

EDST5803

8 Y j Y `cd]b['9 ZZY Wfj Y 'Dfc[fUa g 'Zcf';]ZfY X 'Gh XYbhg

GYa YghYf'C bY''##'&\$%

7ci fgY Cj Yfj]Yk

GhJZZ7cbhJWh8YhJ]`g`

7cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`]hm	@cWUh]cb	D∖cbY
DYtU ⁻ < Um	d"\Um4 i bgk "YXi "Ui	6m5ddc]bha Ybh	>c\b'; ccXgY`` %&\$	

GWkcc~7cbhJWh~abZcfa Uh]cb

GW.cc``cZ9Xi WUfjcb 5ftg`UbX`GcWjU``GWjYbWYg

@Yj Y``%ž'>c\b'; ccXgY```6i]`X]b['fl &\$Ł

H. 'Ž * %'f&Ł'-',) '%-++

9. YXi WUhjcb4 i bgk "YXi "Ui

K. YXi WUhjcb"Ufhgi bgk "YXi "Ui

5 h Y b X U b W F Y e i] f Y a Y b h g

5XX]h]cbU`GWXcc`cZ'9Xi WUh]cb'UhhYbXUbWY'fYei]fYa Ybhq

#i]gYI dYWYX ih UhiUbmighi XYbhiYbfc``YX`]b`Ub`98GH`Wci fgY`k]h\ ih\Y`GW\cc``cZ9Xi WUh]cb`k]```a U_Y`U Wca a]ha Ybhihc ih\Y]f``YUfb]b[`UbX`UhhYbX`U```WUggYg`]b`Z ```k \YfY`WcbhYbhi]g`XY`]j YfYX`]b`U`ZUWY!hc!ZUWY a cXY`YI WYdh]b`WJfW a ghUbWYg`k \YfY`UVgYbWY`]g`Xi Y`hc`]``bYggža]gUXj Ybhi fY`cf`i bZcfYgYYb WJfW a ghUbWYg`VYmcbX`ih\Y`ghi XYbhg`Wcblfc`"``5`a]b]a i a `UhhYbXUbWY`fYei]fYa YbhcZ, \$i `]g`fYei]fYX`Zcf YUW\`Wci fgY"``\#o`WffU]b`WJfW a ghUbWYgž'U`ghi XYbha Uma]gg`i d`hc`&\$i `cZU`Wci fgY`k]h\ci h\Zcfa U` Udd`]WUh]cb`UbX`i d`hc`'` ' i `cZU`Wci fgY`k]h\`Zcfa U``XcW`a YbhUh]cb`fgYbhj]U`Ya U]``hc`Wci fgY`Wcbj Ybcfb dfcj]X]b[`U```h\Y`fYei]fYa Ybhg`XYhU]`YX`VY`ck `UfY`a Yh'``Ghi XYbhg`bcha YYh]b[`ih\Y`UhhYbXUbWV fYei]fYa Ybhg`ci h]bYX`Uvcj Y`k]```VY`Uk UfXYX`Ub`I bgUh]gZUWcfm: U]``fI : b'Zcf`h\UhWci fgY`fY[UfX`Ygg`cZ h\Y]f`dYfZcfa UbWY`]b`h\Y`UggYgga YbhiHug_q`cf`ch\Yf`fYei]fYa Ybhg`Zcf`h\Y`Wci fgY"

