Well Log Formats

Well Log Formats

Builder supports the following well log formats:

- LAS Well Log Format
- Single Well Log File
- Multiple Well Log File

LAS Well Log Format

Builder supports Canadian Well Logging Society's LAS (Log ASCII Standard) Well Log format version 3.0. This format can have the "wrap" or "no wrap" option, and both options are supported. Contact the following address for detailed format description:

```
CWLS Committee
Suite 229, 640-5 Avenue S.W.
Calgary, Alberta
CANADA T2P 0M6
```

Builder only read the following information sections from the file:

```
~VERSION INFORMATION
~Well Information
~Curve Information
~ASCII | CURVE
~Inclinometry_Definition
~Inclinometry | Inclinometry_Definition
~Perforations_Definition
~Perforations | Perforations_Definition
~Tops_Definition
~Tops | Tops_Definition
```

The well surface location is given by UTM in the Well Information section. Builder does NOT read the location given in longitude and latitude format. The well log data are given by Curve Information and ASCII | CURVE sections. The Inclinometry_Definition and Inclinometry sections describe the 3D well trajectory. The Perforations_Definition and Perforations sections specify the perforation interval along the trajectory. The information in these two sections, if present, will be read by the Builder.

The default file extension for this format is ".las". This type of file is self-explanatory. So the sample file below should explain most of the format:

: COMPANY

```
~VERSION INFORMATION
                             3.0 : CWLS LOG ASCII STANDARD -VERSION 3.0
VERS.
                             NO : ONE LINE PER DEPTH STEP
WRAP.
                           COMMA : DELIMITING CHARACTER BETWEEN DATA COLUMNS
# Acceptable delimiting characters: SPACE (default), TAB, OR COMMA.
~Well Information
#MNEM.UNIT
                      DATA
                                                     DESCRIPTION
#----
STRT .M
                    1670.0000
                                             : First Index Value
                     713.2500
STOP .M
                                             : Last Index Value
STEP .M
                     -0.1250
NULL .
                     -999.25
                                              : NULL VALUE
```

<u>Importing Geological and Well Trajectory Data</u> > Well Log Formats

ANY OIL COMPANY INC.

```
LOC .
                 12-34-12-34W5M
                                               : LOCATION
             ALBERIA
ANY LOGGING COMPANY INC.
PROV .
                                              : PROVINCE
SRVC .
                                             : SERVICE COMPANY
                                               : LOG DATE {DD/MM/YYYY}
DATE .
UWI .
                100123401234W500
                                              : UNIQUE WELL ID
API .
                    12345678
                                               : API NUMBER
LAT .DEG
                    34.56789
                                              : Latitude {DEG}
LONG .DEG
                                             : Longitude `{DEG}
: UTM LOCATION
                  -102.34567
UTM .1234587
                    3489875
~CURVE INFORMATION
                    API CODES
#MNEM.UNIT
                                       CURVE DESCRIPTION
#-----
                    -----
DEPT .M
                                    : 1 DEPTH
DT .US/M
                 60 520 32 00
                                  : 2 SONIC TRANSIT TIME
                 45 350 01 00 : 3 BULK DENSITY
42 890 00 00 : 4 NEUTRON POROSITY
07 220 04 00 : 5 RXORESISTIVITY
07 222 01 00 : 6 SHALLOW RESISTIVITY
07 120 44 00 : 7 MEDIUM RESISTIVITY
07 120 46 00 : 8 DEEP RESISTIVITY
RHOB .K/M3
NPHI .V/V
SFLU .OHMM
SFLA .OHMM
ILM .OHMM
ILD .OHMM
~PARAMETER INFORMATION
#MNEM.UNIT
                   VALUE
                                          DESCRIPTION
#----
                  -----
                                      -----
                 GEL CHEM
MUD .
                                      : MUD TYPE
BHT .DEGC
                  35.5000
                                     : BOTTOMHOLE TEMPERATURE
                200.0000
                                  : BIT SIZE
: FLUID DENSITY
: NEUTRON MATRIX
: LOGGING MATRIX DENSITY
: MUD FILTRATE RESISTIVITY
   . MM
BS
               1000.0000
FD .K/M3
                 SAND
MATR .
MDEN .
                 2710.0000
RMF .OHMM
                 0.2160
                            : DRILL FLUID DENSITY
            1525.0000
DFD .K/M3
~OTHER
Note: The logging tools became stuck at 625 metres
causing the data between 625 metres and 615 metres to be invalid.
~ASCII | CURVE
1670.000 123.450 2550.000
                              0.450 123.450 123.450 110.200 105.600
1669.875 123.450 2550.000
                             0.450 123.450 123.450 110.200 105.600
1669.750 123.450 2550.000 0.450 123.450 123.450 110.200 105.600
~Inclinometry Definition
MD. M
                                        : Measured Depth
TVD. M
                                        : True Vertical Depth
                                                                  {F}
AZIM.DEG
                                        : Borehole Azimuth
                                                                  {F}
DEVI.DEG
                                        : Borehole Deviation
                                                                  {F}
~Inclinometry | Inclinometry_Definition
0.00,0.00,290.00,0.00
100.00,100.00,234.00,0.00
200.00,198.34,284.86,1.43
300.00,295.44,234.21,2.04
400.00,390.71,224.04,3.93
500.00,482.85,224.64,5.88
600.00,571.90,204.39,7.41
~Perforations_Definition
PERFT.M
                                        : Perforation Top Depth
                                                                     {F}
```

PERFT. : Charge Type {S}

~Perforations | Perforations_Definition 545.50,550.60,12,BIG HOLE 551.20,554.90,12,BIG HOLE 575.00,595.00,12,BIG HOLE

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