

! ! " #
 #
 # \$%&' () (! * +, - (% . ,) / ! 0 ! 1 2 (3 4 3 5 / ! ! 6 " 6 7 8 9 9 7 : " ; < !
 => ? > ! @ 3 A ! " 9 9 " ! ! \$ 4 (A \$ + B % (> C \$ %) , + . D C \$ % & ' () (> (B ' !
 # , 4 E \$ ' F ((G ! H I ! < : 8 J " 7 " 9 9 " !
 !

 \$ % & ' () * # + (& * , - . ! @ , 3 () 2 , K . G ! L (\$ 4) 2 K \$ % (! M) 2 , K . G ! N 4 3 0 \$ 4 ! L (\$ 4) 2 G ! 1 2 (3 4 3 5 , K \$ 4 ! M) 2 , K . G ! P 3 K , \$ 4 ! M) 2 , K . G ! G !
 = 2 , 4 3 . 3 Q 2 / ! 3 R ! S (4 , 5 , 3 + G ! \$ + B ! P , C 3 + (! H (, 4 !

 / , 0 ') 1 (2 3 #

!
 8 J " T ! = 3 .) 7 U 3 K) 3 % \$) (! , + ! U (C 3 K % \$ K / ! \$ + B ! L ' C \$ + ! S , 5 2) . ! V L \$ 0 , 4) \$) , 3 + W !
 L ' C \$ + ! S , 5 2) . ! X (+) (% G ! Y \$ E ! P K 2 3 3 4 ! 0 ! * + , - (% . ,) / ! 3 R ! X 3 , C O % \$ G ! = 3 %) ' 5 \$ 4 ! !
 ! # 3 + 3 5 % \$ Q 2 / Z ! ! " # \$ % & ' (#) " " # * ' # ' ! + , # - ' . / 0 & % # - 1 " % & " " 2 / * , # - % \$ / - 0 ' 3 4 " % & " "
 5 - / 4 " " 1 ' ! " # \$ % & ' 6 7 * " , 8 ' 9) 3 , ' : / 3 " % & / ; # \$ ' 9 3 + - 1 # / 3 - " % 3 " % & " " < " 3 \$ / = ") # \$ '
 > % # ; ? ' 3 - " % & " " . / 0 & % " 3 ' ! " # \$ % & ' / - " % & " " :) # @ / \$ / # - ' (3 - * % / + % / 3 - '
 , U , % (K) 3 % Z ! U % > ! [+ B % \ ! U , \$. ! = (% , % \$!

!
 8 J "] ! ! !!! = 2 > U > ! , + ! 1 2 (3 4 3 5 , K \$ 4 ! M) 2 , K . ^ L (\$ 4) 2 K \$ % (! M) 2 , K . !
 ! ! ! # \$ % & ' () (! * +, - (% . ,) / !!

E#/#- '> , ") / ; #'
U, % (K) 3 % Z ! U % > ! c (% + \$ + B 3 ! [4) (C (/ (% ! _ i + , 3 % > !
!

8JJ6!! ! ! @\$K2(43%a.!,+!=2,43.3Q2/!!
[.. ' CQ),3+!X\$)234,K!* +, - (%.,)/!X(+)(%G!* e Ic [IG!@%\$b,4!!
12(.,.Z!I%&/;*'#-I'G''-''%/*'
U, % (K) 3 % Z ! U % > ! M B (4 K , 3 ! P (% \$ R , C ! ?)) \$ - , \$ + , > !
!

8JJ:!! ! ! =%3R(...,3+\$4!Y,K(+.(!,+!e'%.+,+5!
! ! ! P\$,+)!X\$C,44' .!1(K2+,K\$4!X344(5(G!@%\$b,4!)
!

! ') , & 4 ('#52-(1(23-#

!
8J8: !0!Q%(. (+)!! [..3K,\$)(!=%3R(..3%!!
! H,44,\$C!_>!` (44/G!P>_G!X2\$,%,!,+!12(3435/!V8J8:78J8;W!
12(3435/!U(Q\$%)C(+)!\$+B!X344(5(!3R!e'%.+,+5G!# \$%&' ()) (! * + , - (% . ,) / !
8J"]!0!8J8: ! [..,.)\$+)!=%3R(..3%!!
!! ! ! 12(3435/!U(Q\$%)C(+)!\$+B!X344(5(!3R!e'%.+,+5G!# \$%&' ()) (! * + , - (% . ,) / !
8J8"!0!8J88! ! L ' 0 (%) ! # j B (% ! X 2 \$, % , ! , + ! @ , 3 () 2 , K . !
! ! ! [40(%)!N+\$ (5 , ! X (+) (% ! R 3 % ! L (\$ 4) 2 ! X \$ % (! M) 2 , K . ! \$) ! P) > ! Y 3 ' , . ! * + , - (% . ,) / !
8J"9!V_7)(%Cw! ! I+-,)(B!=%3R(..3%!
! ! ! X\$C,44,\$+ ' CZ!I.,)') 3!I+)(%+\$b,3+\$4(!B,!1 (3435,\$!=\$.)3%\$4(!P\$+,)\$%, \$!
! ! ! =3+),R,K,\$! * + , , - (% . ,) k ! Y \$) (% \$ + (+ . (! !
8J"<!0!8J"]!!!! [BI'+K)!=%3R(..3%!
! ! ! 12(3435/!U(Q\$%)C(+)!G!# \$%&' ()) (! * + , - (% . ,) / !
8J"6!0!8J"<! ! 1 (\$K2,+5! [...,.)\$+)!G!!
12(3435/!U(Q\$%)C(+)!G!# \$%&' ()) (! * + , - (% . ,) / ! !
8J""!0!8J"6!! ! [..,.)\$+)!=%3R(..3%!@!
! ! ! =2,43.3Q2/!U(Q\$%)C(+)!G!P\$,+)!X\$C,44' .! * + , - (% . ,) / ! X (+) (% ! V @ % \$ b , 4 W ! !
!!

8J8"! VK37(B,)3%!E,)2! # \$%, \$!12(% (. \$!U\$-, 4\$W>!pX3-, B7"T!/!q), K\$!1 (34g5, K\$!(+! [C\%, K\$! Y\$), +\$!0!MB, K, g+!M. Q(K, \$47X1MHXGr!, +-,) (B!. Q(K, \$4!, ... ' (!3R!D3+) - # \$'34'H3) # \$' A&"3\$307>!

!

8J8J! (3F/ITRho'B3\$Z%/; #'''9_8':/3_%/#'', 'l/c\$303'-#)'#\$/I#1''''-\$3+i+";/I#!VPd3! = \$'43G!P=Z!?!Nh+, 3!X%, \$B3%G!8J8JW>!!

!

8J"8s! VE,)2! [+)3+, 3! # \$%), +, W>!A"3\$30/#'''6#a1"!VPd3!=\$'43Z!=\$'4, +\$.G!8J"8W>!

!

8JJTs!! B#*%3)#\$'I#6#a1'''' , '2"4"*#1#b/1#''1#H3)'''; 3, '2/0-/1#1"!VPd3! = \$'43Z!X(+)%3!*+, - (%.), o%, 3!Pd3!X\$C, 43!=%(.G!8JJTW>!

!

Y- 'B)30)'''

8J8:!
>=7#j#\$\$#Q'E#A'')#'' - 'B\$' - #'H#1+)''@8'f%/; #A"3\$g0/; #'' - '> , _)/; #E#W/- #'7''\$' (#)/="Q'<+"F#*'b3; '*Q'<+"F#*'B")*C"; %F#*Q'<+"F3*'7'b/'k3*'2 '*#4Z3*!VK37(B,)3%! E,)2!m(%3+, \$!e \$%\$+13! t ' , +)(%3W!

!

5&&9# : &; (&<&, # ! 91('*&-#

#

Y- 'B)/-%'

!