7ci fgY 8YW] g

7 fYX]hDc]bhg * *

Gi a a UfmcZh\Y'7ci fgY

H\]g`Wci fgY`ZcW gYg`cb`W ffYbhfYgYUfW.`cb'h\Y`Wca dcbYbhg`cZUddfcdf]UhY`dfc[fUa `XYj Y`cda YbhZcf []ZhYX`UbX`hU`YbhYX`ghi XYbhg"`Dfc[fUa `a cXY`g`W ffYbhmi gYX`]b`5i ghfU`]U`UbX`]bhYfbUh]cbU``mk]```VY Wf]h]WU``mYj U`i UhYX"`Mci `k]```VY`fYei]fYX`hc`WcbXi WhbYYXg`UbU`mgYgžXYj Y`cd`dfc[fUa `[cU`g`UbX`XYg][b dfc[fUa g`Uddfcdf]UhY`Zcf`[]ZhYX`ghi XYbhg`k]h\]b`h\Y`UXa]b]ghfUh]j Y`ghfi Whi fYg`UbX`YXi WUh]cb`gmghYa g`cZ h\Y]f`ghUhY`cf`Wci bhfm' F YgYUfW.`cb'h\Y`YZZYWfj YbYgg`cZYbf]W\a Ybhž'UWW`YfUh]cb'UbX'j Uf]ci g`Zcfa g`cZ UV]`]hmž'UW\]Yj Ya YbhUbX`]bhYfYgh[fci d]b[k]```VY`WcgY`mYI Ua]bYXž'k]h\`dUfh]W``Uf`UhhYbh]cb'hc'h\Y`YZZYWfg cZh\YgY`ghfUhY[]Yg`cb'h\Y`ghi XYbhgfiUWJXYa]WUbX`gcW]U``XYj Y`cda Ybh''H\Y`bYYX`Zcf`Wci bgY``]b[`UbX a Ybhcf]b['hc`VY']bWi XYX`]b`dfc[fUa g`Zcf`[]ZhYX`ghi XYbhg`UbX`dfc[fUa g`XYg][bYX`hc`]bWi XY`a]bcf]hmž hk]WY!YI WddhcbU``UbX`i bXYfUW\]Yj]b['ghi XYbhg`k]``'U`qc`VY`U'ZcW`g"

5 hith Y WcbWi g]cb cZth]g Wci fgY th Y ghi XYbhik]``VY UV Y the

- %" 7 f]h]ei Y'h\Y'W ffYbhYXi WUh]cbU``UbX'gcW]U``]ggi Yg'UbX'Uh]hi XYg'UZYWf]b[''h\Y'XYj Y`cda YbhcZgdYV]U``'dfc[fUa g'Zcf'[]ZhYX'ghi XYbhg']b''h\Y'5 i ghfU`]Ub''UbX']bhYfbUh]cbU``WcbhYl H'
- &" 8]gW gg k Umg]b k \]WX]bHY ``YWi U``m[]ZHYX ghi XYbhg X]ZZYf Zfca 'U[Y!dYYfg]b 'Vch\ 'h\Y]f Wc[b]hjj Y UbX gcW]cUZYWij Y `XYj Y`cda Ybhž UbX h\Y]a d`]WUh]cbg cZh\]g 'Zcf 'UV]`]hm[fci d]b['UbX 'UWW' `YfUh]cb"
- ' " 5 bU`mgY`h\Y`Uddfcdf]UhYbYgg`cZU`fUb[Y`cZUV]`]hm`[fcid]b[`UbX`UVWW`YfUh]jY`dfcVWXifYg`Zcf`[]ZhYX gh`XYbhg`]b`h\Y]f`dUfh]W`Uf`gVXcc``WcbhYIh'
- ("9j U`i UHY'h\Y'YZYWIj YbYgg`cZYXi WUhcffig`W ffYbhgW\cc``cf`^\f]gX]WIjcb`dc`]Whicb`h\Y'YXi WUhjcb`cZ []ZhYX'UbX'hU`YbhYX`ghi XYbhgž`]b`hYfa g`cZ\ck 'YZZYWIj Y`U'd`UhZcfa ']h`dfcj]XYg`Zcf`dfc[fUa XYj Y`cda Ybh'
-) " A U_Y'dfcZ/gg]cbU`XYWJg]cbgžcb'h\Y'VUg]g'cZfYgYUfW\Z]bX]b[gžcb'h\Y'XYj Y`cda Ybhž]b'YXi WUhcffg gW.cc`gžcZdfc[fUa g'cZUV]`]hm[fci d]b['UbX'UWW'YYfUh]cb'Zcf'UWUXYa]WU`m[]ZhYX'ghi XYbhg"

