc(t,e,n)
{return null==t?t:ni(t,e,n)}function Hc(t,e,n,r){return r=\"function\"==typeof
r?r:nt,null==t?t:ni(t,e,n,r)}function qc(t,e,n){var r=hp(t),i=r||vp(t)||
bp(t);if(e=mo(e,4),null==n){var o=t&&t.constructor;n=i?r?new o:[]:tc(t)&&Qu(o)?
lf(Cl(t)):{}}return(i?u:lr)(t,function(t,r,i){return e(n,t,r,i)}),n}function
Yc(t,e){return null==t||pi(t,e)}function Kc(t,e,n){return null==t?
t:hi(t,e,_i(n))}function Gc(t,e,n,r){return r=\"function\"==typeof r?
r:nt,null==t?t:hi(t,e,_i(n),r)}function $c(t){return null==t?
[]:D(t,Lc(t))}function Xc(t){return null==t?[]:D(t,Uc(t))}function Qc(t,e,n)
{return n===nt&&(n=e,e=nt),n!==nt&&(n=bc(n),n=n===n?n:0),e!
==nt&&(e=bc(e),e=e===e?e:0),Jn(bc(t),e,n)}function Zc(t,e,n){return
e=mc(e),n===nt?(n=e,e=0):n=mc(n),t=bc(t),_r(t,e,n)}function Jc(t,e,n)
{if(n&&\"boolean\"!=typeof n&&Po(t,e,n)&&(e=n=nt),n===nt&&(\"boolean\"==typeof
e?(n=e,e=nt):\"boolean\"==typeof t&&(n=t,t=nt)),t===nt&&e===nt?(t=0,e=1):
(t=mc(t),e===nt?(e=t,t=0):e=mc(e)),t>e){var r=t;t=e,e=r}if(n||t%1||e%1){var
i=ql();return Wl(t+i*(e-t+Mn(\"1e-\"+((i+\"\").length-1))),e)}return
Xr(t,e)}function ts(t){return Yp(Cc(t).toLowerCase())}function es(t)
{return(t=Cc(t))&&t.replace(Ye,zn).replace(hn,\"\")}function ns(t,e,n)
{t=Cc(t),e=li(e);var r=t.length;n=n===nt?r:Jn(yc(n),0,r);var i=n;return(n-
=e.length)>=0&&t.slice(n,i)==e}function rs(t){return t=Cc(t),t&&we.test(t)?
t.replace(be,Hn):t}function is(t){return t=Cc(t),t&&Ae.test(t)?
t.replace(Ne,\"\\\\$&\"):t}function os(t,e,n){t=Cc(t),e=yc(e);var r=e?
Q(t):0;if(!e||r>=e)return t;var i=(e-r)/2;return Qi(Rl(i),n)
+t+Qi(Dl(i),n)}function as(t,e,n){t=Cc(t),e=yc(e);var r=e?Q(t):0;return e&&r<e?
t+Qi(e-r,n):t}function us(t,e,n){t=Cc(t),e=yc(e);var r=e?Q(t):0;return e&&r<e?
Qi(e-r,n)+t:t}function cs(t,e,n){return n||null==e?
e=0:e&&(e=+e),Hl(Cc(t).replace(Oe,\"\"),e||0)}function ss(t,e,n){return e=(n?
Po(t,e,n):e===nt)?1:yc(e),Zr(Cc(t),e)}function ls(){var
t=arguments,e=Cc(t[0]);return t.length<3?e:e.replace(t[1],t[2])}function
fs(t,e,n){return n&&\"number\"!=typeof n&&Po(t,e,n)&&(e=n=nt),(n=n===nt?
Dt:n>>>0)?(t=Cc(t),t&&(\"string\"==typeof e||null!=e&&!yp(e))&&!(e=li(e))&&V(t)?
xi(Z(t),0,n):t.split(e,n)):[]}function ps(t,e,n){return t=Cc(t),n=null==n?
0:Jn(yc(n),0,t.length),e=li(e),t.slice(n,n+e.length)==e}function hs(t,e,r){var
i=n.templateSettings;r&&Po(t,e,r)&&(e=nt),t=Cc(t),e=Ep({},e,i,oo);var
o,a,u=Ep({},e.imports,i.imports,oo),c=Lc(u),s=D(u,c),l=0,f=e.interpolate||
Ke,p=\"__p += '\",h=il((e.escape||Ke).source+\"|\"+f.source+\"|\"+(f===Ee?
je:Ke).source+\"|\"+(e.evaluate||Ke).source+\"|$\",\"g\"),d=\"//# sourceURL=\"+
(\"sourceURL\"in e?e.sourceURL:\"lodash.templateSources[\"+ ++_n+\"]\")+\"\\
n\";t.replace(h,function(e,n,r,i,u,c){return r||
(r=i),p+=t.slice(l,c).replace(Ge,j),n&&(o=!0,p+=\"' +\\n__e(\"+n+\") +\\
n'\"),u&&(a=!0,p+=\"';\\n\"+u+\";\\n__p += '\"),r&&(p+=\"' +\\n((__t =
(\"+r+\")) == null ? '' : __t) +\\n'\"),l=c+e.length,e}),p+=\"';\\n\";var
v=e.variable;v||(p=\"with (obj) {\\n\"+p+\"\\n}\\n\"),p=(a?
p.replace(ge,\"\"):p).replace(me,\"$1\").replace(ye,\"$1;\"),p=\"function(\"+
(v||\"obj\")+\") {\\n\"+(v?\"\":\"obj || (obj = {});\\n\")+\"var __t, __p =
''\"+(o?\", __e = _.escape\":\"\")+(a?\", __j = Array.prototype.join;\\nfunction
print() { __p += __j.call(arguments, '') }\\n\":\";\\n\")+p+\"return __p\\
n}\";var g=Kp(function(){return
el(c,d+\"return \"+p).apply(nt,s)});if(g.source=p,$u(g))throw
 g;return g}function ds(t){return Cc(t).toLowerCase()}function vs(t){return
Cc(t).toUpperCase()}function gs(t,e,n){if((t=Cc(t))&&(n||e===nt))return
t.replace(Pe,\"\");if(!t||!(e=li(e)))return t;var r=Z(t),i=Z(e);return
xi(r,L(r,i),U(r,i)+1).join(\"\")}function ms(t,e,n){if((t=Cc(t))&&(n||
e===nt))return t.replace(Ie,\"\");if(!t||!(e=li(e)))return t;var r=Z(t);return
xi(r,0,U(r,Z(e))+1).join(\"\")}function ys(t,e,n){if((t=Cc(t))&&(n||
e===nt))return t.replace(Oe,\"\");if(!t||!(e=li(e)))return t;var r=Z(t);return
xi(r,L(r,Z(e))).join(\"\")}function _s(t,e){var n=kt,r=Et;if(tc(e)){var
i=\"separator\"in e?e.separator:i;n=\"length\"in e?
yc(e.length):n,r=\"omission\"in e?li(e.omission):r}t=Cc(t);var
o=t.length;if(V(t)){var a=Z(t);o=a.length}if(n>=o)return t;var u=n-
Q(r);if(u<1)return r;var c=a?xi(a,0,u).join(\"\"):t.slice(0,u);if(i===nt)return
```

```
c+r;if(a&&(u+=c.length-u),yp(i)){if(t.slice(u).search(i)){var
s,l=c;for(i.global||(i=il(i.source,Cc(Be.exec(i))
+\"g\")),i.lastIndex=0;s=i.exec(l);)var f=s.index;c=c.slice(0,f===nt?u:f)}}else
if(t.indexOf(li(i),u)!=u){var p=c.lastIndexOf(i);p>-1&&(c=c.slice(0,p))}return
c+r}function bs(t){return t=Cc(t),t&&xe.test(t)?t.replace(_e,qn):t}function
xs(t,e,n){return t=Cc(t),e=n?nt:e,e===nt?W(t)?et(t):_(t):t.match(e)||[]}function
ws(t){var e=null==t?0:t.length,n=mo();return t=e?h(t,function(t)
{if(\"function\"!=typeof t[1])throw new al(ot);return[n(t[0]),t[1]]}):
[],Jr(function(n){for(var r=-1;++r<e;){var i=t[r];if(o(i[0],this,n))return
o(i[1],this,n)}})}function Cs(t){return er(tr(t,st))}function ks(t){return
function(){return t}}function Es(t,e){return null==t||t!==t?e:t}function Ms(t)
{return t}function Ts(t){return Dr(\"function\"==typeof t?t:tr(t,st))}function
Ss(t){return jr(tr(t,st))}function Ns(t,e){return Br(t,tr(e,st))}function
As(t,e,n){var r=Lc(e),i=pr(e,r);null!=n||tc(e)&&(i.length||!r.length)||
(n=e,e=t,t=this,i=pr(e,Lc(e)));var o=!(tc(n)&&\"chain\"in n&&!
n.chain),a=Qu(t);return u(i,function(n){var
r=e[n];t[n]=r,a&&(t.prototype[n]=function(){var e=this.__chain__;if(o||e){var
n=t(this.__wrapped__);return(n.__actions__=Oi(this.__actions__)).push({func:r,ar
gs:arguments,thisArg:t}),n.__chain__=e,n}return
r.apply(t,d([this.value()],arguments))})}),t}function Ps(){return
An._===this&&(An._=ml),this}function Os(){}function Is(t){return
t=yc(t),Jr(function(e){return zr(e,t)})}function Ds(t){return Oo(t)?
M($o(t)):Kr(t)}function Rs(t){return function(e){return null==t?
nt:hr(t,e)}}function Ls(){return[]}function Us(){return!1}function Fs()
{return{}}function js(){return\"\"}function Bs(){return!0}function Vs(t,e)
{if((t=yc(t))<1||t>Pt)return[];var n=Dt,r=Wl(t,Dt);e=mo(e),t-=Dt;for(var
i=P(r,e);++n<t;)e(n);return i}function Ws(t){return hp(t)?h(t,$o):pc(t)?
[t]:Oi(Sf(Cc(t)))}function zs(t){var e=++hl;return Cc(t)+e}function Hs(t){return
t&&t.length?ar(t,Ms,gr):nt}function qs(t,e){return t&&t.length?
ar(t,mo(e,2),gr):nt}function Ys(t){return E(t,Ms)}function Ks(t,e){return
E(t,mo(e,2))}function Gs(t){return t&&t.length?ar(t,Ms,Ur):nt}function $s(t,e)
{return t&&t.length?ar(t,mo(e,2),Ur):nt}function Xs(t){return t&&t.length?
A(t,Ms):0}function Qs(t,e){return t&&t.length?A(t,mo(e,2)):0}e=null==e?
An:Yn.defaults(An.Object(),e,Yn.pick(An,yn));var
Zs=e.Array,Js=e.Date,tl=e.Error,el=e.Function,nl=e.Math,rl=e.Object,il=e.RegExp,
ol=e.String,al=e.TypeError,ul=Zs.prototype,cl=el.prototype,sl=rl.prototype,ll=e[
\"__core-js_shared__\"],fl=cl.toString,pl=sl.hasOwnProperty,hl=0,dl=function()
{var t=/[^.]+$/.exec(ll&&ll.keys&&ll.keys.IE_PROTO||\"\");return
t?\"Symbol(src)_1.\"+t:\"\"}
(),vl=sl.toString,gl=fl.call(rl),ml=An._,yl=il(\"^\"+fl.call(pl).replace(Ne,\"\\
\\$&\").replace(/hasOwnProperty|(function).*?(?=\\\\\\()| for
.+?(?=\\\\\\])/g,\"$1.*?\")+\"$\"),_l=In?
e.Buffer:nt,bl=e.Symbol,xl=e.Uint8Array,wl=_l?
_l.allocUnsafe:nt,Cl=q(rl.getPrototypeOf,rl),kl=rl.create,El=sl.propertyIsEnumer
able,Ml=ul.splice,Tl=bl?bl.isConcatSpreadable:nt,Sl=bl?bl.iterator:nt,Nl=bl?
bl.toStringTag:nt,Al=function(){try{var t=bo(rl,\"defineProperty\");return
t({},\"\",{}),t}catch(t){}}(),Pl=e.clearTimeout!
==An.clearTimeout&&e.clearTimeout,Ol=Js&&Js.now!
==An.Date.now&&Js.now,Il=e.setTimeout!
==An.setTimeout&&e.setTimeout,Dl=nl.ceil,Rl=nl.floor,Ll=rl.getOwnPropertySymbols
,Ul=_l?
_l.isBuffer:nt,Fl=e.isFinite,jl=ul.join,Bl=q(rl.keys,rl),Vl=nl.max,Wl=nl.min,zl=
Js.now,Hl=e.parseInt,ql=nl.random,Yl=ul.reverse,Kl=bo(e,\"DataView\"),Gl=bo(e,\"
Map\"),
$l=bo(e,\"Promise\"),Xl=bo(e,\"Set\"),Ql=bo(e,\"WeakMap\"),Zl=bo(rl,\"create\"),
Jl=Ql&&new Ql,tf={},ef=Xo(Kl),nf=Xo(Gl),rf=Xo($l),of=Xo(Xl),af=Xo(Ql),uf=bl?
bl.prototype:nt,cf=uf?uf.valueOf:nt,sf=uf?uf.toString:nt,lf=function(){function
t(){}return function(e){if(!tc(e))return{};if(kl)return kl(e);t.prototype=e;var
n=new t;return t.prototype=nt,n}}
();n.templateSettings={escape:Ce,evaluate:ke,interpolate:Ee,variable:\"\",import
s:
{_:n}},n.prototype=r.prototype,n.prototype.constructor=n,i.prototype=lf(r.protot
ype),i.prototype.constructor=i,y.prototype=lf(r.prototype),y.prototype.construct
or=y,tt.prototype.clear=Ue,tt.prototype.delete=$e,tt.prototype.get=Xe,tt.prototy
```

```
pe.has=Qe,tt.prototype.set=Ze,Je.prototype.clear=tn,Je.prototype.delete=en,Je.pr
ototype.get=nn,Je.prototype.has=rn,Je.prototype.set=on,an.prototype.clear=un,an.
prototype.delete=cn,an.prototype.get=sn,an.prototype.has=ln,an.prototype.set=fn,
dn.prototype.add=dn.prototype.push=vn,dn.prototype.has=gn,mn.prototype.clear=wn,
mn.prototype.delete=Cn,mn.prototype.get=kn,mn.prototype.has=En,mn.prototype.set=
Sn;var ff=Fi(lr),pf=Fi(fr,!0),hf=ji(),df=ji(!0),vf=Jl?function(t,e){return
Jl.set(t,e),t}:Ms,gf=Al?function(t,e){return Al(t,\"toString\",{configurable:!
0,enumerable:!1,value:ks(e),writable:!0})}:Ms,mf=Jr,yf=Pl||function(t){return
An.clearTimeout(t)},_f=Xl&&1/K(new Xl([,-0]))[1]==At?function(t){return new
Xl(t)}:Os,bf=Jl?function(t){return Jl.get(t)}:Os,xf=Ll?function(t){return
null==t?[]:(t=rl(t),l(Ll(t),function(e){return El.call(t,e)}))}:Ls,wf=Ll?
function(t){for(var e=[];t;)d(e,xf(t)),t=Cl(t);return e}:Ls,Cf=vr;(Kl&&Cf(new
Kl(new ArrayBuffer(1)))!=ae||Gl&&Cf(new Gl)!=Kt||$l&&\"[object Promise]\"!
=Cf($l.resolve())||Xl&&Cf(new Xl)!=Jt||Ql&&Cf(new Ql)!=re)&&(Cf=function(t){var
e=vr(t),n=e==Xt?t.constructor:nt,r=n?Xo(n):\"\";if(r)switch(r){case ef:return
ae;case nf:return Kt;case rf:return\"[object Promise]\";case of:return Jt;case
af:return re}return e});var kf=ll?Qu:Us,Ef=Ko(vf),Mf=Il||function(t,e){return
An.setTimeout(t,e)},Tf=Ko(gf),Sf=function(t){var e=Tu(t,function(t){return
n.size===ut&&n.clear(),t}),n=e.cache;return e}(function(t){var e=[];return
46===t.charCodeAt(0)&&e.push(\"\"),t.replace(Se,function(t,n,r,i){e.push(r?
i.replace(Fe,\"$1\"):n||t)}),e}),Nf=Jr(function(t,e){return zu(t)?
ir(t,sr(e,1,zu,!0)):[]}),Af=Jr(function(t,e){var n=ma(e);return
zu(n)&&(n=nt),zu(t)?ir(t,sr(e,1,zu,!0),mo(n,2)):[]}),Pf=Jr(function(t,e){var
n=ma(e);return zu(n)&&(n=nt),zu(t)?ir(t,sr(e,1,zu,!0),nt,n):
[]}),Of=Jr(function(t){var e=h(t,yi);return e.length&&e[0]===t[0]?br(e):
[]}),If=Jr(function(t){var e=ma(t),n=h(t,yi);return e===ma(n)?
e=nt:n.pop(),n.length&&n[0]===t[0]?br(n,mo(e,2)):[]}),Df=Jr(function(t){var
e=ma(t),n=h(t,yi);return e=\"function\"==typeof e?
e:nt,e&&n.pop(),n.length&&n[0]===t[0]?br(n,nt,e):
[]}),Rf=Jr(ba),Lf=fo(function(t,e){var n=null==t?0:t.length,r=Zn(t,e);return
$r(t,h(e,function(t){return Ao(t,n)?+t:t}).sort(Si)),r}),Uf=Jr(function(t)
{return fi(sr(t,1,zu,!0))}),Ff=Jr(function(t){var e=ma(t);return
zu(e)&&(e=nt),fi(sr(t,1,zu,!0),mo(e,2))}),jf=Jr(function(t){var e=ma(t);return
e=\"function\"==typeof e?e:nt,fi(sr(t,1,zu,!0),nt,e)}),Bf=Jr(function(t,e)
{return zu(t)?ir(t,e):[]}),Vf=Jr(function(t){return
gi(l(t,zu))}),Wf=Jr(function(t){var e=ma(t);return
zu(e)&&(e=nt),gi(l(t,zu),mo(e,2))}),zf=Jr(function(t){var e=ma(t);return
e=\"function\"==typeof e?e:nt,gi(l(t,zu),nt,e)}),Hf=Jr(Wa),qf=Jr(function(t){var
e=t.length,n=e>1?t[e-1]:nt;return n=\"function\"==typeof n?
(t.pop(),n):nt,za(t,n)}),Yf=fo(function(t){var e=t.length,n=e?
t[0]:0,r=this.__wrapped__,o=function(e){return Zn(e,t)};return!(e>1||
this.__actions__.length)&&r instanceof y&&Ao(n)?(r=r.slice(n,+n+(e?
1:0)),r.__actions__.push({func:Ga,args:[o],thisArg:nt}),new
i(r,this.__chain__).thru(function(t){return e&&!
t.length&&t.push(nt),t})):this.thru(o)}),Kf=Li(function(t,e,n){pl.call(t,n)?+
+t[n]:Qn(t,n,1)}),Gf=qi(ua),$f=qi(ca),Xf=Li(function(t,e,n){pl.call(t,n)?
t[n].push(e):Qn(t,n,[e])}),Qf=Jr(function(t,e,n){var r=-1,i=\"function\"==typeof
e,a=Wu(t)?Zs(t.length):[];return ff(t,function(t){a[++r]=i?
o(e,t,n):wr(t,e,n)}),a}),Zf=Li(function(t,e,n){Qn(t,n,e)}),Jf=Li(function(t,e,n)
{t[n?0:1].push(e)},function(){return[[],[]]}),tp=Jr(function(t,e)
{if(null==t)return[];var n=e.length;return n>1&&Po(t,e[0],e[1])?
e=[]:n>2&&Po(e[0],e[1],e[2])&&(e=[e[0]]),Hr(t,sr(e,1),[])}),ep=Ol||function()
{return An.Date.now()},np=Jr(function(t,e,n){var r=dt;if(n.length){var
i=Y(n,go(np));r|=_t}return io(t,r,e,n,i)}),rp=Jr(function(t,e,n){var r=dt|
vt;if(n.length){var i=Y(n,go(rp));r|=_t}return
io(e,r,t,n,i)}),ip=Jr(function(t,e){return rr(t,1,e)}),op=Jr(function(t,e,n)
{return rr(t,bc(e)||0,n)});Tu.Cache=an;var ap=mf(function(t,e)
{e=1==e.length&&hp(e[0])?h(e[0],I(mo())):h(sr(e,1),I(mo()));var
n=e.length;return Jr(function(r){for(var i=-1,a=Wl(r.length,n);+
+i<a;)r[i]=e[i].call(this,r[i]);return o(t,this,r)})}),up=Jr(function(t,e){var
n=Y(e,go(up));return io(t,_t,nt,e,n)}),cp=Jr(function(t,e){var
n=Y(e,go(cp));return io(t,bt,nt,e,n)}),sp=fo(function(t,e){return
io(t,wt,nt,nt,nt,e)}),lp=to(gr),fp=to(function(t,e){return
t>=e}),pp=Cr(function(){return arguments}())?Cr:function(t){return
ec(t)&&pl.call(t,\"callee\")&&!El.call(t,\"callee\")},hp=Zs.isArray,dp=Ln?
I(Ln):kr,vp=Ul||Us,gp=Un?I(Un):Er,mp=Fn?I(Fn):Sr,yp=jn?I(jn):Pr,_p=Bn?
I(Bn):Or,bp=Vn?I(Vn):Ir,xp=to(Ur),wp=to(function(t,e){return
t<=e}),Cp=Ui(function(t,e){if(Lo(e)||Wu(e))return void Ii(e,Lc(e),t);for(var n
in e)pl.call(e,n)&&Wn(t,n,e[n])}),kp=Ui(function(t,e)
{Ii(e,Uc(e),t)}),Ep=Ui(function(t,e,n,r)
{Ii(e,Uc(e),t,r)}),Mp=Ui(function(t,e,n,r){Ii(e,Lc(e),t,r)}),Tp=fo(Zn),Sp=J
r(function(t,e){t=rl(t);var n=-1,r=e.length,i=r>2?
e[2]:nt;for(i&&Po(e[0],e[1],i)&&(r=1);++n<r;)for(var o=e[n],a=Uc(o),u=-
1,c=a.length;++u<c;){var s=a[u],l=t[s];(l===nt||Vu(l,sl[s])&&!
pl.call(t,s))&&(t[s]=o[s])}return t}),Np=Jr(function(t){return
t.push(nt,ao),o(Dp,nt,t)}),Ap=Gi(function(t,e,n){null!=e&&\"function\"!=typeof
e.toString&&(e=vl.call(e)),t[e]=n},ks(Ms)),Pp=Gi(function(t,e,n){null!
=e&&\"function\"!=typeof e.toString&&(e=vl.call(e)),pl.call(t,e)?
t[e].push(n):t[e]=[n]},mo),Op=Jr(wr),Ip=Ui(function(t,e,n)
{Vr(t,e,n)}),Dp=Ui(function(t,e,n,r){Vr(t,e,n,r)}),Rp=fo(function(t,e){var
n={};if(null==t)return n;var r=!1;e=h(e,function(e){return e=bi(e,t),r||
(r=e.length>1),e}),Ii(t,ho(t),n),r&&(n=tr(n,st|lt|ft,uo));for(var
i=e.length;i--;)pi(n,e[i]);return n}),Lp=fo(function(t,e){return null==t?
{}:qr(t,e)}),Up=ro(Lc),Fp=ro(Uc),jp=Wi(function(t,e,n){return
e=e.toLowerCase(),t+(n?ts(e):e)}),Bp=Wi(function(t,e,n){return t+(n?\"-\":\"\")
+e.toLowerCase()}),Vp=Wi(function(t,e,n){return t+(n?\" \":\"\")
+e.toLowerCase()}),Wp=Vi(\"toLowerCase\"),zp=Wi(function(t,e,n){return t+
(n?\"_\":\"\")+e.toLowerCase()}),Hp=Wi(function(t,e,n){return t+(n?\" \":\"\")
+Yp(e)}),qp=Wi(function(t,e,n){return t+(n?\" \":\"\")
+e.toUpperCase()}),Yp=Vi(\"toUpperCase\"),Kp=Jr(function(t,e){try{return
o(t,nt,e)}catch(t){return $u(t)?t:new tl(t)}}),Gp=fo(function(t,e){return
u(e,function(e){e=$o(e),Qn(t,e,np(t[e],t))}),t}),$p=Yi(),Xp=Yi(!
0),Qp=Jr(function(t,e){return function(n){return
wr(n,t,e)}}),Zp=Jr(function(t,e){return function(n){return
wr(t,n,e)}}),Jp=Xi(h),th=Xi(s),eh=Xi(m),nh=Ji(),rh=Ji(!0),ih=$i(function(t,e)
{return t+e},0),oh=no(\"ceil\"),ah=$i(function(t,e){return
t/e},1),uh=no(\"floor\"),ch=$i(function(t,e){return
t*e},1),sh=no(\"round\"),lh=$i(function(t,e){return t-e},0);return
n.after=bu,n.ary=xu,n.assign=Cp,n.assignIn=kp,n.assignInWith=Ep,n.assignWith=Mp,
n.at=Tp,n.before=wu,n.bind=np,n.bindAll=Gp,n.bindKey=rp,n.castArray=Ru,n.chain=Y
a,n.chunk=Jo,n.compact=ta,n.concat=ea,n.cond=ws,n.conforms=Cs,n.constant=ks,n.co
untBy=Kf,n.create=kc,n.curry=Cu,n.curryRight=ku,n.debounce=Eu,n.defaults=Sp,n.de
faultsDeep=Np,n.defer=ip,n.delay=op,n.difference=Nf,n.differenceBy=Af,n.differen
ceWith=Pf,n.drop=na,n.dropRight=ra,n.dropRightWhile=ia,n.dropWhile=oa,n.fill=aa,
n.filter=ru,n.flatMap=iu,n.flatMapDeep=ou,n.flatMapDepth=au,n.flatten=sa,n.flatt
enDeep=la,n.flattenDepth=fa,n.flip=Mu,n.flow=$p,n.flowRight=Xp,n.fromPairs=pa,n.
functions=Pc,n.functionsIn=Oc,n.groupBy=Xf,n.initial=va,n.intersection=Of,n.inte
rsectionBy=If,n.intersectionWith=Df,n.invert=Ap,n.invertBy=Pp,n.invokeMap=Qf,n.i
teratee=Ts,n.keyBy=Zf,n.keys=Lc,n.keysIn=Uc,n.map=lu,n.mapKeys=Fc,n.mapValues=jc
,n.matches=Ss,n.matchesProperty=Ns,n.memoize=Tu,n.merge=Ip,n.mergeWith=Dp,n.meth
od=Qp,n.methodOf=Zp,n.mixin=As,n.negate=Su,n.nthArg=Is,n.omit=Rp,n.omitBy=Bc,n.o
nce=Nu,n.orderBy=fu,n.over=Jp,n.overArgs=ap,n.overEvery=th,n.overSome=eh,n.parti
al=up,n.partialRight=cp,n.partition=Jf,n.pick=Lp,n.pickBy=Vc,n.property=Ds,n.pro
pertyOf=Rs,n.pull=Rf,n.pullAll=ba,n.pullAllBy=xa,n.pullAllWith=wa,n.pullAt=Lf,n.
range=nh,n.rangeRight=rh,n.rearg=sp,n.reject=du,n.remove=Ca,n.rest=Au,n.reverse=
ka,n.sampleSize=gu,n.set=zc,n.setWith=Hc,n.shuffle=mu,n.slice=Ea,n.sortBy=tp,n.s
ortedUniq=Oa,n.sortedUniqBy=Ia,n.split=fs,n.spread=Pu,n.tail=Da,n.take=Ra,n.take
Right=La,n.takeRightWhile=Ua,n.takeWhile=Fa,n.tap=Ka,n.throttle=Ou,n.thru=Ga,n.t
oArray=gc,n.toPairs=Up,n.toPairsIn=Fp,n.toPath=Ws,n.toPlainObject=xc,n.transform
=qc,n.unary=Iu,n.union=Uf,n.unionBy=Ff,n.unionWith=jf,n.uniq=ja,n.uniqBy=Ba,n.un
iqWith=Va,n.unset=Yc,n.unzip=Wa,n.unzipWith=za,n.update=Kc,n.updateWith=Gc,n.val
ues=$c,n.valuesIn=Xc,n.without=Bf,n.words=xs,n.wrap=Du,n.xor=Vf,n.xorBy=Wf,n.xor
With=zf,n.zip=Hf,n.zipObject=Ha,n.zipObjectDeep=qa,n.zipWith=qf,n.entries=Up,n.e
ntriesIn=Fp,n.extend=kp,n.extendWith=Ep,As(n,n),n.add=ih,n.attempt=Kp,n.camelCas
e=jp,n.capitalize=ts,n.ceil=oh,n.clamp=Qc,n.clone=Lu,n.cloneDeep=Fu,n.cloneDeepW
ith=ju,n.cloneWith=Uu,n.conformsTo=Bu,n.deburr=es,n.defaultTo=Es,n.divide=ah,n.e
ndsWith=ns,n.eq=Vu,n.escape=rs,n.escapeRegExp=is,n.every=nu,n.find=Gf,n.findInde
x=ua,n.findKey=Ec,n.findLast=$f,n.findLastIndex=ca,n.findLastKey=Mc,n.floor=uh,n
```

```
.forEach=uu,n.forEachRight=cu,n.forIn=Tc,n.forInRight=Sc,n.forOwn=Nc,n.forOwnRig
ht=Ac,n.get=Ic,n.gt=lp,n.gte=fp,n.has=Dc,n.hasIn=Rc,n.head=ha,n.identity=Ms,n.in
cludes=su,n.indexOf=da,n.inRange=Zc,n.invoke=Op,n.isArguments=pp,n.isArray=hp,n.
isArrayBuffer=dp,n.isArrayLike=Wu,n.isArrayLikeObject=zu,n.isBoolean=Hu,n.isBuff
er=vp,n.isDate=gp,n.isElement=qu,n.isEmpty=Yu,n.isEqual=Ku,n.isEqualWith=Gu,n.is
Error=$u,n.isFinite=Xu,n.isFunction=Qu,n.isInteger=Zu,n.isLength=Ju,n.isMap=mp,n
.isMatch=nc,n.isMatchWith=rc,n.isNaN=ic,n.isNative=oc,n.isNil=uc,n.isNull=ac,n.i
sNumber=cc,n.isObject=tc,n.isObjectLike=ec,n.isPlainObject=sc,n.isRegExp=yp,n.is
SafeInteger=lc,n.isSet=_p,n.isString=fc,n.isSymbol=pc,n.isTypedArray=bp,n.isUnde
fined=hc,n.isWeakMap=dc,n.isWeakSet=vc,n.join=ga,n.kebabCase=Bp,n.last=ma,n.last
IndexOf=ya,n.lowerCase=Vp,n.lowerFirst=Wp,n.lt=xp,n.lte=wp,n.max=Hs,n.maxBy=qs,n
.mean=Ys,n.meanBy=Ks,n.min=Gs,n.minBy=$s,n.stubArray=Ls,n.stubFalse=Us,n.stubObj
ect=Fs,n.stubString=js,n.stubTrue=Bs,n.multiply=ch,n.nth=_a,n.noConflict=Ps,n.no
op=Os,n.now=ep,n.pad=os,n.padEnd=as,n.padStart=us,n.parseInt=cs,n.random=Jc,n.re
duce=pu,n.reduceRight=hu,n.repeat=ss,n.replace=ls,n.result=Wc,n.round=sh,n.runIn
Context=t,n.sample=vu,n.size=yu,n.snakeCase=zp,n.some=_u,n.sortedIndex=Ma,n.sort
edIndexBy=Ta,n.sortedIndexOf=Sa,n.sortedLastIndex=Na,n.sortedLastIndexBy=Aa,n.so
rtedLastIndexOf=Pa,n.startCase=Hp,n.startsWith=ps,n.subtract=lh,n.sum=Xs,n.sumBy
=Qs,n.template=hs,n.times=Vs,n.toFinite=mc,n.toInteger=yc,n.toLength=_c,n.toLowe
r=ds,n.toNumber=bc,n.toSafeInteger=wc,n.toString=Cc,n.toUpper=vs,n.trim=gs,n.tri
mEnd=ms,n.trimStart=ys,n.truncate=_s,n.unescape=bs,n.uniqueId=zs,n.upperCase=qp,
n.upperFirst=Yp,n.each=uu,n.eachRight=cu,n.first=ha,As(n,function(){var
t={};return lr(n,function(e,r){pl.call(n.prototype,r)||(t[r]=e)}),t}(),{chain:!
1}),n.VERSION=\"4.17.11\",u([\"bind\",\"bindKey\",\"curry\",\"curryRight\",\"par
tial\",\"partialRight\"],function(t)
{n[t].placeholder=n}),u([\"drop\",\"take\"],function(t,e)
{y.prototype[t]=function(n){n=n===nt?1:Vl(yc(n),0);var r=this.__filtered__&&!e?
new y(this):this.clone();return r.__filtered__?
r.__takeCount__=Wl(n,r.__takeCount__):r.__views__.push({size:Wl(n,Dt),type:t+
(r.__dir__<0?\"Right\":\"\")}),r},y.prototype[t+\"Right\"]=function(e){return
this.reverse()[t]
(e).reverse()}}),u([\"filter\",\"map\",\"takeWhile\"],function(t,e){var
n=e+1,r=n==St||3==n;y.prototype[t]=function(t){var e=this.clone();return
e.__iteratees__.push({iteratee:mo(t,3),type:n}),e.__filtered__=e.__filtered__||
r,e}}),u([\"head\",\"last\"],function(t,e){var n=\"take\"+
(e?\"Right\":\"\");y.prototype[t]=function(){return this[n](1).value()
[0]}}),u([\"initial\",\"tail\"],function(t,e){var n=\"drop\"+
(e?\"\":\"Right\");y.prototype[t]=function(){return this.__filtered__?new
y(this):this[n](1)}}),y.prototype.compact=function(){return
this.filter(Ms)},y.prototype.find=function(t){return
this.filter(t).head()},y.prototype.findLast=function(t){return
this.reverse().find(t)},y.prototype.invokeMap=Jr(function(t,e)
{return\"function\"==typeof t?new y(this):this.map(function(n){return
wr(n,t,e)})}),y.prototype.reject=function(t){return
this.filter(Su(mo(t)))},y.prototype.slice=function(t,e){t=yc(t);var
n=this;return n.__filtered__&&(t>0||e<0)?new y(n):(t<0?n=n.takeRight(-
t):t&&(n=n.drop(t)),e!==nt&&(e=yc(e),n=e<0?n.dropRight(-e):n.take(e-
t)),n)},y.prototype.takeRightWhile=function(t){return
this.reverse().takeWhile(t).reverse()},y.prototype.toArray=function(){return
this.take(Dt)},lr(y.prototype,function(t,e){var r=/^(?:filter|find|map|reject)|
While$/.test(e),o=/^(?:head|last)$/.test(e),a=n[o?\"take\"+
(\"last\"==e?\"Right\":\"\"):e],u=o||/
^find/.test(e);a&&(n.prototype[e]=function(){var e=this.__wrapped__,c=o?
[1]:arguments,s=e instanceof y,l=c[0],f=s||hp(e),p=function(t){var
e=a.apply(n,d([t],c));return o&&h?e[0]:e};f&&r&&\"function\"==typeof l&&1!
=l.length&&(s=f=!1);var h=this.__chain__,v=!!this.__actions__.length,g=u&&!
h,m=s&&!v;if(!u&&f){e=m?e:new y(this);var _=t.apply(e,c);return
_.__actions__.push({func:Ga,args:[p],thisArg:nt}),new i(_,h)}return g&&m?
t.apply(this,c):(_=this.thru(p),g?o?_.value()
[0]:_.value():_)}}),u([\"pop\",\"push\",\"shift\",\"sort\",\"splice\",\"unshift
\"],function(t){var e=ul[t],r=/^(?:push|sort|unshift)
$/.test(t)?\"tap\":\"thru\",i=/^(?:pop|shift)
$/.test(t);n.prototype[t]=function(){var t=arguments;if(i&&!this.__chain__){var
n=this.value();return e.apply(hp(n)?n:[],t)}return this[r](function(n){return
e.apply(hp(n)?n:[],t)})}}),lr(y.prototype,function(t,e){var r=n[e];if(r){var
i=r.name+\"\";(tf[i]||
(tf[i]=[])).push({name:e,func:r})}}),tf[Ki(nt,vt).name]=[{name:\"wrapper\",func:
nt}],y.prototype.clone=T,y.prototype.reverse=$,y.prototype.value=J,n.prototype.a
t=Yf,n.prototype.chain=$a,n.prototype.commit=Xa,n.prototype.next=Qa,n.prototype.
plant=Ja,n.prototype.reverse=tu,n.prototype.toJSON=n.prototype.valueOf=n.prototy
pe.value=eu,n.prototype.first=n.prototype.head,Sl&&(n.prototype[Sl]=Za),n}
();An._=Yn,(i=function(){return Yn}.call(e,n,e,r))!
==nt&&(r.exports=i)}).call(this)}).call(e,n(98),n(99)(t))},function(t,e,n){\"use
strict\";var r={remove:function(t){t._reactInternalInstance=void
0},get:function(t){return t._reactInternalInstance},has:function(t){return void
0!==t._reactInternalInstance},set:function(t,e)
{t._reactInternalInstance=e}};t.exports=r},function(t,e,n){\"use
strict\";function r(t){for(var e=arguments.length-1,n=\"Minified React error
#\"+t+\"; visit http://facebook.github.io/react/docs/error-decoder.html?
invariant=\"+t,r=0;r<e;r+
+)n+=\"&args[]=\"+encodeURIComponent(arguments[r+1]);n+=\" for the full message
or use the non-minified dev environment for full errors and additional helpful
warnings.\";var i=new Error(n);throw
 i.name=\"Invariant Violation\",i.framesToPop=1,i}t.exports=r},function(t,e,n)
{\"use strict\";t.exports=n(26)},function(t,e,n){\"use strict\";var
r=n(63);e.a=function(t){return t=n.i(r.a)(Math.abs(t)),t?
t[1]:NaN}},function(t,e,n){\"use strict\";e.a=function(t,e){return t=+t,e-
=t,function(n){return t+e*n}}},function(t,e,n){\"use strict\";function r(t,e)
{return(e-=t=+t)?function(n){return(n-t)/e}:n.i(h.a)(e)}function i(t){return
function(e,n){var r=t(e=+e,n=+n);return function(t){return t<=e?0:t>=n?
1:r(t)}}}function o(t){return function(e,n){var r=t(e=+e,n=+n);return
function(t){return t<=0?e:t>=1?n:r(t)}}}function a(t,e,n,r){var
i=t[0],o=t[1],a=e[0],u=e[1];return o<i?(i=n(o,i),a=r(u,a)):
(i=n(i,o),a=r(a,u)),function(t){return a(i(t))}}function u(t,e,r,i){var
o=Math.min(t.length,e.length)-1,a=new Array(o),u=new Array(o),c=-
1;for(t[o]<t[0]&&(t=t.slice().reverse(),e=e.slice().reverse());+
+c<o;)a[c]=r(t[c],t[c+1]),u[c]=i(e[c],e[c+1]);return function(e){var
r=n.i(l.bisect)(t,e,1,o)-1;return u[r](a[r](e))}}function c(t,e){return
e.domain(t.domain()).range(t.range()).interpolate(t.interpolate()).clamp(t.clamp
())}function s(t,e){function n(){return s=Math.min(g.length,m.length)>2?
u:a,l=h=null,c}function c(e){return(l||(l=s(g,m,_?i(t):t,y)))(+e)}var
s,l,h,g=v,m=v,y=f.b,_=!1;return c.invert=function(t){return(h||(h=s(m,g,r,_?
o(e):e)))(+t)},c.domain=function(t){return arguments.length?
(g=p.a.call(t,d.a),n()):g.slice()},c.range=function(t){return arguments.length?
(m=p.b.call(t),n()):m.slice()},c.rangeRound=function(t){return
m=p.b.call(t),y=f.c,n()},c.clamp=function(t){return arguments.length?(_=!!
t,n()):_},c.interpolate=function(t){return arguments.length?
(y=t,n()):y},n()}e.b=r,e.c=c,e.a=s;var
l=n(7),f=n(30),p=n(16),h=n(67),d=n(126),v=[0,1]},function(t,e,n){\"use
strict\";function r(t){return function(){var
e=this.ownerDocument,n=this.namespaceURI;return
n===a.b&&e.documentElement.namespaceURI===a.b?
e.createElement(t):e.createElementNS(n,t)}}function i(t){return function()
{return this.ownerDocument.createElementNS(t.space,t.local)}}var
o=n(68),a=n(69);e.a=function(t){var e=n.i(o.a)(t);return(e.local?i:r)
(e)}},function(t,e,n){\"use strict\";e.a=function(t,e){var n=t.ownerSVGElement||
t;if(n.createSVGPoint){var r=n.createSVGPoint();return
r.x=e.clientX,r.y=e.clientY,r=r.matrixTransform(t.getScreenCTM().inverse()),
[r.x,r.y]}var i=t.getBoundingClientRect();return[e.clientX-i.left-
t.clientLeft,e.clientY-i.top-t.clientTop]}},function(t,e,n){\"use
strict\";function r(t,e,n){t._context.bezierCurveTo((2*t._x0+t._x1)/3,
(2*t._y0+t._y1)/3,(t._x0+2*t._x1)/3,(t._y0+2*t._y1)/3,(t._x0+4*t._x1+e)/6,
(t._y0+4*t._y1+n)/6)}function i(t)
{this._context=t}e.c=r,e.b=i,i.prototype={areaStart:function()
{this._line=0},areaEnd:function(){this._line=NaN},lineStart:function()
{this._x0=this._x1=this._y0=this._y1=NaN,this._point=0},lineEnd:function()
{switch(this._point){case 3:r(this,this._x1,this._y1);case
2:this._context.lineTo(this._x1,this._y1)}(this._line||0!
==this._line&&1===this._point)&&this._context.closePath(),this._line=1-
this._line},point:function(t,e){switch(t=+t,e=+e,this._point){case
0:this._point=1,this._line?
this._context.lineTo(t,e):this._context.moveTo(t,e);break;case
1:this._point=2;break;case
2:this._point=3,this._context.lineTo((5*this._x0+this._x1)/6,
(5*this._y0+this._y1)/
6);default:r(this,t,e)}this._x0=this._x1,this._x1=t,this._y0=this._y1,this._y1=e
}},e.a=function(t){return new i(t)}},function(t,e,n){\"use strict\";function
r(t,e,n){t._context.bezierCurveTo(t._x1+t._k*(t._x2-t._x0),t._y1+t._k*(t._y2-
t._y0),t._x2+t._k*(t._x1-e),t._y2+t._k*(t._y1-n),t._x2,t._y2)}function i(t,e)
{this._context=t,this._k=(1-e)/6}e.c=r,e.b=i,i.prototype={areaStart:function()
{this._line=0},areaEnd:function(){this._line=NaN},lineStart:function()
{this._x0=this._x1=this._x2=this._y0=this._y1=this._y2=NaN,this._point=0},lineEn
d:function(){switch(this._point){case
2:this._context.lineTo(this._x2,this._y2);break;case
3:r(this,this._x1,this._y1)}(this._line||0!
==this._line&&1===this._point)&&this._context.closePath(),this._line=1-
this._line},point:function(t,e){switch(t=+t,e=+e,this._point){case
0:this._point=1,this._line?
this._context.lineTo(t,e):this._context.moveTo(t,e);break;case
1:this._point=2,this._x1=t,this._y1=e;break;case
2:this._point=3;default:r(this,t,e)}this._x0=this._x1,this._x1=this._x2,this._x2
=t,this._y0=this._y1,this._y1=this._y2,this._y2=e}},e.a=function t(e){function
n(t){return new i(t,e)}return n.tension=function(e){return t(+e)},n}
(0)},function(t,e,n){\"use strict\";function r(t)
{this._context=t}r.prototype={areaStart:function()
{this._line=0},areaEnd:function(){this._line=NaN},lineStart:function()
{this._point=0},lineEnd:function(){(this._line||0!
==this._line&&1===this._point)&&this._context.closePath(),this._line=1-
this._line},point:function(t,e){switch(t=+t,e=+e,this._point){case
0:this._point=1,this._line?
this._context.lineTo(t,e):this._context.moveTo(t,e);break;case
1:this._point=2;default:this._context.lineTo(t,e)}}},e.a=function(t){return new
r(t)}},function(t,e,n){\"use strict\";e.a=function(){}},function(t,e,n){\"use
strict\";var r={};t.exports=r},function(t,e,n){\"use strict\";function r(t)
{return\"topMouseUp\"===t||\"topTouchEnd\"===t||\"topTouchCancel\"===t}function
i(t){return\"topMouseMove\"===t||\"topTouchMove\"===t}function o(t)
{return\"topMouseDown\"===t||\"topTouchStart\"===t}function a(t,e,n,r){var
i=t.type||\"unknown-event\";t.currentTarget=m.getNodeFromInstance(r),e?
v.invokeGuardedCallbackWithCatch(i,n,t):v.invokeGuardedCallback(i,n,t),t.current
Target=null}function u(t,e){var
n=t._dispatchListeners,r=t._dispatchInstances;if(Array.isArray(n))for(var
i=0;i<n.length&&!t.isPropagationStopped();i++)a(t,e,n[i],r[i]);else
n&&a(t,e,n,r);t._dispatchListeners=null,t._dispatchInstances=null}function c(t)
{var e=t._dispatchListeners,n=t._dispatchInstances;if(Array.isArray(e)){for(var
r=0;r<e.length&&!t.isPropagationStopped();r++)if(e[r](t,n[r]))return n[r]}else
if(e&&e(t,n))return n;return null}function s(t){var e=c(t);return
t._dispatchInstances=null,t._dispatchListeners=null,e}function l(t){var
e=t._dispatchListeners,n=t._dispatchInstances;Array.isArray(e)&&d(\"103\"),t.cur
rentTarget=e?m.getNodeFromInstance(n):null;var r=e?e(t):null;return
t.currentTarget=null,t._dispatchListeners=null,t._dispatchInstances=null,r}funct
ion f(t){return!!t._dispatchListeners}var p,h,d=n(1),v=n(88),g=(n(0),n(2),
{injectComponentTree:function(t){p=t},injectTreeTraversal:function(t)
{h=t}}),m={isEndish:r,isMoveish:i,isStartish:o,executeDirectDispatch:l,executeDi
spatchesInOrder:u,executeDispatchesInOrderStopAtTrue:s,hasDispatches:f,getInstan
ceFromNode:function(t){return
p.getInstanceFromNode(t)},getNodeFromInstance:function(t){return
p.getNodeFromInstance(t)},isAncestor:function(t,e){return
h.isAncestor(t,e)},getLowestCommonAncestor:function(t,e){return
h.getLowestCommonAncestor(t,e)},getParentInstance:function(t){return
h.getParentInstance(t)},traverseTwoPhase:function(t,e,n){return
h.traverseTwoPhase(t,e,n)},traverseEnterLeave:function(t,e,n,r,i){return
h.traverseEnterLeave(t,e,n,r,i)},injection:g};t.exports=m},function(t,e,n){\"use
```

```
strict\";function r(t){return Object.prototype.hasOwnProperty.call(t,v)||
(t[v]=h++,f[t[v]]={}),f[t[v]]}var
i,o=n(3),a=n(84),u=n(374),c=n(90),s=n(406),l=n(95),f={},p=!
1,h=0,d={topAbort:\"abort\",topAnimationEnd:s(\"animationend\")||\"animationend\
",topAnimationIteration:s(\"animationiteration\")||\"animationiteration\",topAni
mationStart:s(\"animationstart\")||\"animationstart\",topBlur:\"blur\",topCanPla
y:\"canplay\",topCanPlayThrough:\"canplaythrough\",topChange:\"change\",topClick
:\"click\",topCompositionEnd:\"compositionend\",topCompositionStart:\"compositio
nstart\",topCompositionUpdate:\"compositionupdate\",topContextMenu:\"contextmenu
\",topCopy:\"copy\",topCut:\"cut\",topDoubleClick:\"dblclick\",topDrag:\"drag\",
topDragEnd:\"dragend\",topDragEnter:\"dragenter\",topDragExit:\"dragexit\",topDr
agLeave:\"dragleave\",topDragOver:\"dragover\",topDragStart:\"dragstart\",topDro
p:\"drop\",topDurationChange:\"durationchange\",topEmptied:\"emptied\",topEncryp
ted:\"encrypted\",topEnded:\"ended\",topError:\"error\",topFocus:\"focus\",topIn
put:\"input\",topKeyDown:\"keydown\",topKeyPress:\"keypress\",topKeyUp:\"keyup\"
,topLoadedData:\"loadeddata\",topLoadedMetadata:\"loadedmetadata\",topLoadStart:
\"loadstart\",topMouseDown:\"mousedown\",topMouseMove:\"mousemove\",topMouseOut:
\"mouseout\",topMouseOver:\"mouseover\",topMouseUp:\"mouseup\",topPaste:\"paste\
",topPause:\"pause\",topPlay:\"play\",topPlaying:\"playing\",topProgress:\"progr
ess\",topRateChange:\"ratechange\",topScroll:\"scroll\",topSeeked:\"seeked\",top
Seeking:\"seeking\",topSelectionChange:\"selectionchange\",topStalled:\"stalled\
",topSuspend:\"suspend\",topTextInput:\"textInput\",topTimeUpdate:\"timeupdate\"
,topTouchCancel:\"touchcancel\",topTouchEnd:\"touchend\",topTouchMove:\"touchmov
e\",topTouchStart:\"touchstart\",topTransitionEnd:s(\"transitionend\")||\"transi
tionend\",topVolumeChange:\"volumechange\",topWaiting:\"waiting\",topWheel:\"whe
el\"},v=\"_reactListenersID\"+String(Math.random()).slice(2),g=o({},u,
{ReactEventListener:null,injection:{injectReactEventListener:function(t)
{t.setHandleTopLevel(g.handleTopLevel),g.ReactEventListener=t}},setEnabled:funct
ion(t)
{g.ReactEventListener&&g.ReactEventListener.setEnabled(t)},isEnabled:function()
{return!(!g.ReactEventListener||!
g.ReactEventListener.isEnabled())},listenTo:function(t,e){for(var
n=e,i=r(n),o=a.registrationNameDependencies[t],u=0;u<o.length;u++){var
c=o[u];i.hasOwnProperty(c)&&i[c]||(\"topWheel\"===c?l(\"wheel\")?
g.ReactEventListener.trapBubbledEvent(\"topWheel\",\"wheel\",n):l(\"mousewheel\"
)?
g.ReactEventListener.trapBubbledEvent(\"topWheel\",\"mousewheel\",n):g.ReactEven
tListener.trapBubbledEvent(\"topWheel\",\"DOMMouseScroll\",n):\"topScroll\"===c?
l(\"scroll\",!0)?
g.ReactEventListener.trapCapturedEvent(\"topScroll\",\"scroll\",n):g.ReactEventL
istener.trapBubbledEvent(\"topScroll\",\"scroll\",g.ReactEventListen
er.WINDOW_HANDLE):\"topFocus\"===c||\"topBlur\"===c?(l(\"focus\",!0)?
(g.ReactEventListener.trapCapturedEvent(\"topFocus\",\"focus\",n),g.ReactEventLi
stener.trapCapturedEvent(\"topBlur\",\"blur\",n)):l(\"focusin\")&&(g.ReactEventL
istener.trapBubbledEvent(\"topFocus\",\"focusin\",n),g.ReactEventListener.trapBu
bbledEvent(\"topBlur\",\"focusout\",n)),i.topBlur=!0,i.topFocus=!
0):d.hasOwnProperty(c)&&g.ReactEventListener.trapBubbledEvent(c,d[c],n),i[c]=!
0)}},trapBubbledEvent:function(t,e,n){return
g.ReactEventListener.trapBubbledEvent(t,e,n)},trapCapturedEvent:function(t,e,n)
{return
g.ReactEventListener.trapCapturedEvent(t,e,n)},supportsEventPageXY:function()
{if(!document.createEvent)return!1;var
t=document.createEvent(\"MouseEvent\");return null!=t&&\"pageX\"in
t},ensureScrollValueMonitoring:function(){if(void
0===i&&(i=g.supportsEventPageXY()),!i&&!p){var
t=c.refreshScrollValues;g.ReactEventListener.monitorScrollValue(t),p=!
0}}});t.exports=g},function(t,e,n){\"use strict\";function r(t,e,n,r){return
i.call(this,t,e,n,r)}var
i=n(25),o=n(90),a=n(93),u={screenX:null,screenY:null,clientX:null,clientY:null,c
trlKey:null,shiftKey:null,altKey:null,metaKey:null,getModifierState:a,button:fun
ction(t){var e=t.button;return\"which\"in t?e:2===e?2:4===e?
1:0},buttons:null,relatedTarget:function(t){return t.relatedTarget||
(t.fromElement===t.srcElement?t.toElement:t.fromElement)},pageX:function(t)
{return\"pageX\"in t?t.pageX:t.clientX+o.currentScrollLeft},pageY:function(t)
```

```
{return\"pageY\"in t?
t.pageY:t.clientY+o.currentScrollTop}};i.augmentClass(r,u),t.exports=r},function
(t,e,n){\"use strict\";var r=n(1),i=(n(0),
{}),o={reinitializeTransaction:function()
{this.transactionWrappers=this.getTransactionWrappers(),this.wrapperInitData?
this.wrapperInitData.length=0:this.wrapperInitData=[],this._isInTransaction=!
1},_isInTransaction:!1,getTransactionWrappers:null,isInTransaction:function()
{return!!this._isInTransaction},perform:function(t,e,n,i,o,a,u,c)
{this.isInTransaction()&&r(\"27\");var s,l;try{this._isInTransaction=!0,s=!
0,this.initializeAll(0),l=t.call(e,n,i,o,a,u,c),s=!
1}finally{try{if(s)try{this.closeAll(0)}catch(t){}else
this.closeAll(0)}finally{this._isInTransaction=!1}}return
l},initializeAll:function(t){for(var
e=this.transactionWrappers,n=t;n<e.length;n++){var
r=e[n];try{this.wrapperInitData[n]=i,this.wrapperInitData[n]=r.initialize?
r.initialize.call(this):null}finally{if(this.wrapperInitData[n]===i)try{this.ini
tializeAll(n+1)}catch(t){}}}},closeAll:function(t){this.isInTransaction()||
r(\"28\");for(var e=this.transactionWrappers,n=t;n<e.length;n++){var
o,a=e[n],u=this.wrapperInitData[n];try{o=!0,u!
==i&&a.close&&a.close.call(this,u),o=!
1}finally{if(o)try{this.closeAll(n+1)}catch(t)
{}}}this.wrapperInitData.length=0}};t.exports=o},function(t,e,n){\"use
strict\";function r(t){var e=\"\"+t,n=o.exec(e);if(!n)return e;var
r,i=\"\",a=0,u=0;for(a=n.index;a<e.length;a++){switch(e.charCodeAt(a)){case
34:r=\"&quot;\";break;case 38:r=\"&amp;\";break;case 39:r=\"&#x27;\";break;case
60:r=\"&lt;\";break;case 62:r=\"&gt;\";break;default:continue}u!
==a&&(i+=e.substring(u,a)),u=a+1,i+=r}return u!==a?i+e.substring(u,a):i}function
i(t){return\"boolean\"==typeof t||\"number\"==typeof t?\"\"+t:r(t)}var
o=/[\"'&<>]/;t.exports=i},function(t,e,n){\"use strict\";var
r,i=n(6),o=n(83),a=/^[ \\r\\n\\t\\f]/,u=/<(!--|link|noscript|meta|script|style)[
\\r\\n\\t\\f\\/>]/,c=n(91),s=c(function(t,e){if(t.namespaceURI!
==o.svg||\"innerHTML\"in t)t.innerHTML=e;else{r=r||
document.createElement(\"div\"),r.innerHTML=\"<svg>\"+e+\"</svg>\";for(var
n=r.firstChild;n.firstChild;)t.appendChild(n.firstChild)}});if(i.canUseDOM){var
l=document.createElement(\"div\");l.innerHTML=\" \",\"\"===l.innerHTML&&(s=funct
ion(t,e)
{if(t.parentNode&&t.parentNode.replaceChild(t,t),a.test(e)||\"<\"===e[0]&&u.test
(e)){t.innerHTML=String.fromCharCode(65279)+e;var
n=t.firstChild;1===n.data.length?t.removeChild(n):n.deleteData(0,1)}else
t.innerHTML=e}),l=null}t.exports=s},function(t,e,n){\"use
strict\";Object.defineProperty(e,\"__esModule\",{value:!0}),e.default={colors:
{RdBu:[\"rgb(255, 13, 87)\",\"rgb(30, 136, 229)\"],GnPR:[\"rgb(24, 196,
93)\",\"rgb(124, 82, 255)\"],CyPU:[\"#0099C6\",\"#990099\"],PkYg:
[\"#DD4477\",\"#66AA00\"],DrDb:[\"#B82E2E\",\"#316395\"],LpLb:
[\"#994499\",\"#22AA99\"],YlDp:[\"#AAAA11\",\"#6633CC\"],OrId:
[\"#E67300\",\"#3E0099\"]},gray:\"#777\"}},function(t,e,n){\"use strict\";var
r=n(28);e.a=function(t,e,n){if(null==n&&(n=r.a),i=t.length){if((e=+e)<=0||
i<2)return+n(t[0],0,t);if(e>=1)return+n(t[i-1],i-1,t);var i,o=(i-
1)*e,a=Math.floor(o),u=+n(t[a],a,t);return u+(+n(t[a+1],a+1,t)-u)*(o-
a)}}},function(t,e,n){\"use strict\";function r(){}function i(t,e){var n=new
r;if(t instanceof r)t.each(function(t,e){n.set(e,t)});else if(Array.isArray(t))
{var i,o=-1,a=t.length;if(null==e)for(;++o<a;)n.set(o,t[o]);else for(;+
+o<a;)n.set(e(i=t[o],o,t),i)}else if(t)for(var u in t)n.set(u,t[u]);return
n}n.d(e,\"b\",function(){return o});var
o=\"$\";r.prototype=i.prototype={constructor:r,has:function(t){return o+t in
this},get:function(t){return this[o+t]},set:function(t,e){return
this[o+t]=e,this},remove:function(t){var e=o+t;return e in this&&delete
this[e]},clear:function(){for(var t in this)t[0]===o&&delete
this[t]},keys:function(){var t=[];for(var e in
this)e[0]===o&&t.push(e.slice(1));return t},values:function(){var t=[];for(var e
in this)e[0]===o&&t.push(this[e]);return t},entries:function(){var t=[];for(var
e in this)e[0]===o&&t.push({key:e.slice(1),value:this[e]});return
t},size:function(){var t=0;for(var e in this)e[0]===o&&++t;return
t},empty:function(){for(var t in this)if(t[0]===o)return!1;return!
0},each:function(t){for(var e in
this)e[0]===o&&t(this[e],e.slice(1),this)}},e.a=i},function(t,e,n){\"use
strict\";function r(){}function i(t){var e;return
t=(t+\"\").trim().toLowerCase(),(e=x.exec(t))?(e=parseInt(e[1],16),new
s(e>>8&15|e>>4&240,e>>4&15|240&e,(15&e)<<4|15&e,1)):(e=w.exec(t))?
o(parseInt(e[1],16)):(e=C.exec(t))?new s(e[1],e[2],e[3],1):(e=k.exec(t))?new
s(255*e[1]/100,255*e[2]/100,255*e[3]/100,1):(e=E.exec(t))?
a(e[1],e[2],e[3],e[4]):(e=M.exec(t))?a(255*e[1]/100,255*e[2]/100,255*e[3]/
100,e[4]):(e=T.exec(t))?l(e[1],e[2]/100,e[3]/100,1):(e=S.exec(t))?l(e[1],e[2]/
100,e[3]/100,e[4]):N.hasOwnProperty(t)?o(N[t]):\"transparent\"===t?new
s(NaN,NaN,NaN,0):null}function o(t){return new
s(t>>16&255,t>>8&255,255&t,1)}function a(t,e,n,r){return r<=0&&(t=e=n=NaN),new
s(t,e,n,r)}function u(t){return t instanceof r||(t=i(t)),t?(t=t.rgb(),new
s(t.r,t.g,t.b,t.opacity)):new s}function c(t,e,n,r){return 1===arguments.length?
u(t):new s(t,e,n,null==r?1:r)}function s(t,e,n,r)
{this.r=+t,this.g=+e,this.b=+n,this.opacity=+r}function l(t,e,n,r){return r<=0?
t=e=n=NaN:n<=0||n>=1?t=e=NaN:e<=0&&(t=NaN),new h(t,e,n,r)}function f(t){if(t
instanceof h)return new h(t.h,t.s,t.l,t.opacity);if(t instanceof r||(t=i(t)),!
t)return new h;if(t instanceof h)return t;t=t.rgb();var
e=t.r/255,n=t.g/255,o=t.b/255,a=Math.min(e,n,o),u=Math.max(e,n,o),c=NaN,s=u-
a,l=(u+a)/2;return s?(c=e===u?(n-o)/s+6*(n<o):n===u?(o-e)/s+2:(e-n)/s+4,s/=l<.5?
u+a:2-u-a,c*=60):s=l>0&&l<1?0:c,new h(c,s,l,t.opacity)}function p(t,e,n,r)
{return 1===arguments.length?f(t):new h(t,e,n,null==r?1:r)}function h(t,e,n,r)
{this.h=+t,this.s=+e,this.l=+n,this.opacity=+r}function d(t,e,n){return
255*(t<60?e+(n-e)*t/60:t<180?n:t<240?e+(n-e)*(240-t)/60:e)}e.f=r,n.d(e,\"h\",fun
ction(){return g}),n.d(e,\"g\",function(){return
m}),e.a=i,e.e=u,e.b=c,e.d=s,e.c=p;var v=n(62),g=.7,m=1/g,y=\"\\\\s*([+-]?\\\\
d+)\\\\s*\",_=\"\\\\s*([+-]?\\\\d*\\\\.?\\\\d+(?:[eE][+-]?\\\\d+)?)\\\\
s*\",b=\"\\\\s*([+-]?\\\\d*\\\\.?\\\\d+(?:[eE][+-]?\\\\d+)?)%\\\\s*\",x=/^#([0-
9a-f]{3})$/,w=/^#([0-9a-f]{6})$/,C=new RegExp(\"^rgb\\\\(\"+[y,y,y]+\"\\\\)
$\"),k=new RegExp(\"^rgb\\\\(\"+[b,b,b]+\"\\\\)$\"),E=new RegExp(\"^rgba\\\\(\"+
[y,y,y,_]+\"\\\\)$\"),M=new RegExp(\"^rgba\\\\(\"+[b,b,b,_]+\"\\\\)$\"),T=new
RegExp(\"^hsl\\\\(\"+[_,b,b]+\"\\\\)$\"),S=new RegExp(\"^hsla\\\\(\"+[_,b,b,_]
+\"\\\\)
$\"),N={aliceblue:15792383,antiquewhite:16444375,aqua:65535,aquamarine:8388564,a
zure:15794175,beige:16119260,bisque:16770244,black:0,blanchedalmond:16772045,blu
e:255,blueviolet:9055202,brown:10824234,burlywood:14596231,cadetblue:6266528,cha
rtreuse:8388352,chocolate:13789470,coral:16744272,cornflowerblue:6591981,cornsil
k:16775388,crimson:14423100,cyan:65535,darkblue:139,darkcyan:35723,darkgoldenrod
:12092939,darkgray:11119017,darkgreen:25600,darkgrey:11119017,darkkhaki:12433259
,darkmagenta:9109643,darkolivegreen:5597999,darkorange:16747520,darkorchid:10040
012,darkred:9109504,darksalmon:15308410,darkseagreen:9419919,darkslateblue:47343
47,darkslategray:3100495,darkslategrey:3100495,darkturquoise:52945,darkviolet:96
99539,deeppink:16716947,deepskyblue:49151,dimgray:6908265,dimgrey:6908265,dodger
blue:2003199,firebrick:11674146,floralwhite:16775920,forestgreen:2263842,fuchsia
:16711935,gainsboro:14474460,ghostwhite:16316671,gold:16766720,goldenrod:1432912
0,gray:8421504,green:32768,greenyellow:11403055,grey:8421504,honeydew:15794160,h
otpink:16738740,indianred:13458524,indigo:4915330,ivory:16777200,khaki:15787660,
lavender:15132410,lavenderblush:16773365,lawngreen:8190976,lemonchiffon:16775885
,lightblue:11393254,lightcoral:15761536,lightcyan:14745599,lightgoldenrodyellow:
16448210,lightgray:13882323,lightgreen:9498256,lightgrey:13882323,lightpink:1675
8465,lightsalmon:16752762,lightseagreen:2142890,lightskyblue:8900346,lightslateg
ray:7833753,lightslategrey:7833753,lightsteelblue:11584734,lightyellow:16777184,
lime:65280,limegreen:3329330,linen:16445670,magenta:16711935,maroon:8388608,medi
umaquamarine:6737322,mediumblue:205,mediumorchid:12211667,mediumpurple:9662683,m
ediumseagreen:3978097,mediumslateblue:8087790,mediumspringgreen:64154,mediumturq
uoise:4772300,mediumvioletred:13047173,midnightblue:1644912,mintcream:16121850,m
istyrose:16770273,moccasin:16770229,navajowhite:16768685,navy:128,oldlace:166435
58,olive:8421376,olivedrab:7048739,orange:16753920,orangered:16729344,orchid:143
15734,palegoldenrod:15657130,palegreen:100258
80,paleturquoise:11529966,palevioletred:14381203,papayawhip:16773077,peachpuff:1
6767673,peru:13468991,pink:16761035,plum:14524637,powderblue:11591910,purple:838
8736,rebeccapurple:6697881,red:16711680,rosybrown:12357519,royalblue:4286945,sad
dlebrown:9127187,salmon:16416882,sandybrown:16032864,seagreen:3050327,seashell:1
```

```
6774638,sienna:10506797,silver:12632256,skyblue:8900331,slateblue:6970061,slateg
ray:7372944,slategrey:7372944,snow:16775930,springgreen:65407,steelblue:4620980,
tan:13808780,teal:32896,thistle:14204888,tomato:16737095,turquoise:4251856,viole
t:15631086,wheat:16113331,white:16777215,whitesmoke:16119285,yellow:16776960,yel
lowgreen:10145074};n.i(v.a)(r,i,{displayable:function(){return
this.rgb().displayable()},toString:function(){return this.rgb()+\"\"}}),n.i(v.a)
(s,c,n.i(v.b)(r,{brighter:function(t){return t=null==t?m:Math.pow(m,t),new
s(this.r*t,this.g*t,this.b*t,this.opacity)},darker:function(t){return t=null==t?
g:Math.pow(g,t),new s(this.r*t,this.g*t,this.b*t,this.opacity)},rgb:function()
{return this},displayable:function(){return
0<=this.r&&this.r<=255&&0<=this.g&&this.g<=255&&0<=this.b&&this.b<=255&&0<=this.
opacity&&this.opacity<=1},toString:function(){var t=this.opacity;return
t=isNaN(t)?1:Math.max(0,Math.min(1,t)),(1===t?\"rgb(\":\"rgba(\")
+Math.max(0,Math.min(255,Math.round(this.r)||0))
+\", \"+Math.max(0,Math.min(255,Math.round(this.g)||0))
+\", \"+Math.max(0,Math.min(255,Math.round(this.b)||0))
+(1===t?\")\":\", \"+t+\")\")}})),n.i(v.a)(h,p,n.i(v.b)(r,{brighter:function(t)
{return t=null==t?m:Math.pow(m,t),new
h(this.h,this.s,this.l*t,this.opacity)},darker:function(t){return t=null==t?
g:Math.pow(g,t),new h(this.h,this.s,this.l*t,this.opacity)},rgb:function(){var
t=this.h%360+360*(this.h<0),e=isNaN(t)||isNaN(this.s)?0:this.s,n=this.l,r=n+
(n<.5?n:1-n)*e,i=2*n-r;return new s(d(t>=240?t-240:t+120,i,r),d(t,i,r),d(t<120?
t+240:t-120,i,r),this.opacity)},displayable:function()
{return(0<=this.s&&this.s<=1||
isNaN(this.s))&&0<=this.l&&this.l<=1&&0<=this.opacity&&this.opacity<=1}}))},func
tion(t,e,n){\"use strict\";function r(t,e){var
n=Object.create(t.prototype);for(var r in e)n[r]=e[r];return
n}e.b=r,e.a=function(t,e,n)
{t.prototype=e.prototype=n,n.constructor=t}},function(t,e,n){\"use
strict\";e.a=function(t,e){if((n=(t=e?t.toExponential(e-
1):t.toExponential()).indexOf(\"e\"))<0)return null;var
n,r=t.slice(0,n);return[r.length>1?r[0]+r.slice(2):r,
+t.slice(n+1)]}},function(t,e,n){\"use strict\";function r(t,e,n,r,i){var
o=t*t,a=o*t;return((1-3*t+3*o-a)*e+(4-6*o+3*a)*n+(1+3*t+3*o-3*a)*r+a*i)/
6}e.b=r,e.a=function(t){var e=t.length-1;return function(n){var i=n<=0?n=0:n>=1?
(n=1,e-1):Math.floor(n*e),o=t[i],a=t[i+1],u=i>0?t[i-1]:2*o-a,c=i<e-1?t[i+2]:2*a-
o;return r((n-i/e)*e,u,o,a,c)}}},function(t,e,n){\"use strict\";var
r=n(10),i=n(123),o=n(118),a=n(121),u=n(43),c=n(122),s=n(124),l=n(120);e.a=functi
on(t,e){var f,p=typeof e;return null==e||\"boolean\"===p?n.i(l.a)(e):
(\"number\"===p?u.a:\"string\"===p?(f=n.i(r.color)(e))?(e=f,i.a):s.a:e
instanceof r.color?i.a:e instanceof Date?a.a:Array.isArray(e)?o.a:\"function\"!
=typeof e.valueOf&&\"function\"!=typeof e.toString||isNaN(e)?c.a:u.a)
(t,e)}},function(t,e,n){\"use strict\";Object.defineProperty(e,\"__esModule\",
{value:!0});var r=n(239);n.d(e,\"scaleBand\",function(){return
r.a}),n.d(e,\"scalePoint\",function(){return r.b});var
i=n(245);n.d(e,\"scaleIdentity\",function(){return i.a});var
o=n(34);n.d(e,\"scaleLinear\",function(){return o.a});var
a=n(246);n.d(e,\"scaleLog\",function(){return a.a});var
u=n(127);n.d(e,\"scaleOrdinal\",function(){return
u.a}),n.d(e,\"scaleImplicit\",function(){return u.b});var
c=n(247);n.d(e,\"scalePow\",function(){return
c.a}),n.d(e,\"scaleSqrt\",function(){return c.b});var
s=n(248);n.d(e,\"scaleQuantile\",function(){return s.a});var
l=n(249);n.d(e,\"scaleQuantize\",function(){return l.a});var
f=n(252);n.d(e,\"scaleThreshold\",function(){return f.a});var
p=n(128);n.d(e,\"scaleTime\",function(){return p.a});var
h=n(254);n.d(e,\"scaleUtc\",function(){return h.a});var
d=n(240);n.d(e,\"schemeCategory10\",function(){return d.a});var
v=n(242);n.d(e,\"schemeCategory20b\",function(){return v.a});var
g=n(243);n.d(e,\"schemeCategory20c\",function(){return g.a});var
m=n(241);n.d(e,\"schemeCategory20\",function(){return m.a});var
y=n(244);n.d(e,\"interpolateCubehelixDefault\",function(){return y.a});var
_=n(250);n.d(e,\"interpolateRainbow\",function(){return
_.a}),n.d(e,\"interpolateWarm\",function(){return
```

```
_.b}),n.d(e,\"interpolateCool\",function(){return _.c});var
b=n(255);n.d(e,\"interpolateViridis\",function(){return
b.a}),n.d(e,\"interpolateMagma\",function(){return
b.b}),n.d(e,\"interpolateInferno\",function(){return
b.c}),n.d(e,\"interpolatePlasma\",function(){return b.d});var
x=n(251);n.d(e,\"scaleSequential\",function(){return x.a})},function(t,e,n)
{\"use strict\";e.a=function(t){return function(){return t}}},function(t,e,n)
{\"use strict\";var r=n(69);e.a=function(t){var
e=t+=\"\",n=e.indexOf(\":\");return n>=0&&\"xmlns\"!
==(e=t.slice(0,n))&&(t=t.slice(n+1)),r.a.hasOwnProperty(e)?
{space:r.a[e],local:t}:t}},function(t,e,n){\"use strict\";n.d(e,\"b\",function()
{return r});var r=\"http://www.w3.org/1999/xhtml\";e.a={svg:\"http://www.w3.org/
2000/svg\",xhtml:r,xlink:\"http://www.w3.org/1999/xlink\",xml:\"http://
www.w3.org/XML/1998/namespace\",xmlns:\"http://www.w3.org/2000/
xmlns/\"}},function(t,e,n){\"use strict\";function r(t,e,n){return
t=i(t,e,n),function(e){var n=e.relatedTarget;n&&(n===this||
8&n.compareDocumentPosition(this))||t.call(this,e)}}function i(t,e,n){return
function(r){var
i=l;l=r;try{t.call(this,this.__data__,e,n)}finally{l=i}}}function o(t){return
t.trim().split(/^|\\s+/).map(function(t){var e=\"\",n=t.indexOf(\".\");return
n>=0&&(e=t.slice(n+1),t=t.slice(0,n)),{type:t,name:e}})}function a(t){return
function(){var e=this.__on;if(e){for(var n,r=0,i=-1,o=e.length;r<o;+
+r)n=e[r],t.type&&n.type!==t.type||n.name!==t.name?e[+
+i]=n:this.removeEventListener(n.type,n.listener,n.capture);++i?
e.length=i:delete this.__on}}}function u(t,e,n){var o=s.hasOwnProperty(t.type)?
r:i;return function(r,i,a){var u,c=this.__on,s=o(e,i,a);if(c)for(var
l=0,f=c.length;l<f;++l)if((u=c[l]).type===t.type&&u.name===t.name)return
this.removeEventListener(u.type,u.listener,u.capture),this.addEventListener(u.ty
pe,u.listener=s,u.capture=n),void(u.value=e);this.addEventListener(t.type,s,n),u
={type:t.type,name:t.name,value:e,listener:s,capture:n},c?
c.push(u):this.__on=[u]}}function c(t,e,n,r){var
i=l;t.sourceEvent=l,l=t;try{return
e.apply(n,r)}finally{l=i}}n.d(e,\"a\",function(){return l}),e.b=c;var
s={},l=null;if(\"undefined\"!=typeof document){\"onmouseenter\"in
document.documentElement||
(s={mouseenter:\"mouseover\",mouseleave:\"mouseout\"})}e.c=function(t,e,n){var
r,i,c=o(t+\"\"),s=c.length;{if(!(arguments.length<2)){for(l=e?u:a,null==n&&(n=!
1),r=0;r<s;++r)this.each(l(c[r],e,n));return this}var
l=this.node().__on;if(l)for(var f,p=0,h=l.length;p<h;++p)for(r=0,f=l[p];r<s;+
+r)if((i=c[r]).type===f.type&&i.name===f.name)return f.value}}},function(t,e,n)
{\"use strict\";function r(){}e.a=function(t){return null==t?r:function(){return
this.querySelector(t)}}},function(t,e,n){\"use strict\";var
r=n(70);e.a=function(){for(var t,e=r.a;t=e.sourceEvent;)e=t;return
e}},function(t,e,n){\"use strict\";e.a=function(t){return
t.ownerDocument&&t.ownerDocument.defaultView||t.document&&t||
t.defaultView}},function(t,e,n){\"use strict\";function r(t,e,n){var
r=t._x1,i=t._y1,a=t._x2,u=t._y2;if(t._l01_a>o.a){var
c=2*t._l01_2a+3*t._l01_a*t._l12_a+t._l12_2a,s=3*t._l01_a*(t._l01_a+t._l12_a);r=(
r*c-t._x0*t._l12_2a+t._x2*t._l01_2a)/s,i=(i*c-t._y0*t._l12_2a+t._y2*t._l01_2a)/
s}if(t._l23_a>o.a){var
l=2*t._l23_2a+3*t._l23_a*t._l12_a+t._l12_2a,f=3*t._l23_a*(t._l23_a+t._l12_a);a=(
a*l+t._x1*t._l23_2a-e*t._l12_2a)/f,u=(u*l+t._y1*t._l23_2a-n*t._l12_2a)/
f}t._context.bezierCurveTo(r,i,a,u,t._x2,t._y2)}function i(t,e)
{this._context=t,this._alpha=e}e.b=r;var
o=n(35),a=n(48);i.prototype={areaStart:function()
{this._line=0},areaEnd:function(){this._line=NaN},lineStart:function()
{this._x0=this._x1=this._x2=this._y0=this._y1=this._y2=NaN,this._l01_a=this._l12
_a=this._l23_a=this._l01_2a=this._l12_2a=this._l23_2a=this._point=0},lineEnd:fun
ction(){switch(this._point){case
2:this._context.lineTo(this._x2,this._y2);break;case
3:this.point(this._x2,this._y2)}(this._line||0!
==this._line&&1===this._point)&&this._context.closePath(),this._line=1-
this._line},point:function(t,e){if(t=+t,e=+e,this._point){var n=this._x2-
t,i=this._y2-
e;this._l23_a=Math.sqrt(this._l23_2a=Math.pow(n*n+i*i,this._alpha))}switch(this.
_point){case 0:this._point=1,this._line?
this._context.lineTo(t,e):this._context.moveTo(t,e);break;case
1:this._point=2;break;case
2:this._point=3;default:r(this,t,e)}this._l01_a=this._l12_a,this._l12_a=this._l2
3_a,this._l01_2a=this._l12_2a,this._l12_2a=this._l23_2a,this._x0=this._x1,this._
x1=this._x2,this._x2=t,this._y0=this._y1,this._y1=this._y2,this._y2=e}},e.a=func
tion t(e){function n(t){return e?new i(t,e):new a.b(t,0)}return
n.alpha=function(e){return t(+e)},n}(.5)},function(t,e,n){\"use strict\";var
r=n(32),i=n(17),o=n(49),a=n(77);e.a=function(){function t(t){var
i,o,a,p=t.length,h=!1;for(null==s&&(f=l(a=n.i(r.a)())),i=0;i<=p;++i)!
(i<p&&c(o=t[i],i,t))===h&&((h=!h)?
f.lineStart():f.lineEnd()),h&&f.point(+e(o,i,t),+u(o,i,t));if(a)return
f=null,a+\"\"||null}var e=a.a,u=a.b,c=n.i(i.a)(!0),s=null,l=o.a,f=null;return
t.x=function(r){return arguments.length?(e=\"function\"==typeof r?r:n.i(i.a)
(+r),t):e},t.y=function(e){return arguments.length?(u=\"function\"==typeof e?
e:n.i(i.a)(+e),t):u},t.defined=function(e){return arguments.length?
(c=\"function\"==typeof e?e:n.i(i.a)(!!e),t):c},t.curve=function(e){return
arguments.length?(l=e,null!=s&&(f=l(s)),t):l},t.context=function(e){return
arguments.length?(null==e?s=f=null:f=l(s=e),t):s},t}},function(t,e,n){\"use
strict\";function r(t){for(var e,n=0,r=-1,i=t.length;++r<i;)(e=+t[r]
[1])&&(n+=e);return
 n}e.b=r;var i=n(37);e.a=function(t){var e=t.map(r);return n.i(i.a)
(t).sort(function(t,n){return e[t]-e[n]})}},function(t,e,n){\"use
strict\";function r(t){return t[0]}function i(t){return
t[1]}e.a=r,e.b=i},function(t,e,n){\"use
strict\";Object.defineProperty(e,\"__esModule\",{value:!0});var
r=n(79);n.d(e,\"timeFormatDefaultLocale\",function(){return
r.a}),n.d(e,\"timeFormat\",function(){return
r.b}),n.d(e,\"timeParse\",function(){return r.c}),n.d(e,\"utcFormat\",function()
{return r.d}),n.d(e,\"utcParse\",function(){return r.e});var
i=n(152);n.d(e,\"timeFormatLocale\",function(){return i.a});var
o=n(151);n.d(e,\"isoFormat\",function(){return o.a});var
a=n(314);n.d(e,\"isoParse\",function(){return a.a})},function(t,e,n){\"use
strict\";function r(t){return i=n.i(s.a)
(t),o=i.format,a=i.parse,u=i.utcFormat,c=i.utcParse,i}n.d(e,\"b\",function()
{return o}),n.d(e,\"c\",function(){return a}),n.d(e,\"d\",function(){return
u}),n.d(e,\"e\",function(){return c}),e.a=r;var
i,o,a,u,c,s=n(152);r({dateTime:\"%x, %X\",date:\"%-m/%-d/%Y\",time:\"%-I:%M:%S
%p\",periods:[\"AM\",\"PM\"],days:
[\"Sunday\",\"Monday\",\"Tuesday\",\"Wednesday\",\"Thursday\",\"Friday\",\"Satur
day\"],shortDays:
[\"Sun\",\"Mon\",\"Tue\",\"Wed\",\"Thu\",\"Fri\",\"Sat\"],months:
[\"January\",\"February\",\"March\",\"April\",\"May\",\"June\",\"July\",\"August
\",\"September\",\"October\",\"November\",\"December\"],shortMonths:
[\"Jan\",\"Feb\",\"Mar\",\"Apr\",\"May\",\"Jun\",\"Jul\",\"Aug\",\"Sep\",\"Oct\"
,\"Nov\",\"Dec\"]})},function(t,e,n){\"use strict\";var
r=(n(5),n(317));n.d(e,\"v\",function(){return r.a}),n.d(e,\"p\",function()
{return r.a});var i=n(320);n.d(e,\"u\",function(){return
i.a}),n.d(e,\"o\",function(){return i.a});var o=n(318);n.d(e,\"t\",function()
{return o.a});var a=n(316);n.d(e,\"s\",function(){return a.a});var
u=n(315);n.d(e,\"d\",function(){return u.a});var c=n(327);n.d(e,\"r\",function()
{return c.a}),n.d(e,\"f\",function(){return c.a}),n.d(e,\"c\",function(){return
c.b}),n.d(e,\"g\",function(){return c.c});var s=n(319);n.d(e,\"q\",function()
{return s.a});var l=n(328);n.d(e,\"e\",function(){return l.a});var
f=n(323);n.d(e,\"n\",function(){return f.a});var p=n(322);n.d(e,\"m\",function()
{return p.a});var h=n(321);n.d(e,\"b\",function(){return h.a});var
d=n(325);n.d(e,\"l\",function(){return d.a}),n.d(e,\"i\",function(){return
d.a}),n.d(e,\"a\",function(){return d.b}),n.d(e,\"j\",function(){return
d.c});var v=n(324);n.d(e,\"k\",function(){return v.a});var
g=n(326);n.d(e,\"h\",function(){return g.a})},function(t,e,n){\"use
strict\";function r(t,e){return t===e?0!==t||0!==e||1/t==1/e:t!==t&&e!
==e}function i(t,e){if(r(t,e))return!0;if(\"object\"!=typeof t||
null===t||\"object\"!=typeof e||null===e)return!1;var
```

```
n=Object.keys(t),i=Object.keys(e);if(n.length!==i.length)return!1;for(var
a=0;a<n.length;a++)if(!o.call(e,n[a])||!r(t[n[a]],e[n[a]]))return!1;return!0}var
o=Object.prototype.hasOwnProperty;t.exports=i},function(t,e,n){\"use
strict\";function r(t,e){return Array.isArray(e)&&(e=e[1]),e?
e.nextSibling:t.firstChild}function i(t,e,n){l.insertTreeBefore(t,e,n)}function
o(t,e,n){Array.isArray(e)?u(t,e[0],e[1],n):v(t,e,n)}function a(t,e)
{if(Array.isArray(e)){var
n=e[1];e=e[0],c(t,e,n),t.removeChild(n)}t.removeChild(e)}function u(t,e,n,r)
{for(var i=e;;){var o=i.nextSibling;if(v(t,i,r),i===n)break;i=o}}function
c(t,e,n){for(;;){var r=e.nextSibling;if(r===n)break;t.removeChild(r)}}function
s(t,e,n){var r=t.parentNode,i=t.nextSibling;i===e?
n&&v(r,document.createTextNode(n),i):n?(d(i,n),c(r,i,e)):c(r,t,e)}var
l=n(20),f=n(350),p=(n(4),n(9),n(91)),h=n(57),d=n(176),v=p(function(t,e,n)
{t.insertBefore(e,n)}),g=f.dangerouslyReplaceNodeWithMarkup,m={dangerouslyReplac
eNodeWithMarkup:g,replaceDelimitedText:s,processUpdates:function(t,e){for(var
n=0;n<e.length;n++){var u=e[n];switch(u.type)
{case\"INSERT_MARKUP\":i(t,u.content,r(t,u.afterNode));break;case\"MOVE_EXISTING
\":o(t,u.fromNode,r(t,u.afterNode));break;case\"SET_MARKUP\":h(t,u.content);brea
k;case\"TEXT_CONTENT\":d(t,u.content);break;case\"REMOVE_NODE\":a(t,u.fromNode)}
}}};t.exports=m},function(t,e,n){\"use strict\";var r={html:\"http://www.w3.org/
1999/xhtml\",mathml:\"http://www.w3.org/1998/Math/MathML\",svg:\"http://
www.w3.org/2000/svg\"};t.exports=r},function(t,e,n){\"use strict\";function r()
{if(u)for(var t in c){var e=c[t],n=u.indexOf(t);if(n>-1||a(\"96\",t),!
s.plugins[n]){e.extractEvents||a(\"97\",t),s.plugins[n]=e;var
r=e.eventTypes;for(var o in r)i(r[o],e,o)||a(\"98\",o,t)}}}}function i(t,e,n)
{s.eventNameDispatchConfigs.hasOwnProperty(n)&&a(\"99\",n),s.eventNameDispatchCo
nfigs[n]=t;var r=t.phasedRegistrationNames;if(r){for(var i in
r)if(r.hasOwnProperty(i)){var u=r[i];o(u,e,n)}return!0}return!!
t.registrationName&&(o(t.registrationName,e,n),!0)}function o(t,e,n)
{s.registrationNameModules[t]&&a(\"100\",t),s.registrationNameModules[t]=e,s.reg
istrationNameDependencies[t]=e.eventTypes[n].dependencies}var
a=n(1),u=(n(0),null),c={},s={plugins:[],eventNameDispatchConfigs:
{},registrationNameModules:{},registrationNameDependencies:
{},possibleRegistrationNames:null,injectEventPluginOrder:function(t)
{u&&a(\"101\"),u=Array.prototype.slice.call(t),r()},injectEventPluginsByName:fun
ction(t){var e=!1;for(var n in t)if(t.hasOwnProperty(n)){var
i=t[n];c.hasOwnProperty(n)&&c[n]===i||(c[n]&&a(\"102\",n),c[n]=i,e=!
0)}e&&r()},getPluginModuleForEvent:function(t){var
e=t.dispatchConfig;if(e.registrationName)return
s.registrationNameModules[e.registrationName]||null;if(void 0!
==e.phasedRegistrationNames){var n=e.phasedRegistrationNames;for(var r in
n)if(n.hasOwnProperty(r)){var i=s.registrationNameModules[n[r]];if(i)return
i}}return null},_resetEventPlugins:function(){u=null;for(var t in
c)c.hasOwnProperty(t)&&delete c[t];s.plugins.length=0;var
e=s.eventNameDispatchConfigs;for(var n in e)e.hasOwnProperty(n)&&delete e[n];var
r=s.registrationNameModules;for(var i in r)r.hasOwnProperty(i)&&delete
r[i]}};t.exports=s},function(t,e,n){\"use strict\";function r(t){var
e={\"=\":\"=0\",\":\":\"=2\"};return\"$\"+(\"\"+t).replace(/[=:]/g,function(t)
{return e[t]})}function i(t){var
e=/(=0|=2)/g,n={\"=0\":\"=\",\"=2\":\":\"};return(\"\"+
(\".\"===t[0]&&\"$\"===t[1]?
t.substring(2):t.substring(1))).replace(e,function(t){return n[t]})}var
o={escape:r,unescape:i};t.exports=o},function(t,e,n){\"use strict\";function
r(t){null!=t.checkedLink&&null!=t.valueLink&&u(\"87\")}function i(t){r(t),(null!
=t.value||null!=t.onChange)&&u(\"88\")}function o(t){r(t),(null!=t.checked||
null!=t.onChange)&&u(\"89\")}function a(t){if(t){var e=t.getName();if(e)return\"
Check the render method of `\"+e+\"`.\"}return\"\"}var
u=n(1),c=n(380),s=n(157),l=n(26),f=s(l.isValidElement),p=(n(0),n(2),{button:!
0,checkbox:!0,image:!0,hidden:!0,radio:!0,reset:!0,submit:!
0}),h={value:function(t,e,n){return!t[e]||p[t.type]||t.onChange||t.readOnly||
t.disabled?null:new Error(\"You provided a `value` prop to a form field without
an `onChange` handler. This will render a read-only field. If the field should
be mutable use `defaultValue`. Otherwise, set either `onChange` or
`readOnly`.\")},checked:function(t,e,n){return!t[e]||t.onChange||t.readOnly||
t.disabled?null:new Error(\"You provided a `checked` prop to a form field
without an `onChange` handler. This will render a read-only field. If the field
should be mutable use `defaultChecked`. Otherwise, set either `onChange` or
`readOnly`.\")},onChange:f.func},d={},v={checkPropTypes:function(t,e,n){for(var
r in h){if(h.hasOwnProperty(r))var i=h[r](e,r,t,\"prop\",null,c);if(i instanceof
Error&&!(i.message in d)){d[i.message]=!0;a(n)}}},getValue:function(t){return
t.valueLink?(i(t),t.valueLink.value):t.value},getChecked:function(t){return
t.checkedLink?
(o(t),t.checkedLink.value):t.checked},executeOnChange:function(t,e){return
t.valueLink?(i(t),t.valueLink.requestChange(e.target.value)):t.checkedLink?
(o(t),t.checkedLink.requestChange(e.target.checked)):t.onChange?
t.onChange.call(void 0,e):void 0}};t.exports=v},function(t,e,n){\"use
strict\";var r=n(1),i=(n(0),!
1),o={replaceNodeWithMarkup:null,processChildrenUpdates:null,injection:
{injectEnvironment:function(t)
{i&&r(\"104\"),o.replaceNodeWithMarkup=t.replaceNodeWithMarkup,o.processChildren
Updates=t.processChildrenUpdates,i=!0}}};t.exports=o},function(t,e,n){\"use
strict\";function r(t,e,n){try{e(n)}catch(t){null===i&&(i=t)}}var
i=null,o={invokeGuardedCallback:r,invokeGuardedCallbackWithCatch:r,rethrowCaught
Error:function(){if(i){var t=i;throw i=null,t}}};t.exports=o},function(t,e,n)
{\"use strict\";function r(t){c.enqueueUpdate(t)}function i(t){var e=typeof
t;if(\"object\"!==e)return e;var n=t.constructor&&t.constructor.name||
e,r=Object.keys(t);return r.length>0&&r.length<20?n+\" (keys: \"+r.join(\", \")
+\")\":n}function o(t,e){var n=u.get(t);if(!n){return null}return n}var
a=n(1),u=(n(15),n(39)),c=(n(9),n(12)),s=(n(0),n(2),{isMounted:function(t){var
e=u.get(t);return!!e&&!!e._renderedComponent},enqueueCallback:function(t,e,n)
{s.validateCallback(e,n);var i=o(t);if(!i)return null;i._pendingCallbacks?
i._pendingCallbacks.push(e):i._pendingCallbacks=[e],r(i)},enqueueCallbackInterna
l:function(t,e){t._pendingCallbacks?
t._pendingCallbacks.push(e):t._pendingCallbacks=[e],r(t)},enqueueForceUpdate:fun
ction(t){var e=o(t,\"forceUpdate\");e&&(e._pendingForceUpdate=!
0,r(e))},enqueueReplaceState:function(t,e,n){var
i=o(t,\"replaceState\");i&&(i._pendingStateQueue=[e],i._pendingReplaceState=!
0,void 0!==n&&null!
==n&&(s.validateCallback(n,\"replaceState\"),i._pendingCallbacks?
i._pendingCallbacks.push(n):i._pendingCallbacks=[n]),r(i))},enqueueSetState:func
tion(t,e){var n=o(t,\"setState\");if(n){(n._pendingStateQueue||
(n._pendingStateQueue=[])).push(e),r(n)}},enqueueElementInternal:function(t,e,n)
{t._pendingElement=e,t._context=n,r(t)},validateCallback:function(t,e)
{t&&\"function\"!=typeof t&&a(\"122\",e,i(t))}});t.exports=s},function(t,e,n)
{\"use strict\";var
r={currentScrollLeft:0,currentScrollTop:0,refreshScrollValues:function(t)
{r.currentScrollLeft=t.x,r.currentScrollTop=t.y}};t.exports=r},function(t,e,n)
{\"u
se strict\";var r=function(t){return\"undefined\"!=typeof
MSApp&&MSApp.execUnsafeLocalFunction?function(e,n,r,i)
{MSApp.execUnsafeLocalFunction(function(){return
t(e,n,r,i)})}:t};t.exports=r},function(t,e,n){\"use strict\";function r(t){var
e,n=t.keyCode;return\"charCode\"in t?
0===(e=t.charCode)&&13===n&&(e=13):e=n,e>=32||13===e?
e:0}t.exports=r},function(t,e,n){\"use strict\";function r(t){var
e=this,n=e.nativeEvent;if(n.getModifierState)return n.getModifierState(t);var
r=o[t];return!!r&&!!n[r]}function i(t){return r}var
o={Alt:\"altKey\",Control:\"ctrlKey\",Meta:\"metaKey\",Shift:\"shiftKey\"};t.exp
orts=i},function(t,e,n){\"use strict\";function r(t){var e=t.target||
t.srcElement||window;return
e.correspondingUseElement&&(e=e.correspondingUseElement),3===e.nodeType?
e.parentNode:e}t.exports=r},function(t,e,n){\"use strict\";/**\n",
       " * Checks if an event is supported in the current execution
environment.\n",
       " *\n",
       " * NOTE: This will not work correctly for non-generic events such as
`change`,\n",
       " * `reset`, `load`, `error`, and `select`.\n",
       " *\n",
       " * Borrows from Modernizr.\n",
       " *\n",
       " * @param {string} eventNameSuffix Event name, e.g. \"click\".\n",
       " * @param {?boolean} capture Check if the capture phase is supported.\
n",
       " * @return {boolean} True if the event is supported.\n",
       " * @internal\n",
       " * @license Modernizr 3.0.0pre (Custom Build) | MIT\n",
       " */\n",
       "function r(t,e){if(!o.canUseDOM||e&&!(\"addEventListener\"in
document))return!1;var n=\"on\"+t,r=n in document;if(!r){var
a=document.createElement(\"div\");a.setAttribute(n,\"return;\"),r=\"function\"==
typeof a[n]}return!
r&&i&&\"wheel\"===t&&(r=document.implementation.hasFeature(\"Events.wheel\",\"3.
0\")),r}var
i,o=n(6);o.canUseDOM&&(i=document.implementation&&document.implementation.hasFea
ture&&!0!
==document.implementation.hasFeature(\"\",\"\")),t.exports=r},function(t,e,n)
{\"use strict\";function r(t,e){var n=null===t||!1===t,r=null===e||!1===e;if(n||
r)return n===r;var i=typeof t,o=typeof
e;return\"string\"===i||\"number\"===i?\"string\"===o||\"number\"===o:\"object\"
===o&&t.type===e.type&&t.key===e.key}t.exports=r},function(t,e,n){\"use
strict\";var r=(n(3),n(11)),i=(n(2),r);t.exports=i},function(t,e){var
n;n=function(){return this}();try{n=n||Function(\"return this\")()||(0,eval)
(\"this\")}catch(t){\"object\"==typeof
window&&(n=window)}t.exports=n},function(t,e){t.exports=function(t){return
t.webpackPolyfill||(t.deprecate=function(){},t.paths=[],t.children||
(t.children=[]),Object.defineProperty(t,\"loaded\",{enumerable:!0,get:function()
{return t.l}}),Object.defineProperty(t,\"id\",{enumerable:!0,get:function()
{return t.i}}),t.webpackPolyfill=1),t}},function(t,e,n){\"use
strict\";n.d(e,\"b\",function(){return i}),n.d(e,\"a\",function(){return o});var
r=Array.prototype,i=r.slice,o=r.map},function(t,e,n){\"use
strict\";n.d(e,\"b\",function(){return a}),n.d(e,\"c\",function(){return u});var
r=n(19),i=n(102),o=n.i(i.a)(r.a),a=o.right,u=o.left;e.a=a},function(t,e,n){\"use
strict\";function r(t){return function(e,r){return n.i(i.a)(t(e),r)}}var
i=n(19);e.a=function(t){return 1===t.length&&(t=r(t)),{left:function(e,n,r,i)
{for(null==r&&(r=0),null==i&&(i=e.length);r<i;){var o=r+i>>>1;t(e[o],n)<0?
r=o+1:i=o}return r},right:function(e,n,r,i)
{for(null==r&&(r=0),null==i&&(i=e.length);r<i;){var o=r+i>>>1;t(e[o],n)>0?
i=o:r=o+1}return r}}}},function(t,e,n){\"use strict\";var
r=n(111);e.a=function(t,e){var i=n.i(r.a)(t,e);return i?
Math.sqrt(i):i}},function(t,e,n){\"use strict\";e.a=function(t,e){var
n,r,i,o=t.length,a=-1;if(null==e){for(;++a<o;)if(null!=(n=t[a])&&n>=n)for(r=i=n;
++a<o;)null!=(n=t[a])&&(r>n&&(r=n),i<n&&(i=n))}else for(;++a<o;)if(null!
=(n=e(t[a],a,t))&&n>=n)for(r=i=n;++a<o;)null!
=(n=e(t[a],a,t))&&(r>n&&(r=n),i<n&&(i=n));return[r,i]}},function(t,e,n){\"use
strict\";e.a=function(t,e){var n,r,i=t.length,o=-1;if(null==e){for(;+
+o<i;)if(null!=(n=t[o])&&n>=n)for(r=n;++o<i;)null!=(n=t[o])&&r>n&&(r=n)}else
for(;++o<i;)if(null!=(n=e(t[o],o,t))&&n>=n)for(r=n;++o<i;)null!
=(n=e(t[o],o,t))&&r>n&&(r=n);return r}},function(t,e,n){\"use strict\";function
r(t,e){return[t,e]}e.b=r,e.a=function(t,e){null==e&&(e=r);for(var
n=0,i=t.length-1,o=t[0],a=new Array(i<0?0:i);n<i;)a[n]=e(o,o=t[++n]);return
a}},function(t,e,n){\"use strict\";e.a=function(t,e,n)
{t=+t,e=+e,n=(i=arguments.length)<2?(e=t,t=0,1):i<3?1:+n;for(var r=-1,i=0|
Math.max(0,Math.ceil((e-t)/n)),o=new Array(i);++r<i;)o[r]=t+r*n;return
o}},function(t,e,n){\"use strict\";e.a=function(t){return
Math.ceil(Math.log(t.length)/Math.LN2)+1}},function(t,e,n){\"use
strict\";function r(t,e,n){var
r=(e-t)/Math.max(0,n),i=Math.floor(Math.log(r)/Math.LN10),c=r/Math.pow(10,i);ret
urn i>=0?(c>=o?10:c>=a?5:c>=u?2:1)*Math.pow(10,i):-Math.pow(10,-i)/(c>=o?
10:c>=a?5:c>=u?2:1)}function i(t,e,n){var
r=Math.abs(e-t)/Math.max(0,n),i=Math.pow(10,Math.floor(Math.log(r)/
Math.LN10)),c=r/i;return c>=o?i*=10:c>=a?i*=5:c>=u&&(i*=2),e<t?-
```

```
i:i}e.b=r,e.c=i;var
o=Math.sqrt(50),a=Math.sqrt(10),u=Math.sqrt(2);e.a=function(t,e,n){var
i,o,a,u,c=-
1;if(e=+e,t=+t,n=+n,t===e&&n>0)return[t];if((i=e<t)&&(o=t,t=e,e=o),0===(u=r(t,e,
n))||!isFinite(u))return[];if(u>0)for(t=Math.ceil(t/u),e=Math.floor(e/u),a=new
Array(o=Math.ceil(e-t+1));++c<o;)a[c]=(t+c)*u;else
for(t=Math.floor(t*u),e=Math.ceil(e*u),a=new Array(o=Math.ceil(t-e+1));+
+c<o;)a[c]=(t-c)/u;return i&&a.reverse(),a}},function(t,e,n){\"use
strict\";function r(t){return t.length}var i=n(105);e.a=function(t){if(!
(u=t.length))return[];for(var e=-1,o=n.i(i.a)(t,r),a=new Array(o);++e<o;)for(var
u,c=-1,s=a[e]=new Array(u);++c<u;)s[c]=t[c][e];return a}},function(t,e,n){\"use
strict\";var r=n(28);e.a=function(t,e){var i,o,a=t.length,u=0,c=-
1,s=0,l=0;if(null==e)for(;++c<a;)isNaN(i=n.i(r.a)(t[c]))||(o=i-s,s+=o/+
+u,l+=o*(i-s));else for(;++c<a;)isNaN(i=n.i(r.a)(e(t[c],c,t)))||(o=i-s,s+=o/+
+u,l+=o*(i-s));if(u>1)return l/(u-1)}},function(t,e,n){\"use
strict\";Object.defineProperty(e,\"__esModule\",{value:!0});var
r=n(209);n.d(e,\"axisTop\",function(){return
r.a}),n.d(e,\"axisRight\",function(){return
r.b}),n.d(e,\"axisBottom\",function(){return r.c}),n.d(e,\"axisLeft\",function()
{return r.d})},function(t,e,n){\"use strict\";n.d(e,\"b\",function(){return
r}),n.d(e,\"a\",function(){return i});var
r=Math.PI/180,i=180/Math.PI},function(t,e,n){\"use
strict\";n.d(e,\"b\",function(){return r});var r,i=n(63);e.a=function(t,e){var
o=n.i(i.a)(t,e);if(!o)return t+\"\";var a=o[0],u=o[1],c=u-(r=3*Math.max(-
8,Math.min(8,Math.floor(u/3))))+1,s=a.length;return c===s?a:c>s?a+new Array(c-
s+1).join(\"0\"):c>0?a.slice(0,c)+\".\"+a.slice(c):\"0.\"+new Array(1-
c).join(\"0\")+n.i(i.a)(t,Math.max(0,e+c-1))[0]}},function(t,e,n){\"use
strict\";function r(t){return new i(t)}function i(t){if(!(e=a.exec(t)))throw new
Error(\"invalid format: \"+t);var
e,n=e[1]||\" \",r=e[2]||\">\",i=e[3]||\"-\",u=e[4]||\"\",c=!!
e[5],s=e[6]&&+e[6],l=!!e[7],f=e[8]&&+e[8].slice(1),p=e[9]||\"\";\"n\"===p?(l=!
0,p=\"g\"):o.a[p]||(p=\"\"),(c||\"0\"===n&&\"=\"===r)&&(c=!
0,n=\"0\",r=\"=\"),this.fill=n,this.align=r,this.sign=i,this.symbol=u,this.zero=
c,this.width=s,this.comma=l,this.precision=f,this.type=p}e.a=r;var
o=n(116),a=/^(?:(.)?([<>=^]))?([+\\-\\( ])?([$#])?(0)?(\\d+)?(,)?(\\.\\d+)?([a-z
%])?$/i;r.prototype=i.prototype,i.prototype.toString=function(){return
this.fill+this.align+this.sign+this.symbol+(this.zero?\"0\":\"\")+
(null==this.width?\"\":Math.max(1,0|this.width))+(this.comma?\",\":\"\")+
(null==this.precision?\"\":\".\"+Math.max(0,0|this.precision))
+this.type}},function(t,e,n){\"use strict\";var
r=n(220),i=n(114),o=n(223);e.a={\"\":r.a,\"%\":function(t,e)
{return(100*t).toFixed(e)},b:function(t){return
Math.round(t).toString(2)},c:function(t){return t+\"\"},d:function(t){return
Math.round(t).toString(10)},e:function(t,e){return
t.toExponential(e)},f:function(t,e){return t.toFixed(e)},g:function(t,e){return
t.toPrecision(e)},o:function(t){return
Math.round(t).toString(8)},p:function(t,e){return n.i(o.a)
(100*t,e)},r:o.a,s:i.a,X:function(t){return
Math.round(t).toString(16).toUpperCase()},x:function(t){return
Math.round(t).toString(16)}}},function(t,e,n){\"use strict\";var
r=n(42),i=n(221),o=n(222),a=n(115),u=n(116),c=n(114),s=n(224),l=[\"y\",\"z\",\"a
\",\"f\",\"p\",\"n\",\"Âµ\",\"m\",\"\",\"k\",\"M\",\"G\",\"T\",\"P\",\"E\",\"Z\"
,\"Y\"];e.a=function(t){function e(t){function e(t){var
e,n,a,u=x,s=w;if(\"c\"===b)s=C(t)+s,t=\"\";else{t=+t;var
h=t<0;if(t=C(Math.abs(t),_),h&&0==+t&&(h=!1),u=(h?\"(\"===o?
o:\"-\":\"-\"===o||\"(\"===o?\"\":o)+u,s=(\"s\"===b?l[8+c.b/3]:\"\")+s+
(h&&\"(\"===o?\")\":\"\"),k)for(e=-1,n=t.length;+
+e<n;)if(48>(a=t.charCodeAt(e))||a>57){s=(46===a?d+t.slice(e+1):t.slice(e))
+s,t=t.slice(0,e);break}}y&&!f&&(t=p(t,1/0));var
g=u.length+t.length+s.length,E=g<m?new Array(m-
g+1).join(r):\"\";switch(y&&f&&(t=p(E+t,E.length?m-s.length:1/0),E=\"\"),i)
{case\"<\":t=u+t+s+E;break;case\"=\":t=u+E+t+s;break;case\"^\":t=E.slice(0,g=E.l
ength>>1)+u+t+s+E.slice(g);break;default:t=E+u+t+s}return v(t)}t=n.i(a.a)(t);var
r=t.fill,i=t.align,o=t.sign,s=t.symbol,f=t.zero,m=t.width,y=t.comma,_=t.precisio
n,b=t.type,x=\"$\"===s?h[0]:\"#\"===s&&/
[boxX]/.test(b)?\"0\"+b.toLowerCase():\"\",w=\"$\"===s?h[1]:/[%p]/.test(b)?
g:\"\",C=u.a[b],k=!b||/[defgprs%]/.test(b);return
_=null==_?b?6:12:/[gprs]/.test(b)?
Math.max(1,Math.min(21,_)):Math.max(0,Math.min(20,_)),e.toString=function()
{return t+\"\"},e}function f(t,i){var o=e((t=n.i(a.a)
(t),t.type=\"f\",t)),u=3*Math.max(-8,Math.min(8,Math.floor(n.i(r.a)(i)/
3))),c=Math.pow(10,-u),s=l[8+u/3];return function(t){return o(c*t)+s}}var
p=t.grouping&&t.thousands?n.i(i.a)
(t.grouping,t.thousands):s.a,h=t.currency,d=t.decimal,v=t.numerals?n.i(o.a)
(t.numerals):s.a,g=t.percent||\"%\";return{format:e,formatPrefix:f}}},function(t
,e,n){\"use strict\";var r=n(65);e.a=function(t,e){var i,o=e?e.length:0,a=t?
Math.min(o,t.length):0,u=new Array(a),c=new Array(o);for(i=0;i<a;+
+i)u[i]=n.i(r.a)(t[i],e[i]);for(;i<o;++i)c[i]=e[i];return function(t)
{for(i=0;i<a;++i)c[i]=u[i](t);return c}}},function(t,e,n){\"use strict\";var
r=n(64);e.a=function(t){var e=t.length;return function(i){var o=Math.floor(((i
%=1)<0?++i:i)*e),a=t[(o+e-1)%e],u=t[o%e],c=t[(o+1)%e],s=t[(o+2)%e];return
n.i(r.b)((i-o/e)*e,a,u,c,s)}}},function(t,e,n){\"use strict\";e.a=function(t)
{return function(){return t}}},function(t,e,n){\"use strict\";e.a=function(t,e)
{var n=new Date;return t=+t,e-=t,function(r){return
n.setTime(t+e*r),n}}},function(t,e,n){\"use strict\";var
r=n(65);e.a=function(t,e){var i,o={},a={};null!==t&&\"object\"==typeof t||
(t={}),null!==e&&\"object\"==typeof e||(e={});for(i in e)i in t?o[i]=n.i(r.a)
(t[i],e[i]):a[i]=e[i];return function(t){for(i in o)a[i]=o[i](t);return
a}}},function(t,e,n){\"use strict\";function r(t){return function(e){var
r,o,a=e.length,u=new Array(a),c=new Array(a),s=new Array(a);for(r=0;r<a;+
+r)o=n.i(i.rgb)(e[r]),u[r]=o.r||0,c[r]=o.g||0,s[r]=o.b||0;return
u=t(u),c=t(c),s=t(s),o.opacity=1,function(t){return
o.r=u(t),o.g=c(t),o.b=s(t),o+\"\"}}}var
i=n(10),o=n(64),a=n(119),u=n(31);e.a=function t(e){function r(t,e){var
r=o((t=n.i(i.rgb)(t)).r,(e=n.i(i.rgb)
(e)).r),a=o(t.g,e.g),c=o(t.b,e.b),s=n.i(u.a)(t.opacity,e.opacity);return
function(e){return t.r=r(e),t.g=a(e),t.b=c(e),t.opacity=s(e),t+\"\"}}var
o=n.i(u.c)(e);return r.gamma=t,r}(1);r(o.a),r(a.a)},function(t,e,n){\"use
strict\";function r(t){return function(){return t}}function
 i(t){return function(e){return t(e)+\"\"}}var o=n(43),a=/[-+]?(?:\\d+\\.?\\
d*|\\.?\\d+)(?:[eE][-+]?\\d+)?/g,u=new RegExp(a.source,\"g\");e.a=function(t,e)
{var c,s,l,f=a.lastIndex=u.lastIndex=0,p=-1,h=[],d=[];for(t+=\"\",e+=\"\";
(c=a.exec(t))&&(s=u.exec(e));)(l=s.index)>f&&(l=e.slice(f,l),h[p]?h[p]+=l:h[+
+p]=l),(c=c[0])===(s=s[0])?h[p]?h[p]+=s:h[++p]=s:(h[+
+p]=null,d.push({i:p,x:n.i(o.a)(c,s)})),f=u.lastIndex;return
f<e.length&&(l=e.slice(f),h[p]?h[p]+=l:h[++p]=l),h.length<2?d[0]?i(d[0].x):r(e):
(e=d.length,function(t){for(var n,r=0;r<e;++r)h[(n=d[r]).i]=n.x(t);return
h.join(\"\")})}},function(t,e,n){\"use strict\";e.a=function(t,e)
{t=t.slice();var n,r=0,i=t.length-1,o=t[r],a=t[i];return
a<o&&(n=r,r=i,i=n,n=o,o=a,a=n),t[r]=e.floor(o),t[i]=e.ceil(a),t}},function(t,e,n
){\"use strict\";e.a=function(t){return+t}},function(t,e,n){\"use
strict\";function r(t){function e(e){var n=e+\"\",r=u.get(n);if(!r){if(s!
==a)return s;u.set(n,r=c.push(e))}return t[(r-1)%t.length]}var u=n.i(i.a)
(),c=[],s=a;return t=null==t?[]:o.b.call(t),e.domain=function(t){if(!
arguments.length)return c.slice();c=[],u=n.i(i.a)();for(var r,o,a=-1,s=t.length;
++a<s;)u.has(o=(r=t[a])+\"\")||u.set(o,c.push(r));return e},e.range=function(n)
{return arguments.length?(t=o.b.call(n),e):t.slice()},e.unknown=function(t)
{return arguments.length?(s=t,e):s},e.copy=function(){return
r().domain(c).range(t).unknown(s)},e}n.d(e,\"b\",function(){return a}),e.a=r;var
i=n(211),o=n(16),a={name:\"implicit\"}},function(t,e,n){\"use strict\";function
r(t){return new Date(t)}function i(t){return t instanceof Date?+t:+new
Date(+t)}function o(t,e,c,s,b,x,w,C,k){function E(n){return(w(n)<n?A:x(n)<n?
P:b(n)<n?O:s(n)<n?I:e(n)<n?c(n)<n?D:R:t(n)<n?L:U)(n)}function M(e,r,i,o)
{if(null==e&&(e=10),\"number\"==typeof e){var
u=Math.abs(i-r)/e,c=n.i(a.bisector)(function(t){return
t[2]}).right(F,u);c===F.length?(o=n.i(a.tickStep)(r/_,i/_,e),e=t):c?(c=F[u/F[c-
1][2]<F[c][2]/u?c-1:c],o=c[1],e=c[0]):(o=Math.max(n.i(a.tickStep)
(r,i,e),1),e=C)}return null==o?e:e.every(o)}var T=n.i(f.a)
```

```
(f.b,u.a),S=T.invert,N=T.domain,A=k(\".%L\"),P=k(\":%S\"),O=k(\"%I:
%M\"),I=k(\"%I %p\"),D=k(\"%a %d\"),R=k(\"%b
%d\"),L=k(\"%B\"),U=k(\"%Y\"),F=[[w,1,h],[w,5,5*h],[w,15,15*h],[w,30,30*h],
[x,1,d],[x,5,5*d],[x,15,15*d],[x,30,30*d],[b,1,v],[b,3,3*v],[b,6,6*v],
[b,12,12*v],[s,1,g],[s,2,2*g],[c,1,m],[e,1,y],[e,3,3*y],[t,1,_]];return
T.invert=function(t){return new Date(S(t))},T.domain=function(t){return
arguments.length?N(l.a.call(t,i)):N().map(r)},T.ticks=function(t,e){var
n,r=N(),i=r[0],o=r[r.length-1],a=o<i;return a&&(n=i,i=o,o=n),n=M(t,i,o,e),n=n?
n.range(i,o+1):[],a?n.reverse():n},T.tickFormat=function(t,e){return null==e?
E:k(e)},T.nice=function(t,e){var r=N();return(t=M(t,r[0],r[r.length-1],e))?
N(n.i(p.a)(r,t)):T},T.copy=function(){return n.i(f.c)
(T,o(t,e,c,s,b,x,w,C,k))},T}e.b=o;var
a=n(7),u=n(30),c=n(80),s=n(78),l=n(16),f=n(44),p=n(125),h=1e3,d=60*h,v=60*d,g=24
*v,m=7*g,y=30*g,_=365*g;e.a=function(){return
o(c.e,c.q,c.r,c.d,c.s,c.t,c.u,c.v,s.timeFormat).domain([new Date(2e3,0,1),new
Date(2e3,0,2)])}},function(t,e,n){\"use
strict\";Object.defineProperty(e,\"__esModule\",{value:!0});var
r=n(257);n.d(e,\"create\",function(){return r.a});var
i=n(45);n.d(e,\"creator\",function(){return i.a});var
o=n(258);n.d(e,\"local\",function(){return o.a});var
a=n(130);n.d(e,\"matcher\",function(){return a.a});var
u=n(259);n.d(e,\"mouse\",function(){return u.a});var
c=n(68);n.d(e,\"namespace\",function(){return c.a});var
s=n(69);n.d(e,\"namespaces\",function(){return s.a});var
l=n(46);n.d(e,\"clientPoint\",function(){return l.a});var
f=n(131);n.d(e,\"select\",function(){return f.a});var
p=n(260);n.d(e,\"selectAll\",function(){return p.a});var
h=n(8);n.d(e,\"selection\",function(){return h.a});var
d=n(71);n.d(e,\"selector\",function(){return d.a});var
v=n(135);n.d(e,\"selectorAll\",function(){return v.a});var
g=n(134);n.d(e,\"style\",function(){return g.a});var
m=n(288);n.d(e,\"touch\",function(){return m.a});var
y=n(289);n.d(e,\"touches\",function(){return y.a});var
_=n(73);n.d(e,\"window\",function(){return _.a});var
b=n(70);n.d(e,\"event\",function(){return b.a}),n.d(e,\"customEvent\",function()
{return b.b})},function(t,e,n){\"use strict\";var r=function(t){return
function(){return this.matches(t)}};if(\"undefined\"!=typeof document){var
i=document.documentElement;if(!i.matches){var o=i.webkitMatchesSelector||
i.msMatchesSelector||i.mozMatchesSelector||i.oMatchesSelector;r=function(t)
{return function(){return o.call(this,t)}}}}e.a=r},function(t,e,n){\"use
strict\";var r=n(8);e.a=function(t){return\"string\"==typeof t?new
r.b([[document.querySelector(t)]],[document.documentElement]):new
r.b([[t]],r.c)}},function(t,e,n){\"use strict\";function r(t,e)
{this.ownerDocument=t.ownerDocument,this.namespaceURI=t.namespaceURI,this._next=
null,this._parent=t,this.__data__=e}e.b=r;var i=n(133),o=n(8);e.a=function()
{return new o.b(this._enter||
this._groups.map(i.a),this._parents)},r.prototype={constructor:r,appendChild:fun
ction(t){return
this._parent.insertBefore(t,this._next)},insertBefore:function(t,e){return
this._parent.insertBefore(t,e)},querySelector:function(t){return
this._parent.querySelector(t)},querySelectorAll:function(t){return
this._parent.querySelectorAll(t)}}},function(t,e,n){\"use
strict\";e.a=function(t){return new Array(t.length)}},function(t,e,n){\"use
strict\";function r(t){return function(){this.style.removeProperty(t)}}function
i(t,e,n){return function(){this.style.setProperty(t,e,n)}}function o(t,e,n)
{return function(){var r=e.apply(this,arguments);null==r?
this.style.removeProperty(t):this.style.setProperty(t,r,n)}}function a(t,e)
{return t.style.getPropertyValue(e)||n.i(u.a)
(t).getComputedStyle(t,null).getPropertyValue(e)}e.a=a;var
u=n(73);e.b=function(t,e,n){return arguments.length>1?this.each((null==e?
r:\"function\"==typeof e?o:i)
(t,e,null==n?\"\":n)):a(this.node(),t)}},function(t,e,n){\"use strict\";function
r(){return[]}e.a=function(t){return null==t?r:function(){return
this.querySelectorAll(t)}}},function(t,e,n){\"use
```

```
strict\";Object.defineProperty(e,\"__esModule\",{value:!0});var
r=n(290);n.d(e,\"arc\",function(){return r.a});var
i=n(137);n.d(e,\"area\",function(){return i.a});var
o=n(75);n.d(e,\"line\",function(){return o.a});var
a=n(311);n.d(e,\"pie\",function(){return a.a});var
u=n(291);n.d(e,\"areaRadial\",function(){return
u.a}),n.d(e,\"radialArea\",function(){return u.a});var
c=n(142);n.d(e,\"lineRadial\",function(){return
c.a}),n.d(e,\"radialLine\",function(){return c.a});var
s=n(143);n.d(e,\"pointRadial\",function(){return s.a});var
l=n(303);n.d(e,\"linkHorizontal\",function(){return
l.a}),n.d(e,\"linkVertical\",function(){return
l.b}),n.d(e,\"linkRadial\",function(){return l.c});var
f=n(313);n.d(e,\"symbol\",function(){return f.a}),n.d(e,\"symbols\",function()
{return f.b});var p=n(144);n.d(e,\"symbolCircle\",function(){return p.a});var
h=n(145);n.d(e,\"symbolCross\",function(){return h.a});var
d=n(146);n.d(e,\"symbolDiamond\",function(){return d.a});var
v=n(147);n.d(e,\"symbolSquare\",function(){return v.a});var
g=n(148);n.d(e,\"symbolStar\",function(){return g.a});var
m=n(149);n.d(e,\"symbolTriangle\",function(){return m.a});var
y=n(150);n.d(e,\"symbolWye\",function(){return y.a});var
_=n(292);n.d(e,\"curveBasisClosed\",function(){return _.a});var
b=n(293);n.d(e,\"curveBasisOpen\",function(){return b.a});var
x=n(47);n.d(e,\"curveBasis\",function(){return x.a});var
w=n(294);n.d(e,\"curveBundle\",function(){return w.a});var
C=n(139);n.d(e,\"curveCardinalClosed\",function(){return C.a});var
k=n(140);n.d(e,\"curveCardinalOpen\",function(){return k.a});var
E=n(48);n.d(e,\"curveCardinal\",function(){return E.a});var
M=n(295);n.d(e,\"curveCatmullRomClosed\",function(){return M.a});var
T=n(296);n.d(e,\"curveCatmullRomOpen\",function(){return T.a});var
S=n(74);n.d(e,\"curveCatmullRom\",function(){return S.a});var
N=n(297);n.d(e,\"curveLinearClosed\",function(){return N.a});var
A=n(49);n.d(e,\"curveLinear\",function(){return A.a});var
P=n(298);n.d(e,\"curveMonotoneX\",function(){return
P.a}),n.d(e,\"curveMonotoneY\",function(){return P.b});var
O=n(299);n.d(e,\"curveNatural\",function(){return O.a});var
I=n(300);n.d(e,\"curveStep\",function(){return
I.a}),n.d(e,\"curveStepAfter\",function(){return
I.b}),n.d(e,\"curveStepBefore\",function(){return I.c});var
D=n(312);n.d(e,\"stack\",function(){return D.a});var
R=n(305);n.d(e,\"stackOffsetExpand\",function(){return R.a});var
L=n(304);n.d(e,\"stackOffsetDiverging\",function(){return L.a});var
U=n(36);n.d(e,\"stackOffsetNone\",function(){return U.a});var
F=n(306);n.d(e,\"stackOffsetSilhouette\",function(){return F.a});var
j=n(307);n.d(e,\"stackOffsetWiggle\",function(){return j.a});var
B=n(76);n.d(e,\"stackOrderAscending\",function(){return B.a});var
V=n(308);n.d(e,\"stackOrderDescending\",function(){return V.a});var
W=n(309);n.d(e,\"stackOrderInsideOut\",function(){return W.a});var
z=n(37);n.d(e,\"stackOrderNone\",function(){return z.a});var
H=n(310);n.d(e,\"stackOrderReverse\",function(){return H.a})},function(t,e,n)
{\"use strict\";var r=n(32),i=n(17),o=n(49),a=n(75),u=n(77);e.a=function()
{function t(t){var e,i,o,a,u,g=t.length,m=!1,y=new Array(g),_=new
Array(g);for(null==h&&(v=d(u=n.i(r.a)())),e=0;e<=g;++e){if(!
(e<g&&p(a=t[e],e,t))===m)if(m=!
m)i=e,v.areaStart(),v.lineStart();else{for(v.lineEnd(),v.lineStart(),o=e-
1;o>=i;--
o)v.point(y[o],_[o]);v.lineEnd(),v.areaEnd()}m&&(y[e]=+c(a,e,t),_[e]=+l(a,e,t),v
.point(s?+s(a,e,t):y[e],f?+f(a,e,t):_[e]))}if(u)return v=null,u+\"\"||
null}function e(){return n.i(a.a)().defined(p).curve(d).context(h)}var
c=u.a,s=null,l=n.i(i.a)(0),f=u.b,p=n.i(i.a)(!0),h=null,d=o.a,v=null;return
t.x=function(e){return arguments.length?(c=\"function\"==typeof e?e:n.i(i.a)
(+e),s=null,t):c},t.x0=function(e){return arguments.length?
(c=\"function\"==typeof e?e:n.i(i.a)(+e),t):c},t.x1=function(e){return
arguments.length?(s=null==e?null:\"function\"==typeof e?e:n.i(i.a)
(+e),t):s},t.y=function(e){return
 arguments.length?(l=\"function\"==typeof e?e:n.i(i.a)
(+e),f=null,t):l},t.y0=function(e){return arguments.length?
(l=\"function\"==typeof e?e:n.i(i.a)(+e),t):l},t.y1=function(e){return
arguments.length?(f=null==e?null:\"function\"==typeof e?e:n.i(i.a)
(+e),t):f},t.lineX0=t.lineY0=function(){return
e().x(c).y(l)},t.lineY1=function(){return e().x(c).y(f)},t.lineX1=function()
{return e().x(s).y(l)},t.defined=function(e){return arguments.length?
(p=\"function\"==typeof e?e:n.i(i.a)(!!e),t):p},t.curve=function(e){return
arguments.length?(d=e,null!=h&&(v=d(h)),t):d},t.context=function(e){return
arguments.length?(null==e?h=v=null:v=d(h=e),t):h},t}},function(t,e,n){\"use
strict\";n.d(e,\"a\",function(){return r});var
r=Array.prototype.slice},function(t,e,n){\"use strict\";function r(t,e)
{this._context=t,this._k=(1-e)/6}e.b=r;var
i=n(50),o=n(48);r.prototype={areaStart:i.a,areaEnd:i.a,lineStart:function()
{this._x0=this._x1=this._x2=this._x3=this._x4=this._x5=this._y0=this._y1=this._y
2=this._y3=this._y4=this._y5=NaN,this._point=0},lineEnd:function()
{switch(this._point){case
1:this._context.moveTo(this._x3,this._y3),this._context.closePath();break;case
2:this._context.lineTo(this._x3,this._y3),this._context.closePath();break;case
3:this.point(this._x3,this._y3),this.point(this._x4,this._y4),this.point(this._x
5,this._y5)}},point:function(t,e){switch(t=+t,e=+e,this._point){case
0:this._point=1,this._x3=t,this._y3=e;break;case
1:this._point=2,this._context.moveTo(this._x4=t,this._y4=e);break;case
2:this._point=3,this._x5=t,this._y5=e;break;default:n.i(o.c)
(this,t,e)}this._x0=this._x1,this._x1=this._x2,this._x2=t,this._y0=this._y1,this
._y1=this._y2,this._y2=e}},e.a=function t(e){function n(t){return new
r(t,e)}return n.tension=function(e){return t(+e)},n}(0)},function(t,e,n){\"use
strict\";function r(t,e){this._context=t,this._k=(1-e)/6}e.b=r;var
i=n(48);r.prototype={areaStart:function(){this._line=0},areaEnd:function()
{this._line=NaN},lineStart:function()
{this._x0=this._x1=this._x2=this._y0=this._y1=this._y2=NaN,this._point=0},lineEn
d:function(){(this._line||0!
==this._line&&3===this._point)&&this._context.closePath(),this._line=1-
this._line},point:function(t,e){switch(t=+t,e=+e,this._point){case
0:this._point=1;break;case 1:this._point=2;break;case
2:this._point=3,this._line?
this._context.lineTo(this._x2,this._y2):this._context.moveTo(this._x2,this._y2);
break;case 3:this._point=4;default:n.i(i.c)
(this,t,e)}this._x0=this._x1,this._x1=this._x2,this._x2=t,this._y0=this._y1,this
._y1=this._y2,this._y2=e}},e.a=function t(e){function n(t){return new
r(t,e)}return n.tension=function(e){return t(+e)},n}(0)},function(t,e,n){\"use
strict\";function r(t){this._curve=t}function i(t){function e(e){return new
r(t(e))}return e._curve=t,e}n.d(e,\"b\",function(){return a}),e.a=i;var
o=n(49),a=i(o.a);r.prototype={areaStart:function()
{this._curve.areaStart()},areaEnd:function()
{this._curve.areaEnd()},lineStart:function()
{this._curve.lineStart()},lineEnd:function()
{this._curve.lineEnd()},point:function(t,e){this._curve.point(e*Math.sin(t),e*-
Math.cos(t))}}},function(t,e,n){\"use strict\";function r(t){var
e=t.curve;return t.angle=t.x,delete t.x,t.radius=t.y,delete
t.y,t.curve=function(t){return arguments.length?e(n.i(i.a)
(t)):e()._curve},t}e.b=r;var i=n(141),o=n(75);e.a=function(){return r(n.i(o.a)
().curve(i.b))}},function(t,e,n){\"use strict\";e.a=function(t,e)
{return[(e=+e)*Math.cos(t-=Math.PI/2),e*Math.sin(t)]}},function(t,e,n){\"use
strict\";var r=n(35);e.a={draw:function(t,e){var
n=Math.sqrt(e/r.b);t.moveTo(n,0),t.arc(0,0,n,0,r.c)}}},function(t,e,n){\"use
strict\";e.a={draw:function(t,e){var n=Math.sqrt(e/5)/2;t.moveTo(-3*n,-
n),t.lineTo(-n,-n),t.lineTo(-n,-3*n),t.lineTo(n,-3*n),t.lineTo(n,-
n),t.lineTo(3*n,-n),t.lineTo(3*n,n),t.lineTo(n,n),t.lineTo(n,3*n),t.lineTo(-
n,3*n),t.lineTo(-n,n),t.lineTo(-3*n,n),t.closePath()}}},function(t,e,n){\"use
strict\";var r=Math.sqrt(1/3),i=2*r;e.a={draw:function(t,e){var
n=Math.sqrt(e/i),o=n*r;t.moveTo(0,-n),t.lineTo(o,0),t.lineTo(0,n),t.lineTo(-
o,0),t.closePath()}}},function(t,e,n){\"use strict\";e.a={draw:function(t,e){var
```

```
n=Math.sqrt(e),r=-n/2;t.rect(r,r,n,n)}}}},function(t,e,n){\"use strict\";var
r=n(35),i=Math.sin(r.b/10)/Math.sin(7*r.b/10),o=Math.sin(r.c/10)*i,a=-
Math.cos(r.c/10)*i;e.a={draw:function(t,e){var
n=Math.sqrt(.8908130915292852*e),i=o*n,u=a*n;t.moveTo(0,-
n),t.lineTo(i,u);for(var c=1;c<5;++c){var
s=r.c*c/5,l=Math.cos(s),f=Math.sin(s);t.lineTo(f*n,-l*n),t.lineTo(l*i-
f*u,f*i+l*u)}t.closePath()}}}},function(t,e,n){\"use strict\";var
r=Math.sqrt(3);e.a={draw:function(t,e){var
n=-Math.sqrt(e/(3*r));t.moveTo(0,2*n),t.lineTo(-r*n,-n),t.lineTo(r*n,-
n),t.closePath()}}}},function(t,e,n){\"use strict\";var
r=-.5,i=Math.sqrt(3)/2,o=1/Math.sqrt(12),a=3*(o/2+1);e.a={draw:function(t,e){var
n=Math.sqrt(e/a),u=n/2,c=n*o,s=u,l=n*o+n,f=-
s,p=l;t.moveTo(u,c),t.lineTo(s,l),t.lineTo(f,p),t.lineTo(r*u-
i*c,i*u+r*c),t.lineTo(r*s-i*l,i*s+r*l),t.lineTo(r*f-
i*p,i*f+r*p),t.lineTo(r*u+i*c,r*c-i*u),t.lineTo(r*s+i*l,r*l-
i*s),t.lineTo(r*f+i*p,r*p-i*f),t.closePath()}}}},function(t,e,n){\"use
strict\";function r(t){return t.toISOString()}n.d(e,\"b\",function(){return
o});var i=n(79),o=\"%Y-%m-%dT%H:%M:%S.%LZ\",a=Date.prototype.toISOString?
r:n.i(i.d)(o);e.a=a},function(t,e,n){\"use strict\";function r(t)
{if(0<=t.y&&t.y<100){var e=new Date(-1,t.m,t.d,t.H,t.M,t.S,t.L);return
e.setFullYear(t.y),e}return new Date(t.y,t.m,t.d,t.H,t.M,t.S,t.L)}function i(t)
{if(0<=t.y&&t.y<100){var e=new Date(Date.UTC(-1,t.m,t.d,t.H,t.M,t.S,t.L));return
e.setUTCFullYear(t.y),e}return new
Date(Date.UTC(t.y,t.m,t.d,t.H,t.M,t.S,t.L))}function o(t)
{return{y:t,m:0,d:1,H:0,M:0,S:0,L:0}}function a(t){function e(t,e){return
function(n){var r,i,o,a=[],u=-1,c=0,s=t.length;for(n instanceof Date||(n=new
Date(+n));++u<s;)37===t.charCodeAt(u)&&(a.push(t.slice(c,u)),null!
=(i=dt[r=t.charAt(++u)])?r=t.charAt(++u):i=\"e\"===r?\" \":\"0\",
(o=e[r])&&(r=o(n,i)),a.push(r),c=u+1);return
a.push(t.slice(c,u)),a.join(\"\")}}function a(t,e){return function(r){var
a,c,s=o(1900),l=u(s,t,r+=\"\",0);if(l!=r.length)return null;if(\"Q\"in s)return
new Date(s.Q);if(\"p\"in s&&(s.H=s.H%12+12*s.p),\"V\"in s){if(s.V<1||
s.V>53)return null;\"w\"in s||(s.w=1),\"Z\"in s?
(a=i(o(s.y)),c=a.getUTCDay(),a=c>4||0===c?ht.a.ceil(a):n.i(ht.a)
(a),a=ht.b.offset(a,7*(s.V-
1)),s.y=a.getUTCFullYear(),s.m=a.getUTCMonth(),s.d=a.getUTCDate()+(s.w+6)%7):
(a=e(o(s.y)),c=a.getDay(),a=c>4||0===c?ht.c.ceil(a):n.i(ht.c)
(a),a=ht.d.offset(a,7*(s.V-
1)),s.y=a.getFullYear(),s.m=a.getMonth(),s.d=a.getDate()+(s.w+6)%7)}else(\"W\"in
s||\"U\"in s)&&(\"w\"in s||(s.w=\"u\"in s?s.u%7:\"W\"in s?1:0),c=\"Z\"in s?
i(o(s.y)).getUTCDay():e(o(s.y)).getDay(),s.m=0,s.d=\"W\"in s?(s.w+6)%7+7*s.W-
(c+5)%7:s.w+7*s.U-(c+6)%7);return\"Z\"in s?(s.H+=s.Z/100|0,s.M+=s.Z
%100,i(s)):e(s)}}function u(t,e,n,r){for(var i,o,a=0,u=e.length,c=n.length;a<u;)
{if(r>=c)return-1;if(37===(i=e.charCodeAt(a++))){if(i=e.charAt(a++),!(o=Zt[i in
dt?e.charAt(a++):i])||(r=o(t,n,r))<0)return-1}else if(i!=n.charCodeAt(r+
+))return-1}return r}function c(t,e,n){var r=Bt.exec(e.slice(n));return r?
(t.p=Vt[r[0].toLowerCase()],n+r[0].length):-1}function vt(t,e,n){var
r=Ht.exec(e.slice(n));return r?(t.w=qt[r[0].toLowerCase()],n+r[0].length):-
1}function gt(t,e,n){var r=Wt.exec(e.slice(n));return r?
(t.w=zt[r[0].toLowerCase()],n+r[0].length):-1}function mt(t,e,n){var
r=Gt.exec(e.slice(n));return r?(t.m=$t[r[0].toLowerCase()],n+r[0].length):-
1}function yt(t,e,n){var r=Yt.exec(e.slice(n));return r?
(t.m=Kt[r[0].toLowerCase()],n+r[0].length):-1}function _t(t,e,n){return
u(t,Ot,e,n)}function bt(t,e,n){return u(t,It,e,n)}function xt(t,e,n){return
u(t,Dt,e,n)}function wt(t){return Ut[t.getDay()]}function Ct(t){return
Lt[t.getDay()]}function kt(t){return jt[t.getMonth()]}function Et(t){return
Ft[t.getMonth()]}function Mt(t){return Rt[+(t.getHours()>=12)]}function Tt(t)
{return Ut[t.getUTCDay()]}function St(t){return Lt[t.getUTCDay()]}function Nt(t)
{return jt[t.getUTCMonth()]}function At(t){return Ft[t.getUTCMonth()]}function
Pt(t){return Rt[+(t.getUTCHours()>=12)]}var
Ot=t.dateTime,It=t.date,Dt=t.time,Rt=t.periods,Lt=t.days,Ut=t.shortDays,Ft=t.mon
ths,jt=t.shortMonths,Bt=s(Rt),Vt=l(Rt),Wt=s(Lt),zt=l(Lt),Ht=s(Ut),qt=l(Ut),Yt=s(
Ft),Kt=l(Ft),Gt=s(jt),
$t=l(jt),Xt={a:wt,A:Ct,b:kt,B:Et,c:null,d:A,e:A,f:R,H:P,I:O,j:I,L:D,m:L,M:U,p:Mt
```

```
,Q:ft,s:pt,S:F,u:j,U:B,V:V,w:W,W:z,x:null,X:null,y:H,Y:q,Z:Y,\"%\":lt},Qt={a:Tt,
A:St,b:Nt,B:At,c:null,d:K,e:K,f:Z,H:G,I:
$,j:X,L:Q,m:J,M:tt,p:Pt,Q:ft,s:pt,S:et,u:nt,U:rt,V:it,w:ot,W:at,x:null,X:null,y:
ut,Y:ct,Z:st,\"%\":lt},Zt={a:vt,A:gt,b:mt,B:yt,c:_t,d:b,e:b,f:M,H:w,I:w,j:x,L:E,
m:_,M:C,p:c,Q:S,s:N,S:k,u:p,U:h,V:d,w:f,W:v,x:bt,X:xt,y:m,Y:g,Z:y,\"%\":T};retur
n
Xt.x=e(It,Xt),Xt.X=e(Dt,Xt),Xt.c=e(Ot,Xt),Qt.x=e(It,Qt),Qt.X=e(Dt,Qt),Qt.c=e(Ot,
Qt),{format:function(t){var n=e(t+=\"\",Xt);return n.toString=function(){return
t},n},parse:function(t){var e=a(t+=\"\",r);return e.toString=function(){return
t},e},utcFormat:function(t){var n=e(t+=\"\",Qt);return n.toString=function()
{return t},n},utcParse:function(t){var e=a(t,i);return e.toString=function()
{return t},e}}}function u(t,e,n){var r=t<0?\"-\":\"\",i=(r?-t:t)
+\"\",o=i.length;return r+(o<n?new Array(n-o+1).join(e)+i:i)}function c(t)
{return t.replace(mt,\"\\\\$&\")}function s(t){return new
RegExp(\"^(?:\"+t.map(c).join(\"|\")+\")\",\"i\")}function l(t){for(var e={},n=-
1,r=t.length;++n<r;)e[t[n].toLowerCase()]=n;return e}function f(t,e,n){var
r=vt.exec(e.slice(n,n+1));return r?(t.w=+r[0],n+r[0].length):-1}function
p(t,e,n){var r=vt.exec(e.slice(n,n+1));return r?(t.u=+r[0],n+r[0].length):-
1}function h(t,e,n){var r=vt.exec(e.slice(n,n+2));return r?
(t.U=+r[0],n+r[0].length):-1}function d(t,e,n){var
r=vt.exec(e.slice(n,n+2));return r?(t.V=+r[0],n+r[0].length):-1}function
v(t,e,n){var r=vt.exec(e.slice(n,n+2));return r?(t.W=+r[0],n+r[0].length):-
1}function g(t,e,n){var r=vt.exec(e.slice(n,n+4));return r?
(t.y=+r[0],n+r[0].length):-1}function
 m(t,e,n){var r=vt.exec(e.slice(n,n+2));return r?(t.y=+r[0]+(+r[0]>68?
1900:2e3),n+r[0].length):-1}function y(t,e,n){var r=/^(Z)|([+-]\\d\\d)(?::?(\\
d\\d))?/.exec(e.slice(n,n+6));return r?(t.Z=r[1]?0:-(r[2]+
(r[3]||\"00\")),n+r[0].length):-1}function _(t,e,n){var
r=vt.exec(e.slice(n,n+2));return r?(t.m=r[0]-1,n+r[0].length):-1}function
b(t,e,n){var r=vt.exec(e.slice(n,n+2));return r?(t.d=+r[0],n+r[0].length):-
1}function x(t,e,n){var r=vt.exec(e.slice(n,n+3));return r?
(t.m=0,t.d=+r[0],n+r[0].length):-1}function w(t,e,n){var
r=vt.exec(e.slice(n,n+2));return r?(t.H=+r[0],n+r[0].length):-1}function
C(t,e,n){var r=vt.exec(e.slice(n,n+2));return r?(t.M=+r[0],n+r[0].length):-
1}function k(t,e,n){var r=vt.exec(e.slice(n,n+2));return r?
(t.S=+r[0],n+r[0].length):-1}function E(t,e,n){var
r=vt.exec(e.slice(n,n+3));return r?(t.L=+r[0],n+r[0].length):-1}function
M(t,e,n){var r=vt.exec(e.slice(n,n+6));return
r?(t.L=Math.floor(r[0]/1e3),n+r[0].length):-1}function T(t,e,n){var
r=gt.exec(e.slice(n,n+1));return r?n+r[0].length:-1}function S(t,e,n){var
r=vt.exec(e.slice(n));return r?(t.Q=+r[0],n+r[0].length):-1}function N(t,e,n)
{var r=vt.exec(e.slice(n));return r?(t.Q=1e3*+r[0],n+r[0].length):-1}function
A(t,e){return u(t.getDate(),e,2)}function P(t,e){return
u(t.getHours(),e,2)}function O(t,e){return u(t.getHours()%12||12,e,2)}function
I(t,e){return u(1+ht.d.count(n.i(ht.e)(t),t),e,3)}function D(t,e){return
u(t.getMilliseconds(),e,3)}function R(t,e){return D(t,e)+\"000\"}function L(t,e)
{return u(t.getMonth()+1,e,2)}function U(t,e){return
u(t.getMinutes(),e,2)}function F(t,e){return u(t.getSeconds(),e,2)}function j(t)
{var e=t.getDay();return 0===e?7:e}function B(t,e){return u(ht.f.count(n.i(ht.e)
(t),t),e,2)}function V(t,e){var r=t.getDay();return t=r>=4||0===r?n.i(ht.g)
(t):ht.g.ceil(t),u(ht.g.count(n.i(ht.e)(t),t)+(4===n.i(ht.e)
(t).getDay()),e,2)}function W(t){return t.getDay()}function z(t,e){return
u(ht.c.count(n.i(ht.e)(t),t),e,2)}function H(t,e){return u(t.getFullYear()
%100,e,2)}function q(t,e){return u(t.getFullYear()%1e4,e,4)}function Y(t){var
e=t.getTimezoneOffset();return(e>0?\"-\":(e*=-1,\"+\"))+u(e/60|0,\"0\",2)+u(e
%60,\"0\",2)}function K(t,e){return u(t.getUTCDate(),e,2)}function G(t,e){return
u(t.getUTCHours(),e,2)}function $(t,e){return u(t.getUTCHours()%12||
12,e,2)}function X(t,e){return u(1+ht.b.count(n.i(ht.h)(t),t),e,3)}function
Q(t,e){return u(t.getUTCMilliseconds(),e,3)}function Z(t,e){return Q(t,e)
+\"000\"}function J(t,e){return u(t.getUTCMonth()+1,e,2)}function tt(t,e){return
u(t.getUTCMinutes(),e,2)}function et(t,e){return
u(t.getUTCSeconds(),e,2)}function nt(t){var e=t.getUTCDay();return 0===e?
7:e}function rt(t,e){return u(ht.i.count(n.i(ht.h)(t),t),e,2)}function it(t,e)
{var r=t.getUTCDay();return t=r>=4||0===r?n.i(ht.j)
```

```
(t):ht.j.ceil(t),u(ht.j.count(n.i(ht.h)(t),t)+(4===n.i(ht.h)
(t).getUTCDay()),e,2)}function ot(t){return t.getUTCDay()}function at(t,e)
{return u(ht.a.count(n.i(ht.h)(t),t),e,2)}function ut(t,e){return
u(t.getUTCFullYear()%100,e,2)}function ct(t,e){return u(t.getUTCFullYear()
%1e4,e,4)}function st(){return\"+0000\"}function lt(){return\"%\"}function ft(t)
{return+t}function pt(t){return Math.floor(+t/1e3)}e.a=a;var
ht=n(80),dt={\"-\":\"\",_:\" \",0:\"0\"},vt=/^\\s*\\d+/,gt=/^%/,mt=/[\\\\^$*+?|
[\\]().{}]/g},function(t,e,n){\"use strict\";var
r=n(11),i={listen:function(t,e,n){return t.addEventListener?
(t.addEventListener(e,n,!1),{remove:function(){t.removeEventListener(e,n,!
1)}}):t.attachEvent?(t.attachEvent(\"on\"+e,n),{remove:function()
{t.detachEvent(\"on\"+e,n)}}):void 0},capture:function(t,e,n){return
t.addEventListener?(t.addEventListener(e,n,!0),{remove:function()
{t.removeEventListener(e,n,!0)}}):{remove:r}},registerDefault:function()
{}};t.exports=i},function(t,e,n){\"use strict\";function r(t)
{try{t.focus()}catch(t){}}t.exports=r},function(t,e,n){\"use strict\";function
r(t){if(void 0===(t=t||(\"undefined\"!=typeof document?document:void 0)))return
null;try{return t.activeElement||t.body}catch(e){return
t.body}}t.exports=r},function(t,e){function n(){throw new Error(\"setTimeout has
not been defined\")}function r(){throw new Error(\"clearTimeout has not been
defined\")}function i(t){if(l===setTimeout)return setTimeout(t,0);if((l===n||!
l)&&setTimeout)return l=setTimeout,setTimeout(t,0);try{return l(t,0)}catch(e)
{try{return l.call(null,t,0)}catch(e){return l.call(this,t,0)}}}function o(t)
{if(f===clearTimeout)return clearTimeout(t);if((f===r||!f)&&clearTimeout)return
f=clearTimeout,clearTimeout(t);try{return f(t)}catch(e){try{return
f.call(null,t)}catch(e){return f.call(this,t)}}}function a(){v&&h&&(v=!
1,h.length?d=h.concat(d):g=-1,d.length&&u())}function u(){if(!v){var t=i(a);v=!
0;for(var e=d.length;e;){for(h=d,d=[];++g<e;)h&&h[g].run();g=-
1,e=d.length}h=null,v=!1,o(t)}}function c(t,e){this.fun=t,this.array=e}function
s(){}var l,f,p=t.exports={};!function(){try{l=\"function\"==typeof setTimeout?
setTimeout:n}catch(t){l=n}try{f=\"function\"==typeof clearTimeout?
clearTimeout:r}catch(t){f=r}}();var h,d=[],v=!1,g=-1;p.nextTick=function(t){var
e=new Array(arguments.length-1);if(arguments.length>1)for(var
n=1;n<arguments.length;n++)e[n-1]=arguments[n];d.push(new c(t,e)),1!==d.length||
v||i(u)},c.prototype.run=function()
{this.fun.apply(null,this.array)},p.title=\"browser\",p.browser=!
0,p.env={},p.argv=[],p.version=\"\",p.versions={},p.on=s,p.addListener=s,p.once=
s,p.off=s,p.removeListener=s,p.removeAllListeners=s,p.emit=s,p.prependListener=s
,p.prependOnceListener=s,p.listeners=function(t){return[]},p.binding=function(t)
{throw new Error(\"process.binding is not supported\")},p.cwd=function()
{return\"/\"},p.chdir=function(t){throw new Error(\"process.chdir is not
supported\")},p.umask=function(){return 0}},function(t,e,n){\"use strict\";var
r=n(343);t.exports=function(t){return r(t,!1)}},function(t,e,n){\"use
strict\";function r(t,e){return t+e.charAt(0).toUpperCase()+e.substring(1)}var
i={animationIterationCount:!0,borderImageOutset:!0,borderImageSlice:!
0,borderImageWidth:!0,boxFlex:!0,boxFlexGroup:!0,boxOrdinalGroup:!
0,columnCount:!0,columns:!0,flex:!0,flexGrow:!0,flexPositive:!0,flexShrink:!
0,flexNegative:!0,flexOrder:!0,gridRow:!0,gridRowEnd:!0,gridRowSpan:!
0,gridRowStart:!0,gridColumn:!0,gridColumnEnd:!0,gridColumnSpan:!
0,gridColumnStart:!0,fontWeight:!0,lineClamp:!0,lineHeight:!0,opacity:!0,order:!
0,orphans:!0,tabSize:!0,widows:!0,zIndex:!0,zoom:!0,fillOpacity:!
0,floodOpacity:!0,stopOpacity:!0,strokeDasharray:!0,strokeDashoffset:!
0,strokeMiterlimit:!0,strokeOpacity:!0,strokeWidth:!
0},o=[\"Webkit\",\"ms\",\"Moz\",\"O\"];Object.keys(i).forEach(function(t)
{o.forEach(function(e){i[r(e,t)]=i[t]})});var a={background:
{backgroundAttachment:!0,backgroundColor:!0,backgroundImage:!
0,backgroundPositionX:!0,backgroundPositionY:!0,backgroundRepeat:!
0},backgroundPosition:{backgroundPositionX:!0,backgroundPositionY:!0},border:
{borderWidth:!0,borderStyle:!0,borderColor:!0},borderBottom:{borderBottomWidth:!
0,borderBottomStyle:!0,borderBottomColor:!0},borderLeft:{borderLeftWidth:!
0,borderLeftStyle:!0,borderLeftColor:!0},borderRight:{borderRightWidth:!
0,borderRightStyle:!0,borderRightColor:!0},borderTop:{borderTopWidth:!
0,borderTopStyle:!0,borderTopColor:!0},font:{fontStyle:!0,fontVariant:!
0,fontWeight:!0,fontSize:!0,lineHeight:!0,fontFamily:!0},outline:{outlineWidth:!
0,outlineStyle:!0,outlineColor:!
0}},u={isUnitlessNumber:i,shorthandPropertyExpansions:a};t.exports=u},function(t
,e,n){\"use strict\";function r(t,e){if(!(t instanceof e))throw new
TypeError(\"Cannot call a class as a function\")}var
i=n(1),o=n(18),a=(n(0),function(){function t(e)
{r(this,t),this._callbacks=null,this._contexts=null,this._arg=e}return
t.prototype.enqueue=function(t,e){this._callbacks=this._callbacks||
[],this._callbacks.push(t),this._contexts=this._contexts||
[],this._contexts.push(e)},t.prototype.notifyAll=function(){var
t=this._callbacks,e=this._contexts,n=this._arg;if(t&&e){t.length!
==e.length&&i(\"24\"),this._callbacks=null,this._contexts=null;for(var
r=0;r<t.length;r+
+)t[r].call(e[r],n);t.length=0,e.length=0}},t.prototype.checkpoint=function()
{return this._callbacks?
this._callbacks.length:0},t.prototype.rollback=function(t)
{this._callbacks&&this._contexts&&(this._callbacks.length=t,this._contexts.lengt
h=t)},t.prototype.reset=function()
{this._callbacks=null,this._contexts=null},t.prototype.destructor=function()
{this.reset()},t}());t.exports=o.addPoolingTo(a)},function(t,e,n){\"use
strict\";function r(t){return!!s.hasOwnProperty(t)||!
c.hasOwnProperty(t)&&(u.test(t)?(s[t]=!0,!0):(c[t]=!0,!1))}function i(t,e)
{return null==e||t.hasBooleanValue&&!e||t.hasNumericValue&&isNaN(e)||
t.hasPositiveNumericValue&&e<1||t.hasOverloadedBooleanValue&&!1===e}var
o=n(21),a=(n(4),n(9),n(407)),u=(n(2),new
RegExp(\"^[\"+o.ATTRIBUTE_NAME_START_CHAR+\"]
[\"+o.ATTRIBUTE_NAME_CHAR+\"]*$\")),c={},s={},l={createMarkupForID:function(t)
{return o.ID_ATTRIBUTE_NAME+\"=\"+a(t)},setAttributeForID:function(t,e)
{t.setAttribute(o.ID_ATTRIBUTE_NAME,e)},createMarkupForRoot:function(){return
o.ROOT_ATTRIBUTE_NAME+'=\"\"'},setAttributeForRoot:function(t)
{t.setAttribute(o.ROOT_ATTRIBUTE_NAME,\"\")},createMarkupForProperty:function(t,
e){var n=o.properties.hasOwnProperty(t)?o.properties[t]:null;if(n)
{if(i(n,e))return\"\";var r=n.attributeName;return n.hasBooleanValue||
n.hasOverloadedBooleanValue&&!0===e?r+'=\"\"':r+\"=\"+a(e)}return
o.isCustomAttribute(t)?
null==e?\"\":t+\"=\"+a(e):null},createMarkupForCustomAttribute:function(t,e)
{return r(t)&&null!=e?t+\"=\"+a(e):\"\"},setValueForProperty:function(t,e,n){var
r=o.properties.hasOwnProperty(e)?o.properties[e]:null;if(r){var
a=r.mutationMethod;if(a)a(t,n);else{if(i(r,n))return void
this.deleteValueForProperty(t,e);if(r.mustUseProperty)t[r.propertyName]=n;else{v
ar u=r.attributeName,c=r.attributeNamespace;c?
t.setAttributeNS(c,u,\"\"+n):r.hasBooleanValue||r.hasOverloadedBooleanValue&&!
0===n?t.setAttribute(u,\"\"):t.setAttribute(u,\"\"+n)}}}else
 if(o.isCustomAttribute(e))return void
l.setValueForAttribute(t,e,n)},setValueForAttribute:function(t,e,n){if(r(e))
{null==n?
t.removeAttribute(e):t.setAttribute(e,\"\"+n)}},deleteValueForAttribute:function
(t,e){t.removeAttribute(e)},deleteValueForProperty:function(t,e){var
n=o.properties.hasOwnProperty(e)?o.properties[e]:null;if(n){var
r=n.mutationMethod;if(r)r(t,void 0);else if(n.mustUseProperty){var
i=n.propertyName;n.hasBooleanValue?t[i]=!1:t[i]=\"\"}else
t.removeAttribute(n.attributeName)}else
o.isCustomAttribute(e)&&t.removeAttribute(e)}};t.exports=l},function(t,e,n)
{\"use strict\";var r={hasCachedChildNodes:1};t.exports=r},function(t,e,n){\"use
strict\";function r(){if(this._rootNodeID&&this._wrapperState.pendingUpdate)
{this._wrapperState.pendingUpdate=!1;var
t=this._currentElement.props,e=u.getValue(t);null!
=e&&i(this,Boolean(t.multiple),e)}}function i(t,e,n){var
r,i,o=c.getNodeFromInstance(t).options;if(e){for(r={},i=0;i<n.length;i+
+)r[\"\"+n[i]]=!0;for(i=0;i<o.length;i++){var
a=r.hasOwnProperty(o[i].value);o[i].selected!
==a&&(o[i].selected=a)}}else{for(r=\"\"+n,i=0;i<o.length;i+
+)if(o[i].value===r)return void(o[i].selected=!0);o.length&&(o[0].selected=!
0)}}function o(t){var
e=this._currentElement.props,n=u.executeOnChange(e,t);return
```

