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' \* (6!4\*3!K(43&\*4!' &, &Q%23&(6!N!3< (IQ<1&-!3< (4!Q14!- (, (-!3\*!&4, \*-K13&\*4!31+(4!,- \*K!3< (&-!\* [ 4!  
Q2166- \*\*K!\* )6(-013&\*46!\*-!P-\*)2(K6!-1&6(' ! )9!63%' (436!f&41229!3< (IQ<1&-!16+6!<\* [ !6< (^<(!\* -!  
3< (!' (P1-3K(43!Q14!< (2P!3< (!&463-%Q3\*-!6\*20 (!3< (!P-\*)2(K!N< (!1PP-1&612!&43(-0&( [ !K%63!) (!  
<14' 2(' !Q1- (,%229!14' !K\* -(!3<14!\*4 (!K ( (3&4; !K19!) (!- (U%&- (' !3\*!) -&4; !1) \*%3!3< (14(Q(661-9!  
K\* ' &, &Q13&\*46!N< (!P-&K1-9!\* )\_(Q3&O(!\* ,!149!39P(!\* ,! , \*-K13&O(!\*)6(-013&\*4!P-\*Q(66!&6!  
&KP-\*O(K(43!\* ,!3(1Q<&4; W!

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O/f/O/G: /!

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70&4&Q+&W! =W!] ([ &6!j] W\$4W W! ! #' \$3#. +7)0%#)\$' '#)%&' #63, .%+X! =)7''.?' <%@!O(3-&(O(' !i%29!EV!>F''FV!  
, -\*K!3< (!84&O(-6&39!\* ,!N(a16!13!#%63&4W! : (43(-!, \*-!N(1Q<&4; !/ , , (Q3&O(4(66! [ ( )6&3(X!  
<33PX^^ [ [ [ W%3(a16W(' %^1Q1' (K&Q^' &&1^3(1Q<&4; ^&4' (aWP<P!

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#. ./GHIJ!H!  
\$%&' (2&4 (6!, \* -!7%KK13&0(!. ((-!L



- N<(!6%K K1-9!-(P\*-3!P-\*0&'(6!\*0(-12!&4,\*-K13&\*4!3<13!Q2(1-29!-(P-(6(436!122!3<(!\*)6(-013&\*4!-(6%236W!O(Q\*K K(4' 13&\*46!6< \*%2' !)(!10Q\*K P14&('!)9!6P(Q&,&Q!(a1K P2(6!\*-!\*)6(-013&\*4!P1-3&Q%21-6W!

!

O/f/O/G: /!

70&4&Q+&W!=W!]([ &6V!j W!S4W W!#! #' \$3#. +7)0%#)\$' '#)%&' #63,.%+X!)=7''?' <%%@W!O(3-&(O(' !i%29!EV!>F''FV!  
,-\* K!3<(!84&O(-6&39!\* ,!N(a16!13!#%63&4V!:(43(-!,\* -!N(1Q<&4;!/,,(Q3&O(4(66! [ ()6&3(X!  
<33PX^^ [ [ W%3(a16W(' %^1Q1' (K&Q^' &&1^3(1Q<&4;^&4' (aWP<P!

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j (9!166%(6!,\*-. ((-!L)6(-013&\* 4!)

,-\*K!3<(!84&0(-6&39!\* ,!N(a16!13!#%63&4V!:(43(-!,\* -!N(1Q<&4;!/,,(Q3&0(4(66!

!#' \$3#. +7)0%#)! ' ' #); <&' #63,.%+(=)>".?' <%%@)

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C<13!1-(!6\*K(!+(9!&66%(6!3\*!-(K(K) (-!1)\*%3!,\* -K13&0(!\*-!6%K K13&0(!P((-!\*)6(-013&\* 4b!

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N<(-(!1-(!+(9!&66%(6!3\*!-(K(K) (-!16!9\*%!(43(-!1!,\* -K13&0(!\*-!6%K K13&0(!P((-!\*)6(-013&\* 4!

