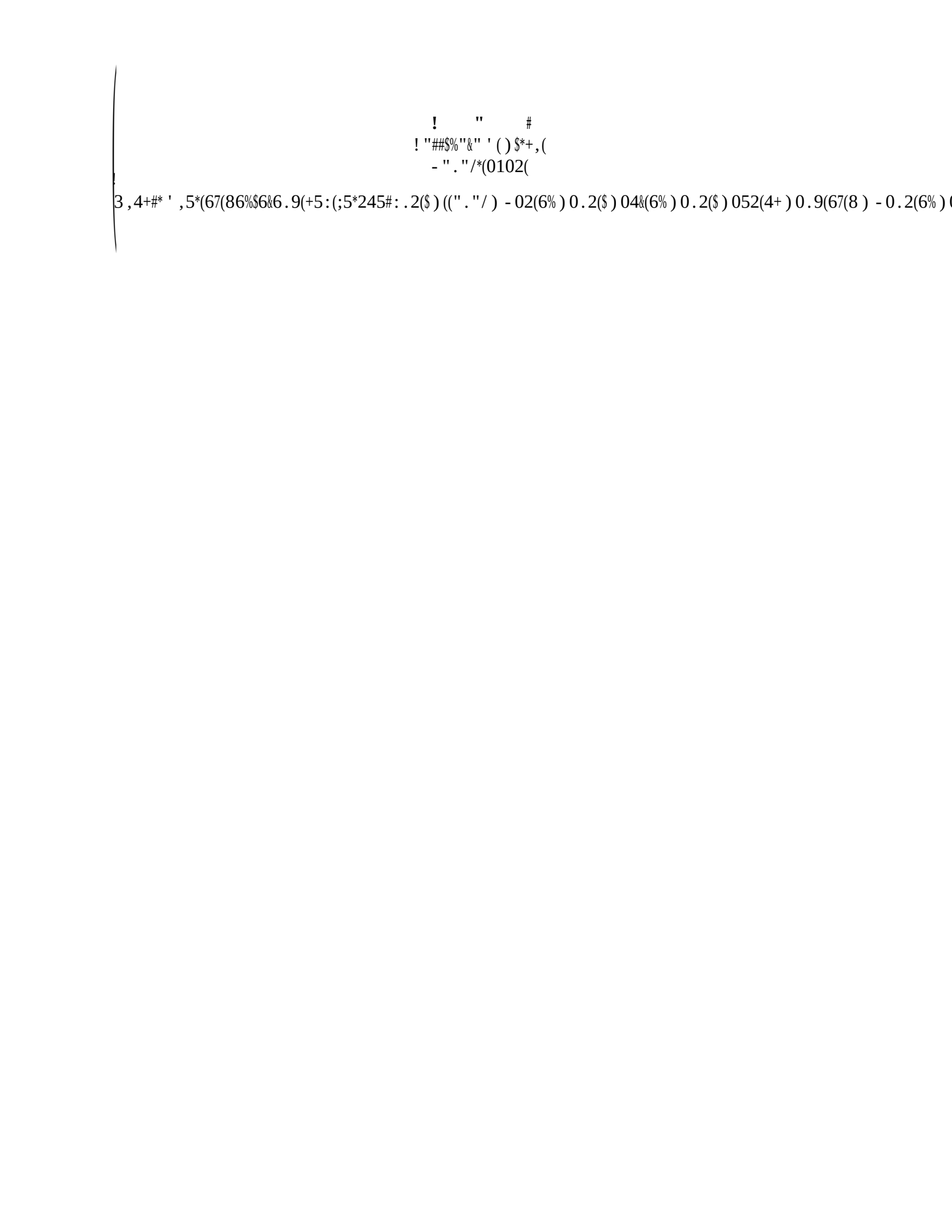
!
!
!

