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I /#-AG/ -A.!./+! *#-G#(H,!&!&?!&H* -#.(1.!K-#!?.AC+1.?!.-!#+H+HB+#!./(!./+O! (#+!+1#-22+C!&1!(!
#-G#(H!C+?&G1+C!.-!.#(&1!#-K+??&-1(2!>-A1?+2-#?&! I /+!A?+! -K!>(?!S&G1+..+?!,2&S+!>2&+1.?,!(1C!
?.AC+1.!+Y*+##&+1>+?! (#+!+??+1.&(2!.-!./&?!*#->+??&!Q.!&?!,./A?,!+Y*+>.+C!./(!?.AC+1.?! F&22!>-1CA>!
./+H?+2S+?! (?! *#-K+??&-1(2?! (1C! H(&1.(&1! ./+! >-1K&C+1.&(2&.O! -K! (22! >2&+1.! -#! ?.AC+1.! H(.+##&(2!
G+1+#+.C! -#! *#+?+1.+C! &1! (1O! *#-G#(H! >2(??&!]! S&-2(.&-1! -K! ./&?! +./&>(2! #+RA&#+H+1.! -K!
>-1K&C+1.&(2&.O! F&22!#+?A2.!&1!K(>A2.O!#+S&+F! -K!?.AC+1.?Z!>-1CA>.(1C! ?AB?+RA+1.!*#-G#+?&!&1!./+!
N#-G#(H\$!!