P-\*Q(66X!

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- #49!\* )6(-013&\* 4!6963(K!Q<\*6(4!)9!1!' (P1-3K(43!K%63!) (! [ (22!%4' (-63\*\*' ! )9!\* )6(-0(-6! 14' !3<\*6(!\*)6(-0(' W#Q3%12!Q2166- \*\*K!P-1Q3&Q(! [ &3<!3<(!\*)6(-013&\* 4!&463-%K(43!&6! K14' 13\*-9!,\* -!&36g!(, ,(Q3&0(!%6(WN<(!\*)6(-0(-!K%63!P-1Q3&Q(! [ &3<!3<(IP((-!\*)6(-013&\* 4! ,\* -K^6!) (,\* -(!Q2166- \*\*K!O&6&36WN<(!\*)6(-013&\* 4!&6!' (, &4(' ! )9!3<(!&463-%K(43!14' !3<(! \*)6(-0(-!K%63!) (!1)2(!3\*!-(Q\*- ' ! ) (<10&\*-!&4!3<(IQ13(; \* -&(6!\* 4!3<(!, \* -K!WN-1&4&4;! ,\* -! \*)6(-0(-6!&6!-(U%&-(' !&4!\* -' (-!3\*!<(2P!3<(K!6((! [ <13!&6!<1PP(4&4;!&4!3<(IQ2166- \*\*K!W 7&K!P2(!\* -!(21) \* -13(!6963(K6!-(U%&-(! (a3(46&0(!3-1&4&4;!3\*!P-(P1-(!\*)6(-0(-6!N<(! 3%-4\*0(-!\* ,!1' K&4&63-13\*-6!14' ! ,1Q%239!&4!12!' (P1-3K(436!&4' &Q13(!3<13!1!Q9Q2&Q12!P((-! \*)6(-013&\* 4!N3-1&4&4;!P-\*; -1K!&6!4(((' ' W

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- #22!\* )6(-013&\* 4! 131!Q\*22(Q3(' !1-(!-(P-(6(4313&0(!\* ,!\*0(-12!3(1Q<(-!P(-, \* -K14Q(!&4!3<(! Q2166- \*\*K!W!L)6(-0(-6!K%63!) (!1 [ 1-(!3<13!6\*K(!Q2166(6!1-(!139P&Q12!6!3<13!3<(9! [ &2! ' (0\*3(! (4\*%; <!3&K(!3\*!6(Q%- (!39P&Q12!' 131!1) \*%3!&463-%Q3\* -!1Q3&0&39W!L)6(-0(-6!1-(! 1 [ 1-(!\* ,!3<(IQ\* 43(43!\* ,!3<(IQ2166!3&K(!\* ,! 19V!2(4; 3<!\* ,!Q2166!14' !\*3<(-!3(KP\*-12! ,1Q3\*-6!6%Q<!16!1; (V!; (4' (-V!(3<4&Q&39V!; (4(-12!1PP(1-14Q(!\* ,!3<(!&463-%Q3\* -V!(3QW!14' !3<(! P\*66&)2(! (, (Q3!\* ,!3<(6(!,1Q3\*-6!\*4!\*)6(-013&\* 4!-(6%236W!

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- L)6(-0(-6!14' !3<(!\*)6(-0(' !&463-%Q3\* -!1-(!1 [ 1-(!\* ,!3<(!&463&3%3&\* 412!14' !' (P1-3K(4312! Q\*43(a3!,\* -!3<(!&K!P\*-314Q(!\* ,!3(1Q<&4; W!H(146!14' !Q<1&6!4(( ' !3\*!K1+(!1!; (4(-12! 144\*%4Q(K(43!1) \*%3!3<(!-\*2(!\* ,!P((-!\*)6(-013&\* 4V!3<(!\*)6(-013&\* 4!&463-%K(436!3\*!) (! %6(' !V!Q\*K!K&33((!166&; 4K(436V!14' !3<(!&43-&46&Q!O12%(!\* ,! ,\* -K13&0(!14' !6%K K13&0(!P((-! \*)6(-013&\* 4!14' !(O12%13&\* 4W!

