

MDIA5021

5Xj Yfh]g]b['UbX'7fYUh]j]hm

HYfa 'C bY''##'&\$&%

7ci fgY[·]Cj Yfj]Yk

GhJZZ 7 cbhJWh 8 YhJ] `g

7cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`] m	@cWUh]cb	D\cbY
>Ua YgʻK][[]bg	ʻUa Yg"k][[]bg4 i bgk "YXi "Ui			

7ci fgY 8YHJ] g

7 fYX]hDc]bhg * *

Gi a a UfmcZh\Y 7ci fgY

H\Y'Wci fqY'ZcW'qYq'cb'h\Y'WfYUhj Y'UqdYWfq'cZUXj Yfhlq]b['UbX'W'ffYbh'hfYbXq']b'UXj Yfhlq]b["

Mci 'k]```YUfb`\ck 'h\Y'UXj Yffjg]b['dfcW/gg'k cf_g'ZcW/g]b[ž]b'dUffjW/`Ufžcb'h\Y'Zc``ck]b['UgdYWfg.

! '⇒XYbhjZjWuhjcb'cZWcaai b]Wuhjcb'WkU``Yb[Yg'UbX'cddcfhi b]hjYg. 'fYgdcbX]b['hc'U'W]YbhVf]YZ/
! '7 fYUhjj Y'ghfUhY[]Yg'UbX'dfUWjWYg'Zcf'[YbYfUhjb[']XYUgžWcbWYdhXYg][bžghcfmhY``]b[žYachjcbU``UddYU`g
UbX'd]hWk]b['Zcf'WJadU][bg/
! '7 UadU][b'Yj U`i Uhjcb'aYhkcXg"

H\Y`fYei]fYa Ybhg`Zcf`UbX`]a dUWicZUXj Yfh]g]b[`UWfcgg`a i`h]d`Y`d`UhZcfa g`UbX`UggcW]UhYX`fYei]fYa Ybhg Zcf`X][]hU``]bhYfUWh]j]hmž`Wc``UVcfUh]cb`UbX`Wc!dfcXi Wf]cb`k]```VY`Ya d\Ug]nYX"

7 ci fgY @YUfb]b[Ci hWca Yg

%" 5dd`miWfYUhjj Y`ghfUhY[]Yg`UWfcgg`U`VfcUX`fUb[Y`cZUXj Yfhjg]b[`a YX]U &" 8Yj Y`cd`U`Wf]hJWU`i bXYfghUbX]b[`cZUXj Yfhjg]b[`cVYWfj Yg ' " 7 f]hjei Y`UbX`fYj]gY`mci f`k cf_ (" K cf_YZZYWfj Y`mk]h\`ZYYXVUW_`UbX`dfYgYbh'mci f`]XYUg`k]h\`WcbZJXYbWf

HYUWX]b['GhfUhY[]Yg'

Ghi XYbhgʻk]``VYʻfYei]fYX`hcʻUhhYbX`Uʻhk cʻ\ci fʻgYa]bUfʻYUWX`k YY_"ʻGYa]bUfgʻUfYʻXYg][bYX`hcʻ]bhfcXi W\U``ghi XYbhgʻ]bʻUʻWcbg]ghYbhik Umhcʻh\YʻfY`Yj Ubhih\Ycf]Ygž'dfUWNWgʻUbX`hcc`g"'H\YmfY`m\YUj]`mcb YI Ua d`YgʻcZWcbhYa dcfUfmUXj Yfh]g]b['hcʻdfUW]WJ``mXYa cbghfUhYʻh\Yʻf\Ycf]Ygʻ]bʻdfUW]WYʻ]bʻfYU` UXj Yfh]q|b['q]hi Uh]cbg"