8J8:!
p [!(.K')\$!K3C3!C\)\3B3!(!3.!Q30%(.^3Q%, C, B3.!K3C3!. '1(, 3.Z!Q3!' C\$!0, 3\), K\$! 5430\$4!Q4' %\$4l'. "F/*/#'B/*/*'#-1'B)#J/*G!" <G!+3>!8Z!8] J08T">!
2))Q.Z^B3,>3%5^" J>]8" : ^8"]<7"9: 9"><JJ8>UPJT

8J8"! p12(!M+B!3R!Y,R(!,+!\$!N430\$4!L(\$4)2!=(%.Q(K),-(r!(3-;/\$/+,!<]G!+3G!<!V8J8"WZ!<;7
; <>!v [%),K4(!,.\$4.3!\$-\$,4\$04(!,+!I)\$4,\$+G!=3%)'5'(.G!PQ\$+,.2G!\$+B!N(%C\$+/w!

!

8J8"! pU(.\$R,3.!)\,K3.!B(!'C\$!K%,.(!C'+B,\$4Z!*C\$!K%,.(!4\$)(+)(G!. '\$!C\$+,R(.)\$yd3!
VX3-,B7"TW!(!K3+R%3+)3. !\$!Q\$%),%!B\$!\),K\$!.3K,\$4!K\$)g4,K\$Gr#IC&###!:G!+3>!8!V8J8"WZ!
":7:]>!2)Q.Z^B3,>3%5^"J>:6;:8^(Q2\$)\$>8J8">T]JT!

!

8J8"! p@,3\),K\$!(!. \$iB(!5430\$4!\$!Q\$%),%B(!0\$,A3Z!3!5430\$4!\$!Q\$%),%!B\$!%(\$4,B\$B(!43K\$4>r!
>%+##\$/I#I""A"3\$g0/;#8<G!+>!;]!V8J8"WZ!"JJ7""9>!U?IZ!
2)QZ^B3,>3%5^"J>"]]] ^ = *XS,3>[1(3<:;;6!

!

8J8J! VE,)2!P/B+(/! [44(+WG!pY,),5\$),3+!)3! [KK(..!L(\$4)2!P(%-,K(.Z! [44/!3%M+(C /!3R!
N430\$4!= '04,K!L(\$4)2zr!

p=%3)(.)\$+)!P3K,\$4!M)2,K.!\$+B!X\$)234,K!P3K,\$4!M)2,K.Z! [!U,\$435' (!13E\$%B.!_'.)!
L(\$4)2r!>+%#\$/1#1''A"3\$g0/;#8"G!+3>!<;!V # \$/7 ['5' .)!8J"]WZ!: 8:7
6:>!2)Q.Z^B3,>3%5^"J>"]]] ""^=*XS,3> [1(3>:J66:!!!!

!

8J"6s!

p=(R(%(+),\$4!?Q),3+!R3%)2(!=33%\$+B!M&' ,)/!,+!L(\$4)2r!. /F/%/#!
(#, /\$\$/#-+ , !6J!V8J"6WZ!: "769>!

!

8J"Js!

p [!=\$.)3%\$4!B\$!P\$iB(!(!P '\$!ICQ3%){+K,\$!+3! # ' +B3!B\$!P\$iB(Z!U\$!==(.(+y\$!
P34,Bo%,\$!\$3!1%\$+ .K(+B(%!\$!U3%!(!3!P3R%,C(+3r!n'H+-13'1#6#a1''':6!V8J"JWZ!
<6]7<<8>!!

!

8JJs!

p [+)%3Q3435,\$!I+)(5%\$4!(!L34f.),K\$Z!X' ,B\$%!B3!P(%!(!\$!@' .K\$!B(!P(+),B3r!. "F/%/#'
:/3''%&/?3*!: !V8JjTWZ!9]7TT>!

!

!

p?!P3R%,C(+3!(!\$!U(.5%\$y\$(C!P,C3+(!H(,4Z! [45' C\$.!IB(,\$!.I+)%3B')g%,\$.r!
. "\$0/[3'''' (+\$%+)#!9!V8JjTWZ!] "79J>!!

!

8JJ9s!

p# 3B(%+,B\$B(!(!X%,.(!B3!P(%Z!* C\$!X%,.(!MA,.) (+K,\$4G!B(!P(+),B3!(!q),K\$r!>0- '*!
9!V8JJ9WZ!9T7'''']>!!

!

8J"]s!

pX3+.K,h+K,\$!B(!c,+)' B(G!P3R%,C(+3!(!M.Q,%)' \$4,B\$B(r!n'H+-13'1#6#a1''': "!

!

;

8J"9! p=(3Q4(!3%!=%3R,)Z! [!X3CQ\$, .3+!3R!L(\$4)2!X\$%(!,+!@%\$b,4!\$+B!)2(!*+,)(B!P)\$(.r!
(#%&3\$;/;! "#\$%&'(#)""I%&/;*/- "%&""56>!8;G!+3>! :!V. 'CC(%!8J"9WZ!8<789>!
2)Q.Z^EEE>K2\$'. \$>3%5^Q'04,K\$),3+.^2(\$4)27K\$(7()2,K.7' .\$^.'CC(%78J"9!!

!

8J";s! p[!L\$,)!S(Q3%)Z! [!=(% .3+\$4!S(R4(K),3+!,+!Y,0(%\$),3+!PQ,%) '\$4,)/r!A&"D3+)-#\$'34'
! "#\$%&;#)""I%&/;*'m'>1, /-/*%)#/#3- '8G!+3>!8!VR\$44^E,+)(%!8J";WZ!2)Q.Z^B3,>3%5^"7
6"J>886;8"^I2(\$>T>]";>!

!

8J"6s! pL(\$4)2!_'.),K(Z! [!Y,0(%\$),3+! [QQ%3\$K2!)3!_'.),K(!,+!L(\$4)2!X\$%(r!,+! ! "#\$%&'(#)""
I'

!
8J"]! pMA,.)(!P(+),B3!+3!P3R%,C(+)3!L ' C\$+3.z!I+!>-%)3C3\$30/#'A"3\$g0/;#8'B"-*#)'3'
!+, #-3'-#5 -/")*/I#I"Q'(B.>[+]3+,3!H>X>P,4-\$!)!\$4!VPd3!=\$'43Z!IB(,.\$!(!
Y(%)\$.G!8J"]WG!" :T7"<;>!

!
! pU3!U(. (+%\$,b\$C(+)3!\$3!c '+B\$C(+)\$4,. C3Z! * C\$!m,. d3!\$!=\$%),%B3!M+%,b\$C(+)3!
H(,4,\$+3!(!B3!U,o4353!Y,0(%)\$B3!c%(,(\$+3r!,+!9+-1#, "-%#\$/*, 38'2 ""#4/3*'^
f%/;#A"3\$g0/;#G!(B.>! # \$%, \$!I+h.!B(!X\$.)%3! # ,44(+)!S3+\$4B3!x\$K2\$%,\$. !V [Q\$%(K,B\$G!
P=>Z!MB,)3%\$!P\$+) ' o%,3)!P@1 # G!8J"]WG!T<7"" ;>!

!
8J" ;s! pICC,5%) ,3+!\$+B!m'4+(%\$04(!@3B,(.Z! # ,5%\$+).!\$+B!L(\$4)2!S,.F.!,+!@%\$b,4r!,+!
E/F/-O'K%&03+%W':3)I")*8!(#%&3\$/; 'A&"3\$30/;# \$'I%&/;*3- %&""H/O)#/3- *'34'
B"3C\$"*Q'(B.>[5+(. ! #>!@%\$b\$4)! # \$%, \$!1 (% (. \$!US-,4\$!V # \$%/F%344Z! ?%O,.!@33F.G!
8J" ;WG!T"7" JJ>!

!
! pU3 ')%,+\$!P3K,\$4!B\$!I5%(!\$!(!1 (3435,\$!B\$!Y,0(%)\$yd3Z!U,R(%(+)(. ! \$03%B\$5(+ .r!I+!
5 , #. "\$"/%+)# 'I#H#0/*_)/3""'2 3+%) /-#63;/# \$'I#Y0)"k#8'(3-%/-+ /I#I""""
2 ""#4/3*Q'(B.>!S3+\$4B3!x\$K2\$%,\$. !S3.\$+\$! # \$+b,+ ,!VPd3!=\$'43Z!=\$'4,+\$.G!8J" ;WG!
<J7;<>!

