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/*#0**-!#1*!("*(-!%$2-#),*"3!%1,-(!(-4!#1*!2"5!!
(!6)(%#,$-(+!%$,-#*.)(#,$-!(77)$(%1!!
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.89:;<:=>!'?@;?!%?A>@?:<!

/@8B<:!2B;C<@D;EF!+>BG>B!

!

+8;D!.;:H(:?B?!

2B;C<@D;EF!>I!-?C?@@?!

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&<I<;!J>8!

2B;C<@D;EF!>I!.@<<BK;LM!!

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6<N@8?@F!OPQR!

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!"#$%&'&()%(*'+#,($%$-./0%+')0(-%#,-(1)'-#.,%2(-3((,%-"(%4564 7%8#9(%',:%-"(%;5%',:%<"#,'=%
)($&(/-#9(>?=%.9()%-"(%&()#.:%8).+%7.9(+2()%@AA@%-.%B')/"%@ACDE%!"(%>#,0'1($%2(-3((,%2.-"%
'11)(1'-(%',:%8#,',/#'>%$(/-.)%$-./0%#,:#/($%F2.-"%3((0>?%',:%+.,-">?G%')(%','>?$(:%H$#,1%
8)'/-#.,'>%#,-(1)'-#.,%',:%8)'/-#.,'>%/.#,-(1)'-#.,%+(-".:$E%IH)-"()=%)(/H)$#9(%/.#,-(1)'-#.,%
',>?$#$%#$%/'))#(:%.H-%8.)%-"(%3((0>?%$()#($%-.%$-H:?%-"(%#+&'/-%.8%-"(%@AAJKD%1>.2'>%8#,',/#'>%
/)#$#$%',:%-"(%@ACL%<"#,'%$-./0%+')0(-%/)'$"%.,%-"(%&'--(),%.8%$-./0%+')0(-%/.K+.9(+(,-E%!"(%
+'#,%8#,:#,1$%')(%-"(%8.>>.3#,1E%4>>%$-./0%#,:#/($%(*"#2#-%>.,1%+(+.)?E%!"()(%#$%/.#,-(1)'-#.,%
2(-3((,%-"(%4564 7%8#9(%',:%-"(%;5%2H-%'>+.$-%,.,(%2(-3((,%-"(%8.)+()%',:%<"#,'=%(*/(&-%
2(-3((,%M,:.,($#'%',:%<"#,'%#,%-"(%/'$(%.8%-"(%8#,',/#'>%$(/-.)E%!"(%@AAJKD%1>.2'>%8#,',/#'>%
/)#$#$%',:%-"(%@ACL%<"#,($(%,JETQq7(,/)0.1%<"#,0(()0.2Tm/T7000-41.3(00-41.3(00-41.3JETQETQ

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RH#$% 4E% O#>K4>','%1)'-(8H>>?%'/0,.3>(:1($%8#,',/#'>%$H&&.)-%8).+%-"(% B#,#$-()#.%:(%<#(,/#'%?%!(/,.>.1\'% F6<]@ACJKDLLASK^GE%

QT! ,BE@>G8LE;>B!

M,%-"(%+.$-%)(/(,-%:(/':($=%1>.2'>#$'-#.,%"'$%>(:%-.%#,/)('$#,1>?%$-).,1()%>#,0'1($%2(-3((,% $-./0%+')0(-$%',:%'%"#1"()%:(1)((%.8%/).$$K/.H,-)?%/.K+.9(+(,-=%3#-"%-"(%;5%&>'?#,1%'% :.+#,',-%).>(E%M,%-"(%$&(/#8#/%/'$(%.8%-"(%4$#',%)(1#.,%#-%'&&(')$%-"'-%<"#,'%#$%'>$.%2(/.+#,1% ',%#+&.)-',-%:)#9()%.8%$-./0%+')0(-%+.9(+(,-$%F5"H%(-%'>E=%@ACLGE%!"()(%"'9(%2((,%'%,H+2()% .8%/'$($%3"(,%:(9(>.&+(,-$%#,%<"#,'%"'9(%$(,-%$".0%3'9($%'/).$$%4$#'E%

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)($H>-$E%5(/-#.,%L%&)($(,-$%-"(%)($H>-$%8).+%-"(%)(/H)$#9(%/.#,-(1)'-#.,%',''>?$#$E%5(/-#.,%Z%.88()$%

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0T! +;E<@?E8@<!) <C;<K!

!"(%8#,',/#'>%#,-(1)'-#.,%>#-()'-H)(%"'$%+'#,>?%8./H$(:%.,%-"(%;5%'$%',%#,-(),'-#.,'>%&>'?()E%

T.3(9()=%1#9(,%<"#,'e$%1).3#,1%$#f(%',:%#,/)('$#,1>?%#+&.)-',-%8#,',/#'>%).>(=%$.+(%)(/(,-%