H\Y`gYa]bUf`ZcfaUh`]g`UXcdhYX`hc`VYhhYf`g]ai`UhY`h\Y`U[YbWhiYldYf]YbW\žk]h\`h]aY`gdYbh`Vf]YZ]b[ghiXYbhg`cb`kYY_`mUgg][baYbhg`UbX`UggYgg]b[`h\Y`YZZYW]jYbYgg`cZh\Y]f`WfYUh]jY`fYgdcbgYg"`H\YgaU``Yf`[fcidg`[]jY`h]aY`Zcf`ZYYXVUW_`UbX`fYZYW]cb`cb`fY`YjUbhdf]bW]d`Yg`UbX`h\Ycfm'`GhiXYbhdUfn]w]dUh]cb`k]```VY`fYei]fYX`h\fci[\cihgYa]bUfg"

7 fYUhji Y'g_]``g'UfY'VYghXYj Y`cdYX'h\fci [\'h\Y]f'WcbghUbhUdd`]WUhjcb"'H\YfYZcfYž'k YY_`mVf]YZg'UfY XYg][bYX'hc'dfcj]XY'ghi XYbhg'k]h\'Ub'cddcfhi b]hmhc'X]gWcj Yf'UbX'XYj Y`cd'h\Y]f'ck b'WfYUhjj Y'dfcV'Ya!gc`j]b['ghm`Yg'UbX'g_]``g"

Ghi XYbhgʻUfYʻUʻgcʻYbWci fU[YXʻhcʻUWijiYʻmWcʻ`YVViUgʻa Ubmd]YWʻgʻcZUXj Yffig]b[ʻWca a i b]WVlijcbʻUgʻh\Ym WUbʻZfca ʻUʻX]j YfgYʻfUb[YʻcZgci fWʻgžʻhcʻ_YYdʻUVfYUghicZWcbhYa dcfUfmWJa dU][bgʻUbXʻUXj Yffig]b[ʻ]ggi YgUbXʻYb\UbWʻh\Y]fʻdfUWijWU`i gYʻcZh\Yʻh\Ycf]Ygž'dfcWfggYgʻUbXʻhccʻgʻWcj YfYX`]bʻh\Y`Wci fgY"

5ggYgga Ybh

5ggYgga YbhHUg_g

5ggYgga Ybh'tUg_	K Y][\h	8iY'8UHY	Gh XYbh@YUfb]b[Ci hWca Ygʻ5ggYggYX
Cb`]bY'fYZYW¶jY'kf]ħjb['HJg_')	&*#\$&#&\$&%`%%\$\$`DA</td><td>%ž*&</td></tr><tr><td>7 f]h]WU``UbU`mg]g`</td><td>(\$1</td><td>\$&#\$(#&\$&%`%%\$\$`DA</td><td>%ž'&ž'' ž'(</td></tr><tr><td>Dcfh7c`]c'</td><td>) \$1</td><td>%*#\$(#&\$&%`%%\$\$`DA</td><td>%ž'&ž'' ž'(</td></tr><tr><td>D]H/W.</td><td>) ।</td><td>&' #\$(#&\$&%`%%\$\$`DA</td><td>&ž˙(</td></tr></tbody></table>	

5ggYgga Ybh'8YhJ]`g

5ggYgga Ybh'% 'Cb`]bY'fYZYWNjj Y'k f]hjb['hUg_

GhUfhXUhY. Bch5dd`]WUV`Y

8 YHJ]`g.

&\$\$`k cfXg"`\DX]j]Xi U``HJg_"`A ccX`Y`Zcfi a "`DUgg# U]``f) ı `dUgg/&ı `ZJ]`/\$ı `bcb!gi Va]gg]cb\!": YYXVUW_ j]U`@A G"`

Hi fb]h]b'gYh]b[.'H\]g'Ugg][ba Ybh]g'gi Va]hhYX'h\fci [\'Hi fb]h]b'UbX'gh XYbhg'Xc'bchgYY'Hi fb]h]b g]a]'Uf]hmfYdcfhg"

5ggYgga Ybh& 7f]h]WU`UbU`mg]g

GhUfhXUhY. Bch5dd`]WUV`Y

8 YHJ] g.

9ei]j U`Ybhhc 'U'a U'cf'YggUnž'h\YcfYh]WU``fYZYWjcbg'cb'h\Y'Zci f'a U]b'hcd]Wg'Zcf'h\Y'Wci fgY'

⊕X]j]Xi U`'HJg_

: YYXVUW_'j]U'@A G

5ggYgga Ybh' . 'DcfhZc`]c

GhUfhXUhY. Bch5dd`]WUV`Y

8YHJ]`g.