```
this._rootNodeID&&(this._wrapperState.pendingUpdate=!0),s.asap(r,this),n}var
a=n(3),u=n(86),c=n(4),s=n(12),l=(n(2),!1),f={getHostProps:function(t,e){return
a({},e,{onChange:t._wrapperState.onChange,value:void
0})},mountWrapper:function(t,e){var
n=u.getValue(e);t._wrapperState={pendingUpdate:!1,initialValue:null!=n?
n:e.defaultValue,listeners:null,onChange:o.bind(t),wasMultiple:Boolean(e.multipl
e)},void 0===e.value||void 0===e.defaultValue||l||(l=!
0)},getSelectValueContext:function(t){return
t._wrapperState.initialValue},postUpdateWrapper:function(t){var
e=t._currentElement.props;t._wrapperState.initialValue=void 0;var
n=t._wrapperState.wasMultiple;t._wrapperState.wasMultiple=Boolean(e.multiple);va
r r=u.getValue(e);null!=r?(t._wrapperState.pendingUpdate=!
1,i(t,Boolean(e.multiple),r)):n!==Boolean(e.multiple)&&(null!=e.defaultValue?
i(t,Boolean(e.multiple),e.defaultValue):i(t,Boolean(e.multiple),e.multiple?
[]:\"\"))}};t.exports=f},function(t,e,n){\"use strict\";var
r,i={injectEmptyComponentFactory:function(t){r=t}},o={create:function(t){return
r(t)}};o.injection=i,t.exports=o},function(t,e,n){\"use strict\";var
r={logTopLevelRenders:!1};t.exports=r},function(t,e,n){\"use strict\";function
r(t){return u||a(\"111\",t.type),new u(t)}function i(t){return new c(t)}function
o(t){return t instanceof c}var
a=n(1),u=(n(0),null),c=null,s={injectGenericComponentClass:function(t)
{u=t},injectTextComponentClass:function(t)
{c=t}},l={createInternalComponent:r,createInstanceForText:i,isTextComponent:o,in
jection:s};t.exports=l},function(t,e,n){\"use strict\";function r(t){return
o(document.documentElement,t)}var
i=n(367),o=n(331),a=n(154),u=n(155),c={hasSelectionCapabilities:function(t){var
e=t&&t.nodeName&&t.nodeName.toLowerCase();return
e&&(\"input\"===e&&\"text\"===t.type||\"textarea\"===e||\"true\"===t.contentEdit
able)},getSelectionInformation:function(){var
t=u();return{focusedElem:t,selectionRange:c.hasSelectionCapabilities(t)?
c.getSelection(t):null}},restoreSelection:function(t){var
e=u(),n=t.focusedElem,i=t.selectionRange;e!
==n&&r(n)&&(c.hasSelectionCapabilities(n)&&c.setSelection(n,i),a(n))},getSelecti
on:function(t){var e;if(\"selectionStart\"in
t)e={start:t.selectionStart,end:t.selectionEnd};else
if(document.selection&&t.nodeName&&\"input\"===t.nodeName.toLowerCase()){var
n=document.selection.createRange();n.parentElement()===t&&(e={start:-
n.moveStart(\"character\",-t.value.length),end:-n.moveEnd(\"character\",-
t.value.length)})}else e=i.getOffsets(t);return e||
{start:0,end:0}},setSelection:function(t,e){var n=e.start,r=e.end;if(void
0===r&&(r=n),\"selectionStart\"in
t)t.selectionStart=n,t.selectionEnd=Math.min(r,t.value.length);else
if(document.selection&&t.nodeName&&\"input\"===t.nodeName.toLowerCase()){var
o=t.createTextRange();o.collapse(!
0),o.moveStart(\"character\",n),o.moveEnd(\"character\",r-n),o.select()}else
i.setOffsets(t,e)}};t.exports=c},function(t,e,n){\"use strict\";function r(t,e)
{for(var n=Math.min(t.length,e.length),r=0;r<n;r++)if(t.charAt(r)!
==e.charAt(r))return r;return t.length===e.length?-1:n}function i(t){return t?
t.nodeType===D?t.documentElement:t.firstChild:null}function o(t){return
t.getAttribute&&t.getAttribute(P)||\"\"}function a(t,e,n,r,i){var
o;if(x.logTopLevelRenders){var
a=t._currentElement.props.child,u=a.type;o=\"React mount: \"+(\"string\"==typeof
u?u:u.displayName||u.name),console.time(o)}var
c=k.mountComponent(t,n,null,_(t,e),i,0);o&&console.timeEnd(o),t._renderedCompone
nt._topLevelWrapper=t,j._mountImageIntoNode(c,e,t,r,n)}function u(t,e,n,r){var
i=M.ReactReconcileTransaction.getPooled(!
n&&b.useCreateElement);i.perform(a,null,t,e,i,n,r),M.ReactReconcileTransaction.r
elease(i)}function c(t,e,n)
{for(k.unmountComponent(t,n),e.nodeType===D&&(e=e.documentElement);e.lastChild;)
e.removeChild(e.lastChild)}function s(t){var e=i(t);if(e){var
n=y.getInstanceFromNode(e);return!(!n||!n._hostParent)}}function l(t){return!(!
t||t.nodeType!==I&&t.nodeType!==D&&t.nodeType!==R)}function f(t){var
e=i(t),n=e&&y.getInstanceFromNode(e);return n&&!n._hostParent?n:null}function
p(t){var e=f(t);return e?e._hostContainerInfo._topLevelWrapper:null}var
```

```
h=n(1),d=n(20),v=n(21),g=n(26),m=n(53),y=(n(15),n(4)),_=n(361),b=n(363),x=n(164)
,w=n(39),C=(n(9),n(377)),k=n(24),E=n(89),M=n(12),T=n(51),S=n(174),N=(n(0),n(57))
,A=n(96),P=(n(2),v.ID_ATTRIBUTE_NAME),O=v.ROOT_ATTRIBUTE_NAME,I=1,D=9,R=11,L={},
U=1,F=function(){this.rootID=U+
+};F.prototype.isReactComponent={},F.prototype.render=function(){return
this.props.child},F.isReactTopLevelWrapper=!0;var
j={TopLevelWrapper:F,_instancesByReactRootID:L,scrollMonitor:function(t,e)
{e()},_updateRootComponent:function(t,e,n,r,i){return
j.scrollMonitor(r,function()
{E.enqueueElementInternal(t,e,n),i&&E.enqueueCallbackInternal(t,i)}),t},_renderN
ewRootComponent:function(t,e,n,r){l(e)||
h(\"37\"),m.ensureScrollValueMonitoring();var i=S(t,!
1);M.batchedUpdates(u,i,e,n,r);var o=i._instance.rootID;return
L[o]=i,i},renderSubtreeIntoContainer:function(t,e,n,r){return null!
=t&&w.has(t)||
h(\"38\"),j._renderSubtreeIntoContainer(t,e,n,r)},_renderSubtreeIntoContainer:fu
nction(t,e,n,r){E.validateCallback(r,\"ReactDOM.render\"),g.isValidElement(e)||
h(\"39\",\"string\"==typeof e?\" Instead of passing a string like 'div', pass
React.createElement('div') or <div />.\":\"function\"==typeof e?\" Instead of
passing a class like Foo, pass React.createElement(Foo) or <Foo />.\":null!
=e&&void 0!==e.props?\" This may be caused by unintentionally loading two
independent copies of React.\":\"\");var a,u=g.createElement(F,{child:e});if(t)
{var c=w.get(t);a=c._processChildContext(c._context)}else a=T;var l=p(n);if(l)
{var f=l._currentElement,d=f.props.child;if(A(d,e)){var
v=l._renderedComponent.getPublicInstance(),m=r&&function(){r.call(v)};return
j._updateRootComponent(l,u,a,n,m),v}j.unmountComponentAtNode(n)}var
y=i(n),_=y&&!!o(y),b=s(n),x=_&&!l&&!
b,C=j._renderNewRootComponent(u,n,x,a)._renderedComponent.getPublicInstance();re
turn r&&r.call(C),C},render:function(t,e,n){return
j._renderSubtreeIntoContainer(null,t,e,n)},unmountComponentAtNode:function(t)
{l(t)||h(\"40\");var e=p(t);if(!e)
{s(t),1===t.nodeType&&t.hasAttribute(O);return!1}return delete
L[e._instance.rootID],M.batchedUpdates(c,e,t,!1),!
0},_mountImageIntoNode:function(t,e,n,o,a){if(l(e)||h(\"41\"),o){var
u=i(e);if(C.canReuseMarkup(t,u))return void y.precacheNode(n,u);var
c=u.getAttribute(C.CHECKSUM_ATTR_NAME);u.removeAttribute(C.CHECKSUM_ATTR_NAME);v
ar s=u.outerHTML;u.setAttribute(C.CHECKSUM_ATTR_NAME,c);var f=t,p=r(f,s),v=\"
(client) \"+f.substring(p-20,p+20)+\"\\n (server) \"+s.substring(p-
20,p+20);e.nodeType===D&&h(\"42\",v)}if(e.nodeType===D&&h(\"43\"),a.useCreateEle
ment)
{for(;e.lastChild;)e.removeChild(e.lastChild);d.insertTreeBefore(e,t,null)}else
N(e,t),y.precacheNode(n,e.firstChild)}};t.exports=j},function(t,e,n){\"use
strict\";var r=n(1),i=n(26),o=(n(0),
{HOST:0,COMPOSITE:1,EMPTY:2,getType:function(t){return null===t||!1===t?
o.EMPTY:i.isValidElement(t)?\"function\"==typeof t.type?o.COMPOSITE:o.HOST:void
r(\"26\",t)}});t.exports=o},function(t,e,n){\"use strict\";function r(t,e)
{return null==e&&i(\"30\"),null==t?e:Array.isArray(t)?Array.isArray(e)?
(t.push.apply(t,e),t):(t.push(e),t):Array.isArray(e)?[t].concat(e):[t,e]}var
i=n(1);n(0);t.exports=r},function(t,e,n){\"use strict\";function r(t,e,n)
{Array.isArray(t)?t.forEach(e,n):t&&e.call(n,t)}t.exports=r},function(t,e,n)
{\"use strict\";function r(t){for(var e;
(e=t._renderedNodeType)===i.COMPOSITE;)t=t._renderedComponent;return e===i.HOST?
t._renderedComponent:e===i.EMPTY?null:void 0}var
i=n(168);t.exports=r},function(t,e,n){\"use strict\";function r(){return!
o&&i.canUseDOM&&(o=\"textContent\"in
document.documentElement?\"textContent\":\"innerText\"),o}var
i=n(6),o=null;t.exports=r},function(t,e,n){\"use strict\";function r(t){var
e=t.type,n=t.nodeName;return
n&&\"input\"===n.toLowerCase()&&(\"checkbox\"===e||\"radio\"===e)}function i(t)
{return t._wrapperState.valueTracker}function o(t,e)
{t._wrapperState.valueTracker=e}function a(t)
{t._wrapperState.valueTracker=null}function u(t){var e;return
t&&(e=r(t)?\"\"+t.checked:t.value),e}var
c=n(4),s={_getTrackerFromNode:function(t){return
i(c.getInstanceFromNode(t))},track:function(t){if(!i(t)){var
e=c.getNodeFromInstance(t),n=r(e)?\"checked\":\"value\",u=Object.getOwnPropertyD
escriptor(e.constructor.prototype,n),s=\"\"+e[n];e.hasOwnProperty(n)||\"function
\"!=typeof u.get||\"function\"!=typeof u.set||(Object.defineProperty(e,n,
{enumerable:u.enumerable,configurable:!0,get:function(){return
u.get.call(this)},set:function(t){s=\"\"+t,u.set.call(this,t)}}),o(t,
{getValue:function(){return s},setValue:function(t)
{s=\"\"+t},stopTracking:function(){a(t),delete
 e[n]}}))}},updateValueIfChanged:function(t){if(!t)return!1;var e=i(t);if(!
e)return s.track(t),!0;var n=e.getValue(),r=u(c.getNodeFromInstance(t));return
r!==n&&(e.setValue(r),!0)},stopTracking:function(t){var
e=i(t);e&&e.stopTracking()}};t.exports=s},function(t,e,n){\"use
strict\";function r(t){if(t){var e=t.getName();if(e)return\" Check the render
method of `\"+e+\"`.\"}return\"\"}function i(t){return\"function\"==typeof
t&&void 0!==t.prototype&&\"function\"==typeof
t.prototype.mountComponent&&\"function\"==typeof
t.prototype.receiveComponent}function o(t,e){var n;if(null===t||!
1===t)n=s.create(o);else if(\"object\"==typeof t){var
u=t,c=u.type;if(\"function\"!=typeof c&&\"string\"!=typeof c){var
p=\"\";p+=r(u._owner),a(\"130\",null==c?c:typeof c,p)}\"string\"==typeof u.type?
n=l.createInternalComponent(u):i(u.type)?(n=new u.type(u),n.getHostNode||
(n.getHostNode=n.getNativeNode)):n=new f(u)}else\"string\"==typeof
t||\"number\"==typeof t?n=l.createInstanceForText(t):a(\"131\",typeof t);return
n._mountIndex=0,n._mountImage=null,n}var
a=n(1),u=n(3),c=n(358),s=n(163),l=n(165),f=(n(420),n(0),n(2),function(t)
{this.construct(t)});u(f.prototype,c,
{_instantiateReactComponent:o}),t.exports=o},function(t,e,n){\"use
strict\";function r(t){var
e=t&&t.nodeName&&t.nodeName.toLowerCase();return\"input\"===e?!!
i[t.type]:\"textarea\"===e}var i={color:!0,date:!0,datetime:!0,\"datetime-
local\":!0,email:!0,month:!0,number:!0,password:!0,range:!0,search:!0,tel:!
0,text:!0,time:!0,url:!0,week:!0};t.exports=r},function(t,e,n){\"use
strict\";var r=n(6),i=n(56),o=n(57),a=function(t,e){if(e){var
n=t.firstChild;if(n&&n===t.lastChild&&3===n.nodeType)return
void(n.nodeValue=e)}t.textContent=e};r.canUseDOM&&(\"textContent\"in
document.documentElement||(a=function(t,e){if(3===t.nodeType)return
void(t.nodeValue=e);o(t,i(e))})),t.exports=a},function(t,e,n){\"use
strict\";function r(t,e){return t&&\"object\"==typeof t&&null!=t.key?
s.escape(t.key):e.toString(36)}function i(t,e,n,o){var p=typeof
t;if(\"undefined\"!==p&&\"boolean\"!==p||
(t=null),null===t||\"string\"===p||\"number\"===p||\"object\"===p&&t.$
$typeof===u)return n(o,t,\"\"===e?l+r(t,0):e),1;var h,d,v=0,g=\"\"===e?
l:e+f;if(Array.isArray(t))for(var m=0;m<t.length;m+
+)h=t[m],d=g+r(h,m),v+=i(h,d,n,o);else{var y=c(t);if(y){var _,b=y.call(t);if(y!
==t.entries)for(var x=0;!(_=b.next()).done;)h=_.value,d=g+r(h,x+
+),v+=i(h,d,n,o);else for(;!(_=b.next()).done;){var
w=_.value;w&&(h=w[1],d=g+s.escape(w[0])+f+r(h,0),v+=i(h,d,n,o))}}else
if(\"object\"===p){var C=\"\",k=String(t);a(\"31\",\"[object
Object]\"===k?\"object with keys {\"+Object.keys(t).join(\", \")
+\"}\":k,C)}}return v}function o(t,e,n){return null==t?0:i(t,\"\",e,n)}var
a=n(1),u=(n(15),n(373)),c=n(404),s=(n(0),n(85)),l=(n(2),\".\"),f=\":\";t.exports
=o},function(t,e,n){\"use strict\";function r(t,e,n)
{this.props=t,this.context=e,this.refs=s,this.updater=n||c}function i(t,e,n)
{this.props=t,this.context=e,this.refs=s,this.updater=n||c}function o(){}var
a=n(40),u=n(3),c=n(181),s=(n(182),n(51));n(0),n(421);r.prototype.isReactComponen
t={},r.prototype.setState=function(t,e){\"object\"!=typeof t&&\"function\"!
=typeof t&&null!
=t&&a(\"85\"),this.updater.enqueueSetState(this,t),e&&this.updater.enqueueCallba
ck(this,e,\"setState\")},r.prototype.forceUpdate=function(t)
{this.updater.enqueueForceUpdate(this),t&&this.updater.enqueueCallback(this,t,\"
forceUpdate\")}};o.prototype=r.prototype,i.prototype=new
o,i.prototype.constructor=i,u(i.prototype,r.prototype),i.prototype.isPureReactCo
mponent=!0,t.exports={Component:r,PureComponent:i}},function(t,e,n){\"use
strict\";function r(t){var
```

```
e=Function.prototype.toString,n=Object.prototype.hasOwnProperty,r=RegExp(\"^\"+e
.call(n).replace(/[\\\\^$.*+?()[\\]{}|]/g,\"\\\\$&\").replace(/hasOwnProperty|
(function).*?(?=\\\\\\()| for .+?(?=\\\\\\])/g,\"$1.*?\")+\"$\");try{var
i=e.call(t);return r.test(i)}catch(t){return!1}}function i(t){var e=s(t);if(e)
{var n=e.childIDs;l(t),n.forEach(i)}}function o(t,e,n){return\"\\n    in \"+
(t||\"Unknown\")+(e?\" (at \"+e.fileName.replace(/^.*[\\\\\\/]/,\"\")
+\":\"+e.lineNumber+\")\":n?\" (created by \"+n+\")\":\"\")}function a(t){return
null==t?\"#empty\":\"string\"==typeof t||\"number\"==typeof
t?\"#text\":\"string\"==typeof t.type?t.type:t.type.displayName||
t.type.name||\"Unknown\"}function u(t){var
e,n=E.getDisplayName(t),r=E.getElement(t),i=E.getOwnerID(t);return
i&&(e=E.getDisplayName(i)),o(n,r&&r._source,e)}var
c,s,l,f,p,h,d,v=n(40),g=n(15),m=(n(0),n(2),\"function\"==typeof
Array.from&&\"function\"==typeof Map&&r(Map)&&null!
=Map.prototype&&\"function\"==typeof
Map.prototype.keys&&r(Map.prototype.keys)&&\"function\"==typeof
Set&&r(Set)&&null!=Set.prototype&&\"function\"==typeof
Set.prototype.keys&&r(Set.prototype.keys));if(m){var y=new Map,_=new
Set;c=function(t,e){y.set(t,e)},s=function(t){return y.get(t)},l=function(t)
{y.delete(t)},f=function(){return Array.from(y.keys())},p=function(t)
{_.add(t)},h=function(t){_.delete(t)},d=function(){return
Array.from(_.keys())}}else{var b={},x={},w=function(t)
{return\".\"+t},C=function(t){return parseInt(t.substr(1),10)};c=function(t,e)
{var n=w(t);b[n]=e},s=function(t){var e=w(t);return b[e]},l=function(t){var
e=w(t);delete b[e]},f=function(){return Object.keys(b).map(C)},p=function(t){var
e=w(t);x[e]=!0},h=function(t){var e=w(t);delete x[e]},d=function(){return
Object.keys(x).map(C)}}var k=[],E={onSetChildren:function(t,e){var n=s(t);n||
v(\"144\"),n.childIDs=e;for(var r=0;r<e.length;r++){var i=e[r],o=s(i);o||
v(\"140\"),null==o.childIDs&&\"object\"==typeof o.element&&null!
=o.element&&v(\"141\"),o.isMounted||
v(\"71\"),null==o.parentID&&(o.parentID=t),o.parentID!
==t&&v(\"142\",i,o.parentID,t)}},onBeforeMountComponent:function(t,e,n){c(t,
{element:e,parentID:n,text:null,childIDs:[],isMounted:!
1,updateCount:0})},onBeforeUpdateComponent:function(t,e){var
n=s(t);n&&n.isMounted&&(n.element=e)},onMountComponent:function(t){var
e=s(t);e||v(\"144\"),e.isMounted=!
0,0===e.parentID&&p(t)},onUpdateComponent:function(t){var
e=s(t);e&&e.isMounted&&e.updateCount++},onUnmountComponent:function(t){var
e=s(t);if(e){e.isMounted=!
1;0===e.parentID&&h(t)}k.push(t)},purgeUnmountedComponents:function(){if(!
E._preventPurging){for(var t=0;t<k.length;t++)
{i(k[t])}k.length=0}},isMounted:function(t){var e=s(t);return!!
e&&e.isMounted},getCurrentStackAddendum:function(t){var e=\"\";if(t){var
n=a(t),r=t._owner;e+=o(n,t._source,r&&r.getName())}var
i=g.current,u=i&&i._debugID;return
e+=E.getStackAddendumByID(u)},getStackAddendumByID:function(t){for(var
e=\"\";t;)e+=u(t),t=E.getParentID(t);return e},getChildIDs:function(t){var
e=s(t);return e?e.childIDs:[]},getDisplayName:function(t){var
e=E.getElement(t);return e?a(e):null},getElement:function(t){var e=s(t);return
e?e.element:null},getOwnerID:function(t){var e=E.getElement(t);return
e&&e._owner?e._owner._debugID:null},getParentID:function(t){var e=s(t);return e?
e.parentID:null},getSource:function(t){var e=s(t),n=e?e.element:null;return
null!=n?n._source:null},getText:function(t){var
e=E.getElement(t);return\"string\"==typeof e?e:\"number\"==typeof
e?\"\"+e:null},getUpdateCount:function(t){var e=s(t);return e?
e.updateCount:0},getRootIDs:d,getRegisteredIDs:f,pushNonStandardWarningStack:fun
ction(t,e){if(\"function\"==typeof console.reactStack){var
n=[],r=g.current,i=r&&r._debugID;try{for(t&&n.push({name:i?
E.getDisplayName(i):null,fileName:e?e.fileName:null,lineNumber:e?
e.lineNumber:null});i;){var
o=E.getElement(i),a=E.getParentID(i),u=E.getOwnerID(i),c=u?
E.getDisplayName(u):null,s=o&&o._source;n.push({name:c,fileName:s?
s.fileName:null,lineNumber:s?s.lineNumber:null}),i=a}}catch(t)
{}console.reactStack(n)}},popNonStandardWarningStack:function()
```

```
{\"function\"==typeof
console.reactStackEnd&&console.reactStackEnd()}};t.exports=E},function(t,e,n)
{\"use strict\";var r=\"function\"==typeof
Symbol&&Symbol.for&&Symbol.for(\"react.element\")||
60103;t.exports=r},function(t,e,n){\"use strict\";var r=(n(2),
{isMounted:function(t){return!1},enqueueCallback:function(t,e)
{},enqueueForceUpdate:function(t){},enqueueReplaceState:function(t,e)
{},enqueueSetState:function(t,e){}});t.exports=r},function(t,e,n){\"use
strict\";var r=!1;t.exports=r},,function(t,e,n){\"use strict\";function r(t)
{return t&&t.__esModule?t:{default:t}}function i(t,e){if(!(t instanceof e))throw
new TypeError(\"Cannot call a class as a function\")}function o(t,e){if(!t)throw
new ReferenceError(\"this hasn't been initialised - super() hasn't been
called\");return!e||\"object\"!=typeof e&&\"function\"!=typeof e?t:e}function
a(t,e){if(\"function\"!=typeof e&&null!==e)throw new TypeError(\"Super
expression must either be null or a function, not \"+typeof
e);t.prototype=Object.create(e&&e.prototype,{constructor:{value:t,enumerable:!
1,writable:!0,configurable:!0}}),e&&(Object.setPrototypeOf?
Object.setPrototypeOf(t,e):t.__proto__=e)}Object.defineProperty(e,\"__esModule\"
,{value:!0});var u=\"function\"==typeof Symbol&&\"symbol\"==typeof
Symbol.iterator?function(t){return typeof t}:function(t){return
t&&\"function\"==typeof Symbol&&t.constructor===Symbol&&t!
==Symbol.prototype?\"symbol\":typeof t},c=function(){function t(t,e){for(var
n=0;n<e.length;n++){var r=e[n];r.enumerable=r.enumerable||!1,r.configurable=!
0,\"value\"in r&&(r.writable=!0),Object.defineProperty(t,r.key,r)}}return
function(e,n,r){return n&&t(e.prototype,n),r&&t(e,r),e}}
(),s=n(41),l=r(s),f=n(129),p=n(66),h=(n(7),n(29)),d=n(78),v=n(112),g=n(136),m=n(
10),y=n(38),_=n(58),b=r(_),x=function(t){function e(){i(this,e);var t=o(this,
(e.__proto__||Object.getPrototypeOf(e)).call(this));return
window.lastAdditiveForceArrayVisualizer=t,t.topOffset=28,t.leftOffset=80,t.heigh
t=350,t.effectFormat=(0,h.format)(\".2\"),t.redraw=(0,y.debounce)(function()
{return t.draw()},200),t}return a(e,t),c(e,
[{key:\"componentDidMount\",value:function(){var
t=this;this.mainGroup=this.svg.append(\"g\"),this.onTopGroup=this.svg.append(\"g
\"),this.xaxisElement=this.onTopGroup.append(\"g\").attr(\"transform\",\"transla
te(0,35)\").attr(\"class\",\"force-bar-ar
ray-
xaxis\"),this.yaxisElement=this.onTopGroup.append(\"g\").attr(\"transform\",\"tr
anslate(0,35)\").attr(\"class\",\"force-bar-array-
yaxis\"),this.hoverGroup1=this.svg.append(\"g\"),this.hoverGroup2=this.svg.appen
d(\"g\"),this.baseValueTitle=this.svg.append(\"text\"),this.hoverLine=this.svg.a
ppend(\"line\"),this.hoverxOutline=this.svg.append(\"text\").attr(\"text-
anchor\",\"middle\").attr(\"font-
weight\",\"bold\").attr(\"fill\",\"#fff\").attr(\"stroke\",\"#fff\").attr(\"stro
ke-width\",\"6\").attr(\"font-
size\",\"12px\"),this.hoverx=this.svg.append(\"text\").attr(\"text-
anchor\",\"middle\").attr(\"font-
weight\",\"bold\").attr(\"fill\",\"#000\").attr(\"font-
size\",\"12px\"),this.hoverxTitle=this.svg.append(\"text\").attr(\"text-
anchor\",\"middle\").attr(\"opacity\",.6).attr(\"font-
size\",\"12px\"),this.hoveryOutline=this.svg.append(\"text\").attr(\"text-
anchor\",\"end\").attr(\"font-
weight\",\"bold\").attr(\"fill\",\"#fff\").attr(\"stroke\",\"#fff\").attr(\"stro
ke-width\",\"6\").attr(\"font-
size\",\"12px\"),this.hovery=this.svg.append(\"text\").attr(\"text-
anchor\",\"end\").attr(\"font-
weight\",\"bold\").attr(\"fill\",\"#000\").attr(\"font-
size\",\"12px\"),this.xlabel=this.wrapper.select(\".additive-force-array-
xlabel\"),this.ylabel=this.wrapper.select(\".additive-force-array-ylabel\");var
e=void 0;\"string\"==typeof this.props.plot_cmap?this.props.plot_cmap in
b.default.colors?e=b.default.colors[this.props.plot_cmap]:(console.log(\"Invalid
color map name, reverting to
default.\"),e=b.default.colors.RdBu):Array.isArray(this.props.plot_cmap)&&(e=thi
s.props.plot_cmap),this.colors=e.map(function(t){return(0,m.hsl)
(t)}),this.brighterColors=[1.45,1.6].map(function(e,n){return
t.colors[n].brighter(e)}});var n=(0,h.format)(\",.4\");if(null!
=this.props.ordering_keys&&null!=this.props.ordering_keys_time_format){var
r=function(t){return\"object\"==(void 0===t?\"undefined\":u(t))?
this.formatTime(t):n(t)};this.parseTime=(0,d.timeParse)
(this.props.ordering_keys_time_format),this.formatTime=(0,d.timeFormat)
(this.props.ordering_keys_time_format),this.xtickFormat=r}else
this.parseTime=null,this.formatTime=null,this.xtickFormat=n;this.xscale=(0,p.sca
leLinear)(),this.xaxis=(0,v.axisBottom)
().scale(this.xscale).tickSizeInner(4).tickSizeOuter(0).tickFormat(function(e)
{return t.xtickFormat(e)}).tickPadding(-
18),this.ytickFormat=n,this.yscale=(0,p.scaleLinear)(),this.yaxis=(0,v.axisLeft)
().scale(this.yscale).tickSizeInner(4).tickSizeOuter(0).tickFormat(function(e)
{return
t.ytickFormat(t.invLinkFunction(e))}).tickPadding(2),this.xlabel.node().onchange
=function(){return t.internalDraw()},this.ylabel.node().onchange=function()
{return t.internalDraw()},this.svg.on(\"mousemove\",function(e){return
t.mouseMoved(e)}),this.svg.on(\"click\",function(e){return alert(\"This original
index of the sample you clicked
is \"+t.nearestExpIndex)}),this.svg.on(\"mouseout\",function(e){return
t.mouseOut(e)}),window.addEventListener(\"resize\",this.redraw),window.setTimeou
t(this.redraw,50)}},{key:\"componentDidUpdate\",value:function(){this.draw()}},
{key:\"mouseOut\",value:function()
{this.hoverLine.attr(\"display\",\"none\"),this.hoverx.attr(\"display\",\"none\"
),this.hoverxOutline.attr(\"display\",\"none\"),this.hoverxTitle.attr(\"display\
",\"none\"),this.hovery.attr(\"display\",\"none\"),this.hoveryOutline.attr(\"dis
play\",\"none\"),this.hoverGroup1.attr(\"display\",\"none\"),this.hoverGroup2.at
tr(\"display\",\"none\")}},{key:\"mouseMoved\",value:function(t){var
e=this,n=void 0,r=void
0;this.hoverLine.attr(\"display\",\"\"),this.hoverx.attr(\"display\",\"\"),this.
hoverxOutline.attr(\"display\",\"\"),this.hoverxTitle.attr(\"display\",\"\"),thi
s.hovery.attr(\"display\",\"\"),this.hoveryOutline.attr(\"display\",\"\"),this.h
overGroup1.attr(\"display\",\"\"),this.hoverGroup2.attr(\"display\",\"\");var
i=(0,f.mouse)(this.svg.node())[0];if(this.props.explanations)
{for(n=0;n<this.props.explanations.length;++n)(!r||Math.abs(r.xmapScaled-
i)>Math.abs(this.props.explanations[n].xmapScaled-
i))&&(r=this.props.explanations[n],this.nearestExpIndex=n);this.hoverLine.attr(\
"x1\",r.xmapScaled).attr(\"x2\",r.xmapScaled).attr(\"y1\",0+this.topOffset).attr
(\"y2\",this.height),this.hoverx.attr(\"x\",r.xmapScaled).attr(\"y\",this.topOff
set-
5).text(this.xtickFormat(r.xmap)),this.hoverxOutline.attr(\"x\",r.xmapScaled).at
tr(\"y\",this.topOffset-
5).text(this.xtickFormat(r.xmap)),this.hoverxTitle.attr(\"x\",r.xmapScaled).attr
(\"y\",this.topOffset-18).text(r.count>1?r.count+\" averaged
samples\":\"\"),this.hovery.attr(\"x\",this.leftOffset-
6).attr(\"y\",r.joinPointy).text(this.ytickFormat(this.invLinkFunction(r.joinPoi
nt))),this.hoveryOutline.attr(\"x\",this.leftOffset-
6).attr(\"y\",r.joinPointy).text(this.ytickFormat(this.invLinkFunction(r.joinPoi
nt)));for(var o=(this.props.featureNames.length,[]),a=void 0,u=void
0,c=this.currPosOrderedFeatures.length-1;c>=0;--c){var
s=this.currPosOrderedFeatures[c],l=r.features[s];u=5+(l.posyTop+l.posyBottom)/2,
(!a||u-a>=15)&&l.posyTop-l.posyBottom>=6&&(o.push(l),a=u)}var p=[];a=void 0;var
h=!0,d=!1,v=void 0;try{for(var g,m=this.currNegOrderedFeatures[Symbol.iterator]
();!(h=(g=m.next()).done);h=!0){var y=g.value,_=r.features[y];u=5+
(_.negyTop+_.negyBottom)/2,(!a||a-u>=15)&&_.negyTop-
_.negyBottom>=6&&(p.push(_),a=u)}}catch(t){d=!0,v=t}finally{try{!
h&&m.return&&m.return()}finally{if(d)throw v}}var b=function(t){var
n=\"\";return null!==t.value&&void 0!==t.value&&(n=\" = \"+(isNaN(t.value)?
t.value:e.ytickFormat(t.value))),r.count>1?\"mean(\"+e.props.featureNames[t.ind]
+\")\"+n:e.props.featureNames[t.ind]+n},x=this.hoverGroup1.selectAll(\".pos-
values\").data(o);x.enter().append(\"text\").attr(\"class\",\"pos-
values\").merge(x).attr(\"x\",r.xmapScaled+5).attr(\"y\",function(t){return 4+
(t.posyTop+t.posyBottom)/2}).attr(\"text-anchor\",\"start\").attr(\"font-
size\",12).attr(\"stroke\",\"#fff\").attr(\"fill\",\"#fff\").attr(\"stroke-
width\",\"4\").attr(\"stroke-
```

```
linejoin\",\"round\").attr(\"opacity\",1).text(b),x.exit().remove();var
w=this.hoverGroup2.selectAll(\".pos-
values\").data(o);w.enter().append(\"text\").attr(\"class\",\"pos-
values\").merge(w).attr(\"x\",r.xmapScaled+5).attr(\"y\",function(t){return 4+
(t.posyTop+t.posyBottom)/2}).attr(\"text-anchor\",\"start\").attr(\"font-
size\",12).attr(\"fill\",this.colors[0]).text(b),w.exit().remove();var
C=this.hoverGroup1.selectAll(\".neg-
values\").data(p);C.enter().append(\"text\").attr(\"class\",\"neg-
values\").merge(C).attr(\"x\",r.xmapScaled+5).attr(\"y\",function(t){return 4+
(t.negyTop+t.negyBottom)/2}).attr(\"text-anchor\",\"start\").attr(\"font-
size\",12).attr(\"stroke\",\"#fff\").attr(\"fill\",\"#fff\").attr(\"stroke-
width\",\"4\").attr(\"stroke-
linejoin\",\"round\").attr(\"opacity\",1).text(b),C.exit().remove();var
k=this.hoverGroup2.selectAll(\".neg-
values\").data(p);k.enter().append(\"text\").attr(\"class\",\"neg-
values\").merge(k).attr(\"x\",r.xmapScaled+5).attr(\"y\",function(t){return 4+
(t.negyTop+t.negyBottom)/2}).attr(\"text-anchor\",\"start\").attr(\"font-
size\",12).attr(\"fill\",this.colors[1]).text(b),k.exit().remove()}}},
{key:\"draw\",value:function(){var t=this;if(this.props.explanations&&0!
==this.props.explanations.length){(0,y.each)
(this.props.explanations,function(t,e){return t.origInd=e});var
e={},n={},r={},i=!0,o=!1,a=void 0;try{for(var
u,c=this.props.explanations[Symbol.iterator]();!(i=(u=c.next()).done);i=!0){var
s=u.value;for(var l in s.features)void
0===e[l]&&(e[l]=0,n[l]=0,r[l]=0),s.features[l].effect>0?e[l]
+=s.features[l].effect:n[l]-=s.features[l].effect,null!
==s.features[l].value&&void 0!==s.features[l].value&&(r[l]+=1)}}catch(t){o=!
0,a=t}finally{try{!i&&c.return&&c.return()}finally{if(o)throw
a}}this.usedFeatures=(0,y.sortBy)((0,y.keys)(e),function(t){return-(e[t]
+n[t])}),console.log(\"found \",this.usedFeatures.length,\" used
features\"),this.posOrderedFeatures=(0,y.sortBy)(this.usedFeatures,function(t)
{return e[t]}),this.negOrderedFeatures=(0,y.sortBy)
(this.usedFeatures,function(t){return-
n[t]}),this.singleValueFeatures=(0,y.filter)(this.usedFeatures,function(t)
{return r[t]>0});var f=[\"sample order by similarity\",\"sample order by output
value\",\"original sample
ordering\"].concat(this.singleValueFeatures.map(function(e){return
t.props.featureNames[e]}));null!=this.props.ordering_keys&&f.unshift(\"sample
order by key\");var
p=this.xlabel.selectAll(\"option\").data(f);p.enter().append(\"option\").merge(p
).attr(\"value\",function(t){return t}).text(function(t){return
t}),p.exit().remove();var h=this.props.outNames[0]?
this.props.outNames[0]:\"model output value\";f=(0,y.map)
(this.usedFeatures,function(e)
{return[t.props.featureNames[e],t.props.featureNames[e]+\"
effects\"]}),f.unshift([\"model output value\",h]);var
d=this.ylabel.selectAll(\"option\").data(f);d.enter().append(\"option\").merge(d
).attr(\"value\",function(t){return t[0]}).text(function(t){return
t[1]}),d.exit().remove(),this.ylabel.style(\"top\",(this.height-10-
this.topOffset)/2+this.topOffset+\"px\").style(\"left\",10-
this.ylabel.node().offsetWidth/2+\"px\"),this.internalDraw()}}},
{key:\"internalDraw\",value:function(){var t=this,e=!0,n=!1,r=void 0;try{for(var
i,o=this.props.explanations[Symbol.iterator]();!(e=(i=o.next()).done);e=!0){var
a=i.value,u=!0,c=!1,s=void 0;try{for(var l,f=this.usedFeatures[Symbol.iterator]
();!(u=(l=f.next()).done);u=!0){var h=l.value;a.features.hasOwnProperty(h)||
(a.features[h]={effect:0,value:0}),a.features[h].ind=h}}catch(t){c=!
0,s=t}finally{try{!u&&f.return&&f.return()}finally{if(c)throw s}}}}catch(t){n=!
0,r=t}finally{try{!e&&o.return&&o.return()}finally{if(n)throw r}}var d=void
0,v=this.xlabel.node().value,m=\"sample order by key\"===v&&null!
=this.props.ordering_keys_time_format;if(this.xscale=m?(0,p.scaleTime)():
(0,p.scaleLinear)(),this.xaxis.scale(this.xscale),\"sample order by
similarity\"===v)d=(0,y.sortBy)(this.props.explanations,function(t){return
t.simIndex}),(0,y.each)(d,function(t,e){return
 t.xmap=e});else if(\"sample order by output value\"===v)d=(0,y.sortBy)
```

```
(this.props.explanations,function(t){return-t.outValue}),(0,y.each)
(d,function(t,e){return t.xmap=e});else if(\"original sample
ordering\"===v)d=(0,y.sortBy)(this.props.explanations,function(t){return
t.origInd}),(0,y.each)(d,function(t,e){return t.xmap=e});else if(\"sample order
by key\"===v)d=this.props.explanations,m?(0,y.each)(d,function(e,n){return
e.xmap=t.parseTime(t.props.ordering_keys[n])}):(0,y.each)(d,function(e,n){return
e.xmap=t.props.ordering_keys[n]}),d=(0,y.sortBy)(d,function(t){return
t.xmap});else{var _=(0,y.findKey)(this.props.featureNames,function(t){return
t===v});(0,y.each)(this.props.explanations,function(t,e){return
t.xmap=t.features[_].value});var b=(0,y.sortBy)
(this.props.explanations,function(t){return t.xmap}),x=(0,y.map)(b,function(t)
{return t.xmap});if(\"string\"==typeof x[0])return void alert(\"Ordering by
category names is not yet supported.\");var w=(0,y.min)(x),C=(0,y.max)(x),k=(C-
w)/100;d=[];for(var E=void 0,M=void 0,T=0;T<b.length;++T){var S=b[T];if(E&&!
M&&S.xmap-E.xmap<=k||M&&S.xmap-M.xmap<=k){M||(M=(0,y.cloneDeep)
(E),M.count=1);var N=!0,A=!1,P=void 0;try{for(var
O,I=this.usedFeatures[Symbol.iterator]();!(N=(O=I.next()).done);N=!0){var
D=O.value;M.features[D].effect+=S.features[D].effect,M.features[D].value+=S.feat
ures[D].value}}catch(t){A=!0,P=t}finally{try{!
N&&I.return&&I.return()}finally{if(A)throw P}}M.count+=1}else if(E)if(M){var R=!
0,L=!1,U=void 0;try{for(var F,j=this.usedFeatures[Symbol.iterator]();!
(R=(F=j.next()).done);R=!0){var
B=F.value;M.features[B].effect/=M.count,M.features[B].value/=M.count}}catch(t)
{L=!0,U=t}finally{try{!R&&j.return&&j.return()}finally{if(L)throw
U}}d.push(M),M=void 0}else d.push(E);E=S}E.xmap-d[d.length-
1].xmap>k&&d.push(E)}this.currUsedFeatures=this.usedFeatures,this.currPosOrdered
Features=this.posOrderedFeatures,this.currNegOrderedFeatures=this.negOrderedFeat
ures;var V=this.ylabel.node().value;if(\"model output value\"!==V)
{d=(0,y.cloneDeep)(d);for(var W=(0,y.findKey)
(this.props.featureNames,function(t){return t===V}),z=0;z<d.length;++z){var
H=d[z].features[W];d[z].features={},d[z].features[W]=H}this.currUsedFeatures=[W]
,this.currPosOrderedFeatures=[W],this.currNegOrderedFeatures=[W]}this.currExplan
ations=d,\"identity\"===this.props.link?this.invLinkFunction=function(e){return
t.props.baseValue+e}:\"logit\"===this.props.link?
this.invLinkFunction=function(e){return 1/(1+Math.exp(-
(t.props.baseValue+e)))}:console.log(\"ERROR: Unrecognized link
function: \",this.props.link),this.predValues=(0,y.map)(d,function(t)
{return(0,y.sum)((0,y.map)(t.features,function(t){return t.effect}))});var
q=this.wrapper.node().offsetWidth;if(0==q)return setTimeout(function(){return
t.draw(d)},500);this.svg.style(\"height\",this.height+\"px\"),this.svg.style(\"w
idth\",q+\"px\");var Y=(0,y.map)(d,function(t){return
t.xmap});this.xscale.domain([(0,y.min)(Y),(0,y.max)
(Y)]).range([this.leftOffset,q]).clamp(!
0),this.xaxisElement.attr(\"transform\",\"translate(0,\"+this.topOffset+\")\").c
all(this.xaxis);for(var K=0;K<this.currExplanations.length;+
+K)this.currExplanations[K].xmapScaled=this.xscale(this.currExplanations[K].xmap
);for(var G=d.length,$=0,X=0;X<G;++X){var Q=d[X].features,Z=(0,y.sum)((0,y.map)
((0,y.filter)(Q,function(t){return t.effect>0}),function(t){return t.effect}))||
0,J=(0,y.sum)((0,y.map)((0,y.filter)(Q,function(t){return
t.effect<0}),function(t){return-t.effect}))||
0;$=Math.max($,2.2*Math.max(Z,J))}this.yscale.domain([-$/2,$/
2]).range([this.height-
10,this.topOffset]),this.yaxisElement.attr(\"transform\",\"translate(\"+this.lef
tOffset+\",0)\").call(this.yaxis);for(var tt=0;tt<G;++tt){var
et=d[tt].features,nt=((0,y.sum)((0,y.map)(et,function(t){return
Math.abs(t.effect)})),(0,y.sum)((0,y.map)((0,y.filter)(et,function(t){return
t.effect<0}),function(t){return-t.effect}))||0),rt=-nt,it=void 0,ot=!0,at=!
1,ut=void 0;try{for(var ct,st=this.currPosOrderedFeatures[Symbol.iterator]();!
(ot=(ct=st.next()).done);ot=!
0)it=ct.value,et[it].posyTop=this.yscale(rt),et[it].effect>0&&(rt+=et[it].effect
),et[it].posyBottom=this.yscale(rt),et[it].ind=it}catch(t){at=!
0,ut=t}finally{try{!ot&&st.return&&st.return()}finally{if(at)throw ut}}var
lt=rt,ft=!0,pt=!1,ht=void 0;try{for(var
dt,vt=this.currNegOrderedFeatures[Symbol.iterator]();!
```

```
(ft=(dt=vt.next()).done);ft=!
0)it=dt.value,et[it].negyTop=this.yscale(rt),et[it].effect<0&&(rt-
=et[it].effect),et[it].negyBottom=this.yscale(rt)}catch(t){pt=!
0,ht=t}finally{try{!ft&&vt.return&&vt.return()}finally{if(pt)throw
ht}}d[tt].joinPoint=lt,d[tt].joinPointy=this.yscale(lt)}var gt=(0,g.line)
().x(function(t){return t[0]}).y(function(t){return
t[1]}),mt=this.mainGroup.selectAll(\".force-bar-array-area-
pos\").data(this.currUsedFeatures);mt.enter().append(\"path\").attr(\"class\",\"
force-bar-array-area-pos\").merge(mt).attr(\"d\",function(t){var e=(0,y.map)
((0,y.range)(G),function(e)
{return[d[e].xmapScaled,d[e].features[t].posyTop]}),n=(0,y.map)((0,y.rangeRight)
(G),function(e){return[d[e].xmapScaled,d[e].features[t].posyBottom]});return
gt(e.concat(n))}).attr(\"fill\",this.colors[0]),mt.exit().remove();var
yt=this.mainGroup.selectAll(\".force-bar-array-area-
neg\").data(this.currUsedFeatures);yt.enter().append(\"path\").attr(\"class\",\"
force-bar-array-area-neg\").merge(yt).attr(\"d\",function(t){var e=(0,y.map)
((0,y.range)(G),function(e)
{return[d[e].xmapScaled,d[e].features[t].negyTop]}),n=(0,y.map)((0,y.rangeRight)
(G),function(e){return[d[e].xmapScaled,d[e].features[t].negyBottom]});return
gt(e.concat(n))}).attr(\"fill\",this.colors[1]),yt.exit().remove();var
_t=this.mainGroup.selectAll(\".force-bar-array-divider-
pos\").data(this.currUsedFeatures);_t.enter().append(\"path\").attr(\"class\",\"
force-bar-array-divider-pos\").merge(_t).attr(\"d\",function(t){var e=(0,y.map)
((0,y.range)(G),function(e)
{return[d[e].xmapScaled,d[e].features[t].posyBottom]});return
gt(e)}).attr(\"fill\",\"none\").attr(\"stroke-
width\",1).attr(\"stroke\",function(e){return
t.colors[0].brighter(1.2)}),_t.exit().remove();var
bt=this.mainGroup.selectAll(\".force-bar-array-divider-
neg\").data(this.currUsedFeatures);bt.enter().append(\"path\").attr(\"class\",\"
force-bar-array-divider-neg\").merge(bt).attr(\"d\",function(t){var e=(0,y.map)
((0,y.range)(G),function(e)
{return[d[e].xmapScaled,d[e].features[t].negyTop]});return
gt(e)}).attr(\"fill\",\"none\").attr(\"stroke-
width\",1).attr(\"stroke\",function(e){return
t.colors[1].brighter(1.5)}),bt.exit().remove();for(var xt=function(t,e,n,r,i)
{var o=void 0,a=void 0;\"pos\"===i?
(o=t[n].features[e].posyBottom,a=t[n].features[e].posyTop):
(o=t[n].features[e].negyBottom,a=t[n].features[e].negyTop);for(var u=void
0,c=void 0,s=n+1;s<=r;++s)\"pos\"===i?
(u=t[s].features[e].posyBottom,c=t[s].features[e].posyTop):
(u=t[s].features[e].negyBottom,c=t[s].features[e].negyTop),u>o&&(o=u),c<a&&(a=c)
;return{top:o,bottom:a}},wt=[],Ct=[\"pos\",\"neg\"],kt=0;kt<Ct.length;kt++){var
Et=Ct[kt],Mt=!0,Tt=!1,St=void 0;try{for(var
Nt,At=this.currUsedFeatures[Symbol.iterator]();!(Mt=(Nt=At.next()).done);Mt=!
0)for(var Pt=Nt.value,Ot=0,It=0,Dt=0,Rt={top:0,bottom:0},Lt=void 0;It<G-1;)
{for(;Dt<100&&It<G-1;)++It,Dt=d[It].xmapScaled-
d[Ot].xmapScaled;for(Rt=xt(d,Pt,Ot,It,Et);Rt.bottom-Rt.top<20&&Ot<It;)+
+Ot,Rt=xt(d,Pt,Ot,It,Et);if(Dt=d[It].xmapScaled-d[Ot].xmapScaled,Rt.bottom-
Rt.top>=20&&Dt>=100){for(;It<G-1;){if(++It,Lt=xt(d,Pt,Ot,It,Et),!(Lt.bottom-
Lt.top>20)){--It;break}Rt=Lt}Dt=d[It].xmapScaled-
d[Ot].xmapScaled,wt.push([(d[It].xmapScaled+d[Ot].xmapScaled)/2,
(Rt.top+Rt.bottom)/2,this.props.featureNames[Pt]]);var
Ut=d[It].xmapScaled;for(Ot=It;Ut+100>d[Ot].xmapScaled&&Ot<G-1;)+
+Ot;It=Ot}}}catch(t){Tt=!0,St=t}finally{try{!
Mt&&At.return&&At.return()}finally{if(Tt)throw St}}}var
Ft=this.onTopGroup.selectAll(\".force-bar-array-
flabels\").data(wt);Ft.enter().append(\"text\").attr(\"class\",\"force-bar-
array-flabels\").merge(Ft).attr(\"x\",function(t){return
t[0]}).attr(\"y\",function(t){return t[1]+4}).text(function(t){return
t[2]}),Ft.exit().remove()}},{key:\"componentWillUnmount\",value:function()
{window.removeEventListener(\"resize\",this.redraw)}},
{key:\"render\",value:function(){var t=this;return
l.default.createElement(\"div\",{ref:function(e){return t.wrapper=(0,f.select)
(e)},style:{textAlign:\"center\"}},l.default.createElement(\"style\",
{dangerouslySetInnerHTML:{__html:\"\\n          .force-bar-array-wrapper {\\n
text-align: center;\\n          }\\n          .force-bar-array-xaxis path {\\n
fill: none;\\n            opacity: 0.4;\\n          }\\n          .force-bar-
array-xaxis .domain {\\n            opacity: 0;\\n          }\\
n          .force-bar-array-xaxis paths {\\n            display: none;\\n
}\\n          .force-bar-array-yaxis path {\\n            fill: none;\\n
opacity: 0.4;\\n          }\\n          .force-bar-array-yaxis paths {\\n
display: none;\\n          }\\n          .tick line {\\n            stroke:
#000;\\n            stroke-width: 1px;\\n            opacity: 0.4;\\
n          }\\n          .tick text {\\n            fill: #000;\\n
opacity: 0.5;\\n            font-size: 12px;\\n            padding: 0px;\\n
}\\n          .force-bar-array-flabels {\\n            font-size: 12px;\\n
fill: #fff;\\n            text-anchor: middle;\\n          }\\
n          .additive-force-array-xlabel {\\n            background: none;\\n
border: 1px solid #ccc;\\n            opacity: 0.5;\\n            margin-bottom:
0px;\\n            font-size: 12px;\\n            font-family: arial;\\n
margin-left: 80px;\\n            max-width: 300px;\\n          }\\
n          .additive-force-array-xlabel:focus {\\n            outline: none;\\n
}\\n          .additive-force-array-ylabel {\\n            position: relative;\\
n            top: 0px;\\n            left: 0px;\\n            transform:
 rotate(-90deg);\\n            background: none;\\n            border: 1px solid
#ccc;\\n            opacity: 0.5;\\n            margin-bottom: 0px;\\n
font-size: 12px;\\n            font-family: arial;\\n            max-width:
150px;\\n          }\\n          .additive-force-array-ylabel:focus {\\n
outline: none;\\n          }\\n          .additive-force-array-hoverLine {\\n
stroke-width: 1px;\\n            stroke: #fff;\\n            opacity: 1;\\n
}\"}}),l.default.createElement(\"select\",{className:\"additive-force-array-
xlabel\"}),l.default.createElement(\"div\",{style:
{height:\"0px\",textAlign:\"left\"}},l.default.createElement(\"select\",
{className:\"additive-force-array-ylabel\"})),l.default.createElement(\"svg\",
{ref:function(e){return t.svg=(0,f.select)(e)},style:
{userSelect:\"none\",display:\"block\",fontFamily:\"arial\",sansSerif:!
0}}))}}]),e}
(l.default.Component);x.defaultProps={plot_cmap:\"RdBu\",ordering_keys:null,orde
ring_keys_time_format:null},e.default=x},function(t,e,n){\"use strict\";function
r(t){return t&&t.__esModule?t:{default:t}}function i(t,e){if(!(t instanceof
e))throw new TypeError(\"Cannot call a class as a function\")}function o(t,e)
{if(!t)throw new ReferenceError(\"this hasn't been initialised - super() hasn't
been called\");return!e||\"object\"!=typeof e&&\"function\"!=typeof e?
t:e}function a(t,e){if(\"function\"!=typeof e&&null!==e)throw new
TypeError(\"Super expression must either be null or a function, not \"+typeof
e);t.prototype=Object.create(e&&e.prototype,{constructor:{value:t,enumerable:!
1,writable:!0,configurable:!0}}),e&&(Object.setPrototypeOf?
Object.setPrototypeOf(t,e):t.__proto__=e)}Object.defineProperty(e,\"__esModule\"
,{value:!0});var u=function(){function t(t,e){for(var n=0;n<e.length;n++){var
r=e[n];r.enumerable=r.enumerable||!1,r.configurable=!0,\"value\"in
r&&(r.writable=!0),Object.defineProperty(t,r.key,r)}}return function(e,n,r)
{return n&&t(e.prototype,n),r&&t(e,r),e}}
(),c=n(41),s=r(c),l=n(129),f=n(66),p=(n(7),n(29)),h=n(112),d=n(136),v=n(10),g=n(
38),m=n(58),y=r(m),b=function(t){function e(){i(this,e);var t=o(this,
(e.__proto__||Object.getPrototypeOf(e)).call(this));return
window.lastAdditiveForceVisualizer=t,t.effectFormat=(0,p.format)
(\".2\"),t.redraw=(0,g.debounce)(function(){return t.draw()},200),t}return
a(e,t),u(e,[{key:\"componentDidMount\",value:function(){var
t=this;this.mainGroup=this.svg.append(\"g\"),this.axisElement=this.mainGroup.app
end(\"g\").attr(\"transform\",\"translate(0,35)\").attr(\"class\",\"force-bar-
axis\"),this.onTopGroup=this.svg.append(\"g\"),this.baseValueTitle=this.svg.appe
nd(\"text\"),this.joinPointLine=this.svg.append(\"line\"),this.joinPointLabelOut
line=this.svg.append(\"text\"),this.joinPointLabel=this.svg.append(\"text\"),thi
s.joinPointTitleLeft=this.svg.append(\"text\"),this.joinPointTitleLeftArrow=this
.svg.append(\"text\"),this.joinPointTitle=this.svg.append(\"text\"),this.joinPoi
ntTitleRightArrow=this.svg.append(\"text\"),this.joinPointTitleRight=this.svg.ap
pend(\"text\"),this.hoverLabelBacking=this.svg.append(\"text\").attr(\"x\",10).a
```

```
ttr(\"y\",20).attr(\"text-anchor\",\"middle\").attr(\"font-
size\",12).attr(\"stroke\",\"#fff\").attr(\"fill\",\"#fff\").attr(\"stroke-
width\",\"4\").attr(\"stroke-
linejoin\",\"round\").text(\"\").on(\"mouseover\",function(e)
{t.hoverLabel.attr(\"opacity\",1),t.hoverLabelBacking.attr(\"opacity\",1)}).on(\
"mouseout\",function(e)
{t.hoverLabel.attr(\"opacity\",0),t.hoverLabelBacking.attr(\"opacity\",0)}),this
.hoverLabel=this.svg.append(\"text\").attr(\"x\",10).attr(\"y\",20).attr(\"text-
anchor\",\"middle\").attr(\"font-
size\",12).attr(\"fill\",\"#0f0\").text(\"\").on(\"mouseover\",function(e)
{t.hoverLabel.attr(\"opacity\",1),t.hoverLabelBacking.attr(\"opacity\",1)}).on(\
"mouseout\",function(e)
{t.hoverLabel.attr(\"opacity\",0),t.hoverLabelBacking.attr(\"opacity\",0)});var
e=void 0;\"string\"==typeof this.props.plot_cmap?this.props.plot_cmap in
y.default.colors?e=y.default.colors[this.props.plot_cmap]:(console.log(\"Invalid
color map name, reverting to
default.\"),e=y.default.colors.RdBu):Array.isArray(this.props.plot_cmap)&&(e=thi
s.props.plot_cmap),this.colors=e.map(function(t){return(0,v.hsl)
(t)}),this.brighterColors=[1.45,1.6].map(function(e,n){return
t.colors[n].brighter(e)}),this.colors.map(function(e,n){var
r=t.svg.append(\"linearGradient\").attr(\"id\",\"linear-
grad-\"+n).attr(\"x1\",\"0%\").attr(\"y1\",\"0%\").attr(\"x2\",\"0%\").attr(\"y2
\",\"100%\");r.append(\"stop\").attr(\"offset\",\"0%\").attr(\"stop-
color\",e).attr(\"stop-
opacity\",.6),r.append(\"stop\").attr(\"offset\",\"100%\").attr(\"stop-
color\",e).attr(\"stop-opacity\",0);var
i=t.svg.append(\"linearGradient\").attr(\"id\",\"linear-
backgrad-\"+n).attr(\"x1\",\"0%\").attr(\"y1\",\"0%\").attr(\"x2\",\"0%\").attr(
\"y2\",\"100%\");i.append(\"stop\").attr(\"offset\",\"0%\").attr(\"stop-
color\",e).attr(\"stop-
opacity\",.5),i.append(\"stop\").attr(\"offset\",\"100%\").attr(\"stop-
color\",e).attr(\"stop-opacity\",0)}),this.tickFormat=(0,p.format)
(\",.4\"),this.scaleCentered=(0,f.scaleLinear)(),this.axis=(0,h.axisBottom)
().scale(this.scaleCentered).tickSizeInner(4).tickSizeOuter(0).tickFormat(functi
on(e){return t.tickFormat(t.invLinkFunction(e))}).tickPadding(-
18),window.addEventListener(\"resize\",this.redraw),window.setTimeout(this.redra
w,50)}},{key:\"componentDidUpdate\",value:function(){this.draw()}},
{key:\"draw\",value:function(){var t=this;(0,g.each)
(this.props.featureNames,function(e,n)
{t.props.features[n]&&(t.props.features[n].name=e)}),\"identity\"===this.props.l
ink?this.invLinkFunction=function(e){return
t.props.baseValue+e}:\"logit\"===this.props.link?
this.invLinkFunction=function(e){return 1/(1+Math.exp(-
(t.props.baseValue+e)))}:console.log(\"ERROR: Unrecognized link
function: \",this.props.link);var
e=this.svg.node().parentNode.offsetWidth;if(0==e)return setTimeout(function()
{return
t.draw(t.props)},500);this.svg.style(\"height\",\"150px\"),this.svg.style(\"widt
h\",e+\"px\");var
n=(0,g.sortBy)(this.props.features,function(t){return-1/(t.effect+1e-
10)}),r=(0,g.sum)((0,g.map)(n,function(t){return
Math.abs(t.effect)})),i=(0,g.sum)((0,g.map)((0,g.filter)(n,function(t){return
t.effect>0}),function(t){return t.effect}))||0,o=(0,g.sum)((0,g.map)
((0,g.filter)(n,function(t){return t.effect<0}),function(t){return-t.effect}))||
0;this.domainSize=3*Math.max(i,o);var a=(0,f.scaleLinear)
().domain([0,this.domainSize]).range([0,e]),u=e/2-
a(o);this.scaleCentered.domain([-this.domainSize/2,this.domainSize/
2]).range([0,e]).clamp(!
0),this.axisElement.attr(\"transform\",\"translate(0,50)\").call(this.axis);var
c=0,s=void 0,l=void 0,h=void 0;for(s=0;s<n.length;+
+s)n[s].x=c,n[s].effect<0&&void 0===l&&(l=c,h=s),c+=Math.abs(n[s].effect);void
0===l&&(l=c,h=s);var v=(0,d.line)().x(function(t){return t[0]}).y(function(t)
{return t[1]}),m=function(e){return void 0!==e.value&&null!==e.value&&\"\"!
==e.value?e.name+\" = \"+(isNaN(e.value)?
e.value:t.tickFormat(e.value)):e.name};n=this.props.hideBars?[]:n;var
y=this.mainGroup.selectAll(\".force-bar-
blocks\").data(n);y.enter().append(\"path\").attr(\"class\",\"force-bar-
blocks\").merge(y).attr(\"d\",function(t,e){var n=a(t.x)
+u,r=a(Math.abs(t.effect)),i=t.effect<0?-4:4,o=i;return e===h&&(i=0),e===h-
1&&(o=0),v([[n,56],[n+r,56],[n+r+o,64.5],[n+r,73],[n,73],
[n+i,64.5]])}).attr(\"fill\",function(e){return e.effect>0?
t.colors[0]:t.colors[1]}).on(\"mouseover\",function(e)
{if(a(Math.abs(e.effect))<a(r)/50||a(Math.abs(e.effect))<10){var n=a(e.x)
+u,i=a(Math.abs(e.effect));t.hoverLabel.attr(\"opacity\",1).attr(\"x\",n+i/
2).attr(\"y\",50.5).attr(\"fill\",e.effect>0?
t.colors[0]:t.colors[1]).text(m(e)),t.hoverLabelBacking.attr(\"opacity\",1).attr
(\"x\",n+i/2).attr(\"y\",50.5).text(m(e))}}).on(\"mouseout\",function(e)
{t.hoverLabel.attr(\"opacity\",0),t.hoverLabelBacking.attr(\"opacity\",0)}),y.ex
it().remove();var b=_.filter(n,function(t){return
a(Math.abs(t.effect))>a(r)/50&&a(Math.abs(t.effect))>10}),x=this.onTopGroup.sele
ctAll(\".force-bar-
labels\").data(b);if(x.exit().remove(),x=x.enter().append(\"text\").attr(\"class
\",\"force-bar-labels\").attr(\"font-size\",\"12px\").attr(\"y\",function(t)
{return 98}).merge(x).text(function(e){return void 0!==e.value&&null!
==e.value&&\"\"!==e.value?e.name+\" = \"+(isNaN(e.value)?
e.value:t.tickFormat(e.value)):e.name}).attr(\"fill\",function(e){return
e.effect>0?t.colors[0]:t.colors[1]}).attr(\"stroke\",function(t,e){return
t.textWidth=Math.max(this.getComputedTextLength(),a(Math.abs(t.effect))-
10),t.innerTextWidth=this.getComputedTextLength(),\"none\"}),this.filteredData=b
,n.length>0){c=l+a.invert(5);for(var w=h;w<n.length;+
+w)n[w].textx=c,c+=a.invert(n[w].textWidth+10);c=l-a.invert(5);for(var C=h-
1;C>=0;--C)n[C].textx=c,c-=a.invert(n[C].textWidth+10)}x.attr(\"x\",function(t)
{return a(t.textx)+u+(t.effect>0?-t.textWidth/2:t.textWidth/2)}).attr(\"text-
anchor\",\"middle\"),b=(0,g.filter)(b,function(n){return a(n.textx)
+u>t.props.labelMargin&&a(n.textx)+u<e-
t.props.labelMargin}),this.filteredData2=b;var k=b.slice(),E=(0,g.findIndex)
(n,b[0])-1;E>=0&&k.unshift(n[E]);var M=this.mainGroup.selectAll(\".force-bar-
labelBacking\").data(b);M.enter().append(\"path\").attr(\"class\",\"force-bar-
labelBacking\").attr(\"stroke\",\"none\").attr(\"opacity\",.2).merge(M).attr(\"d
\",function(t){return v([[a(t.x)+a(Math.abs(t.effect))+u,73],[(t.effect>0?
a(t.textx):a(t.textx)+t.textWidth)+u+5,83],[(t.effect>0?a(t.textx):a(t.textx)
+t.textWidth)+u+5,104],[(t.effect>0?a(t.textx)-t.textWidth:a(t.textx))+u-5,104],
[(t.effect>0?a(t.textx)-t.textWidth:a(t.textx))+u-5,83],[a(t.x)
+u,73]])}).attr(\"fill\",function(t){return\"url(#linear-backgrad-\"+
(t.effect>0?0:1)+\")\"}),M.exit().remove();var
T=this.mainGroup.selectAll(\".force-bar-labelDividers\").data(b.slice(0,-
1));T.enter().append(\"rect\").attr(\"class\",\"force-bar-
labelDividers\").attr(\"height\",\"21px\").attr(\"width\",\"1px\").attr(\"y\",83
).merge(T).attr(\"x\",function(t){return(t.effect>0?a(t.textx):a(t.textx)+t.te
xtWidth)+u+4.5}).attr(\"fill\",function(t){return\"url(#linear-grad-\"+
(t.effect>0?0:1)+\")\"}),T.exit().remove();var
S=this.mainGroup.selectAll(\".force-bar-labelLinks\").data(b.slice(0,-
1));S.enter().append(\"line\").attr(\"class\",\"force-bar-
labelLinks\").attr(\"y1\",73).attr(\"y2\",83).attr(\"stroke-
opacity\",.5).attr(\"stroke-width\",1).merge(S).attr(\"x1\",function(t){return
a(t.x)+a(Math.abs(t.effect))+u}).attr(\"x2\",function(t){return(t.effect>0?
a(t.textx):a(t.textx)+t.textWidth)+u+5}).attr(\"stroke\",function(e){return
e.effect>0?t.colors[0]:t.colors[1]}),S.exit().remove();var
N=this.mainGroup.selectAll(\".force-bar-blockDividers\").data(n.slice(0,-
1));N.enter().append(\"path\").attr(\"class\",\"force-bar-
blockDividers\").attr(\"stroke-
width\",2).attr(\"fill\",\"none\").merge(N).attr(\"d\",function(t){var e=a(t.x)
+a(Math.abs(t.effect))+u;return v([[e,56],[e+(t.effect<0?-4:4),64.5],
[e,73]])}).attr(\"stroke\",function(e,n){return h===n+1||Math.abs(e.effect)<1e-
8?\"#rgba(0,0,0,0)\":e.effect>0?
t.brighterColors[0]:t.brighterColors[1]}),N.exit().remove(),this.joinPointLine.a
ttr(\"x1\",a(l)+u).attr(\"x2\",a(l)
+u).attr(\"y1\",50).attr(\"y2\",56).attr(\"stroke\",\"#F2F2F2\").attr(\"stroke-
```

```
width\",1).attr(\"opacity\",1),this.joinPointLabelOutline.attr(\"x\",a(l)
+u).attr(\"y\",45).attr(\"color\",\"#fff\").attr(\"text-
anchor\",\"middle\").attr(\"font-
weight\",\"bold\").attr(\"stroke\",\"#fff\").attr(\"stroke-
width\",6).text((0,p.format)(\",.2f\")(this.invLinkFunction(l-
o))).attr(\"opacity\",1),console.log(\"joinPoint\",l,u,50,o),this.joinPointLabel
.attr(\"x\",a(l)+u).attr(\"y\",45).attr(\"text-anchor\",\"middle\").attr(\"font-
weight\",\"bold\").attr(\"fill\",\"#000\").text((0,p.format)(\",.2f\")
(this.invLinkFunction(l-
o))).attr(\"opacity\",1),this.joinPointTitle.attr(\"x\",a(l)
+u).attr(\"y\",28).attr(\"text-anchor\",\"middle\").attr(\"font-
size\",\"12\").attr(\"fill\",\"#000\").text(this.props.outNames[0]).attr(\"opaci
ty\",.5),this.props.hideBars||(this.joinPointTitleLeft.attr(\"x\",a(l)+u-
16).attr(\"y\",12).attr(\"text-anchor\",\"end\").attr(\"font-
size\",\"13\").attr(\"fill\",this.colors[0]).text(\"higher\").attr(\"opacity\",1
),this.joinPointTitleRight.attr(\"x\",a(l)+u+16).attr(\"y\",12).attr(\"text-
anchor\",\"start\").attr(\"font-
size\",\"13\").attr(\"fill\",this.colors[1]).text(\"lower\").attr(\"opacity\",1)
,this.joinPointTitleLeftArrow.attr(\"x\",a(l)+u+7).attr(\"y\",8).attr(\"text-
anchor\",\"end\").attr(\"font-
size\",\"13\").attr(\"fill\",this.colors[0]).text(\"â\").attr(\"opacity\",1),thi
s.joinPointTitleRightArrow.attr(\"x\",a(l)+u-7).attr(\"y\",14).attr(\"text-
anchor\",\"start\").attr(\"font-
size\",\"13\").attr(\"fill\",this.colors[1]).text(\"â\").attr(\"opacity\",1)),th
is.props.hideBaseValueLabel||
this.baseValueTitle.attr(\"x\",this.scaleCentered(0)).attr(\"y\",28).attr(\"text
-anchor\",\"middle\").attr(\"font-
size\",\"12\").attr(\"fill\",\"#000\").text(\"base
value\").attr(\"opacity\",.5)}},{key:\"componentWillUnmount\",value:function()
{window.removeEventListener(\"resize\",this.redraw)}},
{key:\"render\",value:function(){var t=this;return
s.default.createElement(\"svg\",{ref:function(e){return t.svg=(0,l.select)
(e)},style:
{userSelect:\"none\",display:\"block\",fontFamily:\"arial\",sansSerif:!
0}},s.default.createElement(\"style\",{dangerouslySetInnerHTML:{__html:\"\\n
.force-bar-axis path {\\n       fill: none;\\n        opacity: 0.4;\\n
}\\n        .force-bar-axis paths {\\n      display: none;\\
n        }\\n       .tick line {\\n        stroke: #000;\\n
stroke-width: 1px;\\n       opacity: 0.4;\\n       }\\n       .tick
text {\\n         fill: #000;\\n        opacity: 0.5;\\n        font-
size: 12px;\\n        padding: 0px;\\n      }\"}}))}}]),e}
(s.default.Component);b.defaultProps={plot_cmap:\"RdBu\"},e.default=b},function(
t,e,n){\"use strict\";function r(t){return t&&t.__esModule?t:
{default:t}}function i(t,e){if(!(t instanceof e))throw new TypeError(\"Cannot
call a class as a function\")}function o(t,e){if(!t)throw new
ReferenceError(\"this hasn't been initialised - super() hasn't been
called\");return!e||\"object\"!=typeof e&&\"function\"!=typeof e?t:e}function
a(t,e){if(\"function\"!=typeof e&&null!==e)throw new TypeError(\"Super
expression must either be null or a function, not \"+typeof
e);t.prototype=Object.create(e&&e.prototype,{constructor:{value:t,enumerable:!
1,writable:!0,configurable:!0}}),e&&(Object.setPrototypeOf?
Object.setPrototypeOf(t,e):t.__proto__=e)}Object.defineProperty(e,\"__esModule\"
,{value:!0});var u=function(){function t(t,e){for(var n=0;n<e.length;n++){var
r=e[n];r.enumerable=r.enumerable||!1,r.configurable=!0,\"value\"in
r&&(r.writable=!0),Object.defineProperty(t,r.key,r)}}return function(e,n,r)
{return n&&t(e.prototype,n),r&&t(e,r),e}}
(),c=n(41),s=r(c),l=n(66),f=(n(7),n(29)),p=n(38),h=n(58),d=r(h),v=function(t)
{function e(){i(this,e);var t=o(this,(e.__proto__||
Object.getPrototypeOf(e)).call(this));return
t.width=100,window.lastSimpleListInstance=t,t.effectFormat=(0,f.format)
(\".2\"),t}return a(e,t),u(e,[{key:\"render\",value:function(){var t=this,e=void
0;\"string\"==typeof this.props.plot_cmap?this.props.plot_cmap in
d.default.colors?e=d.default.colors[this.props.plot_cmap]:(console.log(\"Invalid
color map name, reverting to
default.\"),e=d.default.colors.RdBu):Array.isArray(this.props.plot_cmap)&&(e=thi
s.props.plot_cmap),console.log(this.props.features,this.props.features),this.sca
le=(0,l.scaleLinear)().domain([0,(0,p.max)((0,p.map)
(this.props.features,function(t){return
Math.abs(t.effect)}))]).range([0,this.width]);var n=(0,p.reverse)((0,p.sortBy)
(Object.keys(this.props.features),function(e){return
Math.abs(t.props.features[e].effect)})),r=n.map(function(n){var
r=t.props.features[n],i=t.props.featureNames[n],o={width:t.scale(Math.abs(r.effe
ct)),height:\"20px\",background:r.effect<0?e[0]:e[1],display:\"inline-
block\"},a=void 0,u=void 0,c={lineHeight:\"20px\",display:\"inline-
block\",width:t.width+40,verticalAlign:\"top\",marginRight:\"5px\",textAlign:\"r
ight\"},l={lineHeight:\"20px\",display:\"inline-
block\",width:t.width+40,verticalAlign:\"top\",marginLeft:\"5px\"};return
r.effect<0?(u=s.default.createElement(\"span\",{style:l},i),c.width=40+t.width-
t.scale(Math.abs(r.effect)),c.textAlign=\"right\",c.color=\"#999\",c.fontSize=\"
13px\",a=s.default.createElement(\"span\",{style:c},t.effectFormat(r.effect))):
(c.textAlign=\"right\",a=s.default.createElement(\"span\",
{style:c},i),l.width=40,l.textAlign=\"left\",l.color=\"#999\",l.fontSize=\"13px\
",u=s.default.createElement(\"span\",
{style:l},t.effectFormat(r.effect))),s.default.createElement(\"div\",
{key:n,style:{marginTop:\"2px\"}},a,s.default.createElement(\"div\",
{style:o}),u)});return s.default.createElement(\"span\",null,r)}}]),e}
(s.default.Component);v.defaultProps={plot_cmap:\"RdBu\"},e.default=v},function(
t,e,n){\"use strict\";t.exports=n(359)},function(t,e,n){var r=(n(0),n(411)),i=!
1;t.exports=function(t){t=t||{};var e=t.shouldRejectClick||r;i=!
0,n(22).injection.injectEventPluginsByName({TapEventPlugin:n(409)
(e)})}},function(t,e,n){\"use strict\";function r(t){return t&&t.__esModule?t:
{default:t}}var
i=n(41),o=r(i),a=n(187),u=r(a),c=n(188),s=r(c),l=n(186),f=r(l),p=n(185),h=r(p),d
=n(184),v=r(d);(0,s.default)
(),window.SHAP={SimpleListVisualizer:f.default,AdditiveForceVisualizer:h.default
,AdditiveForceArrayVisualizer:v.default,React:o.default,ReactDom:u.default}},,fu
nction(t,e,n){\"use strict\";function r(t){return t}function i(t,e,n){function
i(t,e){var n=y.hasOwnProperty(e)?
y[e]:null;C.hasOwnProperty(e)&&u(\"OVERRIDE_BASE\"===n,\"ReactClassInterface:
You are attempting to override `%s` from your class specification. Ensure that
your method names do not overlap with React
methods.\",e),t&&u(\"DEFINE_MANY\"===n||\"DEFINE_MANY_MERGED\"===n,\"ReactClassI
nterface: You are attempting to define `%s` on your component more than once.
This conflict may be due to a mixin.\",e)}function s(t,n){if(n){u(\"function\"!
=typeof n,\"ReactClass: You're attempting to use a component class or function
as a mixin. Instead, just use a regular object.\"),u(!e(n),\"ReactClass: You're
attempting to use a component as a mixin. Instead, just use a regular
object.\");var
r=t.prototype,o=r.__reactAutoBindPairs;n.hasOwnProperty(c)&&b.mixins(t,n.mixins)
;for(var a in n)if(n.hasOwnProperty(a)&&a!==c){var
s=n[a],l=r.hasOwnProperty(a);if(i(l,a),b.hasOwnProperty(a))b[a](t,s);else{var
f=y.hasOwnProperty(a),d=\"function\"==typeof s,v=d&&!f&&!l&&!1!
==n.autobind;if(v)o.push(a,s),r[a]=s;else if(l){var
g=y[a];u(f&&(\"DEFINE_MANY_MERGED\"===g||\"DEFINE_MANY\"===g),\"ReactClass:
Unexpected spec policy %s for key %s when mixing in component
specs.\",g,a),\"DEFINE_MANY_MERGED\"===g?
r[a]=p(r[a],s):\"DEFINE_MANY\"===g&&(r[a]=h(r[a],s))}else
r[a]=s}}}else;}function l(t,e){if(e)for(var n in e){var
r=e[n];if(e.hasOwnProperty(n)){var i=n in b;u(!i,'ReactClass: You are attempting
to define a reserved property, `%s`, that shouldn\\'t be on the \"statics\" key.
Define it as an instance property instead; it will still be accessible on the
constructor.',n);var o=n in t;if(o){var a=_.hasOwnProperty(n)?_[n]:null;return
u(\"DEFINE_MANY_MERGED\"===a,\"ReactClass: You are attempting to define `%s` on
your component more than once. This conflict may be due to a
mixin.\",n),void(t[n]=p(t[n],r))}t[n]=r}}}function f(t,e)
{u(t&&e&&\"object\"==typeof t&&\"object\"==typeof
e,\"mergeIntoWithNoDuplicateKeys(): Cannot merge non-objects.\");for(var n in
e)e.hasOwnProperty(n)&&(u(void 0===t[n],\"mergeIntoWithNoDuplicateKeys(): Tried
to merge two objects with the same key: `%s`. This conflict may be due to a
mixin; in particular, this may be caused by two getInitialState() or
getDefaultProps() methods returning objects with clashing
keys.\",n),t[n]=e[n]);return t}function p(t,e){return function(){var
n=t.apply(this,arguments),r=e.apply(this,arguments);if(null==n)return
 r;if(null==r)return n;var i={};return f(i,n),f(i,r),i}}function h(t,e){return
function(){t.apply(this,arguments),e.apply(this,arguments)}}function d(t,e){var
n=e.bind(t);return n}function v(t){for(var
e=t.__reactAutoBindPairs,n=0;n<e.length;n+=2){var
r=e[n],i=e[n+1];t[r]=d(t,i)}}function g(t){var e=r(function(t,r,i)
{this.__reactAutoBindPairs.length&&v(this),this.props=t,this.context=r,this.refs
=a,this.updater=i||n,this.state=null;var o=this.getInitialState?
this.getInitialState():null;u(\"object\"==typeof o&&!
Array.isArray(o),\"%s.getInitialState(): must return an object or
null\",e.displayName||\"ReactCompositeComponent\"),this.state=o});e.prototype=ne
w
k,e.prototype.constructor=e,e.prototype.__reactAutoBindPairs=[],m.forEach(s.bind
(null,e)),s(e,x),s(e,t),s(e,w),e.getDefaultProps&&(e.defaultProps=e.getDefaultPr
ops()),u(e.prototype.render,\"createClass(...): Class specification must
implement a `render` method.\");for(var i in y)e.prototype[i]||
(e.prototype[i]=null);return e}var
m=[],y={mixins:\"DEFINE_MANY\",statics:\"DEFINE_MANY\",propTypes:\"DEFINE_MANY\"
,contextTypes:\"DEFINE_MANY\",childContextTypes:\"DEFINE_MANY\",getDefaultProps:
\"DEFINE_MANY_MERGED\",getInitialState:\"DEFINE_MANY_MERGED\",getChildContext:\"
DEFINE_MANY_MERGED\",render:\"DEFINE_ONCE\",componentWillMount:\"DEFINE_MANY\",c
omponentDidMount:\"DEFINE_MANY\",componentWillReceiveProps:\"DEFINE_MANY\",shoul
dComponentUpdate:\"DEFINE_ONCE\",componentWillUpdate:\"DEFINE_MANY\",componentDi
dUpdate:\"DEFINE_MANY\",componentWillUnmount:\"DEFINE_MANY\",UNSAFE_componentWil
lMount:\"DEFINE_MANY\",UNSAFE_componentWillReceiveProps:\"DEFINE_MANY\",UNSAFE_c
omponentWillUpdate:\"DEFINE_MANY\",updateComponent:\"OVERRIDE_BASE\"},_={getDeri
vedStateFromProps:\"DEFINE_MANY_MERGED\"},b={displayName:function(t,e)
{t.displayName=e},mixins:function(t,e){if(e)for(var n=0;n<e.length;n+
+)s(t,e[n])},childContextTypes:function(t,e)
{t.childContextTypes=o({},t.childContextTypes,e)},contextTypes:function(t,e)
{t.contextTypes=o({},t.contextTypes,e)},getDefaultProps:function(t,e)
{t.getDefaultProps?
t.getDefaultProps=p(t.getDefaultProps,e):t.getDefaultProps=e},propTypes:function
(t,e){t.propTypes=o({},t.propTypes,e)},statics:function(t,e)
{l(t,e)},autobind:function(){}},x={componentDidMount:function()
{this.__isMounted=!0}},w={componentWillUnmount:function(){this.__isMounted=!
1}},C={replaceState:function(t,e)
{this.updater.enqueueReplaceState(this,t,e)},isMounted:function(){return!!
this.__isMounted}},k=function(){};return o(k.prototype,t.prototype,C),g}var
o=n(3),a=n(51),u=n(0),c=\"mixins\";t.exports=i},function(t,e,n){\"use
strict\";e.a=function(t){return function(){return t}}},function(t,e,n){\"use
strict\";var r=n(106);e.a=function(t,e,n){var
i,o,a,u,c=t.length,s=e.length,l=new Array(c*s);for(null==n&&(n=r.b),i=a=0;i<c;+
+i)for(u=t[i],o=0;o<s;++o,++a)l[a]=n(u,e[o]);return l}},function(t,e,n){\"use
strict\";e.a=function(t,e){return e<t?-1:e>t?1:e>=t?0:NaN}},function(t,e,n)
{\"use strict\";var
r=n(100),i=n(101),o=n(192),a=n(104),u=n(196),c=n(107),s=n(109),l=n(108);e.a=func
tion(){function t(t){var r,o,a=t.length,u=new Array(a);for(r=0;r<a;+
+r)u[r]=e(t[r],r,t);var l=f(u),h=l[0],d=l[1],v=p(u,h,d);Array.isArray(v)||
(v=n.i(s.c)(h,d,v),v=n.i(c.a)(Math.ceil(h/v)*v,Math.floor(d/v)*v,v));for(var
g=v.length;v[0]<=h;)v.shift(),--g;for(;v[g-1]>d;)v.pop(),--g;var m,y=new
Array(g+1);for(r=0;r<=g;++r)m=y[r]=[],m.x0=r>0?v[r-1]:h,m.x1=r<g?
v[r]:d;for(r=0;r<a;++r)o=u[r],h<=o&&o<=d&&y[n.i(i.a)(v,o,0,g)].push(t[r]);return
y}var e=u.a,f=a.a,p=l.a;return t.value=function(r){return arguments.length?
(e=\"function\"==typeof r?r:n.i(o.a)(r),t):e},t.domain=function(e){return
arguments.length?(f=\"function\"==typeof e?e:n.i(o.a)
([e[0],e[1]]),t):f},t.thresholds=function(e){return arguments.length?
(p=\"function\"==typeof e?e:Array.isArray(e)?n.i(o.a)(r.b.call(e)):n.i(o.a)
(e),t):p},t}},function(t,e,n){\"use strict\";e.a=function(t){return
t}},function(t,e,n){\"use strict\";e.a=function(t,e){var n,r,i=t.length,o=-
```

```
1;if(null==e){for(;++o<i;)if(null!=(n=t[o])&&n>=n)for(r=n;++o<i;)null!
=(n=t[o])&&n>r&&(r=n)}else for(;++o<i;)if(null!=(n=e(t[o],o,t))&&n>=n)for(r=n;+
+o<i;)null!=(n=e(t[o],o,t))&&n>r&&(r=n);return r}},function(t,e,n){\"use
strict\";var r=n(28);e.a=function(t,e){var i,o=t.length,a=o,u=-
1,c=0;if(null==e)for(;++u<o;)isNaN(i=n.i(r.a)(t[u]))?--a:c+=i;else for(;+
+u<o;)isNaN(i=n.i(r.a)(e(t[u],u,t)))?--a:c+=i;if(a)return c/a}},function(t,e,n)
{\"use strict\";var r=n(19),i=n(28),o=n(59);e.a=function(t,e){var
a,u=t.length,c=-1,s=[];if(null==e)for(;++c<u;)isNaN(a=n.i(i.a)(t[c]))||
s.push(a);else for(;++c<u;)isNaN(a=n.i(i.a)(e(t[c],c,t)))||s.push(a);return
n.i(o.a)(s.sort(r.a),.5)}},function(t,e,n){\"use strict\";e.a=function(t)
{for(var e,n,r,i=t.length,o=-1,a=0;++o<i;)a+=t[o].length;for(n=new Array(a);--
i>=0;)for(r=t[i],e=r.length;--e>=0;)n[--a]=r[e];return n}},function(t,e,n){\"use
strict\";e.a=function(t,e){for(var n=e.length,r=new
Array(n);n--;)r[n]=t[e[n]];return r}},function(t,e,n){\"use strict\";var
r=n(19);e.a=function(t,e){if(n=t.length){var
n,i,o=0,a=0,u=t[a];for(null==e&&(e=r.a);++o<n;)(e(i=t[o],u)<0||0!
==e(u,u))&&(u=i,a=o);return 0===e(u,u)?a:void 0}}},function(t,e,n){\"use
strict\";e.a=function(t,e,n){for(var r,i,o=(null==n?t.length:n)-(e=null==e?
0:+e);o;)i=Math.random()*o--|0,r=t[o+e],t[o+e]=t[i+e],t[i+e]=r;return
t}},function(t,e,n){\"use strict\";e.a=function(t,e){var n,r=t.length,i=-
1,o=0;if(null==e)for(;++i<r;)(n=+t[i])&&(o+=n);else for(;++i<r;)
(n=+e(t[i],i,t))&&(o+=n);return o}},function(t,e,n){\"use strict\";var
r=n(100),i=n(19),o=n(28),a=n(59);e.a=function(t,e,u){return
t=r.a.call(t,o.a).sort(i.a),Math.ceil((u-e)/(2*(n.i(a.a)(t,.75)-n.i(a.a)
(t,.25))*Math.pow(t.length,-1/3)))}},function(t,e,n){\"use strict\";var
r=n(103);e.a=function(t,e,i){return Math.ceil((i-e)/(3.5*n.i(r.a)
(t)*Math.pow(t.length,-1/3)))}},function(t,e,n){\"use strict\";var
r=n(110);e.a=function(){return n.i(r.a)(arguments)}},function(t,e,n){\"use
strict\";n.d(e,\"a\",function(){return r});var
r=Array.prototype.slice},function(t,e,n){\"use strict\";function r(t)
{return\"translate(\"+(t+.5)+\",0)\"}function i(t){return\"translate(0,\"+
(t+.5)+\")\"}function o(t){return function(e){return+t(e)}}function a(t){var
e=Math.max(0,t.bandwidth()-1)/2;return t.round()&&(e=Math.round(e)),function(n)
{return+t(n)+e}}function u(){return!this.__axis}function c(t,e){function n(n)
{var r=null==s?e.ticks?e.ticks.apply(e,c):e.domain():s,i=null==l?e.tickFormat?
e.tickFormat.apply(e,c):d.a:l,h=Math.max(f,0)+b,k=e.range(),E=+k[0]+.5,M=+k[k.le
ngth-1]+.5,T=(e.bandwidth?a:o)(e.copy()),S=n.selection?
n.selection():n,N=S.selectAll(\".domain\").data([null]),A=S.selectAll(\".tick\")
.data(r,e).order(),P=A.exit(),O=A.enter().append(\"g\").attr(\"class\",\"tick\")
,I=A.select(\"line\"),D=A.select(\"text\");N=N.merge(N.enter().insert(\"path\",\
".tick\").attr(\"class\",\"domain\").attr(\"stroke\",\"#000\")),A=A.merge(O),I=I
.merge(O.append(\"line\").attr(\"stroke\",\"#000\").attr(w+\"2\",x*f)),D=D.merge
(O.append(\"text\").attr(\"fill\",\"#000\").attr(w,x*h).attr(\"dy\",t===v?\"0em\
":t===m?\"0.71em\":\"0.32em\")),n!
==S&&(N=N.transition(n),A=A.transition(n),I=I.transition(n),D=D.transition(n),P=
P.transition(n).attr(\"opacity\",_).attr(\"transform\",function(t){return
isFinite(t=T(t))?
C(t):this.getAttribute(\"transform\")}),O.attr(\"opacity\",_).attr(\"transform\"
,function(t){var e=this.parentNode.__axis;return C(e&&isFinite(e=e(t))?
e:T(t))})),P.remove(),N.attr(\"d\",t===y||
t==g?\"M\"+x*p+\",\"+E+\"H0.5V\"+M+\"H\"+x*p:\"M\"+E+\",\"+x*p+\"V0.5H\"+M+\"V\"
+x*p),A.attr(\"opacity\",1).attr(\"transform\",function(t){return
C(T(t))}),I.attr(w+\"2\",x*f),D.attr(w,x*h).text(i),S.filter(u).attr(\"fill\",\"
none\").attr(\"font-size\",10).attr(\"font-family\",\"sans-serif\").attr(\"text-
anchor\",t===g?\"start\":t===y?\"end\":\"middle\"),S.each(function()
{this.__axis=T})}var c=[],s=null,l=null,f=6,p=6,b=3,x=t===v||t===y?-
1:1,w=t===y||t===g?\"x\":\"y\",C=t===v||t===m?r:i;return n.scale=function(t)
{return arguments.length?(e=t,n):e},n.ticks=function(){return
c=h.a.call(arguments),n},n.tickArguments=function(t){return arguments.length?
(c=null==t?[]:h.a.call(t),n):c.slice()},n.tickValues=function(t){return
arguments.length?(s=null==t?
null:h.a.call(t),n):s&&s.slice()},n.tickFormat=function(t){return
arguments.length?(l=t,n):l},n.tickSize=function(t){return arguments.length?
(f=p=+t,n):f},n.tickSizeInner=function(t){return arguments.length?
(f=+t,n):f},n.tickSizeOuter=function(t){return arguments.length?
(p=+t,n):p},n.tickPadding=function(t){return arguments.length?
(b=+t,n):b},n}function s(t){return c(v,t)}function l(t){return c(g,t)}function
f(t){return c(m,t)}function p(t){return c(y,t)}e.a=s,e.b=l,e.c=f,e.d=p;var
h=n(208),d=n(210),v=1,g=2,m=3,y=4,_=1e-6},function(t,e,n){\"use
strict\";e.a=function(t){return t}},function(t,e,n){\"use strict\";var
r=(n(214),n(215),n(60));n.d(e,\"a\",function(){return
r.a});n(213),n(216),n(212)},function(t,e,n){\"use strict\"},function(t,e,n)
{\"use strict\"},function(t,e,n){\"use strict\";n(60)},function(t,e,n){\"use
strict\";function r(){}function i(t,e){var n=new r;if(t instanceof
r)t.each(function(t){n.add(t)});else if(t){var i=-1,o=t.length;if(null==e)for(;+
+i<o;)n.add(t[i]);else for(;++i<o;)n.add(e(t[i],i,t))}return n}var
o=n(60),a=o.a.prototype;r.prototype=i.prototype={constructor:r,has:a.has,add:fun
ction(t){return
t+=\"\",this[o.b+t]=t,this},remove:a.remove,clear:a.clear,values:a.keys,size:a.s
ize,empty:a.empty,each:a.each}},function(t,e,n){\"use strict\"},function(t,e,n)
{\"use strict\";function r(t){if(t instanceof o)return new
o(t.h,t.s,t.l,t.opacity);t instanceof u.d||(t=n.i(u.e)(t));var
e=t.r/255,r=t.g/255,i=t.b/255,a=(g*i+d*e-v*r)/(g+d-v),s=i-a,l=(h*(r-a)-f*s)/
p,m=Math.sqrt(l*l+s*s)/(h*a*(1-a)),y=m?Math.atan2(l,s)*c.a-120:NaN;return new
o(y<0?y+360:y,m,a,t.opacity)}function i(t,e,n,i){return 1===arguments.length?
r(t):new o(t,e,n,null==i?1:i)}function o(t,e,n,r)
{this.h=+t,this.s=+e,this.l=+n,this.opacity=+r}e.a=i;var

a=n(62),u=n(61),c=n(113),s=-.14861,l=1.78277,f=-.29227,p=-.90649,h=1.97294,d=h*p
,v=h*l,g=l*f-p*s;n.i(a.a)(o,i,n.i(a.b)(u.f,{brighter:function(t){return
t=null==t?u.g:Math.pow(u.g,t),new
o(this.h,this.s,this.l*t,this.opacity)},darker:function(t){return t=null==t?
u.h:Math.pow(u.h,t),new o(this.h,this.s,this.l*t,this.opacity)},rgb:function()
{var t=isNaN(this.h)?0:(this.h+120)*c.b,e=+this.l,n=isNaN(this.s)?0:this.s*e*(1-
e),r=Math.cos(t),i=Math.sin(t);return new
u.d(255*(e+n*(s*r+l*i)),255*(e+n*(f*r+p*i)),255*(e+n*(h*r)),this.opacity)}}))},f
unction(t,e,n){\"use strict\";function r(t){if(t instanceof o)return new
o(t.l,t.a,t.b,t.opacity);if(t instanceof p){var e=t.h*v.b;return new
o(t.l,Math.cos(e)*t.c,Math.sin(e)*t.c,t.opacity)}t instanceof d.d||(t=n.i(d.e)
(t));var r=s(t.r),i=s(t.g),u=s(t.b),c=a((.4124564*r+.3575761*i+.1804375*u)/
g),l=a((.2126729*r+.7151522*i+.072175*u)/m);return new o(116*l-16,500*(c-
l),200*(l-a((.0193339*r+.119192*i+.9503041*u)/y)),t.opacity)}function i(t,e,n,i)
{return 1===arguments.length?r(t):new o(t,e,n,null==i?1:i)}function o(t,e,n,r)
{this.l=+t,this.a=+e,this.b=+n,this.opacity=+r}function a(t){return t>w?
Math.pow(t,1/3):t/x+_}function u(t){return t>b?t*t*t:x*(t-_)}function c(t)
{return 255*(t<=.0031308?12.92*t:1.055*Math.pow(t,1/2.4)-.055)}function s(t)
{return(t/=255)<=.04045?t/12.92:Math.pow((t+.055)/1.055,2.4)}function l(t){if(t
instanceof p)return new p(t.h,t.c,t.l,t.opacity);t instanceof o||(t=r(t));var
e=Math.atan2(t.b,t.a)*v.a;return new p(e<0?
e+360:e,Math.sqrt(t.a*t.a+t.b*t.b),t.l,t.opacity)}function f(t,e,n,r){return
1===arguments.length?l(t):new p(t,e,n,null==r?1:r)}function p(t,e,n,r)
{this.h=+t,this.c=+e,this.l=+n,this.opacity=+r}e.a=i,e.b=f;var
h=n(62),d=n(61),v=n(113),g=.95047,m=1,y=1.08883,_=4/29,b=6/29,x=3*b*b,w=b*b*b;n.
i(h.a)(o,i,n.i(h.b)(d.f,{brighter:function(t){return new o(this.l+18*(null==t?
1:t),this.a,this.b,this.opacity)},darker:function(t){return new o(this.l-
18*(null==t?1:t),this.a,this.b,this.opacity)},rgb:function(){var
t=(this.l+16)/116,e=isNaN(this.a)?t:t+this.a/500,n=isNaN(this.b)?t:t-this.b/
200;return t=m*u(t),e=g*u(e),n=y*u(n),new d.d(c(3.2404542*e-
1.5371385*t-.4985314*n),c(-.969266*e+1.8760108*t+.041556*n),c(.0556434*e-.204025
9*t+1.0572252*n),this.opacity)}})),n.i(h.a)(p,f,n.i(h.b)(d.f,
{brighter:function(t){return new p(this.h,this.c,this.l+18*(null==t?
1:t),this.opacity)},darker:function(t){return new p(this.h,this.c,this.l-
18*(null==t?1:t),this.opacity)},rgb:function(){return
r(this).rgb()}}))},function(t,e,n){\"use strict\";function r(t){return
i=n.i(u.a)(t),o=i.format,a=i.formatPrefix,i}n.d(e,\"b\",function(){return
o}),n.d(e,\"c\",function(){return a}),e.a=r;var
i,o,a,u=n(117);r({decimal:\".\",thousands:\",\",grouping:[3],currency:
[\"$\",\"\"]})},function(t,e,n){\"use strict\";e.a=function(t,e)
```

```
{t=t.toPrecision(e);t:for(var n,r=t.length,i=1,o=-1;i<r;++i)switch(t[i])
{case\".\":o=n=i;break;case\"0\":0===o&&(o=i),n=i;break;case\"e\":break
t;default:o>0&&(o=0)}return o>0?t.slice(0,o)+t.slice(n+1):t}},function(t,e,n)
{\"use strict\";e.a=function(t,e){return function(n,r){for(var
i=n.length,o=[],a=0,u=t[0],c=0;i>0&&u>0&&(c+u+1>r&&(u=Math.max(1,r-
c)),o.push(n.substring(i-=u,i+u)),!((c+=u+1)>r));)u=t[a=(a+1)%t.length];return
o.reverse().join(e)}}},function(t,e,n){\"use strict\";e.a=function(t){return
function(e){return e.replace(/[0-9]/g,function(e){return
t[+e]})}}},function(t,e,n){\"use strict\";var r=n(63);e.a=function(t,e){var
i=n.i(r.a)(t,e);if(!i)return t+\"\";var o=i[0],a=i[1];return a<0?\"0.\"+new
Array(-a).join(\"0\")+o:o.length>a+1?o.slice(0,a+1)+\".\"+o.slice(a+1):o+new
Array(a-o.length+2).join(\"0\")}},function(t,e,n){\"use strict\";e.a=function(t)
{return t}},function(t,e,n){\"use strict\";var r=n(42);e.a=function(t){return
Math.max(0,-n.i(r.a)(Math.abs(t)))}},function(t,e,n){\"use strict\";var
r=n(42);e.a=function(t,e){return Math.max(0,3*Math.max(-
8,Math.min(8,Math.floor(n.i(r.a)(e)/3)))-n.i(r.a)
(Math.abs(t)))}},function(t,e,n){\"use strict\";var r=n(42);e.a=function(t,e)
{return t=Math.abs(t),e=Math.abs(e)-t,Math.max(0,n.i(r.a)(e)-n.i(r.a)(t))
+1}},function(t,e,n){\"use strict\";function r(t){return function e(r){function
a(e,a){var u=t((e=n.i(i.cubehelix)(e)).h,(a=n.i(i.cubehelix)(a)).h),c=n.i(o.a)
(e.s,a.s),s=n.i(o.a)(e.l,a.l),l=n.i(o.a)(e.opacity,a.opacity);return function(t)
{return e.h=u(t),e.s=c(t),e.l=s(Math.pow(t,r)),e.opacity=l(t),e+\"\"}}return
r=+r,a.gamma=e,a}(1)}n.d(e,\"a\",function(){return a});var
i=n(10),o=n(31),a=(r(o.b),r(o.a))},function(t,e,n){\"use strict\";function r(t)
{return function(e,r){var a=t((e=n.i(i.hcl)(e)).h,(r=n.i(i.hcl)
(r)).h),u=n.i(o.a)(e.c,r.c),c=n.i(o.a)(e.l,r.l),s=n.i(o.a)
(e.opacity,r.opacity);return function(t){return
e.h=a(t),e.c=u(t),e.l=c(t),e.opacity=s(t),e+\"\"}}}var
i=n(10),o=n(31);r(o.b),r(o.a)},function(t,e,n){\"use strict\";function r(t)
{return function(e,r){var a=t((e=n.i(i.hsl)(e)).h,(r=n.i(i.hsl)
(r)).h),u=n.i(o.a)(e.s,r.s),c=n.i(o.a)(e.l,r.l),s=n.i(o.a)
(e.opacity,r.opacity);return function(t){return
e.h=a(t),e.s=u(t),e.l=c(t),e.opacity=s(t),e+\"\"}}}var
i=n(10),o=n(31);r(o.b),r(o.a)},function(t,e,n){\"use
strict\";n(10),n(31)},function(t,e,n){\"use strict\"},function(t,e,n){\"use
strict\";e.a=function(t,e){return t=+t,e-=t,function(n){return
Math.round(t+e*n)}}},function(t,e,n){\"use strict\";n.d(e,\"a\",function()
{return i});var
r=180/Math.PI,i={translateX:0,translateY:0,rotate:0,skewX:0,scaleX:1,scaleY:1};e
.b=function(t,e,n,i,o,a){var u,c,s;return(u=Math.sqrt(t*t+e*e))&&(t/=u,e/=u),
(s=t*n+e*i)&&(n-=t*s,i-=e*s),(c=Math.sqrt(n*n+i*i))&&(n/=c,i/=c,s/
=c),t*i<e*n&&(t=-t,e=-e,s=-s,u=-u),
{translateX:o,translateY:a,rotate:Math.atan2(e,t)*r,skewX:Math.atan(s)*r,scaleX:
u,scaleY:c}}},function(t,e,n){\"use strict\";function r(t,e,r,o){function a(t)
{return t.length?t.pop()+\" \":\"\"}function u(t,o,a,u,c,s){if(t!==a||o!==u){var
l=c.push(\"translate(\",null,e,null,r);s.push({i:l-4,x:n.i(i.a)(t,a)},{i:l-
2,x:n.i(i.a)(o,u)})}else(a||u)&&c.push(\"translate(\"+a+e+u+r)}function
c(t,e,r,u){t!==e?(t-e>180?e+=360:e-t>180&&(t+=360),u.push({i:r.push(a(r)
+\"rotate(\",null,o)-2,x:n.i(i.a)(t,e)})):e&&r.push(a(r)
+\"rotate(\"+e+o)}function s(t,e,r,u){t!==e?u.push({i:r.push(a(r)
+\"skewX(\",null,o)-2,x:n.i(i.a)(t,e)}):e&&r.push(a(r)+\"skewX(\"+e+o)}function
l(t,e,r,o,u,c){if(t!==r||e!==o){var s=u.push(a(u)
+\"scale(\",null,\",\",null,\")\");c.push({i:s-4,x:n.i(i.a)(t,r)},{i:s-
2,x:n.i(i.a)(e,o)})}else 1===r&&1===o||u.push(a(u)
+\"scale(\"+r+\",\"+o+\")\")}return function(e,n){var r=[],i=[];return
e=t(e),n=t(n),u(e.translateX,e.translateY,n.translateX,n.translateY,r,i),c(e.rot
ate,n.rotate,r,i),s(e.skewX,n.skewX,r,i),l(e.scaleX,e.scaleY,n.scaleX,n.scaleY,r
,i),e=n=null,function(t){for(var e,n=-1,o=i.length;+
+n<o;)r[(e=i[n]).i]=e.x(t);return r.join(\"\")}}}var
i=n(43),o=n(236);r(o.a,\"px, \",\"px)\",\"deg)\"),r(o.b,\", \",\")\",\")\")},fun
ction(t,e,n){\"use strict\";function r(t){return\"none\"===t?s.a:(o||
(o=document.createElement(\"DIV\"),a=document.documentElement,u=document.default
View),o.style.transform=t,t=u.getComputedStyle(a.appendChild(o),null).getPropert
yValue(\"transform\"),a.removeChild(o),t=t.slice(7,-1).split(\",\"),n.i(s.b)
(+t[0],+t[1],+t[2],+t[3],+t[4],+t[5]))}function i(t){return null==t?s.a:(c||
(c=document.createElementNS(\"http://www.w3.org/2000/
svg\",\"g\")),c.setAttribute(\"transform\",t),
(t=c.transform.baseVal.consolidate())?(t=t.matrix,n.i(s.b)
(t.a,t.b,t.c,t.d,t.e,t.f)):s.a)}e.a=r,e.b=i;var
o,a,u,c,s=n(234)},function(t,e,n){\"use strict\";Math.SQRT2},function(t,e,n)
{\"use strict\";function r()
{this._x0=this._y0=this._x1=this._y1=null,this._=\"\"}function i(){return new
r}var o=Math.PI,a=2*o,u=a-1e-
6;r.prototype=i.prototype={constructor:r,moveTo:function(t,e){this._+=\"M\"+
(this._x0=this._x1=+t)+\",\"+(this._y0=this._y1=+e)},closePath:function(){null!
==this._x1&&(this._x1=this._x0,this._y1=this._y0,this._+=\"Z\")},lineTo:function
(t,e){this._+=\"L\"+(this._x1=+t)+\",\"+
(this._y1=+e)},quadraticCurveTo:function(t,e,n,r){this._+=\"Q\"+ +t+\",\"+
+e+\",\"+(this._x1=+n)+\",\"+(this._y1=+r)},bezierCurveTo:function(t,e,n,r,i,o)
{this._+=\"C\"+ +t+\",\"+ +e+\",\"+ +n+\",\"+ +r+\",\"+(this._x1=+i)+\",\"+
(this._y1=+o)},arcTo:function(t,e,n,r,i){t=+t,e=+e,n=+n,r=+r,i=+i;var
a=this._x1,u=this._y1,c=n-t,s=r-e,l=a-t,f=u-e,p=l*l+f*f;if(i<0)throw new
Error(\"negative radius: \"+i);if(null===this._x1)this._+=\"M\"+(this._x1=t)
+\",\"+(this._y1=e);else if(p>1e-6)if(Math.abs(f*c-s*l)>1e-6&&i){var h=n-a,d=r-
u,v=c*c+s*s,g=h*h+d*d,m=Math.sqrt(v),y=Math.sqrt(p),_=i*Math.tan((o-
Math.acos((v+p-g)/(2*m*y)))/2),b=_/y,x=_/m;Math.abs(b-1)>1e-6&&(this._+=\"L\"+
(t+b*l)+\",\"+(e+b*f)),this._+=\"A\"+i+\",\"+i+\",0,0,\"+ +(f*h>l*d)+\",\"+
(this._x1=t+x*c)+\",\"+(this._y1=e+x*s)}else this._+=\"L\"+(this._x1=t)+\",\"+
(this._y1=e);else;},arc:function(t,e,n,r,i,c){t=+t,e=+e,n=+n;var
s=n*Math.cos(r),l=n*Math.sin(r),f=t+s,p=e+l,h=1^c,d=c?r-i:i-r;if(n<0)throw new
Error(\"negative radius: \"+n);null===this._x1?this._+=\"M\"+f+\",\"+p:
(Math.abs(this._x1-f)>1e-6||Math.abs(this._y1-p)>1e-
6)&&(this._+=\"L\"+f+\",\"+p),n&&(d<0&&(d=d%a+a),d>u?
this._+=\"A\"+n+\",\"+n+\",0,1,\"+h+\",\"+(t-s)+\",\"+(e-l)
+\"A\"+n+\",\"+n+\",0,1,\"+h+\",\"+(this._x1=f)+\",\"+(this._y1=p):d>1e-
6&&(this._+=\"A\"+n+\",\"+n+\",0,\"+ +(d>=o)+\",\"+h+\",\"+
(this._x1=t+n*Math.cos(i))+\",\"+
(this._y1=e+n*Math.sin(i))))},rect:function(t,e,n,r){this._+=\"M\"+
(this._x0=this._x1=+t)+\",\"+(this._y0=this._y1=+e)+\"h\"+ +n+\"v\"+ +r+\"h\"+-
n+\"Z\"},toString:function(){return this._}},e.a=i},function(t,e,n){\"use
strict\";function r(){function t(){var t=c().length,r=l[1]<l[0],o=l[r-0],u=l[1-
r];e=(u-o)/Math.max(1,t-p+2*h),f&&(e=Math.floor(e)),o+=(u-o-e*(t-p))*d,i=e*(1-
p),f&&(o=Math.round(o),i=Math.round(i));var v=n.i(a.range)(t).map(function(t)
{return o+e*t});return s(r?v.reverse():v)}var e,i,o=n.i(u.a)().unknown(void
0),c=o.domain,s=o.range,l=[0,1],f=!1,p=0,h=0,d=.5;return delete
o.unknown,o.domain=function(e){return
 arguments.length?(c(e),t()):c()},o.range=function(e){return arguments.length?
(l=[+e[0],+e[1]],t()):l.slice()},o.rangeRound=function(e){return l=[+e[0],
+e[1]],f=!0,t()},o.bandwidth=function(){return i},o.step=function(){return
e},o.round=function(e){return arguments.length?(f=!!
e,t()):f},o.padding=function(e){return arguments.length?
(p=h=Math.max(0,Math.min(1,e)),t()):p},o.paddingInner=function(e){return
arguments.length?(p=Math.max(0,Math.min(1,e)),t()):p},o.paddingOuter=function(e)
{return arguments.length?
(h=Math.max(0,Math.min(1,e)),t()):h},o.align=function(e){return
arguments.length?(d=Math.max(0,Math.min(1,e)),t()):d},o.copy=function(){return
r().domain(c()).range(l).round(f).paddingInner(p).paddingOuter(h).align(d)},t()}
function i(t){var e=t.copy;return t.padding=t.paddingOuter,delete
t.paddingInner,delete t.paddingOuter,t.copy=function(){return i(e())},t}function
o(){return i(r().paddingInner(1))}e.a=r,e.b=o;var
a=n(7),u=n(127)},function(t,e,n){\"use strict\";var r=n(33);e.a=n.i(r.a)
(\"1f77b4ff7f0e2ca02cd627289467bd8c564be377c27f7f7fbcbd2217becf\")},function(t,e
,n){\"use strict\";var r=n(33);e.a=n.i(r.a)
(\"1f77b4aec7e8ff7f0effbb782ca02c98df8ad62728ff98969467bdc5b0d58c564bc49c94e377c
2f7b6d27f7f7fc7c7c7bcbd22dbdb8d17becf9edae5\")},function(t,e,n){\"use
strict\";var r=n(33);e.a=n.i(r.a)
(\"393b795254a36b6ecf9c9ede6379398ca252b5cf6bcedb9c8c6d31bd9e39e7ba52e7cb94843c3
9ad494ad6616be7969c7b4173a55194ce6dbdde9ed6\")},function(t,e,n){\"use
```

```
strict\";var r=n(33);e.a=n.i(r.a)
(\"3182bd6baed69ecae1c6dbefe6550dfd8d3cfdae6bfdd0a231a35474c476a1d99bc7e9c0756bb
19e9ac8bcbddcdadaeb636363969696bdbdbdd9d9d9\")},function(t,e,n){\"use
strict\";var r=n(10),i=n(30);e.a=n.i(i.d)(n.i(r.cubehelix)
(300,.5,0),n.i(r.cubehelix)(-240,.5,1))},function(t,e,n){\"use strict\";function
r(){function t(t){return+t}var e=[0,1];return
t.invert=t,t.domain=t.range=function(n){return arguments.length?
(e=i.a.call(n,a.a),t):e.slice()},t.copy=function(){return
r().domain(e)},n.i(o.b)(t)}e.a=r;var i=n(16),o=n(34),a=n(126)},function(t,e,n)
{\"use strict\";function r(t,e){return(e=Math.log(e/t))?function(n){return
Math.log(n/t)/e}:n.i(p.a)(e)}function i(t,e){return t<0?function(n){return-
Math.pow(-e,n)*Math.pow(-t,1-n)}:function(n){return Math.pow(e,n)*Math.pow(t,1-
n)}}function o(t){return isFinite(t)?+(\"1e\"+t):t<0?0:t}function a(t){return
10===t?o:t===Math.E?Math.exp:function(e){return Math.pow(t,e)}}function u(t)
{return t===Math.E?Math.log:10===t&&Math.log10||2===t&&Math.log2||
(t=Math.log(t),function(e){return Math.log(e)/t})}function c(t){return
function(e){return-t(-e)}}function s(){function t(){return v=u(p),g=a(p),o()
[0]<0&&(v=c(v),g=c(g)),e}var e=n.i(d.a)
(r,i).domain([1,10]),o=e.domain,p=10,v=u(10),g=a(10);return e.base=function(e)
{return arguments.length?(p=+e,t()):p},e.domain=function(e){return
arguments.length?(o(e),t()):o()},e.ticks=function(t){var
e,r=o(),i=r[0],a=r[r.length-1];(e=a<i)&&(f=i,i=a,a=f);var
u,c,s,f=v(i),h=v(a),d=null==t?10:+t,m=[];if(!(p%1)&&h-f<d){if(f=Math.round(f)-
1,h=Math.round(h)+1,i>0){for(;f<h;++f)for(c=1,u=g(f);c<p;++c)if(!((s=u*c)<i))
{if(s>a)break;m.push(s)}}else for(;f<h;++f)for(c=p-1,u=g(f);c>=1;--c)if(!
((s=u*c)<i)){if(s>a)break;m.push(s)}}else m=n.i(l.ticks)(f,h,Math.min(h-
f,d)).map(g);return e?m.reverse():m},e.tickFormat=function(t,r)
{if(null==r&&(r=10===p?\".0e\":\",\"),\"function\"!=typeof r&&(r=n.i(f.format)
(r)),t===1/0)return r;null==t&&(t=10);var
i=Math.max(1,p*t/e.ticks().length);return function(t){var
e=t/g(Math.round(v(t)));return e*p<p-.5&&(e*=p),e<=i?
r(t):\"\"}},e.nice=function(){return o(n.i(h.a)(o(),{floor:function(t){return
g(Math.floor(v(t)))},ceil:function(t){return
g(Math.ceil(v(t)))}}))},e.copy=function(){return n.i(d.c)
(e,s().base(p))},e}e.a=s;var
l=n(7),f=n(29),p=n(67),h=n(125),d=n(44)},function(t,e,n){\"use strict\";function
r(t,e){return t<0?-Math.pow(-t,e):Math.pow(t,e)}function i(){function t(t,e)
{return(e=r(e,o)-(t=r(t,o)))?function(n){return(r(n,o)-t)/e}:n.i(a.a)
(e)}function e(t,e){return e=r(e,o)-(t=r(t,o)),function(n){return
r(t+e*n,1/o)}}var o=1,s=n.i(c.a)(t,e),l=s.domain;return s.exponent=function(t)
{return arguments.length?(o=+t,l(l())):o},s.copy=function(){return n.i(c.c)
(s,i().exponent(o))},n.i(u.b)(s)}function o(){return
i().exponent(.5)}e.a=i,e.b=o;var a=n(67),u=n(34),c=n(44)},function(t,e,n){\"use
strict\";function r(){function t(){var t=0,r=Math.max(1,u.length);for(c=new
Array(r-1);++t<r;)c[t-1]=n.i(i.quantile)(a,t/r);return e}function e(t){if(!
isNaN(t=+t))return u[n.i(i.bisect)(c,t)]}var a=[],u=[],c=[];return
e.invertExtent=function(t){var e=u.indexOf(t);return e<0?[NaN,NaN]:[e>0?c[e-
1]:a[0],e<c.length?c[e]:a[a.length-1]]},e.domain=function(e){if(!
arguments.length)return a.slice();a=[];for(var n,r=0,o=e.length;r<o;+
+r)null==(n=e[r])||isNaN(n=+n)||a.push(n);return
a.sort(i.ascending),t()},e.range=function(e){return arguments.length?
(u=o.b.call(e),t()):u.slice()},e.quantiles=function(){return
c.slice()},e.copy=function(){return r().domain(a).range(u)},e}e.a=r;var
i=n(7),o=n(16)},function(t,e,n){\"use strict\";function r(){function t(t)
{if(t<=t)return f[n.i(i.bisect)(l,t,0,s)]}function e(){var e=-1;for(l=new
Array(s);++e<s;)l[e]=((e+1)*c-(e-s)*u)/(s+1);return t}var
u=0,c=1,s=1,l=[.5],f=[0,1];return t.domain=function(t){return arguments.length?
(u=+t[0],c=+t[1],e()):[u,c]},t.range=function(t){return arguments.length?
(s=(f=o.b.call(t)).length-1,e()):f.slice()},t.invertExtent=function(t){var
e=f.indexOf(t);return e<0?[NaN,NaN]:e<1?[u,l[0]]:e>=s?[l[s-1],c]:[l[e-
1],l[e]]},t.copy=function(){return r().domain([u,c]).range(f)},n.i(a.b)
(t)}e.a=r;var i=n(7),o=n(16),a=n(34)},function(t,e,n){\"use
strict\";n.d(e,\"b\",function(){return o}),n.d(e,\"c\",function(){return a});var
r=n(10),i=n(30),o=n.i(i.d)(n.i(r.cubehelix)(-100,.75,.35),n.i(r.cubehelix)
(80,1.5,.8)),a=n.i(i.d)(n.i(r.cubehelix)(260,.75,.35),n.i(r.cubehelix)
(80,1.5,.8)),u=n.i(r.cubehelix)();e.a=function(t){(t<0||t>1)&&(t-
=Math.floor(t));var e=Math.abs(t-.5);return u.h=360*t-100,u.s=1.5-
1.5*e,u.l=.8-.9*e,u+\"\"}},function(t,e,n){\"use strict\";function r(t){function
e(e){var n=(e-o)/(a-o);return t(u?Math.max(0,Math.min(1,n)):n)}var o=0,a=1,u=!
1;return e.domain=function(t){return arguments.length?(o=+t[0],a=+t[1],e):
[o,a]},e.clamp=function(t){return arguments.length?(u=!!
t,e):u},e.interpolator=function(n){return arguments.length?
(t=n,e):t},e.copy=function(){return r(t).domain([o,a]).clamp(u)},n.i(i.b)
(e)}e.a=r;var i=n(34)},function(t,e,n){\"use strict\";function r(){function t(t)
{if(t<=t)return a[n.i(i.bisect)(e,t,0,u)]}var e=[.5],a=[0,1],u=1;return
t.domain=function(n){return arguments.length?
(e=o.b.call(n),u=Math.min(e.length,a.length-1),t):e.slice()},t.range=function(n)
{return arguments.length?(a=o.b.call(n),u=Math.min(e.length,a.length-
1),t):a.slice()},t.invertExtent=function(t){var n=a.indexOf(t);return[e[n-
1],e[n]]},t.copy=function(){return r().domain(e).range(a)},t}e.a=r;var
i=n(7),o=n(16)},function(t,e,n){\"use strict\";var
r=n(7),i=n(29);e.a=function(t,e,o){var a,u=t[0],c=t[t.length-
1],s=n.i(r.tickStep)(u,c,null==e?10:e);switch(o=n.i(i.formatSpecifier)
(null==o?\",f\":o),o.type){case\"s\":var
l=Math.max(Math.abs(u),Math.abs(c));return null!=o.precision||
isNaN(a=n.i(i.precisionPrefix)(s,l))||(o.precision=a),n.i(i.formatPrefix)
(o,l);case\"\":case\"e\":case\"g\":case\"p\":case\"r\":null!=o.precision||
isNaN(a=n.i(i.precisionRound)(s,Math.max(Math.abs(u),Math.abs(c))))||
(o.precision=a-(\"e\"===o.type));break;case\"f\":case\"%\":null!=o.precision||
isNaN(a=n.i(i.precisionFixed)(s))||(o.precision=a-2*(\"%\"===o.type))}return
n.i(i.format)(o)}},function(t,e,n){\"use strict\";var
r=n(128),i=n(78),o=n(80);e.a=function(){return n.i(r.b)
(o.h,o.k,o.l,o.b,o.m,o.n,o.o,o.p,i.utcFormat).domain([Date.UTC(2e3,0,1),Date.UTC
(2e3,0,2)])}},function(t,e,n){\"use strict\";function r(t){var e=t.length;return
function(n){return t[Math.max(0,Math.min(e-
1,Math.floor(n*e)))]}}n.d(e,\"b\",function(){return o}),n.d(e,\"c\",function()
{return a}),n.d(e,\"d\",function(){return u});var i=n(33);e.a=r(n.i(i.a)
(\"44015444025645045745055946075a46085c460a5d460b5e470d60470e6147106347116447136
548146748166848176948186a481a6c481b6d481c6e481d6f481f70482071482173482374482475
4825764826774828784829794 72a7a472c7a472d7b472e7c472f7d46307e46327e46337f463480453
```

```
73c83e73ca3e72cc3f71cd4071cf4070d0416fd2426fd3436ed5446dd6456cd8456cd9466bdb476a
dc4869de4968df4a68e04c67e24d66e34e65e44f64e55064e75263e85362e95462ea5661eb5760ec
5860ed5a5fee5b5eef5d5ef05f5ef1605df2625df2645cf3655cf4675cf4695cf56b5cf66c5cf66e
5cf7705cf7725cf8745cf8765cf9785df9795df97b5dfa7d5efa7f5efa815ffb835ffb8560fb8761
fc8961fc8a62fc8c63fc8e64fc9065fd9266fd9467fd9668fd9869fd9a6afd9b6bfe9d6cfe9f6dfe
a16efea36ffea571fea772fea973feaa74feac76feae77feb078feb27afeb47bfeb67cfeb77efeb9
7ffebb81febd82febf84fec185fec287fec488fec68afec88cfeca8dfecc8ffecd90fecf92fed194
fed395fed597fed799fed89afdda9cfddc9efddea0fde0a1fde2a3fde3a5fde5a7fde7a9fde9aafd
ebacfcecaefceeb0fcf0b2fcf2b4fcf4b6fcf6b8fcf7b9fcf9bbfcfbbdfcfdbf\")),a=r(n.i(i.a
)
(\"00000401000501010601010802010a02020c02020e03021004031204031405041706041907051
b08051d09061f0a07220b07240c08260d08290e092b10092d110a30120a32140b34150b37160b391
80c3c190c3e1b0c411c0c431e0c451f0c48210c4a230c4c240c4f260c51280b53290b552b0b572d0
b592f0a5b310a5c320a5e340a5f3609613809623909633b09643d09653e0966400a67420a68440a6
8450a69470b6a490b6a4a0c6b4c0c6b4d0d6c4f0d6c510e6c520e6d540f6d550f6d57106e59106e5
a116e5c126e5d126e5f136e61136e62146e64156e65156e67166e69166e6a176e6c186e6d186e6f1
96e71196e721a6e741a6e751b6e771c6d781c6d7a1d6d7c1d6d7d1e6d7f1e6c801f6c82206c84206
b85216b87216b88226a8a226a8c23698d23698f24699025689225689326679526679727669827669
a28659b29649d29649f2a63a02a63a22b62a32c61a52c60a62d60a82e5fa92e5eab2f5ead305dae3
05cb0315bb1325ab3325ab43359b63458b73557b93556ba3655bc3754bd3853bf3952c03a51c13a5
0c33b4fc43c4ec63d4dc73e4cc83f4bca404acb4149cc4248ce4347cf4446d04545d24644d34743d
44842d54a41d74b3fd84c3ed94d3dda4e3cdb503bdd513ade5238df5337e05536e15635e25734e35
933e45a31e55c30e65d2fe75e2ee8602de9612bea632aeb6429eb6628ec6726ed6925ee6a24ef6c2
3ef6e21f06f20f1711ff1731df2741cf3761bf37819f47918f57b17f57d15f67e14f68013f78212f
78410f8850ff8870ef8890cf98b0bf98c0af98e09fa9008fa9207fa9407fb9606fb9706fb9906fb9
b06fb9d07fc9f07fca108fca309fca50afca60cfca80dfcaa0ffcac11fcae12fcb014fcb216fcb41
8fbb61afbb81dfbba1ffbbc21fbbe23fac026fac228fac42afac62df9c72ff9c932f9cb35f8cd37f
8cf3af7d13df7d340f6d543f6d746f5d949f5db4cf4dd4ff4df53f4e156f3e35af3e55df2e661f2e
865f2ea69f1ec6df1ed71f1ef75f1f179f2f27df2f482f3f586f3f68af4f88ef5f992f6fa96f8fb9
af9fc9dfafda1fcffa4\")),u=r(n.i(i.a)
(\"0d088710078813078916078a19068c1b068d1d068e20068f2206902406912605912805922a059
32c05942e05952f059631059733059735049837049938049a3a049a3c049b3e049c3f049c41049d4
3039e44039e46039f48039f4903a04b03a14c02a14e02a25002a25102a35302a35502a45601a4580
1a45901a55b01a55c01a65e01a66001a66100a76300a76400a76600a76700a86900a86a00a86c00a
86e00a86f00a87100a87201a87401a87501a87701a87801a87a02a87b02a87d03a87e03a88004a88
104a78305a78405a78606a68707a68808a68a09a58b0aa58d0ba58e0ca48f0da4910ea3920fa3941
0a29511a19613a19814a099159f9a169f9c179e9d189d9e199da01a9ca11b9ba21d9aa31e9aa51f9
9a62098a72197a82296aa2395ab2494ac2694ad2793ae2892b02991b12a90b22b8fb32c8eb42e8db
52f8cb6308bb7318ab83289ba3388bb3488bc3587bd3786be3885bf3984c03a83c13b82c23c81c33
d80c43e7fc5407ec6417dc7427cc8437bc9447aca457acb4679cc4778cc4977cd4a76ce4b75cf4c7
4d04d73d14e72d24f71d35171d45270d5536fd5546ed6556dd7566cd8576bd9586ada5a6ada5b69d
b5c68dc5d67dd5e66de5f65de6164df6263e06363e16462e26561e26660e3685fe4695ee56a5de56
b5de66c5ce76e5be76f5ae87059e97158e97257ea7457eb7556eb7655ec7754ed7953ed7a52ee7b5
1ef7c51ef7e50f07f4ff0804ef1814df1834cf2844bf3854bf3874af48849f48948f58b47f58c46f
68d45f68f44f79044f79143f79342f89441f89540f9973ff9983ef99a3efa9b3dfa9c3cfa9e3bfb9
f3afba139fba238fca338fca537fca636fca835fca934fdab33fdac33fdae32fdaf31fdb130fdb22
ffdb42ffdb52efeb72dfeb82cfeba2cfebb2bfebd2afebe2afec029fdc229fdc328fdc527fdc627f
dc827fdca26fdcb26fccd25fcce25fcd025fcd225fbd324fbd524fbd724fad824fada24f9dc24f9d
d25f8df25f8e125f7e225f7e425f6e626f6e826f5e926f5eb27f4ed27f3ee27f3f027f2f227f1f42
6f1f525f0f724f0f921\"))},function(t,e,n){\"use strict\";e.a=function(t){return
function(){return t}}},function(t,e,n){\"use strict\";var
r=n(45),i=n(131);e.a=function(t){return n.i(i.a)(n.i(r.a)
(t).call(document.documentElement))}},function(t,e,n){\"use strict\";function
r(){return new i}function i(){this._=\"@\"+(++o).toString(36)}e.a=r;var
o=0;i.prototype=r.prototype={constructor:i,get:function(t){for(var e=this._;!(e
in t);)if(!(t=t.parentNode))return;return t[e]},set:function(t,e){return
t[this._]=e},remove:function(t){return this._ in t&&delete
t[this._]},toString:function(){return this._}}},function(t,e,n){\"use
strict\";var r=n(72),i=n(46);e.a=function(t){var e=n.i(r.a)();return
e.changedTouches&&(e=e.changedTouches[0]),n.i(i.a)(t,e)}},function(t,e,n){\"use
strict\";var r=n(8);e.a=function(t){return\"string\"==typeof t?new
r.b([document.querySelectorAll(t)],[document.documentElement]):new r.b([null==t?
[]:t],r.c)}},function(t,e,n){\"use strict\";var r=n(45);e.a=function(t){var
e=\"function\"==typeof t?t:n.i(r.a)(t);return this.select(function(){return
this.appendChild(e.apply(this,arguments))})}},function(t,e,n){\"use
strict\";function r(t){return function(){this.removeAttribute(t)}}function i(t)
{return function(){this.removeAttributeNS(t.space,t.local)}}function o(t,e)
{return function(){this.setAttribute(t,e)}}function a(t,e){return function()
{this.setAttributeNS(t.space,t.local,e)}}function u(t,e){return function(){var
n=e.apply(this,arguments);null==n?
this.removeAttribute(t):this.setAttribute(t,n)}}function c(t,e){return
function(){var n=e.apply(this,arguments);null==n?
this.removeAttributeNS(t.space,t.local):this.setAttributeNS(t.space,t.local,n)}}
var s=n(68);e.a=function(t,e){var l=n.i(s.a)(t);if(arguments.length<2){var
f=this.node();return l.local?
f.getAttributeNS(l.space,l.local):f.getAttribute(l)}return this.each((null==e?
l.local?i:r:\"function\"==typeof e?l.local?c:u:l.local?a:o)
(l,e))}},function(t,e,n){\"use strict\";e.a=function(){var t=arguments[0];return
arguments[0]=this,t.apply(null,arguments),this}},function(t,e,n){\"use
strict\";function r(t){return t.trim().split(/^|\\s+/)}function i(t){return
t.classList||new o(t)}function o(t)
{this._node=t,this._names=r(t.getAttribute(\"class\")||\"\")}function a(t,e)
{for(var n=i(t),r=-1,o=e.length;++r<o;)n.add(e[r])}function u(t,e){for(var
n=i(t),r=-1,o=e.length;++r<o;)n.remove(e[r])}function c(t){return function()
{a(this,t)}}function s(t){return function(){u(this,t)}}function l(t,e){return
function(){(e.apply(this,arguments)?a:u)(this,t)}}o.prototype={add:function(t)
{this._names.indexOf(t)<0&&(this._names.push(t),this._node.setAttribute(\"class\
",this._names.join(\" \")))},remove:function(t){var
e=this._names.indexOf(t);e>=0&&(this._names.splice(e,1),this._node.setAttribute(
\"class\",this._names.join(\" \")))},contains:function(t){return
this._names.indexOf(t)>=0}},e.a=function(t,e){var
n=r(t+\"\");if(arguments.length<2){for(var o=i(this.node()),a=-1,u=n.length;+
+a<u;)if(!o.contains(n[a]))return!1;return!0}return
this.each((\"function\"==typeof e?l:e?c:s)(n,e))}},function(t,e,n){\"use
strict\";function r(){return this.parentNode.insertBefore(this.cloneNode(!
1),this.nextSibling)}function i(){return
this.parentNode.insertBefore(this.cloneNode(!
0),this.nextSibling)}e.a=function(t){return this.select(t?i:r)}},function(t,e,n)
{\"use strict\";function r(t,e,n,r,i,o){for(var u,c=0,s=e.length,l=o.length;c<l;
++c)(u=e[c])?(u.__data__=o[c],r[c]=u):n[c]=new a.b(t,o[c]);for(;c<s;++c)
(u=e[c])&&(i[c]=u)}function i(t,e,n,r,i,o,u){var
s,l,f,p={},h=e.length,d=o.length,v=new Array(h);for(s=0;s<h;++s)
(l=e[s])&&(v[s]=f=c+u.call(l,l.__data__,s,e),f in p?i[s]=l:p[f]=l);for(s=0;s<d;+
+s)f=c+u.call(t,o[s],s,o),(l=p[f])?(r[s]=l,l.__data__=o[s],p[f]=null):n[s]=new
a.b(t,o[s]);for(s=0;s<h;++s)(l=e[s])&&p[v[s]]===l&&(i[s]=l)}var
o=n(8),a=n(132),u=n(256),c=\"$\";e.a=function(t,e){if(!t)return y=new
Array(this.size()),d=-1,this.each(function(t){y[++d]=t}),y;var a=e?
i:r,c=this._parents,s=this._groups;\"function\"!=typeof t&&(t=n.i(u.a)
(t));for(var l=s.length,f=new Array(l),p=new Array(l),h=new Array(l),d=0;d<l;+
+d){var
v=c[d],g=s[d],m=g.length,y=t.call(v,v&&v.__data__,d,c),_=y.length,b=p[d]=new
Array(_),x=f[d]=new Array(_);a(v,g,b,x,h[d]=new Array(m),y,e);for(var
w,C,k=0,E=0;k<_;++k)if(w=b[k]){for(k>=E&&(E=k+1);!(C=x[E])&&++E<_;);w._next=C||
null}}return f=new o.b(f,c),f._enter=p,f._exit=h,f}},function(t,e,n){\"use
strict\";e.a=function(t){return arguments.length?
this.property(\"__data__\",t):this.node().__data__}},function(t,e,n){\"use
strict\";function r(t,e,r){var i=n.i(a.a)
(t),o=i.CustomEvent;\"function\"==typeof o?o=new o(e,r):
(o=i.document.createEvent(\"Event\"),r?
(o.initEvent(e,r.bubbles,r.cancelable),o.detail=r.detail):o.initEvent(e,!1,!
1)),t.dispatchEvent(o)}function i(t,e){return function(){return
r(this,t,e)}}function o(t,e){return function(){return
r(this,t,e.apply(this,arguments))}}var a=n(73);e.a=function(t,e){return
this.each((\"function\"==typeof e?o:i)(t,e))}},function(t,e,n){\"use
strict\";e.a=function(t){for(var e=this._groups,n=0,r=e.length;n<r;++n)for(var
i,o=e[n],a=0,u=o.length;a<u;++a)(i=o[a])&&t.call(i,i.__data__,a,o);return
this}},function(t,e,n){\"use strict\";e.a=function(){return!
this.node()}},function(t,e,n){\"use strict\";var r=n(133),i=n(8);e.a=function()
```

```
{return new i.b(this._exit||
this._groups.map(r.a),this._parents)}},function(t,e,n){\"use strict\";var
r=n(8),i=n(130);e.a=function(t){\"function\"!=typeof t&&(t=n.i(i.a)(t));for(var
e=this._groups,o=e.length,a=new Array(o),u=0;u<o;++u)for(var
c,s=e[u],l=s.length,f=a[u]=[],p=0;p<l;++p)
(c=s[p])&&t.call(c,c.__data__,p,s)&&f.push(c);return new
r.b(a,this._parents)}},function(t,e,n){\"use strict\";function
 r(){this.innerHTML=\"\"}function i(t){return function()
{this.innerHTML=t}}function o(t){return function(){var
e=t.apply(this,arguments);this.innerHTML=null==e?\"\":e}}e.a=function(t){return
arguments.length?this.each(null==t?r:(\"function\"==typeof t?o:i)
(t)):this.node().innerHTML}},function(t,e,n){\"use strict\";function r(){return
null}var i=n(45),o=n(71);e.a=function(t,e){var a=\"function\"==typeof t?
t:n.i(i.a)(t),u=null==e?r:\"function\"==typeof e?e:n.i(o.a)(e);return
this.select(function(){return
this.insertBefore(a.apply(this,arguments),u.apply(this,arguments)||
null)})}},function(t,e,n){\"use strict\";function r()
{this.previousSibling&&this.parentNode.insertBefore(this,this.parentNode.firstCh
ild)}e.a=function(){return this.each(r)}},function(t,e,n){\"use strict\";var
r=n(8);e.a=function(t){for(var
e=this._groups,n=t._groups,i=e.length,o=n.length,a=Math.min(i,o),u=new
Array(i),c=0;c<a;++c)for(var s,l=e[c],f=n[c],p=l.length,h=u[c]=new
Array(p),d=0;d<p;++d)(s=l[d]||f[d])&&(h[d]=s);for(;c<i;++c)u[c]=e[c];return new
r.b(u,this._parents)}},function(t,e,n){\"use strict\";e.a=function(){for(var
t=this._groups,e=0,n=t.length;e<n;++e)for(var r=t[e],i=0,o=r.length;i<o;++i){var
a=r[i];if(a)return a}return null}},function(t,e,n){\"use strict\";e.a=function()
{var t=new Array(this.size()),e=-1;return this.each(function(){t[+
+e]=this}),t}},function(t,e,n){\"use strict\";e.a=function(){for(var
t=this._groups,e=-1,n=t.length;++e<n;)for(var r,i=t[e],o=i.length-1,a=i[o];--
o>=0;)(r=i[o])&&(a&&a!
==r.nextSibling&&a.parentNode.insertBefore(r,a),a=r);return
this}},function(t,e,n){\"use strict\";function r(t){return function(){delete
this[t]}}function i(t,e){return function(){this[t]=e}}function o(t,e){return
function(){var n=e.apply(this,arguments);null==n?delete
this[t]:this[t]=n}}e.a=function(t,e){return arguments.length>1?
this.each((null==e?r:\"function\"==typeof e?o:i)(t,e)):this.node()
[t]}},function(t,e,n){\"use strict\";function r()
{this.nextSibling&&this.parentNode.appendChild(this)}e.a=function(){return
this.each(r)}},function(t,e,n){\"use strict\";function r(){var
t=this.parentNode;t&&t.removeChild(this)}e.a=function(){return
this.each(r)}},function(t,e,n){\"use strict\";var r=n(8),i=n(71);e.a=function(t)
{\"function\"!=typeof t&&(t=n.i(i.a)(t));for(var e=this._groups,o=e.length,a=new
Array(o),u=0;u<o;++u)for(var c,s,l=e[u],f=l.length,p=a[u]=new Array(f),h=0;h<f;+
+h)(c=l[h])&&(s=t.call(c,c.__data__,h,l))&&(\"__data__\"in
c&&(s.__data__=c.__data__),p[h]=s);return new
r.b(a,this._parents)}},function(t,e,n){\"use strict\";var
r=n(8),i=n(135);e.a=function(t){\"function\"!=typeof t&&(t=n.i(i.a)(t));for(var
e=this._groups,o=e.length,a=[],u=[],c=0;c<o;++c)for(var
s,l=e[c],f=l.length,p=0;p<f;++p)
(s=l[p])&&(a.push(t.call(s,s.__data__,p,l)),u.push(s));return new
r.b(a,u)}},function(t,e,n){\"use strict\";e.a=function(){var t=0;return
this.each(function(){++t}),t}},function(t,e,n){\"use strict\";function r(t,e)
{return t<e?-1:t>e?1:t>=e?0:NaN}var i=n(8);e.a=function(t){function e(e,n)
{return e&&n?t(e.__data__,n.__data__):!e-!n}t||(t=r);for(var
n=this._groups,o=n.length,a=new Array(o),u=0;u<o;++u){for(var
c,s=n[u],l=s.length,f=a[u]=new Array(l),p=0;p<l;++p)
(c=s[p])&&(f[p]=c);f.sort(e)}return new
i.b(a,this._parents).order()}},function(t,e,n){\"use strict\";function r()
{this.textContent=\"\"}function i(t){return function()
{this.textContent=t}}function o(t){return function(){var
e=t.apply(this,arguments);this.textContent=null==e?\"\":e}}e.a=function(t)
{return arguments.length?this.each(null==t?r:(\"function\"==typeof t?o:i)
(t)):this.node().textContent}},function(t,e,n){\"use strict\";var
r=n(72),i=n(46);e.a=function(t,e,o){arguments.length<3&&(o=e,e=n.i(r.a)
().changedTouches);for(var a,u=0,c=e?e.length:0;u<c;+
+u)if((a=e[u]).identifier===o)return n.i(i.a)(t,a);return null}},function(t,e,n)
{\"use strict\";var r=n(72),i=n(46);e.a=function(t,e){null==e&&(e=n.i(r.a)
().touches);for(var o=0,a=e?e.length:0,u=new Array(a);o<a;++o)u[o]=n.i(i.a)
(t,e[o]);return u}},function(t,e,n){\"use strict\";function r(t){return
t.innerRadius}function i(t){return t.outerRadius}function o(t){return
t.startAngle}function a(t){return t.endAngle}function u(t){return
t&&t.padAngle}function c(t,e,n,r,i,o,a,u){var c=n-t,s=r-e,l=a-i,f=u-o,p=(l*(e-
o)-f*(t-i))/(f*c-l*s);return[t+p*c,e+p*s]}function s(t,e,r,i,o,a,u){var c=t-
r,s=e-i,l=(u?a:-a)/n.i(p.d)(c*c+s*s),f=l*s,h=-
l*c,d=t+f,v=e+h,g=r+f,m=i+h,y=(d+g)/2,_=(v+m)/2,b=g-d,x=m-v,w=b*b+x*x,C=o-
a,k=d*m-g*v,E=(x<0?-1:1)*n.i(p.d)(n.i(p.e)(0,C*C*w-k*k)),M=(k*x-b*E)/w,T=(-k*b-
x*E)/w,S=(k*x+b*E)/w,N=(-k*b+x*E)/w,A=M-y,P=T-_,O=S-y,I=N-_;return
A*A+P*P>O*O+I*I&&(M=S,T=N),{cx:M,cy:T,x01:-f,y01:-h,x11:M*(o/C-1),y11:T*(o/C-
1)}}var l=n(32),f=n(17),p=n(35);e.a=function(){function t(){var
t,r,i=+e.apply(this,arguments),o=+h.apply(this,arguments),a=g.apply(this,argumen
ts)-p.f,u=m.apply(this,arguments)-p.f,f=n.i(p.g)(u-a),b=u>a;if(_||(_=t=n.i(l.a)
()),o<i&&(r=o,o=i,i=r),o>p.a)if(f>p.c-p.a)_.moveTo(o*n.i(p.h)(a),o*n.i(p.i)
(a)),_.arc(0,0,o,a,u,!b),i>p.a&&(_.moveTo(i*n.i(p.h)(u),i*n.i(p.i)
(u)),_.arc(0,0,i,u,a,b));else{var
x,w,C=a,k=u,E=a,M=u,T=f,S=f,N=y.apply(this,arguments)/2,A=N>p.a&&(v?
+v.apply(this,arguments):n.i(p.d)(i*i+o*o)),P=n.i(p.j)(n.i(p.g)(o-i)/
2,+d.apply(this,arguments)),O=P,I=P;if(A>p.a){var D=n.i(p.k)(A/i*n.i(p.i)
(N)),R=n.i(p.k)(A/o*n.i(p.i)(N));(T-=2*D)>p.a?(D*=b?1:-1,E+=D,M-=D):
(T=0,E=M=(a+u)/2),(S-=2*R)>p.a?(R*=b?1:-1,C+=R,k-=R):(S=0,C=k=(a+u)/2)}var
L=o*n.i(p.h)(C),U=o*n.i(p.i)(C),F=i*n.i(p.h)(M),j=i*n.i(p.i)(M);if(P>p.a){var
B=o*n.i(p.h)(k),V=o*n.i(p.i)(k),W=i*n.i(p.h)(E),z=i*n.i(p.i)(E);if(f<p.b){var
H=T>p.a?c(L,U,W,z,B,V,F,j):[F,j],q=L-H[0],Y=U-H[1],K=B-H[0],G=V-H[1],$=1/
n.i(p.i)(n.i(p.l)((q*K+Y*G)/(n.i(p.d)(q*q+Y*Y)*n.i(p.d)(K*K+G*G)))/2),X=n.i(p.d)
(H[0]*H[0]+H[1]*H[1]);O=n.i(p.j)(P,(i-X)/($-1)),I=n.i(p.j)(P,(o-X)/($
+1))}}S>p.a?I>p.a?
(x=s(W,z,L,U,o,I,b),w=s(B,V,F,j,o,I,b),_.moveTo(x.cx+x.x01,x.cy+x.y01),I<P?
_.arc(x.cx,x.cy,I,n.i(p.m)(x.y01,x.x01),n.i(p.m)(w.y01,w.x01),!b):
(_.arc(x.cx,x.cy,I,n.i(p.m)(x.y01,x.x01),n.i(p.m)(x.y11,x.x11),!
b),_.arc(0,0,o,n.i(p.m)(x.cy+x.y11,x.cx+x.x11),n.i(p.m)(w.cy+w.y11,w.cx+w.x11),!
b),_.arc(w.cx,w.cy,I,n.i(p.m)(w.y11,w.x11),n.i(p.m)(w.y01,w.x01),!b))):
(_.moveTo(L,U),_.arc(0,0,o,C,k,!b)):_.moveTo(L,U),i>p.a&&T>p.a?O>p.a?
(x=s(F,j,B,V,i,-O,b),w=s(L,U,W,z,i,-O,b),_.lineTo(x.cx+x.x01,x.cy+x.y01),O<P?
_.arc(x.cx,x.cy,O,n.i(p.m)(x.y01,x.x01),n.i(p.m)(w.y01,w.x01),!b):
(_.arc(x.cx,x.cy,O,n.i(p.m)(x.y01,x.x01),n.i(p.m)(x.y11,x.x11),!
b),_.arc(0,0,i,n.i(p.m)(x.cy+x.y11,x.cx+x.x11),n.i(p.m)
(w.cy+w.y11,w.cx+w.x11),b),_.arc(w.cx,w.cy,O,n.i(p.m)(w.y11,w.x11),n.i(p.m)
(w.y01,w.x01),!b))):_.arc(0,0,i,M,E,b):_.lineTo(F,j)}else
_.moveTo(0,0);if(_.closePath(),t)return _=null,t+\"\"||null}var
e=r,h=i,d=n.i(f.a)(0),v=null,g=o,m=a,y=u,_=null;return t.centroid=function(){var
t=(+e.apply(this,arguments)+
+h.apply(this,arguments))/2,r=(+g.apply(this,arguments)+
+m.apply(this,arguments))/2-p.b/2;return[n.i(p.h)(r)*t,n.i(p.i)
(r)*t]},t.innerRadius=function(r){return arguments.length?
(e=\"function\"==typeof r?r:n.i(f.a)(+r),t):e},t.outerRadius=function(e){return
arguments.length?(h=\"function\"==typeof e?e:n.i(f.a)
(+e),t):h},t.cornerRadius=function(e){return arguments.length?
(d=\"function\"==typeof e?e:n.i(f.a)(+e),t):d},t.padRadius=function(e){return
arguments.length?(v=null==e?null:\"function\"==typeof e?e:n.i(f.a)
(+e),t):v},t.startAngle=function(e){return arguments.length?
(g=\"function\"==typeof e?e:n.i(f.a)(+e),t):g},t.endAngle=function(e){return
arguments.length?(m=\"function\"==typeof e?e:n.i(f.a)
(+e),t):m},t.padAngle=function(e){return arguments.length?
(y=\"function\"==typeof e?e:n.i(f.a)(+e),t):y},t.context=function(e){return
arguments.length?(_=null==e?null:e,t):_},t}},function(t,e,n){\"use strict\";var
r=n(141),i=n(137),o=n(142);e.a=function(){var t=n.i(i.a)
().curve(r.b),e=t.curve,a=t.lineX0,u=t.lineX1,c=t.lineY0,s=t.lineY1;return
t.angle=t.x,delete t.x,t.startAngle=t.x0,delete t.x0,t.endAngle=t.x1,delete
t.x1,t.radius=t.y,delete t.y,t.innerRadius=t.y0,delete
```