$-H:#($%"'9(%$-')-(:%',''>?$#,1%#-$%)(1#.,''>%#,8>H(,/(E%M,%&')-#/H>')=%$.+(%.8%-"(+%"'9(%(*'+#,(:%

-"(%/H))(,/?%+')0(-$%',:%"#1">#1"-(:%-"(%)#$#,1%#+&'/-%.8%-"(%^(,+#,2#%.,%-"(%4$#',%/H))(,/#($%

F(E1E=%5"H=%@ACA=%5H2)'+',#',%',:%U($$>()=%@AC@`%I)'-f$/"()%',:%B(">=%@ACX`%5"H%(-%'>E=%@ACL`%

<'&.)'>(%(-%'>E=%@ACDGE%<.,/(),#,1%-"(%+.,(?%+')0(-=%R#H%(-%'>E%F@ACSG%8.H,:%-"'-%)('>%#,-()($-%

&')#-?%".>:$%8.)%-(,%6'$-%4$#',%/.H,-)#($%-"'-%')(%$#1,#8#/',->?%#,8>H(,/(:%2?%(*-(),'>%8'/-.)$%

.)#1#,'-#,1%8).+%<"#,'E%4$%8.)%-"(%2.,:%+')0(-$=%T(%(-%'>E%F@AAYG%)(&.)-(:%-"'-%T.,1%U.,1e$%

+')0(-%#$%+.)(%#,-(1)'-(:%3#-"%-"(%<"#,($(%.,(%:H)#,1%-)',cH#>%&()#.:$%2H-%+.)(%'>#1,(:%3#-"%

-"(%;5%.,(%#,%-H)2H>(,-%-#+($`%+.)(%)(/(,->?=%".3(9()=%5"H%(-%'>E=%F@ACDG%(*'+#,(:%2.,:%

+')0(-$%#,%<"#,'%',:%(>(9(,%.-"()%4$#',KN'/#8#/%(/.,.+#($%',:%8.H,:%-"'-%<"#,'%)(+'#,$%'%

,(1>#1#2>(%&>'?()%#,%-"(%)(1#.,E%%

4$%8')%'$%$-./0%+')0(-$%')(%/.,/(),(:=%$.+(%)(/(,-%/.,-)#2H-#.,$%"'9(%#,9($-#1'-(:%

/).$$K+')0(-%>#,0'1($%#,%4$#'%8./H$#,1%#,%&')-#/H>')%.,%-"(%).>(%.8%<"#,'%F(E1E=%R(',%',:%5+?-"=%

@ACX`%5"H%(-%'>E=%@ACL`%4)$>',''>&%(-%'>E=%@ACZ`%5#,1"%',:%U'H)=%@ACZ`%5"H%(-%'>E=%@ACDGE%I',%(-%

'>E%F@AAYG%',:%5)#,#9'$',%(-%'>E%F@ACSG%',''>?$(:%-"(%>#,0'1(%2(-3((,%<"#,'%',:%.-"()%

#,-(),'-#.,''>%+')0(-$E%!"($(%$-H:#($%H$(%9')#.H$%+(-".:$%$H/"%'$%/.#,-(1)'-#.,%F#E(E=%5)#,#9'$',%

(-%'>E=%@ACS`%R(',%',:%5+?-"=%@ACX`%5#,1"%',:%U'H)=%@ACZG=%$-)H/-H)'>%9(/-.)%'H-.)(1)($$#.,$%

F5g4^$G%F5"H%(-%'>E=%@ACL`%5"H%(-%'>E=%@ACDG=%<'&#-'>%4$$(-%N)#/#,1%B.:(>%F<4NBG%2'$(:%

)(1)($$#.,%',''>?$#$%F%4)$>',''>&%(-%'>E=%@ACZG=%',:%B')0.9K53#-/"#,1%g(/-.)%6)).)%<.))(/-#.,%

B.:(>$%FB5Kg6<BG%FI',%(-%'>E=%@AAYGE%!"(%.9()'>>%/.,/>H$#.,%#$%-"'-%<"#,'e$%#,8>H(,/(%3#-"#,%

',:%.H-$#:(%-"(%4$#',%)(1#.,%"'$%2((,%$-(':#>?%#,/)('$#,1%#,%)(/(,-%?(')$%2H-%#$%,.-%?(-%'$%&).+#,(,-%'$%-"'-%.8%-"(%;5E%%

^(1'):#,1%-"(%#+&'/-%.8%-"(%@AAJKD%1>.2'>%8#,',/#'>%/)#$#$=%O>#/0%',:%TH-/"#$.,%F@ACSG%#,9($-#1'-(:%$-./0%+')0(-%>#,0'1($%

4,.-"()%,.-#/('2>(%1'&%#,%-"(%>#-()'-H)(%#$%-"(%>'/0%.8%(9#:(,/(%.,%-"(%#+&'/-%.8%-"(%

@AAJKD%1>.2'>%8#,',/#'>%/)#$#$%',:%-"(%@ACL%<"#,($(%$-./0%+')0(-%/)'$"%.,%8#,',/#'>%>#,0'1($%#,%

-"(%)(1#.,%F3#-"%-"(%(*/(&-#.,%.8%-"(%/.,0)#2.0(1#)q0.24000.(70.4461Tm/TT81Tf[(<"#)0.2(,()0.2(

