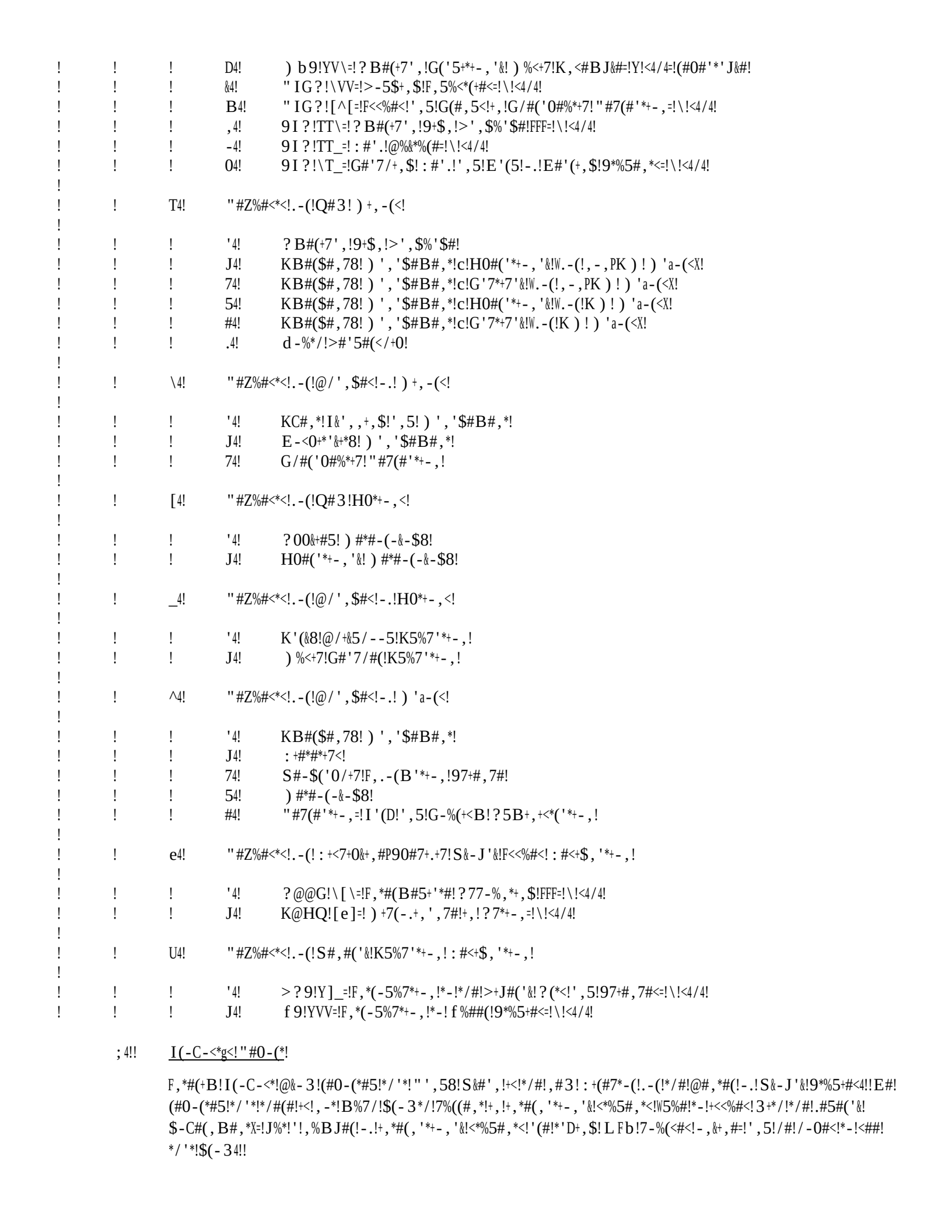
! "#$"%&'( ) (&*(#'+&(, "%#($ -'. / 0 +) $ -'#"& / $ "'!

"#$%&'(!) ##*+, $!-.!*/#!**. / 0 +) $ -'#"& / $ "**!