```
t.y0,t.outerRadius=t.y1,delete t.y1,t.lineStartAngle=function(){return n.i(o.b)
(a())},delete t.lineX0,t.lineEndAngle=function(){return n.i(o.b)(u())},delete
t.lineX1,t.lineInnerRadius=function(){return n.i(o.b)(c())},delete
t.lineY0,t.lineOuterRadius=function(){return n.i(o.b)(s())},delete
t.lineY1,t.curve=function(t){return arguments.length?e(n.i(r.a)
(t)):e()._curve},t}},function(t,e,n){\"use strict\";function r(t)
{this._context=t}var
i=n(50),o=n(47);r.prototype={areaStart:i.a,areaEnd:i.a,lineStart:function()
{this._x0=this._x1=this._x2=this._x3=this._x4=this._y0=this._y1=this._y2=this._y
3=this._y4=NaN,this._point=0},lineEnd:function(){switch(this._point){case
1:this._context.moveTo(this._x2,this._y2),this._context.closePath();break;case
2:this._context.moveTo((this._x2+2*this._x3)/3,(this._y2+2*this._y3)/
3),this._context.lineTo((this._x3+2*this._x2)/3,(this._y3+2*this._y2)/
3),this._context.closePath();break;case
3:this.point(this._x2,this._y2),this.point(this._x3,this._y3),this.point(this._x
4,this._y4)}},point:function(t,e){switch(t=+t,e=+e,this._point){case
0:this._point=1,this._x2=t,this._y2=e;break;case
1:this._point=2,this._x3=t,this._y3=e;break;case
2:this._point=3,this._x4=t,this._y4=e,this._context.moveTo((this._x0+4*this._x1+
t)/6,(this._y0+4*this._y1+e)/6);break;default:n.i(o.c)
(this,t,e)}this._x0=this._x1,this._x1=t,this._y0=this._y1,this._y1=e}},e.a=funct
ion(t){return new r(t)}},function(t,e,n){\"use strict\";function r(t)
{this._context=t}var i=n(47);r.prototype={areaStart:function()
{this._line=0},areaEnd:function(){this._line=NaN},lineStart:function()
{this._x0=this._x1=this._y0=this._y1=NaN,this._point=0},lineEnd:function()
{(this._line||0!
==this._line&&3===this._point)&&this._context.closePath(),this._line=1-
this._line},point:function(t,e){switch(t=+t,e=+e,this._point){case
0:this._point=1;break;case 1:this._point=2;break;case 2:this._point=3;var
 r=(this._x0+4*this._x1+t)/6,o=(this._y0+4*this._y1+e)/6;this._line?
this._context.lineTo(r,o):this._context.moveTo(r,o);break;case
3:this._point=4;default:n.i(i.c)
(this,t,e)}this._x0=this._x1,this._x1=t,this._y0=this._y1,this._y1=e}},e.a=funct
ion(t){return new r(t)}},function(t,e,n){\"use strict\";function r(t,e)
{this._basis=new i.b(t),this._beta=e}var
i=n(47);r.prototype={lineStart:function()
{this._x=[],this._y=[],this._basis.lineStart()},lineEnd:function(){var
t=this._x,e=this._y,n=t.length-1;if(n>0)for(var r,i=t[0],o=e[0],a=t[n]-i,u=e[n]-
o,c=-1;++c<=n;)r=c/n,this._basis.point(this._beta*t[c]+(1-
this._beta)*(i+r*a),this._beta*e[c]+(1-
this._beta)*(o+r*u));this._x=this._y=null,this._basis.lineEnd()},point:function(
t,e){this._x.push(+t),this._y.push(+e)}},e.a=function t(e){function n(t){return
1===e?new i.b(t):new r(t,e)}return n.beta=function(e){return t(+e)},n}
(.85)},function(t,e,n){\"use strict\";function r(t,e)
{this._context=t,this._alpha=e}var
i=n(139),o=n(50),a=n(74);r.prototype={areaStart:o.a,areaEnd:o.a,lineStart:functi
on()
{this._x0=this._x1=this._x2=this._x3=this._x4=this._x5=this._y0=this._y1=this._y
2=this._y3=this._y4=this._y5=NaN,this._l01_a=this._l12_a=this._l23_a=this._l01_2
a=this._l12_2a=this._l23_2a=this._point=0},lineEnd:function()
{switch(this._point){case
1:this._context.moveTo(this._x3,this._y3),this._context.closePath();break;case
2:this._context.lineTo(this._x3,this._y3),this._context.closePath();break;case
3:this.point(this._x3,this._y3),this.point(this._x4,this._y4),this.point(this._x
5,this._y5)}},point:function(t,e){if(t=+t,e=+e,this._point){var r=this._x2-
t,i=this._y2-
e;this._l23_a=Math.sqrt(this._l23_2a=Math.pow(r*r+i*i,this._alpha))}switch(this.
_point){case 0:this._point=1,this._x3=t,this._y3=e;break;case
1:this._point=2,this._context.moveTo(this._x4=t,this._y4=e);break;case
2:this._point=3,this._x5=t,this._y5=e;break;default:n.i(a.b)
(this,t,e)}this._l01_a=this._l12_a,this._l12_a=this._l23_a,this._l01_2a=this._l1
2_2a,this._l12_2a=this._l23_2a,this._x0=this._x1,this._x1=this._x2,this._x2=t,th
is._y0=this._y1,this._y1=this._y2,this._y2=e}},e.a=function t(e){function n(t)
{return e?new r(t,e):new i.b(t,0)}return n.alpha=function(e){return t(+e)},n}
```

```
(.5)},function(t,e,n){\"use strict\";function r(t,e)
{this._context=t,this._alpha=e}var
i=n(140),o=n(74);r.prototype={areaStart:function()
{this._line=0},areaEnd:function(){this._line=NaN},lineStart:function()
{this._x0=this._x1=this._x2=this._y0=this._y1=this._y2=NaN,this._l01_a=this._l12
_a=this._l23_a=this._l01_2a=this._l12_2a=this._l23_2a=this._point=0},lineEnd:fun
ction(){(this._line||0!
==this._line&&3===this._point)&&this._context.closePath(),this._line=1-
this._line},point:function(t,e){if(t=+t,e=+e,this._point){var r=this._x2-
t,i=this._y2-
e;this._l23_a=Math.sqrt(this._l23_2a=Math.pow(r*r+i*i,this._alpha))}switch(this.
_point){case 0:this._point=1;break;case 1:this._point=2;break;case
2:this._point=3,this._line?
this._context.lineTo(this._x2,this._y2):this._context.moveTo(this._x2,this._y2);
break;case 3:this._point=4;default:n.i(o.b)
(this,t,e)}this._l01_a=this._l12_a,this._l12_a=this._l23_a,this._l01_2a=this._l1
2_2a,this._l12_2a=this._l23_2a,this._x0=this._x1,this._x1=this._x2,this._x2=t,th
is._y0=this._y1,this._y1=this._y2,this._y2=e}},e.a=function t(e){function n(t)
{return e?new r(t,e):new i.b(t,0)}return n.alpha=function(e){return t(+e)},n}
(.5)},function(t,e,n){\"use strict\";function r(t){this._context=t}var
i=n(50);r.prototype={areaStart:i.a,areaEnd:i.a,lineStart:function()
{this._point=0},lineEnd:function()
{this._point&&this._context.closePath()},point:function(t,e)
{t=+t,e=+e,this._point?this._context.lineTo(t,e):
(this._point=1,this._context.moveTo(t,e))}},e.a=function(t){return new
r(t)}},function(t,e,n){\"use strict\";function r(t){return t<0?-1:1}function
i(t,e,n){var
i=t._x1-t._x0,o=e-t._x1,a=(t._y1-t._y0)/(i||o<0&&-0),u=(n-t._y1)/(o||i<0&&-
0),c=(a*o+u*i)/(i+o);return(r(a)
+r(u))*Math.min(Math.abs(a),Math.abs(u),.5*Math.abs(c))||0}function o(t,e){var
n=t._x1-t._x0;return n?(3*(t._y1-t._y0)/n-e)/2:e}function a(t,e,n){var
r=t._x0,i=t._y0,o=t._x1,a=t._y1,u=(o-r)/3;t._context.bezierCurveTo(r+u,i+u*e,o-
u,a-u*n,o,a)}function u(t){this._context=t}function c(t){this._context=new
s(t)}function s(t){this._context=t}function l(t){return new u(t)}function f(t)
{return new c(t)}e.a=l,e.b=f,u.prototype={areaStart:function()
{this._line=0},areaEnd:function(){this._line=NaN},lineStart:function()
{this._x0=this._x1=this._y0=this._y1=this._t0=NaN,this._point=0},lineEnd:functio
n(){switch(this._point){case
2:this._context.lineTo(this._x1,this._y1);break;case
3:a(this,this._t0,o(this,this._t0))}(this._line||0!
==this._line&&1===this._point)&&this._context.closePath(),this._line=1-
this._line},point:function(t,e){var n=NaN;if(t=+t,e=+e,t!==this._x1||e!
==this._y1){switch(this._point){case 0:this._point=1,this._line?
this._context.lineTo(t,e):this._context.moveTo(t,e);break;case
1:this._point=2;break;case
2:this._point=3,a(this,o(this,n=i(this,t,e)),n);break;default:a(this,this._t0,n=
i(this,t,e))}this._x0=this._x1,this._x1=t,this._y0=this._y1,this._y1=e,this._t0=
n}}},(c.prototype=Object.create(u.prototype)).point=function(t,e)
{u.prototype.point.call(this,e,t)},s.prototype={moveTo:function(t,e)
{this._context.moveTo(e,t)},closePath:function()
{this._context.closePath()},lineTo:function(t,e)
{this._context.lineTo(e,t)},bezierCurveTo:function(t,e,n,r,i,o)
{this._context.bezierCurveTo(e,t,r,n,o,i)}}},function(t,e,n){\"use
strict\";function r(t){this._context=t}function i(t){var e,n,r=t.length-1,i=new
Array(r),o=new Array(r),a=new
Array(r);for(i[0]=0,o[0]=2,a[0]=t[0]+2*t[1],e=1;e<r-1;+
+e)i[e]=1,o[e]=4,a[e]=4*t[e]+2*t[e+1];for(i[r-1]=2,o[r-1]=7,a[r-1]=8*t[r-
1]+t[r],e=1;e<r;++e)n=i[e]/o[e-1],o[e]-=n,a[e]-=n*a[e-1];for(i[r-1]=a[r-1]/o[r-
1],e=r-2;e>=0;--e)i[e]=(a[e]-i[e+1])/o[e];for(o[r-1]=(t[r]+i[r-1])/2,e=0;e<r-1;+
+e)o[e]=2*t[e+1]-i[e+1];return[i,o]}r.prototype={areaStart:function()
{this._line=0},areaEnd:function(){this._line=NaN},lineStart:function()
{this._x=[],this._y=[]},lineEnd:function(){var
t=this._x,e=this._y,n=t.length;if(n)if(this._line?
this._context.lineTo(t[0],e[0]):this._context.moveTo(t[0],e[0]),2===n)this._cont
```

```
ext.lineTo(t[1],e[1]);else for(var r=i(t),o=i(e),a=0,u=1;u<n;++a,+
+u)this._context.bezierCurveTo(r[0][a],o[0][a],r[1][a],o[1][a],t[u],e[u]);
(this._line||0!==this._line&&1===n)&&this._context.closePath(),this._line=1-
this._line,this._x=this._y=null},point:function(t,e)
{this._x.push(+t),this._y.push(+e)}},e.a=function(t){return new
r(t)}},function(t,e,n){\"use strict\";function r(t,e)
{this._context=t,this._t=e}function i(t){return new r(t,0)}function o(t){return
new r(t,1)}e.c=i,e.b=o,r.prototype={areaStart:function()
{this._line=0},areaEnd:function(){this._line=NaN},lineStart:function()
{this._x=this._y=NaN,this._point=0},lineEnd:function()
{0<this._t&&this._t<1&&2===this._point&&this._context.lineTo(this._x,this._y),
(this._line||0!
==this._line&&1===this._point)&&this._context.closePath(),this._line>=0&&(this._
t=1-this._t,this._line=1-this._line)},point:function(t,e)
{switch(t=+t,e=+e,this._point){case 0:this._point=1,this._line?
this._context.lineTo(t,e):this._context.moveTo(t,e);break;case
1:this._point=2;default:if(this._t<=0)this._context.lineTo(this._x,e),this._cont
ext.lineTo(t,e);else{var n=this._x*(1-this._t)
+t*this._t;this._context.lineTo(n,this._y),this._context.lineTo(n,e)}}this._x=t,
this._y=e}},e.a=function(t){return new r(t,.5)}},function(t,e,n){\"use
strict\";e.a=function(t,e){return e<t?-1:e>t?1:e>=t?0:NaN}},function(t,e,n)
{\"use strict\";e.a=function(t){return t}},function(t,e,n){\"use
strict\";function r(t){return t.source}function i(t){return t.target}function
o(t){function e(){var
e,r=h.a.call(arguments),i=o.apply(this,r),l=a.apply(this,r);if(s||(s=e=n.i(p.a)
()),t(s,+u.apply(this,(r[0]=i,r)),+c.apply(this,r),+u.apply(this,(r[0]=l,r)),
+c.apply(this,r)),e)return s=null,e+\"\"||null}var
o=r,a=i,u=v.a,c=v.b,s=null;return e.source=function(t){return arguments.length?
(o=t,e):o},e.target=function(t){return arguments.length?
(a=t,e):a},e.x=function(t){return arguments.length?(u=\"function\"==typeof t?
t:n.i(d.a)(+t),e):u},e.y=function(t){return arguments.length?
(c=\"function\"==typeof t?t:n.i(d.a)(+t),e):c},e.context=function(t){return
arguments.length?(s=null==t?null:t,e):s},e}function a(t,e,n,r,i)
{t.moveTo(e,n),t.bezierCurveTo(e=(e+r)/2,n,e,i,r,i)}function u(t,e,n,r,i)
{t.moveTo(e,n),t.bezierCurveTo(e,n=(n+i)/2,r,n,r,i)}function c(t,e,r,i,o){var
a=n.i(g.a)(e,r),u=n.i(g.a)(e,r=(r+o)/2),c=n.i(g.a)(i,r),s=n.i(g.a)
(i,o);t.moveTo(a[0],a[1]),t.bezierCurveTo(u[0],u[1],c[0],c[1],s[0],s[1])}functio
n s(){return o(a)}function l(){return o(u)}function f(){var t=o(c);return
t.angle=t.x,delete t.x,t.radius=t.y,delete t.y,t}e.a=s,e.b=l,e.c=f;var
p=n(32),h=n(138),d=n(17),v=n(77),g=n(143)},function(t,e,n){\"use
strict\";e.a=function(t,e){if((u=t.length)>1)for(var
n,r,i,o,a,u,c=0,s=t[e[0]].length;c<s;++c)for(o=a=0,n=0;n<u;++n)(i=(r=t[e[n]][c])
[1]-r[0])>=0?(r[0]=o,r[1]=o+=i):i<0?(r[1]=a,r[0]=a+=i):r[0]=o}},function(t,e,n)
{\"use strict\";var r=n(36);e.a=function(t,e){if((o=t.length)>0){for(var
i,o,a,u=0,c=t[0].length;u<c;++u){for(a=i=0;i<o;++i)a+=t[i][u][1]||
0;if(a)for(i=0;i<o;++i)t[i][u][1]/=a}n.i(r.a)(t,e)}}},function(t,e,n){\"use
strict\";var r=n(36);e.a=function(t,e){if((i=t.length)>0){for(var
i,o=0,a=t[e[0]],u=a.length;o<u;++o){for(var c=0,s=0;c<i;++c)s+=t[c][o][1]||
0;a[o][1]+=a[o][0]=-s/2}n.i(r.a)(t,e)}}},function(t,e,n){\"use strict\";var
r=n(36);e.a=function(t,e){if((a=t.length)>0&&(o=(i=t[e[0]]).length)>0){for(var
i,o,a,u=0,c=1;c<o;++c){for(var s=0,l=0,f=0;s<a;++s){for(var p=t[e[s]],h=p[c]
[1]||0,d=p[c-1][1]||0,v=(h-d)/2,g=0;g<s;++g){var m=t[e[g]];v+=(m[c][1]||0)-(m[c-
1][1]||0)}l+=h,f+=v*h}i[c-1][1]+=i[c-1][0]=u,l&&(u-=f/l)}i[c-1][1]+=i[c-1]
[0]=u,n.i(r.a)(t,e)}}}},function(t,e,n){\"use strict\";var
r=n(76);e.a=function(t){return n.i(r.a)(t).reverse()}},function(t,e,n){\"use
 strict\";var r=n(37),i=n(76);e.a=function(t){var
e,o,a=t.length,u=t.map(i.b),c=n.i(r.a)(t).sort(function(t,e){return u[e]-
u[t]}),s=0,l=0,f=[],p=[];for(e=0;e<a;++e)o=c[e],s<l?(s+=u[o],f.push(o)):
(l+=u[o],p.push(o));return p.reverse().concat(f)}},function(t,e,n){\"use
strict\";var r=n(37);e.a=function(t){return n.i(r.a)
(t).reverse()}},function(t,e,n){\"use strict\";var
r=n(17),i=n(301),o=n(302),a=n(35);e.a=function(){function t(t){var
n,r,i,o,p,h=t.length,d=0,v=new Array(h),g=new
Array(h),m=+s.apply(this,arguments),y=Math.min(a.c,Math.max(-
a.c,l.apply(this,arguments)-m)),_=Math.min(Math.abs(y)/
h,f.apply(this,arguments)),b=_*(y<0?-1:1);for(n=0;n<h;++n)
(p=g[v[n]=n]=+e(t[n],n,t))>0&&(d+=p);for(null!=u?v.sort(function(t,e){return
u(g[t],g[e])}):null!=c&&v.sort(function(e,n){return c(t[e],t[n])}),n=0,i=d?(y-
h*b)/d:0;n<h;++n,m=o)r=v[n],p=g[r],o=m+(p>0?
p*i:0)+b,g[r]={data:t[r],index:n,value:p,startAngle:m,endAngle:o,padAngle:_};ret
urn g}var e=o.a,u=i.a,c=null,s=n.i(r.a)(0),l=n.i(r.a)(a.c),f=n.i(r.a)(0);return
t.value=function(i){return arguments.length?(e=\"function\"==typeof i?i:n.i(r.a)
(+i),t):e},t.sortValues=function(e){return arguments.length?
(u=e,c=null,t):u},t.sort=function(e){return arguments.length?
(c=e,u=null,t):c},t.startAngle=function(e){return arguments.length?
(s=\"function\"==typeof e?e:n.i(r.a)(+e),t):s},t.endAngle=function(e){return
arguments.length?(l=\"function\"==typeof e?e:n.i(r.a)
(+e),t):l},t.padAngle=function(e){return arguments.length?
(f=\"function\"==typeof e?e:n.i(r.a)(+e),t):f},t}},function(t,e,n){\"use
strict\";function r(t,e){return t[e]}var
i=n(138),o=n(17),a=n(36),u=n(37);e.a=function(){function t(t){var
n,r,i=e.apply(this,arguments),o=t.length,a=i.length,u=new Array(a);for(n=0;n<a;+
+n){for(var f,p=i[n],h=u[n]=new Array(o),d=0;d<o;+
+d)h[d]=f=[0,+l(t[d],p,d,t)],f.data=t[d];h.key=p}for(n=0,r=c(u);n<a;+
+n)u[r[n]].index=n;return s(u,r),u}var e=n.i(o.a)([]),c=u.a,s=a.a,l=r;return
t.keys=function(r){return arguments.length?(e=\"function\"==typeof r?r:n.i(o.a)
(i.a.call(r)),t):e},t.value=function(e){return arguments.length?
(l=\"function\"==typeof e?e:n.i(o.a)(+e),t):l},t.order=function(e){return
arguments.length?(c=null==e?u.a:\"function\"==typeof e?e:n.i(o.a)
(i.a.call(e)),t):c},t.offset=function(e){return arguments.length?(s=null==e?
a.a:e,t):s},t}},function(t,e,n){\"use strict\";n.d(e,\"b\",function(){return
p});var
r=n(32),i=n(144),o=n(145),a=n(146),u=n(148),c=n(147),s=n(149),l=n(150),f=n(17),p
=[i.a,o.a,a.a,c.a,u.a,s.a,l.a];e.a=function(){function t(){var t;if(a||
(a=t=n.i(r.a)()),e.apply(this,arguments).draw(a,
+o.apply(this,arguments)),t)return a=null,t+\"\"||null}var e=n.i(f.a)
(i.a),o=n.i(f.a)(64),a=null;return t.type=function(r){return arguments.length?
(e=\"function\"==typeof r?r:n.i(f.a)(r),t):e},t.size=function(e){return
arguments.length?(o=\"function\"==typeof e?e:n.i(f.a)
(+e),t):o},t.context=function(e){return arguments.length?(a=null==e?
null:e,t):a},t}},function(t,e,n){\"use strict\";function r(t){var e=new
Date(t);return isNaN(e)?null:e}var i=n(151),o=n(79),a=+new Date(\"2000-01-
01T00:00:00.000Z\")?r:n.i(o.e)(i.b);e.a=a},function(t,e,n){\"use strict\";var
r=n(5),i=n(13),o=n.i(r.a)(function(t){t.setHours(0,0,0,0)},function(t,e)
{t.setDate(t.getDate()+e)},function(t,e){return(e-t-(e.getTimezoneOffset()-
t.getTimezoneOffset())*i.d)/i.b},function(t){return t.getDate()-
1});e.a=o;o.range},function(t,e,n){\"use strict\";var r=n(5),i=n(13),o=n.i(r.a)
(function(t){var e=t.getTimezoneOffset()*i.d
%i.c;e<0&&(e+=i.c),t.setTime(Math.floor((+t-e)/i.c)*i.c+e)},function(t,e)
{t.setTime(+t+e*i.c)},function(t,e){return(e-t)/i.c},function(t){return
t.getHours()});e.a=o;o.range},function(t,e,n){\"use strict\";var
r=n(5),i=n.i(r.a)(function(){},function(t,e){t.setTime(+t+e)},function(t,e)
{return e-t});i.every=function(t){return t=Math.floor(t),isFinite(t)&&t>0?t>1?
n.i(r.a)(function(e){e.setTime(Math.floor(e/t)*t)},function(e,n)
{e.setTime(+e+n*t)},function(e,n){return(n-e)/
t}):i:null},e.a=i;i.range},function(t,e,n){\"use strict\";var
r=n(5),i=n(13),o=n.i(r.a)(function(t){t.setTime(Math.floor(t/i.d)*i.d)},function
(t,e){t.setTime(+t+e*i.d)},function(t,e){return(e-t)/i.d},function(t){return
t.getMinutes()});e.a=o;o.range},function(t,e,n){\"use strict\";var
r=n(5),i=n.i(r.a)(function(t){t.setDate(1),t.setHours(0,0,0,0)},function(t,e)
{t.setMonth(t.getMonth()+e)},function(t,e){return e.getMonth()-t.getMonth()
+12*(e.getFullYear()-t.getFullYear())},function(t){return
t.getMonth()});e.a=i;i.range},function(t,e,n){\"use strict\";var
r=n(5),i=n(13),o=n.i(r.a)(function(t){t.setTime(Math.floor(t/i.e)*i.e)},function
(t,e){t.setTime(+t+e*i.e)},function(t,e){return(e-t)/i.e},function(t){return
t.getUTCSeconds()});e.a=o;o.range},function(t,e,n){\"use strict\";var
r=n(5),i=n(13),o=n.i(r.a)(function(t){t.setUTCHours(0,0,0,0)},function(t,e)
{t.setUTCDate(t.getUTCDate()+e)},function(t,e){return(e-t)/i.b},function(t)
```

```
{return t.getUTCDate()-1});e.a=o;o.range},function(t,e,n){\"use strict\";var
r=n(5),i=n(13),o=n.i(r.a)(function(t){t.setUTCMinutes(0,0,0)},function(t,e)
{t.setTime(+t+e*i.c)},function(t,e){return(e-t)/i.c},function(t){return
t.getUTCHours()});e.a=o;o.range},function(t,e,n){\"use strict\";var
r=n(5),i=n(13),o=n.i(r.a)(function(t){t.setUTCSeconds(0,0)},function(t,e)
{t.setTime(+t+e*i.d)},function(t,e){return(e-t)/i.d},function(t){return
t.getUTCMinutes()});e.a=o;o.range},function(t,e,n){\"use strict\";var
r=n(5),i=n.i(r.a)(function(t)
{t.setUTCDate(1),t.setUTCHours(0,0,0,0)},function(t,e)
{t.setUTCMonth(t.getUTCMonth()+e)},function(t,e){return e.getUTCMonth()-
t.getUTCMonth()+12*(e.getUTCFullYear()-t.getUTCFullYear())},function(t){return
t.getUTCMonth()});e.a=i;i.range},function(t,e,n){\"use strict\";function r(t)
{return n.i(i.a)(function(e){e.setUTCDate(e.getUTCDate()-(e.getUTCDay()+7-t)
%7),e.setUTCHours(0,0,0,0)},function(t,e){t.setUTCDate(t.getUTCDate()
+7*e)},function(t,e){return(e-t)/o.a})}n.d(e,\"a\",function(){return
a}),n.d(e,\"b\",function(){return u}),n.d(e,\"c\",function(){return l});var
i=n(5),o=n(13),a=r(0),u=r(1),c=r(2),s=r(3),l=r(4),f=r(5),p=r(6);a.range,u.range,
c.range,s.range,l.range,f.range,p.range},function(t,e,n){\"use strict\";var
r=n(5),i=n.i(r.a)(function(t)
{t.setUTCMonth(0,1),t.setUTCHours(0,0,0,0)},function(t,e)
{t.setUTCFullYear(t.getUTCFullYear()+e)},function(t,e){return
e.getUTCFullYear()-t.getUTCFullYear()},function(t){return
t.getUTCFullYear()});i.every=function(t){return isFinite(t=Math.floor(t))&&t>0?
n.i(r.a)(function(e){e.setUTCFullYear(Math.floor(e.getUTCFullYear()/
t)*t),e.setUTCMonth(0,1),e.setUTCHours(0,0,0,0)},function(e,n)
{e.setUTCFullYear(e.getUTCFullYear()+n*t)}):null},e.a=i;i.range},function(t,e,n)
{\"use strict\";function r(t){return n.i(i.a)(function(e){e.setDate(e.getDate()-
(e.getDay()+7-t)%7),e.setHours(0,0,0,0)},function(t,e){t.setDate(t.getDate()
+7*e)},function(t,e){return(e-t-(e.getTimezoneOffset()-
t.getTimezoneOffset())*o.d)/o.a})}n.d(e,\"a\",function(){return
a}),n.d(e,\"b\",function(){return u}),n.d(e,\"c\",function(){return l});var
i=n(5),o=n(13),a=r(0),u=r(1),c=r(2),s=r(3),l=r(4),f=r(5),p=r(6);a.range,u.range,
c.range,s.range,l.range,f.range,p.range},function(t,e,n){\"use strict\";var
r=n(5),i=n.i(r.a)(function(t){t.setMonth(0,1),t.setHours(0,0,0,0)},function(t,e)
{t.setFullYear(t.getFullYear()+e)},function(t,e){return e.getFullYear()-
t.getFullYear()},function(t){return t.getFullYear()});i.every=function(t){return
isFinite(t=Math.floor(t))&&t>0?n.i(r.a)(function(e)
{e.setFullYear(Math.floor(e.getFullYear()/
t)*t),e.setMonth(0,1),e.setHours(0,0,0,0)},function(e,n)
{e.setFullYear(e.getFullYear()+n*t)}):null},e.a=i;i.range},function(t,e,n){\"use
strict\";function r(t){return t.replace(i,function(t,e){return
e.toUpperCase()})}var i=/-(.)/g;t.exports=r},function(t,e,n){\"use
strict\";function r(t){return i(t.replace(o,\"ms-\"))}var i=n(329),o=/^-
ms-/;t.exports=r},function(t,e,n){\"use strict\";function r(t,e){return!(!t||!
e)&&(t===e||!i(t)&&(i(e)?r(t,e.parentNode):\"contains\"in t?t.contains(e):!!
t.compareDocumentPosition&&!!(16&t.compareDocumentPosition(e))))}var
i=n(339);t.exports=r},function(t,e,n){\"use strict\";function r(t){var
e=t.length;if((Array.isArray(t)||\"object\"!=typeof t&&\"function\"!=typeof
t)&&a(!1),\"number\"!=typeof e&&a(!1),0===e||e-1 in t||a(!
1),\"function\"==typeof t.callee&&a(!1),t.hasOwnProperty)try{return
Array.prototype.slice.call(t)}catch(t){}for(var n=Array(e),r=0;r<e;r+
+)n[r]=t[r];return n}function i(t){return!!t&&(\"object\"==typeof
t||\"function\"==typeof t)&&\"length\"in t&&!(\"setInterval\"in t)&&\"number\"!
=typeof t.nodeType&&(Array.isArray(t)||\"callee\"in t||\"item\"in t)}function
o(t){return i(t)?Array.isArray(t)?t.slice():r(t):[t]}var
a=n(0);t.exports=o},function(t,e,n){\"use strict\";function r(t){var
e=t.match(l);return e&&e[1].toLowerCase()}function i(t,e){var n=s;s||c(!1);var
i=r(t),o=i&&u(i);if(o){n.innerHTML=o[1]+t+o[2];for(var
l=o[0];l--;)n=n.lastChild}else n.innerHTML=t;var
f=n.getElementsByTagName(\"script\");f.length&&(e||c(!
1),a(f).forEach(e));for(var
p=Array.from(n.childNodes);n.lastChild;)n.removeChild(n.lastChild);return p}var
o=n(6),a=n(332),u=n(334),c=n(0),s=o.canUseDOM?
document.createElement(\"div\"):null,l=/^\\s*<(\\
w+)/;t.exports=i},function(t,e,n){\"use strict\";function r(t){return a||o(!
1),p.hasOwnProperty(t)||(t=\"*\"),u.hasOwnProperty(t)||
(a.innerHTML=\"*\"===t?\"<link />\":\"<\"+t+\"></\"+t+\">\",u[t]=!
a.firstChild),u[t]?p[t]:null}var i=n(6),o=n(0),a=i.canUseDOM?
document.createElement(\"div\"):null,u={},c=[1,'<select multiple=\"true\">',\"</
select>\"],s=[1,\"<table>\",\"</table>\"],l=[3,\"<table><tbody><tr>\",\"</tr></
tbody></table>\"],f=[1,'<svg
xmlns=\"http://www.w3.org/2000/svg\">',\"</svg>\"],p={\"*\":[1,\"?<div>\",\"</
div>\"],area:[1,\"<map>\",\"</map>\"],col:[2,\"<table><tbody></
tbody><colgroup>\",\"</colgroup></table>\"],legend:[1,\"<fieldset>\",\"</
fieldset>\"],param:[1,\"<object>\",\"</object>\"],tr:[2,\"<table><tbody>\",\"</
tbody></
table>\"],optgroup:c,option:c,caption:s,colgroup:s,tbody:s,tfoot:s,thead:s,td:l,
th:l};[
\"circle\",\"clipPath\",\"defs\",\"ellipse\",\"g\",\"image\",\"line\",\"linearGr
adient\",\"mask\",\"path\",\"pattern\",\"polygon\",\"polyline\",\"radialGradient
\",\"rect\",\"stop\",\"text\",\"tspan\"].forEach(function(t){p[t]=f,u[t]=!
0}),t.exports=r},function(t,e,n){\"use strict\";function r(t){return t.Window&&t
instanceof t.Window?{x:t.pageXOffset||
t.document.documentElement.scrollLeft,y:t.pageYOffset||
t.document.documentElement.scrollTop}:
{x:t.scrollLeft,y:t.scrollTop}}t.exports=r},function(t,e,n){\"use
strict\";function r(t){return t.replace(i,\"-$1\").toLowerCase()}var i=/([A-Z])/
g;t.exports=r},function(t,e,n){\"use strict\";function r(t){return
i(t).replace(o,\"-ms-\")}var i=n(336),o=/^ms-/;t.exports=r},function(t,e,n)
{\"use strict\";function r(t){var e=t?t.ownerDocument||
t:document,n=e.defaultView||window;return!(!t||!(\"function\"==typeof n.Node?t
instanceof n.Node:\"object\"==typeof t&&\"number\"==typeof
t.nodeType&&\"string\"==typeof t.nodeName))}t.exports=r},function(t,e,n){\"use
strict\";function r(t){return i(t)&&3==t.nodeType}var
i=n(338);t.exports=r},function(t,e,n){\"use strict\";var r=function(t){var
e;for(e in t)if(t.hasOwnProperty(e))return e;return
null};t.exports=r},function(t,e,n){\"use strict\";function r(t){var e={};return
function(n){return e.hasOwnProperty(n)||
(e[n]=t.call(this,n)),e[n]}}t.exports=r},function(t,e,n){\"use strict\";function
r(t,e,n,r,i){}t.exports=r},function(t,e,n){\"use strict\";function r(){return
null}var i=n(3),o=n(344),a=n(342),u=function(){};t.exports=function(t,e)
{function n(t){var e=t&&(E&&t[E]||t[M]);if(\"function\"==typeof e)return
e}function c(t,e){return t===e?0!==t||1/t==1/e:t!==t&&e!==e}function s(t)
{this.message=t,this.stack=\"\"}function l(t){function n(n,r,i,a,u,c,l){if(a=a||
T,c=c||i,l!==o){if(e){var f=new Error(\"Calling PropTypes validators directly is
not supported by the `prop-types` package. Use `PropTypes.checkPropTypes()` to
call them. Read more at http://fb.me/use-check-prop-types\");throw
f.name=\"Invariant Violation\",f}}return null==r[i]?n?new
s(null===r[i]?\"The \"+u+\" `\"+c+\"` is marked as required in `\"+a+\"`, but
its value is `null`.\":\"The \"+u+\" `\"+c+\"` is marked as required in
`\"+a+\"`, but its value is `undefined`.\"):null:t(r,i,a,u,c)}var
r=n.bind(null,!1);return r.isRequired=n.bind(null,!0),r}function f(t){function
e(e,n,r,i,o,a){var u=e[n];if(x(u)!==t)return new s(\"Invalid \"+i+\" `\"+o+\"`
of type `\"+w(u)+\"` supplied to `\"+r+\"`, expected `\"+t+\"`.\");return
null}return l(e)}function p(t){function e(e,n,r,i,a){if(\"function\"!=typeof
t)return new s(\"Property `\"+a+\"` of component `\"+r+\"` has invalid PropType
notation inside arrayOf.\");var u=e[n];if(!Array.isArray(u)){return new
s(\"Invalid \"+i+\" `\"+a+\"` of type `\"+x(u)+\"` supplied to `\"+r+\"`,
expected an array.\")}for(var c=0;c<u.length;c++){var
l=t(u,c,r,i,a+\"[\"+c+\"]\",o);if(l instanceof Error)return l}return null}return
l(e)}function h(t){function e(e,n,r,i,o){if(!(e[n]instanceof t)){var a=t.name||
T;return new s(\"Invalid \"+i+\" `\"+o+\"` of type `\"+k(e[n])+\"` supplied to
`\"+r+\"`, expected instance of `\"+a+\"`.\")}return null}return l(e)}function
d(t){function e(e,n,r,i,o){for(var a=e[n],u=0;u<t.length;u++)if(c(a,t[u]))return
null;return new s(\"Invalid \"+i+\" `\"+o+\"` of value `\"+a+\"` supplied to
`\"+r+\"`, expected one of \"+JSON.stringify(t)+\".\")}return Array.isArray(t)?
l(e):r}function v(t){function e(e,n,r,i,a){if(\"function\"!=typeof t)return new
s(\"Property `\"+a+\"` of component `\"+r+\"` has invalid PropType notation
inside objectOf.\");var u=e[n],c=x(u);if(\"object\"!==c)return new
s(\"Invalid \"+i+\" `\"+a+\"` of type `\"+c+\"` supplied to `\"+r+\"`, expected
an object.\");for(var l in u)if(u.hasOwnProperty(l)){var
f=t(u,l,r,i,a+\".\"+l,o);if(f instanceof Error)return f}return null}return
l(e)}function g(t){function e(e,n,r,i,a){for(var u=0;u<t.length;u++)
{if(null==(0,t[u])(e,n,r,i,a,o))return null}return new s(\"Invalid \"+i+\"
`\"+a+\"` supplied to `\"+r+\"`.\")}if(!Array.isArray(t))return r;for(var
n=0;n<t.length;n++){var i=t[n];if(\"function\"!=typeof i)return u(\"Invalid
argument supplied to oneOfType. Expected an array of check functions, but
received \"+C(i)+\" at index \"+n+\".\"),r}return l(e)}function m(t){function
e(e,n,r,i,a){var u=e[n],c=x(u);if(\"object\"!==c)return new s(\"Invalid \"+i+\"
`\"+a+\"` of type `\"+c+\"` supplied to `\"+r+\"`, expected `object`.\");for(var
l in t){var f=t[l];if(f){var p=f(u,l,r,i,a+\".\"+l,o);if(p)return p}}return
null}return l(e)}function y(t){function e(e,n,r,a,u){var
c=e[n],l=x(c);if(\"object\"!==l)return new s(\"Invalid \"+a+\" `\"+u+\"` of type
`\"+l+\"` supplied to `\"+r+\"`, expected `object`.\");var
f=i({},e[n],t);for(var p in f){var h=t[p];if(!h)return new s(\"Invalid \"+a+\"
`\"+u+\"` key `\"+p+\"` supplied to `\"+r+\"`.\\nBad
object: \"+JSON.stringify(e[n],null,\"  \")+\"\\nValid
keys: \"+JSON.stringify(Object.keys(t),null,\"  \"));var
d=h(c,p,r,a,u+\".\"+p,o);if(d)return d}return null}return l(e)}function _(e)
{switch(typeof e){case\"number\":case\"string\":case\"undefined\":return!
0;case\"boolean\":return!e;case\"object\":if(Array.isArray(e))return
e.every(_);if(null===e||t(e))return!0;var r=n(e);if(!r)return!1;var
i,o=r.call(e);if(r!==e.entries){for(;!(i=o.next()).done;)if(!_(i.value))return!
1}else for(;!(i=o.next()).done;){var a=i.value;if(a&&!_(a[1]))return!1}return!
0;default:return!1}}function b(t,e){return\"symbol\"===t||
(\"Symbol\"===e[\"@@toStringTag\"]||\"function\"==typeof Symbol&&e instanceof
Symbol)}function x(t){var e=typeof t;return Array.isArray(t)?\"array\":t
instanceof RegExp?\"object\":b(e,t)?\"symbol\":e}function w(t){if(void 0===t||
null===t)return\"\"+t;var e=x(t);if(\"object\"===e){if(t instanceof
Date)return\"date\";if(t instanceof RegExp)return\"regexp\"}return e}function
C(t){var e=w(t);switch(e)
{case\"array\":case\"object\":return\"an \"+e;case\"boolean\":case\"date\":case\
"regexp\":return\"a \"+e;default:return e}}function k(t){return
t.constructor&&t.constructor.name?t.constructor.name:T}var
E=\"function\"==typeof
Symbol&&Symbol.iterator,M=\"@@iterator\",T=\"<<anonymous>>\",S={array:f(\"array\
"),bool:f(\"boolean\"),func:f(\"function\"),number:f(\"number\"),object:f(\"obje
ct\"),string:f(\"string\"),symbol:f(\"symbol\"),any:function(){return l(r)}
(),arrayOf:p,element:function(){function e(e,n,r,i,o){var a=e[n];if(!t(a))
{return new s(\"Invalid \"+i+\" `\"+o+\"` of type `\"+x(a)+\"` supplied to
`\"+r+\"`, expected a single ReactElement.\")}return null}return l(e)}
(),instanceOf:h,node:function(){function t(t,e,n,r,i){return _(t[e])?null:new
s(\"Invalid \"+r+\" `\"+i+\"` supplied to `\"+n+\"`, expected a
ReactNode.\")}return l(t)}
(),objectOf:v,oneOf:d,oneOfType:g,shape:m,exact:y};return
s.prototype=Error.prototype,S.checkPropTypes=a,S.PropTypes=S,S}},function(t,e,n)
{\"use
strict\";t.exports=\"SECRET_DO_NOT_PASS_THIS_OR_YOU_WILL_BE_FIRED\"},function(t,
e,n){\"use strict\";var r={Properties:{\"aria-current\":0,\"aria-
details\":0,\"aria-disabled\":0,\"aria-hidden\":0,\"aria-invalid\":0,\"aria-
keyshortcuts\":0,\"aria-label\":0,\"aria-roledescription\":0,\"aria-
autocomplete\":0,\"aria-checked\":0,\"aria-expanded\":0,\"aria-
haspopup\":0,\"aria-level\":0,\"aria-modal\":0,\"aria-multiline\":0,\"aria-
multiselectable\":0,\"aria-orientation\":0,\"aria-placeholder\":0,\"aria-
pressed\":0,\"aria-readonly\":0,\"aria-required\":0,\"aria-selected\":0,\"aria-
sort\":0,\"aria-valuemax\":0,\"aria-valuemin\":0,\"aria-valuenow\":0,\"aria-
valuetext\":0,\"aria-atomic\":0,\"aria-busy\":0,\"aria-live\":0,\"aria-
relevant\":0,\"aria-dropeffect\":0,\"aria-grabbed\":0,\"aria-
activedescendant\":0,\"aria-colcount\":0,\"aria-colindex\":0,\"aria-
colspan\":0,\"aria-controls\":0,\"aria-describedby\":0,\"aria-
errormessage\":0,\"aria-flowto\":0,\"aria-labelledby\":0,\"aria-owns\":0,\"aria-
posinset\":0,\"aria-rowcount\":0,\"aria-rowindex\":0,\"aria-rowspan\":0,\"aria-
```

```
setsize\":0},DOMAttributeNames:{},DOMPropertyNames:
{}};t.exports=r},function(t,e,n){\"use strict\";var
r=n(4),i=n(154),o={focusDOMComponent:function()
{i(r.getNodeFromInstance(this))}};t.exports=o},function(t,e,n){\"use
strict\";function r(t){return(t.ctrlKey||t.altKey||t.metaKey)&&!
(t.ctrlKey&&t.altKey)}function i(t){switch(t){case\"topCompositionStart\":return
E.compositionStart;case\"topCompositionEnd\":return
E.compositionEnd;case\"topCompositionUpdate\":return
E.compositionUpdate}}function o(t,e)
{return\"topKeyDown\"===t&&e.keyCode===y}function a(t,e){switch(t)
{case\"topKeyUp\":return-1!==m.indexOf(e.keyCode);case\"topKeyDown\":return
e.keyCode!==y;case\"topKeyPress\":case\"topMouseDown\":case\"topBlur\":return!
0;default:return!1}}function u(t){var e=t.detail;return\"object\"==typeof
e&&\"data\"in e?e.data:null}function c(t,e,n,r){var c,s;if(_?c=i(t):T?
a(t,n)&&(c=E.compositionEnd):o(t,n)&&(c=E.compositionStart),!c)return
null;w&&(T||c!==E.compositionStart?
c===E.compositionEnd&&T&&(s=T.getData()):T=d.getPooled(r));var
l=v.getPooled(c,e,n,r);if(s)l.data=s;else{var f=u(n);null!==f&&(l.data=f)}return
p.accumulateTwoPhaseDispatches(l),l}function s(t,e){switch(t)
{case\"topCompositionEnd\":return u(e);case\"topKeyPress\":return e.which!==C?
null:(M=!0,k);case\"topTextInput\":var n=e.data;return n===k&&M?
null:n;default:return null}}function l(t,e){if(T)
{if(\"topCompositionEnd\"===t||!_&&a(t,e)){var n=T.getData();return
d.release(T),T=null,n}return null}switch(t){case\"topPaste\":return
null;case\"topKeyPress\":return e.which&&!r(e)?
String.fromCharCode(e.which):null;case\"topCompositionEnd\":return w?
null:e.data;default:return null}}function f(t,e,n,r){var i;if(!(i=x?
s(t,n):l(t,n)))return null;var o=g.getPooled(E.beforeInput,e,n,r);return
o.data=i,p.accumulateTwoPhaseDispatches(o),o}var
p=n(23),h=n(6),d=n(354),v=n(391),g=n(394),m=[9,13,27,32],y=229,_=h.canUseDOM&&\"
CompositionEvent\"in window,b=null;h.canUseDOM&&\"documentMode\"in
document&&(b=document.documentMode);var
 x=h.canUseDOM&&\"TextEvent\"in window&&!b&&!function(){var
t=window.opera;return\"object\"==typeof t&&\"function\"==typeof
t.version&&parseInt(t.version(),10)<=12}(),w=h.canUseDOM&&(!_||
b&&b>8&&b<=11),C=32,k=String.fromCharCode(C),E={beforeInput:
{phasedRegistrationNames:
{bubbled:\"onBeforeInput\",captured:\"onBeforeInputCapture\"},dependencies:
[\"topCompositionEnd\",\"topKeyPress\",\"topTextInput\",\"topPaste\"]},compositi
onEnd:{phasedRegistrationNames:
{bubbled:\"onCompositionEnd\",captured:\"onCompositionEndCapture\"},dependencies
:
[\"topBlur\",\"topCompositionEnd\",\"topKeyDown\",\"topKeyPress\",\"topKeyUp\",\
"topMouseDown\"]},compositionStart:{phasedRegistrationNames:
{bubbled:\"onCompositionStart\",captured:\"onCompositionStartCapture\"},dependen
cies:
[\"topBlur\",\"topCompositionStart\",\"topKeyDown\",\"topKeyPress\",\"topKeyUp\"
,\"topMouseDown\"]},compositionUpdate:{phasedRegistrationNames:
{bubbled:\"onCompositionUpdate\",captured:\"onCompositionUpdateCapture\"},depend
encies:
[\"topBlur\",\"topCompositionUpdate\",\"topKeyDown\",\"topKeyPress\",\"topKeyUp\
",\"topMouseDown\"]}},M=!
1,T=null,S={eventTypes:E,extractEvents:function(t,e,n,r)
{return[c(t,e,n,r),f(t,e,n,r)]}};t.exports=S},function(t,e,n){\"use strict\";var
r=n(158),i=n(6),o=(n(9),n(330),n(400)),a=n(337),u=n(341),c=(n(2),u(function(t)
{return a(t)})),s=!1,l=\"cssFloat\";if(i.canUseDOM){var
f=document.createElement(\"div\").style;try{f.font=\"\"}catch(t){s=!0}void
0===document.documentElement.style.cssFloat&&(l=\"styleFloat\")}var
p={createMarkupForStyles:function(t,e){var n=\"\";for(var r in
t)if(t.hasOwnProperty(r)){var i=0===r.indexOf(\"--\"),a=t[r];null!=a&&(n+=c(r)
+\":\",n+=o(r,a,e,i)+\";\")}return n||null},setValueForStyles:function(t,e,n)
{var i=t.style;for(var a in e)if(e.hasOwnProperty(a)){var
u=0===a.indexOf(\"--\"),c=o(a,e[a],n,u);if(\"float\"!==a&&\"cssFloat\"!==a||
(a=l),u)i.setProperty(a,c);else if(c)i[a]=c;else{var
f=s&&r.shorthandPropertyExpansions[a];if(f)for(var p in f)i[p]=\"\";else
i[a]=\"\"}}}};t.exports=p},function(t,e,n){\"use strict\";function r(t,e,n){var
r=M.getPooled(P.change,t,e,n);return
r.type=\"change\",w.accumulateTwoPhaseDispatches(r),r}function i(t){var
e=t.nodeName&&t.nodeName.toLowerCase();return\"select\"===e||\"input\"===e&&\"fi
le\"===t.type}function o(t){var e=r(I,t,S(t));E.batchedUpdates(a,e)}function
a(t){x.enqueueEvents(t),x.processEventQueue(!1)}function u(t,e)
{O=t,I=e,O.attachEvent(\"onchange\",o)}function c()
{O&&(O.detachEvent(\"onchange\",o),O=null,I=null)}function s(t,e){var
n=T.updateValueIfChanged(t),r=!
0===e.simulated&&L._allowSimulatedPassThrough;if(n||r)return t}function l(t,e)
{if(\"topChange\"===t)return e}function f(t,e,n){\"topFocus\"===t?
(c(),u(e,n)):\"topBlur\"===t&&c()}function p(t,e)
{O=t,I=e,O.attachEvent(\"onpropertychange\",d)}function h()
{O&&(O.detachEvent(\"onpropertychange\",d),O=null,I=null)}function d(t)
{\"value\"===t.propertyName&&s(I,t)&&o(t)}function v(t,e,n){\"topFocus\"===t?
(h(),p(e,n)):\"topBlur\"===t&&h()}function g(t,e,n)
{if(\"topSelectionChange\"===t||\"topKeyUp\"===t||\"topKeyDown\"===t)return
s(I,n)}function m(t){var e=t.nodeName;return
e&&\"input\"===e.toLowerCase()&&(\"checkbox\"===t.type||\"radio\"===t.type)}func
tion y(t,e,n){if(\"topClick\"===t)return s(e,n)}function _(t,e,n)
{if(\"topInput\"===t||\"topChange\"===t)return s(e,n)}function b(t,e){if(null!
=t){var n=t._wrapperState||
e._wrapperState;if(n&&n.controlled&&\"number\"===e.type){var
r=\"\"+e.value;e.getAttribute(\"value\")!==r&&e.setAttribute(\"value\",r)}}}var
x=n(22),w=n(23),C=n(6),k=n(4),E=n(12),M=n(14),T=n(173),S=n(94),N=n(95),A=n(175),
P={change:{phasedRegistrationNames:
{bubbled:\"onChange\",captured:\"onChangeCapture\"},dependencies:
[\"topBlur\",\"topChange\",\"topClick\",\"topFocus\",\"topInput\",\"topKeyDown\"
,\"topKeyUp\",\"topSelectionChange\"]}},O=null,I=null,D=!
1;C.canUseDOM&&(D=N(\"change\")&&(!document.documentMode||
document.documentMode>8));var R=!1;C.canUseDOM&&(R=N(\"input\")&&(!
document.documentMode||document.documentMode>9));var
L={eventTypes:P,_allowSimulatedPassThrough:!
0,_isInputEventSupported:R,extractEvents:function(t,e,n,o){var a,u,c=e?
k.getNodeFromInstance(e):window;if(i(c)?D?a=l:u=f:A(c)?R?a=_:
(a=g,u=v):m(c)&&(a=y),a){var s=a(t,e,n);if(s){return
r(s,n,o)}}u&&u(t,c,e),\"topBlur\"===t&&b(e,c)}};t.exports=L},function(t,e,n)
{\"use strict\";var r=n(1),i=n(20),o=n(6),a=n(333),u=n(11),c=(n(0),
{dangerouslyReplaceNodeWithMarkup:function(t,e){if(o.canUseDOM||r(\"56\"),e||
r(\"57\"),\"HTML\"===t.nodeName&&r(\"58\"),\"string\"==typeof e){var n=a(e,u)
[0];t.parentNode.replaceChild(n,t)}else
i.replaceChildWithTree(t,e)}}});t.exports=c},function(t,e,n){\"use strict\";var
r=[\"ResponderEventPlugin\",\"SimpleEventPlugin\",\"TapEventPlugin\",\"EnterLeav
eEventPlugin\",\"ChangeEventPlugin\",\"SelectEventPlugin\",\"BeforeInputEventPlu
gin\"];t.exports=r},function(t,e,n){\"use strict\";var
r=n(23),i=n(4),o=n(54),a={mouseEnter:
{registrationName:\"onMouseEnter\",dependencies:
[\"topMouseOut\",\"topMouseOver\"]},mouseLeave:
{registrationName:\"onMouseLeave\",dependencies:
[\"topMouseOut\",\"topMouseOver\"]}},u={eventTypes:a,extractEvents:function(t,e,
n,u){if(\"topMouseOver\"===t&&(n.relatedTarget||n.fromElement))return
null;if(\"topMouseOut\"!==t&&\"topMouseOver\"!==t)return null;var
c;if(u.window===u)c=u;else{var s=u.ownerDocument;c=s?s.defaultView||
s.parentWindow:window}var l,f;if(\"topMouseOut\"===t){l=e;var
p=n.relatedTarget||n.toElement;f=p?i.getClosestInstanceFromNode(p):null}else
l=null,f=e;if(l===f)return null;var h=null==l?
c:i.getNodeFromInstance(l),d=null==f?
c:i.getNodeFromInstance(f),v=o.getPooled(a.mouseLeave,l,n,u);v.type=\"mouseleave
\",v.target=h,v.relatedTarget=d;var g=o.getPooled(a.mouseEnter,f,n,u);return
g.type=\"mouseenter\",g.target=d,g.relatedTarget=h,r.accumulateEnterLeaveDispatc
hes(v,g,l,f),[v,g]}};t.exports=u},function(t,e,n){\"use strict\";var
r={topAbort:null,topAnimationEnd:null,topAnimationIteration:null,topAnimationSta
rt:null,topBlur:null,topCanPlay:null,topCanPlayThrough:null,topChange:null,topCl
```

```
ick:null,topCompositionEnd:null,topCompositionStart:null,topCompositionUpdate:nu
ll,topContextMenu:null,topCopy:null,topCut:null,topDoubleClick:null,topDrag:null
,topDragEnd:null,topDragEnter:null,topDragExit:null,topDragLeave:null,topDragOve
r:null,topDragStart:null,topDrop:null,topDurationChange:null,topEmptied:null,top
Encrypted:null,topEnded:null,topError:null,topFocus:null,topInput:null,topInvali
d:null,topKeyDown:null,topKeyPress:null,topKeyUp:null,topLoad:null,topLoadedData
:null,topLoadedMetadata:null,topLoadStart:null,topMouseDown:null,topMouseMove:nu
ll,topMouseOut:null,topMouseOver:null,topMouseUp:null,topPaste:null,topPause:nul
l,topPlay:null,topPlaying:null,topProgress:null,topRateChange:null,topReset:null
,topScroll:null,topSeeked:null,topSeeking:null,topSelectionChange:null,topStalle
d:null,topSubmit:null,topSuspend:null,topTextInput:null,topTimeUpdate:null,topTo
uchCancel:null,topTouchEnd:null,topTouchMove:null,topTouchStart:null,topTransiti
onEnd:null,topVolumeChange:null,topWaiting:null,topWheel:null},i={topLevelTypes:
r};t.exports=i},function(t,e,n){\"use strict\";function r(t)
{this._root=t,this._startText=this.getText(),this._fallbackText=null}var
i=n(3),o=n(18),a=n(172);i(r.prototype,{destructor:function()
{this._root=null,this._startText=null,this._fallbackText=null},getText:function(
){return\"value\"in this._root?
this._root.value:this._root[a()]},getData:function()
{if(this._fallbackText)return this._fallbackText;var
t,e,n=this._startText,r=n.length,i=this.getText(),o=i.length;for(t=0;t<r&&n[t]==
=i[t];t++);var a=r-t;for(e=1;e<=a&&n[r-e]===i[o-e];e++);var u=e>1?1-e:void
0;return
this._fallbackText=i.slice(t,u),this._fallbackText}}),o.addPoolingTo(r),t.export
s=r},function(t,e,n){\"use strict\";var
r=n(21),i=r.injection.MUST_USE_PROPERTY,o=r.injection.HAS_BOOLEAN_VALUE,a=r.inje
ction.HAS_NUMERIC_VALUE,u=r.injection.HAS_POSITIVE_NUMERIC_VALUE,c=r.injection.H
AS_OVERLOADED_BOOLEAN_VALUE,s={isCustomAttribute:RegExp.prototype.test.bind(new
RegExp(\"^(data|aria)-[\"+r.ATTRIBUTE_NAME_CHAR+\"]*$\")),Properties:
{accept:0,acceptCharset:0,accessKey:0,action:0,allowFullScreen:o,allowTransparen
cy:0,alt:0,as:0,async:o,autoComplete:0,autoPlay:o,capture:o,cellPadding:0,cellSp
acing:0,charSet:0,challenge:0,checked:i|
o,cite:0,classID:0,className:0,cols:u,colSpan:0,content:0,contentEditable:0,cont
extMenu:0,controls:o,controlsList:0,coords:0,crossOrigin:0,data:0,dateTime:0,def
ault:o,defer:o,dir:0,disabled:o,download:c,draggable:0,encType:0,form:0,formActi
on:0,formEncType:0,formMethod:0,formNoValidate:o,formTarget:0,frameBorder:0,head
ers:0,height:0,hidden:o,high:0,href:0,hrefLang:0,htmlFor:0,httpEquiv:0,icon:0,id
:0,inputMode:0,integrity:0,is:0,keyParams:0,keyType:0,kind:0,label:0,lang:0,list
:0,loop:o,low:0,manifest:0,marginHeight:0,marginWidth:0,max:0,maxLength:0,media:
0,mediaGroup:0,method:0,min:0,minLength:0,multiple:i|o,muted:i|
o,name:0,nonce:0,noValidate:o,open:o,optimum:0,pattern:0,placeholder:0,playsInli
ne:o,poster:0,preload:0,profile:0,radioGroup:0,readOnly:o,referrerPolicy:0,rel:0
,required:o,reversed:o,role:0,rows:u,rowSpan:a,sandbox:0,scope:0,scoped:o,scroll
ing:0,seamless:o,selected:i|
o,shape:0,size:u,sizes:0,span:u,spellCheck:0,src:0,srcDoc:0,srcLang:0,srcSet:0,s
tart:a,step:0,style:0,summary:0,tabIndex:0,target:0,title:0,type:0,useMap:0,valu
e:0,width:0,wmode:0,wrap:0,about:0,datatype:0,inlist:0,prefix:0,property:0,resou
rce:0,typeof:0,vocab:0,autoCapitalize:0,autoCorrect:0,autoSave:0,color:0,itemPro
p:0,itemScope:o,itemType:0,itemID:0,itemRef:0,results:0,security:0,unselectable:
0},DOMAttributeNames:{acceptCharset:\"accept-
charset\",className:\"class\",htmlFor:\"for\",httpEquiv:\"http-
equiv\"},DOMPropertyNames:{},DOMMutationMethods:{value:function(t,e)
{if(null==e)return t.removeAttribute(\"value\");\"number\"!==t.type||!
1===t.hasAttribute(\"value\")?t.setAttribute(\"value\",\"\"+e):t.validity&&!
t.validity.badInput&&t.ownerDocument.activeElement!
==t&&t.setAttribute(\"value\",\"\"+e)}}};t.exports=s},function(t,e,n){\
"use strict\";(function(e){function r(t,e,n,r){var i=void 0===t[n];null!
=e&&i&&(t[n]=o(e,!0))}var i=n(24),o=n(174),a=(n(85),n(96)),u=n(177);n(2);void 0!
==e&&e.env;var c={instantiateChildren:function(t,e,n,i){if(null==t)return
null;var o={};return u(t,r,o),o},updateChildren:function(t,e,n,r,u,c,s,l,f)
{if(e||t){var p,h;for(p in e)if(e.hasOwnProperty(p)){h=t&&t[p];var
d=h&&h._currentElement,v=e[p];if(null!
=h&&a(d,v))i.receiveComponent(h,v,u,l),e[p]=h;else{h&&(r[p]=i.getHostNode(h),i.u
nmountComponent(h,!1));var g=o(v,!0);e[p]=g;var
m=i.mountComponent(g,u,c,s,l,f);n.push(m)}}for(p in t)!t.hasOwnProperty(p)||
e&&e.hasOwnProperty(p)||(h=t[p],r[p]=i.getHostNode(h),i.unmountComponent(h,!
1))}},unmountChildren:function(t,e){for(var n in t)if(t.hasOwnProperty(n)){var
r=t[n];i.unmountComponent(r,e)}}};t.exports=c}).call(e,n(156))},function(t,e,n)
{\"use strict\";var
r=n(82),i=n(364),o={processChildrenUpdates:i.dangerouslyProcessChildrenUpdates,r
eplaceNodeWithMarkup:r.dangerouslyReplaceNodeWithMarkup};t.exports=o},function(t
,e,n){\"use strict\";function r(t){}function i(t){return!(!t.prototype||!
t.prototype.isReactComponent)}function o(t){return!(!t.prototype||!
t.prototype.isPureReactComponent)}var
a=n(1),u=n(3),c=n(26),s=n(87),l=n(15),f=n(88),p=n(39),h=(n(9),n(168)),d=n(24),v=
n(51),g=(n(0),n(81)),m=n(96),y=(n(2),
{ImpureClass:0,PureClass:1,StatelessFunctional:2});r.prototype.render=function()
{var
t=p.get(this)._currentElement.type,e=t(this.props,this.context,this.updater);ret
urn e};var _=1,b={construct:function(t)
{this._currentElement=t,this._rootNodeID=0,this._compositeType=null,this._instan
ce=null,this._hostParent=null,this._hostContainerInfo=null,this._updateBatchNumb
er=null,this._pendingElement=null,this._pendingStateQueue=null,this._pendingRepl
aceState=!1,this._pendingForceUpdate=!
1,this._renderedNodeType=null,this._renderedComponent=null,this._context=null,th
is._mountOrder=0,this._topLevelWrapper=null,this._pendingCallbacks=null,this._ca
lledComponentWillUnmount=!1},mountComponent:function(t,e,n,u)
{this._context=u,this._mountOrder=_+
+,this._hostParent=e,this._hostContainerInfo=n;var
s,l=this._currentElement.props,f=this._processContext(u),h=this._currentElement.
type,d=t.getUpdateQueue(),g=i(h),m=this._constructComponent(g,l,f,d);g||null!
=m&&null!=m.render?o(h)?
this._compositeType=y.PureClass:this._compositeType=y.ImpureClass:
(s=m,null===m||!1===m||c.isValidElement(m)||a(\"105\",h.displayName||
h.name||\"Component\"),m=new
r(h),this._compositeType=y.StatelessFunctional);m.props=l,m.context=f,m.refs=v,m
.updater=d,this._instance=m,p.set(m,this);var b=m.state;void
0===b&&(m.state=b=null),(\"object\"!=typeof b||
Array.isArray(b))&&a(\"106\",this.getName()||\"ReactCompositeComponent\"),this._
pendingStateQueue=null,this._pendingReplaceState=!1,this._pendingForceUpdate=!
1;var x;return x=m.unstable_handleError?
this.performInitialMountWithErrorHandling(s,e,n,t,u):this.performInitialMount(s,
e,n,t,u),m.componentDidMount&&t.getReactMountReady().enqueue(m.componentDidMount
,m),x},_constructComponent:function(t,e,n,r){return
this._constructComponentWithoutOwner(t,e,n,r)},_constructComponentWithoutOwner:f
unction(t,e,n,r){var i=this._currentElement.type;return t?new
i(e,n,r):i(e,n,r)},performInitialMountWithErrorHandling:function(t,e,n,r,i){var
o,a=r.checkpoint();try{o=this.performInitialMount(t,e,n,r,i)}catch(u)
{r.rollback(a),this._instance.unstable_handleError(u),this._pendingStateQueue&&(
this._instance.state=this._processPendingState(this._instance.props,this._instan
ce.context)),a=r.checkpoint(),this._renderedComponent.unmountComponent(!
0),r.rollback(a),o=this.performInitialMount(t,e,n,r,i)}return
o},performInitialMount:function(t,e,n,r,i){var
o=this._instance,a=0;o.componentWillMount&&(o.componentWillMount(),this._pending
StateQueue&&(o.state=this._processPendingState(o.props,o.context))),void
0===t&&(t=this._renderValidatedComponent());var
u=h.getType(t);this._renderedNodeType=u;var
c=this._instantiateReactComponent(t,u!==h.EMPTY);this._renderedComponent=c;var
s=d.mountComponent(c,r,e,n,this._processChildContext(i),a);return
s},getHostNode:function(){return
d.getHostNode(this._renderedComponent)},unmountComponent:function(t)
{if(this._renderedComponent){var e=this._instance;if(e.componentWillUnmount&&!
e._calledComponentWillUnmount)if(e._calledComponentWillUnmount=!0,t){var
n=this.getName()
+\".componentWillUnmount()\";f.invokeGuardedCallback(n,e.componentWillUnmount.bi
nd(e))}else
e.componentWillUnmount();this._renderedComponent&&(d.unmountComponent(this._rend
eredComponent,t),this._renderedNodeType=null,this._renderedComponent=null,this._
```

```
instance=null),this._pendingStateQueue=null,this._pendingReplaceState=!
1,this._pendingForceUpdate=!
1,this._pendingCallbacks=null,this._pendingElement=null,this._context=null,this.
_rootNodeID=0,this._topLevelWrapper=null,p.remove(e)}},_maskContext:function(t)
{var e=this._currentElement.type,n=e.contextTypes;if(!n)return v;var
r={};for(var i in n)r[i]=t[i];return r},_processContext:function(t){var
e=this._maskContext(t);return e},_processChildContext:function(t){var
e,n=this._currentElement.type,r=this._instance;if(r.getChildContext&&(e=r.getChi
ldContext()),e){\"object\"!=typeof
n.childContextTypes&&a(\"107\",this.getName()||\"ReactCompositeComponent\");for(
var i in e)i in n.childContextTypes||
a(\"108\",this.getName()||\"ReactCompositeComponent\",i);return u({},t,e)}return
t},_checkContextTypes:function(t,e,n){},receiveComponent:function(t,e,n){var
r=this._currentElement,i=this._context;this._pendingElement=null,this.updateComp
onent(e,r,t,i,n)},performUpdateIfNecessary:function(t){null!
=this._pendingElement?
d.receiveComponent(this,this._pendingElement,t,this._context):null!
==this._pendingStateQueue||this._pendingForceUpdate?
this.updateComponent(t,this._currentElement,this._currentElement,this._context,t
his._context):this._updateBatchNumber=null},updateComponent:function(t,e,n,r,i)
{var
o=this._instance;null==o&&a(\"136\",this.getName()||\"ReactCompositeComponent\")
;var u,c=!1;this._context===i?u=o.context:(u=this._processContext(i),c=!0);var
s=e.props,l=n.props;e!==n&&(c=!
0),c&&o.componentWillReceiveProps&&o.componentWillReceiveProps(l,u);var
f=this._processPendingState(l,u),p=!0;this._pendingForceUpdate||
(o.shouldComponentUpdate?
p=o.shouldComponentUpdate(l,f,u):this._compositeType===y.PureClass&&(p=!
g(s,l)||!g(o.state,f))),this._updateBatchNumber=null,p?
(this._pendingForceUpdate=!1,this._performComponentUpdate(n,l,f,u,t,i)):
(this._currentElement=n,this._context=i,o.props=l,o.state=f,o.context=u)},_proce
ssPendingState:function(t,e){var
n=this._instance,r=this._pendingStateQueue,i=this._pendingReplaceState;if(this._
pendingReplaceState=!1,this._pendingStateQueue=null,!r)return
n.state;if(i&&1===r.length)return r[0];for(var o=u({},i?r[0]:n.state),a=i?
1:0;a<r.length;a++){var c=r[a];u(o,\"function\"==typeof c?
c.call(n,o,t,e):c)}return o},_performComponentUpdate:function(t,e,n,r,i,o){var
a,u,c,s=this._instance,l=Boolean(s.componentDidUpdate);l&&(a=s.props,u=s.state,c
=s.context),s.componentWillUpdate&&s.componentWillUpdate(e,n,r),this._currentEle
ment=t,this._context=o,s.props=e,s.state=n,s.context=r,this._updateRenderedCompo
nent(i,o),l&&i.getReactMountReady().enqueue(s.componentDidUpdate.bind(s,a,u,c),s
)}},_updateRenderedComponent:function(t,e){var
n=this._renderedComponent,r=n._currentElement,i=this._renderValidatedComponent()
,o=0;if(m(r,i))d.receiveComponent(n,i,t,this._processChildContext(e));else{var
a=d.getHostNode(n);d.unmountComponent(n,!1);var
u=h.getType(i);this._renderedNodeType=u;var
c=this._instantiateReactComponent(i,u!==h.EMPTY);this._renderedComponent=c;var
s=d.mountComponent(c,t,this._hostParent,this._hostContainerInfo,this._processChi
ldContext(e),o);this._replaceNodeWithMarkup(a,s,n)}},_replaceNodeWithMarkup:func
tion(t,e,n)
{s.replaceNodeWithMarkup(t,e,n)},_renderValidatedComponentWithoutOwnerOrContext:
function(){var t=this._instance;return
t.render()},_renderValidatedComponent:function(){var t;if(this._compositeType!
==y.StatelessFunctional)
{l.current=this;try{t=this._renderValidatedComponentWithoutOwnerOrContext()}fina
lly{l.current=null}}else
t=this._renderValidatedComponentWithoutOwnerOrContext();return null===t||!
1===t||c.isValidElement(t)||
a(\"109\",this.getName()||\"ReactCompositeComponent\"),t},attachRef:function(t,e
){var n=this.getPublicInstance();null==n&&a(\"110\");var
r=e.getPublicInstance();(n.refs===v?n.refs={}:n.refs)
[t]=r},detachRef:function(t){delete
this.getPublicInstance().refs[t]},getName:function(){var
t=this._currentElement.type,e=this._instance&&this._instance.constructor;return
```

```
t.displayName||e&&e.displayName||t.name||e&&e.name||
null},getPublicInstance:function(){var t=this._instance;return
this._compositeType===y.StatelessFunctional?
null:t},_instantiateReactComponent:null};t.exports=b},function(t,e,n){\"use
strict\";var
r=n(4),i=n(372),o=n(167),a=n(24),u=n(12),c=n(385),s=n(401),l=n(171),f=n(408);n(2
);i.inject();var
p={findDOMNode:s,render:o.render,unmountComponentAtNode:o.unmountComponentAtNode
,version:c,unstable_batchedUpdates:u.batchedUpdates,unstable_renderSubtreeIntoCo
ntainer:f};\"undefined\"!=typeof
__REACT_DEVTOOLS_GLOBAL_HOOK__&&\"function\"==typeof
__REACT_DEVTOOLS_GLOBAL_HOOK__.inject&&__REACT_DEVTOOLS_GLOBAL_HOOK__.inject({Co
mponentTree:
{getClosestInstanceFromNode:r.getClosestInstanceFromNode,getNodeFromInstance:fun
ction(t){return t._renderedComponent&&(t=l(t)),t?
r.getNodeFromInstance(t):null}},Mount:o,Reconciler:a});t.exports=p},function(t,e
,n){\"use strict\";function r(t){if(t){var e=t._currentElement._owner||
null;if(e){var n=e.getName();if(n)return\" This DOM node was rendered by
`\"+n+\"`.\"}}return\"\"}function i(t,e){e&&($[t._tag]&&(null!=e.children||null!
=e.dangerouslySetInnerHTML)&&g(\"137\",t._tag,t._currentElement._owner?\" Check
the render method of \"+t._currentElement._owner.getName()+\".\":\"\"),null!
=e.dangerouslySetInnerHTML&&(null!=e.children&&g(\"60\"),\"object\"==typeof
 e.dangerouslySetInnerHTML&&z in e.dangerouslySetInnerHTML||g(\"61\")),null!
=e.style&&\"object\"!=typeof e.style&&g(\"62\",r(t)))}function o(t,e,n,r){if(!(r
instanceof D)){var i=t._hostContainerInfo,o=i._node&&i._node.nodeType===q,u=o?
i._node:i._ownerDocument;B(e,u),r.getReactMountReady().enqueue(a,
{inst:t,registrationName:e,listener:n})}}function a(){var
t=this;k.putListener(t.inst,t.registrationName,t.listener)}function u(){var
t=this;N.postMountWrapper(t)}function c(){var
t=this;O.postMountWrapper(t)}function s(){var
t=this;A.postMountWrapper(t)}function l(){L.track(this)}function f(){var
t=this;t._rootNodeID||g(\"63\");var e=j(t);switch(e||g(\"64\"),t._tag)
{case\"iframe\":case\"object\":t._wrapperState.listeners=[M.trapBubbledEvent(\"t
opLoad\",\"load\",e)];break;case\"video\":case\"audio\":t._wrapperState.listener
s=[];for(var n in
Y)Y.hasOwnProperty(n)&&t._wrapperState.listeners.push(M.trapBubbledEvent(n,Y[n],
e));break;case\"source\":t._wrapperState.listeners=[M.trapBubbledEvent(\"topErro
r\",\"error\",e)];break;case\"img\":t._wrapperState.listeners=[M.trapBubbledEven
t(\"topError\",\"error\",e),M.trapBubbledEvent(\"topLoad\",\"load\",e)];break;ca
se\"form\":t._wrapperState.listeners=[M.trapBubbledEvent(\"topReset\",\"reset\",
e),M.trapBubbledEvent(\"topSubmit\",\"submit\",e)];break;case\"input\":case\"sel
ect\":case\"textarea\":t._wrapperState.listeners=[M.trapBubbledEvent(\"topInvali
d\",\"invalid\",e)]}}function p(){P.postUpdateWrapper(this)}function h(t)
{Z.call(Q,t)||(X.test(t)||g(\"65\",t),Q[t]=!0)}function d(t,e){return
t.indexOf(\"-\")>=0||null!=e.is}function v(t){var
e=t.type;h(e),this._currentElement=t,this._tag=e.toLowerCase(),this._namespaceUR
I=null,this._renderedChildren=null,this._previousStyle=null,this._previousStyleC
opy=null,this._hostNode=null,this._hostParent=null,this._rootNodeID=0,this._domI
D=0,this._hostContainerInfo=null,this._wrapperState=null,this._topLevelWrapper=n
ull,this._flags=0}var
g=n(1),m=n(3),y=n(346),_=n(348),b=n(20),x=n(83),w=n(21),C=n(160),k=n(22),E=n(84)
,M=n(53),T=n(161),S=n(4),N=n(365),A=n(366),P=n(162),O=n(369),I=(n(9),n(378)),D=n
(383),R=(n(11),n(56)),L=(n(0),n(95),n(81),n(173)),U=(n(97),n(2),T),F=k.deleteLis
tener,j=S.getNodeFromInstance,B=M.listenTo,V=E.registrationNameModules,W={string
:!0,number:!
0},z=\"__html\",H={children:null,dangerouslySetInnerHTML:null,suppressContentEdi
tableWarning:null},q=11,Y={topAbort:\"abort\",topCanPlay:\"canplay\",topCanPlayT
hrough:\"canplaythrough\",topDurationChange:\"durationchange\",topEmptied:\"empt
ied\",topEncrypted:\"encrypted\",topEnded:\"ended\",topError:\"error\",topLoaded
Data:\"loadeddata\",topLoadedMetadata:\"loadedmetadata\",topLoadStart:\"loadstar
t\",topPause:\"pause\",topPlay:\"play\",topPlaying:\"playing\",topProgress:\"pro
gress\",topRateChange:\"ratechange\",topSeeked:\"seeked\",topSeeking:\"seeking\"
,topStalled:\"stalled\",topSuspend:\"suspend\",topTimeUpdate:\"timeupdate\",topV
olumeChange:\"volumechange\",topWaiting:\"waiting\"},K={area:!0,base:!0,br:!
```

```
0,col:!0,embed:!0,hr:!0,img:!0,input:!0,keygen:!0,link:!0,meta:!0,param:!
0,source:!0,track:!0,wbr:!0},G={listing:!0,pre:!0,textarea:!0},$=m({menuitem:!
0},K),X=/^[a-zA-Z][a-zA-Z:_\\.\\-\\
d]*$/,Q={},Z={}.hasOwnProperty,J=1;v.displayName=\"ReactDOMComponent\",v.Mixin={
mountComponent:function(t,e,n,r){this._rootNodeID=J++,this._domID=n._idCounter+
+,this._hostParent=e,this._hostContainerInfo=n;var
o=this._currentElement.props;switch(this._tag)
{case\"audio\":case\"form\":case\"iframe\":case\"img\":case\"link\":case\"object
\":case\"source\":case\"video\":this._wrapperState={listeners:null},t.getReactMo
untReady().enqueue(f,this);break;case\"input\":N.mountWrapper(this,o,e),o=N.getH
ostProps(this,o),t.getReactMountReady().enqueue(l,this),t.getReactMountReady().e
nqueue(f,this);break;case\"option\":A.mountWrapper(this,o,e),o=A.getHostProps(th
is,o);break;case\"select\":P.mountWrapper(this,o,e),o=P.getHostProps(this,o),t.g
etReactMountReady().enqueue(f,this);break;case\"textarea\":O.mountWrapper(this,o
,e),o=O.getHostProps(this,o),t.getReactMountReady().enqueue(l,this),t.getReactMo
untReady().enqueue(f,this)}i(this,o);var a,p;null!=e?
(a=e._namespaceURI,p=e._tag):n._tag&&(a=n._namespaceURI,p=n._tag),(null==a||
a===x.svg&&\"foreignobject\"===p)&&(a=x.html),a===x.html&&(\"svg\"===this._tag?
a=x.svg:\"math\"===this._tag&&(a=x.mathml)),this._namespaceURI=a;var
h;if(t.useCreateElement){var
d,v=n._ownerDocument;if(a===x.html)if(\"script\"===this._tag){var
g=v.createElement(\"div\"),m=this._currentElement.type;g.innerHTML=\"<\"+m+\"></
\"+m+\">\",d=g.removeChild(g.firstChild)}else d=o.is?
v.createElement(this._currentElement.type,o.is):v.createElement(this._currentEle
ment.type);else
d=v.createElementNS(a,this._currentElement.type);S.precacheNode(this,d),this._fl
ags|=U.hasCachedChildNodes,this._hostParent||
C.setAttributeForRoot(d),this._updateDOMProperties(null,o,t);var
_=b(d);this._createInitialChildren(t,o,r,_),h=_}else{var
w=this._createOpenTagMarkupAndPutListeners(t,o),k=this._createContentMarkup(t,o,
r);h=!k&&K[this._tag]?w+\"/
>\":w+\">\"+k+\"</\"+this._currentElement.type+\">\"}switch(this._tag)
{case\"input\":t.getReactMountReady().enqueue(u,this),o.autoFocus&&t.getReactMou
ntReady().enqueue(y.focusDOMComponent,this);break;case\"textarea\":t.getReactMou
ntReady().enqueue(c,this),o.autoFocus&&t.getReactMountReady().enqueue(y.focusDOM
Component,this);break;case\"select\":case\"button\":o.autoFocus&&t.getReactMount
Ready().enqueue(y.focusDOMComponent,this);break;case\"option\":t.getReactMountRe
ady().enqueue(s,this)}return
h},_createOpenTagMarkupAndPutListeners:function(t,e){var
n=\"<\"+this._currentElement.type;for(var r in e)if(e.hasOwnProperty(r)){var
i=e[r];if(null!
=i)if(V.hasOwnProperty(r))i&&o(this,r,i,t);else{\"style\"===r&&(i&&(i=this._prev
iousStyleCopy=m({},e.style)),i=_.createMarkupForStyles(i,this));var a=null;null!
=this._tag&&d(this._tag,e)?H.hasOwnProperty(r)||
(a=C.createMarkupForCustomAttribute(r,i)):a=C.createMarkupForProperty(r,i),a&&(n
+=\" \"+a)}}return t.renderToStaticMarkup?n:(this._hostParent||
(n+=\" \"+C.createMarkupForRoot()),n+=\" \"+C.createMarkupForID(this._domID))},_
createContentMarkup:function(t,e,n){var
r=\"\",i=e.dangerouslySetInnerHTML;if(null!=i)null!
=i.__html&&(r=i.__html);else{var o=W[typeof e.children]?e.children:null,a=null!
=o?null:e.children;if(null!=o)r=R(o);else if(null!=a){var
u=this.mountChildren(a,t,n);r=u.join(\"\")}}return G[this._tag]&&\"\\
n\"===r.charAt(0)?\"\\n\"+r:r},_createInitialChildren:function(t,e,n,r){var
i=e.dangerouslySetInnerHTML;if(null!=i)null!
=i.__html&&b.queueHTML(r,i.__html);else{var o=W[typeof e.children]?
e.children:null,a=null!=o?null:e.children;if(null!=o)\"\"!
==o&&b.queueText(r,o);else if(null!=a)for(var
u=this.mountChildren(a,t,n),c=0;c<u.length;c+
+)b.queueChild(r,u[c])}},receiveComponent:function(t,e,n){var
r=this._currentElement;this._currentElement=t,this.updateComponent(e,r,t,n)},upd
ateComponent:function(t,e,n,r){var
o=e.props,a=this._currentElement.props;switch(this._tag)
{case\"input\":o=N.getHostProps(this,o),a=N.getHostProps(this,a);break;case\"opt
ion\":o=A.getHostProps(this,o),a=A.getHostProps(this,a);break;case\"select\":o=P
.getHostProps(this,o),a=P.getHostProps(this,a);break;case\"textarea\":o=O.getHos
tProps(this,o),a=O.getHostProps(this,a)}switch(i(this,a),this._updateDOMProperti
es(o,a,t),this._updateDOMChildren(o,a,t,r),this._tag)
{case\"input\":N.updateWrapper(this),L.updateValueIfChanged(this);break;case\"te
xtarea\":O.updateWrapper(this);break;case\"select\":t.getReactMountReady().enque
ue(p,this)}},_updateDOMProperties:function(t,e,n){var r,i,a;for(r in t)if(!
e.hasOwnProperty(r)&&t.hasOwnProperty(r)&&null!=t[r])if(\"style\"===r){var
u=this._previousStyleCopy;for(i in u)u.hasOwnProperty(i)&&(a=a||
{},a[i]=\"\");this._previousStyleCopy=null}else V.hasOwnProperty(r)?
t[r]&&F(this,r):d(this._tag,t)?H.hasOwnProperty(r)||
C.deleteValueForAttribute(j(this),r):(w.properties[r]||
w.isCustomAttribute(r))&&C.deleteValueForProperty(j(this),r);for(r in e){var
c=e[r],s=\"style\"===r?this._previousStyleCopy:null!=t?t[r]:void
0;if(e.hasOwnProperty(r)&&c!==s&&(null!=c||null!=s))if(\"style\"===r)if(c?
c=this._previousStyleCopy=m({},c):this._previousStyleCopy=null,s){for(i in s)!
s.hasOwnProperty(i)||c&&c.hasOwnProperty(i)||(a=a||{},a[i]=\"\");for(i in
c)c.hasOwnProperty(i)&&s[i]!==c[i]&&(a=a||{},a[i]=c[i])}else a=c;else
if(V.hasOwnProperty(r))c?o(this,r,c,n):s&&F(this,r);else
if(d(this._tag,e))H.hasOwnProperty(r)||C.setValueForAttribute(j(this),r,c);else
if(w.properties[r]||w.isCustomAttribute(r)){var l=j(this);null!=c?
C.setValueForProperty(l,r,c):C.deleteValueForProperty(l,r)}}a&&_.setValueForStyl
es(j(this),a,this)},_updateDOMChildren:function(t,e,n,r){var i=W[typeof
t.children]?t.children:null,o=W[typeof e.children]?
e.children:null,a=t.dangerouslySetInnerHTML&&t.dangerouslySetInnerHTML.__html,u=
e.dangerouslySetInnerHTML&&e.dangerouslySetInnerHTML.__html,c=null!=i?
null:t.children,s=null!=o?null:e.children,l=null!=i||null!=a,f=null!=o||null!
=u;null!=c&&null==s?this.updateChildren(null,n,r):l&&!
f&&this.updateTextContent(\"\"),null!=o?i!
==o&&this.updateTextContent(\"\"+o):null!=u?a!
==u&&this.updateMarkup(\"\"+u):null!
=s&&this.updateChildren(s,n,r)},getHostNode:function(){return
j(this)},unmountComponent:function(t){switch(this._tag)
{case\"audio\":case\"form\":case\"iframe\":case\"img\":case\"link\":case\"object
\":case\"source\":case\"video\":var e=this._wrapperState.listeners;if(e)for(var
n=0;n<e.length;n+
+)e[n].remove();break;case\"input\":case\"textarea\":L.stopTracking(this);break;
case\"html\":case\"head\":case\"body\":g(\"66\",this._tag)}this.unmountChildren(
t),S.uncacheNode(this),k.deleteAllListeners(this),this._rootNodeID=0,this._domID
=0,this._wrapperState=null},getPublicInstance:function(){return
j(this)}},m(v.prototype,v.Mixin,I.Mixin),t.exports=v},function(t,e,n){\"use
strict\";function r(t,e){var
n={_topLevelWrapper:t,_idCounter:1,_ownerDocument:e?e.nodeType===i?
e:e.ownerDocument:null,_node:e,_tag:e?
e.nodeName.toLowerCase():null,_namespaceURI:e?e.
namespaceURI:null};return n}var i=(n(97),9);t.exports=r},function(t,e,n){\"use
strict\";var r=n(3),i=n(20),o=n(4),a=function(t)
{this._currentElement=null,this._hostNode=null,this._hostParent=null,this._hostC
ontainerInfo=null,this._domID=0};r(a.prototype,{mountComponent:function(t,e,n,r)
{var a=n._idCounter+
+;this._domID=a,this._hostParent=e,this._hostContainerInfo=n;var u=\" react-
empty: \"+this._domID+\" \";if(t.useCreateElement){var
c=n._ownerDocument,s=c.createComment(u);return
o.precacheNode(this,s),i(s)}return t.renderToStaticMarkup?\"\":\"\\
x3c!--\"+u+\"--\\x3e\"},receiveComponent:function(){},getHostNode:function()
{return o.getNodeFromInstance(this)},unmountComponent:function()
{o.uncacheNode(this)}}),t.exports=a},function(t,e,n){\"use strict\";var
r={useCreateElement:!0,useFiber:!1};t.exports=r},function(t,e,n){\"use
strict\";var r=n(82),i=n(4),o={dangerouslyProcessChildrenUpdates:function(t,e)
{var
n=i.getNodeFromInstance(t);r.processUpdates(n,e)}};t.exports=o},function(t,e,n)
{\"use strict\";function r(){this._rootNodeID&&p.updateWrapper(this)}function
i(t){return\"checkbox\"===t.type||\"radio\"===t.type?null!=t.checked:null!
=t.value}function o(t){var
e=this._currentElement.props,n=s.executeOnChange(e,t);f.asap(r,this);var
```

```
i=e.name;if(\"radio\"===e.type&&null!=i){for(var
o=l.getNodeFromInstance(this),u=o;u.parentNode;)u=u.parentNode;for(var
c=u.querySelectorAll(\"input[name=\"+JSON.stringify(\"\"+i)+']
[type=\"radio\"]'),p=0;p<c.length;p++){var h=c[p];if(h!==o&&h.form===o.form){var
d=l.getInstanceFromNode(h);d||a(\"90\"),f.asap(r,d)}}}return n}var
a=n(1),u=n(3),c=n(160),s=n(86),l=n(4),f=n(12),p=(n(0),n(2),
{getHostProps:function(t,e){var n=s.getValue(e),r=s.getChecked(e);return
u({type:void 0,step:void 0,min:void 0,max:void 0},e,{defaultChecked:void
0,defaultValue:void 0,value:null!=n?n:t._wrapperState.initialValue,checked:null!
=r?
r:t._wrapperState.initialChecked,onChange:t._wrapperState.onChange})},mountWrapp
er:function(t,e){var n=e.defaultValue;t._wrapperState={initialChecked:null!
=e.checked?e.checked:e.defaultChecked,initialValue:null!=e.value?
e.value:n,listeners:null,onChange:o.bind(t),controlled:i(e)}},updateWrapper:func
tion(t){var e=t._currentElement.props,n=e.checked;null!
=n&&c.setValueForProperty(l.getNodeFromInstance(t),\"checked\",n||!1);var
r=l.getNodeFromInstance(t),i=s.getValue(e);if(null!
=i)if(0===i&&\"\"===r.value)r.value=\"0\";else if(\"number\"===e.type){var
o=parseFloat(r.value,10)||0;(i!=o||i==o&&r.value!=i)&&(r.value=\"\"+i)}else
r.value!==\"\"+i&&(r.value=\"\"+i);else null==e.value&&null!
=e.defaultValue&&r.defaultValue!
==\"\"+e.defaultValue&&(r.defaultValue=\"\"+e.defaultValue),null==e.checked&&nul
l!=e.defaultChecked&&(r.defaultChecked=!!
e.defaultChecked)},postMountWrapper:function(t){var
e=t._currentElement.props,n=l.getNodeFromInstance(t);switch(e.type)
{case\"submit\":case\"reset\":break;case\"color\":case\"date\":case\"datetime\":
case\"datetime-
local\":case\"month\":case\"time\":case\"week\":n.value=\"\",n.value=n.defaultVa
lue;break;default:n.value=n.value}var r=n.name;\"\"!
==r&&(n.name=\"\"),n.defaultChecked=!n.defaultChecked,n.defaultChecked=!
n.defaultChecked,\"\"!==r&&(n.name=r)}});t.exports=p},function(t,e,n){\"use
strict\";function r(t){var e=\"\";return o.Children.forEach(t,function(t){null!
=t&&(\"string\"==typeof t||\"number\"==typeof t?e+=t:c||(c=!0))}),e}var
i=n(3),o=n(26),a=n(4),u=n(162),c=(n(2),!1),s={mountWrapper:function(t,e,n){var
i=null;if(null!=n){var o=n;\"optgroup\"===o._tag&&(o=o._hostParent),null!
=o&&\"select\"===o._tag&&(i=u.getSelectValueContext(o))}var a=null;if(null!=i)
{var c;if(c=null!=e.value?e.value+\"\":r(e.children),a=!1,Array.isArray(i))
{for(var s=0;s<i.length;s++)if(\"\"+i[s]===c){a=!0;break}}else
a=\"\"+i===c}t._wrapperState={selected:a}},postMountWrapper:function(t){var
e=t._currentElement.props;if(null!=e.value)
{a.getNodeFromInstance(t).setAttribute(\"value\",e.value)}},getHostProps:functio
n(t,e){var n=i({selected:void 0,children:void 0},e);null!
=t._wrapperState.selected&&(n.selected=t._wrapperState.selected);var
o=r(e.children);return o&&(n.children=o),n}};t.exports=s},function(t,e,n){\"use
strict\";function r(t,e,n,r){return t===n&&e===r}function i(t){var
e=document.selection,n=e.createRange(),r=n.text.length,i=n.duplicate();i.moveToE
lementText(t),i.setEndPoint(\"EndToStart\",n);var
o=i.text.length;return{start:o,end:o+r}}function o(t){var
e=window.getSelection&&window.getSelection();if(!e||0===e.rangeCount)return
null;var
n=e.anchorNode,i=e.anchorOffset,o=e.focusNode,a=e.focusOffset,u=e.getRangeAt(0);
try{u.startContainer.nodeType,u.endContainer.nodeType}catch(t){return null}var
c=r(e.anchorNode,e.anchorOffset,e.focusNode,e.focusOffset),s=c?
0:u.toString().length,l=u.cloneRange();l.selectNodeContents(t),l.setEnd(u.startC
ontainer,u.startOffset);var
f=r(l.startContainer,l.startOffset,l.endContainer,l.endOffset),p=f?
0:l.toString().length,h=p+s,d=document.createRange();d.setStart(n,i),d.setEnd(o,
a);var v=d.collapsed;return{start:v?h:p,end:v?p:h}}function a(t,e){var
n,r,i=document.selection.createRange().duplicate();void 0===e.end?
(n=e.start,r=n):e.start>e.end?(n=e.end,r=e.start):
(n=e.start,r=e.end),i.moveToElementText(t),i.moveStart(\"character\",n),i.setEnd
Point(\"EndToStart\",i),i.moveEnd(\"character\",r-n),i.select()}function u(t,e)
{if(window.getSelection){var
n=window.getSelection(),r=t[l()].length,i=Math.min(e.start,r),o=void 0===e.end?
i:Math.min(e.end,r);if(!n.extend&&i>o){var a=o;o=i,i=a}var
u=s(t,i),c=s(t,o);if(u&&c){var
f=document.createRange();f.setStart(u.node,u.offset),n.removeAllRanges(),i>o?
(n.addRange(f),n.extend(c.node,c.offset)):
(f.setEnd(c.node,c.offset),n.addRange(f))}}}var
c=n(6),s=n(405),l=n(172),f=c.canUseDOM&&\"selection\"in document&&!
(\"getSelection\"in window),p={getOffsets:f?i:o,setOffsets:f?
a:u};t.exports=p},function(t,e,n){\"use strict\";var
r=n(1),i=n(3),o=n(82),a=n(20),u=n(4),c=n(56),s=(n(0),n(97),function(t)
{this._currentElement=t,this._stringText=\"\"+t,this._hostNode=null,this._hostPa
rent=null,this._domID=0,this._mountIndex=0,this._closingComment=null,this._comme
ntNodes=null});i(s.prototype,{mountComponent:function(t,e,n,r){var
i=n._idCounter++,o=\" react-
text: \"+i+\" \";if(this._domID=i,this._hostParent=e,t.useCreateElement){var
s=n._ownerDocument,l=s.createComment(o),f=s.createComment(\" /react-
text \"),p=a(s.createDocumentFragment());return
a.queueChild(p,a(l)),this._stringText&&a.queueChild(p,a(s.createTextNode(this._s
tringText))),a.queueChild(p,a(f)),u.precacheNode(this,l),this._closingComment=f,
p}var h=c(this._stringText);return t.renderToStaticMarkup?h:\"\\
x3c!--\"+o+\"--\\x3e\"+h+\"\\x3c!-- /react-text --\\
x3e\"},receiveComponent:function(t,e){if(t!==this._currentElement)
{this._currentElement=t;var n=\"\"+t;if(n!==this._stringText)
{this._stringText=n;var
r=this.getHostNode();o.replaceDelimitedText(r[0],r[1],n)}}},getHostNode:function
(){var t=this._commentNodes;if(t)return t;if(!this._closingComment)for(var
e=u.getNodeFromInstance(this),n=e.nextSibling;;)
{if(null==n&&r(\"67\",this._domID),8===n.nodeType&&\" /react-
text \"===n.nodeValue){this._closingComment=n;break}n=n.nextSibling}return
t=[this._hostNode,this._closingComment],this._commentNodes=t,t},unmountComponent
:function()
{this._closingComment=null,this._commentNodes=null,u.uncacheNode(this)}}),t.expo
rts=s},function(t,e,n){\"use strict\";function r()
{this._rootNodeID&&l.updateWrapper(this)}function i(t){var
e=this._currentElement.props,n=u.executeOnChange(e,t);return
s.asap(r,this),n}var o=n(1),a=n(3),u=n(86),c=n(4),s=n(12),l=(n(0),n(2),
{getHostProps:function(t,e){return null!
=e.dangerouslySetInnerHTML&&o(\"91\"),a({},e,{value:void 0,defaultValue:void
0,children:\"\"+t._wrapperState.initialValue,onChange:t._wrapperState.onChange})
},mountWrapper:function(t,e){var n=u.getValue(e),r=n;if(null==n){var
a=e.defaultValue,c=e.children;null!=c&&(null!
=a&&o(\"92\"),Array.isArray(c)&&(c.length<=1||
o(\"93\"),c=c[0]),a=\"\"+c),null==a&&(a=\"\"),r=a}t._wrapperState={initialValue:
\"\"+r,listeners:null,onChange:i.bind(t)}},updateWrapper:function(t){var
e=t._currentElement.props,n=c.getNodeFromInstance(t),r=u.getValue(e);if(null!=r)
{var i=\"\"+r;i!
==n.value&&(n.value=i),null==e.defaultValue&&(n.defaultValue=i)}null!
=e.defaultValue&&(n.defaultValue=e.defaultValue)},postMountWrapper:function(t)
{var
e=c.getNodeFromInstance(t),n=e.textContent;n===t._wrapperState.initialValue&&(e.
value=n)}});t.exports=l},function(t,e,n){\"use strict\";function r(t,e)
{\"_hostNode\"in t||c(\"33\"),\"_hostNode\"in e||c(\"33\");for(var
n=0,r=t;r;r=r._hostParent)n++;for(var i=0,o=e;o;o=o._hostParent)i++;for(;n-
i>0;)t=t._hostParent,n--;for(;i-n>0;)e=e._hostParent,i--;for(var a=n;a--;)
{if(t===e)return t;t=t._hostParent,e=e._hostParent}return null}function i(t,e)
{\"_hostNode\"in t||c(\"35\"),\"_hostNode\"in e||c(\"35\");for(;e;)
{if(e===t)return!0;e=e._hostParent}return!1}function o(t){return\"_hostNode\"in
t||c(\"36\"),t._hostParent}function a(t,e,n){for(var
r=[];t;)r.push(t),t=t._hostParent;var i;for(i=r.length;i--
>0;)e(r[i],\"captured\",n);for(i=0;i<r.length;i++)e(r[i],\"bubbled\",n)}function
u(t,e,n,i,o){for(var a=t&&e?r(t,e):null,u=[];t&&t!
==a;)u.push(t),t=t._hostParent;for(var c=[];e&&e!
==a;)c.push(e),e=e._hostParent;var s;for(s=0;s<u.length;s+
+)n(u[s],\"bubbled\",i);for(s=c.length;s-- >0;)n(c[s],\"captured\",o)}var
c=n(1);n(0);t.exports={isAncestor:i,getLowestCommonAncestor:r,getParentInstance:
```

```
o,traverseTwoPhase:a,traverseEnterLeave:u}},function(t,e,n){\"use
strict\";function r(){this.reinitializeTransaction()}var
i=n(3),o=n(12),a=n(55),u=n(11),c={initialize:u,close:function()
{p.isBatchingUpdates=!
1}},s={initialize:u,close:o.flushBatchedUpdates.bind(o)},l=[s,c];i(r.prototype,a
,{getTransactionWrappers:function(){return l}});var f=new
r,p={isBatchingUpdates:!1,batchedUpdates:function(t,e,n,r,i,o){var
a=p.isBatchingUpdates;return p.isBatchingUpdates=!0,a?
t(e,n,r,i,o):f.perform(t,null,e,n,r,i,o)}};t.exports=p},function(t,e,n){\"use
 strict\";function r(){C||(C=!
0,y.EventEmitter.injectReactEventListener(m),y.EventPluginHub.injectEventPluginO
rder(u),y.EventPluginUtils.injectComponentTree(p),y.EventPluginUtils.injectTreeT
raversal(d),y.EventPluginHub.injectEventPluginsByName({SimpleEventPlugin:w,Enter
LeaveEventPlugin:c,ChangeEventPlugin:a,SelectEventPlugin:x,BeforeInputEventPlugi
n:o}),y.HostComponent.injectGenericComponentClass(f),y.HostComponent.injectTextC
omponentClass(v),y.DOMProperty.injectDOMPropertyConfig(i),y.DOMProperty.injectDO
MPropertyConfig(s),y.DOMProperty.injectDOMPropertyConfig(b),y.EmptyComponent.inj
ectEmptyComponentFactory(function(t){return new
h(t)}),y.Updates.injectReconcileTransaction(_),y.Updates.injectBatchingStrategy(
g),y.Component.injectEnvironment(l))}var
i=n(345),o=n(347),a=n(349),u=n(351),c=n(352),s=n(355),l=n(357),f=n(360),p=n(4),h
=n(362),d=n(370),v=n(368),g=n(371),m=n(375),y=n(376),_=n(381),b=n(386),x=n(387),
w=n(388),C=!1;t.exports={inject:r}},function(t,e,n){\"use strict\";var
r=\"function\"==typeof Symbol&&Symbol.for&&Symbol.for(\"react.element\")||
60103;t.exports=r},function(t,e,n){\"use strict\";function r(t)
{i.enqueueEvents(t),i.processEventQueue(!1)}var
i=n(22),o={handleTopLevel:function(t,e,n,o)
{r(i.extractEvents(t,e,n,o))}};t.exports=o},function(t,e,n){\"use
strict\";function r(t){for(;t._hostParent;)t=t._hostParent;var
e=f.getNodeFromInstance(t),n=e.parentNode;return
f.getClosestInstanceFromNode(n)}function i(t,e)
{this.topLevelType=t,this.nativeEvent=e,this.ancestors=[]}function o(t){var
e=h(t.nativeEvent),n=f.getClosestInstanceFromNode(e),i=n;do{t.ancestors.push(i),
i=i&&r(i)}while(i);for(var o=0;o<t.ancestors.length;o+
+)n=t.ancestors[o],v._handleTopLevel(t.topLevelType,n,t.nativeEvent,h(t.nativeEv
ent))}function a(t){t(d(window))}var
u=n(3),c=n(153),s=n(6),l=n(18),f=n(4),p=n(12),h=n(94),d=n(335);u(i.prototype,
{destructor:function()
{this.topLevelType=null,this.nativeEvent=null,this.ancestors.length=0}}),l.addPo
olingTo(i,l.twoArgumentPooler);var v={_enabled:!
0,_handleTopLevel:null,WINDOW_HANDLE:s.canUseDOM?
window:null,setHandleTopLevel:function(t)
{v._handleTopLevel=t},setEnabled:function(t){v._enabled=!!
t},isEnabled:function(){return v._enabled},trapBubbledEvent:function(t,e,n)
{return n?
c.listen(n,e,v.dispatchEvent.bind(null,t)):null},trapCapturedEvent:function(t,e,
n){return n?
c.capture(n,e,v.dispatchEvent.bind(null,t)):null},monitorScrollValue:function(t)
{var e=a.bind(null,t);c.listen(window,\"scroll\",e)},dispatchEvent:function(t,e)
{if(v._enabled){var
n=i.getPooled(t,e);try{p.batchedUpdates(o,n)}finally{i.release(n)}}}};t.exports=
v},function(t,e,n){\"use strict\";var
r=n(21),i=n(22),o=n(52),a=n(87),u=n(163),c=n(53),s=n(165),l=n(12),f={Component:a
.injection,DOMProperty:r.injection,EmptyComponent:u.injection,EventPluginHub:i.i
njection,EventPluginUtils:o.injection,EventEmitter:c.injection,HostComponent:s.i
njection,Updates:l.injection};t.exports=f},function(t,e,n){\"use strict\";var
r=n(399),i=/\\/?>/,o=/^<\\!\\-\\-/,a={CHECKSUM_ATTR_NAME:\"data-react-
checksum\",addChecksumToMarkup:function(t){var e=r(t);return o.test(t)?
t:t.replace(i,\" \"+a.CHECKSUM_ATTR_NAME+'=\"'+e+'\"$&')},canReuseMarkup:functio
n(t,e){var n=e.getAttribute(a.CHECKSUM_ATTR_NAME);return
n=n&&parseInt(n,10),r(t)===n}};t.exports=a},function(t,e,n){\"use
strict\";function r(t,e,n)
{return{type:\"INSERT_MARKUP\",content:t,fromIndex:null,fromNode:null,toIndex:n,
afterNode:e}}function i(t,e,n)
```

```
{return{type:\"MOVE_EXISTING\",content:null,fromIndex:t._mountIndex,fromNode:p.g
etHostNode(t),toIndex:n,afterNode:e}}function o(t,e)
{return{type:\"REMOVE_NODE\",content:null,fromIndex:t._mountIndex,fromNode:e,toI
ndex:null,afterNode:null}}function a(t)
{return{type:\"SET_MARKUP\",content:t,fromIndex:null,fromNode:null,toIndex:null,
afterNode:null}}function u(t)
{return{type:\"TEXT_CONTENT\",content:t,fromIndex:null,fromNode:null,toIndex:nul
l,afterNode:null}}function c(t,e){return e&&(t=t||[],t.push(e)),t}function
s(t,e){f.processChildrenUpdates(t,e)}var
l=n(1),f=n(87),p=(n(39),n(9),n(15),n(24)),h=n(356),d=(n(11),n(402)),v=(n(0),
{Mixin:{_reconcilerInstantiateChildren:function(t,e,n){return
h.instantiateChildren(t,e,n)},_reconcilerUpdateChildren:function(t,e,n,r,i,o)
{var a,u=0;return
a=d(e,u),h.updateChildren(t,a,n,r,i,this,this._hostContainerInfo,o,u),a},mountCh
ildren:function(t,e,n){var
r=this._reconcilerInstantiateChildren(t,e,n);this._renderedChildren=r;var
i=[],o=0;for(var a in r)if(r.hasOwnProperty(a)){var
u=r[a],c=0,s=p.mountComponent(u,e,this,this._hostContainerInfo,n,c);u._mountInde
x=o++,i.push(s)}return i},updateTextContent:function(t){var
e=this._renderedChildren;h.unmountChildren(e,!1);for(var n in
e)e.hasOwnProperty(n)&&l(\"118\");s(this,[u(t)])},updateMarkup:function(t){var
e=this._renderedChildren;h.unmountChildren(e,!1);for(var n in
e)e.hasOwnProperty(n)&&l(\"118\");s(this,[a(t)])},updateChildren:function(t,e,n)
{this._updateChildren(t,e,n)},_updateChildren:function(t,e,n){var
r=this._renderedChildren,i={},o=[],a=this._reconcilerUpdateChildren(r,t,o,i,e,n)
;if(a||r){var u,l=null,f=0,h=0,d=0,v=null;for(u in a)if(a.hasOwnProperty(u)){var
g=r&&r[u],m=a[u];g===m?
(l=c(l,this.moveChild(g,v,f,h)),h=Math.max(g._mountIndex,h),g._mountIndex=f):
(g&&(h=Math.max(g._mountIndex,h)),l=c(l,this._mountChildAtIndex(m,o[d],v,f,e,n))
,d++),f++,v=p.getHostNode(m)}for(u in
i)i.hasOwnProperty(u)&&(l=c(l,this._unmountChild(r[u],i[u])));l&&s(this,l),this.
_renderedChildren=a}},unmountChildren:function(t){var
e=this._renderedChildren;h.unmountChildren(e,t),this._renderedChildren=null},mov
eChild:function(t,e,n,r){if(t._mountIndex<r)return
i(t,e,n)},createChild:function(t,e,n){return
r(n,e,t._mountIndex)},removeChild:function(t,e){return
o(t,e)},_mountChildAtIndex:function(t,e,n,r,i,o){return
t._mountIndex=r,this.createChild(t,n,e)},_unmountChild:function(t,e){var
n=this.removeChild(t,e);return
t._mountIndex=null,n}}});t.exports=v},function(t,e,n){\"use strict\";function
r(t){return!(!t||\"function\"!=typeof t.attachRef||\"function\"!=typeof
t.detachRef)}var i=n(1),o=(n(0),{addComponentAsRefTo:function(t,e,n){r(n)||
i(\"119\"),n.attachRef(e,t)},removeComponentAsRefFrom:function(t,e,n){r(n)||
i(\"120\");var
o=n.getPublicInstance();o&&o.refs[e]===t.getPublicInstance()&&n.detachRef(e)}});
t.exports=o},function(t,e,n){\"use
strict\";t.exports=\"SECRET_DO_NOT_PASS_THIS_OR_YOU_WILL_BE_FIRED\"},function(t,
e,n){\"use strict\";function r(t)
{this.reinitializeTransaction(),this.renderToStaticMarkup=!
1,this.reactMountReady=o.getPooled(null),this.useCreateElement=t}var
i=n(3),o=n(159),a=n(18),u=n(53),c=n(166),s=(n(9),n(55)),l=n(89),f={initialize:c.
getSelectionInformation,close:c.restoreSelection},p={initialize:function(){var
t=u.isEnabled();return u.setEnabled(!1),t},close:function(t)
{u.setEnabled(t)}},h={initialize:function()
{this.reactMountReady.reset()},close:function()
{this.reactMountReady.notifyAll()}},d=[f,p,h],v={getTransactionWrappers:function
(){return d},getReactMountReady:function(){return
this.reactMountReady},getUpdateQueue:function(){return l},checkpoint:function()
{return this.reactMountReady.checkpoint()},rollback:function(t)
{this.reactMountReady.rollback(t)},destructor:function()
{o.release(this.reactMountReady),this.reactMountReady=null}};i(r.prototype,s,v),
a.addPoolingTo(r),t.exports=r},function(t,e,n){\"use strict\";function r(t,e,n)
{\"function\"==typeof t?
t(e.getPublicInstance()):o.addComponentAsRefTo(e,t,n)}function i(t,e,n)
```

```
{\"function\"==typeof t?t(null):o.removeComponentAsRefFrom(e,t,n)}var
o=n(379),a={};a.attachRefs=function(t,e){if(null!==e&&\"object\"==typeof e){var
n=e.ref;null!=n&&r(n,t,e._owner)}},a.shouldUpdateRefs=function(t,e){var
n=null,r=null;null!==t&&\"object\"==typeof t&&(n=t.ref,r=t._owner);var
i=null,o=null;return null!==e&&\"object\"==typeof e&&(i=e.ref,o=e._owner),n!
==i||\"string\"==typeof i&&o!==r},a.detachRefs=function(t,e){if(null!
==e&&\"object\"==typeof e){var n=e.ref;null!
=n&&i(n,t,e._owner)}},t.exports=a},function(t,e,n){\"use strict\";function r(t)
{this.reinitializeTransaction(),this.renderToStaticMarkup=t,this.useCreateElemen
t=!1,this.updateQueue=new u(this)}var
i=n(3),o=n(18),a=n(55),u=(n(9),n(384)),c=[],s={enqueue:function()
{}},l={getTransactionWrappers:function(){return c},getReactMountReady:function()
{return s},getUpdateQueue:function(){return
this.updateQueue},destructor:function(){},checkpoint:function()
{},rollback:function()
{}};i(r.prototype,a,l),o.addPoolingTo(r),t.exports=r},function(t,e,n){\"use
strict\";function r(t,e){if(!(t instanceof e))throw new TypeError(\"Cannot call
a class as a function\")}var i=n(89),o=(n(2),function(){function t(e)
{r(this,t),this.transaction=e}return t.prototype.isMounted=function(t){return!
1},t.prototype.enqueueCallback=function(t,e,n)
{this.transaction.isInTransaction()&&i.enqueueCallback(t,e,n)},t.prototype.enque
ueForceUpdate=function(t)
{this.transaction.isInTransaction()&&i.enqueueForceUpdate(t)},t.prototype.enqueu
eReplaceState=function(t,e)
{this.transaction.isInTransaction()&&i.enqueueReplaceState(t,e)},t.prototype.enq
ueueSetState=function(t,e)
{this.transaction.isInTransaction()&&i.enqueueSetState(t,e)},t}
());t.exports=o},function(t,e,n){\"use
strict\";t.exports=\"15.6.2\"},function(t,e,n){\"use strict\";var
r={xlink:\"http://www.w3.org/1999/xlink\",xml:\"http://www.w3.org/XML/1998/
namespace\"},i={accentHeight:\"accent-
height\",accumulate:0,additive:0,alignmentBaseline:\"alignment-
baseline\",allowReorder:\"allowReorder\",alphabetic:0,amplitude:0,arabicForm:\"a
rabic-
form\",ascent:0,attributeName:\"attributeName\",attributeType:\"attributeType\",
autoReverse:\"autoReverse\",azimuth:0,baseFrequency:\"baseFrequency\",baseProfil
e:\"baseProfile\",baselineShift:\"baseline-
shift\",bbox:0,begin:0,bias:0,by:0,calcMode:\"calcMode\",capHeight:\"cap-
height\",clip:0,clipPath:\"clip-path\",clipRule:\"clip-
rule\",clipPathUnits:\"clipPathUnits\",colorInterpolation:\"color-
interpolation\",colorInterpolationFilters:\"color-interpolation-
filters\",colorProfile:\"color-profile\",colorRendering:\"color-
rendering\",contentScriptTyp
e:\"contentScriptType\",contentStyleType:\"contentStyleType\",cursor:0,cx:0,cy:0
,d:0,decelerate:0,descent:0,diffuseConstant:\"diffuseConstant\",direction:0,disp
lay:0,divisor:0,dominantBaseline:\"dominant-
baseline\",dur:0,dx:0,dy:0,edgeMode:\"edgeMode\",elevation:0,enableBackground:\"
enable-
background\",end:0,exponent:0,externalResourcesRequired:\"externalResourcesRequi
red\",fill:0,fillOpacity:\"fill-opacity\",fillRule:\"fill-
rule\",filter:0,filterRes:\"filterRes\",filterUnits:\"filterUnits\",floodColor:\
"flood-color\",floodOpacity:\"flood-opacity\",focusable:0,fontFamily:\"font-
family\",fontSize:\"font-size\",fontSizeAdjust:\"font-size-
adjust\",fontStretch:\"font-stretch\",fontStyle:\"font-
style\",fontVariant:\"font-variant\",fontWeight:\"font-
weight\",format:0,from:0,fx:0,fy:0,g1:0,g2:0,glyphName:\"glyph-
name\",glyphOrientationHorizontal:\"glyph-orientation-
horizontal\",glyphOrientationVertical:\"glyph-orientation-
vertical\",glyphRef:\"glyphRef\",gradientTransform:\"gradientTransform\",gradien
tUnits:\"gradientUnits\",hanging:0,horizAdvX:\"horiz-adv-
x\",horizOriginX:\"horiz-origin-x\",ideographic:0,imageRendering:\"image-
rendering\",in:0,in2:0,intercept:0,k:0,k1:0,k2:0,k3:0,k4:0,kernelMatrix:\"kernel
Matrix\",kernelUnitLength:\"kernelUnitLength\",kerning:0,keyPoints:\"keyPoints\"
,keySplines:\"keySplines\",keyTimes:\"keyTimes\",lengthAdjust:\"lengthAdjust\",l
```

```
etterSpacing:\"letter-spacing\",lightingColor:\"lighting-
color\",limitingConeAngle:\"limitingConeAngle\",local:0,markerEnd:\"marker-
end\",markerMid:\"marker-mid\",markerStart:\"marker-
start\",markerHeight:\"markerHeight\",markerUnits:\"markerUnits\",markerWidth:\"
markerWidth\",mask:0,maskContentUnits:\"maskContentUnits\",maskUnits:\"maskUnits
\",mathematical:0,mode:0,numOctaves:\"numOctaves\",offset:0,opacity:0,operator:0
,order:0,orient:0,orientation:0,origin:0,overflow:0,overlinePosition:\"overline-
position\",overlineThickness:\"overline-thickness\",paintOrder:\"paint-
order\",panose1:\"panose-
1\",pathLength:\"pathLength\",patternContentUnits:\"patternContentUnits\",patter
nTransform:\"patternTransform\",patternUnits:\"patternUnits\",pointerEvents:\"po
inter-
events\",points:0,pointsAtX:\"pointsAtX\",pointsAtY:\"pointsAtY\",pointsAtZ:\"po
intsAtZ\",preserveAlpha:\"preserveAlpha\",preserveAspectRatio:\"preserveAspectRa
tio\",primitiveUnits:\"primitiveUnits\",r:0,radius:0,refX:\"refX\",refY:\"refY\"
,renderingIntent:\"rendering-
intent\",repeatCount:\"repeatCount\",repeatDur:\"repeatDur\",requiredExtensions:
\"requiredExtensions\",requiredFeatures:\"requiredFeatures\",restart:0,result:0,
rotate:0,rx:0,ry:0,scale:0,seed:0,shapeRendering:\"shape-
rendering\",slope:0,spacing:0,specularConstant:\"specularConstant\",specularExpo
nent:\"specularExponent\",speed:0,spreadMethod:\"spreadMethod\",startOffset:\"st
artOffset\",stdDeviation:\"stdDeviation\",stemh:0,stemv:0,stitchTiles:\"stitchTi
les\",stopColor:\"stop-color\",stopOpacity:\"stop-
opacity\",strikethroughPosition:\"strikethrough-
position\",strikethroughThickness:\"strikethrough-
thickness\",string:0,stroke:0,strokeDasharray:\"stroke-
dasharray\",strokeDashoffset:\"stroke-dashoffset\",strokeLinecap:\"stroke-
linecap\",strokeLinejoin:\"stroke-linejoin\",strokeMiterlimit:\"stroke-
miterlimit\",strokeOpacity:\"stroke-opacity\",strokeWidth:\"stroke-
width\",surfaceScale:\"surfaceScale\",systemLanguage:\"systemLanguage\",tableVal
ues:\"tableValues\",targetX:\"targetX\",targetY:\"targetY\",textAnchor:\"text-
anchor\",textDecoration:\"text-decoration\",textRendering:\"text-
rendering\",textLength:\"textLength\",to:0,transform:0,u1:0,u2:0,underlinePositi
on:\"underline-position\",underlineThickness:\"underline-
thickness\",unicode:0,unicodeBidi:\"unicode-bidi\",unicodeRange:\"unicode-
range\",unitsPerEm:\"units-per-em\",vAlphabetic:\"v-alphabetic\",vHanging:\"v-
hanging\",vIdeographic:\"v-ideographic\",vMathematical:\"v-
mathematical\",values:0,vectorEffect:\"vector-
effect\",version:0,vertAdvY:\"vert-adv-y\",vertOriginX:\"vert-origin-
x\",vertOriginY:\"vert-origin-
y\",viewBox:\"viewBox\",viewTarget:\"viewTarget\",visibility:0,widths:0,wordSpac
ing:\"word-spacing\",writingMode:\"writing-mode\",x:0,xHeight:\"x-
height\",x1:0,x2:0,xChannelSelector:\"xChannelSelector\",xlinkActuate:\"xlink:ac
tuate\",xlinkArcrole:\"xlink:arcrole\",xlinkHref:\"xlink:href\",xlinkRole:\"xlin
k:role\",xlinkShow:\"xlink:show\",xlinkTitle:\"xlink:title\",xlinkType:\"xlink:t
ype\",xmlBase:\"xml:base\",xmlns:0,xmlnsXlink:\"xmlns:xlink\",xmlLang:\"xml:lang
\",xmlSpace:\"xml:space\",y:0,y1:0,y2:0,yChannelSelector:\"yChannelSelector\",z:
0,zoomAndPan:\"zoomAndPan\"},o={Properties:{},DOMAttributeNamespaces:
{xlinkActuate:r.xlink,xlinkArcrole:r.xlink,xlinkHref:r.xlink,xlinkRole:r.xlink,x
linkShow:r.xlink,xlinkTitle:r.xlink,xlinkType:r.xlink,xmlBase:r.xml,xmlLang:r.xm
l,xmlSpace:r.xml},DOMAttributeNames:{}};Object.keys(i).forEach(function(t)
{o.Properties[t]=0,i[t]&&(o.DOMAttributeNames[t]=i[t])}),t.exports=o},function(t
,e,n){\"use strict\";function r(t){if(\"selectionStart\"in
t&&c.hasSelectionCapabilities(t))return{start:t.selectionStart,end:t.selectionEn
d};if(window.getSelection){var
e=window.getSelection();return{anchorNode:e.anchorNode,anchorOffset:e.anchorOffs
et,focusNode:e.focusNode,focusOffset:e.focusOffset}}if(document.selection){var
n=document.selection.createRange();return{parentElement:n.parentElement(),text:n
.text,top:n.boundingTop,left:n.boundingLeft}}}function i(t,e){if(y||null==v||v!
==l())return null;var n=r(v);if(!m||!p(m,n)){m=n;var
i=s.getPooled(d.select,g,t,e);return
i.type=\"select\",i.target=v,o.accumulateTwoPhaseDispatches(i),i}return null}var
o=n(23),a=n(6),u=n(4),c=n(166),s=n(14),l=n(155),f=n(175),p=n(81),h=a.canUseDOM&&
\"documentMode\"in document&&document.documentMode<=11,d={select:
```

```
{phasedRegistrationNames:
{bubbled:\"onSelect\",captured:\"onSelectCapture\"},dependencies:
[\"topBlur\",\"topContextMenu\",\"topFocus\",\"topKeyDown\",\"topKeyUp\",\"topMo
useDown\",\"topMouseUp\",\"topSelectionChange\"]}},v=null,g=null,m=null,y=!1,_=!
1,b={eventTypes:d,extractEvents:function(t,e,n,r){if(!_)return null;var o=e?
u.getNodeFromInstance(e):window;switch(t){case\"topFocus\":
(f(o)||\"true\"===o.contentEditable)&&(v=o,g=e,m=null);break;case\"topBlur\":v=n
ull,g=null,m=null;break;case\"topMouseDown\":y=!
0;break;case\"topContextMenu\":case\"topMouseUp\":return y=!
1,i(n,r);case\"topSelectionChange\":if(h)break;case\"topKeyDown\":case\"topKeyUp
\":return i(n,r)}return null},didPutListener:function(t,e,n)
{\"onSelect\"===e&&(_=!0)}};t.exports=b},function(t,e,n){\"use strict\";function
r(t){return\".\"+t._rootNodeID}function i(t)
{return\"button\"===t||\"input\"===t||\"select\"===t||\"textarea\"===t}var
o=n(1),a=n(153),u=n(23),c=n(4),s=n(389),l=n(390),f=n(14),p=n(393),h=n(395),d=n(5
4),v=n(392),g=n(396),m=n(397),y=n(25),_=n(398),b=n(11),x=n(92),w=(n(0),{}),C={};
[\"abort\",\"animationEnd\",\"animationIteration\",\"animationStart\",\"blur\",\
"canPlay\",\"canPlayThrough\",\"click\",\"contextMenu\",\"copy\",\"cut\",\"doubl
eClick\",\"drag\",\"dragEnd\",\"dragEnter\",\"dragExit\",\"dragLeave\",\"dragOve
r\",\"dragStart\",\"drop\",\"durationChange\",\"emptied\",\"encrypted\",\"ended\
",\"error\",\"focus\",\"input\",\"invalid\",\"keyDown\",\"keyPress\",\"keyUp\",\
"load\",\"loadedData\",\"loadedMetadata\",\"loadStart\",\"mouseDown\",\"mouseMov
e\",\"mouseOut\",\"mouseOver\",\"mouseUp\",\"paste\",\"pause\",\"play\",\"playin
g\",\"progress\",\"rateChange\",\"reset\",\"scroll\",\"seeked\",\"seeking\",\"st
alled\",\"submit\",\"suspend\",\"timeUpdate\",\"touchCancel\",\"touchEnd\",\"tou
chMove\",\"touchStart\",\"transitionEnd\",\"volumeChange\",\"waiting\",\"wheel\"
].forEach(function(t){var e=t[0].toUpperCase()
+t.slice(1),n=\"on\"+e,r=\"top\"+e,i={phasedRegistrationNames:
{bubbled:n,captured:n+\"Capture\"},dependencies:[r]};w[t]=i,C[r]=i});var
k={},E={eventTypes:w,extractEvents:function(t,e,n,r){var i=C[t];if(!i)return
null;var a;switch(t)
{case\"topAbort\":case\"topCanPlay\":case\"topCanPlayThrough\":case\"topDuration
Change\":case\"topEmptied\":case\"topEncrypted\":case\"topEnded\":case\"topError
\":case\"topInput\":case\"topInvalid\":case\"topLoad\":case\"topLoadedData\":cas
e\"topLoadedMetadata\":case\"topLoadStart\":case\"topPause\":case\"topPlay\":cas
e\"topPlaying\":case\"topProgress\":case\"topRateChange\":case\"topReset\":case\
"topSeeked\":case\"topSeeking\":case\"topStalled\":case\"topSubmit\":case\"topSu
spend\":case\"topTimeUpdate\":case\"topVolumeChange\":case\"topWaiting\":a=f;bre
ak;case\"topKeyPress\":if(0===x(n))return
null;case\"topKeyDown\":case\"topKeyUp\":a=h;break;case\"topBlur\":case\"topFocu
s\":a=p;break;case\"topClick\":if(2===n.button)return
null;case\"topDoubleClick\":case\"topMouseDown\":case\"topMouseMove\":case\"topM
ouseUp\":case\"topMouseOut\":case\"topMouseOver\":case\"topContextMenu\":a=d;bre
ak;case\"topDrag\":case\"topDragEnd\":case\"topDragEnter\":case\"topDragExit\":c
ase\"topDragLeave\":case\"topDragOver\":case\"topDragStart\":case\"topDrop\":a=v
;break;case\"topTouchCancel\":case\"topTouchEnd\":case\"topTouchMove\":case\"top
TouchStart\":a=g;break;case\"topAnimationEnd\":case\"topAnimationIteration\":cas
e\"topAnimationStart\":a=s;break;case\"topTransitionEnd\":a=m;break;case\"topScr
oll\":a=y;break;case\"topWheel\":a=_;break;case\"topCopy\":case\"topCut\":case\"
topPaste\":a=l}a||o(\"86\",t);var c=a.getPooled(i,e,n,r);return
u.accumulateTwoPhaseDispatches(c),c},didPutListener:function(t,e,n)
{if(\"onClick\"===e&&!i(t._tag)){var o=r(t),u=c.getNodeFromInstance(t);k[o]||
(k[o]=a.listen(u,\"click\",b))}},willDeleteListener:function(t,e)
{if(\"onClick\"===e&&!i(t._tag)){var n=r(t);k[n].remove(),delete
k[n]}}};t.exports=E},function(t,e,n){\"use strict\";function r(t,e,n,r){return
i.call(this,t,e,n,r)}var
i=n(14),o={animationName:null,elapsedTime:null,pseudoElement:null};i.augmentClas
s(r,o),t.exports=r},function(t,e,n){\"use strict\";function r(t,e,n,r){return
i.call(this,t,e,n,r)}var i=n(14),o={clipboardData:function(t)
{return\"clipboardData\"in
 t?
t.clipboardData:window.clipboardData}};i.augmentClass(r,o),t.exports=r},function
(t,e,n){\"use strict\";function r(t,e,n,r){return i.call(this,t,e,n,r)}var
i=n(14),o={data:null};i.augmentClass(r,o),t.exports=r},function(t,e,n){\"use
```

```
strict\";function r(t,e,n,r){return i.call(this,t,e,n,r)}var
i=n(54),o={dataTransfer:null};i.augmentClass(r,o),t.exports=r},function(t,e,n)
{\"use strict\";function r(t,e,n,r){return i.call(this,t,e,n,r)}var
i=n(25),o={relatedTarget:null};i.augmentClass(r,o),t.exports=r},function(t,e,n)
{\"use strict\";function r(t,e,n,r){return i.call(this,t,e,n,r)}var
i=n(14),o={data:null};i.augmentClass(r,o),t.exports=r},function(t,e,n){\"use
strict\";function r(t,e,n,r){return i.call(this,t,e,n,r)}var
i=n(25),o=n(92),a=n(403),u=n(93),c={key:a,location:null,ctrlKey:null,shiftKey:nu
ll,altKey:null,metaKey:null,repeat:null,locale:null,getModifierState:u,charCode:
function(t){return\"keypress\"===t.type?o(t):0},keyCode:function(t)
{return\"keydown\"===t.type||\"keyup\"===t.type?t.keyCode:0},which:function(t)
{return\"keypress\"===t.type?o(t):\"keydown\"===t.type||\"keyup\"===t.type?
t.keyCode:0}};i.augmentClass(r,c),t.exports=r},function(t,e,n){\"use
strict\";function r(t,e,n,r){return i.call(this,t,e,n,r)}var
i=n(25),o=n(93),a={touches:null,targetTouches:null,changedTouches:null,altKey:nu
ll,metaKey:null,ctrlKey:null,shiftKey:null,getModifierState:o};i.augmentClass(r,
a),t.exports=r},function(t,e,n){\"use strict\";function r(t,e,n,r){return
i.call(this,t,e,n,r)}var
i=n(14),o={propertyName:null,elapsedTime:null,pseudoElement:null};i.augmentClass
(r,o),t.exports=r},function(t,e,n){\"use strict\";function r(t,e,n,r){return
i.call(this,t,e,n,r)}var i=n(54),o={deltaX:function(t){return\"deltaX\"in t?
t.deltaX:\"wheelDeltaX\"in t?-t.wheelDeltaX:0},deltaY:function(t)
{return\"deltaY\"in t?t.deltaY:\"wheelDeltaY\"in t?-
t.wheelDeltaY:\"wheelDelta\"in t?-
t.wheelDelta:0},deltaZ:null,deltaMode:null};i.augmentClass(r,o),t.exports=r},fun
ction(t,e,n){\"use strict\";function r(t){for(var e=1,n=0,r=0,o=t.length,a=-
4&o;r<a;){for(var u=Math.min(r+4096,a);r<u;r+=4)n+=(e+=t.charCodeAt(r))+
(e+=t.charCodeAt(r+1))+(e+=t.charCodeAt(r+2))+(e+=t.charCodeAt(r+3));e%=i,n
%=i}for(;r<o;r++)n+=e+=t.charCodeAt(r);return e%=i,n%=i,e|n<<16}var
i=65521;t.exports=r},function(t,e,n){\"use strict\";function r(t,e,n,r)
{if(null==e||\"boolean\"==typeof e||\"\"===e)return\"\";var i=isNaN(e);if(r||i||
0===e||o.hasOwnProperty(t)&&o[t])return\"\"+e;if(\"string\"==typeof e)
{e=e.trim()}return e+\"px\"}var
i=n(158),o=(n(2),i.isUnitlessNumber);t.exports=r},function(t,e,n){\"use
strict\";function r(t){if(null==t)return null;if(1===t.nodeType)return t;var
e=a.get(t);if(e)return e=u(e),e?
o.getNodeFromInstance(e):null;\"function\"==typeof t.render?
i(\"44\"):i(\"45\",Object.keys(t))}var
i=n(1),o=(n(15),n(4)),a=n(39),u=n(171);n(0),n(2);t.exports=r},function(t,e,n)
{\"use strict\";(function(e){function r(t,e,n,r){if(t&&\"object\"==typeof t){var
i=t,o=void 0===i[n];o&&null!=e&&(i[n]=e)}}function i(t,e){if(null==t)return
t;var n={};return o(t,r,n),n}var o=(n(85),n(177));n(2);void 0!
==e&&e.env,t.exports=i}).call(e,n(156))},function(t,e,n){\"use strict\";function
r(t){if(t.key){var e=o[t.key]||t.key;if(\"Unidentified\"!==e)return
e}if(\"keypress\"===t.type){var n=i(t);return
13===n?\"Enter\":String.fromCharCode(n)}return\"keydown\"===t.type||\"keyup\"===
t.type?a[t.keyCode]||\"Unidentified\":\"\"}var
i=n(92),o={Esc:\"Escape\",Spacebar:\" \",Left:\"ArrowLeft\",Up:\"ArrowUp\",Right
:\"ArrowRight\",Down:\"ArrowDown\",Del:\"Delete\",Win:\"OS\",Menu:\"ContextMenu\
",Apps:\"ContextMenu\",Scroll:\"ScrollLock\",MozPrintableKey:\"Unidentified\"},a
={8:\"Backspace\",9:\"Tab\",12:\"Clear\",13:\"Enter\",16:\"Shift\",17:\"Control\
",18:\"Alt\",19:\"Pause\",20:\"CapsLock\",27:\"Escape\",32:\" \",33:\"PageUp\",3
4:\"PageDown\",35:\"End\",36:\"Home\",37:\"ArrowLeft\",38:\"ArrowUp\",39:\"Arrow
Right\",40:\"ArrowDown\",45:\"Insert\",46:\"Delete\",112:\"F1\",113:\"F2\",114:\
"F3\",115:\"F4\",116:\"F5\",117:\"F6\",118:\"F7\",119:\"F8\",120:\"F9\",121:\"F1
0\",122:\"F11\",123:\"F12\",144:\"NumLock\",145:\"ScrollLock\",224:\"Meta\"};t.e
xports=r},function(t,e,n){\"use strict\";function r(t){var e=t&&(i&&t[i]||
t[o]);if(\"function\"==typeof e)return e}var i=\"function\"==typeof
Symbol&&Symbol.iterator,o=\"@@iterator\";t.exports=r},function(t,e,n){\"use
strict\";function r(t){for(;t&&t.firstChild;)t=t.firstChild;return t}function
i(t){for(;t;){if(t.nextSibling)return t.nextSibling;t=t.parentNode}}function
o(t,e){for(var n=r(t),o=0,a=0;n;){if(3===n.nodeType)
{if(a=o+n.textContent.length,o<=e&&a>=e)return{node:n,offset:e-
o};o=a}n=r(i(n))}}t.exports=o},function(t,e,n){\"use strict\";function r(t,e)
```

```
{var n={};return
n[t.toLowerCase()]=e.toLowerCase(),n[\"Webkit\"+t]=\"webkit\"+e,n[\"Moz\"+t]=\"m
oz\"+e,n[\"ms\"+t]=\"MS\"+e,n[\"O\"+t]=\"o\"+e.toLowerCase(),n}function i(t)
{if(u[t])return u[t];if(!a[t])return t;var e=a[t];for(var n in
e)if(e.hasOwnProperty(n)&&n in c)return u[t]=e[n];return\"\"}var
o=n(6),a={animationend:r(\"Animation\",\"AnimationEnd\"),animationiteration:r(\"
Animation\",\"AnimationIteration\"),animationstart:r(\"Animation\",\"AnimationSt
art\"),transitionend:r(\"Transition\",\"TransitionEnd\")},u={},c={};o.canUseDOM&
&(c=document.createElement(\"div\").style,\"AnimationEvent\"in window||(delete
a.animationend.animation,delete a.animationiteration.animation,delete
a.animationstart.animation),\"TransitionEvent\"in window||delete
a.transitionend.transition),t.exports=i},function(t,e,n){\"use strict\";function
r(t){return'\"'+i(t)+'\"'}var i=n(56);t.exports=r},function(t,e,n){\"use
strict\";var r=n(167);t.exports=r.renderSubtreeIntoContainer},function(t,e,n)
{\"use strict\";function r(t,e){var n=l.extractSingleTouch(e);return n?
n[t.page]:t.page in e?e[t.page]:e[t.client]+f[t.envScroll]}function i(t,e){var
n=r(b.x,e),i=r(b.y,e);return Math.pow(Math.pow(n-t.x,2)+Math.pow(i-
t.y,2),.5)}function o(t)
{return{tapMoveThreshold:g,ignoreMouseThreshold:m,eventTypes:C,extractEvents:fun
ction(e,n,o,a){if(!h(e)&&!d(e))return null;if(v(e))_=k();else if(t(_,k()))return
null;var u=null,l=i(y,o);return
d(e)&&l<g&&(u=s.getPooled(C.touchTap,n,o,a)),h(e)?
(y.x=r(b.x,o),y.y=r(b.y,o)):d(e)&&(y.x=0,y.y=0),c.accumulateTwoPhaseDispatches(u
),u}}}var
a=n(353),u=n(52),c=n(23),s=n(25),l=n(410),f=n(90),p=n(340),h=(a.topLevelTypes,u.
isStartish),d=u.isEndish,v=function(t)
{return[\"topTouchCancel\",\"topTouchEnd\",\"topTouchStart\",\"topTouchMove\"].i
ndexOf(t)>=0},g=10,m=750,y={x:null,y:null},_=null,b={x:
{page:\"pageX\",client:\"clientX\",envScroll:\"currentPageScrollLeft\"},y:
{page:\"pageY\",client:\"clientY\",envScroll:\"currentPageScrollTop\"}},x=[\"top
TouchStart\",\"topTouchCancel\",\"topTouchEnd\",\"topTouchMove\"],w=[\"topMouseD
own\",\"topMouseMove\",\"topMouseUp\"].concat(x),C={touchTap:
{phasedRegistrationNames:
{bubbled:p({onTouchTap:null}),captured:p({onTouchTapCapture:null})},dependencies
:w}},k=function(){return Date.now?Date.now:function(){return+new Date}}
();t.exports=o},function(t,e){var n={extractSingleTouch:function(t){var
e=t.touches,n=t.changedTouches,r=e&&e.length>0,i=n&&n.length>0;return!r&&i?
n[0]:r?e[0]:t}};t.exports=n},function(t,e){t.exports=function(t,e){if(t&&e-
t<750)return!0}},function(t,e,n){\"use strict\";function r(t){var
e={\"=\":\"=0\",\":\":\"=2\"};return\"$\"+(\"\"+t).replace(/[=:]/g,function(t)
{return e[t]})}function i(t){var
e=/(=0|=2)/g,n={\"=0\":\"=\",\"=2\":\":\"};return(\"\"+
(\".\"===t[0]&&\"$\"===t[1]?
t.substring(2):t.substring(1))).replace(e,function(t){return n[t]})}var
o={escape:r,unescape:i};t.exports=o},function(t,e,n){\"use strict\";var
r=n(40),i=(n(0),function(t){var e=this;if(e.instancePool.length){var
n=e.instancePool.pop();return e.call(n,t),n}return new e(t)}),o=function(t,e)
{var n=this;if(n.instancePool.length){var r=n.instancePool.pop();return
n.call(r,t,e),r}return new n(t,e)},a=function(t,e,n){var
r=this;if(r.instancePool.length){var i=r.instancePool.pop();return
r.call(i,t,e,n),i}return new r(t,e,n)},u=function(t,e,n,r){var
i=this;if(i.instancePool.length){var o=i.instancePool.pop();return
i.call(o,t,e,n,r),o}return new i(t,e,n,r)},c=function(t){var e=this;t instanceof
e||
r(\"25\"),t.destructor(),e.instancePool.length<e.poolSize&&e.instancePool.push(t
)},s=i,l=function(t,e){var n=t;return n.instancePool=[],n.getPooled=e||
s,n.poolSize||
(n.poolSize=10),n.release=c,n},f={addPoolingTo:l,oneArgumentPooler:i,twoArgument
Pooler:o,threeArgumentPooler:a,fourArgumentPooler:u};t.exports=f},function(t,e,n
){\"use strict\";function r(t){return(\"\"+t).replace(b,\"$&/\")}function i(t,e)
{this.func=t,this.context=e,this.count=0}function o(t,e,n){var
r=t.func,i=t.context;r.call(i,e,t.count++)}function a(t,e,n){if(null==t)return
t;var r=i.getPooled(e,n);m(t,o,r),i.release(r)}function u(t,e,n,r)
{this.result=t,this.keyPrefix=e,this.func=n,this.context=r,this.count=0}function
```

```
c(t,e,n){var i=t.result,o=t.keyPrefix,a=t.func,u=t.context,c=a.call(u,e,t.count+
+);Array.isArray(c)?s(c,i,n,g.thatReturnsArgument):null!
=c&&(v.isValidElement(c)&&(c=v.cloneAndReplaceKey(c,o+(!c.key||
e&&e.key===c.key?\"\":r(c.key)+\"/\")+n)),i.push(c))}function s(t,e,n,i,o){var
a=\"\";null!=n&&(a=r(n)+\"/\");var
s=u.getPooled(e,a,i,o);m(t,c,s),u.release(s)}function l(t,e,n){if(null==t)return
t;var r=[];return s(t,r,null,e,n),r}function f(t,e,n){return null}function
p(t,e){return m(t,f,null)}function h(t){var e=[];return
s(t,e,null,g.thatReturnsArgument),e}var
d=n(413),v=n(27),g=n(11),m=n(423),y=d.twoArgumentPooler,_=d.fourArgumentPooler,b
=/\\/+/g;i.prototype.destructor=function()
{this.func=null,this.context=null,this.count=0},d.addPoolingTo(i,y),u.prototype.
destructor=function()
{this.result=null,this.keyPrefix=null,this.func=null,this.context=null,this.coun
t=0},d.addPoolingTo(u,_);var
x={forEach:a,map:l,mapIntoWithKeyPrefixInternal:s,count:p,toArray:h};t.exports=x
},function(t,e,n){\"use strict\";var
r=n(27),i=r.createFactory,o={a:i(\"a\"),abbr:i(\"abbr\"),address:i(\"address\"),
area:i(\"area\"),article:i(\"article\"),aside:i(\"aside\")
,audio:i(\"audio\"),b:i(\"b\"),base:i(\"base\"),bdi:i(\"bdi\"),bdo:i(\"bdo\"),bi
g:i(\"big\"),blockquote:i(\"blockquote\"),body:i(\"body\"),br:i(\"br\"),button:i
(\"button\"),canvas:i(\"canvas\"),caption:i(\"caption\"),cite:i(\"cite\"),code:i
(\"code\"),col:i(\"col\"),colgroup:i(\"colgroup\"),data:i(\"data\"),datalist:i(\
"datalist\"),dd:i(\"dd\"),del:i(\"del\"),details:i(\"details\"),dfn:i(\"dfn\"),d
ialog:i(\"dialog\"),div:i(\"div\"),dl:i(\"dl\"),dt:i(\"dt\"),em:i(\"em\"),embed:
i(\"embed\"),fieldset:i(\"fieldset\"),figcaption:i(\"figcaption\"),figure:i(\"fi
gure\"),footer:i(\"footer\"),form:i(\"form\"),h1:i(\"h1\"),h2:i(\"h2\"),h3:i(\"h
3\"),h4:i(\"h4\"),h5:i(\"h5\"),h6:i(\"h6\"),head:i(\"head\"),header:i(\"header\"
),hgroup:i(\"hgroup\"),hr:i(\"hr\"),html:i(\"html\"),i:i(\"i\"),iframe:i(\"ifram
e\"),img:i(\"img\"),input:i(\"input\"),ins:i(\"ins\"),kbd:i(\"kbd\"),keygen:i(\"
keygen\"),label:i(\"label\"),legend:i(\"legend\"),li:i(\"li\"),link:i(\"link\"),
main:i(\"main\"),map:i(\"map\"),mark:i(\"mark\"),menu:i(\"menu\"),menuitem:i(\"m
enuitem\"),meta:i(\"meta\"),meter:i(\"meter\"),nav:i(\"nav\"),noscript:i(\"noscr
ipt\"),object:i(\"object\"),ol:i(\"ol\"),optgroup:i(\"optgroup\"),option:i(\"opt
ion\"),output:i(\"output\"),p:i(\"p\"),param:i(\"param\"),picture:i(\"picture\")
,pre:i(\"pre\"),progress:i(\"progress\"),q:i(\"q\"),rp:i(\"rp\"),rt:i(\"rt\"),ru
by:i(\"ruby\"),s:i(\"s\"),samp:i(\"samp\"),script:i(\"script\"),section:i(\"sect
ion\"),select:i(\"select\"),small:i(\"small\"),source:i(\"source\"),span:i(\"spa
n\"),strong:i(\"strong\"),style:i(\"style\"),sub:i(\"sub\"),summary:i(\"summary\
"),sup:i(\"sup\"),table:i(\"table\"),tbody:i(\"tbody\"),td:i(\"td\"),textarea:i(
\"textarea\"),tfoot:i(\"tfoot\"),th:i(\"th\"),thead:i(\"thead\"),time:i(\"time\"
),title:i(\"title\"),tr:i(\"tr\"),track:i(\"track\"),u:i(\"u\"),ul:i(\"ul\"),var
:i(\"var\"),video:i(\"video\"),wbr:i(\"wbr\"),circle:i(\"circle\"),clipPath:i(\"
clipPath\"),defs:i(\"defs\"),ellipse:i(\"ellipse\"),g:i(\"g\"),image:i(\"image\"
),line:i(\"line\"),linearGradient:i(\"linearGradient\"),mask:i(\"mask\"),path:i(
\"path\"),pattern:i(\"pattern\"),polygon:i(\"polygon\"),polyline:i(\"polyline\")
,radialGradient:i(\"radialGradient\"),rect:i(\"rect\"),stop:i(\"stop\"),svg:i(\"
svg\"),text:i(\"text\"),tspan:i(\"tspan\")};t.exports=o},function(t,e,n){\"use
strict\";var r=n(27),i=r.isValidElement,o=n(157);t.exports=o(i)},function(t,e,n)
{\"use strict\";t.exports=\"15.6.2\"},function(t,e,n){\"use strict\";var
r=n(178),i=r.Component,o=n(27),a=o.isValidElement,u=n(181),c=n(191);t.exports=c(
i,a,u)},function(t,e,n){\"use strict\";function r(t){var e=t&&(i&&t[i]||
t[o]);if(\"function\"==typeof e)return e}var i=\"function\"==typeof
Symbol&&Symbol.iterator,o=\"@@iterator\";t.exports=r},function(t,e,n){\"use
strict\";function r(){return i++}var i=1;t.exports=r},function(t,e,n){\"use
strict\";var r=function(){};t.exports=r},function(t,e,n){\"use strict\";function
r(t){return o.isValidElement(t)||i(\"143\"),t}var
i=n(40),o=n(27);n(0);t.exports=r},function(t,e,n){\"use strict\";function r(t,e)
{return t&&\"object\"==typeof t&&null!=t.key?
s.escape(t.key):e.toString(36)}function i(t,e,n,o){var p=typeof
t;if(\"undefined\"!==p&&\"boolean\"!==p||
(t=null),null===t||\"string\"===p||\"number\"===p||\"object\"===p&&t.$
$typeof===u)return n(o,t,\"\"===e?l+r(t,0):e),1;var h,d,v=0,g=\"\"===e?
l:e+f;if(Array.isArray(t))for(var m=0;m<t.length;m+
+)h=t[m],d=g+r(h,m),v+=i(h,d,n,o);else{var y=c(t);if(y){var _,b=y.call(t);if(y!
==t.entries)for(var x=0;!(_=b.next()).done;)h=_.value,d=g+r(h,x+
+),v+=i(h,d,n,o);else for(;!(_=b.next()).done;){var
w=_.value;w&&(h=w[1],d=g+s.escape(w[0])+f+r(h,0),v+=i(h,d,n,o))}}else
if(\"object\"===p){var C=\"\",k=String(t);a(\"31\",\"[object
Object]\"===k?\"object with keys {\"+Object.keys(t).join(\", \")
+\"}\":k,C)}}return v}function o(t,e,n){return null==t?0:i(t,\"\",e,n)}var
a=n(40),u=(n(15),n(180)),c=n(419),s=(n(0),n(412)),l=(n(2),\".\"),f=\":\";t.expor
ts=o}]);</script>"
      ],
      "text/plain": [
       "<IPython.core.display.HTML object>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "text/html": [
       "\n",
       "<div id='iNRDMGJXQI9EU1AEF1F5F'>\n",
       "<div style='color: #900; text-align: center;'>\n",
       "  <b>Visualization omitted, Javascript library not loaded!</b><br>\n",
       "  Have you run `initjs()` in this notebook? If this notebook was from
another\n",
       "  user you must also trust this notebook (File -> Trust notebook). If
you are viewing\n",
       "  this notebook on github the Javascript has been stripped for security.
If you are using\n",
       "  JupyterLab this error is because a JupyterLab extension has not yet
been written.\n",
       "</div></div>\n",
       " <script>\n",
       "   if (window.SHAP) SHAP.ReactDom.render(\n",
       "    SHAP.React.createElement(SHAP.AdditiveForceVisualizer,
{\"outNames\": [\"output value\"], \"baseValue\":
0.2774834632873535, \"outValue\":
0.23216664791107178, \"link\": \"identity\", \"featureNames\":
[\"AcceptedCmp1\", \"AcceptedCmp2\", \"AcceptedCmp3\", \"AcceptedCmp4\", \"Accep
tedCmp5\", \"AcceptedTot\", \"Age\", \"Childnum\", \"Complain\", \"Days_as_cust\
", \"Education\", \"Frq\", \"Income\", \"Kidhome\", \"Marital_Status\", \"MntFis
hProducts\", \"MntFruits\", \"MntGoldProds\", \"MntMeatProducts\", \"MntSweetPro
ducts\", \"MntWines\", \"Mnt_tot\", \"NumCatalogPurchases\", \"NumDealsPurchases
\", \"NumStorePurchases\", \"NumWebPurchases\", \"NumWebVisitsMonth\", \"RFM\",
\"R_DealFrq\", \"R_MntFishProducts\", \"R_MntFrq\", \"R_MntFruits\", \"R_MntGold
Prods\", \"R_MntIncome\", \"R_MntMeatProducts\", \"R_MntSweetProducts\", \"R_Mnt
Wines\", \"R_Mnt_NumCatalogPurchases\", \"R_Mnt_NumStorePurchases\", \"R_Mnt_Num
WebPurchases\", \"R_NumCatalogPurchases\", \"R_NumStorePurchases\", \"R_NumWebPu
rchases\", \"Recency\", \"Teenhome\"], \"features\": {\"0\": {\"effect\":
1.8457438272889704e-05, \"value\": 0.0}, \"3\": {\"effect\": 1.963929389603436e-
05, \"value\": 0.0}, \"4\": {\"effect\": -0.00013830007810611278, \"value\":
0.0}, \"5\": {\"effect\": -0.035929106175899506, \"value\": 0.0}, \"6\":
{\"effect\": -0.00028379372088238597, \"value\": 0.25}, \"7\": {\"effect\": -
0.00036794142215512693, \"value\": 0.6666666666666666}, \"9\": {\"effect\": -
0.014224515296518803, \"value\": 0.40746054519368724}, \"11\": {\"effect\": -
0.00031299397232942283, \"value\": 0.16129032258064516}, \"12\": {\"effect\": -
0.005758435465395451, \"value\": 0.410498572369866}, \"14\": {\"effect\":
0.00828402116894722, \"value\": 1.0}, \"15\": {\"effect\":
0.0002664211206138134, \"value\": 0.0}, \"16\": {\"effect\": -
0.00021201783965807408, \"value\": 0.0}, \"17\": {\"effect\": -
0.0010207766899839044, \"value\": 0.0321285140562249}, \"18\": {\"effect\": -
0.014155255630612373, \"value\": 0.01652892561983471}, \"19\": {\"effect\":
0.001184244290925562 4, \"value\": 0.0}, \"20\": {\"effect\": -
```