! . % H , : ()$-' , :% -"(% 8)'/-#. , '>% #,-(1)'-#. ,% ' , :% /.#,-(1)'-#. ,% +(-". :$% H$(:% 2(>. 3% $. +(%
:(8#,#-#. ,$%')(%H$(8H>E%M,%&')-#/H>')=%'%/. 9')#' , /(%$-'-#. , ')?%&). /($$%j*.=%-%k%A=%lC=%mn%#$%:(8#,(:%
-. %2(%MFAG%.)%-. %(*"#2#-%$".)-%+(+.)?%

Q(>. 3% 3(% ($-#+'-(% :% H$#,1% -3.% '&&).'/"($=% &')'+(-)#/% ',:% $(+#K&')'+(-)#/%
)($&(/-#9(>?=%2.-"%2'$(:%.,%-"(% d "#-->(%8H,/-#.,%#,%-"(%8)(cH(,/?%:.+'#,%FP'">"'H$=%CYDYGE%
!"(%8.)+()%H$($%'%-($-#,1%&)./(:H)(%:H(%-.%^.2#,$.,%FCYYXG%-"'-%#$%-"(%+.$-%(88#/#(,-%+(-".:%
#,%-"(%N#-+',%$(,$(%'1'#,$-%>./'>%:(&')-H)($%8).+%-"(%,H>>E%4,.-"()%':9',-'1(%.8%-"#$%'&&).'/"%
#$%-"'-%#-%"'$%'%$-',:'):%,H>>%>#+#-%:#$-)#2H-#.,%',:%-"#$%'$?+&-.-#/%2("'9#.H)%".>:$%)(1'):>($$%
.8%-"(%#,/>H$#.,%.8%:(-()+#,#$-#/%-()+$%$H/"%'$%#,-()/(&-$%.)%>#,(')%-)(,:$E%B.)(.9()=%#-%#$%9'>#:%
8.)%',?%)('>%9'>H(%.8%:%',:%-"()(8.)(%#-%#$%,.-%,(/($$')?%-.%:#88()(,-#'-(%-"(%$()#($%,%/'$(%.8%,.,K
$-'-#.,')?%2("'9#.H)E%!"(%>'--()%8.>>.3$%^.2#,$.,%FCYYLG%',:%#$%2'$(:%.,%'%>./'>%d "#-->(%
8H,/-#.,%3#-"%8)(cH(,/#($%:(1(,()'-#,1%-.%f().E%!"#$%+(-".:%)(cH#)($%$-'-#.,')#-?%',:%-"()(8.)(%
-"(%',>?$#$%3#>>%2(%/.,:H/-(:%.,%-"(%8#)$-K:#88()(,/(:%$()#($=%'::#,1%C%-.%-"(%($-#+'-(:%9'>H(%
.8%:E[S]%

% I)'/-#.,'>%/.#,-(1)'-#.,%#$%',-H)'>%(*-(,$#.,%.8%-"(%/.,/(&-%.8%8)'/-#.,'>%/.#,-(1)'-#.,%
-.%-"(%+H>-#9')#'-(%/'$(E%M,%-"#$%&'&()%3(%8./H$%.,%2#9')#'-(%)(>'-#.,$"#&$`%8.>>.3#,1%6,1>(%',:%
O)',1()%FCYDJG=%-3.%$()#($=%?C-%',:%?@-=%')(%$'#:%-.%2(%/.#,-(1)'-(:%#8%'G%2.-"%.8%-"(+%')(%
#,-(1)'-(:%.8%-"(%$'+(%.):()=%$'?%:=%',:%2G%#8%-"()(%(*#$-$%'%>#,(')%/.+2#,'-#.,%.8%-"(%-3.%3"#/"%
#$%#,-(1)'-(:%.8%'%$+'>>()%.):()=%$'?%:%K%2=%3#-"%2%r%AE%7.-(%-"'-%#,%-"(%.)#1#,'>%&'&()%2?%6,1>(%
',:%O)',1()%FCYDJG%-"(%-3.%&')'+(-()$%:%',:%2%3()(%'>>.3(:%-.%2(%8)'/-#.,'>=%-".H1"%+.$-%.8%
-"(%(+&#)#/'>%'&&>#/'-#.,$%$#,/(%-"(,%"'9(%8./H$(:%.,%-"(%#,-(1()%/'$(=%3#-"%:%k%2%k%C`%.,>?%
+.)(%)(/(,-%$-H:#($%"'9(%'>$.%'>>.3(:%8.)%8)'/-#.,'>%9'>H($E%Q(>.3%3(%-($-%-"(%.):()%.8%
#,-(1)'-#.,%.8%-"(%:#88()(,-#'>$%2(-3((,%-"(%4564 7%$-./0%#,:#/($%',:%-".$(%.8%;5%',:%<"#,'=%
#E(E%3(%#+&.$(%-"(%/.#,-(1)'-#,1%9(/-.)%-.%2(%(*'/->?%FC=%KCG%$#,/(%($-#+'-#,1%-"(%/.#,-(1)'-#,1%
/.(88#/#(,-$%3.H>:%)(cH#)(%-"(%/.+&H-'-#.,%.8%#,-(%$'+&>(%/)#-#/'>%9'>H($%8.)%-"(%/.,8#:(,/(%
2',:$=%3"#/"%3.H>:%2(%/.+&H-'-#.,'>>?%9()?%#,-(,$#9(E!