!!
8J" <s! p? !M-\$+5(423!B(!_3d3!(!\$!M.Q(%\$+y\$Z!=\$3!' C\$!q),K\$!B\$!Y,0(%B\$B(!(!B3! [C3\$r!,+!
A"3\$30/#'H3)#\$8'9+-1#, "-%3*Q'2 ""#4/3*Q'B")*C";%F#*Q!(B.>!Y(3!(...+,)!S3+\$4B3!
x\$K2\$%,\$. !V [Q\$%(K,B\$Z!P\$+) ' o%,3G!8J" <WG!" J]7"66>!

!
8J"6s! pU%35\$.Z!,+)(%Q(4\$y | (.!k!1 (3435,\$! # 3%\$4r!,+!f%/;#A"3\$g0/;# 'I'D+F"-%+I"*8'
Y-")C"#]o""* . ";ZC)3;#*T'2/F")*/I#I""6"J+#\$'\ '2)30#*'\ 'b/3\$`-;/#'\ ' "I"*'
63;/#/*'b/)%+/#*Q'(B.>!Y>!(...+,!\$+B!S>!x\$K2\$%,\$. !V [Q\$%(K,B\$Z!P\$+) ' o%,3G!8J"6WG!
]"79">!

!
8JJTs! p_+!"Z!"7<6!7!_(. ' !S\$,.(. !Y\$b\$b' .Z!S(\$4,b(B!M.K2\$)3435/!,+!)2(!L,.)3%/r!,+!
>-#/*'13'ppq'(3-0)""*3'1#63;/1#1"" :)#*\$/"/)#""A"3\$30/#""' (/^-;/#*1#
. "\$0/[3Q!(B.)B!O!/P3)(%!VPd3!=\$'43Z!=\$'4,+\$.G!8JJTG!->!8WG!J<7"" ;>!

!
8JJ9s! uX3+.]TJET50.24000.2392cmB=\$'A.2('4)0.2(3Z)0.2(!=-)0.2(\$0.2('4)0.2(,)0.2.240601.92TQq

! pL\$5\$%\$B!)2(!N3B!3R!)2(!?QQ%(. .(BZ!N(+!" ;Z"0" ;!\$.!P((+!R%3C!)2(!=(% .Q(K),-(!
3R!)2(!~Y3.(% .ar!,+!K#%")/-0%"&"'G#)I"-8'6%+I/"*"/-'! 3-3)'34'2'")I)""2", C*"?!
(B>! [+B%(! [>! ? %43-!V=, .K\$)\$E\$/G! e _Z!N(3%5,\$. !=% (. .G!8J8:WG!"9"0"TT>!

! 8J88! pM.K')\$%K3C3!' C!Q%,+KfQ,3!.3K,\$4!K\$)g4,K3Z!' C\$!Q3+)(!Q\$%\$!3!B,o4353!K3C3!
,5 '\$, .!\$!Q\$%),% !B3!P'4r!,+!()+@#)'9)3-"/%)#8'5 , #'5)0`- ;/#C#)#'f%/#'
A"3\$g0/#0!(B.>! # o%,3! # \$%K(43G! [4(AS+B%(! # \$%),+.G!\$+B! # \$%)\$!Y>!c%(K2(,%\$.!
V [Q\$%(K,B\$Z!P\$+) ' o%,3G!8J88WG!6]09J>!!

! 8J8" ! pM)2,K. !\$+B!M&' ,)/!,+!N430\$4!L(\$4)2Z!12(!=%(R(%(+),\$4! ? Q),3+!R3%)2(!=33%Gr!,+!
(&#\$\$"-0"*'/'G\$3=#\$B+=\$/;'!'#%&'8'(\$ /, #)'(' &#-0"Q'B3\$\$+%/3-Q'##-1'&' "'#%&'!
34%&"B33)G!(B.>! =2,4,Q!Y\$+B%,5\$+!\$+B! [+B%(\$!m,K,+,G!VM'5+(G! ? SZ! =,KFE,KF!
= '04,K\$),3+ .!0/!H,QR! n !P)3KFG!8J8"WZ!T ;7" J<>'

! 8J8J! pY(3!=(. .,+Z!' C!0,3(,K,.)\$!K\$C,4,\$+3!K3C!3!K3%\$yd3!+3.!(.K%),3.r!>', 3)#'\$!I3'
C#C#9)#- ;/*;38'+ , 'C)3k"%3'I3*I"*;#)#!I3*G!(B.>!S>!x\$K2\$%,\$.)! # >!D!X\$.)%3!
,4(+!V [Q\$%(K,B\$Z!MB,)3%\$!P\$+) ' o%,3G!8J8JWG! : <97: TJ>!

! 8J" T! pM)2,K. !\$+B!='04,K!U, .K3' % .(Z!@' ,4B,+5!\$!@%,B5(!0()E((+!12(3435/!\$+B!)2(!
U(.,)')(!P,KFr!,+! : +/\$I/-0' :)/10"*'/'6#)#"F38'A&"B\$"-#)7'B#C")*4)3 , '
(AIK ('pVRrQ!(B.>! ` % , .),+!M>!L (/ (%G!_C(.!c>! ` ((+\$+G!\$+B! [+B%(\$!m,K,+,!
V # \$%/F+344G!e •>Z!8J"TWG!"<<7" ;J>!

! p_32+a. !N3.Q(4!\$+B!L3Q(Z!M)2,K. !3R!c%((B3C!\$+B!Y3-(r!,+! :)/10/-0'6;)/C%+)"'
#-1'H3)#'\$A&"3\$3078'I**#7*'/-'2/#\$30+"X%&'j/+6/-0'Ea;c*'(&#-Q'6NDNG!(B.>!
,K2\$(4!>!X3-(%G!_32+!12,(B(G!P>_G!\$+B!_3.2'\$!M!@' %+.!VY\$+2\$C# !UZ!
Y(A,+5)3+!@33F.G!8J"TWG!8"<788;>!

! pe3+7X3CC'+,K\$04(!\$+B!X2%3+,K!U,.(. (!,+!U(- (43Q,+5!X3'+),(.Z!12(!e((B!
3R!=\$44,\$),-(!X\$%(!,+!N430\$4!L(\$4)2! [5(+B\$R!,+!(#%&3\$;':/3"%&/'*#-1'63;/#'\$
D+*%/'"8#A&"B)#J/*'34'56'!' "#%&'(#)"/-'#G\$3=#\$@'I'K3)\$IQ'(B.>! #>!12(%(.(!
Y/.\$'52)!# ,K2\$(4! # KX\$%)2/!VX344(5(-,44(Z!Y,) '%5,K\$4!=(. .G!8J"TWG! : 8T7:6">!!

! 8J"]! pU,o4353Z! [+],53!(!e3-3!U(. \$Rf3!Q\$%\$!\$!q),K\$!1 (34g5,K\$!+3!@%\$. ,4r!,+! ! #;/#'+-#'
f%/#'1'"B#)%;/C#;/g-'7'I"C")#-@#8'(3-0)"*3'E#/-3#,)/;#13'I"'"f%/#'
A"3\$30/#0!(B.>!MC,4K(!X' B\$!V@353)oZ! *+,-(%.,B\$B!_\$(%,+\$+!=(. .G!8J"]WG!" ;J7
8JJ>!

! 8J" 8! p t' (!\$.!\$iB(!. (!B,R'+B\$!.30%(!\$!)(%\$!VMK43>!:9G!9Wr!,+!n*';# , /\$/#-3*"'"#C#%3)#'\$
I#*#a1"8%)`*!_ ;#1#*1"#"#][3'0RhrVtpVRpWG!(B.>!Y>!(. .,+G!X>! =>!@%K2,R3+)\$,+(!
VPd3!=\$'43Z!X(+)%3!*+,-(%.,)o%,3!Pd3!X\$C,43!=(. .G!8J"8WG! : ;87: ;;>!'

! 8J" ""! p [!,CQ3%){+K,\$!B\$!Q\$.)3%\$4!B\$!. \$iB(!+3!C'+B3!B\$!. \$iB(Z!' C\$!Q%(. (+y\$!.34,Bo%, \$!
B,\$+)(!B\$!B3%!(!B3!.3R%,C(+3r!,+!I- ;#-%3"'" . "*C3- *#=#/1#1"-'3'(+!#13'1#'
b/I#0!(B.>!Y>!@(%)\$K2,+G!Y>!(. .,+!VPd3!=\$'43Z!=\$'4,+\$.)!X(+)%3!*+,-(%.,)o%,3!Pd3!
X\$C,43!=(. .G!8J" ""WG! : "<7: : >!