```
0.00021524459589272738, \"value\": 0.04554588077695914}, \"21\": {\"effect\":
0.0003549180692061782, \"value\": 0.033386327503974564}, \"22\": {\"effect\":
8.392747258767486e-05, \"value\": 0.0}, \"23\": {\"effect\": -
0.0005651225219480693, \"value\": 0.2}, \"24\": {\"effect\": -
0.0003578515024855733, \"value\": 0.3076923076923077}, \"25\": {\"effect\": -
7.982546230778098e-05, \"value\": 0.18181818181818182}, \"26\": {\"effect\": -
0.008184355683624744, \"value\": 0.5384615384615385}, \"27\": {\"effect\":
0.02248569205403328, \"value\": 0.024774774774774748}, \"28\": {\"effect\":
0.020461030304431915, \"value\": 0.6428571428571428}, \"29\": {\"effect\":
0.0004907082766294479, \"value\": 0.0}, \"30\": {\"effect\": -
0.00010017152089858428, \"value\": 0.07444345503116653}, \"31\": {\"effect\":
0.0002213857660535723, \"value\": 0.0}, \"32\": {\"effect\":
0.001646904740482568 7, \"value\": 0.17391304347826086}, \"33\": {\"effect\": -
0.000521237263455987, \"value\": 0.04989666930910377}, \"34\": {\"effect\": -
0.014289921149611473, \"value\": 0.23216753481449984}, \"35\": {\"effect\": -
0.0002770527498796582, \"value\": 0.0}, \"36\": {\"effect\": -
0.0026052447501569986, \"value\": 0.7672877846790891}, \"37\": {\"effect\": -
0.006328526418656111, \"value\": 0.0}, \"38\": {\"effect\": -
0.0016729399794712663, \"value\": 0.14492753623188406}, \"39\": {\"effect\":
7.405337237287313e-05, \"value\": 0.17391304347826086}, \"40\": {\"effect\": -
0.00037501376937143505, \"value\": 0.0}, \"41\": {\"effect\": -
0.033582903444767, \"value\": 0.6666666666666666}, \"42\": {\"effect\": -
8.868364966474473e-05, \"value\": 0.3333333333333333}, \"43\": {\"effect\":
0.0407390221953392, \"value\":
0.06060606060606061}}, \"plot_cmap\": \"RdBu\", \"labelMargin\": 20}),\n",
       "    document.getElementById('iNRDMGJXQI9EU1AEF1F5F')\n",
       "  );\n",
       "</script>"
      ],
      "text/plain": [
       "<IPython.core.display.HTML object>"
      ]
     },
     "execution_count": 120,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# train XGBoost model\n",
    "shap.initjs()\n",
    "model = xgboost.train({\"learning_rate\": 0.01}, xgboost.DMatrix(x,
label=y), 100)\n",
    "\n",
    "# explain the model's predictions using SHAP values\n",
    "# (same syntax works for LightGBM, CatBoost, and scikit-learn models)\n",
    "explainer = shap.TreeExplainer(model)\n",
    "shap_values = explainer.shap_values(x)\n",
    "\n",
    "shap.force_plot(explainer.expected_value, shap_values[0,:], x.iloc[0,:])"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### plot feature importance of models"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 121,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAbgAAAGDCAYAAABZdwXdAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3XmYXEW9//
H3IQQChC2yCQIBBFkCTKCIslpARMG6XFBWISSg4gIGhIhe9QKiKFdR1rCJEEQElUWgWASVYglLLAgQdn
9hXwRiQiAhiSTp3x9VTTqd6ZmeySw9PZ/X8/jM9Ok6depMcL5T55yuT1EqlRAREWk2y/
T2AERERLqDCpyIiDQlFTgREWlKKnAiItKUVOBERKQpqcCJiEhTUoET6eeKohhaFEWpKIqanxkqiuLU3G
ZCDw6t15V/
LkVRtPT2WKTjVOBE+omiKHYuiuLmoij+XRTF3KIophZFcR6wXB27PwicA9zZ6rzzKYo5hRFMaMo
iseLovh+V4xfpKMKfdBbpPkVRXEI8DgtgAPAY8A9gKCBHYDJAKVSSqViP+X+wPXA9MA24MfA5tgLdLpdJ
Oj/6pVcUxcBSqfRBJ/Yr/
4IcXiqVHu3iYUk30wxOpMkVRbEiMJ5U3H4HbFcqlb6ai87mwPsVbb9UFMVLefZ1VsX2ei5R7p6//
rRUKn2lVCodUSqVWoCDK/r5WFEUdxZFMbsoiolFUfwo9/toft/
m1y9W7BPytjH59eFFFUTxVFMV7RVH8pyiK54qi+GYrY722KIo/
FkUxBzgsv3dUURSPFUUxqyiKfxZF8f2iKJbN7xVFUZxWFMVbRVG8WhTFqE78uKWBqMCJNL+dgSH5+5U
SqWF5TdKpdJU4D8VbX8G3AesAhxfFMWeHTjOG/nrAVR/
KkoihOKotiyVCpYVrUU/
AxfFxHOmhlyFFUfwWWIfL7HOBmaRZpankgp3vfcJzwcuAH5XFM
UNpOJoSDNcS7o/uCfw/
aIoNmbR5VTpozSDE+kHSqVaQZz63ABsBoYAvg11Q8RbmUbi9M9nLEV6YGNbfPrfUql0szc5jDgr3kMm
wA/rxrnTODrwOvVkz7e8AB50gPojxY8f4Heewvkz7e8A7pgZF6XAR8BXiBdIl1H1LxvTS/P4H00Ml7+dj/V2e/
0qD0OTgR6TX50f/
LgcfyRwpEuoxmcCIi0pRU4EREpCnpEqWIiDQlzeBERKQpqcCJiEhT0ufgpDvp+reIdIe6Ui80gxMRkaa
kAiciIk1JBU5ERJqSCpyIiDQlFTgREWlKKnAiItKUVOBERKQpqcCJiEhTUoETEZGmpAInIiJNSUt1dTF
j3f7A9cAWMfhneuB4xwOXxODrTmU21llgHHAdcFzevCXwLLAAuD0G/70a+
+4BvB+Df7C190VE6jHplVlcMXk6L8yYx0arL8/
o4UMYsf7gLj2GClzXOxS4DzgEOLUHjnc88DHQug7gJXFoO/
nJSmjLHuRWD3GPy0dnbbA5gGqMCJSKdMemUWJ//
1dVYdNID1tVkcPDOdQ0Ab7+e0kqDKqTVb0yHcyoRttDAB2kGSo0cdaFKrDEfyJQdAUsmmyFmAsPB5PeWmrDvMXDpadCZxZ2cpNidmz9s4Ge8XXR1bxTcd2ZjWD+zx5IfrvI8x5M4UnN1aqwCGxNZDMLFfXD2Gbk2mnrJzZEQNX
kYgGCkyf0IK2L/
PWPdx4CJgTdKs6cAY/
FRj3XeAg4DlgRti8KcY64YCtwMPAcOB54AjgK8A6wJ3GeumxxeB3N9btBfwo7z8VODIGP8tY9zngbT9y
qSOc1kDuAwYCswCjgbm5GMuMNaNAb4+/
0z+wVjz77LNd2Z2INKCzH5xL8UEJioJlVliN1VZIpeiKydO7tMDpHlzX2o90ee85YLqxbjtj3d55+ydj
8NsCP89trwLG5207AW/k4rQpMAJoAbY31u2et98cuDgG/0ljIt3ioQfH/0ap9f/
DbARE4wVg3CPg18F/ArsA6dZzLj4GH92+BdUnE5F3idNPPaPRelHwIjY/
DbARE4wVg3CPg18F/ArsA6dZzLj4GH8vFOBSbE4KcClwK/iMG3tFbcj4HVHG+uisS4eNOab9f/
kRKTfeG1WicEDF9+2yqABvDBjXpceRzO4rnUoaQq8ZYECE1+vQxwefkeuFuZzWC9GPwt9gFzg9gI
m5z4Gkwrey8ArMfiH6hzT5+GAv3Xvfv/I40I2vLLsDn8/
juMNZNMat1N4PIAZ/
CXAJwKijj+9wXM4nPvGJju4iIn3MsGdfZtrsDz6cuQG+89Pb8cBG62+ztuQQ/FMZD21FsjVbufwpEpfP2ybeT6jsumNDNVePuZzVVMVwc0ErvjOgmVyrjxHcBF6Xz4PMNjU3NZ2OJzCw0CopEjepUh9EK7CXHEXjHyVZlfzFXGcWDpStm+FEE1odOZB5PfPXxDQaE/ofvcqRnJjBnhdYVPXjaPOuNWrQW5IKAS30qnN+tKfRvFZVNbUq9uX1HBlNBmjcbSqVfcYPuUTYGLQWm/kBjnK7DPhdL/OdvOadanbCuafvRzQFtPNOELRRkRhQG5YCHqxWUYMTu8CIDwjXKDmvEYPAiHDjdHjvbBlw9fPagrOBdmKAUtRoMbCAsDNAGaKGSKBA8Q2JiZT4TBlPPGF5XwcTE53xLXWaXEi2ez5h6tusRgmTJvQfsBYSQbN8GZ3ieBRaapWZnm2MyBRDpiDgzvU4ryYTKt7A3DxSKhqQzMJ4QlN3fi7KvbMaUWs9HCrV8I8qMj8G+hPX2xFALkPkCiMk0W79sbE71WhQnX/
LyXz1GeXDSFXoqb0wam2ZwreuLuW7DgIfbOKfVSWkH3wZuBs4CtgEPgOfgBDyt/ggEVUFTOiuqR1+ZAkiCHeaHtF9EoqOcEd
MkOiUb0f
fWXWasW73WQSrz4GbMnNnGcES6T0/
```

ljUlj0wyudc2U61Z2cwy+lBdxfjMGPyX38SQptftR0sz0DxVjuz5/fyHp3l4pf/
0lcFRrB1EenDSCnsobk8amAlelD+e6PQlsDzxW4/3yn64LK74vv67130EJIAb/
ZsUYfg34Gu1FGkJP5Y1JY9MlyiX11Vy3XwDfz+0w1i1jrDuhg+e+TD5/gC+Vx2as+2hFm/
2BJzrYr0iP6qm8MWlsmsEt6VDgjKpt1wFbsCjX7T/
ArcD3SQ+dXGysOw34gPSQyR3Gui1IuW4As4DDSQ+hlHPdLgb+yZK5bm/
k+3BjSLlu5WsqP4zBP2esK+e6TSMVoGEAMfjH80cNrs5FtgTc0sFznw1sZax7GJgJHJy3/7xi9vgi8LU
O9ivS40asP1gFrZ9THlwPavRcN2PdrBh8l/1GUB6ciHQT5cGJiEj/
pUuUPajRc926cvYmItLbNIMTEZGmpAInIiJNSQVORESakgqciIg0JRU4ERFpSnqKskEY6xYAU0j/
Ji8Ao2Lw79RoOzS3+UkM/n/ztjWAN4CLY/
DHtnGcocBOMfjf59cWuDH3BzAtBj+yC05JpG7KbpPuoBlc45iTs9aGkZYFO6ad9s8DruL1gaT1KNszlL
QMV6V7K7Lelihuxjr9ISTdRtlt0l30i6sxPQBs006bOcDTxjoTg4+kZbX+SMqVK2fAvQsYUqzOSTH4a0
nLkG1hrHsUuIJFiQeLyftPJ+XWPWKs+ylwNSn3bhLwOWD7GPy0zp/
mkpQH1/8ou026iwpcgzHWDQD2BH5TR/
NrgEOMdf8irXP5OrnAZR8FdiHF7NwEXAt8DxgXg3f5eBbYNRc8gD/F4E/
P329GyqRbYKw7F7gvBn+ase7z1IjpyWtlHg2wztpr1nfS0q+9NqvEWlVZ9spuk66gAtc4VshFZigpuPT
OOva5nZTP9iaLctwq/
TkGvxB4yljXVk7IveWCV+VPMfgF+fvdgC8AxOBvMdbNaK0j5cFJRym7TbqL7sE1jjkx+BZgQ1LAaXv34
IjB/4dUDE8kJR5Uq/
wTuK7FSavMrnqtlbmly40ePoSZcxfwzpz5LCyVeGfOfGbOXcDo4UN6e2jSx6nANZgY/
ExSyvc4Y93AOnb5JfDdGPy/
6zxEZe5cR9wDHAZgrNsbWL0TfYgsQdlt0l10ibIBxeAnG+seAw4Brmyn7ZPU9/Rk2ePA/Nz/
BGo8ZNKKH5Gy5h4B7gZe7sAxRdqk7DbpDsqDk04x1r0ImLaeolQenIh0E+XBiYhI/
6VLlA3MWLc1S16inBeD/2RvjKdSDH5ob49BRKQtKnANLAY/
BWjp7XGIiPRFukQpIiJNSQVORESakgqciIg0Jd2DE5Fepagc6S6awfUhxrqSse7KitfLGuveNtb5dvZb
zVj3zXbaDDXWVcfotNauxVi3T/2jFqlNUTnSnTSD61tmA8OMdSvE4OcAnwFeq2O/
1YBvAhe00WYoKSfu9+301UKK4Lm1juN2mOJy+hdF5Uh3UoHre24DPk+KvjmUlNG2K4Cx7lRgA2Dj/
PXsGPy5pAy4TXJawZ0x+O+00m91TtyF+X8GmA+cAEwETiMlH+wC/
CwGv1iKgeJypCMUlSPdSQWu77kGODlfltwGuIxc4LLNgd1JCyo/
a6y7kJQBNyynFdRSnRN3IkAMfmtj3ebAHaR8uJNJS3Qd21onisuRjlBUjnQn3YPrY2Lwj5MuJx5K65cJ
b4nBz8trRL4FtJUD15ZdyKuoxOCfAV4iFTiRLqOoHOlOKnB9003AmaTLk9Uqr+0soPOz9M7kx4l0iKJy
pDvpEmXfdBkwMwY/xVhn62hfTwZcdZty/tvfjXWbke7pPQtsWkdfInVTVI50F83g+qAY/
Ksx+HM60P7fwERj3RPGul/
UaPZhTpyx7tukJy4HGOumAH8AxsTg5wF3AVsa6x411h28lKciItJtlAcn3UZ5cCLSTZQHJyIi/
ZfuwfUzjZwxJyLSlVTg+hllzIlIf6FLlCIi0pRU4EREpCmpwImISFPq9XtwxmIINuRMG4+BcxfwaZ0dpmQ0H
ZrbjI3Bn5e3nQ/EGPyELhjLp4BzgOXz//4Qgz81f5j6PzH4+5f2GPk4FrgReB4YBFwTg/9RF/
Q7hjbWiRTpKcp4k0bQCDO4OTH4lhj8MGA6cEw77d8CjjPWLdcNY7kCODovSjwM+GPeboGdOtKRsa69Px
7ujcEPJ63Wf7ixbvsO9D2gI2MR6UnKeJNG0eszuCoPkFbIb8vbpNiW0cCvK98w1gXSivjRWLcGaWY3NM
9s9gMGkArXL4HlgFGktRv3icFPB9YC3gCIwS8Ansqzxxq8DC4x1hwPfAl4mLZe1Zh7PkTH4l411E0hFej
jwiLHuZOA8YGvSz/
rUGPyNlWOOwc821j1MirPZmooZWE4MODMGH4x1s4BfAZ8FTjTWzSPNNlfK57Bn7nJdY93twCbADTH4k3
JfFwI7ACsA18bgT8nbzwD2JUXi3BGDH2esWxO4iLQ8F8DxMfiJxrpP52MClIDdYvDvtf3P1THKg+v7lP
EmjaIRZnDAh7OSPUkLCbfnDNIv+Y7MZIaRAj1HAKcD7+cZ1APAEbnNWaSImRuMdV8z1g2Kwb9I+mV/
Vp5p3gucD/w2Br8NcBVwbsVxNgNGxuBPBH4A/
D0GvwMpwuYXxrqVqs77I8CngCfbGf9KwBP582qTSMtnHReD3xYYCczJ7VqAg0lF9WBj3fp5+w9i8IbI0B
8SnjXXbGOuGAPsDW+Vz+Ulue04+3x2ALwKX5u3jgGPyDHfXimNWns/
RxrporIszZs5s55SkGb02q8TggYtvU8ab9IZGmMGtkEM2hwIPA3e2t0MM/
gVj3SRSwarXXXm28Z6xbiZwc94+hTxrjMGfZqy7Ctgr930o6fJktR2BL+TvrwR+XvHen/
Lsj9zPvsa6cfn1IBbNinY11k0GFgJnxOCfNNbt0Mb4FwDX5e8/AbwRg/9HHve7AMY6gL/
F4Gfm108BGWkvAAflMNJlgY8CWwJPAXOBS411tzWA+9z+StN5k+dirGOtWJs2cf5V/
RtfH4F+tHqTy4EQZb9IoGqHAzYnBtxjrViX9gj2GxWdEtfyUlGp9T8W2+SyalQ6qal/
55+PCitcLqfg5xOCnAhca634xoN4H2p/EU+u+L7AvhiDH6x627GurVJ9+Aci6scf/
U5zK0onEXVMSstEZdjrNuINPvaIQY/
I19KHRSDn2+sG0GaOR8CHvskcewYwy+eoZ2Ri6E+wAPGutG5qw4kQ+NHj6Ek//6OpBmbu/
OXcDMuQs4cZfORhOKdE7DXKLMs46xwDhj3cA62j9DmoFUGKeG5KKhDvsGS
UzP2kggApUua+Gl3+BfhWuU9j3fB2hvAi0GKsWyZfWhxRo90zpHttO+R+V27noZZVSIV3Zi6ue+f9BgO
rxuBvBY5n0Qond5CKHbldS/66SQx+Sgz+/
4BISg8XWYwy3qRRNMIM7kMx+MnGusdIxaN6vcTWnA5Mrnh9JvBHY90o4O+dGMIo4Cxj3fuk2dRhMfgFx
rqbgWuNdf9NeshkLHCZse5z5F5IdMavT3Y+Bs4PFc5F5k8YJcbSLpYxBTgCeAR1prFIP/
T46qOc9YtwLpXtjIWp3G4B/Ll0OfJH00YWJ+a2XgRmPdINKs8Nt5+1hgvLHucdJ/I/
eQHrQ53li3O6nwPwXc1sa5SD+mjDdpBIrLkYZuuUFkWV6juBwRkf+/L++lLK2BBgFoGUHfNmUFPL3E+HS6/
Vk2S5LytCfd4zFdP8k5DmCVMlRRaTmFWBoKi3WO0rxDQhNUZVsdc5AHovYaa4T3MDSXg1uRHkAG6HNO42t7fR60Kpr6jTgX9NC7hqbEyKIIvbWlXEWXJoI9HDTDWPHK3HxhLRYnXSpqZZlxVwxmzD9NwTHsGeNm/
eU7RPTcEh2CW4ANJfkmmBDu7rtTR6DYt0TJ+vtWyLjILJfaVhgJbbLuuDH4jNGCZftqAstPRCJi2LXTQKVfNW0YScUdpnTTjZ3fL6mK00unX20hLKb/Cf9jHx6Pnn/
HjZ0fGZ0mN/nWc3A/3iTv+sE1/vXZZSXddyBR8/
w3ZFz+wTntM3u7KeHPRGemBOXD80p1PqfKGtlKDD0uvMmvDTRM+4e8nHObeC4yLOb8a8o9ahdYpqSSgWbC5aMm5qNk1dVhlD8e/
tWxo/0SJNk+cp7ZJXrgN6BDSmn9fLS2h/
n5NFiqhCkkbR5LOvFwxyH7FdHtbaI/pKoA0RODLs2XjAyPPW3DGPp2l6tYDZuV7d2GuDFhcOf1ui3Yp3pt9+oSK/
RYbMvfOjvjM0/

z1j3cdJaQNrklb4ODAGPzWvcnIQKTj1hhj8KTl653bgIVKkznOkJIOvAOsCdxnrpsXgdzfW7QX8KO8/
lRTJM8tY9znS6ijTWHylk5OA08uzzRj8fOCCPO4JpNVONictvnwkKW5oR+ChGPyY3G4WcHE+7xnAITH4
t2PwT+f3l/pn2x7F5fRtisqRRqIZXOv2A26PwT8HTDfWbZcv/
+0HfDJH1JQTBK4CxudtOwFv5OK0KWktyRZge2Pdbrn9J0iXIrcB3gW+GYM/
F3gd2D0XtzWAH5Jid7Yjrft4Ql5S69fAf5HiatapGPMwUhpDLauTFlL+NilJ4SxgK2Dr8lqTpEubj+Rj
3g2c0rEfm+Jy+jtF5Ugj0QyudYeSZkkA1+TXywCXl+
+RxeCn5wiZ9WLwN+RtcwFygduLRetkDiYVvJeBV2Lw5bUgf0da9/HMquN/ihRnMzHPmpYj5dZtDrwQg/
9nPs7vgKPrPKebY/AlY90U4M38WUOMdU+SoooeJc1M/
1Axtuvr7PtDisvp3xSVI41EBa5KjsfZAxhmrCuRUsBLpCy26l/
YtdZDK4CfxeAvrup7aCt9tFYECuDOGPyhVfu31GgPaSHl7YHHarxfGQ9UHR1U678DLVQqHaKoHGkkukS
5pANIad0bxuCHxuDXJ63wPx04yli3IoCxbkgOGn3VWLdf3rZ8fv8vue3gvH09Y91auf8NjHU75u/
LD7LA4pE8DwI75/t7GOtWNNZtRorJ2chYt0nF/mW/
AL6f25Ejd07o4Lkvw6KYoS9ROwZIpFWKypFGogK3pEOBG6q2XUd6COQmIOYE8vLj96OAsTla5n5gnRj8
HcDvgQfyJcFrWVS8ngZG5/
ZDgAvz9kuA24x1d8Xg3wbGAFfndg8Cm+dLoEcDtxjr7gNeKg8wBv846UnMq411T5OefPxoB899NrCVse
5h0iz2NEgfmTDWvUp6KOUWY91fOtiv9CMj1h/
M+H034NbRmzJ+3w1U3KTXKC6nB+VLlD4GP6y3x9IaY92sGHyX/
TZSXI6IdBPF5YiISP+lh0x6UAz+RdLj/
A2pK2dvIiK9TTM4ERFpSipwIiLSlFTgRESkKanAiYhIU1KBExGRpqQC18fkFf9FGsqkV2ZxzE0vs88V/
+SYm15WPI40BBU4EVkqyoCTRqXPwfVROc37VFIuXDkq5/CcGLADcA4p/
mYesCfwAWlZMAPMB06Iwd9lrBtDigEakPv5JSm9YFTed5+cnLAJMJ6Ue/
c+8NXuSDpXHlzfoww4aVSawfVtw0nrT24JbExaoHk5UuTNcTmjbiQp7PQYgBj81qT1Nq/
I+XKQCtuXSPl1pwPvx+CHkyJ6jshtLgG+FYPfnrQO5wWtDUh5cP2PMuCkUWkG17dNisG/
CpAXgB4KzATeiMH/
AyAnHmCs2wU4L297xlj3ErBZ7ueuGPx7wHvGupmkQFSAKcA2ORVhJ+BPFanerQZ8KQ+u/
1EGnDQqFbi+rfJP5AWkf8+C2hlz9fRTmRdXzopbBngnBt9SvaOIMuCkUekSZfN5Blg334fDWLeysW5Z4
B7gsLxtM2ADoK4bXnkW+IKx7sC8f2Gs27Y7Bi99jzLgpFFpBtdkYvD/
MdYdDJxnrFuBdP9tJOme2UU5n24+MCYGP6/
ikmN7DgMuNNb9EBgIXEPt9HDpZ0asP1gFTRqO8uCk2ygPTkS6ifLgRESk/
1KBExGRpqQCJyIiTUkFTkREmpIKnIiINCUVOBERaUoqcCIi0pT0Qe9OMtYtIK3VuCzwAjAqBv9OjbZDc
5ufxOD/N29bA3gDuDgGf2wbxxkK7BSD/
31+bYFxMfi6P6Et0h0mvTKLKyZP54UZ89ho9eUZPXyIPuwtDUUzuM6bE4NvicEPA6aTV+tvw/
NAZVE6EHiyjuMMJa30L9IwlAEnfYFmcF3jAWCbdtrMAZ421pkYfAQOBv4IrAtgrJsAvEvKa1sHOCkGfy
1wBrBFTgu4Aphc7tBYdyppTcmN89ezY/Dn5veOIMXalIDHY/
CjjHUbApeRMt3eBo6Mwb+cjz0H2BzYEDgSGA3sCDwUgx+T+9wL+BEpSWBq3r9Lf6MpD65vUAac9AWawS
0lY90AUqDoTXU0vwY4xFj3MdLq/
69Xvf9RYBfSTO+MvO17wL15tnhWK31uDnyWlOV2irFuoLFuK+AHwB45E+643PZ84Lcx+G2Aq4BzK/
pZHdgD+DYpLucsYCtga2NdS76k+kNgZAx+OyACJ7Ty81AeXD+gDDj
pCzSD67wVKjLYHgburGOf24EfA2+SQkmr/
TkGvxB4ylhXb9bILTH4ecA8Y91bwNqkQnVtDH4aQAx+em67I/CF/
P2VwM8r+rk5p4FPAd6MwU8BMNY9mc/
xY6Rg1Yl5geblSDPXxSgPrn9QBpz0BZrBdd6cnI+2IemXfXv34IjB/
4dUDE8ErmulSeWfv3UtJkrHMuGqVbapzICrzocr93lnnkm2xOC3jMF/
uc4xSpMZPXwIM+cu4J0581lYKvHOnPnMnLuA0cOH9PbQRD6kAreUYvAzgbHAOGPdwPbaA78EvhuD/
3edh3gPWLmDw/
obcJCx7iMAxrryb537gUPy94cB93WgzweBnY11H9899rphz5aQfUgac9AW6RNkFYvCTjXWPkYrHle20fZ
L6np4sexyYn/ufQMVDJm0dw1h3OnB3/jjDZGAMqRBfZqz7Dvkhk3oHEYN/
21g3BrjaWFe+DvVD4Ln6T0WaiTLgpNEpD066jfLgRKSbKA9ORET6L12i7ELGuq1Z8hLlvBj8J3tjPCIi
/ZkKXBfKj9a39PY4REREElyhFRKRJqcCJiEhTUoETEZGm1G/
uwRnrSsDvYvCj8utlSXE1D7UVPWOsWw34Ugz+gvx6KJ2MvmnjGC3AujH4W/PrMcAvgNdIq6ScFYP/
dUf7reg/
kCJ2Ygf3W+zcRUAxOdJ39KcZ3GxgmLFuhfz6M6QC0p7VgG9Wbets9E0tLcA+Vdv+kJcCs8BPq9emzAW6
u7V27tKPKSZH+pJ+M4PLbgM+D1wLHApcDewKbUbPnAFskhdWvhMYT/
vRN2sCF+V+AI6PwU801o0AzgZWyH0cSZoNnkZavHkX4GeVA47Bv2WsmwpsaKz7Rj7GUGCase4o4EJSxM
584IQY/F25iF9OWhz56Xw88thmxeAH5+8PAFwMfkwuoBfl8wf4Bmnlk8pz/xVpkehVSP/tfCMGf2+H/
gXaobicxqaYHOlL+tMMDhbF1Qwi5bc9VPX+EtEzpLiaqXmB4e+00ldr0TfnkC4r7gB8Ebg0b38G2C0GP
xw4GfhpXoD5ZPKMLQa/WMqAsW5jUtH5f3nT9sB/x+C/RF7gOQa/NalgX5HP7RvA+zkW5/
S8T3vOBe7O8TrbkWak1ef+JeAveWa5LfA1YfIWAAAgAElEQVRodSeKy2luismRvqRfzeBi8I/
ne2iHAre20qS16Jla2oq+GQlsmWNlAFYx1q0Mr3Eoqy0MrEoqQpuSVvJva3Hmg/
OMbh7wtRj89NzfTTH4ObnNLsB5+dyeMda9BGwG7EbOesv7h4Yh8Ycj8/
HgbxynbAzgi77MAmGmsW72qzT9Ia1kOJEX7LFHgFJfT3BSTI31Jf5vBQQomPZN0ebJaa9EzrWon+mYZY
MeKaJn1YvDvkQriXTH4YcB/
AYPaGGd5RvfJGPwNdtnV3zf1npstYpL5fa2jr+EGPw9pOL5GnBlTg2XfkQxOdKX9McCdxlwlR6jX/
xdXUir65A/jwACSkGVz5wZZ6xxdR6jR+EGJjLfeQYm/I0TUbAM9WbR9Guhxb9qaxbgtj3TLA/hXb/

0a6tImxboCxbpXqcRnrNgTeyk90/oZ0KVP6EcXkSF/Sry5RAsTgXyXdI6u3/b+NdRONdU+QHlIZX/
FereibscD4fGlwWVLB+TopQfsKY90JwN8r2t8FfC8/zPGz6s7acAFwUU7hng+MicHPM9ZdCFyej/
8oMKlin+8BHngFeAIo/2Y6DrjEWPdl0uz1GzH4B6rO/
QngO8a6D4BZ5Eua0r8oJkf6CsXlSLdRXI6IdBPF5YiISP+lAiciIk1JBU5ERJqSCpyIiDQlFTgREWlKK
nAiItKUVOBERKQpdfkHvY11C4Apue8XgFEx+HdqtB2a24yNwZ+Xt50PxBj8hC4azzjgK6QPQi8AfhmD/
20b7ccAd8TgX6/VJrebAPgY/LWdGNMYujDvraLfU4FZMfgzl7Yv6T+U7ybNqjtmcHPyGorDgOnkFe/
b8BZwnLFuua4eiLHu66TctxF5PLvR/
gcEx5Bjb7pZm3lvtRjrirzMlshSU76bNLPuXqrrARZfB7E1bwMTgdHAYrOYyiTqnJodY/
BD8wxoP2AAMIy0JuRywCjSgsn7xOCnA98Hdo/
BvwsQg58JXJH7Ppm04PEKwP3A10jRNga4ylg3B9gR+E51uxj8Ysu/
GOv2JC3gvCxpxf1v5CWz9iFlqE0DHgE2rk4PbyXv7cMZWF4iq9z+NtKSXjsC+xnrtgB+mn8G02Lwe+Z2
W+afW2WmHca6PwPrkxZYPicGf4mxbgBpTUlDWoT5shj8Wca6TUhLkq0JvA98NacVHAicQpoJz4zB77bE
v+ZSUh5cz1K+mzSzbpsJ5F+ee5JW72/PGcCJeZ96DSPlk40gZZ69n3PWHgCOyPE0K8fgp9bY//wY/
A55ZrcCKfjzWiACh+VZ6JzW2lWd5yBgAnBwzmVbFvhG3n4xsHcMfhdSsVhCK3lvtXwC+G0+x/
dJfwx8Mee3HVjRrrVMO4CjYvDbk4rZWGPdR0hJ4uvF4IflsV+e214CfCu3H0da8xJSbt1n8zH3rXE+yo
PrQ5TvJs2sO2ZwK+RFg4eS4mTubG+HGPwLxrpJpIJVr7tyBM17xrqZwM15+xTSrLGgdmQMwO7GupOAFY
EhpEWTb+5Eu08AL8Tgn8uvryBdlg3A8zH4F/L2q4GjK/
arlfdWy0sx+Afz958C7in3nWerZa1l2r1KKmrl9ID1gU1JyQMbG+vOA24B7jDWDQZ2Av5UMZ5y2NdEYI
Kx7o/
A9a0NUnlwfYvy3aSZdds9OGBD0mXD9u7Blf0U+G7VmOZXvK7OLqv8E3NhxeuFwLL5suTsPENaTJ5dXQA
ckGcuv26l/3rb1bqn1969vtby3irPl6pjVefA1SoeS2TaGessKYR1xzz7mgwMisHPICVzB9K/
06X5+O9UZNm1xOC3AIjBfx34IalAPppngdKHKd9Nmlm3XaLM97vGAuMqLpO11f4Z4CkWvwT4IrB9/
v6ATgzjZ6TYmlUAjHWrGOuOZlHhmJZnLJV9V2agtdWu7BlgqLHu4/n1KODuvH3j/
KQowMF1jPdFcsaasW47YKMa7R4APm2s2yi3be+30arAjBj8+8a6zUkzQPJ9zWVi8NcB/wtsl/
8weCHfbys/1LJt/n6TGPxDMfiTSfcV16/
jnKSBKd9Nmlm3Po0Xg58MPAYcUucupwMfq3h9Jul+1v3AGp0YwoWkBzP+kR/
YuJt0r+4d0mxsCvBn0oMhZRNIGWuPkmZDtdoBEIOfCxxJuqQ3hTSDvCjfv/
smcLux7j7gTaC9m1LXAUPysb8BPNdaoxj826TLndcb6x4D/tBOv7eTZnKPk1LFy5c61wNCPt4E4H/
y9sOAL+e+nwT+O2//hbFuSv5Z3kP6t5U+bsT6gxm/
7wbcOnpTxu+7gYqbNA3lwXUjY93gGPwsY11BeirxnzH4s3p7XD1FeXAi0k2UB9cAvppnR0+SLhNe3Mvj
ERHpN7r7c3AAGOu2Bq6s2jwvBv/
Jnjh+b8mztX4zYxMRaSQ9UuBi8FNIn7kSERHpEbpEKSIiTUkFTkREmpIKnIiINKUeuQcntRnrSsDvYvC
j8utlgTeAh6oXZq7abzXgSzH4C/LrG4ArYvB/
zq+fBa6Mwf8kv74Ou2G09LRKTXqcD1vtnAMGPdCvnD4Z8h5cS1ZzXSB8nLCyHfT1pD8s95
Ca1ZpOSBsh2BY2Lw/
yItKC0CKA9OmpcKXGO4Dfg8cC1wKGlh5l3hwxDTDUiJA5UROGcAm+TP2d0J3AD8PPe3E+CBvfOHzIeS1
gj9V16XclwM3rXRN8a6w0lLrS0HPEQqptBKvE7X/
zikp5Tz4FYdNGCxPDgt1yXNQAWuMVwDnGys86QkhMvIBS7bHNidtEbms8a6C4HvAcPywtYY65YnzQSXI
xW4u0mFawtgOCkJoDWt9f1x0tqZO8fgPzDWXUBavutJcrxOPuZqXXT+H1IeXM9SHpw0MxW4BhCDfzwvy
nwocGsrTVqLwKnuY56x7knSYs2fIs3mNiYVu+GkS5itaa3vPUmLXP8jR+asQEpev5mqeJ3qzvJi1kcDr
LN2qxF40kBem1VirRUX36Y8OGkWKnCN4ybS4tIWqI6hWSICp0Yf9wO7kYJeZxjrHgSOJRW4i2rs01rfB
emBlf+pbpyTBT5Litc5CDiq8n3lwfUtyoOTZqaPCTSOy4DT8qov9aiM9SmbCHyNRav8P06azW1AurxYr
78BBxjr1oIUx2Os27C1eJ0O9CkNSHlw0sxU4BpEDP7VGPw5HWj/
b2Cise4JY90v8ub7SZclH8ht5pMuLcYY/
MIO9P0UKdj0jhyxcyfwUWrH60gfpTw4aWaKy5Fuo7gcEekmissREZH+SwVORESakgqciIg0JRU4ERFpS
ipwIiLSlFTgRESkKanAiYhIU+r1pbpyHtqvYvAn5tfjgMEx+FO7qP8jgJNIn5soSCvgn9lG+/2A5/
KHndvq91RgVlt9tbGvBW4EngcGAdfE4H/U0X5a6XcMYGLwxy5tX9J8FIsj/U0jzODmAV/
Iy0B1KWPd3sDxwF4x+K1IS0vNbGe3/YAtu3osrbg3Bj+cFD1zuLFu+3p3NNYN6L5hSTMqx+JMm/
3BYrE4k16Z1dtDE+k2vT6DA+aTFuf9NvCDyjeMdRMAH4O/Nr+eFYMfnGdAPwLeBFqA64EpwHGkle/
3i8FPJS0lNS4G/zpADH4u8Ovc11dJq94vB/w/YFTua1/
g08a6HwJfBPaobheDf79qnC2kxYxXBKYCR+XFjncg5afNBu4D9i5HzZTF4Gcb6x4mZbttTcUMLMfnnBm
DD8a6WcCvSAsdn2ismwecA6xE+iNhz9zlusa624FNgBti8Cflvi4Edsg/
n2tj8Kfk7Wfkc54P3BGDH2esWzOfzwa5z/NjZ/
Ox4SUB7dbDP49upDicrqHYnGkP2qEGRzAeOAwY92qHdhnW1JB25pUnDaLwY8ALgW+ldsMAx6usf/
1MfgdYvDbAk8DX47B309a1f87MfiWX2Fvhu1D34ZUaE/J2y8Hvh6D/2p2h/
MeSVgCdi8J8EJgF/AI7L4xoJzMntWkDxvr1s/bfxCDN6S8uU8b67Yx1g0B9ge2ymP/
SW57DnBWDH4HUpG/
NG8fR0oFbyHl1ZWPWXk+RxrorEuzpjZ3mRZesprs0oMHrj4NsXiSLNrhBkcMfh3jXW/JSVIL/FLs4Z/
xODfADDWTWVRNtkUUoBne4YZ634CrAr8GPPzCrAYMBv7SmXa5KK8Wg787b7oC+FMOA105F02A3wOuYtddjXWTgYXA
GTH4J/OMr5YFwHX5+08Ab8Tg/wHp55fHAvC3GPzM/
PopYEPgFeCgnNW2LGnh5C2Bp4C5wKXGupuBm3K/uwBfN4XLvQAjgE74erhP3+Wxq7TpVOe4yBwH4/
X15y9Ycs5tDKCF86BD/vy3eG2fZtnUjGqHCdmWSp4VpzS5Gp9V0TkzN6S8Eysu4xXhGfIPz+SOYdH2iB/
ms0r9Ad7+ma/DhcWNbiYPm3efT4Qaw04KAfT9CiBZTIt+mPPFM8b7YCq79yxiaT+TkDYrqkZ9bwtunx
Ywxdd1WTEdEjgu9q60Ifn2t/
ON9l3Ik1IUbjfCqSZX/
UtxbTgU2eeiACPEAdbBW0QKI7ABcsFYidx5f2AeF/vIP0TS5R0zK7vMhHsvxg2jWX/
2Bet7VxvVTdBvkpqLgWxIWbMJ4ehXvy5wrpAf4bkSdOH7T7jt9Kcs0hW/
LlIXKeIsiBpDFFTHO+yM6I/
NNOuQMDjJFc7fpT+o8AeBUPsJjiIM/
sBQCK9MNbl+Dc5srWlWTPmf4/gJCYlh/AKzOaf4W4uKbixVcGWwbf5xYmCuHLKuzdd/
BiJKrUGBgakPsXI5/kGqUZSMmCxGnFzmJrRbdX/
GAr9IT7ZG3hfgr6R4xD/1h4f46H7wsGbTf1kMy9iyt9HaxkQRVGc8/
b3/R5N4VxStkaS1sBx52dHvPR6bV5Ku7IXoy9EyBuGLiRfaPJaQM8r8GzS4UtIXNyB5/
Bxj3bLxMbI4FqnR8/
UswUt2ZaEiAQcJSVd2Mt6ps3wwnxbOQbD7aK7WzEe0jfPaSPM0OMFNymKo42YRtOLELi2AbJmeIYcjfcyF
7GL/WCoAs8tbpGj/
hDK4j5ZVfVEbhQOuVcaPCX8ZRWkqWXvjQNR6tgzhhYzWUd0zWzI2Y0+VqF6MGHUN9FPHvWybwAr4gajR
ev8V6srSGHK47v2GY/
0QXaUVnUhtOZnHXvI6LnsXWwnvXtOO2n3hGSHSZvyD2bhGqbHuH6U/
vmSLGWu6mqlv8LpczBzKV/
NQg88GaV6Sr5Si/ovNf1Xu9dRNpF1NQJc6kmxN8xVb2+bD4IaRPLd/
JfaAvK4cHxi43jqvGqmrTM2WZUcGIqmfGLQBWqxc6rNRh2iTuaJOmK8A/
XoGfMY3YbCdx1uqtjr3nmPDQMBTmRyMdzG/
cBYZJT7gUYndhAmX2aV9wB7aXdzBT7I4l0sqeCnmAkj4fmwngaqUXanz6lBOR7RQO21bkudqaW5Y5fVrq0
8D+h3dqLj18v/gnHzXoROPaUC2tyf56OdsmxM8VvwNiyG5cyfnU3r4IjP7tx1w0LWXH8mX5dXCR
rSAdDs3gwgY5+2dqp6GfYu7VnjRrsE2NDHWE2NB+DHdi38S6NnKmtF4nPdRYpeMe5kmJBFGqq3bHA3x
FLyRFYOXzNB7aVzi7BlONDTGrPRrJ/
GO8UpxHBKi3tcCuChbSLoZ8fEbLi6VnY5KNdE/U9ZpHfHbB+kWoHWUR8oqhgCrrLIBnW7XQhnXc
yyO+jGpMUQy8sbjbz1xLtd1Yev4SXVhdN3MdtBJ0DBDQFJrjUu39sDxb6vqCnuQm8RX/
i0yKOMEV7AbEvPpV3Ba5UsexLDUM/
NG8fR0oFbyHl1ZWPWXk+RxvrorEuzpjZ3mRZesprs0oMHrj4NsXiSLNrhBkcMfh3jXW/JSVIL/FLs4Z/

40h81TIGLwU8H/sjilwBfZFGB+m+g6iJLu34G/NxYtw6AsW55Y93Y/
N7KwBvGuoHAYRX7VOes1WpXHvdMYIaxbte8aRRwdwx+BvCese5TefshdYz3RaDFWLdMvrQ4oka7Z0j32
nbI57Wysa6t2fgqpPuAM411awN75/0GA6vG4G8lPYzTktvfQQpKJbdryV83icFPicH/
HxABFbg+QrE40h81xCXKCr+k4hcr6YGQG411k0ghnLM70lkM/tb8C/
2veQZYIgWLQgrsfAh4iXRZs1zUrgF+nQvhAW20qzQauMhYtyLp0f8j8/Yv575mA4H2n+CcCLyQj/
ME8EiN8/
qPse5g4Dxj3Qqky7oja3Uag38sXw59Mo9vYn5rZdLPdxBpVvjtvH0sMD5nwS0L3AN8HTjeWLc7aWb4FH
BbO+cjDWTE+oNV0KRfUR5cNzLWDY7Bz8rffw/4aAz+uF4eVo9RHpyIdJO68uAabQbXbD5vrPsf0s/
5JWBM7w5HRKT/
UIHrRjH4P5Ae5xcRkR7WMA+ZiIiIdCUVOBERaUoqcCIi0pRU4EREpCnpIZMajHX7kxZx3iIG/
0wPHO944JLqhZzb2ceSFpN2+fXewI9Jq8EUpIWqx3XB2H5M+qD9QuAtYEx5AWsRkUalGVxth5ISAOpZg
aQrHE9KI+gUY90w4Hzg8Bj8FqSFpp/vorH9Iga/TV5k2QMnd1G/0kmTXpnFMTe9zD5X/
JNjbnpZsTcirdAMrhV5CaudSYs23wScmrefRFqKayFwWwz+e8a6j5OiZdYkrfBxYAx+qrHuO8BBwPKk2
JpTjHVDSes9PgQMB54DjiCt77gucJexbloMfndj3V6ktS+XJ0XwHBmDn2Ws+xxp3c5pLL7SyUnA6eXZZ
l5n8oI87gmk1U42Jy2+fCRp9ZUdgYdi8GNyu1nAxfm8ZwCHxODfLi/
mnK1E7XUwpQeUs91WHTRgsWw3Lb0lsjgVuNbtB9weg3/OWDfdWLcdsHbe/skY/
Ps5agbgKlIawA15yatlcnHalLSWZAHcZKzbDXiZlATw5ZyvdhnwzRj8mca6E4DdY/DTcvjrD4GROS/
uu8AJxrqfk5Yv24OUTVf5GbthpKXOalk977cvcDOpgH8F+IexriUG/yipeD0Sgz/
RWHcyKfannE13OqkYz6S+tIZOUR5c+5TtJlIfXaJs3aGkNSnJXw8lrfV4efkeWQx+eo6QWS8Gf0PeNje
/v1f+32TSLGtzUsEDeCUGX14L8nfALq0c/1OkOJuJxrpHSbOtDXM/L8Tg/
xmDL+X963Vz3mcK8GZeNHkhaX3KobnNQhYVzcXGFoP/
QQx+fVJBr1wvdDHKg+t+ynYTqY9mcFVyAOkepBy4EjCAdEnuOpa8NFdrPbQC+FkM/uKqvoe20kdrl/
sK4M4Y/KFV+7fUaA+LooEeq/
F+ZZxQddRQrf8OWjvW70lxO6e08p7y4HqAst1E6qMZ3JIOAH4bg98wBj80z1peAKYDR+XEAIx1Q/
K9qVeNdfvlbcvn9/+S2w7O29cz1q2V+9/AWLdj/r78IAssHtPzILBzvr+HsW5FY91mpJicjYx1m1TsX/
YL4Pu5HTly54QOnvsy+fwBvlQem7Fu04o2+
+ZxSC9RtptIfVTglnQocEPVtutID4HcBMR82bD8+P0oYGyOlrkfWCcGfwdppvOAsW4KcC2LitfTwOjcf
ghwYd5+CXCbse6uGPzbpIWZr87tHgQ2j8HPBY4GbjHW3UdawBmAGPzjpCcxrzbWPU2K2/
loB899NrCVse5h0iz2tLz9DGPdE3ksewH9JhGhESnbTaQ+isvpQfkSpY/
BD+vtsbTGWDcrBt9lvyUVlyMi3aSuuBzN4EREpCnpIZMeFIN/
kfQ4f0PqytmbiEhv0wxORESakgqciIg0JRU4ERFpSipwIiLSlFTgRESkKekpSpE+aNIrs7hi8nRemDGP
jVZfntHDh+iD3iJVVOB6ibFuAWnh42VJS4GNisG/U6PtUNIKKM8Ag0jLeo2PwV/RyWMPJX/
gPIem3pjHADAtBj+yM/
1Kz1Bcjkh9VOB6z5wcIIqx7grgGOD0NtpPjcEPz+03Bq431i0Tg7+8C8ZybzkVvDXGumVzvly3U1xO+x
SXI1IfFbjG8ACwTb2NY/
DP54WUfwlcbqxbCTgP2Jr0b3pqDP7GPFO7kpTzBnBsDP7+eo6RQ1Knk4JZHzHW/
RS4mhTsOgn4HLB9DH5a1X5Hk9bLZJ2116z3lKQDXptVYq2q7HfF5YgsSQWulxnrBgB7Ar/
p4K7lnDmAHwB/
j8EfZaxbDZhkrPsr8BbwmRj83JwIcDVgWulr17yANMCfYvDlmeRmpNDVBca6c4H7YvCnGes+Ty5i1RSX
0/0UlyNSHxW43rNCLipDgYeBOzu4f+Vio3sB+xrrygkHg4ANgNeB83OO3AJSwWpNrUuUf4rBL8jf7wZ8
ASAGf4uxbkYHxytdZPTwIZz819eBNHN7d+4CZs5dwIm7rN3LIxNpLCpwvWdODL7FWLcq4En34M7twP7D
SQ+eQCp2X4zBL3YDy1h3KvAmsC3pIyFzOzjG2VWvFT3RAMpxOZVPUZ64y9q6/
yZSRZ+D62Ux+JnAWGCcsW5gPfvke2tnku67QQpY/ZaxrsjvD8/
bVwXeiMEvJOXWDViKod4DHJb73xtYfSn6kqU0Yv3BjN93A24dvSnj991AxU2kFSpwDSAGPxl4DDikjWa
bGOsm5zDTPwLnVTxB+WNgIPC4se6J/
BrgAlK46oOky5PVM7KO+BGwm7HuEdIl0ZeXoi8RkW6nwFPpFGPdi4CpfoqykgJPRaSbKPBURET6Lz1k0
kCMdVuTPrdWaV4M/
pO9MZ62xOCH9vYYRETaogLXQGLwU4CW3h6HiEgz0CVKERFpSipwIiLSlFTgRESkKekeXD9TK6anIpKnc
jWUEcCXgMtJa1L+LfexP3A9cGAM/toeHH6/pgw4kY5Rget/
2orpmVp+r8xYB6kgHgr8LW8+hPTBdOkhyoAT6TgVuP6t3piee0mJAwOB5YGPA4+2vUvnKA+udcqAE+k4
Fbh+qkZMzyYVsTkTY/DH5O9LwF+Bz5LWt7wJ2KhGv8qD6wbKgBPpOBW4/
qetmJ4lLlFWuIa0KPSqwInA91trpDy47qEMOJGO01OU/U/
5HtyGwHKke3DtisFPAoYBa8Tgn+vG8UkrRg8fwsy5C3hnznwWlkq8M2c+M+cuYPTwIb09NJGGpQLXT3U
mpgf4H2rM3KR7lTPg1lhpIK+9+wFrRDRQD5iItEOXKUVOBERKQpqcCJiEhTUoETEZGmpAA96d1JFrtp
AYD5wBXB2DH5hrw6sBxjr9gE/
1dtj6S+UBSfScZrHz4BFSbH2x+7L+15sy5FwmUbF0/
KGfBTZv9JbT0tEMJ4lLFWuIa0KPSqwInA91trpDy47qEMOJGO01OU/U/
31h3JXBtDP5GAGPdVcAfgKmk1OzlSH90fDEG/8/WjmWs+zOwPjAIOCcGf0mOvvkNYEjRNpfF4M+qsf/
HgYuANYEFwIG5v3ExeJfbnA/EGPwEY90ZwL6kWeodpCTvfYFPG+t+mMc6tTM/
t9YoD25JyoIT6RzN4LpIDP550s9zJ2PdSsa6N4x1HxVSrP2x+O2Ag4Fzc7NLgSNj8NsBZwFnGyMBjsBtwJfJxWrFlKRerWNQx0V
g98+txrrPsI0AKsF4MfFoPfmlQsa7kKGB+D3zYf/41aDY11Q4D9ga1i8NsAP4nB30/Kg/
tOnsFOrdrnaGNdNNbFGTNntjEMqddrs0oMrloOW1lwIu3TDK5rlddHHGwicb6xrIc2SNgOIwd9trBtvrF
sL+AJwXQx+vrHuAeAHxrqPAdfXmr1lY411+

```
+fv1wc2BZ4FNjbWnQfcQpppLcFYtzKpEN6QxzM3b691rHeBucClxrpbAN/
eD0B5cF1PWXAinaMZXBcx1m1MKmZvAd8G3gS2Jc20lqtoeiVwGGkmdzlADP73pMt+c4C/
GOv2qHEMC4wEdswzsMnAoBj8jHysQMp3u7TGMGstUDqfxf9bGJTHNR8YAVxHuu92e439pRspC06kc1Tg
uoCxbk3Sfa3zY/AlUur1G/mJylHAgIrmE4DjAWLwT+b9Nwaej8GfS7r8t02NQ60KzIjBv2+s2xz4VN5/
DWCZGPx1wP8C27W2cwz+XeDV/BQkxrrljXUrAi8BW+bXqwJ75vcHA6vG4G/
NYy6nfb8HrNyBH5EsBWXBiXSOLlF23grGukdZ9DGBK4Ff5fcuAK4z1h0I3AXMLu8Ug3
/TWPc08OeKvg4GDjfWfQD8CzitxjFvB75urHucdFnywbx9PeByY135D5b/
aWPco4CLjXWnAR8AB8bgnzfW/
RF4HPgnaWYIqYjdaKwbRJr9fTtvvwb4tbFuLHBAVz5kIq1TFpxIxykProflGdMUYLucqt20lAcnIt1Ee
XCNxlg3EngGOK/Zi5uISG/TJcoeFIP/K7BBe+3yo/9/a+WtPWPw/
67nWMa68cDOVZvPicG39RECEZGmoQLXgHIRa2m3Ydt9HNNFwxER6ZN0iVJERJqSCpyIiDQlFTgREWlKu
gfXIIx16wBnAzsA84AXSZ+V27e8CHJV+0uBX8XgnzLWvQiYGPy0qjanArNi8Gd27+iloxR/
I9L9VOAagLGuAG4ArojBH5K3tQD/
VWufGPxXemh40sXK8TerDhqwWPyNVicR6VoqcI1hd+CDGPxF5Q0x+EeNdasBexrrrgWGAQ8Dh8fgS8a6
QIq4iZUdGet+ABwBvAK8nfcht38oH2s14Msx+HuNdWNIs79jczsPnBmDD8a6WcB40vqXM4DvAz8nfdTh
+Bj8TV39g+gPcTmKvxHpGboH1xjKxas1w0nrQG4JbMySn237kLFue+CQvM8XSJc7Ky0bgx+R+6snnHUl
IOR4nveAn5DCXfenxnJiistpn+JvRHqGZnCNb1IM/lWAvPblUOC+Gm13BW6Iwb+f21fPsK7PXx/O/
bTnPyxKEJgCzIvBf2Csm1Jrf8XltE/xNyI9QzO4xvAksH2N9yr/
rF9A+3+UtFVUyn1V9tNqVE72QU5HAFhY3j+nJOiPo05S/I1Iz1CBawx/
B5Y31n21vMFYtwPw6Q72cw+wv7FuhRxuWvMhlQovAi3GumWMdeuT8t+kGyn+RqRn6K/
wBpAfGtkfONtY9z1SivaLLB6pU08/jxjr/
gA8Ssp4u7eO3SYCL5AuQT4BPNKRY0rnKP5GpPspLke6jeJyRKSbKC5HRET6LxU4ERFpSipwIiLSlFTgR
ESkKanAiYhIU1KBExGRpqTPwTUwY90C0ufTliV9Vm1UDP6d3h2ViEjfoALX2ObE4FsAAsAjHVXAMcAp/
fukKQrKA9OpPupwPUdDwDblF8Y674DHAQsT1pg+ZS8/
QhgHGlNysdj8KOMdWsCF5FibiBF3UzMgagbkFIKNgDOjsGf21o/wDfz183ygsur5NebxuA/
6NYzbzLKgxPpGSpwfYCxbgCwJ/Cb/
HovYFPSupEFcJOxbjfg38APgJ1j8NOMdeXVe88BzorB32es2wD4C7BFfm9zUkbcysCzxroLgc2q+4nBv
5cz5T5PWkLsEOC6ri5uyoNTgRPpKipwjW2Fioich4E78/
a98v8m59eDSQVvW+DaGPw0gBj89Pz+SGBLY12531XyYswAt8Tg5wHzjHVvAWsDe9To51LgJFKBOxL4cH
HoMmPd0cDRAOusvebSnHvTem1WibVWXHyb8uBEup4KXGObE4NvMdatCnjSPbhzb0n8XgL65sbKwbS+
txOcsAO8bg51S1h9bjeIrW+smXNYca6z4NDIjBP9FKG+XBtUN5cCI9Qx8T6ANi8DOBscA4Y91A0iXGo4
x1gwGMdesZ69YC/
gYcZKz7SN5evkR5B3BsuT9jXUs7h6zVD8BvgauBy5f6xPop5cGJ9AwVuD4iBj8ZeAw4JAZ/B/
B74IGcrn0tsHIM/
knSU5Z3G+seA36dKxAWsTipy0gnKgxPpGYrLkQ4xvO6haD/
1Zvj0FEpF66ByciIk1JBU5ERJqSCpyIiDQlFTgREWlKKnAiItKU+vxTlMa6EvCrGPyJ+fU4YHAM/
tSl7Hc1YCqwRgy+ZKzbEbgfWD8G/2pePuuF/P7CGn1MAHwM/tqq7Ra4EXgeGARcE4P/0dKMN/
c7BjAx+GPbays9R9E4Ir2jGWZw84AvGOvW6MpOc7Dov1i06v5OpMWNd8qvPwU8VKu41eHeGPxwwACHG+
u2r3fHnC4gfUA5Gmfa7A8Wi8aZ9Mqs3h6aSNPr8zM4YA6K12QAABHlSURBVD5pcd9vkyJePlQ9gzLWzY
rBD84zqB8BbwItwPWk5OzjgBWA/WLwU4GJpIL2VP56Vv76x/z1/
tzvJsB4YE3gfeCrMfhn8jBGGuuOOMQY/
21j3MLCJsW5rKmZgxjoPnBmDD8a6WaQlsz4LnGism0eKwVmJVOT3zF2ua6y7h7E/9/
emUdLVV15+ANFMdE4tLaxlUQ0xAn1KQc0ThyAn1KQc0ThyNRo1H0XaOi2DaDtqNoe04xCGKSdBFOlFEO84aMW2COEV
yHKJtPOrCiRMnxCko2EGJRAUcAYHXf+xdcCle1asn770qy/2tVetV3Tp1z++egrtrn3Pv/
olP3Bm6ryuAgXp8txb848YAh+g43pdTPK2Kf9xg7ROkGPNeOcX3q347HaTZ7HLMGscw6kczZHAgweU4n
TaslR2RgLY9MBQx8hyEWMKUbmh+lOUZ2xbALUjGhW6frM+vBn6QUxyAmIReXuhnc2Aw4qN2pfOhd1GEF
jTeFZjWjt4vAs/
nFHcBngRuBv4jp7gjYodTcgpoAY7W4zra+dBHt5+TU3SIaepg58MOWkT5MGC7nOIOwGhtW/
KPGwgcrmOCHtsIdRnfs9Bn8XiGOx+y8yHPnT+/
nUNqft74oJW1e624zaxxDKN7aIYMjpzie86HG5GiwiuddCswJac4G8D58CpScR8kk9tbn08GznQ+9AVm
5hQXOB96aBX/
AcCT+nw34JaC31rR92SiTmP+xfnwGmIwCrCn8+FpwtU6Jqc4zfkwsIreJcBt+nwJqc4zfkwsIreJcBt+nwrYHZOcUrp+PU4AB5Q
9wG0sPJXgb8i7gDDke98E2BbJDNdAFzrfLgLgBeSyv5xk4GLnQ83AbnFGeVizS7nBUxaxzDqB9NEeCU
S4CnWNHGZTGapToTofegBrFN/A/
rAwcDj+n7f0bMPmKdZVbnx+RcVNc7HhwJvbR/
JKYay95bpVYrZ3oKc4hJ93qZfWxvHtQRYKQbfGaARWkKFXOf84zfgqv1Y+RLwITDf+bDf4cTTwDEwHPoNJEkidDzsWPn+k86GtbNtAVRbZ/
DTLFGXJdXoicEJh80wk0wIYApRNFtXEY8PhwJEkidDzsWPn+k86GtbNtAVRbZ
JoJtGj7PsCgCu1eQtbaBmqf6zgfqv1Y+RLwITDf+bAxUjAZzT7XzSnercdUCtJt+sc5H7bMKU7NKf4cy
CzPRo0KmDWOYdSPZsrgAC6icGIGrgHudD48iZh4fvgp9jkZyViivn4MCVSPFtocB1zhfPgxEkQnIN5tI
AHtIeQik5N0mrNaXzOQadLnkYx0JXKKi5wPRwOR/
WQqZl962005ziszodOg25NaG0drgOMj69kazwP3X7SOBXzofnkH8jDyMecqc4H/
ZGMsMXgHsq9WksZ1CftS2gGUYdMD84o8swPzjDMLqImvzgmmaK0jAMwzCKWIwDAzMMMwmhILcIZhGEATYTYg
```

```
HOMAzDaEoswBmGYRhNiQU4wzAMoymxAGcYhmE0Je3e6O18WILceLw6chPyULWSaavt5tpmdE7xXN22IT
AbuKqaT5l+drec4m+rtPHAg8AhOcU/6LZlFffbO5b2cD4E4GdI4O8FjMspXuV8OBR4Jaf4wqr2of0cD/
wCeAMpHzY2p3hNJ+z3fOCDnOIvV3VfxqphHnCGUX9qyeA+zim25BT7A+8CI9pp/
xpQLNVxJO1Xygepuv+dGtrNoswWpzNwPvRCigQfrBX6dwKSvn0oUpy4I/tr78fDzVq/
0gMXagmtWvbbw/
lgmXcDYx5whtEYdLRU12OI3Uo1PgZedD64nGJGrFsmAv8Eyzza3kNsZ74MnKF+bWOAbZwPzwDjc4pjK+
z/WaCX82G/
nOL9xTecDzMRP7W3nQ8Oyey8ZjZ9kSr6Xwd+iFjUHIhkUQcjZatWB94ByCkuBF52PuyG+KUN1lJch2vb
K4EvIK7f/6JFjBNSwmt3YJI6HKzkq1bUnFOco24GX3U+/
BuFDMz58DzLfyzcg2Sv3wAOdT5sA1wIrAa8nVMs+cFtqzq+AlySU7xU9/
V7oA9SwHlcTvFqNU69Tr+LVuD6nOLYSv52Wm9zFFKqa35Oca8K39Gnphn84MwDzjAag5ozAT0ZfhOYVE
PzCcAxzofNkJPhm2XvbwLsgZy8x+i2M5EK+y1VgluJ0cCPa9WubIl4sg0B/
gd4MKe4PRKQD9JizZOA150Pv3M+HOd86JlTfFS3n67aXgVuBH6kHmpTkZN+ifVyioNzihdR2VdtGc6HL
ZDaltPb0b8VcKO6gH+E1Nk8XLPNIwvttkZMUQcBozQzBQnCA5BgNlJ96FqATXOK/
XUsSk4MlfztzgP21z4PaUtk0Q9u4aJF7RxSc2IecIbRGNSSwa2lWdXmiFXM/
dWbA3Avspb1FmLMWc7v1SPthVqn5orkFB9xPuB82LMDH7snp/
iJ82EqkvXcq9unIsdGTvFf1VV7X+TEvh9wfHEnaqq6Xk7xId00HjFCLVE83kq+aiBmpHsg9jYn5hTfrV
KEGeD1nOLj+nxX4OGc4gzV/W6h3V2afS50PsxBijzPQoLaYdqmD9APKQS9hfPhMuAu4L52/
O0mAzc4HyYiLugrUfSDo7KlT0WawQ/OPOAMozGoeQ0OMc5cg/
bX4MgpLkKC4aksN+ksUvwpW1PRzDa4gJXX4op+ar3L3luo2pYCn+QUSyffZf5v+v5UzSD3Q7KujlJ0LC
j5qrXoY9Oc4vv63s26bZec4h1t6C8/huJ+O+oH55Fg+w3Nvp5G/
ODmIs7mCfler9X+5xU0t+QUtwHIKZ6EZM59gGc0CzTKGLbTBsxfsIR5Hy9maWsr8z5ezPwFSxi20wb1l
mYYnytqnqJUl+iRwGmFaa9qXIRM471TYxfvI2tbteq5D1gfOUGXmMly/
7cOBSfnw9oaCEq0AK+Xa9NxmFvIHocidjht0aavWhVmAjtr252RdcO2eAxZE+yrbds7c64LzM0pfuR82
BrJAEtXuPbMKd4GnAvsXM3fTv3gnsgpnge8jQQ6owzzgDOMxqBDF5nkFJ92PjyLuD//
pp2206jt6skSzwGLdf831LAOB5LF3Vl4/RPgOufD2cATHegbJCs6w/
lwFbIu9yHLpycnANc4H0YCRwDDgCudD19Arhr9XoV9VvJVq8RtwHd1SngK8EpbjXKKf3c+DAdu1ysq5y
AZZyXuBU5SHS8DpanOTYFfF67KPEv/VvK3+4XzoR8yVg+w3PPOKMM84Ayj/
pgfnNGV2D8uwzC6AvODMwzDMD6/dPQ+OAD0SsPyKcqFOcVdVl0SOB/
2B35etnlGTvGwttobhmEYRjk2RWl0JfaPyzCMrsCmKA3DMIzPLxbgDMMwjKbEApxhGIbRlFiAMwzDMJo
SC3CGYRhGU2IBzjAMw2hKPtV9cIZRIx0upK0eeAu6QMunZUOk7mYj0WiaTE/
7NJqmRtMDUgC+f6fusbW11R72aJjHgMEH5XpraGQ9jajJ9Hz2NDWanq7SZFOUhmEYRlNiAc4wDMNoSiz
AGY3G1e036VYaTQ80nibT0z6NpqnR9EAXaLJalIZhGEZTYhmcYRiG0ZTYbQJGQ+B8OAAYB6wGXJtTHFM
nHTOB94ElwOKconM+bADcDGwOzASOyinO7aL+rwcCMKd0yXSl/p0PPZAx+zbwEXB8TvGpbtJ0PvB94O/
a7Oyc4t363lnACcgYjswp/rGT9fQBbgS+DCwFrs4pjqvXOFXRcz71G6PewMPAmsh5/
tac4ijnQ19gArAB8BQwNKe4yPmwph7DAOAd4Oic4sxu0HMDMBiYr02Pzyk+01nfmWVwRt1xPqwG/
Ao4ENgWONb5sG0dJe2dU2zJKTp9fSbwQE6xH/
CAvu4qbgAOKNtWqf8DgX76GA5c0Y2aAMbqOLUUTtzbAscA2+lnLtfvtzNZDJyaU9wG2BUYof3Wa5wq6Y
H6jdFCYJ+c4o5AC3CA82FXxGdzrI7RXCTIon/n5hS/BoxlZT/
OrtIDcHphjJ7RbZ3ynVmAMxqBQcD0nOJrOcVFyC/MIXXWVGQIMF6fjwcO7aqOcooPA+/
W2P8Q4MacYmtO8XFgPefDJt2kqRJDgAk5xYU5xRnAdOT77Uw9s0u/
5nOK7wMvAptSp3GqoqcS3TFGrTnFD/RlL320AvsAt+r28jhVxu9WYN/MApzRCGwK/
LXwehbVTxRdTQ/ucnLQz7z486Avdv2yWRBfTytHdt/ZMHKneH4kTfoXKx/1/Jfeta3bNZpTVtnTL46Uye4oUTzcmkSVX5sf3lHbQdTS2aaMQ49K/
POR+udz6sXw9NzofNgZ2AJ2iAcSrTA3UcI+fDas6HZ4A5wP3Aq8C8nOLiNvpdaqeGAVVDw+fbP2ihp7K1qiL0GC+2wyoXnjwWoRTRwnvDbpuq/
8Q1fqySmWxugCHaOxOlW6gp42tNaMBTijEWjrl2K9Lu/
dPae4MzJFMsL5sFeddNRCPcftCmBLZLppNnBRd2tyPqwN3AacklN8r0rTbtHUhp66jlFOcUlOsQXYDMk
Qt6nSb5drKtfjfOgPnAVsDQxE1gV/1Jl6LMAZjcAsoE/h9WbA2/WQjlOofm8LO2o9/UhT3Spe6w9t/6aseFIC9dc/vJrUlvd0d3K/
OAe5ATgxvlaZH9O+cbpZVqf+6jVtO8S09YS0FrmH5FFu3aHI+9EKCyU05xdt1c93GqS099R6jEjnFeUB
C1gfXcz6ULi4s9rtMk76/LrVPS39aPQfo9G5rTnEh8Gs6eYwswBmNwBSgn/Ohr/
NhDWQBFjl3J3i3A+fNH5sE7pOfAt4HnVMkybDQn7GZplHS+hWZPhr/
dPhzWiI1PzVwL3JCOCLJoA1BIVkpvprZunLk4G5Ye3rk0Pc/Y4PzPJpZ4GyZ4mXpFdnFFYVyBBlnhvgk9owO6mNeVPbHwMQXKKdGjOYaPuM1/
pgxdOtJzWZrRA7rAsanZQPXALPutH6DoqEUiLaMZPM4DwdpLhKZvwuYGbSG14PQ49JaSQ3ZlNPNUc7JqlW9PrJ+EQKtQOzpYmEg2/
NhDWQBflJ3i3A+fNH5sE7pOfAt4HnVMkybDQPu7GZplfqfBHzX+dBDF+znl6boupqy9ZDDkHEqaTrG+b
CmXrHXD3iyk/vuAVwHvJhTvLjwVl3GqZKeOo/
RRs6H9fT5WsC+C+yGgpYEvRqgdnJfvkyFiqSxD7Ld+/Ur3lFBvmVjsYTpalqThLO1iQ6YzDwqJ9UwoxLAKDsBDSouwa+QAyAC6KAwBzXXkdirfbF/cD4yTQ/
4bU7xXufDFGCi8+EE4P+AI7tKgPPhd4AHNnQ+zAJGAWMq9H83chn1dORS6u91oybvfGhBpo1mAicC5BS
nOR8mAi8gVxeOyCku6WRJuwNDgam6B1tK+cl5fWnuxmg0vb6z8ibKS2yWQl6lKz0FFGoZuzMDN8FTd31XsmP4C+7e0y5H2SEutYjiZJCN+2tu5qhfIyt2H7S5tfKBidyrvfcWL+AUmIsEMKr7gAhDe03KnK1+CVRpudGJ27YnHbyBTi9Zeh+75ob7ro1cqZKEF2W9jI3LuvP0I9ik/zz8Bb9sMSFHfbHCTJUsxmr7tadk7QRPAjz2b1vJ9ZgjvkVm9PRAU4lTdvjoVszwy3zHQIGvX4ZZ+TmYdvG9NIXNR4DJPe3sQBJCaKqu7ZcGgpJTCOmyoLzh7TEsCCpuAD3VK9ODFSS5a8hFbtn0hcDq4r6Vj8JWZ3Zb/
f3zgfpiOZ2zHdpOdPzoeNkCnJZ4CTtH2nfGdWycQwDMNoSmyK0jAMw2hKLMAZhmEYTYkFOMMwDKMpsQB
nGIZhNCUW4AzDMIymxG4TMAwDWFZmagZwV04x1EnD2cBHOcVL6tG/
0VxYgDMMo+44H44DHK3oi94udDNBDWhN4IAzPHrWyVJxmYTY+1zGeyS7vqpR1JyWbH2w6fHJMRkvKcw6Zsnri81D6HGVDwg1zGJLs1Ln7ExTnGCgcLx0Mi+WiS9LN2JBSQHdy7YjPpj4OcbiGHfLg8u7wuA6BW/
XCrwCPIJUwXgUOE692LYDLkVKML0LXAuMzim26uemIzf4HqT72LEgaTzwS2Ai4vG2SPf9/
ZziG+q3NgqxWvoWsD7w7znFW7Qizk+A7yBFl6fkFPdyqPqyL2MEEZInmdqR25EedMIRGg2FrcIZhVGMPJ
Ch9BXgIeBx4GRiuVTpKfB14CwlGBwLnan3GScAuwDnAc8BPWbEqxdeQyvWnapuFSAZ3LFKseBES6EYC/
w3sD5xfpnFfJMiti1QzAfGCOxOYBpyMHuCZIZDEY+7axEftJ92bEiMzwoW4AzDqMZlLA8as3OKo5AyS
gB9C+1m5RTPQYLJUqS011bAFsCdOcVLgR9q2wMLn3sHGJ5TvCKneBdSuurDnOIEtVNE8nCrkECYE9g+
zKNF+cUxwGvIZkewMHIlOfROcXrcoqn6PaALM2cjlSu74Ldl6/
```

```
M3J37TafqW25wA7IFOR+wOfAL3L2pSq3i9mxXNapX7/BuxXeIyoos/
4DGMXmRiG0Rls5ny4ANgICTIPIlOZrwJDnA8/
QKYSYXkG2BZzgY2cD8MQl4lSwFwbqcjfq0Y9fwAccLPz4VZgB83iInA8cAjwLDAAyTgfqXG/
xmcIy+AMw+gMXkYu5jgKuBe5kOQTYAgSqC5EnK7PQ9a/KvFfyLrbDcA/A6OBl5B1u3eQ9bpaGKOP/
siFMjvr9lOQtbejgHGIR9rkGvdpfMawqygNw1gl9GrIaTnF/
vXWYhhFLIMzDMMwmhLL4AzDMIymxDI4wzAMoymxAGcYhmE0JRbgDMMwjKbEApxhGIbRlFiAMwzDMJoSC
3CGYRhGU/L/q41x86KWEnMAAAAASUVORK5CYII=\n",
       "text/plain": [
        "<Figure size 360x432 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAbgAAAGDCAYAAABZdwXdAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3Xuc3dO9//
HXToQgbjlu5SSC0tAgYTWta1dI9dBVh7ZKaJrQ1lE0VVSdXkK1Wr/
SUqRuLUm1Li2lsdzrWFRcYrkl7koQlyISoxNJKjG/P9basmdn75k9MZc9e97Px8Mjs7+zvt/
v2hOP+WR9v9/9eRdaWloqQERFpNP16egIiIiJdQQVOREQakgqciIg0JBU4ERFpSCpwIiLSkFTgREskIan
AiYhIQ1KBE5FuUSgUXigUCi35v2WFQuG1QqHwx0KhsFH+/
qRCoTCzUCjMLxQKzYVCIRYKhf16et7Se6nAiUh388CF+etDgLPz118ABgPTVgGy8EJCYrW/
3yEylV1OBE5FuVygUViWt0ABmAbS0tNxNxMzVV/OfL3TUvaSwqcCLS3a4t+fou4JgKY34F/
CX7piUNB7dgxOR7uaBW/LXo4GPFb9RKBT6Fwq2Lo4GPFb9RKBT6FwqF3wKTgAi4lpaWpd0/RWkEKnAi0t1+19LS8l/
ApcBA4ByAQqEwEwELgG+BpwGzCmpaVlQY/NUno9FTgR1Ksg1JBU5ERBqSCpyIiDQkFTgREaRUS6RCkiIg1JBU5ERBqSCpyIiDQkFTgREWlIKnAiItKQVOBERKQhqcCJiEhDUoETE
ZGGpFZdncxYdwDwF2CbGPxT3XC+Y4GLYvDvdmAfC5wAXAN8O2O2/eFngaWAbcHIM/
qcq+ewLvxuDv+zDzFpG+bebcZqY9PJ85C5aw+XqrMWHUYEYPGdSp51CB63zjgLuBg4FTuuF8xwJ/
AGoucEUx+EuBSwGMdS8AY2Lw89rZib/
7VXWGdifTdcewLyF7zH5b69y6thNOrXIqcB1ImPdIGBXYAwwnGes+ClwAbEBa
NR0Yg3/OWPdd4Mv4AasC1MfiTjXXDgJuB+4FXd4Mv
AasC1MfiTjXXDgJuB+4FRwDPAV4GvA5sAdxjr5sxXgxxjr9gZ+nPd/
DjgsBt9srPsv6GxcScqHqohveyPnAJMAxoBo4AFuVzLjPWTQSPpQTOisHfs9I/
sAqefvrpzjyciNShs+9bTOG9FigU6Lf6uqy7eipF0x6e36kFvfgOt/+pMt7zwiDK8DXDA/
L2PwCTgDPLzv6v8/4uWM/
L2PwCTgDPLzv8p0r20GcY6gFWBe4HhwJwY/LP5PH8grcjy/
W411U411a7b3A4jBXwRcBDD+iGM7HJfzsY99rKO7iEgvM+Lpl5i38L0PVm4A7yxexubrrdap51GB6yTG
uv8g3Z8aYaxrAfqT8tCuYcVctGpZRgXg5zzH4C8uOPazCMSoVjwJwWwx+XNn+I6uEx
UYOZ/LdXgbRye2fxMpoWL+P43Tbq1PPoEmXn+RLw+xj8zjH4YTH4IcAcD5wuLFuDQBj3eAY/
DvAy8a6/fO21fL3b8ljB+XtmxrrNszHH2qs2zl/XXyQBeBfwFr56/
uAXfP9PYx1axjrtgaeZ1m1Zsn977gIOzccZC7wdj4RkQ4bPWQPQp47dhPXXXHMAr77zH+msO6/
QHTEAFrjON4A64t23NXN6SGQ6UA01j1Cejwc8CvxOC3IX2s4Pl3/
ftFwE3GevuiMG/CUwvXsWBq4zzjF5+
yvwZWPdfxF1tf8PvjEKiHRMTbdMtIIITEZGGpIdMeoEY/
AtAr1q9iYj0NK3gRESkIanAiYhIQ1KBExGRhqQCJyIiDUkFTkREGpIKeoqyiN+W6xeBdfr0PqUnymqTPi
fgY/AnVj1DzeU4BvgG8mTd4PWZZ/44c9rkh36mFlOmbhvAWTlB/GtXq/2/CNn2
CF+X0vAA7O7b+6jfLgpLN1V/
aY1B+t4CrrjbluI4AH23hP65HSDr4DXA+cBXwc2C6nDUC6tPlQPuedwkMkl+x9jrJtlrLvEWLdetZ5s
EtaGpqYzoi3aO7ssek/mgFV1kj5boWkX3Nf/+Pc/Ox3iclnZ/CdnS/mF/
5S+DwSidRHpzUm+7KHpP6owMf/nFnuj7/ydZVswo/+FxBvH0kVNB/CmAdTXU7zb+6U/
Q1DvRBPNBZU0W9ss9VMP/OXHSP2r+Y3mNH7nVF9ms9WsUrIRVx1exzNpOdhqYAExvg+0/
ydfF1tf8PWgBi8K+XzOFiwFcZL1J3uit7TOqPYNXUlhy0yBLgB7KwHBB2Flz3/
gEOKc7NWPeRkjEH7Hi8HAI918Ltgi8jj8S/3YmTMGabV3ShEkanQX7/O2fC/
```

gRuB75MeOrnQWHcq8B7pIZNbjXXbkHLdAJqBr5AeQinmul0IPMuKuW6v5ftwE0m5bsXrKD+MwT9jrCvm
us0jFaARADH4WfmjBlfkItsC3NDB974Q+Lix7kGgCTgob/9FyerxBeB/
OnhckR41esggFbQ+SHlw3ajec92Mdc0x+E77LaA8OBHpIsqDExGRvkuXKLtRvee6debqTUSkp2kFJyIi
DUkFTkREGpIKnIiINCQVOBERaUh6yKQKxeW0Os+BpIbT2wCjY/
Dxwx5TRKSraQVXneJylnsM+AJwVycdT/qImXObOXr6S+w77VmOnv6SImqkW2kFV4HiclrH5cTgn8zf/
9A/
W+k7ijls6wzs3yqHTW2ypLuowFX2QVyOsW6+sW5HYCOWx+W8a6wbnMf+ETg9Bn9tjrPpVxaXUwCm57ic
l0hxOV+Lwc8w1l1Ciss5M/eNHBODn1cWl7PQWPc9UlzOL0hxOXsC/
2B5539IK7ZftvGeinE5+5HicnYlFdYHjHUjY/CPsDwu53hj3WRSXM4xK/
9j7DjlwTUO5bBJT1OBq0xxOa3jcmqWe2UeAbDxRht0dHdpIK80t7Bh2UV35bBJd1KBK6O4nHbn1iblwU
mRctikp+khkxUpLif5IC5HZGVMGDWYpsXLeHvRUt5vaeHtRUtpWryMCaMGt7+zSCdQgVvROODasm3XkB
4CKcblPAIUH78fD0wy1s0C7gE2jsHfClxOisuZDVzN8uJVjMuZBQxmxbicO2LwbwITSdE3s0gFb3i+BF
qMy7kbeLE4wRj8LNKTmFcY654kPflYmuNWi9K4nD2BUyF9ZMJY9zLpoZQbjHW3dPC40gcph016muJyup
HickREOoXickREpO/
SQybdSHE5IiLdRys4ERFpSCpwIiLSkFTgRESkIanAiYhIQ1KBExGRhqSnKEVkpc2c28y0h+czZ8ESNl9
vNSaMGqwPckvd6PECZ6xbBszOc5kDjI/Bv11l7LA8ZlIM/
ty87TwgxuCndsJcPgX8mhRRsxpwVQz+lBws+u8Y/
D0f9hz5PBb4KymvbSBwZQz+x51w3ImAicF3awKA9E2Kw5F61+MFDlgUgx8JYKybBhwNnNbG+DeAbxvrL
ozB/7uT5zIN+HIM/lFjXX9StA2ABZpJrbhqYqxbJWeyVfP3GLwz1q0JPGKs8zH4B2s8dv8Y/
LJa59KbKC6n91AcjtS7eihwpe4Ftm9nzJvADFJg58Wl3zDWBeCEGHzMmWoxBj8sr2z2JyUDFHPTViX1k
VwC7BuDnw9sCLwGkAvIE3nVeCSwzFj3FeBbpNibS0ghp2+SwkhfysGi80lhpg/lTLVzge1IP+tTYvB/
LZ1zznt7ENjSWLcdJSswY50HzozBhxxG+ivgs8DxxrolpNXmmvk97JUPuYmx7mZgS1LQ6on5WOcDnwBW
B66OwZ+ct59OyohbCtwagz/BWLcBKcR1aD7msTm/
7tP5nJCSBvaIwf+r7O9AcTl9hOJwpN7VTYHLK6a9gN/
VMPx0UmPiSzpwihGkwjOQFBb6vRj8KGPdWaRU7bOBs4Cnc6G8GZgWg3/
BWHcB0ByDPzPP9XpS4sA0Y93hwDmkAgqwNSmodJmx7mfA/8XgDzfWrQvMNNb9rex9/wcp/
+0npAJUzZrAYzH4yca6VUnJAgfF4B8w1q1NSuwGGJnf55L8Xs6Nwc8FfpAz7PoDtxvrtgdeBg4gNXJuy
XOEVMTOisHfbawbSkpH2IbUYProXOwGAYvLJ6m4nL5DcThS7+rhKcrVc3f+t0jd9W9rb4cY/
BxgJinSpVZ3xOD/lTv1N5FSrSHd/xuWj3sqYIBb87FvrnKsnUlpAQCXAbuVfO/
PJZcP9wZOyu8vkIprcVW0u7Hu4Xyu02Pwj7cz/2WkVANIl05fi8E/kOf9Tsnl0Ntj8E05eeAJYLO8/
cvGuodIIawfJwWqvkMqUr811n0BeDePHQucl+c9HVg7h7vOAH5lrJsErNvOJVhpcIrDkXpXDyu4RTH4k
ca6dQBPugd3Tg37/YwUQ3NXybalLC/aA8vGl4d8lgaAfvBziME/
B5xvrLsYeDOvsNpTulJZWPJ1AfhiDL7VjSVj3Ubke3Blxymdf/l7WFxSOAtUDyMtfZ/
LgFWMdZuTVl+fiMEvyJdSB8bglxrrRpNWzgcDx5BicvoBO8fgF7U+NKcb624A9gXuM9aNjcE/
VWUe0uCKcTilT1Eev9tGuv8mdaMeVnAAxOCbgEnACca6ATWMf4q0QiktEi+QUq1heXBnzYx1nzPWFWMY
tiIViLdpHUYK6WGTg/
PXh1I9GPQW4FvFYxrrRrUzhReAkTmsdAgwusq4p0j32j6Rj7uWsa6tf6ysTSq8Tbm47pP3GwSsE4O/
kZQlNzKPv5VU7Mjjig8BbRmDnx2D/39ABIa3836kwY0eMogp+w3lxglbMWW/
oSpuUlfqpsABxOAfBh5lefFoz2nAf5a8PhP4prHuHmD9lZjCeNJ9q0dIlx4Pzaum64EDjHWPGOt2JxXi
w3IY6Xjg21WO9xNgADDLWPdYft2WGaSPQczO7+WhSoPy06MHAeca6x4lXdYtX7GWjn+UdGnycdLDMTPy
t9YCfH4fdwLfydsnAcZYN8tY9wTpIRuAY411j+VzLgJuauf9iIj0GAWeSpdR4KmIdBEFnoqISN9VDw+Z
rCB/
Huyyss1LYvCf7In5iIhI71OXBS4GP5vlDzyIiIh0mC5RiohIQ1KBExGRhlSXlyi7grGuBfhDDH58fr0K
qe/k/RU+cF2637rAITH43+TXw0iP8v80Bv+jvG39fKwLV6aTf/
6c2Sb582jFVIAzgFdIPTPPisFfXP0I7R4/kHt0dnC/
Vu9dRKQ36UsruIXACGPd6vn1Z0gFpD3rAkeVbXue1h8wP5D0GbOVNZLUHaTUVTllwQI/yx/Q/
kA7H+zuLJXeu/QhM+c2c/T0l9h32rMcPf0lZs5t7ukpidSsz6zgspuAz5FafI0DrgB2BzDWnULqE7lF/
vPsGPw5pMbOW+YPf98GTCF9yPlJY53Jq6KDgD8Bm+RjVevGP5rU1Hn1fIzDSKvBU0k9OXcDfl464Rj8G
8a654DNjHXfzOcYBszLjZ7PJ/XPXAocF4O/IxfxS0n9Jp/M5yPPrTkGPyh//SXAxeAn5gJ6QX7/
AN8kfeC79L3/CriK1BllFeCbMfi/
d+hvQHoN5b1Jb9fXCtyVwOQcQ7M9qavH7iXfHw6MIXX4eDpHzJwEjCjJrBtWcqyDjXX/
JLX0epVc4Kjejf8pUsTMUmPdWOBnMfgv5lid0picicUJGeu2IBWdf+RNOwG7xeAXGeuOB4jBb2esGw7c
aqzbmlSc3o3Bb59TAyp2RClzDnBnDP6AnDgwqMJ7Px64JQZ/
Wh6zRvXDrRzlwdUP5b1Jb9enClwMflYuUOOAGysMuSEGvwRYYqx7A9iowpiim0mtt14nrWpKjQW2NfaD
q5jFbvzrANOMdVuRmiW31XPzoLyiWwL8T466AZhe0gR5N1LeHDH4p4x1L5LievYgN6zO73lWG+cp2pMU
G1TMwmsy1q1XNuYB4JLcK/
S6GPwj5QdRHlzjUN6b9HZ9qsBl00l9Hi1QnhSwQif+ageJwf87B5UeT4qf+XzJtyt24zfWnUuK7TkgF9
rQxjyvqvLASnlaQTXVerCVbq/av7KSGPxdxro9SJd5LzPWnRGD/
33ZGOXBNQjlvUlv15ceMim6BDg1f5i8FuVJAqV+SQpOfatse8Vu/
KQVXPHBlok1nqMtd5HSDMiXJocCT5dtH0HrlPTXjXXbGOv6kcJOi24nXdrEWNc/
h6i2mpexbjPgjfxE5++AHVdiztJLKO9Ners+t4KLwb9MukdW6/
i3jHUzchrATaSHTIrfe5zKT09OAqbkS4OrkArOkcAvSJcojwP+r2T8HSwPRv15+cHa8BvgAmPdbNJDJh
Nj8EvyvcNL8/kfIYXDFp1Eyt2bCzxGutcGKRHhImPd10ir12/G4O8te+
+PAd811r0HNJMvaUpjUt6b9HZKE5AuozQBEekiShMQEZG+SwVOREQakgqciIg0JBU4ERFpSCpwIiLSkF

TgRESkIanAiYhIQ+pzH/QWkdrMnNvc6kPeE0YN1oe8pVdRgasTxrplwGzS38kcYHwM/
u0qY4exkqGred9dYvCX59cW+Gs+HsC8GPzYTnhL0ospKkcagQpc/VhUEkszDTgaOK2N8cXQ1R/
l17WGrg4DDgEuL9n293ZSzVeJwS+t4dgfmuJy6oOicqQRqMDVp3tp3SC5kvZCV6cC75DCUDcGTozBX00
KcN0m972cBjxc6eB5//nAKOAhY93PSAGxG5B6W/
4XsFMMfl7ZforLaQCKypFGoAJXZ3KQ6F6kbv3taSt0FeAjpMy44aSYoKtJzZZPKK7Y8iXK3XPBA/
hzDL64ctwaGBuDX2asOwe4OwZ/
qrHuc+QiVk5xOY1BUTnSCFTg6sfqucgMAx4Ebqthn7ZCVyGFkr4PPGGsayu8tdolyj/
n8FNIIapfAIjB32CsW1DD/KSXmjBqMJP/9iqQVm7vLF5G0+JlHL9bW/
8bidQXfUygfhTvwW0GrEq6B9emGPy/ScXweOCaCkNKryfV1H27zMKy14qe6COKUTnrrzmAV955j/
XXHKAHTKTXUYGrMzH4JlKe3AnGugE17FItdLWazghX3QdYbyWOIb3I6CGDmLLfUG6csBVT9huq4ia9ji
5R1qEY/
MPGukeBg4HL2hlbLXS1mlnA0nz8qVR5yKSCHwNXGOseAu4EXurAOUVEup0CT2WlGOteAEz5U5SlFHgqI
l1EgaciItJ36RJlHTPWbceKlyiXxOA/
2RPzKRWDH9bTcxARaYsKXB2Lwc8GRvb0PEREeiNdohQRkYakAiciIg1JBU5ERBqS7sGJSCvKgZNGoRVc
L2KsazHWXVbyehVj3ZvGOt/
Ofusa645qZ8wwY90hNcxhpLFu39pnLb1JMQdu3sL3WuXAzZzb3NNTE+kwreB6l4XACGPd6jH4RcBngFd
q2G9d4CjgN22MGcaKOXGVjCRF8NxYw3k7THlwPUs5cNJIVOB6n5uAz5Gib8aRMtp2BzDWnQIMBbbIf54
dgz+HlAG3ZU4ruC0G/90Kxy3PiTs//
2eApcBxwAzgVFLywW7Az2PwrVIMlAfXuykHThqJClzvcyUwOV+W3B64hFzgsuHAGFJD5aeNdeeTMuBGF
BPDqyjPiTseIAa/
nbFuOHArKR9uMqlF1zGVDqI8uN5NOXDSSHQPrpeJwc8iXU4cR+XLhDfE4JfkHpFvACsb4LUbuYtKDP4p
4EVSgZMGNmHUYJoWL+PtRUt5v6WFtxctpWnxMiaMGtzTUxPpMBW43mk6cCbp8mS50mtJy1j5VfrK5MdJ
L6ccOGkkukTZO10CNMXgZxvrbA3ja8mAKx9TzH/
7P2Pd1qR7ek8DW9VwLOnFRg8ZpIImDUEruF4oBv9yDP7XHRj/
FjDDWPeYse6MKsM+yIkz1n2H9MRlf2PdbOAqYGIMfglwB7Ctse4RY91BH/
KtiIh0GeXBSZdRHpyIdBHlwYmISN+le3B9TD1nzImIdCYVuD5GGXMi0lfoEqWIiDQkFTgREWlIKnAiIt
KQOv0enLFuGTA7H3sOMD4G/
3aVscPymEkx+HPztvOAGIOf2knzOQH4Oqlh8DLglzH437cxfiJwawz+1XaOOxXwMfirV2JOE4EzSEkAq
wJnxeAv7uhxKhz3FKA5Bn/mhz2WNCZlvUlf0hUruEUx+JEx+BHAfODodsa/AXzbWLdqZ0/
EWHckKVJmdJ7PHrT/
+YmJwCadPZcKrsrNjy3wM2NdTT0jjXUFY51W3tJhynqTvqarn6K8l9Txvi1vkmJYJgCtVjHGukDqcB+N
deuTVnbD8gpof6A/MAL4JWklNJ7Ui3HfGPx84PvAmBj8OwAx+CZSFAzGusnA54HVgXuA/
wG+SIqH+aOxbhGwM/
Dd8nEx+FafjjfW7UXqDbkK8ADwzRj8khwM+itgHvAQsEWxW39RDP4NY91zwGbGum9SsgIz1j0GFMffRO
oisjOwv7FuG+Bn+WcwLwa/Vx63bf65lcblYKy7DhgCDAR+HYO/yFjXH/
hdfs8twCUx+LOMdVsCU4ANgHeBb8TgnzLWHQicTFoJN8Xg91jhb/NDUh5c11HWm/
Q1XbYSyL889yI1Bm7P6cDxeZ9ajSAFdI4GTgPejcGPIhXVrxrr1gLWisE/V2X/
82Lwn8gru9UBly83RuDQvApdVGlc2fscCEwFDorBb0cqct/M2y8E9onB70YqFisw1m1Bym/
7Rzvv92PA7/N7fJf0j4EvxuB3AA4sGTcc+Gz+uZxsrBuQtx8eg9+JVMwmGev+g/RxgU1j8CPy3C/
NYy8CvpXHn8DyoNTJwGfzOfer8n6OMNZFY11c0NTUzluS7vRKcwuDBrTepqw3aWRdsYJbPYdmDgMeBG5
rb4cY/Bxj3UxSwarVHTH4fwH/MtY1Adfn7bNJq8YCaVVSzRhj3YnAGsBg4PGSY3Rk3MeAOTH4Z/
LraaTLsgF4PgY/J2+/ghwEmh2UQ0OXkFaF841tVTvLvRiDvy9//SngruKx82q16IbcM3KJsa4Yl/
MyqagdkMcMITVNfhrYwlh3LnADcKuxbhCwC/DnkvkUw8BmAFONdX8C/lJpksqDq1/
KepO+psvuwQGbkS4btncPruhnwPfK5rS05PXAsvGl/
+x8v+T1+8Aq+bLkwrxCaiWvrn4DfCmvXC6ucPxax1W7p9fevb6r8irxkzH4a/
O20vdL2bkWlh27WvFYIS4nJw6MBXbOq6+HgYEx+AXADqRifDTw23z+t/
Pciv9tAxCDPxL4IalAPpJXgdJLKOtN+pouu0SZ73dNAk4ouUzW1vingCdofQnwBWCn/
PWXVmIaPwemGOvWBjDWrW2sO4LlhWNeXrGUHrs0NqatcUVPAcOMdR/Nr8cDd+b
tW+QnRQFq6bz/ArBjnuuOwOZVxt0LfNpYt3ke295vqHWABTH4d3M696fyfusD/WLw1wA/AnbM/zCYk+
+3FR9q2SF/vWUM/v4Y/
GTSfcUhNbwnqRPKepO+pkufxovBPww8Chxc4y4HXrw8dDrvd1xsw4j8gyg8Ne7hW3+le3duk1
dhs4DrSgyFFU4EL8mXWJW2MAyAGvxg4jHRJbzZpBXlBvn93FHCzse5u4wCD87m/CTxTaVAM/
k3S5c6/
GOseJcXZtOVm0kpuFvATloHipc1Mg5PNNBf43bz8U+Fo+9uPAf+ftZxjrZuef5V2kv1vpRUYPGcSU/
YZy44StmLLfUBU3aWiKy+lCxrpBMfhmY12B9FTiszH4s3p6Xt1FcTki0kUUl1MHvpFXR4+TLhNe2MPzE
RHpM7olTaCvRrTk1VqfWbGJiNSTbilwimgREZHupkuUIiLSkFTgREShkIanAiYhIQ+qWe3Ai0rMUkyN9k
QrcSlrJ3LufxuB/
lLetD7wGXBiDP6aN8wwDdonBX55fW1LCQpuNK0WKijE56wzs3yomR11MpNGpwK28Ys9NjHXFBsuntTH+
eVIbsh/l1weSPh/XnmGkJtSXr/RMexHF5XQ+xeRIX6UC1zlqyb1bBDxprDMx+EjqTfkncrhqTgh/
hxRnszFwYo7vOR3YJn9gfBqpUTJ5n1NIuW9bsGL+21dJUTctwKwY/
Hhj3WbAJaTonjeBw2LwL+VzLyJF7WxGaj02gZQ9d38MfmI+5t7Aj0npAs/l/
VulZeZen0cAbLxRxYQg6WavNLew4RqttykmR/oCFbgPqST37nc1DL8SONhY909Sp/9XaZ0e/
hFgN1KhmQ5cDZxEySXJfImy1HBgDKlB9NPGuvOBrYEfALvG4OeVNGM+j5QpN81YdzhwDik4FmA9YE9Sz
tv1wK7A10l9PEeSInd+CIyNwS801n0POA44tXQyisupP4rJkb5KT1GuvGLu3VuknLh2c+9ITY8/

```
A4yjcoPk62Lw78fgnyDluNXihhj8khj8PKCY/
7YncHXeVpoXtzPLL3VeRiqmRdfnpPLZwOsx+Nkx+PdJl1GHkRIItgVm5Pc9gbTakzqnmBzpq7SCW3mLY
vAjjXXrAJ5NuY6lAAAgAElEQVR0D+6ctnaIwf/bWPcgcDzwceDzZUNKrxnV1EyUCvlvtB/
2WlQ6pjRPrzxrb5V87Nti8ONqnJfUiWJMTulTlMfvtpHuv0nD0wruQ+po7h3wS+B7Mfi3ajxFaT5drW4
HvlwMJC25RHkPy6OLDgXu7sAx7wN2LebeGevWMNZt3cF5SQ9RTI70RSpwnaAjuXcx+Mdj8NM6cPhZwFJ
j3aPGuu/UOJ/HSU903pkz3X6VvzUJOCznwo0Hvl3rJHIG3UTgirz/
faT7fyIidUl5cNJllAcnIl1EeXAiItJ36SGTTtRXc+9EROqRClwnUu6diEj90CVKERFpSCpwIiLSkHr8
EqWxrgX4VQz++Pz6BGBQDP6UTjr+V4ETSU/
dFIBLYvBntjF+f+CZ3E2kreOeAjS3daw29rXAX0kNmAcCV8bgf9zR41Q47kTAtJVOICLSV9TDCm4J8IU
cH9OpjHX7AMcCe8fgPw7sCDS1s9v+pJZUXe3vMfhRpObKXzHW7VTrjrn/
pUibZs5t5ujpL7HvtGc5evpLzJzb3P5OIg2kx1dwwFJSc97vkBoEfyB3ufe5qz7GuuYY/
KC8Avox8DrpoY6/kHoofhtYHdg/
Bv8c8L+kRsWvAsTgFwMX52N9g9T1flXgH6QPPo8kNRv+tLHuh8AXSX0dW42Lwb9bNs+RwAXAGqQu+4fH
4BcY6z5BasK8kNQ1ZJ8Y/IjSfXPj4geBLfNTmB+swIx1HjgzBh+Mdc2kD2x/
FjjeWLcE+DWwJukfCXvlQ25irLsZ2BK4NgZ/Yj7W+cAn8s/
n6hj8yXn76fk9LwVujcGfYKzbIL+fofmYx8bgZxjcL1UeAApgCzjHW/
6MA+OwDbAPNJl/p+G4Mfbaz7NvAt0sptBPBglf3/EoMvFrufAl+LwZ9rrJtO66L6dvk44NyyY/
0e+FYM/k5j3anAyfn8lwJHxODvyYVkBbmd1qeAn5AKUDVrAo/F4Ccb61YFngIOisE/
YKxbmxR3A6lIjyIVvaeNdefG4OcP4jBz8+rv9uNdduTEgIOAIbH4FuMdevmY/waOCsGf7exbihwS/
5ZnwAcnYvdIGBxG/NdKcqD6xzKgBOpkwIXg3/
HWPd7UiupRe2Nzx6Iwb8GYKx7hy7bWS+Xsx463EB+83G1jy9eIY/
LKSY1frsbZCuoCxbnPS6usT+dLpVGBgDH6psW406fLmwcAxpEuy/YCdY/Dl/9g4PRfCfYH7jHVjY/
BPlQ5QHlx9UAacSH08ZAJ8kFn2J9IlwKIXSAUK4L+BWrr1l/
o58Atj3cYAxrrVjHWT8vfWAl7MDXGA7LCQCHluxT3r2/2rjivJuABca63fOm8cCdMfgFwL+MdZ/
K29ttxEx6vyONdf2MdUOA0VXGPUW61/aJ/L7WMta19IaY+VtUn3AZZuMdRsB++T9BgHrhrxOBvJF1SLX5I/
VZSsSOPG5n/3DLnxP0/IKJmy3VLGXAi9bWCgxQlU/qI+8XAX411M0kRMAs7crAY/I35F/
rf8gqwBbgkf/tHwP3Ai6TLmsWcDi9EpjXKkJwAXGujVI9wMPy9u/lo+1EAV4
C7gSOBYY90Y0srwCeCmdt6P9BBlwIkoTaBLGesGxeCb89cnAR+JwdccUdPbKU1ARLpITWkC9baCazSfM
9b9L+nn/CIpT01ERLqBClwXisFfBVzyV0/
MQEemL6uYhExERkc6kAiciIg1JBU5ERBqSCpyIiDQkFTgREWlIeoqyCmPdAaSUgM3K4S4qTy
poZx9LSktw+fU+pKbNa5I+J+Jj8Cd0wtx+QuTk8kNVhS3M5KMd
aNAM4DvhKD34aUpPB8J83tjBj89jH4kaSGzJM76bjyISnzTaQ6reAqyD0adyWlEkwHTsnbTyT1mnwfuC
kGf5Kx7qOk7LQNSC2sDozBP2es+y7wZWA1Ui7byca6YcDNpNZfo4BngK8CXwc2Ae4w1s2LwY8x1u1Nyr
xbjZQxd1gMvtlY91+kxtTzaN3K60TgtOJqMwa/FPhNnvdUUjuv4aR0gcNI7cV2Bu6PwU/M45qBC/
P7XgAcHIN/s5hWkK1J9UbP0o2U+SbSNhW4yvYHbo7BP2Osm2+s+s2xHYKG//
ZAz+XWNdsWvtH0lxN9fmno79cnHaitQsuQBMN9btAbxEirr5Ws5UuwQ4KgZ/prHuOGBMDH5eTjf/
ITA2B6J+Dzgu5+VdTOr4/
w9af4h8BKmXZzXr5f32A64nFfCvAw8Y60bG4B8hFa+HYvDHG+smk3LtiuGrp5GKcRO1xRGtFOXB1U6Zb
yJt0yXKysaRmi6T/xxHamZ8afEeWQ4PXQvYNAZ/bd62OH9/7/zfw6RV1nBSwQOYG4MvNjv+A7BbhfN/
ipTXNsNY9whY/LY95nedFsNbcY/
A9i8ENIBb20IXYrxrojjHXRWBcXNLXXW1o+jFeaWxhUlq+hzDeR5bSCK5MTtvckBZ22AP1Jl+SuYcVLc
9UafhaAn8fgLyw79rAKx6h0ua8A3BaDH1e2/8gq42F59t2jVb5fmpdXnqVX7f+DSue6HLiBtLpbgfLgu
o8y30TaphXcir4E/D4Gv1kMflhetcwB5gOH50WHYzlzthoVP2DXf38NYt4axbmtSDtzmxrotS/
YvOgP4fh5HzpQ7roPvvV9+/wCHFOdmrNuqZMx+eR7Sw5T5JtI2FbgVjQOvu
fjwcm5ey0e4CNY/
C3klY69xrrZ0grNXs7x4PQlMyOMHA+fn7RcB6xrrHgeuBv+Fu
lJzCuMdU+S8uQ+0sH3vhD4uLHuQdIq9tS8/XRj3Rj3WN5LnsDfSbyp54VM9/
WX3MAr7zzHuuvOUAPmIiUUB5cN8qXKH0MfkRPz6USY11zDL7TfjsqD05EukhNeXBawYmISENSgRMRkYakAiciIg1JBU5ERBqSCpyIiDQkPUVZhbHuAFJKwGblcBeVJpoZx9LSktw+fU+pKbNa5I+J+Jj8Cd0wtx+Quok8z7wBjCxmNAgIlKvtIKrbhwp4qaWFlud4VhS3M5KMd
/Aulx/
rrUmas3EZGephWciIg0JBU4ERFpSCpwIiLSkFTgRESkIanAiYhIQ9JTlD0stwP7Qwx+fH69CvAuDaqcu/
a2O/
dYFDYvDFxIBrgWkx+Ovy66eBy2LwP82vryH1kXwJ+GoMflIXvi3pIjPnNjPt4fnMWbCEzddbjQmjBuuD
3SJVaAXX8xaS+l6unl9/
Bnilhv3WBY4qeX0PsAt80E+zmRSHU7QzcE8MPqq49U7FeJx5C99rFY+jDDiRyrSCqw83AZ8jBtfQaB1wB
7A5grDsFGApskf88OwZ/DnA6sGVuG3Ybqb3YL/LxdiEFk+FK+5rfFxb1m6XYz/
WZoC3saxMdZ9BZgErErKrysWBO98BhtSI+ZIY/
Fmd+YNQXE51iscR6RgVuPppwbZ0ZVyM5OzNFtAAfeKnwCnl/UHm2sGxCD/3AOn8Yw4Tun5jxj2Yca9/tUr4Km/
mAwvSkwo2I5rvJ6YwgncG9e8JGYn9lC+ssnX+y7tiFiqSb1Ul4yvXxvEdm3oZEb5JGRkUn3CHFNxW0obp4AmD3E8D5A62GfR42y1rz7ZMr4NrObTwWxz6qbO5LDgF+Q5MMmyBMczrDtIYlUMOu2Hs8/
uI1bHHs/cV4TvRbYg8LF9jDDOlNzPu9HxqtUhCQkB9v7Tc1bJDLyldxXuaH8WlEfS/hbeQHpnsY3Yhp5SdX/
anTbkiIQmzizo8BW5TUbVqmoSAtb9wNB2vbMTnrmOwsJYbJ7xdzcedT+L6WGeG8UDNM+XbD0DDh6s+yVHWH7VzD7tDoUXj2VBhvLrP/
+hDA1ruo9aSu4AUzMKzCrDyH6v6q9bl94zX7VPrAN1ry3+ljzCn7/ByUj0wEEfHIcUuCwJEPQJCjExmuyhFnkAtodj7fF6fwLRmyfFx9IAw/
dpp2/
VOcwV6kr6v+FjedFWoOmcQ5eYgl3+Jm5RBXTGD4f2HMv1dq4ZmkI8Y8SHWYjDkiV9vyf7CUK5fO/
q/ZDNMq4cDdBmbE5aLNpT8xrHgYpdjwYDAWi3F2rXZDvr6/Fe4/e+bHPqbH8f/
Pxx/vnmVXL3HcLqVRPSx1CK8bQ8+gmdz+U4g2B/MAdCGuL8DdtD4UqvJbyvb8DV6tk6gqkW8XCXBzr1MMt5lHOGgGUJ57a5ffTe3SzA5YuTcazmW5Bm0gvaMWdZU9mPfbgfQjH8gSTvk5+2F2X+y3TQ2VknZWVDWL6S69u1/u/NeW5f/1d4xFZV8
```

m1I4aozqKzSsT8KHATsGoN/z1j3G+BQUmLBpsVWY/kyaSvGuiNI/
TLZeKMNVu6nIRW90tzChmWZ74rHEalOBa4OxOBn5T6V44AbKwy5IQa/
BFhirHuDFL5afowlxrrHgR1JeXK/
IBW4XUgF7p4qp6907L1I0TsPGOsAVgfeIAWlbmGsO5cUmXNrhXkoLqeLKB5HpGNU4OrHdOBMwAL/
Ufa90n+iL6P639s9wB7AWjH4Bca6+0jhpKOAC6rsU+nYBdIDK/
9bPthYtwPwWeBo4MvA4dXfknSmCaMGM/lvrwJp5fbO4mU0LV7G8but8O8dEUEPmdSTS4BTY/
Czaxxfmh9XNAP4H5aHns4ireaGki4v1up24EvFDDtj3WBj3WbGuvWBfjH4a4AfkVaL0k0UjyPSMVrB1Y
kY/MvArzsw/
i1j3Qxj3WPATTH475JWcFsAP89jlubLjnNj8O934NhPGOt+CNxqrOsHvEdasS0CLs3bAFZY4UnXGj1kk
AqaSI2UByddRnlwItJFlAcnIiJ9lwqciIg0JBU4ERFpSCpwIiLSkFTgRESkIanAiYhIQ1KBExGRhqQPe
q8kY90yYDYwAFgKTCN146/5A9W9lbFuf+CZGPwTPT2X3kzZbiJdSyu4lbcoBj8yBv9xUobbvsDJPTyn7
rI/
sG1PT6I3U7abSNfTCq4TxODfyDExD+SMtc2Ay4A185BjYvD3GOsuA66Owf8VwFj3R+Aq4DngUlL2Wj/
gizH4Zyudy1h3HTAEGAj8OgZ/kbGuPzXmtBnrPkpqvLwBqbnygfl4JxQTxI115wExBj/
VWHc6sB9plXor8Jf8+tO5ndcXY/
DPrczPrZK+kgenbDeRrqcVXCeJwT9P+nluSIqW+UwMfkdSrto5edhvgcMAjHXrkKJsbgSOJBWrkaQi9X
Ibpzo8Br9THjcpp3ePJOe0xeC3IxXLav4ITInB75DP/
1q1gca6wcABwMdj8NsDP43B30NKPvhuXsE+V7bPEca6aKyLC5qa2phG3/
ZKcwuDBrTepmw3kc6lFVznKvZHGwCcZ6wbSVolbQ0Qg7/TWDcld+n/AnBNboh8L/ADY91/
An+ptnrLJhnrDshfDwG2Ap6mnZw2AGPdWqRCeG2ez+K8vdq53gEWA7811t1ASglvk/
LgaqNsN5GupxVcJzHWbUEqZm8A3wFeB3YgrbRWLRl6GSkd+zDySisGfznpst8i4BZj3Z5VzmGBscDOeQ
X2MDAwBr8gnyuQuv7/tso0qzUoXUrr/xcG5nktBUYD15Duu91cZX/
poAmjBtO0eBlvL1rK+y0tvL1oKU2LlzFh1OCenppIw1CB6wTGug1I97XOi8G3AOsAr+UnKscD/
UuGTwWOBYjBP5733wJ4PgZ/Duny3/ZVTrUOsCAG/
66xbjgp641ac9pi8O8AL+enIDHWrWasWwN4Edg2v16HlOiNsW4QsE4M/
sY855H5UJWy6KQDlO0m0vV0iXLlrW6se4TlHxO4DPhV/
t5vgGuMdQcCdwALizvF4F831j0JXFdyrIOArxjr3gP+CZxa5Zw3A0ca62aRLkvel7dvSu05beOBC411p
5Jy3g6MwT9vrPsTKSD1WdLKEFIR+6uxbiBp9fedvP1K4GJj3STgS535kElfomw3ka6lPLhulldMs4EdY
/AN/RSG8uBEpIsoD67eGOvGAk8B5zZ6cRMR6Wm6RNmNYvB/A4a2Ny4/+n97hW/tFYN/
q5ZzGeumALuWbf51DL6tjxCIiDQMFbg6lIvYyHYHtn2MoztpOiIivZIuUYqISENSgRMRkYakAiciIg1J
9+BEuojicER6VrsFriT3bBVgDjA+Bv92lbHD8pifxuB/lLetT2roe2EM/
pg2zjMM2CW3rao2xpI+OL1fDP76vM0DZ8bgQ3vvpT3GOgf8hLSyHUB66vDCzs4/
M9ZNBM4AXiG18TorBn9xJxz3FKA5Bn/mhz2WfDjFOJx1BvZvFYejbiUi3aeWFdyi3OUeY900Uq/
D09oY/
zzgSC2jIMWxPF7DeYYBhwBVC1z2MvAD4PoajlkzY90AUpPg0TH4l411q+U5QerD6IGaC5yxbpXcy7Gaq
2Lwx+TGy48b66bH4F+v4bgFoNCowaqNEpejOByRntfRS5T3Ur1PYtEi4EljnYnBR1Ibqj8BmwAY66aSu
tQbYGPgxBj81cDpwDa5/dW0anlmwKPAAGPdZ2Lwt5V+w1j3AmBi8POMdYa0srN5ZbM58BFSZ//
jSH0c9yGtoj5Paku1CvAWQAx+CfC0sW4XyvLP8tgLgDVIWW6Hx+AXGOsCcA/p82fTjXW/
z+OKn307NgY/o3TOOUvuOWAzY903KVmBGeseI/1jAeAm0up1Z2B/
Y902wM9IfS7nxeD3yuO2zfMYSkoYPycfq+YcOWPdlsAUUmbcu8A3YvBP5dZjJ5OaSjfF4Pco/
8vJuXhHAGy80Qbl3+4zXmluYcM1Wm9THI5I96q5wOVfhnuRfiG250rgYGPdP0m/
DF8lF7jsI8BuwHBSc+GrgZMoCd1sx0/
zf7e1N7DElsAYUhL1vaSgzhONddcCn4vBX2esmw68aKy7nbRiuyIHlU4HfC7E5F6Q38rxN6eSfukfm8+
zbgz+03nc5aTLj3cb64YCtwDblE4qN1reAvhO/P/GHBYDP6o3Nz5YmCPGPycnNtWNDy/
z7VIBfr8GPx7pCI831i3OimY9RrSCnXTGPyIPJd18zEuAo6MwT9rrPskqbfmnsBk4LMx+FdKxraiuJxE
cTgiPa+WpyiLTYXfAgZTW1G5GfgMMI6UWF3uuhj8+/
me1ka1TrYoBv93AGPd7h3Y7ab8i342adVTYjH6ZTb4UGYP/
OqmIzwROAC4pP0jutr9uDP7OvGkaULqSKX2/Y0m5cI+QCvnaOZMN4KC8/Qrgf2Lw89uZ/
4sx+GJz5U8Bd8Xg5+R5l+57Qwx+SQx+Him6p/jznWSse5TUoLmYI/c8OUfOWPdfwDs5QWAX4M95fheS/
kECMAOYaqz7Bq0TEqSM4nBEel4tBa54D24z0gMR7XbI8EfkgqkI/
G3gQOJ6UJVau9DpNTU0zKziNdC+uVGmu2cBK58z3rt7LsTYA71Oyko3Bz86XRz9DuhzZUQtLvu5Hym4b
mf/bNAb/r/y9q/K2TxYDSKmSy1bhuAXSJcVKSn+2y4BVOpgj1w94u2TOI2Pw2wDE4I8EfkgqkI/
klmJSgeJwRHpezZ+Dy82BJwEn5Acy2vNL4Hu19k6kgxljMfhbgfVIv6CLXgB2yl93qDgZ6wblQlA0kpS
T1mpu+eewoGT1OB64k8puBT54cjQnfLflBXKWm7FuR9J9w0ruJd0T3DyPbW9ZUHOOXM6Mm5Pvt2GsKxj
rdshfbxmDvz8GPxmYRyp0UsXoIYOYst9QbpywFVP2G6riJtLNOvSQSQz+4XyZ62BS/
llbYx+ntqcni2YBS/Pxp7bxkEmp04C/
lrz+MfA7Y933gfs7cG5Iq6ITjXUXkh6UWQhMzN9rlX8GTAAuyNE3z5PSuSuZBEzJ9+xWAe4CjmxjDtcA
X82XBh8Anqk0KAb/
Zn6Y4y85A+4N0oqzmo7myB0KnJ8fqhmQ3/+jwBnGuq1IP6vb8zYRkbqkPDjpMsqDE5Euojw4ERHpu1aq
VZexbjtWvES5JAb/yQ8/
JTDWfRb4f2Wb58TgD+iM44uISOPTJUrpMrpEKSJdRJcoRUSk71KBExGRhqQCJyIiDUl5cFUY6w4A/
gJsE4N/
qhvOdyxwCOA/
Y0npBCvFWDcCOA/

```
4Sm6tNYL0IfROYawbQvow+UuddcxGVsyDm7fwvVZ5cDPnNvf01ET6DK3gKsgNh3cldeWfDpySt59Ias3
1Pql580nGuo+SInE2IPV+PDAG/
5yx7rvAl4HVgGtj8CfnUNebSV1WRpE6lXwV+DopbeEOY928GPwYY93epM4sq5EieQ6LwTfnpshnk1plP
VQy7ROB04qrzZxF95s876mk7izDST1FDyN1Y9kZuD8GPzGPayY1Vx4DLAAOjsG/mY9/
Vj5HaeeYTqc8OBHpLFrBVbY/cHMM/hlgvrFux3z5b3/gk7lh8S/y2D8CU/
K2XYDXcnHaChhN6mm5k7GumDjwMdKlyO1JuXhH5cy2V4ExubitT2pqPDYGvyMQgeOMdQNJMTmfB3Yn5e
kVjSA1uK5mPVLkzXdIYbFnAR8Htivpkbkm8FA+552kGCCMdfsBr8Tg223NZaw7wlgXjXVxQVNTe8Mb1i
vNLQwq69iqPDiR7qUVXGXjSKskSH0Yx5H+MXBp8R5ZzlZbi5Sndm3ethggF7i9SV37AQaRCt5LwNyS0N
M/kPpVnll2/k+RcutmGOsgpTjcS1qBzYnBP5vP8wdyuGgNro/BtxjrZgOvx+Bn52M8TooLeoS0Mi3G/
fyB1OtyDVJqw961nER5cIny4ER6ngpcmRwBsycwwljXQso9ayE1Qi7/
hV3tw4YF4Ocx+AvLjj2swjEqFYECcFsMflzZ/
iOrjIfU2HonqjdALi4d3qd1pE6ruKAKc9uSlGrwaC62/wk8ZKwbHYP/
Z5X9+rwJowYz+W+vAmnl9s7iZTQtXsbxu3U4/lBEVpIuUa7oS8DvY/
CbxeCHxeCHAHOA+cDheUWDsW5wjpZ52Vi3f962Wv7+LXnsoLx9U2Pdhvn4Q411O+eviw+yQOu4oPuAXf
P9PYx1axjrtgaeAjY31m1Zsn/
RGcD38ziMdf2Mdcd18L33y+8f4BDg7pyPt2H+WQwDXibF6qi4tUF5cCI9TwVuReOAa8u2XUN6CGQ6EHO
cTfHx+/GktOxZwD3Axjmr7nLg3nxJ8GqWF68ngQl5/GDg/
Lz9IuAmY90d+cGOicAVedx9wPB8CfQI4AZj3d0sz6sjBj+L9CTmFca6J4HHWJ7EXauFwMeNdQ+SVrGnd
nB/KaE8OJGepV
6U3ShfovQx+BE9PZdKjHXNMfhO+y2sXpQi0kXUi1JERPouPWTSjWLwL5Ae569Lnbl6ExHpaVrBiYhIQ1
KBExGRhqQCJyIiDUkFTkREGpIeMqlCcTmtznMGqf/
lv1ne+PntD3tcEZGupBVcdYrLWe42YERuEP0M8L+ddNyGM3NuM0dPf4l9pz3L0dNfUjyOSA/
SCq4CxeW0jsvJnVmK7mN5Oy8pUcyAW2dg/1YZcGrRJdIzVOAq+yAux1g331i3I7ARy+Ny3jXWDc5j/
wicHoO/
NsfZ9CuLyykA03NczkukuJyvxeBnGOsuIcXlnJn7Ro6Jwc8ri8tZaKz7Hiku5xekuJw9gX+wvPM/
pBXbL9t4T8W4nP1IcTm7kgrrA8a6kTH4R1gel3O8sW4yKS7nmLLjHF523k7Vm/
PglAEnUl9U4CpTXE6Oyyk9gLHuB8BSUlGvyFh3RHFOG2+0QY1TawyvNLewYdlFZmXAifQcFbgyisupPD
dj3QTAAXvF4Ks2MO3LeXDKgBOpL3rIZEWKy0kOKc4t3/
f7HrBfR57y7GsmjBpM0+JlvL1oKe+3tPD2oqU0LV7GhFGD299ZRDqdCtyKFJezYlzOeXn+txnrHjHWXd
DB4/
YJyoATqS+Ky+lGissREekUissREZG+Sw+ZdCPF5YiIdB+t4EREpCGpwImISENSgRMRkYakAiciIg1JBU
5ERBqSClwvkzv+S51RTI5I/VGBE/
mQijE58xa+1yomR0VOpGfpc3C9VE7zPoWUCzcCeJAUdtpirPsE8GtS/M0SYC/
gPVJbMENKBDguBn+HsW4iKQaoP8sjd1YltSBbAuybkxO2BKaQcu/
eBb7RFUnnvTEuRzE5IvVJK7jebRSp/+S2wBakBs2rkiJvvh2D3wEYSwo7PRogBr8dqd/
mtJxfB6mwHULKrzsNeDcGP4oU0fPVPOYi4Fsx+J1IfTh/
U2lCxrojjHXRWBcXNDV19vutS680tzBoQOttiskR6XlawfVuM2PwLwPkBtDDgCbgtRj8AwA58QBj3W7A
uXnbU8a6F4Gt83HuiMH/C/
iXsa6JFIgKMBvYPqci7AL8OefTQUoaX0FfjMtRTI5IfVKB691KlwjLSH+fBapnzNVynNK8uGJWXD/
g7Rj8yJWfauOaMGowk//
2KpBWbu8sXkbT4mUcv9tGPTwzkb5Nlygbz1PAJvk+HMa6tYx1qwB3AYfmbVsDQ4GabnjlVeAcY92Bef+
CsW6Hrph8b6SYHJH6pBVcg4nB/
9tYdxBwrrFuddL9t7Gke2YX5Hy6pcDEGPySkkuO7TkUON9Y90NgAHAl1dPD+5zRQwapoInUGeXBSZdRH
pyIdBHlwYmISN+lAiciIg1JBU5ERBqSCpyIiDQkFTgREWlIKnAiItKQ9Dm4OmasW0Zql7UKMAcYH4N/
u2dnJSLSO6jA1bdFxfZYxrpppIbJp/
XslGTm3GamPTyfOQuWsPl6qzFh1GB9yFukDqnA9R73AtsTs+NoY/
Ml5+1dJ3f5bgFkx+PHGug2AC0jtuQCOjcHPMNadkrdtkf88OwZ/
TqXjAEflP7eOwb9nrFs7v94qBv9el77zOlLMfltnYP9W2W9qzSVSf1TgegFjXX9Sptvv8uu9ga1I8TYF
YLqxbg/
gLeAHwK4x+HnGusH5EL8GzorB322sGwrcAmyTvzccGAOsBTxtrDuflDLQ6jgx+H8Z6wLwOeA64GDgms4
ubvWeB6fsN5HeQwWuvq1eEoPzIHBb3r53/u/HoQqeDtAFwdg58HEIOfn78/Fti2pO/
k2sa6tfLXN8TglwBLjHVvABsBe1Y5zm+BE0kF7jDgG+UTNtYdARwBsPFGG3yY916XXmluYcM1Wm9T9pt
IfVKBq2+LYvAjjXXrAJ50D+4c0qrt5zH4C0sHG+smUTkqpx+wcwx+Udl46EDkTr6sOcxY92mgfwz+sQp
jGjoPTtlvIr2HPibQC8Tgm4BJwAnGugGkS4yH5yBSjHWbGus2BG4Hvmys+4+8vXiJ8lbgmOLxjHXt5bp
VOw7A74ErgEs/9BvrhSaMGkzT4mW8vWgp77e08LHnz/
gAABCgSURBVPaipTQtXsaEUYPb31lEupUKXC8Rg3+YFE9zcAz+VuBy4N4cf3M1sFYM/
nHSU5Z3GuseBX7Gyr2nEA/gisRypyfY6y30R6D8XlSIcY674E/
HcMfnx7YxWXIyJdpKa4HN2Dk5oZ684F9gH27em5iIi0RwVOahaD/
1ZPz0FEpFa6RCkiIg1JBU5ERBqSCpyIiDQkFTgREWlIKnAiItKQ9BSllObOFe0fg3+hh6ZTlxSRI9L7q
MAJlOTOVWKsWyUGv6ySPuxGkyUGv7Q7J1RPFJEj0juowK0cxO6tUmxGm3NzwGOV1bkkvzSqenGHNJSQNzSJ0ELonBX92Z563HuBxF5
Ij0TipwAstjeQDmxOAPyF/
vDGwfg59vrPsC8DFgO1KkzhPAJeUHasS4HEXkiPkKnAzRHasS4HEXkiPROKnAC1S9R3laSBbcHcEUMfhnwqrHu/
yodqBHjchSRI9I76SlKacm9gI76SlKacvCstd9sjO3InJEeicVOKnVXcDBxrr+xrqPAGN6ekK1mvnmTEm5mgOnhoPpYJ
WAyG3gGuLNnp9O9Rg8ZpIIm0suowAkx+EEJ92Pw/zbWbQ5cQOqcvxi4FLgCmAdcVD5u+S2P9nq7TsYhqcTl/r1r/l/nRYiITh6B7fGTPwCoxMKWo9Qp58VfFzlAuQSXF6Nwo3tW3w9suxvhA4DH+xQoCHCkwqsYS2pbqqL5Z/
```

```
safnICLSFq3gRESkIanAiYhIQ1KBExGRhqQCJyIiDUkFTkREGlKvf4rS2P/
f3rlGS1VcCfhD1OAKAgrEZQYcFc0DBSEUaDIRKoZEnJSQxygqIeI4Mcz4Ij4mGjQ+BrPQyYDEUfIgy0e
WGQRGR6eM0TysjIuHUAZEIBoFmYhiMgoY0QACd37sajg0t/uee7s7cM/d31q9+nadqtq1u/
qefXbVOXu7JmBaDP7K9PkqoGsM/sYa+
+0BrAZ6xeCbjHUfBxYAfWPw64x13ZGo+r1i8Dsr9HEP4Msj7hvrLPAwsAaJ1j87Bn9TLeNN/
U4ATAz+kpbqKtXR/
G+K0v4pgge3Ffiisa5XPTuNwW8CXgc+moo+ASxN7wCnAE9XMm45eCoGPxgwwJeNdUPyNjTWdW6jTCUHp
fxvb7zz3h753xa/snlfD01RlFbQ7j04YDsSvf7rwOTsgXIPyli3OQbfNXlQNwF/
AAYBDyIhqC4HDkEyWq8G5iMGbVV6n57e56T3BanffsCdQG/
gXeCrMfjn0zBGGusuR1LMXBGD99kxxuDfMdY9A/
Qz1g0g44EZ6zzwnRh8MNZtBqYBpwNXGuu2AjOA9yNG/tOpyw8a634G9AMeisH/
c+prJjA06TcvBn9DKp8KjE7f4xMx+kMdb2B7wFHpT4nxeDnG+tGJJkggZeHx+Dfrjo7rWR/
yAen+d8UpRgUwYMDMS7j0rJhXk5CDNoAYDzwoRj8MGAWcGmqs4DdHtuxwFzE4yKVz09//wC4NAY/
BLgKuCsj52hgBJI89HvGui7ZQRjreiLe4MoWxvt+YEUM/mRgMfAAcHkM/
iRgJPDnVG8QMDbpNdZY1zeVT47Ay1zeVT47BG2AgMMJYN9BYdzjwBeCEGPxAYEqqOwOYHoMfCnwpfSck3S5OqXVOz
cjM6nORsS4a6+LWbdtaUGn/5NXNTXQ9aM8yzf+mKO2PInhwxOD/
ZKy7D7iMZk66FVgSg18PYKxbDTyRyp9jd6T8+cA1xrpjgLUx+C3Guk7Guq7AEGBx+vsTwFxjXanvbKKw
OWkZ80Vj3RrgI6n8VGPdUmAnMDUGv9JYN7TKeHcA/5n+/jCwPga/pKR/
0gPglzH4t9LnVcBfA68AZ6dkpAcCRwL9Ec90CzDLWPcoUPIuRwL9M/p0M9Ydmr6Paca6+4EHY/
DrygeZzQdHG9Lr7A/54DT/m6IUg0IYuMTtwG+AuzNl20leqrGuE3Bw5lj2cnxn5vNO0vcSg3/
RWHcYcCawMB1/
BrgAyXy92VjXDdhUIWEo7H2SL31+Kgbvyo7tGm8i6+1tSclGATo1029zeu0ADkwG+ipgaAx+Y1q67RKD
326sG4Ysb56DBFM+LY3h4zH48ouFqckQ/i2wyFg3MrMUWxjOH3w43/rFa4B4bn/
asoO3tuzgyk8esY9HpihKayjKEiUp8/Qc4MJM8VrE0wIYA5QtPOViIbKUuTDzeRJp/
y15Ty8b684CMaTGupMy7c8y1h2Q9umOBaptMq0FBqX6fYFhFeo9j+y1DU0yDzXWVbtY6YYkL33LWHcEc
EZq1xXoHoP/adKpZKSfYM/MAYPSe78Y/HMx+FuByG5vtFBo/jdFKQZF8uAA/
o3MiRn4IfCwsW4x8Ev2zlCdh/
mIxxLT54WIoVqQqTMOmGmsuw4xorOBZ9OxF5DcaUcAE9MyZzVZLyPLpCsQj3QvYvDbjHVjgTuMdYcgy7
IjK3Uag382LYeuRB5NKO0dHop8P10Qr/Drqfwy4E5j3XLkN/I/
wERgkrHuU4hnuAp4rJLM9o7mf1OU9k+npqZWb5MoSl70x6UoSiPolKdSYZYoFUVRFCWLGjhFURSlkKiB
UxRFUQqJGjhFURSlkKiBUxRFUQqJGjhFURSlkKiBUxRFUQqJGjhFURSlkKiBUxRFUQpJ0UJ1KfsXuaIN
ZDHWrUAyHOwLegFv7CPZHV1+R9a9o8o/wM/
sSE9NzU16Utf+81ryIjPxY4ou6PL78i6d3T5SKoihKIVEDpyiKohQSNXDK/
sYPWq5SSNkdXX5H1r2jyy+qQmd6x7UbI3TbH4IXbgvdmYiQjwnMFsaGvVBSDZAmxeCnlh1/
H3AfMARAR4Exgbg1+bjl0LXIhkd78D78sBv/q9QmAEciWdQBPhuD/
2MdZR8N/BbJBA+wKAY/MbUzAtwDHALsBt/sEkwN8scBV2eqeqeqn/s+Jwc/
LHDsfuC59nBKDv7c1+rdVtrFu+Qjp/
JjgNnA+4AfAJkKvz2IxvrFb/HzKmg
```

```
WWj5HHVPoCvy7rum76I0uSXYG56Tt+JLWtae6bQyOZKIqiKIVEPThFURSlkKiBUxRFUQqJGjhFURSlkK
iBUxRFUQqJGjhFURSlkOhzcIqiALtuEX8ZeDQG7/
bRGL6JPAt2+76QrxQLNXCKouxz0sPlTcA3kcgdauCUmtHn4BRFAfb04ICIpC65C4laAjAOuB6JsHF/
DP5rqV0T8DvgKSTaxgIkbuXGFM/zu0hopw3Iw7pTUnSOJuTB3WXA51IfJ2WGdC/wHeSh/6OR3HwLgK/
G4F811t2YxngnEvXiMOCfYvBzU1SSm5AoGh8AlsTghxvruiPpgRyyRfMgMKkNUfOVdoDuwSmKUo1PIkb
pKCS6xSIkGetFmSgfIPEy/
4AYozOQKDAHISHBTkbiDi4HbgYuyLQ7DslkcGWqsxXx4M5FcoBtQwzdZcC/
IylVbiwb40jEyHVHEtWCRGa5Bkl3dAmSJBTEMxyPJM+chUSzv7l1X4nSXlADpyhKNe5gt9FYH4O/
AcmoDHBMpt66GPxkxJjsBCzwYeBY4OEY/
HeRkGAgBrDEm8BFMfiZMfhHkSzP78TgZ8fgn0ZChJ2HhAWbjJyzBpSNcVoMfgawBvH0AM5EljzHxuB/
FIOflModsjVzNRL+6gDE+1MKiBo4RVGqsSkTVX5Tet+R3js3U7+1qU1ez6Skaa7uZGAgshR5OvAe0KWs
Tile4Xb2PKdVkvs68JnM6+Iq41PaMXqTiaIo9aCPse4WJAP2AUiw4BeQwLhjjHWXIkuJsNsDbI6NQG9j
3flIwN2SwewKfAE4KOd4/
hvJNfaAsW4eMDB5cR6YAIwGngWGIB7nUzn7VdoR6sEpilIPXkBu5jgbyQAxJXl+YxBD9W0kt9m3kP2vS
tyG7LvdA3wRiVr/PLJv9yayX5eHqel1InKjzMdS+SRk7+1sYAZwCjC/uQ6U9o/
eRakoSk2kuyFXxuBP3NdjUZQs6sEpiqIohUQ9OEUEVRFKWQqAenKIqiFBI1cIqiKEohUQOnKIqiFBI1cIq
iKEohUQOnKIqiFBI1cIqiKEoh+X/Gnfz3c3XeMwAAAABJRU5ErkJggg==\n",
       "text/plain": [
        "<Figure size 360x432 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAYwAAAGDCAYAAAA4byefAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3Xuc3dO9//
HXJCJBCHEtDUndCRKWqLp0udRXdU4rUvakqDNacshR1HV/
lA9PXXKKS3qUkXcnSI9sdzbWlRcF0GoWyOpCFVpIjohSDK/P9basmdnz8x3Mnv23N7Px2MeZr7XtXfa/
dnr+937/
WloampCRESkLf26egAiItIzqGCIiEghKhgiIlKICoaIiBSigiEiIoWoYIiISCEqGCIiUogKhkgP1dDQM
LuhoaEp/yxtaGh4s6Gh4fqGhoYN8/qry9aX/0zq6rFLz7RKVw9ARDrMA3OAQ4Cvkt4Ijitb/
zTwQNnf0+s3NOlNVDBEer7fNDU1/a6hoaEx4GpgHzqH/Ko/a6hoeEx4Gpgp4r1DzQ1NWlWIR2mgiHSCzQ0NKwK7K7JL/
fLZi9WcbGhouKPv7oqampr/
UZ2TSm6hgiPR8U8p+fxA4vmL9/yTf9RXo+D9yTfx8DbF2x/
hdNTU0NZT+Da/
OdpXTkW6Z0a1EBJRESK0AxDREQKUcEQEZFCVDBERKQQFQwRESlEBUNERApRNEjPoo+0iUhnaCiykWYI
iJSiAqGCIiUogKhoiIFNLto0GMdYCtwHbxB5NLto0GMd
YcAtwHbxuBfrMP5JgArWArcHYOv2gHNWMFx4M/
tGOjFtE+rbH5zQyefp8+FjaPvn8Gy0MS3DnoGMn/+dNr6zOvaSMFl8B4JjBtMDp8IzoY79K+VT5l6BPB3DxsxjomNHwZ0JuF6/
FzjhbDt3thFBpwWXALwUOMvKoJjYvc71AgixngFMtsDTmYnl7/tcbz+ftlY8Ep/9Ht/wtXZZgBqRq+i/
xKEYq4ra4LY9dFQUkEQYVJsYFgY0f3o2oL98P7AVzuthQc4KZqJd/
ZvzqnSahgpG23mVR3qHoXdTG9YuJQTIE23VhYb3nyzI3QSKvbKc2UPO6ylkWYKbwdy/
hd91NOtNhTk8qJH5QwmRxdPdVYCwhqXYIzXPhDymrIEzQcVRsx3PRSTyTKzbs/
ycSR5oePJGaJiztUoeNcXrnjxkfCUbO0bNd7slUwgBIpMLqBMoPyMW96T52UR/KtGpPMmvgEGWAqfAatmGqnI5ePJmBQKhRamS1GpdcghxWrPcBv7YTuqyGc2XjsedzhnKr4AlNCKP6OwrHb5XaMBkMKJtl3lz2QYavjC9o9w3VqT9X/HN6Pqes2QP2+cbuX0nbDIaa3V8OqMmOt+gxZYMEYkm1NAAk1NBQ6O4sU+oUDX1/tNFObCPpPacnPbwBSVUlxhz
6vzAc7srjuvd6mjBc9VrebA6EYCx56Na/
aO9xsrS/VYlPbh0uyTQ3dv6/2kjK38GyXTpuXWV/lr4ELvCNeUfgjSxSnnEaHMEUc4GMZ5qpcW6/
ZIYp7yNeWnwUaI63TVZXdsHL6QtlNxDwkxaK05ZXg9JbIcq4ptHeFPnkAuhdtyjSr93QtI15aqO6MdD2bgf/
1W2yyHkCpKWvZ4cDfM1TtAEgJ6ttO8wQbzPzsTGBWVJZH4Pf60JqOj/N0/uzQHaFfNXuCIW+Hx1lo1XIaFzV4xBr2CqW85Ygng6s/
y3kzUh8Iy/WYzfd1A5/x8YIwCu9gJA6fLqTh7GgqxsHoLkcyi8LzTc6k0RoiEPYnqJwL6tSwVFeMhXzMZmxLsdZ/
nC/3mTa9TrfArIo68Ymx9aY9QeeBY9qhejuz3xzVnr6nk/Sa7fhXgkfDmvTDPAELQG0DixpqSqiCpcbjuPCqvovawsHvx9aX/
mw4+zX/Frb4YB6brSHg7JYyRaUbPfFuYfD08mJyDHEPJJsb5Gxu+bEnuzpXPgyXJ2OHq9qBMRFzpX2p0XMaKQcXkOcd2cX+tIc/
z9LFRPc7uN6NcJuA1mKQNT9FEOmQ/w3wVlrGx6wZyMKhVEdrHMuf/S6gzQS6prwC/KTG+7aO1+l1MlSkzIyKeAl7Jn/
i1KFuaWf/
anqh4Nsl8XXPk9xRjJuJ9+MRULaSiwIDp0jYTRSLb9qFHoevzn/Xu2OnJuPa/
A0yEuFfIyyOUgKJtJdYvXGX6I9vNxsJ54bUc0XLbo7U88/fd+xD+vkR3Z3fSjrPRtkcHqxsrPb2jTNQNrNAJh4HJs7hpXNeCAhfSXSs4PdEzaEImSfHHkLa9uGo+eh6fUQ24o2mYVqM6PBHwdHvwGdyiHVM+LhbKObrDxpQQSWEBs/
MLo0JGXpF/hNb4lrsAl8UKXrv3NQMJ+wOWbpMW/WUSnGB1NpzvYVHhBsrvHpr5sZydLsJUGr6ChXCghpsvDJMdpFfyo7kEs7/9/I9ixHOJpmn4wTXHwT58LxZOfj5M3yOw1eA9Ztn7tZnCR/
i7BrRMAdkGQkAqr5vGCPZaCXD45PhSeWeK/kl9p4WOQ0kwjh5Q6Scx9XHR4RFGp6hqZD0C8fUoN3uTOpumULU2vlk=

