

ARTS2128

5fhž5Wfjj]gažDiV`]Wg

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

GW.cc``cZh\Y'5fhg`UbX'A YX]U`'#''I BGK `'5fhg`UbX'GcWJU`'GWJYbWYg

: cf`YggYbh]U``ghi XYbh]bZcfa Uh]cb`fY`Uh]b[`hc.`fYei Yghg`Zcf`YI hYbg]cb/fYj]Yk`cZa Uf_g/cVWV dUh]cbU``\YU`h UbX`gUZYhm'YI Ua]bUh]cb`dfcVWXi fYg/gdYV]U``Wcbg]XYfUh]cb`]b`h\Y`Yj YbhcZ]``bYgg`cf`a]gUXj Ybhi fY/ ghi XYbhYei]hmUbX`X]gUV]`]hm'UbX`ch\Yf`YggYbh]U``UWUXYa]W]bZcfa Uh]cbž gYY`<u>\hdg.#k k k "Ufhg"i bgk "YXi "Ui #W ffYbhIgh XYbhg#UWUXYa]W]bZcfa Uh]cb#dfchcWc`g![i]XY`]bYg#</u>

7ci fgY[·]8YHJ]`g

7 fYX]h Dc]bhg ***

Gi a a UfmcZh\Y'7ci fgY

Gi VYW15fYU. FZWSfdWS`V BW0Xad_S`UWEfgV[We

5 fhjghjWghfUhY[]Yg`\Uj Y`Ya Yf[YX`Ug`dck YfZ``a YUbg`cZa U_]b[`gcWjU``UbX`dc`]hjWU`a YggU[Yg`\YUfX`VmU k]XYf`Ui X]YbWYžUbX`ghfUhY[]Yg`gi W.`Ug`W`h fY`{Ja a]b[žZUg\`a cVgž[i Yff]``U`h\YUhYžUbX`cb`]bY UWjj]ga `\Uj Y`\UX`Ub`]a dUWhUWfcgg`dc`]hjWU``WJa dU][b]b[žgcWjU``UXj cWUWhž'UbX`Wca a i b]ma cV]`]gUhjcb" H\]g`Wci fgY`k]```]bhfcXi WY`mci `hc`gca Y`cZh\Y`_Ym\]ghcf]WU``XYj Y`cda Ybhg`UbX`XYVUhYg`Ufci bX`\ck`Ufh \Ug`VYYb`i gYX`hc`]bgd]fY`W\Ub[Y`UbX`hc`]bhYfj YbY`k]h\]b`di V`]WgdUWY"``Nci `k]``\Uj Y`h\Y`W\UbWY`hc`k cf_ k]h\`mci f`dYYfg`hc`XYj]gY`mci f`ck b`Zcfa `cZUWjj]ga `cf`Wca a i b]miYb[U[Ya YbhUfci bX`Ub`]ggi Y`cZmci f W\c]WY"`H\]g`Wci fgY`]g`dUfhcZh\Y`H\YUhY`UbX`DYfZcfa UbWf`Ghi X]Yg`ghfYUa "`\#iWUb`U`gc`VY`hU_Yb`Ug`Ub Y`YWjj Y`]b`h\Y`6UW\Y`cf`cZA YX]U`fDi V`]WF Y`Uh]cbg`UbX`5Xj Yfh]g]b['L"

5 hih Y WobWi g]cb cZih]g Woi fgY h Y ghi XYbhik]``VY UV Y hc

- %" →XYbhjZmg][b]Z]WUbha ca YbhgʻUbXʻXYVUhYgʻ]bʻh\YʻXYj Yʻcda YbhcZdi V`]WUfhžʻUWhjj]ga žʻUbXʻh\Y dc`]hjWgʻcZdi V`]WgdUWYʻ]bʻh\Yʻ&\$h\`UbX`&%ghWYbhi f]Yg````
- &" 5ggYgg'_Ymh\YcfYh]WU`WcbWYdhg'Ug'k Y``Ug'dfUWh]WU``a cXYg'cZUWhjj]ga 'UbX'di V`]WUk UfYbYgg! fU]g]b[ž'UbX'Udd`mih\Ya 'hc'WcbhYa dcfUfmi]ggi Yg''''
- ' "K cf_Wc``UVcfUhj Y`mk]h. ch\Yfg`]b`i bXYfH_]b[`fYgYUfW. UbX`dfYgYbHUhjcb`cZZjbX]b[g````