Y- 'B)'***'

8J8: ! p12(!X(+)%\$4,)/!3R!)2(!P,KF6!)2(!=33%G!\$+B!)2(!? QQ%(.(B!,+!_(. ' .!# #,...,3+r!,+!
./**'5C#-I'K#?\$8'(#&3\$;/*, '#-I'!'#%&'(#)'**#;)3**%&'G\$3='G!(B>!H,44,\$C!1>!
X\$-\$+\$'52!VX\$.K\$B(!@33F.WG]:J9!E3%B.!VR3%)2K3C,+5W>!

!

Y- 'C)30)'***'

8J8: ! p* C\$!\),K\$!4,0(%)\$B3%\$!Y\$),+37 [C(%,K\$+\$!&' (!\$-\$+y\$!(!. (!% (+3-\$!\$!Q\$%),%!B(!
+3-3. !B(. \$R,3.!(!' C\$!+3-\$!5(%\$yd3!B(!(),K,.)\$. r!

!

!

/3'C'*2%&, (#)29#G('1(23)9C#/319(&-#?62#5&&9#: &; (&<A#

,

Y- 'B)/-%'

8J8" ! pP\$ iB(r!,+!2;/3-c)/3'I''(+\$%+)#/'/'B#@G!-34!8G!(B.>!=\$'43!X>!e3B\$%,)!Y',b!
Pf-(%(!VX'%,),0\$G!=SZ!MB,)3%\$!XSmG!8J8"WG!66"766;!

!

8J"<!

pe\$)\$4,B\$B(r!,+!2;/3-c)/3'I3'(3-;Z/3'b#%/;#-3'YYQ!(B.>!_3d3!U\K,3!=\$. .3.!)!
H\$5+(%!Y3Q(b!P\$+K2(b!VPd3!=\$'43Z!=\$'4'.)!=\$'4,+\$.G!8J"<WG!; ; "7; ; <>!

!

=22>#: &; (&<-#?6237: &&&9&&, A#

!

8J"]!! ! # \$%, \$!X4\$%\$!@,+5(C(%G!6/, 3-'"K"/\$8'H7*%/: '34'B##*/3- '#-I'(3, C##*/3-!VM'5+(G!
?SZ!X\$.K\$B(!@33F.G!8J"<WG!,+!A&"3\$30/#;'6%+I/'*'] :G!+3>!: !V8J"]WZ!]]6>!

#

H9)3-*)1(23#

##

Y- 'B)/-%'

8J8" ! VE,)2!M-(%5)3+!P>!P3'b\$W!p=\$.)3%\$4!X\$%(!,+!P3')2! [C(%,K\$Z!13C\$.!B\$!M+K\$%+\$yd3!
X3.)\$!(!Y,C\$G!@,.23Q!3R!=(%+\$C0'K3!V"]8:7"]96Wr!,+!A&'/'(#&3\$;/'
I-\$/0&%"- , "-%8'>'G\$3=#\$>-%&3\$307G!(B.>!*4%,K2!Y>!Y(2+(%!\$+B!P2\$'+!@4\$+K2\$%B!
VH\$.2,+5)3+G!X>U>Z!12(!X\$)234,K!*+,-(%,.)!/!3R! [C(%,K\$!=\$(..G!8J8"WG!"6<7"<9>!

!

8J"9! =\$'4!c%\$C(%G!B##3\$30/#*'13'B31")8'6#aI"Q'2/)"/%3*!' + , #-3*'"#<3F#G+")#'
(3-%)#'3*'B3=)"*!VPd3!=\$'43Z!=\$'4'.G!8J"9W>! ?%,5,+\$4Z!B##&3\$30/'*'34'B3X")8'
!'#\$%&Q'! + , #-'. /0&%*Q'#-I'A&'<"X'K#)'3- %&'B33)!V@(%F(4(/Z!*+,-(%,.)!/!3R!
X\$4,R3%+,\$!=\$(..G!8J" JW>!

!

8J": s! [+B%(\$!m,K,+,G!p # \$Q(\$C(+))3!B3!K\%(0%3Z!* C\$!&' (.)d3!\),K\$z!,+!: /3'"/%&/?3*!]G!+3>!
6!V8J": WZ!68;76: J>! ?%,5,+\$4Z!H#CC/-0%&'":)#/-8'>- 'I%&/#\$Y**+"d"!

!

8J"" s! # ,F43. !m()•G!pP,C3+(!H(,4!(!\$!L,.)g%, \$!B\$!c,43.3R,\$r!,+!6/, 3-'"K"/\$/'/'#'
9/\$3*34/#Q!(B.>! # \$%, \$!X4\$%\$!Y>!@,+5(C(%!)c(+\$+B3!S(/!=\$' (+)(!VPd3!=\$'43Z!
Y3/34\$G!8J""WG!"<7<J! ?%,5,+\$4Z!6/, 3-'"K"/\$/'/'\$s! /%3/) "'I"'#B&\$3*3C&'/'N"!

!

8J"Js! MBE,+!mo.&' (bG!> , #@t-/#Q')/*"'> , =/'-%#"'": 3;3-&";/; , "-%3'13'n+%)38'B#)#'
B"-*#)#'f%/;#A"3\$g0/#'-#> , _)/;#E#W/-#V [Q\$\$(K,B\$Z!MB,)3%\$!P\$+i)\$%,3G!8J" JW>!

!

?%,5,+\$4Z!>, #03-/#0' ()/*/*'>, =/'-/%#\$'j'. ";3-3;/, /"-%3'2 "\$'n%)38'B#)#'B"- *#)'
E#'f%/#'A"3\$g0/#'I-'>, _)/;#E#/#-#N'

#

I &3&9)*# ! 0, (&3' Ǽ*(')1(23-#? 6237 : &@&9&&, A!

!

nCTII*'

8J8:!

p1(3435,\$! # 3%\$4!+\$! [C \%,K\$!Y\$),+\$Z!Q3%! ' C!B,o4353!\$CQ4,R,K\$B3r!Y- %%%+%3'
! + , #-/##*'5 -/*/-3*!VPd3!Y(3Q34B3G!SP>G!@%\$b,4WG! ['5' .)!"9G!8J8:>!

!

!

p@\$+b(,%3!, Ff)g!(! t '(%,B\$! [C\$b3+,\$Z!U3,..!(.K')\$B3%(.G!M4,\$+(!@%' C!(!=\$Q\$!
c%\$+K,.K3G!&' (!Q%(K,. \$C!. (%(.K')\$B3.r!Y- %%%+%3' ! + , #-/##*'5 -/*/-3*!VPd3!
Y(3Q34B3G!SP>G!@%\$b,4WG! # \$/!86G!8J8:>!

!

8J88!

VE,)2! # o%,3! # %%K(43!X3(423W!p1(3435,\$! # 3%\$4!+3!@%\$. ,4!\$!Q\$%),!B\$!K\$C,+2\$B\$!B\$!
P@1 # r!Y- %%%+%3' ! + , #-/##*'5 -/*/-3*!VPd3!Y(3Q34B3G!SP>G!@%\$b,4WG!P(Q)(C0(%!8:G!
8J88>!

!

p=\$'4!c%\$C(%G!' C!Q\$%K(,%3!+\$!. \$iB(!\$. (%,y3!B3.!Q30%(.r#Y- %%%+%3' ! + , #-/##*'5
5 -/*/-3*!VPd3!Y(3Q34B3G!SP>G!@%\$b,4WG! # %%K2!J]G!8J88>!

!

p* C!C \B,K3G! ' C!(\$+)%3Qg4353G! ' C\$!Q\$,Ad3Z! . (%,%!\$3.!Q30%(.r!Y- %%%+%3'
! + , #-/##*'5 -/*/-3*!VPd3!Y(3Q34B3G!SP>G!@%\$b,4WG! # %%K2!J]G!8J88>!

!