Let me reconsider — I must transcribe exactly.
```

7Q1FRNpHLVpFRKR2uu1N784Ug58N9KjZhYhIV9MMQ0REClHBEBGRQlQwRESkEBUMEREpRAVDREQK6ZOf
khKRvqEePSL6km5TMIx1S4EZwABgCTAZuCAGv6xLB1YHOdLk5Rj8n7t6LCK9Rb16RPQl3aZgAO/
H4EcB5LynG4AhwJldOqr6GAt4oOYFQ/0wpK+qV4+IvqQ7FYyPxeD/bqybCDxhrDsL2Ay4FijFgR8fg3/
YWHctcEsM/v8AjHXXAzeTGh1dRYoj7wd8uRRFXslY9ztgGDAI+EUM/nJjXX/gN4AhpdJeGYM/
v4X9V2jclI93cgze5W0uAmIM/mpj3TnAwaRZ1L2k9rMHA5811v0wj3Vm2fEnkqPTN9pw/
XY8iyJ929zGJjZYvfmyzugR0Zd0y4IBEIN/1VjXD9gA+DvwuRj8YmPdlsCNpBfzK4D/
AP7PWDeE1DhpPHA+6cX/emPdqqRo9JYck3tqrEYqULeSuuJtUsqaMtat3cr+1wPnxOCn5MZK/
UgFYwXGuqHAIaQAwyZj3dox+HeMdVNJ2Va3VHke1A9DZCXUq0dEX9LdPyVVCsQaAPw6J87+ltTUiBj8A
8AW+RLWOODWGPwSUpOj04113wM2i8G/
38o5TjDWPUNKoh1GarD0KvApY92FuRXru9V2rNa4qdTYqQXvAouBK4x1/8pK9A0XkWLGjx7KwsVLeef9
JSxrauKd95ewcPFSxo8e2tVD67G6bcEw1n2KdInn76RZxFvATqSZxaplm15L6jNxNOkyFDH4G0iXed4H
7jHW7dvCOSywP7B7bu06HRgUg1+QzxWA40gzmWpaSnhcQvPndlAe1xJSu9hbye1nW9hfRDqoXj0i+pJu
WTCMdeuT7gtcFINvIt38fjN/YupIml9iuhqYBBCDfz7v/yng1dyjeyqwYwunGgIsiMG/
Z6zbhtSSldzLu18M/lbg/
wE7V9u5lcZNfwW2y38PAfbL6wcDQ2Lwd+Yxj8qHUhMlkU5Qjx4RfUl3KhirGeueNtY9D/
yedEP4R3ndr0jNjh4FtgIWlXaKwb9FaoZ0VdmxDgeeyw2WtgGuaeGcdwOr5KZGPyZdlgLYBAh5/6uB77
cy7mqNm+YA/
ws8S7rHUeopvibg87YPkGZOkPqVn5KbKG2OiEg31OMbKOV39DOAnWPwC7t6PJ1JDZREpJP0/
gZKuTf2i8CFvb1YiIh0tW77sdoiYvC/BzZtaztj3brAH6qs2i8G/
48i5zLWXQzsUbH4FzH4q6ptLyLS2/
ToglFULgqj2tyw9WMcV6PhiIj0SD36kpSIiNSPCoaIiBSiggEY6xq7egwiIt1dn7iHISLdi/
pU9EwqGGVyVMhZwDxgJPAk8PUcFLgr8AtSYu4HpG9vfwRcQoorWQKcFIO/
31g3gRT90T8f539IcSZH5n0PyoGHmwMXk5Ju3wO+GYN/
sS4PVqSLqE9Fz6WCsaLRwPbAG8A0YA9j3eOk2PTDY/
BPGOvWIuVUnQgQg98hR4vca6zbKh9nZD7WIOAvwPdi8KONdecDRwEXkFJovxWDf8VYtxvpG+1Vc69Wlv
phSHejPhU9lwrGih6Pwb8OkKNBhgMLSVlWT8DHGVIY6/YELszLXjTW/ZUUXQJwfwz+n8A/
jXULgdvz8hnAjjlX6jPAb411pXOvkLusfhjS26hPRc+lgrGi8v/
VLiU9Rw2kRkqVWvs6fflxlpX9vSwfsx/wTqnLYEvUD0N6G/
Wp6Ln0KaliXgQ2zvcxMNataaxbBXiQFK1OvhS1KVDoGlCepcwy1h2a928w1u3UGYMX6U7Up6LnUsEoIA
b/ISkB98LcbOk+0r2JXwH9c2Onm4EJMfj2zKu/Bhybj/
k88KXajlyk+1Gfip6rx6fV9iVKqxWRTtL702pFRKR+VDBERKQQFQwRESlEBUNERApRwRARkUJUMEREpB
AVDBERKaRu0SDGukOA24Bt65HIaqybBFweg3+vHftY4OQYvMt/fx74MSmhtgHwMfiTazC2s4BvAm/
nRafH4O/
s6HFFVoaixqWoes4wxgEPAUfU6XyTgNXb3KoFxrqRwEWkePNtSemzr9ZobADnx+BH5R8VC+kSpajxeYs
+ahY1/vgc9RSTFdVlhpGTWfcA9gGmknpOYKw7ldQjYhlwVwz+NGPdFsClpB4RS4FDY/
AzjXWnAIeREl2nxODPNNYNB+4GHiNFib9Mig7/BrAxcL+xbl4Mfh9j3QHAj/L+M4GjY/
CNxroDSVHj84CnyoZ9KvCT0mwoBr+EFAWCse5qUrz5NsBmwNHAeGB34LEY/
IS8XSNwWX7cC4AjYvBvU0eKN5fWKGpc2qNeM4yxwN0x+JeB+ca6nfPlnrHAbjH4H4nYCf5W2vBy7Oyz4Dv
Jlf7LcExgCjgF2MdXvn7bcmXXraEXgX+E4M/pekfhb75GKxHvBDYP8Y/
M5ABE4y1g0Cfg18IsbGi1Zh9S74j9I0eXnk/po7GCsKyXQrgE8lc/
5AHBm2f7HG+ueNdZdaaxbp6WTGOsmGuuisS4uWLiwleGItN/cxiYGD2i+TFHj0pJ63cMYR3oXD3BT/
rsfcFXpHkPuQLcmsEkMfkpethggF4wDgOn5GINJBeQ1YE4Mflpefh1wAnBexfk/
DWwHTMu9J1YFHiHNEGbF4F/J57mO3HuigNtzJ74ZwFsx+Bn5GM+Temg8TZo53Vw2ttvy75eQ7o005f/
+D3BMtZMo3lw6k6LGpT06vWAY69YlvRMfaaxrIrUtbQJuUeEy0FYDUAP43BX1Zx7OFVjtFS34r7YvD
jKvYf1cL2kNJjdwGeaWF9eX+Lyt4XLT2vTQAx+LfKxvBrwLewvUinGj96KGf8/
g0gzSzeXbyUhYuX8t09N+zikUl3VI9LUl8BronBbxaDHx6DHwbMAuYDxxjrVgcw1g3NPSJeN9aNzcsG5
vX35G0H5+WbGOs2yMff1Fi3e/69dGMd4J/
Amvn3R0mtVrfI+6+e1e8CIzIvbVL+5ecC5xearlqrOtnrDupnY+9X378AF8tjc1Y94mybQ4BnmvncUV
qQlHj0h71uCQ1DjinYtmtwLakG+DRWPchcCdwOukm+GXGurOBj0g3ve811m0LPJIvKTUCXyfdFH8BGG+
suwx4hXS5B9JlnLuMdW/m+xgTgBuNdaW59g9j8C/nFqh3GOvmkV7QRwLE4J/
NH829MRetJuCOdj72RcD2xronSW1eD8/Lf1Y2u5kN/
Fs7jytSM2OGDVaBkEJ6dD+MfEnKx+BHdvVYqjHWNcbga/b/
RPXDEJFOon4YIiJSO3X7pndniMHPG9qObsQmmGIiEghKhgiIlKICoaIiBSigiEiIoX06Jve
3U29I9xFROpJBaO2yiPcz+raoUhfoX4WUi8qGDVSLcLdPeP1FPjs6Q4lH7AlTH4W4x1uwA/
JwUpzgMmxODf7JLBS49V6mcxZFD/
Zv0sFO8hnUEFo3Y+jnA31s031u0MfIqUXLsDsAEpxuRKY90A4ELgSzH4t411hwM/
oYXE2o5QP4zeTf0spJ5UMGqnWoT7JNKKa+Mdz/Fyfpf3YJVY2ytaVyFvpufhRCmAqBjZ4fJWasjYX35BnmL8Kej2F43KX1Hf4BuxxH/Qrf6lY9Tuw6kPa+RlV2rYHg66vwO/
suj/d/Ybl2t6VH0WPAnZ7OQpn6WJf3nZfrhD6W7hDQu9N0uUthxFzHb7Z/Qnv+w5F7g/GtS5ZoJbm2x1W0ztEGDbX8Kz/ZO6ZIGlEvgTbcLxRKwxoS4VeI8+xtm21e2bHB/CqGk8u1Jru0O6ZKTC+eowJ96oB0MoRCGzmKlRcmbOcWgrk1Q7vpR/u1ZXkmVwH+YRyBdn96mXugN5SYKPbQv0n7OB9nW8fmxCh6fkyBCf4FJPWr3uH6nDV56
prmNTWxQ0VdS/Syks6hg1EArEe5TWtilAXg+Br97C+s/
pn4Y0hr1s5B60sdqa6OlCPd5wJdzNPqGgM3bvwSsX4plN9YNMNZt3xUDl55t/
OihLFy8lHfeX8KypibeeX8JCxcvZfzooV09NOmFVDBqYxwrziZuJfUVf53U7+/
xhTH4D0lr4pn7vB75+5O0lxnx/ckRiHyYnZEw/kzk0Fwl6ey9lK6CdTBQgqwjN7/O/CI/
kLxFoY/mn0V1V2tMZfRfhwLg/89/XBI/e7ozFZZ4zWyo3hnlw0LvZ3nmMVVbnYYbB/
NH829MRetJuCOdj72RcD2xronSW1eD8/Lf1Y2u5kN/
Fs7jytSM2OGDVaBkEJ6dD+MfEnKx+BHdvVYqjHWNcbga/b/
RPXDEJFOon4YIiJSO3X7pndniMHPJl9C6o5qObsQEelqmmGIiEghKhgiIlKICoaIiBSigiEiIoX06Jve
3U29I9xFROpJBaO2yiPcz+raoUhfoX4WUi8qGDVSLcLdWNeP1FPjs6Q4lH7AlTH4W4x1uwA/
JwUpzgMmxODf7JLBS49V6mcxZFD/
Zv0sFO8hnUEFo3Y+jnA31s031u0MfIqUXLsDsAEpxuRKY90A4ELgSzH4t411hwM/
oYXE2o5QP4zeTf0spJ5UMGqnWoT7AOC3MfhlwN+Mdffn9VuTvnB4X87G6g9UnV3krKuJABttuH6nDV56
prmNTWxQ0VdS/Syks6hg1EArEe5TWtilAXg+Br97C+s/
pn4Y0hr1s5B60sdqa6OlCPd5wJdzNPqGgM3bvwSsX4plN9YNMNZt3xUDl55t/
OihLFy8lHfeX8KypibeeX8JCxcvZfzooV09NOmFVDBqYxwrziZuJfUVf53U7+IyUu/
xhTH4D0lF5r+Ndc+QuvN9pn7Dld5C/Syknnp0vHlPYKwbHINvzJetHgf2iMH/
bWWOpXhzEekkheLNdQ+j83lj3dqkPuI/
XtliISLS1VQwOlkM3nb1GEREakH3MEREpBAVDBERKUQFQ0REClHBEBGRQlQwRESkkJX+lFSOwLguBn9k
/nsVUh7SYzF418p+awNfjcH/Kv89nPSt6P+Mwf+/

vGy9fKzLYvDHr8TYRgEbx+DvzH9PAM4F5pI+3np+DP7X7T1u2fEDcHIMPrZzv2aPXaS9FGUuXakjM4xF
pOyk1fLfnyO9ILdlbeA7FcteBcqLzKHA8x0Y2yjgoIplN8fgR5HiOf4rR3V8LBe8zlbtsYsUUooyn7fo
o2ZR5o/PaezqoUkf0dEXybuALwC3kOIxbgT2AjDWnQVsSor43hS4IAb/
S+AcYHNj3dPAfcDFwPvAC8Y6k9+1Hw78LylaA2Pd+sCl+TgAk2Lw04x1Y0gJsavlYxxNmq2cDaxmrNsT
+Gn5gGPwfzfWzQQ2M9Z9O59jODDPWHcMcAlggCXASTH4+3NRvArYjhRRXiqSGOsaY/
CD8+9fAVwMfkIuSJfmxw/wbeCEisf+c+BmYC3Sv8W3Y/B/ate/
QBsUb957KMpculpH72HcBBxhrBsE7EjKSiq3DfAvwBjgzNwH4jRgZgx+VAz+lCrH+iSwFHijbN0vSJeR
dgW+DFyRl78I7B2DHw2cAfxXzmk6gzyjiMHfXD4gY92nSC/if8mLdiH1pfgqcBxADH4HUgGcnB/
bt4H3YvA7kvpW7FLgufkl8EAMfidgZ9KMqfKxfxW4J898diJlSjVjrJtorIvGurhg4cICp5Xeam5jE4M
HNF+mKHOppw7NMGLwz+Z7EOOAO6tsckcM/
gPgA2Pd34ENq2xTcjfwY+At0rvucvsD2+XeEQBrGevWBIaQXtS3JMWJV/zfqZnD84zjA+DfYvDz8/
GmxuDfz9vsSWpsRAz+RWPdX4GtgL1JBaD0mJ9t5Twl+wJH5X2WAguNdetUbPMEyxsq/
S4Gv0LBULy5lCjKXLpaLT4lNRU4j3Q5qlL5W5+ltFKg8szgSeC7pKTXcv2A3fM781Ex+E1i8P8kFZj7Y
/AjgS8Cg1oZZ2nGsVsMvjxZdlHZ760FcLX0Yl2+vLXzryAG/yCpGM0FrjXWHdWe/
aVvUZS5dLVaFIwrgbNj8DMKbv9PYM0W1v0P8L0Y/
D8qlt8LfPxpqfwpKEgzjNKN9gkFz9GaB4Gv5XNsRbpn8lLF8pGky28lbxnrts39uw8pW/
4H0qUsjHX9jXVrVY7LWLcZ8Pf8ia3fkC5diVSlKHPpah3+ZFAM/nXSPYai2//
DWDfNWPcc6ab5xWXrnqf6p6NOAC7Ol4JWIb2Afwv4GemS1EnAH8u2vx84Ld9c/
mnlwVrxK+BSY90M0k3vCTH4D4x1lwBX5fM/TYopLzkN8MAcUt+L0v97TwQuN9YdS5pdfTsG/
0jFY38OOMVY9xHQSL6EJdKSMcMGq0BIl1E/jB5E/
TBEpJMU6oehb3qLiEghKhgiIlKICoaIiBSigiEiIoWoYIiISCEqGCIiUogKhoiIFFKPSO8uUeN+HS+Qv
vFdMiZHmRQdy52koEFQP4weTz0ppK/
qzTOMWvbrmFmWYzWqsli01UsjBn9QDP6dFo4tPYh6Ukhf1mtnGFmt+nWsIO9f3kvjXsCUOgQa6zxwXgw
+GOtmk3psVB5b/TB6GPWkkL6stxeMm4Az8ov3jqSgxL3K1m8D7EMKBHwpZ0adBozMPSpKl6RKL/
IA02Lwx+XfdwH2jMG/n9vAtqXy2N8l9cP4ibGuP7B65Q7GuonARICNNly/
8AOXzjG3sYkNKv6V1JNC+opeXTBq2K9jZulFvkJ5L42VoX4YPYx6Ukhf1pvvYZTUpF9HC8p7aSyh+fPZ
Zm8M9cPoedSTQvqyvlAwatmvozWzgVHGun7GumGktrStHlv9MHoe9aSQvqxXX5KC2vbraMM0YBYwg9Tn
4qkCx1Y/jB5IPSmkr1I/jB5E/
TBEpJOoH4aIiNSOCoaIiBSigiEiIoWoYIiISCEqGCIiUogKhoiIFNKl38OoVQR5XrYlcD6wLfAO8C5wZ
v42dUvHmUBZYGDFusYY/OCKePNVgQeB78Tgl7Xz4ZaOexbQGIM/
b2X2FxHpKl09w6hJBLmxbhBwB3B5DH7zGPwuwL+TkmhroZQltSOwHTC2fGUODpRe7vE5jRw39TUOmvwK
x019TZHm0ud0h2961yKC/EXgkRj81NJBY/
DPkb5JjbFuKCki5FPAe8DEGPyz5YMw1o0AbiA9J3dXG2gMfomx7mFgC2OdBc4kzYhGAdsZ604CjsmbXx
GDvyAf+wekb3HPAd4GnszLTwC+Rcqh+nMM/oj2PXVSL6U+GEMG9W/
WB0OxINKXdIeCUYsI8p9TJYqjzI+A6TH4sca6fYFrSC/
y5X4BXBKDv8ZYd9wKR0jnWR3YDzgjLxqTxzHLWLcLcDSwG+lbk48Z6x4gzeKOAEaTnu+nyAUjP44RMfg
P8mW2mlM/
jNpQHwyRrr8kRX6nP5w2Ishj8POA1iLIP2asm2Kse85Yd1tetCdwbT7fH4F1jXVDKnbbg+WJttdWrCvN
Zqbl8dyVlz8eg59Vdo4pMfhFMfhG4DZS4dsrL38vBv8uKT235FngemPd10mzjGqPZaKxLhrr4oKFC9t6
6NJJ5jY2MXhA82XqgyF9TXeYYcDyCHILrFuxrkgE+fOkmHAAYvCHGOtMPiZUz0mpFqLVUrBWS/
0wyuPNW8tiaem4XyCN+2Dg/xnrto/
BNysc6ofRPagPhkg3mGFkHY0gvwHYw1h3cNmy8r5oDwJfA8j3Hubld/
vlppEuHVHatp0eBMYa61Y31q0BHAL8KS8/
xFi3mrFuTeCLeRz9gGEx+PuBU0k38nVto5tSHwyRbjLD6GgEeQz+FGOdA35urLsAeItUVP4z73IWcJWx
7lnSTe/xVQ57InCDse5eNaNaVeAxPGeuuBh7Pi66IwU8HMNbdDDwN/
JVURAD6A9flS2MNwPkx+Hfae16pj1IfjMnT5zNrwQeMWGcg391zQ92/
kD5F8eY9iOLNRaSTKN5cRERqRwVDREQKUcEQEZFCVDBERKQQFQwRESlEBUNERApRwRARkUJq9sW9WvW2
qOg/UTIGOBDYLgZ/TgvHmUBZYGDFusYY/a+dDLB3LAie39pha2Xcs8HIM/s8rc27pGo/
PaWz2hb3xo4fqC3vSJ9VyhlGT3hbZzBj8qLKfD2PwU1sqFgXtE4PfCYjA6ZUr69TTYiypn4b0EKVY83m
LPmoWa65eGNIX1ToapBa9LS6uduDyGYSx7lBSL4qlwMIYfCl4cGNj3d3A5qSE2FOrHOpB4IR8zEbg58C
/
AN811g0kBRauAjwBfDtHjx8IXADMoyxGvbJ7Xo4qcTH42ca6o4CTScGDzwKXkEIGP2us+yHw5fxcdWo/
DMWbd4xizUWWq/U9jJuAI3IHvB2BxyrWb0N6cR4DnGmsG0DqCVaUZySt9vcWPd0/qlWQM4A/
iXPGMoDB0cBhwM7AIcb64ZV2dcBpZDDNYDnYvC7kWYeVwOHx+B3IBWNb+fH8H8mtPQnGuu2BH
wD75jGeGIN/
mJTKe0p+rDPzYx8dg9+RVDiqHUvx5l1IseYeYiy9V0hhGDfzbfg2i1twXwgbGutd4WLcWJl0wDrjbW/
S+p70TJH2LwCwGMdX8X8GNiN1uQO431i3lPRu/4d52VKWBw1cyKWBw1uDcyKwb+c/
54MHAeEvPyVfNzrgrgImtjA1gX+CW3GMftTd8/4TBUk8nL6AOQVHjQUeGq0df5/8zv6oslTYvxH4Ak/
mDAtKNKNZcZLnOKBgd7W3RJmPd5jH4x2L
wZ5DuK1S79NReLwLDjXVb5L+PBB7Iy0cY6zbPy8eV7TMb2DmPaWdgRF7+B+CwUiHLPcWh7LGqH0bPUIo
1X2+NAcx99yPWW2OA+nhLn1Xzd7Qd7W1BCze9K5xrrNuS9E7+D8AzrNiju11i8IuNdUcDv83v9J8ALs0
3vScCdxjr5gEPASPzbrcCR+Ub9k8AL+djPW+s+wnwQL4MNh2YQLrH82tj3QmkZk2/UT+M7m/
MsMEqECKoH0aPon4YItJJ1A9DRERqRwVDREQKUcEQEZFCVDBERKQQFQwRESlEBUNERApp83sYNYwt70c

K8NuX9C3oxcBhMfhZHX4UK567WYy4se5q4LPAQlLE+XEx+Ec6cPzGGHy7P5hvrBsFbByDrxabIiLSrRW
ZYdQqtvxwYGNgxxzudwjQWV9UqxYjfkrOpzoNuKxyhzrFcowCDqrDeaSAx+c0ctzU1zho8iscN/
U1RZaLtKHoi2QtYsvfBN6MwS+Dj78RjrHuMODTMfiTjHUnkpJdP5WjOCbH4Pc01u1CiiEfTIoCmRCDfz
NvczGwPvAe8E1gKCvGiJd7ENginzsADwN7AFONdbeQok3WB94Gjo7Bv2asGwHckJ+vu0sHqmymZKy7CI
gx+KuNdbuSvvG+Binj6nPA2cBqxro9gZ8Cf2P5t+KbgL1j8P8s+G8iHVDqczFkUP9mfS4U+yHSsqIF4y
bgDGOdJ8WWX0kuGNk2wD6knKSXjHWXkN7JjyylzhrrPgk8ZKzbixTncV0MfjrpBbwUa74X8A9j3SbAns
CfcgT6hcCXYvBvG+sOB34CHENKcf1WDP4VY91uwK9i8Psa66YCPgZ/Sz53+WP5IsvjzQHWjsF/
Nm93O3BNDH6yse4Y4Jek2covgEti8NcY645r68ky1q0K3EyKSn/
CWLcWqaCdQVlXwHy+42Lw04x1g0mX6WpK/
TCqU58LkfYrdNM7Bv8sMJw2YstznHfV2PI8o9ga+D7pPsIfjHX75Vapg411a5JCBG8A9iYVjz/
lfUYC9+XZyg+BT+YX2M+Qsp+eJl1m+kQrD+PcvN1E4Niy5TeX/b57Pj/
AtaSiBWkGcmPZ8rZsTZpNPZEf+7sx+CVVtpsG/
DxnS61dbRv1w+gc6nMh0n7tuW5hBixpAAAgAElEQVRfii23wLoV6wrFludeGHcBdxnr3iK9e/
8D8AhwNKmP959Is4fdge+SLnM9H4PfvfxY+V37O230zSh3SmnGUWFRK/
s0tfB7SYfizWPw5xjr7iDd13jUWLd/DP7Fim3UD6MTqM+FSPu152O1HYotN9btbKzbOP/
ej3Rp66959YOkdqYPkpJd9wE+yM2QXgLWN9btnvcdYKzbPgb/
LjArt2vFWNdgrNup2rnb4WFSiizA10jJtJBmAuXLS/4KbGesG5hTZ/
fLy18ktYvdNY9tzXxTvfI52TwGPyMG/9+kjn/
brMSYZSWoz4VI+xUuGDH412Pw7YotB6YZ654z1p0LbADcnmPMnyW9O78ob/4n0uWoB3NDoznkF+sY/
IfAV4D/
NtY9AzxNuhQF6cX72Lz8eeBLeflNwCnGuullfSyKOAE42lj3LKkfxol5+YnAcca6J4AhZY9xDvC/
+fFcTyp2pTEfDlyYx3YfafZxP6nAPJ3vxUzKz88zwPuk2ZfUgfpciLSf4s17EMWbi0gnUby5iIjUjgqG
iIgUooIhIiKFqGCIiEghKhgiIlKICoaIiBSigiEiIoXUI9IbAGPdIcBtwLaV8ReddL5JwOUx+PfasY+l
efrs54EfkxJnG0iBhifXYGyHAmcB2wJjYvCxo8cUEels9ZxhjCN9e/
uItjaskUnA6iu7s7FuJOmb6F+PwW9LCkB8tUZjew04Gpheo/OJiNRUXVYYxtYZAwRQEJHFdt/
xWPAaOBl4CjgG6RmTfcb6+bF4Pcx1h0A/
CjvP5PU66LRWHcgzqpRPgPOCpsmGfCvykNBvKSbKl7oFXk6I8tgE2IwUnjicFJj4Wg5+Qt2skpejuAywAj
ojBvx2DfyGv7/
BzK61T3wuR2qnXJamxwN0x+JeNdfONdTuTItDHArvF4N8z1pVS364HzonBTzHWDQL65Rf7LYExpEtDU4
11ewOvkaLEj809Ja4EvhODP89YdxKwTwx+nrFuPVIs+v4x+EXGuu8BJxnrfgb8mtQ29i80jzofCfxPK4
9pnbzfwcDtpIL4DeAJY92oGPzTpEtZT8Xgv2usOwM4Ezh+5Z/G9uvr/
TDU90KkdupVMMaR3sVDCgYcR7ocdlXpHkMMfn7uibFJDH5KXrYYIBeMA8jhfqTOe1uSCsacGPy0vPw6U
oDgeRXn/zSpZeu0/K5+VVKk+jbArBj8K/
k815H6ZRRxewy+yVg3G6i9I3ZRRxewy+yVg3A3irlOJrrHue1DvkadLMqVSEriPdw2kXY93E0pg22nD99u7e581tbGKDiguT6n
shsnI6vWAY69YlvRMfaaxrAvqTekXcyoo9I1oKwGoAfhqDb9aLO1+SqjxGtTTFBuC+GPy4iv1HtbA9pP
TbXYBnWlhfesVZRvN+IMto+Xltd9Kj+mF0jPpeiNROPW56f4XU9nSzGPzwGPwwYBYwHzjGWLc6gLFuaO
5x8bqxbmxeNjCvvydvOzgv38RYt0E+/
qalXhksv7EOzXtPPArske+PYKxb3Vi3FalvxYiyCPTygnIucHreDmNdv3yZqz365ccP8NWysUmdqO+FS
O3Uo2CMA6ZULLuVdFN6KhBz69TSx1WPBE7IPSkeBjaKwd9Lap36SL4EdAvLi8ELwPi8/
VDgkrz8clJnv/
tj8G8DE4Ab83aPAtvkS14TgTuMdQ+xvKFTqS3tpLzPC6RPNrXWAraaRcD2xronSbOssyF9xNhY9zrpJv
kdxrp72nlcKUh9L0Rqp0f3w8iXpHwMfmRXj6UaY11jDL5mr0zqhyEinUT9MEREpHbq9k3vzhCDn036+G
u3VMvZhYhIV9MMQ0REClHBEBGRQlQwRESkEBUMEREpRAVDREQK6dGfkhKBlEg7efp8Zi34gBHrDGT86K
H6Yp5IJ+iygpFzpa6LwR+Z/
14FeJMUD14499tYtzHwyxj8V3I21MYx+Dvb2MdS1iipyvoNgd8Aw4ABwOwY/
EH5i4KficHf0MbxC20nHaf4cpH66coZxiJSIOFqMfj3gc8Bc9tzAGPdKjH4N1ie1zQKMECrBaOAs0lhh
b/I59kxLx9OyoRqqxAU3a7T9fZ4c8WXi9RPV1+Sugv4AikbahxwI7AXgLFuDCkSfTVSs6KjY/
AvGesm5H0GAWsY644BPLAz6YV+NWPdnsBPSSGHKxyjwLg+Adxb+iPnSgGcA2ybs68mkzKyriX1vQA4Pg
b/
cJXtFgAmBn98fmyeFMH+J9JMxpCSbK+MwZ9fPhDFm7dO8eUi9dPVBeMm4Iz8ArojcCW5YJCSZPeOwS8x
1u0P/Bfw5bxud2DH3ENjOEAM/sPcpKj8hXmtVo7RmouBm411xwO/J/
XteAM4jeY9v1cHPheDX2ys25JU8EyV7Sa0cJ5RpP4fI/
N2a1duoHjz1im+XKR+uvRTUvmd+3DS7KLyMtIQ4LfGuueAA84Hty9bdF4OfX+AUrR2jtXHdA3yK1I1vG2
C6sa7a2/sBwK9zgu5vSU2a2uNV4FPGugtzq9h327l/
n6f4cpH66Q4fq51KujxzY8XyHwP353ffXyRdgipZVPDYrR2jVTH4+TH4G/JN+SeAvats9h/
AW8BOpJnFqi0cbgnNn+tB+RwL8r4BOA64ouj4JFF8uUj9dPUlKUiXoRbG4GfkTy+VDGH5Ty+VDGH5TfAJBY9V3jR
pZY+BsW5f4NHca3xNYHNSO9hlVY7/
egx+mbFuPKmbYLVxzAa+Y6zrB2xC6k1O7jX+YQz+VmPdTODqomOU5cYMG6wCIVIHXV4wYvCvA7+osupn
wOTc5e6PBQ93P3Bavtn805U8BqTWrBcZ60ozgyti8E8Y6wYAS4x1z5Be3H8F3GqsOzSfuzTzebZiuwtI
N+BnkBoxPZW32wS4KhcSgO+3Y4wiInXVoxso9TVqoCQinUQNlEREpHa6/
JJUVzLWHQ2cWLF4Wgz+uK4Yj4hId9anC0YM/
irgqq4eh4hIT6BLUiIiUogKhoiIFFLXS1LGukY/DvtWMfS/
NYj8+TvgC4BumTBD4Gf3INxvZj4Euk73b8HZiQ40dERLqles8wxgEPAPEPAUfU6XyTgFXy6ytgNXb3KoFxrqRwEXA12

```
Pw2wIjSXEetXBuDH7HGPwoUnjiGTU6bq/
3+JxGjpv6GgdNfoXjpr7G43Mau3pIIn1C3WYYxrrBwB7APqQ4kLPy8lOBI0nvtO+KwZ9mrNsCuBRYH1g
KHBqDn2msOwU4DBgITInBn5nDB+8GHgNGAy8DRwHfADYG7jfWzYvB72OsOwD4Ud5/
Jim9tjHnOF0AzGP5l+oATgV+UpoNxeCXkL6sh7HualIC7jbAZsDRwHhSMOJjMfgJebtG4LL8uBcAR8Tg
347Bl+dGrUFKq5U2qP+FSNep5yWpscDdMfiXjXXzjXU7Axvm5bvlGI5SYtz1wDkx+CnGukFAv/
xivyUpVqMBmGqs25sU2bE1cGwMfpqx7krgOzH48/I3vPeJwc/LMRw/
BPaPwS8y1n0POMlY9zNSyOC+wF+Am8vGPBL4n1Ye0zp5v4OB20kF8RvAE8a6UTH4p0nF4KkY/
Hdzmu6ZQClN9yek4raQVFBqrrf1w1D/C5GuU89LUuNIcebk/
44D9idFh78HKfAvZzdtEoOfkpctzusPyD/TSbOAbUgFBGBODH5a/
v06YM8q5/80KU12Wo4OGU+aGWwDzIrBvxKDb8r7F3V73mcG8FYMfkYMfhnwPCmFF9LMqVSEmo0tBv+DG
PwwUoE8vtoJjHUTjXXRWBcXLFzYjqH1TnMbmxg8oPky9b8QqY+6zDCMdeuS3omPzK1Z+5MuwdzKipdiW
vqKegPw0xj8ZRXHHl7lGNUu7zSQYtHHVew/
qoXtIb3w7wI808L60qvUsrLfS3+39NxWO9cNwB2k2Ucz6ofRnPpfiHSdes0wvgJcE4PfLAY/
PL+rngXMB47JjYgw1g3N1/ZfN9aNzcsG5vX35G0H5+WbGOs2yMff1Fi3e/
69dGMdmqfGPgrske+PYKxb3Vi3FalR0whj3eZl+5ecC5yet8NY1y9f5mqPfixvIfvV0thyw6WSg/
M4pA3qfyHSdepVMMaR2pmWu5V0U3oqEPNlotLHVY8ETjDWPQs8DGwUg7+X9E78kdyw6BaWF4MXgPF5+6
HAJXn55cBdxrr7Y/BvkyLOb8zbPQpsE4NfTGqBeoex7iHgr6UB5gZPk/I+L5CSZj/
Rzse+CNjeWPckaZZ1dl5+jrHuuTyWA1gxokSqUP8Lka7T49Nq8yUpX2pz2t0Y6xpj8DV5NVNarYh0EqX
ViohI7fT48MEY/GzSx1+7pVrNLkREuppmGCIiUogKhoiIFKKCISIihahgiIhIISoYIiJSSI//
lFR3ZKxbSsqXKhmbP83VJz0+p5HJ0+cza8EHjFhnIONHD9UX7UR6IBWMzvF+7nNRlbFulRyV3uspjlyk
91DBqBNj3QTgC8AgYA1j3X7AhaS4kFmkb1peGYO/pZbn7ep4c8WRi/QeKhidY7WcjQUpOv2Q/
PvuwI45xv1fSX08diD1BfkzcGXlgYx1E0lZV2y04fqdPvBam9vYxAYVPQ8VRy7SM6lgdI6WLkndF4Ofn
3/
fG7gxBr8UeMNY98dqB+rp8eaKIxfpPfQpqfpaVPF3z05+LEBx5CK9hwpG13kQOMJY199Y9wk6qUVrV1M
cuUjvoUtSXWcK6Yb3DOBl4IGuHU7nGTNssAqESC+ggtEJqiXUxuCvBq4u+7uJsj7exrqrK/
cREelOdElKREQK0Qyjm4jBT+jqMYiItEYzDBERKUQFQ0REClHBEBGRQlQwRESkEBUMEREppFd9SqpKH4
qbYvDnVGxjgZNj8K6G57XAhzH4h/Pf3wLei8FfU6tz9ETqgyHSu/
SqgkEbfSg6kQUagYcBYvCXdsEYuhX1wRDpfXpbwajKWHcgcAEwD3iqbPlZQGMM/
rz893OAi8HPNtYdBZxMCgh8NgZ/pLHui8APgVWBfwBfA1YDvgUsNdZ9Hfh3YL/
ScY11o4BLgdWBmcAxMfgFxroAPEbKkFobODYG/6daP/
au6oehPhgivU9vu4exmrHu6bKfw411g4BfA18E9gI2ausgxrrtgR8A+8bgdwJOzKseAj4dgx8N3AScml
uvXgqcH4MfVeVF/
xrgezH4HUmXy84sW7dKDH4MMKlieflYJhrrorEuLli4sNCT0B3MbWxi8IDmy9QHQ6Rn620zjBUuSeV3+
LNi8K/
kv68jNyRqxb7ALTH4eQBlPSw+Cdyc02VXJXXKa5Gxbgiwdgy+FCw4Gfht2Sa35f8+CQyvdoye2g9DfTB
Eep/eNsNoSUsvtEto/hwMyv9taGGfC4GLYvA7AP9Wtv3KKr3dXkovK97qgyHS+/
SFgvEiMMJYt3n+e1zZutnAzgDGup2BEXn5H4DDjHXr5nWlV7khwNz8+/iy4/
wTWLPyxDH4hcACY91eedGR9OIY83LqgyHS+/Sqd7U076UNcHcM/rTcF/
sOY9080n2IkXn9rcBReZ8nSH0piME/b6z7CfBA/
qjudGACcBbwW2PdXOBRlheY24FbjHVfIt30LjceuNRYtzrwKnB0LR9wd6Y+GCK9S0NTU6/
vEtprHDlxUtO1l1/
Q1cMQkd6nochGfeGSlIiI1IAKhoiIFKKCISIihahgiIhIISoYIiJSiAqGiIgU0tu+h/
ExY91GpMDBXUnfqJ4N/A44uFq0ubHuCuDnMfg/
G+tmA6YUDVK2zVVmUx+G/UaXg9jvpaiAj00oJBigz/
qLwvRQz+aWPd2sB+xrpbSN/
2fhL4egy+KceNnxxyY90E0uzk+LydB86LwdQdjXSNwMbA4OIY/tTOejEoMfY6w7iBRPvn8b41oDCDH47xnrpgD/
sAA4HfgZsCkwKQY/tTOejI5QXwsRKemtBaNUDKoZZFDWoZDWwPvAFMA/
YgxYWswFi3C3BE3mcVi+N8w7iBRPvn8b41oDCDH47xnrpgD/
CXwO2I6UZFvzgtHRfhjqayEiLTm8Rj86wA5Q2o4LRQMUv+MKTH49/L2lS/obcaTV/gQuDv/
PgP4IAb/
kbFuRkv75xysiQAbbbh+gVPU1tzGJjZYvfky9bUQ6Zt6a8F4HvhKC+vKX+mKxIq3FrZVLZ68pch0SJfJ
SsdbVto/Br/
MWFd1HF3dD0N9LUSkpLd+rPaPwEBj3TdLC4x1uwKfbedxHgQOMdatZqxbk1ZumpeZDYwy1vUz1g0DxrT
znN2K+lqISEmvLBj5XfwhwOeMdTONdc+TosnfaOdxngJuQBp4mRaEX6bk9jdSJbwZwHmU9xHsi9bUQkRL
Fm/cgijcXkU6ieHMREakdFQwRESlEBUNERApRwRARkUJUMEREpBAVDBERKUQFQ0RECumt0SDNGOsaY/
CD8+8HAb8A9gMOAt6LwV9Tsf1wwMfgR1amz/
YVijQXkUp9omCUGOv2Ay4zz4EDojBvZc2sYufZIIzUWkmj5TMIx1ewG/Bg6Kwc/
My84id9DLUeZXAu+xYnrtxsa6u4HNSem1p+b9x5F6WjQAd8Tgv5eXt9n3wljXHzgsMBA4OIY/
GW1ftwrE2+uSHMRqaav3MMYCPwfMDYG/2IL21wFnBCD373KulHA4cAOwOHGumHGuo2B/
wb2zet3NdaNzduX+l7sQ+SmGuuisS4uWLiw3Q98Zcxtb
GLwgObLFGkuIn1lhvER8DDpRfrEypEypXGuiHA2jH4B/
Kia4HPl23yhxj8wrztn4HNgHVJRewCz/AifS8OAHY01pVi1KCCz/
WFfHmijQXkWr6ygxjGXAYaRpRZRzRasa6YcCLwEmktNvrjfWVxlo/yx9dG/s3AJNi8KfV8oJrWZfhpDDdQG2ailuZ+DXHkJUPXfC3eZqHm6wsKQZdv4zUNs9HZqK8+UzUzW4NkDsE/aMxiEYDRmaqjDdDHB/Uq5AOUK/vvXy4s4CcH2yQYMZ+LWVkLEZaHx6fLpuJNNaBhIyHmFLdPlJ7o4GKCsGCn4KrBe0C3w/R93/+GCgVdeXgy/xdtPbkfe2fZeGnK6VtrJnNsHVx/kkkGjyjaVwx7A/l6GLNf+N/
Cj8s+IGPy9bT+UzqdIcxGppq8UDHLXPAd8zVh3bMW6d4CFxro9gZ/1dW4MiqXbmx/8+zrYHk6kipV8+7K+vdyAtsgFE6oYdXD4GOcAy6vMMjOAQhPoKHbgsgsYwfgO4SwbYwR+xakD6lUbB8nyEXsA6X5NrMDcd6vt0Yu4aZq4DW2iQ98ikNy8Pt/tIcC+KDmP4nd4k4cAjWbvnDuAu4eNlR0T+S5Ju/
JtAD5nHe3oSGWFA6qBnB0Kij2iptbDDiyQ+wBXU4GyJPh+C5mvQA1+uvDbD3S+kb+i3y5PK+SBq7gKLgtz/
Kia4HPl23yhxj8wrztn4HNgHVJRehtvPx6YG9S3/AifS8OAHY01pVi2IcAW5KCCz/
WFfHmijQXkWr6ygxjGXAYaRZwepX1DRTrewHLe1+0FtbVYt8LlhfpBuDfY/
Cj8s+IGPy9bT+UzqdIcxGppq8UDHLXPAd8zVh3bMW6d4CFxro986KvFTjkY8BnjXXr5fsR44AH2tin3D
```

```
3At411AwCMdVsZ69Zox/
6dRpHmIlJNX7kkBUAMfr6x7kDgQWPdvIrVRwNXGuveI72Yt3WsN4113wfuJ80W7ozB/
187hnMF6fLUU8a6BuBtYGyre9TRmGGDVSBEpBn1w+hB1A9DRDqJ+mGIiEjtqGCIiEghKhgiIlKICoaIi
BSigiEiIoWoYIiISCF1/R6Gse4Q4DZg21YynWp5vknA5flLe0X3scDJMXiX//
488GNSPlQDKfb85BqO8WTgXGD9GHzld0NERLqNes8wxpGSYI+o0/kmAauv7M7GupHARcDXY/
DbAiOBV2s0Nox1w0ihhK/
V6pgd8ficRo6b+hoHTX6F46a+xuNzGrt6SCLSjdRthmGsGwzsAewDTAXOystPBY4kZS7dFYM/
zVi3BalXxfqk7KZDY/AzjXWnkDKhBpJixs/MzY7uJkV1jAZeBo4CvgFsDNxvrJsXg9/
HWHcA8KO8/0zg6Bh8Y/
729wXAPOCpsmGfCvykNBuKwS8BfpXHfTXwPrANKYzwaGA8sDvwWAx+Qt6uEbgsP+4FwBGlwELg/
HyO9nxDvFOoB4aItKWeM4yxwN0x+JeB+ca6nfPlnrHAbjH4nUg9IwCuJ/
WH2An4DPBmfrHfEhhDihPfxVi3d95+a9Klpx2Bd4HvxOB/CbwB7JOLxXrAD4H9Y/
A7AxE4yVg3iNQn44vAXsBGZWMeCTzZymNahxRv/h/
A7aQCsD2wg7FuVN5mDeCpfM4HgDMBjHUHA3Nj8M+04zlst5deeqnQzwV/nEnDR+/
BB430a2hg7dVWYcig/kyePr8zhyciPUg972GMI72LB7gp/
90PuKp0jyFnPa0JbBKDn5KXLQbIBeMAYHo+xmBSAXkNmBODn5aXXwecAJxXcf5PA9sB04x1AKsCj5BmC
LNi8K/k81wHTCz4mG6PwTfl2PK3YvAz8jGeJ+VEPU2aOd1cNrbbjHWrAz/
Ij6dVxrqJpfFstOH6BYfVfnMbm9ig4uKdemCISLm6FAxj3bqkd+IjjXVNQH9SnPitrBgr3lKmSQPw08q
udPmSVOUxqgVkNQD3xeDHVew/qoXtAZ4HdgFamgWUXk2X0TwCvTzGvFITqXPfCOCZXLw+SQohHBOD/
1v5xvXqh6EeGCLSlnpdkvoKcE0MfrMY/PAY/DBSo6D5wDH5HTfGuqEx+HeB10vd64x1A/P6e/K2g/
PyTYx1G+Tjb2qsK3XKK91Yh9Ttbs38+6PAHvn+CMa61Y11WwEvAiOMdZuX7V9yLnB63g5jXT9j3UntfO
z98uMH+CrwUAx+Rgx+g/
xcDAdeB3auLBb1pB4YItKWehWMccCUimW3km5KTwWise5poPRx1SOBE4x1z5I65W2UmwvdADySLwHdwv
Ji8AIwPm8/FLgkL78cuMtYd3+
+0TwBuDFv9yiwTb7kNRG4w1j3EPDX0gBj8M+SPml1o7HuBeA54BPtfOyLgO2NdU+SZllnt7F9l1APDBF
pS4+PN8+XpHwMfmRXj6UaY11jDL4mr7qKNxeRTqJ4cxERqZ0e33EvBj+b9PHXbqlWswSka6mGYaIiBS
igiEiIoWoYIiISCEqGCIiUogKhoiIFFLPtFr1wlh+nnNJYYcfsjw1952OHndlPD6nkcnT5zNrwQeMWGc
g40cP1Zf1RKSqes4w1AtjufuAkTld92Xg+zU6bruUIs3nLfqoWaS5+mCISDX1Ch9UL4yyXhg55qTkUZZ
nTdXcSy+91OK6Cx5dTMNHTdDQQL/
V1v44eHDy9PmaZYjICuo1w1AvjLJeGBWOAe5q6STGuonGumisiwsWLmxlOO03t7GJwQOaL1OkuYi0pF7
3MNQLI/fCKD+Ase
4HwBJSkayqM+PNFWkuIu3R6QVDvTCqj81YNx5wwH4x+C5JgBw/eihn/P4NIM0s3l28lIWLl/
LdPTfsiuGISDdXj0tS6oWRfLU0tnzf5HvAwe35FFetKdJcRNqjHgVDvTBW7IVxUR7/
fca6p411l7bzuDUzZthgLj54U+4cvyUXH7ypioWKtKhH98PoS70wQP0wRKTTqB+GiIjUTo/
uh6FeGCIi9aMZhoiIFKKCISIihahgiIhIISoYIiJSiAqGiIgU0qM/
JdUWY91GpAyrXUnxHbOBSTNPTk1mhhGwMcFYM/
odbnr6Q+FyJSa722YBjrGkjfMJ8cgz8iLxsFbEiKQa+7GHwkJeV2qlKfiyGD+jfrc6HYDxHpiF5bMEg9
KD6KwX8cuxGDf9pY15A73n2eFAb4nzH4m/
MM4UfAW6QI9duAGcCJwGrA2NyX42pgMSnKfEPgpBi8Lz+xsW4MaWazGqlvxtEx+JfKZyHGurOATYFP5f
9ekGPZO2zy9PkMGdT/
4xRa9bkQkVrozfcwWupn8a+kgrATsD9wrrGulBG1G1E6lA7EDKtNoqBj8GuAL3Sj3
IrB3DH40cAbwXy2McRvgX0h9Ps401g2o3KC8H8YH37IWG9W+2TH0uRKSjevMMoyV7AjfG
4JcCbxnrHiDd43gXeCIG/
yaAsW4maUmZwBdwDYUmzUOqMN4M0Yyn53xj8MuBzY92DzAJTmzVpsA2CE+fcJKz
1HszYxYZ6D6XIhIzfXmGUapn0Wl0W1kK2KvtalPe8xg+DFwfw5F/
CJQOQOpdr6l1KiAjx89lIWLl/LO+0tY1tTEO+8vYeHipYwfPbQWhxeRPqo3F4w/
AgONdd8sLTDW7UrqrX24sa6/sW59YG/
g8XYe+9DcH2Nz0j2IysacH2Nz0j2IysbZQ4C5+fcJKzP4jlCfCxHpDL32klRun3oIPwfzPWVV5Was1LpB7dGwLfisEvzq1fS35GuiR1Eqlw1d2YYYNVIESkpnp0P4yukD8l5WPwt3TB6fWPJSK
dQf0wRESkdjTD6Fn0jyUinUEzDBERqR0VDBERKUQFQ0RECLHBEBGRQlQwRESkEBUMEREpRAVDREQK6bX
RIL1Uoc9KlzPWPUeKRemO1gPmdfUgWtCdxwbde3zdeWzQvcdXi7HNi8EfWIvBrKCpqUk/
vfhnl89+IXb1GDS2vjW+7jy27j6+7jy2pqYmXZISEZFiVDBERKQQFYze7/
K2N+kyGtvK687j685jg+49vu48NoUPiohIMZphiIhIIfpYbQ9lrDsQ+AXQxQH7giBn9OxfqBwDWkvub/
AA6Pwc/
O674PHEvqI35CDP6e7jI+Y926wC3ArsDVMfjju9HYPgecA6wKfAicEoOvaUfFDoxtDMsvZzQAZ8Xgp9R
ybB0ZX9n6TYE/5/Gd1x3GZqwbDrzA8lbLj8bgv9UdxpbX7QhcBqwFLAN2jcF3yUflNcPogYx1A4DzSPHm
YGLgc8D2wHjjHXbAgBr8FcD7w33nf7YAjgF4eN1i/GRvjPy/
4CTazmmGo1tHvDFGPwOwHB0m40tucXX8n5wF21HFeNxjYzYgL/
6+rANeRWkFvD1jgo1qOrz1FUMQr1gvzxuA/BG4z/
k43WL8cXgF8XgH6Lzvmz8YkbFNj8G/kZc/
DwzK7wy7w9jei8EvYnryfXNP0nPXbcaW3LwkIUY0P/
VeEwdHlteN8JYN91Y94CxbgnFGuqeMdafWeGztooLRM1V+yrn3obG2GhjzKj1mj9vYzB96UrsPJJxuPW9jMP9/
```

```
DYjHXbky4Z/FsNx9XmedvaJgb/
WL5ssSvwfWPdoG40vh8B58fgG2s8prdtbFUAAATPSURBVLbOW2SbN4FNY/
CjgZOAG4x1a3WTsa0C7Al8Lf/
3EGPdfjUcW7uoYPRMrwPDyv7+JPBGS9vk66BDgPkF9+3K8XW2Do3NWPdJYApwVAx+ZncaW0kM/
gVgETCyG41vN+BnxrrZwCTgdGNdLT/QsNJjy5dn/wEQg38SmEl6Z9/
lY8vLH4jBz4vBvwfcCexcw7G1iz4l1TM9AWxprBsBzCXdxP7q/2/v/
kKsLMI4jn9ZsCAC62K9iCgVy5uygoGCxOaikmhSijBKIiMyyU0WolCXWpEtImJRk7woQS+CsgiyWcibm
ojsj4PsCgsVZUFGdqHrRQXBttvFMydPyyqvnLO7r4ffBw4Lh/
fseZblzHOemXeemXLNQWxh9kvgQeCTnOKk8+Eg9g1qELgKuA74pi7xtTmOtsbmfLgCGAK25BS/
qFlsi4BfcorjzodrgaXAz3WJD/hvmsf5sA34I6e4uw6xOR+6scTj/
NhMfaZOF6T2A4BzzsfLsPuzLsDWxSfE6owLkJljrMHOITdDnggpzjqfNjufFhVLtuLzR3/
gJXZm8trR4ED2K2NHwMb272I1kp8AOVb6CCwzvlwYpo7SuYqth5gCfCC82G4PBbUJLblwIjzYRirgJ7O
Kba1I2ur/9eZ1GJsK4BjzocRbMF5Q06xbdVui5/
XMeyzcAQYBo7mFIfaFduF0k5vERGpRBWGiIhUooQhIiKVKGGIiEglShgiIlKJEoaIiFSifRgiM6R0Qf0
JGMophjmKYSvwV05xx1y8v3QWJQyRDuR86MJaS2zFuuwqYUjLtA9DZIY0VxhABvqBN4BGtbEWa+V+O/
B2TvGp8rpJ4Hvgc2zX72FgbU5xrPSx2oV1QD0NvAUMlF3Bk1j34WHg3vI7bmoKaT/wGrZxcyG2c/
gw8GRO8deyA7sfa8V9N3AltgHwPefDJVg/
qEeABcCRnOIK58N8bOdxwKa4PwB6SxsL6TBawxCZXcuxQf4a4DPgK+zgnvXOh5ubrrse+B0b/
BdpfPw1pI3Ar0AceA7cDjTa9bgnU6fbZc8zdWYTwM7MGSxH5gE7AbWAlsmxLjnVjSmI8dGAW283gz1pq
8Bzhant8BPArsK3/XEyUm6UBKGCKz63XODsK/
5RT7sYZyAIuarjuRU+zDBucJ7OCcpcBi4MOc4i6shQRYQmk4BazPKe4pLSTGgT9ziu/
kFL8GLsWqhDexhNIF3DglxsGc4k6sn9LC8tx92BTXQznFvTnF3vJ8wKa2n8Pal3dh1Yl0ICUMkdl1Jqf
YODHtTPnZ6OU13cmHF9oG/mROceI81/
YBy7Cpp5XY6W1T26A3+iiN8/8x4lzvexK4q+mx8TzxyUVMi94i9XS18+EloBsbtD/
Fpq5+BFY7H57Bpo7gbIUynTGg2/nwGNbArpGALgfuB+ZVjOcjwAHvOh/
eB5aVKiMC64BVwAh2JvUEtv4iHUYVhkg9fYctg9/
BugoPlMpkNTVwvwzzcAryIrR+cy6gAPgFgAPgWW/
c4ha13VPFKedyALdw3zmToxdYu1gA7gduAmWj9LjWgu6REaqbc7TSaU2z3AUgiLVGFISIilajCEBGRSl
RhiIhIJUoYIiJSiRKGiIhUooQhIiKVKGGIiEglShgiIlLJvxCZZhi4EcwoAAAAAElFTkSuQmCC\n",
       "text/plain": [
        "<Figure size 360x432 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAawAAAGDCAYAAAB3MiRPAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3Xu8XNP9//HXcU2IS4NSbQipKoJElqqgIlkurl1VflAqKqC8/
LUUr1LfUrdpqqWvdNQ3qfq0u5Ut9LfFN3JZrRNEvimj5RTl0RIIpfz+2OtSSaTmTlzjjPnnJnzzfj4eHmdm
z95r75m053PW3ns+75bW1lZERER6uqW6+wBERERqoYIlIINQQVLREQaggqWiIg0BBUsERFpCCpYIiLS
EFSwRESkIahgiUhNWlpapra0tLm/+a3tLS82dLSck1LS8ua/fVxRa8X/
3d0fn10hddv7953Jo1ime4+ABFpOB54Fdgd2Jf0h+8Ra8/
BTxQ9PzJku2nAdcUPJqSCJSLt9afW1tbbyYHRdquC8Nk75Pd3a2jjqkyusiZekuQRFprz+1trZ+E/
gz0Ac4v5uPR3ohJzbBEpKNOBfYYHtmhpadmlDduBWRF+Fi/
CKhgSZtUsEBZYkTusLLALMBzYkHRdquC8Nk75Pd3a2jqkyusiZekuQRFprz+1trZ+E/
gz0Ac4v5uPR3oJzbBEpKNOBfYHtmhpadmlHduVXsN6vbW19w8ru
xS46al17CeBlSwpE0tCnAUEZFGoGtYIiLSEFSwREXREFSwRESkIahgiYhIhgiYhIQ1DBEhGRqhqCCJSIiDUG3tUt76JZEa
mHllpW0gxLREQaggqWiIg0BBUsERFpCCpYIiLSEFSwRESkIahgiYhIhgiYhIQ1DBEhGRqhqCCJSIiDUEFS0REGo
IKloiINIRe3ZrJWNcK/CUGv39+vgzwJvBIDN5V2W5W5VYN8Y/
EVFyzYAzgE2Aj4EAnx+DHVxDLnxgDZEqpGXgEzZ7nNHGBi8eUeW1mDL6Eao4wY8/gnA+3gna+3cK4pwAzY/
BndWR7EZFyHn11Jlc++T5PPpjDep9bngOBHkwuo/
ePsP6GBhsrOubn38deL2G7G7VYFflx4YqzrA9wJXBaDHwHSi/
k47zpRj8EGAzYGNgt+IzpzPm9n3nJJ9XjzYz8ImPk8Ewh/Czyb9x/fnEXZvdKeoPngnctXjsGwSJ+L0/
k3uLnegMFb5xXqrQJwJeNdRY4mTQTpq/k4w9kM3jfAIcGoN/
pvgjCgi4vmC8gAORWxkg3HzZfjPF+1Ed3E9PDrVGsn6M+
v1F1Wb59hAVwPjMqpzQpM2AR0pe/yqwCAcAnCONSNycBi/
FtgEeKLLPPk4FnozBbWFxG4dmotraJzbWDI9jFA15AT0vHeWxRA+nLLfEfeOeV3yN3dqH/sYLF4nNt
FtgEeKLKPk4FnozBbwb8AriqzDrnGAHeN2jF6Sm0cnBBMwIQa/
```

```
sbFuGHAQsBXwNeAQY93QvHwUMBTYA9iyaMjjgaH5uA6rsM9DjXXRWBe/P/
rH5VYRkV7u9Zmt9Ft28WUr91maKR/M6dT99PoZVgz+mXydaB/
g72VWuTMGPweYY6x7B1izrTGNdbcBGwAvxuD3AEYC38v7+x9j3WrGulVKNtumsA5wNfC7otcKs7lW4K8
x+LvyDOvRGPyUvM5I4LYY/Mf5GG4lzRSXyss/ycvvKBr3GeAaY93twO3l3ksM/
jLgMoD9Dz263fEiG264YXs3EZEGM/
iFfzPt47kLZ1YAM2bPZ73PLd+p+9EMK7kDOIt0OrBU8Z8I8ylf5CcDWxSexOB3B0YD/
fOiclkv5X75VyoIhdnc0Bj8KUXLPy56XC1PptK43wEuBIYBj+ebTkRE2uXAof2ZPns+H86ax4LWVj6cN
Y/ps+dz4ND+bW/cDipYyVjgtBj8pDbXTD4CVip6fi2wjbFu16JlKxQ9Hg/
sB5BnRtNi8DNKxpxAOnVHYd12Gg/sZqxbwVi3IrA78GBevruxrq+xbiXgu/
k4lgIGxODvB44j3UjSubf0iEivMHxAP07beW1WX3FZXp8xl9VXXJbTdl670+8S1F/
UQAz+NdI1pFrXf89YN8FY9yxwVwz+WGOdA8421p0LvE0qaqfnTU4B/
myse4Z008WBZYY9CrjWWHcUcEsH3sMTxrpxwKN50RUx+CcBjHU3AE8Br5CKGMDSwF/yqckW4JwY/
Ift3a+ICKSi1dkFqlRLa6tSz6U2+x96dOvVl53b3YchIs2n2iWNhXRKUEREGoIKloiINAQVLBERaQgqW
CIi0hBUsEREpCGoYImISENQwRIRkYagLw53ss7K2Mr9CK+Mwd+en78AXB2DPz0/vwW4Bvg3cEAM/
sg6vi0RkYW6IvuqHM2wOl+nZGwBE4ERAMa61YCZwNZFr28NTIzBRxUrEekqXZV9VY5mWPXRGRlbtwG/
z+ONADzwLWNdCzAQmBWDfyyv3JhwTg3dVxsZY9wPgSFJq8SMsKo5/
AgypQe7YGPw5nflBKA9LpLl0VfZVOSpY9XE9cJKxzpMytsaHW1b2VWAHUgPrZFd2zl8ymWAHUgPdF4x1F5OyqQbnZGGMdcuT
ZmrLkQrWA6RCtBEp22pChX2XG/
vLwN7ANjH4uca6i0gNdicDX4zBD877XLV0MGPdocChAGutuUbHPg0RaRqvz2zl8yssvqwe2VflqGDVQW
dkbMXg5xjrCrElXyPNttYnFa+hpFOG5ZQbeydShMhjxjqAvsA7wN+A9Y11FwB3AveUOQ7lYYnIQl2VfV
WOClb9FDK2LLBayWu1ZGxBKkrbASvF4D8w1j0MHEEqWJdU2Kbc2C2kGzj+q3RlY93mpETlw4HvAz+s/
JZEpLc7cGh/TvrHG0CaWc2YPZ/ps+dzzMg2s20/M910UT+fNWML0mm//wc8nZ8/
Q5ptrUM6nVer+4A9jXWfBzDW9TfWrWusWx1YKgZ/C/
BLikIoRUTK6arsq3I0w6qTzsjYIs2w1gd+m9eZl0/
zvRqDX9COsZ8z1p0I3JODG+eSZlSzSDldhT9clpiBiYiU6orsq3KUhyU1Ux6WiNSJ8rBERKR5qGCJiEh
DUMESEZGGoIIlIiINQQVLREQaggqWiIg0BBUsERFpCPricJ0Y6+YDk0if8RRg/xj8hxXWHZjXOT0G/
8u8bHVSjtalMfgjquxnIDAiBn9tfm6Bv+bxAKbF4HfuhLckIr1Md+VeVaIZVv3MisEPyZ3Q3yd1lqjmZ
aA44HEvamu/NBDYt2TZg3nfQ8oVqxwqKSJSUXfmXlWiX1xd4yFSzEg1s4B/
GutMDD6S4kBuBNYGMNaNA2aQsqvWAo6Lwd9MytHaKOdoXQk8WW7wvP37pMa5TxjrfkPK6VoDeBT4JjAs
Bj+t429zScrDEmlM3Zl7VYkKVp0Z65YmxXv8qYbVrwdGGeveInVaf4NcsLIvACNJmVd3kAIijycHOOb9
WWDbXMAAborB/zo//gqwcwx+vrHufOB/Y/CnGeu+Q868KnP8ysMS6YW6M/
eqEhWs+umbi8ZA4HFSinBb7gZ+BbwN3FDm9dtz09vnjHXVevk/WChgJW6Kwc/
Pj7cD9gCIwd9prPug3EDKwxLpnboz96oSXcOqn1k5PXhdUix9W9ewiMF/
SipuxwC3lFml+E+bmppFlvi45Lk6H4tIWQcO7c/02fP5cNY8FrS28uGseUyfPZ8Dh/
bvtmNSwaqzGPx04EhgjLFu2Ro2+QPw8vMdTYbXRhZMCr5Tbc7XzjsGA/
sBGOu+BXyuA2OISJPqztyrSnRKsAvE4KcY66YCewD/aGPd3xjrpgA3A3uXvnX/
/bsU8R6QW6K/eqEuVhCQDGuqmAqXaXoPKwRKROlIclIiLNQ6cEu5CxblOWPCU4Jwa/VXccT7EY/
MDuPgYRkWpUsLpQDH4SMKS7j0NEpBHplKCIiDQEFSwREWkEwREWkIKlgiItIQevw1LGNdK/CXGPz+
+fkypNiNRyq0Hypstyqwbwz+ovx8KeBcYEdSh4fZwPdj8FMqjfEZjnk34MUY/HP5+Thge2A6sAA4PAb/
0GcYf2YMvt1fjjDWDQHWjsH/vaP7FpHm09NiRCpphBnWx8BgY13f/
PzrwOs1bLcq8O0i7X7ZbvPrUfTVwn4wlcZeqRpJ5j4BHh2F+xHRBpET4wRq
aTHz7Cyu4DvkLqT70OKxdgWwFh3CrAOsH7+eW4M/nxS7Mag3ID2XtKs7M3cPJYY/Gt5++8DX4vB/
8xYdxRwVAx+fWPdIODKGPxIY90w4GygHzANGB2DfzOvcyEpouMT4BCgP7ArsL2x7kTgeyXvZTzw5bzvA
EwEtgHuMNbdDIzN470LHBSD/7exbj3gWtK/
192FgXJn9uJO7X8EYgx+nLFuS+A8YEVSD8KvA6eRmvKOBH4LvJXXgTTr3C4G/1HN/yo1ULyISM/
WE2NEKmmEGRYsit3oQ8qVeqTk9Q2BnYCtgZONdf2AE4CXYvBDSotVdjCwMnBMDL4Pqe9gG+BrFwqzwmH/
fYNzRvO55c/
PLP94x1XyTFeDyYx7oA2DMGP4xUUApxHZcBP8nLxwAXxeAnkqI/js37fqnkWL9LSiIuWDUGv30M/g/
AH4GrYvCbAdcA5+d1ez8qBr85sDNppnoScEM+Ssq61Fg
XjXXxg+nT29q1iDSY12e20q+ky2l3x4hU0hAzrBj8MzkKKfh+g3PWXO2Pwc4A5xrrp3gCWiN2LwrxnrNiR
dw9oRuM9Yt1cM/j5jXT9j3UrAANJMZjvSL/BbgQ2BwcC9X9gBHATXk5QLW+
+2fmGde7wMFFy4tjRLYmR36QvmD8+/x4GxbN1K4GfldlP+RjfjMG/
1h+7zMAio6zYAJwtrHuGuDWDWwqyzmOJFRJpbT4wRqaQhClZ2B3AeMIzUA7Dg46LHn/DF99XT1BQDmjmRc8RkMkh4rNVuTAUDFFI3X/
lNgPhXeVy5qdwF3GeveJl1ruo+UCHwQ8ALwIPBDUvE4hnSacXIMfuvisYx1KwMf5tlJLY7NCcGlSiM/
irVWeFwwj8VnyX3yz5YK6y8mBn+Gse5nWth29rrOxFpHgcO7c9J/
3gDSDOrGbPnM332fI4ZWS1yr3s0yDIBSKfiTsvdImqxWVcLY10nFbhn4p0qnFV/
LL40mnx8aTup3vQGqZNJ1UxNYw1m2dt13WWLdJnrVMMdbtlZe3c9M3GOs2GOfvdphI6ugOKfrjf/
PjCSXLC14BNjbWLW2s60WaBZUqZAf/7YJbuMhjAbAt3NfLYl+6G+m5UkO4mZwJWKIEd4vMvPucJ2+j47RIY5nZDLQn1CT21vtzGF2AwiB3fjtDVwr6IVE0JD8L7n81QjOK6RhlnqgoSWLDISDAm7DhiTaoMMq6H5+PqSQn8ZnR+OrUiHXiHXr3uMa6umnxnGGeOcMaAC/aEifxkHQ6JdDqlO9bsdg6G4qrV1J3t+Wn82t5t0wZzdqnOwUbo2AIHbaTT/KjpYJXoY7IKfLfJ1yv3ixUsadwPi3K0GNS+d5qs3yX4IPVv4EuTsDf0jXo4YLSmWZrxMBZbnY1mH2TOx4M3lr8bqH4bUfvE9zMZiO52PM6l7TU9SuKVdAnl8hn9pnF29BAx/9uV6/Xe/5ROfcYWBDwjZL3JkYt6bG3+gjs8DD/iTc34MaU3gSd/N5p5/JBiPSZtvk6ACWfmxTmw33jfyZc3hgzA3k+3wtlTExyyaYKUowFbYcFe+2WlodtlSZwG5Ga6N42f1Tn+UkOhm+/Cqb4PmKW3hDbOTB9wjSJ1n5VjDY+V4bV/kGfa76pjEbm6uEBpNMMIwqZ9wv5lnFVWWWF5Vh8oZK1kNwZlWwZ8KcDvBQpa1LLPw0mrSRWh47fRz8opU9Io0yBJGdHzGBFJwq38RtcZiNW1Bn0GOgtPJmYbeoVX4Cg4zKNLZ7MR2b2pmnaJ9H8jvPVUVNhmSszDMIwxvqXJDDKf/GPWyXe7Vx/mrJNfJRoNu2Fa5iOxhaS+KLA4c35SeEcT5vaLGnWdTUbugb3I6G5k4X+9sZOIo4V6hq/BhUhwUVVFVH6BAWeNcqThc4mS1b+WbUVVWVQnZEzTXEYxFSSk5HE0+HJ6X/2b6UKLPB+Uf+vIEkUPvb9ac06Vif+qwU6ZJ2K/kJ2ru2lRQvZPzxJyrwh5G6VunYzUWHRvr+MdNxDSRF1M2nk7BqR7ULdEzuJ6KGwn7rX2nHh4vGPQbCdK2OeDdQxkqcQgjOJxA8rKlSh9VJmDAaItI+3Nf4eCyiEeyNqwl4iOJVUmymcBJ0ol8kLhPM0vwKoH7TqzYPKSZfgMxWpP8B4A3FySMa0J/hkN/Mw1uqOqZOUjp4lNJn2bHq02OXEO+O35W3vu6oIfxqiYBm3GtzOPVZlKCsFIVXtYFZS+uFOMZO9Rz1zaT4uFMEqgj+QX4V7/kw/iGRpVeWUs9Llzqf32fxIpppSRLQc6Sr60LjE1Iv0MLG4b+ZBUXhnuIQnrMhNnO8XTz+u7pz24dLLdFjmOiE4O3uUX5KVdpeb5NuxfezSVSJjAU/4a1zwXWWPI85hyjFfqHb1zNNPDKSthJvO1IZCYK4cSbRnPoG4uQpK3olV7pZMf5RXDSvKNNWhtZXPLUZvyUVXtu5f5J9nuiJcyEpMsGujn05vaFZPefPaVJNu01K+cBw6nPoE38KCmkY4UBrFBsfSvC2FUI7HzvTlEbm97iTZVA3W0/rsHSQRvLBdpD+OqkhDYsdPJiRmIMbtJm0iEPhIMWfC48j6WszrMhtbaUNFH0Ew4ACDxQhB14wfhfMq9cXhGo3YIcHVgLHDHcDsDnS3mPyFI02QeyXuyZcOOtb/3Go+lk5jrS0m1J0T6ES36yFDnHU1f5Wgt1BSBR8Vd9T+Xi
```

```
Wc+qb2y8BTInB754fb00KsHzfWLcHqav7pqTu9s+R+jV2KuVhifQcjZR9VY4KVnOqdErw3hj8+/
nxdsB1Mfj5wBvGuv8pN5Cx7lDgUIC11lyjLgcrIl3j9ZmtfH6FxZf11OyrclSwepfSKJNaIkiUhyXSJB
op+6oc3dbee40npTgvbaz7AilSRUSa2IFD+zN99nw+nDWPBa2tfDhrHtNnz+fAof27+9BqooLVe91Gii
SZBFwMPNC9hyMi9dZI2VflKF5EADDWjQN8tbsEFS8iInWieBEREWkeuulCAIjBj+7uYxARqUYzLBERaQ
gqWCIi0hBUsEREpCGoYImISENQwRIRkYaguwTrxFi3FnAusCUwB5gKHB2Df7EO+7LAmBi8q7KOAQ6IwR
/
Z2fsXkZ6nkWNEKlHBqgNjXQupk8SVMfhRedkQUlf0Ti9YtYjBRyB2x75FpGs1eoxIJSpY9bEDMDcGf0l
hQQz+KWNdi7HuTOBbpMazp8fgb8gzpFOBt4EhwK2klklHAX1JicEv5W4Us4FNSMXvZzF4X7xjY91w0sy
uLzALOCgG/0LxLMxYdwqwDrB+/nluDP78enwQihcR6XqNHiNSia5h1cdg4PEyy/
cgFaTNgZ2BM3PjWfKyo0j5VPsDX4nBDweuAH5SNMZAYHtSGOMlxro+Jft4HtguBj8UOAn4TYVj/
CqwCzAcONlYt2y5lYx1hxrrorEufjB9euV3LCI9xuszW+lX8v/
oRooRqUQzrK41kkUZVG8b6x4gXeOaATwWg38TwFj3EnBP3mYSi3dSvzEGvwD4l7HuZVLhKbYKcKWxbgP
SLK5sIQLujMHPAeYY694hzdheK11J8SIijafRY0Qq0QyrPiYDw8osr9bgsfhPnwVFzxew+B8WpUWj9Pm
vgPtj8IOB7wKlM7By+5uP/
ngRaRqNHiNSiQpWffwPsLyx7pDCAmPdlsAHwN45g2oNUurvo+0cey9j3VLGukGka1ClF4lWAV7Pj0d35
OBFpLE1eoxIJfqrug5i8K3Gut2Bc411x5NulJgKHA30A54mzYyOi8G/
ZawrPa1XzQuk7Ko1gcNi8LONXexu9t+TTgn+jFQ4RaQXGj6gX8MXqFLKw2ogtWRW1ZPysESkTpSHJSIi
zUOnBBuIMqtEpDfTDEtERBqCCpaIiDQEFSwREWkIKlgiItIQVLBERKQh6C7BLmCsmxmD75cffxs4D9gJ
+DbwSQz+qpL1B5K+bzXYWDcaMDH4I7r2qEWkETRj7lUlKlhdyFi3E3AB8I0Y/
L+BS9rYRESkombNvapEBauLGOu2BS4Hvh2DfykvOwWYGYM/y1g3DBgLfAL8b8nmaxvr7gYGAbfF4I/
L2+8D/IL0LfE7Y/A/z8tnAheSIkw+yOv8npR9dXQM/
g5j3dLAGYAFlgcujMFf2tnvW3lYIvXTrLlXlegaVtdYHvgrKYjx+Qrr/Bk4Mga/
dZnXhgB7k7Ky9jbWDTDWrQ38Dtgxv76lsW63vP6KQIjBDwM+Ak4Hvg7sDpyW1zkYmB6D35IUcXKIsW69
0h0rD0uk52rW3KtKNMPqGnOBiaQicVTpi8a6VYBVY/AP5EVXk1KJC+6LwU/
P6z4HrAusRipK7+bl15C6v98OfArcnbedBMyJwc811k0iBUACfAPYzFi3Z36+CrABMKX42JSHJdJzNWv
uVSWaYXWNBcD3SbOgX5R5vYUlc62KlcuuqtYscm4MvjDewmytHPxY+F92C/CTGPyQ/
N96Mfh7yowlIj1Us+ZeVaKC1UVi8J8ADtjPWHdwyWsfAtONdSPzov1qGPIRYHtj3er5etQ+pNiRWv038
CNj3bIAxrqvGOtWbMf2ItLNmjX3qhKdEuxCMfj3jXXfBMYb66aVvHwQMNZY9wmpmLQ11pvGuv8C7ifNl
v4eg/
9rOw7nCtLpwSeMdS3Au8BuVbcQkR6nGXOvKlEeltRMeVgiUifKwxIRkeahgiUiIg1BBUtERBqCCpaIiD
QEFSwREWkIKlgiItIQVLBERKQhNNUXh41180m985Yh9cTbP3eRKLfuwLzO6TH4X+ZlqwNvApdWy5/
K246IwV9btGw4qSP6F0kNZ98Ejo/BT6oyzinkbu1lxi/kYVlS49yXgT7A9TH4Uyt+CG0w1o3LY9/
c0TFEpHv0puyrcppthjUr98UbDLwPHN7G+i+T2iUV7AVMrmE/A4F9C0+MdWsCNwK/
iMFvEIPfAvgtKQ6kMzwYgx8KGOAHOYpkIWNdU/3hISJLKmRfTft47mLZV4+
+OrO7D63LNPMvuoeAzdpYZxbwT2OdicFHUoTHjcDasHA2MoNUKNYCjsszkzOAjYx1TwFXAv2BK2PwEws
Dx+AXZloZ69YlZV2tQWqBdFAOcKRonWp5WIUxPzbWPQ4MMtZtCnyHNOtaMYdD/
p7U5b2VNHO8IbdduoAUQzKFom+UG+vOAHYF5gH3xODHtPF5tZvysEQ6R2/
Lviqn2WZYAORmsDsBd9Sw+vXAKGPdl0id0N8oef0LwEjSTOyMvOx40qxnSAz+HGAT4Ikq+/
gjcFUMfjPgGuD8MutUy8MCwFi3GvA1Fs0CtwYOjMHvCOxBysXanBTceKax7gukDKwNSVlahwAj8lj982
ub5OM6vcI+lYcl0gP0tuyrcppthtU3z3oGAo8D99awzd3Ar4C3gRvKvH57juV4Lp/
6a5Ox7hFgZdKs5ShSYdkjv3w1aSZUvH5beVjbGuueJEWFnBGDn2ys2xK4Nwb/
fl5nJHBdDH4+8Lax7gFSMON2RcvfMNb9T15/
BjAbuMJYdyfgy70X5WGJ9Ay9LfuqnGabYc2KwQ8hBRwuR9vXsIjBf0oqbscAt5RZpfjPl0oNGicDWxSN
uRXwS1IoYjmlv/jbysN6MAY/NAY/LAZ/SdHyj2s4tnL7IwY/
DxhOes+7sSjwUUR6oN6WfVVOsxUsAHI675HAmELeUxv+APw8Bv9ejbv4CFip6PmFwGhj3YiiZSsUPZ4I
jMqP96PkGlUH87BKjQf2NtYtbaxbgzSzejQvH5WXfwHYAcBY1w9YJQb/
d+Bo0ulEEemhelv2VTnNdkpwoRj8k8a6p0mF4uo21p1MbXcHFjwDzMvjj4vBn2Os2xv4nbHui8A7wDTg
tLz+kaSsq2PJN12UGbNdeVhl3EY69fg0aUZ1XAz+LWPdbaQbLiYBL7Io5HEl4K/
Guj6k2dlPO7BPEelCvSn7qhzlYUnNlIclInWiPCwREWkeTXtKsCB/
X6n0lOCcfGOEiIg0iKYvWLk1km4oEBFpcDolKCIiDUEFS0REGoIKloiINISmv4YlItJoenuMSCV1L1gd
zKg6MgZ/QV72RyDG4Md9xuPYnNRfC7/
wJ1K3h7n5bsJrciPYSmMEYEzu7F68fDRwJvA6qSXUOTH4yz/
L8eZxT6FMXpaINK9CjMgqfZZeLEakt3W1KKcrZliziorElaT+fr+usv47wFHGuktzn7/
OMglY11i3Ugz+I1LX8ueBoaQWRiOACZ9h/
Bti8EcY6z4PTDbW3RGDf7utjXL8R0tusNt0FC8i0j6KEamsq08J1pJR9S6pcBwILDZLKZ7h5HTgGIMfm
Gc4uwFLA4NJvQGXA/YnNa/
9dgz+fWPdY8BWwD+AYaQegCNYVLD+kfczDDgb6EdqsTQ6Bv9mPowfGOvOJ3Vj/2EM/
tHiY4zBv2Ose4lUHH9E0QzJWPcsiwIj7wLuJ7VT2s1YtxHwm/wepsXgd8rrbZzf9zrAuTH48/
NYtwMDSHlY58XgL8uxKn8i5Xe1AmNz26hB+b2uQcrbOiQG/7yxbi/gZFKsyvQY/Hal/
xjGukOBQwHWWnONJf6xRKRzvT6zlc+vsPiy3hYjUkmXFayijKo/1bD6GcBdxrqx7djFYNJsqQ/
wf6RmtkONdecABwDnkprQjjDWPUSK6gikZOBzSQXr1Nws9wLgP2Lw7+Yegb8gzpfSxbjtS4OL
gkve5PrB+PoZqNiQFOf44N6u9HNguBj8lZ1UVfJXUsHYl4AVj3cUx+LmkYvm+sa4v8Jix7hZSrMoXc+I
yxrpV8xiXAYfF4P9lrNsKuIjUX/AkYJcY/
OtF6y5G8SIiXUsxIpV1xV2ChYyq9lXbVMXgp+NuR0WC9Gp2PwT+z3HRugq@EB16JHdXEDEQVmOUKXm8pTjXxx
```

g3wWmA3/LyyeRfpFDmrmNIMVqPBaDfwn4ci4Y/WLwL5MKyWDg3nzcJwJfKtrPdfkYxwMrF/
2i3zuvfx3w/4pyqip5JQb/
cH78NWB8ft+UbHtnDH5ODH4a6XRpIZPryNx892HSTGsD4GVgfWPdBca6bwIzclf2EcBN+fguJYVSFj6P
cca6Q0gzOxHpZooRqazLrmHlkEJPuoZVLnG31G+Am0nxGAXzWFRk+5SsXzxfXlD0fAGL3ufDpFDDkaTT
kwCvkTq6F+LtW4DJVZJ/S2cZhec3xOCPKHmt+HhLj7k0y6rS7KX4fc0HljHWWVKq8NYx+E/
yKcM+MfgP8s0lu5A+5++TokM+LFxHLBaDPyzPuL4DPGWsG9KOiBURqYNCjEjxXYLHjFyz11+/
gi78HlZ7M6pi8M8Dz7Homg/
AVNK1J4A9O3AMHwGvAqNZVLAeIv1SLxSsF4A1jHVbAxjrljXWbVI0zN55+UjSdZ9qufFTycGOxrotgPU
qrPcQsL2xbr28blt/
Sq0CfJCL1VdJMzTydb2lYvC3kAIkt4jBzwCm5OtVGOtaclHDWDcoBv9IDP4k0rW6AW3sV0S6wPAB/
bhw13X4+4EbcOGu66hYZV36xeEY/JOkvKZRba2b/ZrFT8edBfzIWDcRWL2DhzEBWD4G/2p+/
hDpmtPEfIyfkorh7/
Ipt6dIp9QKPsj7vwQ4uI193QL0z6fifkTKo1pCPo15KHBr3ucNbYx7N2mm9QzwK9LMEeCLQMj7Gwf8V1
6+H3BwHnsy8B95+ZnGukn5ZpDxpH8bEZEeSXlYUjPlYYlInSgPS0REmke3tGZSRpWIiLRXtxQsZVSJiE
h76ZSgiIg0BBUsERFpCIoXqRNjXSvwlxj8/vn5MsCbwCMxeFdlu1WBfWPwF+XnA4F/
kr4fVjC8PY2BjXV/Z1HXkIVji4g0EhWs+vkYGGys6xuDnwV8nRQ/
0pZVgR+T+v0VvFSuU0WBsW6ZGPy8Sq/
H4L+d1xtYZmwR6UbKvqqdClZ93UVqe3QzsA+pz+C2sDDrah3Sl5aLO7GfAQzKX/
69l9RlfQl5+7VJfRKnGevuAUyhPZSxzgNnxeCDsW4qqYN76dhnk76kvDLpfws/isE/
2KmfgIhUpOyr9lHBqq/
dA+fXAAAgAElEQVTrgZNy8diM1N1926LXl+jEDhwPDC7KEBvIoiIDMCEGf3h+PAwYGYOflSNW2lI69jH
Af8fgf5276a9QdesOUB6WSGXKvmofFaw6isE/
kwvOPsDfy6xyZwx+DjDHWFfcib1UpVOCd+TTjR31GDA293a8PQb/
VOkKysMSqR9lX7WPClb93UHqgWiB1UpeW6ITezvHLu74Xq0zfFkx+PE51+s7wNXGujNj8FeVrKM8LJE6
UfZV+
+i29vobC5yWvyxdi49IpwjbayowxFi3lLFuACnzq+rYxrp1gXdi8JeTgjW36MB+RaSDlH3VPpph1VkM/
jXgvHas/
56xbkLuoH4XFW66KGMCMIUUWPks8EQNYz8LHGusmwvMJCUzi0gXUfZV+6hbu9RM3dpFpE7UrV1ERJqHC
paIiDQEFSwREWkIKlgiItIQVLBERKQhqGCJiEhDUMESEZGG0DRfHK53/
hTwTWDjGPwZFcYZTVG39JLXppK6TCwA3gYOiMG/
1c63WBjLAmOqvacq2+4GvBiDf64j+xYR6U5NU7Cof/7UHfm/jtohBj/NWPcb4BfAkcUvGuuWjsHP/
wzj12I3wAMqWCJdTLlXn10zFSyob/
7UaPIMyli3F3AyqWHt9Bj8dnm1tY11dwODgNti8MeVGWo8uVgZ62aSMql2AY4x1i1PapS7DKmT+o9i8H
OMdd8EzgWmUdRyKb+nmTH4s/LzZwEXg59qrDsAGAO0As8AFwO7Atsb604Evpc/
q8NIjXOfi8GPausDFpH2U+5V52i2glXv/
KmCk4BuBUOAoaQu6j8DyurKVc/
WOB9bLRXHVamN2lPKwKcY/
IvGuquAHxnrAnXVsW4T4T4ARgmzyr6x+Df99YdwfgY/A35/
WOB9bLRXHVamN2lPKwRJR71VmaqmB1Qf5UwQRgnLHuRuDWouX3xeCnAxjrngPWBQoF635j3XzSbOfEvG
w+cEt+vCEwJQb/Yn5+JXA4EPLyf+Vx/
0LOp6piR+DmGPw0gBj8+xXWewa4xlh3O3B7uRWUhyXy2Sn3qnM0VcHK6pk/BUAM/
jBj3VakU2pPGesKxa3a+DsUCkiR2UXXrao1f6zUobhSBlZLlW2KfQfYjnSq8JfGuk1i8POKV1Aelshnp
9yrztGMt7XXPX/
KWDcoBv9IDP4k0nWlAe08xnKeBwYa676cn+8PPJCXr2esG5SX71O0zVRyhpWxbgtgvbz8PuD7xrrV8mu
FcJ2F79VYtxQwIAZ/
P3Ac6eYTnZsQqQPlXnWOpitYMfjXYvDtyp8CJhjrnjXWnVnjZmca6yblmxzGA0935FhLjmM2cBBwk7Fu
EukW+Evy8kOBO411/wu8UrTZLUD/fL3tR8CLeazJwK+BB4x1T5Nu7IB0je9YY92TwAbAX/K+ngTOicF/
+Fnfh4gsqZB7tfqKy/
L6jLmsvuKyuuGiA5SHJTVTHpaI1InysEREpHmoYImISENQwRIRkYaggiUiIg1BBUtERBqCCpaIiDQEFS
wREWkIzdiaSUSk2yhGpH7aLFi5YeukvO4UYP9KHRFy49mkxJ+Avysj8CMQY/
rjMO2Fg3BvhPUh+9+cAfYvBXVVl/
NHBPDP6NNsYdR1En83Ye02jgTFL+1nKkrhGXt3ecMuOeQlF8iIj0bIoRqa9aZliziqI3Ch3Ef11l/
XeAo4x1l8bgP+2EY1zIWHcYKZhxeAx+hrFuFVIoYTWjgWeBqgWrE9yQs7I+D0w21t0Rg3+7rY2MdS1AS
wx+QZ2Pr1soXkR6E8WI1Fd7Twk+RMqZquZdUvzGgaQcp4WMdYEU7x6NdauTZl4D8wxlN2BpYDDwB9JMZ
X9SB/Rv54iMX5C6ns8AyFEeV+axTwK+C/QFJgL/jxRSaEgRGrOArYFjS9eLwS/Wn8pYtxPlgxS/
TerLVwhSXL80qj4G/46x7iVgXWPdjygTsJhXvQu4Px/
Tbsa6jYDf5M9gWgx+p7zexvlzKw6dJEeCDCB1aD8vBn+ZsW5p4E/
5PbcCY2Pw5+TGuRcCawCfAIfE4J+vEkRZ/FkoXkSkRooRqa+aC1b+ZbgT6RdiW84xbb3CmjcHfnxpc/
2IQUV/jwGP9RYdw5wgLHuT8BKMfi/xxj8aflYry795srDuCXCTza0usB/
yt6H32AcZRPkjxUmC7GPwUY9115Q7CWLc/dwXiJ0MgY/F/
hhDmXsCzxmrLsFGAh8MQY/OB9LIZTzxbs/
cizKRaTMrEpBlAspXkSkdooRqa9a7dhJ7XXIVxcDnwI/
UQz+XWA6i4r+f3BlbpdFdN9N1pFlbdDEgldi8A8B/
nx18DxhfGLN1pFlbpdDEgldi8A/
nx18DxhfGLtn2zhj8nJylVRw6eWTuxP4waaa1AfAysL6x7gJj3TeBGca6fsAIUhf4p0hF9wt5jSEIQ5SG
kmZ2IfAaKEamvWgpW4RrTWuqTTdKVx8ZX8Bvh5yT6KAwf7lKxfPGdeUPR8AbBMPg34cZ7BLCbPii4C9oz

Bb0qarZSOX+t6lboGt9VN+IYY/JAY/
FYx+NvyskoBiwAfl4xdqRgvEQpprLPAzsDWMfjNSfEgfWLwHwCbk1KKDweuyPv/
MB9b4b+NIAVRktKPB5CCKEsDL0WkHRQjUl81fw8rXy86EhhjrFu2hvWfB55j0TUbSIGDw/LjPWs/
zIV+C1xorFsZwFi3cr7GUigE0/KMonjs4oDGausVVAtSXD/
fCQmwdw3HO5XyAYulHgK2N9atl9dt68+xVYAPYvCfGOu+Spqhka8LLhWDvwX4JbBFLvRT8vUqjHUtxrr
N8+N6BFGK9GrDB/
Tjwl3X4e8HbsCFu66jYtWJ2vXF4Rj8k6SwwlE1bvJr4EtFz88iXQ+aCKzenn1nF5NuVHgs38DwAPBJvs
3+ctLpw9tJN0oUjAMuyafD5lRZD6gapDgL+DFwdw5SfJt06rKasgGLZfb5LunGhlvzab4b2hj3btJM6x
ngV6TTggBfBELe3zjgv/Ly/YCD89iTgf/Iyzs9iFJEpF4U4NgOxrp+MfiZ+Vb0C4F/
xeDP6e7j6ioKcBSROlGAYx0ckmcvk0mn5S7t5uMREek1OtSayVi3KXB1yeI5MfitPvsh9Vx5NtVrZlQi
Ij1JhwpWDH4SMKSTj0VERKQinRIUEZGGoIIlIiINQQVLREQagvKwatTBmJXTY/C/
zMtWB94ELo3BH1FlPwOBETH4a/NzC/
w1jwepMe7O7Tz2iTH4EaVji8hno+yrrqUZVu1m5bZGg4H3abtF1css3uVjL9Lt8G0ZyJI9GB8saqu0RL
Ey1lX9wyMGP6LK2CLSAYXsq2kfz10s+
+rRV2d296E1Lc2wOqaWmJVZwD+NdSZ3it8buBFYGxYGRs4gRYGsBRyXwyPPADbK3/e6ktQncAl5+/
dJHe6fMNZ9RJkokxj8VGPdzBh8vzJj3wP8mdQjcingezH4f3Xg86hIeVjSrJR91fVUsNqpnTEr1wOjjH
VvkRrXvkEuWNkXgJGkTvB3ADcDx5PiUFzenwW2zUUG4KYYfCFA8yvAzjH4+TmduC2lY19AytK6xli3HG
U6tisPS6Q8ZV91PRWs2hViVgYCj1NDzAqp59+vSH0Hy/
UHvD0nDT9nrFuzzOsFD5YGRWY3xeDn13AclTwEnGCs+xJwa7nZlfKwRMpT9lXX0zWs2rU7ZiUG/
ympuB1DaoRbqvhPsZp6aZUojiipFmVS6fiuBXYlnb78b2Pdjh04BpFeSdlXXU8Fq53aG7MC/
IGUnvxejbsojkNpj6m0HWWy2Ng5W+zlGPz5pFOSbV2XE5FM2VddT6cEOyAG/
2SO6hjFkj0VS9edTG13BxY8A8zL44+jwk0XZdwCHJBPWz5G+SiT0rH7AD8w1s0F3gJOa8dxivR6wwf0U
4HqQooXkZopXkRE6kTxIiIi0jx0SvAz6K0xKyIi3UEF6zNQzIqISNfRKUEREWkIKlgiItIQVLBERKQh9
LhrWMa6VuDsGPwx+fkYoF8M/pTPOO6qwEvA6jH4VmPd1sBEYEAM/jVj3SqkCI/
Vc7ukcmOMA3xuUlu83JIiQF4mfbfp+hj8qZ/
lePO4owFTLY5EROpPMSI9Q0+cYc0B9sj5UZ0mZ1e9BWyUF40gfSm3EL3xNeCRSsWqBg/G4IeSuq//
wFg3rNYNc0NdEemBFCPSc/
S4GRapJ95lwE+BE4pfKJ3hFGIz8gznVFKT2SHAraSwxaOAvsBuMfiXgAmkAvVc/nlO/nlj/
jkxjzsIuBBYA/gEOCQG/3w+jJ2NdUcBawI/
i8H74mOMwX9srHscGJRve184QzLWeeCsGHww1s0EzgZ2AY4x1s0BzgNWJBXtnfKQaxvr7gYGAbfF4I/
LY10MbJnf380x+JPz8jNI/QHnAffE4McY69YALgHWyWMeHYOfYKzbPu8ToBXYLgb/UdV/
nXZSvIg0OsWI9Bw9cYYFqVjsl0/
T1WpzUoHaFNgf+EoMfjhwBfCTvM5EFs2o1gduIs2IyMsn5MeXAT+JwQ8DxgAXFe1nILA98B3gEmPdYk1
mjXWrkWZrbbVjWhF4Nn9n61FSN/ejYvCbAzuTGtJCKsB75/e1t7FuQF5+QgzekPr/bW+s28xY1x/
YHdgkBr8ZcHpe9zzgnBj8lsD38mdCfm+H56a+2xbts/j9HGqsi8a6+MH06W28JZHm8/
rMVvqVdA1VjEj36IkzLGLwM4x1V5GazC7xS7SCx2LwbwIY614ihRNCmmntkB9PAI431q0HTI3BzzbWtR
jr+gHDgEfz4xHATcYuTPQozgu4MZ82/
Jex7mVSlhWkzKongQXAGTH4yca6Lasc73wWdXDfEHgzBv9Y4f3n9wFwX264i7HuOVK3+FeB7+esqmVIu
Vobk2aOs4ErjHV3AoXZ387AxkXvZ2Vj3Ur58zjbWHcNKV7ktdKDVLyI9HaKEek5emTBys4FniAl4hYsj
NAw1rWQYj4Kiv/cWVD0fAH5fcbg/
2Ws+xzwXVIWFKT4j4OAKTH4mca6lYEP86yjnNJf2oXn5TKrqkV+zC7KsmopM2659zUfWCYX3DHAljH4D
/Kp0j4x+HnGuuGk04mjgCOAHfMxbB2DLy3+Z+TC9m3gYWPdzkWnPkWEFCNy0j/
eANLMasbs+UyfPZ9jRlaLsJN66KmnBInBv0+6tnRw0eKppJkQwH8AtcR7lHqIdOrwoaLnR5OvX+XZzRR
j3V6QCqOxbvOi7fcy1i2Vr3OtD1S7SDMVGJLXHwAMr7De86RrVVvmfa5krKv2x8TKpCys6Tn48Vt5u37
AKjH4v+f3VCi695CKF3m9IfnnoBj8pBj874DIotmiiGSKEek5evIMC1KWVPEt3ZcDfzXWPQrcx+IBhrW
aQJpRxPz8IVLhmVi0zn7Axca6E0lF8Xrg6fzaC8ADpJsuDsunFavtawrptOSzpBnjEmLwnxrr9gYuMNb
1JZ0G3bnSoDH4p/Ppx8mkW+kL195WIn0+fUiztp/
m5UcCFxrrniH9m48HDgOONtbtQJq5PQfcVWmfIr2ZYkR6BsWLSM0ULyIidaJ4ERERaR4qWCIi0hBUsER
EpCGoYImISENQwRIRkYaggiUiIg1BBUtERBpCT//icFPL2V9/
icHvn58vA7xJijmp+G3knO21bwz+oirrDARGxOCvbeMYhgBr5+4YIr2acq96Ns2wutfHwODc3QLg68Dr
NWy3KvDjNtYZCOxbw1hD0/RHo15V71fJphdb+7SFElNwP7ANeRoj4w1p1CyrBaP/88NwZ/PnAGKW/
rKeDeGPyxZcY9A9gor3MlcHH+z5Ca8v6M1NLpNKCvsW4k8NsY/
A2d+eaUhyWNQrlXPZ8KVve7HjgphztuBowlF6z6R4lJWAF3Jw4/HA4Cod5cnrjCmcWjTWHQMQg9/
UWPdVUkPcrwAnURQyWSpHmBwKsNaaa3T4TYr0dK/
PbOXzKyy+TLlXPYsKVjeLwT+TrzftA5S7jnRnDH4OMMdY9w6p6W5HjAQuyPt83lj3CqlgtXV8ysOSXkG
5Vz2frmH1DHcAZ5FOB5ZaIg+rg/uoqbmkSG914ND+TJ89nw9nzWNBaysfzprH9NnzOXBo/
+4+NMlUsHqGscBpMfhJNa7/EekUYXvWGU+KTcFY9xXSNbEXahxLpOkp96pnUw+rBxH4R4/
XjvXfM9ZNMNY9C9xV4aaLZ4BNZEMNY9C9xV4aaLZ4B5xrqngXHARcAlxrpJpJsuRsfg5xjr7geOzzdndPpNFyKNRLlXPZvysKR
mysMSkTpRHpaIiDQPnRJscMa6TYGrSxbPicFv1R3HIyJSLypYDS7fqFHt+1giIk1BpwRFRKQhqGCJiEh
DUMESEZGGoIIlIiINQTddZMa6+cAk0mcyBdg/Bv9hhXUH5nVOj8H/
Mi9bnZRldWmlRrJF2y7MqTLWWYqa1IpI11D2VePRDGuRWTH4ITH4wcD7wOFtrP8yUFxk9gIm17CfgdSW
UyUidaLsq8akGVZ5D5GiPqqZBfzTWGdi8BHYG7gRWBvAWDcOmEHKn1oLOC4GfzNL5lQ9WRiwSv4VxroD
gDFAK/BMDH5/
Y926pD6EawDvAgfF4P+d9z2LFE2yLnAQcCCwNSnNeHQe8xvAqcDywEt5f6zysKQnUvZVY9IMq4Sx

```
bmlgJ1IH9bZcD4wy1n2J1En9jZLXv0CK9XCkQgUpp+rBPJs7p8yYXwV2AYYDJxvrljXWbQKcAOwYg98c
OCqv+0fgqhj8ZsA1wPlF43wO2BH4KfA34BxgE2BTY92QfArzRGDnGPwWQCSFOpZ+Hoca66KxLn4wfXoN
H4lIz/f6zFb6Lbv4MmVf9XyaYS3SN896BgKPA/fWsM3dwK+At4FyTWNvj8EvAJ4z1tWaY1Uu/
2pH4OYY/
DSAGPz7ed2tgT3y46uB3xeN87cYfGtudvt2oRO8sW5yfo9fAjYGJhjrAJYjzSwXozwsaUbKvmpMmmEtM
isn+K5L+uXd1jUsYvCfkorbMcAtZVYp/nOt1jyqcvlXLaRTgW0pXqcwzoKSMRcUjXlvnukNicFvHIM/
uMZjFGloyr5qTCpYJWLw04EjgTHGumXbWh/4A/DzGPx7Ne6iI/lT9wHfN9atBmCsK/y/aiIwKj/eD/
jfdoz5MLCNse7LecwVck6WSNNT9lVj0inBMmLwT+YcqVEs2Vi2dN3J1HZ3YEFpTtWT1VdP+zDW/
Rp4IN9+/
yQwmlRYxxrrjiXfdFHrQcTg3zXWjQauM9YVzoOcCLxY+1sRaVzKvmo8ysOSmikPS0TqRHlYIiLSPHRKs
AplTYmI9BwqWFUoa0pEpOfQKUEREWkIKlgiItIQVLBERKQh6BpWnRjr1gLOBbYkdZqYCtwO7FouSsRYd
wVwdgz+OWPdVMAUWjEVrXMKMDMGf1Z9j16keShGpHmoYNWBsa4FuA24MgY/Ki8bAny30jYx+P/
sosMT6TUKMSKr9Fl6sRgRdbVoTCpY9bEDMDcGf0lhQQz+KWPdqsBOxrqbgcGkPoQ/
yE1qAynIMRYPZKw7ATgAeJXUzeLxvDwAj+R9rQocHIN/
MHevMIUQSWOdB86KwQdj3UzgQmBn4APgF6SGuesAR8fga+lQ3y6KF5HupBiR5qJrWPVRKEblDAWOJnVK
Xx/
YptIgxrphpPZQQ0ld2bcsWWWZGPzwPN7JNRzXikCIwQ8j9TQ8Hfg6sDtwWoVjULyINCzFiDQXzbC63qM
x+NcAiuJMKjWt3Ra4LQb/SV6/dAZ0a/75eB6nLZ+SIlEAJpG+BD03R5CU3V7xItLIFCPSXDTDqo/
JwLAKr5WLD6mmWpEojFU8zjwW/3ftU/R4bgy+MN7C2JGc2aU/XqTpKEakuahg1cf/
AMsb6w4pLDDWbQls385xxgO7G+v6GutWospNG0WmAkOMdUsZ6waQkotFeiXFiDQX/VVdB/
kmit2Bc411xwOzWXRbe3vGecJYdwPwFPAK8GANm00AppBO+T0LPNGefYo0G8WINA/
Fi0jNFC8iInWieBEREWkeKlgiItIQVLBERKQhqGCJiEhDUMESEZGGoIIlIiINQQVLREQaQpd/
cdhYN5/0pdZlSF9w3T8G/2GFdQfmdU6Pwf8yL1sdeBO4tNCRvMq2I2Lw1+bnKwCXA5uR7vn/
EPhmDH5m57yzxfY9GrgnBv9Gfh6AL5C+QDwT+GEMvkNtzPP78jH4wR3Y1gKfxuAndmTfIj2Zcq+aX3fM
sGbF4IfkX7jvA4e3sf7LQHHg4V6kXn1tGQjsW/
T8KODtGPymed8HA3NrPur2GQ2sXbJsvxj85sCVwJmlGxjrlq7TsRSzwIgu2I9IlyrkXk37eO5iuVePvt
rpf49KN+ru1kwPkWY81cwC/mmsMzkram/
gRnJBMNaNA2YABlgLOC4GfzNwBrBR7oh+JWmG80ph0MIMx1h3HDA7Bn++se4cYPMY/
I7Gup2Ag2LwPzDWfQM4FVgeeCkvn5njP84G+gHTSIVqm3ws1xjrZgFbl7yf8aQ4EHKy8FjgG8AfjXXPA
5cAK+T9/DAG/0Hez1jgE4o6u7eRffVN4DfA0vnYDgYOA+Yb634A/CR/XieTmudOj8Fv18a/
RbspD0u6gnKveoduu4aVZxQ7AbWEBl4PjDLWfYn0y/WNkte/AIwkzcTOyMuOBx7Ms7lzSL/
wf26se8hYd7qxboO83nhSjAekQtPPWLdsHu/
BfAryRGDnGPwWQAR+lte5ANgz50uNBX6di2UkzaiGxOBnlRzrd0mnRAtmx+BHxuCvB64Cfh6D3yyvU8i
4+jNwZAy+tPiVZaxbg3T683
t5VrdXDH4qqRiek4/rQeAkYJe8zq4VxlIelvR4yr3qHbpjhtW3KAfqceDeGra5G/
gV8DZwQ5nXb88RGc8Z69YsN0BO/
F2fNJvZGXjMWLd1PoZhuRv6HFKzWEMqYkcCXyOFLU4w1gEsR5oZbkgKarw3L1+adG2tksKMayppdlNwA
4CxbhVg1Rj8A3n5lcBNZZZfDXyryn7Ixzw+Bj8lv/
f3K6w3ARhnrLuRRdlai1EeljQC5V71Dt1RsGbF4IfkX8SedA3r/GobxOA/
NdY9DhwDbMKSMRvFf0ZVbKKYb7C4FbjVWLcA+HYM/g/51NxBwETgGVLs/CDgn/
nnvTH4fYrHMtZtCkyuddZDmnHFMss/bmO7FipnYlXKvqvq2zUIx+MOMdVsB3wGeMtYNicG/
19Z2Ij3NgUP7c9I/
0omXlfsszYzZ85k+ez7HjCz796s0qG47JRiDn06awYzJp9fa8gfS6bJaf6F+BKxUeGKs28ZY97n8eDnS
rKlwTWs8MCb/
fJB0reepHHb4MLCNse7LedsVjHVfAV4A1sizNIx1yxrrNim371rkz+MDY13h9OT+wAP5DsrpxqrqRefl+
RZtNpXz21UPA9sa69fKxFdLqSj+TQTH4R2LwJ5Gucw1ozzGL9BTKveoduvWmixj8k8a6p4FRpFNd1dad
TG13BxY8A8zL448D3gMuNta1kAr1ncAted0HgROAh2LwHxvrZudlxODfzTc3XGesK5K6ZBOUi/
g/DxbXAY4Nx/
jOOCSCjddVHNg3m4F0t2RB+XlBwFjjXWfAP9dtH7Z7Kt8zIeSZpJLAe8AXwf+BtxsrPsP0mnJn+ZreS3
AfcDT7ThWkR5FuVfNT3lYUjPlYYlInSgPS0REmkd3fw8LWHgDQ+kpwTkx+K2643hERKTn6REFKwY/
CRjS3cchIiL9l04JiohIQ1DBEhGRhqCCJSIiDaFHXMOSzmsSzmGs253UyWOjGUxyWOjGPzz3X08IvWiKJHeSTOs5rIP
qZv7qO4+EJF6UZRI76UZVpMw1vUjRZvsQOqAf0rucvFHYHtSR4ylgLEx+JvLRaPE4Ks17+0Qxh1IZ1OU
SO+lGVbz2A24Owb/IvC+sW4LYA9SV/
xNgf8kt4mqFI1hPoyiR3kszrOaxD6mXIaT8sH2AZYGbcvTKW8a6+/
PrNUejKF5EehpFifReKlhNwFi3j3GrAjMNhY10oqQfK3AbU6KOt2MP4MoX1B4ZNo3bu4l3jI4x4f/k0Ni+ayifiPDivnRJsDnsCV8Xg143BD4
zBDyBds5oGfC/
Hj6wJ2Lx+tWgUkR5NUSK9l2ZYzWEf4WEf4IySZbcAAnU/K0SgiPZ6iRHonxYQH1s5oGfC/
8zHza8FFgmxj8Wx0ZS/EiLlnNcWLaIbV/
LyxblVgOeBXHS1WoGgUkZ5KUSIiIiIi0lA0wxIRkYaggiUiIg1BBUtERBqCCpaIiDQEFSwREWkIKlgiItIQVLBERKQhqGCJiEhDUMESEZGGoIIlIiINQQVLREQaQpd/
ZDUR2dWIdArKeFMc/4KFgm4m+VvOaQhk/m8W2jf3+y1BM2n
+8SzK2Bzo7BH5OfjwH6xeBP6aTxDwCOI92330LqPn5WlfV3A16MwT/
XxrinADOrjVVlWwv8FXgZ6ANcH4M/tb3jlBl3NGBi8Ed81rFEGpFyr6RYPWZYc4A9jHWrd/
bAxrpvAUcD34jBbwJsAbTVQnw3YOPOPpYyHozBDwUM8IMc31ETY93S9Tsskcak3CspVY/
vYc0jdff+KXBC8QvGunGAj8HfnJ/
PjMH3yzOUU4G3GPxLwHDE4GcDl+exB9v+A/
```

```
fNYuwLbG+tOBL5HahK72Hox+E9KjnMIcAmwAvAS8MMY/
AfGui2BPwEfk4ISvxWDH1y8bQz+Y2Pd48AgY92mFM2QjHUeOCsGH4x1M0l5VLsAxxjr5gDnASuSiv5Oe
ci1jXV3A4OA22Lwx+WxLga2zJ/PzTH4k/PyM/J7ngfcE4MfY6xbI7+fdfKYR8fgJxjrts/7hNQsd7sY/
Ed0IuVhSUcp90pK1esa1oXAfrlPXa02JxWoTUnF5isx+OHAFcBP8jqDgccrbH9rDH7LGPzmwD+Bg2PwE
0lhhsfG4IfkorfEemXGugr4eQx+M1LhPDkv/zNwWO5yPr/
cQeQWSIcEQOcAAAnPSURBVF+j7b58KwLPxuC3IrVMugE4Kh/XzsCsvN4QYO/
8uextrBuQl58QgzfAZqSCvJmxrj+wO7BJPvbT87rnAefE4LckFe0r8vIxwOEx+CHAtkX7LH4/C/
Ow5nz6aRtvSaTzKPdKStWl00UMfoax7irgSMr8EqzgsULirbHuJeCevHwSKUW3LYONdacDq5JSdP+7I+
vlIrtqDP6BvOhK4Kbc3milXAQBrgVc0abbGuv+f3t3H2NXUcZx/
NtWpCgFrKA0FKUqKshLKyNiUDNilTaMFA2Wl6YphIhGKlSJykuwSFALkZeCCIFCWpPGUpEEnCK+VAZID
cjIqy0vASxSLBCgrRUoZbvrH88sPWx26a67t5dz+vskm73n3P37n12zsyd5z6gE5iTU1xeemR92
YQtUAtWn2p1TvEesOevtAVgaU5xXdleAXwQeBqY6nw4GfsdjsEue64ANgDznA9LgFjOPxHYt5wPYCfnw
yhgGXCx82EhlshX9WxktR4W1gsbENXDkv+X6l5JT62cJXgp1nt5d2VfR/
fPdD4Mwy7Ldav+29RZ2e5kc2JdDvQ1NjQfmJlT3B+7vDhykMf1tKXFGe/
MKU7IKR6UU7yq7Hsj3qL6szbkFLt7acPoOxlUn5dNwDucD+Ow3tEXS09qCTAyp9gBHIwlwqOAW8vjhgO
fKb3M8TnFPXKK63OKc7BKxDsAdzkfPr6FGEW2mhkTRrNuwybWvtpBZ1cXa1/
tYN2GTcyYMLrdTZM2aVnCyim+BCzmzZfcVrI54UzBKuIOxM+AC50PuwM4H7Z3Ppxa7hsFrC7l36dVHrO
+3McWjutu9zpgjfPhc2XXdOD2nOIaYL3z4ZCy/9heHv6Gz3LKJ23yUDd/A5Zib7r9llO8pbxB/
pUiWuU8+Gter87YeNo60qdq8nlcTsCO+cUb8Emp4wvx/8ReGOmYRmjw/
nw4ZziQznFC4AMKGHJ24bqXklPrV789iIqb5TYBImbnA9/A5Zib7r9llO8pbxB/
7n00LqA68rd52D1np7CLiN2J6lFwDUlsR39FsdVzQCucj68C5uTK5uqfmLZf1I518tAYssszFJdhhRQfwmpS3
dtHXBudD8cAlzsfdsAuo07s66Q5xQfK5cflpX3Lyl2jsOd3JNZr+27ZfypwhfPhQex3fgfwLWCW8+E
M9tBfD7LcQjslWp7pVUqR7WAHTXliq3zwDG5BRPa3Oztia9WESkFVQPqwWOcD6ciT1vTwEntLc5IiLbD
vWwZCD0YhGRVuhXD0trCYqISC0oYYmISC0oYYmISC0oYYmISC0oYYmISC0oYYmISC0oYYmISC0oYYmISC3og8MyE
P36rESV8+Ef2AryTbUr8EK7G9FCTY8Pmh/
j1o7vhZzipFacWAlLWm1DqdvVSM6HrPjqrekxNik+XRIUEZFaUMISEZFaUMKSVrt6y4fUmuKrv6bH2J
4tPitiIjUgnpYIiJSC5olKC3hfJgEzCkOwBcgAVGAPNyinPa3KRBcz5cBwTg+ZzifmXfaOB6YC9gJTA1p7imXW0
cDOfDnsCvgNFzmGVxFbBTuDqnOLcpsRYKnHfAWyPvffdkFOc7XwYh41UmH41VBZ3JKKoUn
xqYclQ678wVwBTAb2BY5zPuzb3lYNiAz8+XnAOcU
DgfHAJOfDIcAFwCUlvjXASW1s42CdDjxS2W5SbACH5hTH5Pudvt
/pNbBExpc5sGLad4B/
BSj91TgAXl9gLgqK3aqCGUU1ydU7y33F6PventQUNizCl25RT/Wza3K19dwGHADWV/
beMDcD6MBY4A5pXtYTQoPiUsaYU9gKcr26vKviTwcqTlEcDoOWaQPv_spuriously_no
cDzwN/Ap4A1uYUO8ohdX+tXgr8ALukC/
BeGhSfEpa0Qm9LOGk6ak04H3YEfgvMyin+p93tGUo5xU05xfMAfHAWOxKwD69HFbL16rzoXt89e+V3Y36W1
TCklZYBexZ2R4L/
LtNbWm155wPYwDK9+cbYHhHnFG8uvRsKd4ceWuRsTofPN7PWFjY50PqzELsMfh
vW4mhKfEpa0xD3A3s6Hcc6HwXAje3uU2tcjMwxNM+bBLu
b0DMBEbp7sNOLocVtv4copn5BTH5hT3wsZHJimnaxwfOB92cD7s2H0b+AzwMA0an9LaR4aY6Y4l3cL
AprVfl1Nc3uZmDZrz4deBYhBZS1mJuxTNBmKBo6eHoD
nFKPzYQWwPlwPAflrSb5Ic0JD6tdCEiIrWgS4l
u0lBleaV/
AktyiqFNbTgLeCWneGk7fr40ixKWiAw558NwbAmgs4AXsBUXRAZFn8MSaahqDwurjzQb+CVW0wtgGnAO
9oHhhTnFb5bHdQGPAXdiKyT8FZiWU1zjfPgsb2DgEcBm2Dt9L2Krg5+cUu8rjHgfux1YMfww4sNKkBcDPgcVY
ba2N5dzfyCk+43w4t7TxcLxCuDLwHuAb+cUf1NWTPkxOr1Bi4pMQ0HbsTWQHxlcJ5CeZvR
GJbItuWzWJL5AHA7cBfwKHCy82F85biPAs9hyWUycE5ZZ/
Bm4NPA2cCDwHnZfQRYB5xyeejnkN62EdB1yJJakFwKnAL4DDgXN7tHEilrR2xlbZAKvBdQawHJi
IE67lNx2qVzcNqPZ03sKdE6kIJS2Tbcjmbk8DqnOJ4J4JayPa5y3
qxkyuPexE4Oad4Yc4t1Ytd/jgWuwhDYc2L9HGy/
OKc4FnsR6YgBfwS4xHpNTvDanOKvDanOKvsD9jQxvexJYiGY70zaSAlLJFty9qc4uvdt8v3TeX7iF6OH2h5imd
zip2V7Z7Hng0cgF36Oxx4HRjZ45juIpkdvPk9qq+f+yzwpcrXKW/
RPqkxTboQkd6MdT78BNgNSAMB++g126g809tN6sAXZzPszAVvHvToA7Al/
Fqv72x+8AB1zvfLgBOKD0siJwAnAk8ABwENYjvLOf55UaQ9LRHrzKVX4nVgCpZ4fopVJP4
RNn7Ulwuxcav5wNeA84FHsHGvF7Hxc4xWNL58mUS0olKCJvUmb7Lc8
p7tfutohUqYclIiK1oB6WiIjUgnpYIiJSC0pYIiJSC0pYIiJSC0pYIiJSC0pYIiJSC/
8DIqy9oArlEvoAAAAASUVORK5CYII=\n",
      "text/plain": [
       "<Figure size 360x432 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAYwAAAGDCAYAAAA4byefAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3XuYHEW9//
F3B8I1CEYQhBMIIAoYIYEyiiAWiKhYckARiAoJoPmpIHK4iZcDiHrkACoiCIJyUS6iYDQWF0WlQMK1BA
x3OJFIuAjEQMKGJCSb+f1RNWR2Mrvbm8zO7k4+r+fZZ2d7uqt7JjDfqe6Z76eoVCqIiIj0ZthAH4CIiA
wNKhgiIlKKCoaIiJSigiEiIqWoYIiISCkqGCIiUooKhoiIlKKCIdJERVHMLIqi0uBnbB+2tU04jtHVfa
/sWCJVqw/0AYi0KQ/MqPn7xWYNXBTFMCDbvSXAWyO/mcUqSi8g/jFYj059VKpVjqj/
AukVRzC+KoqMoii2LolijKIqH8izgoKIoZgJb5G1vzssn5Z9KURS3FUVxflErwBfL4pih6Io7iyK4qW
iKBYXRfFcURTn5nFHA09WD6RmljO6KIpL8+2fFEVxU1EUrwG7FUWxelURF8Ug+zoeLovhc7QMqiuL
woij+nh/
DE0VRfK0oitXzfaOLorgxH8+CoigeK4rimy14nqWFNMMQ6R9H1J5aqlQqxxRFcQJwHnAhcBewPXBlpVK
5uiiKtwPHA+sB1wJPAw/ndQB2BTYCrgT+kW+/ltftBD4KHJm3uxxC4BDgsb/vD/HtezfFNBm4BLs/
LvwWcBDwG/BrYE7iwKIrXKpXKZUVR/D/
gAmAWcA3wHuA7wHDgm8C3gQ8BN5GK1dbAu1fomZNBq1AvKZHmqZspvK5Sqr/
huADwMV4BngnZVK5eW6bfeoVCohL5tEevev/Bdi8um6+b3eWFZIdSS/
yN1Uqlb1rZxnVfedtLgUmAqdWKp/HaAt4zSqlb1rZxnVfedtLgUmArdWKpX352UFqWiMyPuaB2wFfAy4q1KpvKcoiodIxatazDYEPg08X6lUNim
K4mrgQOBrwI3AI8DiSqXSuQJPowxSmmGI9I/9K5XKbxssPw+YALyWb7U/K5XKY8ZRbnPw0lZVRV3aUe3s
JiJbZzD4b/Dv/b0i7R4nHQdCmKXuLBpTtDuMhxTFHUdn8cSE8b78JTbyCJtxYKPE7hqRXlTbBZlUqlfdNLWpSZ0Rm0rZK+91uzIVtCS5I4/qVAmIo
WQDkjgm2RJumRv3CkI7IsmawPmkX6wxgvcG0E8KYJu/
G9nVpvHZN9+zEHaOlVYPACnBVvvTNeAXl2jujpZRMmgAfbN/Wx5OvmJmUEpNXQ7CpvOoZuPHxyJPtBfxeLRKQO0MJOunLbXm3qtdbtBCKrA4OgJNiUJaaTGsAEbxf6ee5BMBsWVoxd8wbgQwBQQk0zRMmkSGlMZ2BmZfnCUbGi9T7YgIMl9c/IwCmKpeUwVJrbGQa5CB71lehzDJL5R/ig9ZS4VehoBGYxeWahXZW4+q1QzndYT58AA3srd/
SVcAVVfO3AeDw1Dcs6IGD2h2HGixuXSC+RMb9WLc2eHUTnmodRdyORvVJB0Jd/lWIdtUzOHSrrZ5gPX5mO2cfPbb63PvLwPi/
QzLPhfxMDsoUBt4umnG3OHX3r4RKqRw4nbWjVyJCM0bvrOKfEAVHn1M4ZKGRqvgXSP1V3hVKEkIw+iXNH4ze/H6IWW0tZZ/
b1oRpB9hkMXxMEXP+4LtbSrLm/8WdrHMbzmkAG+aFkBy9NUlN74QWP/0WyC8HJ5hzvKPbmHavtTzh33u4B3jS1ROmqpcv9dg8MLSCS3Yp4+mg6Wk4dZmu+nLkf/
Gh6TlG9pEmGwTMoVzfW8Ro3MS5EIEw45p3zS0OWIDvYFBDSG+GXbcjE+2E4PZXxP5d77Q6YAqYWoP/0qLdDLwaryN9mEvMSU4YyJCeGdYjU+vVa2YhL5p6SqIAvZTUJEbyyChD6abumMoHrDgdt+qmTLebTYcP40rfQd/
wHRvhwdJRQbeyI1/jdW3ZeNbvbO6BO1GgrrxUUMmLy6HJdW7tTcCM1qZY8n5nCMXtxPzpjgVDdzH7sjQEC0TSYuT+0nYjk68W5rgJUfa0eBJBw/Nd9CMW2iYbmGO3ssyB6eAIyyZ8bzE6NxyBa6u59kmCGJX8V4/ygl/
/MxJHBA0OLFqTY3EGnpDhH0RgeV+ZFb3WhaP+zW2+rIaVPx2+sjNXb7QrRdzw+WqsmuTzTR/wCQC0HcgvBpE8pQJy3wYVApBpMWuDyRSNrcz/PHk23ZkFYBHDqXnhPlDU8VPj5yvRo/
A+wCPgRcELJ45EhQNcwRFqkKIrhwPfyn4uAY6ui2Kpmleq78Ub/Xy6q+/ug/Ptk0hu/
r1R3UzcWRVHfedtLgUmArdWKpX352UFqWiMyPuaB2wFfAy4q1KpvKcoiodIxatazDYEPg08X6lUNim
K4mrgQOBrwI3AI8DiSqXSuQJPowxSmmGI9I/9K5XKbxssPw+YALyWb7U/K5XKY8ZRbnPw0lZVRV3aUe3s
Zm8zX4N7n8NWAO4siiKf1Yqla/QQKVSqRRFcR5wInRMSqVQK1rqJhWRdQfRG5ggCrqlTj+cQZ4+/
J8043kO6zjEJODcf7+VFUUxhWTF5AbDAj/N1mEdJrysbkopWRw+PQYaaSqWiH/3op0k/pHfilQY/
XwOWAP8CRpJmAn/K930/LgmIN0gvtBXSC/K93r3V+zzGkF/QK0JGXXZr/PrVuvOGkgvEwsIr8/
PrVuvOGkgvEwsIBUcG4EPpLvL4AjgPtJRWB23u9n8v3V+14BXgOjgBCoeaY/
TT3Rxe9RUSkFF3DEBGRUlQwRESkFBUMEREpRQVDRERKUcEQEZFS9D2MoUUfaROR
lD0vopmGCIiUpIkhoilahgiIlKKCIdJERVHMLIqi0uBnbB+2tU04jtHVfa/sWCJVqw/
JQy6FuDGOv2B34DbBeDf7QF+zsGuDAG/2oftrHA8cC1wJfz4u2Bx0jpaTfG4E/
qZts9gVdj8HeuzHGLyKrt7lkdXHbfHJ58aRFbvnFNJo4byfhRI5q6j0FfMEg5yLcBBwOntmB/
x5Ayl0sXjKoY/CXAJQDGupnAHjH42b1b1sticp7lIFQ0RWyN2zOjj5T8+y/lqrsdkbhjN7/mJO/
tOznLbXpk0tGoO6YBjrRgC7AnsU8kFw1h3InAIsBZZW7/vpAe5rsAbX4hnYbi3EDCBMGTKWBbjkrrsTx7/LlC9wmgW8/E7XkQBEC6s2wAbTTCY/rR90NGkRFTZy3rAA/EFORZmHWQ8+DsNe6OBFsmzPNQjX2dn1LOSWhhRAD/LCw81j9Gc8oyk2amCZd8Ua5VdtEiYaLa1dOsn32SAknj5zv9YfEPBOI1S1j9Yj2fUBlhpK/C8yN4EAkCzoR0ts3PyngrNHJUKhVLdOvZyo6H2OWvp6fAqhm3LUUHZ5UBnRcqr1nmUWePhBBqTdCYQqc7vYgFjD0pqqGpf1s6rEOsJjz/x9X4CprcBOdLuBNK9MnnB+1mbEX8UMIOA3r5O3v/OtiLgVIxMpfy4sDH32dD0Ea6d90KHHoo1N7z8ai0EJIDBKA8hrTc/jFowADmrd5/Aadm93C9ds4Ur3ezwe+S3nd1f/ZuFZ6Su0DKNZBl2qPz+3ayNs2ZzyvDmUw+eHDCfkCvFh2QxGa/fNSe/qnntMBFMjymbYK1ok4OyGaYe6+T0Sf/nUZr46O6IVbb7c4i4NTLu7sxdkYCiOqNxeEOn2Hsci1IrLPrQuFQZ+0ojnc2xcsYBVY4fPQlZYeRJWVrG/XNbhvlM5WzX6RxRwD3ofd/MHh9w34BKLz9n29QpYmWiU4yWBcO+LsCL9q3ffz3Q5Fsqlz/
gPq20fXhfz/EJCdiXXGpUJwEnL/Gd3Y/xewT51Jw3Lr04ab2nAtZrlENwCh9ybDjSLXZ3xspn3kf0c+PhOR/
MRiFhqyDZzeHLDgYlUGjCpRiCa/JjqS/AxtjrBa+mn8GBsWkg/J4xbsmTeh29EYL8cV8Z2i1FzbCKY+dRUjzF/ENK+h9Jt0pnF5m4LqFvzUiFh6d9eL2UL3tDn6rqNy/
iHXZlB7JDGDhJ0eG62r0LEMZ49vFe+UzkPJYD5VzQHfoy0fX2dMk58N8dZwgGyWEj4YuwsM8l9VO+zZJwR+kfQVqDPa//
/5cyy0C5x9EGhOtE4xTXsQA8NX+x0sJRBe7ZJUbW1oQgmvaymz/QiEKtnXVbfT2qEgd0UbQ36IKzM+nlz1BbvcmYG1S2/5C9YWA2iXzx2KbsKG9hK6JRWPyiwDRB9fCB7cXPTF/
X0tTXKwmkT9B5ny3VG/WygEzN5n5xxNrmv+b2XV20z8E6/ubn/MmgzF7vBo6IBVT07kb/LU2t70JT3mN5nbNg80mvSVRtq6PBhc7DYm+3o38PaC0iYTHDs9a/cUpqIVK0hRPFJUdTjT3PDC3EnRqa/cWvXGEtBM6MkHEi4vrHZrUIr3Zrrvo4rpffmyeFm3VTtkf0t/jdjA1Cv6HkkCkjHl3ZoyfxXGxLaJrTpVEdOA3JMyY/pWIdB6yZ+bh2aVKN/tyu+Za0d3tq9X9H2aHVQpAKhBzr9t0Y0g2zK1FZe2tpsVX38oR5elP9oCSfC1VVjHFOs/8m62rj6eMWd8aWFKeErhoQCGXsNWc/8+tZjZ+bsdCaGlqiVnJ1IiqlB3j+e6vhd0vdIn/nA4kBTxm5oJXK1Q0UKyfxU/4Lhl3/uHiwZhxBw88d/A6jb34I9/A9b5Uyt/xZ7NP/z3eHGu1Q2JmjfvnDNe4jIJ9SZ5hGHhEG2GpCtp1mOT5Ytd7YDqyI01ehwwEKuAlNwX2xpzEfvUEbvYQmfZAQ5LXI8yDb9pzOKLsQtWzmZ8DyN0jCqHE9Blu+vTfNWWqUewYVeG8fUL1M3LvLH2LbuN3JeNLjDHqqtnLBSJSD0gsFmHt+4bb/L5b3IYtOGnhenYWMbHm/iPaq2ChL9dcTGJ7mBBiZ9kBWvc3SdujnRZadaOu0YvFL3SJKAFMqvfhf2TPX2ZLe/TOfMAYkjbmkmyuMZTl9Q4x3Fy1DLxBPVBbRQ5XmeTLUk8dqYtBQFTb+oenLS3V/RSfSBqHapxC5Av9+B+TDMxfBeeGuq3iMjMtMYmN7oWG9IQiDYWGBj8aqGBuGpHoGYmCKl0pBR16EXFzQCohPewkZXBvn9N/XHsDdJXWB43ODxszFbfXaaRLkNzhQiU0mcGtX0PRbg7aWpbMn1YZpOkRfXyBjbNvXnuq8nvJzJQTQV0fyKlfM/zpQBrN8Ut6yMJYxvQxbr9w+G0mD2fYLTNkH0OjIQNdbQRUuddQlBHQb99WBGZXWcUYwrtPRvIEJYOcWrF2nnALCmMrxUQsjFOiSz3qwULmUKR0bdaqzDVAjuhNT9Ty4WOYx2qOsPaOTdfJJqOOZmVoLQQrH6w4oUZyZvXfX3mvRz4IqxlIKYt4mtGv06UnUljyLOLVB70yXqJQkhcT28i3flRxjGYuzY3d4Akc2sUCsvp0B5aEf9xJSAi1b9pJvFhI0lgWf7Ud0Y2F9Uem33NXuWY8OtN8aDZoPNhpH7afDr9A3Mkzx5UVJt8YUX4tq9B1NzH2BJP9TQAJJJe5pvXvTSIwGoCCIaKkJMNkUJ3TmJR0Utf2Kh6PwHgeWjFhXyaWJTANIKpDJKyJAO7QQ7hU8Ma8p5tVQaTahb2VWxe8JHuUcWbDXk6gzqMSJJWC5Lnhws8AT6yAcwiBnUj9+7crnBB37gbRnlzK6S5CVy1wDGQkvKb3yw7WTe8QI3OBlHmnJaITDOOuxZgdwAxF1e6W7w2s8KtEU5xN1Y8nAWBrlrfEbhb0Iu0ahB5qOUb1oF1Hn3QLyHOuD8SMRZbw3qEzw8jiuBpOx1pZ8FvCsRT8U4JYx+YJu0zwiQJ0wTK6iklJDtzJlS1oIm+m3FEkZ1bqQGFnLNdMQnJTvhiGbdcUR2Rh1RWuJkVAZXc8B/JAHYBy0QbLyqHjV7Fb4NaSFnYsc2BBLhVYfQyo7zNcC/37QyIH5uBTEXQ5wxUyShbpHb1KH0XLW/CB7L2ASaN0/S8BbrMn9Xm0mXFfGCaPrDp5FmYfpqDCXHpCWNwgvv3Or8+iqxNvk3l3P9hfeffLcm09M9KZnFYR4cGcmd2Qsu5zF8D8hyymVaavV3PkxOiHoURaSy+dO2+N69Lc5ejVqhz9uSy9FFyrdEP8mY3ujjLfgVyfedHB8ns1CRDVJNQ4N7MJQHz1Z/Zvkeu+AS/NOqbQVXyoq7RZD6U3n8sUbQiPp1lXBHgoj7+sGzBRE6eSqXg+NMbJK7UvlzYBaaL6JNcs+DOsQtSfCZVwPq7X5kTw31U02M6Ulp4AwGd9AUdD/OGg8UlOE8mKTc8HmWRLBydYPrZX+OmaK4rNqEQcf6dfZG+eMZJdqRF0iyJsgbp3pFTkrqJ0Ew8ydlKa/tPz2vmHYlpLzgiNd+ufJxkfVuj5IRF7KlDFG5n7NtcNqGh8mzX5Xdo4uC3jqj6rcLxeD42C6wqJnAOoSzbVrb+QdzRh+WIhqLb+JPmeRNdFo6dggM7lE8qtG3ntGFQVrZk/YIt48T7hK9xG5AEM5gLKCw4eVXwFySUijG8OXcf4G6eGm0BB0CDz4efLsTN+/UJWJAdPBKJg2ScHHRUehtMeCbZ6c+bmZK6RpuLrjhIYQ1t6nuMthWbX7RmVpaHytsoqUxE7q81UHsAY7wkBG1eBTLfLtOuDQHxI/7rQUMdqdPd5Y2mq4CWjz/Ch0R04ocxGfD7b3tP4TfeoUUgoJdLwzgy6L59FSmVtrK5uTl0N+uB9hpqsMqNnlAvrhcpmmWS/4M58lnAYLZAi5ghc8fAhyqt2m2Qv1CBB2S8xwWjtAGExBbFW2nsDK3EhTQeTPeeMUIvCXjJqVXRvb2ckHvmKxaHTjd9pA4jMbiYzvdBzIMi2zzm8mc+LuVfpk+Hmh5EKB+qBRgq/JbO0t+h4Ah+L5QXqsfh8H7BNcSNYVSQYlpWfjO4hEOPg1yH0ZQgtDvbuzOnWYBRwOXgW7zpz+yZx5ViT5cBR3NyVzPu0wBfSNB2hRYT6kWqPoFrVJf1x3WpoA5ZApy3Wd1z1HsDiIrVYGchm8R4W2gv/rsxLfgVk3vkq7iPdT0Cjdi9DeIk19oVyjuX1FzaZ13bzkgJ/ZJv3aGbaVdOxKRCtcQkzjXnD1PlDn6pq+nAk8+VvWIzZ8qrnmCGH9Ul6k0hOyKV7+MzLvxWyHS96+9dLIHU35qfSPtXm3JcUmDf5ZPExrgeEPiCzHSW6ifIDo3jv7VavN64hLBALlwbGCyS4kX1NxGEJAMaq3B/DgJcSjCNvrT2U2MP9ZUv2yZMh2HLzpk+7lEJa8RJ/Xkul95Am4XfGgZvxPeECaZiVmEbt/lpfvO8fBQPoA9ESIr3h+K5SOYgsvHdKv9bhZ6v8MX+aHHHxDp7W4RbkhqKzIXdOWfHLBg4hJH6QwS3vhAMeQqbsDOK6xF4aB4xcjlj/bHV0wBzgu4TcbNj4OBp12QbAAeBUFvDn6Fo+vgwkQMQwgYgbtFBxbvYjy+7Em+4IYyUwe8IEg6O2n2OGdJTF05h1W6vqZv1FXEVx6yKJlCPoW/0y+0zl6WspPSD3Uc4YYhHxVy68VPv8ZZANkV1Pd0SBv3LrzPEG5dqcCIbA3MyfDQ1Fee9G9MrxJkuG59Va3wa+wvLf0sRe8oqApzzc1RWkuMZ5r2vBZvqNpc6t7S/8r3NDO3Vqh4sV48oVVLhgPBuDIJ4tg0zvXHFLE79vV+SpPpsbQsGxWCE+29ZLrQTDyGzGe0BBFdjmsMObKe34NP3rBTDWH7f3tgrtBnrzF8PiHBRVOx71QGyKAV2e6sEhAEDuelcttI3vYmbdx+XeBN1zzAYIZTcc1WrOMNL9tuyjPqdwOHcWhh7vrvd8lfu3wbtWoWNexZTSPgU2J4vTbqKL3hXy79kLW6rxf+mP4Kk3GBXCzRMcOCrkoKbXMj1zBVGCqKHSnNPp4F4EXhH8VOdgNPM5mQDvuWRzm4XjmaWJXpcJm7O9FuWHSDvlNB5fSVaNYjPe8vS0oJWAzNpzhc3qsUJ+y2vFh7vx43AZ6D6wAR8sOw8ebOvFJ3pUgAf1D+ba8xk/HwrMyvGc8G7CAdBHcXDRVjc6Ob8WBQ9ZnKMwxBV16tPUfaHE8ea0Q6z8cv6ceLh2L8lXdLxhiC6J0c4dWVjqYTbyAAfv5oxVQfSOjgO6ZWrF5Jzq0KNoNnvN3bX93SXiUhf8cNpfKQDy+9xS3x5HdR5+6nE7A+ouUSSWRpB8hqEv0GOqSyM6dy7OQNsgD7M0AxS3PHj8ydnAfozVl/n6HHPu9rjcSqYEuXdjxTDTMNjlqUqYkl0r1t4JpXaprw8ou/HpCtBOQhq5DZgxv4m8XPa+RfgWB2gO3PGtCBrIdD/cN4jN+IFXxe/dwSlgR6P1DWPxRxvMWMFJbs/Q7EZ4oIdAgQi4K6Tr7klN+Ma/yazTQh1n8g5ZIsvH5o/7VQwIXzYSLG7JzTUOXcIH4uKPF7Gr8RJLLl1d57cD8PzxFxq1gZDMiDHAKh3ZtYhhEGnt/Y6l7V8CuC6H8I02ezpS2t8dTKgThfwIDqvftZfD3qcXyfu6EMsWl3umJ41dCuEBa2mcqZ7Hg1Kq8qOUPzdTQ2G8MlyHlLyfGxZ6CpW7mvdLvcxRJN0j1A/oSTpeaTyG1Ix3CxpH11lXKnOs1nT6ix5yDu2zFqyVXcdxZ6V4ITEAwKRlJ8M2h4yc4nB41QuUQ0ztnEOK3l4wtKOxy93IqnLs9dshNBbmfzdWUzuEWIJsOZW4enFQgjLmzBhlAwV4czH1lTtK/eLxG5ba4pqjGE0rMiifxVl21M6oIbnWH7z6j9ltM7XVv3Ir8f60E39JNHPqvJ68ouKEAuEDYkqNmJG0b6Vt8sOqyvT3HSoEjqsLbFD9EP2ouVCJ3WNVoVWUhmeJ5v0JW+9KhUGZyT8F6xLeQpNy5oUUP98R+CwtIrXvbFnmN0VIuvsbQBoJG7A+9cv8U0Zzk7gT0vzZ5MezGsgjmqwINSFtV72xV17KzlxtBpQCCUuN13K6zA7W0Q+gxcP5OTi55tRN7gRpVTmTAMe4WjPMb8TjbHEFlmWSJWIEK+JwoaFMu1QDdVJ5oT8fBBs8qmO4p19TmwJXGGT9N3gCKIpmNg2lvHKR7HZMe0czAQd20H6uf/VWb9rPt6byvWgQxm+8yBVyeS3ynrYnrK4GxWAhSULGJ8TWk5iLhojW8wJZ6DFcbFwOMmKQY7iCWhvtEA+cghkVVq/wX3LYl6EeXcaJBWqbZTV6mBNFvTVb1w6uHXe0tYXjsIRhGmKrVvlF9ywNjEHPBs3Dj4dPvoXW8uCFdoEUcx/2fU/RUzYlWy5Tqi6HJY1+OhZDrxoWNTTXaK8wXNHvNfVXsqyMFdjnTuXNI1mJ3jcpmu6nSTqbUpvGjpESIQ9Qi9EC96Jm8ACNXYR4Cw2+qhqkW6AF6jN4xPbf4hx8gb+ALoN4ryWw4sZ4fTsmkjoYgkS1qiTA+6GyZ9etpSZr2/nKN1Bo5Sn1cFm6L9czTL8R9Wqq7uSsrBRwQqh7MEoa1qt57E7uxkJGSoi5xS7SqvvJ8cdgjeP8zzVpsvSwgUj0kZ17NeuH6Hj7fsnp3xP7nJJmk1YYLs7TJhQhpBDrF+kKt79HQPfeRFx3DYk/GdHZmE0vpjSsvvbz/TZ37GtSPbeC4Yb+GwXx17Jmqan3E9yo+f/BTsDzZAm9SeKsk+87yYWRFzGgmKAW+e3PvT+8yGR4Z4cRqzsQ0uhQGlXw5PEYFMe6R9EWhUjhq8V8cnhPeyWfN3DhXy1ahobHEa6YiLdvJs2kaH5oKeFrxr4BihBjugXxhLRq+vkvlE/Z9YUQDbG7ydp9hIGa8zVQMvN6m3sBNqoE9fqEnXnO1GsVBSYBbHA0xa/xIa2kfrCgAjh7VybEmrwaeM6DZEMAW07hm1wy3pf7UMX5UuFzdF7f2v6VOzMUx0v/Bx8DRV6urR8yPzg5bJkL/V9Wv1zbL7y7FGqYgtxApbOv7GlONyW5B+wzfyYapQjV2+3o+XkntkOKfl8kKx43R4JoNhXdfFtpWsTzUjd2OJaq+v7zdJ9xcLGAkzrOE9XHvbpCWl89xLfUJfSZqnu5TZRm4ElWJLafTHfxtxwtGwYwFOhLBL3NFYqWFkhyg+lHmxvpeJYt2kgQXbmIEmZmgxSF8ulvKhhtgmL3aBpMzXWjnMupLmILcs6FJ3SvfQJlAU0IHj/gapyPHAFt2xqivVKTnA+hxCcjTWA7rbZ0FrZOlSIdavcrTx3fvDhi5kqTh85r1hrfbIJZWoBkOBrd8jCxXRdg/jXXeATXSB9lEfRppiv7qi9tvH9Xl3E5XyXvpiOfUVlljqEiwbxAGo8GhhNMQRDsR1j1GfhCPBYYXm5j4mrzJbmHH3o+nwU9GdOzmh1xr9nZDOdz3rZ7rCaQ/fvLo9kJfmqIIx3P+0cL8yMbRBeGGQfqtBjUWDmSlwvsr9Q3KbWZZAJqMuFKoJBH52Py/Jh95Cc8N6yBC8fpwwoTCBJB6uWUtbR4l39OsbKsQvgkNXiAm/wXr0KqbQ87RY9Xzu+ZGIHhH5s7Q6lpYmVkpwMQSO4ysNU7vZVmG8Dzpww8Fj8mhX0lfe4JBMPh7KsDMh5V1hnWxjxqLPeLz9vu4XZGJ+vEvMQ3d3GW6Yv7CE6QN6ViQ7nzhMOhRcqXgUr8htuTn/DM5SxS6BD4nkbuxaqnbUi/8RLzJnTyhrQyrLJwZX+A0cJW2pW0K0RzjM/7nnZLyJk3ziLkGiSmL0NcEEf3Wx4gkfK7JCwR0NUpy2UiNUOz1ML6H/ytZrTU4OVZSWMezX0TjJwTlPlfyp2u1QHhx08FImBGjgHkGqvl8ZVmtbhkVvNe8+hL/S0gsbF2tDG+Z/KLzH1C6ZoLtH0VTHkNQPFtnbm8dOCEHEpNQGHtP4e0ZTbkjBgDOo6lbZP1KtYxOGj0w8pV26vLgl7MN29nEtHeiK6XJOdGJRJ9wNWkRL5zDEWCORDQuL5Y1DI4ZZFk6ryfA2GmxbOT9nZzDhkm4N73FwfVUZxtGBKKS1rw6mAdgnJVpDqGGP6zvCzCCP6j7hS0nSMWo2xCH/8qaVPN0C9D4u/p0eLdX1yu7bg/DEY/ZhpqdAvNwYmbaCvwDvFcEBSzdjNSmqwq5RVQozfRnvOd8dzcxpeQ7H40Xaxc7O8HrHzBw7IT2L5qXfxMMsyF4uUd4TPaR8MNMdw7lVsg8AT4D+Y6+KTPvhiqxc/6BpfBrcD4NVv2tSs4NqFDVwuDHbLrNlhHmC2y8mOmmT+vKyLSMvvh6BzEUJB0NwqeYlfQg8efpNf6ZBfaicCY/UU82Qr9jI0kvRG4tKYxRI3jfbqR/HDNLk5s+dyK7Fdvc69L1lsH4I9uFGeHlgnNR7+E+1Ez+JBqy6FA3V5QD0Y1rqhzBXtKp0cyhJj5VdL20jGpM2/0jRp3gDrYkFtmBTSA3Xm+9HZMWqoZ9iQi9/QHI4cMWX8gsLO8gDZoAA7Wdi0kfqQcnu8m8GG79vEaYVOprMJHX5o45kq87zTebY8hKxQq89lFHMrq/1gDYWJtm4bfxYD6Hr3Rbd6sbQJ8hg1TaAp9H2+M9E/r2Cq5AEBvy0gqsyUixE/hDE8rJV8KW7cSBubZ1pJuKm5hHa7TeWB+SfGfGV+N72pBWIIIhjp1H9TRnV2BaxfLQS+3Yu96s30vMwWIuyMqJsVw1c4j/oBYRZQNd6gW6WBrZq3BQLJx0BnuH0KvqvKA8pMRgL7fw9/WVfnsZyUh3cZLSOh+PB1Mqy79I+DRvYxz6wn+c9xnbwrfSHjDIb7Bqej0zWPgI/X0IyVBqCUa5tMh0nUoPTHafWAUkfVM8TOdUkqC5+UWT20PadQKAQXzUu5DBpVYxvdRy9Gh5fGiXyL/vMKL8N4E4tljwCP3xBEFE6VpqOHh/ZlrVbPiuTx2/DiN5aQJgLgOXx1C8lwHffXd0wzyQQwjpoNDEfvm4sVHVr4rmXTCrXMOBhTL/fjNCW6FhTd2IP0Pxh8y/tnW5WqBFxrdeXtJxtLOwM4ZSzxlUmmWBN3zeXyOUSUIgLFUkRENnAHeGgzujq7ctyknQeckKZbCfvMvfV2GSk6PvBhyUgl/iwHs0WUjGQLcMZ8MzQRQcEGRW68oHbMO3ylQF3YmMqJU0k7KeVwbIQlD+L6b7Y0JLw4GvIuXYL/iQnxXYBvt3k5xF/lm4xTTvh37MXvI9t9GPFwH5bdf0DSMDZiCA9fbj5RZh9WNUbMVzGrm1ZoDoQBeBOlbRKq8dzZVFA+7Xf9cMX3Nbs+H1kiqBOgCBr6xt1yqS1FNQ9eahHOyq8VxnOZ7G71O8vcwu7pJB1o2CNI+Ttz4LRMFuyQo9KnyUpGaXLN5j/Gzmj9pI88Ms9VcGPZnlrzJKW1KMFG6tlZAA1HcA/fs94hchDawbIr16xzbSVbAy2zD8ldgJf1ShSdvXHtMQBbT4jnYEyK8h7V7pzRkZLoGB2KktuA2Dm2Qx44+dwN9sYuwvRbNHn4W7ynD7KPLd31eFl47Lbf3vfSMBFhmXsLLPpRaHg3Frj3U/KA7R92xzkbGIUnMb76+wUI+iXX0lCBI8NXKwLOUnrSvCQlMEsGDUVg6SQGtUexwn3BwsbJbqJQFtN3BZP30xJ1Q7X/TiMx+Vx3JAFHDx7n1ufUzaFdeDoSxzNw7hRx2yV5Y1QlL2vjuRbEdhF8Ra56e+UtUF3gpVZ+4cE+L1H7UYFgGpyPlVmn2MMWbkaMQIoLyOWNEwPGOzHfJC2gFNcPY1V8Fm5gXQ+70ksJBm5ALHa6XjXUGH6o0HqZyaa7MoRF0ZOf+q5wQa7LfFpFYXm4hiqD9bq5R6Odlo9lMoXZHmo8P1vXJtjn7qmSr0WaqjpY2B8HLuLp7wRc/bO/EwoBKPPQ38lWHz3e0fcNCYG4Zm1EwgdLmRIP/4sq7d2UAgX5xl4+CsnCtoeuWPXcDRqGQvtV3hlTbyKBHqrsGbPjLeegkZ8k/ydStrVP6lvNv5p/U57NFnC4EPFlDbETpTpBDBhGZlgX63ld0NqQ5MgSWRHAGBZLd2hG+bMSgZxsW3RX9lrGqIsXuGl+4EbBMeJ6SkV5fLLEnamlPZ8yP/wj7+GlW7FrF31yS0ASvrR7EqpnsRdJ9sRRnqsTxfO8B5WzQcsFsRCf6g3yz6Y7QU3L9+VsrjvfoGW+h5VAojRbDkaPQx5Vy6Cb4jy/9gEmb2AE5B+ojF4IcAP08Ox+DY2RSk42PZ8efNBqNqCsP4lDCOuqtYUSTt8aVcahQtEPqO0KlnbMkvNnc0fsCAeEJa3wWZBwyKNDrQ1/VWLyoCPFcApLNtjA8ZfAGEsZH1UbF1ttfyUkbrDN2WnTMrmbHsQ06WUDaHFJtUyBBxsbiMBsCvGWdS4GDO4VhNWEVr7C9l8IjOeY6JgrvmL4Gn6Dv4wR3gTwYv11qeWd6o4WbrPB8K4fdwr+Y7t4D/0YmYYRqoHRUyo1CMYoI8bQaHAvmUmR2HL8sROJHnJwCHWsWHSSydAw3mQETqGtZQjX3vDa/NtUKgtNrXUWkBXUUqDuk5IWcLD0R6IN5Yt6b0SNvPT9S+BMsdTmDZY+BD+kpScxqjaFDm5HsTCW9dRfWk52ilvn0NJGPSSBm7sYdkQhktsAnTr8IcpsgO36gwj2gQQwL2cz08kXP6y3xChfh2tmN2L6Xw/NU3NaLoPWTs0Lsj9aTqxzm3p8SzBFIYOwvTKpYcSnuBnRj4ub+2ivqD7OESQeU5dYr0Y8TDJZwIHXYaazJdlX2jCa7O21JK1m8KjiPjT0XohvG6LdhIFXwtSthGm6Pp3GCSBW8lLqzuVp+PfdZTXfZfJO3rP8t28IxkISYy6dEjQ2kzt0TcSkYn2eE4DlFQ8LehHiPBvHrxG0R0yr6/FNbOI1I3bCZvPqBJD8oCTG7n9j5sjmBszAF9nxSMwbIQk2zrZ8v2+8bwsz7qgHs2/tCBtzsOJYtkrPx0RXWRZjAb91ahzUTU2gHB2+TG90WQ/RHEXl4iLh4ue7fhoetxi6Q5AM9ds5T05aT6Gt7+BiK8zqSpfSQNQ7o0HJoBZbubtHGOWmd/v4/RN+p/MH9HcMBCc+w+GGuBmjB03Jrfs1G7C5SA0SA0O8/VSMf/bSbxjm1t9p4rnpyPvVPPVKi4ZwUJnbILM3kbL6XOXBZ5EAWxZZHS0/jNMoe6+NCiz3M3wzAS4wKv/
```