HYUWX]b[GhfUhY[]Yg

FYUX]b[gžj]XYcgžUbX:U:WeaV]bUh]cb:cZcb`]bY:UbX:ZJWY!hc!ZJWY:YWhifYg'k]``dfcj]XY:\]ghcf]WU``WebhYI h UbX:Wf]h]WU``hYfa]bc`c[mZcf`i bXYfghUbX]b[:h\Y'jUf]ci g`]bhYffY`Uh]cbg'VYhkYYb'UfhUbX:UWh]j]ga "``5`Z]ddYX a cXY``cZhi hcf]U`g'k]```gi ddcfhighi XYbh`YX'Yb[U[YaYbhk]h`]ggi Yg'UbX'WUgY`ghi X]Yg'cZh\Y]f`ck b W\ccg]b[ž`YUX]b[:hckUfX'h\Y'XYjY`cdaYbhcZh\Y'Z]bU``[g'U %%

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ga YbhHUg_g`

iga Ybh'HJg_	K Y][\h	8iY`8UHY	GhiXYbh@YUfb]b[CihWcaYgʻ5ggYggYX
\cd`dfYgYbHJh]cb`	%\$I	%-#\$(#&\$%_`\$\$\$`5A	%
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gga Ybh'8YHJ]`g

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U**hy**. '%-#\$(#&\$%_'\$-.\$\$'5A

g.`)`a]bihYg"H\]g`HUg_`k]``\Y`d`dfYdUfY`h\Y`kUmZcf`mcif`fYgYUfW\`YggUm"GhiXYbhg`fYWY]jY U``fYdcfhg`UggYggYX`UVW¢fX]b[`hc`U`fiVf]WcZaUf_]b[`\M]hYf]U"