(
**+,-,.,,/#0(1.234#$.5674,*#**
H&,*%<,#0(L:N+#:(!M(+5:(Z $&&(S9/65M(010@M(bLI+ ' $5$5.(L5#6& ' ,5*(3,%$/$65/(+5:(T$7,(
! <+&&,5.,/(67(-:"&*(T,+#5,#/($5(-:G+5%,:(S,%<56&6.$,/(P#6.#+ ' /Mc((
(DA>@B=(@JJE@?2M!
(
S9/650(Z $&&(+5:(d6/$4+(Q6W/+M((01@DM((b; ' 46#*+5%,(67(Y#+:,/(+5:(P&+%, ' ,5*(76#(\ +*<(
-**+$5 ' ,5*Mc# (2J>AB=(@21E@20M(
(
H&,*%<,#0(L:N+#:(+5:(Z $&&(S9/65M(01@DM(bV#$:.$5.(S,%<5$%+&(8W$&&/(Y+4/(R,*N,,5(a$.<(8%<66&(
8*":,5*/(+5:(T6%+&(L ' 4&69,#/Mc( @>@B=(01EA@M(
(
H&,*%<,#0(L:N+#:(+5:(Z $&&(S9/65M(01@DM(b-(T65.$*":$5+&(-5+&9/$/(67(^6"5.(-:"&*(P+*<N+9/(*6(
8SL\a(e%%"4+*$65/Mc( (20>@B=(AKEKKM(
#
S9/650(Z $&&(+5:(d6/$4+(Q6W/+M((01@JM((b a 6N(8%<66&/(8*#"%*"#,(e 446#*"5$*9=(S<,(Q6&,(67(
! "##$%"&" ' (+5:(P&+%, ' ,5*($5(\ +*<(-**+$5 ' ,5*Mc#
(22=(@02E@AKM(
(
S9/650(Z $&&M(01@@M(bX,.+*$G,(;' 4+%*(67(L ' 4&69 ' ,5*(65(L5.$5,,#$5.(8*":,5*(S$ ' ,(
\ +5+.,' ,5*0(S$ ' ,(*6(3,.#,,0(+5:(Q,*,5*$65=((H+%"&*90(-:' $5$/*#+*6#0(+5:(8*+77(
P,#/4,%*$G,/Mc( (@A>2B=(
2DCE2C?
#
S9/650(Z $&&M(01@@M(b\6:,&$5.(L5.$5,,#$5.(3,.#,,(-**+$5 ' ,5*(F/$5.(a$.<(8%<66&(+5:(!6&&,.,(
P<9/$%/(+5:(!+&%"&"/(!6"#/,*+W$5.(+5:(-%<$,G,' ,5*Mc( (
@11>2B=(@E@?M(
#
S9/650(Z $&&(+5:(`+*<#95(\M(V6#' +5M(01@1M(bf Z,[G,(-&&(T,+#5,:(+(T6*(67(Z +9/(X6*(*6(86&G,(
*<,(P#6R&,' [=(P,#%,4*$65/(67(8%$,5%,(+5:(L5.$5,,#$5.(P+*<N+9/(+' 65.(S,5"#,:(Z 6 ' ,5(
H+%"&*9cM( (@J>2B=(0DKE0C@M(#
(
!+#*,#EL:N+#:/0(T6#$0(3$655,(!M(Y6:,**,0(8" ' $*#+(8<+5*+W" ' +#(Z <$*,0(+5:(Z $&&(S9/65M(011CM(
b-(!65%,4*"+&(H#+ ' ,N6#W(76#(8*":9$5.(-&%6<6&(;5*+W,(+5:(V&66:(P#,//"#,(65(a$/*6#$%+&&9(
V&+%W(!6&&,.,(+5:(F5$G,#/$*9(!+' 4"/,/Mc( >0B=(@2CE@JKM(
(
S9/650(Z $&&0(]Q,.$5+&:(T,,0(`+*<#95(V6#' +50(+5:(\ +#9(-55(a+5/65M((011DM((b8%$,5%,0(
S,%<56&6.90(L5.$5,,#$5.(+5:(\ +*<,' +*$%/(>8SL\B(P+*<N+9/=(a$.<(8%<66&(8%$,5%,(+5:(
\ +*<(!6"#/,N6#W(+5:(P6/*/,%65:+#9(3,.#,,(-**+$5 ' ,5*Mc((
(@0>AB=(02Ag0D1M(
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**' (()#893:5,.*#(.#;,<=,25*#(-#3#' (()#**
]\ +#*$5,h0()+5,//+0(\ $%<,&&,(a".<,/(\ $&&,#0(Z $&&(S9/65M((01@2M(b-5+&9h$5.(8SL\(H+%"&*9(
3,' 6.#+4<$%/(+5:(H+%"&*9(!&$ ' +*,(8"#G,9Mc(P4M(DCECJ($5(
0(,:$*,:(R9(