: ci fˈf(ˈŁˈWfYUhjj YˈUXj Yfhjg]b[ˈd]YWfgˈhcˈVYˈgi Va]hhYXˈUgʻWca dcbYbhgˈcZh\Yˈdcfhzc`]c"'±bX]j]Xi U``hUg_" : YYXVUW_j]U @A G"

 $\label{thm:continuous} \begin{tabular}{ll} Hi fb]h]b "gYhh]b" . "H\]g"Ugg][ba Ybh]g"gi Va]hhYX"h\fci [\ 'Hi fb]h]b "UbX"gh XYbhg"Xc"bchgYY"Hi fb]h]b g]a]'Uf]hmfYdcfhg" \\ \end{tabular}$

5ggYgga Ybh (. D]hW

FYgci fW/g

DfYgWf]VYX F Ygci fWYg

6UffmžD"`f&\$%* Ł"`H\Y`5Xj Yfhjg]b[`7cb\\dh6cc_ž' fX`9X]hjcbž@cbXcbž'H\Ua Yg'/ `<i Xgcb"

FYWca a YbXYX FYgci fWfg

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

Hi fb]h]b Gi Va]gg]cb

⊋mci YbWci bhYf'U'dfcV`Ya 'k \Yb'UhYa dhJb['hc'gi Va]hmci f'Ugg][ba Ybhh\fci [\'Hi fb]hJbž'd`YUgY hY`Yd\cbY'9| hYfbU`'Gi ddcfhcb'-',) '' ' ' %cf'Ya U]`'h\Ya 'cb'Y! hYfbU`hYhgi ddcfh4 i bgk "YXi "Ui "''Gi ddcfh\ci fg'UfY', .\$\$Ua '-',\$\$.\$\$da 'cb'k YY_XUmg'UbX'-.\$\$Ua '-').\$\$da 'cb'k YY_YbXg'fl *) 'XUmg'U'mYUfŁ'''⊋mci UfY'i bUV'Y'hc'gi Va]hmci f'Ugg][ba YbhXi Y'hc'U'ZJi `hk]h\'Hi fb]hJb'mci 'a UmUdd`mZcf'Ub'Y! hYbg]cbž'Vi hmci a i ghfYhJ]b'mci f'hJW_Yhbi a VYf'Zfca '9! hYfbU`'Gi ddcfhfU`cb['k]h\'Ubmch\Yf'fY`Yj UbhXcW a YbhgŁ'hc

5 WUXYa]W<cbYghmUbX D`U[]Uf]ga

D`U[]Uf]ga `]g`i g]b['h\Y`k cfXg`cf`]XYUg`cZch\Yfg`UbX`dfYgYbh]b['h\Ya `Ug`mci f`ck b"`±hWJb`hU_Y`a Ubm Zcfa gžZfca `XY`]VYfUhY`W\YUh]b['hc`UWW]XYbhJ``mWcdm]b['Zfca `U`gci fWY`k]h\ci hUW_bck `YX[Ya Ybh'

IBGK [fcidg'd'U[]Uf]ga]bhc'h\Y'Zc``ck]b['WUhY[cf]Yg.

 $7 \text{ cdm}b[...i g]b[...h\Y.gUa Y.cf.j Yfmig]a] \Uf'k cfXg'hc'h\Y.cf][]bU''hYl h'cf']XYU'k]h\ci h'U\V_bck `YX[]b[...h\Y.cf][]bU''hYl h'cf']XYU'k]h'cf']$

- i bXYfgHUbX'mci f'f][\hg'UbX'fYgdcbg]V]`]h]Yg'Ug'U'gh XYbhUhI BGK
 VY'Uk UfY'cZd`U[]Uf]ga ž'Wcdmf][\hz'I BGK 'Gh XYbh7cXY'cZ7cbXi WhUbX'5VWWdhUV`Y'I gY'cZ IBGK =7 HF Ygci fWrg Dc`]Wh