!

- /1Q<!&4' &O&' %12!,1Q%239!\* )6(-0(-!K((36!,1Q(M3\*W,1Q(! [ &3<!3<(!&4' &O&' %12!&463-%Q3\* -6!) (&4;! \*)6(-0(' !V!-(K(K) (-&4;!3<13!6\*K(!,1Q%239!<10(!3-(K(4' \*%6!,(1-6!1) \*%3!) (&4;! \*)6(-0(' !V!14' !3<13!3<(!1Q3!\* ,!\*)6(-013&\* 4! [ &2! (, (Q3!3<(!\*0(-122!3(1Q<&4; ^2(1-4&4;! (4O&-\*4K(43!3\*!6\*K(!' (; -((!\* -!14\*3<(-W!

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- L)6(-0(-6!14' !&463-%Q3\* -6!1-(!1 [ 1-(!3<13!\*)6(-013&\* 46!' \*!4\*3!31+(!P21Q(!&4!&6\*213&\* 4!14' ! 3<(-, (\* -!P-\*' %Q(!O&' (4Q(! [ &3<!P\*66&)2(!2(; 12!&K!P2&Q13&\* 46W# ' !\ \*Q!; \*K!K&33((! K(K) (-6!4(( ' !3\*!) (!1 [ 1-(!\* ,!3<(16(46&3&O&39!\* ,!\*)6(-013&\* 4!-(P\*-36!14' ! -(Q\*K!K(4' 13&\* 46!K1' (! ,\* -!6%K K13&0(!P((-! (O12%13&\* 46W#6!; (43-1S''EE?V!PW''BFT! 6313(' !mf1Q%239!K(K) (-6!14' !1' K&4&63-13\*-6!6<\*%2' !<10(!1!; (4(-12!1 [ 1-(4(66!\* ,!3<(&-! 2(; 12!-&; <36!14' !-(6P\*46&) &2&3&(6V!16!6313(' !&4!, (' (-12!\* -!6313(!21 [ 6!14' !&43(-P-(3(' !&4!

!











F=31' ()\$0' 4!14)&' (+!D\$%4+ ' %O)O6M

#-(!63%' (436!#GH!3(10<(-!&43(- (63(' !14' !(43<%6&163&Qb!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

H\*(6!3<(!&463-%Q3\*-!%6(!63%' (43!41K(6b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

!6!<%K\*-!%6(' !1PP-\*P-!13(29b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

H\*(6!&463-%Q3\*-!4\*3!(K)1--166!\*-!) (2&332(!63%' (436!&4!149![ 19b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

!6!3<(!13K\*6P<(-(!\*,!3<(!Q2166-\*\*K!P1-3&Q&P13&O(b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

H&' !3<(!&463-%Q3\*-!<10(!9(!Q\*431Q3![ &3<!63%' (436b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=)

)