%

[S]%]-"()%$(+#K&')'+(-)#/%+(-".:$%F42':#)%(-%'>E=%@AAJ`%N"#>>#&$%',:%5"#+.-$H=%@AAX=%@AAL`%5"'.=%@ACAG%)(cH&c42004219$7.'5

!

VT! 4?E?!?BG!* = A;@;L?:!) <D8:ED!

!"(%$()#($%H$(:%8.)%-"(%','>?$#$%')(%3((0>?%'11)(1'-(%$-./0%+')0(-%#,:#/($%'$%3(>>%'$%8#,',/#'>%$(/-.)%#,:#/($%8.)%<"#,'=%-"(%4564 7%8#9(%F#E(E=%M,:.,($#'=%B'>'?$#'=%N"#>#&&#,($=%5#,1'&.)(%',:%!"'#>',:G%',:%-"(%;5%8).+%7.9(+2()%@AA@%-.%B')/"%@ACDE%!"(%:'-'%$.H)/(%#$%P'-'$-)('+E%I#1H)(%C%:#$&>'?$%-"(%3((0>?%$()#($%8.)%-"(%'11)(1'-($`%'>>%.8%-"(+%&('0%#,%@AAJ=%:(/>#,(%$"')&>?%#,%@AAD%',:%-"(,%#,/)('$(%$-(':#>?=%-".H1"%>($$%.29#.H$>?%#,%-"(%/'$(%.8%<"#,'=%H,-#>%+#:K@ACX`%',.-"()%&('0%#,%@ACL%#$%8.>>.3(:%2?%'%8'>>=%+.)(%&)..,.H,/(:%#,%-"(%4$#',%/.H,-)#($%-"',%#,%-"(%;5=%',:%-"(,%$-(':?%1).3-"%#,%@ACZK@ACJ%F3#-"%-"(%(*/(&-#.,%.8%-"(%N"#>#&&#,($G%',:%'%$>#1"-%:#&%-.3'):$%-"(%(,:%.8%-"(%$'+&>(%&()#.:E%I#,',/#'>%$(/-.)%#,:#/($%F3((0>?G%')(%&>.--(:%#,%I#1H)(%@`%-"(?%(*"%#2#-%$#+#>')%&'--(),$%-.%-".$(%#,%I#1H)(%C=%'>-".H1"%-"(%:#&$%#,%@AAJ%',:%@ACL%')(%+.)(%&)..,.H,/(:%-"',%8.)%-"(%'11)(1'-(%#,:#/($E%4$%'%).2H$-,($$%/"(/0%3(%'>$.%(*'+#,(%+.,-">?%:'-'%8.)%2.-"%-"(%'11)(1'-(%',:%8#,',/#'>%$(/-.)%#,:#/($%FI#1H)($%S%',:%XGE%!"($(%:#$&>'?%$#+#>')%&'--(),$%-.%-"(%3((0>?%.,($%&>.--(:%#,%I#1H)(%C%',:%@E%4>>%$()#($%')(%>.11(:%8.)%-"(%(+&#)#/'>%',:'>?$#$%2(>.3E%!

%

VTQT! 0 <<W:F! (99@<9?E<!"E>LW!,BG;L<D!*C;G<BL<! !

d(%$-')-%2?%',:'>?$#,1%-"(%3((0>?%$()#($%',:%($-#+'-#,1%-"(%8.>>.3#,1%+.:(>V%

$%_! = α + β! + #_! &$ – $%^&' #_! = "_! ! = $! #! """"!% FSG%

H,:()%-"(%-3.%/'$($%.8%H,/.))(>'-(:%',:%'H-./.))(>'-(:%()).)$-%#,%-"(%>'--()%/'$(%H$#,1%'%,.,K&')'+(-)#/%'&&).'/"%:H(%-.%Q>..+8#(>:%FCYJSG%-"'-%&).:H/($%'H-./.))(>'-#.,$%:(/'?#,1%'-%',%(*&.,(,-#'>%)'-(%'$%#,%-"(%4^B4%/'$(E%!'2>(%C'%:#$&>'?$%-"(%d"#-->(%($-#+'-($%.8%:=%'>.,1%3#-"%-"(%YL_%/.,8#:(,/(%#,-()9'>$%/.))($&.,:#,1%-.%-"(%,.,K)(b(/-#.,%9'>H($%.8%:%H$#,1%^.2#,$.,e$%FCYYXG%&')'+(-)#/%'&&).'/"=%8.)%-"(%-")((%$-',:'):%/'$($%.8%,.%:(-()+#,#$-#/%-()+$%Fs%k%t%k%A%#,%FSGG=%',%#,-()/(&-%Fs%($-#+'-(:%',:%t%k%AG=%',:',%#,-()/(&-%',:'%>#,(')%-#+(%-)(,:%F#E(E=%s%',:%t%2.-"%H,0,.3,%',:%($-#+'-(:%8).+%-"(%:'-'GE%