HYUWX]b['GhfUhY[]Yg'

HYUWX jb['glfUhY[]Yg. 'H\Y'Wti fgY']bWi XYg'U'] Uf]YmmcZ'YUfb]b['glfUhY[]Yg'h\UhZcWigcbdfcj]X]b['ZYl]V'Y UbX'dYfgcbU'''YUfb]b['h\fci [\ 'h\Y'i gY'cZcb']bY''Yggcbg"'H\Y'Wti fgY'Yb[U[Yg'ghi XYbhg']b''YUfb]b[h\fci [\ 'h\Y'i gY'cZcb']bY''YWhi fYg'UbX'k cf_g\cdg'dfYgYbhYX'VmU'j Uf]YmmcZ'cWD''UbX']bhYfbUh]cbU''Yl dYfh YXi WUhcfg']b'h\Y'Z]YX'cZ[]ZhYX'YXi WUhcb"'C b']bY'k YY_mUWhj]hjYg'k]*'i gY'U'fUb[Y'cZhYUW,]b['ghfUhY[]Yg hc']bj c'j Y'ghi XYbhg']b'WY'zWYUhj Y'UbX'fYZYWhj Y'h\]b_]b['dfcWiggYg"'C b']bY'X]gWigg]cb'Zcfi a g'k]*'
U''ck 'ghi XYbhg'hc'W\U''Yb[Y'UbX'fYZ]bY'h\Y]f']XYUg'k]h\' dYYfg'UbX'hi hcfgž'UbX'hc'g\UfY'Zhca 'h\Y]f'dYfgcbU'
Yl dYf]YbW'''Ghi XYbhg'k]*''VY'YbWti fU[YX'hc'Wf]hWD''mYj U'i UhY'h\Y]f'W ffYbhdfUwhWg'UbX'i bXYfgHUbX]b[cZdfc[fUa a]b['Zcf'[]ZhYX'ghi XYbhgż'UbX'hc'fYXYg][b'dfUWhJWg'cb'h\Y'VUg]g'cZW ffYbhfYgYUfW\"'H\Y'gY'Z X]fYVWYX'fYUX]b['dfcj]XYX'cb']bY'k]*''VfcUXYb'ghi XYbhg''H\Y'dfYdUfUh]cb'cZk f]hYb'b'Ugg][ba Ybhg'k]*''XfUk 'cb'ghi XYbhg'''H\Y'dfYdUfUh]cb'cZk f]hYb'b'Ugg][ba Ybhg'k]*''XfUk 'cb'ghi XYbhfYzYWhjcb'cb'W ffYbhdfUWhJW'z'Ugg]ghk]h\'h\]b_]b['UVci h\ck 'hc'X]ggYa]bUhY'h\Y]f''YUfb]b[']b'h\Y]f'k cf_Yb'j]fcba Ybhz'UbX'Wcbg]XYf'k Umg'hc'Yj U'i UhY'UbX'Yb\UbW''W ffYbhdfUWhJW'k]h\]b'h\Y'WUggfcca z'UbX UWfcgg'gW\cc''UbX'YXi WUhjcb'gmghYa g

F UhjcbU`Y. `H\Y`WcbhYbhcZh\Y`Wci fgY`dfcj]XYg`Ub`cj Yfj]Yk `cZh\Y`a U`cf`]ggi Yg`h\Uha UmVY`fY`Yj Ubh'nc YXi WUhjcbU``dfc[fUa a]b[`Zcf`[]ZhYX`UbX`hU`YbhYX`ghi XYbhg"`C b`]bY``YWn fYgž'k cf_g\cdgž'UWhjj]hjYgž'UbX fYei]fYX`fYUX]b[g`Yl d`cfY`W ffYbh'n\Ycfm'UbX`dfUWhJWY`cb`U`fUb[Y`cZ]ggi Yg`]b`h\Y`[fci d]b[`UbX UWWY`YfUh]cb`cZ[]ZhYX`UbX`hU`YbhYX`ghi XYbhgž'U``ck]b[`ghi XYbhg`cZh\Y`Wci fgY`hc``YUfb`bYk `]bZcfa Uh]cb`UbX

