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 .&9: (. 9: &4!F) 9: ?' !.5A(!E?9: !. ('<@9!9B! (U5&A!. (A&9?B4' !E?9: !B9: (. ! (= <AB) ('!
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^\$ _ ! L : ?' !<&. &H.&<: !>B('!4B9!<.B: ?F?9!&!A&E) (. ! C.B = ! (4H&H?4H! ?4' (U5&A!
 .(A&9?B4' !E?9: !&!@A?(49!BC!9: (!A&E) (. 0' ! C?. = !<.BP?>(>!9: &9!9: (!A&E) (. ! : &'!4B!
 ?4PBAP(= (49! ?4!9: (!<(.CB. = &4@(!BC!9: (!A(H&A!EB. - !CB.!9: (!@A?(49+^! !

"6"6eMB . +)) H!2++) / 0 . N0FI# . 0+!(. P * 2 I! / . I 2 + #) 0 (, #E(! "Q7!

L : 5' /!&'!4?9?&AA)!<.B<B' (>!DB>(A! I 5A(!7+N^G_!4B9!B4A)!<.B : ?F?9(>!' (U5&A!
.(A&9?B4'!F(9E((4!&99B.4()!&4>!@A?(49'!^(U@(<9!CB.!9 : B' (!' (U5&A!. (A&9?B4' : ?<!
(U?'9?4H! <. ?B.! 9B! 9 : (! &99B.4()S

"Q"! () * + , - . (+ . / 0!12 - ! / . 3# . - ! `aBA!#[!]

L: (IX9: ?@ ! " 666!%B = ? ' ' ?B40' !BCC?@?&A!(U<A&4&9?B4!BC!D249906593 . (4) = <4C!<<C-

"6"6eMB . +)) H!2++) / 0 . N0F1# . 0+!(. P * 2 I! / . I 2 + #) 0 (, #E(! "Q\$!

%B = =?' 'B4!(U<.('A)! 'B5H:9!9B!.(=(>)+!V&.9!]]!(U&=?4('9: &9!P&.&4@(/!
BCC(.?4H!&4&A) '?!&'!9B!9:(. (A&9?P(!'9.(4H9: '!&4>!E(&-4('(!BC!9:(!>?CC(. (49!
G5.? '>?@9?B4&A! &<<.B&@: (' ! &'! E (AA! &'!>?'@5''?4H! BF0(@9?B4'! 9B! &>B<9?B4! BC!
(U<.(' !<.B: ?F?9?B4' +!V&.9!] a !ABB- '!&9!9: (!P&.&4@(!&=B4H!'9&9(' !E?9:!. (H&.>!
9B! &99B.4()! ' (U5&A! .(A&9?B4'! E: (. (! 9: (! @A?(49! ?'! &! @B.<B.&9(! B.! B9: (.!
B.H&4?1&9?B4&A! (49?9) /! &4>!' '5(!9: &9! DB>(A! I 5A(!7+N^G_!>B(' !4B9!(U<.('A)!
&>>.(' !+!V&.9! a!<.B<B' (' !&!4(E! =B>(A! .5A(!9: &9! ?4@B.<B.&9(' !B = (!BC!9: (!
C(&95.(' !C.B = !>?CC(. (49!'9&9(!&<<.B&@: (' +!

]]] + ! ; L J L X ! J V V I 3 J % M X ; ! L 3 ! J L L 3 I K X m S % W J X K L ! ; X \ Y J W ! I X W J L J 3 K ; M J V ; i !
D 3 1 X W ! I Y W X ! 7 + N ^ 0 _ ! J ; ! L M X ! , J ; X W J K X ! !

* ?9:!. (H&.>!9B! ' (U5&A! .(A&9?B4' :?<'!F(9E((4!&99B.4() '!&4>! ?4>?P?>5&A!
@A?(49' /! 9E(49)S9EB! '9&9(' ! :&P(! &>B<9(>! DB>(A! I 5A(! 7+N^G_! P(.F&9? = +R7!!
J 4B9: (. ! (P(4! '9&9(' ! :&P(! &>B<9(>!.5A(' ! '5F'9&49?&AA) ! ' ? = ?A&.!9B! DB>(A! I 5A(!
7+N^G_! /! E?9: ! 'B = (! 'A?H:9! A&4H5&H(! >?CC(. (4@ (' ! ! fB.! (U& = <A(/! %&A?CB.4?&!
(U<A?@?9A)! (U = <9' ! ' (U5&A! .(A&9?B4' :?<'!F(9E((4!&99B.4() '!&4>! ' <B5' (' B.!
(.H?9((.>!>B = ('9?@!<&.94(. ' +R!! J A9: B5H: ! DB>(A! I 5A(!7+N^G_! ?' ! ' ?A(49!B4!9: ?'!
<B?49/!9: ?' ! ?' ! A&.H(A) !&!>'9?4@9?B4!E?9: B59!>?CC(. (4@ (+!