'C'+&'J&#4!9#,'*-(!@'((!,-*#5!*/''*!'!0(#<#,*'*+-,!3'<!/#&5!+,!)'8!3+*/!K`#7%*+C#!:+(#7*-(!Q',78!
>'*/'B!-.!*/#!@-%,7+&!-.!G#'7/#(!K5%7'*+-,!'*!bFb@!'*!3/+7/!</#!5+<7%<<#5!*/#!F&&+,-+<!
K5%7'*-(!h'7',78!:'*'!"#0-(*4!9#,'*-(!@'((!-J<#(C#5!*/'*!*/#!@/+7'$-!'(#'!$#*<!3+5#!'**#,*+-,!
(#$'(5+,$!*#'7/#(!</-(*'$#<=!/-3#C#(=!)7:-,-%$/!@-%,*8!*-0<!*/#!$('0/4!

T4! b05'*#5!6'7%&*8!9#,'*#!)##*+,$!@'&#,5'(!

@/'+(0#(<-,!I8,#<!B#,*+-,#5!*/''*!B##*+,$<!3+&&!J#!/#&5!-,!*/#!<#7-,5!G%#<5'8!-.!#C#(8!B-,*/4!
E#!<*'*#5!*/''*!*/#!:#7#BJ#(!B##*+,$!3+&&!J#!/#&5!-,!*/#!Y<*=!'<!3'<!*/+<!B##*+,$4!!

@/'+(0#(<-,!I8,#<!'&<-!B#,*+-,#5!*/''*!9#,'*-(!;(+7#!(#7-(5#5!/+<!:+<*+,$%+</#5!6'7%&*8!&#7*%(#=!
3/+7/!9#,'*-(!;(+7#!<'+5!3#,*!3#&&!',5!3-%&5!J#!J(-'57'<*#5!<--,!-,!'&&!'00(-0(+'*#!<*'*+-,<4!!

FFF4! !"#0-(*<!-.!@-BB+**##<!',5!@-%,7+&<!!

?4!! @-%,7+&!-,!?5B+<<+-,=!S('5%'*+-,!',5!?7'5#B+7!9*',5'(5<!W@?S?9X!
W)#$',!H3#,<=!@/'+(=!TVTVPTVTYX!!

Y4! ?,,%'&!"#0-(*!W)'(D!;#(,'(5<=!@/'+(=!TVY]PTVTVX!

9#,'*-(!;#(,'(5<!#`0(#<<#5!/+<!#,a-8B#,*!+,!<#(C+,$!3+*/!*/#!7-%,7+&4!E#!(#0-(*#5!*/''*!*/#!7'<#<!
/#'(5!+,!0(#C+-%<!8#'(<!3#(#!7-B0'('J&#!*-!*/+<!8#'(4!9#,'*-(!;#(,'(5<!<'+5!/#!3'<!'<D#5!J8!
9#,'*-(!>'%#(!&'<*!8#'(!'J-%*!?7'5#B+7!F,*#$(+*8!(#0-(*<=!3/+7/!3#(#!5-3,!.(-B!*/#!8#'(!J#.-(#=!
J%*!*/#(#!3'<!,-!&'($#!%0*+7D!*/+<!8#'(4!!

9#,'*-(!;#(,'(5<!(#0-(*#5!*/''*!-,#!-.!@?S?9g<!B'a-(!'7*+C+*+#<!&'<*!8#'(!3'<!*-!%05'*#!*/#!
?7'5#B+7!F,*#$(+*8!I-&+78!*-!/#&0!.'7%&*8!3/-!5#'&!3+*/!C+-&'*+-,<!-.!*/#!0-&+784!F,*#(+B!
I(#<+5#,*!?J('/'B!&<-!(#Z%#<*#5!*/''*!@?S?9!3-(D!-,!*/#!?5B+<<+-,<!9*',5'(5<!I-&+78=!3/+7/!
6'7%&*8!9#,'*#!/#'(5!&<!.'&&4!