Z $&&(S9/65(!)((E(

S9/650( Z $&&(>P;B‴((01@C‴(P+*<S,%<(T;HL=(！65/*#"%*$5.(+(X+*$65+&(8"#G,9(67(L5.$5,,#$5.(
S,%<56&6.9(8*":,5*/(*<#6".<(Q,.$65+&(+5:(8*+*,N$:,(S,/*$5.(H$5+&(-55"+&(Q,46#*‴((
(
S9/650( Z $&&(>P;B‴((01@?‴(P+*<S,%<(T;HL=(！65/*#"%*$5.(+(X+*$65+&(8"#G,9(67(L5.$5,,#$5.(
S,%<56&6.9(8*":,5*/(*<#6".<(Q,.$65+&(+5:(8*+*,N$:,(S,/*$5.(^,+#(A(-55"+&(Q,46#*‴((
(
S9/650( Z $&&(>P;B‴((01@D‴(P+*<S,%<(T;HL=(！65/*#"%*$5.(+(X+*$65+&(8"#G,9(67(L5.$5,,#$5.(
S,%<56&6.9(8*":,5*/(*<#6".<(Q,.$65+&(+5:(8*+*,N$:,(S,/*$5.(^,+#(0(-55"+&(Q,46#*‴((
(
S9/650( Z $&&(>P;B‴((01@J‴(P+*<S,%<(T;HL=(！65/*#"%*$5.(+(X+*$65+&(8"#G,9(67(L5.$5,,#$5.(
S,%<56&6.9(8*":,5*/(*<#6".<(Q,.$65+&(+5:(8*+*,N$:,(S,/*$5.(^,+#(@(-55"+&(Q,46#*‴((
(
S9/650( Z $&&(>P;B‴((01@K‴(8"%%,//7"&(-%+:,'$%(+5:(L'4&69',5*(P+*<N+9/($5(-:G+5%,:(
S,%<56&6.$,/(H$5+&(-55"+&(Q,46#*‴((
(
S9/650( Z $&&(>P;B‴((01@2‴(8"%%,//7"&(-%+:,'$%(+5:(L'4&69',5*(P+*<N+9/($5(-:G+5%,:(
S,%<56&6.$,/(^,+#(A(-55"+&(Q,46#*‴((
(
S9/650( Z $&&(>P;B‴((01@A‴(8"%%,//7"&(-%+:,'$%(+5:(L'4&69',5*(P+*<N+9/($5(-:G+5%,:(
S,%<56&6.$,/(^,+#(0(-55"+&(Q,46#*‴((
(
S9/650( Z $&&(>P;B‴((01@0‴(8"%%,//7"&(-%+:,'$%(+5:(L'4&69',5*(P+*<N+9/($5(-:G+5%,:(
S,%<56&6.$,/(^,+#(@(-55"+&(Q,46#*‴((
#
**+ B $** #
**$*#%.6276:34#C2>,*56<35(.D#**
X+*$65+&(8%$,5%,(H6"5:+*$65(>3FL(n@?1@@JAB(
bP+*<S,%<(T;8SLX=(\$I,:(\,*<6:/(T65.$*":$5+&(;5G,/*$.+*$65/(67(8*":,5*/($5(S,%<5$%$+5(
L:"%+*$6Xc(