; , : ()%-"(%'$$H+&-#. ,%.8%3"#-(%, .#$(%()).)$%-"()(%'&&(')$%-.%2(%+(',%)(9()$#. ,%F:%r%CG%
#,%-"(%/'$(%.8%-"(%;5`%-"(%H,#-%)..-%,H>>%"?&.-"($#$%F#E(E=%:%k%CG%/', , .-%2(%)(b(/-(:%8.)%M, : . ,($#'=%
-"(%N"#>#&&#,($%', :%!"'#>', :=%3"#>$-%#-%#$%)(b(/-(:%#,%8'9.H)%.8%"#1"()%.):()$%.8%#,-(1)'-#. ,%F:%q%
CG%8.)%<"#,'=%B'>'?$#'%', :%5#,1'&.)(E% d"(,%'>>.3#,1%8.)%'H-./.))(>'-#. ,%'$%#,%Q>..+8#(>:%
FCYJSG=%(9#:(,/(%.8%MF:G%2("'9#.H)%3#-"%:%q%C%#$%8.H, :%8.)%<"#,'=%M, : . ,($#'=%5#,1'&.)(%', :%
!"'#>', :=%', :%(9#:(,/(%.8%MFCG%2("'9#.H)%8.)%B'>'?$#'=%-"(%N"#>#&&#,($%', :%-"(%;5E%],%-"(%
3".>(=%-"()(%#$%(9#:(,/(%.8%MF:G%2("'9#.H)%3#-"%:%k%C%.)%:%q%C%#,%'>>%/'$($=%3"#/"%#+&>#($%-"'-%
$".0$%"'9(%&()+',(,-%(88(/-$E%%

X,BD<@E!#?N:<D!Q?!?BG!QN!?N>8E!M<@<Y!

!'2>(%C2%:#$&>'?$%-"(%($-#+'-($%.8%:%8).+%-"(%$(+#&')'+(-)#/%'&&).'/"E%%!"(%)($H>-$%')(%
)(&.)-(:%8.)%'%$(>(/-(:%1).H&%.8%2', :3#:-"%&')'+(-()$=%8).+%@L%-.%SCE%!"(%MFCG%"?&.-"($#$%
/', , .-%2(%)(b(/-(:%8.)%', ?%.8%-"(+%#,%-"(%/'$(%.8%M, : . ,($#'=%', :%8.)%$.+(%#,%-"(%/'$(%.8%B'>'?$#'%
', :%-"(%;5E%!"($(%)($H>-$%')(%/.,$#$-(,-%3#-"%-"(%&')'+(-)#/%., ($=%$#,/(%-"(?%'>$.%&).9#:(%
(9#:(,/(%.8%MF:G%2("'9#.H)%3#-"%:%k%C%.)%:%q%C%#,%'>>%/'$($E%
% 7(*-%3(%',>?$(%-"(%/.#,-(1)'-#,1%)(>'-#. ,$%3#-"%)($&(/-%-.%2.-"%<"#,'%', :%-"(%;5%2?%
/. ,$#:()#,1%-"(%:#88()(,-#'>$%2(-3((,%-".$(%-3.%/.H,-)#($%', :%-"(%45647%., ($E%!"(%)($H>-$%
9#$KuK9#$%<"#,'%')(%)(&.)-(:%#,%!'2>(%@'E%!"()(%#$%, .%(9#:(,/(%.8%+(',%)(9()$#. ,%F:%r%CG=%', :%
-"H$%.8%/. ,9()1(,/(=%)(1'):>($$%.8%3"(-"()%-"(%)($#:H'>$%')(%'$$H+(:%-.%2(%'%3"#-(%, .#$(%.)%', %
'H-./.))(>'-(:%&)./($$=%#E(E%-"()(%#$%, .%(9#:(,/(%.8%/. ,9()1(,/(%3#-"%)($&(/-%-.%<"#,'E%%

X,BD<@E!#?N:<D!O?!?BG!ON!?N>8E!M<@<Y!

!'2>(%@2%:#$&>'?$%-"(%)($H>-$%9#$KuK9#$%-"(%;5E%M,%-"#$%/'$(=%H,>#0(%-"(%&)(9#.H$%., (=%
+(',%)(9()$#. ,%', :%-")(8.)(%/. ,9()1(,/(%#$%8.H, :%8.)%'>>%$()#($E%T.3(9()=%-"(%':bH$-+(,-%
&)./($$%#$%$>.3=%$#,/(%-"(%.):()%.8%#,-(1)'-#. ,%#$%>')1(%#,%'>>%/'$($=%)', 1#,1%2(-3((,%AED%', :%AEYE%
d"(,%'>>.3#,1%8.)%'H-./.))(>'-#. ,=%-"()(%#$%3('0()%(9#:(,/(%.8%/. ,9()1(,/(=%', :%-"(%H,#-%)..-%
,H>>%/', , .-%2(%)(b(/-(:%#,%$.+(%/'$($%F#E(E=%M, : . ,($#'%', :%!"'#>', :G%

M,%2)#(8=%.H)%','›?$#$%&).9#:($%$.+(%3('0%(9#:(,/(%.8%/.,9()1(,/(%9#$KuK9#$%-"(%;5=%
2H-%,.,(%9#$KuK9#$%<"#,'E%!"#$%#$%/.,$#$-(,-%3#-"%)(/(,-%$-H:#($%.,%4$#',%$-./0%+')0(-$%8#,:#,1%
-"'-%1›.2'›%#,-(1)'-#.,%2(-3((,%-"(%4$#',%',:%;5%$-./0%+')0(-$%:.+#,'-($%)(1#.,'›%#,-(1)'-#.,%
FT#,.b'›($%',:%N')0=%@ACC`%N')0%',:%R((=%@ACC`%U#+%(-%'›E=%@ACC`%U#+%',:%R((=%@AC@`%N')0=%
@ACSGE%%

!