9#,'*-(!;#(,'(5<!B#!$('5+,$!0-&+7+#<!.-(!0'<<2.'+&!3#(#!7/',$#5!5%#!*-!@-C+5P
Y]=!'<!3#&&!'<!(#C+<+-,<!*-!*/#!S('5#!@/',$#!I-&+784!@-,7#(,<!3+*/!'**#,5',7#!5%#!*-!<*%5#,*<!,-*!
J#+,$!#,(-&&#5!+,!7&'<<!3/+&#!-77%08+,$!7&'<<!<#'*<!.-(!&-,$!0#(+-5<!-.!*B#<!3#(#!'55(#<<#5!
/(-%$/!'!,#3!0-&+784!9#,'*-(!;#(,'(5<!'&<-!#`0&'+,#5!*/''*!5%#!*-!@-C+5PY]!0(#C#,*+,$!<%5#,*<!
.(-B!*'D+,$!*/#!*#<*<=!?@G29?G!<7-(#<!3#(#!5+<7-,*+,%#5!.(!<*%5#,*<!'J-C#!'!0'(*+7%&'(!
*/(#</-&54!!

@/',$#<!*-!*3-!-*/#(!0-&+7#<=!*/#!S('5#!?00#'&<!I-&+78!',5!*/#!F,7-B0&#*#!S('5#<!I-&+78=!'(#!+,!
/#!3-(D<!',5!3+&&!&+D#&8!J#!J(-%$/!.-(3'(5!'*!/#!H7*-J#(!9#,'*#!B##*+,$4!E#!#`0&'+,#5!*/#!
$-'&!+<!*-!B'D#!*/#!&',$%'$#!7-,<+<*#,*!J#*3##,!*/#!S('5#!?00#'&<!',5!?7'5#B+7!F,*#$(+*8!
I-&+7+#<!(#$'(5+,$!*/#!'00#'&<!0(-7#<<0!F,*#(+B!I(#<+5#,*!?J('/'B!(#Z%#<*#5!*/#!(#C+#3!-.!*/#!
F,7-B0&#*#!S('5#<!I-&+784!

9#,'*-(!>'%#(!'<D#5!/-3!B',8!)'7)%(('8!@-&&#$#!<*%5#,*<!#,5#5!%0!*'D+,$!'5C',*'$#!-.!
LFbg<!J&',D#*!3'+C#(4!9#,'*-(!;#(,'(5<!(#<0-,5#5!*/''*!?<<-7+'*#!I(-C-<*!)-($',!3-(D#5!-,!*/#!
0-&+784!?<<-7+'*#!I(-C-<*!)-($',!<'+5!*/''*!/#!5+5!,-*!/'C#!,%BJ#(<!,-3!J%*!3+&&!7/#7D!3+*/!
?5B+<<+-,<4!iQ-*#1!>'*#(!+,!*/#!B##*+,$!F,*#(+B!I(-C-<*!@&-3!(#0-(*#5!*/''*!*/#(#!3#(#!<+`4j!

@/'+(0#(<-,!I8,#<!#`0(#<<#5!/+<!$('*+*%5#!.-(!*/#!3-,5#(.%&!a-J!9#,'*-(!;#(,'(5<!5+5+5!
⁋/'+(+,$!@?S?9=!0'(*+7%&'(&8!<+,7#!@?S?9!',5!*/#!"#$+<*('(g<!H..+7#!/'5!'!&-*!-.!7/',$#<!*-!
B'D#!'*!*/#!#,5!-.!*/#!<0(+,$!<#B#<*#(!5%#!*-!*/#!0',5#B+74!9#,'*-(!6+&+0+,D!'<D#5!+.!*/#(#!3'<!
',8!(#'<-,!.-(!*/#!5#7&+,#!*/#!(#P'5B+<<+-,!.'!00#'&<4!9#,'*-(!;#(,'(5<!(#<0-,5#5!*/''*!5%#!*-!
@-C+5PY]!<*%5#,*<!3#(#!,-*B-C#5!.(-B!0(-J'*+-,!*-!5+<B+<<'&0!<*%5#,*<!*80+7'&&8!3-%&5!J#!
0#,'&+R#5!.-(!5-+,$!0--(&8!5%(+,$!<0(+,$!<#B#<*#(=!3/+7/!B'8!&#'5!*-!0(-J'*+-,=!<%<0#,<+-,=!-(!
5+<B+<<'&=!/-3#C#(=!5%#!*-!@-C+5PY]=!<*%5#,*<!3#(#!,-*0#,'&+R#5!.-(!*/#+(!SI?<!+,!<0(+,$!