%&A?CB.4?&0' ! .5A(! &'B! >(C?4(' ! c' (U5&A! .(A&9?B4' d! &4>! <.BP?>(' ! 9: &9! 9: (!
%&A?CB.4?&! ; 9&9(! , &. ! = 5 '9!C? . '9!@B4' ?>(. ! E: (9: (. !9: (!@A?(49! E?AA!F(!F5.>(4(>!
54>5A) ! F) ! 9: (! ?4P('9?H&9?B4! F(CB. (! <5. '5?4H!>'@?<A?4&.) ! &@9?B4! &H&?4'9!9: (!
&99B.4() +RS!! D?44('B9&0' ! .5A(! >B(' ! 9: (! ' & = (+R#!! 3 . (HB4/RQ1 * ('9! a ? .H?4?&/RR!&4>!
* ?' @B4' ?4R8!&'B!&>B<9!9: (! = B>(A! .5A(0' ! A&4H5&H(! E: ?A(! &>>?4H!&!>(C?4?9?B4!
BC!c' (U5&A! .(A&9?B4' /d!F59!4B4(! BC!9: (! 9: . (('9&9(' ! . (r5?. (!&4!&' (' ' = (49!BC!9: (!
? = <&@9!B4!9: (!@A?(49!F(CB. (! ?4?9?&9?4H!&!>'@?<A?4&.) !&@9?B4+!

!

! R7+! J I]w+! I YWX; !3 f!V I 3 f0W!% 3 K 1 Y%L! .!7+N^G_!^"67[_g! J I o+! I YWX; !3 f!V I 3 f0W!% 3 K 1 Y%L! .!
7+N^G_! ^"67[_g! % 3 KK+! I YWX; !3 f!V I 3 f0W!% 3 K 1 Y%L! .! 7+N^G_! ^"67[_g! I XW+! I YWX; !3 f!V I 3 f0W!
% 3 K 1 Y%L! .!7+N^G_!^"67[_g!K1+! I YWX; !3 f!V I 3 f0W!% 3 K 1 Y%L! .!7+N^G_!^"67[_g!om+! I YWX; !3 f!V I 3 f0W!
% 3 K 1 Y%L! .!\$7\$6^7+N^G_!^"67[_g!K+M+! I YWX; !3 f!V I 3 f0W!% 3 K 1 Y%L! .!7+N^G_!^"67[_g!K+D+! I YWX; !
3 f!V I 3 f0W!% 3 K 1 Y%L! .!7RS76N^0_!^"67[_g!V J+! I YWX; !3 f!V I 3 f0W!% 3 K 1 Y%L! .!7+N^G_!^"67[_g! a L+!
I YWX; !3 f!V I 3 f0W!% 3 K 1 Y%L! .!7+N^G_!^"67[_g!% 3 W 3 +

"Q#!

() * + , - . (+ . / 0!12 - ! / . 3# . - !

` aBA+!#[!

* & ' : ?4H9B4^{RN}!&4>!K(P&>&^R! : &P(!FB9: !&>B<9(>!DB>(A! I5A(!7+N^G_!F59!
 (&@: ! &>>! A&4H5&H(! &>>.(' ' ?4H! 9: (! .5A(0'! &<<A?@&F?A?9)! E: (4! 9: (! ' (U5&A!
 .(A&9?B4' : ?<!?'!E?9: !&!.(<.(' (49&9?P(!B.!@B4'9?95(49!BC!&!@A?(49+!!D?44('B9&/⁸⁶
 3.(HB4/⁸⁷! &4>! * ?'@B4'?'4⁸! &A'B! (U<.(' 'A)! &>>.(' ' ! 9: (! ?' '5(! BC! ' (U5&A!
 .(A&9?B4' : ?<!?'!E?9: !@A?(49!.(<.(' (49&9?P('!B.!@B4'9?95(49'+!!L: (!?' '5(!BC!' (U5&A!
 .(A&9?B4' : ?<'!F(9E((4!&99B.4()!'&4>!@A?(49!.(<.(' (49&9?P('!B.!@B4'9?95(49'!'!
 >?'@5' '(>!?'4!>(<9: !/!@ \$D%6/!'4!V&.9!] a+!