8J8"!

p.,C,K%3+G!+\$)' (b\$!(!\$%%35{+K,\$!2' C\$+\$Z!' C\$!5' (%%\$!(+)%(!Q\$)g5(+3.!(!
2' C\$+3.r!Y- %%%+%3' ! + , #-/##*'5 -/*/-3*!VPd3!Y(3Q34B3G!SP>G!@%\$b,4WG!U(K(CO(%!
J]G!8J8">!

!

""

!

!

":

pY\$m'4+(%\$0,4,B\$B!U(!Y3.! =30%(!•!Y\$!U(.,5 '\$4B\$B!(+! [C\%,K\$!Y\$),+\$r!,+!H/\$'
:)#@3*G!Y,C\$7=(%iG!Q>!8J788G!: J! ['5>!8J"J>!

p [!m'4+(%\$0,4,B\$B(!U3.! =30%(!(!U(.,5 '\$4B\$B(!+\$! [C\%,K\$!Y\$),+\$r!,+!>I/#\$G!
c3%)\$4(b\$G!" ;!_ '+>!8J"J>!

!

8JJ9!

pY\$!=30%(b\$!P3K,\$4! [!=\$%),!U(!Y\$!@,3\),K\$r!,+!H/\$':)#@3*G!Y,C\$7=(%iG!Q!<;7<9G!
"J!_ '4>!8JJ9>!

!

8JJ]!

pY\$!=\$.)3%\$4!m\$K\$K,3+\$4Z!U(.B(!Y\$.! [5 '\$. !U(4!@\$'),.C3r!,+!H/\$':)#@3*G!Y,C\$7
=(%i>!

p*+\$!@,3\),K\$!=\$%\$! [C\%,K\$!Y\$),+\$>! # ,4!@%\$b3.r!,+!H/\$':)#@3*Q'

!
8J''T! p?!(%K'%.3!B3!=\$%),B3!B3.!1%\$O\$42\$B3%(.!k!Y'b!B\$! [+])%3Q3435,\$!B(IP,C3+(!
H(,4Gr!PQ(K,\$4!I+)(%-,(E!)3!=\$)%K,\$!c\$K2,+G!Y-*/%+%3'!+, #-/##'5 -*/-3*!Pd3!
Y(3Q34B3G!SP>G!@%\$b,4G!P(Q)(C0(%!86G!8J''T>!

59&-&31)1(23-!

#
D23@&9&3' ;&-&31)1(23-#

!
8J8:! p1(\$K2,+5!R3%)2(!X2' %K2Z!X2\$44(+5(!.\$+B! ? QQ3%)'+),(.!3R!Y,-,+5!3' %!m3K\$),3+!
\$.!12(3435,\$+!.!,+!Mkk4(.,\$4!PQ\$K(.r! [++ '\$4! # ((,+5!3R!)2(!P3K,()/!3R!X2%,.),\$+!
M)2,K.G!X2,K\$53G!IYG!_ \$+ '\$%/!6G!8J86!V=\$+(4!E,)2! # (52\$+!X4\$F!\$+B!MC,4/!
S(,C(%7@%\$/G!R3%)2K3C,+5W>!e\$),3+\$4G!(R(%(BG!Q\$+(4,.)>!!

!
[B-\$+K,+5!\$+B!S(+ (E,+5!\$!Y\$),+! [C(%K\$+!Y,O(%\$),+5!M)2,K.Z!e (E!X2\$44(+5(!
R%3C!\$!e (E!N(+(\$%),3+!3R!M)2,K,.)G!Y('- (+!M+K3 '+)(%.!3R!P/.) (C\$),K!12(3435/Z!
;J!/(%\$.!m\$),K\$+!IIZ!12(!M+B!3R!)2(!H(.)+%!X2' %K2zG!Y('- (+G!@ (45,' CG!97''''!
e3- (C0(%!8J8:!VR3%)2K3C,+5W>!I+)(%+\$),3+\$4G!(R(%(BG!Q%(.+)(%>!!

!
pq),K\$!)(34g5,K\$!5430\$4!(!\$!C,..d3!B\$!X1MHX!Vq),K\$!1(34g5,K\$!X\$)g4,K\$!+\$!I5%(I\$!
#'+B,\$4W!\$)!mII!Y\$),+! [C(%K\$+!X3+R(%(+K!3R! # 3%\$4!12(3435/Z!e (37e\$b,.CG!
3%\$4! # \$+,Q'4\$),3+!\$+B!S(.,.)\$+K(G!@%\$b,4,\$+!P3K,()/!3R! # 3%\$4!12(3435/G!
[.3K,\$),3+!3R! # 3%\$4!12(3435!/3R! [%5(+),+\$G!X\$)234,K!12(3435,K\$4!M)2,K,!,+!)2(!
H3%4B!X2' %K2G!Pd3!=\$'43G!@%\$b,4G!''9! ['5').!8J8:!

!
pH23.(!P3'4z!H2,K2!Y,C).z!S(,C\$5,+5! # (B,K,+(!-,\$!=\$'4!c\$%C(%a.!=%\$A,.!3R!
[KK3CQ\$+,C(+r!\$)!X3+R(%(+K!3+! # (B,K,+(!n!S(4,5,3+G!X34' CO' .G! ? LG! # \$%K2!
":!V=\$+(4!E,)2!_ '4,(!N'+O/G!=\$)%KF!PC,)2G!\$+B!U>!@% (+B\$+_32+.3+W!>!e\$),3+\$4G!
%(R(%(BG!Q\$+(4,.)>!!

!!
8J88! p=3+)(. !\$!P(%(C!X3+.)% 'fB\$.G!S(Q\$%B\$.!3' !X% 'b\$B\$.r!\$!)2(!Pu%&' :)#@/\$/#- '
(3-4'')"- ;'''34'H3)#'\$A&"3\$3078' ()+@#)4)3-%'"/)#*8'+, #'+)O`-;/#C#)#'#_#/#'
%'3\$gO;/#G!@%\$b,4,\$+!P3K,()/!3R! # 3%\$4!12(3435/G!Pd3!=\$'43G!P(Q)(C0(%!8"0!8J88!
VR3%)2K3C,+5W>!I+)(%+\$),3+\$4G!+3+7%(R(%(BG!5' (.)! .Q(\$F(%>!!

!
8J88! pS(7(+,-.,3+,+5!@,3()2,K.!\$+B!L(\$4)2!X\$%(!,+!\$!N430\$4!MK3435,K\$4!X3+)(A)Gr!
=4(+\$/!=\$+(4!E,)2!L\$+F!)(+!L\$-(!\$!)2(!RV'' '(3\$\$3i+/, '34%'&'Y-%')-##/3-#\$'
>*3;/##/3-'34' (#%&3\$;':/3''%&/:*8'I;3\$307Q!' "#\$%&Q' #-1':/3''%&/:*GI [X@G!S3C(G!
_'4!/!8J88>!I+)(%+\$),3+\$4G!+3+7%(R(%(BG!5' (.)! .Q(\$F(%>!

!
8J8''! pS(Q(+.\$%!\$!0,3\),K\$!\$!Q\$%),%B\$!X3-,B7''T!(B\$!. \$iB(!5430\$4r!\$)!vYb'(3-0)''*3'
:)#*\$/')3'I'' :/3_#/#G!P3K,(B\$B(!@\$\$.4(,%\$!B(!@,3\),K\$G!P\$3!=\$'43G!P(Q)(C0(%!
:JG!8J8''>!I+)(%+\$),3+\$4G!(R(%(B>!

! p=%(-(+,%!K3+)%\$!N%\$-,B(b!I+B(.!\$B\$!(!\$.!I+R(Ky|(.!P(A'\$4C(+)(!

8J"]!

pU3!U(. (+%\$,b\$C(+)!3!\$3!c '+B\$C(+)\$4,. C3Z! * C\$m,. d3!\$!=\$%),%!B3!M+%\$,b\$C(+)!3!
H(,4,\$+3!(1B3!U,o4353!Y,0(%)\$B3!c%(\$+3r!\$!)2(!PR#(3-0)""*3':)##*/")3'I"
A"3\$30/#'H3)#\$\$9+-1#, "-#%\$/*, 3*8'2"*#4/3*'B#)#'f%/#'A"3\$g0/#!VPd3!
=\$'43G!@%\$b,4WG! ['5' .): "G!8J"]>I+)(%+\$),3+\$4G!(R(%((B>!