50%

WG ; : =!@/ '+(YX!

Y4! ? , , %'&! -B!9'5&#(=!@/

@/'+(0#(< #(!(#7-$,+R#5!*/#!7-%,7+&!B#BJ#(<4!F */'*!&'<*!.'&&! !'55(#<<#5!*/#! +<<%#!-.!. ,*#,',7#!.-(!*/#!b,+C#(<+*84!E#!'5 =!%,.-(*%,'*#& *-!J%5$#*! 7-,7#(,< +B+*#5!'B-%,*!-.!B'+,*#,',7#!3 +J&#!-,!7'B0%<=! 0+,$!-,!,#3! B'+,*#, #7*<!/'<!J#7-B#!5+..+7%&*4!

@/'+(5&#(!(#0-(*#5!*/'*!#B#($#,78!5 !B'+,*#,',7#!B-,#8!(5!%0!J8!*/#!<* 7 B+&&+-,4!@/'+(0#(<-,!9'5&#(!<*' !G(-8!"/-'5<!$'C#!@@I b #(C+#3!'J %,5<!3#(#!J#+,$!'&&-7'*#54!@/'+ !9'5&#(!<*'*#5!*/'*!*/#!(--.<!.- M,-J&'%7/!E'&&<!',5!*/#!>+J('(8!3#(#!7-B0&#*#5!+,!90(+,$!TVTV=!',5!0-<<+J&8!9+B0 &&! 3+&&!.-&&-3=!'&*/-%$/!*/'*!+<!,-*!.+,'&+R#54!!

@/'+(0#(<-,!9'5&#(!<*'*#5!*/'*!kT4_!B+&&+-,!3'<!'&&-7'*#5!*-!0+0+,$!+,!;(-3,=!)-($',!',5!9*+0#<! E'&&<4!!@'B0%<!7/+&&#5!3'*#(!&--0<!/'5!k[4\!B+&&+-,!'&&-7'*#50!k\4\!B+&&+-,!3'<!'&&-7'*#5!*-!*/#! #&#7*(+7'&!+,.('<*(%7*%(#=!*(',<.-(B#(<=!-+&<=!<3+*7/#<=!',5!7'J&+,$4!

@/'+(0#(<-,!9'5&#(!(#0-(*#5!*/'*!*/#(#!3'<!'!k[VV!B+&&+-,!J'7D&-$!.-(!5#.#((#5!! ! !B'+,*#,',7#=!'&*/-%$/!kTU!-(!kT]!B+&&+-,!/'<!J##,!'&&-7'*#5!-C#(!*/#!,#`*!<+`!*-!#+$/*!8#'(<4! G/#(#!'(#!<#C#('&!+*#B<!-,!*/#!3+</!&+<*!.-(!(#0'+(<=!+,7&%5+,$!B-(#!.-(!#&#7*(+7'&=!/#'*+,$=!!<-&'(=! B'+,*#,',7#=!J%+&5+,$!(#0'+(=!',5!%0$('5#!-.!7&'<<(--B<4!

@@I b!5+<7%<<#5!*/#!.%*%(#!@#,*#(!.-(!*/#!I#(.-(B+,$!?(*<=!.-(!3/+7/!kU4]!B+&&+-,!3'<!(#&#'<#5! J8!*/#!<*'*#!*-!(#P#,$'$#!3+*/!*/#!'(7/+*#7*<4!@/'+(0#(<-,!9'5&#(!<'+5!*/#(#!3'<!5+<7%<<+-,!.-(! J+55+,$!*/+<!0'<*!<%BB#(=!/-3#C#(!/#!+<!,-*!'3'(#!-.!*/#!0(-$(#<<+-,!-.!0&',<4!E#!'55#5!*/'*! */#(#!3+&&!J#!,-!,##5!*-!'55!'55+*+-,'&!0'(D+,$!&-*<!.-(!*/#!J%+&5+,$4!

