

! "#"\$%&'%()"* +),

-)" ,"/(+#(0(11(\$. 2(3435(15016037
8.9,(/. ,. : . 9"(; */. , "(0(17(% ; < ; 9,(3431(44044044
%**=>? . ,>+ # (@")9>+ # (0(7ABM4

! "#\$%&' () * + , # - % + (
C)" />?, "/ &K%
- +0"E*)"99>+ #
CF29>?. =(' # , ") . ? ,>+ #9
C. ,FG. 2
- +0=+?. =>H. ,>+ #
I F.)" /(*)+ , ">#(/+J . >#9
! "#" ,>?(' # , ") . ? ,>+ #9

I ".)?F(*.). J ", ")9

. &/0+-(1 N+J +(9. *>"#9(0F; J . #P

2"+"(- Q7R(\$CI \$T1(\$N! U(\$CI \$%5\$(- %\$V3%(\$Q&%W%1(\$! %QQ5MT(\$X' \$C7(\$
! Y\$T(\$CZ! T(\$%VX3(\$TT- 7(\$C'V7- ! (\$- %I C3(\$CI \$%3(\$[&- MT(\$&UVT1(\$
- QV&1T(\$I X%X1(\$YTC1(\$I X%X%(\$I \ \$1(\$! - N1(\$\ \$C1(\$%C- (\$I X%X5(\$
CCC7- %(\$\] TT3(\$! 8[Q1(\$CI \$%R(\$X%C1(\$[TT(\$C'V7- Q(\$'U&T1(\$'I ! 34(\$
- NC1(\$C] V%] 1T(\$'! U3] (\$\ 8%&\ (\$X' - %\$3

! "#\$%&' 3 %; ,+J . ,>?. =2(9"="?, "/(G">F, >#<(J ", F+/
\$"-/4#-+/
! "#\$%&' (5

%: : . 9>DI ?F>/DC+; =, ")D341^(\$%: ; D_/"FD%`" >#. #D3415(\$%?F; , F. #a; , , 2D\$. >#. #/D
341^(\$%<). G. -DI "/>@D3414(\$%F#D8""D344R(\$%=: ")9DV+"<=D344M(\$%="E. #/")Db . #<D
341R(\$%="E. #/); DQ"9F. >"9D344R(\$%>H. /"FDI , , ; / , D3444(\$%=9; =. J >D- . <#"2D341^(\$
%#DI ; #D3416(\$%#/) "9"#DU=+) "9D\$+). ="9D3415(\$%): +<. 9,DI) +9D341^(\$%)>9D
] ; , <""), 9D344^(\$%)) +2+D%=+2D3415(\$%)) +2+D%=+2D341M(\$%9. />DQF. #@. #, .)>D341R

6

T. >"2DN>" , ")D341M(\$T. #/2+*. /F2. 2D'/"a")D3414(\$T. #a9Db . 9F: ;)#D341B(\$
T. #, 9?F"LLDQ)"G"9D3411(\$T.))DV#. **D344^(\$T.))">+D%+=#9+D- "/d#D341R(\$T.))>+9D
] +/>"9Db). #. D344M(\$T"F)"#/#DN.)*)D3414(\$T"FH. /#>. D8eF)J . ##D3446(\$
T"#="; =J >D- F. . ?F+; . DW+?a")9D341B(%(\$T"#="; =J >D- F. . ?F+; . DW+?a")9D341B(T(\$
T"##" , , DN.)*)D3414(\$T"#H>#<")DN")J "a>#<D344M(\$T")<<f)/DW. J "9D344B(\$T" , , D
N. 2D3417(\$T"2")DT+=/, D341R(\$TF. , #. <.)D%, , >"D3415(\$T>/D&"@#9D344B(T(\$
T' _!] 'QDI \$%88DI - %8\DI X[Q'\I (\$T' _!] 'QDI \$%88DI - %8\DI X[Q'\I (\$
T>9F+LDI "2L)>"/D341R(\$T=. #/>#D] >?F.)/D3417(\$T+=J "#DT); J J "a. J *D341M(\$
T+=J "#DT); J J "a. J *D341M(\$T+<. ?F"adb ">"=D3415(\$T+=/)>?aD] "=J . #D3443(\$
T+=/, D] +"*J . #D341B(\$T+, F. J DI ?F>J J ")D341^(\$T+; GJ ""'9, ")DI ; *"), >DU;)<. D3445(\$
T). /2D_ J .)2D341R(\$T). c"#+@>?DQ)"G"9D3445(\$T)"FJ "DI ; *"), >DU;)<. D344^(\$
T;)>#<, +#DI F. ; <F#"992D344R(\$T; , =. #/DN. 2/"#D3415(\$T2)+#DN; J *F)>"9D3413

7

- . >D- +#. G. 2D3446(\$(- . J .)<+DT). #/+>#D3446(\$(- . J *+9D] ">#: ")<D341M(\$(- . +D
- F>##. >2. #D3415(\$(- .)J +#D8>; D3415(\$(- .)+#D@. #(% , , >a; J D341^(\$(- \ 88g\$%C(\$
- F"#DT)+G#D3443(\$(- F"#DI "D3417(%(\$(- F"#DI "D3417(T(\$(- F"#DI ; . #D341R(\$(- F"#D
N; . #<D3415(\$(- F"#DV)+<. #D341R(\$(- F"#DZ; D341R(\$(- F"#DYF. #<D3417(\$(- F"#DYF+; D
341^(\$(- F"#<DQ"- . *)>+D3416(\$(- F>D] ""'/D341R(\$(- F>, . ="D] >?F=2D3416(\$(- F+>DT" ; , =)"D
341^(\$(- F+>DT; 9>#>+D341R(\$(- F+; /F;)2D\$>?F="G9a>D3416(\$(- F)>9, >. #9+#DV+*+, +D3411(\$
- =+; , >")D- +; =+J : "D3417(\$(- +; , >")D- +; =+J : "D3416(\$(- +>?"=>D3414(\$(- +=. #/D
! . ; , F>)"D3445(\$(- +#, "DC")"HD_=>@. D341R(\$(- ++*)DI)""#D341M(\$(- +)+J >#. 9D
' . a+; ?F"@. D3415(\$(- +; H"#9DI ! >#<). 9D3417(\$(- +ED] >HH>#>+D3417(\$(- +2. ; /D] . ; <F, D
341M(\$(-)+GD-)>9, ". D3416

Q. . a+;)DXG>H")"D341B(S(Q. : : . <F>H. /"FDX. #<; . 2D341R(S(Q.),Db "=9D341M(S(Q. 9D
T)+ "J ")D341^(S(Q. @>9D! =. ; #9>#<")D341M(S(/"(N++<D\$. ##D3445(S(Q"@.). c. #DV",F. D
V; J.)D3413(S(Q>#")D-)>9, ". D341M(S(Q>, ,J ")D\$>9, ">D3415(S(Q+: : >D! >+)/ . #+D344M(S(
Q+; . ##"DT>/h)"D341^(S(Q)>99>DT+>9@"),D341M(S(Q; DV)+<. #D3416