g_]``g"``Ghi XYbhi]XYUg`k]```VY`fYZ]bYX`h\fci [\`cb`]bY`dcghX]gWigg]cbg`UbX`YXi WUh]cbU``UWhj]h]Ygž'k\]W\`k]`` Ugg]ghighi XYbhg`hc`VYWca Y`a cfY`h\cfci [\`miZJa]`]Uf`k]h\`dfUWh]WYg`k\]W\`UfY`g\ck b`hc`VY`YZZYWhj Y`]b dfc[fUaa]b[`Zcf`[]ZhYX`UbX`hU`YbhYX`ghi XYbhg"

H\YgY`UWIj]hJYgž'UbX`h\Y`lk c`UggYgga Ybhgž'k]```U`gc`Yb\UbW\`gh XYbhg'`UV]`]hmhc`UggYggž'U`hYf`UbX`UXUdh dfc[fUa a]b[`cdh]cbg`h\Uh'UfY`W ffYbhmi gYX`]b`cfXYf`hc`fYZYWhfYgYUfW\!VUgYX`dfUWIJW\`UbX`WcbhYl hi U`bYYXg"

5i ghfu`]Ub'DfcZYgg]cbU`; fUXi UhY'HYUWX]b['GhJbXUfXg

5ggYgga Ybh

Q YfY 'mci 'WUb'ci h]bY'UbmfY'Yj Ubh]bZcfa Uh]cb'h\Uhk Ug'bch]bWi XYX']b'5 \Rightarrow G'Vi ha Umdfcj Y'\Y'dZ `'Zcf mci f'ghi XYbhg": cf'Yl Ua d'Yžmci 'a][\hdfcj]XY'XYhU]'g'cb'h\Y'fYZYfYbW]b['gmghYa ž`]b_g'hc'dfYj]ci g ghi XYbhYl Ya d'Ufg'cf'h\Y'XYg][bUhYX'k YY_']b'h\Y'Wci fgY'h\Uhmci 'k]```X]gW gg'h\Y'UggYgga Ybh'Uh'Yb['h\" \Rightarrow dcfhUbhmž'h\]g'gYWf]cb']g'Ub'UfYU'Zcf'mci 'hc'dfcj]XY']bZcfa Uh]cb'h\UhXcYg'bch[c'h\fci [\'h\Y'Uddfcj YX [cj YfbUbWY'ghfi WhifY"Q

5ggYgga Ybh'HUg_g'

5ggYgga Ybh'hUg_	K Y][\h	Gh XYbh@YUfb]b[Ci hWca Yg 5ggYggYX	5 +HG@'DfcZYgg]cbU`; fUXi UHY HYUWX]b['GHJbXUfXg'5ggYggYX	8iY 8UhY
Dfc[fUa Yj U`i Uh]cb`	(\$1	%ž&Ž Ž(b#U	&' #\$' #& \$% \$) .\$\$ DA
Dfc[fUa 'dfcdcgU`	*\$1	&Ž Ž(Ž)	b#U	\$, #\$) #& \$% \$) .\$\$ DA

 $\label{eq:continuous} D`YUgY`fYZYf`hc`3gefcS`fS`BcaXWee[a`S^EfS`VSdVeXadFWSUZWcb`cb`h\Y`dfYj]cig`dU[Y]$

5ggYgga Ybh'8YhJ]`g

5ggYgga Ybh% Dfc[fUa Yj U`i Uh]cb

 $H\YfY`UfY`lk\ c`dUffg`lc`lh\]g`Ugg][\ ba\ Ybh`DUffi5`DfYgYblUlficb`UbX`DUffi6`DUdYf''`5XX]lf]cbU``]bZcfa\ Ulficb`cb\ A\ ccX`Y''$