@@I b!'&<-!/'5!'!<0(+,$!5+<7%<<+-,!-.!B-,+*-(+,$!7'B#('<!-,!7'B0%<=!3/+7/!3'<!'!7/'($#!.(-B! */#!K`#7%*+C#!@-BB+**##4!F,.-(B'*+-,!3'<!(#7#+C#5!.(-B!bG#7/=!3/+7/!@/'+(0#(<-,!9'5&#(! Z%-*#5!!1?!.#3!8#'(<!'$-=!'!$(-%0!-.!0#-0&#!7(#'*#5!'!,#3!<#7%(+*8!7'B#('!0-&+78!-,!7'B0%<4! G/#!0-&+78!3#,*!*/(-%$/!'&&!*/#!(#Z%+(#B#,*<!*-!$#*!'00(-C#5!J%*!.-(!<-B#!(#'<-,!,#C#(!$-*! 0-<*#5!*-!*/#!3#J<+*#4m!@/'+(0#(<-,!9'5&#(!<*'*#5!*/'*!*@@I b!/'5!0&',,#5!*-!7-,*+,%#!*/+<! 5+<7%<<+-,!+,!90(+,$!TVTV=!/-3#C#(=!5%#!*-!@-C+5PY]=!B##*+,$<!3#(#!7',7#&&#5

@@IF!B##*+,$<!/'5!*-!J#!/#&5!C+'!R--B!5%#!*-!@-C+5PY]4!E#!0-+,*#5!-%*!*/'*!*/#(#!3#(#!B-(#!B+,-(<!7-,<+5#(#5!&'<*!8#'(!*/',!+,!*/#!0'<*!.#3!8#'(<4!

@/'+(0#(<-,!I8,#<!B#,*+-,#5!*/'*!9#,'*#!7-%,7+&!7/'+(<!3-%&5!/'C#!*-!*'D#!-C#(!'55+*+-,'&!5%*+#<!5%#!*-!*/#!(#*+(#B#,*!-.!)<4!E'BB4!E#!<*'*#5!*/'*!+,!-(5#(!*-!B'D#!6'7%&*8!9#,'*#!B##*+,$<!B-(#!#..+7+#,*!',5!*-!B'D#!<%(#!#C#(8-,#!D,-3<!3/#,!*/#+(!7%((+7%&'(!+*#B<!3+&&!7-B#!J#.-(#!9#,'*#=!@@IF!3+&&!,-3!7-B#!-,&8!*-!*/#!&'<*!(#$%&'(&8!<7/#5%&#5!6'7%&*8!9#,'*#!B##*+,$!+,!6'&&=!'*!3/+7/!'&&!7%((+7%&'(!+*#B<!3+&&!J#!0(#<#,*#5!'*!-,7#=!',5!*-!*/#!0#,%&*+B'*#!(#$%&'(&8!<7/#5%&#5!B##*+,$!+,!*/#!90(+,$4!@/'+(0#(<-,!I8,#<!<*'*#5!*/'*!'!<7/#5%&#!.-(!*/#!B##*+,$<!3+&&!J#!0(#0'(#5!J8!@/'+(0#(<-,!;#,,#**4!

:4! @-%,7+&!-,!S#,#('&!K5%7'*+-,!W@SKX!

!! W?,5(#'!?&C#</#(#=!@/'+(=!TVTVPTVTYX!

Y4! ?,,%'&!"#0-(*!W?,5(#'!?&C#</#(#=!@/'+(=!TVY]PTVTVX!