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.-!>/ (1G+!C&G&. (2!#+>-#C&1G?,!. /+!>2(??!?)>/+CA2+!H(O!&1C&>(, +!H-#+!.&H+!. / (1!H(1C(. +C!K-#!>2&1&>(2!
*#->+??!>2(??+?! MNL a! 7T34,! 7T<4! (1C! 7TU4! (#+! K&+2C! *2(>+H+1.!>-A#?+?! &1! ?+#S&>+! *#-S&C&1G!
(G+1>&+?!LA*+#S&?-#?!F&22!#(. +!?.AC+1.! ' 1 - F2+CG+!(1C!?' &22\$!!
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L.AC+1.?!(#+! - 120!(CH&..+C!K-#!W(22!+1#-22H+1.\$!W-#!(*2&>(.&-1!(??&?. (1>+!-#!RA+?.&-1?!#+G(#C&1G!
./+!(>>+*. (B&2&.O! -K! *#++RA&?&.+!>-A#?+?!,! *2+(?+!>-1.(>.!./+! *#-G#(H!C&#+>.-#," #!%#&' (!) (#*+#\$!
] CC&.&-1(2!&1K-#H(.&-1!(? F+22!(?! *#-G#(H!#+RA&#+H+1.?! (1C! *#++RA&?&.+?!>(1!B+!K-A1C! -1! -A#!
F+B?&.+D!!!!!! ! "#\$%#&' (%)*+\$% ,#-). /O'+', .#1#&2+\$3 '4%\$2#"525*#6%\$7*4)\$5.8#92:*4)3\$*+;#
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- M-H*2+.+!./+!77;?+H+?.+#!A1&.*#-G#(H!&1!(>>-#C(1>+!F&./!./+!(**#-S+C!N2(1!-K!L.ACO!!!!
- P+!&1!`--C!L.(1C&1G!&1!./+! J L!&1!M-A1?+2&1G!N?O>/-2-GO! *#-G#(HD!]!?.AC+1.! HA?!.
H(&1.(&1,!(!./+!+1C! -K!+(>/.!+H! -K!+1#-22H+1.,!(!>AHA2(.&S+!`N]! -K!=\$4! -#! /&G/+#!&1!
>-A#?+?! .(' +1! .-! H++!.! C+G#+++! #+RA&#+H+1.?! (1C! #+>+&S+! ?(.&?K(>.-#O! +S(2A(.&-1?! -K!
#+#-K+??&-1(2!C+S+2- *H+1.!K#-H!K(>A2.O!(1C!K&+2C!*2(>+H+1.!?A*+&S&-#?&L.AC+1.?!1-!&1!
`--C!L.(1C&1G!HA?!.!K-#H(22O!#+RA+?!.!+H&??&-1!6(1C!#+>+&S+!F#&..+1!(**#-S(28!.-!+1#-22!
&1!(CC&&-1(2!G#(CA(.+!>-A#?+?&!I /+!MNWM!F&22!#+S&+F!./+!+Y*2(1(.&-1?!(1C!*2(1?!?+!K-#./!
&1!./+!*+.&&-1!(1C!C+>&C+!F /+./+#!.-!+H&.!>-1.1A+C+1#-22H+1.!(1C!F /(.!>-1C&&-1?!HA?!.
B+! H+!.! K-#! (! #+.A#1! .-! `--C! L.(1C&1G\$! 6L+++]>(C+H&>! N#-B(.&-1! (1C!]>(C+H&>!
" &?RA(2&K&>(.&-1!A1C+#!" &S&?&-1!-K!`#(CA(.+!N#-G#(H?!F&./&1!./+!MLOP!M(.&-G\$8!!!!
- P+!(CS(1>+C!.-!`#(CA(.+!M(1C&C(>O!)"
- _+>+&S+!(1!-S+#+(22!`N]!-K!=\$4! -#! /&G/+#!K-#!./+!+1.&#+!77;A1&.*#-G#(H\$!6] 10!>-A#?+!F&./!
(!G#(C+!2- F+#!./ (1!P;!F&22!1-!>-A1!.!- F (#C!G#(CA(.&-1\$8!!
- I (' +!(1C!* (?!./+! J (? +#!M-H*#+/+1?&S+!%Y(H&1(.&-1\$I /&?&?!./+!>A2H&1(.&1G!(>.&S&.O!K-#!
./+! J \$L\$!&1!M-A1?+2&1G!N?O>/-2-GO! *#-G#(H!>-H*2+.+C!(./+!>-1>2A?&-1!-K!./+! J (? +#!
M-H*#+/+1?&S+!%Y(H&1(.&-1!>-A#?+!6MNL a!7:748\$!] 22!?.AC+1.?! HA?!.(' +!(1C!* (?!./&?!
+Y(H!.-!G#(CA(.+!\$!!
- I /&?! ./#++;O+(#!>-A#?+! ?+RA+1>+! &?! K-#! KA22;.&H+! ?.AC+1.?! (1C! #+RA&#+?! (..+1C(1>+! K-A#! 2(.+!
(K.+#1--1?!-#!+S+1&1G?!(!F++' !K-#!./+!CA#(.&-1!-K!./+!*#-G#(H\$!!Q1!(CC&&-1,!? .AC+1.?!(#+!#+RA&#+C!