 $\label{eq:higher_high_state} \mbox{Hi fb]h]b "gYhh]b[. "H\]g"]g"bchU"Hi fb]h]b"Ugg][\mbox{ba Ybh}$

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

Gh XYbhg UfY Yl dYWYX hc di hh\Y]f bUa Yg UbX gh XYbhbi a VYfg cb Yj YfmdU[Y cZh\Y]f Ugg][ba Ybhg"

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

#mci YbWci bhYf'U'dfcV'Ya 'k \Yb'UthYa dr]b['rc'gi Va]hmci f'Ugg][ba Ybht\fci [\'Hi fb]r]bž'd'YUgY
hY'Yd\cbY'9I hYfbU'Gi ddcfhcb'-',) '''' %cf'Ya U]''h\Ya 'cb'<u>Yl hYfbU'hY'hgi ddcfh4 i bgk "YXi "Ui"</u>"'Gi ddcfh
\ci fg'UfY', .\$\$Ua '-'%\$.\$\$da 'cb'k YY_XUmg'UbX'-.\$\$Ua '-').\$\$da 'cb'k YY_YbXg'fl *) 'XUmg'U'mYUft\"'=\maintention
UfY'i bUV'Y'hc'gi Va]hmci f'Ugg][ba YbhXi Y'hc'U'ZJi 'hk]h\'Hi fb]h]b'mci 'a Um'Udd'm\Zcf'Ub'YI hYbg]cb\ZVi hmci
a i ghfYhJ]b'mci f'h]\W_Yhbi a VYf\Zfca '9I hYfbU''Gi ddcfhfU'cb['k]h\'Ubmch\Yf'fY'Yj UbhXcW'a Ybhgt'hc
]bWi XY'Ug'Yj]XYbW' hc'gi ddcfhmci f'Yl hYbg]cb'Udd']\WJh]cb'''=\maintention 'Ya U]''9I hYfbU''Gi ddcfhmci 'k]'`
Ui hca Uh]\WJ'`mfY\W']j Y'U'h]\W_Yhbi a VYf\ZVi h]Zmci 'hY'Yd\cbY'mci 'k]'\'bYYX'hc'gdY\W]\Z\WJ'`mUg_'Zcf'cbY''
Hi fb]h]b'U'gc'dfcj]XYg'i dXUhYg'cb'h\Y]f'gmghYa 'ghUh' g'cb'Hk]hYf''

; YbYfU`mž'UggYgga YbhitUg_g'a i ghVY'gi Va]hhYX'Y`YWfcb]WU``mj]U'Y]h\Yf'Hi fb]h]b'cf'U'A ccX`Y Ugg][ba Ybh''=b']bghUbWfg'k \YfY'h\]g']g'bchdcgg]V`Yž']hk]```VY'ghUhYX'cb'mci f'Wci fgY'g'A ccX`Y'g]hY'k]h\U`hYfbUh]j Y'gi Va]gg]cb'XYhU]`g"

@UhY 5ggYgga Ybh'DYbU`h]Yg

5b'UggYggYX'HUg_']g'XYYa YX``UhY']Z]h']g'gi Va]hhYX'UZhYf'h\Y'gdYW]Z[YX'h]a Y'UbX'XUhY'Ug'gYhci h']b'h\Y Wci fqY'@YUfb]b['A UbU[Ya YbhGmqhYa 'f@A GŁ"

 $\label{thm:condition} $$HY^UHY^dYbU^m]g^hY^cgg^cZ)_L^cZ^hY^hcHU^dcgg]VY^aUf_g^Zcf^hYY^HUg_Z^cf^YUW^XUmcf^dUfhhYfYcZhY^kcf_]g^UHY^@UhYbYgg^k]^*]bW^XY^kYY_YbXg^UbX^di_V^]WYc^]XUmg^"HY]g^XcYg^bchUdd^mhc^U'HUg_'hWh]g^UqqYqqYX^Vi_hbc^aUf_]g^Uk_UfXYX"$$$