9

\=>+, ,D! 2)/DN. #9"#D341B(S(\J /. -D_="9"#D341M(S(\#H+DQ; *+ #,D341M(S(\), 2?FD
T. 9,>. #9D341B(S(\G>#<DU<"29D3446

)

U. #<D8>#D3411(S(U. ; 9,DU). #a="D341R(S(U"##")DC)"F#D3414(S(U+=2/DC. <=>.)>#>D341B(S(
U+")9, ")D] >, ")D3417(S(U+<")+ #D8. #<"D3417(S(U+ #9"? . DQ. J <.)/D341M(S(U+9, ")D
\$.)9F. =D3417(S(U). <+H. DZ; D341^(S(U)">: . ; J DX. 2+>)D3414

2

! . :)>"=DT. ; J <). 99D341B(S(! . =.)/+Di .). DT")#. : "; D341^(S(! . =><. #DN+G="2D341M(S(
! . +D] ">#: ")<D3413(S(! . +Di . H)>D341B(S(! .)H>. DI +#"#: ")<D3416(S(! . ; ,>)DN. =D344^(S(
! >. ##+ #>D8>; D3414(S(! >J +)"Db . 9F; ;)#D341B(S(! >;). ,+DX.). =+D341R(S(! =. , ,")D
! 9, . >")D344^(S(! =+"?a#")D["LL#<D3446(S(! + "F=")Db . #a")D3445(S(! +)/+ #DV)+<. #D
3434(S(! +; /)" . ; ,D! >#<). 9D344^(S(!)"?+D-)>9, ". D3411(S(!)+99J . ##DI , "H=D341M(S(
! ; .). #>DN.)*)D3415(S(! ; .)/D_=/D341^(S(! ; .)/>. D8. <; .), . DC)H"/: +)9a>D341^(S(
! ; /")>. #D!)>J J =")D3411(S(! ; *, . DC"=" ,>")D341M

:

N. #DT. 99>aD3416(%(S(N. #DT. 99>aD3416(T(S(N. #9+ #D- =. 2, + #D3415(S(N. ;)>DT">9"=D341B(S(
N. ;)>D! 9, . >")D3417(S(N. @)2+>@D] "/+G>?HD344^(S(N. @; <>J . #. D\J >>D3413(S(N. 2"9D
[]: j D3413(S(N"<"="DI , "H=D3413(%(S(N"<"="DI , "H=D3413(T(S(N">/"=: ")<")DT"=D341R(S(
N">#D\$. ##D341M(S(N")J c. a+: D%*G">")D3445(S(N"))DN"=" / . 2D341M(S(N+LLJ ">9, ")D
8k#<9,D3416(S(N+)=: "?aD! >: ") ,D341R(%(S(N+)=: "?aD! >: ") ,D341R(T(S(N+9*DI "=: . ?FD
341M(S(N+; D- F"#D341R(S(N+; DN; . #<D3416(S(N; Db ++/9D341^(S(N; DZ>#D341^(S(N; : "D
C>?F=J . >)D341^(S(N; : ")DN+"H=D3416(S(N[\$%&- Z- (S(N; J *F)>"9DN; J *F)>"9D344^(S(
N; 99. >#D%=/ . HD341R(S(N; , ?F>#9DC" , ")9D3414(S(N; , ,=>#D! 2<>D341M(S(N; , ,=>#DN.)*)D
3416(S(Ne, , "#F. >#DV)+<. #D341^

;

'3QDT' & QDU=23N; J . #(S('3QDT' & QD\$+; 9"3N; J . #(S('3QDT' & QD] . , 3N; J . #(S('3QD
T' & QDb +)J 3N; J . #(S('3QDT' & QDZ". 9, 3N; J . #(S('3QDT>+!] 'QDU=23N; J . #(S('3QD
T>+!] 'QD\$+; 9"3N; J . #(S('3QDT>+!] 'QD] . , 3N; J . #(S('3QDT>+!] 'QD
b +)J 3N; J . #(S('3QDT>+!] 'QDZ". 9, 3N; J . #(S('3QD- F"#DC. G9+ #D344^DC>G>I ?)""#D
\$+; 9"3N; J . #(S('3QDU+)J 9, "F")DQ. @> , D344MD\J :)2+DU=23N; J . #(S('3QD
U+)J 9, "F")DQ. @> , D344MDN". /DU=23N; J . #(S('3QD! >+, D] +, F: ") , D3447DN<FD
U=23N; J . #(S('3QD! >+, D] +, F: ") , D3447D8+GDU=23N; J . #(S('3QD' & %&X\QTD
\$+; 9"3N; J . #(S('3QD' #, %?, DU=23N; J . #(S('3QD' #, %?, D\$+; 9"3N; J . #(S('3QD' #, %?, D
] . , 3N; J . #(S('3QD' #, %?, Db +)J 3N; J . #(S('3QD' #, %?, DZ". 9, 3N; J . #(S('3QDV)+<. #D
!)""#: =. , , D344BD- +)"DZ". 9, 3N; J . #(S('3QDV)+<. #D!)""#: =. , , D344BD&+ # - +)"D

;

Z". 9,3N; J . #(\$('3QD8>Di >/ . ð3445D- \DQ%X%D b +)J 3N; J . #(\$('3QD8>Di >/ . ð3445D
- _] \D1D b +)J 3N; J . #(\$('3QD8>Di >/ . ð3445D- _] \D3D b +)J 3N; J . #(\$('3QD8>Di >/ . ð
3445D>#,"")+<D b +)J 3N; J . #(\$('3QD8>Di >/ . ð3445D>,""). , ;)"D b +)J 3N; J . #(\$('3QD8>D
i >/ . ð3445D#>#D?+)"D b +)J 3N; J . #(\$('3QD\$. #; . ð\$+; 9"3N; J . #(\$('3QD\$. #; . ð
] . ,3N; J . #(\$('3QD\$! 'D\$+; 9"3N; J . #(\$('3QD\$' &XDU=23N; J . #(\$('3QD\$' &XD
\$+; 9"3N; J . #(\$('3QD\$' &XD] . ,3N; J . #(\$('3QD\$' &XD b +)J 3N; J . #(\$('3QD\$' &XD
Z". 9,3N; J . #(\$('3QD\$' C I DZ". 9,3N; J . #(\$('3QDC, . ?"aD I #2/"D344MDZ". 9,3N; J . #(\$(
'3QDI , . #2+>DU>#="2D3445D- "-= 2?="DU=23N; J . #(\$('3QDX.). 99+@DC- %D
Z". 9,3N; J . #(\$('3QDX"G.)>Di >/ . ð3445DX! U: D b +)J 3N; J . #(\$('3QD@+>#\$")>#<D
T+)aD3443DN<FDZ". 9,3N; J . #(\$('3QD@+>#\$")>#<DT+)aD3443D8+GDZ". 9,3N; J . #(\$(
'3QD@+>#\$")>#<DT+)aD3443D\$"/>; J DZ". 9,3N; J . #(\$('3QD b . #<D_)a>#D344BD\I ?J *=ED
\$+; 9"3N; J . #(\$('3QD b . #<D_)a>#D344BD\I ?J *=E'CD\$+; 9"3N; J . #(\$('3QD b . #<D
_)a>#D344BD\I ?J *=E+GD\$+; 9"3N; J . #(\$('3QDZ; Di >/ . ð344RD! +=/I , /D
Z". 9,3N; J . #(\$(' \$'Q(\$' #<F. J DC. G9+>#D344M(\$'##+?"#,>DT)+G#D3411(\$(
'&X\] C] _(\$(' . />DT+)?F"=,D341R(\$'] \UD: FLD; ?=(\$'] \UD: >#/((\$'] \UD: >#/D
,). #9=. ,>+>#(\$'] \UD: >+<)>/((\$'] \UD?+); J (\$'] \UD/>*((\$'] \UDF*>/((\$'] \UDF*)/((\$'
'] \UDF;)>(\$'] \UD>##. ,"/: (\$'] \UD># , . ? , (\$'] \UD># , ?+J *= "E(\$'] \UDJ . ,)>E/: (\$'
'] \UDJ : >#L+(\$'] \UDJ ># , (\$'] \UDJ **>(\$'] \UD` ; >?a<+(\$'] \UD)". ? , +J "(\$'] \UD
I \$%88DI - %8\DI X[Q' \I (\$'] \UDI \$%88DI - %8\DI X[Q' \I (\$'] \UD9*>a"(\$'] \UD
; #>*)+ , **(\$'] \UD@>); 9F+9, (\$' @. #+>Fa+D%))+G9J >, FD341^