- P#$5%$4+&(;5G,/*$.+*6#=(Z $&&(S9/65(
- ！6EP#$5%$4+&(;5G,/*$.+*6#/=((T+W/<'$(d+9+#+'(+5:(\+#$&95(V+#.,#(
- oDCC0?K?(>e%*6R,#(01@?(g(e%*6R,#(010AB(
- o@KC0C0?(>8"44&,',5*+&(7"5:$5.B(
-

b8"%%,//7"&(-%+:,'$%(+5:(L'4&69',5*(P+*<N+9/($5(-:G+5%,:(S,%<56&6.$,/c((

- P#$5%$4+&(;5G,/*$.+*6#=(Z $&&(S9/65(
- ！6EP#$5%$4+&(;5G,/*$.+*6#/=((T+W/<'$(d+9+#+'0(\+#$,(V69,**,0(`+*<#95(V6#'+5(>#,*$#,:B(
- o@0@CJ0DC1(>8,4*,'R,#(01@@(g(-"."/*(01@KB(

(

**$*#8(E%.627&:34#C2>,*56<35(.D#**

X+*$65+&(8%$,5%,(H6"5:+*$65(>3FL(n0002J0AB(

b!6&&+R6#+*$G,(Q,/,+#%<=(!6''"5$*9(!6&&,.,(8E8SL\(X,*N6#W(>!!8XB(g(3,G,&64$5.(+5:(

8<+#$5.(Q,/,+#%<(65(T6NE;5%6',(!6''"5$*9(!6&&,.,(8*":,5*(3,%$/$65E\+W$5.(+5:(P+*<N+9/(

$5(8SL\c((

- P#$5%$4+&(;5G,/*$.+*6#=(\$%<,&&,()+5(X69(>Q"*.,#/(F5$G,#/$*9B(
- ！6EP#$5%$4+&(;5G,/*$.+*6#/=(Z $&&(S9/650(Q,5,,(L:N+#:/(>Q"*.,#/B0(L&$h+R,*<(dM(\,h+(

>F5$G,#/$*9(67(Z+/<$5.*65B(

- o00?DC0JD!>d+5"+#9(010A(g(3,%,'R,#(010DB!

(

X+*$65+&(8%$,5%,(H6"5:+*$65(>3FL(n0010@JCB(

bY#+5*(;5/$.<*/(*<#6".<(Q,/,+#%<(p(3,G,&64',5*(>Y;Q3B=(F/$5.(V$.(3+*+(!,5*,#,:(\$I,:(

\,*<6:/(*6(LI4&+$5()+#$+5%,/($5(Y#+5*(H"5:$5.(+5:(e"*%6',/(+*(SN6E^,+#(!6&&,.,/c((

- P#$5%$4+&(;5G,/*$.+*6#=(V,5l+'$5(Q,$:(>;'4+%*(-&&$,/B(
- ！6EP#$5%$4+&(;5G,/*$.+*6#/=(!<#$/*64<,#(V+,%<&,(>;5:$+5(Q$G,#(8*+*,(!6&&,.,B0(Z $&&(

S9/650(Q+//6"&(3+/*'6h:(>P;)eS2!<+5.,B(

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X8H(Q,/,+#%<(65(T,+#5$5.(+5:(L:"%+*$65(>QeTLB((bF5:,#/*+5:$5.(H+%*6#/(*<+*(8"/*+$5(8SL \ (
!+#,,#(P+*<N+9/c(>X8H(3QT(n1AADK2AB(