```
0T2D7/vT7wgXz/CGD9GPz1+ZjH5qEUoiTSplqRU9Eqg6lgrG2su99Y9xDwJ9IF4W/
m+35MCju6E3gbML+6UQz+eVIY0iU1Yx0EPJgDlrYFft7NPm8EVs+hRt8inZYC2AwIeftLga/
2cNyNgptmAb8CppOucVQzxdcDfF73FtLMCVJe+Qk5RGlrREQGoSEfoJTf0T8A7BSDnzvQx9OfFKAkIv2
k/QOUcjb2o8CP2r1YiIgMtEH7sdoyYvB/
AjbvbT1j3ZuAPze46wMx+H+X2Zex7jxg17rFP4zBX9JofRGRdjOkC0ZZuSiM7XXFnsc4skmHIyIyJA3p
U1IiItI6KhgiIlJKy05JGev2J/VN2i4G/2gL9ncMcGEv37yu38bStQfUR0gft12X9CkCH4M/
vgnH9kngVGA7YHwMPq7smCIi/
a2VM4wJwG3AwS3a3zHAOr2u1Q1j3RjgXOAzMfjtgDGkliHN8CDwceDWJo0nIgPk7lkdHDn1Kfa57AmOn
PoUd8/qGOhD6jctmWHkbzjvCuxB+ub1qXn5iaQvvi0FbojBn9So+2sMfoax7gTgQGBNYEoM/
hRj3WjSl+/uAsYBjwOHAp8FNgVuNtbNjsHvYazbm/
RFwDVJ3WwPi8F35F5RZwOzgXtrDvtE4DvV2VBu6/
HjfNyXktqObEvqpHsYqenhLsBdMfhJeb0O4Cf5cb8EHByDfzEG/
0i+f6WfWxEZOO2Wd9GbVp2S2g+4MQb/uLFujrFuJ2DjvPzduTVHtRvXct1f84v9NqQ+TAUw1Vi3O/
AU8HbgiBj8NGPdxcAXY/BnGeuOBfaIwc/
OrT6+AewVg5+fmxIea6w7A7gI2BP4P1Jr9KoxwPd6eExvzNvtC/yeVBA/S+p4OzYGfz/
pVNa9MfjjjHUnk7I9jlrxp7HvlIch0n/
aLe+iN60qGBNI7+IhtcGYQDoddkn1GkNuMb5c91eAXDD2ZlmLjRGkAvIUMCsGPy0vvxw4Gjirbv/
vIXW4nZbf1a9B6mi7LfBkNSvDWHc5OXuihN/nFuUPAM/H4B/
IYzxEao9+P2nmVC1Cl5Ou4fSJ8jBEBq92y7voTb8XjPyluT2BMca6CqlxYIXUsbW+L0l3X08vgO/
G4H9SN/boBmM06nVSADfF4CfUbT+2m/UBHgJ2Bv7ezf3V/yKW1tyu/
t3d89rnPizKwxAZvNot76I3rbjofQDw8xj8FjH40TH4UcCTwBzg8NwLCmPdyB66v/
4hrzsiL98sZ2AAbG6s2yXfrl5Yh64dYO8Eds3XRzDWrWOsexuprciWNQ3/
agvKmaRMjbflbYbl01x9MSw/foBP1RybiLSBdsu76E0rCsYEYErdsmtJF6WnAjF3ha1+XLVR99c/
kjK+78ingK5hWTF4hNTJdjowEjg/L78QuMFYd3MM/
kVgEnBVXu9OUurdQtLpnuuMdbeR2pIDEIOfTvqk1VXGukdIn2x6Sx8f+3zgHca6v5FmWadB+oixse5p0
kXy64x1f+jjuCIyCLRb3kVvhnS32nxKylejVAcbY11HDL5p/+WoW62I9JP271YrIiKtM6SbD8bgZ5I+/
jooNXN2ISIy0DTDEBGRUlQwRESkFBUMEREpRQVDRERKUcEQEZFSlIfRdRtLa/IwTgU+B7yYF30tBn/
9yo4rIn1z96wOLrtvDk++tIgt37gmE8eNbNsv3TWD8jC60c95GAA/
iMGPzT8qFiItVm1NPnv+4i6tyds5z2JlKQ9jAPIwmvCUlqb25iKNrWqtyZuhVTOM1/
MwgDnGup3y6Z5qHsaOwBl53SuA8/
Ky9wLP1eVhjAV2znkYkPIwLozB7wDMI+VhnAM8S8rD2KMuD2MnIJLyMNYi5WF8DHgfsEnNMY8B/
tbDY6rmYfwXKQ/jB8A7gHfmLriwLA9jJ+AWUh5G1VHGuunGuouNdW/sbifGusnGumisiy/
NndvD4YhIXzzTUWHE8K7L2rk1eTMoD2Ng8jDOJ10bqeTf3wMOb7QTtTcX6R+rWmvyZlAexgDkYcTgn68
5hosA3836ItJPJo4bycl/
ehZIM4t5CzuZu7CT43bbeICPbPBSHsYA5GEY62rbpO9Pap0uIi20qrUmb4ZWnJKaAJxet+xaYDuW5WG8
BlwPfI10EfwnxrrTgMWki95/NNZtR8rDAOgAPkO6KF7Nw/gJ8ATL52E8l69jTCJlW1Tnm9/
IGePVPIzZpBf0MZDyMPJHc6/
KRasCXNfHx16bhzEXOCgvP6NmdjMT+H99HFdEmmD8qBEqEH2gPIx+pDwMERkilIchIiLNozyMfqQ8DBF
pJ5phiIhIKSoYIiJSigqGiIiUooIhIiKltPSit1qcd9nPt4D/JH0z/
AVgUgz+2ZUdV0Skv7R6hqEW58ucGYPfIQY/
ltQa5OQmjSuySrh7VgdHTn2KfS57giOnPqW25C3QygAltTivaXGe26BUrUv3Pa1EpE41y2L9tVbrkmWh
1h79q5WnpF5vcW6sm2Os2wnYmGUtzl811o3M614BnB6Dn5JbkA+ra3FeAFNzi/
OnSC3Oj4jBTzPWXUxqcX5W7v20Rwx+dl2L8/
nGuq+QWpyfQWpxvifwfyzrLgtpRvG9Hh5TtcX5vqQW57uSCtU9xrqxMfj7Wdbi/
Dhj3cmkFudHARjrvkMqbnNJBaXplIch7UhZFgOj1Yl7v8y3qy3O96JEi/
N8f22L83tJ7+y3yePVtzjfrcH+a1uc30+aDWxBTYvzGHwlb1/W7/M2r7c4j8EvJXW6HZ3XqW9x/
vqxxeC/
npsxXkEuIvWUhyGyPGVZDIxWJe6pxXnPx3YlqbHhKfV3KA9DZHnKshgYrZphqMV5UtvifJuadfbNxyEi
JUwcN5K5Czt5ecESllYqvLxgCXMXdjJx3MjeN5YV1qqCMQGYUrfsWtJF6WqL8/
uB6sdVDwGONtZNB24HNonB/5H0TvyOnHJ3DcuKQbXF+XRgJMu3OL85Z2lPIrUrn04qINvmVL9qi/
PbgH9WDzAGP530SaurjHWPkHIrarMsyqhtcb4ncFpefrqx7sF8LHsDX+7juCKrLGVZDIwh3d4cVq0W52
pvLiL9RO3NRUSkeYZ0e3NQi3MRkVbRDENEREpRwRARkVJUMEREpBQVDBERKUUFQ0RESlHB4PWOsiLSZG
pB3l5UMESkX1RbkM+ev7hLC3IVjaFryH8Po5ly2t6ppFyMMcDfSOFJFWPdu4AfktqVLwI+ACwmtSExwB
Lg2Bj8zca6SaS27auxrEX6GqSWJ4uAfXJn3q2B80i5H68Cn2t2EqHam8tAUQvy9qMZxvLGkfpHbQ9sRW
pYuAapRfmXY/A7ktqyLwCOBIjBv5PUL+uynN8BqVB8ipTf8R3g1Rj8OOAOUgYGpF5XX4rB70zqo/
Xj+oNRe3MZqtSCvP1ohrG8u2PwTwPkhoijSQFHz8Xg7wGopuUZ63YDfpSXPWqs+yfwtjzOzTH4V4BXjH
VzSQFLkLIzdshdd98L/NpYV933cr2Z1d5chiq1IG8/
KhjLq33700l6jgq6z9goM05tXkY1K2MY8HLO9BZpOxPHjeTkPz0LpJnFvIWdzF3YyXG7bTzARyYrSqek
ynkU2DRfx8BYt56xbnXgVuDTednbgM2BUhcN8izlSWPdJ/P2hbFux/
44eJGBoBbk7UczjBJi8K8Z6w4CfmSsW5t0/
WIv0jWHC3I+xxJgUgx+Uc0ppt58GjjfWPcNYDgpura7dD+RIWf8qBEqEG1kyOdhrEqUhyEi/
UR5GCIi0jwqGCIiUooKhoiIlKKCISIipahgiIhIKSoYIiJSigqGiIiUssJf3DPWVYDLY/
CH5L9XB54D7orBd/vNNWPdBsCnYvA/zn+PBp4Evh2D/++8DWPdBsCnYvA/zn+PBp4Evh2D/++8bMM81k9i8EetwLGNBTaNwV+f/
54EnAk8Q+oa+4MY/EV9Hbdm/
```

AAcH4OPfdyuy2MXaXd3z+rgsvvm8ORLi9jyjWsycdxIfZFvCFuZGcZ8YEz+5jPAB0kvyL3ZAPhi3bJ/
ALVF5pPAQytxbGOBfeqWXZ37Nlngf4x1XRra5ILX3xo9dpG2pDyM9rOyL5I3AB8FriG1974KeB+Ase5U
Um+lrfLvs2Pw5wCnA1vnTrA3kfIgFgCPGOtMftd+EPArYNM81kbABXkcgGNi8NOMdeOBs4Fqu47DSLOV
04C1czfZ79YecAz+BWPdDGALY90X8j5GA7ONdYfTON9ibeASUsvzR/L+yMfWEYMfkW8fALgY/
KRckC7Ijx/gC8DRdY/9+6S26W8g/Vt8IQb/1z79C/
RCeRgyUJSH0X5W9hrGL4GDcwbEDsBddfdvC3yIlAlxirFuOHASMCMGPzYGf0KDsf6D1CX22Zr7fkg6jf
Qu4BPAT/PyR4Hdc87EycD/xOBfy7evzvu4uvaAjHVbkV7E/
y8v2hn4zxj8p+g+3+ILpDyLHUjZFjuXeG7OAW7J+Rk7kWZM9Y/9U8Af8sxnR+D+
+kGUhyFDlfIw2s9KzTBi8NPzNYgJwPUNVrkuBr8IWGSsewHoqa/
xjcC3gOdJ77pr7QVsX9PU7w3GuvWA9Ukv6tuQ2o/X/
efZxUF5xrEI+H858Q5gagx+QV6nu3yL3UkFoPqYp/
ewn6o9yUFJMfhOYK6x7o1169wDXJwL6W9j8MsVDOVhyFClPIz204xPSU0FziKdjqrXKFuioTwz+BtwHH
Bt3d3DgF3yO/OxMfjNcjjRt0hBRWOAjwFr0b3qjOPdMfgpNcvn19zuqQFXdy/
Wtct72v9yYvC3korRM8AvjHWH9rKJyJAxcdxI5i7s5OUFS1haqfDygiXMXdjJxHEjB/
rQZAU1o2BcDJwWg3+g5PqvAOt1c9/3gK/E4P9dt/
yPwOuflsqfgoI0w6heaJ9Uch896S7fonb5GNLpt6rnjXXbGeuGAfvXLP8z6VQWxrrVjHVvqD8uY90WwA
v5E1s/I526EmkLysNoPyv9yaAcZ/rDPqz/
b2PdNGPdg6SL5ufV3PcQjT8ddTRwXj4VVA0u+jxwBumU1LHAX2rWvxk4KV9c/m79YD3oLt/ifOCSvP/
7gbtrtjkJ8MAs4EGg+n/
Dl4ELjXVHkGZXX4jB31H32B8ETjDWLQY6WJb1LdIWlIfRXpSHMYQoD0NE+onyMEREpHlUMEREpBQVDBE
RKUUFQ0RESlHBEBGRUlQwRESkFBUMEREppRUtvRta0TyNBuNsCpwTgz+gPgejh20sKc+i4X5yp9mfAaN
I/almxuD3yX2z3huDv7KX8UutJzJUKNdCYGBnGCuap/E6Y93qMfhnY/
AH5EWNcjBWxGnATTH4HWPw25O+zQ2pDfqnSmxfdj2RQU+5FlI1YDOMrKc8jeWyLmLwj+X0vI+SGv2tmz
MsPKkPU30OxpONxihxXG8h9a8CUofafPN0YLvccuQyYArwC2DdfP9RMfjbG6z3EmCq6YHGOk9q2PhX0k
zGkJoYXhyD/0GpZ64k5WHIylKuhVQN9DWMnvI0lsu6qLlvF2BiDH7P6oJucjB6GqMn5wE/
M9bdbKz7ej7tBWmm8dc8/
g+AF4APxuB3IoU+ndPNet0ZC2wWgx+TMzguqV9BeRgy0JRrIVUDOsPoJU+jp6yLm2Lwc0rsoi95GbXH9
YcctPRh4CPAfblLbb3hwLn52kknKTujL/
4BbGWs+xFwHTWzmppjUR6GDCjlWkjVQM8woPs8jZ6yLuZTTl/
yMrqIwc+JwV+ZL8rfQ8qtqPdfpMCnHUmnldboZrgldH2u18r7eClvG0hpfz9dbkuRAaZcC6kaDAWjuzy
N7rIuelKfg7EiY2Cs29NYt06+vR6wNfBUN+M/F4NfChwCrNbNccwExhrrhhnrRpEiazHWbQgMi8FfC/
w3ysOQQUi5FlI
10Be9e8rT6C7roif1ORgrMgakzO5zjXXVmcFPY/D35CjVJca6vwOXkvIzrjXWfTLvuzrzmV633tmkC/
APkDIw7s3rbUbK2agW7q/
24RhFWka5FgLKwxhSlIchIv1EeRgiItI8A35KaiAZ6w4jRanWmhaDP3IgjkdEZDBbpQtGDP4SGnz3QUR
ElqdTUiIiUooKhoiIlKKCISIipazS1zCazVi3P/AbYLsY/KMDfTzS/
tR2XFpJM4zmmgDcBhw80Aci7U9tx6XVNMNoEmPdCGBXYA9Sf6xT8ze4zwXeT/qm9zBSC/
NrjHU7A98HRgCzgUkx+OeafVxqb96+1HZcWk0zjObZD7gxBv84MMdYtxPwcVKY0juBz5LaspNbjPwIOC
AGvzOpn9Z3Gg2q9ubSHbUdl1bTDKN5JpB6RkHK+ZhAan/+69yc8F/Gupvz/
W8HxgA3GesgNS1sOLtQe3PpjtqOS6upYDSBse5NwJ6kyNkKqQBUSIl8jRTAQzH4XVp0iNKGJo4bycl/
ehZIM4t5CzuZu7CT43bbeICPTNqVTkk1xwHAz2PwW8TgR8fgR5GuWcwGPpHbmm8M2Lz+Y8BGxrrXT1EZ
694xEAcuQ5fajkuraYbRHBNIOd61rgW2A54mtTR/nBRBOzcG/5qx7gDgHGPd+qR/
h7OBh1p3yNIO1HZcWkntzfuZsW5EDL4jn7a6G9g1Bv+vFRlL7c1FpJ+Uam+uGUb/
88a6DUjxrd9a0WIhIjLQVDD6WQzeDvQxiIg0gy56i4hIKSoYIiJSigqGiIiUooIhIiKltNVFb2NdJ/
BAzaJfxuBPr1vHAsfH4F0T92uB12Lwt+e/Pw+8GoP/ebP2ISIy0NqqYAALYvBjB2C/
FugAbgeIwV8wAMcgg5yyK2Soa7eC0ZCx7sOkb1LPBu6tWX4q0BGDPyv//
SDgYvAzjXWHAseTekJNj8EfYqz7GPAN0ncq/
g18Glgb+DzQaaz7DPAl4APVcY11Y4ELgHWAGcDhMfiXjHWB9M3vPYANgCNi8H/
t32dCBko1u2L9tVbrkl2hVh4ylLRbwVjbWHd/zd/fBX4HXERqDvh/
wNW9DZL7On2d9K3s2ca6kfmu24D3xOArxrrPAifG4I8z1l1A18LzgZrhfg5XoNEBAAAgAElEQVR8KQZ/
i7HuNOAU4Jh83+ox+PHGun3y8r1W8HF3S3kYg4OyK6QdtFvBWO6UVH6H/2QM/on89+XA5F7G2RO4JgY/
GyAGPycv/w/gamPdW0izjCd7GiT3idogBn9LXnQZ8OuaVX6Tf/
+NlJvRaIzJ1ePdZOONejlsGaye6ajw5nW6LlN2hQw17VYwutNdw6wldP2k2Fr5d9HNNj8Cvh+Dn5ovdJ
+6ksdVfbXopJt/C+VhtAdlV0g7WBU+VvsosKWxbuv894Sa+2YCOwHkhLwt8/I/
AwfmhoHUnJJaH3gm355YM84LwJp1nLvTm9frrsUR8zr3O1Mmb3vX5Ehuq1RdNFXvjrsZpXoQMXppVnEyBqVLNVW0fKWXvzRkfxPQLbdm7bs4N6+t9ZtQUwAD8Q4CKfvNpSnPf0HJZL2gpRq0b6EgIIZs+6eHTgdZnJ4/CIQ6wLv+5ezFp5u8Q0wTTFTbCkhbk6RCsIy/
f9Z1xe43QhTf28VknFGPGB8tUgh0ByO8eLgnavhkKX5e0X0ujnsU73KanbP8Bc+T4qMGfJeCHJ9qvvpqEvzAuNa7y4Sw8MD22rcZ8SyPTTs7QsZxAwnKCXcT1Pd4DlMDAeoDZ/T6rOF10R+y6jFnUHO0/7P2+1kfX29R8mGF+fb7Yx51Qc3GpzQbBhPZGiDHm/+F/u3aBcJs3zdeYbW2pDdsvuTydvrPNBlt6aS6EPp/AvxnCm23BW3mxk1xedf9WlbeSAucnrV0lKNjzcYsyvDKflJOcQBKjnTtyoHj5Htq0I+9kDDWWA/2lrVFtm83uYnfhcUI/AnyVgAYSyT9O2fmKTLmxbmD2LNnrPyz/vvG6FH28Qc+8uQNy7sx0TvN1ZQYkmtP8yEX11Ahn/RBqz4sCdzw8/dUVcQNuOpzfwXwqfotP9ZQ4uS1/LvQhZeehaa6/2M/6PC5N7kVQhn6NYtwAOVDSbUJSedt+s0h80tV9ICEpawG8eeexnUUOXSxZFDx8qkaz4ejOtQc1b+TtHbBkNOVKc6jK75/0/X/KpQ9HdVSPLyXlCzSVXh5dNbHWN0qbp4y/Ioxwh+6XRWrywmbPJ1w5Ai/pMdXbN7SLGL3jGdrm0qNvCjdzO3+i+aB3HdlyS9ptRDtxY+yibj2vhd/FMgW51EFcc+cDcw0FORV5jT94Dkn0omrDsMSzDupOCpYvSiSYnoDDfdRoiEB1x+F5/nWAbsDIVAWdcPiKD9SFJKhqjubxU4e+GSQUl5lddERoUQNKrPW9gE3I3Mrk6anEjzLKT4mpiEJAVYglJlpdWjUPZhQX+8v6hXZEHD5Tl5PxdyWPtR1mojkB6z9rHVpm77w8pYIG0kuVXXx0N+F6UNdg0Yrhyx99Rs4LNbsYcCSZhJT5swA5Zc/5Tf8AJlvSu5XzJKpMsfqdPQfBSdQOJnn2dNhrHiUkTcvbyPwdbf6hKHsLU8m0Ghyc64vq8Bfm9A5mTNzY5fNbbdcaYsNiklk6pCSgnJlCxkCOjZfKh7r+M/e8U7yOSrnjXS78vRDzvH4+lQ0JxjMp02IYIQ38gjXpYufN7qkd87V9Xuuyfj3+cw3FNjJHu7Lw0h3wrzsq7lDsN5NzXbm+sCzvWfuWv6kDvDyOm0jQfjMP1Ly85MMeAVgTfzQmXbPDsTmgIgO0Yb9NhFq13bkMnlxA2wtaYr2npGi1oPCQqtw8tm3eu7jQ4KBkGNPIVvZjWJ+HhsdDOpzXNnsu8gBYlaBnMj7Eh6QoFttzlLs2xhsUkTyHG0xm5Q26dEOJtc3R1R1/I2tzIUVBRNOxHMAOyD5+dOiI2UcrBqQJmXCjRR3KUjUdYRUQpDpEoEDmOw/PkWpXk95gXA4fmMrnVTcvRq0lLG2Y7GeQJk7DBttcTH5Uq4IqqHaiPzYFhpoN5I8MWOXCdGujq1BhaAGO4mn52pKbfm0T7WxC4ZwCDYgyPiBGJ0WvpoDn5HWLz06LAUIbgDR4ltEQbtCTqxLkbJj2qKyDE7MhDEoYqQWr8M73nzmvCZE+XgxzLFZ6YEDd5mpCdALpJHOgq8PBYT0wWPR7IUb1q/HE/7kmwlGoMEpKaHWxwa3uTF6XyjbRjb4VMyMzRf4SzDj2fO2jDZWW0YBmG1wRsGZqdXzRGTOmuUrM0Mx0j9xfwMNNrZB2W3Dhy7JuBWEctBLMA/8y6HlZ7JDsZNKwPtpPkBRY18gGuoNfNyM9/1FhJxuYSCKt4hqQHMG+FUr4mhlTSeXyECZGVGYbVzmD43DdlwgLoZi3pUkHeOprk0rMb/9+AnfJSunvp+FXfPfq8jk0yE1rcmqtWR6uR/8lqiGwRbP5tNnpcc+U5w4Ee/GyNv38Fj4fbCJOa7SSKMdgoQjQjXX0nw46pRCuUZsbPQrcH88P9P/lE1S4FdnJ2T8u+4RypINo4JnqeLGi3FXBDbEppMj09C+ZxHwW+y71fGGEH8WhNxjiETcOrx6J+AmxSNzAoIIPbNozmVyBDFKp5C+/3P0GAQQrGE8Fm7nEpQ+gw4vNZqLImdPpBUcpPeWL0p3eOV+Gt2CgbCBJexRJp2VYB4D/MLOJ2evvY9xZTrm0rL7gwkVXvjhmLC9GzqwibtdetDR5Y3TDlyu6B6vI00/QD0ZOC8+CVnrPm0CfELBhV4GHiUh2ZmXa6KJHjjgq6BCvtxhHI1a/Q6UPlXEqSD1dumUpoSdItVdn79JZamk7PMbCQOQ6wq0m6Evpkgx/1+LhZnVGJEfqXZqg1z9Xy+j1j9ujd+kiXb3lsZtGQmNFRctpVFJDGHwxoAizqwYT4lhhHo4xRLWzxwJOIKvSMVCqAV4aUijz+3Cc/tu2fJlSwB/t1cMzQldDTs5jB4QP3oX1eHyLXKXeNtpCbBDR5AJiJ8Y14/lE8uIT+kYwpjcvZWLpuJzmWqymDyQCy1oLU5NdzXzqmKXzvuTYQw43Ny3K0sVjx1ot/0tsi9/5Mr3fLB2DzV+wjGbWRiVpnSUJl/pYjzh5/Ah2p0n3NMXCZA0jIzFNOf/Hq0ZM6v61qh76dtEUY8BPNm3xEDpuCSvIG2Ogy1O3Y5nJm9fYW5qDAmEWcjHJ4MHrb1wvqIrc+PImtrjfS94L86egf8RJ1/AA9E6MVmCSe05w2z2eAt2bSImWxPzUL10ocYKoy9ZXHWL4Oh+jqRWJL25jL4yY2NNTM9E4UNDl7NiGkDnbgN2z4zX2ikU0EN0P4qHbHmRkqxmTWWMOFVAADO7s8T0dUQ7+5Qw9SOi6I6nsUNFVUKoR5bo9cxxfx5ruwSvz/EU4I5ZQeUlnqXx3s2ANtmBszq3wuupGhvmt+fsYqo8qVaL8v12qx1QH57HP/g6aBqVzN4wGvQHEwqNaQ/Ih1JmtR1DI5AGvg5wG2tZxjH0dvOPYBUQW6aIDCkQ2GBcUX9N96IGnPYcvHaCS1xKxdDzL4pmjSrzbV4OIX0lL+/SCIRTEQNbR4/Ezk+qIt0g+8mLpmgxdSAZjnDuP6OK8VWnp5j8hNs0xH/PpydJ66I2VwtJwZTqRuamzTwYd9CAR3ieF44ZRn44Gi4NtagY6cOuaZnbDR9Ue3Q+vRtSmJMDqTOI1hLLgbc9l+wMvedvl4OwA4U0hyACcuOoMGQZF7hnhZ0pDmrB/3XBhx1zMsHVtGPkXDpc1dMmqdCbwVzB6XRwlWSZvQzYdeS/C9ZuFj1FrJz4mDoB4I9TUoK3G7Ka8k6z9ld9WhXrk1IVRwMOzXB5xGVEmn1CMsyWg/exyPEcLZxdk3jLiC0OVFwCxBTdd8Z3jI+nVjI3ocVi+TjwN96cbJ7AkY/NjVA0QDXqeFOrM8AtbjYQrgL7WX7VUNBWdGSyfS5/0kXRfrdcvbpYF3jBGufRbt7Kmdx6Ahaj7ju3a7S0Y9LiORXiTIxxPLmBywS+OKUg2JKN3ELiDOoLWwB2a+lQ4lNdqcfunbOn2jgPBukmdJQx0EhY/9MLuuMoGfyEqgQsjdBgb7pCxZhm0GBmFuESc9XrcHtHdv6xY28mXPg8LeG0Y5fGKbGOiGcs51sO/J1O6fD2AkeE+EcAjmU8VqwWCtZDOCP/GbmiB+3BxiBWsWsaRX7xXPSvRqxXsd8k3N17ZkuGFP0dPkZKH7M5P0ZoLhSz9QeuEO3Go0Y0dvhiEJzyfMj9CUeDI/BXNTo4IV4Ik2jQwMgU/5i1vhZU1OWsk6+PczyfyD+z9j4r95m8szOSs0c59gJ4ADotdXFgm8PyFvS3tXqg/+PF6OZF1Y4LHRbOawlFBWGtp6Ocj8z2a89ve6WsjsaI+Ki96AHW52w06bu0TYUcJRXVu27CkQVN8zz2cP6tUeDW0Y+jFjHf9KrXCg9mMTa2kKrVfkH3+6H9ndNAL5eF/4H7/E0PE7M3CtlxYx+/NlRLL5QLRm6Y/58cBOhdIG8T3EKOH6r5Aqj3bLW71FTD1cPwGPt4QOIEzcTNC2MkT0HEZtu5ckcTcnM/aW53Ze7pI8Vlq7rm/X0PEBfm/KeP8MrxV7UZt0mlWGm3B/bE0uKdDW53/L+P/ReRLRs6nbbCJDn8b/vqxq4SFi5krxY0xkzW2pOcvU1t1tYXk3RgnCC5XjvDlDMrqtUX7x+ozKlcLZ1D8C9Zm3S7Mn80pPL9D0/P1xIPgqRx5M+V9lnwmHn8eCRR4FsVxfIVvYEUVANDg4xhpxSBDRdHjSkBgYfdB4Y1S3dBQhtFALTwSZBzjkuR2j4eyL0RfcR2RZkmIF/BcJK91Nm5iO8tqvc7x5D5JXF6xpZB7pDOapHj+3+U6SfBPiWTRDLJRs8fhnqQ7O5PeHQAvZ2ygjmB5PGdZ1gjVTLJgqlY6ol8KZDZKJVjHlOUFwJbfSPw4nEK+u8mECDjfphJqZ6QdzbJ1vOO6h9iZhKWF47W8f5SZ6QAlLCd0YJXc7m4S1TfdzEvlUVvbFD2Gt6ZdRf8p/VlmfV7ac4qK6mO4jbP9JjobPIBFQ/Br3E7hk2oRmmv6Xh8fOEA0ZZSupsYcTkfnrvkP33J9F9SfHYlvbQqI5Byx4KDo7UwCFxx9BrHrVg3Y04E8nyE07K4TwEkRaUdpSUOHBxjAS1twMsA2ZwaGwnsKKMC7WyYgGNm4BXF4YdqMIHiJgvhJvngz0W6Xb3tHjfBqZXqC3jrQ3z2kNlKVSWySNNShOgfzmnR7ngYkrwzIpX3zm9BWx3ZchsAqVW6VtRLCF5L5Sa9IKggTNxcQDEUvvxGHfhe7lR1d52eDDyCU12IyrQ7Km2OUsY4Sif3OZC46QYYuLdzdtAA3lnDBsoEtmWbEpBtBHyvn3mbJe/ha+pU95x+zfm4gwxe/IcdpOaWbz9EJbtNiA46d4ksk2VmbT6pG2SCZlfTPH5E8NmEzWg9xq1FGYYX5mW0+2KpqlsHMMsXjJ4Gfx2Pyvh6nDUnmzYXn3oXGRT2TRKH4pCN9xpedDZEUFGSJcO4yIOPsvAk/KDdmxZ/3/6R6aC30AhbkbvvmTV9Af1d6ll7wWvQCgdr0u4f/IVz4yK+7fVZnKsmbq8ijqoyZJ71nQFnEaqUzkJZwgiqMU+Q60G/aeiaLJlQDJYpswkxlKQcdcCZsAtnY3Ij+UgSZyIx9n5dmTMxdR60aKdzKYiMMGCngIuWnfxAi2eFUIrmNPQp6Hd89RtVGPG+K3gfClSBdLFbFA/Y5CPt3Fw3BPa7lFKeDChTDFDhMDA+B07r5MRpmqdCO7jfXMrLs9tRoHajD1d1HsoIxL3+KxxM7xp3k5bdftNZPYIxfshjSezgEdyCXeMQ56bf5FT+N1GTWfibRgX5MoEzF5+FbUHwMJmgbDkY02Nu2FiKrbuKPsqhWhPk6JM7bAytjrQH93XwPKXNiqRjq02AR0iJH9xDeV/TLgMKxNvSZLhDEvbdZJ0gHtTB11YJjgNhNe8q29u4bnzb/rXzD25AQ/eqxD2oy3Lm2tD7jAQlmwyzbymnzbGNQ79FSZozuYbfptFJWs1MF/W0Fqfi6PBWZ0S6ljp3BfYvJoIHN/5YUj+0K3CKJ0gF/nmHsa2fggNBOUC/0zDnWUk/rQnI1ChvW0OmXpkB2kPDsnvQ4PIs6+fa43Yb3+IN4wSF0HFjlUGDtT8RTm1sM0WFmwlY0AEZlLmo0mVpy2FDmsV1RKh4kRnWefLhpVnPK2cmHw0tNh63AcbcNOZPdxugbY+kHeQB9odaKaAIMFRB0gX/rh2NbNCQ3QGR4dBR+38PqAuSMH/wtGsfhxB4hyD42R+Tvbw2HjTq/XZ2t6yDFcDEGjTPTf72b1z6dzWjP2L5rAfFi7zrjbxfJQPeUGvzCrcDzOVl8n6IiSP/VgOH3GYsnN4bTGhgNcW6qqiCB49KErC1qu3KUhW8zl/0nPgWN2i3udR/HeYyaI0jrdsEkWNmRxyuCFcGP6kDi1Kc3TNbdbhN1jm9Mk5RTYwyA97+GfBpZgrK8QMddbjpeN5QoObejhodtNPP8trtyMp8HLTGdpuxpHN6FT2thvJPaUj/wQvCBgHmfkDmgtpoaPk8XDGaTeHNTkHQRMl5bhvbsy4rBnBkuCAMymU3xx/9vDcGYvPMEIfZ6c8vEiaSYsAeGiVsDDm2COK4WlLJ08GH3vpP3i8e2W9r+e9DRv5P35GWZZ4u1DhsuIw61mP/CyHSU/9cEDE8Ae1UQb7a/nEPVs4XyyL/z7ujFSHepp5Hu0bCqCKZfz5BbADjrPcm+1ddeZJ1sDnrnxOZFZz6JmUD8DvDaxzw6s68Lfsnt3ZE+Tn3KgnFhbS5qxTV0IbG2PjVfxh0yGB+vNuGfWq0Mp4cF0CMHpBg2cyEeqnuHhnnvHlBsXBWvRWBpTBb0w4Q0mK9nCIx03WUaq1pDhKp/VKE8FGl/A4UytvutRjYvAfQpxoOFy8D1ZUXVSe2eF/rJqy7TOE69Z8hyhJVHmq8jVLlEkTD7t0Su0bVz86V6ZO6jnaN1eZ8aSJsi88aFmWthnmZfOxCg2Pn8BZmoqK5Ey6ozdUyymNIHQ+i9k1xm9U4Z+T+dwW4mGHUqpdfAn4gS+Ec/M8eHJ6hcNe7WV3rIs5+D0HIaFsPavmnh1Lu2X1CCCrQnO9ckiRWiYOUU7V7qTugGpVGg1bRR/J0rV5T/Y8N/Jf+vhxtNXs5+H9xrVUUgqQMdC5NHdHIrm/B8JP8uUjx/Tq79OXtPsrdSo/lPX6S+40vQ6jGkKpFMeAkdXRfbjkSv7vXv0KFR5e0MPR4bjQKTUsFmmbXRnO3+vWBXu8ohydhsYJqX79bxCqWWyN7G23LzQqGhzBwIi0JZ1Id+mwKe8UmCXPBMtJVDwtZtsKJNh9x+tC63FjyUHBr6L4LfqXtA6WhOEw+J4/Je5NUdGYzx0o2FRzdHgu1cxiDHeHyEIvpm+fP+W9UkPDxOaBtlPt8rhnXnXhZKXzK6T9dLzqt0gbnO3FmRoYnZWeLWvMzYGoGzXw80JJz3grkcP3YXW1HP+GXvzJSEXW+AmgJMLxSUCaV+HZvr3PxqfQ0mHaBxWqupnLpaZdNgSvqPHF3ydzCcfyukbdXtB4x+/z85L3cl4ntYe0s5BSuNsHO1MFOPHLk6cZufPBDWOFQVEd/8nVePxbJTePKoaWf5NCw/vrLkVzwgFdbWiBg0Ab2ebCK0trXxx0fZeyAqZKTeW5cQ4AuDSbvxUvPFSyZ4+h4fDKqCqYCnvE46OQiEqhxwx2c0eDqgODHp+Gv4OD0EazT7HYhXqkjwGmI9vxG4SfbGSkWJ79KCQZDMHQbzjPhTQRpLzpMyhunbCVgpZx2gIKaKvYgVeVrXGc7RC8q5WZlxI4ZJ4Ie3EzybP33S2rRXVf9Yn9k+PjJNSYPgUA6Q88wzsmOwRSWgDhwnobZFAtsHxrqqBMl4g4rjoemlrlb/hS3kA2iX+aEC5wqDlxKsdNJ6FxeZeqvJoxxVYfOO5izcPoYHDjQNDnVt5gnq0d0QZ/SbPNkH9aCgnFBK27uMeDQ3Uh+XqzLsqFdZGl+b0/bXmJRMmsy9n5XoIXnVyKW6wrx0r2lSRCBZ9TTKG0Hf6JmzefG/+PFdXFNOtp+ZCdrkD3V7kZ42LbnoKWYuD6Q6YJIx1tCi7EJ1CQuAjdbb2QUsvDU5wZKgvTJfGvUT75UrIhdWaCUZMqAdC4xTbMyKuxk/a0pj/MlOGbtIr2ajV3vGzR8+Upt4TH8tc64PAdEEL5Y9JyJy27WIEDZa8fVs2l8n29EkW40EVX8GRHfgBS7uOY4RN+qQXkzjpmfpaIXN6wkqpyI3uAXFc1+QRf16pVKZ4qGFkVTK1CZcxCrO0WUxezBpOQRmsDOfKUv+kDzoytBcLXqB2nBEqFl4aD8qBxqdP/jOd6snL2YeLrzShUQL1gYyDVRiw98fiWQv3rFbaDNnqdaQyV8Sq5/RVHLF/iDgKxdHAwMnUrVmRRqqNGn7P3HKlTUthhOupw0/SX0oXPYYaSLvHlLtxnl4Rj98u1ma3SO7Uh8nPsp0FyhQ5ZDHxNgy+Xal36+WXhvwhX8Jg/j7WCptp2pmTOFwvTzLEX0rvm8oprvzTc+4M/dV9qqqpBjkCqEh1f2eoiYPKhMHOvsUqyWFlaOn1jLyxvcDeAy31T7HZ2bKz/JvsTGUqHyB7e9y0u8l7pD6oJQJ1hK0qEbzqRzCv3sUuCgHIG8BKYL80PoFoxuYy6HP1CMLhG/vs3UMW2ox/wGxLN0MxnDOQmQ2t3MUgwqa1yXpjZI9dt8bWVs+uz5CjPhRSLSW30/gixHsdvf9gFXmBqe/TnY86yTbOdnIjdmm0rjHEXL7kBCZzt19mdUk5I3BgIUpD0j2kZJOqx3gNJk1fO6UzRoomW+bGlGtuy3Ecte+Yq9HLTtGV3BHyZ0CpYeuTMlmh4RUUcb/N/BQPf4VcDzPhNfGzBtCo/EQ+Nqz0ZvcbvU2WtGMHf8wTCtn6dzSCCgL3R9LeTn1XIvt12EkNp5iQhMLE5YZnGbyobXFBiTJ4w6h+yctDpCbJStJBgBlKQyGZH3SOKXywuTO6vgi33Wh9JiJkzSqrHK5yTyrEr1Pz4VP94xoF+v9aNaazaf3ZadcbB+Lv5DeSV0OCb4SSLVs+g6N60zpPl3lLYVq2c8hn+5uG9x7mbFHiWmNfWvd20/L5y5K+vR8jEM3UPBM7I/5s3XKrRNPQD3kfV4UpqHlqd8+rwVi0xfY9Sx6PjPj24SqBSpK03gRuWd3M/M9hbv46vVu6JZd7cJDhvHBZn94+PaCJZIy0W+EKKuJHL4tZlGGaLjS0bmsXrrvtXWdWKRjCFZFHBnaT+hp66RE2ZTvv4eMxEOUiWPzgMapXE+6VGQMzoXsPUJh4I3lqOCZ4hsWY54VjUpE8d7+xLpdfAhwm/wqLH5Ox8Mb+mvWZZ3nxKWtRW0zo4QG5jOjXAyrSMdtHlZBFmP3nuuXMsqq1YoBfNSSOdjh8fVx3WO5KRLjO6c6tlJzmktaZmBp4rnUx7ykU3Cd7wUGOXdQY73z1bjvUXAQ5DvAO5hUOx8P0lX7bxqu86y9PuYy7x1cRHKo6R1DDVQIqFfbQM8w/7BvwMCBzuU4Vnw2xnkWAnkhqEpxrRcrn9Hy+LVPUxwFcoPPB5CA+mp6B4gI9mwmpBqdzyzoC6nf3UXyFjuxDC8nbSWfPBHVeX/7jXQ2mKF8Mfs5nURXZdBMxh8dmGxyqNuNz3E5y2RIUBvvkNzl5P7aI5B/oLy6Kq9KP2AY3Yz94sZwVs25V7BUVKF8/DRZe0ebePwAP7VXh4aB68zgBj/+y1xTqLx1r3k8aeG1cN/Ei+uLGL/ccYJ9fPKJY01zsyswEv8gxjZ/r/1WiqFWhSzxdO8nq3U+ld/Kl8TJq5dhVqWXSoAQS3nrKkQLdOJQ1l66Dt2Gc4fi2Fwf/L8E/NRJ2cPl5f/r8jCE2sUX8IwkT/XBDKK/xRX6CpNk2Q5QLebRmqEMsqf+jlYDpCbaDw1v3+dm3OHNvltcTzD2n6rvR2oBYuBsoA2VtpfIMpt/sKBZvb2tNpJbIlHqzHg2HGdKkIvC2FYTcdIjhkYEDLkkh1dyxzPIWbTVlLgdqnNcKIBdnz38hD6hKWL2mOIjMcCu7EBDj/5c6l3SoXS2a2sBIYqQ2Sc2zsh6GK/SUs4jFPNiL8VxZyKkRsoXaVRWOJ9BUTiBTqM6oB66lIiC+K3p93t5gtDqgkX8P+rHMxp2eqqSBOzUUnJR+vs6e4xUI+ZbbRkMkvCA46xTjUvzAQVVhJ5cvVc0T92bBh0xoXqzsKLlmC60dygeByv0RoP/b4JsaVDDdRB6WhkUbiYxfoMymGNxaI79VoDDvD10nJMTzzMTsiMNrrtSNLHmabUk0umiMiCYdSNxmr/5R/DCMl8fwTEfYm96cnmkQOJLXhzX+7mdTBXMAGr5pcA6kmm3NSi8dBGHFzvj2WD+vS08LcOdWYoy5lsv/hiF/bRtCLgm78/mVvcLz/+gE3rpA4yv4NUSVI+7rCOSALeFhD/gyfa0bKzKn/zpnBDTGH3MS8ZpZ0J+ZHYx0F17sZFkNV9HDWtpFtjL8hAIKAVt0Q/eHIL0AdM7B6uAomfhx1EwHLA+a3+G3dbL+0h4TqEB7Wi0qA5o5dWmg7LT7rAjfzmbNNrrCLvpsrBGsBbXtf37gKjcFt8/AJoP/p98brBX6H5r3JhVCgmGQhCOaIYJQMhzNdB+b3M/W7aaaFi9Ow3z5CLOaoyvHnxcrN75rgxlZhkq/hlCKCuWFdVQzx8krv5v2vDKQmFCz43ehM4Cs8QmZ3jUVYcwqbh0jUnTu6cK0+BEk2UTf6lEWDSLE7T6CE8ojdSkqz/X3jrXBUm11OEYB0IEHpYQo2ZIKv8MxKwADa3UP+AJjTjZgiXuD8Q7amhsyU+1HcoXJnVFkHhlJnf4UYDoAG0C4UOOsJDyFDIB7pxQPmBhUkXhbSS2l3xrg3Ndmg/8YuXcy8BvH/jJ5nDZPqH+R2mlRnbSMqIIhU9BQ0sfr6XJIQMoTP9m7fPzHKcmbLPQx16Z0qSvwMe6+7QqdSYiyA6rmM9LCSpAUMmTyx26G3yGPFDFNM0ro8NWljPF8sSqNGzv9P3WPMZD/JB5ztFu0cbt6eDtz5kfmUB4E5kgmjQ/yuLqYoDbRRuoCmtaC4yUuh0NY0A7URxzk7fKAeqcmcFfqJHhcr/uLp/E4hjcW87ADTUJ9/lnVbsuh/oQYFXxS1vEz7hnuETqQ4lOwDbz3LTLSDiH0YdgrbVXFoU0ZHoFhz6NgHb7HHe7a7apf71twqcYIVt3HMX5l9sY1bQcpRHhvUtZ1SwmRmjAHN3SP27d8+mSwMRxwUoyj3aGkQ+TyT0EEB6rlIAOykqo0vg6yhmL8mwxYWmgh0ggmn9fLYWvyHzpa0lkrVh+eq1sZrNwmZxZPDHiTuAqcb+9pX6bMTd6ZnsyC6GxtU4cdNtrELc+Pu4C6sXKCwrUojpVA0z3kDR7vD6K5ciXpEnSEl9eJAMuZ6dP9wfb7mW+dbRx31iOYaLK0TNLR6sRJFQqWHLUNTAyiPXzPTxxp4bnI6JUQRPSTaICxwk1FW7yX05gV4f21iP6yYtvQsy2eMlZJAx6D9UzHsPiEh1QNjqqa94n9CuYlOLoCCH8pL7VBAuQRCTaA3wPYgiW4E2KdMC9IsGrTyzcnHC9qIJDwIZWBfBw6BQQThPxMnaQ0k0LEL8p8P8BXxpGxCk9ZO6Wh8ZYf7tw1tXEtyUgpMuoQR7bpFOMaAQXs1R1Fqf8Y0vpfSoKuSPGjtHeVT2GSxZQ3yc+ERn4P8xYPCSF+5xpBjHSd/7VkJlxrXm0Ilv0JZbXEt1Gkf0LJ6XqLnrmRQJ9gqqdQ9jsAvUjE6AzyS0JjZxEZyOo7Kzra91d06d8GxlN0Bql4XBtgEDb5fHr/3LDwN1GHRLUPHR7v+eMp+WMzZp+91pO6F5+eOLgXQS11X59WGzY4SA8TSN0ofqkeuLFhO3CoEX1S95tqeU/3MCkT6eFKNVFrAPr+zbnrh5v2zTNjWeK6ZkgaXBGJPU8OEWC1zi7WU5XrWtIVO0QnUuYBNSXBdbWcExAStrVdbCt8V2c/0Gxy/RaXKx8XvCBQmLk7dgVaYm1TcvhBl9TnEaDrYaW2r2ZMZhKdZL4ihSSmxQZcNv9t2E6aDMpp8PP9LsttPa1hQzNR9OwB9q3MmpaflGMr/b02oKsi2wn7DFb3AjnDl6JrRXZXTiVsmMBsCSeAlTeT9GLaxK8MkU+x/n5tpscU0ZzmP/QhOJbbVPfXBvTzXLr6GfLEXzx4hrgE8OFHwKQqyUYXHpVzoAsfHXOYiaMI6WUSS5qlxtD4i61wgkpOD7nNvGhYUj2nF24Y7wWnTQd3qN3dGHAk6I+U7z4zVCM98AUxmSDHNbuDbYpUbKQUkQcHODf5L+DzTYJTvL1w7vHHgMCdkEMXiD1oFGMrfl6GJtPdfHC9Q7flH6A3D0HODRnRGRIyhfO6d1s3Nmmzs8TiuJ7QPtVHpD9VR+ZsNsHH6VkK6f3Y3ZRG2kpV0fMOQgrmWlU1Pd/VXfqmLxl0uTp2Qz1PGjFf5YmjiBbX6+dTp9x6YHdaI+dKo1QbpQ8aKLvaeLhk4mIrjwr3ixVXwyz2KI7Epva2m9PWKKXjvxMy0zwRrW1SPrq6e6vDe5m8zEOpE8hzmQ5DeqI9lVpmKFxPxmq2Y3lJ8x8Iq5ylUPnHwsk8HaIr9g96Y+yHJMVvH8+IWxHRHcqHGNlb8vX9WjvOm72WeWTN2F8A8zOqWbeGQRjb5g4qxnP/AL28zGtjP+cyvEPkE0w1ThqpL2oOYPF9v3VftexgJ7WoAgJ+h4tC0ePUKjfu1BuWkIxlAxZmRTr5wS8bM4uh8FOlbBJIEjZFq4WtGVZRrKo5FDi3eC2XPaK7f13Ej8A44rSN7YaZB/6pEo4+QCbWGbnvwfsNIkMk5ekUyHF4T5NmT+HtXgqUs+S7MEvDySTmGrZe1k7bj4+h23CDlldM/cmpnxhyvd/p39AKjNrQcM9AHcvCRlVtSk7nm4ZMcRXNZYuiRmVkJwqj1/GcT9EB8TphdH2eKSeH3HWYgLftU84TyrDIcf0cjrz+EvMOo3jFaRDgZGWGKLNAc6fW3JyX1Ue2uF7rCKyMXmCSuaLZ0LE+RTaIbz9MVxQsbZKz5YYKR0GfvtmKnFUfv0V1kdUdnE52hU9XUKY3D7ZHMHNTgb86q8dC6L9c7u1dHSC1KAPHFCO9PRnyTomh2z2lvBZNeS/4lBZz94PQDVNnZVjCsEEYbltDyh2yqxEpMtM6s+6fWbvLQXtbuLZiQq3r4l6F12tjO6tNTX4LLTH0e7WmL3gXXFoPmhAVuf8Sy7b1BTk6M1jdMY5CnOiQsFP8YY2TRSdlWxpVJdIt4z+lEWphdSKA2M13YVm4VlUT60g4BODS7IYTnTpf7LWuiFzvqkyGDm0b4ma6rB5a7dyT7JzmcWcgO7YTkMrBwa8HV9Bvxi0FXL0j5EXwbGoaL85ENcI0uf8gl9WeDe6Hh3ZmwHajXqQW/DCZ6NpDSwZkhgkIV9TtBuQ0Wlh20hT5XlnCqgxjgGj+3ukAoXp4JSRgw+M4AbuJ2B7AwtWtg4X5chlYAdd9vpHRkMXOQjyPpJeZv0+Xw1MZngb/3vFi7yHCgdF14OXnwxrGAkY60+R7g5Ysye1fqf9WFMkaH2EXQ4KFyDyz8rHTt8JL4GkFhaoOJ3CQngxjnyPlVMlYkI+yAHhwdbUCm/TvKmFuG5wVZbrmx7x69l63rl3BnRqD+nhuXSbPqzcRncGHu3DhJ5AmOfJ4pPtRgbh12exWqnTcFGyakTdwdfqjMUQ0lexmvMZkAmT7AO9u1kz9q1DNqMAkHyAtXWlr+NUPIDNCtlrkWBm6bb4WJYFG8NmrPaAdYLr3ZBshrpfyjcJw1OvYpfEjyjD5OqnC/ZBlI1rsdafOL37M8Iy1jjZOHt+AKNp2fP8DiN63iDzjgYo+3iAS+ZJ0BY2EZVNRa4ULlYcJ+d9ZuxbbQ95W6U8gmKAYkH5Rqq5LajmnP9cTpmQfAq/Jhn9zfYUaf6WC3qYMGxBWVF7PdcH6/pcjvCMEZsDJ2Au+5oSCeSAcIOhOJLQUPf4fFB4T6UnWiCgwXkGcyzwSi+Z5cYx3Ib05N5XoHmGYH1wbU7OvsWtrygzm8wf8bxXW4FbsUK1knGUAjNnbQJhJXn3VlVV8zBoknrtUGj2cVuaNP3FDPG0MyzuGq4ZfyXkx3J0VvSSjgVkbCP4J0sNI+1otj7cWs9WgmC3ADKhYOYyB0/ITZhu1TBdjX3oRSBx4+hTsXlp6jE1NgLuGuRYH3dNeV9cFtOJ9X4F1WTkNyR8Jb2JK7qa3G3pj2trAi5bupSXDRYAhYxjNmv+3J/AX/OUQsCd2XdM7TMbXTK0tQsG8b2ly8pX0vQxjeoEIJOE94HAZFWpxSxHM9TB8wIsYk2pM6oIW4pDU9JXg6Wj3A7wWImiKPJ/u3o1MT2Z5mLRm6HCJvjGyvKNl8CXL0jgE3CpKFDM+T9bPPLYXL7XeqnxcWmJxtPlkg51dP3c7iw/x0hEN5Y6BcT5vXZzYKs1HYiOxQKfNRE6FhFeVDRbLpH1VHVt2ujEFcUbZ/hlXrlLFzqGuLyBpFKHUAE2mLefc2MH/gvEmJR3gVu3sTX3HdWeIYTbsYNBJSPltJULN4j25j/aX/kkktGKx9R3Ne2hAaQpd1Mp1W+tSVNT1HbdlCQjhcOi5y5okH8mh6ACQd7/xhXgBtM+1ZGwxFo6YRpTgg6DLU8YbiNXMFSthuY1Gg6rS8nRa2d7GcT3FCpTqvqF9xy/k3iULYgNsfGiHdYCWNR6wvXOeLsrbJeqnvVMk5b1n6P33yBHFt5ZR5xFFkMJgMh0DhxvTmPjpGCUu3CxGsJUZCxBuuqa7cS3Ih3apsfF1R95mM5KsHNzGfuRv9YTxmtoOHu2n2NEzaH5mzV66LQc1Lq5sHRNrfgjsuHD1RzOsgBmfBF4Uiwa0UKoLBwnGmx/4UTIZDD4AXCDLeiMVjdWpLdMk9P8+gEWnRwMV8OmQWbjTrWX2dmB1Va9V99TZQovcMPYXK5UFl30ZfjvtVgiVIyi0pbZ0iqy3Edk3S9eZqfcVYBQxlWwfaklNhXcE86Gpu1GgprUmUb5/Bm/OVf0WEqZzyupqnyyYIAoV3Ae1cSKHHmkt+LcVnNo/aibUIPqnVFV7MtpiSSq4dP3xrmHz1jB2aQ+TvJMnpdWYT/HOzhb3MMwTOEfO2AWQlXZc44AIkmhDpRGUgqKpkY3/JHZb0Hk4xkbM1TvojRzhRgBrUyEEEGxsQ4e1hQhh3o6TcxcD9JdzuxNGqUTONXpZvJK3hUV0aSUq8VlytYtDD5iNbtqV1YlA4hJpRAKvuHwtAsqh/0oYvy0CAsxBebg2xxpQUDnAPTrlMUDjkk7xKNufF00nk4aVxpB2pxeAUQ0uQiZyaKbgkcrbnC5AaRDGJcBKu5YD+s3e2BNadHbEtyLHxn2OeEgNu5AqrfmZPaUuA8Xu0KzXUpXJOgC+41IuDNQDBXQ7XI8OJhSEhwwnRbujydoCXvd9+/5p2A62hOTYvwpSK2ts/nqVtrRZLtH4l5uN5aqoTXCH+QvNSDH5F1Ml+AAbAjc1BgD4EMqgMfk2W7GN9v4ERsiYkNzGUMsVeU4/rzaF6TbULiKuLeRMBCeuoyrXcvHCFkfxKa/k6mTKDNcjQwbUTr3Tnkn4QD5AmV3D/w54UWW9qp9vmMCJ8AyNuj0ak8i1QWKdu1jSzV7TGB9vQCW0qRJW7FSAZ5HBkmtZoEJgZrDzg+5kXFIDyK5W0tArdxNWqvDPgKQupZEjKvbf/sZ/U2NzEQzB0bYTTdfJQLg4ui10gqJsgwudnU4EypeAU1Sqfl3XqhjvE1MzYBGr7dhM7RqlKY2mBrpu9qWBvI1Wwg5WBrjHTmKmUOoeTpQt4cwwwoKtxPMPDUahWb2vIdHgsDzfzK3+jDu7lf0U3lTK6RFKWsQ5WNq/K6ZmoJmHxgEV5oDvMiSRlGojK7wiZUBvkDsUdhx/1SmkN5QTSm1KGFfPsqT1s2Cdrbtab3Sm7pdxEqPQd7ghe3lCSdmW/E1EOcpWeyBrcqRpybGTvJ4VSR+cDYrErrx1c8YUe2QfV8Ni1cJxhBjXfwCmqHXy/OXTFd7ys2zW0Mxwy6DGvVrXDPmKmfpMUaqeT5uC8qbnGXpH/bPa94ht1Bkf3E7MXPpJiN2ArYMJAHqMdDeOkgQS9yefyX81ehUAtsVzHkTZR5A0WkgLw49ocNA1xCB1pxFUOiRfemYxDxzCa3Z0aYhYMXqoFuQSpFqxnY0gbqgk2HjdJv8ub62BpfKShQK15gzHcRhVNlHiSXZjaGxFn1Dz1KPxHyDpdsgbqiWMeucppOFv7A3B+Rx1Do4/1DptPHVUIuTq8y9Cg3E0vFMB5dRFeZZsp5nmHA3bmlqWfSBXF4PPIxGeMG3nx0umaatsrhzeX1M3p9bAlG5ul0ymbUbFUIkzKOr/ixdyOCD4ncijJzMKcbIwXHlN+D8AJ1W26FoSgPSHPwk0omhhsDRchxj2KUsvPF7cXfh/K0AvIzMlPKPKd8iqi2VPwYJ2wHjqZS/LjH3wHlGI2+Z6N+cOBA1qUwjIWyYKnTBdVVdb4PHxtv3tqg7YnjjgpebAHuvL4KF8uQqs2ZKMw6Sx5t92Wz5C9jjZ2XR4KgdXBYPF3g8zFP2wDI72D2+MRjTxWtSgRJWKf1kGeOpeG0CCmHRgmZYaXvqrpSKUENKz8TUu0pfwkgNbM8fWehY31RAoDj0P1gOmDZRNxAlmZHOwkBWOEDUtd/j/1gJ7qj7Q8xsqw8Kw9xlhXezb05rF0j8MHF3vErpdWRqjcS6SJdBw6Lfm1bx76hlpbWxiWPQVpvNqTahM2dctgdu+sXr7HYlpl8O/yFT6GqPzkG8K/kR9y8GjVzp2xMj/MJRz6PdGedS0cE4+zGpq6SjyC4r6M7IanjgGFvvgcBUzHDyQn61K3NK1XRPh1Z2+GZKe8qe2hkVAP7UTUeIhoySsQk8uaj+C4rhx3qG+Eq/dJ07xU01SKfUmgAGUKsO95nVL5N3dR8pxtsNwi3szzqsobgR9O8VpgyKdt8yTTF8yM7YDdsgdDOeuPmRiSQwKhGapPPDmBqpvqYkxf2UANXYRZyM0oKwHOj2EnxLuepfwlMTSTj1uJk6SvnUjYZxqEMTRZg15cvgPNoQtrafvGaDCfmDCMTQqXQsSM26mhU8D7GgPhfJFx6Ck1zO0k/7HQ5HiNMLkTm4khWD7eZzy7eG+5cPBXGx+RMeHZ/1u2ZOLo5eV9H4vTbdyqEtWVs3Qfwj0K3KkYGVgQ02AK1EGuSjD1OO0FUhAHIbfhH9vDWrPJE6v9K9jSP2mMi0lU5aAPMzTXbUC9aeVxhEGSOnDRCs5dghG0VT9Zx1v+nPDG3wfW6N2/rBmc/jPq35O5SN4qjqVGnuGLlVXBEEfAhOsB04ReuGYB4/f3XjAAbnI8qnAnKJPa/2SVz96aeAn5zzWHEWuDqRSG8OYjcMzXMqqDxAjBpaFNOqLHWYAaDDRfrpOi9Wq6omxE3tFOEUWXCBqX8Fm0GaaXJ5fxG4oVbmJu1OnLFTvRHuK6T4aDNPjQSCKFQWrthotjUCYsN8Y6e3ulhGBtz4HOIrN98sq2s1iBnbdlN0FiOizePoHsQ7vd2RDgmRwbPgQV9mi8xhTL5G1jOXz2aYO4HfoPQNZOjDKafOCRYepMw5xgWDTC4dSiikAd0R+2ICJvwlBo/5j9f5RxzITkdZxh2sqJdbZVE09jnxAA0cgn5n2eoHFtGtPcxpTp4Kq2aMs92+BHY7rtyQ6LM5dqRqQ0pOjcXeAdOGSCnjdqJWMeuanDTn0pWnZtKcYF4efgYp8o0E/N3e1o0n9QDTrEg1iqvu8OJa1x2vwyzFVpH8JATdRjxTvkqs3Ja2xbrTCpwX0jN2xkQ5ZeyS/0AoHT6QmRKkoE1t8NsqWbiPjMabvjaxMzlFbXVqhUF7c6dFfMkc7Azss4tfIZtMhI6kqJrPMxtnfv7Z/OlLnlAWcahtEFtWGE1h8O5AAJYlmRmQYVtSxnSA68FqVtTKQzmBBe95O3JWdkOmcB08KNqcvwK9sE+zdDSyu5Hkld6G0cadiHF5EE5V6Q8pSc43bCmljEd0pKNTDrO01sjeOH6FpuZ0EuWhXCdCVJ+cvg/UtnWFhqd3/XJAEnd2ilUz7JxHn/TUtujDpQQx8ZUPUh9p6kJGSSvXyDN09ZVbuG6oPyrjGoyyjaY82ihxukbzR1bsfCeSkxG+Qnu1dSHDlcN3GBKGXIIDYj7ZGaKbGN5TaNWPNwaJNhfTVyXJ/S8JsnrWDT1ntzeC6Q3Fv3qL5zFyM8d2+7Wf3DcB47z0zIw9eHxxaBdShmCX0NVB31LeJAl6MrKZpbDg7N3HBWq+EFDQ7hqvGsJp7VobM2GDMeHUtYqQwWB2X6zdbBDS5rEUqRMFY2nBkzj61J2ZSJ9Ks3SwtfM58z13g1S8UyIO18vymoa3xUvHzk4zAzmMlFXXBRqmukszBgu0c8xvhHE70HfDKA/1FSXQNnOLaNr5x8JBtx15Ki8pYHObdSOcJ0ufDeuGnGLPCC7iynNiSLGz8Irj97RuCv5XB+ugYJhOKu4zqwXzeGN2l0sPKW2VL+5OcD4zQd6tbQx49YALK0PThGzhWVQe1ZBo64LdBU6z8WZ6U2MMMO8wrBQHxWSsMZvw1rpZ0z1emLz7DcIwfS6lB9OqCkGNA81n4f1oCqPRa+M85RnvB1pJN8QsrHzgTNYVwvjfbh4GuD4DVaEKZBCkKAMJc5Ds6VwhpDnhkM9Kog2eDzTxoJoZYq6P/Yw5AdodY/DNb33uR20SRQZZBYhTW0npHbETE1DPcO2CGPQTQrcZoVpOVLu31PnlH6sNs3iPDS1umVJ5lajwvWi9C7JQVwXgNbmi4WuomtVthzBpQD6+s4eNMvCxMwWWVtN5FBhHU3iRgmVlhkIOf5nI4UjjJF3WsMBIPuDH6IQc5MEvpEHS/MmvCsxQwq0FfCDs4tHZzvhmjgaEtF0hFKUAIxM0zxXq8Zl3nTAphl7lGIZZxhHmkhvsYZmv+VE0t+/mDAMfILuuZ+sAlu/4X/3XLXDPPUBg2XsyzAmZrQLSH2ZdHzTEv/2vsELijfr3aIo5P5EN9tnbyLBEZGfTdPePhYsyvDiscLOVRrf6lMkYk4qHkNqGg5D4jxjyjrdiMpSqLm6RDpYdMx10RuVWnDEBf6MZKKFrHCy3sB6yWWAj1QnLThX/bq/e45AM2sm54fk+HxGjXXfHbf52cQ0Q1k/5rbiHYMbp2H6clKd3pAhhPtS/PXgrpsKr4m1TH8MeTrvlyQ0pUH91qpXBtd7P0P60Omgz0H2RdfYdvRR+eW/U6AWqz8f42ylLkl+bVoB1EIdqTsbzdeDVIDovUzhqjjp4jdRfnbtSX3EnWMpp8xVNi3uU9CdzX8wKY7HldXPs8thCsA8zNCuRLbWxjFJgxqnEeT7cnM+yOIqLhmnkvD8emSTHvefnNuwSwlf4YGlp3EIvmpH/33wJUk7HldlmsDZgb0sR2K24pWHbrq+JVgHRtx7oWkwkAA+RrupZDl1BO8wfKdcbZ1K9dK9oSmAlLcEhUm/7s/38bhC9gapLBjeq7X2zFQrxW00w5jy6K+aeGEfnq3kSF0q6EvWvsM5eZFqQCSzBLCe4uU9wfaidkoVDK1ZrOaklyVtU90BaEcbIxanA7rmnmKIEd0zdQrJlAi3cj8yq/6g91OfD+10QTLv0t7VvA6g6mBHEMMSdtLSiP/9jqdnJ1/aNOVnvbSIMlnJSw6uZ4ISVzf6DNA1imNbsgtLzkCEBDZFi/VKJ6V7vRJbqaSzlwV1lfRa49UNs8ba1qmM6lLKnngpoh2NcS0/0Ld66xUbCNeJ0tF3n9PaLkx2oeY1qxrtDgUtn3YzZE+hKVZqYDMH6E95T3IpAYnNl9POq61BsRkfBNL6sVqrnoNtMOPF3JaJ8NvIGt2fpGnslbJm9rA8lXUlm+BbvGfRpbbaR8Sr81lHRZ15kedoYrlSSaAEoPtbJ0JiOmlAg8nEd9gbwt8BSSXE4ZGxubOFVbE4XfkHIzRaMPw1pSvuQLWhsOadBIn9xnj53i2FnoF1W6IYf6zcZMj52WLpsb5zcP4pw4Pd07TiIQuuuX+2A5fXBf1j1xNlQTd4+LjntRCy7FnHdNgtHEnI7tfq9H6IV3dkGpUpydW6H6wmpYkuHHFHDfHGVvRqa2zQyfzo8x8vOoN4NYUKvAA9nCJUQv89/c0ZAsyBkz0VwtQ23qV+8uSyGCl3nswyFMu1mGHIVwxPzPbmA6aYq7RWnhaC0Mm0qpQ0smvvbXVaLsh+yoVkCo5XD6ZeXLkj0eSq6AWJgJ6tILLGTxjL6N7f+hHQpzctThJ3tEKVTLLv2lBu3c43q5NGFv1z6fm1NhnIG25jTgqx5AJp2SXV0e0kaKXlemm8k1yNudS99+TBHtzqAhRCTdbF04BOHEgfDdl6tkbR1gwtdh2+SsQnPkuSlTfPmKL+sN96X7FO/TymhFowK2+TN4IdtKbZ0pnTGJIthOwJLXm3nfXH1j7qm9/9+SiS8GZeFrnvUfd+gTFkq6yU8umXYUrRg8y+0+1GELG3+dFi9edEZTmJmOWOiJJ12GZcoQzhYpYqMlNEWxIYfz5sMeh9B94fwsE0ImbxFtgvN6y3lQRhE8xXG1AOPw6BoK8ISmyZ4AjNV9kaO4vL45jxGqaNRA7wAAAAASUVORK5CYII=
AAcH4OPfdyuy2MXaXd3z+rgsvvm8ORLi9jyjWsycdxIfZFvCFuZGcZ8YEz+5jPAB0kvyL3ZAPhi3bJ/

```
sdeGtuPngKaUY0FtjeWHcscHhe/
acx+LPz2F8HDgVmAS+SutNirDualKWxBHg4Bn9w3546GUyUeSHtbjAUjF8CJxvrPOkd/
MXkgpFtSwoZWg94zFh3PnASMKbaytxY931qgpEa+CZwXwx+P2PdnqSMivpkvh8C58fgf26sO7LRILkf1
AeAk/Oi8fk4njTW7UzqE/Vu0tfs7zLW3UKaxR0MjCM93/
eSC0Z+HFvG4Bfl02xNpzyM1lHmhbS7gT4lRX6nP5o0u7i+wSrXxeAX5WyKF4CNexvTWDfFWPegsa6aN7
Eb8Iu8v78Ab8pZFbV2Jc1uqK5bozqbmZaP54a8/O4YfDUTYzdgSgx+fgy+g5R18b78MyUG/
2oMfh4wtWbc6cAVOalvSTePZbKxLhrr4ktz5/
b20GUAPdNRYcTwrsuUeSHtZDDMMCC9iJ5FysZ+U919tf+3dZcb8RCwe/
WPGPz+xjqTx4TGjbUadV3srhNj9RpGvfk1t3tq3tXduB8lHfe+wH8b694Rg+9SOJSHMXQo80La3YDPML
KLgdNi8A+UXL8+f+JKYFdj3b41y2rzzW4l5W+Trz3Mzu/2a00jnTqium4f3QrsZ6xbx1i3LrA/
8Ne8fH9j3drGuvWAj+XjGAaMisHfDJxIupCv8xZDmDIvpN0NihlGDP5p0jWEsuv/
21g3zVj3IHBDDP4EY50Dvm+sOxt4nlRUvp03ORW4xFg3nXTRe2KDYb8MXGms+zIpJ6Ovj+FeY92lwN15
0U9j8PcBGOuuBu4H/kkqIgCrAZfnU2MF8IMY/
Mt93a8MHsq8kHanPIwhRHkYItJPlIchIiLNo4IhIiKlqGCIiEgpKhgiIlKKCoaIiJSigiEiIqWoYIiIS
Cm9fnGvWZkV+ZvNZwN7klplLAQOrOnF1DTGuv2Ax2PwD+e/
LwXeD8wFlgJHxuDvWInxO2Lwff42lrFuLLBpDL5RzywZYu6e1dHlS3oTx43Ul/
SkrZWZYTQlswI4CNgU2CEG/05S64z++mbzfqTcilon5H5QJwE/qd8gF8L+NhbYpwX7kX5WbWU+e/
7iLq3MlX8h7azsi2QzMiueA56rJtXldiAY6w4E3hODPza35fhyDH4rY93WwGUx+N1y6/
Dvk3otzQYmxeCfy+ucB2xEavnxOWAkqZnf+4113wA+UfdYbgXemvcdgNtJnWqnGuuuIfW12oiUW3FYDP
6p7rIycl+q46szLWPduUCMwV9qrHsXqd3JuqQGih8ETgPWNtbtBnwX+BfLWqJUgN1j8K+U/
DcpRe3N+4damcuqqOw1jF8CB+dkux2Au+ru3xb4ECkf4hRj3XDSO/
kZMfixMfgTgF8BHzPW3W+s+56xblze9laW5V+8D/i3sW4zUrvwv+axfgQckJP0Lga+k9e/
EPhSXn488OMY/O2k7rcn5H3PqDvWjwG1TQ43iMG/Pwb/
PeBc4Ocx+B2AK4Bz8jrVrIx3kV7ke2SsWwO4mlT8dgT2Is3UTgauzsd1dT7mI/
PM533AggZjqb35IKRW5rIqKjXDiMFPz9nWPWZWAIuMdQ0zK2LwTxvr3k66hrEn8Gdj3Sdj8H821o3InV
xHkd7J7056Af0N8HZgDHCTsQ5S077njHUjgPcCv87LAXrqI31mnnG8CBxRs/zqmtu7AB/
Pt38BnJFv78qymcovgP/tYT/
kY34uBn9PfuzzAGqOs2oaqWHiFcBvqrOuWmpvPjiplbmsivpy3n5lMyvIReUG4AZj3fOkaw1/
Bu4gpdU9Rurmejjpxfs40mmuh2Lwu9SOZax7A/
ByNzkVjZwQg7+mwfL5DZZVVbq5XbWErrO0tfLvopv1u4jBn26su450XeNOY91eMfhHe9tOBt7EcSM5+U
/
PAmlmMW9hJ3MXdnLcbr3me4kMWX35WO1KZVYY63Yy1m2abw8jndr6Z777VtLpmVuB+0iRrIti8HNJRWQ
jY90uedvhOWhoHvCkse6TeXlhrNux0b774Ha6ZmLclm93l5XxT1KW95q5TfkH8vJHgU3zdQyMdevli+r
1z8nWMfgHYvD/
C0TSqT0ZAqqtzDdcdzjPzFvMhusOV3a3tL3SM4yVzawgzSQuMtZV5+x3k64ZQJpVjAJujcF3GutmkV50
icG/Zqw7ADgnvyivTvp47kOkF+/z86mm4aRrLX/
Pvy8y1h0NHFD2mIGjgYuNdSeQL3rn5Q2zMmLws4x1vyJFrT5BKnbVYz4I+FH+dNkC0nWMm4GT8gcBvgv
sZqzbgzQrezg/
TzJEjB81QgVCVinKwxhClIchIv1EeRgiItI8KhgiIlKKCoaIiJSigiEiIqWoYIiISCkqGCIiUkorOrQC
YKzbn9TqY7tWfJvZWHcMcGEM/
tU+bGPp2kzwI8C3SA0EC8DH4I9vwrGdSepp9Rowg9TksL8694qINEUrZxgTSN+cPri3Fyj
DeG9MXCz8TgtyP1s/pHk47tJmBMbnL4OPDVJo0r/
ejuWR0cOfUp9rnsCY6c+pRamcsqpyUzjNwocFdSy4+pwKl5+YnAIaRQoxti8CcZ694KXEBqMd4JfDIGP
yN/+/pAUoPBKTH4U3JDxBtJ3XPHkV58DwU+S8reuNlYNzsGv4exbm/
gm3n76rv6DmPdh0nfHJ8N3Ftz2CcC36nOhmLwS4BqGNSlpG9vbwtsQfpG+ERS/
6u7YvCT8nodpOyNPYCXgINj8C/G4P9Ys5876du30WUAVPMv1l9rtS75F2oHIquSVp2S2g+4MQb/
uLFujrFuJ1JH2/2Ad8fgXzXWjczrXgGcHoOfktupD8sv9tuQ2qcXpOyK3YGnSJ1hj4jBTzPWXQx8MQZ/
lrHuWGCPGPxsY92GwDeAvWLw8411XwGONdadAVxE6p77f3TtXDsG+F4Pj+mNebt9gd+TCuJngXuMdWNj
8PeTTmXdG4M/zlh3X7beplIfRHMq/EGldwZhAehcPqc/TBNLpsEuq1xhi8HNyi/
PNYvBT8rKFALlg7E3u1UQKUtqGVDBmxeCn5eWXk/pBnVW3//
eQEvim5Rbja5A65G4LPBmDfyLv53JgcsnDvjqP7k8WaeBU/
LH2yu624mxbnL1mDbZeKOShybN9kxHhTfXneBU/
oWsavq9YBjr3kR6Jz4m54OvRmr9fS3LtwDvrp9JAXw3Bt8lWjWfkqofo1FzrAK4KQY/
oW77sd2sD6m54c6kZoaNVF8pltK1vftSun9eX9+XsW4i4IAPxOC7beilPIzBQfkXIq256H0AKcVuixj8
6Bj8KOBJYA5wuLFuHQBj3cjcsvxpY91+edmFfK/
E7gV3z9RGMdesY695G6oi7ZY56rW5fdSbwtbwexrph+TRXXwxj2fWJT1WPLV83+Qqwb18+xSUDZ+K4kc
xd2MnLC5awtFLh5QVLmLuwk4njRva+sUibaEXBmABMqVt2Lemi9FQg5nbf1Y+rHgIcbaybTsqn2CRfJL
4SuCOfArqGZcXgEWBiXn8kcH5efiEpqOnmGPyLwCTgqrzencC5dOA6Y91tLMvnIAY/
nfRJq6uMdY8ADwJv6eNjw8w1j3N9Is67S8/Nx8/
DflyNoL+jiutJjyL0SGeHvzfErKx+DHDPSxNGKs64jBN+0VRe3NRaSfqL25iIg0T8u+6d0fYvAzSR9/
HZSaObsQERlommGERlommGIiEgpKhgiIlKKCoaIiJSigiEiIqWoYIiIISClD+lNSPcltSC6PwR+S/
14deI7UTdb1sN0GwKdi8NXOtKNXOtKNJXw6s7eI3Pgb/
Wh+O5XrSN72pHVsGt7tndXDZfXN48qVFbPnGNZk4bqS+qCertHaeYcwn9a9aO//
9QeCZEtttAHyxbtmMGPzYmp8uxSIXo27F4PfJAUmNxpZBqNrOfPb8xV3amSsDQ1ZlbTvDyG4APkpqJTI
```

BuAp4H4Cx7lRgc2Cr/
PvsGPw5wOnA1rldyU3AeY0GzttvSupMO9tY90fAxOCPyvd74KwYfDDWzQRMg7G/T+pm+wbSv8UXYvB/
beYToPbmK0btzEWW1+4F45fAyfnFewfgYnLByLYlhRutBzxmrDsfOImUhjcWXj8lVX2RB5gWgz8y394Z
2C0Gv8BYN6nE8dSPfRzwhxj8d4x1q9EgIVDtzQeG2pmLLK+tC0YMfnp+wZ8AXN9gleti8IuARca6F0ih
To3MqL7I15kag1+wEod4D3CxsW448NscutSF2psPDLUzF1leO1/
DqJpKClS6qsF9tW8XO+l7AZ1fc3sJXZ/PtXrbOAZ/K7A76drKL4x1h/Zx/
9JP1M5cZHmrQsG4GDitmohXQm2ORl/
MBMbm3IxRpDjZHsc21m0BvBCDvwj4GbDTCuxX+oHamYssr61PSQHE4J8GftiH9f9trJtmrHuQdNG84UX
vBqaRgqEeIGVn3Fti7AeBE4x1i4EOQDOMQWT8qBEqECI1hnQexqpGeRgi0k+UhyEiIs2jgiEiIqWoYIi
ISCkqGCIiUooKhoiIlKKCISIipahgiIhIKS394p6xbn/gN8B2MfhHW7C/Y4ALY/
Cv9mEbCxxfzcww1n0E+BawLumzyj4Gf3wTj/
F44Exgoxj87GaNKytOORgijbV6hjEBuA04uEX7O4YGHWDLMtaNAc4FPhOD3w4YA/
yjScdGbiHyQeCpZo0pK0c5GCLda9kMw1g3AtiV1E58KnBqXn4icAiwFLghBn+Sse6twAXARqSmgJ+Mwc
8w1p0AHAisCUyJwZ+Su9HeCNwFjAMeJ7XY+Cwpr+JmY93sGPwexrq9gW/
m7WcAh8XgO4x1HwbOBmbTtaXHicB3qrOhGPwSoJrEdymwgNQifQvgMGAisAsp1W9SXq8D+El+3C8BB8f
gX8zj/yDv43cr89z2RHkYfaMcDJHutXKGsR9wYwz+cWCOsW6nfLpnP+DdMfgdgTPyulcA5+Vl7wWeyy/
225Ca+o0FdjbW7Z7Xfzvp1NMOwDzgizkM6Vlgj1wsNgS+AewVg98JiMCxxrq1gIuAj5GyMjapOeYxwN9
6eExvBPYE/gv4PakAvAN4p7Gu2g59XeDevM9bgFMAjHX7As/E4P/
e05NmrJtsrIvGuvjS3Lk9rSpN8ExHhRHDuy5TDoZI0sprGBNI7+IhBRtNIBWsS6rXGGLwc4x16wGbxeC
n5GULAXLB2Bu4L48xglRAngJmxeCn5eWXA0eTWprXeg+wPTDNWAewBnAHaYbwZAz+ibyfy8mBRSX8PgZ
fMdY9ADxf7YhrrHuIlMR3P2nmdHXNsf3GWLcO8PX8eHqkPIzWUg6GSPdaUjCMdW8ivRMfY6yrAKsBFeD
a/
LtWd02wCuC7Mfif1I09usEYjV5YC+CmGPyEuu3HdrM+wEOkVL3uZgHVt51L6ZqtsZTun9sKsDWwJfD3X
Lz+A7jXWDc+Bv+vbraTFpg4biQn/+lZIM0s5i3sZO7CTo7brbtsLZFVR6tOSR0A/
DwGv0UMfnQMfhSpFfgc4PD8jhtj3cgY/
DzgaWPdfnnZmvn+P+R1R+Tlmxnr3pzH39xYt0u+Xb2wDl3zJ+4Eds3XRzDWrWOsexvwKLClsW7rmu2rz
gS+ltcjZ10c28fHPiw/
foBPAbfF4B+Iwb85PxejgaeBnVQsBp5yMES616qCMQGYUrfsWtJF6alAzJnZ1Y+rHgIcbaybDtwObBKD
/yNwJXBHPgV0DcuKwSPAxLz+SOD8vPxC4AZj3c35QvMk4Kq83p3AtvmU12TgOmPdbcA/
qwcYg59O+qTVVca6R0j5FW/
p42OfD7zDWPc30izrtD5uLy02ftQIztt3c66fuA3n7bu5ioVINuTzMPIpKR+DHzPQx9KIsa4jBt+UVxz
lYYhIP1EehoiINM+Qj2iNwc8kffx1UGrW7EJEZKBphiEiIqWoYIiISCkqGCIiUooKhoiIlDLkL3p3x1i
3CakVybtI38KeCfwW2Lfaurxu/Z8C34/
BP2ysmwmY+nbjxrpTgY4YfH3bERGRtteWBcNYV5C+KHhZDP7GvGwsqcFgQzH4DVtMW1ZcE
gtRJfHIO/oLogBn+/sW4D4APGumtY1on2M7mBYCAFJ8XagYx1Xye1S58FvJi3Ia9/V97XBsARMfi/
GusmkWYnR+X1PHBWDD7kVufnAXuRWp1/
jdShd3PgmBj81P54MiSpZl2sv9ZqXbIu1PpDpJx2LRg9tSUfR2pB/
iwwjZTRcVujFY11O5PCnsaRnqt768ZdPQY/
3li3D6lt+V69HNe6QIjBf8VYNwX4NilAaXvgMlKblKZSHsYyyroQWTntWjB6cncM/
mmA3L9qNN0UDFI+xpRq+3VjXf0L+m/y77/
lcXrzGinsCeABYFEMfnHujdVwe2PdZHK79U023qjELqQ7z3RUeHNd/
qKyLkTKa9eC8RDLOsTWq3116KT356CnZlvVsWrHWULXT5+tVXN7cQy+Ot7rLdFj8EuNdQ2PQ3kYzaOsC
5GV064fq/
0LsKax7nPVBca6dwHv7+M4twL7G+vWzETGJtboY8iJQTKIDBx3EjmLuzk5QVLWFqp8PKCJc
xd2MnEcSMH+tBEhoS2LBj5Xfz+wAeNdTNyAt6ppOsWfRnnXlJa3v2kdux/
LbHZNFLWxwOk1L97e15dWkVZFyIrZ8i3N1+VqL25iPQTtTcXEZHmUcEQEZFSVDBERKQUFQwRESlFBUNE
REpRwRARkVJUMEREpJSmtQYx1lWAy2Pwh+S/VweeA+5qlD9Rs90GwKdi/
Of48GHgFqu+aNBz4MbB+DP72bcSZR0yW27r6ZwCukdhzPA4fG4P/Vx4dYHcuSutp2+5h62HY/4PEY/
MMrsm9ZOWptLrJymjnDmA+MMdatnf/
+IPBMie02AL5Yt2xGDH5szc9rMfip3RWLkvaIwe8IRFJb8S6MdautxNhl7UfqTCstVm1tPnv+4i6tze+
e1THQhyYyZDS7+eANwEeBa4AJwFWkjq/
VtLrNga3y77Nj8OcApwNb586xN5HyIpZTO4Mw1n2S1E68E5gbg989r7apse5GYGtSl9kTGwx1K3BB0HrM
D+D7wIeA4Y92apHYeqwP3AF+IwS8y1n2YlN43m5pWH/UJfMa6BwEXg59prDsUOJ7UvHA6cD6wL/
B+Y903gE/
k5+rzpIaFD1fDnppJ7c0TtTYXWXnNvobxS+BgY91awA6kgKFa25JenMcDpxjrhgMnsWxGcUJeb2tj3f3
5p1EBORn4UJ4x7FuzfCxwEPBO4KDc/K+eI/V5gpRP8WAM/
t2kmcelwEEx+HeSisbX8mO5iNR48DJr09Cca6dwBfB/bMx/jlGPztpLyLE/JjnZEf+7gY/
A6kwtForMnGumisiy/NndvbrqUbz3RUGDG86zK1Nhfpm6bOMGLw0/
M1iAnA9Q1WuS4GvwhYZKx7Adi4m6FmxODH9rCracClxrpfsSyTAuDPMfi5AMa6h4EtEl5ADcb6zpJ7/
a/kZd1kpoKArwdeDIG/3j++zLgSCDk5U/kcS8n51P0YE/
gmmomeAx+TjfrTQeuMNb9lpQ3vhy1N28OtTYXWXn98SmpqaTTOlc1uK+vWRQNxeA/
T3rRHwXcb6x7U4nx/7jv7A+Nwb+cly2MwZ0SR0Cm5n4G/
dZWLIylNrc5GV1x8F42LgtBj8A72umbwCrNeXHRjrto7B3xWDaE5l0XaHRqae+ehQYbax7a/
77EOCWvHxMuMm1mAjvlY9oJ2DIv/zNwYLWGeuqr0vP1Zj3TBgVAz+Z/

nUzvJ2ptLrLymv6ONsef/rAP6//bWDctXzC+gW4uetc501i3Demd/J+Bv5OuX6ywGPxCY91hwK/zO/
17gAvyRe/
JwHXGutmkONcxebNrgUPzBft7gMfzWA8Z674D3JJPg90HTCJd47nIWHc0KSv8Z8a69fPj+EHNzEf6wfh
RI1QgRFaC8jCGEOVhiEg/UR6GiIg0jwqGiIiUooIhIiKlqGCIiEgpKhgiIlKKCoaIiJSibxb3g/
zdi9ovLu4Xg585QIcjItIUKhj9Y0FPvbCMdavH4Je08oBEeRgiK0sFo0Vye/
aPkvpNrWus+wDwI1KjwidJX5y5OAZ/
zYAdZBur5mGsv9ZqXfIw1B5EpDwVjP6xdm4XAqnT7f759i7ADjH4Oca6j5M65L6T1LX3YVIfrqZSHkai
PAyRlaeC0T+6OyV1U02r892Bq3K33GeNdX9pNFDuYzUZYJONN+qXg10VPNNR4c3rdF2mPAyRvlHBaK35
dX/
32shLeRjNoTwMkZWnj9UOnFtJ6YSrGeveAuwx0AfUzpSHIbLyVDAGzhTgCdLHb88nZW9IP1EehsjKU3v
zQcJYdynge/qUlNqbi0g/
UXtzERFpHl30HiRi8JMG+hhERHqiGYaIiJSigiEiIqWoYIiISCkqGCIiUooKhoiIlLJKfErKWNcRgx+R
b+8D/BD4ALAP8GoM/ud1648mfSdiTO4ya2LwR7X2qIcmtRAXaV+rRMGoqmkpvncM/
inggE+pLaiFuIi7W2VKRjGuvcBFwH7xOBn5GWnAh0x+LOMdTuT2ou/CtxWt/mmxrobga2BKTH4E/
P2E4Cvkb4leV0M/it5eQdwHrAX8FJe5wxgc+CYGPxUY91qwOmABdYEzovB/
6TZj7uV7c3VQlykva0q1zDWBH5Hikp9tJt1LgGOjsHv0uC+scBBpOyKg4x1o4x1mwL/
SwpAGgu8y1i3X15/XSDE4HcGXgG+DXwQ2B84La9zBDA3Bv8u4F3A54x1W9bv2Fg32VgXjXXxpblz+/
zAW+mZjgojhnddphbiIu1jVZlhLAZuJ71If7n+TmPd+sAGMfhqA8BfAB+pWeXPMfi5ed2HgS2AN5GKwo
t5+RWkjIvfAq8BN+ZtHwAWxeAXG+seAEbn5XsDOxjrDsh/
rw9sQ0rfe91Qam+uFuIi7W1VmWEsBQ4kzQK+1uD+gp6zKWrfIneSCm1PzboWx+Cr4y2tbh+DX8qyIl0A
X4rBj80/W8bg/9j7Qxm81EJcpL2tKgWDGPyrgAM+baw7ou6+l4G5xrrd8qJPlxjyLuD9xroN8/
WICfStRfkfgC8Y64YDGOveZqxbtw/
bDzpqIS7S3laVU1IA5CztDwO3Gutm1919GHCxse5V0ot5b2M9Z6z7KnAzabZwfQz+d304nJ+STk/
da6wrgBeB/
XrcYggYP2qECoRIm1IexhCiPAwR6SfKwxARkeZRwRARkVJUMEREpBQVDBERKUUFQ0RESlHBEBGRUlQwR
ESklLb+4p6xbhPgbFJzv0XATFK32Mf7YV8WOD4G73pYxwCHxuCPbvb+e6KMChFphrYtGPnb01OAy2LwB
+dlY4GNgaYXjDJi8BGIrdynMipEpFnatmAAe5CaAL4ekhSDv99YVxjrziR1o60A347BX51nCN8Enie1K
/8NqdPsl4G1Sa3RZxjrLgUWAu8gFZ9jY/C+dsfGuvGkmc3awALgsBj8Y7WzkJzFsTmwVf59dgz+nGY/
CWf/ZYYyKkSkKdr5GsYY4G8Nln+cVBB2JAUcnWmse0u+b0dSgXgncAjwthj8eFLfpy/VjDEaeD/
wUeACY91adft4FNg9Bj8OOBn4n26OcVvgQ8B44JRqI8JatXkYi157redH3IAyKkSkWdp5htGd3YCrYvC
dwPPGultI1zjmAffE4J8DMNbNAKrtxh8gzViqfpVblT9hrPsH6YW/
1vrAZca6bUizmOUKQXZdDH4RsMhY9wJpxvJ07Qq1eRj03IK9oTGjRiqjQkSaop1nGA8BOzdY3lOTrdq3
3Utr/q7NsYDlX7jr//4WcHMMfgzwMaB+BtJof9WcjaZSRoWINEs7F4y/AGsa6z5XXWCsexcpY/
sgY91qxrqNSCl5d/dx7E8a64YZ67YmXYOoD85eH3gm3560IgffLMqoEJFmaf/
iLVAAAAc+SURBVNtTUjH4irFuf+BsY91JpAvVM4FjgBHA30kzgxNj8P8y1tWfVurJY6SwpI2Bz8fgFxr
b5dO0Z5BOSR1LKlwDShkVItIMysPoo/wpKR+Dv2YAdq9/
LBHpD8rDEBGR5tEMY2jRP5aI9AfNMEREpHlUMEREpBQVDBERKUUFQ0RESlHBEBGRUlQwRESkFBUMEREp
pW1bg7SpUp+VrmWse5DUFqUdbQjMHuiD6Aft+rhAj60VZsfgP9wfA6tgtL+FMXgz0AfRH4x1sR0fW7s+
LtBjG+p0SkpEREpRwRARkVJUMNrfhb2vMmS162Nr18cFemxDmpoPiohIKZphiIhIKfqU1BBlrPsw8ENg
NeCnMfjT6+5fE/g5Kdf838BBMfiZ+b6vAkeQcsSPjsH/oYWH3qsVfWzGujcB1wDvAi6NwR/
V2iPv3Uo8tg8CpwNrAK8BJ8TgBzzNsdZKPLbxLDudUwCn/v/27j3EyiKM4/
g3oxIKLML+KCsNK9AuFkMGXRjoYtKo3bBMSiO6kBbShUopL1iUiJqZEiUoUZhFkY1d/
qmJym5DabXd0ArabpBZkIK5aX/MLJ6WXXt33913GHN9HGuv2Bx4CxwAhgkrFuRJtm1wPbyDDgcXAw3nfEcBVwEjjgImB5frxaKJMbab7J
fcCdFYXbKSVz+w0YF4M/
GZgCPFVN1MWUzO1zwMrYGbGsPUGV3MPrczG+e6b/2dKxVUMHOm84ANsfgv43B/w2sAS3Bod5npcPonB/
5S3NwED8yfbuiiT244YfEvePpPB6XSiszHsnsNY90lek56ytdsmvxn/
BA4vuG9vKpNbGn/ZQnF9AMqqR8Rxm/
S49F2Trc8bzH4L4HtwEk9FmnnnlMlrNLDAWPc9MAOYaayr3RcxOqMWA0vSaR8BxxvrhgE/
kgaxr27TZh1pcPTdOuAZZY90i4EjgeODDDyiL/f13Ordlou6bM83YosB64Nwb/
boUxF1Umt2PK04HXTDGtTDGtMfg6rPPa+vXY32imt4iIFKIeIFKIeIFKIeIFKIeIFKIeIFKIeIFKIe
hoiIFKKCISIihagiIhIISoYIiJSiAqGiIgUonkYIj3EWDcU+A5Y5N3vRTDGBHHDH5Jb/
x+6V9UMET6IWPdANLyFDNJK92qYEhpgGIiPmoch0kZk0nLAAKMD/
PmN5DWn4NTWwJaDSwbhhj8j3k3k28j8B/A84+XXUOvgMvBQm/GdnHnaOVq03z0ha5Ltc+2ktQzSrugtnXNetn5iq9Ar/WctGnCBSMLXOJh4lDQ8+lqe70naquqE2OGvSaz4eDuHCsDSGhWqCq8eMGHYTgsYI3Z96WYxYi8oTSFpXV8hkPoJhpokn4BLT9Xj1p8ZYl0VC1yT+4zQhfBCheZpsYiPYo+dmzZMLlMz1/qHOvTjTPv4bmsTHCmdyFQ+ywbu9snMTpcw/AkCIMz61DZKgqG/

```
YaTVku9I7fZSephTAJWkIrEauA2YBkwBpjTJsbzSUVjEOmiTZBmL99DWqZ7OvBx3r4EuAZYlfO6Psck/
ZAKhki1HmXvQfjnGPxs4JV8f1hDu+YY/
CzSwXk3YElrLB0HvBSDX0pahgJSQWm1FbgxBr8iBr8eaAG2x+DXxOA/AA4i9RKeIBWUAcDJbWJcFIN/
hHQdh6F52zjSKa4rY/ArY/Az8nZHOrV9F2kp7wGk3on0QyoYItX6Iwa/q/Xn/G/rWl7tXfmws0u5/
xKD372PtrOAU0innsYAu0gXLWrUuoJsC/
89RnT0e38BLmi4TdtHfNKHadBbpJ6GGOseAAaTDtpvkk5dbQEmGOtuJZ06gr09lPZsAwYb66aQVl5tLU
CHAJcCBxSM52XAAM8a654HTsm9DA9MBcYDm0jXtd5NGn+RfkY9DJF6+po0uDyRtKrw/
NwzmUA68D8InAbcTxo/6MgC0rjFKuAyYD7wFWncYytpvKOIh/LtJNLA/
el5+wzS2MVE4BHgTKCOy69LN9C3pERqJn/
bqSkGX5eLCIkA6mGIiEhB6mGIiEgh6mGIiEghKhgiIlKICoaIiBSigiEiIoWoYIiISCEqGCIiUsi/
KQDEbD0AonYAAAAASUVORK5CYII=\n",
       "text/plain": [
        "<Figure size 360x432 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAYwAAAGDCAYAAAA4byefAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzt3XmcXEW5//
HPJEASCCQEEAQDCYgiRkigiCKLxeZFKBG8bIELAb3moiDwY1EUBERRVK4sgiAgEHYURGOxCUqxbyUJSU
ACNwQJi2BICCQkIcv8/qjqpKfTM3Mm0z3r9/16zWu6T9ePU30mOU/
XOX2ep6GxsRERERZHW9OnsAYiISPeggCEiIoUoYIiISCEKGCIiUogChoiIFKKAISIihShgiIhIIQoYIt1
YQ0PDKw0NDY0NDQ3LGhoa5uXnv2hslTa2E4cqPYAChkjPcCfwO2ARcBwSENDwSENDw0GdOyTpaRp0p7d
I99XQ0PAKsBlwQGNj4x/nQ08SrqOAfr/x9bhGpwA64HDgVmA06HDgVmA0uBDSpWO7qxsfHajhyn9AyaYYj0II2NjUuAH+anQ4BLgff
z89uBi4DnO2Fo0gOs1tkDEJGa+2fZ4/8jzTTWBi5pbGYre/x2p41CehwxwDpEeJF/
DOCs/nQ08SrqOAfr/
Lu2kf0AiPcPXGxoargaeI13wXgIc09jY+AEwM7c5p6Gh4KGhoahnTVI6d70LSmRbqzsW1KNwALg38CT
wP82NjY+ldtY4Epgc9KHxB0aGxjZ4xXujcFDBERKUSnpERZpBAFDBERKUQBQ0RECSk
EKUG6V70lTYRqYeGIo00wxARkUIUMEREpBAFDBERKUQBQ0RECSkHAEBGRQhQwRESkEAUMEREpRAFDREQK
UcAQEZFCFDBERKSQLp8axFh3APAH4FMx+Bc6YHsnAlfE4D9owzAwBHiHVKT67Os6VtGaxM4dmPQQRg8dWNmAAYwBHiHVKT67A7Z3InZ3InADUDhglMTg
rwGuATDWvQLsFD5cpquQwbrBs5AsxHx+Bc6YHsnAlfE4D9owzoWOAW4HTghL94amEaqp3xPDP60Ztbd
HfggBv9Ee8YtIr3bUzPnMX7ibGbMWcTwbHwdfsxdtQRg8dWNNtdPmAAYwBHiHVKT67A7Z3InADUDhglMTg
rwGuATDWvQLsFoOf1cpquuwOzAAUMEVklT82cx5n3v8Gg/n3ZJ3VmTV/MWfe/
wbn7LlxTYNGlw4YxrqBwE7ArsCfgHONdX2Ai4GdgCmkAO1XYvA3G+tGAr8EBgJvA0fE4N+o0u/Rxrr9gC2Bm4GvJp+AQ9Exp+OMPAJYBtwdgz/R
WNcXOI80wxAA+0EDBwdvHOAJYBtwdgz/
NWPdx4HJgA9KuRAA9Kn+oNi8NONdacCBwP9P9gDti8GcZ64YB95BB95BqH48CXgSOm7Hui8Kwa/m7Hui8AP8/
rTgaNj8POMdXsDF5IO9s8UeC/rA1cDDw4B5wDhSDeb/
BpYa644CvhfDGbzf4xCvhWDf2yVd1gEoHz9xdk0RDRle/hrE/
6XTOi8BsY912xrov5eWfjcFvC/
w8t70RuDQv+zzwZj7bYbwmmMBkYC2xvrds+wPewZg98OiMBJxrr+wAJBrAgAwZg98OiMBJxrr+wJ
XAl4FdgI0KvJcU/m7Z0NXBuDnw5cBfwiBj+yWAAiBj+yWrAw1o0z1kVjXTz4qG8V33Mi0mu8Pq+Rgas3XbZO/
77MmLOoptvp0jMM0umoC/PjW/LzPsA1fwjMbk6EI/y58uAbIa/1Iu22iVJHjEQ5AEf6Me/
Ny28AjgfOr9j+50jXIh411gGsGSATwObAXMiMG/
lLdzA2nG0JKdgX3z+P5irLvWWLdWazFy2cWAO8t
XMrwdfvVdDtdNmAY69Yjnd8fYaxrBPqS6kHczsp1IZrL5d4A/DQG/5uKBCa6NY11n
ZHNtG9J5RgL5Z8XEWnN2FFDOPP+N4A0s3h3wTLeem8pZ++5cdHGbYUFTOD7ZcB6
xnr1gQw1g2Jwb8HvGz5Ks+0juf1Nj3Y75cenCOsD7wNr58RPATvn6CMa6NY11n
wBeAIYb67YoW781DwGH5372
bcmPXXWp3X31vM+mutXvML3tC1A8YY4I6KZbeTLkLpkpPAKKxbhLp66yQLoIfb6ybDDAb/BbDDwGbBSD/wtwE/
C4sW4KcBsDs7/AMbm9kOAy/DRwF3JzbQPFslU95jQPuNNNY/E5/
h87ucc4Oi8/E/Awca6ica6ica6zxfZMSIilUYPX5tz9hwOQwYuE0zKqUeS1UpMN7e1dcjZKX5kKtuhXc0qUTMiViRSl4UzJlfufvxl1XNHc2HeWbk8EbvZCKGX4tuHrS3/hnPEsyTCJRz9H+6mnnnGFy8OAbvdsGVdzQW1eXdMEDdlPxEa0IYELiGFfw/eDGQfcOfPYQfLhuqtWT0hPZqQWRuY4ye2yelVAQBdeGHvc/hCAAB
O3ssItBx9RWke+kyAQNYEIMfCZDzPd0EDALO6tRRdYz9AQ/
UPGCoHoasio6qryDdS1cKGMvF4N821oo0DnjbWnQ1sBlwPlNKBHxeDf8xdz1wWwz+TwDGuhuBW0mFjq4
hpSPvA/xnKRV5JWPdMcDuAhUaBFUL8FNI5/eWpFLmn1h0JzSB4/P6sZGqB
gohj8Fca6vsBvAUPKSnt1DP6CZtZ6fqXBT7u+UGB4BYgzHz+WmdecB+pFnUX0jlZ/
cDvmCsOyPdvCsOyOPdXpZ/
+PIqdM32nCDNuxFkVX3+rxGPrJm02X1qK8g3UuXDBgAgAMfiXjXV9gI8AwxTtXGZgI8AbwN4xeAXGuuG+4XyvAv4
Cdj3SBS4aSxwAWkg/+Nxro1SKnm/
```

```
O1XFNjAClA3U6qirdJKdeUsW5wC+vfCJwXg78jF1bqQwoYKzHWDQEOICUwbDTWDY7Bv2usm0DKbXVblf
2gehjS4TqqvoJ0L139W1KlhFirA1fmjLO/JxU1Igb/
IPDxfAprDHB7DH4JqcjR94113wU2i8EvaGEbxxvrniVloh1KKrD0MrC5se5XuRTre9VWrFa4qVTYqRnv
AQuBq4x1X2UV6oaLdISxo4Ywd+FS3l2whGWNjby7YAlzFy5l7KghnT006URdNmAY6zYnneJ5mzSLeAvY
ljSzWKOs6fWkOhNHk05DEYO/iXSaZwFwr7Fu92a2YYE9gR1zadeJQP8Y/
Jy8rQAcS5rJVNNchsclNN23/fO4lpDKxd5OLj/
bzPoinaqj6itI99IlA4axbgPSdYFLYvCNpIvfb+ZvTB1B01NM1wInAsTgn8vrbw68nGt0TwC2aWZTg4A
5MfgPjHVbkUqykmt594nB3w78ANiu2sotFG76J7B1fj4I2CO/PhAYFIO/
K495ZO5KRZSky+mI+grSvXSlgDHAWDfJWPcccD/pgvAP82u/JhU7egL4BDC/tFIM/
i1SMaRryvo6BJiaCyxtBVzXzDbvAVbLRY1+RDotBbAJEPL61wLfa2Hc1Qo3zQR+B0wmXeMo1RRfG/
C57YOkmROkeuWn5iJKWyAi0gV1+wJK+RP9FGC7GPzczh5PPamAkojUSc8voJRrY78A/
KqnBwsRkc7WZb9WW0QM/n5g09baGevWA/
5a5aU9YvDvFNmWse5SYKeKxRfF4K+p1l5EpKfp1gGjqBwURrbasOU+jq3RcEREuqVufUpKREQ6jgKGiI
gU0qmnpIx1jcANMfgj8vPVgDeBJ0t5mJpZbzBwWAz+12XLtiSlBPkU8C7pruqzYvAPtdDPUYCJwR9X5b
V5MfiBxrphpK/
tTiPdMPgQ8K1VzaKbc2PNi8Gfvyrri4h0ls6eYcwHRuQ8TgB7Aa8XWG8w8K3Sk5zD6U7gihj8FjH47YF
vA5vXaJzTcybdbUhpSfYvfzEnK5Qu4qmZ8zh2wqvsM/4ljp3wKk/
NnNfZQxLpEbrCRe+7gX2B20j5oG4GdoHln8Y3JR34NyXVx7gYOA/YIt9Ydx/
pq7WPx+AnlDqNwU8FpuZ+hgBX534+AMbF4CeXD8JYN5yUUn01mknZEYNfYqx7jJS/
ypJSr79JuqC+tbHuJOBruflVMfgLc9+nA0cCM4F/A3/
Py48HjiGlEnk+Bn9o23adVFIdB5H66QoB4xbgTGOdJ32Cv5ocMLKtgN1Id0lPM9ZdBpwGjCirn/
FL4JkWtvFDYGIMfv+cV+o6Vv7W1EXAZTH464x1Vb8RlW8S3AM4My8anccxw1i3PSmf1WdJN8E8aax7kD
SLOxQYRdrfz5ADRn4fw2Pwi1rJiLvKels9DNVxEKmfzj4lRf6kP4w0u7irSpM7Y/
CLYvCzSIkIN2ytT2PdHca6qca6P+RFO5OSFBKD/
xuwXs7xVG4n0uyGUtsypdnMo3k8d+flT8XgZ5Rt444Y/PwY/
DxSnYtd8s8dMfgPcu6pCWX9TgZuNNb9F2mWUe29jDPWRWNdnDNX9ya25vV5jQxcveky1XEQqY2uMMOAd
BA9H7DAehWvlf9PX0r1MT8H7Fp6EoM/wFhncp9Q/bb3ajlRmsuTUrqGUWl+2eOWbq1vrt99SePeD/
iBse7TOaPtcqqH0Taq4yBSP50+w8iuBs6JwU8p2L4yu+tNwE7Guv3KlpXXC3uIlAK9lNJ8Vv60X+5R0q
kjSm3b6CFgf2Pdmsa6tUiFkh7Oyw8w1g3I9TO+nMfRBxgag38A+A7pQr7OmbST6jiI1E+XmGHE4F8jXU
Mo2v4dY92jxrqpwN0x+FONdQ74pbHuQlLtjPeBH+dVzgauyVliPyBV5at0AnCTse4EUr2Ktr6HZ4x11w
JP5UVXxeAnAhjrbgUmkdKeP5xf7wvckE+NNQAXxODfbet2palSHYfxE2czY84ihq/
bj5N33lDXL0RqoNtnq+1NlK1WROqk52erFRGRjqOAISIihShgiIhIIQoYIiJSiAKGiIgUooAhIiKFKGC
IiEghChik2hedPQZpndKWi3QuBQzpFkppy2fNX9wkbbmChkjH6RKpQbqKnGfqbGAWMIKUhvy/
YvCNxrodSOlL1iIlRNwDWAxcBhhSttmTYvAP5Ep++5PSf4wA/
pdUre+IvO4+MfjZxrotgEuBDUgpS74Rg3+hlu+pp6Q3V9pykc6nGcbKRgEnkirrbU5KargGcCtwQgx+W
2BPYAFwLEAM/jOk9Ozjc/U/SIHiMFLNjHOBD2Lwo4DHScWUIGWh/
XauEHgKsLzkbInSmydKWy7S+TTDWNlTORkiuQbGMGAu8GYM/mmAUqZbY93OwK/ysheMdf8EPpH7eSAG/
z7wvrFuLvDnvHwKsI2xbiDweeD3xi4vX75SDm6lN0+Utlyk8ylgrKxa/Y0Gqte0aClhV3k/
y8qeL8t99gHebabOhlQYO2oIZ97/
BpBmFu8tXMrchUs5eedW62mJSI3olFQxLwAb5+sYGOvWNtatRtM6G58g1R0vdNEgz1JmGOsOyus3GOu2
rcfge4JS2vL111qd199bzPprra463SIdTDOMAmLwHxrrDgF+ZawbQLp+sSfpmsPlxroppIveR+X63EW7
Phy4zFh3BrA6qb75szV/
Az3E6KEDFSBEOpHqYXQjqochInWiehgiIlI7ChgiIlKIAoaIiBSigCEiIoUoYIiISCEKGCIiUogChoiI
FNJpN+4Z6xqBG2LwR+TnqwFvAk/G4Avf+Was2xi4OAZ/
oLFuJLBxDP6uVtaxwCnNbcdYtyHwW2Ao6Ya6V2Lw+xjrhgGfj8Hf1Er/hdr1Nk/
NnMf4ibOZMWcRw9ftx9hRQ3Qjnkg30pkzjPnAiHznNMBewOtt6cBYt1oM/o0Y/
IF50UhgnxqM7Rzgvhj8tjH4rYHT8vJhpAy0rSnartdQPQuR7q+zU4PcDewL3EZKD34zsAuAsW40cCFQS
sVxdAx+Wq41sS/
QH1jLWPc1wAPbkQ70A3IW2Z8CM6r1UWBcHwX+UnoSg5+cH54HfCpnsR0P3AFcT6qRAXBcDP6xKu3mACY
Gf1x+bx44H3iYNJMxpOSGV8fgLyi05wrqKvUwVM9CpPvr7GsYtwCH5hoS2wBPlr32ArBrriFxKvCTstd
2BMbG4HcvLYjBf5jb3RqDHxmmDv7WVPlpyKfBbY90DxrrT82kvSDONh3P/
FwBvA3vF4LcDDgEubdcQR+SaGtdUNugp9TBz0Kk+
+vUGUYMfnI+3z8GqLzuMIhUkGhL0qfv8sPNfTH42QU20VIfLY3rXmPd5sDewJeAica6EVWarg5ckq+dq+dL
GVFLYyiXgY2N9b9CriTsllN2Vh6RD0M1bMQ6f46e4YBMIF0eubmiuU/
IhUhGgF8mXQKqmR+wb5b6qNFMfjZMfib8kX5p4FdqzT7f8BbwLak00prNNPdEpru6/55G3PyuoFUve+q
ouPrbsaOGsLchUt5d8ESljU28u6CJcxduJSxo4Z09tBEpKCuEDCuBs6JwU+pWD6IFRfBjyrY1/
vA2u3sA2Pd7sa6NfPjtYFNgFdRBPjtYEtgFeb6f/
NGPwyUr3uvs2M4xVgpLGuK8a69YE+MfjbgR+QrPz0umkk4C
/FezuAeC0fLH5p6vYB8D2pFNNpZnBVTH4p411qwNLAteS6mHcnosgPcCKMc/kinYXki7ATwGmAs/
kdpsA1xjrSoH8pGgHcnosgPcCKMc/kinYXki7ATwGmAs/
kdpsA1xjrSoH7e20YY7ejehYi3ZvqYXQjqochInWiehgiIlI7nX5KqjMZ644GTqhY/GgM/
tjOGI+ISFfWqwNGDP4aqtz7ICIiK9MpKRERKUQBQ0REClHAEBGRQnrUNQxj3VLSvQ4lt8Tgz6toY2kht
fkqbtcCH+bEgxjrjgE+iMFfV6ttdBVKUS7Se/WogAEsiMGP7ITtWmAe8BhADP7yThhD3ZVSlA/
q37dJinLdsS3SO/S0gFGVsW5v0t3Ws1hxlzXGurOBeTH48/
PzqYCLwb9irDsSOIWUtHByDP4IY92XgTNIOaPeAQ4npU4/
```

BlhqrPsv4NvAHqV+c2LCy4E1genA12Lwc4x1gZSddzdgMPD1GPzDtX7vtUxvrhTlIr1bT7uGMcBYN6ns
55CcOv1KUvLBXYCNWuvEWPdp4HRg9xj8tqy4V+MR4HM5XfotwHdi8K+QAsIFOZ155UH/
OuC7MfhtSKfLzip7bbUY/GjgxIrl5WPpMunNlaJcpHfraTOMlU5J5U/
4M2LwL+XnNwDjWulnd+C2GPwsSJlr8/KPAbca6z5KmmXMaKkTY90gYHAM/sG8aDzw+7Imf8i//
06q0reSrpTeXCnKRXq3njbDaE5zB9qqacdJeVWqrfMr4JJc7Oh/
aEO69GaUPpovpRsEb6UoF+ndekPAeAEYbqzbIj8fU/
baK+SU4sa67YDheflfgYONdevl10pHxPJ06WPL+qlMZw5ADH4uMMdYt0tedATwYGW77kIpykV6ty7/
qbaNBuTU5iX3xOBPM9aNA+401s0iXYcoVc+7HTgyr/
M08CJADP45Y925wIP5q7oTSfU0zgZ+b6x7HXiCFQHmz8BtxrqvkC56lxsLXJ7ra7wMHF3LN9zRlKJcpP
dSevNuROnNRaROlN5cRERqRwFDREQKUcAQEZFCFDBERKQQBQwRESlEAUNERApRwBARkUJW+cY9Y10jcE
MM/
oj8fDXgTeDJlmpNGOsGA4fF4H+dnw8j5WT6cQz+B3nZ+rmv38Tgj1uFsY0ENo7B35WfHwX8gnSX9hqkR
IFXtrXfsv4DqaZGbON6Td57d6R6GCK9V3tmGPOBEca6Afn5XqxIm9GSwcC3Kpa9DJQHmYOA59oxtpHAP
hXLbs2JCS3wE2PdhuUv5oBXb9Xee7dRqocxa/7iJvUwnpo5r7OHJiIdoL0HybuBfYHbSDmabialEC/
VmtgU2Dz/vjAGfzFwHrBFTsdxH3ApsAD4h7HO5E/thwC/
AzbOfW1ASiG+ad7uiTH4R411o0l1LgbkPo4mzVbOIaUJ2Rn4afmAY/
BvG+umA5sZ676ZtzEMmGWs+xpwGWBIiQlPisE/kIPiNcDWwD/y9shjmxeDH5gfH0iqp3FUDkiX5/
cP8E3g+Ir3/kvgVmAd0t/im7WuiaF6GCJSK+29hnELcGiuObENqSBQua2A/
wBGA2cZ61YHTgOm59oRp1bp62Ok7K1vlL12Eek00g7AfwJX5eUvALvm+hRnAj+JwX+YH9+at3Fr+YCMd
ZuTDuL/
lxdtD3wlBn8YcCxAzkY7Bhif39s3SSVXtwHOzeu05mLgwVxPYzvSjKnyvR8G3JtnPtsCkyo7UT0MEekq
2jXDiMFPztcgxgB3VWlyZwx+EbDIWPc2sGGVNiX3AD8C3iJ96i63J7C1scvPWq1jrFublD12vLFuS1I6
8orDWROH5BnHIuB/YvCzc38TYvALcpudSSnMicG/YKz7J/
AJYFdSACi958ktbKdkd+DIvM5SYK6xbt2KNk8DV+dA+scY/EoBQ/UwRKSrqMW3pCYA55NOR1Uq/
+jZYs2HPDP4O3AyKYtsuT7AjvmT+cgY/
CYx+PdJAeaBGPwIUkW9lupTlGYcn43B31G2fH7Z45YScDV3sC5f3qb6GDH4h0jB6HXg+lwWtstSPQyR3
q0WAeNq4JwY/
JSC7avWjsj+l1TO9J2K5X8Bln9bKn8LCprWpziq4DZa8hCpTjfGuk+QrplMq1g+gnT6reQtY92njHV9g
APKlv+VdCoLY11fY906leMy1m0GvJ2/sfVbcm2Orkr1MER6t3Z/MygG/xrpGkPR9u8Y6x411k0lXTS/
tOy156j+7ajjgUvzqaDVSAfwY4Cfk05JnQT8raz9A8Bp+eLyTys7a8GvSbUrppAueh8Vg19krLsMuCZv
fxLwVNk6pwEemAlMBUpHzxOAK4x1XyfNrr4Zg3+84r1PBU411i0G5pFPYXVlqoch0nupHkY3onoYIlIn
qochIiK1o4AhIiKFKGCIiEghChgiIlKIAoaIiBSigCEiIoW0eh9GDdOY9yElCtyddHf0QuDgGPyMdr+L
lbe9P/BiDP75/Pxa4AvAXGAZcGwM/
vF29L884WAb12uSdl1EpDspMsOoVRrzQ0iZYbfJyf0OAN5tw1jbYn9SZtlyp+Ykf6cBv6lcoYPSm1dLu
95lPTVzHsdOeJV9xr/
EsRNeVRpzkV6u6EGyFmnM3wTejMEvg+V3iGOsOxj4XAz+JGPdCcAJMfjNjXVbAONj8Dsb67YnpQIfCMw
i3YH9Zm5zKbAB8AHwDWAIsB/
wBWPdGaTstuUeAj6etx2Ax4CdgAnGuttIqU42AP4NHB2Df9VYNxy4Ke+ve0odGessqZCSy88vAWIM/
lpj3Q6kO+DXIuXU2ouV067/ixV3yTeSMu++X/
BvUlel2heD+vdtUvtCqUBEeq+iAeMW4ExjnSflUbqaHDCyrYDdSHmSpuVUGqcBI/
KnenLa8keMdbuQ8izdEIOfSDqAl9Kc7wK8Y6zbhJQ59uGcyfVXpBTk/
zbWHUJKMf41UhbXY2LwLxnrPgv8Oga/u7FuAuBj8Lflb8Ze/ly8D5XmvBsfgv5Db/Rm4LgY/
PtfGuJg0W7kIuCwGf52x7tjWdpaxbg1Sxt1DYvBP5zxSH5DSrptSFcG8vWNzbY+BpNN0NbWq9TBU+0JE
KhW66B2Dn0wqMtRiGvMY/CygahrzPKP4JPA90nWEvxrr9ojB/
wsYmNOVDyV9kt+VFDwezuuMAO7Ls5UzgI/lA+zngd/n5b8BPtrC2/
hFbjcO+HrZ8vJU6jvm7QNcTwpakGYgN5ctb80nSbOpp/
N7fy8Gv6RKu0eBXxrrjicFrpXadFY9DNW+EJFKbTlvX0pjboH1Kl4rlMY818a4G7jbWPcW6dP7X4HHSd
XyppGCxNdIB++TSae5novB71jeV/7U/
m5pBlPAqaUZR4X5VZaVNDbzuGQJTYNuKb15QzPtm4jBn2esu5N0XeMJY92eMfgXKtp0Sj0M1b4QkUpt+
Vptu9KYG+u2M9aVSq72IZ3a+md++SHglPx7Iun01qIY/FxSENnAWLdjXnd1Y92nY/
DvATOMdQfl5Q3Gum2rbbsNHgMOzY8PBx7Jjx+tWF+x7yT1Jhp37GukHAHnn5C8DG+ToGxrq180X1yn2yRQ
x+Sgz+Z0Akndr
rElT7QkQqFQ4YMfjXYvBtSmMOPGqsm2qs+wXwEeDPObX3ZNKn80ty84dJp6MeytXpZpIP1rmw0oHAz4x
1z5LSi38+r3c48PW8/DngK3n5LaS04RPzhfGijgeOzmnMjHMjyClR/CqP7T7S7OMBUoCZlK/
PtZY9zSpBkfpPc4k1R6fDNxICnalMR8C/CqP7T7S7OMBUoCZlK/
FnJj3z7OkmuR3t2GsdaXaFyJSSenNuxGlNxeROlF6cxERqR0FDBERKUQBQ0REClHAEBGRQhQwRESkEAU
MEREpRAFDREQK6YiU3r2Gse4A4A/ApypTfHQXT82cx/
iJs5kxZxHD1+3H2FFDdLOeiACaYdTaGNId6oe21rArKqU0nzV/
cZOU5qqDISKgGUbN5Oy5O5HyYE0Azs45sy4hVfubQQrQV8fgb2uuxketx9WW9OZKaS4iLdEMo3b2B+6J
wb8IzDbWbQd8lZQW/
jPAf5My8FJW4+PAGPz2pMSO51brtCPTmyuluYi0RDOM2hlDqlkkOKfnhGGB14Pe5yuC/
jHUP5NfLa3wA9CVVJFxJR6Y3V0pzEWmJAkYNGOvWA3Yn1T5vJAWARuCOZlZpoEqNj842dtQQzrz/
DSDNLN5buJS5C5dy8s4r1cMSkV5Ip6Rq40BSadfNYvDDYvBDSdcsZgH/
aazrY6zbkFR8Cpqp8dEZAy+nlOYi0hLNMGpjDHBexbxbLbgU8BrwFTgReBJ4G5MfgPjXUHAhfnwkurkU5n

PddxQ65u9NCBChAiUpXqYdSZsW5gDH5ePm31FLBTrmPeZqqHISJ1UqgehmYY9eeNdYOBNYAfrWqwEBHp
bAoYdRaDt509BhGRWtBFbxERKUQBQ0REClHAEBGRQhQwRESkEF30rgNj3VJgStmi/
WPwr3TScEREakIBoz4WxOBHNveisW61GPySjhxQJdW9EJG2UsDoIMa6o4B9gf7AWsa6PUgZa3cnpRFpI
Kc+r/
dYSnUvBvXv26TuhdKAiEhLFDDqY4CxblJ+PCMGf0B+vCOwTQx+trHuq6SstZ8BNgSeJ6U5r6lq9TBU90
JEVoUCRn00d0rqvhj87Px4V+DmGPxS4A1j3d+qdWSsGweMA9howw1qMrjX5zXykTWbLlPdCxFpjQJGx5
pf8bzVRF71qIehuhe0QCFXAAAgAElEQVQisir0tdrO8xBwqLGur7Huo6TSrh1i7KghzF24lHcXLGFZYy
PvLljC3IVLGTtqSEcNQUS6IQWMznMH8BLp67eXAQ921IZV90JEVoXSm3cRxrprAd/
St6SU3lxE6qRQenPNMEREpBBd9O4iYvBHdfYYRERaohmGiIgUooAhIiKFKGCIiEghChgiIlKIAoaIiBT
SK74lZaybF4MfmB/vA1wE7AHsA3wQg7+uov0w0j0RI3KWWRODP65jRy0i0rX0ioBRUpZS/
Isx+FeByzt5SJ1G9TBEpK16TcAw1u0CXAnsE4OfnpedDcyLwZ9vrNuedA2wB3BGD/
05efwzwfdJdknfG4L+bl88DLgX2BObkNj8HNgVOjMFPMNb1Bc4DLNAPuDQG/
5s6vf0mVA9DRFZFb7mG0Q/4E6lU6gvNtLkGOD4Gv2OV10YCh5BqVxxirBtqrNsY+BmpANJIYAdj3f65/
VpAiMFvD7wP/BjYCzgAOCe3+TowNwa/A7AD8A1j3fB2vs+VTJs2baWfC/
82nYbFH8CiefRpaGDwgNUY1L8v4yfObr1DEem1essMYzHwGOkgfULli8a6QcDgGHwpAeD1wJfKmvw1Bj
83t30e2AxYjxQU/p2X30iqcfFH4EPgnrzuFGBRDH6xsW4KMCwv/
yKwjbHuwPx8ELAlqfpe+dhUD0NEuoTeEjCWAQcD9xvrvh+D+Dv/0nF6w20XJui/
Ei6lLTfWkrWtTgGX+pvWWn9GPwyY11pnzcA347B39vSwFUPQ0S6it5ySooY/
AeAAw431n294rV3gbnGup3zosMLdPkk8AVj3fr5esQY2pai/
F7gm8a61QGMdZ8w1q3VhvVXmephiMiq6DUBAyCXR90bOMNY95Wl48GLjXWPQ4sKNDXm8D3gAeAZ4FnY
vB/
asNwriLV8X7GWDcV+A0dNONTPQwRWRWqh9GNqB6GiNSJ6mGIiEjtKGCIiEghChgiIlKIAoaIiBSigCEi
IoUoYIiISCEKGCIiUkjNbhQz1jUCN8Tgj8jPVwPeBJ6MwbsW1hsMHaD/
3V+Pgz4BzCtrNlo0g13W8fgz2umn6Nopm6Fse4VUhLAZcBbwJEx+H+18S2W+rLAKS29pxbW3R94MQb//
Kpsu5aU3lxE2qqWM4z5wAhj3YD8fC/
g9QLrDQa+VbFsegx+ZNnPhzH4Cc0Fi4J2i8FvC0RSuvEmcnqPetsf2LoDttOiUnrzWfMXN0lv/
tTMeZ09NBHpwmqdiuJuYF/
gNlJupZuBXWB57YlNgc3z7wtj8j8BeTakJsYaybBNxHqiOxkvIZhLHuIOAsUiLAuTH4XXOzqnUrKjwEHJ/
7nAf8EvgP4GRjXT/
gfNJ+eRr4Zgx+kbFub+BCYYBbwTNmYzibX08jPpwIuBv+Kse5I4BRSUsPJwGXAfqT8U2cA/
5n31THAEuD5GPyhre3gtpo2bdpKMyy58YiENixuhoYE+AwYvT0I4fuJszTJEpFm1voZxC3Cosa4/
sA0pQV+5rUgH59W4HAWx3mmsmFGcmtttYayblH+qBZAzgf/
IM4b9ypavVLeiHcUt2KqTH4z5JmHtcCh8TgP0MKGt/
M7+VK4Muk4LdRazvBWPdp4HRg9zzGE2e52e3/
uoGPw2pMBRra9xxrporItz5s5tbdOFvD6vkYGrN12m9OYi0pqazjBi8JPzNYgxwF1VmtwZg18ELDLWvQ
1s2ExX02PwI1vY1KPAtca63wF/KFterW7FzPzaA8a6paRP+2fkZUuB2/PjTwKvxOD/nTy4uR0Bkz0J/
lPu9gVyfogW7A7fF4GfB8qSH1UwGbjTW/ZFUR2MlSm8uIl1FPb4lNYF0WufmKq9VqyRZjH4gH/
aHAJGPdegX63y1/
sj8ypzMHWBiDX5oft5R9KAa7sP+ZX0VObjvSzoFtz3w97JaGXWl9OYisirqETCuBuBs6WnWFaTiBs6JwjWU
PrB2WzZgrNsiBiDX5oft5R8q7kD9RKa7sP+ZX0VObjvSzoFtz3w97JaGXWl9OYisirqETCuBs6JwU9ptWXy
PrB2WzZgrNsiBv9kDP5M0nWFaqee2uoFYJix7uP5+RGk+hYvAMONdVvk5WPK1nkF2C6PaTugVGL1r8DB
pUBmrCsdiZe/V2NdH2BoDP4B4Duki/8dcgFB6c1FZFXU/BNtDP414KI2tH/
HWPdovmB8N81c9K7wC2PdlqRP8n8l1aNo6RRWkXEsNNYdDfw+f9J/Grg8X/
QeB9xprJsFPAKMyKvdDhyZL9g/
DbyY+3rOWHcu8GA+DTYROIp0jedKY93DwU6kWSdeZlEAUNERApRwBARkUIUMERE
pBAFDBERKaRD7izuLMa6jUhJA3cg3QX4NCRBiWfqPWm7L0kra
c2OdIaVWP77W2xcRqbceGzCMdQ3AHcD4UhZYY91IUv6qmgeMImLwkZTksO5U70JEaq3HBgxN2BxDP7y
0oIY/CRjXYOx7hfAl0j5j5nn4cg781zxB+SCqwNJKU1HAKcAIwANg/Bj/
dWHctsBD4NCn4nBSD9+UbNtaNJs1sBgALgKNj8NPKZyEtpHtvt1K9i0H9+zapd6H0HyLSHj35GsYI4O9
Vln+VFBC2BfYkpRn5aH5tW1KA+Awpl9Qny4Ail54OU5BXq5F4BdY/
CjSKnYf9LMGKule2+38RNnM6h/XwYPWI0+DQ0MHrAag/
r3ZfzE5pLmioi0rifPMJqzM3BzzlL7lrHuQdI1jveAp2PwbwIY66YDf8nrTCHNWEp+F4+F4NfBrxkrHuZdO
AvNwgYn/
NdNQLNBYJq6d5fK2+Q81iNA9howw0KvcEZcxaxyTpNN6l6FyLSXj15hvEcKW5pQfUZxqZyppMD/
ooYvInBm3UHDWph6CsMX7cf7y1c2mSZ6l2ISHv15IDDWKOFOsi4ZzHWLXDWDa99+bMg1hRz/
yoVRl8e6jehYjUQ48NGH4RuAAYC9j3XRj3XPA2cBNpEp3z5KCyndi8LPbuO9uMGSBwK7asWVtYqQWUvBR/
fTSLUy7gaOicEvrHj958BPjXWPAn1X/
V2sGtW7EJF6UHrzsNsrfkvIx+Ns6ettKby4idaL05iIiUju98VtS7S0FRKR+8VtS7RKDP6qzxAi0hk0wxARRkUIUMEREp
BAFDBERKUQBQ0REClHAEBGRQnrst6SaqYXR2C/ajUrjHVXAb+MwT9vrHsFMDH4r+/
o20/pzUWk1npkwJiwGihFsYYA9j3W2sSH/
+XzH4RmNdINWqaFLgyFh3OnAkMBP4GXJK6ifdH3P7JvK3+T0ojVsAQkVXWbyx4yfOVsAQkVXWU69hNFcLo7SfMhi9ajBLgDadkfgrRwNNSlx4E7NdWKs2x44NK/
zVdLprXKr5XoZJwJnFRjXWkCIwW8PvA/8GNiLlPPqnGbGMM5YF411cc7cuQU2kdKbr9O/

aQorpTcXkfbqqQGjJU/F4F/L9SwmkYohNWcX4I4Y/Acx+PeAyhnAH/
Lvv7fST8mHwD358RTgwRj84vy46vpKby4iXUVPDRjN1cKAAjUoKrSUnbHUV3k/
S2i6X8trYSzOWXShrN5GDl41Oz2o9OYiUg89NWA0VwvjC23s5yHgAGPdAGPd2rRw0bzMK8DIXC9jKKn8
aodSenMRqYceedE7X8Q+ALjQWHcasJAVX6ttSz/
PGOtuJZ26+ifwcIHVHgVmkE4zTQWeacs2a2X00IEKECJSU6qH0Y2oHoaI1InqYYiISO0oYIiISCEKGCI
iUogChoiIFKKAISIihShgiIhIIQoYIiJSSI+8cQ/AWNcI3BCDPyI/
Xw14E3iyWj2MsvUGA4fF4H+dnw8D/gFMK2s2Ogb/YRvGchdwWH66vO96Uj0MEam1njzDmA+MMNYNyM/
3Al4vsN5g4FsVy6bH4EeW/TQJFjkYNSsGv08M/
t1m+q65Uj2MWfMXN6mH8dTMefXetIj0YD12hpHdDewL3AaMAW4mZaAtVc/
blJTifFPgwhj8xcB5wBbGuknAfaT6FSvJ629MyjI7y1j3F5qvg/EKYKr0/UvgVmAd0t/
imzH4IulHWqR6GCJSDz09YNwCnJkP3tsAV5MDRrYVqQDS2sA0Y91lwGnAiBj8SFh+Sqp0kAd4NAZ/
bH68PbBzDH5BLpzUmsq+TwbujcGfa6zrC6xZuYKxbhwwDmCjDTco9KZnzFnEJuus3mSZ6mGISHv16IAR
g5+cD/hjgLuqNLkzBr8IWGSsexvYsJmuppcO8hUmxOAXtGOITwNXG+tWB/
4Yg59U2SAGfwVwBaRcUkU6Hb5uP2bNX7x8ZgGqhyEi7deTr2GUTADOJ52OqtTW2hiV5pc9bqkORlUx+I
eAXUnXVq431h3Zxu1XpXoYIlIPvSFgXA2cE4OfUrD9+6RTVG31Cq3XwWjSt7FuM+DtGPyVwG+B7VZhuy
tRPQwRqYcefUoKIAb/GnBRG9q/
Y6x71Fg3lXTRvOpF7yparYNRpe+pwKnGusXAPKAmMwxQPQwRqT3Vw+hGVA9DROpE9TBERKR2FDBERKQQ
BQwRESlEAUNERApRwBARkUIUMEREpJAOuw/
DWHcA8AfgUzH4FzpgeycCV8TgP2jDOhY4pZT+3Fj3JeBHwFqkr535GPwpNRjb2cA3gH/
nRd+PwVdLXSIi0mV05I17Y4BHgEOBsztgeycCNwCFA0Y5Y90I4BJg3xj8CzmF+bgaju+CGPz5NeyvCdX
DEJFa65CAYawbCOxEygw7gRwwjHXfAY4AlgF3x+BPM9Z9HLgc2ICU3+mgGPx0Y92pwMFAP+COGPxZObH
gPcCTwCjgRdLd0v9NSj3+gLFuVgx+N2PdF4Ef5vWnA0fH4OcZ6/
YGLgRm0fTu7O8A55ZmQzH4JUCpqNK1wAJSttvNgKOBscCOpAJNR+V284Df5Pc9Bzg0Bv9v6qxUD2NQ/
75N6mEoPYiItEdHXcPYH7gnBv8iMNtYt10+3bM/8NkY/LbAz3PbG4FL87LPA2/mg/
2WpPxMI4HtjXW75vafJJ162gZ4D/
hWrmvxBrBbDhbrA2cAe8bgtwMicJKxrj9wJfBlUtrzjcrGPAL4ewvvaV1gd+D/
AX8GLgA+DXzGWFfKbLsW8Eze5oPAWWXrH2esm2ysu9pYt26hvVhQeT2MPg0NDB6wGoP692X8xNm13IyI
9DIdFTDGkGpTkH+PAfYErildY4jBzzbWrQ1sEoO/Iy9bmF//Yv6ZSJoFbEUKIAAzY/
CP5sc3ADtX2f7ngK2BR3Ndi7GkmcFWwIwY/Esx+Ma8flF/
zutMAd6KwU+JwS8DniMVVYI0c7q1ytguA7YgBb83gf9tbiPGunHGumisi3Pmzi00sBlzFrFO/
75Nlqkehoi0V91PSRnr1iN9Eh+R62z3BRqB2/Pvcs3lM2kAfhqD/
01F38Oq9FEtOVYDcF8MfkzF+iObaQ/
pwL898Gwzr5eOvstomiZ9Gc3v10aAGPxbZWO4EvDNtFc9DBHpMjpihnEgcF0MfrMY/LAY/
FBSVtfZWNeMdWsCGOuGxODfA14z1u2fl/XLr9+b2w7Myzcx1n0k97+psW7H/Lh0YR2aphJ/AtgpXx/
BWLemse4TwAvAcGPdFmXrl/wC+H5uR05bflIb33uf/
P4BDiuNzVj30bI2B5Cy1taM6mGISD10RMAYA9xRsex20kXpCUDMp4lKX1c9AjjeWDcZeAzYKAb/
F+Am4HFj3RRSje5SMPgHMDa3H0I63QPpU/
ndxroH8oXmo4Cbc7sngK1i8AtJ33y601j3CPDP0gBj8JNJ37S62Vj3D9JBvfxAX8R84NPGur+TZlnn5O
U/
N9ZNyWPZjXQdpGZUD0NE6qFbpzfPp6R8DH5EZ4+lGmPdvBh8zY7SSm8uInWi9OYiIlI73briXgz+FdLX
X7ukWs4uREQ6m2YYIiJSiAKGiIgUooAhIiKFKGCIiEghChgiIlJIh35LSjUxqm7vFNJd5RvE4GfGi+qvl
NxeRWuvoGUZ5TYYcCKw5qquuXFYT479i8J8ifYX35RqNDWPdUGAv4NVa9Qkr0pvPmr+4SXrzp2bOq+Vm
RKSX6ciKe6qJsXJNjAvyNv7Unn1bqTy9ObD89/
iJszXLEJFV1pEzDNXEKKuJYazbD3g9Bt9cNlxyO6U3F5EuoSMDhmpi5LHlDLynA2e2toEY/
BUxeBODN+sOGlRoUMPX7cd7C5c2Wab05iLSXh1VolU1MZqObQtgOPCssQ7gY8AzxrrRMfh/
NbNeYWNHDeHM+98A0szivYVLmbtwKSfvvGF7uxaRXqyjZhiqiZEcBjySyIfyftiGPAasF0tggUovbmI
1EdHlmhVTYymNTHqavTQgVy636bcNXZLLt1vUwULEWm3bl0PA3pXTQxRqZ1uXQ8DVBNDND
RKSjaIYhIiKFKGCIiEghChgiIlKIAoaIiBSi9OYrr2PpgPTmxrofAV8h3RX+NnBUDP6N9vYrIlvSm/
egjqnN/9FDH6bGPxIwFMgr1RbPDVzHsdOeJV9xr/
EsRNeVWpzEWk3pTfvpPTmOQVKQz+qzUr1MAb179ukHobSgbShbJsDhorJsLJsHJE4NZxj
l9TD6NDQweMBqDOrfl/ETZ9dqEyLSCym9eSekNy+qRs9lESg7+ClESRI8adWOi01fB1+zFr/
uLllfZA9TBEpP2U3rwT0pvnvnYsa7NfHkdNjB01hLkLl/
LugiUsa2zk3QVLmLtwKWNHDanVJkSkSkF1J6885Lb36esW5qHssXgRPa2G+zVA9DROpB6c3rTOnNRaQbUH
pzERGpHaU3rzOlNxERekRnkIzDBERKUQBQ0RECOHAEBGRQhQwRESkEAUMEREEppCOz1aoWxort/
IKU7PBDVmTNfbe9/ZZ7auY8xk+czYw5ixi+bj/GjhqiG/
dEpF06OvmgamEk9wEjcnbdF4HdF4Hv1ahfYEV681nzFZdJb66Ea2GCLSHh2VfFC1MJrWwViL2XaeYEWuqZooT2
8OLP89fuJszTJEZJV11AxDtTAqmGU+Rpwd3MbUXpzEekqOjL5oGphVIzNWV8RgzcxeL
PuoEGFBjZ83X68t3Bpk2VKby4i7VX3U1KqhVF9bMa6sYAD9siBp2bGjhrCmfe/
AaSZxXsLlzJ34VJO3nnDWm5GRHqZjphhqBZGUl4LY2/
gu8B+bfkWV1FKby4i9dARAUO1MFauhXFF269hvq0YPHcil+23KYKFiLRbt66HAb2rJoaI1F23rocBqmkhjmIyjIKFKGCIiIoWoHkb
TdSwdUw/jIFLG3k8Bo2Pwsb19VlI9DBGpNdXDaEad62FMBb4PFSj/ppQPQwRqQfVw+icel/
yK+3e99Wo3oYIlIPqofR+fUwlReD2PRhx8WWkf1MESkHjrqrqrqGsYY0qd0d4WFEPow8F6mEA5IBRqocBMJAU

```
QF5l5XoYxwPnV2y/vB4GwBrA45TVw8jbuYGUjLCIP8fgG3MyxLdi8FNyH6V6GJNYuR7GHwr2vVwM/
gpSIkVoPhV7E8PX7ces+YuXzyxA9TBEpP1UD6OT6mHUk+phiEg9qB5GJ9TDqDfVwxCRelA9jE6oh2GsO
8BY9xrpIvmdxrp729hvq1QPQ0RqTfUw6qjW9TDooFNaItLrqB6GiIjUTreeYfRC+mOJSD1ohiEiIrWjg
CEiIoUoYIiISCEKGCIiUogChoiIFKKAISIihShgiIhIIR1WcU9qotB3pcsZ66YCC+swlrZan1RzpCvoK
mPROFbWVcbSnccxKwa/dz0GQ2Njo3568M/2X9g3dvYYutI4utJYNI6uOxaNo/
qPTkmJiEghChgiIlKIAkbPd0XrTTpEVxkHdJ2xaBwr6ypj0TiqUPJBEREpRDMMEREpRF+r7UaMdXsDF5
Hqol8Vgz+v4vV+wHWkWuTvAIfE4F/
Jr30P+DqwFDg+Bn9vkT5rPRZj3V7AecAawIfAqTH4v+V1Aqmq4YLczRdj8G/
XaRzDSNUap+WmT8Tgj8nrbA9cCwwA7gJOiMG3OBVvxzgOB04ta7oNsF0MftKq7I+CY9kVuDBv69AY/
G1lr40FzshPfxyDH1/HfVJ1HMa6kaTKmeuQ/r2eG4O/Nb92LfAFYG7u5qgY/KQ67o+lwJT89NUY/
H55+XDgFlKVz2eAI2LwH7Y0jnbuk92AC8qabpVf/
+Oq7JNVpRlGN2Gs6wtcCnwJ2BoYY6zbuqLZ14E5MfiPk/5x/SyvuzVwKPBpYG/g18a6vgX7rOlYSN8p/
3IM/
jPAWOD6ivUOj8GPzD+tBYv2jANgetm2jilbfhmpdO+W+afF77S3Zxwx+BtLYyCVJ36l4j974f3RhrG8S
ipZfFPFukOAs4DPAqOBs4x16+aX67FPqo4D+AA4MgZf+vd6obFucNnrp5btk9aCRXvGAbCgbFv7lS3/
GXBBDH5LYA7p79ui9owlBv9A2b+T3Un76C9lTQrvk/ZQwOg+RgP/F4N/
OX+SuQX4SkWbrwDj8+PbgD2MdQ15+S0x+EUx+BnA/+X+ivRZ07HE4CfG4N/
Iy58D+udP36uiPfukKmPdR4F1YvCP50/Q1wH7d9A4xgA3t7Kt1rQ6lhj8K7lm/
bKKdf8DuC8GPzsGPwe4D9i7XvukuXHE4F+Mwb+UH78BvA1sUHQH1Goczcl/
t91Jf0dIf9fW9kctx3IgcH
cM/oMi460lBYzuYxNgZtnz1/Kyqm1i8EtIU9T1Wli3SJ+1Hku5/
wQmxuAXlS27xlg3yVj3g5YO7DUax3Bj3URj3YPGul3K2r/
WSp+1HkfJIawcMNqyP4qOpa3r1muftMpYN5p0+nJ62eJzjXWTjXUXFPiw0d5x9DfWRWPdE8a6UlBYD3g
3/
x3b0mdN9gnpbEHlv5O27JNVpoDRfVQ7WFSeQ26uTVuX13MsABjrPk2a1v9P2euH51NVu+SfI+o4jjeBT
WPwo4CTgJuMdesU7LOW4wDAWPdZ4IMY/NSy19u6P4qOpa3r1muftCjPbK4Hjo7Blz5xf490/
n4H0vWD79Z5HJvG4A1wGOnU2Bbt6LNW+
+QzwL1li9u6T1aZAkb38RowtOz5x4A3mmtjrFsNGATMbmHdIn3WeiwY6z4G3EE6T738k2MM/
vX8+33SOdzR9RpHPj33Tt7e30mfYD+R23+slT5rNo6y11f61LgK+6PoWNq6br32SbNy8L4TOCMG/
0RpeQz+zRh8Y56VXkNt/o00q3T6NAb/MhCAUaTrcIPz37EtfbZrLNnBwB0x+MVlY2zrPlll+pZU9/
E0sGX+dsbrpAPMYRVtJpAuJD9OOs/
5txh8o7FuAukT9C+BjUkXLZ8ifeJprc9aj2Uw6UDwvRj8o6XG+T/f4Bj8LGPd6oAD7q/
jODYgBY6lxrrN8z55OQY/
21j3vrHuc8CTwJHAr+o1jvze+wAHAbu2c38UHUtz7gV+Unah+4ukv1O99klVxro1SB8orovB/77itY/
G4N/Mp+f2B6ZW66NG41iXNOtbZKxbH9gJ+Hn+9/MA6e94C+nv+qcCXbbnb1MyhjSjKB9nW/
fJKtMMo5vI50uPI/2n/gfwuxj8c8a6c4x1pW9v/BZYz1j3f6TTLKfldZ8Dfgc8D9wDHBuDX9pcn/
UcS17v48AP8rn5Sca6jwD9gHuNdZOBSaT/UFfWcRy7ApONdc+SLl4eE4MvfeL/
JnAV6csB04G76ziO0lhey59iS9q8P4qOxVi3g7HuNVKQ+o2x7rm87mzgR6QD29PAOfXcJ82Ng/
QpelfgqLJ/IyPzazca66aQvuq6PvDjOo7jU0DM/0YeAM6LwT+fX/
sucFL+e65H+vu2qJ1jwaSvgg8FHqzouk37pD10p7eIiBSiGYaIiBSigCEiIoUoYIiISCEKGCIiUogChoiIFKL7METqJH8Ncg2cwdZeddIYvk+6l+DCzti+9CwKGCIiUoYIiISCEKGCIiUogCho
iIFKL7METqJH8NcgZwZwzeddIYvk+6l+DCzti+9CwKGCI9UL4ZsBH4PunOZAUMaTfdhyFSJ+UzDCCSUo
f/mnTXNsDhwA9IdxDfGIP/n7xeI/Ai8DDpbuLHSHml5uQcXBeT0j/
MJt1M9+N893Ej6ca6ScC+uY9ty4Y0HjifdBPnMFI9kseAb8TgXzfWnZ3HeCnpLu91gW/
F4H+f777+IenO5I8AT8fgdzXWDSKla3ekU9x/
AE7sjEyqUn+6hiHSsXYmHeQ3Jd2x+wSpiNO4sruZIeW1eot0cP8S6c741UkpRj4LnA5MBs4Bji5b7+Ok
TLgn5zaLSDOMMaSaFh+SAsfxwCWklOZnV4xxT1LQGEQqdgXpzvTTSCnpjyMVDYI0czmCVFzpKlJdiHPa
tkuku1DAEOlYv2LFQfjNGPxZpAp2AMPL2r0Wgz+ddHBeBljgk8DmwJ9i8BeTUoxACigl7wDjYvCXxeDv
BJYA82Pwt8TgnySlHDmMlGbkdNIx4DMVY/
xlDP4i4GXSTATgy6RTXIfE4H8bgz8xL3ekU9unktJl9CHNTqQHUsAQ6VjvlmUafyV/
963Svq0psf9Vlgq8WtvTSeU/zyLNLhYD/
SvalPJHLaHpMaK57f4L2Kvs59gWxifdMC56i3RNHzPWnUuqSuXGe5Mdd8mnTqCFTOUauYAG
5hUq/tpVgSggcABwOoFx/NnwAC3GutuA7bJswPKim6H/
AsqWb5MtL1F+lhNMMQ6ZqmkS4uH0zP5CunA/
xNSbYYzSdcPmvNz0nWLa4GvkjKZvkC67EeflnxGkC/
fb5eUnkq5dHAxcBeLRaB9L96VtSIl1M/
rbTczH4EZ09FpV9/10AAAA3SURBVJFymmGIiEghmmGIiEghmmGIiEghChgiIlKIAoaIiBSigCEiIoUoY
IiISCEKGCIiUsj/B/LUhOU0rINqAAAAAElFTkSuQmCC\n",
      "text/plain": [
       "<Figure size 360x432 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
{
 "data": {
  "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAYwAAAGDCAYAAAA4byefAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3Xuc3dO9//
HXJFIJ0ZC6lROCugeJrKZVoculTsuqEz1uUSS0zWlLcSjHUT9Uj8Mpp7Skbi1CVJ0jtLHctVlUXBdxrd
uJpCIUaSI6kUQu8/tjrS17dvbMfCfZM3tm8n4+Hh4z+7u/l7Un7f7s9f3u7/
vT0NTUhIiISFt61XsAIiLSPahgiIhIISoYIiJSiAqGiIgUooIhIiKFqGCIiEghKhgiIlKICoZIN9fQ0D
CzoaGhqaGh4bT8c0aVdV7Kz/
2gHmOUnkEFQ6TnmAMsAgY3NDTsUVrY0NCwG7ATsBT4bZ3GJj2ACoZIzzEf8Pn30tqanq/
c4ckPYkKhkjPMjH/
PLyhoaF3Q0NDA3BkxXMiq2Steg9ARGrqbuBvwCbAPqRTVFsAfwd+X8dxSQ+gGYZID9LU1LQE+N/
8cDQrTkdNampqWlifUUlPoYIh0vOUTj19Azgs/
35TncYiPYgKhkgP09TUNBV4Azgs/
35TncYiPYgKhkgP09TUNBV4A1gf2BCYDYR6jkl6BhUMkZ7p5rLff9PU1LS8biORHqNBDZRERKQIzTBER
KQQFQwRESlEBUNERApRwRARkUJUMERERpBBFg3Qv+kqbiHSEhiIraYYhIiKFqGCIiEghKhgiIlKICoaIi
BSigiEiIoWoYIiISCEqGCIiUogKhoiIFKKCISIihahgiIhIIV0+GsRYdwhwO7BjDP6VTjjeKcA1MfiP2
rGNBX4ITAJOzot3Al4FlgH3xuDPbGHbfYGYPYvCPr864RWTN9uSsRiZMm8uMeYvZaoO1GTNsICMG9a/
pMbp8wQBGA48ARwLndcLxTgEmAoULRkkM/
nrgegBj3Uxgnxj8nDY22xeYA6hgiMgqeXJWI+c8+DYD+vZm80/3Yc6CJZzz4Nucv/
9mNS0aXbpgGOOv6A3sC+wCTyQXDWHcGcAywHLgnBn+mse5zwBXXAr6F9YfF4UWkG+isf
sM3As8AQwDXgOBb4NbAZMMdbNicHvYv6hvXn+6cFwMvtFY91XgF72XgMtMmb/
TMFXsuGwHXAYKARGAcszMdcZQwbC3w/Bv/oKv/Bqnj11VdruTsR6YIue3vwDUuaK4Aw1hX1/
HGEvqa1Ga154dg3/NWFfqazGH9IY+BCAG/
3z+au4tuWg1AXe187UvAHY21j0NzAeOyMt/Wja7mQn8Szv3KyJdzIhB/
XtcgajUrfthdPW+Fsa6xhxcdDy7zwhzInbdyyAmuIVE47xHOGHGvBq++gDQMd4nPEmyyz8O1/
7V9OYjIvXSWf0o6rq4rRVmcaJ+hL7K4oEx9hCkebYaQQkpCzWRzM4cuQ17Jql/
Fml3uRtmajS5FxIE+eC4CORqkdY3Kd
pR1FtnzTC6Y1+LIcDTrbymDUhpuv8K3AlcCuwM7JLTbCGdynomH/
Mh4Nyy7U801j1vrLvOWH
78VoYjIvXSWf0o6q2zrmH0pL4WXfCG4JtyqOG7MfgX8j5eIeX
ZmYtu8WDtn8ztc73XWwxbBXaBpb
KCzg33VaQ6aiHd0Hd8N/
IMWgx3Zu1+y1i4h0J6szw1hAivvolx9/
hfSG3Jb1ge9XLHsDKC8yh5GiOVbXWvdO6VEESqGrdg+dlh8pscOOF1
Tpj8Zo+LJK+l1X2TvAc4CLiNdEf3LaTU11KToC2ArfPPy3KK7EXANsa6Z4EHgPGkqPCXjXUmf2o/
AvgfUkQ5xrqNSJHnW+TjnhKDn2qsG0EKNeyX93EcabZyPtDWDcSuLB8wDH494x104EtjXXfy8cYDMwx
1h1PulPcAEuBU2PwU3JRvJ4UYPhyPh55bJ/cnGesOxRwRwMMfixxRBdlV8/wPdIwYjlr/
1npHDCT5P+Lb4Xg/9Tu/
4FRGSVlfpYDOjbu6bi54Y61ELq1swfgucY6zzwAdeSCke1A6/RYtz/wnzQY0umsfEqK/PvWpDfx/
8uLhgMjY/ALjXWnAcTgdzHW7FIPf1/
9NOC+GPwFeZ1vVbd8OKKPe7BXVE1ZTW+8k/xr/lqv0gVz0DEBCe0xkvJx4m7Z5xbN29YlC8mEf0/
YXKhu1C7VNX1CP
```

7AzvlHCmAT+co9AHABGPdtqRcpopE+maOyDOOxcC/
5Dh1gMkx+IV5nZHA5fm1vWKs+wuwHbA3qQCUXvPzrRynZF9SMydi8MuA+VX6XjwFXGes6wP8Lgb/
bOVOctbVOIBNN9mowGFFpKjZjU1sXPExrSf2saiVWpy3n0zqP2GBz1Q8V/
5XX9ba8WLwH+eQvtNIjYi+XvZ0L2CPsjd2AIx1lwNT8qf4wUBoZZy3tnABfUHZ763lqbQUulW+vG8r26
8kBv9wbgR1EHCTse7iGPyNFeuoH4ZIB1lT+ljUSi2+VnsdcH6pgVAB5bHjlf4b+LcY/
N8qlt8PfPJmX9bRbgArLrSPLXiM1jwMfDMfYzvSNZNXK5YPIZ1+K3nXWLejsa4XKaq85A+kU1kY63ob6
z5dOS5j3ZbAe/kbW78Gdl+FMYvIKhozbCDzFy3jg4VLWd7UxAcLlzJ/
0TLGDBtY76F1Sas9w4jBv0W6xlB0/b8Z66Ya614kXTQfX/bcS1T/dtRJwPh8Kmgt0hv4d0ltXSfkPhV/
LFt/CnBmvrh8YeXOWvFL4KrcRW8pMDYGvzhfe7k+H/
9Z4Mmybc4kNUCaReprUTrxeTJwjbHuW6TZ1fdi8I9VvPYXgdONdUtIke3HtmOsIrKaSn0sJkyby4x5i9
lqg7U5beQmun7Rgm4db76mUby5iHQQxZuLiEjtqGCIiEghKhgiIlKICoaIiBSigiEiIoWoYIiISCEqGC
IiUkhnRHoDYKw7BLgd2DEG/0onHO8U4JoY/Eft2MaS+ly4/PhrpHyrdUnfU/Yx+B/
WYGyHAeeRAhRHtLevhkhP8uSsxmY3zo0ZNlA3znVRnTnDGA08AhzZScc7hdVIf80RIFcAR8fgdwSGkPp
21MKLwDdId6yLrLFK8eJzFixpFi+unhRdU6fMMIx1/
YE9SVHnk0mfrjHWnQEcAywH7onBn2ms+xypj8RGpEiNw2Lw0411pwOHA2sDd8Tgz82Bg/
cCTwDDgNdI8RrfJkWjTzHWzYnB72OsOwD4cd5+OnBcDL7RWPdVUk+NOTSPLT8DuKA0G4rBLyVFh2Csu4
HUf2MHYEtSH44xwB6kjoNj83qNwNX5dc8DjozBvx+Dfzk/v9p/
27Yo3ly6MsWLdy+dNcMYBdwbg38NmGus2z2f7hkFfCEGvxspFwrgZmB8XvYl4J38Zr8tMILUTW94TnkF
2J5O6mlX4EPg+7lR09vAPrlYbAicDewfg98diMCpxrq+wLWkZNy9gE3LxjwEeLqV17QBKcL8X4E7gUtJ
Kbu7lIUjrgs8k4/5EHBu+/5sKd7cWBeNdXHe/Pnt3VykS5vd2ET/
iqYEihfvujrrGsZo0qd4SI2SRpOK1fWlawy5P8V6wOYx+DvyskUAuWAcAEzL+
+hPKiBvArNi8FPz8omkoMJLKo7/RVK3vKn5U/
2ngMdIM4QZMfjX83EmkntPFHBnDL4pBxW+W0rrNda9ROrg9yxp5lTq7TGRdA2nXRRvLj2Z4sW7lw4vGM
a6z5A+iQ8x1jUBvUk9JCaxco+JlgKwGoALY/
BXV+x7cJV9VHtTbQAeiMGPrth+aAvrQ0rNHQ4818LzpY9Ay2ne92M5Lf9dlfQoUmbMsIGc8+DbQJpZfL
hoGfMXLeO0ka31WpN66YxTUocCN8bgt4zBD47BDyL13Z4LHG+sWwfAWDcwBv8h8JaxblRetnZ+/
r68bql39ubGuo3z/rcw1u2Rfy9dWIfmvSceB/
bM10cw1q2T+128AmxlrNumbPuSi4Gz8noY63rlGPX26JVfP8BRZWMTEVbEi2+4bh9mf7iEDdfto37aXV
hnFIzRwB0VyyaRLkpPBmLuW1H6uuoxwEm598SjwKYx+PuB3wCP5VNAt7GiGLwMjMnrDwSuzMuvAe4x1k
2Jwb9ParB0S17vcWCHfMprHHCXse4R4C+lAcbgnyd90+oWY93LpG82fbadr30BsHPuJLgvcD6krxgb69
4iXSS/y1h3Xzv3K9JjjBjUn/EHb8HdY7Zl/MFbqFh0Yd26H0Y+JeVj8EPqPZZqjHWNMfia/a9f/
TBEpIOoH4aIiNROp93p3RFi8DNJX3/
tkmo5uxARqTfNMEREpBAVDBERKUQFQ0REClHBEBGRQlQwRESkkC7zLSlj3TLgBaAPsBSYAFwWg19e14F
1gnxn+2sx+D/
Xeywi1ahnhUDXmmEsjMEPjcHvDHwFOJBVSHftpkaRwhFFuhz1rJCSLjPDKBeDf89YNw54ylh3HqnnxE2
kuHCAE2PwjxrrbgJui8H/HsBYdzMpHXY6cD0plbYX8M+lRNpKxrrfAYOAvsDPY/
DXGOt6A78GDCkw8LoY/KUtbL9S/468v/LOfVcAMQZ/
g7HuIuBg0izqflKC7cHAl411Z+exTl+Vv1s16ochq0s9K6SkK80wmonBv0Ea38bAe8BXcl+JI4Bf5NV+
RWpehLFuAKl/xt3Ad0lv/kNJb/pvtXKo42Pww/
N6J+V03aGkmPUhMfhdSMWnJSv172hpRWPdQOAQYOfcv+M/
YvCPkjK1Ts8zrOkV26gfhtSVelZISZecYZQp5Zv0Aa7IceTLgO0AYvAPGevG5+TabwCTYvBLjXWPAT8y
1v0DcHtLs4vspNxvHNLMYFvgVWBrY93lwF2kmcBKWunf0dKxPgQWAb8y1t0F+Lb+AOqHIfWmnhVS0mVn
GMa6rUnF4T1SV7t3gd1IM4FPla16E/BN0kzjeoAY/G9Ip3kWAvcZ6/Zt4RgW2B/YI88QpgF9Y/
Dz8rECcAJpJlNNS4FdS2n+t+2bx7WU1DVwErkLYQvbi3QZY4YNZP6iZXywcCnLm5r4YOFS5i9axphhA+
s9NOlkXbJgGOs2Il0XuCIG3wQMAN7J35g6htSEqeQGUgw5MfiX8vZbA2/kVq2TgV1bONQAYF4M/
iNj3Q6kznzklq69YvCTgP8H7F5t41b6d/wF2Ck/HgDsl5/
vDwyIwd+dx1xq5Vreu0OkS1HPCinpSqek+uW+GKWv1d4E/Cw/90tgkrHuMGAKqc8EADH4d3O/
it+V7esI4Ghj3RLgr+Q+FFXcC3w398h4ldQnA2Bz4HpjXamg/nsr4z4GuNpYdz6wBDgsBv+Gse5/
gOeB11nRWnY94Pe5l3gDaeYEqW3ttca6k4BDa3nRW6QWRgzqrwIh3bsfBqTueaT7N3aPwffoq8LqhyEi
HaTn98Mw1u1ParN6eU8vFiIi9daVTkm1Wwz+QWCLttbLX5X9Q5Wn9ovB/63IsYx144E9Kxb/
PAbf2lduRUR6jG5dMIrKRWFomyu2vo8TajQcEZFuqVufkhIRkc6jgiEiIoWoYIiISCGdeg0jR3DcDuwY
g3+lE453CnBNDP6jdmxjaR4c+DXgJ6TgwwbAx+B/WIOx/
QT4J2A56W72sTH4t1d3v9LzKWpc6qWzZxijgUeAIzvpeKcAa7Vz++NI6yF7APsCo631yu3dfnVt//
dWHc6cDiwNnBHDP5cY91g0h3bTwDDgNeAY4FvA5sBU4x1c2Lw+xjrDgB+nLefDhwXg2801n0VuAyYAzx
TNuwzgAtKs6GcBfXLPO4bSFlVO5Di148DxgB7AE/E4Mfm9RqBq/PrngccGYN/
P8eKlKxLilGvOcWb9yyKGpd66swZxijg3hj8a8BcY93u+XTPKOALOfzvp3ndlSLD85v9tqTwvqHAcGPd
3nn97UmnnnYlJcJ+P+dIvQ3sk4vFhsDZwP45Jj0Cp+aYjmuBrwN7AZuWjXkI8HQrr2kDYF9SxMedwKXA
zsAuOVkXUjF4Jh/
zIcqaQhnrLjDWzSKFJ1adYSjeXMopalzqqTOvYYwmfYqHlJ00mlSwri9dY4jBz20lMvwA4ABW5DL1JxW
QN4FZMfipeflE4CTgkorjf5HU1W5qjh//FPAYaYYwoxSBbqybCIwr+JrujME3GeteAN6Nwb+Q9/
ESMBh4ljRzurVsbLeXNo7B/4gUw/
7vwIlU6TCoeHMpp6hxqadOKRj5Tut9gSHGuiZS2mwTKea78k2wpUyTBuDCGPzVFfseXGUf1d5YG4AHYv
CjK7Yf2sL6AC8Bw4HnWni+9LFuednvpcct/