cbU``XYHJ]`g.

```WkccgY`UbX`dfYgYbhhc`h\Y`WUgg`Ub`YIUad`Y`cZUWNjj]gaždiV`]WdYfZcfaUbWYžWcaaib]m nUh]cbžcf`UkUfYbYgg!fU]g]b[ž`]bWiX]b[`\]ghcf]WU``UbX`WcbWYdhiU``WcbhYIhZcf`h\Y`WUgY`ghiXmUbX`U `m]bZcfaYX`UggYggaYbhcZ]hg`YZZYWNjjYbYggžXYacbghfUh]b[`k\Uhia][\hiVY``YUfbYX`Zfca`h\]g `Y`Zcf`igY`]b`ch\Yf`WcbhYIhg''``H\]g`hUg\_`k]```\Y`d`dfYdUfY`h\Y`kUmiZcf`mcif`fYgYUfWk`YggUm'`Mci`UfY `U[YX`hc`VY`WfYUh]jY`k]h\`mcif`dfYgYbhUh]cb`!`k]h\]b`h\Y`jYfmighf]Wh`]a]hg`cZ)`a]bihYg''

&c]WY^WUb^VY^Zfca\_YIUa\_d`Yg`kY`\UjY`U`fYUXmWcjYfYXžcf`mci\_`UfY`U`gc`YbWcifU[YX`hc`W&ccgY`Ub `Y`cZmcif`ckbžig]b[`h\Y`YX]hYX`Wc``YWfjcbg`cf`mcif`ckb`YIdYf]YbWY`Ug`U`fYgcifWY"``H\Y`cb`m U]bh]g`h\Uhmci\_`WUbbchfYd`]WUhY`k\UhigcaYcbY`Y`gY`\Ug`W&cgYb"

#### ga Ybh'Wf]hYf]U.

7 fYUhjj]hmUbXYZZYWhjjYbYgg`]bYjc\_]b[`h\Y`eiU`]hUhjjY`UgdYWhg`cZh\Y`YjYbhUbX`]hg`WcbhYIhik]h\]b )`a]bihYg

7`Uf]mi]b`gi a a Uf]g]b[`UbX`X]gh]b[ i ]g\]b[`h\Y`dUfh]W``Uf`ZYUhi fYg`cZh\Y`gY`YWYX`UW]cb

#### 5ggYgga Ybh& FYgYUfW dUdYf

GHJfh'XUhY. %-#\$(#&\$% `\$-.\$\$`5A

8YHJ]`g. '&\$\$\$`k cfXg"Gh XYbhg`fYW]j Y`k f]HYb`ZYYXVUW\_`UbX`U`bi a Yf]WU``[ fUXY"

#### 5XX]h]cbU`XYHJ]`g.

H\]gʻUggYgga YbhUg\_gʻmci ʻhcʻXYa cbghfUhYʻmci fʻi bXYfgHUbX]b[ʻcZWf]h]WUʻ WcbWrdhgʻ]bhfcXi WrX`]bʻh.Y `YWfi fYgʻUbX`fYUX]b[gʻUfci bX`]XYUgʻcZh\Y`di V`]Wgd\YfYžh\Y`h\Ycf]gUh]cbʻcZgdUWržUbX`X]ZYfYbha cXY`g cZgcWJU``mYb[U[YX`Ufh'``Nci `UfY`Ug\_YX`hc`XYa cbghfUhY`Uddfcdf]UhY`mgY`YWhYX`h\Ycf]YgʻUbX`WcbWrdhg Zrca `h\Y`Wci fgY`]b`fY`Uh]cb`hc`U`gdYWJZJWYI Ua d`Y`fcZmci f`W\ccg]b[ŁcZWca a i b]miYb[U[Ya Ybhžg]hY! gdYWJZJWUfhždYfZcfa UbWr`]bhYfj Ybh]cbžcf`UWhjj]ghUk UfYbYgg!fU]g]b["

5ggYgga Ybh'\f]hYf]U

UHHYbXUbWY`di fdcgYg"9UVX`ghi XYbhk]```fYVW]jY`kf]HHYb`ZYYXVUW\_`cb`H\Y`cjYfU```[fci d`dfc^YWhUbX`cb`\]g cf`\Yf`ck b`WcbHf]Vi h]cb`Ug`kY```Ug`U`bi a Yf]WU``[fUXY"