f?P(!'9&9('! : &P(!.5A('!9: &9!&.(' '5F'9&49?&AA)! '9.B4H(.!9: &4! DB>(A! I5A(!
 7+N^G_+!!3C!&AA!'9&9('!/]BE&0'!.5A(!=&)!F(!9: (!'9.B4H('9i!

J! A&E)(.!' : &AA! 4B9! : &P(' (U5&A! .(A&9?B4'! E?9: ! &! @A?(49! B.! &!
 .(<.(' (49&9?P(!BC!&!@A?(49/!54A('!'!9: (!<.('B4?'!9: (!' <B5'(!BC!9: (!A&E)(.!'B.!
 9: (! ' (U5&A! .(A&9?B4' : ?<! <.(>&9('! 9: (! ?4?9?&9?B4! BC! 9: (! @A?(49SA&E)(.!'
 .(A&9?B4' : ?<+!!XP(4!?'4!9: (' (!<.BP?'B4&AA)! (U(=<9!.(A&9?B4' : ?<'!9: (!A&E)(.!'
 ' : B5A>!9.?'@9A)!@.59?4?1(!9: (!A&E)(.0'!F(: &P'B.!CB.1&4)!@B4CA?@9'!BC!?'49(.('9!
 9B!>(9(.=?4(!?C1&4)! : &. =! =&)! ('5A9!9B!9: (!@A?(49!B.19B!9: (!<.(' (49&9?B4+!!]C!
 9: (.(!?'!&4)! (&'B4&FA(!<B'?'F?A?9)!9: &9!9: (!A(H&A!<.(' (49&9?B4!BC!9: (!@A?(49!
 =&)!F(!?'=<&?.(>!B.19: (!@A?(49! : &. =(>!F)!9: (!@B49?45&9?B4!BC!9: (!' (U5&A!
 .(A&9?B4' : ?<'! 9: (! A&E)(.!' : B5A>! ? = (>?&9(A)! E?9: >.&E! C.B = ! 9: (! A(H&A!
 .(<.(' (49&9?B4+⁸⁸!

]BE&0'!.5A(!.(CA@9'9: (!@B.(!BC!DB>(A! I5A(!7+N^G_!E: ?A(!&A'B!(=<: &'?'!?'4H!

"6"6eMB . +)) H!2++) / 0 . N0FI# . 0+!(. P * 2 I! / . I 2 + #) 0 (, #E(! "QQ!

; (U5&A!. (A&9?B4' : ?<'!9 : &9!<. (>&9(!9 : (!@A?(49SA&E) (.!. (A&9?B4' : ?<!&. (!4B9!
<.B : ?F?9(>+!!]' '5('!. (A&9?4H!9B!9 : (!U<AB?9&9?B4!BC!9 : (!C?>5@?&.)!. (A&9?B4' : ?<!
&4>!@A?(49!>(<(4>(4@)!&. (!>?= ?4?' : (>!E : (4!9 : (!' (U5&A!. (A&9?B4' : ?<!(U?'9(>!
<. ?B. !9B!9 : (!@B = (4@ (= (49! BC!9 : (!@A?(49SA&E) (.!. (A&9?B4' : ?<+! !MBE(P(. /!
F(CB. (!<.B@(>?4H! E?9 : ! 9 : (! . (<. (' (49&9?B4! ?4! 9 : (' (! @?. @5 = '9&4@(' /! 9 : (!

"QR! () * + , - . (+ . / 0!12 - ! / . 3# . - ! `aBA!#[!