!

pP,C3+(!H(,4a.!S\$B,K\$4! ?+)3435 /!3R!S33)(B+(. .Z!e\$)'%\$4!\$+B!P'Q(%+\$)'%\$4!
_'.),K(.r!,+!Uw'">--+#\$>, ")/;#-'K"/\$'63;/""7'(3\$\$3i+78'6/, 3-""K"/\$8'G)#;"Q'
A)+%&Q'##-I'D+*%#;""V=2,4\$B(4Q2,\$G!*P [WG! [Q%,4!8"G!8J"]>!e\$),3+\$4G!(R(%((B>!
!

8J" ;s!

p12(!Y(R,.)!=34,.)K\$4!=\$%),(.!,+!Y,52)!3R!P,C3+(!H(,4a.!X%),K,. Cr!,+!%&"'US'"'
>--+#\$>, ")/;#-'K"/\$'63;/""7'(3\$\$3i+78'!3C"/-'IJ/\$"V e(E! ?4(\$+.G!Y [WG! [Q%,4!
";G!8J" ;>!e\$),3+\$4G!(R(%((B>!

!

p_32+a.!N3.Q(4!\$+B!12(!M)2,K.!3R!c%((B3C!\$+B!Y3-(r!,+!p\$%>--+#\$'H#)i+'%""
6;)/C%+)""B)3k";%'(3-4""-;"8':/=\$/;#'\$I%&;*/- %&"'pR&!'("-%+)7^# ,4E\$'F((G!
*P [WG! [Q%,4!TG!8J" ;>!Y3K\$4G!+3+7%(R(%((B>!

!

8J" <s!

pm\$),K\$+!II!\$+B!I).!1E3! #3%\$4!c\$K(.Z!12(!?4B!=\$3K%(\$),3+!\$+B!12(!e(E!
X3+.K,(+K(r!,+!RV'"':/"- -/#\$'H"""/-0'34'A&"'E"+F"- 'I- ;3+-%)"/- '67*" , #%/ ;'
A&"3\$307!VY('-(+G!@ (45, 'C'WG! ?K)>8 ;G!8J" <G!I+)(%+\$),3+\$4G!(R(%((B>!!

!

8J" :s!

pU%35\$.Z!I+)(%Q(4\$y|(.!k!1(3435,\$! #3%\$4r!\$!)2('v v v bY' (3-0)""*3':)##*/")3'I"
A"3\$30/#'H3)#\$!VPd3!=\$'43G!@%\$b,4WG!P(Q)>9G!8J" :>!e\$),3+\$4G!(R(%((B>!!

!

8J" ""s!

pP,C3+(!H(,4!M! [!@' .K\$!U\$m(%B\$B(!MC!=4\$d3r!\$!)2(!Y'b'6", /-c)/3'<" , ""*8'
2"+*""3*9/\$g*343*VPd3!=\$'43>!@%\$b,4WG!e3->!8<G!8J" "">!S(5,3+\$4G!(R(%((B>!

!

8J" Js!

p [!m'4+(%\$0,4,B\$B(!U3.! =30%(.!\$!\$!U(.,5'\$4B\$B(!\$ [C\%,K\$!Y\$),+\$r!\$!)2(!v v Yb'
(3-0)""*3':)##*/")3'I""A"3\$30/#'H3)#\$!VPd3!=\$'43G!@%\$b,4WG!P(Q)>!;G!8J" J>!
e\$),3+\$4G!(R(%((B>!

!

!

pc,43.3R,\$!X3C3!MA(%KfK,3!U3!M.Qf%),3!MC!@' .K\$!=(4\$m(%B\$B(!MC!P,C3+(!
H(,4r!\$!)2(!YYY'6", /-c)/3'<" , ""*8'>*'H+\$&""""2"+*0Pd3!=\$'43G!@%\$b,4WG!e3->!
8 ;G!8J" J>!S(5,3+\$4G!(R(%((B>!

#

8JJs!

pM.Q,%) '\$4,B\$B(!(!3! #'+B3!U\$!P\$!iB(Z! [!=\$.)3%\$4!U\$!P\$!iB(!e3.!L3.Q),\$.!U\$.!
N%\$+B(.!X,B\$B(r!\$!)2(!bY' (3-0)""*3'I""A"3\$30/#'I""6[3'B#+\$3!VPd3!=\$'43>!
@%\$b,4WG!P(Q)>!88G!8J(((\$0.2(!P)-0.2(\$0.2(>!(3G!@%)0.2(2(4)0.260.2(!m)740601.92cmBT5ETQqQ

!

"]

!
8JJ9s!

p [! # (B,)\$yd3!L(.,K\$.)\$! [!=\$%),%!U3!S(4\$)3!U(!_(\$+7 • - (.!Y(34' Qr!\$!)2(!bYYY'
H3*%)# '1''B)31+] [3' (/" - %Z4/; # '1# ' 5 - / * # \$ 'VPd3!=\$ ' 43G!@%\$b,4WG!8JJ9>!Y3K\$4G!
%(R(%((B>!

!

p@,3\),k\$!U\$!Y,0(%\$yd3Z!* C\$! ?Qyd3!=\$%(R(%(+K,\$4!=(43.! =30%(.r!\$!)2(!bYYY'
H3*%)# '1''B)31+] [3' (/" - %Z4/; # '1# ' 5 - / * # \$ 'VPd3!=\$ ' 43G!@%\$b,4WG!8JJ9>!Y3K\$4G!
%(R(%((B>!

!

8JJ]s!

pX3+.K,h+k,\$!B(!c,+)' B(G!P3R%,C(+)3!(!M.Q,%)' \$4,B\$B(r!\$!)2(!bYY'(3-0)""*3'
:)#*\$/')3'1'' : /3_%; #!VPd3!=\$ ' 43G!@%\$b,4WG!8JJ] >! e \$),3+\$4G!%(R(%((B>!

!

p ? !X3+K(,)3!U(!X3%\$yd3!MC! [53.),+23Z! * C\$!X%f),K\$! [!m,.d3! # 3B(%+\$!U3!P(%!
L ' C\$+3r!\$!)2(!b'(3-0)""*3'1''A"3\$30/#'1''6[3'B#+\$38'n'6#0)#13'-#*'>)"*!
VPd3!=\$ ' 43G!@%\$b,4WG! ?K)>!"8G!8JJ] >!Y3K\$4G!%(R(%((B>!!

!

pU3!M)23.!X4o..,K3! []\! [!@,3\),K\$r!\$!)2(!bYY'H3*%)# '1''B)31+] [3' (/" - %Z4/; # '1# '
5 - / * # \$ 'VX\$CQ,+\$.G!@%\$b,4WG!8JJ] >!Y3K\$4)B>

!

8J8"

[pL\(\\$4\)2!X\\$%\(!I+\(&' \\$4\),\(.\\$+B!\)2\(!X?mIU7"T!=\\$+B\(C,KZ!M\)2,K\\$4!X2\\$44\(+5\(.\\$+B!
S\(.Q3+.,0,4\),\(.Gr!Q\\$%\)!3R!`4\(+!Y\(K\)'%\(!P\(%,\(.\\$\)!c\\$,\)27_'.\),K\(!I+.\),'\)\(G!P\\$,+\)](#)

!
8J"9!

pM)2,K.!\$+B!='04,K!U,.K3'%.(Z!@',4B,+5!\$!@%,B5(!0()E((+!12(3435/!\$+B!)2(!
U(.),)'(!P,KFr!\$!)2(!U"%Y-%")-#%/3-#\$(3-4)"-;"34'(#&3\$/;'A&"3\$30/;#'\$I%&/;*' /- '%&"'K3)\$I'(&+);&'0(AIK(W8':+\$/I/-0':)/10"*43)'%&"'9+%)!"!VP\$%\$I(-3G!
@3.+,\$!\$+B!L(%b(53-,+\$WG!_'4/!89G!8J"9>!!!!

!

p?!U,%(,)3!k!P\$iB(!(\$!X3+.),)' ,yd3!@%\$.,4(,%\$r!\$!)2(!6", /-c)/3'I*C";74/;3'13'
B)30)#, #'1"'Bg*T23+%3)#, "-%3'", '2", 3;)#;/#'"'2/)'%3*!' +, #-3*VX3,C0%\$G!
=3%)'5\$4WG!_'4/G!"8G!8J"9>ETQq0.24000.240601.92cmBT500.G!