>-A#?+!F&22!*#-S&C+!C&C(>.&>!(1C!+Y*+##&+1.&(2!2+(&1G!-**-&#A1&.&+?!F /&2+!+Y*2-#&1G!./+!S(#&-A?!
./+ -#&+?!(1C!#+?+(#>/;?A** -#.+C!>-A1?+2&1G!?.#(.+G&+?!(1C!.+>/1&RA+?!.-!(&C!&1!./+!.#+(.H+1!.-K!
>-H*(?&-1!K(.&GA+!(1C!S&>(#&-A?!.#(AH(\$!!
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Q1.+##+##?-1(2! *#->+??+?! KA1C(H+1.(2! .-! ./+! C+S+2-*H+1! -K! *?O>/-./+##(*+A.&> >-A1?+2&1G!
?.#(.+G&+?;!F&./!(1!+H*/(?&?!-1!*#->+??+?!A1C+#20&1G!S+#B(2!(1C!1-1S+#B(2!>-HHA1&>(.&-1!(1C!./+!
A?+!-K!>2&1&>(2!?'&22?!(*2&>(B2+!.-!&1.+##S&+F&1G,!(&??+??H+1.,!(1C!&1.+##S+1.&-1\$!N#(>.&>+&1!?'&HA2(.+C!
2(B-#(. -#O!?'&.A(.&-1?'\$!N#++RA&?'&.+D!] CH&??&-1!.-!./+! J L!&1!M-A1?+2&1G!N?O>/-2-GO\$!!
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%Y(H&1(.&-1! -K! H[(-#! .O*+?! -K! *?O>/-*(./-2-GO\$! I+>/1&RA+?! -K! &1.('+! &1.+##S&+F&1G! (1C!
C+.#H&1&1G!H+1.(2!?.(A?!.-!K-#HA2(.+!(C&KK++1.&(2!C&(G1-?&?!B(?+C!A*-1!./+! " &(G1-?.&>!(1C!
L(.&?.&>(2! J (1A(2! -K! J +1.(2! " &?-#C+##? \$! N#++RA&?'&.+D!] CH&??&-1!.-!./+! J L! &1! M-A1?+2&1G!
N?O>/-2-GO\$!!
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%Y*2-#(.&-1!-K!./+!B&-2-G&>(2,*?O>/-2-G&>(2,(1C!?->&(2!C+S+2-*H+1.(2! (? '?!(1C!2&K+!+S+1?!-K!./+!
(CA2.!O+(#?!K#-H!(1!&1C&S&CA(2,!K(H&2O,!>-A*2+,(1C!S->(.&-1(2!*+##?+>.&S+\$!W->A?!-1!?->&->A2.A#(2,
G+1C+#!(1C!K(H&2O!&??A+?!?(2&+1!.-!#&+2(.&-1?/&*?,!?'*+*(#

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W->A?!-1!./+!&1.+#?+>.&-1!(1C!>-1S+#G+1>+!-K!>A2.A#+,!#(>+,!+./1&>&.O,!G+1C+#,!?+YA(2&.O,!C&?(B&2&.O,!
?->&-+>-1-H&>!?.(A?!,#&2&G&-1,!(>>A2.A#(.&-1,!<1C!>/#-1-2-G&>(2!(G+\$)] ..+1.&-1!(2?-!&?!G&S+1!.-!
&??A+?!-K! *#&S&2+G+,! H(#G&1(2&.O,! (1C! - **#+?&-1,! &1>2AC&1G! ?+Y&?H,! #(>&?H,!>2(??&?H,! (B2+&?H,!
(G+&?H,!<1C!/+.#-?+Y&?H\$! I /+.#+.&>(2!*+?&*+>.&S+?!-1!HA2.&>A2.A#(2!>-A1?+2&1G!F&22!B+!+Y(H&1+C!
(?!F+22!(?!?.#(.+G&+?K-#!&1.+#S+1.&-1,!<CS->(>O,!<1C!*#-H-.&-1!-K!?->&(2![A?.&>+!WA2K&22?!&1?.#A>.&-1!
&1!./+!(#+(?!-K!?.ACO!?*+>&K&+C!&1!PA?&1+??!(1C!N#-K+??&-1?!M-C+!K-#!V J WI!(1C!VNMM,!L+>.&-1?!
:TU4\$=7!(1C!:TTT\$==\$\$N#+#RA&?&.+D!M2(??&K&+C!?.(1C&1G!&1!./+! J L!&1!M-A1?+2&1G!N?O>/-2-GO\$!!

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WA2K&22?!. /+!M(2&K-#1&(!P-(#C!-K!P+/(S&-#(2!L>&+1>+?!#+RA&#H+1.!K-#!?A#S+O&1G!./+!A?+!-K!
/(#H(>-2-G&>(2!(G+1.?!&1! (.&+1.!>(#+\$) J +>/ (1&?H?!-K!(>.&-1,!&1C&>(.&-1?!K-#!#+K+##(2!(1C!
H-1&. - #&1G!,!>-HH-1!&1.+#(>.&-1?!(1C!&(.#-G+1&>?!F&22!B+!&1.#-CA>+C\$!N#+#RA&?&.+?D!M2(??&K&+C!
L.(1C&1G!&1!./+! J L!&1!M-A1?+2&1G!N?O>/-2-GO\$!!