?4CA5(4@(! ?4! @B44(@?B4! E?9:!'(U5&A! &@9?P?9)+^{NQ}! ! L:(! 5'(! BC! @B(.@?B4!
?49?=?>&9?B4!/B.!54>5(!?4CA5(4@(!9B!9&-(!&>P&49&H(!BC!&!@A?(49!.(A&9?B4':?<
EB5A>!F(!<.B:?F?9(>! ?4! &! 45=F(!BC!@B49(U9'!/ 4B9!G5'9!'(U5&A!.(A&9?B4'^{NR}!!
L:(.(CB.(?!?9!?!54@A(&.!E:(9:(!K(E!mB.-0'!.5A(!&@95&AA)!<.B:?F?9!'(U5&A!
.(A&9?B4'!F(9E((4! &99B.4(!'!&4>!@A?(49'!B59'?>(!BC!9:(!>B=('9?@!.(A&9?B4'!
@B49(U9+!

fB5.! B9:(.! '9&9('! :&P(! .5A('! .('9.?@9?4H! &99B.4()S@A?(49!'(U5&A!
.(A&9?B4':?<'! F59! 4B4(! BC! 9:(! CB5.! <.BP?>(! '5F'9&49?&AA)! .BF5'9! @A?(49!
<.B9(@9?B4'!9:(.(54>(.! J A&F&=&^{N8}

"6"6eMB . +)) H!2++) / 0 . N0FI# . 0+!(. P*2I!/ . I2+#) 0(, #E(! "Q8!

A?99A(!9B! (= <: &'?1(! &4>! . (H5A&9(!9: (! <&.9?@5A&.! <.BFA(= '! &'B@?&9(>! E?9:!
&99B.4()S

"6"6eMB . +)) H!2++) / 0 . N0FI# . 0+!(. P * 2 I! / . I 2 + #) 0 (, #E(! "Q[!

L :&9! 9: ('(! .5A('! =&)! <.B:?F?9! 'B=(! &99B.4(! @B4>5@9! 9:&9! ?'! <(C(@9A)!
A(H?9?=&9(/!B.!&AABE!'B=(!@B4>5@9!9:&9!?!?AA(H?9?=&9(/!>B('!4B9!H(4(.&9(!9:(!
@B49.BP(.')!9:&9!DB>(A! I 5A(!7+N^G_!>B('+'76\$!
* :)/! 9:(4/! ?'! ' (U! >?CC(.49y! ! a?.95&AA)! &AAA! 65.? '>?@9?B4!'! (U<.('A)!
.(@BH4?1(9:(!4:(.(49!.' - '!9B!.(.('49&9?B4!<B'(>!F)!&99B.4()S@A?(49!'(U5&A!
.(A&9?B4 '+'76#!!

"6"6eMB . +)) H!2++) / 0 . N0FI# . 0+!(. P*2I!/ . I2+#) 0(, #E(! "R7!

@A&?=!9: (!4((>!CB.! =B. (!>&9&!9B!&'

"R"! () * + , - . (+ . / 0!12 - ! / . 3# . - ! ` aBA!#[!

&99B.4()S@A?(49!'(U!?'!E(AA!E?9: ?4!9: (!'<: (.!BC!HBP(.4=(49!&@9?B4!H?P(4!9: ?'!
C.&=(EB.-+7""!

V.BC(''B.!; ()=B.(!&' '(.'9!'9: &9!9: (!.(H5A&9?B4!BC!&99B.4()S@A?(49!'(U5&A!
.(A&9?B4': ?<'!'!4B9!&FB59!>?@9&9?4H!E: (4!B.!E?9: !E: B=!&4!&99B.4()!@&4!:&P(!
&'(U5&A!.(A&9?B4': ?< b ?9!?'!&FB59!>?@9&9?4H!9: (!@?.@5='9&4@('!54>(!E: ?@: !&4!
&99B.4()!@&4!.(<.('(49!&!@A?(49+7""S!

* : ?A(9: (!&59: B.!?'!')=<&9: (9?@!9B!9: (!<.?P&@)!&.H5=(49'!/: (!&H.((!'E?9: !
V.BC(''B.!; ()=B.(0'!@B4@A5'?B4'+!!L: (!<.&@9?@(!BC!A&E b &4>!9: (.CB.(!9: (!
&99B.4()S@A?(49!.(A&9?B4': ?< b

"6"6eMB . +)) H!2++) / 0 . N0F1# . 0+!(. P * 2 I! / . I 2 + #) 0 (, #E(! "R\$!

