

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

"#\$%&'()*\$!*+,-./0+1/!

9'((+)+!':!;%3-(!;%3+1%+#<!=~/&<!-18!286%-/3'1!

IHA!J7!K+11+8\$L(M87!

N-0,-<!OP!BBQHQAIRH!

20-3(4!0#/-#3'56/7+86!

>::3%+!"&'1+4!?!@ABC!DEFGBHF!!

"#\$%&'()*!

P'63#3-1-!;/-/!S13M+.#3/\$<!L-/1!T'6)+<!PU!

"&7*7!31!9(313%-(!"#\$%&'()*\$<!=-\$!DHHD!

"&X-00'183%-(!"#\$%&'()*\$<!=-\$!D12)\$!

;/-#3'<!=7!^7<!96..\$<!K7<!;6//1G;\311+.<!P7<!h!_(-##0-1<!*7!?DHH@C7!>M+.G/&+G%'61/+!
0+83%-/3'1!-18!&+.b-(!.!83+/-.\$!#6,,(+0+1/!6#+!31!%'((+)+4! *'#+!:.+k6+1%\$!-18!
.+(-/3'1#&3,!/!#+(G.+,'./+8!83#/+.##7!'#\$%&'(!#3!) F-%+, '&!4#((-:-!>- '(*I<!EH<!EBEGEI@7!

;/-#3'<!=7!^7<!-18!*61%-1<!K7!?DHHFC7!U1!+M'(6/3'1-.\$!-,,'-!-%&!/'^!-1+!U6#/!+14!"+&3#/.3%!
.,+:+.1%+#!31!/%+2-'&2!/%-I\$2+, -7!8*\$2+-.!+&!*I-!J#7-(@!KL<!ABBGAIQ7!

*61%-1<!K7!P7<!h!;/-#3'<!=7!^7!?DHHAC7!;6.M+\$31)!:+0313#/,+8-))\$4!U!0+-#6.+0+1/<!-1!
+M-(6-/3'1<!-18!-1!-::3.0-/3'17!M-F+&+. *!C-' , I-%<!BK<!DDEGDB@7!

9'0-/\$<!^7!27<!;/-#3'<!=7!^7<!h!U8M\-/<!97!?DHHAC7!U1-(\$#3#!:!'6/%'0+!M-.3-b(+#!:!'!/\+1!
+% '1'0\$!#\$#/+0!31!-!#/-/+!,#%&3-/.3%!/-(4!U!,.)-.0!+M-(6-/3'17!%, I!+&!
N-7-(#; F-&* '(!N+. 'O(+*+-. <!AA<!DBBGDEB0!

;/-#3'<!=7!^7!?ARR@C7!9'00613/\$!;++(31)!-18!#%'3-(!31/+ .+#!-#!%6(/6.-(!%'00'1!/&.+84!K+\$!
3##6+#!-18!.+#+-.%&!83.+%/3'1#7!'#\$%&'(!#3!P&2+7+2\$'(!/.9, I#(#:9<!ED<!BAHGDB7!

;/-#3'<!=7!^7<!h!9-,.'1<!27!J7!?ARR@C7!;'%'3-(!31/+ .+#!-#!-!83#/31%/,+.#'1-(3/\$!%'1#/.6%/4!
9'0,-.3# '1#!Z3/&!WN&+!L3)!O3M+Y!-18!.+(-/+8!,.'#%'3-(!%'1#/'6%!#3!P&2+7+2\$'(!
/.9, I#(#:9<!ED<!AHGDB7!

./"2"*&'()*2!3!)2""/2!

;30'1<!U7<!T6#/!+31<!97<!h!;/-#3'<!=7!^7!?DHDH<!U,3(C7!!/-%3-, *#&+. F!'&2!?'33+, ', 9!#3!
<+&23\$(&-..06'. -2!4#;+&:!P&*-%7-&*#&. 7! "-,+!-%%+/,+8!:'!/&+!QQ!116-(!
'6/&+#+/+.1!"#\$%&'()*3%-(!U##%'3-/3'1!?'2"UC!9'1:+.1%+<!V+Z!>.(+1#<!PU7!!"-,+!
-M-3-(b(+!1(31+g!%'1:+.1%+!%-1%+((+8!86+!/'!&+-(/!&%.3#3#m!