@/'+(0#(<-,!?&C#</#(#!#`0(#<<#5!/#(!$('*+*%5#!*-!@SK!B#BJ#(<!J#7'%<#!</#!3'<!7/-<#,!.-(!7/'+(!'*!/#(!C#(8!.+(<*!@SK!B##*+,$!<-!/'5!*-!&#'(,!'<!</#!3#,*4!@/'+(0#(<-,!?&C#</#(#!<'+5!3/#,!</#!<*'(*#5=!B',8!-.!*/#!7-%,7+&!B#BJ#(<!3#(#!,#3=!<-!5-7%B#,*<!3#(#!(#C+#3#5!',5!5+..#(#,*!5+<7%<<+-,<!*--D!0&'7#!-,!+<<%#<!(#&#C',*!*-!S#,#('&!K5%7'*+-,4!9/#!<*'*#5!*/'*!9#,'*-(!@'((!'**#,5#5!*/#!H7*-J#(!B##*+,$!*-!0(-C+5#!0#(*+,#,*!+,.-(B'*+-,!.(-B!*/#!F;EK!6'7%&*8!?5C+<-(8!@-%,7+&!(#$'(5+,$!S#,!K5!7(#5+*!/-%(<!*(',<.#((#5!+,4!@/'+(0#(<-,!?&C#</#(#!#`0&'+,#5!*/'*!.'7%&*8!3#(#!7-,7#(,#5!'J-%*!*/#!Z%'&+*8!-.!*/#!7(#5+*!/-%(<!',5!3/'*!3'<!J#+,$!5+<0&'8#5!'<!.'('<!3-(D!B#*!-%*<+5#!LFb4!9/#!<'+5!*/#(#!3'<!$--5!+,0%*!.(-B!*/#!<*%5#,*!(#0(#<#,*'*+C#!(#$'(5+,$!*/#!.+,',7+'&!B-*+C'*+-,!.-(!7(#5+*!/-%(<!*'D#,!#&<#3/#(#4!! ! !

@/'+(0#(<-,!?&C#</#(#!(#&'*#5!*/'*!>-(+!;'D#(P90#((8!</'(#5!+,.-(B'*+-,!(#$'(5+,$!*/#!?<<#<<B#,*!-.!9*%5#,*!>#'(,+,$!@-BB+**##4!@/'+(0#(<-,!?&C#</#(#!<'+5!@SK!3'<!%,5#(!*/#!+B0(#<<+-,!*/#!E+$/#(!>#'(,+,$!@-BB+<<+-,!3-%&5!C+<+*!.-(!*/#!(#P'77(#5+*'*+-,!'<!#'(&8!'<!6#J(%'(8!TVTV=!J%*!*/'*!5'*#!/'<!J##,!0%</#5!J'7D4!G/#(#!3#(#!7-,7#(,<!#`0(#<<#5!J8!@SK!B#BJ#(<!*/'*!7/'+(<!3#(#!7-,5%7*+,$!*/#!'<<#<<B#,*<!+,!<-B#!5#0'(*B#,*<!3/+&#!.'7%&*8!3#(#!5-+,$!*/#!'<<#<<B#,*<!+,!-*/#(<=!&#'5+,$!*-!0(-J&#B<!3+*/!*/#!.##5J'7D!&--04!

@/'+(0#(<-,!?&C#</#(#!B#,*+-,#5!*/'*!*/#(#!3#(#!5+<7%<<+-,<!'*!@SK!B##*+,$<!(#$'(5+,$!-,&+,#!5#&+C#(8=!3/+7/!3#(#!0(-B0*#5!.(-B!5+..#(#,*!<+*%'*+-,<4!H,#!-.!*/#!'7'5#B+7!'5C+<-(<!#`0(#<<#57-,7#(,!3+*/!0(-J&#B<!0(-C+5+,$!*/#!S#,!K5!7-%(<#<!,##5#5!J8!.%&&8!-,&+,#!<*%5#,*<4!)-<*!@SKB#BJ#(<!'$(##5!*/'*!-,&+,#!5#&+C#(8!3'<!,-*!J#<*!.-(!*/#!7-%(<#<!*/#8!3#(#!*#'7/+,$4!

