!! ''#\$%&#'(#)'!*+,%+- . !/!0\$#12+'#(3!,4! 5 2'(2+\$!6\$(-+#,!!

''#\$%&#'(#)'!7789-!*:,\$,;,%#)-;!<\$-;3'#'!

=-;;!7>7?!

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"2)(&+2@" # \$%&'(")*+,-.*+,/"012")2,)"A&(,+#-;'@"

 $1 (=5/"2789=?"), T?"!''\#\%\&'(\#\%)*+, \%''\%-\%.)?"M<B=(-2B'9NF=BB?"b\$

"

Z\$7""BB"'55<X%A = %65"'%&"6=565/"6D = %567896\$7"'%&0\$7"6D = "KO"A'("7=]8<7="(\$8"6\$"'66=%&"'%"<%->=75%" <%6=7; <=F"6\$"&<59855"(\$87"F\$7N"L=H\$7="6D="A'7N"<5"H<%'8<S=&?"4%"'&<6<\$%/" #'N=-I>"6=565/"FD=7=" %==&=&/"A'("9%5<56"\$H"\$7"<%9B8&="'%"<%6=7; <=F"<%->=75%""\$7"; <'"R\$\$A?""

- "
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<u>N<"CPO<B</u>!

<!I+2;# . #\$-+3!),&+'2!)-;2\$G-+!Y#;;!J2!G#'(+#J&(2G!#\$!(:2!4#+'(!Y22K!,4!);-''2')! N,\$(#\$%2\$)3!I;-\$!4,+!-\$!#\$XI2+',\$!);-''!I#1,(#\$%!(,!Z>> [!,\$;#\$2!;2-+\$#\$%!

4%"6D="=; =%6"\$H"'"JGg4: -!T"7=587X=%9="&87<%X"6D="9\$875="6D'6"%=9=55<6'6=5"6D="9\$875="&=B<; =7("A\$; <%X"'F'("H7\$A"H'9=-6\$-H'9="<%6=7'96<%/" 'HH=96=&"9\$875="9\$%6=%6"F<BB"L="&=B<; =7=&"=%6<7=B(" \$%B<%=7"=<6D=7"5(%9D7%\$85B("0<?=?/"'6"6D="6<A=5"<%&<9'6=&"<%"6D="6<A=6'LB=P"\$7"'5(%9D7%\$85B("0<?=?/"'6"6D=<7"9\$%; =%<=%9=P?""O%("7=A'<%<%X"'55=55A=%65"A'("'B5\$"'L="9\$%&896=&"\$%B<%="5"&=6=7A<%=&"L("6D="9\$875="<%567896\$7?!

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<AACPO<PNC"

066=%&'%9="<5"A'%&'6\$7("'%&"<5">'76"\$H"(\$87">'76<9<>'6<\$%"A'7N?"^\$8"9'%%\$6"B='7%"H7\$A"9B'55=5" 6D'6"(\$8"&\$"%\$6"'66=%&?"4H"(\$8"N%\$F"(\$8"'7="X\$<%X"6\$"A<55"'"9B'55/">B='5="'77'%X="6\$"58LA<6"'%(" F\$7N"&8="L=H\$7="9B'55"0;<'"(\$87": 7\$>2\$a"\$%"6D="9\$875="GM["5<6=
$$\begin{split} H\$7" & 99\$AA\$\& & 6<\$\%"L'5=\&"\$\%"A=\&<9"B"\&\$98A=\%6'6<\$\%"\$7">5(9D\$B\$X<9'B"'\%\&"9\$X\%<6<;="6=56<\%X?""KD=">\\\$B<9("$\%"09'&=A<9"099\$AA\$\& & 6<\$\%"H$7"`68&=\%65"F<6D": <5'L<B<6<=5"9'%"L="H$8%&"'6*"$$
D66>5*00FFF?8F\$?9'08%<;5=90>&H0'9'&=A<9i>\$B<9<=50'>>='B5009'&=A<9" 099AA$& '6<$\% i &<5'L<B<6<=5?>&HM!! \end{split}$

. ! !

Q2\$G2+XJ-'2G!-\$G!'2\&-;!1#,;2\$)2""

$$\begin{split} \mathbf{M} &= 56 = 7\% < 5^{9} \$ \mathbf{A} < 66 = \&^{6} = 26 \$ - \&^{9} = 89 < \% \\ \mathbf{M} < 89 < \&^{6} = 86 \$ \\ \mathbf{M} < \mathbf{M}$$

F(-(2.2\$(!,\$!*;-%#-+#'./!N:2-(#\$%!-\$G!,(:2+!F):,;-'(#)!6442\$)2'!