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WA2K&22?!. /+!M(2&K-#1&(!P-(#C!-K!P+/(S&-#(2!L>&+1>+?!#+RA&#H+1.!K-#!?A#S+O&1G!./+!#+(.H+1.!-K!
?AB?.(1>+;#&2(.+C!(1C!(CC&>.&-1!C&?-#C+?&\$! I /&?!>-A#?+!K->A?+?!-1!A1C+??.(1C&1G!>2&1&>(2!&??A+?!
#+2(.+C!.-!(CC&>.&-1?!>-A1?+2&1G!(1C!F&22!(CC#+?&?!.&-2-GO,!C&(G1-?&?!(1C!#+(.H+1.!-K!(CC&>.&-1?&\$!
] CC&.&-1(2!K->A? F&22!B+!*2(>+C!-1!C+S+2-*&1G!A1C+??.(1C&1G!-K!#+>-S+#O,!>-;->>A##&1G!H+1.(2!
/+(2./! &??A+?!,! ?->&(2! (1C! *?O>/-2-G&>(2! &H*2&>(.&-1?! -K! ?->&-+>-1-H&>! *-?&.&-1,! (1C! >A2.A#(2!
(F(#+1+??!(1C! >-H*+.+1>&+?&\$! N#+#RA&?&.+?D! M2(??&K&+C! L.(1C&1G! &1! ./+! J L! &1! M-A1?+2&1G!
N?O>/-2-GO\$!!

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W->A?+?!-1!./+!*#->+??!-K!>(#++#!C+S+2-*H+1!./#-AG/!./+!2&K+!**(1,!&1>2AC&1G!(1!+H*/(?&?!-1!
./+ -#O,!#&+?-A#>+?(1C!(**2&>(.&-1,!./+!&1.+#K(>+!B+.F++1!./+!&1C&S&CA(2!(1C!./+!F-#'!F-#2C,(1C!./+!
&1.+#(>.&-1?!-K!F-#'!(1C!K(H&2O\$!L*+>&(2!(..+1.&-1!.-!(C[A?H+1!.-!C&?(B&2&.O,! (1C!./+!#-2+!-K!
>-1.+Y.A(2!S(#&(B2+?!&1>2AC&1G!G+1C+#,!+./1&>&.O,!?->&(2!>2(??,!?+YA(2!-#&+1.(.&-1!(1C!&C+1.&.O\$!

/ - F!+(>/!(**#-(>/!&?!A?+C!&1!>2&1&>(2,!?)>/ - -2,!(1C!H(##&(G+!(1C!K(H&2O!>-A1?+2&1G!(**2&>(.&-1?&N#+#RA&?&.+D)] CH&??&-1!. -!./+! J L!&1!M-A1?+2&1G!N?O>/ -2-GO\$!!
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%Y*2-#(.&-1! -K! >-A1?+2&1G! ?' &22?! A?+C! &1! ?A**-#. &S+,! &1?&G/.; -#&+1.+C,! (1C! *#->+??; -#&+1.+C! *?O>/ -./+#+(*&+?&! Q1S-2S+H+1.! &1! +Y*+##&+1.&(2! (>.&S&. &+?! C+?&G1+C! .-! #+2(.+! ./+! -B?+&S(.&-1,! C+H-1?.#(.&-1,!(1C!*#(>.&>+!-K!*?O>/ -./+#+(*O!. -!>(?+!K-#HA2(.&-1\$!N#+#RA&?&.+D)!MNL a !7334,!7=34! (1C!(CH&??&-1!. -!./+! J L!&1!M-A1?+2&1G!N?O>/ -2-GO\$!!
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W->A?! -1! H([-#! ?O?.+H&>! (1C! 1-1?O?.+H&>! -#&+1.(.&-1?! &1! #+2(.&-1?/&*,! >-A*2+?,! (1C! K(H&2O! >-A1?+2&1G\$!] ..+1.&-1!. -!./+! *?O>/ -C01(H&>?! -K!#+2(.&-1?/&*?! (1C! .#(1?>A2.A#(2!K(H&2O! ?O?.+H?,! >-HHA1&>(.&-1?!./+ -#O,!(1C!./+!#-2+!-K!K(H&2O!-K!-#&G&1!&1!&1C&S&CA(2!(1C!K(H&2O!KA1>.&-1&1G\$!!