K cf_'gi Va]hhyx'zci fhyyb'fl%(EXUmg'Uzhyf'h\y'Xi Y'XUhy'k]``VY'a Uf_YX'UbX'zYYXVUW_'dfcj]XYX'Vi hbc'a Uf_ k]``VY'fYWcfXYX"'=Zh\Y'k cf_'k ci `X'\Uj Y'fYWr]j YX'U'dUgg'a Uf_'Vi hzcf'h\Y'`UhybYgg'UbX'h\Y'k cf_']g'U Wca di `gcfm'Wci fgY'Wca dcbYbhz'U'gh XYbh'k]``VY'XYYa YX'hc'\Uj Y'a Yhih\UhfYei]fYa Ybh''H\]g'XcYg'bch Udd`mhc'U'hUg_'h\Uh']g'UggYggYX'Vi hbc'a Uf_']g'Uk UfXYX"

K cf_'gi Va]hh/X'hk YbhnlcbY'f&&XUmg'UZhYf'h\Y'Xi Y'XUhY'k]```bchVY'UWWdhYX'Zcf'a Uf_]b['cf'ZYYXVUW_UbX'k]```fYWY]j Y'bc'a Uf_'cf'[fUXY"'=Zh\Y'UggYgga YbhHUg_']g'U'Wca di `gcfmWca dcbYbhcZh\Y'Wci fgY'U gh XYbhk]```Ui hca Uh]WU``mZU]`'h\Y'Wci fgY"

GdYWJU`7cbg]XYfUhJcb55dd`]WUhJcbg

 $\label{eq:linear_continuity} $$Mc_i = W_0 - W_$

G]W_bYggža]gUXj Ybhi fY'cf'ch\Yf'W]fW a ghUbWrg'VYmcbX'mci f'Wcbhfc``a Um

ł DfYj Ybhimci Zfca Wca d`Yhlb[U.Wci fqY fYei]fYa Ybhž

ł? YYd mci Zfca 'UthYbX]b['Ub 'UggYggUV'Y 'UWnji]tmž

ł Ghod moi gi Va]hh]b['UggYggUV'Y k cf_ Zcf'U Wci fgYž

ł `G][b]Z]\WbhmUZZY\Wimci f`dYfZcfa Ub\Wr`]b`UggYggUV`Y`k cf_ž`VY`]h'U`Zcfa U``YbX!cZgYa YghYf`Yl Ua]bUh]cbž`U`\WUgg`hYghž`U``UVcfUhcfmihYghž`U`gYa]bUf`dfYgYbhUh]cb`cf`Ubmch\Yf`Zcfa 'cZUggYgga Ybh'

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]XYbhU`mWcdm]b['Zfca `U`gci fWY'k]h\ci hUW_bck `YX[Ya Ybh'

IBGK [fcidgdu[]Uf]ga]bhch\yzc``ck]b[WUhY[cf]Yg.

7 cdm]b[.'i g]b['h\Y'gUa Y'cf'j Yfmg]a]`Uf'k cfXg'hc'h\Y'cf][]bU`hYl h'cf']XYU'k]h\ci h'UW_bck `YX[]b['h\Y gci fW'cf'i g]b['ei chUh]cb'a Uf_g"'H\]g'U`gc'Udd`]Yg'hc']a U[Ygž'Ufh'UbX'XYg][b'dfcYWhgž'Ug'k Y``'Ug dfYgYbhUh]cbg'k \YfY'gca YcbY'dfYgYbhg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h'