<

W. >#DC.)a")D341B(\$W. #<DX)+>#D341R(\$W")+>J +D- +; +=J : "D3446(\$W>. #<D/"(V+aD
3416(\$W>#DC. G9+>#D3445(\$W>). G. , #+ , . >Dl >?>#9a>D3411(\$W+F#9+>#DV")#")D b >?F,")="D
341M(\$W+F#9+>#DI F+"J . a")D3447(\$W+>#9D\$. ?T". , FD344B(\$W+9F>D-)>9, ". D3417(\$
W+HG>aD- .))+=D341B(\$Wk<")DV)+<. #D3411

=

V. F="DY+<F: >D3411(\$V. =,"#: . ?FDN; <F"9D3446(\$V. #<DI F>#D341M(\$V.)). 9DI +"#<. 9D
341^(\$V. , +DI , ")# : ")<D3415(\$V. , 9+<. ##+; D] +>?F>D3415(\$V. G. F.). DC. "9(8"J "D
3416(\$V="")D8""D3415(\$V"##"/2DV+=?FD3434(%(\$V"##"/2DV+=?FD3434(T(\$VF. ##. D
C.)# . >aD341R(\$V>J D\$. c+)D341M(\$V#">99-D!); J J , D3447(\$V+>FDN")J "a>#<D3446(\$
V+, =2.)DW;)>9?. D341M(\$V)>9, "9#"DU+9, ")D3413(\$V; J .)D\$. //>a. D3416(\$V; J .)D
i "), "<. . ð3416(\$V; *a. D b . =?H. aD341B(\$Vk): =. #"DI .)J >#" , +D341M(\$VI)=DI! m)=>FD
341M

>

8. J : ") , DI >#<). 9D341M(\$8. J *"), DC", ")D341R(\$8. ; D] +#. >D3413(\$8""D- F+>D341B(\$
8""D- F+>D3416(\$8""DW"+>#<D3416(\$8""DW+; D341^(\$8""D\$. 2)D341^(\$8""DI +>#<2. #<D
3411(\$8"F#")DI . #/")9+>#D3445(%(\$8"F#")DI . #/")9+>#D3445(T(\$8"; #<DW+>#9D3415(\$
8"; #<D\$>=")D3416(\$8>D- F"#D341M(\$8>DQ+)LD3411(%(\$8>DQ+)LD3411(T(\$8>DQ+)LD3415(\$
8>DU; D3416(\$8>DN. ;). D3417(\$8>DN; #<D341^(\$8>D8; D341R(\$8>D b . #<D341B(\$8>DYF+; D
3416(\$8>": "=, Di "), "<. . ð3434(\$8>J DY+<F: >D344B(\$8>#DI J >, FD3414(\$8>*D! ; , F)>"D
341M(\$8>; D- F"#D341^(\$8>; DI ; #D341^(\$8>; DX. a. F. 9F>D3416(\$8>; DX. #D341R(\$8>; D

B

I ?F. /,DI F+"J . a")D3445(S(I ?F>H. DQ>. J . #/>9D341R(S(I ?F+=HDX. 2=+)D341B(S(I ?>L+D
8. +=G9a>D341M(S(I ?+, ,DI ; 2D3416(S(I ?+, ,DI ?F; =J . #D341B(S(I F. J >(I F. FDT. 9a>#D341^(S(
I F"#D- F"#D341^(S(I F"#D\$. =>D3416(S(I F")J . #DX">, "="D3414(S(I >J . : ; ?>DY. #?F>#D341^(S(
I >#<FD\$++)"D3413(S(I +D- +=G>=D341M(S(I +a+=# . DI , . <=c.)D3416(S(I +=")D8r*"HD%=+2D
3411(S(I +G. DN.)*)"D344^(S(I)>@. 9D'/"a")D341B(S(I ,DQ"#>9D! >#<). 9D341M(S(I ,DQ"#>9D
! >#<). 9D341B(S(I , "F>#<D8>=D3413(S(I , "F>#<D8>=D3417(S(I , "H=D b . #a")D344M(S(I , ; .),D
V>J D3447(S(I ; #/"=>D'@.)99+#D341R(S(I ; ,")D b . #a")D3417(S(I G. 2. J *. a; =. DQ"/F.)D
3416

C

X. >*. ="D8>#/"^ ; >9,D3413(S(X. >*. ="D8>#/"^ ; >9,D3415(S(X. a. F. 9F>D- +#. G. 2D3411(S(X. #<D
b . #<D341^(S(X.). +=D b ">9HD3411(S(X">E">). DI +J "9D3414(S(X">E">). D8. J . #D341B(%(S(
X">E">). D8. J . #D341B(T(S(XF. =. **>=2DQ; 9" , ,>D344R(S(XF+J *9+#D8; ?F. #9a2D3415(S(
X>"J . ##DV. #>D341^(S(X+J a>9D\$. #H+#>D341R(S(X+#<D\$+). #D3415(S(X+2+9F>J . D
!). #/+>)D3413(S(X)"*, "D b . #a")D341R(%(S(X)"*, "D b . #a")D341R(T(S(X9. >D-)>9, ". D3413