#### 5XX]h]cbU``XYHJ]`g.

Hc Wca d`YhY h\]g UggYgga Ybhmci `k ]``k cf\_`]b 'ga U```[ fci dg hc XYj ]gY U Zcfa 'cZUWf]j ]ga ždYfZcfa UbW žcf a cV]`]nUh]cb"``H\]g UWf]cb 'a UmfYa U]b WcbW dh U``Vi hg\ci `X`VY XYhU]`YX`]b ']hg 'd`Ub Zcf`YI YW h]cbž'UbX g\ci `X`VY `VUgYX`cb 'Vch\`df]a UfmUbX`gYWcbXUfmfYgYUfW\`]bhc U`WcbhYa dcfUfm]ggi Y"``9UW\`[ fci d`k ]`` dfcXi Wr U`n]bYž'k YVg]hYžcf`gca Y`ch\Yf`Zcfa `cZXcW a YbhUh]cb`f]b Wcbgi `hUh]cb`k ]h\`h\Y`Wci fgY`h hcfŁh\Uh ]bWi XYg 'Vch\`h\Y`WcbhYI h- h\Y`[ fci fYg WcbWY]j Xg UWf]cb 'UbXfgY`žcff]a [ n]bXZXcW a YbhUh]cb`cZh\h

ugydogy akonykkeur akonykeur a Ybh

## Gi Va ]gg]cb cZ5ggYgga YbhHUg\_g

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

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

Zmci YbWci bhYf'U'dfcV'Ya 'k \Yb'UthYa dhjb[ 'hc'gi Va ]hmci f'Ugg][ ba Ybht\fci [ \'Hi fb]hjbž'd'YUgY hY'Yd\cbY'9I hYfbU''Gi ddcfhicb'-', ) '' ' %cf'Ya U]`'h\Ya 'cb'<u>YI 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'mYUfŁ'' Zmci UfY'i bUV'Y'hc'gi Va ]hmci f'Ugg][ ba YbhXi Y'hc'U'ZJi `hk ]h\'Hi fb]hjb'mci 'a UmUdd`m'Zcf'Ub'YI hYbg]cbžVi hmci a i ghfYhU]b'mci f'hjW\_Yhbi a VYf'Zfca '9I hYfbU''Gi ddcfhfU'cb[ 'k ]h\ 'Ubmch\Yf'fY'Yj UbhXcW a YbhgŁ'hc ]bWi XY'Ug'Yj ]XYbWY hc'gi ddcfhimci f'YI hYbg]cb'Udd`]WUhjcb'' Zmci 'Ya U]`'9I hYfbU''Gi ddcfhimci 'k ]`` Ui hca UhjWU'`mfYWY]j Y'U'hjW\_Yhbi a VYfž'Vi h]Zmci 'hY'Yd\cbY'mci 'k ]``bYYX'hc'gdYWJZWU'`mUg\_'Zcf'cbY" Hi fb]hjb'U`gc'dfcj ]XYg'i dXUhYg'cb'h\Y]f'gmghYa 'gfUh g'cb'Hk ]hYf"

; YbYfU``mž'UggYgga YbhiHUg\_g'a i ghVY'gi Va ]HHXXYYWYfcb]WU``mj ]U'Y]H\Yf'Hi fb]h]b'cf'U'A ccX`Y Ugg][ ba Ybh''=b`]bgHUbWYg'k \YfY'H\]g']g'bchdcgg]V`Yž']hk ]``VY'gHUHX'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'HJg\_']g'XYYa YX``UHY']Z]h']g'gi Va ]HHYX'UZHYF'H\Y'gdYW]ZJYX'Hja Y'UbX'XUHY'Ug'gYhici h]b'H\Y Wci fgY'@YUfb]b['A UbU[Ya YbhGmgHYa 'f@A GŁ''

H\Y``UhY`dYbU`hm`]g`h\Y``cgg`cZ)ı `cZh\Y`hchU``dcgg]V`Y`aUf\_g`Zcf`h\Y`hUg\_`Zcf`YUW\`XUm`cf`dUfhih\YfYcZh\Y kcf\_`]g``UhY"`@UhYbYgg`k]```]bWiXY`kYY\_YbXg`UbX`diV`]W\c`]XUmg"`H\]g`XcYg`bchUdd`mhc`U`hUg\_`h\Uh`]g UggYggYX`Vihbc`aUf\_`]g`UkUfXYX"

K cf\_'gi Va ]httX:Zci fhtYb`f%(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`fYWY]j YX`U`dUgg`a Uf\_`Vi hZcf`h\Y``UhYbYgg`UbX`h\Y`k cf\_`]g`U Wca di `gcfmWci fgY`Wca dcbYbhzU`gh XYbhk]``VY`XYYa YX`hc`\Uj Y`a Yhh\UhfYei ]fYa Ybh'`H\]g`XcYg`bch Udd`mhc`U`hUg\_`h\Uhi]g`UggYggYX`Vi hbc`a Uf\_`]g`Uk UfXYX''