]a+!! JLL3 IKXmS%WJXKL!;X\YJW!IXWJLJ3K;! * MXK!LMX!%WJXKL!];!JK!
3 I h J K]w J L]3 Ki!D 3 1 XW! I YWX!7+N^0_0;!;M3 IL%3 D]K h ;!J K 1 !;L J L X!
J V V I 3 J %M X ;!L 3 !L M X !]; ; Y X!

* : (4!9: (!@A?(49!?'!&4!B.H&4?I&9?B4&A! (49?9)! .&9: (.!9: &4! &4! ?4>?P?>5&A/
@B4@(.4'!&FB59!<BE(.!?=F&A&4@('!=&)!4B9!F(!&'?'H4?C?@&49+7"8!! J 4>!) (9/!9: &9!
>B('!4B9! =(&4!9: &9! <BE(! ?=F&A&4@('!&.(! ?4'?'H4?C?@&49+! ! 3 .H&4?I&9?B4&A!
.(<.('(49&9?P('!&4>!@B4'9?95(49'!@(.9&?4A)!<A&@(!9: (?!.!9.5'9!&4>!@B4C?>(4@(!?4!
9: ((49?9)0'!@B54'(A!&4>!&99B.4(!C?>5@?&.)!>59?(!&.(!4B9!&PB?>(>'?=<A)!F)!
9: (!C&@9!9: &9!&!@A?(49!9&- ('!&!@B.<B.&9(!CB.=+!!f5.9: (. =B.(/(P(4!?C!9: (.(!E(.(!

"R#!

"6"6eMB . +)) H!2++) / 0 . N0F1# . 0+!(. P * 2 I! / . I 2 + #) 0 (, #E(! "R8!

J A&' -&0'! .5A(!<(. :&<'! =B'9!@A(&.A)! .(@B4@?A('!9:(!&<<.B&@: !BC! DB>(A!
I 5A(!7+N!E?9: !DB>(A! I 5A(!7+7\$!(CC(@9?P(A)!@B>?C)?4H!%B = (49!7[!&4>!&A' B!
(U<.('A)!?4@B.<B.&9?4H!9'! I 5A(!7+7\$!i!

fB.!<5.<B('!BC!9:?!!.5A(!E: (4!9:(!@A?(49!?'!&4!B.H&4?I&9?B4!lc@A?(49d!=(&4'!
&! @B4'9?95(49! BC! 9:(! B.H&4?I&9?B4! E: B! '5<(.P?' ('!>?. (@9'! B.! .(H5A&.A)!
@B4'5A9'!E?9: !9: &9!A&E) (.!@B4@(.4?4H!9: (!B.H&4?I&9?B40'!A(H&A! =&99(. '!!; ((!
I 5A(!7+7\$^:_!CB.!9: (!>(C?4?9?B4!BC!c@B4'9?95(49+d?7#R!

L: 5' /! J A&' -&0'! I 5A(!7+N!/F)!?9'!BE4!9(= '/!'!&4!(U@(<9?B4!9B! I 5A(!7+7\$+!!
J A&' -&0'! &<<.B&@: ! 9: (.CB.(! BCC('! <.B9(@9?B4! 9B! @A?(49'! &4>! @A?(49!
.(<.('(49&9?P('!E: ?A(!&9!9: (!' &= (!9? = (!&PB?>?4H!'9&959B.)!@B4'9.5@9?B4!?' '5('!
54>(.! I 5A(!7+7\$+!

* &' : ?4H9B4!9&- ('!&'? = ?A&.!9&@-!F)! (U<.('A)! (U9(4>?4H!9'!<.B: ?F?9?B4!
9B!&4)!c.(. ('(49&9?P(!BC!&!@5..(49!@A?(49! ?C!9: (! '(U5&A! .(A&9?B4'! EB5A>!/B.!
EB5A>! A?-(A)!>&=&H(! B.!<.(65>?@(! 9: (! @A?(49! ?4! 9: (! .(<.('(49&9?B4+d! 7#8!!
* &' : ?4H9B4!>B('!4B9! (U<.('A)! .(C(.4@(! I 5A(!7+7\$! E?9: ?4! I 5A(!7+N!/ F59!
* &' : ?4H9B40'!%B = (49!7[!>B('!. (C(.4@(! I 5A(!7+7\$+?7#N!