D

[<>/+9Di . #/"#:)+"?aD341^

E

i . #(%?a")DQ"G>="/D341^(S(i . #(%=9,2#"DC"=>HH+#>D341R(S(i . #(<O; >?a"=: ")<F"D
! "@. ") ,D341R(S(@. #(caDX>J J ")9D344^(S(i . #/. J J "D%#<). #/D3411(S(i .)>")D
i ")J "; ="#D341B(S(i .)c+9. +=DI 9, . <")D3417(%(S(i .)c+9. +=DI 9, . <")D3417(T(S(
i .)c+9. +=DI ; *"),>DU;)<. D3417(S(i . 9,)>aDI , ">#D3446(S(i "#a. , "9. #Di >/ . >D344^(S(i >, . D
i .),>. >#"#D341^(S(i >#. 2. <. J D b . #a")D3411(S(i >)+aDUe=m*D3411(S(i >H". ?+; J .)D
\$+LL. ,D3417(S(@+#(N; #/"=9F. ; 9"#D b ": ")D3416

F

b . =. ?FDV). J ")D3417(S(b . #D\J >=D341M(S(b . #<DT. =?FD344B(S(b . #<D- F"; #<D341M(S(
b . #<DN"D344R(S(b . #<DN; . #<D3416(S(b . #<D8>; D341^(S(b . #<D\$.)>9D344B(S(b . #<D
n>+#<D341^(S(b . #<Dn; D341M(S(b . #<DZ. #<D3411(S(b . , . #. : "DU; c, . D341R(S(b ">J . ##D
I , "H=D3417(%(S(b ">J . ##DI , "H=D3417(T(S(b ">J . ##D\$">9,")D344^(S(b ">9Fk; *>D
I ?FJ >/ ,D341^(S(b ">,FD\$ "2")D341R(S(b F>9"#. #,DI . +=J +>D341M(S(b >a>#9+#D- +: . D
341^(S(b >=>#<F. J D\$; ?F+G9a>D3447(S(b >#?H;). DW"#9"#D341R(S(b +>#<D_pT)2. #D3413(S(
b ++/9D\$+>, ">)+D3413(%(S(b ++/9D\$+>, ">)+D3413(T(S(b ++/9J >,FDI . #/")9+#D3413(S(
b ; DI ! .)@"2D3446(S(b ; D8>D3446(S(b ; D\$. D3413(S(b ; DI , ">#D3414(S(b ; DI , ">#D3414

G

n>. +DT)+G#D341R(S(n>. +D8"La+G>,HD3446(S(n>"D- +>#<D3417(S(n>"DI !)""#D3413(S(n>"D
YF. #<D3416(S(n; DZ"D3413(S(n; DY", ,")D341B

H

Z. ?F>"D] +, FD341B(S(Z. / . @Di .)c+9. +=D3416(S(Z. J . ; ?F>D\$. "/. D341R(S(Z. #<DT). 9>")D
341M(S(Z. #<D- F"#D3414(S(Z. #<D\$. ;)")D341R(S(Z. #<Di >/ . >D341B(S(Z. #<D b . #<D341R(S(
Z. +DI , . <=c.)D3416(%(S(Z. +DI , . <=c.)D3416(T(S(Z. ,>J DT"#a>). #"D3413(S(Z"; #<D

H

Q+; <. #D341^\$(Z; D- F+GD3417\$(Z; D\#<"=D341R\$(Z; Di >/. =D3411\$(Z; "D8>; D341R

I

Y. #+#DC>?F=")D3417\$(Y"=")Db ">D344B\$(YF. #<DI F. #<D344B\$(YF. #<Di ")J "; ="#D3416\$(
YF. #<Db . #<D341R\$(YF. #<Db F""=")D3415\$(YF. #<Dn; D341R\$(YF. #<DY+; D3411\$(YF. +D
V); <D344M\$(YF. +DZ. #<D3411\$(YF+#<Di >/. =D341B\$(YF+; D- +#). /9D3445\$(YF+; D
N. #"J . ##D341B\$(YF; D8>; D341R

!"#9

2"+"	8"(&-J#-%+	A0+'
TT-7	T-83(:>#/#<(?+J *+#"#, (7(sl+;)?"0N! &-(I 2J : +t%??0N! &-016RBRu	&K%
X'-%\$3	,+=(=>a()"?"*+,)(./.*+,)(J +="?; =(3(sl+;)?"0N! &-(I 2J : +t%??0N! &-0317M5u	&K%
YTC1	YDQ&%(:>#/#<(*)+, ">#(1(sl+;)?"0N! &-(I 2J : +t%??0N! &-01B16Bu	&K%
'U&T1	>#,"")L")+#(:",.(1(sl+;)?"0N! &-(I 2J : +t%??0N! &-0M575u	&K%
\\$C1	"*>,F">.= (J "J :).#"(*)+, ">#(1(sl+;)?"0N! &-(I 2J : +t%??0N! &-07777u	&K%
C] V%] 1T	*)+, ">#(a>#.9"(%\$CD/"*"#/"#, (2*"(')"<; =.,+)2(9; ; ; #>, (:",.(sl+;)?"0N! &-(I 2J : +t%??0N! &-0^7^4u	&K%
-%IC3	? .9*.9"(3(sl+;)?"0N! &-(I 2J : +t%??0N! &-01M47u	&K%
[&-MT	; #?DM("#,)>#()"?"*+,)(T(sl+;)?"0N! &-(I 2J : +t%??0N! &-013MBRu	&K%
C'V7-Q	*F+9*F.,>/2>#>+9>, +D5SMD: >9*F+9*F., "(7Da>#.9"?. ,. =2,>(9; ; ; #>, (/="., (sl+;)?"0N! &-(I 2J : +t%??0N! &-0R^66u	&K%
! %QQ5MT	<)+G,F(.))"9,.(#/(Q&%(/.J . <(>#/?; =("(:",.(sl+;)?"0N! &-(I 2J : +t%??0N! &-054^Bu	&K%
! Y\$T	<). #H2J "(T(sl+;)?"0N! &-(I 2J : +t%??0N! &-0564^u	&K%
-NC1	? .=?>#";)>#(=>a"(\UDF.#/(*)+, ">#(1(sl+;)?"0N! &-(I 2J : +t%??0N! &-016577u	&K%
\8%&\	"=.9,.9"\$S("#; ,)+*F>("E*)"99"/(sl+;)?"0N! &-(I 2J : +t%??0N! &-0774^u	&K%
CI \$%R	*)+, ".9+J "(34I (9; ; ; #>, (. =*F.(R(sl+;)?"0N! &-(I 2J : +t%??0N! &-033^RMu	&K%
N! U	F"*.,+?2,"(<)+G,F(L.?,+)(sl+;)?"0N! &-(I 2J : +t%??0N! &-05R^7u	&K%
CZ! T	<=2?+<"#(*F+9*F+)2=.9"(T(sl+;)?"0N! &-(I 2J : +t%??0N! &-0^637u	&K%
X'\$C7	X'\$C(J",. =+***,>/ .9"(>#F>: >,+) (7(sl+;)?"0N! &-(I 2J : +t%??0N! &-011R33u	&K%
'I! 34	>#,"")L")+#(9,>J ; =.,"/("E+#; ?=.9"(<"#"(34(sl+;)?"0N! &-(I 2J : +t%??0N! &-0B174u	&K%
! 8[Q1	<=; ,.J .,("/F2/)+<"#.9"(1(sl+;)?"0N! &-(I 2J : +t%??0N! &-0577Mu	&K%
I \ \$1	I \ \$1(3BI (*)+, ".9+J "(?+J *= "E(9; ; ; #>, (sl+;)?"0N! &-(I 2J : +t%??0N! &-014R5Mu	&K%
'! U3]	>#9; >#(=>a"(<)+G,F(L.?,+)(3()"?"*+,)(sl+;)?"0N! &-(I 2J : +t%??0N! &-0M5B6u	&K%
[TT	; :>` ; >, >#(T(sl+;)?"0N! &-(I 2J : +t%??0N! &-0135B7u	&K%
-Q7R	-Q7R(J +="?; =(sl+;)?"0N! &-(I 2J : +t%??0N! &-01BB6u	&K%
! -N1	! XC(?2?+=F2/)+=.9"(1(sl+;)?"0N! &-(I 2J : +t%??0N! &-051^7u	&K%