- P#$5%$4+&(;5G,/*$.+*6#=(`+*<#95(V6#'+50(F5$G,#/$*9(67(86"*<(H&6#$:+(
-

Z $&&(S9/65( ! ) (I((@1(

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-$W$5/0(8*,4<,50(3,5$/,(3+G$/E!6**650(\$%<,&&,(\+:,50(Z$&&(S9/650(+5:(V#,5:+(Z+&W,#M(010@M(
b-5(b-77$5$*9(\6',5*c=(V&+%W(Q,/,+#%<,#/(!6''$**,:(*6(Q+%$+&(Lk"$*9Mc(F8H(;5/*$*"*,(65(
V&+%W(T$7,(-55"+&(!657,#,5%,M(H,R#"+#9(AM(F5$G,#/$*9(67(86"*<(H&6#$:+0(S+'4+0(HTM((
(
Z$&/650(Q65,,(+5:(Z$&&(S9/65M(010@M(b;5%#,+/$5.(d6R(e446#*"5$*$,/(76#(^6"5.(V&+%W(H+*<,#/(*6(
;'4#6G,(!<$&:(+5:(!6''"5$*9(a,+&*<Mc(F8H(;5/*$*"*,(65(V&+%W(T$7,(-55"+&(!657,#,5%,M(
H,R#"+#9(AM(F5$G,#/$*9(67(86"*<(H&6#$:+0(S+'4+0(HTM((
(
S9/650(Z$&&M(01@JM(bF8H(P+*<S,%<Mc(84#$5.(01@J(\,,*$5.(67(*<,(H&6#$:+(-:G+5%,:(
S,%<56&6.$%+&(L:"%+*$65(!,5*,#(;5:"/*#9(-:G$/6#9(!6''$**,,M(8,4*,'R,#(@@M((8"5(
a9:#+"&$%/0(8+#+/6*+0(HTM((
(
S9/650(Z$&&M(01@KM(b8"%%,//7"&(-%+:,'$%(p(L'4&69',5*(P+*<N+9/($5(-:G+5%,:(S,%<56&6.$,/Mc((
`,956*,(/4,+W,#(+*(K*<(-55"+&(8SL\(P#67,//$65+&(-//6%$+*$65('',*$5./0(\+#%<(@CM((
\$::&,*65(a$.<(8%<66&0(S+'4+0(HTM((
(
S9/650(Z$&&M(01@2M(bF8H(P+*<S,%<Mc(H+&&(01@2(\,,*$5.(67(*<,(H&6#$:+(-:G+5%,:(S,%<56&6.$%+&(
L:"%+*$65(!,5*,#(;5:"/*#9(-:G$/6#9(!6''$**,,M(8,4*,'R,#(@@M((V#,N/*,#(S,%<5$%+&(!6&&,.,0(
S+'4+0(HTM((
(
S9/650(Z$&&M(01@AM(bP+*<S,%<=(V"$&:$5.(P+#*5,#/<$4/(N$*<(!6''"5$*9(!6&&,.,/(*6(8*":9(
P+*<N+9/(*6(-:G+5%,:(S,%<56&6.9(3,.#,,/Mc(F8H(8SL\(L:"%+*$65(Q,/,+#%<(!6&&6k"$"'(
V#6N5(V+.M(\+#%<(A1M(F5$G,#/$*9(67(86"*<(H&6#$:+0(S+'4+0(HTM((
(
**;  8  %  #**

**C25,.2356(234D#**

V6#'+50(`+*<#950(\+#9(-55(a+5/650(Z$&&(S9/650(a,+*<,#(\,$W&,M((011JM(bL77,%*/(67(!6&&,.,(
3,.#,,(P#6.#+'(!"&*"#,(65(H,'+&,(+5:(\$56#$*9(8*":,5*(8%$,5%,0(S,%<56&6.90(L5.$5,,#$5.(
+5:(\+*<,'+*$%/(>8SL\B(P+#*$%$4+*$65Mc(P+4,#(4#,/,5*,:(+*(*<,(+55"+&('',*$5.(67(*<,(T+*$5(
-',#$%+5(+5:(!+#$RR,+5(!657,#,5%,(76#(L5.$5,,#$5.(+5:(S,%<56&6.9(>T-!!L;B0(

Z $&&(S9/65( ! ) (E(@A(

S9/65O( Z $&&M(01@DM(bX65E

((

S9/650( Z $&&M(01@AM(bT$5W$5.( \ $%#6(+5:( \ +%#6=(8*":,5*(-%<$,G, ',5*(+5:(P,,#(L77,%*/(65(
Y,5:,#(3$/4+#$*$,/($5( \ +*<, '+*$%/(!6"#/,*+W$5.Mc(P+4,#(4#,/,5*,:(+*(*<,(-55"+&( \ ,,*$5.(67(
*<,(- ',#$%+5(86%$6&6.$%+&(-//6%$+*$650(-"."/*(@1E@A0(X,N(^6#W0(X^M(