```
W2rHes3pL4ba0pLWllFY4YN5JwH03cjPt23Nx8uWsb8Rcs4beQmdR6ZrAk665TUocCNMfgtY/CDY/
CDgBnAXOD4HCCIsW5gK5Hh9+V1++flm+fGSQBbGOv2yL+XLqxD89jwx4E98/
URjHXrGOu2I2VRbWWs26Zs+5KLgbPyehjrehnrTm3na++VXz/
AUaWxGeu2LVvn4DwOkVYpalzqqbNOSY0GLqpYNgnYkXQBPBrrPia1Vz2L6pHh9xvrdgQey6eUGoGjSRf
FXwbGGOuuJsWJX5mPcQ1wj7HunXwdYyxwi7GuNH8/Owb/Wu4ffpexbg7pDX0IQAz+
+fzV3Fty0WoizQTaYwGws7HuaWA+KXod4CJj3fak2chfSG1lRdqkqHGpl54Qbz6YdG/
EkHqPpRpjXWMMvib/
71a8uYh0kJ4fby4iIp2n26fVxuBnkk8hdUW1ml2IiNSbZhgiIlKICoaIiBSigiEiIoWoYIiISCEqGCIi
UkhdvyWVY0ImxuCPyY/XAt4hpb26VrZbHzgqBv/LsmXbksL/dgQ+IIUQnhuDf7iV/
YwFTAz+xCrPNcbg+
+f7PF4GXiXlTz1MCjdc3s6XW9rveUBjDL4y60qkReqBIV1BvWcYC0j5Uv3y468Aswtstz7w/
dKDnDh7FymxdpsY/
HDgB8DWNRrn9Ny3YldSgOGo8ieNdb1rdByRlagHhnQVXeE+jHuAg4DbSBEit5BixkufxrcgvfFvAVyWY
8svArYx1j0LPEDKYXosBj+5tNMY/IvAi3k/
A4Hr8n4+AsbF4J8vH4SxbitSCOBapP4aK4nBLzXWPQp8LnfmO5c0IxoK7JRzpo7Pq/
8qBn9Z3vePSD06ZgHvkyPTjXUnkSJBlgJ/
jsHXvLGU+mF0f+qBIV1FvWcYkKLOj8yzhF1JjZDK7QD8I6kPxrnGuj7AmeRP/
TH400k9KJ6hZT8GpuV+GWcBN1ZZ5+fAlTH4zwN/rbaTnCe1H/
BCXjQC+FEMfidj3XBSE6UvkKLUv2OsG5aXH0lq7vQN4PNluzwTGJbHVTVLSv0wRD0wpKuo+wwjB/
wNJs0u7q6yyl0x+MXAYmPde0CbOc7GujtIvTJei8F/AxgJ/HM+3h+NdZ8x1g2o2GzP0jrATcB/
lT1Xms00Ab+Pwd+TZxhPxuBn5HVGkroALshjuJ00U+qVl3+Ul08u2+/
zwM3Gut8Bv6v2WtQPQ9QDQ7qKrjDDgJRYewnpdFSl8o9Ry6he5F4Cdi89iMEfAowFBuZF1YK1qr35tvS
GXJrNDIvBn1e2fEHZ762Fd7W034OA8aSeG0/ni/4izYwZNpD5i5bxwcKlLG9q4oOFS5m/
aBljhg1se2ORGuoqBeM64PxSx7oCyvtcQLr2sKex7uCyZeuU/
f4wqQ0qeWYwp6KnNsBU0qkjSuu208PAqNxnY13gEOBPefkhxrp+uZvg1/
M4egGDYvBTSL3D1yd1ERRpRj0wpKvoEp9oY/Bvka4hFF3/
b8a6qca6F4F7YvCnG+sc8DNj3WXAu6Si8h95k/OA6411z5Mueo+pstuTgd8Y604m9epo72t4xlh3A/
BkXvSrGPw0AGPdraR2rX8hFRFIXQcn5lNjDcClMfgP2ntcWTOoB4Z0Bd2+H8aaRP0wRKSDqB+GiIjUjg
qGiIgUooIhIiKFqGCIiEghKhgiIlKICoaIiBTSJe7D6GmMdctYkTcFMCoGP7NOwxERqQkVjI6xMMehV2
WsWysGv7QzByT1oT4W0pOoYHSS3KzpIKAvsK6xbj/
gcmBfYAbpxpnrYvC31W2QUlOlPhYD+vZu1sdCsR7SXalgdIx+Od0WYEYOQwTYA9g1Bj/
XWPcNYHtgF1IC759JmVo1pX4Y9aM+FtLTqGB0jJZOST0Qg5+bf98buCUGvwx421j3x2o7MtaNA8YBbLr
JRh0yWOkYsxub2Hid5svUx0K6MxWMzrWg4nGbQV7qh9F9qY+F9DT6Wm39PEz
qNNjbWPdZYJ96D0hqS30spKdRwaifO4DXSV+/
vRJ4qL7DkVpTHwvpaRRv3kXkXhq+tW9JKd5cRDqI4s1FRKR2dNG7i4jBj633GEREWqMZhoiIFKKCISIi
hahgiIhIISoYIiJSiAqGiIgU0mO/JWWsawImxuCPyY/XAt4BnojBu1a2Wx84Kgb/y/
x4MPAyUJ7iNyIG/3E7xnI3cFR++Mm+pXtTdLmsaXryDGMBMMRY1y8//gowu8B26wPfr1g2PQY/tOy/
ZsUiF6MWxeAPjMF/
0MK+pRsqRZfPWbCkWXT5k7Ma6z00kQ7TY2cY2T2kHhS3AaOBW4C9AIx15wFbAFvnn5fF4H8BXARsk+PJ
HwDGV9tx3n4zYDAwx1h3P2Bi8Cfm5z1wSQw+GOtmAqbKvn8G3Ap8mvRv8b0Y/
J9q+QdQvHnHUHS5rIl6esH4LXBOfvPeldRvYq+y53cghf6tB7xqrLsSOBMYUoonz6ektinrbzE1Bn9C/
n04MDIGvzA3SGpL5b5PA+6LwV9grOsNrFO5geLNuyZFl8uaqEcXjBj88/
kNfzRwd5VV7orBLwYWG+veIzUyqmZ6C/0tJsfgF67GEJ8CrjPW9QF+F4N/
tnIFxZt3TYoulzVRT76GUTIZuIR0OqpS+cfBZbS/gJb3t1hK879n37Y2jsE/
TGqkNBu4yVh3bDuPL3Wi6HJZE60JBeM64PwY/AsF1/876RRVe80EhhrrehnrBgEj2tq3sW5L4L0Y/
LXAr4HdV+G4UgeKLpc1UY8+JQUQg38L+Hk71v+bsW6qse5F0kXzqhe9q5gKzCD1t3gReKbAvl8ETjfWL
QEaAc0wupERg/
qrQMgaRf0wuhH1wxCRDqJ+GCIiUjsqGCIiUogKhoiIFKKCISIihahgiIhIISoYIiJSSKfeh2GsOwS4Hd
gxBv9KJxzvFOCaGPxH7djGAj8sRaAb674G/ARYl/TVMx+D/2ENx/
hD4GJgoxj8nFrtV0Sk1jp7hjEaeAQ4spOOdwpVAv2KMtYNAa4Ajo7B7wgMAd6o0djId4R/
BXizVvuUjvHkrEZOmPwmB054nRMmv6kYc1kjddoMw1jXH9iTlA47GTgvLz8DOAZYDtwTgz/
TWPc54CpgI1LG02Ex+OnGutMVIj0XAAAgAElEQVSBw4G1gTti8OfmcMF7gSeAYcBrpDumv02KH59irJs
Tg9/HWHcA8OO8/
XTguBh8o7Huq8BlwBya36F9BnBBaTYUg18KlBor3QAsJCXebgkcB4wB9iA1aRqb12sErs6vex5wZAz+/
bz/S/Mxfr86f1vpWKXeFwP69m7W+0JRILKm6cxTUqOAe2Pwrxnr5hrrdielw44CvhCD/
8hYV0puuxm4KAZ/
h7GuL9Arv9lvS8poagAmG+v2Jn063x74Vgx+qrHuOuD7MfhLjHWnAvvE4OcY6zYEzgb2j8EvMNb9G3Cq
se6nwLXAvsD/kfpTlAwB/ruV17RB3u5g4E5SQfw28JSxbmhOn10XeCYGf5qx7hzgXOBEY93BwOwY/
HPGttgAcLWpH8bqU+8LkaQzC8ZoqGN4SH0qRpNOiV1fusYQg59rrFsP2DwGf0wdGf0detgggF4wDgGl5H/
1JBeRNYFYMfmpePhE4iZRQW+6LwE7A1PwG/SngMdIMYUYM/vV8nIk/
hMF3BmDbzLWvQC8Wwo4NNa9RGqs9Cxp5lQQhOB24116wA/yq+nVeqHUX/
qfSGSdErBMNZ9hvRJfEjutd0baAIm5Z/lWso0aQAujMF/XbHvwVX2USCTSrL0gqwF4IAY/umL7oS2sD/
ASqUnScy08X3rHWE7zqPTltPy3bQK2AbYCSrOLfwCeMdaNiMH/tXxl9cOoP/W+EEk666L3ocCNMfgtY/
CDY/CDSMmuc4Hj8ydujHUDY/AfAm8Z60blZWvn5+/L6/bPyzc31m2c97+FsW6/HvpwjoN0jxN/
```

HNgzXx/
BWLeOsW474BVgK2PdNmXbl1wMnJXXI0eXn9rO194rv36Ao4BHYvAvxOA3zn+LwcBbwO6VxUK6BvW+EEk
6q2CMBu6oWDaJdFF6MhBzC9TS11WPAU4y1j0PPApsGoO/H/gN8Fg+BXQbK4rBy8CYvP5A4Mq8/
BrgHmPdlHyheSxwS17vcWCHfMprHHCXse4R4C+lAcbgnyd90+oWY93LpDjyz7bztS8AdjbWPU2aZZ3fz
u2lztT7QiTp9vHm+ZSUj8EPqfdYqjHWNcbga/
LOonhzEekgijcXEZHa6fYd92LwM0lff+2SajW7EBGpN80wRESkEBUMEREpRAVDREQKUcEQEZFCVDBERK
QQFQwRESmkbl+rzZlSE2Pwx+THawHvkKLBC8e3Gus2A34Rgz8050JtFoO/
u41tLGVNkqo8vwnwa2AQ0AeYGYM/MN8k+KUY/G/
a2H+h9aR+npzVyIRpc5kxbzFbbbA2Y4YN1J3bIm2o5wxjASmMsF9+/BVgdnt2YKxbKwb/
dgy+lNU0FDiwBmM7nxRUuFsMfifgzLx8MCkPqi1F15M6KPW3mLNgSbP+FmqKJNK6et+4dw9wECkXajRw
C7AXgLFuBCkOvR+pUdFxMfhXjXVj8zZ9gXWNdccDHtid9Ebfz1g3EriQFHC40j4KjOuzwP2lBzlTCuAi
YMecezWBlI91E6nnBcCJMfhHq6w3DzAx+BPza/Ok+PU/kWYyhpRie10M/
tJCf7mC1A9jZepvIbJq6n0N47fAkblJ0q6krnklrwB7x+CHAecA/
1n23B7AmBj8vqUFMfiP83q3xuCHxuBvbWMfrRkP/
NpYN8VY96N82gvSTONPef+XAu8BX4nB7w4cAfyihfVaMpTU+2NIDH4X4PrKFYx144x10VgX582fX3D40
prZjU3079N8mfpbiLStrjOMGPzz+Xz/aKDyusMAYIKxblvSp+/y/4s/
EIOfW+AQre2jtXHdZ6zbGvgq8DVgWu7vXakPcEW+drIM2K7I/
su8AWxtrLscuIuyWU3ZWNQPo8bU30Jk1dR7hgEp3vwS0umocj8BpuQU2q+TTkGVLCi479b20aoY/NwY/
G/
yRfmngL2rrPavwLvAbqTTSp9qYXdLaf637puPMS9vG4ATgF8VHZ+sOvW3EFk1XaFgXAecX2pvWmYAKy6
Cjy24r/KGSau6D4x1+5Y1dVqP1CHvzRb2/04Mfjmph0fvFsYxExiaGzANIvUlJ/
cZ7xWDnwT8P9J1GOlg6m8hsmrqfdGbGPxbwM+rPPVT0umkU4E/
FtzdFODMfLH5wlXcB6S2rFcY60ozg1/F4J8y1vUBlhrrngNuAH4JTDLWHZaPXZr5PF+x3mWkC/
AvkJowPZPX2xy43lhXKtz/3o4xymoYMai/CoRIO3X7BkprEjVQEpEOogZKIiJSO3U/
JVVPxrrjgJMrFk+NwZ9Qj/
GIiHRla3TBiMFfT5V7H0REZGU6JSUiIoWoYIiISCEqGCIiUkinXcMw1h0C3A7sGIN/
pROOdwpwTQz+o3ZsYymLPTfWfY10t/i6pK+d+Rj8D2swtotJd55/
DEwnhSJ+sLr7ldYp0lxk9XTmDGM08AhwZCcd7xRgnVXdOGdHXQEcHYPfERhCyn6qhQeAITH4XYHX0A17
HU6R5iKrr1NmGMa6/sCewD6k7Kjz8vIzSJEay4F7YvBnGus+B1wFbEQK9DssBj/
dWHc6cDiwNnBHDP7cHFx4LynldhjpzfdY4NvAZsAUY92cGPw+xroDgB/
n7Uuf6huNdV8l3Yk9hxV3YAOcAVxQmg3F4JeDKS59B2BL4DhgDClF94kY/
Ni8XiNwdX7d84AjY/
Dvx+DLQwYfBw6lgyjePFGkucjq66wZxijg3hj8G8Bcu93u+XTVKS9B2BL4DhgDClF94kY/
OyLwHv5Df7bUkZTEOB4ca6Uhjg9qRTT7sCHwLfj8H/
Angb2CcXiw2Bs4H9cxR5BE7NserXkk4P7QVsWjbmIcDTrbymDYB9SQGEdwKXAjsDu+T0Wkinsp7Jx3wI
OLfKfo4n9QWpSvHmtaFIc5HV11nXMEaTPsVD6oExmlSsri9dY4jBz81Bf5vH4O/IyxYB5IJxADAt76M/
qYC8CcyKwU/
NyycCJ5HSb8t9EdgJmGqsg5Qq+xhphjAjBv96Ps5EYFzB13RnDL7JWPcC8G4pPNFY9xKp496zpJnTrWV
ju718B8a6H5GSbG9u6SCKN68NRZqLrL4OLxjGus+QPokPyX28e5N6U0zKP8u1lGfSAFwYg7+6Yt+Dq+y
j2ptqA6mHxuiK7Ye2sD7AS6QQwudaeL700XR52e+lxy39XT85lrFuDOCA/
WLwCvTqYGOGDeScB98G0sziw0XLmL9oGaeN3KTOIxPpPjrjlNShwI0x+C1j8INj8INIya1zgePLYsQHx
uA/
BN4y1o3Ky9bOz9+X1+2fl29urNs4738LY90e+ffShXVoHjH+OLBnvj6CsW4dY912pI58Wxnrtinbvui
4Ky8Hjma/
NR2vvZerLg+cVRpbPm6yb8BB7fnW1yy6hRpLrL6OqNgjCb1vi43iXRRejIQcxx56euqxwAnGeueBx4FN
s0XiX8DPJZPAd3GimLwMjAmrz8QuDIvvwa4x1g3JQb/Pqkfxi15vceBHfIpr3HAXca6R4C/
lAaY+3ifkrd5mRRL/tl2vvYFwM7GuqdJs6zz8/Ir8vgfMNY9a6y7qp37lVUwYlB/
xh+8BXeP2ZbxB2+hYiHSTt063jyfkvK5o16XY6xrjMHX7F1J8eYi0kEUby4iIrXTrdNqY/
AzSV9/7ZJqObsQEak3zTBERKQQFQwRESlEBUNERApRwRARkULavOid786eDexS7dsl+ZlI3UEMvqHX
UtM5vCxnlzSQR8wNw+VgFCxDrrSY2cuLSdLW6+mdEHhpMfVotF1mNzE/pkBoUVXp5sHhL3SdRDWdZOiNQ7eEhN
bfunyUJVHWeqAVu1Zdp5jWF3d7FlMuzL23zNS/R4rM0Mqa0Exo01Xtyd8gHbCkUNnRuC6Jl3rFA0xG+Z8LJ
YFnJkM5CT+oCBAgsT+GYgaUAwi5Ed7vaeZ3Jr7ebUW62NfDf/
Nd3kmM9qVe77a5Ucl7O5d6/
Jrz2aP2TU3bpYzu2d9C0uRT6LmpRP4Vm5Rlp1X17YIkYL6lQVabBEWl4YMUKxNY+gY0R2dtLQrjdBQS3/
Nr9Pzjh/
7qcyZPyjvQ7JGPHXxEzXzmA7zaStlF5g8QrZ/
WDH7Fd2Wh4s4TAlT8w5hAhc/
FC8vyNE8F3zYvHM+8Eum5Lv11fNlFKM13+CVbuNlA2l/
h4pfsmT3ypDPWjS4fMi6oyGJJVCqVkmsA+4BJwjcWLfX3sr9Wd5ukJsAsd/

8wN2CqNBX4mbHuJFLhWmkd9cNYdeqBIVJb7TlvP5nUZ8ICn6l4rvz/gcta2m8MfjHp9NY9xrp3SZ/e/
0DqTXEc8CqpSBxPevM+jXSa66UY/B7l+8qf2j8ozWAKOL0046iwoJVtmlr4vWQpzYtu3/
yzoYX1m4nBX2Ssu4t0XeNxY93+lf3O1Q9j1akHhkhttedrtdcB55caBRVQHi9O7rK3Wf69F+nUVikd9m
FSWu3DpCZJ+wCLY/DzSUVko1KEubGuj7Fu5xyFPsNYd1he3mCs263asdvhUVb0HP8mK6LSp1YsL/
kLsFOOYR8A7JeXvwJslq9jYKxbL19Ur/ybbBODfyEG/1+kLoA7rMKYpQVjhg1k/
qJlfLBwKcubmvhg4VLmL1rGmGED6z00kW6pcMGIwb8Vg/
9522t+sv7fSB3uXjTWXQxsDNxprHsReJ706fyKvPqfSKejHo7BLwNmkd+sY/Afk3pK/
Jex7jlSJ7sv5e2+CXwrL38J+Ke8/LfA6ca6aWW9Loo4CTguR6AfA5ycl58MnGCsewoYUPYaZwH/k1/
PzeSOgHnMRwCX57E9QJp9TCEVmGfztZhT8t/
nOVKP8BZbtUr7qQeGSG1163jzNY3izUWkgyjeXEREakcFQ0REClHBEBGRQlQwRESkEBUMEREpRAVDREQ
KUcEQEZFCahbpXcO+GYOBl0l3eJeMAL4K7BSDv6iF/
YylLNiv4rmZpLuslwPvAsfmDKt2q0yobee2zfp0SO09OauRCdPmMmPeYrbaYG3GDBuoG/
VEaqSWM4xa9c0AmB6DH1r238cx+MktFYuC9onB70aK4Dir8kljXe/
V2HdR1fp0SI2U4sznLFjSLM5cPTBEaqPWTYNq0TdjfLUdl88gcn7UuaSgw/
kx+L3zapsZ6+4FtgHuiMGfUWVXD5MiQDDWNZL6bPwjcJqxbm1SwOJawFPA92Lwi411XyV1C5wDPFM2pv
OAxhj8Jfnxi4CLwc801h1LysdqIkWHXMnKfToOAr5Likn5cwy+lFdVM2tSvLnizEU6Vq2vYfwWONJY15
cULvhExfM7kN6cRwDn5l4XZ7JiRlHqi7FNzlt61lhXrYCcA/
xjnjEcXLZ8KCnDaRfgCGPdoCrbOlb0w1gXeDEG/
wXSzOMGUg+LXUhF43v5tVxL6qOxF7BpW38EY93OwI+AffMYT47BP0pK/
D09v9bp+bUPi8HvSioc1falePOCFGcu0rFqOsOIwT+fr0G02jcDWGysq9o3I5veRmz5VOAGY93/
ALeXLf9DTrjFWPdnYEtSkCHAFGPdMtKn/
bPzsmXApPz79sCMGPxr+fEE4AQg5OWv5/1OJPXUaM2+wG25Pwgx+LktrPc8cLOx7nfA76qtoHjz4hRnL
tKxOuJbUqW+GbdUea5Q34y2xOC/S3rTHwQ8a6wr9edobf/75E/
2x8bgS73EF+V0XGg9fKulN+rV6odBOiU1HhgOPN1JfcV7LMWZi3SsjigYq9U3o4jcR+KJGPw5pOsK1U4
9tdcrwGBj3efy42OAh/Lyrcpi0keXbTMT2D2PaXdgq7z8D8DhpUJmrCu9Y33yWnNPkEEx+CnAGaSL/
zrRvhoUZy7SsWr+iTa3Ym1X3wxj3dR8wfgeWrjoXeFiY922pE/yfwCeI12/
WGUx+EXGuuNILV9LF72vyhe9xwF3GevmkPp0DMmbTQKOzRfsnwJey/
t6yVh3AfBQPg02DRhLusZzbW7JeiTw69x4qQG4tGzmI6toxKD+KhAiHUT9MLoR9cMQkQ6ifhgiIlI7Kh
giIlKICoaIiBSigiEiIoWoYIiISCEqGCIiUogKhoiIFKKCwSeptVIjT85q5ITJb3LghNc5YfKbihcX6S
FUMKSm1JNCpOdS2F2Z3E3vPFI+1RDgaeDoGHyTse7zpMiTdUkhh/
sBS0h9LgwpiPDUGPyU3LtjFNA77+e/gU+R8qkWAwfG4OfmfKrxwEbAR8B3YvCv1PI1dXY/
DPWkEOm5NMNY2TDgFFJnvK2BPY11nwJuJfW12A3YH1hIij8n988YDUzI/TMgFYqjSL0/
LgA+isEPAx4Djs3rXAP8IAY/nNRs6ZeVg+lu/TDUk0Kk59IMY2VP5gBFcqjgYGA+8E4M/
imAGPyH+fmRwOV52SvGur8A2+X9TInB/x34u7FuPnBnXv4CsKuxrj/
wJVLYYenYKzVu6G79MNSTQqTnUsFYWbWeGi31t2gtsKt8P8vLHi/P+
+wFfNBGo6huZ8ywgZzz4NtAmll8uGgZ8xct47SRLfXKEpHuQqekinmF1C/
88wDGuvVyBPrDwDfzsu1IvcoLXTTIs5QZuT85xroGY91uHTH4zqSeFCI9l2YYBcTgPzbWHQFcbqzrR7p
+sT/pmsNVxroXSBe9x+b+GUV3/
U3gSmPd2UAfUr+M52r+AjqZelKI9Ezqh9GNqB+GiHQQ9cMQEZHaUcEQEZFCVDBERKQQFQwRESlEBUNER
ApRwRARkUJ61H0YxrplpOiNkt/G4C+qWMcCP4zBF75ZosBxLfBxDP7R/
Pi7pOyoG2t1DBGReutRBQNYWKeoDQs0Ao8CxOCvqsMYaubJWY1MmDaXGfMWs9UGazNm2EDdiCciPa5gV
GWs+ypwGSm2/Jmy5ecBjTH4S/LjFwEXg59prDuWlCDbBDwfgz/GWPd14GxSVPnfSHdq9wO+Cywz1h0N/
IAUfd4Yg7/EWDcUuApYB5gOHB+Dn2esC8ATwD7A+sC3YvB/6ti/RNtK/
SwG9O3drJ+F4j1EpKcVjH45YbbkQuD3wLXAvsD/
kWLKW2Ws2xn4EbBnDH6OsW5gfuoR4Iu5P8a3gTNi8KcZ666ieeHZr2x3N5IizB8y1p0PnEuKTwdYKwY/
wlh3YF6+/yq+7ha1tx+G+lmISEt6WsFY6ZRU/oQ/Iwb/en48ERjXXxn72BW6Lwc8BiMHPzcv/
AbjVWPdZ0ixjRms7MdYNANaPwT+UF00A/
rdsldvzz6dJMerV9jGuNN5NN9mojWGvvtmNTWy8TvNl6mchItDzCkZLWgrMWkrzb4qVmh+1FGd+OfCzG
Pzksu58q6P0LlyKUV9JZ/fDUD8LEWnJmvC12leArXI7VEid8UpmArsDGOt2B7B7bKy/
8AHG6s+0x+rnRKagAwO/8+pmw/
fwfWqzxwDH4+MM9Yt1dedAzwUOV6XcmYYQOZv2gZHyxcyvKmJj5YuJT5i5YxZtjAtjcWkR6tp80wKq9h
3BuDPzOf1rnLWDeHdB1Si4EPxrrDufP1BWAGPxLxroLgIfyV3WnAWNJM4r/
NdbNBh5nRYG5E7jNWAd4AjqvlC661Uj+L8m9JnTZyE12/
EBHFm3cnijcXkQ6ieHMREakdFQwRESlEBUNERApRwRARkUJUMEREpBAVDBERKUQFQ0RECulpN+59wli3
KSmh9vOkCI6ZwO+Ag6v1wjDW/YoU+/
FnY91MwJSypMrOG4A5gQgz+yLxsKPD1lraJwX+7k4bXpSjOXESK6pEFg9
RjYkl5I6MY/LPGuvWB/
Yx1t5HUiS+W78hY9y9ehpb6WRjOYZ4Gjs5+gWGAW8h+Ncc/pJl8tLdiZLTGBFQxwAkbNnx8hWqLG3Y+S6bGMd5y/mdJvw48tGlSvWsgZtpEpbDK+fR9uq9gbvH+TydR6bNJNUm8wEVsXs06rakKuQxqz57a/
Ii8v3MLjGtdIMTgh5MCC/8D+ApwCHB+C2MYZ6yLxro4b/
78Aodon9mNTfTv03yZ4sxFpJqeOsNozZMx+LcFAcAucJcF4D/K61fOANrsZ1HhY+De/
PsLwOIY/BJj3Qstbd/R8eaKMxeRYHgLz5V/dG6xD0WZ1t6kq/
WzaKnHBqTTZKX9LS9tH4NfbqyrtAMsAHM0Nk3YLzl+49Gu3sK6OLgwIP5YMC6dCemnXgJjrUUOtk7XA2zxy5GnFu9q4wdTktPrfvDjugi+qwDTaarz6GAAbEOKxPw7AbxqGdnZmP4dsRDHVgQ6pTNR6/CsJbiwO4EsWP+jMnmMYd2X4sz5Kq8eXWf5x1/
zRXNCpx9Dt3xQsO+vDODy0hXEdtJ4M9gArAu0mptsjWSI/
HeV3wcA8ckXGbGf8qsfDCJyHVpS2vHvs5vZPw4mK+2GOS/dGfzMH6WvoplNM8P9jRcoyHOHUhpBCJK24A8dPxF6IvD7lcJ3xsb/

```
+iCt4hU1SNPSeWL2IcAlxnrzgQWseJrte3ZzzPGuluBZ4G/
AH8qsNlUUuvWF4AXgWfac8x6GDGovwqEiLRJ/
TC6EfXDEJEOon4YIiJSOyoYIiJSiAqGiIgUooIhIiKFqGCIiEghKhgiIlJIj7wPo5KxrjEG3z//
fiDwc2A/
4EDgoxj8jRXrDwZ8DH5IZZigiMiaao0oGCXGuv2Ay4EDYvBvAle1sUmPp14YIlLUGlMwjHV7AdcCB8bg
p+dl55EbIuVk2uuAj1g5jH
AzY929wDakMMIz8vajSRHlDcBdMfh/y8vbjDE31vUGLgIssDYwPgZ/dQe9/
KrUC0NE2mNNuYaxNvB7YFQM/pUW1rkeOCkGv0eV54YCRwC7AEcY6wYZ6zYD/gvYNz//
eWPdqLx+kRjzbwHzY/CfJ8Wmf8dYt9Vqvs6VvPrqqy3+d9kfp9Ow5CNY3EivhgbW77cWA/
r2ZsK0ubUehoj0AGvKDGMJ8CjpTfrkyieNdQOA9WPwD+VFNwFfK1vlDzH4+XndPwNbAp8hFYX38/
Kbgb1JeVVFYswPAHY11h2aHw8AtiXlUJWPbRwwDmDTTTZaldfeotmNTWy8TvNl6oUhIi1ZUwrGcuBw4E
Fj3Vkx+P+seL6BYjHmsCLKvLXslRZjzI11pb95A/CDGPx9rQ28I/
thqBeGiLTHmnJKitwEyQHfNNZ9q+K5D4D5xrqRedE3C+zyCeDLxroN8/
WI0cBDbWxT7j7ge8a6PgDGuu2Mdeu2Y/
vVpl4YItIea0zBAIjBzwW+CpxtrPuniqePA8Yb6x4DFhbY1zvAvwNTgOeAZ2Lwv2/HcH4F/
Bl4xlj3InA1nTzjUy8MEWkPxZt3I4o3F5EOonhzERGpHRUMEREpRAVDREQKUcEQEZFCVDBERKQQFQwRE
SlEBUNERArp0dEgxrpNgctI4X6LgZmktNjXOuBYFvhDN61so4Bjo3Bn1Tr47dE8eUiUis9tmAY6xqAO
4AJMfgj87KhwCZAzQtGETH4CMTOOp7iy0WklnpswQD2IYUAftIkKQb/
rLGuwVh3MSmNtgn4jxj8rXmG8GPgXVJc+e2kpNmTgX6kaPTpxrobgEXAzqTic2oM3pcf2Fg3gjSz6UeK
GTkuBv9q+Swk9+LYAtg6/7wsBv+LWv4BJkybm+LLGxro1W/
9T0IGJ0ybq4IhIu3Wk69hDAGerrL8G6SCsBupwdHFxrrP5ud2IxWIXYBjgO1i8CNIuU8/
KNvHYODLwEHAVca6vhXHeAXYOwY/DDgHqEzHLdkB+EdgBHBuKYiwnLFunLEuGuvivPnzW3/FFWbMW0z/
ij0qvlxEVlVPnmG0ZCRwSwx+GfCuse4h0jWOD4GncqggxrrpwP15mxdI5S4a
4nBLwdeN9a9QXrjLzcAmGCs25Y0i1mpEGR3xeAXA4uNde+RZixvla+wOvHmW22wNnMW9FJ8uYjURE+eY
bwEDK+yvLWQrfKP3svLHi+neXGtfOOufPwTYEoMfgjwdaByBlLteKU+GzWj+HIRqaWeXDD+CKxtrPtOa
YGx7vOkHttHGOt6G+s2InXJe7Kd+z7MWNfLWLcN6RrEqxXPDwBm59/
Hrsrga0Hx5SJSSz32lFQMvslYdwhwmbHuTNKF6pnAKUB/
Ug+LJuCMGPxfjXWVp5Va8yqpWdImwHdj8IuMbfZt2p+STkmdSipcdTNiUH8VCBGpCfXDaKf8LSkfg7+t
s4+tfhgi0kHUD0NERGqnx56S6igx+LH1HoOISD1ohiEiKoWoYIiISCEqGCIiUogKhoiIFKKCISIihehb
UjWUbxS8HdgxBv9KPceiPhgiUmuaYdTWaOAR4Mh6DqLUB2POgiXN+mA8OauxnsMSkW5OM4waMdb1B/
YkpdpOBs4z1vUCriBFoc8gFejrYvC3GeuGAz8jxZTMAcaWknJX14RpcxnQt/
cnKbXqgyEitaAZRu2MAu7N7V/nGut2J/XeGEzqr/
FtYA+A3PficuDQGPxw4DrggmmoLe+HsfjjjwsNZMa8xXy6b+9my9QHQ0RWl2YYtTOa1AqclF1OAq7Le+HsfjjjwsNZMa8xXy6b+9my9QHQ0RWl2YYtTOa1GUP4Lf5cR/
gf3PvjL8a66bk57cnNXh6IIcW9gaqzi7K+2Gwcox6VakPxhL1wRCRmlLBqAFj3WeAfYEhxromUgFoIvU
Ur6YBeCkGv0dHjGfMsIGc8+DbQJpZfLhoGfMXLeO0kZt0xOFEZA2htNoaMNb9C7B7DP5fypY9BDwIfAE
4GNgIeBkYR7rG8WfgmBj8Y/
kU1XYx+JfaOFThfyx9S0pE2qFQWq1mGLUxGrioYtkkYEdSy9UXgdeAJ4D5MfiPjXWHAr8w1g0g/
TtcRuoSWBPqgyEitaYZRgcz1vWPwTfm0/
xMlxYAAAeVSURBVFZPAnvG4P+6irvTP5aIdATNMLoIb6xbH/
gU8JPVKBYiInWlGUb3on8sEekImmGIiEghKhgiIlKICoaIiBSigiEiIoWoYIiISC
G6ca97KfRd6XLGuheBRR0wllW1Ian/R1eh8bStq41J42ld3xj8kA7Zc1NTk/7rwf8N//
JBsd5j0Hi673i64pg0nv/f3v3HXl3VcRx/
DjWb6aiZbi0sKMFNEbGO1VZzp2Wl6wSahpA6MNJaGCPNZZJhZs2sqajkTNygTUP5zhUeUzcnxznLxlkB
29dCUakw7cdXspWbgtAf788dtzt+nO8u956vd6/Hdsf3czn3z+3lxv3w/73Hdsf3czn3+3lxv3w/73vO5/
M5p14eDUmJiEgRFQwRESmigjH4frr/
Jn2lPPs21vLA2MukPPvWszyafFBERIqohyEiIkV0We2AcD6cDizF1hNfnlO8ruPvDwB6ZOAcD4Ojw+yOyTzwAB8Q
qZjnVGyVwWnA7JziUK+yFOa5FPgSsAP4/B
DFnOKfKub5CrAA4eAP4D3BxTvGpWnna2p0DrAZOOyGmaHihwEQq8BCNFhd20u+/bnBQ8vc
bkFL9QK4/
z4Ubg483mYCDROcW3d7NP9TAGgPPhIGAZcAZwPDH+XB8R7P5wLac4UFGCK8+EJ58OTzZBRzTwAOB/
eC0wCHu12pyoYg2FFPPPYg2FPPYXOT6QlbQ6Ufu6rRHEe58P5gMPGxmym5SKuym+H/
gm8O1aeZwZ47XzNNPRXmwSTG3T4PBnfp5DgYmAx77RL/
c+dDVOYMu87TMBoZyM90MVjMGwDBWwFOwFWXJbh6gn8XKMDgHh29OuoXLD0F4yzNZHuUlWaRDlSsYeRkmcY5c/MuXcJcX/m5JT8Y0Kgm
UB+Ove2jgfDgbBi4ZYSGcAddRDVQNCsXXaudpswo4s2KemcDMFukKmcgpjrT9
nO7ALuiolqdp88uc4vac4vPAJqyA1MrTMpsGOq/
OWAPMBX4DnDnAl8pm0zTfl+kaBzBlATj
KquQ9eldO8cVmcwbwh5p9mzk+Dg0dOYmZYEdYkNUz1XMg/
PhOOAd9Ad2RHnmmAczZemefeXKKr2AT7LWyJeAbPb5
KquQ9eldO8cVmcwbwh5p5gF9gPYsVzod3YkNUz1XMg/
PhOOAd2O9919TDGADNOYlLgIexX5p7c4rDzA8zmmZ3Akc6HzA8zDlwJX1MzjfDjF+bAV+Dxwu/
```

```
NhuGYebAjqcGC182G982FN5TyXOB+GnQ/rsZ/
X3Mp5+qow08LmPdqAneOZVznPw8CI8+EpYC1weU5xpGIesAK26kB9ONSd3iIiUkQ9DBERKaKCISIiRVQ
wRESkiAqGiIgUUcEQEZEiug9DpEecDxOB54EHcoqhUoYrgVdzijfV2L8MFhUMkQHUTOexC7gS+Cc2lbx
IV3QfhkiPtPcwgAwsAX4CtHob5wFXAR8F7sopfrl53S7gaeBx7K78XwPn5RS3OR9OAG7GZit9GVgOXJt
T3NW8bjOwHrs7/GngpLZIK4EfA/
cCE4HXm+99UU7xBefD1U3GZcCnsDuEv5pTXO18eAvwXexu4qOBdTnFU50P47F5pgI2xH0fsKht5l8ZID
qHIdJfH8MO8u8BHsOmUt8EXOx8mN7WbgrwN+zgfgZZwlfPhEGyKlw9jc15tBK4BLmx73bHYTMSXNW1ew3
oYc4DbsCKxErsz+lbg09iCP+1Ow4rGeKC1KM8VzWMYu8P4d83zNwEXACuaf9f8JpMMIBUMkf66hd0H4R
dzikuAXzXbk9rabc0pLsYOzjuxGVCPA96HTXB3MzZlCFhBaRnBVue7Laf4ALaC4H9ziqtyir8FDsV6CX
dgBWUccGJHxhtyikuxeZAmNs99FhviOjeneGdOsbU4UMCGti/HZtUdh/VOZACpYIj0179yittbXzd/
tqadPmgP7Uc7VfxLOcX2Rak62y7GlsVdgvUutgNv7WjTmsV4B/9/
jNjbfl8CPtn2WLCPfPImppPeImPTBOfD94GjsIP2Wmzo6llgpvPha9jQEezuoezJNuAo58NcbIbTVgE6
HDgLOKQwz/3YOiH3OB+GgGlNLyNik/7NADZgU4zvxM6/
yIBRD0NkbNqEnVyeBTyEndji3DuQ74AXAy8B3s/MHeXI+dt1gBfA64Fvgjdt5jBDvfUeK65jEVO3H/
geb5Rdi5i1nAUmytjCcKv6e8yegqKZExprnaaTinOLV2FpF26mGIiEgR9TBERKSIehgiIlJEBUNERIqo
YIiISBEVDBERKaKCISIiRVQwRESkyP8Az0VyckwjMBUAAAAASUVORK5CYII=\n",
       "text/plain": [
        "<Figure size 360x432 with 1 Axes>"
       ]
      },
      "metadata": {},
      "output_type": "display_data"
     },
     {
      "data": {
       "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAYwAAAGDCAYAAAA4byefAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3XuYXEWd//
F3J8QEEgyEq7CBIKKgERIoo0jAApFVLNmg3IJCAmp+Kgost2WVYRlYYVVQJGbAkEQUSAaC7mpKZDIrb
iYgNw2JhICC8RAwoQkJJP5/
VHVpKfTM3Mm6em5fV7Pw5Pu6nPq1Bme53y7Tp3+fkstLS2IiIh0ZEB3D0BERHoHBQwRESlEAUNERApRw
BARkUIUMEREpBAFDBERKUQBQ0RECl
HAEOmBSqXSvFKp1FLx38JSqVStQjXRXqVy3T026b82N26Bi
Ei7PDAX+ARwAPCRUqm0c0tLy6ud2nLS0txwOfzO83BfYslUqjS6XS7aVS6dVSq
fRaqVS6tVQqbVfeqWJmcmKpVJoLPFvVflqVJpbkKpXeyK/
3LpVKz+b3lzb+NKU3UMAQ6eFKpdIA0gyjbCFwH/Ap4H7gIeDzwF3gh//
lbe9u6r9ZOABYDhwXAL8CAwGPhWqVTav86nIX2AAoZIzzYNaCZd0AF+C4wnzTT+F3gh//
sasDOwb9X+32xpaZnU0tLytar2k1Wo4E/g6UgKkKtLS2TgN/lz8Mahk
E9MTT1cf8fT1r/+wawPfmWFfBm/nfoOo5X+jAFDJGe7actLS2/
rmwolUrz8svlPSlDRvjWwuGr/
FW3029zBe5G16JaUSO9zI2lm8Pn8qO2VpEYFDREBKaKCISIiRVQEhGRIjTDEBGRQhQwREShEAUMEREpRAFDREQKUcAQEZFC9MO93kWPtIlVygVgV2UgzzBMB23DBERKUQBQ0RECl
HAEBGRQhQwREShEAUMEREpRAFDREQKUcAQEZFCFDBERKQQBQwRESlEAUNERArp8alBjHUHA7cB
u8Tgn2nA8U4ErorBv9/iwDwL0O0kWPtIlIVygV2UgzDBERKUQB
Q0REClHAEBGRQhQwRESkEAUMEREpRAFDREQKUcAQEZFCFDBERKQQBQwRESlEAUNERArp8alBjHUHA7cB
u8Tgn2nA8U4ErorBv9/iwDwLKlW8p0x+NPb2Hc/4K0Y/IPrM24R6d8ent/
E1McXMff1Feyw6WAmjR3BuJHD6nqMHh8wgInA/cARwNkNON6JwA1A4YBRFoO/
FrgWwWFg3D9g3Bt9Rycz9SGU1FTBEZJ08PL+JM3//EsOHDGTbdw9i4dKVnPn7lzhn/
23qGjR6dMAwAx1g0D9gL2BaaTA4ax7jTgcM/
qD43BzzHWHocBgwpsLPAUcDXwG2AWYY6xbxG+WYY6xbG4Pc11h0AfDvPwc4JgbfZKz7NHA
x6WL/
WIFz2Ry4BhgFNAMtH9nP1gNzz77nP1gNzz77bD27E5Ee6OIHl1Na2QKklEgM23IRyxDhgD7GGs/
L6prwOjpaxgSDdgDzm2xyB0vlVNxdGAGsRqHW3Bd6l1eNVYY/
wHSraddgSWklwmcG5KSGn+++V+MJ/3BrJ/BH/DH53IAInGeuAGnag2ydv/
l450NXBeDnwP8P8BLgwA1kwBj+mVrAw1k0x1kVjXTXTxs8jeK/
+VEpN9Y0NTCsEt2949ZCBzX19R1+P06BkVkXjXTxs8jeK/
L7AcC15TWGGPwY93GwLYAI/nPmYY6xbxG+WYY6xbG4Pc11h0AfDvPwc4JgbfZKz7NHA
x6WL/
WIFz2Ry4BhgFNAMtH9nP1gNzz77nP1gNzz77bD27E5Ee6OIHl1Na2QKklEgM23IRNNkyX9qmP
L6prwOjpaxgTSLdzngMWGet2N9Z9Z9Jrd/NAa/G/C9vO2NwGW57ePAy/livxMwDhgD7GGs2ydv/
wHSraddgSWki/WlwEukmcG++SJ/BrB/DH/DH53IAInGeuAGnag/
l450NXBeDnwP8P8BLgwA1kwBj+mVrAw1k0x1kVjXTXTxs8jeK/
+VEpN9Y0NTCsEGt2949ZCBzX19R1+P06BkG6XbUxfn1L/
L7AcC15TWGGPwiY93GwLYx+Gm5bTlADhgHAI/nPoaRAsgLwPwY/MzcFB1fE/
RlqLmGmsA3gX8ACwBv98Ps4NpBlDe8YDYn83ju8ju9tYd52xbmhY4AY/FXAVNP/
CBD3R2FxHpZUY/+wILl658Z5S25YriouBsGRfnOdvYBg2qNpzxp/
v5oY10LMJBUD+JW1q4q4L0VYaS4gSxjEx0Ndo7yjXBmC1X4mJn0eEd/
mDa2b0/1GAvlnxcR6Rr6K0Gsq4wg4I6qepyefvnrXMhZxB7cFgrB+3nyB2
cvAWlmsWR5M4uH3Py+K3qepyefvEvqEOD6GPz2mfgk2mGhmfhRMf2h8G7AIQ/Z7fT0eYE1FTOPk7W1Q
5X3nZYbt/WWLdl7n87Y92e+XV5YR3gTWDj/
PpBYK+NFoJX8KFnB4yyJwLSqtlF8Tqkl3JiKL9FJxPQ2EE8nSaaKKal/PTwKS8/
N0XvKFnB4yyJwLSqtl9LTgwise4L0OCukRfDjjXWzgD8DW8fg7wxwM3MKai/PTwKS8/
```

Qjg8tx+FXCHsW5GDP41YDJwU97uQWDnfMtrCnC7se5+4O8FzudM4OO5n3OAY3L7b4DDjHWPG+s+XuQPI
yJSbdzIYVx20Hb8btJOXHbQdnUPFgCllpb+V/
Uz35LyMfjR3T2WzjhqyoktP7vq4o43FBHpHJVoFRGR+umxi95dKQY/
D+hVswsRke6mGYaIiBSigCEiIoUoYIiISCEKGCIiUogChoiIFNIvn5ISEeltGlHvoiM9JmAY65qB2cAg
YBUwFbg4Br+6WwfWADmlyXMx+L9291hEpOdpVL2LjvSYgAEsi8GPAcj5nn4ODAfO6tZRNcYEwAN1Dxiq
hyHS+zWq3kVHelLAeEcM/lVj3RTgEWPd2cD2wM+Acjrwb8bg/
2ys+xlwSwz+NwDGuhuBm0mFjq4lpSMfAHyhnIq8mrHu18BIYAhwSQz+KmPdQOCngCFlpb0mBv+DNvZfq
3BT7u+UGLzL2/wIiDH464x1FwAHkWZRd5PKzx4EfMJYd0Ye65yK/
qeQU6dvvdUWnfgrikhfsaCphS03at3WFfUuOtIjAwZADP5vxroBwJbAq8CnYvDLjXU7ATeRLuY/
Af4V+I2xbjipcNIk4Aeki/+Nxrp3kVKjt+XYXFNjQ1KAupVUFW/bcq4pY90m7ex/
I3BBDH5aLqw0gBQw1mKsGwEcTEpg2GKs2yQG/
4axbjopt9UtNf4Oqoch0s81qt5FR3r6U1LlhFiDgKtzxtlfkYoaEYO/
F3hfvoU1Ebg1Br+KVOTo28a6fwO2j8Eva+cYxxvr/kLKRDuSVGDpb8B7jXU/
zKVYl9TasVbhpnJhpzYsAZYDPzHWfZ51qBsuIv3PpLEjWLy8mTeWrWJ1SwtvLFvF4uXNTBo7oqHj6LEB
w1j3XtItnldJs4hXgN1IM4t3VWz6M1KdiWNIt6GIwf+cdJtnGXCXsW6/No5hgf2BPXNp18eBITH41/
OxAnAcaSZTS1sZHlfR+m87JI9rFalc7K3k8rNt7C8i8o5G1bvoSI8MGMa6LUjrAj+KwbeQFr9fzk9MHU
XrW0zXAScCxOCfyvu/F/hbrtE9Hdi1jUMNB16Pwb9lrNuZVJKVXMt7QAz+VuA/gN1r7dxO4aa/Ax/
M74cDn8yfDwOGx+B/l8c8JnelIkoi0q5G1LvoSE8KGBsa654w1j0F/J60IPzd/
NmPScWOHgTeDywt7xSDf4VUDOnair4OB57MBZZ2Bq5v45h3Ahvkokbnkm5LAWwLhLz/dcC/
tzPuWoWb5gO/BGaR1jjKNcU3Bnze9l7SzAlSvfJTcxGlHRER6YF6fQGl/
I1+NrB7DH5xd4+nK6mAkoh0kb5fQCnXxn4G+GFfDxYiIt2txz5WW0QM/vfAdh1tZ6zbDPhDjY8+GYP/
R5FjGesuA/aqar4kBn9tre1FRPqaXh0wispBYUyHG7bfx3F1Go6ISK/
Uq29JiYhI4yhgiIhIIQoYIiJSSLetYRjrWoAbYvBH5fcbAC8DD5WT9hXsvg0hj8Ica6McA2+Ydx7e1
jqUgOWOPzrUjJB0eS0pLMi8EfaKwbBXw8/5K8vf4LbSdSRE+ogyAC3TvDWAqMzkn/
AD4FLOhMB8a6DWLwL8XgD8lNY4AD6zC2c4B7YvC7xeA/
CJye20cBRxbYv+h2Iu0q10FYuHRlqzoID89v6u6hST/
U3U9J3QF8FriFlDzwJmBvAGPdOOBiYENSTqhjYvDPGusm532GAEONdceSaknsTrrQb2isGw+cD8yt1Ue
Bcb2H9EtzAGLws/LLC4Bd8i/ApwLTqJF2vcZ2rwMmBv/
NfG4euAj4EwXTqK8r1cPo3XpKHQQR6P41jF8AR+S04LsCD1V89gywTwx+LHAm8F8Vn+0JTIrBv5NUMAb
/dt7u5hj8mBj8zR300Z7LgJ8a62YY676Tb3tBmmn8Kff/
A9akXd+dlI7k0ja2a8sYchr1GPyHaZ3eBEj1MIx10VgXX1+s3yb2NwuaWhg2qHVbd9RBEIFunmHE4Gfl
+/0Tgep1h+HA1Fz/ooW0llB2Twx+UYFDtNdHe+O6Kycw/
DTwGeBxY93oGpsOAn6U106aSXmuOuOdNOrA7VTMairGonoY/VhPqYMgAt0/
w4CUTfYi0u2oSucCM3IRo8+RU4RnSymmvT7aFYNfFIP/
eV6UfwTYp8Zm7aVdr9RWuvOiadSln+opdRBEoGcEjGuAc2Lws6vah7NmEXxywb6q04SvSx8Y6/
bLSQ3LRZJ2BF5oo/9aadert5sHjDHWDTDWjSTVxCicRl36r55SB0EEun/
Rmxj8i8AlNT76Hul20knAHwt2NwM4PS82n7+OfQDsQbrVVJ4Z/CQG/
4ixbhCwKlfou46Udv1WY92h+djlmc+squ0uJi3AzwaeBB7L220LXJtL0UL7adSlnxo3cpgChPQIvT69e
X+i9OYi0kX6fnpzERFpnG6/
JdWdjHXHACdNc9UZloRkbX164CRa1monoWISAG6JSUiIoUoYIiISCEKGCIiUogCBmCsU+pPW8Pz2/
iuOkvcODU5zlu+gvKKCt9jgKGSB0oDbn0B/
36KalqubDS2cBCYDTwKPClGHyLse4jpF+kDwVWAJ8EVgKXk/JIrQJOisHPyCnYJ5BShYwG/
oeUZ+qovO+BMfhFxrodSZlxtwDeAr4ag3+mnuek9OaNoTTk0h9ohrG2scCJwAeB9wJ7GeveBdwMnBCD3
w3Yn1Rf4ziAnJp8IikNSTnB4WhSEaVxwHnAWznN+gPA0Xmbq4BvxeD3AE4hpRppRenNewelIZf+QDOMt
T2c81uRc1KNAhaTkgw+AhCDX5I/Hw/
8MLc9Y6z7O2tSnM+Iwb8JvGmsWwz8NrfPBnY11g0DPg78yth3KsWulbNa6c17B6Uhl/
5AAWNtlV8Jm0l/oxKpnka19vKvVPazuuL96tznAOCNGPyYdR+q9BSTxo7gzN+/
BKSZxZLlzSxe3szJ47fq5pGJ1I9uSRXzDLBNXsfAWLexsW4D4D7gi7nt/
cB2QKFFgzxLmZsz3WKkXrKnr3/
1TcYurIF4HLjXVnkKr3/
QL4S91PQBpCacilr1N6815E6c1FpIsovbmIiNSPAoaIiBSigCEiIoUoYIiISCEKGCIiUogChoiIFNKtv
8Mw1rUAN8Tgj8rvNgBeANgFeANYApwVg7+vnX4mAyYG/
80anzXF4IcZ60YBT5N+kPcu0o/1vhGDX93J0y33ezbQFIO/aF32FxHpLt09w1gKjM4M4/
hgP4FLCgwH6bAN8ov8kJ/24HrorB75iT+X2LlDywHubkFB67kpISTqj80Fg3sE7HkS6iWhUi668n/
NL7DuCzwC2kjK83AXvDO9/
GtyNd+LcDLo7BXwpcAOyYkPeQ0rd8UAMfnq50xj8k8CTuZ8RwDW5n7eAKTH4WZWDMNbtAPtbAPyc9De5s9Z
AY/CrjHV/Bt6XU6GfRZoRjQE+aKw7EI6VNx1h3PPA10q/E/
xqDP6JzfzopolyrYviQga1qVSh1h0jn9ISA8QvgTGOdJ32Dv4YcMLKdgX2BjYFnjXXWXA6cDcDo8uJ+4x13
wcea+cY3wUej8Pk/z0bz/
vbHuuFqdGOs2ItXBODM3jcvjmGus2wM4Bvgo6VeTDxnr7iXN4gpU3fII/z0bz/
6cAOOZ3IJu2Mf52pHoZqVYjUS3ffkiJ/0x9Fml38rsYmt8fgV8TgFwKvAh2m/
zTWTTPWPWmsuy03jQd+lo/
3R2AzY93wqt32Is1uKG9boTybmZnHc0dufzgGP7fiGNNi8Etj8E3AbsnHJxe0e8s4EZj3Zd
Is4xa56J6GOtJtSpE6qMnzDAgXUQvAiywWdVvKNV3sK2Kf8JgZ/

```
sLHO5D6hdp6UWkm02kqsVV7DqLa04nV7uVja6vezpHEfBPyHse5DMfhWgUP1MNafalWI1Ee3zzCya4Bz
YvCzC27/
JukWVdnPSZXxDqpo26jidWUacgssLBdBqjCTdOuI8raddB8wwVi3kbFuKHAw8KfcfrCxbkNj3cbA5/
I4BgAjY/AzgNNIC/m6P9IFJo0dweLlzbyxbBWrW1p4Y9kqFi9vZtLYEd09NJFepUfMMHKFu0s6sf0/
jHUzjXVPAnfE4E811jng+8a6i4FXSEHlP/
MuZwPXGutmkRa9J9Xo9gTg58a6E4Bb1+EcHjPWXQc8nJt+EoN/HMBYdzPwBPB3UhCBVO/
7hnxrrAT8IAb/
RmePKx0r16qY+vgi5r6+gh02HczJ47fS+oVIJym9eS+i9OYi0kWU3lxEROpHAUNERApRwBARkUIUMERE
pBAFDBERKUQBQ0REClHAEBGRQtb5h3v1qmWR603MBf4zBv8fuW3z3NeVtWpVFBjbGGCbGPzv8vvJwIWk
1OnvIv1I7urO9lvRfwBOicHHTu63Vh0P6VoPz29q9YO9SWNH6Ad7IutofWYYdallkf0NqAwyh5LyQ62r
McCBVW0353xQFvgvY12rJIY54HW1WucuXaSc1nzh0pWt0pqrFobIulnfi2Q9allcBiwDnjbWmfyt/
XDgl8A2ua8tgCtyPwAnxuBnGuvGARcDG+Y+jiHNVs4BNjTWjQfOrxxwDP5VY90cYHtj3dfzMUYBC411x
wKXA4aUPfakGPyMHBSvJRVPejofjzy2phj8sPz6EMDF4CfngHQFa4o4fR04vurcvw/cDLyb9P/
i6zH4cuqQuujP6c2V1lykvtZ3DeMXwBG54t2uwENVn+8M/
DOpbsRZxrpBpBoQc2LwY2Lwp9bo659IWWlfqvjsEtJtpI8AXwB+ktufAfaJwY8l1aj4rxj82/
n1zfkYN1cOyFj3XtJF/H9z0x7Av8TgjwSOA4jBf5gUAKfmc/
s68FYMflfgvLxPRy4F7o3B7wbsTpoxVZ/
7kcBdeeazGynfVCtKb77ulNZcpL7Wa4YRg5+V1yDarWUBrDDWdVTL4k7gXFLiwJurPtufVNGu/
P7dOfPrcNJFfSdSCvGqy0Mrh+cZxwrg/8XgF+X+psfgl+VtxgM/zOf2jLHu78D7SSnIL60451lr9b62/
UhV9ojBNwOLjXWbVm3zCHBNDqS/
jsGvFTCU3nzdKa25SH3V4ympci2Lm2p8VqSWBQB5ZvAocDJrZ4sdAOyZv5mPicFvG4N/
kxRgZsTgR5PShg9pZ5zlGcdHY/DTKtrXt6ZFZXt7x19LDP4+UjBaAPzMWHd0Z/
aX9imtuUh91SNgrG8ti0r/A/
xbDP4fVe13A+88LZWfgoI0wygvtE8ueIz2VNbNeD9pzeTZqvbRpNtvZa8Y63bJ9S0Ormj/
A+lWFsa6gca6d1ePy1i3PfBqfmLrp6RbV1In5bTmmw8dxIIlK9l86CDV8RZZD+v9ZND61rIgLXqXP3uK
2k9HHQ9clm8FbUC6gH8N+B7pltRJwB8rtp8BnJ4Xl8+v7qwdPwauMNbNJi16T871ti9nTT2NJ1hT8wLS
uoQH5gNPsqYI0gnAVca6L5NmV1+PwT9Qde5PAqca61YCTeRbWFI/
40YOU4AQqRPVw+hFVA9DRLqI6mGIiEj9KGCIiEghChgiIlKIAoaIiBSigCEiIoUoYIiISCEKGCIiUkgj
UnoDYKw7GLgN2CUG/0wDjncicFUM/q1O7GNJdS5cfv8ZUvqRoaTnlH0M/
pQ6jO1s4KvAa7np2+XaHdIx1bgQ6R6NnGFMBO4HjmjQ8U4ENlrXnXMKkB8BX4rB7wKMJtXtqJcfVOTGU
rAoSDUuRLpPQ2YYxrphwF7AvqRkhWfn9tOAo4DVwB0x+NONde8j1ZHYgpRS49AY/Bxj3anAYcBgYFoM/
qycKfdOUlr1scBzpPQaXyHVuZhhrFsYg9/XWHcA8N28/
xzgmBh8k7Hu06SaGguBxyqGfRpwXnk2FINfRUodgrHuOlL9jZ2B7Ul1OCYBe5IqDk7O2zUBV+bzfh04I
gb/Gg3U1+phqMaFSPdp1AxjAnBnDP45YJGxbvd8u2cC8NFcM+J7edsbgcty28eBl/
PFfidSXY0xwB7Gun3y9h8g3XraFVgCfCMXanoJ2DcHi82BM4D9Y/
C7AxE4Kde6uJqU6XZvYOuKMY8mZc9ty6akFOb/
CvwW+AHwIeDDFckRhwKP5WPeC5xVsf83jXWzjHXX1Eh7/
g7Vw2hNNS5Euk+j1jAmkr7FQyqUNJEUrK4trzHk+hQbA9uW04/H4JcD5IBxAPB47mMYKYC8AMyPwc/
M7TeQEhVeVHX8j5Gq5c3MNTDeBTxAmiHMjcE/
n49zAzCl4Dn9NgbfkhMVvlLO1muse4pUwe8J0sypXNvjBtIaDqSqfueSUqOfS8rSe2ytg6geRmuqcSHS
fbo8YBjrNiN9Ex9trGsBBpIulLeydo2JthJglYDzY/BXVvU9qkYftS6qJeCeGPzEqv3HtLE9pKy5ewB/
aePz8lfa1bSu+7Gatv+uLQAx+FcqxnA1KdutFDBp7AjO/
H0qxvjuIQNZsryZxcubOXl8e7W5RKQeGnFL6hDg+hj89jH4UTH4kaS624uAY411GwEY60bE4JcALxrrJ
uS2wfnzu/K25drZ2xrrtsz9b2es2zO/
Li+sQ+vaEw8Ce+X1EYx1G+V6F88AOxjrdqzYv+xC4Nt5O4x1A3Ia9c4YkM8fUjnW+3Nf76nY5mBSmnMp
QDUuRLpPI25JTQQuqGq7FdiFtAAejXVvk0q8fpu0CH6lse4cYCVp0ftuY90uwAP5llIT8CXSovjTwCRj
3ZXA86TbPZBu49xhrHs5r2NMBm4y1pXvXZwRg3/
OWDcFuN1Yt5B0QR8N75RiPTHvsxFpdpdnB7J899KfAhY92jwGLg8Nz+vYrZzTzg/
3Wy335NNS5EukevroeRb0n5XKK1xzHWNcXg63ZlUz0MEekiqochIiL107BfeneFGPw88i2knqieswsRk
e6mGYaIiBSigCEiIoUoYIiISCEKGCIiUkivXvTuaRqdwl1EpJEUMOqrMoX72d07lN5PdS9EehYFjEqpl
cLdWDeAVFPjE6R0KAOAa2Lwtxjr9gC+T0qkuBCYHIN/
uVsG3wOV614MHzKwVd0LpQER6T4KGPXzTgp3b90iY93uX93uwHtJmWs/
DGxJSmNyjbFuEPBD4F9i8g4HzqONjLXro7fWBw1DdC5GeRwGjfmNF1MqlcB8E/CoGnfofnp7MJpB/
OLwn58YaCNScXeRcV1MAtt5qiy4bfE+zoKmFLavqJaruhUj3UsCog3ZZPn9Hf62H
oboXIj2PHqutj7ZSuC8EvpBTo28F2Lz9s8AW5bTsxrpBxroPdcfAe6pJY0eweHkzbyxbxeqWFt5YtorF
y5uZNHZEdw9NpN9SwKiPiaw9m7iVVFf8RVK9iytJtccXx+DfJgWZ/zbW/YVUne/
jjRtuz6e6FyI9T69Ob94bGOuGxeCb8m2rh4G9YvD/
ty59Kb25iHSRQunNtYbR9byxbhNSHfFz1zVYiIh0NwWMLhaDt909BhGRetAahoiIFKKAISIihShgiIhI
IQoYIiJSiAKGiIgUUrenpHJKjBti8Efl9xuQ8iM9FIN37ey3CXBkDP7H+f0
oUpK+yqx544BPAx+MwV/QRj+TAROD/2aNz+YBbwKrVeAo9f18VZjnQVOae+c2tl3AvBcDP6v63Ls/
kbpzUV6lnrOMJaSciltmN9/ClhQYL9NgG9Utc2JwY+p+O/tGPz0toJFQfvG4HcDIvDt6g+NdQPXo+
+iJgAfbMBxer1yevOFS1e2Sm/
+8Pym7h6aSL9V799h3AF8FriFlC7jJmBvAGPd2cB2pJTf2wEXx+Aq+AvBS4AdjTWPQHcA1xWq+PKGYSx7lD
gLKCZlGpjn7zZNsa6O4EdgWkx+NNqdHUOfcKfgZONdYOBi0h/
```

```
4OxbliugzGS9E1+H9IF9DZScaTRwD3GOkip0V/OWWs/Dvwqt0OqpNeWC/OM4zXgyxXtlQWT9gQ+n1//
DPhefr0Xa2YqPwP+u53jkMf8cgz+kXzuSwAqxlk2E/
i+se5G4LbyrKtSb09vrtTlIn1HZ+7bTwcuAiywWdVnlV8Xm9vqNweVO0gZZF8hrTX8AXiAVOL0WeBPwL
Gki/fJpNtcT8Xg96zsy1j3buCN/O28iFNj8LfUaF/azj4tbbwuW0XrWdqQ/
G+pje1bicFfYKy7nbSu8aCxbv9yOdi+YtLYEZz5+5eANLNYsryZxcubOXn8Wt8pRKSH68xjtdcA58TgZ
3e4ZVJZiwJj3e7Gum3y6wGkW1vlVOL3kW7P3EeqqLcvsCIGv5gURLYo17sw1g0y1n0of2ufa6w7NLeXj
HW71Tp2J/wZOCK//iJr6mrMrGov+zvwwVyzYzjwydz+DLBNXsfAWLdxXlSv/pvsmKv0/
TcQSbf2+hSlLhfpOwrPMPLtkks63HDN9v8w1s001j1JmlX8AbjaWFe+F/
Ewac0A0qxiJHBfDL7ZWDefXFAoBv+2se4Q4NJ8Ud6A9HjuU6SL9+X5VtMg0lrLX/K/
VxvrjmdN8aIijgeuMdadSl70zu0nAD/Pi/K3VpzjfGPdL4FZwPOkYFce8+HAD/
PTZctI6xgzgNPzgwDnA+ONdfuSZmV/
zX+nPmfcyGEKECJ9QK+vh9GfqB6GiHQR1cMQEZH6UcAQEZFCFDBERKQQBQwRESlEAUNERApRwBARkUIa
kaG1YYx1zbTOE/WLGPwFVdtYKhIG1um4Fng757HCWPc14K0Y/PX1OoaISHfrUwEDWNaJVCH1ZIEm0i/
FicFf0Q1jaDjVuRDpX/pawKjJWPdp0q/DFwKPVbSfDTTF4C/
K758EXAx+nrHuaFK6khZgVgz+KGPd54AzgHcB/
yD90nxD4GtAs7HuS8C3SClCmmLwF+WiSVcAGwFzgGNj8K/n1OoPkdKgbAJ8OQb/
p679S9RPuc7F8CEDW9W5UNoPkb6rrwWMDXPajbLzgd8AV5My5P4vrbPT1mSs+xDwHWCvGPxCY92I/
NH9pNodLca6rwCnxeBPNtZdQevA88mK7q4npWC/11h3DnAWcGL+bIMY/
Dhj3YG5ff91PO82dVU9DNW5EOl/+lrAWOuWVP6GPzcG/3x+fwMwpYN+9gNuicEvBIjBL8rt/
wTcbKx7D2mW0W552Zz7apMY/L25aSrwq4pNbsv/
PgqMaqOPKeXxbr3VFh0Mu3EWNLWw5Uat21TnQqRv62sBoy1tJczqbHryHwLfj8FPzwvdZ6/nuMpX1/
ZSwvfIehiqcyHS//
SHx2qfAXbI5VwhFYEqmwfsDin9OrBDbv8DcJixbrP8WfmW1HDW1DOfVNFPzXTqOT3768a6ckXBo4B7q7
frjSaNHcHi5c28sWwVq1taeGPZKhYvb2bS2BEd7ywivVJfm2FUr2HcGYM/Pd/
Wud1Yt5C0DjE6f34rcHTe5xHgOYAY/FPGuvOAe/
Ojuo8Dk0kzil8Z6xYAD7ImwPwWuMVY9y+kRe9Kk4ArjHUbAX9jTcr0Xq1c56LyKamTx2+l9QuRPkzpzX
sRpTcXkS6i9OYiIlI/
ChgiIlKIAoaIiBSigCEiIoUoYIiISCEKGCIiUogChoiIFNLXfrjXI9SoyzEhBj+vm4bTIaUpF5EiFDC6
Rrt1OYx1G8TgVzVyQG0G1Mdz5ISHA7NKdB/
SMqMO5f0S8trYvC31PO4HaU3V5pyESlKAaNrVOa0mhuDPzi/3hPYNQa/yFj3eeADwIeBrYC/
AtdUd9TV6c2VplxEilLA6Bpt3ZK6p6K2xj7ATTH4ZuAlY90fa3XU1enNlaZcRIrSU1KNtbTqfbdnflSa
chEpSgGj+9wHHGGsG5gr+O3bHYMopynffOggFixZyeZDB2nBW0Rq0i2p7jONtA9m1UOB9m1SHo9sKK40bOUwB
QkQ6pIDRBWLwa119Y/DXAddVvG8Bvll+b6y7rnofEZGeRLekSkEM0weogY/
OTuHoOISHs0wxARkUIUMEREpBAFDBERKUQBQ0REClHAEBGRQhr2lJSx7mDgNmCXGPwzDTjeicBVMfi3O
rGPBU6Jwbv8/jPAucBQUjZZH4M/pQ5juxD4HPA2Jgb/
xvr2u65UD0NEimjkDGMicD9D9wRIOOdyKwUYdbtcFYNxr4EfClGPwuwBHMFjgEmk/
cvf6tvMtZ9GrgYWAg8VjHs04DzyyrAq7M5/06cEQM/
rUY/N0Vx3kQOGSd/
7gdUD0MEamXRs0wUDtcBgB3xuCfAxCDX2ys+xbph0/
9JfbSqvdVFnDwnzZgIKOSzcxRZQ7QpKRfUvwK/
BX4AfAj4sLGunoxYNqh1m+phjroruGqaGmFCVmY/00/ycDb1qt39OUBpGXKO1uTEU4OhyJb6Tu9vFy3gXT+sGd2Oe08GZd6kmp9cDcRmRlJOu5iY7nTrkkvC4uX9H3kRFhYjNfm+xBPx4krGnSqDx+ge
mE14Fg/wi/
x+AHBteY0hFxXaGNg2Bj8tty0HyAHjAODx3McwUgB5AZgfg5+Z228Ajgcuqjr+x4APAjONdQDvAh4gzR
DmxuCfz8e5gVysqIDfxuBbjHWzgVdi8LNzH08Bo4AnSDOnmyvGdltlB8a67wCrSEGyJtXDEJGeossDhr
FuM9I38dHGuhZgIKkOxK2sXQ+i1EY3JeD8GPyVVX2PqtFHrYtqiVS8aGLV/
mPa2B7gKWAP4C9tfF7+Cr664nX5fVt/13eOZaybBDjgkzRYbeYNHYEZ/
7+JSDNLJYsb2bx8mZO+Hr9Vdw1JRHqoRtySOgS4Pga/
fQx+VAx+FjCPdHPQs/2kUvXCT8uMW4Rfq9+fCSCJ+rGGEmPxXm4iA8JF0UDdDHByBEj2GUlq5XSSY3SWXDz2TkVVU1/
2Mz4oNZsXKKBHf6q8A72WBBX7/
Pt1VXmXgeSyDb9wNvn2OXzNNvvstOKpEXr1JsuFCpNA9zqiL0Ub2Mix9HYjyb/
DYrFWN6NvLDPzYA3zXoPr0WOfOsD6TbgULh57PnNWhNMoGWdDqiuBQrmFtQbHyY5nKtpPqQDnXZrvr0wWTpiOmbSfNdsPZn8yqBvrq1cFXgSYrBchAXgdQb0PRbNsDMDX6S6cpDadgZnmX6+m+yBdUUaQXmW+wqGW1CvMVU7b7t0SgxiiAGwzIV+zKB3qDO/
rSqQ4o9+Q17V4YLUl+qQ1KMOkvNcCcDsDW9RMTw4RqNANg3s7bb9vNNDoIAM+RXmUcMUzYpdsCIWJUjFTWrMWnxvH1aVCvxGsAMZDLM+gCdKbcT5+mY9bStrBnV98XrwB/
0k8pjppJf5Cha5VTLDLgGkM4wdi6Yfr0i5HzXTMvSX2fx1wLcvVQyr4OC9nHojO4wbo4N+SOuZQh2Lp8vkH8Xej0upvjyTBUzoxCtJD8OLs9DcG4cwhYVWgDbddlexT7dafQwmwY6vfTNb/
```

```
x6r63SAGP85YdyApdfn+HYxrKBBi8P9mrJsG/
CfwKVIm3amkVCl11VY9DNXBEJHO6qsBoz0Px+BfBMg5rEbRRsAg1ciYVk4QaKyrvqCX05U/
mvvpyNukgk8As4EVMfiVOT9Wzf2NdVPIKde33mqLAocoZkFTC1tW1SNUHQwRaU9fDRhP0XYVu8orYjMd
/
w3aS7ZV7quyn1W0fvpsSMXrlRWpzN9Jix6DX22sqzmOrqqHoToYItJZffWx2j8Cg411Xy03GOs+Anyik
/3cBxxsrNswF3dqc9G8wjxgTE6HPpJUJbDHmTR2BIuXN/
PGslWsbmnhjWWrWLy8mUljR3T30ESkh+qTASN/iz8Y+JSxbk6ugnc2ad2iM/
08RqqY9wQpJfufCuw2k1TvYzap8t9j7W/
ePVQHQ0Q6q1enN+9vlN5cRLqI0puLiEj9KGCIiEghChgiIlKIAoaIiBSigCEiIoUoYIiISCEKGCIiUkj
DUoMY6w4m5V7aJQb/
TAOOdyJwVTkPVMF9LCljrcvvPwOcS0oaWAJ8DP6UOoztUNIPCXcBxlVnyO1qSmsuIuuikTOMiaQkf0c0
6HgnAht1uFUbjHWjgR+R0p/
vQsqA+7c6je1J4POk1CMNVU5rvnDpylZpzR+e39TooYhIL9OQGYaxbhgpjfi+pBTeZ+f204CjSIn47oj
Bn26sex9wBbAFKanfoTH4Oca6U4HDgMGkDLJnGetGkbK/
PkRKQf4cqXbFV4BtgBnGuoUx+H2NdQcA3837zwGOicE3Ges+TarMt5DWaTxOA84rz4Zi8KuAH+dxXwcs
A3YGtgeOASYBewIPxeAn5+2agCvzeb8OHBGDfy0G/3T+fL3/
th2pTm+utOYisq4aNcOYANwZg38OWGSs2z3f7pkAfDQGvxupkBDAjcBlue3jwMv5Yr8TKZHfGGAPY90+
efsPkG497QosAb4Rg7+UlDdq3xwsNgfOAPaPwe8OROAkY90Q4GpSUsG9ga0rxtxeTQ2ATYH9gH8Ffgv8
gFRn48O5uh+kW1mP5WPeS6qZ0SnGuinGumisi68vXtzZ3deyoKmFYYNatymtuYgU0ag1jImkb/
EAv8jvBwDXltcYYvCLckbYbWPw03LbcoAcMA4AHs99DCMFkBeA+TH4mbn9BuB4UtK/Sh8jFSmamb/
Vvwt4gDRDmBuDfz4f5wZy7YkCfpsr9c0GXonBz859PEWqbfEEaeZ0c8XYbqvVUXvqnd5cac1FZF11ecA
w1m1G+iY+2ljXAgwk1Zi4lbVrTbSVAKsEnB+Dv7Kq71E1+qh1US0B98TgJ1btP6aN7SHV1NgD+Esbn5e
/
kq+mdY2N1bT9d+32TI+Txo7gzN+npL3vHjKQJcubWby8mZPHb9XNIxORnq4Rt6QOAa6PwW8fgx8Vgx9J
Sv+9CDjWWLcRgLFuRAx+CfCisW5CbhucP78rbzsst29rrNsy97+dsW7P/
Lq8sA7wJrBxfv0gsFdeH8FYt5Gx7v3AM8AOxrodK/YvuxD4dt6OXN/
ipE6e+wDWFHI6krYr+zWM0pqLyLpqRMCYCEyraruVtCg9HYi5VGr5cdWjgOONdbOAPwNbx+DvBn4OPJB
vAd3CmmDwNDApbz8CuDy3XwXcYaybEYN/DZgM3JS3exDYOd/ymgLcbqy7H/
h7eYAx+FmkJ61uMtY9TXqy6T2dPPelwIeMdY+SZlnnQHrE2Fj3ImmR/
HZj3V2d7He9jBs5jMsO2o7fTdqJyw7aTsFCRArp1fUw8i0pH4Mf3d1jqcVY1xSDr9vVWPUwRKSLqB6Gi
IjUT8N+6d0VYvDzSI+/
9kj1nF2IiHQ3zTBERKQQBQwRESlEAUNERApRwBARkUIauuitFOc1j3cK6UeCW8TgF9arXxGRemv0DEMp
zlv3PxL4FCknVpd5eH4Tx01/gQOnPs9x019QKnMRWSeNLKCkFOcVKc5z/z/Ix/
jN+vxt21OufzF8yMBW9S+UDkREOquRMwylOK9IcW6sOwhYEINvK7
lhXVz8xzmUVr4FK5oYUCqxyYYbMHzIQKY+vqgrDysifVAj1zCU4jynOM8JFb+Tz6ddxrop5fFsvdUWBY
e1xoKmFrasuimn+hcisi4aVXFPKc5bj21HYAfgLzl4/RPwmLFuXAz+/
yo3Xt96GKNHjlD9CxGpi0bdklKK8+RI4P4Y/OwY/
Jb5bzEKeBHYvTpY1MOksSNYvLyZN5atYnVLC28sW8Xi5c1MGjui3ocSkT6uUQFDKc6rUpw3iupfiEi99
Or05tC/
UpwrvbmIdBGlNxcRkfrp1enNQSnORUQaRTMMEREpRAFDREQKUcAQEZFCFDBERKQQBQwRESmk1z8l1R5j
3dak/FUfIaXumAecmBMg1vtYloo6Gm1sY4CjY/DH1/v41R6e38TUxxcx9/
UV7LDpYCaNHaEf64nIeumzAcNYVyL9unxqDP6I3DYG2IqUAr3hYvCRlCW3SymluYh0hT4bMEj1J1bG4K
8oN8TgnzDWlYx1FwKfISUC/M8Y/
M15hvBd4BVS+vTbgNnACcCGwIRck+M6YDkpjflWwEkxeF95YGPdONLMZkNSzYxjYvDPVs5CjHVnA9sB7
83/XpxTsq+3qY8vYviQge8kHCz/O/
XxRQoYIrLO+vIaRlu1LD5PCgi7AfsDFxxrryvmhdiMFiA+T8lm9PwY/
DvgJ8K2KPkYBnwA+C1yRa2pUegbYJwY/
FjgT+K82xrgz8M+kGh9nGesGVW9grJtvGVW9grJtirIvGuvj64sXtn3E29/
UVvHvIwFZtSmkuIuurL88w2jIeuCkG3wy8Yqy7l7TGsQR4JAb/
MoCxbg5wd95nNmnGUvbLGLw2hlj3d9IF/
5Kw4GpxrqdSLOYtQJBdnsMfgWwwlj3KmnG8mLlBuuS3nyHTQcrpbmI1F1fnmGUa1lUay/
JVnVNi8p6F5XBtaP6G+cCM3JCxM8B1TOQWsdrpk4BXCnNRaQr9OWA8UdgsLHuq+UGY91HSW1DzfWDTT
WbQHsAzzcyb4PzbUxdiStQTxb9flwYEF+PXldBr8+lNJcRLpCn70llUunHgxcbKz7GXw7nbRQPY9U32IYp
eC3BaDP7/
jHXVt5Xa8yypPvdWwNdi8Mtz5byy75FuSZ1ECClwNN27kMAUIEamrXl8Po9HyuZ4CiGUjC7tQbZcImFNIvnpIy1jXF4Ifl
1wcClwCfBA4E3orBX1+1/SjSby1GG+smAyYG/83Gjnr9qB6GiNRbvwgYZca6TwI/
BA6Iwb8AXNHBLr2S6mGISFfoNwHDWLc3cDVwYAx+Tm47G2iKwV9krNsDuAZ4C7i/
avdtjHV3AjsC02Lwp+X9JwLfJv1K8vYY/L/l9ibgMlL69NfzNt8j1b04MQY/3Vg3ELgAsMBg4LIY/
JX1OFfVwxCRrtBf1jAGA78hFUh6po1+IH14vfrBVT9nNM3/aqzbofrAlfUwvrz9t5ssYRr1h0yMgdmhbRFPbmefdjpxDFNFQxVAz0xhmZNAh9JvAHANGRw/3VJYRyqqzX9SW9c0kwD9PNyThfYqbXbwOLJRXJjcW4GKWnHjwVbRxt+tJshYY1kYAfc2Vt//
4RY92EvP1QIMTg9wDeBP4T+BRwMHBO3ubLwOIY/EdI6dW/aqzbofrAlfUwVrz9dqGTVT0MEekK/
WWGsRL4M+kifUL1h8a64cAmMfh7c9PPSBX5yv4Qg1+ct/
0rsD2wGSkovJbbbyRlvv018DZwZ953NrAiBr/
SWDebVHwJ4ABgV2PdIfn9cGAnYG7l2CrrYbB2GvWaVA9DRLpCf5lhrAYOI80Cvl3Ltrfd4Ph4f1jvptPmSFv1X1Okrcf2DA4CtXJ45bPsH+ZZtJjWyxwoUDJdXxqwv6Ou2p/XK3fQZ0Ahgnjt/cvG4PQnFz/bfYxLNt4OX2btaqgfzmX6ZOJKEFubEhZgpLk9bWLVXQfeG7t/7UfU9UpO4fBj5zx+2hZbzUqdGbEUq0hxJFuZXgi6b6P1u9r2hYTyNmdsNGgAE8qQaxvE9Iw5h21KcZqpNqo+E5mwTetitvB4XqF6Z9JVfFV6UxOWMPUb6v+4F1+E0fqHF3BwMZM14BCLbkSr3FY5Lv1FwKS1VtzlDWvv2Dfb4X0OD7M4nMsMrlh6TgsZpUh3DDbZMGp/JGZN3r3eU05GYrVeR+XMx6lHv4KDdMSqOHbMxnY4C3Kz4MBSHRWNcnWSp8pnXFjLMJ2cnWJ3KXxyrCkuAG1TLjfh3fSG4E1DrL2Lm+Iy0TFmMV2KmNdm92GUA1CfEXwa2kJ3y+pOAH1rdNW8i9L42Uq2/CXYHxNtm9ieOP/0Ir9XiiZrcn/nd5jEJMUEcflMPJ9jiS9OuAZcAw1fY0qP8V+MgNVlVbhv1hH77h9mOAlHt+ZMC4ZVBQgP1O/MoYbzmq4J6trSgW4IPzhmDoNfMYULTUWW8S5hd5KUhdZFrbBFBB+9+C8uFTGqZRuCxTMfs7EW0iyTANIN8CCaNbN66ohcO+XuHOdAhnqhJ0YO8v51E2SVW6V5sXYo9JD6o+QprHlNXGLWdW+rbSzNtvsYpdFSyPz7P/h0Ae4L8hbZ+9PIcFP1Kg6o9XD6e/IKSqZZyDx7/3dhGlMnK3/jR4Q4B0jWRvfFLDCjGPHLrkmGhzoLZ2mLi2J1Bkqp2L1WVQhdKI4ldRxSnN7O1fG7bZYbNVevrDCNk2+3XCM+fh8ekzDm1OrI0FPGazdrsTkzXHYZa7ivVLjTQu89LLaYjXHymWQ83lgbdmbKiDS3q2n4W2YHxJXRmpo/MJwrIN7SmPdkpIBKTdQkvd3OyFfF3zdqBRL/UzXMfELdrOAP/bxx86/Vw1xvbs9IZiX5pwh3ibJh3V8pxG5rtPn7OgrvwqP7+3UdiHsJP+hfFGrLfovvbLPtjbcnQ5n5NJ9ejnXvY9W+DHlH/ix5dHebzo+T6Pj8O0rLVbK9trrP4yPEldZzfrhEeUJ3uP5l6p1bgq6XCFLamAvEfeROptzeuArFsxRGt0yLBq/iAQi3MxKUYI7TMkEcuekT8oHYzt0O9tnLsVRsyd9WJnwFx3uJw5q9w9FK33Go77rKhlWn/hZJZHC5VLu/5aqlfxwQJtyZ0fp7GBHXCwrAa9BHfCtcgA+ss71xuy9Kw0ulpdqi2krE26vVlrnHfVMpPbupeCvXnuhsLcEvXx9/5h/r1PBPnH8K9s2u46shuhHJMbFXxwWcUgb/NmYrCprVs9QdcPrMvB8PF5g1lPyKbuv8S4nkZL5AMCl2UHmqyqc87tKEdTGDA8LMZXy35VgkrnHmgM8yEy/UbpY3Mba9P6WfNe4tp6Wrh/ttWRHjYhLE8BbpMcI1bQBsx92qbCBe4ucA45yOB28/oRPbevl3P0g0ufv3wH4YhjbWM2d6OqhuCmJbjO9Zl1u+g+mRptMrWAhpv3EiO+C4X0H8b3qXY0bpCNuIDMQPfoLl0zdnCv3BhjajHoE5LbE+BKctCmNxiv3Zd3n2YjP+nFuOmnuNqEwT6F1uf1Q4vGz6hNHfuNUdOgd9fRnoGIR0SxVCjmg8ZZ9xfY4fxRjKIpY4B60fnMM2lK+aq4r+Co5DLJ7aqqB7X1c8SNXqcEqAPLkXJGx7ZmWa8RlGMgE1P16HL0u96T0EN4I4y2/h/aV1PpPt8VRTjP7n9X1Bg7a9r8mWL7kblz7Vi8fXl+d2cJtxDdN2PjcoI0Jj3bmWpuOGQ9wgSNjtgn+1e4XJpkbFDb1K2wNXu9sVC7yVJQGC1t8oBE78Tgkdaz1/5hlmhRzwj3/6PuWcI9FHMGFcDbzpw+Kj2KgeTzbnFBLy3VlBZvh/Hf9Jr6+6bt9D+W9aX+wUM3mGr4fQ+YZy5EtFZmk8PZlhaI3qsMJ4l/nKaIjL+MYDzG1VuBljSTpWmU18LHkfNsvaVx0A/JHhi8+zGgqSe3m0ot8wV2w19i8cSJkOD8tm2dE89aEhnmI0QOaHYDXvmLpV3W+JsHvXV3YP4QqPXzzWV8VsTZ4Z4vZ8uzDjbSa/TG1Wu1wQM7i9B4rq3r2cRpqJ8kwqrZOA88Djwp7aHq4PLutKiH0BscvgP9sFlVcrD7ABpJ9/g2efJWD/4CF6d6HCtNa7oq2Uy5XmL6d8uFBcYC1nlzB/NFwKxsl3kt6fC6B9nznTj7WbeDVXFoD2k/+dzg+g+xwYhvwFdnf/Uxs/wNgvChz39nBQnwF4r0+BrJUWCPT0zt2wSqfJ9AShxV2I79hRZOB1V6lPdRF8Iz/6Xz5S+NO/l9Ff+N5cW/vuXx+fVpB3ecfs4Lq+A2bUX+PvaGxUO81fVnxg7PZftxzD2HfETlmuC1hPubBSlTO+HDfj9kXrx1JbmLA0/TDnQzN3dqJ8v3N4zDkA2cEsqN0eFBXwBYjHJQL3SL5Vdh3xvtl7K3jNSNLpqBF3SqrXWbzqW8Vbn9W4YbqTxRc9yK6ZnnFxeFe8uG4bmdGUGSS9Ye4G3L9VhmvHKQbu1uwr9VA4D2kpsdaxN6FrwzktS4mFoqfR7dWHOdrQnwi9RrRD89XAWdDFxhrHu+ajG4yaX1xK+fqqDNn7+xsaevsj0O9n3oJgKHvMGMvAwBhPGqPvDFTTyjN+PGHiQQjKYj/PxtGn6hA5v9XpUmOXoR+4MYtAMy8Klj+/xkdrJt62vIrQm6W/xGBOhcn5BGj8pB5Gau7rqC7DXyfoAC7UWTvOI7vSFcAD2/LOX9rUqLwJ7wBnGKUYWU3XzKKG/lmyBlfbSd2wMpDXBGqi/9LYQCIRQNGWR6FhbGGz7wl+u0r5T+RCmXaTuH6VmrwS4BDkA+I1Kf6wDtJyLIWHe5ohRaJmWaKoOIEW4RjC4IlAaF2J8xuD8qH/hZaY4JBZdMAJRNrfqxnsrB8PcEUAnQbTlJA8AmyWNpQ2vgbmEfWpJDiZlJIfjmyIPUpSdRkG5Jjxu4DEQUj7Z7P9gMSBcvBjTqgQqlnaMntRDrwd5evy4e2bdE8dNkYFzRDF7JWbIeCSfXPkQiDG0fUsSXQrkgbe+lW2nUnWNiBy4J71tO8GbBWZ4RnAyXDOpAUxeLRnNtXwOxMRPsXeRwkX0wm2+j6tzIn7tZ6/ZnLzSQAHBXSnlE9SkvwT9n2dsnqgm6LTfEnAb+ZeJH5hqHvCSdeySWzexWaoDp8Lv+sLqdOelhqfG/rGthaewufMdYOOYbUKqAa8TpbwxHjxXgyhsmZ0BPY6QwZhRQnkOcjVxPYw4ns0e3ouhxwnc4u45GE9vJjV4blpHTkFXUPSKiAF34G7pr1smFhbFqNxu11Qt9X/dAX1P+BxORVRvPsl8QShhdOX28ZiZrW3e5hjD5ywXz2wlXSTYkTTVK6rJhyIMEb/n6RoL9gTBvcMMSdmN3wqRhP+JhXTAnH6A4dPZ19x+HbM1DWKlnNcx9TQlXpNTe/+1YqUOVgMZIU1mKrBaklpJXLPCjrFBIl0LKW4X9bmu8qGJ3hPUXvi5H9fMpYxkN4tqwB3yNOHyr/XMkUy7TSuUBYsGLLVl0MawnytDv68hHUm34vlC9MejqSUO7kuvLKCVqO5sKqpMcVYVqsK6dqvjAn0gVYH6xqtPwmnxGYaDvbiUPbHC4MjR+JDbDOTS5wAfltnyqkW6+JzLFfvdT4XoM4/MtaN2XbO4q0nxy8tSiNaH2W2l0lYcK2z0B06uzlO3sjFr3fmWRxDnKQHQM0lODjPs+Zly/uAq2+MwVqOtxfZWAPyoDMdOdvIHqb3M0z1pe0BzXcljVqhfeF7Ohk3Gh4Cfx56N7dA1Sn/uL4pw8SJTlmvuCUgIcAMYnQBn+dPOB2xV0chYbj8jJdtC61iK9Vi5oqxkF/wNsX/5QNm27y9HjXjtB9nDDAO1/xQYgVPZAMD3SqmhcjTn5kUh7NvFxhOPzvYO37zUGgL7Q4ST69qd3vnJXo/KOXvfuZNeE3ZZRnlw0yfLRw8hfpaXHxbTTaA9EwdRHRGoEONSn6Bm+g2Fe9aUEGPtsy2pEkSD/kHoLpq3nI7KlmOJR82YQkZufA7gqCK9T7MTgvfZ3PdjHb/RzVMBtJz9nj52hnyZWvpWz2YZAwTwd+xjm0YlJCMYxDZY4Pv6D12Au9Pw4MrHh2xUPjCR7mubCmHFkyDB2HG/Hly8H9eY3sE+vrJuCKiK5TkS4J5dqbV1IcBrCGCUgO59zp6ZxzHH+7JVbf5WN6dLl5Wv2Gm84NH5Ch/O4dPb7yg4tt7rn3NQfbOa9wWEOYFW9M+VqsYMTUNy5Il6O1QnGGbCoBRyn5uDTMFDJHSD9a/PwUyPEK6iP6+LzbkPfRxhYxgo/jnHr9T+JdFMLtWexcSSMYqh2DBCzF6m2EK8unPU1aaXQlAu9bQ1xJg/9j9XcqgxixTi+qvcxOlrPMtW7lrU+vnPHIyDn8mVeztcGMbkSTJMNfrmaJDc0bhSPh/LaOUKhDNQZS7Z2qEm+7xaq0hxjZrzeUVCiQ/cqwd/vFPPqjA7J06IXdoeo6rOpmdrezNq79tNNqFx0QGDjqxi5BGhxr7lzHFGFKOGRgtlEQuEk0pSb2rQMa7vgb3f5DQb+A2ujbRHUVAWH2xnkmEDfEyRFKdeqeZkodjyR2Y2WBKgGAQ7UE4c2WRjFiD0Hfjih3D4aKfM8uDdPL3hNIPr2fXGHQevpN3NsTr7hTyVfzpAH3xnGe6wwP3Lv6U7ad8nsU2VIDBQJkwvKFKEhm4hP96tXWf1fNiZHzTe3b7mY7Hsd5Pr6rtuBnOZo8FunDmr7+gUdGB1Q9LNmqYIjtjBBF6KtsNzS1KG1eROTtWoiHVoCj/xPMF+h8unPF+RsRCyoRwhk1xpW8JAgC5zG1tMEUeTCYBM49ZPvHNRfO+I7sEtnSCnqXTN8ybr0Scj0XlIpxBk5qKHq3aP/TzXbFuQ8gqA1y+rfRfsXk2AtpEdpcs9cl5vh6XibK7JhRVYHrxs64gXsVqYFgEfpGfkjs63VTrK2l/tGcB+xXjQZrxwK0zsn/EXo5RxNMkmWuJhPNKRhPTZHQmjT4+rKLhBmDQDaG9ZYR/G4wRoAxmnJBv2uUNUvZiavm1Ng2Urtv4kL6HrGGnKlm7sZC1txU4vzZC58nXMbBFepdFQCvAU6t5tF9ESJbGqp52qNYVg+0IDqNSvA77SxvbGgOXh+hr1n3pMVsFaiNgoRFAvJsgV0MpWKqwn9CVQ0bpqQiSr1sKZoE0hUmSGO/MbVTJeESxFxlM8p2cVxkD9ZMlTYt4vcBGiLtb/rGm1+V6EeGqzJB9NZwMIwMbB+nPbNSZgnh/xRRwDx2jKzF0EB7CaIiz4E/OyqDmkhv8FDSNOL+3Gy2UOsPk3NNnQijs6TRSH5mL6tbmqXZ9B7ZuhzUP8hZ2FbVf6+RMmz4wzJMPPz2mHGzRPOfqGUfeMBQ3HGVkDd6XXGdGQqRZfU4lfV9P9WxJSCEj1iW2QzuZOE1EyQMRTtCEhVE+y0FrCdfnuTfXG8ib10qlNS6/wA+TrlIsF/vuWwqJAPJgi1QV0w5nHt1Pvbt0t+fJodq/hRh6kVhvmb4eHH8GE8SeT3O2ZvBvNgwU8Hk5m7yDr7ovVmfW6VtNJ2Uj5JMLbS1ZI5AWwT6LcCtJ4GMNjD+hi0Hkd8ixVS1CrRbpwBn6XCmlSzqvBbZ5bDeGdPFf5rp1OJ7W4n1iqnm37r40HEvvr2yIyRy3d7rUBY+dKXO9gfNLx+CIH4+PNeS0y4n1nOzl2gPCuJiUoyCoqY8vKwpeTwt+Vr4GnGrvTvqBtxsVF6VHv4N0h5xzc5oVYWKQn9umbQ48T+vD9UJVP6f7Bj68JYqU5jB6HMv9XEvezLu4BvnSrMtx1qGc2XdPjdIJDcbB5K9H0x4WUTzXEcN8v1lOpfuRNYN2TRxZ9XXJVCiq1P5jqjXqQV+gEuOZ6RgnmbkgJ3TZMq4Swo2wMXcTAhjTjtHYgzpJ4nrYnI6M1H7YPKo7YKvSkqnSDCWFsOPJMNlQXpqLmEmP4xL4w0Dz5vp3Lq4bNzPrSYrpuBWcXCRPF1vwQrjTXA1o+jM0kkNzMKMJbQAWpeQm3Pz6zFaLE/7NfIklDeWJh3LZGvRTEG1vKLDWEw8g1fqtHgkqk1uzSp+9zv6s5x3oMoCxeYHEHJoPJF/YwT9eMRqUuHUTOkj+RcX63KJKzs6dAnHtNjdqB3nmRu+1jvNDP5VbZKnpV3LE3Vid5XkCNELC92Ds8ng2gb/ssETS3DGQGhc9FoUzpDYg+71GASUHmxufJrc5TkH96wRR2b1zcvjHvh8LcSaD27d83G+D4mQmmt5EOCA6ddqQQzQ9ZsHyMAzPYtt8DYq58yeF+u0Yjtyd3ByIaxHKeQwvSt+AHjVVKsWOcp3ss6QhOW1jVDMqwvIEShJ0UD5pCN/Phl8OzYxMQGQJH1IYBgnELvdVWvB2RWwnhsQoeiIIIY1xXxfdsFFV9EWyydhKTVWgfmqINaJ2w4XJx4NeF91fX48BGNk2hbxCwcAR1b/oZYA2zaxnjbfzu+7eb6bkPPnmbKkWU2jyIrh8Fxlb5eIG3Ib4lfJIzq7c6dh7PTdGMqd/YImmxbc3IcS26FQy0tmrOeyC17/7rhVPlSMMl9nTjx2rXMvlo+DWHQVGJ5/ZazzhuLQgYMKnPNw+Qax2j4OQEpR97X8OvpI7A8GOXtXbXf6rrIsU6Sv/aN6dxlqzMHbfvy0sfdQUzpo0+xNgXc7aRK4wiMq+kEYxYCGFf0D7W/PwT1j7c3jhd6KnNnCtOpO8yrbTE1ynIhxIOYnPWL6AoEoKzQ03gR0nb/yD6BjSGgMRNGL3k17Lq0Li3U6ScInxH/gTyotN8AHr4JWeBpW2YrBHNv/mW5+r7sJXmLhBBzoFlJbUPnjUg0vT9LPlWtmh/fqcPI1aqG2SE98LgKzYKFUVEwBOKq0wBX8FvM9WYcY82yG1oBr8/bxnuchMJaB+5uSa4N8GDQUxPnCTkOLzvg8d5vHMFYXfQq+oqZKixunKSEpiuhv9nbFvu+4eF3IJsH4ArJ7nFhs/Qjwp0B2ioT6UgB/x/hlZ2M3MkIo8Ms3XbEsiwSZbOk8h/Wt0zRKC+hDSgJt7CEyiWg81oT0V7DjJ7LMuxPMbQvKkX8mlNEsEt1OKn+qaoDPQ0z6aDXQ0n4vBbFMgP3fnXn6iDyWBBiv8h4hLU0qhVdOvGtb8W1Ng/n3fI/AN/XzoKsUdeMJ3XeeuyhS3E+WJZJIoY1F61JVqUqvakfQtYuf/9xD4zqU6eGOW78hkfpGp2MzOtVaFohGXUj4QhQhR5BHqwcLi9Qu7DXBnaSQyfY1KK9B2FObGQrXkPDk2HOAzBRrE6DKNFN8xbG59Lq+7fkkf04EYyX3FGKkeeN1bWzsgKhXxYxy8Srb6o6u6mGO2Yx5iUJwEpqAxCiWf5gGh5RwQ3PvazbyFB4oEGLYv3ltUyp1nYi5CoHpzodmbu4TBnxdZ3skXUyuvbT7vCVB1VMyk1eRg8Z3DiwRJq2PVDzxDlkxNvHBfvsoxCIlrKuw+rT3tXCSxzH8gDbhjoRF9jUk6OOTSZW10g9/BKfTCmw+Hvl7n73YpZGRxJpQ1r+FstwMH2iSpd+1H/BQyHfxKrpn0c3I6H6V6FnK3OyRw1YqHZPXL9ECdZ+eZsr+/XU9fctLq3G0gTQEhgdJh+mF2cjvqzm+DEqWDz+0sbEY4gs3DzUj6HJ7ePHLm9VNZLmspdG/ltEsTtK2dYkIMz+lNnExYUpGGn/nuJb8GPsbzU6dtqlF5mT2hmf1ppgzWC4mWJOBXGSo1S8DNbF0CL1fFOXOl4/dZgkGVHzj88Qrk7fvImOxbjGxQY99EPpoGjRpr7s7i7mhb/oHUNLdWaNBvfgYyEdHMZmh8L3YzvaDiDHaB+xpFIBP5N4b6u4J0R1aDnq6bG0v3tkhzLSw7k3nuuuVn6wLd+dJx/QhvDKYq/xd8FVRF2HSHzwzu3YbV/96d/iPi6tNF2vr17JqLzI8VvlMIwGV3CwmhZ1w/sHl2wCsMZoupWwcX+Kc6WHUfuKhlN7/2/P23GW6ZMwzYSzo4hsU5RrGqJ1TBkNcsUk7/sXMQpmrJcYsz4KvgPJMlUPGuVg8w1OUI3xfaQxwKJCKEI1HPfg8kXDOj0o2vyvv52B77tqsPCZrXbaSRvDnaUDUBRmnb1AuZqNb4+LDAXeYj9N0ZqSyGYsyHWdwfvIaXcZPFiOm0xqsKvNi58wQ7pFYPPqG5JJGO0o8uRrd4f9nVNTf+qeDS+P6Nj9z6MhOamkxyIF8V1ERWpYsf0sFbeb9TAnyJdqP4HEObL5ioNwfiVHK8iVtB4ctjKXvZjBc+RD2Q2ILjj+i8LPBd9vdGX7x4gTxO6cYJAYUnSoJSJjtj29P7z6K6KDZAe4DhPVc44lJCl4mNXE3hSQXhhQYuOWA1qe2IT32BgyZMjJjZbkunOIv0v1O6yMEMi8i+hUF6EDLjMn6N3YhDI2QaT01kbh88tTmj7RC5iSMfZ/lxc/E1BgufDZ+Jq5XSlC7csmmwN2WCnuq5iVXP98zdLcZCZjsMK9DdKv3NAsvg0jkuldRVfDnKgCP4K4e8qLeYM+qzDnjtu6XeIaDQb6kYazpSrI8DKeAT3wxRXyZnQKUEDC3DYGWH1cfSw6xRiN8r2ENAuKiigzRvcNyxa+yd7DRTCUhNfYXSmnHCLGyGrZL6PGGtgnXZfIKdlSxqI+o2Xgb9gNjqWyBmn2U6Z7b5XFe+gs5P+E0OAeqy8gX9Hm4D2vuBvupeZt3v0jyd+ppQGMjMCsoT2YxyfeqcZ6jvd8Ng6i5DTqQPtAzcZHmXJ3nVgWfYdaFCpgyrwu3gW/tRDoDOFoVIlwZUqHcn9ns06adg+jnm38TUlofIeH6WJx3pwSp1tvm+DPFpNzj/YNdcQSYQpSVzMBIlv/T6hVcBgDmLyrupqLmUPEJ+EuRAP2WPuuTuDMSm9HUp+8JnnDAbUJ2GFVBKUGXqqmKJ5gDwxIGpKSGALqAuXAh8EPyLuYJZP3EfmuZpXmXsjZBQqcB8Tb1Au3yTmjdJuO2jNspTaTdS9ilwIcbF3fdS/xyJEt4tzEFnJDhtnzcJNY0I5f59F0+hQnwVsH5A6vZBOTdEbhxuHpEyWCHmd4jz3dHqjVb40MRB0qwO0qCzDmf/gJQ44m9qUvGpkbrRaAotYe7Fd1JgUz+OWHe0uGbexOozlWdIDHJA7Ggw86sMUKDAxpJwl9eDv0AYI3hJS3M53VhE/NJnXaGovq0FZBe+lmdWxTF3OYXS6rZZlgrIoFyj5x/4XQBkfT+fZc99DKvnXm/Wtjsvl/3Idm/4kXcwlWMyNTOhbA3JURmGu/AC8R2aApTIk1mrZ6Ku+UvYwOcAt2nVvMvfp+XrByOaZ6qZgg5zsUOIZ6PTyq2g0MbnlG5CU+bz3vwl2Gi+QCEW4cHf8sTjyvR/FwXnZKRYqnM5vmDN8ANTBUbwbZaNLRe/LQ7rnRbJ3uWjJYbbWlS0uiQw2FxU1S+yR98a7UDbl3OUXAbaP3VeGDxTt7EXrKD09/IQ9k6XNzJqG4zKWmzW3HE3yTKVjXGJfCnKhsSYkTQQnRHPdQ1zvRDzg8vdpJDA9/QAC0dIifJYAIw/cl3SjyuwLvibmA6CUpVVTPa4FeG6+E7A+J0Q1qdZ6XEe4tl9qd6ZXUglpy3PvoHAZMfbGA7x4DaxuLCtAaXyKxWc5DN21sYvsPqEBHrWa8dVNtzsDMFPvLJu5U6X1sV2ZmLuaK6KvVkKpw63H3mkJ2P35u07ZzkuaAU0FlXpwFZ8ZoDbHvTtRIukd4CA1Ls5ZYRNxzsmJ8xbn2Ky3aiYN9MqeMDMo5LgeVkPpgnT3ymFvIcGpbAmnbM8rwR6iz3U+jofvvE7YuGf8YulDIaPm7B3tU4eU9fvWAo4yYA24uf+qSMbz8HGvhaVVF0DHRRdl5nMRYzjhiHY0NA0Mng0XtCTFuNv3ylc6cQH8gwEf4WB7U1cpRzzpvk7CGyS+0yG/3zUV9ZWLY+9wBtWyEDh/Gh6x1+D4rKwkqMLq9ahKBd6IOSp3mLqq6+oSYU8vt8XV7YX6I8NHQDj72nVL2YBqTuP8Ig2zPCXBXpXhG9O7eNzIYd6FBEg1GAfgCu4+D4UbmJlaIuGsPSAiKWdqWu8g/ujMHt60GdjWPYqDM3D70/5rfxeSKbM9zZCHf9TyB1kdp9nHtZE8I0g4i85hSDh2Wa3fOHZrlIJG5MW/e8t86MuTXcUGqXAlwkqoXOTmDXZ6fYDKvNp/EiPnM4EJHh5jdDKdxT2m4yqE6V+uLHqO0jzWVlwEArxVXzUFbNBrDnJklaZi9+cqy7zlyRW/2pWm97tZZ3cLAL4WEHC5zcwpvaQN8gyNf8mjZGPsV0R4j3sJg8Q==
Xyhh8ub936mrkokvlq3gJ+FYMfkz+b4cY/
N01+uo01cMQka7QXwIGMfi3AAd80Vj35arP3gAWG+vG56YvFujyIeATxrrN83rERFLK86LuAr5eLstqr
Hu/sW5oJ/Zvk+phiEhX6C+3pACIwS8y1n0auM9Yt7Dq42OAa4x1b5Eu5h319bKx7t+BGaTZwu9i8L/
pxHB+Qro99ZixrgS8Bkxod49OUD0MEak31cPoXfQ/S0S6guphiIhI/
ShgiIhIIQoYIiJSiAKGiIgUooAhIiKFKGCIiEghChgiIlKIAoaIiBSigCEiIoX0q9QgfUChX2NWMtY9C
SzvgrE02unp/oUAAAciSURBVOZAdTqX3krn0vP0lfMAGBKDH90VHStg9H3LY/
Cmuwexvox1sS+cB+hceqK+ch6QzqWr+tYtKRERKUQBQ0REClHA6Puu6niTXqGvnAfoXHqivnIe0IXnov
TmIiJSiGYYIiJSiJ6S6kVytcBL/
n975x4qZ3HG4QdjjFJpLEHFNhYtsYVoNOq0FWxlpDUqHT2oxSveCEY0aRpapWpIvZCWtJTUS9U/
qhhTDFFDS3WiRkRHvOuoUYitJTFCT9QWY1qCSmJM/OOdo+tyzsl3zu63ezb8HvjY3dmZd+e3s8y7M/
PNO8A44I6c4qKm9ycAS4GjgY3AWTnFt8t7VwMzsTPJ5+YUV1Wx2WNa3gY2l/
RtnbjrZbQ6nA+TgBXAd4ElOcU5DWWOBpYAewEPAT9vOCO+17Qk4ADg45I0I6f43zGs5QRgEbAHsBW4Mq
f4eCnT8XapSUdilG2iEUaPUM4NvxU4GZgKnON8mNqNyUVdlLDQbCD8LtSdipwNnAocBJwm/
NhXEWbPaGlodzxOcXpHXIWo9aB7Y1ZAFwxiOnbgVnAIeU6qf21/
zI1agE4r7TJ9A45i1a0vA+cklOcBlwI/KWhTEfbpUYdMMo2kcPoHb4HrM0pvpVT3AosB/
qa8vQBd5fnK4AflfPC+4DlOcUtOcX1wNpir4rNXtHSDUatI6f4YU7xaZo2VTofDgC+mlN8rvx7XUobz3
ofhrZr6SKtaHk1p/hOSV8D7Ol8mNCldmm7jlYrJIfRO3wD+HfD6/6SNmienOI2YO/
ApGHKVrFZB61oGY2dSurfFhQnH7dtEvLGcCrOcUtdKdd6tAxwKjaRA6jdxisUZvnT4fKM9L0uqlDC8CxOcWj
sCH8bOfDcaOvYiVa0TJpALpLWtxPhyKTe9cOgKb7aYOHdBCm8hh9A79wIEN
rycD7wyVx/mwOzAR+GCYslVs1kEdWhgYgpc52b9R/
1RVKzqGszl5JzbroA4t5BQ3lMfNwDDI6M33Ykhbnw2Ts93NBTnFdQ/
5Ot0sdOlpqE90l1Tu8BBzifDgY2IAt/eCnwOM5xR3OhweAZC6HxcDXsQW7F7F7F/
Jzuz2RNanA9fAXbLKW4uz2cAN4xVHUMZzCm+63zY7Hw4BngBuAC4pY7KN9F2LaUD2yen++L7zYTwQgMfq
qHwTrfy+9gFWAlfnFJ8ZyNldmm7jlbbRCOMHqHMT84NvxBVgH/
AO7LKa5xPtzgfDi1ZDR8WAv8AriqTwCzM4pfjqUzV7UAuzhitzio+MVR3w
+W3Ai4GLnA/
9DXfAXAbcgS3orwMerlNHMerlNHjVomAKucD68Dq7FO789jXMscYAqwoMzMzxr3Y+7Ffe62i71KSjpTbRTm8hhBC
V0AhDCCFEJeQwhBBCVEIOQwghRCXkMIQQQlRCDkMIIUQltA9DiJpwPhwErMdu8Q1dqsM1wEc5xRu78fl
i10IOQ4hdEOfDbliIiGuwyKVyGKJltA9DiJpoHGEAGbgWuA3bXQtwHhYW/
FjgnpzipaXcDuBfwFPY7t1nsfg/m0psoJuxcA4fYBvJFpbdvTuwTWWrgZ8UG0c0VOlu4A/
YxseDsHMSngUuySlucD5cV+p4K7ZT/
mvA5TnF+50PewDXYzuN9wNeyike53yYiIXVDtgU91+BeTnFj9rwFYoxhtYwhOgsP8A6+W8CTwLPA28Cs
5wP0xvyfRv4D9a5n4zt2B2PhYL4PjAfeB/0Lf3JxQ7kpWMTSX5Y8W7ARxjnYeQ5bMccxF/
gTcCJwXVMdf4w5jYnYITxgO4ivwkJlzwFeKek3YsHrlhRdM6k/JIvoEnIYQnSWW/
iiE343p3gtdnobwMEN+fpzivOxznk74IHvAN8C/
p5TvBkLBQHmUAbYCMzKKd6eU1wJbAEzEf6wOmNdVxcU7xJuAtbCQCcAo2xXVWT
vHOnOK8kh6wqe0rgV8Vezt8kh4EP
gH2bMozEIF2G1/uI4b63PeAExqu2cPUT/
QwWvQWYmwy2fnwG2BfrNN+Apu6Wgf0OR9R9Yk4dwdRcjlMHYBOzrfLgQ4HV
gI/BNb99iIrXdUYVG5DsMW7o8q6fOwtYszgZuAY4BnBjMgeh/
dJSXEGKPc7bQmp3hYt+siRCXkMIQQQlRCDkMIIUQltA9DiJpwPhwErMdu8Q1dqsM1wEc5xRu78fl
QQohKyGEIIYSoxGc1ZRqc/YbqRwAAAABJRU5ErkJggg==\n",
      "text/plain": [
       "<Figure size 360x432 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    }
   ],
   "source": [
    "methds = [df_chisq_rank,LinReg_,rf_,rfe_,extc_,dtree_,IV,perm_df_]\n",
    "for met in methds:\n",
    "    plot_importance(met,met.columns[0])"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Compare All Models"
   ]
```

```
},
{
 "cell_type": "code",
 "execution_count": 122,
 "metadata": {
  "scrolled": false
 },
 "outputs": [
  {
   "data": {
    "text/html": [
     "<div>\n",
     "<style scoped>\n",
     "    .dataframe tbody tr th:only-of-type {\n",
     "        vertical-align: middle;\n",
     "    }\n",
     "\n",
     "    .dataframe tbody tr th {\n",
     "        vertical-align: top;\n",
     "    }\n",
     "\n",
     "    .dataframe thead th {\n",
     "        text-align: right;\n",
     "    }\n",
     "</style>\n",
     "<table border=\"1\" class=\"dataframe\">\n",
     "  <thead>\n",
     "    <tr style=\"text-align: right;\">\n",
     "      <th></th>\n",
     "      <th>Chi-Squared</th>\n",
     "      <th>LinReg</th>\n",
     "      <th>RF</th>\n",
     "      <th>RFE</th>\n",
     "      <th>Extratrees</th>\n",
     "      <th>Dt</th>\n",
     "      <th>IV</th>\n",
     "      <th>Perm</th>\n",
     "      <th>Ranking</th>\n",
     "      <th>Valid</th>\n",
     "    </tr>\n",
     "  </thead>\n",
     "  <tbody>\n",
     "    <tr>\n",
     "      <th>AcceptedTot</th>\n",
     "      <td>1</td>\n",
     "      <td>1</td>\n",
     "      <td>1</td>\n",
     "      <td>2</td>\n",
     "      <td>1</td>\n",
     "      <td>1</td>\n",
     "      <td>2</td>\n",
     "      <td>1</td>\n",
     "      <td>1</td>\n",
     "      <td>True</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>R_NumStorePurchases</th>\n",
     "      <td>5</td>\n",
     "      <td>4</td>\n",
     "      <td>13</td>\n",
     "      <td>1</td>\n",
     "      <td>10</td>\n",
     "      <td>12</td>\n",
     "      <td>1</td>\n",
"      <td>5</td>\n",
"      <td>2</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Days_as_cust</th>\n",
"      <td>16</td>\n",
"      <td>13</td>\n",
"      <td>2</td>\n",
"      <td>3</td>\n",
"      <td>3</td>\n",
"      <td>2</td>\n",
"      <td>10</td>\n",
"      <td>2</td>\n",
"      <td>2</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>R_Mnt_NumStorePurchases</th>\n",
"      <td>20</td>\n",
"      <td>14</td>\n",
"      <td>3</td>\n",
"      <td>8</td>\n",
"      <td>15</td>\n",
"      <td>6</td>\n",
"      <td>5</td>\n",
"      <td>8</td>\n",
"      <td>4</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Recency</th>\n",
"      <td>18</td>\n",
"      <td>18</td>\n",
"      <td>6</td>\n",
"      <td>9</td>\n",
"      <td>6</td>\n",
"      <td>3</td>\n",
"      <td>16</td>\n",
"      <td>3</td>\n",
"      <td>4</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>RFM</th>\n",
"      <td>15</td>\n",
"      <td>22</td>\n",
"      <td>5</td>\n",
"      <td>4</td>\n",
"      <td>2</td>\n",
"      <td>4</td>\n",
"      <td>27</td>\n",
"      <td>4</td>\n",
"      <td>6</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>AcceptedCmp5</th>\n",
"      <td>2</td>\n",
"      <td>2</td>\n",
"      <td>8</td>\n",
"      <td>12</td>\n",
"      <td>5</td>\n",
"      <td>41</td>\n",
"      <td>3</td>\n",
"      <td>18</td>\n",
"      <td>7</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>MntMeatProducts</th>\n",
"      <td>9</td>\n",
"      <td>5</td>\n",
"      <td>12</td>\n",
"      <td>18</td>\n",
"      <td>9</td>\n",
"      <td>18</td>\n",
"      <td>6</td>\n",
"      <td>14</td>\n",
"      <td>7</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Income</th>\n",
"      <td>7</td>\n",
"      <td>17</td>\n",
"      <td>4</td>\n",
"      <td>23</td>\n",
"      <td>8</td>\n",
"      <td>8</td>\n",
"      <td>30</td>\n",
"      <td>9</td>\n",
"      <td>9</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Mnt_tot</th>\n",
"      <td>4</td>\n",
"      <td>7</td>\n",
"      <td>19</td>\n",
"      <td>31</td>\n",
"      <td>11</td>\n",
"      <td>24</td>\n",
"      <td>4</td>\n",
"      <td>16</td>\n",
"      <td>10</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>R_DealFrq</th>\n",
"      <td>14</td>\n",
"      <td>31</td>\n",
"      <td>7</td>\n",
"      <td>17</td>\n",
"      <td>12</td>\n",
"      <td>14</td>\n",
"      <td>28</td>\n",
"      <td>6</td>\n",
"      <td>11</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>R_MntMeatProducts</th>\n",
"      <td>30</td>\n",
"      <td>26</td>\n",
"      <td>17</td>\n",
"      <td>5</td>\n",
"      <td>14</td>\n",
"       <td>5</td>\n",
"       <td>29</td>\n",
"       <td>12</td>\n",
"       <td>12</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>R_NumCatalogPurchases</th>\n",
"       <td>10</td>\n",
"       <td>8</td>\n",
"       <td>9</td>\n",
"       <td>34</td>\n",
"       <td>33</td>\n",
"       <td>28</td>\n",
"       <td>9</td>\n",
"       <td>11</td>\n",
"       <td>13</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>R_MntFrq</th>\n",
"       <td>3</td>\n",
"       <td>6</td>\n",
"       <td>16</td>\n",
"       <td>43</td>\n",
"       <td>34</td>\n",
"       <td>19</td>\n",
"       <td>12</td>\n",
"       <td>10</td>\n",
"       <td>14</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>AcceptedCmp1</th>\n",
"       <td>6</td>\n",
"       <td>3</td>\n",
"       <td>28</td>\n",
"       <td>14</td>\n",
"       <td>4</td>\n",
"       <td>41</td>\n",
"       <td>8</td>\n",
"       <td>42</td>\n",
"       <td>15</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>Marital_Status</th>\n",
"       <td>31</td>\n",
"       <td>23</td>\n",
"       <td>31</td>\n",
"       <td>10</td>\n",
"       <td>13</td>\n",
"       <td>11</td>\n",
"       <td>22</td>\n",
"       <td>7</td>\n",
"       <td>16</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>AcceptedCmp3</th>\n",
"       <td>13</td>\n",
"       <td>11</td>\n",
"       <td>33</td>\n",
"       <td>13</td>\n",
"       <td>7</td>\n",
"       <td>41</td>\n",
"       <td>14</td>\n",
"       <td>24</td>\n",
"       <td>17</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>R_MntIncome</th>\n",
"       <td>8</td>\n",
"       <td>9</td>\n",
"       <td>29</td>\n",
"       <td>30</td>\n",
"       <td>22</td>\n",
"       <td>15</td>\n",
"       <td>7</td>\n",
"       <td>36</td>\n",
"       <td>17</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>MntWines</th>\n",
"       <td>11</td>\n",
"       <td>12</td>\n",
"       <td>24</td>\n",
"       <td>44</td>\n",
"       <td>19</td>\n",
"       <td>30</td>\n",
"       <td>17</td>\n",
"       <td>26</td>\n",
"       <td>19</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>MntGoldProds</th>\n",
"       <td>26</td>\n",
"       <td>26</td>\n",
"       <td>22</td>\n",
"       <td>45</td>\n",
"       <td>30</td>\n",
"       <td>7</td>\n",
"       <td>15</td>\n",
"       <td>13</td>\n",
"       <td>20</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>NumCatalogPurchases</th>\n",
"       <td>12</td>\n",
"       <td>10</td>\n",
"       <td>37</td>\n",
"       <td>26</td>\n",
"       <td>25</td>\n",
"       <td>31</td>\n",
"       <td>11</td>\n",
"       <td>37</td>\n",
"       <td>21</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>R_MntWines</th>\n",
"       <td>42</td>\n",
"       <td>38</td>\n",
"       <td>10</td>\n",
"       <td>7</td>\n",
"       <td>29</td>\n",
"       <td>13</td>\n",
"       <td>42</td>\n",
"       <td>17</td>\n",
"       <td>22</td>\n",
"       <td>False</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>R_Mnt_NumCatalogPurchases</th>\n",
"       <td>36</td>\n",
"       <td>33</td>\n",
"       <td>15</td>\n",
"       <td>20</td>\n",
"       <td>35</td>\n",
"       <td>16</td>\n",
"       <td>25</td>\n",
"       <td>26</td>\n",
"       <td>23</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>R_MntGoldProds</th>\n",
"       <td>35</td>\n",
"       <td>38</td>\n",
"       <td>18</td>\n",
"       <td>38</td>\n",
"       <td>16</td>\n",
"       <td>20</td>\n",
"       <td>31</td>\n",
"       <td>15</td>\n",
"       <td>24</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>NumWebPurchases</th>\n",
"       <td>19</td>\n",
"       <td>20</td>\n",
"       <td>30</td>\n",
"       <td>32</td>\n",
"       <td>24</td>\n",
"       <td>35</td>\n",
"       <td>13</td>\n",
"       <td>40</td>\n",
"       <td>25</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>R_Mnt_NumWebPurchases</th>\n",
"       <td>29</td>\n",
"       <td>24</td>\n",
"       <td>25</td>\n",
"       <td>21</td>\n",
"       <td>37</td>\n",
"       <td>23</td>\n",
"       <td>20</td>\n",
"       <td>34</td>\n",
"       <td>25</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>NumWebVisitsMonth</th>\n",
"       <td>34</td>\n",
"       <td>43</td>\n",
"       <td>32</td>\n",
"       <td>19</td>\n",
"       <td>17</td>\n",
"       <td>10</td>\n",
"       <td>40</td>\n",
"       <td>28</td>\n",
"       <td>27</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>MntFruits</th>\n",
"       <td>22</td>\n",
"       <td>26</td>\n",
"       <td>20</td>\n",
"       <td>36</td>\n",
"       <td>38</td>\n",
"       <td>41</td>\n",
"       <td>19</td>\n",
"       <td>22</td>\n",
"       <td>28</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>MntFishProducts</th>\n",
"       <td>23</td>\n",
"       <td>28</td>\n",
"       <td>23</td>\n",
"       <td>35</td>\n",
"       <td>42</td>\n",
"       <td>34</td>\n",
"       <td>26</td>\n",
"       <td>21</td>\n",
"       <td>29</td>\n",
"       <td>True</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>Age</th>\n",
"       <td>44</td>\n",
"       <td>43</td>\n",
"       <td>11</td>\n",
"       <td>27</td>\n",
"       <td>18</td>\n",
"       <td>25</td>\n",
"       <td>44</td>\n",
"       <td>20</td>\n",
"       <td>29</td>\n",
"       <td>False</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>R_MntFishProducts</th>\n",
"       <td>39</td>\n",
"       <td>35</td>\n",
"       <td>36</td>\n",
"       <td>6</td>\n",
"       <td>28</td>\n",
"       <td>21</td>\n",
"       <td>38</td>\n",
"       <td>30</td>\n",
"       <td>31</td>\n",
"       <td>False</td>\n",
"     </tr>\n",
"     <tr>\n",
"       <th>MntSweetProducts</th>\n",
"       <td>28</td>\n",
"      <td>30</td>\n",
"      <td>26</td>\n",
"      <td>42</td>\n",
"      <td>32</td>\n",
"      <td>22</td>\n",
"      <td>24</td>\n",
"      <td>29</td>\n",
"      <td>31</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>AcceptedCmp2</th>\n",
"      <td>25</td>\n",
"      <td>16</td>\n",
"      <td>44</td>\n",
"      <td>11</td>\n",
"      <td>36</td>\n",
"      <td>41</td>\n",
"      <td>23</td>\n",
"      <td>39</td>\n",
"      <td>33</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>AcceptedCmp4</th>\n",
"      <td>21</td>\n",
"      <td>14</td>\n",
"      <td>42</td>\n",
"      <td>15</td>\n",
"      <td>39</td>\n",
"      <td>41</td>\n",
"      <td>21</td>\n",
"      <td>43</td>\n",
"      <td>34</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>NumStorePurchases</th>\n",
"      <td>32</td>\n",
"      <td>38</td>\n",
"      <td>35</td>\n",
"      <td>22</td>\n",
"      <td>21</td>\n",
"      <td>27</td>\n",
"      <td>33</td>\n",
"      <td>32</td>\n",
"      <td>35</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>R_MntSweetProducts</th>\n",
"      <td>40</td>\n",
"      <td>43</td>\n",
"      <td>14</td>\n",
"      <td>28</td>\n",
"      <td>20</td>\n",
"      <td>29</td>\n",
"      <td>45</td>\n",
"      <td>25</td>\n",
"      <td>36</td>\n",
"      <td>False</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>R_NumWebPurchases</th>\n",
"      <td>37</td>\n",
"      <td>36</td>\n",
"      <td>21</td>\n",
"      <td>37</td>\n",
"      <td>31</td>\n",
"      <td>26</td>\n",
"      <td>36</td>\n",
"      <td>22</td>\n",
"      <td>37</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>R_MntFruits</th>\n",
"      <td>43</td>\n",
"      <td>38</td>\n",
"      <td>27</td>\n",
"      <td>33</td>\n",
"      <td>23</td>\n",
"      <td>9</td>\n",
"      <td>43</td>\n",
"      <td>31</td>\n",
"      <td>38</td>\n",
"      <td>False</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Education</th>\n",
"      <td>41</td>\n",
"      <td>34</td>\n",
"      <td>39</td>\n",
"      <td>25</td>\n",
"      <td>27</td>\n",
"      <td>17</td>\n",
"      <td>32</td>\n",
"      <td>33</td>\n",
"      <td>39</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>Frq</th>\n",
"      <td>24</td>\n",
"      <td>19</td>\n",
"      <td>38</td>\n",
"      <td>41</td>\n",
"      <td>43</td>\n",
"      <td>32</td>\n",
"      <td>18</td>\n",
"      <td>38</td>\n",
"      <td>40</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>NumDealsPurchases</th>\n",
"      <td>33</td>\n",
"      <td>43</td>\n",
"      <td>34</td>\n",
"      <td>24</td>\n",
"      <td>26</td>\n",
"      <td>36</td>\n",
"      <td>41</td>\n",
"      <td>19</td>\n",
"      <td>41</td>\n",
"      <td>True</td>\n",
"    </tr>\n",
"    <tr>\n",
       "      <th>Childnum</th>\n",
       "      <td>17</td>\n",
       "      <td>20</td>\n",
       "      <td>40</td>\n",
       "      <td>29</td>\n",
       "      <td>41</td>\n",
       "      <td>41</td>\n",
       "      <td>34</td>\n",
       "      <td>41</td>\n",
       "      <td>42</td>\n",
       "      <td>True</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Teenhome</th>\n",
       "      <td>27</td>\n",
       "      <td>28</td>\n",
       "      <td>43</td>\n",
       "      <td>16</td>\n",
       "      <td>40</td>\n",
       "      <td>41</td>\n",
       "      <td>37</td>\n",
       "      <td>35</td>\n",
       "      <td>43</td>\n",
       "      <td>True</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Kidhome</th>\n",
       "      <td>38</td>\n",
       "      <td>32</td>\n",
       "      <td>41</td>\n",
       "      <td>39</td>\n",
       "      <td>44</td>\n",
       "      <td>33</td>\n",
       "      <td>35</td>\n",
       "      <td>44</td>\n",
       "      <td>44</td>\n",
       "      <td>True</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>Complain</th>\n",
       "      <td>45</td>\n",
       "      <td>43</td>\n",
       "      <td>45</td>\n",
       "      <td>40</td>\n",
       "      <td>45</td>\n",
       "      <td>41</td>\n",
       "      <td>39</td>\n",
       "      <td>44</td>\n",
       "      <td>45</td>\n",
       "      <td>False</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "                           Chi-Squared  LinReg  RF  RFE  Extratrees  Dt
IV  \\\n",
       "AcceptedTot                          1       1   1    2           1   1
2   \n",
       "R_NumStorePurchases                  5       4  13    1          10  12
1   \n",
       "Days_as_cust                        16      13   2    3           3   2
10   \n",
       "R_Mnt_NumStorePurchases             20      14   3    8          15   6
5   \n",
       "Recency                             18      18   6    9           6   3
16   \n",
       "RFM                                 15      22   5    4           2   4
27   \n",
       "AcceptedCmp5                         2       2   8   12           5  41
3   \n",
       "MntMeatProducts                      9       5  12   18           9  18
6   \n",
       "Income                               7      17   4   23           8   8
30   \n",
       "Mnt_tot                              4       7  19   31          11  24
4   \n",
       "R_DealFrq                           14      31   7   17          12  14
28   \n",
       "R_MntMeatProducts                   30      26  17    5          14   5
29   \n",
       "R_NumCatalogPurchases               10       8   9   34          33  28
9   \n",
       "R_MntFrq                             3       6  16   43          34  19
12   \n",
       "AcceptedCmp1                         6       3  28   14           4  41
8   \n",
       "Marital_Status                      31      23  31   10          13  11
22   \n",
       "AcceptedCmp3                        13      11  33   13           7  41
14   \n",
       "R_MntIncome                          8       9  29   30          22  15
7   \n",
       "MntWines                            11      12  24   44          19  30
17   \n",
       "MntGoldProds                        26      26  22   45          30   7
15   \n",
       "NumCatalogPurchases                 12      10  37   26          25  31
11   \n",
       "R_MntWines                          42      38  10    7          29  13
42   \n",
       "R_Mnt_NumCatalogPurchases           36      33  15   20          35  16
25   \n",
       "R_MntGoldProds                      35      38  18   38          16  20
31   \n",
       "NumWebPurchases                     19      20  30   32          24  35
13   \n",
       "R_Mnt_NumWebPurchases               29      24  25   21          37  23
20   \n",
       "NumWebVisitsMonth                   34      43  32   19          17  10
40   \n",
       "MntFruits                           22      26  20   36          38  41
19   \n",
       "MntFishProducts                     23      28  23   35          42  34
26   \n",
       "Age                                 44      43  11   27          18  25
44   \n",
       "R_MntFishProducts                   39      35  36    6          28  21
38   \n",
       "MntSweetProducts                    28      30  26   42          32  22
24   \n",
       "AcceptedCmp2                        25      16  44   11          36  41
23   \n",
       "AcceptedCmp4                        21      14  42   15          39  41
21   \n",
       "NumStorePurchases                   32      38  35   22          21  27
33   \n",
       "R_MntSweetProducts                  40      43  14   28          20  29
45   \n",
       "R_NumWebPurchases                   37      36  21   37          31  26
36   \n",
       "R_MntFruits                         43      38  27   33          23   9
43   \n",
       "Education                           41      34  39   25          27  17
32   \n",
       "Frq                                 24      19  38   41          43  32
18   \n",
       "NumDealsPurchases                   33      43  34   24          26  36
41   \n",
       "Childnum                            17      20  40   29          41  41
34   \n",
       "Teenhome                            27      28  43   16          40  41
37   \n",
       "Kidhome                             38      32  41   39          44  33
35   \n",
       "Complain                            45      43  45   40          45  41
39   \n",
       "\n",
       "                           Perm  Ranking  Valid  \n",
       "AcceptedTot                   1        1   True  \n",
       "R_NumStorePurchases           5        2   True  \n",
       "Days_as_cust                  2        2   True  \n",
       "R_Mnt_NumStorePurchases       8        4   True  \n",
       "Recency                       3        4   True  \n",
       "RFM                           4        6   True  \n",
       "AcceptedCmp5                 18        7   True  \n",
       "MntMeatProducts              14        7   True  \n",
       "Income                        9        9   True  \n",
       "Mnt_tot                      16       10   True  \n",
       "R_DealFrq                     6       11   True  \n",
       "R_MntMeatProducts            12       12   True  \n",
       "R_NumCatalogPurchases        11       13   True  \n",
       "R_MntFrq                     10       14   True  \n",
       "AcceptedCmp1                 42       15   True  \n",
       "Marital_Status                7       16   True  \n",
       "AcceptedCmp3                 24       17   True  \n",
       "R_MntIncome                  36       17   True  \n",
       "MntWines                     26       19   True  \n",
       "MntGoldProds                 13       20   True  \n",
       "NumCatalogPurchases          37       21   True  \n",
       "R_MntWines                   17       22  False  \n",
       "R_Mnt_NumCatalogPurchases    26       23   True  \n",
       "R_MntGoldProds               15       24   True  \n",
       "NumWebPurchases              40       25   True  \n",
       "R_Mnt_NumWebPurchases        34       25   True  \n",
       "NumWebVisitsMonth            28       27   True  \n",
       "MntFruits                    22       28   True  \n",
       "MntFishProducts              21       29   True  \n",
       "Age                          20       29  False  \n",
       "R_MntFishProducts            30       31  False  \n",
       "MntSweetProducts             29       31   True  \n",
       "AcceptedCmp2                 39       33   True  \n",
       "AcceptedCmp4                 43       34   True  \n",
       "NumStorePurchases            32       35   True  \n",
       "R_MntSweetProducts           25       36  False  \n",
       "R_NumWebPurchases            22       37   True  \n",
       "R_MntFruits                  31       38  False  \n",
       "Education                    33       39   True  \n",
       "Frq                          38       40   True  \n",
       "NumDealsPurchases            19       41   True  \n",
       "Childnum                     41       42   True  \n",
       "Teenhome                     35       43   True  \n",
       "Kidhome                      44       44   True  \n",
       "Complain                     44       45  False  "
      ]
     },
     "execution_count": 122,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "from functools import reduce\n",
    "dfs = [chi_sq, LinReg, rf, rfe, extc, dtree, IV_rank, perm_df]\n",
    "compare_models = reduce(lambda left,right: 
pd.merge(left,right,left_index=True, right_index=True), dfs)\n",
    "\n",
    "# Vote\n",
    "compare_models['Ranking'] = 
compare_models.sum(axis=1).rank(ascending=True).astype('int64')\n",
    "compare_models.sort_values(by='Ranking',inplace=True)\n",
    "compare_models['Valid'] = df_chisq_rank.valid\n",
    "compare_models"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "## VIF"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 123,
   "metadata": {},
   "outputs": [],
   "source": [
    "from statsmodels.stats.outliers_influence import variance_inflation_factor\
n",
    "def calculate_vif(features):\n",
    "    vif = pd.DataFrame()\n",
    "    vif[\"Features\"] = features.columns\n",
    "    vif[\"VIF\"] = [variance_inflation_factor(features.values, i) for i in 
range(features.shape[1])]    \n",
    "    return(vif)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 124,
   "metadata": {},
   "outputs": [],
   "source": [
    "features_ = df[list(compare_models[compare_models['Ranking'] <=15].index)]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 125,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
"<div>\n",
"<style scoped>\n",
"    .dataframe tbody tr th:only-of-type {\n",
"        vertical-align: middle;\n",
"    }\n",
"\n",
"    .dataframe tbody tr th {\n",
"        vertical-align: top;\n",
"    }\n",
"\n",
"    .dataframe thead th {\n",
"        text-align: right;\n",
"    }\n",
"</style>\n",
"<table border=\"1\" class=\"dataframe\">\n",
"  <thead>\n",
"    <tr style=\"text-align: right;\">\n",
"      <th></th>\n",
"      <th>Features</th>\n",
"      <th>VIF</th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>0</th>\n",
"      <td>AcceptedTot</td>\n",
"      <td>4.312620</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>1</th>\n",
"      <td>R_NumStorePurchases</td>\n",
"      <td>25.025725</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>2</th>\n",
"      <td>Days_as_cust</td>\n",
"      <td>4.625467</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3</th>\n",
"      <td>R_Mnt_NumStorePurchases</td>\n",
"      <td>5.364882</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>4</th>\n",
"      <td>Recency</td>\n",
"      <td>86.600728</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>5</th>\n",
"      <td>RFM</td>\n",
"      <td>145.577934</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>6</th>\n",
"      <td>AcceptedCmp5</td>\n",
"      <td>2.689065</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>7</th>\n",
"      <td>MntMeatProducts</td>\n",
"      <td>14.387561</td>\n",
"    </tr>\n",
"    <tr>\n",
       "      <th>8</th>\n",
       "      <td>Income</td>\n",
       "      <td>25.686136</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>9</th>\n",
       "      <td>Mnt_tot</td>\n",
       "      <td>34.416204</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>10</th>\n",
       "      <td>R_DealFrq</td>\n",
       "      <td>4.994066</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>11</th>\n",
       "      <td>R_MntMeatProducts</td>\n",
       "      <td>11.482441</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>12</th>\n",
       "      <td>R_NumCatalogPurchases</td>\n",
       "      <td>5.740324</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>13</th>\n",
       "      <td>R_MntFrq</td>\n",
       "      <td>22.839674</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>14</th>\n",
       "      <td>AcceptedCmp1</td>\n",
       "      <td>2.167205</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "                     Features         VIF\n",
       "0               AcceptedTot    4.312620\n",
       "1       R_NumStorePurchases   25.025725\n",
       "2              Days_as_cust    4.625467\n",
       "3   R_Mnt_NumStorePurchases    5.364882\n",
       "4                   Recency   86.600728\n",
       "5                       RFM  145.577934\n",
       "6              AcceptedCmp5    2.689065\n",
       "7           MntMeatProducts   14.387561\n",
       "8                    Income   25.686136\n",
       "9                   Mnt_tot   34.416204\n",
       "10                R_DealFrq    4.994066\n",
       "11        R_MntMeatProducts   11.482441\n",
       "12    R_NumCatalogPurchases    5.740324\n",
       "13                 R_MntFrq   22.839674\n",
       "14             AcceptedCmp1    2.167205"
      ]
     },
     "execution_count": 125,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "vif = calculate_vif(features_)\n",
  "vif"
 ]
},
{
 "cell_type": "code",
 "execution_count": 126,
 "metadata": {},
 "outputs": [],
 "source": [
  "while vif['VIF'][vif['VIF'] > 10].any():\n",
  "    remove = vif.sort_values('VIF',ascending=0)['Features'][:1]\n",
  "    features_.drop(remove,axis=1,inplace=True)\n",
  "    vif = calculate_vif(features_)"
 ]
},
{
 "cell_type": "code",
 "execution_count": 127,
 "metadata": {},
 "outputs": [
  {
   "data": {
    "text/html": [
     "<div>\n",
     "<style scoped>\n",
     "    .dataframe tbody tr th:only-of-type {\n",
     "        vertical-align: middle;\n",
     "    }\n",
     "\n",
     "    .dataframe tbody tr th {\n",
     "        vertical-align: top;\n",
     "    }\n",
     "\n",
     "    .dataframe thead th {\n",
     "        text-align: right;\n",
     "    }\n",
     "</style>\n",
     "<table border=\"1\" class=\"dataframe\">\n",
     "  <thead>\n",
     "    <tr style=\"text-align: right;\">\n",
     "      <th></th>\n",
     "      <th>Features</th>\n",
     "      <th>VIF</th>\n",
     "    </tr>\n",
     "  </thead>\n",
     "  <tbody>\n",
     "    <tr>\n",
     "      <th>0</th>\n",
     "      <td>AcceptedTot</td>\n",
     "      <td>4.284276</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>1</th>\n",
     "      <td>Days_as_cust</td>\n",
     "      <td>4.077000</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>2</th>\n",
     "      <td>R_Mnt_NumStorePurchases</td>\n",
     "      <td>2.743741</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>3</th>\n",
     "      <td>Recency</td>\n",
       "      <td>3.501894</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>4</th>\n",
       "      <td>AcceptedCmp5</td>\n",
       "      <td>2.651668</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>5</th>\n",
       "      <td>MntMeatProducts</td>\n",
       "      <td>8.733807</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>6</th>\n",
       "      <td>R_DealFrq</td>\n",
       "      <td>4.513024</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>7</th>\n",
       "      <td>R_MntMeatProducts</td>\n",
       "      <td>8.088744</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>8</th>\n",
       "      <td>R_NumCatalogPurchases</td>\n",
       "      <td>4.708534</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>9</th>\n",
       "      <td>R_MntFrq</td>\n",
       "      <td>9.771704</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>10</th>\n",
       "      <td>AcceptedCmp1</td>\n",
       "      <td>2.156185</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "                   Features       VIF\n",
       "0               AcceptedTot  4.284276\n",
       "1              Days_as_cust  4.077000\n",
       "2   R_Mnt_NumStorePurchases  2.743741\n",
       "3                   Recency  3.501894\n",
       "4              AcceptedCmp5  2.651668\n",
       "5           MntMeatProducts  8.733807\n",
       "6                 R_DealFrq  4.513024\n",
       "7         R_MntMeatProducts  8.088744\n",
       "8     R_NumCatalogPurchases  4.708534\n",
       "9                  R_MntFrq  9.771704\n",
       "10             AcceptedCmp1  2.156185"
      ]
     },
     "execution_count": 127,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "vif"
   ]
```

```
  },
  {
   "cell_type": "code",
   "execution_count": 128,
   "metadata": {},
   "outputs": [],
   "source": [
    "vif_selected_variables = list(vif['Features']) #+ ['Response']"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 129,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "['AcceptedTot', 'Days_as_cust', 'R_Mnt_NumStorePurchases', 'Recency',
'AcceptedCmp5', 'MntMeatProducts', 'R_DealFrq', 'R_MntMeatProducts',
'R_NumCatalogPurchases', 'R_MntFrq', 'AcceptedCmp1']"
      ],
      "text/plain": [
       "['AcceptedTot',\n",
       " 'Days_as_cust',\n",
       " 'R_Mnt_NumStorePurchases',\n",
       " 'Recency',\n",
       " 'AcceptedCmp5',\n",
       " 'MntMeatProducts',\n",
       " 'R_DealFrq',\n",
       " 'R_MntMeatProducts',\n",
       " 'R_NumCatalogPurchases',\n",
       " 'R_MntFrq',\n",
       " 'AcceptedCmp1']"
      ]
     },
     "execution_count": 129,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "vif_selected_variables"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Remove correlated features by importance order"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 130,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "array(['R_MntWines', 'Age', 'R_MntFishProducts', 'R_MntSweetProducts',\
n",
       "       'R_MntFruits', 'Complain'], dtype=object)"
      ]
     },
     "execution_count": 130,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "not_valid = compare_models.loc[compare_models.Valid==0].index.values\n",
    "not_valid"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 131,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "['AcceptedTot', 'R_NumStorePurchases', 'Days_as_cust', 'Recency',
'MntMeatProducts', 'R_DealFrq', 'R_MntMeatProducts', 'R_NumCatalogPurchases',
'AcceptedCmp1', 'Marital_Status', 'AcceptedCmp3', 'MntGoldProds',
'R_Mnt_NumCatalogPurchases', 'R_MntGoldProds', 'NumWebPurchases',
'NumWebVisitsMonth', 'MntFruits', 'MntFishProducts', 'MntSweetProducts',
'AcceptedCmp2', 'AcceptedCmp4', 'NumStorePurchases', 'R_NumWebPurchases',
'Education', 'NumDealsPurchases', 'Childnum', 'Kidhome']"
      ],
      "text/plain": [
       "['AcceptedTot',\n",
       " 'R_NumStorePurchases',\n",
       " 'Days_as_cust',\n",
       " 'Recency',\n",
       " 'MntMeatProducts',\n",
       " 'R_DealFrq',\n",
       " 'R_MntMeatProducts',\n",
       " 'R_NumCatalogPurchases',\n",
       " 'AcceptedCmp1',\n",
       " 'Marital_Status',\n",
       " 'AcceptedCmp3',\n",
       " 'MntGoldProds',\n",
       " 'R_Mnt_NumCatalogPurchases',\n",
       " 'R_MntGoldProds',\n",
       " 'NumWebPurchases',\n",
       " 'NumWebVisitsMonth',\n",
       " 'MntFruits',\n",
       " 'MntFishProducts',\n",
       " 'MntSweetProducts',\n",
       " 'AcceptedCmp2',\n",
       " 'AcceptedCmp4',\n",
       " 'NumStorePurchases',\n",
       " 'R_NumWebPurchases',\n",
       " 'Education',\n",
       " 'NumDealsPurchases',\n",
       " 'Childnum',\n",
       " 'Kidhome']"
      ]
     },
     "execution_count": 131,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "#### 1 Using correlation\n",
    "\n",
    "# lista com variaveis ordenadas por importancia\n",
    "# para cada ver a correlacao com as outras\n",
    "# se for acima de 70% retirar essa var da lista\n",
    "\n",
    "# Lista com features ordenadas por importÃ¢ncia para explicar a variÃ¡vel
target\n",
    "col_ordered = compare_models.index\n",
    "\n",
    "# Dataset com apenas as variÃ¡veis nÃºmericas\n",
    "x_ = x[col_ordered]\n",
    "columns = np.full(x_.columns.shape[0], True, dtype=bool)\n",
    "\n",
    "corr = x_.corr()\n",
    "to_keep = -1\n",
    "\n",
    "for i in range(corr.shape[0]):\n",
    "    for j in range(i+1, corr.shape[0]):\n",
    "        if corr.iloc[i,j] >= 0.7:\n",
    "            if columns[j]:\n",
    "                columns[j] = False\n",
    "selected_columns = x_.columns[columns][:to_keep]\n",
    "# remove non valid variables\n",
    "selected_columns = [x for x in selected_columns if x not in not_valid]\n",
    "selected_columns\n",
    "#df_after_remove =
pd.concat([x[selected_columns].iloc[:,:to_keep],y],axis=1)    \n",
    "#print(df_after_remove.columns)\n",
    "#df_after_remove.head(1)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Decomposition \n",
    "---"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "* PCA \n",
    "* Factor Analysis\n",
    "* FastICA\n",
    "* TSNE\n",
    "* LDA\n",
    "* Kernel PCA\n",
    "* Feature Agglomeration\n",
    "* Gaussian Random Projection"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "## PCA"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 132,
   "metadata": {},
   "outputs": [],
   "source": [
    "from sklearn.preprocessing import StandardScaler\n",
    "from sklearn.decomposition import PCA"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 133,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "\n",
      ">>> PCA 80% of cumulative explained Variance achieved with: 10 
components\n",
      "\n",
      "    Explained_Var  Cumulative_Var\n",
      "PC                               \n",
      "1            26.8           26.77\n",
      "2            11.8           38.55\n",
      "3             9.8           48.39\n",
      "4             8.0           56.43\n",
      "5             6.5           62.97\n",
      "6             5.1           68.02\n",
      "7             4.2           72.26\n",
      "8             3.3           75.61\n",
      "9             3.0           78.57\n",
      "10            2.4           80.96\n",
      "11            2.1           83.02\n",
      "12            1.9           84.94\n",
      "13            1.7           86.66\n",
      "14            1.6           88.26\n",
      "15            1.5           89.79\n",
      "16            1.3           91.07\n",
      "17            1.2           92.25\n",
      "18            1.0           93.22\n",
      "19            0.9           94.11\n",
      "20            0.9           94.99\n"
     ]
    }
   ],
   "source": [
    "n_components = 20\n",
    "i = 1\n",
    "achieved = False\n",
    "for n in range(n_components):\n",
    "    pca = PCA(n_components=i)\n",
    "    principalComponents = pca.fit_transform(x)\n",
    "    cumulative_var = np.sum(pca.explained_variance_ratio_ * 100)\n",
    "    if cumulative_var >= 80 and achieved == False:\n",
    "        threshold_80_percent = i\n",
    "        achieved = True\n",
    "        print('\\n>>> PCA 80% of cumulative explained Variance achieved 
with: {} components\\n'.format(i))\n",
    "    i += 1\n",
    "pca_board = pd.DataFrame({\"Explained_Var\": 
np.round(pca.explained_variance_ratio_ * 100, decimals=1),\n",
    "                          \"Cumulative_Var\": 
np.round(np.cumsum(pca.explained_variance_ratio_ * 100),\n",
    "                                                     decimals=2)})\n",
    "pca_board.index.name = 'PC'\n",
    "pca_board.index += 1\n",
    "print(pca_board)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 134,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "image/png":
"iVBORw0KGgoAAAANSUhEUgAAAmEAAAG5CAYAAADGcOOUAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAA
LEgAACxIB0t1+/
AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDMuMC4wLCBodHRwOi8vbWF0cGxvdGxpY
i5vcmcvqOYd8AAAIABJREFUeJzs3Xl4U2Xi9vHv0wVEgVIUAWUpKbLvtAgitIi7RXBwGWAEZFxmdH64g
MsobqjvjBvgjrgBCqgoi1RFxaGIgINBcFRQEVvZFMpiWQSh6fP+kdMaSpekND1Ne3+uK1d6kpOkOTO0krt
88554mx1iIiIiIiFSvK7QAiIiIi1ZFKmIiIiIgLVMJEREREXKASJiIiIuIClTAREREF6iEiYiIiLigy
pcwY0yCMcYaY8plLg5jTKqzazy2J6zzZHONjPKa5tSfvJ/f4wxCc5ylrOc6mowF+h3VUSk/
ERMCQv4hy//
ssMY84ExJqmUh+4BnnAu2WGs62l7cgyqcyESEZHIFuN2gDJIBzKBFOBcINkY09Zau730Rta2XyYWGvt
LuCm8npya+0P5bk9kYrg/C0cdjuHiIj8IWJGwfUWZGzAyAbAuCtjbjFHzUlHHHMaKNAemqFYoR5Xx2uwt/
zDGfG+M2WuMec0C0cdjuHiIj8IWJGwgK8ZK0dDfR3luOBXoG7HY0xfzPGbAU+LGp3/
VjovBcHjDHflfR+G2M6GGPeNcZsdz67t40M4WLo5n8Ne57M5MWCbfY0xnzive6sxZoYx5hTnvludr
E87y7c4yw87y/c4y48Wk/
cUY8yHznu2zBhzv7P+moDfh6L+FmKNMR8JJAcs7gZeAhwJvD9hW4HpTgQPO8l+d+88JWOc9Z51vnPtSnduz
nOXA5/0R/27Kfc7y/znrjAQ+Ap537t/l3P/ngPstkFHMa28E7HDW+AKKc4DyvBZZAbzs/
7wcSncdnOLcdBl4FcpzlX4F4Ae/tg4VeYx7wlfOYw85x1HnGWBzWDZs/
3AXWddWY5t60CpjvbyANSnfunBmxjLvCN8/NS5/578O9utsBbwCSgB/
Cac9uHznu+CFhYwnu7CzgEzME/0mqBdUDNQr8vCYV+F/c4n2bH53ltsU8TsZ+LdQE/gamAY8g/
93yQa+NwGP2+a8tu3O8uOFPte84j5j5XXXTRRddgru4HiDooH/
8w1f48g7+Uhb4DB3gtvz1AaRN5+D/zYd/
z1l+t9BrPAy8k5W3iRbYFlk3gCn3zMhr48FO7j5TP8o9YHjGH/a2t1/NSiK2o5b3bbalO3e84j5/
b4kFHrOG53lzG5X+JJXO4Hj8JePXOe2JKCB87MPeAp/
V3LntCYovYWcvevxpwCwC34S3T+7/1BnN+rgMcCJ4EPnZ4mAc/
i7fGmMB1lgW5rdOIrGmOajs2fDWHUhqYCZQB/
8IaXGv7SRjTM3A+4v5v5XEVEJEiRekzYc3A+4v5v5XEVEJEiRekzYzdbaB6217wcUjw3kwLW2t+D+Ue
R7yNc73Zub7CuR6J/x/A5/I4XLONcn5OfA1v5qnFn+4wHQMKxgZZeEDHKrzl5vR74Xtnf/
Gj+kCw9Gn0n+vOIJZc9mUdxNk5kxvMIeGR1PfMkXhQ3dDwVrsfi3pHV7OZk+8wbpzAu2rcAA4BRjgHtDfHPwr
2Df5drgRctwH+a639zRizrBqe3wnDy6hHVFRKQMInEkLOystR/hL2HLgTOBy/
D/Y1+ae/GXrIP4y8E7fDv9nk+xDy/4C8n8/DvjhqOv1zsttbux3+m6Nv4/0E/G/8oSn/
rn07jWGzCf8D8+fhHv2631r7j3HcXcDfwGzAU/2j/r8C/8R/kPRL/CRYr8I/UBOs+
Lune+E/Fq8h/s+tNv5ycjn+3a7DrLW7Cz/YWrsVfxlJx3+0fP4B+Zku25u+HfPfsOzi5na+0a/
```