]BE&!&A' B!CB.F?>'!&4!&99B.4()!C.B = ! (4H&H?4H! ?4!' (U5&A! .(A&9?B4'! E?9: !&!
c.(. ('(49&9?P(!BC!&!@A?(49+d!7#I!!]9!>B('!4B9 b E?9: ?4!9: (! .5A(!B.!F)!@B = (49 b
(U<.('A)! .(C(.4@(! I 5A(!7+7\$+?706!!3 .(HB4!>B('!9: (!' &= (+?707!! , B9: !'9&9('! : &P(!
&>B<9(>!P(' ?B4'!BC!%B = (49!7[! /! E: ?@: /! E: (4!@B = F?4(>! E?9: !9: (!9(U95&A!
>'9?4@9?B4! F(9E((4! c@A?(49d! &4>! c.(. ('(49&9?P(! BC! &! @A?(49/d! ?'!<.BF&FA)!
'5CC?@?(49!9B!&>>.(' !9: (!B.H&4?I&9?B4&A!@A?(49+?70Q!

"RN!

() * + , - . (+ . / 0 ! 1 2 - ! / . 3 # . - !

`aBA!#[!

D?44('B9&

"6"6eMB . +)) H!2++) / 0 . N0F1# . 0+!(. P * 2 I! / . I 2 + #) 0 (, #E(! "R[!

! ^" _!fB.!<5.<B'('BC9:?!'.5A(!E:(49:(!@A?(49!?'!&4!B.H&4?I&9?B4/lc@A?(49d!
=(&4'!&!@B4'9?95(49!BC9:(!B.H&4?I&9?B4!E:B!'5<(.'P?'('/!>?.(@9'/!B.!(H5A&.A)!
@B4'5A9'!E?9:!9:&9!A&E)(.!@B4@(.4?4H!9:(!B.H&4?I&9?B40'!A(H&A! =&99(. '! ; ((
I 5A(!7+7\$!CB.!9:(!>(C?4?9?B4!BC!c@B4'9?95(49dg!

! ^\$! XP(4! ?4! &! '(U5&A! .(A&9?B4':?<! <.BP?'?B4&AA)! (U(=<9! 54>(!
<&.&H.&<:'!^7_!&4>!^" _!&FBP(!/9:(!A&E)(.0'!F(:&P?B.!':B5A>!F(!'9.?@9A)!
'@.59?4?I(>!CB.!&4)!@B4CA?@9'!BC!?49(.('9!9B!>(9(.=?4(!?C!&4)!:&. !=&)!.('5A9!
9B!9:(!@A?(49!B.!9B!9:(!.(<.('(49&9?B4+!

! ^#_!]C!9:(.(!?'!&4)!.('&B4&FA(!<B''?F?A?9)!9:&9!9:(!A(H&A!.((<.('(49&9?B4!BC!
9:(!@A?(49! =&)!F(!?=<&?.(>!B.!9:(!@A?(49! :&. =>!F)!9:(! ?4?9?&9?B4! B.!
@B49?45&9?B4! BC! &! '(U5&A! .(A&9?B4':?<! 9:(! A&E)(.!' :&AA! >(@A?4(! B.!
?=>(>?&9(A)!E?9:>.&E!C.B=!9:(!A(H&A!.((<.('(49&9?B4!<5. '5&49!9B! I 5A(!7+7R+!

L:(!<.B<B'(>!'.5A(!=B.(!9:B.B5H:A)!&>>.(' ('!9:(!@B4@(.4'!.&?'(>!F)!9:?!
&.9?@A(!9:&4!(?9:(.!DB>(A! I 5A(!7+N^G_!B.!&4)! '9&9(S&>B<9(>!P(. '?B4!9:(.(BC+!
f?. '9/!9:(!<.B<B'(>!'.5A(! (=F.&@('! DB>(A! I 5A(!7+N^G_0'!@A(&..!FA&@-!A(99(!
<.B: ?F?9?B4! B4! &99B.4()S@A?(49! '(U5&A! .(A&9?B4'/'! &4>! &A'B! (U9(4>'! 9:(!
<.B: ?F?9?B4! 9B! 'BA?@9&9?B4! BC! '(U5&A! .(A&9?B4'+'!+3 - 1 (') - 1 (() - 1 (>)m0 1 8Tc9?B2! .B5- 3 3 6Tm/TT2 1 3 cm

"86! () * + , - . (+ . / 0!12 - ! / . 3# . - ! ` aBA!# [!