VTO!!!! 0 <<W:F!6;B?BL;?:!"<LE>@!,BG;L<D!*C;G<BL<!

!'2›(%S'%:#$&›'?$%-"(% d "#-->(%($-#+'-($%.8%:%8.)%-"(%8#,',/#'›%$(/-.)%#,:#/($%8.)%-"(%-")((%

.,(%#,%-"(%/'$(%.8%M,:.,($#'E%d"(,%'».3#,1%8.)%'H-./.))(>'-#.,=%,.%(9#:(,/(%.8%+(',%)(9()$#.,%#$%8.H,:%#,%',?%$#,1>(%/'$(E%%

X,BD<@E!#?N:<D!V?!?BG!VN!?N>8E!M<@<Y!

Q?%/.,-)'$-=%-"(%)($H>-$%8.)%-"(%;5%F!'2>(%X2G%$H11($-%+(',%)(9()$#.,%',:%-"H$%/.,9()1(,/(%8.)%'»%8#9(%45647%(/.,.+#($E%!"(%.):()%.8%#,-(1)'-#.,%#$%)(>'-#9(>?%>')1(%#,%'»%/'$(%F)',1#,1%2(-3((,% AED% ',:% AEYG=% 3"#/"% #+&>#($% $>.3% /.,9()1(,/(E% ;,:()% -"(% '$$H+&-#.,% .8%'H-./.))(>'-#.,=%-"()(%#$%(9#:(,/(%.8%/.,9()1(,/(%.,>?%

M,%-"#$%$(/-#.,%3(%)(&('-%-"(%',›?$#$%H$#,1%+.,-"›?%:'-'%'$%'%).2H$-,($$%/"(/0E%X%%!"(%8)'/-#.,'›%#,-(1)'-#.,%',:%/.#,-(1)'-#.,%)($H›-$%')(%&)($(,-(:%#,%!'2›($%L'KD2E%%

!"(%($-#+'-($%2'$(:%.,%-"(%&')'+(-)#/%+(-".:%.8%^.2#,$.,%FCYYXG%')(%:#$&›'?(:%#,%!'2›(%L'%8.)%-"(%'11)(1'-(%#,:#/($%',:%!'2›(%J'%8.)%-"(%8#,',/#'›%$(/-.)%#,:#/($E%;,:()%-"(%3"#-(%,.#$(%'$$H+&-#.,=%-"(%H,#-%)..-%,H›»"?&.-"($#$%F#E(E=%:%k%CG%/',,.-%2(%)(b(/-(:%8.)%',?%.8%-"(%'11)(1'-(%#,:#/($%2H-%5#,1'&.)(%F:%k%CECSG=%8.)%3"#/"%#-%#$%)(b(/-(:%#,%8'9.

%%],%-"(%3".>(=%-"(%+.,-">?%)($H>-$%')(%/.,$#$-(,-%3#-"%-"(%3((0>?%.,($V%'>-".H1"%-"()(%

')(%8(3()%#,$-',/($%.8%+(',%)(9()$#.,=%'1'#,%-"()(%#$%$-).,1()%(9#:(,/(%.8%/.,9()1(,/(%2(-3((,%

-"(%4564 7%8#9(%',:%-"(%;5%/.+&')(:%-.%<"#,'=%2.-"%8.)%-"(%'11)(1'-(%',:%-"(%8#,',/#'>%$(/-.)%

#,:#/($E%R.3()%8)(cH(,/?%:'-'%$H/"%'$%+.,-">?%.,($%+#1"-%,.-%:(-(/-%-)',$#(,-%)($&.,$($%-.%

#,,.9'-#.,$%-"'-%+'?%>'$-%8.)%'%$".)-%&()#.:%.,>?%FQ)'#>$8.):=%CYYZ`%6>?'$#',#=%(-%'>E=%CYYD`%

4,:()$(,=%(-%'>E%@AA@`%N'>'+'>'#%(-%'>E=%@ACSGE%%!"()(8.)(=%3(%$"'>>%(+&>.?%3((0>?%:'-'%8.)%-"(%

)(/H)$#9(%/.#,-(1)'-#.,%',>?$#$E%%

ZT!) <L8@D;C<!%>;BE<9@?E;>B! (B?:FD;D!

M,%-"#$%$(/-#.,%3(%/'))?%.H-%)(/H)$#9(%/.#,-(1)'-#.,%',>?$#$%H$#,1%3((0>?%:'-'E%M,%&')-#/H>'](E)TjE0!9.2(:

/"',,(>$%F6$$()$-%@ACSGE%^(1'):#,1%-"(%4564 7%8#9(K<"#,'

!