L6]b++<!X7<!J+3#<!_7<!L-..+//G9(-.\+<!U7<!;/-#3'<!=7!^7<!K!/+ .b-<!27U7<!h!c6+1<!27!K7!
?DHAR<!O+b.6-.\$C7! N&+!+::+%/#!:'!O-%+b"!6#+!1!%)13/3'1!-18!+0/3'1!31!%'((+)+!
#/68+1/#4!"#3/3M+!.+:(+%/3'1!).'6,7!O('38-!S18+.).-86-/!T+#+-.%&!9'1:+.1%+<!
S13M+.#3/\$!:'!V'./&!O('38-<!^-%#1M3((+<!OP7!

;/-#3'<!=7!^7!?DHAF<!>%/'b+.C7!8*\$2-&*!N-;-%-..+&G!8+:&. @!%-.;#&.-. @!'&2!', ,#FF#2' *#&. 7!
P61%&!h!P+- .1!-(\!#, '1#+.8!b\$9+1/+!:'!N+--%&31)!-18!P+- .131)<!S13M+.#3/\$!:'!
N-0,-<!OP7!

9-..<!97<!_++1+<!d7<!L-.-\/<!K7<!d+.'1+#3<!d7<!U#&<!7<!=-1#'6.<!L7<!K!/+ .b-<!K7<!;/-#3'<!=7<!
"-/.3%<!T7<!_1)3<!97<!h!c6+1<!27!D7AQ<!U,3(C7!O##RS.!-33-, *!#&!F##27! "'#/+!
,+#+1/+8!-!/'&+!AA/&!U116-(!9'((+)+!:'!%;3-(!%;3+1%+<!=-/&+0-/3%#<!h!286%-/3'1!
S18+.).-86-/!T+#+-.%&!9'1:+.1%+<!S13M+.#3/\$!:'!N-0,-<!OP7!

P',+&<!X7<!d-1K3.\<!T7<!h!;/-#3'<!=7!^7!?DHAQ<!=-.%&C7!!N+. ;#.#+*#&'(!;-%3-, *#&+. F!'&2!
;-%3#%F'&, -!#&!*T#!, #F; \$*-%+U-2!;%#0(-FQ.#(7+&:!*'.R.7! "'#/+!,.+#+1/+8!-!QD18!
U116-(!;'6/&+#+/+.1!"#\$%&'()*3%-(!U##%'3-/3'1!?'2"UC!9'1:+.1%+<!V+Z!>.(+1#<!PU7!

;&'+1b+.)+.<!K7<!;%(-13<!^7<!h!;/-#3'<!=7!^7!?DHAQ<!=-%&C7!!V&#T(-2: -!'&2!'**+\$2-..'0#\$*!
.\$+,+2-@!;%-7-&*#&@!'&2!+&*-%7-&*#&7!"#/#+!.,#+#1/+8!-!/QD18!U116-(!'6/&+-#/+1!
"#\$\$%&'()3%-(!U##'%3-/3'1!?'2"UC!9'1:+. +1%+<!V+Z!>.(+1#<!PU7!