#JUddfcdf]UhY`dUfUd\fUg]b[.'W\Ub[]b['U'ZYk'k cfXg'UbX'd\fUgYg'k\]'Y`a cghmfYhU]b]b['h\Y`cf][]bU`ghi Whi fY`UbX']bZcfa Uh]cb`k]h\ci h'UW_bck `YX[Ya Ybh''H\]g'U`gc'Udd`]Yg']b'dfYgYbhUh]cbg'k\YfY`gca YcbYdUfUd\fUgYg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h''#iU`gc'Udd`]Yg'hc'd]YW]b['hc[Yh\Yf'ei chYg'UbXdUfUd\fUgYg']bhc'U'bYk'k\c`Yž'k]h\ci h'fYZYfYbW]b['UbX'U'ghi XYbhg'ck b'UbU`mg]g'hc'Vf]b['h\Y'a UhYf]U`hc[Yh\Yf'

7 c``i g]cb. 'k cf_]b['k]h\ 'ch\Yfg'Vi h'dUgg]b['cZZh\Y'k cf_'Ug'U'dYfgcb'g']bX]j]Xi U``k cf_"'7 c``i g]cb'U`gc]bWi XYg'dfcj]X]b['mci f'k cf_'hc'Ubch\Yf'ghi XYbhVYZcfY'h\Y'Xi Y'XUhYžcf'Zcf'h\Y'di fdcgY'cZh\Ya d`U[]Uf]g]b['Uh'Ubmh]a Yž'dUm]b['Ubch\Yf'dYfgcb'hc'dYfZcfa 'Ub'UWUXYa]WhUg_ž'ghYU`]b['cf'UWei]f]b[Ubch\Yf'dYfgcb'g'UWUXYa]Wk cf_'UbX'Wcdm]b[']hz'cZYf]b['hc'Wca d`YhY'Ubch\Yf'dYfgcb'g'k cf_'cf'gYY_]b[dUma YbhZcf'Wca d`Yh]b['UWUXYa]Wk cf_"

±bUddfcdf]UhY`W]hUh]cb.`7]h]b[ˈgci fW/gˈk \]WX`\Uj Y`bchVYYb`fYUXžk]h\ci hUW_bck`YX[]b[ˈh\Y`″gYWcbXUfm″gci fW/Zfca k \]WX`_bck`YX[Y`cZh\Ya`\Ug'VYYb`cVhU]bYX"

8 i d`]\WUh]cb`ff`gY`Zld`U[]\Uf]ga "Ł`gi Va]\h]b[`mci f`ck b`k cf_ž]b`k \c`Y`cf`]b`dUfhžk \YfY`]h`\Ug`dfYj]ci g`m VYYb`dfYdUfYX`cf`gi Va]\hYX`Zcf`Ubch\Yf`UqqYqqa Ybhcf\Wci fgY`UhI_BGK_`cf`Ubch\Yf`i b]\Yfq]\m"

7 cffYWhfYZYfYbWb[dfUWhWyg.

• Dufud\fug]b[žgi a a Uf]g]b[žYggUmk f]h]b["UbX"h]a Y a UbU[Ya Ybh

•

- VYMYfa UbU[Ymcifh]a Y
- i bXYfgHJbX'mci f'f][\hg'UbX'fYgdcbg]V]`]h]Yg'Ug'U'ghi XYbh'Uhi BGK
 VY'Uk UfY'cZd`U[]Uf]ga ž'Wcdmf][\hž'I BGK 'Ghi XYbh'7cXY'cZ7cbXi Wh'UbX'5WWYdhJV`Y'I gY'cZ I BGK '= H'F Ygci fWfg'Dc`]Wh

Fygci fWyg

DfYgWf]VYX F Ygci fWYg

Bch'Uj U]`UV`Y

FYWca a YbXYX FYgci fWYg

Bch'Uj U]`UV`Y

7ci fgY '9j U`i Uh]cb 'UbX '8Yj Y`cda Ybh

∍a U[Y'7fYX]h

GmbYf[]Yg^]b^GcibX^&\$%*

7F=7CG

7F = 7 C G 'Dfcj]XYf'7cXY. '\$\$\$-,;