(

S9/650( Z $&&(+5:(-/<&,9(84+&:$5.M(01@1M(b;'4+%*(67(b Z ,,:(e"*c(!6"#/,(-%<$,G, ',5*(+5:(
P#,%6&&,.,(P#,4+#+*$65(65(8SL \ (3,.#,,(-**+$5 ',5*(+'65.(Z6',5(+5:(F5:,##,4#,/,5*,:(
\ $56#$*$,/Mc((P+4,#(4#,/,5*,:(+*(*<,(-55"+&( \ ,,*$5.(67(*<,(- ',#$%+5(86%$6&6.$%+&(
-//6%$+*$650(-"."/*(@2E@D0(-*&+5*+0(Y-M(

(

V6#'+50(`+*<#95( \ M0(Q,.$5+&:(T,,0(-/<&,9(84+&:$5.0(Z $&&(S9/650(+5:(V,%W9(8',#:65M(01@1M((
be5ES#+%W(76#(8SL \ (!+#,,#/=(-%%,//(*6(Q$.6#6"/(+5:(Q,&,G+5*(8SL \ (!6"#/,N6#W($5(
H&6#$:+s/(a$.<(8%<66&/Mc(P+4,#(4#,/,5*,:(+*(*<,(-55"+&( \ ,,*$5.(67(*<,(- ',#$%+5(L:"%+*$65+&(
Q,/,+#%<(-//6%$+*$650(-4#$&(A1E \ +9(20(3,5G,#0(!eM(

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S9/650( Z $&&(+5:(`+*<#95(V6#'+5M(011CM(b[ Z ,[G,(-&&(T,+#5,:(+(T6*(67(Z+9/(X6*(*6(86&G,(*<,(
P#6R&,'[=((3,/%#$4*$65/(67(P6/$*$G,(3,4+#*',5*(-*'6/4<,#,(+5:(Q,%#"$*',5*(+5:(Q,*,5*$65(
67(H,'+&,(8*":,5*/(+5:(H+%"&*9(R9(S,5"#,:(H,'+&,(8%$,5%,(+5:(L5.$5,,#$5.(H+%"&*9Mc(P+4,#(
4#,/,5*,:(+*(*<,(-55"+&( \ ,,*$5./(67(*<,(- ',#$%+5(86%$6&6.$%+&(-//6%$+*$650(-"."/*(DE@@M(
8+5(H#+5%$/%60(!-M(

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**+,<6(234D#**

S9/650( Z $&&(+5:(T+W/<'$(d+9+#+'M(0101M(b \ 6*$G+*$65/(76#(+5:(;57&",5%,/(65(Z6',5s/(
L5#6&&',5*($5(S,%<5$%$+5(L:"%+*$65(P#6.#+'/(+*(SN6E^,+#(!6&&,.,/Mc(P+4,#(4#,/,5*,:(+*(*<,(
-55"+&( \ ,,*$5./(67(*<,(86"*<,#5(86%$6&6.$%+&(86%$,*90(-4#$&(@E2M((d+%W/65G$&&,0(HT(
>!+5%,&&,:(:",(*6(!e);3BM(

(

S9/650( Z $&&(+5:(T+W/<'$(d+9+#+'M(01@CM(b`56N&,:.,(+5:(F*$&$h+*$65(67(!+'4"/(Q,/6"#%,/(+5:(
P#6.#+'(8+*$/7+%*$65(-'65.(!6''"5$*9(!6&&,.,(S,%<5$%$+5(L:"%+*$65Mc(P+4,#(4#,/,5*,:(+*(
*<,(-55"+&( \ ,,*$5./(67(*<,(86"*<,#5(86%$6&6.$%+&(86%$,*90(-4#$&(@1E@AM((-*&+5*+0(Y-M(