_.++1+<!d7<!L-. -/<!K7<!9-..<!97<!U#&<!"7<!=1#'6.<!L7<!d+. '1+#3<!d7<!K'/+.b-<!27<!;/-#3'<!=7<!
"-/.3%\<!T7<!_ -1)3<!_7<!h!c6+1<!27DHAQ<!O+b.6-.\$C7M', -0##R!\$. -!'33-, *!
F##27!"#/#+!.,#+#1/+8!-!/!&+!O('38-!S18+.).-86-/+!T+#+-.%&!9'1:+. +1%+! ?OST9C<!
N-0,-<!OP7!

c6+1<!27!K7<!;/-#3'<!=7<!K'/+.b-<!27<!"-/.3%\<!T7<!=1#'6.<!L7<!L-. -/<!K7<!h!_.++1<!d7!?!DHAE<!
V'M+0b+.C7!!C1-!-33-, *.!#3!.#,'(!F-2+'!#&!F##27!"#/#+!.,#+#1/+8!-!/!&+!IR/&!U116-(!
9'1M+1/3'1!:'!&+!U##'%3-/3'1!:'!L+&-M3'-(!-18'9)13/3M+!N&+.-,3+#<!"&3(-8+(&3-<!U7!

"/\<!97<!P', +#<!X7<!c6+1<!27<!h!;/-#3'<!=7!^7!?DHAE<!=-%&C7!+. F!'&2!;-%3#F'&, -!#&!
T#!,%#0(-FQ.#(7+&:!'.R.7!"#/#+!.,#+#1/+8!-!/!&+!AHU116-(!9'((+)'!:'!%3-(!
;%3+1%+&#<!=/&+0-/3%#<!h!286%-/3'1!S18+.).-86-/+!T+#+-.%&!9'1:+. +1%+<!S13M+.#3/\$!:'!
N-0,-<!OP7!

L'00-.3/'<!=7<!;&'+1b+.)+.<!K7<!h!;/-#3'<!=7!^7!?DHAE<!=-%&C7!..+#&'&2!.\$+,+2-!+&!
,#((-:-G!+=.R!3', *%#. @!., %--&+&: @!'&2!'... F-&*!#3!.\$2-&*!'&2!3', \$(*9!R&#T(-2:-7!"#/#+!
,.#+#1/+8!-!/!&+!AHU116-(!9'((+)'!:'!%3-(!;%3+1%+&#<!=/&+0-/3%#<!h!286%-/3'1!
S18+.).-86-/+!T+#+-.%&!9'1:+. +1%+<!S13M+.#3/\$!:'!N-0,-<!OP7!

X3)31#<!U7<!"6.3%+((3<!;7<!h!;/-#3'<!=7!^7!?DHAE<!=-%&C7!!N#-. !;-%3-, *#&+. F!'&2!.#,'(!3--20', R!
+&3(\$-&, -!0#29!+F' : -!, #&, -%&.! ' &2!2-, +.#&.! '0#\$*!'!, #. F-*, !. \$%: -%9!, ' &2+2' *-W!
"#/#+!.,#+#1/+8!-!/!&+!AHU116-(!9'((+)'!:'!%3-(!;%3+1%+&#<!=/&+0-/3%#<!h!
286%-/3'1!S18+.).-86-/+!T+#+-.%&!9'1:+. +1%+<!S13M+.#3/\$!:'!N-0,-<!OP7!

P',+<!d7<!-18!;/-#3'<!=7!^7!?DHAE<!=-%&C7!, *#&+. F!0#29!+F' : -!, #&, -%&.@!'&2!\$2: F-&*!'
'0#\$*!, #. F-*, !. \$%: -%9!"#/#+!.,#+#1/+8!-!/!QHU116-(!'6/&+-#/+1!"#\$%&'()3%-(!
U##'%3-/3'1!?'2"UC!9'1:+. +1%+<!V-#&M3((+<!NV7!

;-18-((<!;7<!J30b+.(+\$<!N7<!h!;/-#3'<!=7!^7!?DHAB<!=-%&C7#&+. F!F##2@!'&2!%- , #: &+*#&!
F-F#%9!+&!'. ' F;(-!#3!I#&#%!. *\$2-&* 7!"-,+!)3M+1-!/!&+!ERJ116-(!'6/&+-#/+1!
"#\$\$%&'()3%-(!U##'%3-/3'1!?'2"UC!9'1:+. +1%+<!U/(-1/-<!_U7!