 $\label{eq:solution} $$ 9D$B : 56<9"$HH=%9=5" : 7="6' N=%"5=7<$85B("'%&"568&=%65" : 7="&<7=96=&"6$"7=' &"6D=" :>>7$>7<'6=">$B<9(/"5>=9<H<9' BB (/"6D="&=H<%<6<$%"$H" FD : 6"9$%56<686=5" : "`9D$B : 56<9"GHH=%9=/" : 6"6D="HBB F<%X" M=L"5<6=*" D66>*00 F F ?8 F $?9 : 08%<; 5=90>&H0 : 9 : &=A<9 : >$B<9<=50 : >>= : B5059D$B : 56<9 : &<59<=K%=: 8%&=7X7 : &?>&H""$

D66>5*00FFF?8F\$?9'0\$AL8&50'9'&=A<908%&=7X7'&8'6=0'9'&=A<9i<%6=X7<6(?D6AB""

$$\begin{split} & \texttt{H}^7 \texttt{A}^7 \texttt{-}^{\mathsf{H}} \texttt{A}^{\mathsf{G}} \texttt{A}^{\mathsf{H}} \texttt{A}^{\mathsf{G}} \texttt{A}^{\mathsf{H}} \texttt{A}^{\mathsf{H}$$

O2J - + . 2 (!4+, . !Y+#(#\$%!(:2!4#\$-;!2\- . #\$-(#,\$!

O "568&=%6"<5"=%6<6B=&"6\$"L="=a ' A<%=&"<%"9\$875=5"<%"FD<9D"7=X<567 ' 6<\$%"<5"A ' <%6 ' <%=&/"58LC=96"6\$"6D=" H\$BB\$F<%X"B<A<6 ' 6<\$%5*""

!P"0"568&=%6"A'("L="&=L'77=&"H7\$A"F7<6<%X"6D="H<%'B"=a'A<%'6<\$%"H\$7"H'&B7="6\$"A'<%6'<%" 5'6<5H'96\$7("'9'&=A<9"56'%&<%X"6D7\$8XD\$86"6D="(='7?""

) P" 0 % ("568&=%6" FD\$/'<%"6D="\$><%<\$%"\$H"6D="<%567896\$7/'<5" L5=%6"6\$\$"H7=] 8=%68 ("H7\$A"9B'55"\$7" 686\$7<'B">=7<\$&5"<%" '' % ("9\$875=" F<BB"L="7=>\$76=&"6\$"6D=" : = '%"\$H"6D="Z'98B6("\$HH=7<%X"6D="9\$875=" 0'H6=7"&8=" F'7%<%X"D'5"L==%"X<;=%P?"G%"6D="7=9\$AA=%&'6<\$%"\$H"6D=" : =>'76A=%6"9\$%9=7%=&/'' %&" F<6D"6D=">=7A<55<\$%"\$H"6D=" : = '%"\$H"6D'6"Z'98B6(/"6D="568&=%6" F<BB"L="&=L'77=&"H7\$A"6'N<%X"6D=" 7=X8B'7"=a'A<%'6<\$%"<%"6D="9\$875=?" KD=" : = '%"\$H"6D="Z'98B6("\$HH=7<%X"6D="2) = 7860" (%BB=2) = 7880" (%B=2) = 780" (%B=2) (%B=2) = 780" (%B=2) (%B=2) (%B=2) (%B=2) (%B=2) (%B=2) (%B=2) (%B=2) (%B=2) (%B=2)

6D'6"&=9<5<\$%"6\$"6D=" : = '%"\$H"6D="Z'98B6("\$H"7=X<567'6<\$%?"0k066=%&'%9=" c =X8B'6<\$%5"H\$7" @a'A<%'6<\$%5"*"<u>D66>*00FFF?8F\$?9'08%<;5=90'9'&=A<9i>\$B<9<=50=a'A<%'6<\$%5?D6ABP"</u>!

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"EPQ0EFAENF!7789</!=<""!7>7?@!N60BFC!N<"CPO<B!!

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`=>6=AL=7"!U"	JGb`Gb0bK`"0b:"gGM@[`*"\1Gb@#@`"	JD'>6=75"!-)"
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	<=33/; ('', (&->-/(3&%95&/\$(3?-	
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	<i>36<*1%*#'#%\$45-*211B*%=*#,1*64\$6*#10#</i> <-	
G96\$L=7"+,-b\$;=AL=7"3"	BC <oepq! !n="" ''="" 5="" 6="" <ff!="" b!<="" ccw@!p="" td=""><td></td></oepq!>	
	AOA6BEZ".	

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