2"+"	8" (, &-J#-%+	A0+'
Q&%W%1	Q#. W(F". , (9F+?a(*)+, ">#(L. J >2(0N9*54P(J "J : ") (%1(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0M33^u	&K%
%VX3	%VX(9")>#"K, F)" + #>#" (a>#. 9" (3(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 07^3u	&K%
C'V7- !	*F+9*F. , >/2>#>9>, +=D5SMD: >9*F+9*F. , "(70a>#. 9" (? . , =2, >?(9; ; ; #>, (<. J J . (sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0R^6Ru	&K%
- % \$ V3%	? . =?>; J K?. =J +/; >#(/" "*" #/" #, (*)+, ">#(a>#. 9" (' (. =*F. (sl +;)?"0N! &- (I 2J : +=t%??0N! &- 015B4u	&K%
- QV&1T	?2?>#(/" "*" #/" #, (a>#. 9" (>#F>: >, +) (1T(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 016RMu	&K%
X%C1	,). #9*+), ") (1S(%XC(: >#/#<(? . 99", , "(9; : L. J >2(T(J "J : ") (sl +;)?"0N! &- (I 2J : +=t%??0N! &- 057u	&K%
I X%X M%	9<#. =(,). #9/; ?") (. #/(. ?, >@. , +) (L(,). #9?)>*, >+ # (M%(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0117BBu	&K%
I X%X5	9<#. =(,). #9/; ?") (. #/(. ?, >@. , +) (L(,). #9?)>*, >+ # (5(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0117BMu	&K%
%C-	%C- () "<; =. , +) (L(b &X(9<#. >#<(* . , FG. 2(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0MR7u	&K%
CCC7- %	*)+, ">#(*F+9*F. . , 9" (7(? . , =2, >?(9; ; ; #>, (. =*F. (sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^715u	&K%
I X%X1	9<#. =(,). #9/; ?") (. #/(. ?, >@. , +) (L(,). #9?)>*, >+ # (1(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0117B3u	&K%
&UVT1	#; ?=" .) (L. ?, +) (a. **. (T(9; ; ; #>, (1(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 066^5u	&K%
CI \$ %3	*)+, ". 9+J "(34I (9; ; ; #>, (. =*F. (3(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M71u	&K%
CI \$ %5	*)+, ". 9+J "(34I (9; ; ; #>, (. =*F. (5(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M77u	&K%
CI \$ T1	*)+, ". 9+J "(34I (9; ; ; #>, (: ", . (1(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M76u	&K%
\] TT3	") : D: 3() "?" * , +) (, 2)+9>#" (a>#. 9" (3(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 07574u	&K%
CI \$ %B	*)+, ". 9+J "(34I (9; ; ; #>, (. =*F. (B(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M7Mu	1
CI \$ %7	*)+, ". 9+J "(34I (9; ; ; #>, (. =*F. (7(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M73u	3
CI \$ %M	*)+, ". 9+J "(34I (9; ; ; #>, (. =*F. (M(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M75u	7
CI \$ T3	*)+, ". 9+J "(34I (9; ; ; #>, (: ", . (3(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M7^u	5
CI \$ %1	*)+, ". 9+J "(34I (9; ; ; #>, (. =*F. (1(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M74u	M
CI \$ T7	*)+, ". 9+J "(34I (9; ; ; #>, (: ", . (7(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M54u	B
CI \$ TR	*)+, ". 9+J "(34I (9; ; ; #>, (: ", . (R(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M5Mu	6
CI \$ TB	*)+, ". 9+J "(34I (9; ; ; #>, (: ", . (B(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M57u	R
! &%_1	! (*)+, ">#(9; ; ; #>, (. =*F. (+1(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 057R^u	^

2"+"	8"(&-J#-%+	A0+'
CI \$T6	*)+, ". 9+J "(34I (9; ; ; #>, (: ", . (6(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M55u	14
] 'CV7)"?"* , +)(># , ") . ? , >#<(9")>#"K, F)" + #>#"(a># . 9"(7(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 014431u	11
CI \$T5	*)+, ". 9+J "(34I (9; ; ; #>, (: ", . (5(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M51u	13
'813] T3	># , ")="; a>#(13)"?"* , +)(9; ; ; #>, (: ", . (3(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0M^63u	17
%Q] \$1	. /F"9>+ #()"<; = . , >#<(J += "?" ; ="(1(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 01M6M^u	15
[I C15	; : >` ; >, >#(9"*"?>?(*"* , >/. 9"(15(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 013B13u	1M
Q%C	/". , F(. 99+?>. , "/(*)+ , ">#(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 03B63u	1B
X%C3	,) . #9*+ , ") (3\$(%XC(: ># />#<(?. 99" , , "(9; : L. J >2(T(J "J : ") (sl +;)?"0N! &- (I 2J : +=t%??0N! &- 055u	16
T3\$: ", . 030J >?) +<=+ : ; >#(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^15u	1R
TI X1	: +#" (J . .) + G(9 ,) + J . = (" = (. # , <#"#(1(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0111Ru	1^
CI \$%6	*)+, ". 9+J "(34I (9; ; ; #>, (. =*F. (6(sl +;)?"0N! &- (I 2J : +=t%??0N! &- 0^M7Bu	34