!

! pM)2,K.!\$+B!N430\$4!L(\$4)2Z!12,+F,+5!L(\$4)2!I+(&'\$4),(.,+!)2(!X3+)(A)!3R!
PK\$%K,)/r!\$)!*+,-(%.,)/!3R!P2,b'3F\$G!P2,b'3F\$G!_!\$Q\$+G!_'4/!"8G!8J88>!

! pP34,B\$%/!\$+B!12(!?Q),3+!R3%!2(!=33%!+!L(\$4)2!X\$(r!\$)!X344(5(!3R!)2(!L34/!
X%3..G!H3%K(.)(%G!#[G![Q%,4!J9G!8J88>!

! p[!@,3\),K\$!+3.!M* [!(+3!#'+B3!*+,-(%.,)o%,3r!\$)!X34\5,3!Y\$!P\$4(G!‡\$+A(%hG!
@%\$b,4G!#\$%K2!:"G!8J88>!

! p@,3(2,K.!,+!X3CQ\$+,3+2,Qr!\$)!."*"#);&'E+-;&'6")/"*#[40(%)!N+\$(5,!X(+)(%!
R3%!L(\$4)2!X\$(!M)2,K.G!P\$,+)!Y3',.!*+,-(%.,)/G!P>!Y3',.G!#\$%K2!86G!8J88>!

! 8J8"! pX\$)234,K!P3K,\$4!1(\$K2,+5!\$+B!L(\$4)2!X\$(r!\$)!X344(5(!3R!)2(!L34/!X%3..G!
H3%K(.)(%G!#[!VN'(..!Y(K)'%(WG!e3-(CO(%!"<G!8J8">!

! p=%304(C\$!.!q),K3.!B\$!=\$+B(C,\$Z!m,34\$yd3!B3.!U,%(3.!L'C\$+3.r!R3%!2(!G)+C3'
I""B""i+/*#A"3\$30/#'m'(3-%",C3)#-"/I#I"G!\$)I+.),')3!B(!c,43.3R,\$!(!1(3435,\$!
=*X7#,#,+\$.G!e3-(CO(%!"G!8J8">!!

! p[!X3+)%'O',yd3!B(!=\$'43!c(%(!k!P\$!B(r!G+""*E";%+)"#%'H"1/;#S'!+,#-/#""*'
(\$#**\$)!*+,-(%.,,B\$B(!c(B(%\$4!B3![4\$53\$.G!@\$b,4G!['5'.)!86G!8J8">!

! p@,3\),K\$!(!P\$!B(!N430\$4Z!U(.,\$R,3.!(C!'C!#'+B3!X3+(K)\$B3r!\$)!2(!+)*3'
:/3_%;#""6+#'B")*C";%/F##*63;/#/*G!\$)!*+,-(%.,)/!3R!#3+)(.!X4\$%3.!
V*eI#?e1MPWG!#\$/!89G!8J8">!

! pN430\$4!L(\$4)2!R%3C!)2(!=(%.Q(K),-(!3R!)2(!=33%r!\$)!A&"3\$307Q'H"1/;/-'Q'#-1'
(+\$\$+)"Y-/#/#F"G!U'F(!*+,-(%.,)/G!*P[G!_!\$+'\$%/!8JG!8J8>!

! 8J8J! pP,C3+(!H(,4!(!\$!\$+)3Q3435,\$!B(!'C\$!R,4g.3R\$G!C,4,\$+)(!(Cf.),K\$R!G+""*'
E";%+)"#%'H"1/;#S'!+,#-/#""*'(\$#**\$)!*+,-(%.,,B\$B(!c(B(%\$4!B3![4\$53\$.G!@\$b,4G!
e3-(CO(%!86G!8J8J>!

! p@,3\),K\$!(!P\$!B(!N430\$4Z!U(.,\$R,3.!(C!'C!#'+B3!X3+(K)\$B3r!\$)!2(!+)*3'
:/3_%;#""6+#'B")*C";%/F##*63;/#/*G!\$)!*+,-(%.,)/!3R!#3+)(.!X4\$%3.!
V*eI#?e1MPWG!['5'.)!8JG!8J8J>!

! F3;(1&,#D)4%0-#59&-&31)1(23-#?623

3R! # 3%\$4! 12(3435 /!3R! [%5(+),+\$G!X\$)234,K!12(3435,K\$4!M)2,K.!,+!)2(!H3%4B!
X2 '%K2G!Pd3!=\$' 43G!@%\$b,4G!";!0!"9! [' 5' .)!8J8: !V=%(.,B(+)!W!!

!
!

S(.\$%K2!H3%F.23QZ!

! ! ‡ ‡ ‡Im!X3+5%(..3!@%\$. ,4(,%3!B(!1 (3435,\$! # 3%\$4>!VPd3!=\$ '43G!@%\$b,4WG!P(Q)>!8J" J!!
! X3+R(%h+k,\$!X3C!?!c%(!X\$%43.!# (.)(%.Z!?!S 'C3.!U\$!1 (3435,\$!@f04,K\$!e \$!
8JTs! [C\%,K\$!Y\$),+\$!M!e3!@%\$. ,4>!VPd3!=\$ '43G!@%\$b,4WG! # \$/!8JTT!!
! X '%.3!B(!c3%C\$yd3!B(!# '4),Q4,K\$B3%(.!B\$!=\$.)3%\$4!B\$!P\$!iB(!e \$K,3+\$4>!VPd3!
! =\$ '43G!@%\$b,4WG! [Q%,4!8JTT!!
! II!P(C,+o%,3!e (C(.Z!P(%,\$! [!P\$+),B\$B(!I+. 'Q3%)o- (4z!VPd3!=\$ '43G!@%\$b,4WG!U(K>!
! 8JTT!!

! =%3l(K)Z!pX3CC '+,)/!=\$%),K,Q\$),3+!,+!= '04,K!L(\$4)2!U(K,..,3+7 # \$F,+5!\$+B!
L ' C\$+!S,52).Z! e (34,0(%\$4!=34,K,(. !\$+B! *+,- (%.\$4!L(\$4)2!X\$!(IX3-(%\$5(!,+!
@%\$b,4r!V6G: JJ! *PUW!

!
8J8J! V=IW!P' CC(%!c\$K'4)/!c(443E.2,Q!VPPcW!0! # \$%&' ())(! *+,- (%.,)/!V<G<JJ!
*PUW!

!
8J"T^8J8J! c\$K'4)/!U(- (43QC(+)! [E\$%B!0! ?RR,K(!3R!S (. (\$%K2!\$+B!I++3-\$),3+G!
\$%&' ())(! *+,- (%.,)/!V"8JJ! *PUW!

!
8J"T78J8"! VX344\$03%)3%W!=(.,B(+).a. !X2\$44(+5(!N%\$+)!
! =%3l(K)Z!12(!e (A)!P)(Q!X4,+KZ! [!=\$%)+(%.2,Q!1\$%5(+),+5! # (+)\$4!\$+B!
U(- (43QC(+)\$4!L(\$4)2!R3%! # ,4E\$ 'F((a.! *+B(%.(%-(B!X2,4B%(+!\$+B!
c\$C,4,(. !V8<JGJJJ! *PUW!

!
8J"9^8J"T! V=IW!=3.)7U3K)3%\$4!c(443E.2,Q!=%35%\$C!0!L ' C\$+!S,52).!X(+)(%G!Y\$E!
PK2334!

VK37=IW!=%3C3),+5!(&' ,)/!0/!\$BB% (.,,+5!./.) (C,K!%\$K, . C!\$!)2(!K3CC '+,)/!
4(- (4!-, \$!,+)(5%\$),+5!E(44+(. .G!K3CQ%(2(+.,- (!Q' 04,K!2(\$4)2!(B' K\$),3+G!\$+B!
E3%FR3%K(!B(- (43QC(+)
! X1PI!0! # XH!
! <JGJJJ>JJ!* PU!