```
L8HK/AfC9gC/wH65weMEq7ij1K4rNC1BZaW8LzD8J/o0Rx/
YZzo3F7aCPDT+H+HagJ98R+sX5x7nHVq4j92bFwp2xYRkRCZIvbmSQicY7IyAZzdWBHP+Cc+XQz8ZK1N
cDeNFGaMibPW5gQsP4+/AL5mrb3yGLed/
x+EFtbarGPZloiIlEy7I0Uiz1XGmIH4Rzxb4B+9y+OPkVcREYkAKmEikec7/GdU3o7/
BImlwAPW2s9KfJSIiFQq2h0pIiIi4gIdmC8iIiLigojYHdn/
4qH2lEYnux1DREREpFTrvv9hhzcjvdQJ2SOihJ3S6GRenTLJ7RgiUknZHdsBMCfpf9ZExH1JqWmFJ0sv
knZHikjE8737Fr5333I7hohISFTCREREFygEiYiIiLigog4JkxERNx1+PBhNm/
ezMGDB92OIlJpHHfccTRp0oTY2NgyPV4lTERESrV582bq1KlDQkICxlSJb2gTOSbWWnbu3MnmzZtp0aJ
FmbahEiYiES+qz9luR6jyDh48qAImEsAYw4knnkh2dnaZt6ESJiIRL8rTyu0I1YIKmMiRjvVvQgfmi0j
Es79swf6yxe0YIiIhUQkTkYjn+2A+vg/mux1DIkRqaiper7fEda6+
+mrWrl1bLs+XkJDAjh07ymVbgcozo7hDuyNFREQKefHFF92OUCKfz1fpM0rpNBImIiIR4bXXXqNHjx50
6dKF6667Dp/Px08//
cRpp53Gjh07yMvLo0+fPnz44YdkZWXRpk0bRowYQadOnbj00kv57bffjtrm3//+d5KSkmjfvj333ntvw
e2Bo2W1a9fmrrvuonPnzvTs2ZNt27YBkJ2dzeDBg0lOTiY5OZlly5YBsHPnTs4991y6du3Kddddh7X2q
Od97rnnuO222wqWp06dyv/
93/8BMGjQILp370779u2ZMmVKwTq1a9fmnnvu4fTTT2fFihVHZCzudSQkJHDvvffSrVs3OnbsyLfffgv
Avn37uOqqq+jYsSOdOnXi7bffBuDDDz+kV69edOvWjcsuu4x9+/
aV4ZOSYGkkTEREQnLTTTexZs2act1mly5dSp+O8IXrduHW+88QbLli0jNjaW66+/nhkzZjB8+HBuv/
12/
va3v3H66afTrl07zj33Xsjuu+946aWX6N27N6N6NGjeLZZ59l7NixR2z3oYceon79+vh8Pvr378/
vc/OnXqdMQ6+/fvp2fPnjz00EPcdtttvPDCC4wbN44bb7yRm2+
+mTPPPJONGzdy3nnnsW7dOu6//37OPPNM7rnnHt59990jilS+Sy+9lF69evHII48A8MYbb3DXXXcB8PL
LL1O/fn0OHDhAcnIygwcP5sQTT2T//
v106NCB8ePHH7W9k7HSSedxBdffMGzzz7LY489xosvvsgDDzxAXFwcX331FQC7d+9mx44dPPjggyxat
IgTTjiBhx9+mAkTJnDPPfeE8ElKKFTCRESk0vv4449ZtWoVycnJABw4cIBw4cICTT/Z/YfvVV1/
N7NmzmTx58hHlsGnTpvTu3RuAv/
zlLzz55JNHlbA333n4NsdTKVOmkJuby88//8zatWuPKmE1atTgggsuAKB7d+7z+lvAzNJPMMnfHH/V6GjRogMfj4bPPPuO0007ju++
+K8j65JNPMnfuXAA2bdrE+vXrOfHEE4MmOjmbw4MFFvj8lvY4//
elPBdnzcy1atIjXX3/+94PHx8+94PHx8fGkp6ezdu3aghyHDh2iV69eRT6B2flA+VMBGJeFFnXeB2hGqlpBGrcLHWM
mLECP71r38ddd9vv/3G5s2bAf9utjp16gBHTx9QeDkzM5Mzz//
nPj4eEaOHFnkNwLFiBbVq1TrqMcFMXXDFFVfw5ptv0qZNGy655BKMMWRk
ZLBo0SJWrFjB8ccfT2pqakWVjBZqakGm4447juj06KO2U9rrqFmz5lHZrbVHvHZbTWcs455zBr1qxSs0v50DFh+P/
vZdWqVW7HEJEyimragqimZZuxWiJD//
79eeutt9i9i+fTsAu3bt4qeffgLg9ttvZ9iwYYwdO5Zrr7224DEbN25kxYoVAMyaNYszzzzziO3t3buXE0
44gbi4OLZt28Zt28b7778f+fUqB44Zzzz2Xp59+umA4E3Bb9++zJgxA4D333+f3bOTqOHHE0
44gbi4OLZt28b7778fUqZzzz2Xp59+umA5fxSub9++zJgxA4D333+f3bt3F/n4P/
3pT8ybN49Zs2ZxxRVXAJCTk0N8fDzHH3883377LZ999lmpOcryOgpn3717Nz179mTZsmX88MMPgL/
cfv/996VuS8pOJQyYMmUKSUlJ/
Prrr25HEZEyyNuUSd6mTLdjSBi1a9eOBx98kHPPPZdOnTpxzjnn8PPPP7NkyRK+/
zzgiJWo0YNXnnlFQDatm3LtGnT6NSpE7t27eLvf//
7Edvs3LkzXbt2pX379lx11VUFu0DLonfv3uzevZsOHTrQuXNnlpKmkWMBRUsFWVCv9zXd+ZtwMlfXgLfqVOrMHddumAyDgZTnzVZvEXkX+mRfnfQvdvP7BEjeKozqf8MBZxW+JwqTqLCuNd6HoksGoqGQRSMoEWSNBzrmfrIDSI9Dvf8A4Xyp7lZH0yktT9Gq4wMoJfLbo7rbM8gXcWQlZJpGT1n+GWfpZQ/rbpMMh3kvqfY4bwwBZLMyRjvMDKAT/XYnW+mqVRIiP6UgElnBmFwkQvqDBjBa8+49Jq/Pna4b8exAlljk2jUZJt4T9fvcGB4YdPrLhZnXAXnQmEIIRJILKHoSLnVImjhjIoDBdeJFfr4N9eMuMNtc8jV7ZMK3bsfmBqmkzHhqwHeQ4X4iktGgHTFyE4gn7D2gOvUpfHwzpn9QjFM3W4M0lXjJUHUV8rjmVZtx5jVpGxzYJKgkGGhPFIVBSjnMHIlZIv6FhnHFxQQ7DNdQAdEVjfjNhU9+KiHNgZA7Dn8bVuYvtOBq6CmMcuMIlqWyMBCdvWWcoexN+SCqpyUCkvFwPfEJmTmQfMvFb2LtB0zGYfH4dKlOu+MnbxFKV5k3bjwV5jOw3fkCjV+TrTR7vMIekYn+hDlEXbt6sNSKcDKVi5q3aaNfNexwqGO3LnLhoPWe9KBQJvFmVvGbvRYq1Y1PFlhVWe5bmC9F5l9SsSdPDM6+1uRxDmB5hdA3u7LqKi0RK8NRb+/uRcppn7NXD7ZPvDzn75QWbOjFnCNl2wRK/Y34A+KRLHe1sBVtAUH35SC5r5UuMkGhd2Ra1H9HF/ndD+LLavmxDhMUR+6w8mGJdPTbNdr3M9L99vtDsX1DX5jtbN0LqJXNUFndB+NjsbZ4t6Cs+W27C1EKu0+0oVBKhBJI5ZnXZY1lBmM3NNOyFUz7+P5w28GZM1fDN3Z7X3T9QbbGt0DyQ9ZEtC2ld43Z1QVE9VXDTJdFSY/nHLeJpSIV7ck8QIYbZGWFrThZb0FJSX4uyFXRgvDCihJ8Y7IaVyXR2yqjbYhNZ1BSYYTnbPkZvbr+7QqAw+z8xY7XFIo6YRMBbqV6+cSRhzHk2EcYm2Wc02m/a3v7Hyc+Eb/hsKn+hVjvnN+vN4MG9fUuIXXTlz3y5/38bf6lZ+/0qcK8uI5v/ZE49PfNb7eXYnxVncDSkY4GRzKeVhzJeJxPh47KA5uFFxqPLVy7KLOPoKEJTqEeYpLj2ewM+7mF8bXKfV5g0SrtkrzPvt6V+Vh0W7Ke2d0D5RaTVN3vKsrE69PBzlpOJ1W7Oi8XZHOAeLOOpmDYF5ExyAUtXGN0mSu3bb+Hc7+D5NJY/zfTrx9w8RBVTtuSJUSQW6SpPr9g8XmoWtD4LWZC6fF0o6AHMNdmUljr8P4WjxbS5c/k9iD8Er/Tp8bmEcohPT3i36DPSN5x/mgo6v4rWgUBLFGHAaAPbA8nFr8pvhpAG/hgJvOUxfFlGmkVmp30B/OJpfhyzqEi5F8S7KaLlzczvvrt2XYzRqlMXIsjlY56yvHzZBp/xfzR8gX6dKGMKfqAqSG5M/DmzZi0SkwWHDRmsqMODcRCWUttUOGOz6CEEVxFnY3lj7zhy2GTdLDqT5UYw2T6iLsPZKQQI90m9znTTGEG11ZLrl0Lp3AyZxGKAxN11TDnAlyHtg1g+U62mDRiXL6n7hBnDYIqVEthYnbMsxGqMswYxvEIBO5pQTqCThtC0P0YwUF1X5YnkMTh0HFMYzbAbvl/LaexO0hb//GlRH10Cbj1rOHbHEhQxXVLHYGVc5IAHi5W4eYb8wBkXuEJBhRbZEwNGrt68pZXi/H3Y8Wx8TKmwHOaJ40uPBKMNPG2APzzFfl+cs1qXKX0I66MpLkAPqLWdYAXzmVdRF8zGMtjoZmGK7WP7UIH8ggKTuGJcWY4ZrY+t07oE6wuALAFr3PeUJkg7akq72BG4aKYnm6ve5wS9+3EcNxKHKCeJC0k6O/Yr8dn6hFlZXNzy7XMGxLXO53gs+ij7tUHpxFZgyQxu6nQEEPK0eUgPHSw5CMyAzdYjUvZWcZR+2oGvmvxZ//gRrjkjDFxOz8wzx0Ctw+FlqHbO0c1fEXFHwtjgqMlBLRZLbt0ClqmSfXSjUlwvNuk5HPkcQu9K0DfRdqzyuLRjYeg3yYcaoL6rt32qFfvc2nmNdTcePtNdgHEbbthjbxCKYOP/dZDdYMEiO3GymQgeEsiW5zOhnQQI3lJRL9MwWU6KQ/1ixaJovPcRyHh8CtwQq9tmGnN8mr/KUs4Dif4+DFu7MnvfMCBA+z9N/dHzsnDjWeuV7FtQnM3m7EXHnGfUUBDk6tf3DEZE+mtU/9aRNLBxS3AOZSCZqxCYQ7sbmzFUFXFmpCZxDtUVHCB9sSbRfBcHIJFxTqaCU8PGxJnC7DznzWEnJoXtMkaZhaP7P0G3Qvj6mk7fRkVOovzVpffgBEcyyhAoqx8gPvkeaF9yKnETVvNJzyP0N2v4HPJDjh/AJbwD+kn4WMHLIe8fdOfe8YHxbEfB/AzwBJcCkQbtO9Nt6PtnpNBhnW5Fh7oh9k6kO9rrBdUW/rbNK4MJFy0gCRNEE+9ypP6vVp/cBpD6bvO7r8ySiYXHJcXozvFwTThOOfWeg76yNbw0GifRqyT5hj4Dw1Y4VV/s0X7xFGr7xJLxbpvW1HDP0WR1OYgRQADu3MwGDkd/8Gj35EaIrBnhzBoAQ1b3TS/ec6D1X6vUEiqsqJ/xRjwS2Hl97nIOfGcXO1jH/dgXi/+qcvbr9BWtCrAgQe/1pEXL
```

```
vbbb7Z9+/b2888/P+L1HD582Obk5Fhrrc3OzraJiYk2Ly/
vqPesbt26dtOmTdbn89mePXvapUuX2kOHDtlevXrZ7du3W2utff311+1VV11lrbW2Y8eONiMjw1pr7di
xYwves0Bz5syxw4cPt9Za+/
vvv9smTZrY3377rcT39fjjjy94zYXl5eXZjIwMO3z4cJuYmGjvuOMOu379+iLX3bp1q+3QoYM99dRTbb
169azX67XWWnvDDTfYV199tWC9UaNG2dmzZ9tff/
3VXnjhhbZ79+520aJF9oknnrBTp04tctv5Cv9tWGtt95SLvDaIfqOzIx3R0dEkJCRoJExEpBL6z3/+w6
WXXspJJ50EQP369ut9THJyMo0bNwb8J1+de+65AHTs2JHFixcH/dyHDx/mH//
4B2vWrCE6OjqoL7W+4oorGD9+PFdddRWvv/56e56wtctv5Cv9tWGtt95SLvDaIfqOzIx3R0dEkJCRoJExEpBL6z3/+w6
53//+VzBCl5OTw/r162nRogVPPfUUHTp0oGfPngwZMqTgMeeccw4nnngi4P9i8E8//ZSkpD
+Ncday5133sknn3xCVFQUW7ZsYdu2bTRq1OiI3D169KBJkyYAdOnShaysLOrVq8fXX3/NOeecA/
hH6ho3bkxOTg6//vorKSkpAFx55ZVFfnn4BRdcwOjRo/
n9999ZuHAhffv2pVatWuTk5BT7vvbo0aNgIvXCjDGkpKSQkpLCnj17ePjjhh2nTpg1vvPEGgwcPPmLdWb
NmMXLkSMaMGcOKFSu48sor+frrwtG+ApvNy4ujnfffRfw7/
Z8+OGHmTNnDtdccw27d+9mzJgx9OrVq8hcZaESFkBzhYmIBKek7+k0sTVKv/42iF/
z6e1FmPM0TliYsjLyytY59ChQwX31OqZs+DnqKioguWoqCi8Xu/xX3jxl/aWS9lPT7fxIkTadiwV9+
+SV5eXkcd9xxpebt1asXP/zwA9nZ2bybN1aJr/
Wpp57ivPPO+q+LVu2EBUVxbZt28jLyytm8jJq8hcZaESFkBzhYmIBKek7+k0sTVKvv/42iF/
YdHU1ubi7WWtq3b8+KFSuOWPfXX38t8jMp7LjjjiM1NZUPPPviAN954e+nnDCCSVu88CBA8ydO5
eXX36ZX3/9lSeeeKKgJAZ66aWXWLhwIeD/
TA4ePMiOHTto0qQJmzZtKlhv8+bNRx7zNX78eO666y7dGTp0KAMHDgypwJdGx4QFUAkTiUzR
F11K9EWXuh1Dwqh///
jcf78+Rw+fDik7Qbz+JycHBo3bkxUVBUBSvvvpqwcHiderUYe/
evUVu1xjDJZdcwi233Lbtm0LRqnOPfdcn766YL11qxZc9RjzzvvPJ577rmCLN9//
z379+8nNzeXq666ipkzZ9K2bVsmTJhQ8JiPPvqIXbt2ceDAAebNm0fv3r2Peg0nnn3wysbGxLF68mJ9+
+ino96h169ZkZ2cXlLLDDhw/zzTffUK9ePeLi4vj0008Bf9Erzp///
GdeeeUVli5dWlAui3tfS3PbbbfRrl07li1bxqOPPorX6+WGG26gbt26R63Pv74Y8D/
RdsHDx6kQYMGXHzxxbz++uv8/
vvvZGZmsn79enr06FHwuvPXr17N161ZSUlL47bffiIqKwhhTZHE9FhoJC+DxeOjXrx9/CXvVpqkfhTMdebJ2ahNsTUEnu0Ui68oUdqnBCFKBgNrD1L7X4fOM9yfqfvfRpmXvr6yWLp2Zl2FJPDkIvKsgB3bGNsDRP
AMRScUZqPPUxn4ErH8ULvYJO3HRRxeSYZRvVtW0s8SMu69bJT0XzJhTtFTNFRZ4BPK2BNG2J6k5Nj8TB9v6hBa7JqjJ1tXY3cH1QxUCAKL5HXYbEcEucqqn
b8eFMd88XsNqK5FOHDYOa6Vtdax0YZcbyqwHDGjXV0rSyW5qGJyyl8bJ+NVG12IsRNq7TwedcQ+TLRQmfTnIq7fj9oRLVbRC3r5T8Zx3Yrn4bkXjE5UG8F
oWgWp7Q2zsZXZnJ9XvMRaPTpwaiy0UtRWaHZUoo+1ZydKWvBRCR5/
+l8PW5RNSchl4YfKXwQx6ZmF5x9GOCYLK2IM6X2ETzI8fJQDuyL/
KtsdQqf6DBe3L47l8JvS4Nt8ZMTyrETn5R1JBzkwvvt9EDgfMIhsRyBDhgkWCvcPJfRLBUAxKrWnY1sqtDwb8R+UE3BYBn13+wsffB4ZvP/
TJVi7ja1nevstt6sL88sbxkMWUaRN7lkMPH7vmd6XrcSlf/
xFWPKDBmhHwiUs4WqACWjdCxtH4Ml/
5P6XjcH1WH6h6uZ8dJ3wsiqRmhmjnyXxrP9N0gYnPGoUPsaFsaztU31Fd8UF0ENfSaYA+ZgeMCrR9i/
s9VNDwrrLSkJfNGfz7YxbPTmEm5Nn1qePvdMTg8Whx8jcyWUzzvnOT1tZ6FQTMyNCg4vN/
+OoHZQ9cFyyYd2/
L4/
QRvqaSYtQNjhvQRNZRG64/
H5YEDJ1nUYK5xJd9DtIiCQD1lO5VXuNpZB9J7wSedHuxxLRnVf3RObzbPD8SEk//
LCmQ/
SkXL9pN/
t8mwJgUDiVWNmdxvlzsW//
9vwdOeu8NlE8QBAAJ2aE0cX5bSGHVRMeGEbSP3Lx3/
t6C7Qoa/
cS1GrvwunjYMpPhBJz/
99VmMZA5vzvAxLeGjfmiFhD7hPRBBAAdRJ9TXC04//
zDmO5XUeFMlZQqlvNzLpI1/
cOdPtX/
eabcnd/
CDwJYfWqRPcRDdBQdkvPOKqnJaKxn2knxAMvpMD/
HVI39/
zDuTbc/
6aIM3bq2P9dttzOCr5ljDMf8AU8/
eDv26MNkYetoeNLkU+tnc1zE/
W6gDPsu9XrkWuTsLpOc9cTGWbs/
sbv7/
Xof6QrM8pW8fI/
O9x3O4fVtfqePudJcOTpzw/
QWEWGSJeNeJLcdPt2fx/
bAm+P9ZRKT/
RKkWYGTDhdlztuVSlvbH/
vNpA0TEumJdV2gdyx9iZxrjhGdzvd3vDp+36/
+PbjeWs8mBf3nwc9z2+PbH8s7dXQ/
tf5QL0zjWfyOWa+mH4hIZdX8pOaKE9RTDazpPjW1ha3X/
dvqqLWGLf2hbcPdvW/
ZWZqJhCT8f/
ERejVAGp+gIuRDrl+W3JV++XMu/
4f5LJdSV5A+uMqfT/
tGQ1tFDIQqPtELIgTiNE5tOK83/
TKrOrjEdjSwAq9/
8DOfX3Gh9ezwEZq7/
ECzVFRXlNvSPWcjdZW9/
6UhSrjLqAjd0xg6p+6JWCOGcH/
Tac7Xu+cZ8zJuZ/
zn5CE2O94XQPhh5rNrhZ/
H8VjEj7jlRHZmQhAOE3vr/
MVyeMXrWHLW0Bxy/
8f+Pnkn/
YyW3yiMJe5DQRDhUjHgfnTVjpFvXPvnMEgfTcDLcXoNrGwXH87mq/
b+ZcN8/
AKjA9wGhRJcULn+hEnKZtXGmrkUm2k3jb/
vr8GJ/
HFz5EjX73Rb4jHbLm/
evw/
cn8k/
Gvb/
8u3H/
E37tFWBLWI5J2oM8T2bcQaf/
ZswiFH/
APwP4W3tKpMoT+Y4mk8mU8VPjwFMPGjw4+h2/
nNjqEN+KZQw7NuKFb4A/
FWu/
X/
q+wZ/
1MbMfNj2XDWb1WZ/
UJ4NBc0oa/
CfWqOzBwVEqDrTeOm42Jr74HzJVV+gIxzSHnCRjj7LwKnIQpGPvc6jg5e9fhkO0N9cNUgXkrnk+W7KFqd/
BaxE6R7wmgVEbt8cxSY/
GwH2Ppfu1RT4cYWf7Q4gKbi8qv9efo0ClB9XXI1Nk0VL/
Ga1hQ5Zq+97r5eX/
Ryw3jlvE1d2dHr+9Bq75dEtwPZM/
0l/
2W4e6/
zP7PKf6Lqh4qBHPe4S2lLTA+HaJZK2HqLQAH/
MKw9O2N6bSvBGQ+Ok7Y0EOG1GqhMNpCXM/
R9+R8qUv/
3Hp/
v0yQgRZvb/
k4Ep/
+4y9Vt3dHoNr7SwN8U2fHqW73b1cQA4dbUy8/
cLmj/
7jKFn/
sv/
+FMP6DbTPoBxu5zmUtwV9mYzGTHujOE/
5e/
8OM0Rvde0J74nTMxQm8gsD+ufYSQn/
3UVnjtrTkxRlvzwlP9MWs/
Wy5iV+KyOFcd1vgxG3lr7Wnrgqwhsu3e8dwafGtRIBu/
HREpzf/
Nd5DzXtNDbDTqXVMzj+/
9Kqwvfx9E9wXe1k5WTewvbCVMa/
eNThr1pTaX/
ZHS5hdpu65rrXdq/
3/
HdyHuTzJXOgS/
BerMbI0xPb/
EB/
LZ2+vC3+pe59OGnvHnPDj25sjcE/
WJj93B8PWZp9bXu/
FMfjQzl/
k2MzQ9bxOAp4W/
dTEPhf/
Kc3/
Vlw/
vrtD3mm9mf17l8qfDEhb2nMOc9wM/
Pk4Wz5/
ycr/
vwNOsiN/
ePOqRwpqb/
AO/
8lw/
7Ozd7//
rZgp+FMXO5vHfSN5Mf/
Oc9MZ+Pr79//
b4vsThcv/
d6/
ovtH9ptW/
6v79c0X/
vDrfPm9vd9/
Q2vLSFd9NgR+5WOqQoq/
nvX+Hn/
3dfsVvPP/
S3eH/
F3/
qC5+u/
Wr/
9f/
9T3nz/
3u3/
eXwsrnH3sWv1tlfb/
Nvf3r/
O/
r3sH/
cfvqP/
6Pc/
vy/
vcvv+PKn//
ygsbtPn9h/
Pv/
rdvzcvj/
Nvfd/
cvc/
v/
9/
1/
3/
3/
NvT5l/
cfzb/
H3m/
fezt7dvnX/
On2b3v/
/
/
/
/
```

WVhY+n8/
tKCIiIlIFqIQFKTExkcOHD7N582a3o4iIiEgVoBIWJJ0hKVKJ1a3nv4iIRBCVsCCphIlUXjGXDCXmkqF
uxxARCYlKWJCaNGlCTEyMSpiIiIiUC5WwIMXExNC8eXOVMJFKyLdwPr6F892OISISEs0TFgJNUyFSOdl
tW9yOICISMo2EhUAlTERERMqLSlgIPB4PO3bsYM+ePW5HERERkQinEhYCnSEpIiIi5UUlLASJiYmASph
IZWPqN8DUb+B2DBGRkOjA/BBoJEykcooecJnbEUREQqaRsBDExcVRv359lTARERE5ZiphIdIZkiKVj2/
BbHwLZrsdQ0QkJCphIVIJE6l87K5s7K5st2OIiIREJSxEHo+HrKwsfD6f21FEREQkgqmEhcjj8XD48GG
2bNEM3SIiIlJ2KmEhyj9DcsOGDS4nERERkUimEhYizRUmUvmYhqdiGp7qdgwRkZBonrAQNWnShJiYGJU
wkUok+vyBbkcQEQmZRsJCFBMTQ/
PmzVXCRERE5JiEbSQsKTWtKTAdaATkAVO8GelPJKWm1QfeABKALOByb0b67nDlCAdNUyFSueTOnQlAzC
VDXU4iIhK8cI6E5QJjvBnpbYGewA1JqWntgDuAj70Z6acBHzvLEUUlTKSS2fOr/yIiEkHCVsK8Gek/
ezPSv3B+3gusA04FBgLTnNWmAYPClSFcPB4PO3bsYM+ePW5HERERkQhVIQfmJ6WmJQBdgf8CDb0Z6T+D
v6glpaadXMxjrgWuBWjUsEFFxAxa/
jQVmZmZdO7c2eU0IiIiEonCfmB+UmpabeBt4CZvRnrQQ0fejPQp3oz0JG9GelJ8XFz4ApZBfgnTLkkRE
REpq7CWsKTUtFj8BWyGNyN9jnPztqTUtMbO/
Y2B7eHMEA6asFWkcjFNEjBNEtyOISISknCeHWmAl4B13oz0CQF3vQOMAP7tXM8PV4ZwqVevHvXr19dIm
EglEd3/QrcjiIiELJzHhPUGrgS+SkpNW+Pcdif+8vVmUmraX4GNwGVhzBA2OkNSREREjkXYSpg3I/
1TwBRzd/9wPW9F8Xg8rF692u0YIgLkvuk/4Trm8hEuJxERCZ5mzC8jj8dDVlYWPp/P7SgicmC//
yIiEkFUwsrI4/
Fw+PBhtmzZ4nYUERERiUAqYWWkaSpERETkWKiElZFKmIiIiByLCpkxvypq2rQp0dHRmitMpBIwCae5HU
FEJGQqYWUUExND8+bNNRImUglEp5zjdgQRkZBpd+QxSExMVAkTERGRMlEJOwaasFWkcsid8QK5M15wO4
aISEhUwo6Bx+Nhx44d7NkT9PeSi0g45B72X0REIohK2DHIP0MyMzPT5SQiIiISaVTCjoGmqRAREZGyUg
k7BiphIiIiUlaaouIY1KtXj/j4eJUwEZeZ09q6HUFEJGQqYcfI4/FowlYRl0Wf0c/
tCCIiIdPuyGOkucJERESkLFTCjpHH4yErKwufz+d2FJFqK3fas+ROe9btGCIiIVEJO0Yej4fDhw+zZcs
Wt6OIiIhIBFEJO0Y6Q1JERETKQiXsGKmEiYiISFmohB2jpk2bEh0drRImIiIiIdEUFccoJiaG5s2bq4S
JuMi06+x2BBGRkKmElQPNFSbirujk3m5HEBEJmXZHlgOPx6ORMBEX2cOHsIcPuR1DRCQkKmHlIDExkR0
7drBnzx63o4hUS76ZL+Kb+aLbMUREQqISVg7yz5DMzMx0OYmIiIhECpWwcqBpKkRERCRUKmHlQCVMRER
EQqUSVg7q1atHfHy8SpiIiIgETVNUlBOdISninqjOSW5HEBEJmUpYOfF4PHz55ZduxxCplqK69HA7goh
IyLQ7spx4PB4yMzPx+XxuRxGpduxxv+7C/7XM7hohISEotYcaY440xdxtjXnCWTzPGPGpIU/
WmTxeDwcPnyYLVu2uB1FpNrxzZ6Ob/
Z0t2OIiIQkmJGwV4DfgV7O8mbgAALYIxJxD8yJgGaNkm1KdHS0SpiIiIgEJZizI8sVqTVIiiCZSi/nMFjTEzgN7AyHCGikQxMTE33ZUEUjTVIiIiE
gogilhh4wxtQALYIxJxD8yJgGaNm1KdHS0SpiIiIgEJZizI+8FFgJNjTEzgN7AyHCGikQxMTE0b95cJU
xERESCUmoJs9Z+ZIz5AuiJfzfkjdbaHWFPFoE0V5iIO6K69yp9JRGRSiaYsyMvAXKtte9ba98Dco0x
BHizwqYSLuiOrQlagOXd2OISISkmCOCbvXWpuTv2Ct/RX/
LkopxOPxkJ2dzd69e92OIlKt2Jzd2JzdbscQEQlJMCWsqHU0034RdIakiDt882bhmzfL7RgiIiEJpoR5
jTETjDGJxhiPMWYisCrcwSKRSpiIiIgEK5gS9n/
AIeANYDZwELghnKEilSZsFRERkWAFc3bkfuCOCscsgS8erVq0d8fLxKmIiIiJSq1BJmjGkFjKGFj
VvliRS2dIioiISDCCOcB+NjAZeBHwhTdO5PN4PHz55ZduxxCpVqJ6prgdQUQkZMGUsFxr7XNhT1JFeDwe3
e5s+fj8/nIzo62u4ItVCVOv2bkcQEQlZMAfmzzXGXG+MaWyMqZ9/CXuyCOXxeMjNzWXr1q1uRxGpNuzObd
idetC+OP/BBt251O4pItWF3bMfu2O4pItWF3bMfu2O52DBGRkAQzEjbCub414DQ4DYLeMo/
TuTLn6Ziw4YNNNG3a1OUa1OU0ItWD7923AIgZcb3LSUREglfqSGVqSJi1tkUROpm6tkURFxWwYmiuMBEREQlGUDPfG2M6AO2A
4/Jvs9ZOD1eoSNasWTOio6NVwkRERKREwUxRcS+Qir+EvQdcAHwKqIQVISYmhubNm6uEiYiISImCOTD/
UqA/
8Iu19iqgM1AzrKkinOYKExERkdIEU8IOWGvzgFxjTF1gOzoov0QqYSIVK6rP2UT1Q9dvtGCIiIQnmmDCv
MaYe8AL+L+7eB6wMa6oI5/F4yM7OZu/evdSpU8ftOCJVXpSnldsRRERCFsx3R+af8z3ZGLMQqGut/
V94Y0W2/DMkMzMz6dSpk8tpRKo++8sWAMwANyWHEYyjU11OIiISvGJ3Rxpj2jiXLYFTnoK/LSWq
vg/
n4PpjvdgwRkZCUNBJ2C3At8HgR91ngrLAkqgJatmxJVLSeyZCNSi2+pUhHXiGMEGBIJX4WKPHZ0A2DN+CjyVUmoK9x14f2zW/gSbwHrAm8y6BR4MAxGuHEN2cHOGaFEMAJcmzGFahsDXMG5NaPfuSeHrAH4Z3u2WBqLEoBOpgtnhlrJCkMbbBEM
lbXrRWlgCxWbSanHjdYDFwOLVJzfgYHgCumH/fBQuUjr0PaSrq6+oyP+z9Ox+7+AkIMBpnAlFA/fxDMpqXlZAmSNKSKi8zKCRWPIRNN6qF3dq/
C6CqKyqB9NcVeaYyCTbRSSnbSavjyYD4Zc4sZUdGrYxQQ7z6AAWycsWAZCoEyDaX4eqZvZJUsOZJB/
WUmLEaFNU+hIkmLxuMWLuuOJWZMQoCe+DxbKhYvPPvz9aEBqZUpsRU2aSzyBiU5bVhT7HSZZQLSzgdHbsRJx+NHJavFp+eV6LOJQ3LtmCK/
QqyUWMNtsFk0cSRMMTEdsOTXe1EWFoOmSRw1IIfGLhCsTXXqdECUxSeh9jWPmTHaZhjnDqyfxL6PKZMa4rVIbo2JE+CWaKrSNkdJAuYZy9m/
QuXCSKKXXc4jXOp4RnIXYKlPUvWsjWBXX1XHJhdBqkx+M6t8GWqHb6JXSMKbKuLdb7HqbO5Dnr8M/
tTFmw+Ra7gG+b69FjHAGbQIQZ+/
X8rt9wJXEHjGgxGlElJtwjyzEmQKFKRYqEPvSZBIqwkxGoNvqFNwJXpBwJNoAVyr+3mK/
3DOu8eKDvHb3TQg3KJFCY6zLu6XuObGhL2RpZFTIJbgDPq/FWlq+iaBxrMXcN2zcEKvfNmubrgcD3SYI0hlbP1JWVvkAzYU0tfNKgULNlzvJlrMv/
YZXrzSM2QUOSZAAR9ijJQ5Pv43o4W2SGLBe1rMufvjgmyT/
DWXmRcyTnNDm0S1G/d+3wyU0SfMPPL2uQg4Xlo6hOAYC5iR+FCSD6LbGqkbuTcWqxW2FIJQjoUgtU8U1Vh9NONBF3ieIF7/NC5gzaVuvcsxwtvjoxr/
ezWHaIAcvnT7gIiFVfjUlqvQBOTEQUn9bYRp2F4YfESuGCx8GrGvAmrA0eWWWSHPYGQLUQYNVESYiJPUDKRrqBKlC5xJZVoIUsoXUVsMxDCGm8yTmsEdpz5MW3xS24QK0ZuDMDGx3/
HX0U25+/UUZYo1tJMbXGLAf5hKXKMCVSpaQOWSJQHQwMCmdT5yNNX+Tlo+8OoBkPgDG+LIhxdVnJvLdX4oFbBDXZ/
lc2JRtcZuiqrCktN5AOrGAxJ3JQLRFPlFkDZSTdC6ig8s/

```
nczuKiIiIVCKhHJgvZeDxeDh06BBbt26ladOmbscRqZKiL7rU7QgiIiErtoQZY+qX9EBr7a7yj1P1BJ4
hqRImEh7mpJPdjiAiErKSdkeuArzOdTb+OcLWOz+vCn+0qkHTVIiEX95335D33TduxxARCUmxI2HW2hY
AxpjJwDvW2vec5QuAsysmXuRr2rQp0dHRKmEiYZT3mf8b1aJat3c5iYhI8II5MD85v4ABWGvfB1LCF6l
qiY2NpVmzZiphIiIicoRgDszfYYwZB7wGWOAvwM6wpqpiPB6PJmwVERGRIwQzEjYEaADMdS4NnNskSJo
rTERERAordSTMOQvyRmNMbWvtvgrIVOV4PB6ys7PZu3cvderUcTuOiIiIVALBfHfkGcaYtThf2m2M6Wy
MeTbsyaqQxMREADIzM11OIlI1RQ8aQvQgDdCLSGQJZnfkROA8nOPArLVfAn3DGaqq0TQVIuFl4uIxcfF
uxxARCUlQX1tkrd1U6CZ9B08IVMJEwivv69Xkfb3a7RgiIiEJ5uzITcaYMwBrjKkBjAbWhTdW1RIfH0+
9evVUwkTCJG/VCgCiOnR1OYmISPCCGQn7G3ADcCqwGejiLEsIdIakiIiIBArm7MgdwLAKyFKleTwe/
ve//
7kdQ0RERCqJUkuYMaYBcA2QELi+tXZU+GJVPR6Ph3feeQefz0d0dLTbcURERMRlwRwTNh9YCixCB+SXm
cfj4dChQ2zdupWmTZu6HUdERERcFkwJO95ae3vYk1RxgWdIqoSJlK/
oy4a7HUFEJGTBHJifboy5MOxJqrj8CVt1cL5I+TPH18YcX9vtGCIiIQmmhN2Iv4gdMMbsMcbsNcbsCXe
wqqZp06ZER0erhImEQd6aleStWel2DBGRkARzdqS+7LAcxMbG0qxZM5UwkTDI+9ILQFSXHi4nEREJXrE
lzBjTxlr7rTGmW1H3W2u/CF+sqklzhYmIiEi+kkbCbgGuBR4v4j4LnBWWFYx+Nh/
vz5bscQERGRSqDYEmatvda57ldxcao2j8fD9u3b2bt3L3XqaC+viIhIdRbMFBUYYzoA7YDj8m+z1k4PV
6iqKn+aiszMTDp16uRyGhEREXFTMDPm3wuk4i9h7wEXAJ8CKmEEhCpwrTCVMpPxED73a7QgiIiELZoqKS
4H+wC/
W2quAzkDNsKaqogJLmIiUHxNbAxNbw+0YIiIhCaaEHbDW5gG5xpi6P9+vWpV6+eSphIOfN
9vgzf58vcjiEiEpJgjgnzGmPqAS8Aq4B9gGZFLCOPx4PX69UXeYuUI7v2S/
8Pyb3dDSIiEoJSR8Kstddba3+11k4GzgFLOslpQxGjRrFf//
7X0aMGIHPp+9DFxERqa5Kmqy1yEla8+/
TZK1lc8MNN5CTk8Ndd90FwLRp0zQiJiIiUg2VtDuyqEla82my1mNw5513AqiIiYiIVGMlTdaqSVrDSEV
MRESkegtmnrDjgOuBM/GPgC0FJltrD4Y5W5WnIiZSPmJGXO92BBGRkAVzduR0YC8woeDny4EZwLBwhaq
wlLM8BHgVuCxcoaoTFTEREZHqKZgS1tpa2zng58XGmNRwBapOVMRPNVMREjo1v+WIAos/
QURQiEjmCKWGrjTE9rbWfARhjzgBWhCtU9aOXiYSJLt+nf8HlTARiSDBlLDTgeHGmI3OcjN
gnTHmK8Baa/UliOWk8IiYipiIiEjVFUwJOz/
sKaSAipiIiEj1EEwJO81auyjwjwBmPMGcGvttDBlqvbuvPNOrLWMGzcOUBETAGpioIpYfcYYWwYDY4HawIv
A74BKWBjlj4SpiIkEISbW7QQiEL
poSlAGOANc7yPdbaWeGLJPlUxESCEzPsGrcjiIiEL
JgSFo//
4PwNQBOguTHGWGttWJMcGQRM8bwyiuvqIiJiIhUAcGUsM+Af1trXzbG1AIexexzbG1AIexj9FxRlhTSYFCo+IqYiJ
HMm35CMAolPOcTmJiEjwgilhZ1trNwJYaw8Ao40xfcMbSwpTERMpns1a7/9BJUxEIkgwJWyTMeYvgMda
O94Y0wzQ90a6QEVMRESk6gimhD0L5AFnAePxf4/
k20ByGHNJMVTEREREqoagZsy31nYzxqwGsNbuNsbEhrUZ+mPvvPyoCCoOdvrL+h8zjNE9DEEAYdGg+5R0v1bG/IFRv1U8j5N9axQD8g/AdHi1+Ro1DYjZNr1XKE2lY3Gj7kIV0R2C/k9u8PiChcyZJHoKLhmdQQCb9n/cAAKO8M9+IHc8RKFjEUgNyjfpQe/
8iYuOiuu+7CWsvdd98NqIhJNVfrBLcTiIiELJgS9iQwFzjZGPMQcCkwLqypJCj5I2F33303xhhefvllF
TGplmIuH+F2BBGRkJVawqy1M4wxq4D+gAEGWWvXXlfa4pNS0l4E0YLs3I72Dc1t94A0gAcgCLvdmpO8uc
3o5oogBKmIiIiIRIiqYlay131prn7HWPh1MAXNM5egv/
74D+NibkX4a8LGzLMdo3LhxPPDAA0yfPp1Ro0bh8/ncjiRSoXwfv4fcjiEiEpJgdkeWiTcj/
ZOk1LSEQjcPBFKdn6cBGcDt4cpQnWhETKozuznL7QgiIiELWwkrRkNvRvrPAN6M9J+TUtNOLm7FpNS0a
4FrARo1bFBB8SKbipiIiEjkqOgSFjRvFrFjRvoUYArEzCtYY2F7Bz
18tBBaxgwcPMn36dGrWr0lyKhEREQlU0SXsHWAE8G/
nen4FP3+1MW7cOGrVqsXYsWPZsWMHc+fOJUOmraX4X4GNwGXhen6BMWPG0zCtC/
+8vVmUmraX4GNwGXhen6BMWPG0LBhQ6666ir69u3L+++/
T+PGjd2OJVLuYi4Z6HUFEEZFqhfPsyCHF3NU/XM8pR/vLX/
5CgwYNGDx4MGeccQb7sdPgNdW1Axd7Jq0hVqq/F+/
vXv3ZuXXKlW5HEilXvoo20bYvbMUREQqISVo20bNmSZcuW2a1bN2rUqAGAtRZjjMvJRERERNwXTAkbfwlB/
udiQREZFqSyWsmmnUqBFDhw4F4IsvvqBnz578+OOPLqcSERERkVpTCfvll194/vnnj7g9JyeHsWPHkpycjDHG+RuA6p/vvvuOgwcPctRRR3HllVeyfv16V/OKlNWuXbsOu1JkwoQJjB07lv379wOwZcsWVq9ezbRp03jsscfo2bMnKSkpzJ8/n7S0NLp06cJ7773H448/Ttu2bUlPTzebsf8AAAAGyklEQVTzgnTt31AgCyARc2i/tzrDY9VmMLDR7wEe+2AsHGAG1wWO++z8mX7LiV/nhQdlwBZ/sbF8LOVKjGFHLaCg5HFLE5vlbJdL/plaPTSGVdqPKTvVAXlVPKvqGIkn/vSqP5Tb9eVnq7gxlt9XQkOgEqFSxEQqiI8++ohWrVqxadMmPvjgA3r37s2aNWt49NFH6dy5M71799a9hUjoAiUDjnNUVCErpVgTqjuawgUKjl+9+Muzdu3XZNkfcZW2ZUfdsQqOiJ1ww5wXttBgzBUwLvvOfovYkdmJxvP59lNuQ2DQKWKW4RJWt9tWqVq1wy7JKdgMLEY/2nGLYLHfwTHvPnTt3xZb1yNlrEAPi0Bqg28pgmJRN8tdSQbJNWjFuHXtv5wrcwhIYdg0cPRYXXVtjVmfdl8GeL4PqvATajCLCoGjDhm1o+jwvqdc7RHUGrtodsvDyoSoNiAIO4W/hn/NrSaT32cG3+6aNfHfqJ98Pv3ZtJTM7uqUeGK2+sKqttkq1Tn4kFwJTo92uS9VKBB4Rpv4sHm6KlqlPVpetPxJHpU4t9PE7V8UBs7iMAFuGTbdMPPYVTh+p5XxaFCeqC8wNfKRySatHw9aJRaRGuYKbuXAj3YO7KClbTd4qNNh8vvVYmiXbQQuMV/X3mIrk4Tj4/XZBZVo7zVXGxo9LaT3lZ9fKbDe6VV/Zp7Wr3OdFRL1Qkce+hPxjcJuFSbVsv8PlafO2n8jURgLo1jM2RGDd7drXjFwFmWjtEKNvk7Y8X9e8vF5s+bBXrBt9xr78YnQvZ1vQoeqtqtxxBrWAGMMHGoEYjSp9awvknpJqMn16S6JT4dDKlVTu94S7zj7m4A6fwQAPlq04h+S1r5KT9BmCq+xBVcmuVbNXJv5fT8PBz5+zrbV6VGoRdGKLe8iCrAObqUt9+5AHAE0dHmvA81PN/EfbG5f5ZD+Gt+lqrYXnAEz7ciJ2Xdn01B2xjlKQnvN1NhX3X1jZdFzm6MFM5bktdYVXVpzV2Mr2qqdH7VflYwWhsjX9E9dxr33s7YGydDiZ7TfEuvKAfEt/yFk48gmU4HIiMk2RoVRTSZjjMzZnTzeVWvlA3PxNsKQQDeSwJZxVbqw2vWu8trRqeG4j2Xz1t+tTGstpHOqbm5Kf/DvqRcz3vm6fVzsRMwGIiIrwP7vFpMTvuthmRXKIG7fR6t1PlhO8tk7eq4wpGuBTyFvOKX7D60JkHoeWd+gyLYXdhFDRmLF5rz+TBgFmsCTsMFshXmEN4Ke3M83ZC2fv+Sc66n2F7W+2gCxGs8+/HYNGHx53DfOHzsSe/wcm3OFOh4HJvqiMLaPEoMGNO1r+vZn7pSLx+TXkzYKuxHQlf/1nHOA9vBOJsaXrt0fKW3tZbaEEETGg+BhWBwyTJs7fZ04jwn5qrimxe/lSZ1lvOeC2CQHYyZpJz63eO6YJumYntgr7rSWVZDzkF1SuMrP4Xwm+uYwqnkKL0O+PMC+hVDMEfAEcvTT6DKYcQFzqxoDcdBl9TvXNyQbwU10R4vSzgJEQWM2xvFfCGY5FdJ1bQFFKxkbXfs/bFPF/KsK9PSQgMkB7aaQ6Of82BJANyRgMJYw56ow2dMNVcb0AOGS0ttXV2L8ha+QMpLSnIkGuzLo3WKSJVwOavL4+RNTIyYb+kRywc5WrWn1HSp+Nu4uQWuqGV8LjTfpbK1x6RM0ZOjhGvmiiFTHMx6dQNbnk4+jc2z8E40rWPuNEqNa3XfNaKO2CScWQoyCwMgDGZGpJOnXpEfgZKg1mSl+C53v0ZGHIDZOO+RhMiXmtJ2P6p2w/ltVyNyY1YsMgVPcwZ/ClbvyUtwhxmKlJiOKhAotuEVZDQ6Ckpr3rbGmdYCqhx4Dt7/X4wUfSzMtFOqRz5o1DRQPcDG3VYNx9NdbO3O6fDebVSMBS4v7Ye2tDK+gNPL3hD9xSmBS2DI5i8GlKGL2o52J3J2T4UvxoQK81kxYrLiY42kYjUZbiqGYGZnYjPgRJw2kUPvlcTCNq7PTwMJoyTaEZq/Hv8K7fgaMvcDHKlEfNT0JwcK2avoTEaAeMefSTAEwm+e3s6QqoDwAZYgu0d5hiJYdP1t63PEfrA76uHJC2UO3S4lDePs/6bmgaOQuxJiYvg8nVODPxfs7SvAqxLfKi8lKQqDFtMGPnrtLg/IzEGFxwydaAWzYemnxbwdrkf7KcUDY3oWrTbsErTJu0SjJ3cPeS37Ybvj3eKcylIAvtwk/y3YcvLTLtEiHsHwHZTY0cFJkuu7nMfmjuPyrwGPjMA6H5Nqp7Gd5G0RGG0ZRJSmQ0x9u2V8ki3yxDf5zEJhwB3XEIYbjx2kIvk90S3O2iSF/ly5Jj50jz49M5LlWtWkPK8mQ1AvMW/3PxL4UGRmtuuwfKPL1kghzgBUWG9MrB1TUBHSY3LQgrw
```

```
Jk3i/fffp2vXrto9KSIi1Z5KmFQIYww33ngjn376qXZPSrkzCadhEk5zO4aISEhUwqRC9ejRgy++
+IK0tDTtnpRyE51yDtEp57gdQ0QkJCphUuHi4+OZM2eOdk+KiEi1phImrii8e7JPnz5MmjRJuyelTHJn
vEDujBfcjiEiEhKVMHFV/u7Jiy66iJtvvplLLrlEuycldLmH/
RcRkQiiEiauC9w9+d5779G1a1dWrlzpdiwREZGwUgmTSiFw9yTAmWeeqd2TIi
JSpamESaXSo0cPVq9ezYUXXsjNN9/Mn/
70J+2eFBGRKkklTCqd+Ph45s6dy8SJE0lPT9fuSSmVOa0t5rS2bscQEQmJSphUSsYYbrrpJu2elKBEn9
GP6DP6uR1DRCQkKmFSqZ1+
+ul88cUXXHDBdo9KSIiVYpKmFR69evXZ968eUyYMIH09HS6dOnCJ5984nYsqURypz1L7rRn3Y4hIhIS
lTCJCMYYbr75ZpYtW0aNGjVITU3u4NChQ25HExERKROVMIko+WdPXn311fRPPNN27H
EhERCZlKmESc2rVrM2XKFObPn8+WLVvo3r07Tz75JHl5eW5HExERCZpKmESsiy++mK++
+oqzzz6bG2+8kfPPP58tW7a4HUtERCQoKmES0Ro2bMiCBQuYPHkyy5Yto2PHjsyePdvtWFLBTLvOmHad
3Y4hIhISlTCJeMYYrrvuOlavXk3Lli25/
PLLGTFiBDk5OW5HkwoSndyb6OTebscQEQmJSphUGa1atWLZsmXcc889vPbaa3Tu3JmlS5e6HUsqgD18C
HtYZ8qKSGRRCZMqJTY2lvvvv59ly5YRExNDSkoK//znPzWVRRXnm/
kivpkvuh1DRCQkKmFSJfXs2ZM1a9bw17/+lX//
+9/07NmTtWvXuh1LRESkgEqYVFm1a9fmhRdeYN68eWzatInu3bvz1FNPaSoLERGpFFTCpMobOHAgX331
FWeddRajR4R4/
mggsuYOvWrW7HEhGRak4lTKqFRo0akZ6eznPPcfSpUvp2LEjb731ltuxREShGlMJk2rDGMPf/
vY3Vq9ejcfj4bLLLmPkyJHs2bPH7WhyjKI6JxHVOcntGCIiIVEJk2qndevEuWLF+
+nLvvvvptXX31VU1lUAVFdehVpYfbMUREQqISJtVSbGws48eP59NPPyUqKkpTWUQ4+9s+7G/
73I4hIhISlTCp1nr16sWaNWsYNWpUwVQW69atczuWi3Mg3ezq+2dPdjiEiEhKVMKn26tSpw4svvsjcuXP
ZtGkT3bp146mnnsJa63Y0ERGpwmLceNKk1LQsYC/gA3K9Gek6olZcN2jQIHr37s3IyZOJHH3qaAFafSXw
88yQkJLgdTUREqiA3R8L6eTPSu6iASWXh3pEg
hxhiuv/56vv/
+e2655Rbee+89kpOTSUlJ4Z133tGM+yIiUi7cKmFSdm1Sapo3KTXNuzsnp4L
jiUCTJk145JFH2LRpExMmTCArK4uBAwfStm1bnn/
+eQ4cOOB2RHFEde9FVPdebscQEQmJWyWstzcjvRtwAXBDUmpa38IreDPSp3gz0p08GelJ8XFxFZ9QxFG
3bl1uvvlmNmzYwKxZs6hbty5/+9vfaNasGffey/
bt293O2K1F9WhK1EdurodQ0QkJK6UMG9G+lbnejsxswFejsfwF9Asi1LpxcTE81Oc//
5mVK1eyZMkSzjjjDMaPH0+zZs6249tpr+fbbb92OWG3ZnN1uxxARCUmFl7Ck1LQTklLT6uT/
DJwLfF3ROUTTKyhhD3759mT9/Pt9/
+y0jR47ktddeo23btvz+97/n/fffd33dndLxgCIiIVEJk2qndevEuWLF+
+nLvvvptXX31VU1lUAVFdehVpYfbMUREQqISJtVSbGws48eP59NPPyUqKkpTWUQ4+9s+7G/
73I4hIhISlTCp1nr16sWaNWsYNWpUwVQW69atczuWi3Mg3ezq+2dPdjiEiEhKVMKn26tSpw4svvsjcuXP
ZtGkT3bp146mnnsJa63Y0ERGpwmLceNKk1LQsYC/gA3K9Gek6olZcN2jQIHr37s3IyZOJHH3qaAFafSXw
88yQkJLgdTUREqiA3R8L6eTPSu6iASWXSqFEj3n33tn33n555hmWLFnCOeecQ4cOHZg6daqmsqgAec8+TN6zD7sdQ0QkJOVfhhv/
hxhiuv/56vv/
+e2655Rbee+89kpOTSUlJ4Z133tGM+yIiUi7cKmFSdm1Sapo3KTXNuzsnp4L
jiUCTJk145JFH2LRpExMmTCArK4uBAwfStm1bnn/
+eQ4cOOB2RHFEde9FVPdebscQEQmJWyWstzcjvRtwAXBDUmpa38IreDPSp3gz0pO8GelJ8XFxFZ9QxFG
3bl1uvvlmNmzYwKxZs6hbty5/+9vfaNasGffey/
bt293O2K1F9WhK1EdurodQ0QkJK6UMG9G+lbnejsxswFejsfwF9Asi1LpxcTE8Oc//
5mVK1eyZMkSzjjjDMaPH0+zZs6249tpr+fbbb92OWG3ZnN3YnN1uxxARCUmFl7Ck1LQTklLT6uT/
DJwLfF3ROUTKyhhD3759mT9/Pt9/
+y0jR47k1VdfpW3btvz+97/n/fffd33dndLxgCIiIVEJk2qndevEuWLF+
+nLvvvptXX31VU1lUAVFdehVpYfbMUREQqISJtVSbGws48eP59NPPyUqKkpTWUQ4+9s+7G/
73I4hIhISlTCp1nr16sWaNWsYNWpUwVQW69atczuWi3Mg3ezq+2dPdjiEiEhKVMKn26tSpw4svvsjcuXP
ZtGkT3bp146mnnsJa63Y0ERGpwmLceNKk1LQsYC/gA3K9Gek6olZcN2jQIHr37s3IyZOJHH3qaAFafSXw
```

O9OnTWbZsGfPmzWPcuHEsWLCAVatWsWfPnrhDFhEZFErCRCRWU6dOZdGiRfzxj3/k9ddf5/bbb+fss8/
mT3/6EwsWLGDcuHE4jsNVV11FQ0ND3OGKiAwYJWEiUjSqq6s599xzuemmm7o1W+7evbvXZsvEp88i8em
zYo5eRKR/lISJSFFKJBKdzZabN2/mxRdfZNmyZbmbLf/
8F7btbeHdd9+NO2wRkT7T05EiUhKmTZvG4sWLWbx4MS0tLd2etnzzJ9+vScPfpPmjQJM4t
7N0REOikJE5GS09Fsee6559Le3s6bv76S/fsP8D+t6c7OYx988EHeeuutznVGjx7do0f/
+vp66uvrGTNmTIx7IyJDlZIwESlpiUSC6upqqqur+XFGZ63pdJpXXXnmlx3iY69at47bbbiOdTneWnTBh
Qo8rZ/
X19Rx11FGMGDEijt0SkSFASZiIlKWKigqmTJnClClTOPXUU7ste+edd9ixY0eP8TDvvvvtudu3a1VkukU
gwffr0bonZMcccw+TJk5k4cSJjxoxRE6eIHDYlYSIy5IwcOZLZs2cze/
bsHsv27NnTbcDyfM2bEA5aPmnSJCZOnNg5hFOu6ZqaGiVrItKDkjARkQx1dXXMnTuXuXPndpvf0by5ff
t2mpubaW5upqmpiaamJpqbbm9m4cSP33HMPra2tPbbZkazlS9KUrIkMTUrCRKTkJT7z2UH/
jMzmzd60tLR0JmjjZiVpTUxNPPfUa9asYf/+/
T3Wrays7DVJ65hWsiZSXHpSEiUjJs7Hj4w6hU8dDAocakDwzWcuVsK1fv57m5mYlayJlTEmYiJS89LZnA
KiYeWzMkfRdf5K1fFfVmpub2bBhA01NTUrWREqQkjARKXnpx/
8ClFYS1lfV1dWzX15r0ma7W1tVRVVXUmh5mvXPPzla2srFRCJ9JHSsJERMrAe03W9u3bR0tLCy0tLb
S2tvLyyy93vm9paenxZGg+ZtYjQ1OviZr2drb22ltbe2WmGW/
723eQCZ1fU3g6urqOptcR44ceTjVJTKolISJiMghRIJxowZM2BDPPU1qcs2s8v79u
KQkTEZGCG+ikrq2tjdbW1m4J2xtvvJGzu5DnnnuO5uZm2traemynI1nrrU83JWsyUJSEiUjJS5x9ftwh
SMyGDRtGbW0ttbW1fSqfTqd5/fXXe+3T7dlnn82brL3/e/
vlpjV1dX1+b630aNHk0gkBroKpAQpCRORkdj6uIOQUpMRUUF48ePZ/
z48Rx33HF5y2Una9lJ2+v79ut2bc7SEfCorKw/
rCdSamhqOPPJIdS1SJpSEiYiIlLG+Jmt79+6lra2tWxcduR5AePDBB2lra2PXpMI0K2nlFV5PXFVVVFRMnTnzP20un0+zfv79bwrZv3z5ofe20V2OXhc
lYSIiIkWooqKisxmyubn5KC2HSbS1KfJhMLbHeG/
pBy4Igj4NNL9r1y5aW/cCzIyamhpf8pnbXL5ajbZoqyA7hdb2pg/
IBG727NmMH18c480qCRMRERlCzIyamhpqamoO2WhtjmXsfbSbbuG8886LNYSGcGbNHWHCJPOWFIGhQPtHcDfSrTOCbNsPvBKUiiAW3Hp1WgQLRY1gGOMgGjHQnQg9QTMNf4IlXwkU3Sp/
ESbRbmRPDIFFl0NgTKe+SU8w/EONr2JfHfNJL5ElHrsmAb1mY07Bd7GT4fYf4lYvcNDwsWtqRPCM3wbkJ9p4ZgXrTyR06XA7aewv1X1DvxpDd+Lm9sgl4y5jCX4+hBcG3uRh2cWN6JyhAW9F0+zvz2I/
7n5h4dOM5RHDTZwYDvz2nWNmfs9yQaKSJkRJAgYDvaxxa0QhmJTGFGfB/
iRb3vL2wmvtupQDZ76tDLfyNB/
gj8QH6Ctzi+Y1rVfYW7K9RMfLf0KEI1xyNFLNyTiyg0T5Iw+tBBPx1Pk+BVMz9O9LcXHyWHAxrdDo/
qecHp3lqOS+Et7BLBZ1PVpbXXR+UWC/
6L+gcTwh+gX/rkB7NYN52Jyng2pDKpnKnM0yMw9PpDvvOTWONFs/
bdh2B13qm8FNn3ke1WTc9DRhvZ8/VxHgDL+U+WrkypyVSvxuIy/
7LOvmvcPI4U1pPTN3VOVrh1VWtH7U5XJFsXqpqDCZDDT2zDp99C8QR0/
m28rQbr+ThF5+zeBEx/2BPuaBm37C23NF8oZmXrM+tG9iYiLMW5TPkvfJNm2LvveOsl94ELeY6imgE7h0dodJaQmHkXm0NDHiX2uh93uXDlfYNHZOgPr8Mw1f6+ETT5ZPQiWFgV/UGDqsxEVH9LcVt2UXV8uO9j0hXN0AxefZjRpJeaIKzYY/Wc/
oPftZbLHkUxRjqvj/
OX1V1EJ9rLSpsfahT07m4SrGW7+rSxWkFzXfIzfBWf/Fa+f9bG7Qfg/Cr2RxRncv9q19I4vrU6nedTkxHyywP6GJTHJyHF0QaROR1J
BpbGzaJ5pkWpxHLIdVGWZLcGOQU2FXRuTV51/Kz+/Mx/3Q+23qHE7DSU8PgZJvEsm+1P/
QsOXOTPxdT+nqGG4O4aUGTQDfX/dmXkPI/
eVN91d60nRWYDx51ajJsfpZJY5JyJXtF6v+aZz/
OJMcBDvzJtxX3P2VjUROh3m0GFaK/
pHHCyDmuUJW7wkUtpBgzuUB+pgv+H+gbPW/XdYJrj+Hx3/
5SBcq7lGXvsKh7E+cDkqO/
Y3OnFYRHCNBOIaw4mwTpWDz4Oo8w6eOgmiD8sGEAEcmoqlUd7ls/MwLk/
ybXdJqVzYn9SHbE4JXuMEAUT/Ro9ZkHkVt+ak/BJ9j+m/+PK/
Oafn2dU0+bffp3s76rt/ufneLnP23XT7bLkPAH29ZpOywnn9bBNGCHLLGzzE7+Dy4TwvNKbrl/gCOhv8K3d9oTI/v/kTEqj1Iw+s93zBz
4rCYfJ1JRVR1OAgzmw9lfTiZtVnMrDLSz8yxnOw5bftwnTC84ugz6I49Xm2/3w/3cGdDHNoJL/MS
8mBQBs4vKIFl8bgfAcvkWUcv6BRbI8B6GMwZRxPhR+Bk9GL5s3Ozat8B6QiNhNnEj2TBmI3Ykt
xYhNbb+v7yKntcSaJeTKBz0+GWE6xajwyh7q9QndrszbJhvzaBe+fHGfWhLjXNA1lK8OU4N3xTa0Ts
SDk+a0d5rS/Lm6BBX7l82KNb2ZOedzKUcmhSvXbZWS9rjRrTvXcnrzWDOVXGWFLMkt/
f2F5/+GUVpeg59aXSOHm1m+l5EaVzkV3/Ov33HZ1zZTlDzb2/
2Xe3+SQJjyPNk/8hgJw9sayK4vPKCT02/XE6BfXz06cvQe4KWrfnR6fbOl42WtD9Q7rPQR
ZV46oUn7NPfD6urwx06fyOy5sWjjGoAVfTmPcyKg4DQvrXq22UvnXXtiFAZ7NYUT17tyu+Vzy0NQF
VmVlXWJNQ6UHuY/
Ilx9ixVt1Ga0OUxIbh44mZqyZz6DMyAAzp70edcZi3egWLd6B7HLTkFZk1GyfwKpz7UeePVw8ivNQGF
uOQNdFvCEgq/ZDn0tN9sUpahCpcXQJOJ3KQjHGBxZxgBvmJUjwJqdJFUA4P+KwT+nqJcNDAX0Q
oCJOpZDGEW6G1/
Kc+7jn2vy75CPrxyhQsYP3UO2qLhzONfG7LRtKk/
bfzcYXv8XZVZ7C+8LNhgTAJu6xzBVX3UmRZBdwlv8v5Lh9sCbrOzjbhz2h2GKCRuDs+tfnvz2dlP17vc+TH7PXBxn9c/
8CYQy2cn7q7VwQVcBzjlJOzw86tNVwoZxUrjKvhZu5yjnsCMbT5/SeKsw3PqA57+4vxvCv+lavKp3lNUZZHQEtGRKwTS/4Nix43Tz+W/
UXYo6TSuFvOqC8ZMNDMvUgurj+/
ZJmoaG9SPEMK89b+i3Szb/
0Crsu8d1DBXzA3MZDuEQbMDJ+KN2BSI9OtRKEI8Fp3nuLvcnEVoBZwJdbzwz9QuVn9e/6dwcmIfZjPt4uHLdqZRLMxnQbd+MxXxbOoXzGn/
5iqnSKfoAvR/lgz7YLPbdRU0Sp+KUIXbzUnWEs6rKZiWTuo7LeSNZjhZ46A/
9Qv6drzwBCOv7rI6yOG9Aty2zlSp6NsmQ6qg9wZtzR2C4S9FZjl1+q7uI4pbBsBfX+ZRI+xb/
RiJC2mgiFoSEmoKu47rqWdA8x+H0LHvsupfMDzIRnpiKd9RRW/
vV4cH8ReDjZQHPvGW5j2rd/
fWmGy3tXfUx+2WLWbhDwtGDVKaGPqmbKvyfqcNtKVFdlLrWaQlwTMjMD/
+mlkMg22DxwiyMZN2E/+bN/
ZVNsiW3bJyZ5dp98K6qXYvTjwv5FqjvS+hcjvHoQXh9dOwH+jhxmhA7lixPdZ/
3wa9oAANUU7e2jtVqmUgn9Hjb+4rvCQeoJ5YQv3MkC/
mNA7Zc/
/AlyDLD30KqU4VSb0kmiJ5i0N8gv/
x11dUh7cHjMH30AAqN7r+a/
Ekyd1BoakjTgDXT59FOb8qZVKW9wIzf6u+SMpaVJzB9TIMPXcHOrUdEUzKhY+CsxW4y9+DjZP3MEXg4pbu0o0h2nQIXYo0rDPZ1Ab
Nph1VtNg+IfSzAf6AH5TPmqYJLydUvTv/
6JU9vB/1tu0JXdEIhg5ZHPOaEIQ0nYcNAVbNVMMLY6s+I1X/
pcJHBYl1eSObZ4vR4UQWdAgJeY+RBwBCL3nGSPmZWHgcQ4vkPQdBQUNefc1Nz/4DH3ZRmY8w9A/
dnXRSSWCh77lfi9b9KuF3COBy33NvKnD4AyZPPVwKjKQr4X7c99yFSSc1ibD7hTPyfZcKGvwAy1MXDmF

```
TZEDYFcG/
+p7bnFkX0bpnAL8g7KJiRTnWhe+5Nyad1ErC4+HajLJle1z08vv5BEV8rlASJiIiIhIDNUeKiIiIxEBJ
mIiIiEgMlISJiIiIxEBJmIiIiEgMlISJiIiIxEBJmIgUlJl5ZpYswOd8y8yeNbN8vciXBTOrNbNvxB2H
iPSfkjARKRlmNqwfxb8BnBEEwRcHK54iUUu4ryJSYpSEiUgPZjYtuop0vZk9Y2b3m9moaFnnlSwzG2tm
jdH0RWZ2l5mtNrMXzWyxmX3bzJ4ys8fN7IiMj7jAzB41sy1mNjdaf7SZrTCzddE6Z2Vs9zYzWw3cnyPW
b0fb2WJml0TzrgWOAu42s3/
LKp8wsyvN7Gkz22xm34zmnxp97tNRHCOj+Y1m9hMze8zMfDP7sJndZ2bbzWxhVMYxs4fM7E4z22pm15p
ZRbTs/
GibW8zspxlxtJrZ5Wa2KaqfCdH8cWZ2e1QP68zs5Gj+D6O4PDPbYWbfijZ1BXC0mW00s5+Z2cQolo3RZ
370sA8EERlcQRDopZdeenV7AdMIe98/Pnp/
K3BBNO0ByWh6LNAYTV8EvABUA+OAfcDCaNnPgUsy1r8+mv4YsCWa/
knGZ9QCDcDoaLs7gSNyxDmHsIfs0UAV8AxwQrSsERibY52vE44vNyx6fwTwPsIRCeqjeTdnxNsIfD1jP
zZn7OOuaL4DvE2Y+CWAtcBngUmEvXSPI+yV/M/A2dE6ATA/mv5v4AfR9O+AU6LpvwOejaZ/
CDxK2EP+WMJe8odH/1ZbMvbvO8D3o+kEUB338aSXXnrlfvXn0r6IDC0vBkGwMZpeT/
hjfygPBkHQArSY2T5gdTT/
aeAfMsqtAgiC4CEzqzGzWsLx2s40syVRyVmfcRDdkFrA2CYHeOzzsFuDMIgv0AZnYH8FHgqV5i/
ARwbRAEbVEMu83suGh/
G6IyvwEWEQ5vA13jCz4NVGXs49tR7ABPPBkGwI4pjVRTbQcALguBv0fzfzEiaedwHvAm607nrgkxnxfdDM
OuKtMbPqaHpNEATvAO+Y2S5gQo79WwesML
4YiUmSUhIlIPu9kTLcDo6LpNrpuZXhfL+ukM96n6X6+yR4vLQAM+OcgCLZlLjCzE4H9eWK0PPN7Yzk+/
1DbydyP7H3s2K98+5TPwSAIOtZpz9hOBfCRIAje6hZgmJRl/5v0OIdHie3HgM8A/
2tmPwuC4OZe4hCRmOieMBHpr0bCZkAIm9wOx+cBzOwUYF8QBPuA+4BvWpRtmNkCZqOBc
wgH8e3N/cDCjpv8o3vVngOmkdkxUZkvAX/p5z7NNbPp0b1b1gnwceJhw8+OPRvXMJ4Pw+bPd+YHHHGzM7/
hDlWwibRzvKTyVsJr0euBH4cD/3Q0QKRFfCRKS/rgRuNbMvEd7jdDj2mNmjQA3w1Wjejwmb/
zZHiVgjkOptI0EQbDCzlcCT0awbgiDorSkS4AagPvqcg4T3py03s68At0XJ2Trg2n7u02OEN8n/
PWFyeGcQBGkzuxR4kPCq2D1BEPzhENv5FnCNmW0mPEc/BCzMVzgIgjfM7BEz2wLcC2wB/j3at1bgy/
3cDxEpEOu6Gi4iIofDzBxgSRAEvSaNIiKZ1BwpIiIiEgNdCRMRERGJga6EiYiIiMRASZiIiIhIDJSEiY
iIiMRASZiIiIhIDJSEiYiIiMTg/wGEIt4s2rqYQwAAAABJRU5ErkJggg==\n",
      "text/plain": [
       "<Figure size 720x504 with 1 Axes>"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    }
   ],
   "source": [
    "# plot elobe graph\n",
    "\n",
    "plt.figure(figsize=(10, 7))\n",
    "plt.plot(pca_board.Explained_Var, color=\"black\", label=\"explained 
variance\")\n",
    "plt.xlabel('number of components')\n",
    "plt.ylabel('explained variance')\n",
    "plt.title(\"Principal components elbow graph\", loc=\"left\", 
fontweight=\"bold\")\n",
    "plt.axvline(x=threshold_80_percent, alpha=2, color=\"salmon\", 
linestyle=\"--\",\n",
    "            label=\"cumulative explained var > 80%\")\n",
    "plt.legend()\n",
    "#plt.show()\n",
    "\n",
    "    # See how each variable is epxlinaed by each component\n",
    "pca_index = []\n",
    "\n",
    "for i in range(1, n_components + 1):\n",
    "    pca_index.append('PC' + str(i))"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 135,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "      AcceptedCmp1  AcceptedCmp2  AcceptedCmp3  AcceptedCmp4
AcceptedCmp5  \\\n",
      "PC1          13.05          2.37          2.27          9.36
15.66   \n",
      "PC2          -1.00          0.50         -0.58          7.87         -
0.20   \n",
      "PC3          -1.53         -0.05          0.77          0.03         -
2.62   \n",
      "PC4          -3.87         -0.04         -3.19          4.03         -
3.12   \n",
      "PC5          -9.37          0.34         -2.82          6.11        -
12.10   \n",
      "PC6          37.34         12.87         15.54         46.17
46.32   \n",
      "PC7           5.01          2.01         37.13         -2.40
7.00   \n",
      "PC8          -0.70         -2.10         58.16        -33.30         -
6.96   \n",
      "PC9          12.61         -3.89        -23.91        -15.80
17.11   \n",
      "PC10         -3.65          3.04        -26.93         26.50
8.53   \n",
      "PC11         -3.22         -1.24        -28.27         39.83        -
13.97   \n",
      "PC12         23.20          2.04         19.30         -5.69
13.61   \n",
      "PC13        -55.53          4.28         36.28         50.73        -
18.05   \n",
      "PC14         57.45          6.90          1.42          8.72        -
58.70   \n",
      "PC15         -9.60          1.71        -23.44        -16.76
19.27   \n",
      "PC16          2.62          3.16          0.70         -1.42
16.25   \n",
      "PC17         16.63         -0.30          0.57         12.76        -
31.13   \n",
      "PC18        -10.10         -2.16          1.17         -6.46
18.46   \n",
      "PC19         -0.79         -0.50          1.66          7.88         -
6.82   \n",
      "PC20          6.77         -3.84         -3.16          1.35         -
1.64   \n",
      "\n",
      "      AcceptedTot    Age  Childnum  Complain  Days_as_cust    ...     \\\
n",
      "PC1         10.68   2.55    -18.51     -0.64          5.12    ...      \
n",
      "PC2          1.65   5.51     14.35     -0.59         -4.73    ...      \
n",
      "PC3         -0.85   0.60     -2.55     -0.40          1.73    ...      \
n",
      "PC4         -1.55   2.27      9.77      0.45          4.45    ...      \
n",
      "PC5         -4.46   7.13     32.55      0.43         24.00    ...      \
n",
      "PC6         39.56  -2.08      8.09     -0.08        -17.74    ...      \
n",
      "PC7         12.19  -5.63     -1.78     -0.56         64.13    ...      \
n",
      "PC8          3.77   4.46     19.41     -0.54        -45.55    ...      \
n",
      "PC9         -3.47  -4.12     38.77      0.31          2.75    ...      \
n",
      "PC10         1.87  10.39     12.93      0.77         20.50    ...      \
n",
      "PC11        -1.71  -2.97      1.29     -2.22        -37.85    ...      \
n",
      "PC12        13.11   0.19      6.90     -1.54         -5.78    ...      \
n",
      "PC13         4.42  -8.15      7.71     -0.76         -1.90    ...      \
n",
      "PC14         3.95   0.01      2.07      0.19          5.28    ...      \
n",
      "PC15        -7.20  -7.39      1.23     -0.42        -10.84    ...      \
n",
      "PC16         5.33  -2.30     -0.42      1.34          5.30    ...      \
n",
      "PC17        -0.37   2.25      0.14      0.58         -5.06    ...      \
n",
      "PC18         0.23   2.44      6.03     -0.94          3.87    ...      \
n",
      "PC19         0.36  -1.93      8.68     -0.47         12.37    ...      \
n",
      "PC20        -0.13  -4.15     12.46      0.63         16.07    ...      \
n",
      "\n",
      "      R_MntSweetProducts  R_MntWines  R_Mnt_NumCatalogPurchases  \\\n",
      "PC1                -1.31        6.28                      -0.09   \n",
      "PC2                -8.16       29.60                      -1.19   \n",
      "PC3                -0.63       -0.55                       1.05   \n",
      "PC4                -1.18        4.80                       0.77   \n",
      "PC5                -4.77       25.98                      -2.03   \n",
      "PC6                -4.23       14.38                      -0.26   \n",
      "PC7                 1.61      -16.63                       4.82   \n",
      "PC8                -2.95       -1.43                      14.92   \n",
      "PC9                 0.99      -14.74                      -5.73   \n",
      "PC10                3.91      -20.23                      15.50   \n",
      "PC11                6.49      -21.79                       8.34   \n",
      "PC12               11.37      -26.04                     -17.23   \n",
      "PC13               -0.81       -3.72                      -3.77   \n",
      "PC14                1.61        8.98                       8.59   \n",
      "PC15               -3.15       11.28                       2.10   \n",
      "PC16                4.80      -24.64                      19.59   \n",
      "PC17              -18.78      -13.38                     -17.18   \n",
      "PC18              -14.88        1.22                      -0.49   \n",
      "PC19               16.78        8.82                      -1.35   \n",
      "PC20              -19.00        9.67                       3.18   \n",
      "\n",
      "      R_Mnt_NumStorePurchases  R_Mnt_NumWebPurchases  
R_NumCatalogPurchases  \\\n",
      "PC1                    -10.81                 -12.41
19.60   \n",
      "PC2                     -0.69                  -0.03                  -
2.79   \n",
      "PC3                      0.12                   0.41
1.45   \n",
      "PC4                     -2.00                  -0.50                  -
0.09   \n",
      "PC5                     -7.14                  -5.06                  -
4.76   \n",
      "PC6                      4.27                   5.06                  -
2.08   \n",
      "PC7                       -5.35                    1.22
6.78   \n",
      "PC8                       -4.02                   -1.60
25.82   \n",
      "PC9                        5.63                    6.66                  -
1.59   \n",
      "PC10                       0.01                  -10.86
27.95   \n",
      "PC11                     -12.45                    5.83
6.46   \n",
      "PC12                       6.77                    2.33                 -
38.57   \n",
      "PC13                       5.96                   -2.62                  -
4.17   \n",
      "PC14                       3.83                   -4.61
10.18   \n",
      "PC15                       1.94                   -6.95                  -
2.25   \n",
      "PC16                      -4.67                   -6.31
11.75   \n",
      "PC17                       3.87                    3.76                 -
15.21   \n",
      "PC18                       3.79                    2.08                  -
1.21   \n",
      "PC19                      -0.09                   -1.50                  -
3.61   \n",
      "PC20                      -0.60                   -1.97
4.35   \n",
      "\n",
      "      R_NumStorePurchases  R_NumWebPurchases  Recency  Teenhome  \n",
      "PC1                 -9.66              -3.02     1.58     -4.68  \n",
      "PC2                 -0.69               2.49    -1.65     19.44  \n",
      "PC3                 -0.34              -0.60    -2.97     -3.39  \n",
      "PC4                 -2.26               2.31    65.68     12.61  \n",
      "PC5                 -6.05               9.13   -16.26     49.12  \n",
      "PC6                  0.09               1.26    -0.53      0.33  \n",
      "PC7                -15.26              10.87     0.14    -18.42  \n",
      "PC8                -14.64              -2.07    -0.32     20.43  \n",
      "PC9                  2.81              -1.78    -0.65      3.13  \n",
      "PC10                 2.18             -20.27    -0.85     40.37  \n",
      "PC11               -28.86              24.68    -2.29    -12.37  \n",
      "PC12                23.86               1.10     2.03     24.67  \n",
      "PC13                19.02             -16.32    -0.09     -9.01  \n",
      "PC14                11.70             -18.29    -0.51    -12.23  \n",
      "PC15                16.95             -15.50    -1.31    -21.75  \n",
      "PC16                 2.71             -10.31    -2.69      0.40  \n",
      "PC17                 6.27               3.57    -0.55      9.12  \n",
      "PC18                 2.56              -1.78    -0.12     -3.14  \n",
      "PC19                -1.07               3.41    -0.92     -6.43  \n",
      "PC20                -4.50               1.69     0.62     -3.53  \n",
      "\n",
      "[20 rows x 45 columns]\n"
     ]
    }
   ],
   "source": [
    "print(pd.DataFrame(np.round(pca.components_ * 100,
2),columns=x.columns,index=pca_index))\n",
    "\n",
    "agg_pca = pd.DataFrame(principalComponents,columns=pca_index)\n",
    "pca_df = pd.DataFrame(principalComponents, columns=pca_index,
index=x.index).iloc[:, : threshold_80_percent]\n",
    "pca_df = pd.concat([pca_df, df['Response']],axis=1)\n",
    "#pca_df.to_excel(\"df_PCA.xlsx\")"
```

```
  ]
 },
 {
  "cell_type": "code",
  "execution_count": 136,
  "metadata": {},
  "outputs": [
   {
    "data": {
     "text/html": [
      "<div>\n",
      "<style scoped>\n",
      "    .dataframe tbody tr th:only-of-type {\n",
      "        vertical-align: middle;\n",
      "    }\n",
      "\n",
      "    .dataframe tbody tr th {\n",
      "        vertical-align: top;\n",
      "    }\n",
      "\n",
      "    .dataframe thead th {\n",
      "        text-align: right;\n",
      "    }\n",
      "</style>\n",
      "<table border=\"1\" class=\"dataframe\">\n",
      "  <thead>\n",
      "    <tr style=\"text-align: right;\">\n",
      "      <th></th>\n",
      "      <th>PC1</th>\n",
      "      <th>PC2</th>\n",
      "      <th>PC3</th>\n",
      "      <th>PC4</th>\n",
      "      <th>PC5</th>\n",
      "      <th>PC6</th>\n",
      "      <th>PC7</th>\n",
      "      <th>PC8</th>\n",
      "      <th>PC9</th>\n",
      "      <th>PC10</th>\n",
      "      <th>Response</th>\n",
      "    </tr>\n",
      "    <tr>\n",
      "      <th>ID</th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "      <th></th>\n",
      "    </tr>\n",
      "  </thead>\n",
      "  <tbody>\n",
      "    <tr>\n",
      "      <th>67</th>\n",
      "      <td>-0.809906</td>\n",
      "      <td>0.792371</td>\n",
      "      <td>0.715204</td>\n",
      "      <td>-0.523118</td>\n",
      "      <td>0.231709</td>\n",
      "      <td>0.068501</td>\n",
"      <td>-0.113152</td>\n",
"      <td>0.018288</td>\n",
"      <td>0.238226</td>\n",
"      <td>0.019844</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3828</th>\n",
"      <td>1.028261</td>\n",
"      <td>-0.432112</td>\n",
"      <td>-0.434778</td>\n",
"      <td>0.312748</td>\n",
"      <td>0.470928</td>\n",
"      <td>-0.505876</td>\n",
"      <td>-0.038942</td>\n",
"      <td>0.095833</td>\n",
"      <td>0.056138</td>\n",
"      <td>0.213251</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3409</th>\n",
"      <td>-0.285483</td>\n",
"      <td>-0.368740</td>\n",
"      <td>0.605481</td>\n",
"      <td>0.327997</td>\n",
"      <td>0.039011</td>\n",
"      <td>0.314861</td>\n",
"      <td>0.480147</td>\n",
"      <td>0.558096</td>\n",
"      <td>-0.171324</td>\n",
"      <td>-0.785501</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>9451</th>\n",
"      <td>1.028023</td>\n",
"      <td>-0.318300</td>\n",
"      <td>-0.444433</td>\n",
"      <td>0.704355</td>\n",
"      <td>0.514666</td>\n",
"      <td>-0.391068</td>\n",
"      <td>0.129448</td>\n",
"      <td>-0.100894</td>\n",
"      <td>0.160467</td>\n",
"      <td>-0.151734</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>6211</th>\n",
"      <td>-0.828008</td>\n",
"      <td>0.525254</td>\n",
"      <td>-0.275814</td>\n",
"      <td>-0.166023</td>\n",
"      <td>-0.663175</td>\n",
"      <td>0.010228</td>\n",
"      <td>-0.130732</td>\n",
"      <td>0.037532</td>\n",
"      <td>-0.025651</td>\n",
"      <td>-0.067390</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"  </tbody>\n",
"</table>\n",
       "</div>"
      ],
      "text/plain": [
       "           PC1       PC2       PC3       PC4       PC5       PC6  
PC7  \\\n",
       "ID                                                                 
\n",
       "67   -0.809906  0.792371  0.715204 -0.523118  0.231709  0.068501 -
0.113152   \n",
       "3828  1.028261 -0.432112 -0.434778  0.312748  0.470928 -0.505876 -
0.038942   \n",
       "3409 -0.285483 -0.368740  0.605481  0.327997  0.039011  0.314861  
0.480147   \n",
       "9451  1.028023 -0.318300 -0.444433  0.704355  0.514666 -0.391068  
0.129448   \n",
       "6211 -0.828008  0.525254 -0.275814 -0.166023 -0.663175  0.010228 -
0.130732   \n",
       "\n",
       "           PC8       PC9      PC10  Response  \n",
       "ID                                           \n",
       "67    0.018288  0.238226  0.019844         0  \n",
       "3828  0.095833  0.056138  0.213251         0  \n",
       "3409  0.558096 -0.171324 -0.785501         0  \n",
       "9451 -0.100894  0.160467 -0.151734         0  \n",
       "6211  0.037532 -0.025651 -0.067390         0  "
      ]
     },
     "execution_count": 136,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "pca_df.head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "## Factor Analysis"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 137,
   "metadata": {},
   "outputs": [],
   "source": [
    "from sklearn.decomposition import FactorAnalysis as FA"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 138,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "0.9631416325658947"
      ]
     },
     "execution_count": 138,
   "metadata": {},
   "output_type": "execute_result"
  }
 ],
 "source": [
  "n_components = threshold_80_percent\n",
  "fa = FA(n_components = n_components, random_state=seed)\n",
  "fa_df = fa.fit_transform(x)\n",
  "sum(fa.noise_variance_)  "
 ]
},
{
 "cell_type": "code",
 "execution_count": 139,
 "metadata": {},
 "outputs": [
  {
   "data": {
    "text/html": [
     "<div>\n",
     "<style scoped>\n",
     "    .dataframe tbody tr th:only-of-type {\n",
     "        vertical-align: middle;\n",
     "    }\n",
     "\n",
     "    .dataframe tbody tr th {\n",
     "        vertical-align: top;\n",
     "    }\n",
     "\n",
     "    .dataframe thead th {\n",
     "        text-align: right;\n",
     "    }\n",
     "</style>\n",
     "<table border=\"1\" class=\"dataframe\">\n",
     "  <thead>\n",
     "    <tr style=\"text-align: right;\">\n",
     "      <th></th>\n",
     "      <th>Fact1</th>\n",
     "      <th>Fact2</th>\n",
     "      <th>Fact3</th>\n",
     "      <th>Fact4</th>\n",
     "      <th>Fact5</th>\n",
     "      <th>Fact6</th>\n",
     "      <th>Fact7</th>\n",
     "      <th>Fact8</th>\n",
     "      <th>Fact9</th>\n",
     "      <th>Fact10</th>\n",
     "      <th>Response</th>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>ID</th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "    </tr>\n",
     "  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>67</th>\n",
"      <td>-1.251478</td>\n",
"      <td>-0.140457</td>\n",
"      <td>-0.152598</td>\n",
"      <td>0.116644</td>\n",
"      <td>-1.387838</td>\n",
"      <td>-0.092602</td>\n",
"      <td>-1.583889</td>\n",
"      <td>0.168579</td>\n",
"      <td>1.035578</td>\n",
"      <td>0.221977</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3828</th>\n",
"      <td>0.423191</td>\n",
"      <td>-0.464838</td>\n",
"      <td>2.019676</td>\n",
"      <td>-1.096858</td>\n",
"      <td>0.551726</td>\n",
"      <td>0.133886</td>\n",
"      <td>0.867247</td>\n",
"      <td>0.037749</td>\n",
"      <td>-0.045855</td>\n",
"      <td>0.219754</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3409</th>\n",
"      <td>-0.158051</td>\n",
"      <td>2.228083</td>\n",
"      <td>-0.033909</td>\n",
"      <td>1.028487</td>\n",
"      <td>0.626806</td>\n",
"      <td>0.698284</td>\n",
"      <td>0.814756</td>\n",
"      <td>0.140286</td>\n",
"      <td>-0.668858</td>\n",
"      <td>-0.473987</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>9451</th>\n",
"      <td>0.278522</td>\n",
"      <td>0.977900</td>\n",
"      <td>1.671330</td>\n",
"      <td>-0.390954</td>\n",
"      <td>1.533862</td>\n",
"      <td>-1.728088</td>\n",
"      <td>0.225450</td>\n",
"      <td>0.500031</td>\n",
"      <td>0.116961</td>\n",
"      <td>0.566531</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>6211</th>\n",
"      <td>-1.400568</td>\n",
"      <td>-0.898799</td>\n",
"      <td>-0.368700</td>\n",
"      <td>0.184549</td>\n",
"      <td>0.014160</td>\n",
       "      <td>-0.170857</td>\n",
       "      <td>-0.336057</td>\n",
       "      <td>-0.533657</td>\n",
       "      <td>-0.449540</td>\n",
       "      <td>0.250631</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "         Fact1     Fact2     Fact3     Fact4     Fact5     Fact6     
Fact7  \\\n",
       "ID                                                                     
\n",
       "67   -1.251478 -0.140457 -0.152598  0.116644 -1.387838 -0.092602 -
1.583889   \n",
       "3828  0.423191 -0.464838  2.019676 -1.096858  0.551726  0.133886  
0.867247   \n",
       "3409 -0.158051  2.228083 -0.033909  1.028487  0.626806  0.698284  
0.814756   \n",
       "9451  0.278522  0.977900  1.671330 -0.390954  1.533862 -1.728088  
0.225450   \n",
       "6211 -1.400568 -0.898799 -0.368700  0.184549  0.014160 -0.170857 -
0.336057   \n",
       "\n",
       "         Fact8     Fact9    Fact10  Response  \n",
       "ID                                            \n",
       "67    0.168579  1.035578  0.221977         0  \n",
       "3828  0.037749 -0.045855  0.219754         0  \n",
       "3409  0.140286 -0.668858 -0.473987         0  \n",
       "9451  0.500031  0.116961  0.566531         0  \n",
       "6211 -0.533657 -0.449540  0.250631         0  "
      ]
     },
     "execution_count": 139,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "fa_index = []\n",
    "for i in range(1, n_components + 1):\n",
    "    fa_index.append('Fact' + str(i))\n",
    "fa_df = pd.DataFrame(fa_df, columns = fa_index,index=x.index)\n",
    "fa_df = pd.concat([fa_df, df['Response']],axis=1)\n",
    "fa_df.head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "## ICA"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 140,
   "metadata": {},
   "outputs": [],
   "source": [
    "from sklearn.decomposition import FastICA"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 141,
   "metadata": {},
   "outputs": [],
   "source": [
    "n_components = threshold_80_percent\n",
    "ica = FastICA(n_components=n_components, random_state=seed)\n",
    "ica_df = ica.fit_transform(x)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 142,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>ICA1</th>\n",
       "      <th>ICA2</th>\n",
       "      <th>ICA3</th>\n",
       "      <th>ICA4</th>\n",
       "      <th>ICA5</th>\n",
       "      <th>ICA6</th>\n",
       "      <th>ICA7</th>\n",
       "      <th>ICA8</th>\n",
       "      <th>ICA9</th>\n",
       "      <th>ICA10</th>\n",
       "      <th>Response</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>67</th>\n",
"      <td>0.011172</td>\n",
"      <td>-0.000455</td>\n",
"      <td>-0.005046</td>\n",
"      <td>-0.009369</td>\n",
"      <td>-0.035371</td>\n",
"      <td>0.030746</td>\n",
"      <td>0.008045</td>\n",
"      <td>-0.033047</td>\n",
"      <td>-0.025256</td>\n",
"      <td>0.024706</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3828</th>\n",
"      <td>-0.042609</td>\n",
"      <td>-0.021474</td>\n",
"      <td>-0.016525</td>\n",
"      <td>-0.009406</td>\n",
"      <td>0.013360</td>\n",
"      <td>-0.022553</td>\n",
"      <td>-0.016197</td>\n",
"      <td>0.019122</td>\n",
"      <td>0.022735</td>\n",
"      <td>0.018532</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3409</th>\n",
"      <td>-0.003301</td>\n",
"      <td>0.053710</td>\n",
"      <td>-0.014193</td>\n",
"      <td>0.079819</td>\n",
"      <td>0.019428</td>\n",
"      <td>-0.017438</td>\n",
"      <td>0.003478</td>\n",
"      <td>-0.033738</td>\n",
"      <td>-0.029366</td>\n",
"      <td>-0.014856</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>9451</th>\n",
"      <td>-0.047360</td>\n",
"      <td>0.013831</td>\n",
"      <td>-0.012333</td>\n",
"      <td>-0.010028</td>\n",
"      <td>0.035104</td>\n",
"      <td>-0.019728</td>\n",
"      <td>-0.028729</td>\n",
"      <td>0.017514</td>\n",
"      <td>-0.000218</td>\n",
"      <td>0.012383</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>6211</th>\n",
"      <td>0.028177</td>\n",
"      <td>0.001681</td>\n",
"      <td>-0.008779</td>\n",
       "      <td>-0.000628</td>\n",
       "      <td>-0.001344</td>\n",
       "      <td>0.030976</td>\n",
       "      <td>0.027076</td>\n",
       "      <td>0.017837</td>\n",
       "      <td>-0.007809</td>\n",
       "      <td>-0.019243</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "          ICA1      ICA2      ICA3      ICA4      ICA5      ICA6  
ICA7  \\\n",
       "ID                                                                
\n",
       "67    0.011172 -0.000455 -0.005046 -0.009369 -0.035371  0.030746  
0.008045   \n",
       "3828 -0.042609 -0.021474 -0.016525 -0.009406  0.013360 -0.022553 -
0.016197   \n",
       "3409 -0.003301  0.053710 -0.014193  0.079819  0.019428 -0.017438  
0.003478   \n",
       "9451 -0.047360  0.013831 -0.012333 -0.010028  0.035104 -0.019728 -
0.028729   \n",
       "6211  0.028177  0.001681 -0.008779 -0.000628 -0.001344  0.030976  
0.027076   \n",
       "\n",
       "          ICA8      ICA9     ICA10  Response  \n",
       "ID                                            \n",
       "67   -0.033047 -0.025256  0.024706         0  \n",
       "3828  0.019122  0.022735  0.018532         0  \n",
       "3409 -0.033738 -0.029366 -0.014856         0  \n",
       "9451  0.017514 -0.000218  0.012383         0  \n",
       "6211  0.017837 -0.007809 -0.019243         0  "
      ]
     },
     "execution_count": 142,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "ica_index = []\n",
    "for i in range(1, n_components + 1):\n",
    "    ica_index.append('ICA' + str(i))\n",
    "ica_df = pd.DataFrame(ica_df, columns = ica_index,index=x.index)\n",
    "ica_df = pd.concat([ica_df, df['Response']],axis=1)\n",
    "ica_df.head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "## TSNE"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 143,
   "metadata": {},
   "outputs": [],
   "source": [
    "from sklearn.manifold import TSNE \n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 144,
   "metadata": {},
   "outputs": [],
   "source": [
    "n_components = 3\n",
    "tsne = TSNE(n_components=n_components, n_iter=250,random_state=seed)\n",
    "tsne_df = tsne.fit_transform(x.values)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 145,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>TSNE1</th>\n",
       "      <th>TSNE2</th>\n",
       "      <th>TSNE3</th>\n",
       "      <th>Response</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>67</th>\n",
       "      <td>-0.436040</td>\n",
       "      <td>1.164724</td>\n",
       "      <td>0.604223</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>3828</th>\n",
     "      <td>0.140193</td>\n",
     "      <td>-0.477769</td>\n",
     "      <td>-0.247487</td>\n",
     "      <td>0</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>3409</th>\n",
     "      <td>0.488393</td>\n",
     "      <td>0.969068</td>\n",
     "      <td>-0.412692</td>\n",
     "      <td>0</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>9451</th>\n",
     "      <td>0.132900</td>\n",
     "      <td>-0.465626</td>\n",
     "      <td>-0.237191</td>\n",
     "      <td>0</td>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>6211</th>\n",
     "      <td>-1.065690</td>\n",
     "      <td>0.056261</td>\n",
     "      <td>1.134965</td>\n",
     "      <td>0</td>\n",
     "    </tr>\n",
     "  </tbody>\n",
     "</table>\n",
     "</div>"
    ],
    "text/plain": [
     "         TSNE1     TSNE2     TSNE3  Response\n",
     "ID                                          \n",
     "67   -0.436040  1.164724  0.604223         0\n",
     "3828  0.140193 -0.477769 -0.247487         0\n",
     "3409  0.488393  0.969068 -0.412692         0\n",
     "9451  0.132900 -0.465626 -0.237191         0\n",
     "6211 -1.065690  0.056261  1.134965         0"
    ]
   },
   "execution_count": 145,
   "metadata": {},
   "output_type": "execute_result"
  }
 ],
 "source": [
  "tsne_names = []\n",
  "for i in range(1, n_components + 1):\n",
  "    tsne_names.append('TSNE' + str(i))\n",
  "\n",
  "tsne_df = pd.DataFrame(tsne_df, index = x.index, columns=tsne_names)\n",
  "tsne_df = pd.concat([tsne_df, df['Response']],axis=1)\n",
  "tsne_df.head()"
 ]
},
{
 "cell_type": "markdown",
 "metadata": {},
 "source": [
  "# LDA"
 ]
},
{
 "cell_type": "code",
   "execution_count": 146,
   "metadata": {},
   "outputs": [],
   "source": [
    "#from sklearn.discriminant_analysis import LinearDiscriminantAnalysis as
LDA\n",
    "\n",
    "#n_components = 10\n",
    "#lda = LDA(n_components = n_components)\n",
    "#lda_df = lda.fit_transform(x, y)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 147,
   "metadata": {},
   "outputs": [],
   "source": [
    "#lda_df.shape"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Kernel PCA"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 148,
   "metadata": {},
   "outputs": [],
   "source": [
    "from sklearn.decomposition import KernelPCA as KPCA"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 149,
   "metadata": {},
   "outputs": [],
   "source": [
    "n_components = threshold_80_percent\n",
    "kpca = KPCA(n_components = n_components, random_state=seed,
kernel='linear')\n",
    "kpca_df = kpca.fit_transform(x)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 150,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
"        vertical-align: top;\n",
"    }\n",
"\n",
"    .dataframe thead th {\n",
"        text-align: right;\n",
"    }\n",
"</style>\n",
"<table border=\"1\" class=\"dataframe\">\n",
"  <thead>\n",
"    <tr style=\"text-align: right;\">\n",
"      <th></th>\n",
"      <th>KPCA1</th>\n",
"      <th>KPCA2</th>\n",
"      <th>KPCA3</th>\n",
"      <th>KPCA4</th>\n",
"      <th>KPCA5</th>\n",
"      <th>KPCA6</th>\n",
"      <th>KPCA7</th>\n",
"      <th>KPCA8</th>\n",
"      <th>KPCA9</th>\n",
"      <th>KPCA10</th>\n",
"      <th>Response</th>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>ID</th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>67</th>\n",
"      <td>0.809906</td>\n",
"      <td>0.792371</td>\n",
"      <td>-0.715204</td>\n",
"      <td>-0.523118</td>\n",
"      <td>0.231709</td>\n",
"      <td>-0.068501</td>\n",
"      <td>0.113153</td>\n",
"      <td>-0.018288</td>\n",
"      <td>-0.238228</td>\n",
"      <td>0.019846</td>\n",
"      <td>0</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3828</th>\n",
"      <td>-1.028261</td>\n",
"      <td>-0.432112</td>\n",
"      <td>0.434778</td>\n",
"      <td>0.312748</td>\n",
"      <td>0.470928</td>\n",
"      <td>0.505876</td>\n",
"      <td>0.038941</td>\n",
"      <td>-0.095832</td>\n",
"      <td>-0.056138</td>\n",
       "      <td>0.213252</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>3409</th>\n",
       "      <td>0.285483</td>\n",
       "      <td>-0.368740</td>\n",
       "      <td>-0.605481</td>\n",
       "      <td>0.327997</td>\n",
       "      <td>0.039011</td>\n",
       "      <td>-0.314861</td>\n",
       "      <td>-0.480147</td>\n",
       "      <td>-0.558096</td>\n",
       "      <td>0.171325</td>\n",
       "      <td>-0.785502</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>9451</th>\n",
       "      <td>-1.028023</td>\n",
       "      <td>-0.318300</td>\n",
       "      <td>0.444433</td>\n",
       "      <td>0.704355</td>\n",
       "      <td>0.514666</td>\n",
       "      <td>0.391068</td>\n",
       "      <td>-0.129448</td>\n",
       "      <td>0.100892</td>\n",
       "      <td>-0.160468</td>\n",
       "      <td>-0.151732</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>6211</th>\n",
       "      <td>0.828008</td>\n",
       "      <td>0.525254</td>\n",
       "      <td>0.275814</td>\n",
       "      <td>-0.166023</td>\n",
       "      <td>-0.663175</td>\n",
       "      <td>-0.010228</td>\n",
       "      <td>0.130732</td>\n",
       "      <td>-0.037533</td>\n",
       "      <td>0.025650</td>\n",
       "      <td>-0.067389</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "         KPCA1     KPCA2     KPCA3     KPCA4     KPCA5     KPCA6  
KPCA7  \\\n",
       "ID                                                                
\n",
       "67    0.809906  0.792371 -0.715204 -0.523118  0.231709 -0.068501  
0.113153   \n",
       "3828 -1.028261 -0.432112  0.434778  0.312748  0.470928  0.505876  
0.038941   \n",
       "3409  0.285483 -0.368740 -0.605481  0.327997  0.039011 -0.314861 -
0.480147   \n",
       "9451 -1.028023 -0.318300  0.444433  0.704355  0.514666  0.391068 -
0.129448   \n",
       "6211  0.828008  0.525254  0.275814 -0.166023 -0.663175 -0.010228  
0.130732   \n",
     "\n",
     "         KPCA8     KPCA9    KPCA10  Response  \n",
     "ID                                            \n",
     "67   -0.018288 -0.238228  0.019846         0  \n",
     "3828 -0.095832 -0.056138  0.213252         0  \n",
     "3409 -0.558096  0.171325 -0.785502         0  \n",
     "9451  0.100892 -0.160468 -0.151732         0  \n",
     "6211 -0.037533  0.025650 -0.067389         0  "
    ]
   },
   "execution_count": 150,
   "metadata": {},
   "output_type": "execute_result"
  }
 ],
 "source": [
  "kpca_names = []\n",
  "for i in range(1, n_components + 1):\n",
  "    kpca_names.append('KPCA' + str(i))\n",
  "\n",
  "kpca_df = pd.DataFrame(kpca_df, index = x.index, columns=kpca_names)\n",
  "kpca_df = pd.concat([kpca_df, df['Response']],axis=1)\n",
  "kpca_df.head()"
 ]
},
{
 "cell_type": "markdown",
 "metadata": {},
 "source": [
  "# Feature Agglomeration"
 ]
},
{
 "cell_type": "code",
 "execution_count": 151,
 "metadata": {},
 "outputs": [],
 "source": [
  "from sklearn import cluster"
 ]
},
{
 "cell_type": "code",
 "execution_count": 152,
 "metadata": {},
 "outputs": [],
 "source": [
  "n_clusters = threshold_80_percent\n",
  "agglo = cluster.FeatureAgglomeration(n_clusters=n_clusters)\n",
  "agglo.fit(x) \n",
  "x_reduced = agglo.transform(x)"
 ]
},
{
 "cell_type": "code",
 "execution_count": 153,
 "metadata": {},
 "outputs": [],
 "source": [
  "clust_names = []\n",
  "for i in range(1, n_clusters + 1):\n",
  "    clust_names.append('CLUST' + str(i))"
 ]
},
{
 "cell_type": "code",
 "execution_count": 154,
 "metadata": {},
 "outputs": [
  {
   "data": {
    "text/html": [
     "<div>\n",
     "<style scoped>\n",
     "    .dataframe tbody tr th:only-of-type {\n",
     "        vertical-align: middle;\n",
     "    }\n",
     "\n",
     "    .dataframe tbody tr th {\n",
     "        vertical-align: top;\n",
     "    }\n",
     "\n",
     "    .dataframe thead th {\n",
     "        text-align: right;\n",
     "    }\n",
     "</style>\n",
     "<table border=\"1\" class=\"dataframe\">\n",
     "  <thead>\n",
     "    <tr style=\"text-align: right;\">\n",
     "      <th></th>\n",
     "      <th>CLUST1</th>\n",
     "      <th>CLUST2</th>\n",
     "      <th>CLUST3</th>\n",
     "      <th>CLUST4</th>\n",
     "      <th>CLUST5</th>\n",
     "      <th>CLUST6</th>\n",
     "      <th>CLUST7</th>\n",
     "      <th>CLUST8</th>\n",
     "      <th>CLUST9</th>\n",
     "      <th>CLUST10</th>\n",
     "      <th>Response</th>\n",
     "    </tr>\n",
     "    <tr>\n",
     "      <th>ID</th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "      <th></th>\n",
     "    </tr>\n",
     "  </thead>\n",
     "  <tbody>\n",
     "    <tr>\n",
     "      <th>67</th>\n",
     "      <td>0.613805</td>\n",
     "      <td>0.051884</td>\n",
     "      <td>0.577381</td>\n",
     "      <td>0.022903</td>\n",
     "      <td>0.305575</td>\n",
     "      <td>1.0</td>\n",
     "      <td>0.042690</td>\n",
     "      <td>0.0000</td>\n",
 "      <td>0.265325</td>\n",
 "      <td>1.0</td>\n",
 "      <td>0</td>\n",
 "    </tr>\n",
 "    <tr>\n",
 "      <th>3828</th>\n",
 "      <td>0.543338</td>\n",
 "      <td>0.078206</td>\n",
 "      <td>0.233059</td>\n",
 "      <td>0.481257</td>\n",
 "      <td>0.311574</td>\n",
 "      <td>0.0</td>\n",
 "      <td>0.695468</td>\n",
 "      <td>0.0000</td>\n",
 "      <td>0.774936</td>\n",
 "      <td>0.0</td>\n",
 "      <td>0</td>\n",
 "    </tr>\n",
 "    <tr>\n",
 "      <th>3409</th>\n",
 "      <td>0.377944</td>\n",
 "      <td>0.158259</td>\n",
 "      <td>0.288690</td>\n",
 "      <td>0.116949</td>\n",
 "      <td>0.437184</td>\n",
 "      <td>1.0</td>\n",
 "      <td>0.706047</td>\n",
 "      <td>0.0625</td>\n",
 "      <td>0.401604</td>\n",
 "      <td>0.0</td>\n",
 "      <td>0</td>\n",
 "    </tr>\n",
 "    <tr>\n",
 "      <th>9451</th>\n",
 "      <td>0.577551</td>\n",
 "      <td>0.065383</td>\n",
 "      <td>0.250259</td>\n",
 "      <td>0.473040</td>\n",
 "      <td>0.353969</td>\n",
 "      <td>0.0</td>\n",
 "      <td>0.964646</td>\n",
 "      <td>0.0000</td>\n",
 "      <td>0.748069</td>\n",
 "      <td>0.0</td>\n",
 "      <td>0</td>\n",
 "    </tr>\n",
 "    <tr>\n",
 "      <th>6211</th>\n",
 "      <td>0.437445</td>\n",
 "      <td>0.057094</td>\n",
 "      <td>0.288690</td>\n",
 "      <td>0.013424</td>\n",
 "      <td>0.358409</td>\n",
 "      <td>0.0</td>\n",
 "      <td>0.462599</td>\n",
 "      <td>0.0000</td>\n",
 "      <td>0.184705</td>\n",
 "      <td>1.0</td>\n",
 "      <td>0</td>\n",
 "    </tr>\n",
 "  </tbody>\n",
 "</table>\n",
 "</div>"
],
      "text/plain": [
       "        CLUST1    CLUST2    CLUST3    CLUST4    CLUST5  CLUST6    CLUST7  
\\\n",
       "ID                                                                        
\n",
       "67    0.613805  0.051884  0.577381  0.022903  0.305575     1.0  0.042690  
\n",
       "3828  0.543338  0.078206  0.233059  0.481257  0.311574     0.0  0.695468  
\n",
       "3409  0.377944  0.158259  0.288690  0.116949  0.437184     1.0  0.706047  
\n",
       "9451  0.577551  0.065383  0.250259  0.473040  0.353969     0.0  0.964646  
\n",
       "6211  0.437445  0.057094  0.288690  0.013424  0.358409     0.0  0.462599  
\n",
       "\n",
       "      CLUST8    CLUST9  CLUST10  Response  \n",
       "ID                                         \n",
       "67    0.0000  0.265325      1.0         0  \n",
       "3828  0.0000  0.774936      0.0         0  \n",
       "3409  0.0625  0.401604      0.0         0  \n",
       "9451  0.0000  0.748069      0.0         0  \n",
       "6211  0.0000  0.184705      1.0         0  "
      ]
     },
     "execution_count": 154,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "x_reduced = pd.DataFrame(x_reduced, index = x.index, columns=clust_names)\
n",
    "x_reduced = pd.concat([x_reduced, df['Response']],axis=1)\n",
    "x_reduced.head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Gaussian Random Projection"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 155,
   "metadata": {},
   "outputs": [],
   "source": [
    "from sklearn.random_projection import GaussianRandomProjection\n",
    "\n",
    "n_components = threshold_80_percent\n",
    "grp = GaussianRandomProjection(n_components
=n_components,random_state=seed)\n",
    "rand_proj = grp.fit_transform(x)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 156,
   "metadata": {},
   "outputs": [
    {
```

```
"data": {
 "text/html": [
  "<div>\n",
  "<style scoped>\n",
  "    .dataframe tbody tr th:only-of-type {\n",
  "        vertical-align: middle;\n",
  "    }\n",
  "\n",
  "    .dataframe tbody tr th {\n",
  "        vertical-align: top;\n",
  "    }\n",
  "\n",
  "    .dataframe thead th {\n",
  "        text-align: right;\n",
  "    }\n",
  "</style>\n",
  "<table border=\"1\" class=\"dataframe\">\n",
  "  <thead>\n",
  "    <tr style=\"text-align: right;\">\n",
  "      <th></th>\n",
  "      <th>GRP1</th>\n",
  "      <th>GRP2</th>\n",
  "      <th>GRP3</th>\n",
  "      <th>GRP4</th>\n",
  "      <th>GRP5</th>\n",
  "      <th>GRP6</th>\n",
  "      <th>GRP7</th>\n",
  "      <th>GRP8</th>\n",
  "      <th>GRP9</th>\n",
  "      <th>GRP10</th>\n",
  "      <th>Response</th>\n",
  "    </tr>\n",
  "    <tr>\n",
  "      <th>ID</th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "      <th></th>\n",
  "    </tr>\n",
  "  </thead>\n",
  "  <tbody>\n",
  "    <tr>\n",
  "      <th>67</th>\n",
  "      <td>0.491865</td>\n",
  "      <td>0.168557</td>\n",
  "      <td>0.923474</td>\n",
  "      <td>0.339993</td>\n",
  "      <td>-0.498594</td>\n",
  "      <td>-0.449854</td>\n",
  "      <td>0.201955</td>\n",
  "      <td>-0.669956</td>\n",
  "      <td>-0.316022</td>\n",
  "      <td>0.799339</td>\n",
  "      <td>0</td>\n",
  "    </tr>\n",
  "    <tr>\n",
  "      <th>3828</th>\n",
       "      <td>0.661241</td>\n",
       "      <td>0.038519</td>\n",
       "      <td>1.085218</td>\n",
       "      <td>0.383266</td>\n",
       "      <td>0.444486</td>\n",
       "      <td>-1.337309</td>\n",
       "      <td>1.471578</td>\n",
       "      <td>-0.613053</td>\n",
       "      <td>-2.247389</td>\n",
       "      <td>-0.233343</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>3409</th>\n",
       "      <td>0.495962</td>\n",
       "      <td>0.014785</td>\n",
       "      <td>0.424602</td>\n",
       "      <td>-0.088210</td>\n",
       "      <td>-0.471883</td>\n",
       "      <td>-0.542405</td>\n",
       "      <td>1.155794</td>\n",
       "      <td>-0.588679</td>\n",
       "      <td>-0.806568</td>\n",
       "      <td>0.290853</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>9451</th>\n",
       "      <td>0.402433</td>\n",
       "      <td>-0.188029</td>\n",
       "      <td>1.266110</td>\n",
       "      <td>1.068602</td>\n",
       "      <td>0.304885</td>\n",
       "      <td>-1.367569</td>\n",
       "      <td>0.889981</td>\n",
       "      <td>-1.084449</td>\n",
       "      <td>-2.277606</td>\n",
       "      <td>0.023013</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>6211</th>\n",
       "      <td>0.231310</td>\n",
       "      <td>0.164170</td>\n",
       "      <td>1.101483</td>\n",
       "      <td>0.031763</td>\n",
       "      <td>-0.481775</td>\n",
       "      <td>-0.508159</td>\n",
       "      <td>0.233581</td>\n",
       "      <td>-1.003808</td>\n",
       "      <td>-0.210673</td>\n",
       "      <td>0.287452</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "          GRP1      GRP2      GRP3      GRP4      GRP5      GRP6
GRP7  \\\n",
       "ID
\n",
       "67    0.491865  0.168557  0.923474  0.339993 -0.498594 -0.449854
```

```
0.201955   \n",
       "3828  0.661241  0.038519  1.085218  0.383266  0.444486 -1.337309
1.471578   \n",
       "3409  0.495962  0.014785  0.424602 -0.088210 -0.471883 -0.542405
1.155794   \n",
       "9451  0.402433 -0.188029  1.266110  1.068602  0.304885 -1.367569
0.889981   \n",
       "6211  0.231310  0.164170  1.101483  0.031763 -0.481775 -0.508159
0.233581   \n",
       "\n",
       "          GRP8      GRP9     GRP10  Response  \n",
       "ID                                            \n",
       "67   -0.669956 -0.316022  0.799339         0  \n",
       "3828 -0.613053 -2.247389 -0.233343         0  \n",
       "3409 -0.588679 -0.806568  0.290853         0  \n",
       "9451 -1.084449 -2.277606  0.023013         0  \n",
       "6211 -1.003808 -0.210673  0.287452         0  "
      ]
     },
     "execution_count": 156,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "rand_names = []\n",
    "for i in range(1, n_components + 1):\n",
    "    rand_names.append('GRP' + str(i))\n",
    "\n",
    "grp_df = pd.DataFrame(rand_proj, index = x.index, columns=rand_names)\n",
    "grp_df = pd.concat([grp_df, df['Response']],axis=1)\n",
    "grp_df.head()"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Comparing choice of features with RFECV"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 157,
   "metadata": {},
   "outputs": [],
   "source": [
    "from sklearn.feature_selection import RFECV\n",
    "from sklearn.svm import SVR\n",
    "from sklearn.linear_model import LogisticRegression\n",
    "\n",
    "estimator = LogisticRegression()\n",
    "\n",
    "selector = RFECV(estimator, step=1, cv = 5)\n",
    "selector = selector.fit(x,y)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 158,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "array(['AcceptedCmp1', 'R_NumStorePurchases', 'R_Mnt_NumWebPurchases',\
n",
       "       'R_Mnt_NumStorePurchases', 'R_Mnt_NumCatalogPurchases',\n",
       "       'R_MntWines', 'R_MntMeatProducts', 'R_MntFishProducts',\n",
       "       'R_DealFrq', 'RFM', 'NumWebVisitsMonth', 'NumStorePurchases',\n",
       "       'NumDealsPurchases', 'Recency', 'MntMeatProducts',\n",
       "       'NumCatalogPurchases', 'Teenhome', 'AcceptedCmp2',\n",
       "       'Marital_Status', 'AcceptedTot', 'AcceptedCmp3', 'Days_as_cust',\
n",
       "       'AcceptedCmp4', 'Income', 'AcceptedCmp5', 'Education'],\n",
       "      dtype=object)"
      ]
     },
     "execution_count": 158,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "rfecv_df =
pd.DataFrame({'var':x.columns,'rank':selector.ranking_,'support':selector.suppor
t_ }).sort_values(by='rank')\n",
    "rfecv_features = rfecv_df.loc[rfecv_df.support == True]['var'].values\n",
    "rfecv_features"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Best power transformation for selected features"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 159,
   "metadata": {},
   "outputs": [],
   "source": [
    "# 2) & 3) perform power transformations on scaled features and select the
best\n",
    "from scipy import stats\n",
    "from sklearn.preprocessing import KBinsDiscretizer\n",
    "from scipy.stats import boxcox\n",
    "\n",
    "\n",
    "# define a set of transformations\n",
    "trans_dict = {'x': lambda x: x,\n",
    "              #'1/x': lambda x: np.divide(1, x),\n",
    "              'log': np.log,\n",
    "              'sqrt': np.sqrt,\n",
    "              'exp': np.exp,\n",
    "              '**1/3': lambda x: np.power(x, 1/3),\n",
    "              '**1/4': lambda x: np.power(x, 0.25),\n",
    "              '**1/5': lambda x: np.power(x, 1/5),\n",
    "              '**1/6': lambda x: np.power(x, 1/6),\n",
    "              '**1/7': lambda x: np.power(x, 1/7),\n",
    "              '**2': lambda x: np.power(x, 2),\n",
    "              '**4': lambda x: np.power(x, 4)}"
   ]
  },
  {
   "cell_type": "code",
"execution_count": 160,
"metadata": {},
"outputs": [
 {
  "data": {
   "text/html": [
    "<div>\n",
    "<style scoped>\n",
    "    .dataframe tbody tr th:only-of-type {\n",
    "        vertical-align: middle;\n",
    "    }\n",
    "\n",
    "    .dataframe tbody tr th {\n",
    "        vertical-align: top;\n",
    "    }\n",
    "\n",
    "    .dataframe thead th {\n",
    "        text-align: right;\n",
    "    }\n",
    "</style>\n",
    "<table border=\"1\" class=\"dataframe\">\n",
    "  <thead>\n",
    "    <tr style=\"text-align: right;\">\n",
    "      <th></th>\n",
    "      <th>Education</th>\n",
    "      <th>Marital_Status</th>\n",
    "      <th>Income</th>\n",
    "      <th>Kidhome</th>\n",
    "      <th>Teenhome</th>\n",
    "      <th>Recency</th>\n",
    "      <th>MntWines</th>\n",
    "      <th>MntFruits</th>\n",
    "      <th>MntMeatProducts</th>\n",
    "      <th>MntFishProducts</th>\n",
    "      <th>...</th>\n",
    "      <th>R_MntFishProducts_01T</th>\n",
    "      <th>R_MntSweetProducts_01T</th>\n",
    "      <th>R_MntGoldProds_01T</th>\n",
    "      <th>RFM_01T</th>\n",
    "      <th>R_NumWebPurchases_01T</th>\n",
    "      <th>R_NumCatalogPurchases_01T</th>\n",
    "      <th>R_NumStorePurchases_01T</th>\n",
    "      <th>R_Mnt_NumWebPurchases_01T</th>\n",
    "      <th>R_Mnt_NumCatalogPurchases_01T</th>\n",
    "      <th>R_Mnt_NumStorePurchases_01T</th>\n",
    "    </tr>\n",
    "    <tr>\n",
    "      <th>ID</th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
    "      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>67</th>\n",
"      <td>1</td>\n",
"      <td>1</td>\n",
"      <td>46423</td>\n",
"      <td>1</td>\n",
"      <td>1</td>\n",
"      <td>6</td>\n",
"      <td>68</td>\n",
"      <td>0</td>\n",
"      <td>16</td>\n",
"      <td>0</td>\n",
"      <td>...</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.173913</td>\n",
"      <td>0.024775</td>\n",
"      <td>0.333333</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.666667</td>\n",
"      <td>0.173913</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.144928</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3828</th>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>71107</td>\n",
"      <td>0</td>\n",
"      <td>1</td>\n",
"      <td>61</td>\n",
"      <td>533</td>\n",
"      <td>10</td>\n",
"      <td>217</td>\n",
"      <td>198</td>\n",
"      <td>...</td>\n",
"      <td>0.252507</td>\n",
"      <td>0.218538</td>\n",
"      <td>0.293896</td>\n",
"      <td>0.774775</td>\n",
"      <td>0.269231</td>\n",
"      <td>0.356643</td>\n",
"      <td>0.500000</td>\n",
"      <td>0.042200</td>\n",
"      <td>0.085908</td>\n",
"      <td>0.032655</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3409</th>\n",
"      <td>0</td>\n",
"      <td>1</td>\n",
"      <td>36108</td>\n",
"      <td>1</td>\n",
"      <td>0</td>\n",
"      <td>68</td>\n",
       "      <td>141</td>\n",
       "      <td>8</td>\n",
       "      <td>129</td>\n",
       "      <td>3</td>\n",
       "      <td>...</td>\n",
       "      <td>0.014976</td>\n",
       "      <td>0.054081</td>\n",
       "      <td>0.277286</td>\n",
       "      <td>0.725225</td>\n",
       "      <td>0.583333</td>\n",
       "      <td>0.128788</td>\n",
       "      <td>0.333333</td>\n",
       "      <td>0.165192</td>\n",
       "      <td>0.056047</td>\n",
       "      <td>0.039331</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "<p>3 rows Ã 91 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "      Education  Marital_Status  Income  Kidhome  Teenhome  Recency  
MntWines  \\\n",
       "ID
\n",
       "67            1               1   46423        1         1        6   
68   \n",
       "3828          0               0   71107        0         1       61   
533   \n",
       "3409          0               1   36108        1         0       68   
141   \n",
       "\n",
       "      MntFruits  MntMeatProducts  MntFishProducts  \\\n",
       "ID                                                  \n",
       "67            0               16                0   \n",
       "3828         10              217              198   \n",
       "3409          8              129                3   \n",
       "\n",
       "                 ...                R_MntFishProducts_01T  \\\n",
       "ID               ...                                       \n",
       "67               ...                             0.000000   \n",
       "3828             ...                             0.252507   \n",
       "3409             ...                             0.014976   \n",
       "\n",
       "      R_MntSweetProducts_01T  R_MntGoldProds_01T   RFM_01T  \\\n",
       "ID                                                           \n",
       "67                  0.000000            0.173913  0.024775   \n",
       "3828                0.218538            0.293896  0.774775   \n",
       "3409                0.054081            0.277286  0.725225   \n",
       "\n",
       "      R_NumWebPurchases_01T  R_NumCatalogPurchases_01T  \\\n",
       "ID                                                       \n",
       "67                 0.333333                   0.000000   \n",
       "3828               0.269231                   0.356643   \n",
       "3409               0.583333                   0.128788   \n",
       "\n",
       "      R_NumStorePurchases_01T  R_Mnt_NumWebPurchases_01T  \\\n",
       "ID                                                         \n",
       "67                   0.666667                   0.173913   \n",
       "3828                 0.500000                   0.042200   \n",
       "3409                 0.333333                   0.165192   \n",
       "\n",
       "      R_Mnt_NumCatalogPurchases_01T  R_Mnt_NumStorePurchases_01T  \n",
       "ID                                                                \n",
       "67                         0.000000                     0.144928  \n",
       "3828                       0.085908                     0.032655  \n",
       "3409                       0.056047                     0.039331  \n",
       "\n",
       "[3 rows x 91 columns]"
      ]
     },
     "metadata": {},
     "output_type": "display_data"
    },
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "Index(['Education', 'Marital_Status', 'Income', 'Kidhome', 'Teenhome',\
n",
      "       'Recency', 'MntWines', 'MntFruits', 'MntMeatProducts',\n",
      "       'MntFishProducts', 'MntSweetProducts', 'MntGoldProds',\n",
      "       'NumDealsPurchases', 'NumWebPurchases', 'NumCatalogPurchases',\n",
      "       'NumStorePurchases', 'NumWebVisitsMonth', 'AcceptedCmp3',\n",
      "       'AcceptedCmp4', 'AcceptedCmp5', 'AcceptedCmp1', 'AcceptedCmp2',\
n",
      "       'Complain', 'Response', 'Age', 'Days_as_cust', 'Mnt_tot', 'Frq',\
n",
      "       'Childnum', 'R_MntFrq', 'R_MntIncome', 'AcceptedTot',
'R_DealFrq',\n",
      "       'R_MntWines', 'R_MntFruits', 'R_MntMeatProducts',
'R_MntFishProducts',\n",
      "       'R_MntSweetProducts', 'R_MntGoldProds', 'RFM',
'R_NumWebPurchases',\n",
      "       'R_NumCatalogPurchases', 'R_NumStorePurchases',
'R_Mnt_NumWebPurchases',\n",
      "       'R_Mnt_NumCatalogPurchases', 'R_Mnt_NumStorePurchases',
'Education_01T',\n",
      "       'Marital_Status_01T', 'Income_01T', 'Kidhome_01T',
'Teenhome_01T',\n",
      "       'Recency_01T', 'MntWines_01T', 'MntFruits_01T',
'MntMeatProducts_01T',\n",
      "       'MntFishProducts_01T', 'MntSweetProducts_01T',
'MntGoldProds_01T',\n",
      "       'NumDealsPurchases_01T', 'NumWebPurchases_01T',\n",
      "       'NumCatalogPurchases_01T', 'NumStorePurchases_01T',\n",
      "       'NumWebVisitsMonth_01T', 'AcceptedCmp3_01T', 'AcceptedCmp4_01T',\
n",
      "       'AcceptedCmp5_01T', 'AcceptedCmp1_01T', 'AcceptedCmp2_01T',\n",
      "       'Complain_01T', 'Age_01T', 'Days_as_cust_01T', 'Mnt_tot_01T',
'Frq_01T',\n",
      "       'Childnum_01T', 'R_MntFrq_01T', 'R_MntIncome_01T',
'AcceptedTot_01T',\n",
      "       'R_DealFrq_01T', 'R_MntWines_01T', 'R_MntFruits_01T',\n",
      "       'R_MntMeatProducts_01T', 'R_MntFishProducts_01T',\n",
      "       'R_MntSweetProducts_01T', 'R_MntGoldProds_01T', 'RFM_01T',\n",
      "       'R_NumWebPurchases_01T', 'R_NumCatalogPurchases_01T',\n",
      "       'R_NumStorePurchases_01T', 'R_Mnt_NumWebPurchases_01T',\n",
      "       'R_Mnt_NumCatalogPurchases_01T', 'R_Mnt_NumStorePurchases_01T'],\
n",
      "      dtype='object')\n"
     ]
    }
   ],
   "source": [
    "# 1 SCALING\n",
    "\n",
    "scaler = MinMaxScaler()\n",
    "X_01 = scaler.fit_transform(df.drop(columns = 'Response').values)\n",
    "\n",
    "column_names01 = [s + \"_01T\" for s in df.drop(columns =
'Response').columns]\n",
    "df_01T = pd.concat([df, pd.DataFrame(X_01, index=df.index,
columns=column_names01)], axis=1)\n",
    "\n",
    "display(df_01T.head(3))\n",
    "print(df_01T.columns)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 161,
   "metadata": {},
   "outputs": [],
   "source": [
    "# 2 / 3 Chi square\n",
    "\n",
    "target = \"Response\"\n",
    "\n",
    "# best transformation dictionary for each feature\n",
    "best_power_dict = {}\n",
    "\n",
    "# take scaled columns\n",
    "\n",
    "scaled_cols = [col for col in df_01T if col.endswith('01T')]\n",
    "\n",
    "for feature in scaled_cols:\n",
    "    max_test_value, max_trans, best_power_trans = 0, \"\", None\n",
    "    for trans_key, trans_value in trans_dict.items():\n",
    "        \n",
    "        # apply transformation itself\n",
    "        \n",
    "        feature_trans = trans_value(df_01T[feature])\n",
    "        if trans_key == \"log\":\n",
    "            feature_trans.loc[np.isfinite(feature_trans) == False] = -50\
n",
    "            \n",
    "        # bin feature\n",
    "        \n",
    "        bindisc = KBinsDiscretizer(n_bins = 10, encode = \"ordinal\",
strategy = \"uniform\")\n",
    "        feature_bin = bindisc.fit_transform(feature_trans.values[:,
np.newaxis])\n",
    "        feature_bin = pd.Series(feature_bin[:, 0], index = df_01T.index)\
n",
    "        \n",
    "        # obtain contigency table\n",
    "        \n",
    "        df_ = pd.DataFrame(data = {feature: feature_bin, target:
df_01T[target]})\n",
    "        cont_tab = pd.crosstab(df_[feature], df_[target], margins = False)\
n",
    "        \n",
    "        # compute Chi-Square test\n",
    "        \n",
    "        chi_test_value = stats.chi2_contingency(cont_tab)[0]\n",
    "        if chi_test_value > max_test_value:\n",
    "            max_test_value, max_trans, best_power_trans = chi_test_value,
trans_key, feature_trans\n",
    "            \n",
    "    \n",
    "    best_power_dict[feature] = (max_test_value, max_trans,
best_power_trans)\n",
    "    df_01T[feature] = best_power_trans"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 162,
   "metadata": {},
   "outputs": [
    {
     "name": "stdout",
     "output_type": "stream",
     "text": [
      "The best power transformations:\n",
      "\t>>> Education_01T x\n",
      "\t>>> Marital_Status_01T x\n",
      "\t>>> Income_01T **4\n",
      "\t>>> Kidhome_01T x\n",
      "\t>>> Teenhome_01T x\n",
      "\t>>> Recency_01T **1/4\n",
      "\t>>> MntWines_01T sqrt\n",
      "\t>>> MntFruits_01T x\n",
      "\t>>> MntMeatProducts_01T **1/3\n",
      "\t>>> MntFishProducts_01T x\n",
      "\t>>> MntSweetProducts_01T **1/4\n",
      "\t>>> MntGoldProds_01T **1/3\n",
      "\t>>> NumDealsPurchases_01T sqrt\n",
      "\t>>> NumWebPurchases_01T x\n",
      "\t>>> NumCatalogPurchases_01T exp\n",
      "\t>>> NumStorePurchases_01T exp\n",
      "\t>>> NumWebVisitsMonth_01T sqrt\n",
      "\t>>> AcceptedCmp3_01T x\n",
      "\t>>> AcceptedCmp4_01T x\n",
      "\t>>> AcceptedCmp5_01T x\n",
      "\t>>> AcceptedCmp1_01T x\n",
      "\t>>> AcceptedCmp2_01T x\n",
      "\t>>> Complain_01T x\n",
      "\t>>> Age_01T sqrt\n",
      "\t>>> Days_as_cust_01T **2\n",
      "\t>>> Mnt_tot_01T **1/4\n",
      "\t>>> Frq_01T **2\n",
      "\t>>> Childnum_01T x\n",
      "\t>>> R_MntFrq_01T x\n",
      "\t>>> R_MntIncome_01T **2\n",
      "\t>>> AcceptedTot_01T x\n",
      "\t>>> R_DealFrq_01T sqrt\n",
      "\t>>> R_MntWines_01T **2\n",
      "\t>>> R_MntFruits_01T **1/6\n",
      "\t>>> R_MntMeatProducts_01T sqrt\n",
      "\t>>> R_MntFishProducts_01T **1/6\n",
      "\t>>> R_MntSweetProducts_01T **1/3\n",
      "\t>>> R_MntGoldProds_01T sqrt\n",
      "\t>>> RFM_01T sqrt\n",
      "\t>>> R_NumWebPurchases_01T x\n",
      "\t>>> R_NumCatalogPurchases_01T sqrt\n",
      "\t>>> R_NumStorePurchases_01T sqrt\n",
      "\t>>> R_Mnt_NumWebPurchases_01T **1/5\n",
      "\t>>> R_Mnt_NumCatalogPurchases_01T **1/3\n",
      "\t>>> R_Mnt_NumStorePurchases_01T **1/6\n"
     ]
    },
    {
     "data": {
```

```
"text/html": [
 "<div>\n",
 "<style scoped>\n",
 "    .dataframe tbody tr th:only-of-type {\n",
 "        vertical-align: middle;\n",
 "    }\n",
 "\n",
 "    .dataframe tbody tr th {\n",
 "        vertical-align: top;\n",
 "    }\n",
 "\n",
 "    .dataframe thead th {\n",
 "        text-align: right;\n",
 "    }\n",
 "</style>\n",
 "<table border=\"1\" class=\"dataframe\">\n",
 "  <thead>\n",
 "    <tr style=\"text-align: right;\">\n",
 "      <th></th>\n",
 "      <th>Education</th>\n",
 "      <th>Marital_Status</th>\n",
 "      <th>Income</th>\n",
 "      <th>Kidhome</th>\n",
 "      <th>Teenhome</th>\n",
 "      <th>Recency</th>\n",
 "      <th>MntWines</th>\n",
 "      <th>MntFruits</th>\n",
 "      <th>MntMeatProducts</th>\n",
 "      <th>MntFishProducts</th>\n",
 "      <th>...</th>\n",
 "      <th>R_MntFishProducts_01T</th>\n",
 "      <th>R_MntSweetProducts_01T</th>\n",
 "      <th>R_MntGoldProds_01T</th>\n",
 "      <th>RFM_01T</th>\n",
 "      <th>R_NumWebPurchases_01T</th>\n",
 "      <th>R_NumCatalogPurchases_01T</th>\n",
 "      <th>R_NumStorePurchases_01T</th>\n",
 "      <th>R_Mnt_NumWebPurchases_01T</th>\n",
 "      <th>R_Mnt_NumCatalogPurchases_01T</th>\n",
 "      <th>R_Mnt_NumStorePurchases_01T</th>\n",
 "    </tr>\n",
 "    <tr>\n",
 "      <th>ID</th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
 "      <th></th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>67</th>\n",
"      <td>1</td>\n",
"      <td>1</td>\n",
"      <td>46423</td>\n",
"      <td>1</td>\n",
"      <td>1</td>\n",
"      <td>6</td>\n",
"      <td>68</td>\n",
"      <td>0</td>\n",
"      <td>16</td>\n",
"      <td>0</td>\n",
"      <td>...</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.417029</td>\n",
"      <td>0.157400</td>\n",
"      <td>0.333333</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.816497</td>\n",
"      <td>0.704801</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.724756</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3828</th>\n",
"      <td>0</td>\n",
"      <td>0</td>\n",
"      <td>71107</td>\n",
"      <td>0</td>\n",
"      <td>1</td>\n",
"      <td>61</td>\n",
"      <td>533</td>\n",
"      <td>10</td>\n",
"      <td>217</td>\n",
"      <td>198</td>\n",
"      <td>...</td>\n",
"      <td>0.795022</td>\n",
"      <td>0.602341</td>\n",
"      <td>0.542122</td>\n",
"      <td>0.880213</td>\n",
"      <td>0.269231</td>\n",
"      <td>0.597196</td>\n",
"      <td>0.707107</td>\n",
"      <td>0.530962</td>\n",
"      <td>0.441243</td>\n",
"      <td>0.565360</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>3409</th>\n",
"      <td>0</td>\n",
"      <td>1</td>\n",
"      <td>36108</td>\n",
"      <td>1</td>\n",
"      <td>0</td>\n",
"      <td>68</td>\n",
"      <td>141</td>\n",
"      <td>8</td>\n",
"      <td>129</td>\n",
"      <td>3</td>\n",
"      <td>...</td>\n",
       "      <td>0.496478</td>\n",
       "      <td>0.378164</td>\n",
       "      <td>0.526580</td>\n",
       "      <td>0.851602</td>\n",
       "      <td>0.583333</td>\n",
       "      <td>0.358870</td>\n",
       "      <td>0.577350</td>\n",
       "      <td>0.697586</td>\n",
       "      <td>0.382694</td>\n",
       "      <td>0.583163</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "<p>3 rows Ã 91 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "      Education  Marital_Status  Income  Kidhome  Teenhome  Recency
MntWines  \\\n",
       "ID
\n",
       "67            1               1   46423        1         1        6
68   \n",
       "3828          0               0   71107        0         1       61
533   \n",
       "3409          0               1   36108        1         0       68
141   \n",
       "\n",
       "      MntFruits  MntMeatProducts  MntFishProducts  \\\n",
       "ID                                                  \n",
       "67            0               16                0   \n",
       "3828         10              217              198   \n",
       "3409          8              129                3   \n",
       "\n",
       "                 ...               R_MntFishProducts_01T  \\\n",
       "ID               ...                                       \n",
       "67               ...                            0.000000   \n",
       "3828             ...                            0.795022   \n",
       "3409             ...                            0.496478   \n",
       "\n",
       "      R_MntSweetProducts_01T  R_MntGoldProds_01T   RFM_01T  \\\n",
       "ID                                                           \n",
       "67                  0.000000            0.417029  0.157400   \n",
       "3828                0.602341            0.542122  0.880213   \n",
       "3409                0.378164            0.526580  0.851602   \n",
       "\n",
       "      R_NumWebPurchases_01T  R_NumCatalogPurchases_01T  \\\n",
       "ID                                                       \n",
       "67                 0.333333                   0.000000   \n",
       "3828               0.269231                   0.597196   \n",
       "3409               0.583333                   0.358870   \n",
       "\n",
       "      R_NumStorePurchases_01T  R_Mnt_NumWebPurchases_01T  \\\n",
       "ID                                                         \n",
       "67                   0.816497                   0.704801   \n",
       "3828                 0.707107                   0.530962   \n",
       "3409                 0.577350                   0.697586   \n",
       "\n",
       "      R_Mnt_NumCatalogPurchases_01T  R_Mnt_NumStorePurchases_01T  \n",
       "ID                                                                \n",
       "67                         0.000000                     0.724756  \n",
       "3828                       0.441243                     0.565360  \n",
       "3409                       0.382694                     0.583163  \n",
       "\n",
       "[3 rows x 91 columns]"
      ]
     },
     "execution_count": 162,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "# BEST TRANSFORM\n",
    "print(\"The best power transformations:\")\n",
    "for key in best_power_dict:\n",
    "    print(\"\\t>>>\", key, best_power_dict[key][1]) \n",
    "\n",
    "df_01T.head(3, )"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 163,
   "metadata": {},
   "outputs": [],
   "source": [
    "# list of different feature selection methods\n",
    "feat_select_dict = {'vif':[col + '_01T' for col in
vif_selected_variables],\n",
    "                    'correlation':[col + '_01T' for col in
selected_columns],\n",
    "                    'rfecv': [col + '_01T' for col in
list(rfecv_features)]}"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 164,
   "metadata": {},
   "outputs": [],
   "source": [
    "# see best variable selection\n",
    "from sklearn.model_selection import StratifiedKFold\n",
    "\n",
    "n_splits = 10\n",
    "selectors_df =
pd.DataFrame(index=range(len(feat_select_dict.keys())*n_splits),
columns=(['method','recall', 'accuracy', 'precision', 'f1']))\n",
    "CV = StratifiedKFold(n_splits=n_splits, random_state=seed)\n",
    "scoring = ['accuracy','precision','recall','f1'] \n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 165,
   "metadata": {},
   "outputs": [],
   "source": [
    "entries = []\n",
    "comparing_selectors =pd.DataFrame()\n",
    "\n",
    "for score in scoring:\n",
    "   \n",
    "    entries = []\n",
    "    \n",
    "    for selector in feat_select_dict.keys():\n",
    "\n",
    "        x_train = scaler.fit_transform(df_01T[feat_select_dict[selector]])\
n",
    "        y_train = df_01T['Response']\n",
    "\n",
    "        accuracies = cross_val_score(LogisticRegression(n_jobs=-1),x_train,
y_train, scoring= score, cv=CV)\n",
    "\n",
    "        for fold_idx, accuracy in enumerate(accuracies):\n",
    "            entries.append((selector, fold_idx, model.__class__.__name__,
accuracy))\n",
    "    \n",
    "    _ = pd.DataFrame(entries, columns=['method', 'fold_idx','model',
score])\n",
    "    comparing_selectors[score] = _.groupby(['method'])[score].agg('mean')\
n",
    "\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 166,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>accuracy</th>\n",
       "      <th>precision</th>\n",
       "      <th>recall</th>\n",
       "      <th>f1</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>method</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>rfecv</th>\n",
       "      <td>0.909340</td>\n",
       "      <td>0.810323</td>\n",
       "      <td>0.511692</td>\n",
       "      <td>0.625383</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>correlation</th>\n",
       "      <td>0.903577</td>\n",
       "      <td>0.794372</td>\n",
       "      <td>0.484615</td>\n",
       "      <td>0.595083</td>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>vif</th>\n",
       "      <td>0.884528</td>\n",
       "      <td>0.728671</td>\n",
       "      <td>0.356769</td>\n",
       "      <td>0.478193</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "             accuracy  precision    recall        f1\n",
       "method                                              \n",
       "rfecv        0.909340   0.810323  0.511692  0.625383\n",
       "correlation  0.903577   0.794372  0.484615  0.595083\n",
       "vif          0.884528   0.728671  0.356769  0.478193"
      ]
     },
     "execution_count": 166,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "comparing_selectors.sort_values(by=['f1', 'recall'], ascending=False,
inplace=True)\n",
    "comparing_selectors"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 167,
   "metadata": {},
   "outputs": [],
   "source": [
    "best_selector = comparing_selectors.index[0]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 168,
   "metadata": {},
   "outputs": [],
   "source": [
    "df_01T_best_selector = df_01T[feat_select_dict[best_selector]]\n",
    "df_01T_best_selector = pd.concat([df_01T_best_selector,df_01T.Response],
axis = 1)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "### Transform Test Data"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 169,
   "metadata": {},
   "outputs": [],
   "source": [
    "#df_test.loc[df_test['Marital_Status']==0 | df_test['Marital_Status']==1]\
n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 170,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Erros de coerÃªncia\n",
    "df_test.replace( [np.inf, -np.inf], np.nan,inplace=True)\n",
    "df_test.fillna(df_train.mean(), inplace=True)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 171,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "(448, 46)"
      ]
     },
     "execution_count": 171,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df_test.shape"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 172,
   "metadata": {},
   "outputs": [],
   "source": [
    "scaler = MinMaxScaler()\n",
    "scaler.fit(df.drop(columns = 'Response').values)\n",
    "X_01 = scaler.transform(df_test.drop(columns = 'Response').values)\n",
    "df_test_01T = pd.concat([ pd.DataFrame(X_01, index=df_test.index,
columns=column_names01), df_test.Response], axis=1)\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 173,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Apply transformations to test data\n",
    "for key in best_power_dict:\n",
    "    df_test_01T[key] = trans_dict[best_power_dict[key][1]]
```

```
(df_test_01T[key])"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 174,
   "metadata": {},
   "outputs": [],
   "source": [
    "df_test_01T = df_test_01T[df_01T_best_selector.columns]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 175,
   "metadata": {
    "scrolled": true
   },
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>AcceptedCmp1_01T</th>\n",
       "      <th>R_NumStorePurchases_01T</th>\n",
       "      <th>R_Mnt_NumWebPurchases_01T</th>\n",
       "      <th>R_Mnt_NumStorePurchases_01T</th>\n",
       "      <th>R_Mnt_NumCatalogPurchases_01T</th>\n",
       "      <th>R_MntWines_01T</th>\n",
       "      <th>R_MntMeatProducts_01T</th>\n",
       "      <th>R_MntFishProducts_01T</th>\n",
       "      <th>R_DealFrq_01T</th>\n",
       "      <th>RFM_01T</th>\n",
       "      <th>...</th>\n",
       "      <th>AcceptedCmp2_01T</th>\n",
       "      <th>Marital_Status_01T</th>\n",
       "      <th>AcceptedTot_01T</th>\n",
       "      <th>AcceptedCmp3_01T</th>\n",
       "      <th>Days_as_cust_01T</th>\n",
       "      <th>AcceptedCmp4_01T</th>\n",
       "      <th>Income_01T</th>\n",
       "      <th>AcceptedCmp5_01T</th>\n",
       "      <th>Education_01T</th>\n",
       "      <th>Response</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>ID</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
       "    </tr>\n",
       "  </thead>\n",
       "  <tbody>\n",
       "    <tr>\n",
       "      <th>2895</th>\n",
       "      <td>0.0</td>\n",
       "      <td>0.745356</td>\n",
       "      <td>0.657711</td>\n",
       "      <td>0.663696</td>\n",
       "      <td>0.460157</td>\n",
       "      <td>0.306529</td>\n",
       "      <td>0.608015</td>\n",
       "      <td>0.695128</td>\n",
       "      <td>0.534522</td>\n",
       "      <td>0.836929</td>\n",
       "      <td>...</td>\n",
       "      <td>0.0</td>\n",
       "      <td>1.0</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.127624</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.039571</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0.0</td>\n",
       "      <td>0</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "<p>1 rows Ã 27 columns</p>\n",
       "</div>"
      ],
      "text/plain": [
       "      AcceptedCmp1_01T  R_NumStorePurchases_01T  
R_Mnt_NumWebPurchases_01T  \\\n",
       "ID                                                
\n",
       "2895               0.0                 0.745356   
0.657711   \n",
       "\n",
       "      R_Mnt_NumStorePurchases_01T  R_Mnt_NumCatalogPurchases_01T  \\\n",
       "ID                                                                 \n",
       "2895                     0.663696                       0.460157   \n",
       "\n",
       "      R_MntWines_01T  R_MntMeatProducts_01T  R_MntFishProducts_01T  \\\
n",
       "ID                                                                   \
n",
       "2895        0.306529               0.608015               0.695128   \
n",
       "\n",
       "      R_DealFrq_01T   RFM_01T    ...     AcceptedCmp2_01T
Marital_Status_01T  \\\n",
       "ID                               ...
\n",
       "2895       0.534522  0.836929    ...                  0.0
1.0   \n",
       "\n",
       "      AcceptedTot_01T  AcceptedCmp3_01T  Days_as_cust_01T
AcceptedCmp4_01T  \\\n",
       "ID
\n",
       "2895              0.0               0.0          0.127624
0.0   \n",
       "\n",
       "      Income_01T  AcceptedCmp5_01T  Education_01T  Response  \n",
       "ID                                                           \n",
       "2895    0.039571               0.0            0.0         0  \n",
       "\n",
       "[1 rows x 27 columns]"
      ]
     },
     "execution_count": 175,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "df_test_01T.head(1)"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Select best engineering for Models\n",
    "---"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "* With best of variable selection\n",
    "* Decomposition\n",
    "* WOE"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 176,
   "metadata": {},
   "outputs": [],
   "source": [
    "scaler = MinMaxScaler()\n",
    "var_selection = pd.DataFrame(scaler.fit_transform(df_test_01T.drop(columns
= 'Response').values), columns = df_test_01T.drop(columns = 'Response').columns,
index = df_test_01T.index)\n",
    "var_selection = pd.concat([var_selection, df_test_01T.Response], axis=1)\
n",
    "#df_test_01T"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 177,
   "metadata": {},
   "outputs": [],
   "source": [
    "# let's choose engeneering that better predicts our target\n",
    "df_collection = {'variable_selection': var_selection,#df_test_01T,\n",
    "                 'woe': df_woe,\n",
    "                 'pca': pca_df,\n",
    "                 'fa': fa_df,\n",
    "                 'ica':ica_df,\n",
    "                 'tsne':tsne_df,\n",
    "                 'kpca':kpca_df,\n",
    "                 'feat_agglom':x_reduced,\n",
    "                 'grp':grp_df}"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 178,
   "metadata": {},
   "outputs": [],
   "source": [
    "n_splits = 5\n",
    "selectors_df = 
pd.DataFrame(index=range(len(df_collection.keys())*n_splits), 
columns=(['method','recall', 'accuracy', 'precision', 'f1']))\n",
    "CV = StratifiedKFold(n_splits=n_splits, random_state=seed)\n",
    "scoring = ['accuracy','precision','recall','f1'] \n",
    "\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 179,
   "metadata": {},
   "outputs": [],
   "source": [
    "entries = []\n",
    "comparing_eng = pd.DataFrame()\n",
    "\n",
    "for score in scoring:\n",
    "   \n",
    "    entries = []\n",
    "    \n",
    "    for df_ in df_collection.keys():\n",
    "\n",
    "        x_train = df_collection[df_].drop(columns = 'Response')\n",
    "        y_train = df_collection[df_].Response\n",
    "\n",
    "        accuracies = cross_val_score(LogisticRegression(n_jobs=-1),x_train, 
y_train, scoring= score, cv=CV)\n",
    "\n",
    "        for fold_idx, accuracy in enumerate(accuracies):\n",
    "            entries.append((df_, fold_idx, df_, accuracy))\n",
    "    \n",
    "    _ = pd.DataFrame(entries, columns=['method', 'fold_idx','model', 
score])\n",
    "    comparing_eng[score] = _.groupby(['method'])[score].agg('mean')\n"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 180,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "KernelPCA(alpha=1.0, coef0=1, copy_X=True, degree=3,
eigen_solver='auto',\n",
       "     fit_inverse_transform=False, gamma=None, kernel='linear',\n",
       "     kernel_params=None, max_iter=None, n_components=10, n_jobs=None,\
n",
       "     random_state=0, remove_zero_eig=False, tol=0)"
      ]
     },
     "execution_count": 180,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "kpca"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 181,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/html": [
       "<div>\n",
       "<style scoped>\n",
       "    .dataframe tbody tr th:only-of-type {\n",
       "        vertical-align: middle;\n",
       "    }\n",
       "\n",
       "    .dataframe tbody tr th {\n",
       "        vertical-align: top;\n",
       "    }\n",
       "\n",
       "    .dataframe thead th {\n",
       "        text-align: right;\n",
       "    }\n",
       "</style>\n",
       "<table border=\"1\" class=\"dataframe\">\n",
       "  <thead>\n",
       "    <tr style=\"text-align: right;\">\n",
       "      <th></th>\n",
       "      <th>accuracy</th>\n",
       "      <th>precision</th>\n",
       "      <th>recall</th>\n",
       "      <th>f1</th>\n",
       "    </tr>\n",
       "    <tr>\n",
       "      <th>method</th>\n",
       "      <th></th>\n",
       "      <th></th>\n",
"      <th></th>\n",
"      <th></th>\n",
"    </tr>\n",
"  </thead>\n",
"  <tbody>\n",
"    <tr>\n",
"      <th>woe</th>\n",
"      <td>0.903574</td>\n",
"      <td>0.755609</td>\n",
"      <td>0.523529</td>\n",
"      <td>0.615724</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>kpca</th>\n",
"      <td>0.901854</td>\n",
"      <td>0.767508</td>\n",
"      <td>0.484766</td>\n",
"      <td>0.592367</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>pca</th>\n",
"      <td>0.901854</td>\n",
"      <td>0.767508</td>\n",
"      <td>0.484766</td>\n",
"      <td>0.592367</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>fa</th>\n",
"      <td>0.889159</td>\n",
"      <td>0.734206</td>\n",
"      <td>0.391629</td>\n",
"      <td>0.507759</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>variable_selection</th>\n",
"      <td>0.870581</td>\n",
"      <td>0.610159</td>\n",
"      <td>0.346154</td>\n",
"      <td>0.437343</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>feat_agglom</th>\n",
"      <td>0.882790</td>\n",
"      <td>0.793316</td>\n",
"      <td>0.286652</td>\n",
"      <td>0.420222</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>grp</th>\n",
"      <td>0.866642</td>\n",
"      <td>0.665128</td>\n",
"      <td>0.216968</td>\n",
"      <td>0.325690</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>ica</th>\n",
"      <td>0.851041</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.000000</td>\n",
"      <td>0.000000</td>\n",
"    </tr>\n",
"    <tr>\n",
"      <th>tsne</th>\n",
"      <td>0.851041</td>\n",
       "      <td>0.000000</td>\n",
       "      <td>0.000000</td>\n",
       "      <td>0.000000</td>\n",
       "    </tr>\n",
       "  </tbody>\n",
       "</table>\n",
       "</div>"
      ],
      "text/plain": [
       "                    accuracy  precision    recall        f1\n",
       "method                                                     \n",
       "woe                 0.903574   0.755609  0.523529  0.615724\n",
       "kpca                0.901854   0.767508  0.484766  0.592367\n",
       "pca                 0.901854   0.767508  0.484766  0.592367\n",
       "fa                  0.889159   0.734206  0.391629  0.507759\n",
       "variable_selection  0.870581   0.610159  0.346154  0.437343\n",
       "feat_agglom         0.882790   0.793316  0.286652  0.420222\n",
       "grp                 0.866642   0.665128  0.216968  0.325690\n",
       "ica                 0.851041   0.000000  0.000000  0.000000\n",
       "tsne                0.851041   0.000000  0.000000  0.000000"
      ]
     },
     "execution_count": 181,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "comparing_eng.sort_values(by = 'f1', ascending=False)"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 182,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "\"\\n# If test is decomposed\\n\\n#n_components = threshold_80_percent\\
n#kpca = KPCA(n_components = n_components, random_state=seed, kernel='linear')\\
n\\nscaler = MinMaxScaler()\\nscaler.fit(df.drop(columns = 'Response').values)\\
nX_01 = scaler.transform(df_test.drop(columns = 'Response').values)\\
ndf_test_01T = pd.concat([ pd.DataFrame(X_01, index=df_test.index,
columns=column_names01), df_test.Response], axis=1)\\n\\n\""
      ]
     },
     "execution_count": 182,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "'''\n",
    "# If test is decomposed\n",
    "\n",
    "#n_components = threshold_80_percent\n",
    "#kpca = KPCA(n_components = n_components, random_state=seed,
kernel='linear')\n",
    "\n",
    "scaler = MinMaxScaler()\n",
    "scaler.fit(df.drop(columns = 'Response').values)\n",
    "X_01 = scaler.transform(df_test.drop(columns = 'Response').values)\n",
    "df_test_01T = pd.concat([ pd.DataFrame(X_01, index=df_test.index,
columns=column_names01), df_test.Response], axis=1)\n",
    "\n",
    "'''"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 183,
   "metadata": {},
   "outputs": [
    {
     "data": {
      "text/plain": [
       "\"\\nkpca_test_df = 
kpca.transform(df_test_01T.drop(columns='Response'))\\n\\nkpca_test_df = 
pd.DataFrame(kpca_test_df, index = df_test_01T.index, columns=kpca_names)\\
nkpca_test_df = pd.concat([kpca_df, df_test_01T['Response']],axis=1)\\
nkpca_test_df.head()\\n\""
      ]
     },
     "execution_count": 183,
     "metadata": {},
     "output_type": "execute_result"
    }
   ],
   "source": [
    "'''\n",
    "kpca_test_df = kpca.transform(df_test_01T.drop(columns='Response'))\n",
    "\n",
    "kpca_test_df = pd.DataFrame(kpca_test_df, index = df_test_01T.index, 
columns=kpca_names)\n",
    "kpca_test_df = pd.concat([kpca_df, df_test_01T['Response']],axis=1)\n",
    "kpca_test_df.head()\n",
    "'''"
   ]
  },
  {
   "cell_type": "markdown",
   "metadata": {},
   "source": [
    "# Output"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 184,
   "metadata": {},
   "outputs": [],
   "source": [
    "df_01T = df_01T[df_01T_best_selector.columns]"
   ]
  },
  {
   "cell_type": "code",
   "execution_count": 185,
   "metadata": {},
   "outputs": [],
   "source": [
    "# Extract step 02 to excel\n",
    "df_01T.to_excel(\"df_02.xlsx\")\n",
    "df_test_01T.to_excel('df_test_02.xlsx')"
   ]
  }
 ],
 "metadata": {
  "kernelspec": {
   "display_name": "Python 3",
   "language": "python",
   "name": "python3"
  },
  "language_info": {
   "codemirror_mode": {
    "name": "ipython",
    "version": 3
   },
   "file_extension": ".py",
   "mimetype": "text/x-python",
   "name": "python",
   "nbconvert_exporter": "python",
   "pygments_lexer": "ipython3",
   "version": "3.6.5"
  }
 },
 "nbformat": 4,
 "nbformat_minor": 2
}
```