&" ,G+)a9

@&"K-,#"K	7BA73v
'3QD@+#\$")>#<DT+)aD3443DN<F0Z". 9,3N; J . # -+J *.) . ,>@(" . 99"99J "#, (+(=.)<"D9? . ="(/. . . (9", 9(+L(*)+, ">#D*)+, ">#(>#, ") . ?. ,>+9A(@+#(\$")>#<(" , (. =(03443PA(! ""#\$%& C)"/>?, "(G>, F(637(>#, ") . ?. ,>+9(L)+J ('3Q	17A74v
'3QDX.) . 99+@DC- %DZ". 9,3N; J . # %#(>#(@@+(J . *(+L(, F"(2". 9, (*)+, ">#(>#, ") . ?. ,>+J "A(X.) . 99+@(" , (. =(0344RPA(')&*(& C)"/>?, "(G>, F(37M(>#, ") . ?. ,>+9(L)+J ('3Q	RA7Rv
'3QDT'&QDZ". 9,3N; J . # T'&QDD. (/ . . . (9""?>L>?. ,>+9(L+)(9,)+>#<(. #/(/"9?)>: >#<(: >+J +=""?; =.)(># , ") . ?. ,>+9S(J +=""?; =.)(>+J *= "E"9(. #/(* . , FG. 29A(T. /")(" , (. =(03444PA(+),)*- , % . ""#)(/ C)"/>?, "(G>, F(M^># , ") . ?. ,>+9(L)+J ('3Q	7A13v
'3QDT>+!] 'QD\$+; 9"3N; J . # T>+!] 'QD(. (<"#") . =()" *+9>, +)2(L+)(># , ") . ?. ,>+9(/. . . 9", 9A(1 , .)a(" , (. =(0344BPA(! \$(0&)(12()3/14&/ C)"/>?, "(G>, F(14SM35(>#, ") . ?. ,>+9(L)+J ('3Q	3AM7v
'3QDT>+!] 'QDU=23N; J . # T>+!] 'QD(. (<"#") . =()" *+9>, +)2(L+)(># , ") . ?. ,>+9(/. . . 9", 9A(1 , .)a(" , (. =(0344BPA(! \$(0&)(12()3/14&/ C)"/>?, "(G>, F(RSB6B(>#, ") . ?. ,>+9(L)+J ('3Q	1A65v
'3QDV)+<. #D!)""#: =. , , D344BD- +)"DZ". 9,3N; J . # ! +=: . =(= . #/9?. *"(+L(*)+, ">#(>+J *= "E"9(>#(, F"(2". 9, (I . ??F.)+J 2?"9(?)"@>9>. "A(V)+<. #(" , (. =(0344BPA(! ""#\$%& C)"/>?, "(G>, F(RB4(>#, ") . ?. ,>+9(L)+J ('3Q	1A63v
'3QD' #, %?, DZ". 9,3N; J . # XF("(' #, %?, (J +=""?; =.)(># , ") . ?. ,>+9(/. . . : 9"(>#(3414A(%). #/ . (" , (. =(03414PA(! \$(0&)(12()3/14&/ C)"/>?, "(G>, F(6S73M(>#, ") . ?. ,>+9(L)+J ('3Q	1A5Mv
'3QD\$' &XDZ". 9,3N; J . # \$' &XD(. (\$ +=""?; =.)(' &X") . ?. ,>+9(/. . . : 9"A(Y. #H+>#>(" , (. =(03443PA(56+' 17&## C)"/>?, "(G>, F(3S5RB(>#, ") . ?. ,>+9(L)+J ('3Q	1A15v
b ; DI , ">#D3414 %(F; J . # (L; #? ,>+9. =(*)+, ">#(># , ") . ?. ,>+9(#" , G+)a(. #/>, 9(. **=>?. ,>+9(, +(? . #?"")(/. . . (. #. =29>9A(b ; (" , (. =(03414PA(8&* , . &1+), 0 C)"/>?, "(G>, F(R^S^B6(>#, ") . ?. ,>+9(L)+J (9; **=" J "#, .)2(J . , ")>. =	1A14v
'3QD8>Di >/ . D3445D># , ") +=+<Db +)J 3N; J . # %(J . *(+L(, F"(># , ") . ?. ,>+J "(#" , G+)a(+L(, F"(J " , . H+. #(- A("=<. #9A(8>(" , (. =(03445PA(')&*(& C)"/>?, "(G>, F(7^B(>#, ") . ?. ,>+9(L)+J ('3Q	4ARBv
'3QDT>+!] 'QDZ". 9,3N; J . # T>+!] 'QD(. (<"#") . =()" *+9>, +)2(L+)(># , ") . ?. ,>+9(/. . . 9", 9A(1 , .)a(" , (. =(0344BPA(! \$(0&)(12()3/14&/ C)"/>?, "(G>, F(16S715(>#, ") . ?. ,>+9(L)+J ('3Q	4AR4v
'3QD' &&%X\QTDS+; 9"3N; J . # '##. , "QT0(L. ?>., . ,>#<(929, "J 9D="@"= (. #. =29"9(+L(, F"(J . J J . >. #(># , , ">J J ; #") "9*+9" A(82#>#(" , (. =(0344RPA(9 , 01' : /#1+), 0	4A16v

@&"K-, #"K

7BA73v

'3QD' &&%X\QTD\$+; 9"3N; J . #

C)"/>?, "/(G>, F(5\$45^(>#, "). ? ,>+ #9(L)+J ('3Q

7%L" MJ&" ((-%+

77A6^v

] >"<")D- F; D3445

5A44v

X+E?>,2(L)+J 0 . /> .>+ # (,F"). *2(.99+?> . ,"/(G>F(. : #+)J . (,). #9?>)* ,>+ # . ()"9*+ #9"9(,+ (Q&%(/ . J . <"[J]>"<") (" ,(. =(03445PA(: %, (1 ! " #12 ("31" 01<1' 12

- +D"E*)"99>+ # (G>, F(3BBSR6^(>#,").?,>+ #9(L)+J (! _

7 +9" #G. =/DI .. ; /, D3441

7AM^v

1 "=, >+#+(L(<"#("E")99>+#+(#F"#+, 2**(", +(>J J; #+<+; ;>#(J; , , >+#+(<"#+, 2**(>#(T("?=(?F)+#>?(<2J *F+?2, >?(<"; a"J >. k() +9"#G. =/(
", .(03441pA(=16>?19&3

-+D"E*)"99>+#{G>,F(11RS4^6(>#,").?,>+9(L)+J(9; **="J"#,.)2(J,,")>.=

T+=/) > ? aDl " = J , #D3443

7A7Rv

!,"")>2*"/(.#/(9*"?>?<{<#"("E*")99>+#+(*)+<).J9{>#(F;J.#>#.#,"">J J;#"()9*+9"9(,+(:.?,"")>.k(T+>=/?a("(.=(03443PA(:%,(1
! "#12("31' 11<1' 12

- +D"E*)"99>+ # (G>, F(11BS1^6(>#,").?,>+ #9(L)+J (9; **="J "#,.)2(J.,")>.=

T>=/D&"@>#9D344B(T

7A31v

—#?+<"#>?(*.,FG.2(9x#.,;)"9(>#(F;J.#(?.#?)9(.9(.(<;>/"(+,(.)<","/,(F)".*>"9A/Tx/(",(.=(0344BPA(! "\$%&

- +D"E*)"99>+ # (G>, F(3RMS7BR(>#,"). ?,>+ #9(L)+J (! \

C")+:DT+,9,">#D1^^^

7A41v

Q>9,>#?,>#("<"#"("E*")99->#(*,.,")#9<#(F; J . # (J . J J .) 2 ("*>,F">=>.(?"=9(. #/(;) : . 9,(? . #?)9A(C")+; (",(. =01^^^PA(; %, (1! "012("31 ' 01<1' 12

-+D"E*)"99>+ # (G>,F(BRS344(>#,").?,>+ #9(L)+J(9; **="J"#,.)2(J,,")>.=

1. J. 9G. J 2D! +=; : D3441

$$3A \wedge B \vee$$

\$; =,>?=. 99(? . #?"")(/>. <# +9>9(; 9>#< (, ; J +) (<"#"("E*")99>+ # (9<# . , ;)"9A[] . J . 9G. J 2 (" , (.=03441PA(; %, (1! "#012 ("31')1<1' 12