-"(#)%$-H:?%.8%6H).&(',%',:%;5%$-./0%+')0(-%#,-(1)'-#.,E%B.)(.9()=%I#1H)($%L%',:%Z%$".3%-"'-%

-"(%@ACL%$-./0%+')0(-%-H)+.#>%#,%<"#,'%:.($%,.-%$((+%-.%"'9(%'88(/-(:%-"(%4564 7%8#9(K;5%

8#,',/#'>%>#,0'1($%',:%"'$%"':%'%+H/"%>($$%,.-#/('2>(%#+&'/-%.,%-"(%4$#',%(/.,.+#($%/.+&')(:%

-.%-"(%@AAJKD%1>.2'>%8#,',/#'>%/)#$#$=%

M,:.,($#'%',:%<"#,'%#,%-"(%/'$(%.8%-"(%8#,',/#'>%$(/-.)E%!"(%>'--()%(9#:(,/(=%/.+2#,(:%3#-"%-"(%
($-#+'-($%.8%:%2(-3((,%-"(%4564 7%8#9(%',:%<"#,'%2(#,1%>.3()%8.)%'>>%8#,',/#'>%$(/-.)%#,:#/($%
/.+&')(:%-.%-"(%'11)(1'-(%.,($=%#+&>#($%-"'-%-"()(%#$%/>.$()%#,-(1)'-#.,%2(-3((,%-"(%4564 7%
8#9(%',:%<"#,'%#,%-"(%2',0K:.+#,'-(:%8#,',/#'>%$(/-.)$%-"',%#,%-"(%/'$(%.8%-"(%'11)(1'-(%$-./0%

).': + '&%#,%@AAD=%-"(%<"#',1% B '#%M,#-#'-#9(% BH>-#>'-()'>#f'-#.,%#,%@AC@G% ')(%:($#)'2>(%-.%
&).+.-(%8H)-"()%8#,',/#'>%/..&()'-#.,%#,%-"(%)(1#.,E% I.)%#,$-',/(=%8).+%-"(%&.#,-%.8%9#(3%.8%
8#

P'">"'H$%^E%CYDYE%688#/#(,-%&')'+(-()%($-#+'-#.,%8.)%$(>8K$#+#>')%&)./($$E%4,,'>$%.8%5-'-#$-#/$%
CJV%CJXY – CJZZE%
%
P.>'-'2':#=%5E=%7#(>$(,=%BE%|E=%x%}H=%UE%F%@ACLGE%4%8)'/-#.,'>>?%/.#,-(1)'-(:%g4^%',>?$#$%.8%
&)#/(%:#$/.9()?%#,%/.++.:#-?%8H-H)($%+')0(-$E%*!"#$%&'(")(8#.#$-0(9&$2-.0*=%SL=%SSYpSLZE%
%
6>?'$#',#=%6E=%N()()'=%NE=%x%NH)#=%!E%FCYYDGE%M,-():(&(,:(,/(%',:%:?,'+#/%>#,0'1($%2(-3((,%
$-./0%+')0(-$%.8%5)#%R',0'%',:%#-$%-)':#,1%&')(,-$E%a.H),'>%.8%BH>-#,'-#.,'>%I#,',/#'>%
B',1(+(,-=%D=%DYKCACE%
%
6,1>(%^I=%O)',1()%<daE%CYDJE%<.#,-(1)'-#.,%',:%()).)K/.))(/-#.,V%)(&)($(,-'-#.,=%($-#+'-#.,%
',:%-($-#,1=%6/.,.+(-)#/$%SL=%
B'?=%CXSSCLYE%
%
6$$()$%PE%P(9(>.&#,1%/.H,-)?%9H>,()'2#>#-?%#,%>#1"-%.8%-"(%1>.2'>%8#,',/#'>%/)#$#V%$".0%-"()'&?~%
^(9%P(9%I#,',/(%@ACS`SV%ZCpDS%
%
I',=%UE=%RH=%{E%x%d',1=%5E%@AAY=%

!

!