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H\* (6!3< (!&463-%Q3\*-!&43-\*' %Q(!3\*P&QV!6313(!; \*126V!P-(6(43!K13(-&12!\*-1!Q3&O&39!(, (Q3&O(29V!  
6%K K1-& (V!14' !; &O(!166&; 4K(43!\*-!6%; ; (63!14!& (1!3\*!Q\*46& (-!) (,\*-(!4(a3!Q2166b!  
! P%,)Q' 8%+&, #3, '?) P' ' ?&)\*8\$#%6' 8' +,) /3,.&03-, %4) ; ", &, 3+?.+7) PR=!  
: \*%2' !3< (!&463-%Q3\*-!) (l6((4!14' !<(1-' b!  
! P%,)Q' 8%+&, #3, '?) P' ' ?&)\*8\$#%6' 8' +,) /3,.&03-, %4) ; ", &, 3+?.+7) PR=!  
C (-(!+(9!P\*&436!(KP<16& (' b!  
! P%,)Q' 8%+&, #3, '?) P' ' ?&)\*8\$#%6' 8' +,) /3,.&03-, %4) ; ", &, 3+?.+7) PR=!  
C (-(!aP21413&\*46!Q2(1-!3\*!63%' (436b!  
! P%,)Q' 8%+&, #3, '?) P' ' ?&)\*8\$#%6' 8' +,) /3,.&03-, %4) ; ", &, 3+?.+7) PR=!  
C (-(!a1KP2(6V!K(31P<\*-6V!14' !1412\* ; &(6!1PP-\*P-&13(b!  
! P%,)Q' 8%+&, #3, '?) P' ' ?&)\*8\$#%6' 8' +,) /3,.&03-, %4) ; ", &, 3+?.+7) PR=)  
C 16!3< (!2(Q3%-(163&K%213&4; !14' !3< \*%; <3!P-\*0\*+&4; b!  
! P%,)Q' 8%+&, #3, '?) P' ' ?&)\*8\$#%6' 8' +,) /3,.&03-, %4) ; ", &, 3+?.+7) PR=)  
!

H\* (6!3< (!&463-%03\*-!P-\*0&' (!63%' (436!\*PP\*-3%4&39!3\*!K (43&\*4!P-\*)2(K6^Q\*4Q(-46! [ &3<!3< (!Q2166V!  
(&3<(-!0(-)1229!\*-!&4! [ -&3&4; b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=  
)  
!

Q+ '%0)O6!=)DD)134()+/M

H\* (6!1!63%' (43!4 (' !166&6314Q(!,\*-!1!3(KP\*-1-9!\*-!P(-K14(43!' &61)&2&39b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

#-(!\*4(!\*-!K\*-(!63%' (436!4\*3!K\*3&013('!\*-!%41)2(!3\*!,\*2\* [ !3<(!Q2166b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

H\* (6!3< (!&463-%03\*-!6<\*[!,10\*-&3&6Kb!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

#-(!63%' (436!1)2(!3\*!6(!!0&6%12!1&' 6b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

H\* (6!\*4(!;-\*%P!' \*K&413(!' &60%66&\*4!14' !<&4' (-!\*3<(-6g!P1-3&Q&P13&\*4b!

! P%,)Q' 8%+&,#3,'?) P' '?&)\*8\$#%6' 8'+,) /3,.&03-,%#4) ; ",&,3+?.+7) PR=!

#. ./GHIJ!!

:2166-\*\*K!N(1Q<&4;!L)6(-013&\*4!

,-\*K!3<(!84&0(-6&39!\*!=&44(6\*31V!: (43(-!,\*-!N(1Q<&4;!14'!] (1-4&4;!

!

f10%239!L)6(-0(' RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR!014+RRRRRRRRRRRRRRRRRRRRRR!

H13(!\*,!L)6(-013&\*4RRRRRRRRRRRRRRRRRRRRRR!:%-6(!L)6(-0(' RRRRRRRRRRRRRRRRRRRRRRR!

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E4' //%%\$&!<+' 19)06!- . /+%\*' )\$0!

013(!\*,!' (2&0(-9![ 16!1PP-\*P-&13(! ! "!" >! ?! @! A!  
/,,(Q3&0(!)\*' 9!K\*0(K(43!14' !; (63%- (6! "!" >! ?! @! A!  
/9(!Q\*431Q3![ &3<!63%' (436! ! ! "!" >! ?! @! A!  
:\*4,&' (43!! !(43<%6&163&Q! ! ! "!" >! ?! @! A!

!  
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87/!Lf!=/HI#!

L0(-<(1' 6^0<12+)\*1-' !Q\*43(43!Q2(1-!! !  
! ! ! [ (22!\*-; 14& (' ! ! ! "!" >! ?! @! A! G#!  
5&6%12!1&' 6!Q14!) (! (16&29!-(1' !! ! "!" >! ?!