8J8"78J88! ! V=IW! ` (44355!I+.,)') (!R3%!I+)(%+\$),3+\$4!P)' B,(. !0! *+, - (%.,)/!3R! e 3%(!U\$C(!
=%31(K)Z!X3CC '+,)/!=\$%),K,Q\$),3+!,+!= ' 04,K!L (\$4)2!U(K,.,3+7 # \$F,+5!\$+B!
L ' C\$+!S,52).Z!U(C3K%\$K/G!e (34,0(%\$4!=34,K,(. !\$+B! *+, - (%. \$4!L (\$4)2K\$%(!
X3- (%\$5(!,+!@%\$b,4!
ŠŠ!K3- (%!\$R ' 44!/(%\$!R\$K ' 4)/!. \$4\$%/G!)2(!C3' +)!,. !B(Q(+B,+5!3+!R\$K ' 4)/!
%\$+F!!

8J8"78J88! ! V=IW! HINL!=3.)B3K)3%\$4!c(443E. 2,Q!0!L\$%- \$%B! *+, - (%.,)/!!
=%31(K)Z!X3CC '+,)/!=\$%),K,Q\$),3+!,+!= ' 04,K!L (\$4)2!U(K,.,3+7 # \$F,+5!\$+B!
L ' C\$+!S,52).Z!U(C3K%\$K/G!e (34,0(%\$4!=34,K,(. !\$+B! *+, - (%. \$4!L (\$4)2K\$%(!
X3- (%\$5(!,+!@%\$b,4!
Š; JJJJ!* PU#!

8J8"78J86! ! VK37=IW! [B-\$+K,+5!H, .K3+.,+a. !L (\$4)2!H3%FR3%K(!0! # (B,K\$4!X344(5(!3R!!
! ! ! H, .K3+.,+!
=%31(K)Z!X%(\$),+5!(&' ,)\$04(!3Q03%)'+,)/!,+!Q' 04,K!2(\$4)2!)3!.)%(+5)2(+!
H, .K3+.,+a. !Q' 04,K!2(\$4)2!E3%FR3%K(!
! ! ! Š: <JGJJJ!* PU!!

P2329-#)3 ,#! (<)9, -##

8J8J! I+)(%+\$),3+\$4!S(. (\$%K2! [E\$%B!0! # \$%&' ())(! *+, ->! ?RR,K(. !3R!I+)(%+\$),3+\$4!
MB 'K\$),3+!\$+B!S(. (\$%K2!n !PQ3+. 3%(B!=%35%\$C. !V8<JJ!* PUW!!!

8J"<! [40%(K2)!-3+!@3(. (4\$5(%! • 3' +5!PK234\$%!=% (. (+)\$),3+!\$!)2(!]!"!
X343&' , ' C!3R!)2(!I+)(%+\$),3+\$4! [. .3K,\$),3+!3R!X\$)234,K!@,3()2,K,.)!
! =\$Q(%Z!P34,B\$%)/!\$+B!P3K,\$4!_ '),K(!,+!=%3C3),+5! # (+)\$4!L (\$4)2!\$+B!
H(44+(. .!\$C3+5!ICQ3- (%.,2(B!=(3Q4(Z!Y33F,+5!R%3C! # (%K/!\$+B!
Y,0(%\$),3+!V"9JJ!X [UW!

8J"6! M. .\$/!X3+)(.)!H,++(%Z! :#\$! [++ '\$4!X\$)234,K!L (\$4)2! [. .3K,\$),3+!V"8JJ!
* PUW!
N%\$B '\$)(!M)2,K. !M. .\$/!X3CQ(,),3+!
M. .\$/Z!L (\$4)2/!_ '),K(Z! [!Y,0(%\$),3+! [QQ%3\$K2!)3!_ '),K(!,+!L (\$4)2K\$%('

#

\$&9;(' &#

592@&--(23#

!
H" , =")*&/C/- 'E"#) - "I'63;/'%/'*''
,

P3K,(B\$B(!@%\$. ,4(,%\$!B(!1(3435,\$! # 3%\$4!0!P@1 # !Vm,K(7=(. ,B(+)!8J8"78J86W!!
X\$)234,K!12(3435,K\$4!M)2,K.!,+!)2(!H3%4B!X2 '%K2!0!X1MHX!VX3%(!Y(\$B(% .2,Q!0!X33%B,+)\$3%!3R!
Y\$),+! [C(% ,K\$+!\$+B!X\$,00(\$+!S(5,3+!\$+B!Y(\$B(%!R3%!' +,3%!PK234\$%!I+,),\$), - (.G!8J"9!0!Q%(. (+)W!
P3K,()/!3R!X2%,.) , \$+!M)2,K.!0!PXM!VC(C0(%W!
[C(% ,K\$+!H(,4!P3K,()/!0! [HP!VC(C0(%W!
I+)(%+\$),3+\$4! [..3K,\$),3+!3R!X\$)234,K!@,3()2,K.!0!I [X@!V [K\$B(C,K!X3CC,)))(W!
!

I1/3)/#\$' : 3#)I*''
n'H+-13'I#6#aI''0!Pd3!=\$'436!@%\$b,4!V8J"9!0!Q%(. (+)W!
>\$%"/1#18' . "F/%/#'1''I1+;#;/g-!0! t ',)36!MK '\$B3%!V8J"9!0!Q%(. (+)W!

7!P(-(%\$4! ?KK\$. ,3+.!0()E((+!8JJ ;!)3!8J"6!0!. (%-(B!,+! [C\$b3+!S\$,+R3%(.)!,+!@%\$b,4!\$+B!=(% ' !
7!P' CC(%!8J"<!\$+B!8J"]!0!. (%-(B!,+!@34, -, \$!,+!\$+!,+B,5(+3 ' .!K3CC '+,)/}!4(B!\$!% (.(\$%K2!Q%31(K)!
,+!N430\$4!L(\$4)2>!
7!P' CC(%!8J"9!0!. (%-(B!,+!_,+!\$G! * 5\$+B\$G!E3%F,+5!\$.!\$!K4,+K,\$+!\$)!P\$,+)!X\$C,44 ' .!L(\$4)2!X(+)(%!
\$+B!L3.Q,K(!_+,+!\$>!!
H,)2!)2(!eN ? !=\$%)+(%.!,+!L(\$4)2!
7!P' CC(%!8J" ;!0!. (%-(B!,+!L\$,),G!E3%F,+5!\$.!\$!K4

#

\$(31#D) 4 (**0-#Q3(;&9-(1C#(3#=9)0(*#

5 - 1"0)#I+#%''!

! !! ! @,3()2,K.!

! ! ! =2,43.3Q2,K\$4! [+)2%3Q3435/!

! ! ! [(.)2(),K!\$+B!L(\$4)2!

G)#I+#%''(3+)*'''

! ! ! @,3()2,K\$4I.. '(!, +!M+B!3R!Y,R(!

! ! ! =2,43.3Q2,K\$4! [+)2%3Q3435/!

#

592@&--(23)*#G&;&*2% 4 &31!

!

8J"8! ! !

!

:J

!

! '1(;(1(&-#

!

Y(\$B(%!3R!)2(!=%31(K)!B3\$/*#-I'!3C"!VQ34,.\$+B23Q(>3%5W!
P((%,+5!X3CC,))(!C(C0(%!,+!)2(!Q%31(K)Z!. "%&/- ?/-O'D+*/;'''- "%&"" (#%&3\$/; '63;/#\$'A&3+0&%8'>'
A)+ "'K"#\$\$&'34'<#%/3- 'B)3k";%G!.Q3+.3%(B!0/!)2(!I+.),)'(!R3%! [B-\$+K(!X\$)234,K!P)' B,(.!)! *PX!
V8J"978J8:W!
H(O.,)(!B(- (43Q(%!R3%=34,.\$+B!L3Q(!V8J"9W!\$+B!@%\$b,4,\$+!P3K,)/!3R! # 3%\$4!12(3435/!V8J8"W!
=3BK\$.)!L3.)!3R!)2(!.23E!6: AHT2/c\$303*G!\$!Q3BK\$.)!3R!@%\$b,4,\$+!P3K,)/!3R! # 3%\$4!12(3435/!
M)2,K.!X3+. '4)(%R3%!. (- (%\$4!23.Q,)\$4.!,+!* P [! \$+B!@%\$b,4!B'%,+5!)2(!X?mIU7"T!=\$+B(C,K!V8J8J7
8J8"W!

!

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