>-S+##+C! F&22!B+!&??A+?! -K!C+S+2-*H+1.,!(C[A?.H+1.,!(1C!H(2(C[A?.H+1.,!(1C!/(+(2./!(1C!F+221+??!
#-H-.&-1\$!M-A1.?!.-F(#C!./+! J WIENMM!#(>.&>AH!#+RA&#+H+1.!6PA?&1+??!(1C!N#-K+??&-1?!M-C+!
M/(*.+#! 349:.,! L+>.&-1! :TU4\$:=,! (;CX! (1C! :TTT\$==;=78\$! V&H&.+C! .-! 7! ?.AC+1.?! *+#! ?+>.&-1\$!
N#+##+RA&?&.+D! `#(CA(.+!M(1C&C(>O! ?.(1C&1G!&1! ./+! J L! &1!M-A1?+2&1G!N?O>/-2-GO,!B(>'G#-A1C!
>/+>' ,!(1C!*#-K+??&-1(2!2&(B&2&.O!&1?A#(1>+\$\$!
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]!>-1.&1A(.&-1!-K!MNL a!7U34\$!]!A*+##S&?+C!>2&1&>(2!*#(>.&>AH!F&./&1!./+!?>-*+!(1C!*#(>.&>+!-K!(
J (#&&(G+! (1C!W(H&2O! I /+##(*&?!.! -#!N#-K+??&-1(2!M2&1&>(2!M-A1?+2-#)!]**2&>(.&-1! -K!>-A1?+2&1G!
*#->+CA#+?.,! F&./! (!K->A?! -1! (??+??H+1.,! C&(G1-?&?.,! *#-G1-?&?.,! (1C! .#+(.H+1.! -K!K(H&2&(2! (1C!
#+2(.&-1?/&*! CO?KA1>.&-1?\$\$!]2?-! >-S+##+C! F&22! B+! &??A+?! -K! C+S+2-*H+1.,! (C[A?.H+1.,! (1C!

>-A1!.!-F(#C!#+RA&#+H+1.?!K-#!./+! J L!&1!M-A1?+2&1G!N?O>/-2-GO\$! eKK+#+C!-1!(!>#+C&.,!1->#+C&.!
B(?&?!-12O\$!_+RA&#+?! (**#-S(2! BO! ./+! ?*-1?-#&1G! K(>A2.O! H+HB+#! (1C! ./+! MNL a! N#-G#(H!
M- -#C&1(-#\$\$!
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Q1C&S&CA(2! ?A*+ #S&?&-1!-K!>-A1?+2&1G!-#!&1S+?.&G(.&-1!-K!(1!(**#-S+C!*#[+>.!2+(C&1G!.-(!F#&..+1!
#+*-#.\$! J (O!B+!#+*+(.C!K-#!>#+C&.\$! eKK+#+C!-1!(!>#+C&.,!1- ;>#+C&.!B(?&?!-12O\$!_+RA&#+?!(!*+.&.&-1!K-#!
&1C&S&CA(2!?.ACO!(**#-S+C!BO!./+!?* -1?-#&1G!K(>A2.O!H+HB+#!(1C!./+!MNL a!N#-G#(H!M- -#C&1(-#\$\$!

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