(

S9/650( Z $&&(+5:(T+W/<'$(d+9+#+'M(01@?M(bP+*<S,%<(T;HL=(LI4,#$,5%,/(67(F5:,#EQ,4#,/,5*,:(
Y#6"4/($5(S,%<5$%$+5(L:"%+*$65Mc(P+4,#(4#,/,5*,:(+*(*<,(-55"+&( \ ,,*$5./(67(*<,(H&6#$:+(
L:"%+*$65+&(Q,/,+#%<(-//6%$+*$650(X6G,'R,#(@2E@J0(8*M(P,*,#/R"#.0(HTM(

(

S9/650( Z $&&(+5:(T+W/<'$(d+9+#+'M(01@?M(bP,#/65+&(+5:(P#67,//$65+&( \ 6*$G+*$65/(67(L5#6&&',5*(
$5(!6''"5$*9(!6&&,.,(-:G+5%,:(S,%<56&6.9(P#6.#+'Mc(P+4,#(4#,/,5*,:(+*(*<,(-55"+&(
\ ,,*$5./(67(*<,(86"*<,#5(86%$6&6.$%+&(86%$,*90(-4#$&(2ED0(X,N(e#&,+5/0(T-M(

(

S9/650( Z $&&M((01@JM((bP+*<S,%<(T;HL=(!65/*#"%*$5.(+(X+*$65+&(8"#G,9(67(3$G,#/,(!6''"5$*9(
!6&&,.,(8SL \ (8*":,5*/Mc(P+4,#(4#,/,5*,:(+*(*<,(-55"+&( \ ,,*$5./(67(*<,(86"*<,#5(
86%$6&6.$%+&(86%$,*90(-4#$&(@AE@J0(-*&+5*+0(Y-M(

(

(
S9/650( Z $&&M((01@2M((bV&+%W(+5:(a$/4+5$%(P+*<N+9/($5(H&6#$:+(8SL \ (L:"%+*$65=(Q,46#*/(7#6 ' (

(
**G4(.6/3#G(.1=#(2#&2<62,,.62<#",792(4(<H#**
S9/650(Z $&&M(0100M(bP+*<S,%<(T;8SLX(F4:+*,Mc((;5G$*,:(/4,+W,#(+*(84#$5.(0100(H&6#$:+(H6#" '(
65(L5.$5,,#$5.(S,%<56&6.9M((\+#%<(A@M((V#6N+#:(!6&&,.,(g(X6#*<(!+'4"/0(H6#*(T+":,#:+&,0(
HTM(
(
S9/650(Z $&&(+5:(T+W/<'$(d+9+#+'M(010@M(bP+*<S,%<(T;8SLX(F4:+*,Mc((;5G$*,:(/4,+W,#(+*(
84#$5.(010@(H&6#$:+(H6#" '(65(L5.$5,,#$5.(S,%<56&6.9M((\+#%<(@CM(()$#*"+&(P#,/,5*+*$65M((
(
S9/650(Z $&&(+5:(T+W/<'$(d+9+#+'M(0101M(bP+*<S,%<(T;8SLX(F4:+*,Mc((;5G$*,:(/4,+W,#(+*(H+&&(
0101(H&6#$:+(H6#" '(65(L5.$5,,#$5.(S,%<56&6.9M((e%*6R,#(@JM(()$#*"+&(P#,/,5*+*$65M((
(
S9/650(Z $&&(+5:(T+W/<'$(d+9+#+'M(01@CM(bP+*<S,%<(T;HL(F4:+*,Mc((;5G$*,:(/4,+W,#(+*(H+&&(01@C(
H&6#$:+(H6#" '(65(L5.$5,,#$5.(S,%<56&6.9M((e%*6R,#(@DM((8,'$56&,(8*+*,(!6&&,.,(g(T,,(
!+'4"/0(eG$,:60(HTM(
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01@J(H&6#$:+(H6#" '(65(L5.$5,,#$5.(S,%<56&6.9M((8,4*,'R,#(00M((3+9*65+(8*+*,(!6&&,.,(g(
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>X-LPB(a$.<(8%<66&(S#+5/%#$4*(8*":$,/(S,%<5$%+&(P+5,&0(Z+/<$5.*650(3!0(\+9(01@D(
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- Q,%#"$* ' ,5*(+5:(Q,*,5*$65( Z 6#W.#6"4(>010@E00B(
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