K cf\_`gi Va ]hhYX'hk YbhnicbY'f&&:XUmg'UZhYf'h\Y'Xi Y'XUhY'k ]``bch'VY'UWW/dhYX'Zcf'a Uf\_]b[ 'cf'ZYYXVUW\_ UbX'k ]``fYWY]j Y'bc'a Uf\_`cf'[fUXY"'=Zh\Y'UggYgga Ybh'hUg\_`]g'U'Wca di `gcfm'Wca dcbYbhicZh\Y'Wci fgY'U ghi XYbh'k ]``Ui hca Uh]WU``m'ZU]``h\Y'Wci fgY"

#### GdYWJU``7cbg]XYfUh]cb`5dd`]WUh]cbg

 $\label{eq:milling} \end{tabular} Mci `WUb`Udd`millingYgdYWJU`Wcbg]XYfUh]cb`k \Yb`]``bYgg`cf`ch\Yf`WJfW a ghUbWfg`]bhYfZYfY`k ]h\`mci f UggYgga YbhidYfZcfa UbWf"$ 

G]W\_bYggža]gUXjYbhifY`cf`ch\Yf`W]fW a gHubWfg`VYmcbX`mcif`Wcbhfc``aUm

ł DfYj Ybhmci Zfca Wcad Yhjb[ UWci fgY fYei ]fYa Ybhž

ł?YYdimci Zfca UHYbX]b[ UbiUggYggUVYUW]j ]mž

ł Ghod moi i gi Va ]hh]b[ iUggYggUV Y k cf\_iZcfiU Wci fgYž

ł `G][ b]Z]WUbhmUZYWimci f`dYfZcfa UbWi`]b`UggYggUV`Y`k cf\_ž`VY`]hU`Zcfa U``YbX!cZigYa YghYf`YI Ua ]bUh]cbž`U WUgg`hYghž`U``UVcfUhcfmhYghž`U`gYa ]bUf`dfYgYbhUh]cb`cf`Ubmich\Yf`Zcfa `cZUggYgga Ybh'

: cf'Z fh\Yf'XYHJ]`g`]b`fY`UH]cb`rc`GdYW]U``7 cbg]XYfUH]cb`]bWi X]b[`''K \Yb`rc`5dd`mf'Z''<ck`rc`5dd`mf'UbX "Gi ddcfh]b[`8cW a YbHJh]cb"'d`YUgY`fYZYf'rc'h\Y`GdYW]U``7 cbg]XYfUH]cb`rk YVgh]Y.` \hhdg.##gh XYbH'i bgk "YXi "Ui #gdYW]U`!Wcbg]XYfUH]cb

## 5WUXYa ]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"`=hWUb`hU\_Y`a Ubm Zcfa gžZca `XY`]VYfUhY`W\YUh]b[`hc`UWW]XYbhU``mWcdm]b[`Zca `U`gci fWY`k]h\ci hUW\_bck `YX[Ya Ybh'

I BGK '[fci dg'd`U[]Uf]ga ']bhc 'h\Y'Zc``ck ]b[ 'WUhY[cf]Yg.

7 cdm]b[..i g]b[.ih,Y`gUa Y`cf`j Yfmig]a ]`Uf`k cfXg`hc`h,Y`cf][.]bU``hYI h`cf`]XYU`k ]h\ci hUW\_bck `YX[.]b[.ih,Y gci fWY`cf`i g]b[ `ei chUh]cb`a Uf\_g"`H\]g`U`gc`Udd`]Yg`hc`]a U[.Ygž`Ufh`UbX`XYg][ b`dfc`YWfgž`Ug`k Y```Ug dfYgYbhUh]cbg`k \YfY`gca YcbY`dfYgYbhg`Ubch\Yf`g`]XYUg`cf`k cfXg`k ]h\ci hWfYX]h"