- +D"E*)""9>+ # (G>, F(3R5\$R3^(># , "). ? , >+ #9(L)+J (9; **="J "#, .)2(J . , ")>. =

C")+;DT+,9,">#D3444

3A7Bv

\$+= "?; =.) (*+), ,).> 9(+L(F; J .#(:)" .9,(; J +;)9A(C")+; ("(.=(03444PA(! "#\$%&

- +D"E*)"99>+ # (G>, F(1R^\$767(># , "). ? , >+ #9(L)+J (9; **="J "# , .)2(J . , ")> . =

Q+: : >#D! >+) / . #+D344M

3A45v

"": . :) . , + 2 (? + J * .) . : ∞, 2 9 (; / 2 (+ l (? . # ? ") (< " # " (" E * ") 9 9 - + # (. # . - 2 9 - 9 (; 9 ; # < (+ ∞ < + # ; ? = " + , > / " (J > ?) + .)) . 2 9 A (Q + : : > # (" , (. = (0 3 4 4 M P A (@ l) * 1 @ " * (% & 1 4 & /

- +D"E*)"99>+#(G>,F(5M3\$733(>#,").?,>+#9(L)+J (! _

%)>c9D] ; , <""), 9D344^

1A65v

\$: ?9>.-("##"("E*")99>+#{(. #,>J ?>):>.-(***,>/'"9(>#(>#L=. J J . ,+)2(: +G="(/>9". 9"(: "L+)"(. #/(\. L,")(<)>9,>#L=>E>J. : (.)", J "#,A(%)x9(",.(0344>PA(; 7, ' 1A*&

- +D"E*)"99>+ # (G>, F(B6B\$B^M(>#,").?,>+ #9(L)+J (! \

b. #<D\$.)>9D344B

1A63v

#, "<.", >#&J>9/~/#"#, >9(/>9, #?>.(J+=?>.;)=. 99"9(+L#>.);+=. 9, +J. (. #/(9F+G9(, F., (J ;=>*"("<#"9(, ".)<";", "/(: 2 0)"<+>#.= (.= "). ,>+9#>9(Q&%?+*2(#; J:)A(b . #<#(. =(0344BPA(@**(&%14&/

- +D"E*)"99>+ # (G>, F(364\$7RR(>#,"). ?,>+ #9(L)+J (! \

T;)>#<, +#DI F. ; <F#"992D344R

1AM4v

7%L"MJ&"((-%+

77A6^v

T;)>#<, + #DI F. ; <F#"992D344R

X; J +)(?"=(<"#"("E*")99>+#{F. #<"9(L+=+G>#<(9F+),D,")J (>#(⊗+("E*+9;)"(, +(9>#<="(. <"#,(?F"J +,F"). **"; ,>?9(.)"O"=, "/(, +(9;)⊗. =(>#(J ; =,>*=" (J 2"=+J . A(T;)>#<, + #(" , (. =(0344RPA(⊗) *1@ " * (&%14&/ - +D"E*")99>+#{G>, F(3^MS734(>#,"). ?. >+ #9(L)+J (! __

- F"#DT)+G#D3443

4A^Rv

! " #"("E*")99>+#{(* , , ")#9(>#(F; J . #(>⊗)"(?. #?")9A(- F"#(" , (. =(03443PA(9 , 01+), 01⊗&00 - +D"E*")99>+#{G>, F(3^1S744(>#,"). ?. >+ #9(L)+J (9; **="J "# , .)2(J . , ")>. =

'##+?"# ,>DT)+G#D3411

4A^7v

'/"# ,>? , ,>+#{S() "*"=>? , ,>+#{S(. #/(L; #? ,>+ #. =(L>#"DJ . **>#<(+L("E*")99>+#{(; # ,> , . ,>⊗(" , .> , (=+?>(>#(*)>J .)2(F; J . #(>⊗)"(,>99; "A('##+?"# ,>(" , (. =(03411PA(; 7 , ' 18&*#& - +D"E*")99>+#{G>, F(B34S34M(>#,"). ?. >+ #9(L)+J (! __

%>H. /"FDI , . ; / ,D3444

4ARBv

Q>9 ,>#? , (, 2*"9(+L(/>L; 9"(=.)<"(TD?"=(2J *F+J . (>/"# ,>#"/(: 2(<"#"("E*")99>+#{(*)+L>#<A(%>H. /"F(" , (. =(03444PA(! " # \$ %& - +D"E*")99>+#{G>, F(^357B4(>#,"). ?. >+ #9(L)+J (9; **="J "# , .)2(J . , ")>. =

b ; D! .)@ "2D3446

4AB^v

XF#"("LL"? , (+L(>#9; >#(+#"("E*")99>+#{(+L(<"#"9(. #/(: >+?F"J >? , =(* , FG. 29(>#(F; J . #9a"= " , = (J ; 9?="A(b ; (" , (. =(03446PA(6*3 , (%)*& - +D"E*")99>+#{G>, F(36MS1MM(>#,"). ?. >+ #9(L)+J (! __

W>. #<D/"(V+aD3416

4AM6v

__J >?9D: . 9"/(>/"# ,>? , ,>+#{(+L(F"(?+J : >#" /("LL"? , 9(+L(> />+92#?) ,>?(/) ; <9(. # /(>#L= J J . , +)2(?2 , +a>#"9(+#{(F("@"=+* J "# , (+L(/) ; <D># / ; ?"/(>⊗)"()<# ;)2A(W>. #<(" , (. =(03416PA(B , >)(, 012??01; C"% . " (, 0 - +D"E*")99>+#{G>, F(555S^M^(>#,"). ?. >+ #9(L)+J (! __

b . #<D- F"; #<D341M

4A33v

! " #" ,>?(⊗.)> ,>+#{(>#(>#9; >#D# / ; ?"/>a# . 9"(9<# . >#<A(b . #<(" , (. =(0341MPA(9 , 01' : /#1+), 0 - +D"E*")99>+#{G>, F(533SR^B(>#,"). ?. >+ #9(L)+J (! __

\$. =+ #D\$?V. 2D3417

4A43v

I , "J - " =QT0(, F"(F; J . #(*=))>*+ , "# , (9 , "J (?"/. , . : . 9"(, (, F"(& . ,>+ #. =(' #9 ,> , ; "9(+L(N" . =, FA(\$. =+ #(" , (. =(03417PA(' #& . 1⊗&0014&/ - +D"E*")99>+#{G>, F(B43S117(>#,"). ?. >+ #9(L)+J (! __

@4N(- , 003; +#"&O , #-%+(

34A7Mv

b . #D\J >D341M

6A45v

C. #+). J . (+L(. #?>"# , (J " , . H+ . #(J . ?)+J +=?" ; =.)(?+J *="E"9A(b . #(" , (. =(0341MPA(! " # \$ %& CF29>?. =(' # , ") . ?. >+ #9(G>, F(1BSB36(>#,"). ?. >+ #9(L)+J (T>+!] 'Q