@/'+(0#(<-,!?&C#</#(#!(#0-(*#5!*/'*!,!#B'+&!3'<!<#,*!-!.'7%&*8!+,!A',%'(8!'<D+,$!+.!*/#8!3-%&5!J#!3+&&+,$!*-!*#'7/!5%'&!#,(-&&B#,*!&+C#<*(#'B!+,!6'&&!TVTV!*-!/+$/!<7/--&!<*%5#,*<4!f%#<*+-,<!3#(#!('+<#5!'J-%*!/-3!*/+<!3-%&5!3-(D4!HC#('&&=!*/#(#!3#(#!7-,7#(,<!(#$'(5+,$!3/*/#(!*/#$-'&<!

5#7&+,#54!9#,'*-(!@'((!<*'*#5!*/''*!3/#,!'(*+7%&'*+,$!7-%(<#<!J8!<*%5#,*<!*(',<.#((+,$!*-!LFb=!/#(!
5#0'(*B#,*!7/'+(!'<D<!.'7%&*8!3+*/+,!*/#!5#0'(*B#,*!*-!3#+$/!+,4!G/#!.'7%&*8!(#7-BB#,5!3/#*/#(!
/#!7-%(<#!7',!(',<.#(!+,!'<!',!#&#7*+C#!+,!*/#+(!5+<7+0&+,#!',5!3/#*/#(!*/#8!*/+,D!+*!7-%,*<!.-(!'!

@-%,7+&!.-(!F,<*(%7*+-,'&!G#7/,-&-$8!W@FGX!!

6#(+5%B!G'<5',=!)'*/2I/+&=!(#0&'7+,$!M8&#!)'8J-(,!! ! TVT\!! ! ?n9!

!

+&(,"%#($-'0*+&0()#'/&D'0*<<($$""#3'

;%(#'%!-.!@%&*%('&!?..'+(<!W;@?X!

S#-($#!G%(,#(=!)%<+7=!(#0&'7+,$!"+7/'(5!E%$/#8!! ! TVTY!! ! ?*P>'($#!

A-<#!6#(,',5#R=!K,$&+</=!(#0&'7+,$!KB+&8!E'(*!! ! ! TVTY!! ! ?*P>'($#!

@#,*#(!.-(!F,,-C'*+-,!+,!G#'7/+,$!',5!"#<#'(7/!W@FG"X!?5C+<-(8!@-BB+**##!

:-,,'!L+#,7#D=!)$B*2)D*$=!(#0&'7+,$!S4!)',$'&'('a!! ! 6'&&!TVTY!! ;nG!

>+'!I#*('7-C+7+=!)'*/2I/+&=!(#0&'7+,$!>4!;'(5#,PS'JJ#+!!! TVTT!! ! ?n9!

E-,-(<!@-%,7+&!

M(+<*'!;-3#(<!9/''(0#=!>+J('(8=!(#0&'7+,$!>+,5'!N#&&B#(!!! TVTY!

?4!! K&#7*+-,!-.!9#,'*-(<!*-!<#(C#!-,!;%5$#*!G(',<0'(#,78!@-BB+**##!
W*3-!<#,'*-(<=!-,#!#'7/!.(-B!K`@-!',5!?n9=!*-!<#(C#!*3-P8#'(!*#(B<X!

@/'+(0#(<-,!I8,#<!<*'*#5!*/'*!*/#!9#,'*-(!>'%#(!3+&&!<#(C#!'<!*/#!K`@-!(#0(#<#,*'*+C#!.-(!*/#!;%5$#*!
G(',<0'(#,78!@-BB+**##4!G/#(#!3'<!'!<#&.P,-B+,'*+-,!.-(!9#,'*-(!:+B+*(-C!*-!(#0(#<#,*!?n9!.-(!'!*3-P
8#'(!*#(B4!

;4!! K&#7*+-,!-.!@-BB+**##!-,!I(-C-<*!',5!I(#<+5#,*+'&!I#(.-(B',7#!
W.+C#!<#,'*-(<=!*-!+,7&%5#!-,#!K`#7%*+C#!@-BB+**##!B#BJ#(=!*-!<#(C#!-,#P8#'(!*#(B<X!