=bUddfcdf]UhY'dUfUd\fUg]b[.'W\Ub[]b['U'ZYk 'k cfXg'UbX'd\fUgYg'k \]Y'a cghmfYhU]b]b['h\Y'cf][]bU' ghfi Whi fY'UbX']bZcfa Uh]cb'k ]h\ci hUW\_bck `YX[Ya Ybh''H\]g'U`gc'Udd`]Yg']b'dfYgYbHUh]cbg'k \YfY'gca YcbY dUfUd\fUgYg'Ubch\Yf'g']XYUg'cf'k cfXg'k ]h\ci hWfYX]h''=hU`gc'Udd`]Yg'hc'd]YW]b['hc[Yh\Yf'ei chYg'UbX dUfUd\fUgYg']bhc'U'bYk 'k \c`Yž'k ]h\ci hfYZYfYbW]b['UbX'U'gh 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 hdUgg]b[ 'cZh 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'gh XYbhVYZcfY'h Y'Xi Y'XUhYzcf'Zcf'h Y'di fdcgY'cZh Ya d`U[ ]Uf]g]b[ 'UhUbmh]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\_''

=ÐUddfcdf]UhY`W]hUh]cb. 7]h]b[`gci fWYg`k∖]WX`\Uj Y`bchVYYb`fYUXžk]h\ci hUW\_bck`YX[]b[`h\Y`″gYWcbXUfm´ gci fWY`Zfca`k∖]W\`\_bck`YX[Y`cZh\Ya`\Ug`VYYb`cVhU]bYX"

8id`]\WUh]cb`fl`gY`ZId`U[]Uf]ga "Ł`gi Va]hhjb[`mcif`ckb`kcf\_ž`]b`k\c`Y`cf`]b`dUfhž`k\YfY`]h\Ug`dfYj]cig`m VYYb`dfYdUfYX`cf`gi Va]hhYX`Zcf`Ubch\Yf`UggYggaYbhcf`\\circf`Ucil BGK `cf`Ubch\Yf`ib]jYfg]hm"

7 cffYWhfYZYfYbW]b[dfUWf]WYg.

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	@Y₩i fY	GHfiWHifY`UbX`ghfiWHifY`YggbYgg"``H\Y``YWHifY`k]`` ]bhfcXiWY`h\Ycf]Yg`UbX`dfUW]WYg`cZWc``UVcfUh]jY kcf_`Ug`U``YUfbUV`Y`g_]``ž`]bWiX]b[`dfU[aUh]W UddfcUW\Yg`hc`Ujc]X]b[`k\Uhi>c`:fYYaUb`WU``YX ffh\Y`hmfUbbmicZghfiWhifY`YggbYgg"fi
K YY_`'' \$`5df]`!'*`A Um	nDfc∕YWh	@YWNifY`g`ch`9UW\`[fcid`dfYgYbhg`U`ghUhig`idXUhY cb`h\Y]f`kcf_" Hihcf]U``g`ch`7cbh]biY`k]h\`[fcid`kcf_`h\fci[\ ghfiWnifYX`kcf_g\cdg"
K YY_`%\$.`+`A Um'!`% A Um	Dfc Ƴ₩	@YWNifY`g`ch`9UWX`[fcid`dfYgYbhg`U`ghUhig`idXUHY cb`h\Y]f`kcf_" Hihcf]U``g`ch`7cbh]biY`k]h\`[fcid`kcf_`h\fci[\ ghfiWnifYX`kcf_g\cdg"
K YY_`%%`%(`A Um!`&\$ A Um	Dfc YWh	@YWNifY`g`ch`9UVX`[fcid`dfYgYbhg`U`ghUhig`idXUHY cb`h\Y]f`kcf_" Hihcf]U``g`ch`7cbh]biY`k]h\`[fcid`kcf_`h\fci[\ ghfiWnifYX`kcf_g\cdg"
K YY_`%&.`&%`A Um'!`&+ A Um	Dfc YWh	@YWMifY`g`ch`9UW\`[fcid`dfYgYbhg`U`ghUhig`idXUHY cb`h\Y]f`kcf_" Hihcf]U``g`ch`7cbh]biY`k]h\`[fcid`kcf_`h\fci[\ ghfiWMifYX`kcf_g\cdg"
K_YY_`%_`&, `A_Um!`' >i_bY	Dfc YWh	Hihcf]U`g`ch':]bU`g∖Uf]b['cZ[fcid'dfc17Wkg'k]h∖ YUW\'ch\Yf"

## FYgci fWg

## DfYgWf]VYX F Ygci fWfg

5```fYgci fWfg`cb`Cb`]bY`FYUX]b[`@]gh'Uh \hhdg.##Ud\$%{U"U`aU"YI`]Vf]g[fci d"Wca #Y[Ubhc#fYUX]b[`]gh#]ghg#&&)(&, \$(-)\$\$\$%+' %3]bgh]hi h/1\*%{BGKS= BGH/Ui h\1@C75@