;/-#3'<!=7!^7!?DHAD<!,+/,+0b+.C7!-, *#&+. F!'!'&'!' ;-, *!#3!;.9, I#(#: +, '(!2+. %-. ..7!O-%6(/\$!
9'((k6360!.,#+#1/-/3'1!-!/!&+!S13M+.#3/\$!:'!N-0,-<!N-0,-<!OP7!

J30b+.(+\$<!N7<!h!;/-#3'<!=7!^7!?DHAD<!=-%&C7!#&+. FG!=-(' *#&. I+;.! ' F#&: !;-%.#&'(!
. *' &2' %2. @!-7'(\$ *+7-!, #&, -%&.! ' &2!' \$*#F' *+, !*I#\$: I* 7!"-,+!)3M+1-!/!&+;,31)IDHAD!
;'6/&+-#/+1!"#\$%&'()3%-(!U##'%3-/3'1!?'2"UC!9'1:+. +1%+<!V+Z!>.(+1#<!PU7!

J30b+.(+\$<!N7<!h!;/-#3'<!=7!^7!?DHAA<!U,3(G7!#&+. F!'&2!;.9, I#(#: +, '(!2I\$. *F-&*!+&3%.*!
9- '!, #((-:-.!. *\$2-&* 7!"#/#+!.,#+#1/+8!-!/!&+;,31)IDHAA!9;;=2!S18+.).-86-/+!

;/-#3'!!!! E

T+#+-.%&!9'1:+.+1%+<!N-0,-<!OP7!

J30b+.(+\$<N7<!\Z.'1+\<!^7<!h!;/-#3'<!=7!?DHAA<!=. %&C7&-@!2-;%-..-2!F##2@!'&2!
%- ',*+#&!*+F-!*#!F##20,#&:%\$-&*!T#%2.7! "-,+!)3M+1!-!/!&+!;,31)!DHAA!;'6/&+-#/+ .1!

&4&/#2!3!+)*)/2!

N&+!S13M+. #3/\$!':!N-0,-<!N-0,-<!OP!
 UZ-.8+8!L'-.8!':!O+((Z#!_-1/<!DHAE!?'1!b+&-(!':!X+-(/&\$!;,.-/-1#!DHDHC!
 UZ-.8+8!;-bb-/3%-(!P+-M+<!DHAB!
 *-1-!_-1!/UZ-.8<!DHAB!
 _.-1/+8!N+16.+!-18!".'0'/+8!/'!U##'%3-/+'!'.:++##'.<!DHAD!
 9;:=2!2[%+((+1%+!31!N+-%&31)!UZ-.8<!DHAH!
 N+-%&31)!`11'M-/3'1!_-1!/UZ-.8<!DHHI<!DHHF!
 *+(!_-1!/UZ-.8<!DHHE<!DHH@!
 *-1-!_-1!/UZ-.8<!DHHF<!DHAB!

./)5"22()*&1!&55(1(&'()*2!

U##'%3-/3'1!':!L+&-M3'-(!-18!9')13/3M+!N&+.-,3+#!?!UL9NC!

\$(6"/2('7!2"/6(%"!

N&+!S13M+. #3/\$!':!N-0,-!
 ;,-./-1!/683+#!*3.+%/'.!':!';%3-(!-18!L+&-M3'-(!;%3+1%+#!<!;,31)!DHDA!G ,.+#+1!
 =+0b+.<!N+16.+!h!".'0'/3'1!9'003//++<!DHARG, .+#+1/g!9&-3.!DHDHGDD!
 =+0b+.<!L-%%-(-6.+/-+!9'003//++<!DHAQGAR!
 9&-3.<!X+-(/&\$!;,.-/-1#!DHDH<!DHAB!/'!DHAQ!
 O-%6(/\$!*+M+(',0+1/9'003//++!+=+0b+.<!DHAD!/'!DHAB!
 `1/+1.#&3,!9'61%3(!+=+0b+.<!DHAH!/'!DHA!