X9: ?@!"666!%B ==?'?'B4! :&>! ?4! =?4>! ?4!@. &C9?4H!&!<. B: ?F?9?B4!B4!&99B.4()S
@A?(49!'(U5&A!. (A&9?B4'!/ &4>!9: (!&59: B.! EB5A>! (4@B5.&H(!9: (! J , J! &4>!9: (!
?4>?P?>5&A! '9&9('!9B! . (&'('!'!9: (?!.! .5A('!9B! = (9!9: (!@: &AA(4H('! C&@?4H! 9: (!
<.BC('?'B4!9B>&)+!

a]! % 3 K% WY;] 3 K!

L: (!A(H&A!<.BC('?'B4! :&'!&!nD(LBB!<.BFA(= b F59!9: (!<5FA?@!&99(49?B4!
&A' B! . (< ('(49!' &4! B<<B.954?9)! 9B! F5?A>! &! F(99(!<.BC('?'B4! ! L: (!<BE(!
? =F&A&4@('!9: &9!&. (!&9!9: (!: (&.9!BC!9: (!<.BFA(=!BC!'(U5&A!:&.&' ' = (49!'&' ' &5A9!
&4>!&F5' (!&. (!&!.?' -!4B9!B4A) 9B! (= <AB) (('!E?9: ?4!9: (!<.BC('?'B4! /F59!&A' B!9B!
@A?(49'+!!; 9&9('!9: &9! : &P(9: 5'!C&!.! (C5' (>!9B!&>B<9!&4)! (U< ('!'<. B: ?F?9?B4!B4!
&99B.4()S@A?(49!'(U5&A!. (A&9?B4'!' : B5A>!4BE!>B!' B!

f 5.9: (. = B. (/! G5'9! &'!9: (! X9: ?@!"666!%B ==?'?'B4! . (S(U&=?4(>! (9: ?@!"
BFA?H&9?B4'! ?4! . (<B4' (!9B!&!@: &4H?4H! EB. A!&4>! F5?A9! 5<B4!9: (!CB54>&9?B4!
A&?>! F)! 9: (! D I V%0'! 7 [N\$! CB. = 5A&9?B4! / 9: (!<.BC('?'B4! 9B>&)' : B5A>! . (S
(U&=?4(!?9'!@5.. (49! &<<.B&@: !9B! &99B.4()S@A?(49!'(U5&A!. (A&9?B4'!&4>! F5?A>!
5<B4! 9: (! CB54>&9?B4! A&?>! F)! 9: (! DB>(A! I 5A(! 7+N^G_+! ! ; 9&9('! 9: &9! : &P(!
(U<(. ? = (49(>! E?9: !>?CC(. (49! P&. ?&9?B4'! B4! <. B: ?F?9?B4'! : &P(! ?>(49?C?(>! &!
45 = F(. !BC!E&)'!9: &9!9: (! = B>(A! .5A(!@&4!F(!? = <.BP(>+!!L: (!&59: B.0'!<. B<B' (>!
.5A(! ?4@B. <B. &9('! ' (P(. &A! BC! 9: B' (! P&. ?&9?B4'! ?49B! &! @A(&. (! .5A(! BCC(. ?4H!
'5F'9&49?P(!H5?>&4@(!9B!9: (<.&@9?9?B4(.+!! * : ?A(!9: (!<. B<B' (>! .5A(!@(.9&?4A)!
E?AA!4B9!&9?'C)!&AA!BFG(@9?B4'!9B!&4!(U< ('!'<. B: ?F?9?B4! /?9! ?!9: (!&59: B.0'! : B<(!
9: &9! ?9! &9! A(&'9! &>P&4@('!9: (!>?'@5'?'B4!9BE&.>'!9: (!>(P(AB<= (49!BC!&!F(99(!
(9: ?@&A!F&'(A?4(+!

!
?4CB. = &9?B4!' : &. ?4H!&= B4H!F5' ?4('!'@A?(49'!' : B5A>!F(!<. ('5 = (>!>5(9B!9: (14&95. (!BC!9: &9!F5' ?4('!'
'(.P?@(! = B>(A_+!