#### FYWca a YbXYX FYgci fWYg

6cmXž5bXfYk žUbX8UjYCgkUXA]WXY``žYXg"ž4WSgf[Xg^FdagTW/3Faa/TajXadDWha/gf[a``fBYk`Mcf\_UbX'@cbXcb.`C#F`6cc\_gž&\$%&Ł

5bX'h\Y'k YVg]hY']g'0<u>\hd.#/YUi h]Z `hfci V`Y"cf[</u>2

Ch\Yf`fYWcaaYbXYX`Wc``YWh]cbg`cb`diV`]WUfhUbX`UWh]j]ga.

8c\Yfmž'7`U]fYž'YX"ž'BgT'{U3df/@aif;AgfaXF[\_WAgfaXB'SUWf@cbXcb.`5fhi#6cc\_gž'&\$%) Ł

: Y`g\]bž`B]bUž`YX"ž'4gf;e;f3df1 FZWEb[d[faX3df3e3Uf[h[e\_ 'fGYUhhY.'6UmDfYggž'%-(Ł

A WeU[UbžAY[žUbX:MUhYgAW?YYžEW]e[TWBa{ff[Ue, FZWH[egS^5g/fgdWaX@a`YahWd]\_WfS^ 3Uf[h[e\_\_`fBYk:Mcf\_.:NcbY'6cc\_gž&\$%&L

BYU'ž@iWhžB'Sk[`YXadF[\_W?S][`Y3dfSe;XfZWIadV?SffWdWV'fl@cbXcb.'CVYfcb'6cc\_gž&\$%)Ł

BchYgʻZfca 'Bck \YfYžI W3dW7hWdki ZWdW, FZW;ddWe[ef[T^WD[eWaX9^aTS^3`f[USb[fS^[e\_ 'f@cbXcb.'J Yfgcž &\$\$' Ł

ghY]f]gWXYf`\YfVghUbX`: `cf]Ub`A U`nUWXYfžYXg"žFdgfZ;e5a`UdWfW;3: S`VTaa] Xad3df[ef[UEfdSfWY[We[`DWS^Ba'[f[Ue`fbYf]]b.`GhYfbVYf[`DfYggž&\$%( Ł

H\cadgcbžBUhcžUbX; fY[cfmG\c`YHYžYXg"žFZW;`fWdhWf[a`[efe,GeWde?S`gS^XadfZW5dWSf[hW6[edgbf[a`aX7hWdxVSk>[XWf7UaVf]X[Y`A5.`A+H`DfYggž&\$\$(Ł

H\cadgcbžBUhcžYX"ž>[h[`Y Se 8ad\_, E aU[S^k 7`YSYW 3dfXda\_ #++#Ž\$" ##`f7UaVf]X[YA5`UbX @cbXcb.`A +H`DfYggž&\$%&{

K Y]VY`žDYhYfžYX"ž9 &TS^3Uf[h[e\_, 3dfS`V5a`X[Uf[`fZW\$#ef5W fgdk`f7 Ua Vf]X[Y`A5`UbX`@cbXcb. A +H`DfYggž&\$%) Ł

N? A ž'Y aTS^S5 f; H; E \_ ž'O<u>\hd. #k k k "[`cVU`!UWfji]ga "XY#</u>O

<agd S^aX3WefZWf[Ue BdafWefZO<u>hd.#kkk"cUUd"cf[#</u>2

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

=j U`i Y`mci f`ZYYXVUW\_`UbX`k]```i gY`H\Y`a m9I dYf]YbWY`Ubcbma ci g`gi fj Ymž'Ug`k Y```Ug`]b!WUgg`fYZYWI]cbžhc ]bZcfa `\ck `=g\UdY`Z Hi fY`HYUW\]b[ "

## ⊨a U[Y<sup>·</sup>7fYX]h

@]VYfUHY`HUHYž: g\_S`5aefž8ijYYb'; U``YfmžHUHY`6f]HJ]b'f&\$%%2"`H\Y`dYfZcfaUbWY`hcc\_`d`UWY`cb`h\Y`Z]fgh Ubb]jYfgUfmcZh\Y`gHJfhcZh\Y`6D'; i`ZcZAYI]Wc`X]gUgHYf"`+r`UgHYX`Zcf', +`a]biHYgžcbY`Zcf`YjYfmXUmcZ h\Y`gd]``"-aU[Y`Zfca`<u>k k k`")VYfUHYHUHY"cf["i\_#dYfZcfaUbWYg#\iaUb!WcgHUdf]`</u>\&\$%%#`fbc`Wcdmf][\Hz

#### 7F=7CG

7F =7CG Dfcj ]XYf 7cXY. \$\$\$-,;