'] \UDJ ># ,

7A5Bv

CF29>?. =(' # , ") . ?. >+ #9(G>, F(15S54R(>#,"). ?. >+ #9(L)+J (>) "L' # / "E

b . #<DN; . #<D3416

7A14v

\$ +=?" ; =.) (Q" , . >9([# / ")=2#<(Q2# . J >?(I ,) ; ? , ;)"9(. # / (] "< ; = , ,>+#{(+L(F"(N; J . #3BI (C)+ , " . 9+J "A(b . #<(" , (. =(03416PA(9 , 01⊗&001 ; % , #& , .) (/ CF29>?. =(' # , ") . ?. >+ #9(G>, F(67(>#,"). ?. >+ #9(L)+J (T>+!] 'Q

W+#"9D\$. ?T". , FD344B

3A63v

%(` ; . # ,> , . ,>⊗("*)+ , ">#(>#,"). ?. >+ #("# , G+)a(L+)(, F"(\ : T0)"?*" , +)9(> 9>#<(*)+ , ">#(J >?) +.)) . 29A(W+#"9(" , (. =(0344BPA(! " # \$ %& CF29>?. =(' # , ") . ?. >+ #9(G>, F(1MR(>#,"). ?. >+ #9(L)+J (>) "L' # / "E

@4N(-, 003; +#"&0, #-%+(34A7Mv
8>DU; D3416	1A^Bv
XF"(_#?+CC>{#, G+)a(+L(?.#?)DL+?; 9"/(*)+, ">#D*)+, ">#{>#, "). ?.,>+#9(+>#L+)J (: >+>+<>?. =>#9<F, 9(. #/(, F"). **; ,>?(9,). , "<"9A(8>{", (.=(03416PA(! "#1@, . . \$*	
CF29>?. =(' #, "). ?.,>+#9(G>, F(65^(>#, "). ?.,>+#9(L)+J (T>+!] ' Q	
'] \U DU . ,)>E/:	4A^Bv
CF29>?. =(' #, "). ?.,>+#9(G>, F(1M\$533(>#, "). ?.,>+#9(L)+J (>] "L' #/"E	
'] \U D>##. , "/:	4A75v
CF29>?. =(' #, "). ?.,>+#9(G>, F(3\$7MM(>#, "). ?.,>+#9(L)+J (>] "L' #/"E	
T+; GJ ""'9, ")DI ; *") ,>DU;)<. D3445	4A3^v
%(*F29>?. =(. #/(L; #?,>+#. =(J . *(+L(, F"(F; J . #(>X&UD. =*F. K&UDa. **. (T(9<#. =(, . . #9/; ?,>+#{* . , FG. 2A(T+; GJ ""'9, ")(" , (.(=03445PA(! "#1@&001+), 0	
CF29>?. =(' #, "). ?.,>+#9(G>, F(1\$B^5(>#, "). ?.,>+#9(L)+J (>] "L' #/"E	
'] \U D)" . ? , +J "	4A35v
CF29>?. =(' #, "). ?.,>+#9(G>, F(111\$^3B(>#, "). ?.,>+#9(L)+J (>] "L' #/"E	
i . 9,)>aDI , ">#D3446	4A35v
] " . ? , +J "0(. {a#+G=" /<"(: . 9"(L(: >+>+<>?(* . , FG. 29(. #/(*)+"?"99"9A(i . 9,)>a(" , (.(=03446PA(8&* , . . &1+), 0	
CF29>?. =(' #, "). ?.,>+#9(G>, F(111\$^3B(>#, "). ?.,>+#9(L)+J (>] "L' #/"E	
@0#4\$0N	7A75v
b ; DI , ">#D3414	1A^Bv
%(F; J . #.(L; #?,>+#. =(*)+, ">#{>#, "). ?.,>+#{("#, G+)a(. #/(>, 9(. **=>?. ,>+#{(+(? . #?")(/. . (. #. =29>9A(b ; (" , (.(=03414PA(8&* , . . &1+), 0	
C. , FG. 2(G>, F(6R\$116(>#, "). ?.,>+#9(L)+J (9; **="J "#, . .)2(J . , ")>. =	
- \88g\$%C	1A76v
C. , FG. 2(G>, F(7^6(>#, "). ?.,>+#9(L)+J (C. , FG. 2(- +J J +#9	
7%L0%, 00-PO#-%+	7A36v
W+F#9+#DI F+"J . a")D3447	3A77v
! "#+J "DG>/"(9;)@"2(+L(F; J . #(. =, ")# . ,>@"(*)"DJ] &% (9*>?>#<(G>, F("E+#{(c; #?,>+#{(J>?)+.)). 29A(W+F#9+#(" , (.(=03447PA(')&*(& - +D=>?. =>H. ,>+#{(G>, F(53B\$5B5(>#, "). ?.,>+#9(L)+J (! __	
- F"#DN; . #<D3415	4AB4v
[9>#<(. #(>#(9>; (*)+E>J >, 2(>=<. ,>+#{(. 99. 2(+ (929, "J . ,>?. =2(*)+L<="("#/#+<"#+; 9(*)+, ">#D*)+, ">#{>#, "). ?.,>+#9(>#(. (* . , FG. 2(#", G+)aA(- F"#(" , (.(=03415PA(=1; %, #&, . . &14&/	
- +D=>?. =>H. ,>+#{(G>, F(MM^(>#, "). ?.,>+#9(L)+J (T>+!] ' Q	
I ?F. / , DI F+"J . a")D3445	4A7Mv
%(?+J *)"F"#9>@"(, . . #9?)>*, (>#/"E(+L(, F"(F; J . #(<"#+J "(<"#"). , , /(> 9>#<(J>?)+.)). 29(. #/(?+J *; , . ,>+#. =(. **)+. ?F"9A(I ?F. / , (" , (.(= 03445PA(8&* , . . &1+), 0	
- +D=>?. =>H. ,>+#{(G>, F(M^S^34(>#, "). ?.,>+#9(L)+J (! __	
B40&"K3J&%#" -+3K%1 O-+(3AB7v
' &X\] C] __	1AB7v
I F.)"/(*)+, ">#(/+J . >#9(G>, F(B31\$1M^(>#, "). ?.,>+#9(L)+J (' #, ")C)+	
CU%\$	1A44v

B40&"K3J&%#" -+3K%1 0-+(3AB7✓

CU%\$

I F.)"/(*)+,">#(/+J .>#9(G>F(561\$M77(>#,").?,>+9(L)+J (CL. J

2"+"#-, 3; +#"&0, #-%+(4A74✓

8>#DI J >,FD34144A74✓

%(<"#+J "DG>/"(J . *(+L(F; J . #(<"#",>?(>#,").?,>+9(>#L"))"/(L)+J (). /> .,>+9(F2:)>/(<"#+,2*"9A(8>#(",(. =(03414PA(8&* , . &14&/
! "#",>?(' #, ").?,>+9(G>F(5\$R4MS775(>#,").?,>+9(L)+J (9; **=" J "#,.)2(J . ,")>. =