CX@A − CXSJE%
%
^.2#,$.,%NBE%CYYLE%R.1K&()#.:.1)'+%)(1)($$#.,%.8%-#+(%$()#($%3#-"%>.,1%)',1(%:(&(,:(,/(E%4,,'>$%.8%5-'-#$-#/$%@SV%
CAXD − CAJ@E%
%
5'>#:b',.9'=%7E=%@ACLE%<"#,'z$%5-./0%B')0(-%<.»'&$(%',:%O.9(),+(,-z$%^($&.,$(E%;E5EK%<"#,'%6/.,.+#/%',:%5(/H)#-?%^(9#(3%<.++#$$#.,%M$$H(%Q)#(8E%;5%1.9(),+(,-=%d'$"#,1-.,=%P<E%
%
5"'.=%}E=%@ACA=%7.,$--#.,')#-?K(*-(,:(:%d"#-->(%($-#+'-#.,-=%6/.,.+(-)#/%!"(.)?%@Z=%X=%CAZAKCADJE%
%
5"H%<E=%@ACA=%M+&'/-%.8%-"(%^(,+#,2#%6*/"',1(%^'-(%.,%4$#',%<H))(,/#($E%M,V%N(,1%dE=%5"H%<E%F(:$G%<H))(,/?%M,-(),'-#.,'>#f'-#.,V%O>.2'>%6*&()#(,/($',:%M+&>#/'-#.,$%.)%-"(%^(,+#,2#E%N'>1)'9(%B'/+#»',-%R.,:.,%
%
5"H=%<E=%T(=%PE=%P.,1=%aE%',:%d',1=%TE%@ACDE%^(1#.,'>%&H»%9$%1>.2'>%&H$"%8'/-.)$V%<"#,'%',:%;5%#,8>H(,/(%.,%4$#',%8#,',/#'>%+')0(-$=%a.H),'>%.8%M,-(),'-#.,'>%B.,(?%',:%I#,',/(=%DJ=%CC@KCS@E%
%
5"H=%<E=%T(=%PE=%d',1=%TE%',:%P.,1=%aE%@ACL=%!"(%M,8>H(,/(%.8%<"#,($(%',:%;5%I#,',/#'>%B')0(-$%.,%4$#'KN'/#8#/=%QM5%N'&()%7.E%D@E%Q',0%8.)%M,-(),'-#.,'>%5(-->(+(,-$=%Q'$(>E%%
%
5#,1"=%4E%',:%U'H)=%NE%@ACZ=%P.%Q^M<%<.H,-)#($e%6cH#-?%B')0(-$%<.KB.9(%#,%R.,1%^H,~E%!"(.)(-#/'>%6/.,.+#/$%R(--()$=%Z=%CCYKCSAE%%
%
5)#,#9'$',%NE=%U'>'#9',#%BE%',:%P(9'0H+')=%<E%@ACS=%5-./0%B')0(-%R#,0'1($%#,%6+()1#,1%4$#'KN'/#8#/%B

! "#$%& ' "(&) *+, - "+%*& . /&0&/ . 1&%"23&*%1,%*&4 ,+3 . 5+&"60&4 ,+3&"5+ . 2 . 11%$"+,. 67&4 %%8$9&": : 1%: "+%&*+ . 28&,60,2%*&

!	"#!$%&#'#(()*$&+#"!			, +&-!$%&#'#(()*$&+#"!		
. #%"&(+)/!	0#!()1()//#(/!	2"!+"&)(')3&!	2!*+")$(!&+4)!&()"5!	0#!()1()//#(/!	2"!+"&)(')3&!	2!*+")$(!&+4)!&()"5!

! "#$%&@"(&) *+, - "+%*&./&0&/1. - &+3%&/1"2+,.6"$&2.,6+%:1"+,.6&1%:1%,.6*&J,*KLKJ,*&M3,6"7&4%%8$9&":::1%:"+%&*+.28&,60,2%*&**

!	"#!$%&#'#(()*$&+#"!			, +&-!$%&#'#(()*$&+#"!		
.#%"&(+)/!	0#!()1()//#(/!	2"!+"&)(')3&!	2!*+")$(!&+4)!&()"5!	0#!()1()//#(/!	2"!+"&)(')3&!	2!*+")$(!&+4)!&()"5

!!!!!!!!! ! "#$%&>"(&) *+, - "+%*&./&0&/.1&%"23&*%1,%*&4,+3.5+&"60&4,+3&"5+.2.11%$"+,.67&4%%8$9&/,6"62,"$&*%2+.1&,60,2%*&

! "#!$%&#'#(()*$&+#"

! "#$%&B"(&) *+, - "+%*&./&0&/1. - &+3%&/1"2+,.6"$&2.,6+%:1"+,.6&1%:1%,.6*&J,*KLKJ,*&M3,6"7&4%%8$9&/,6"62,"$&*%2+.1&,60,2%*&**

!

&&&&&&&! "#$%&D"(&) *+, - "+%*&./&0&/.1&%"23&*%1,%*&4,+3.5+&"60&4,+3&"5+.2.11%$"+,.67& - .6+3$9&":: 1%:"+%&*+.28&,60,2%*&

!

"#!$%&#'#(()*$&+#"!

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

! "#$%&E"(&) *+, - "+%*&./&0&/1. - &+3%&/1"2+,.6"$&2.,6+%:1"+,.6&1%:1%,.6*&J,*KLKJ,*&M3,6"7& - .6+3$9&"::1%:"+%&*+.28&,60,2%*&**

!	"#!$%&#'#(()*$&+#"!			, +&-!$%&#'#(()*$&+#"!		
.#%"&(+)/!	0#!()1()//#(/!	2"!+"&)(')3&!	2!*+")$(!&+4)!&()"5!	0#!()1()//#(/!	2"!+"&)(')3&!	2!*+")$(!&+4)!&()"5!

70EF0GH72! 8:C!!;8D?=!!>8B@!

&&&&&&&&

! "#$%&

!"#$%&'()' * &&+,-'.##%&#./&'0/12+'"34"2&0'5,1/06'78"3.9' : ; < : ='>"?&'.34'@;'

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!"#$%&'A)' * &&+,-'>"3.32".,'0&2/1%'0/12+'"34"2&0'5,1/06'78"3.9' : ; < : ='>"?&'.34'@;'

!"#$%&'B)'C13/8,-'.##%&#./&'0/12+'"34"2&0'5,1/06'78"3.9':;<:='>"?&'.34'@;'

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!"#$%&'D)'C13/8,-'>"3.32".,'0&2/1%'0/12+'"34"2&0'5,1/06'78"3.9':;<:='>"?&'.34'@;

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