



ARTS2462

HYfa YX]UH' 7 \]bYgY'Zcf'6UW_[fci bX'GdYU_Yfg'6

HYfa 'H\fYY'##'&\$&\$

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7cbj Ybcfg

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@YW] fYfg

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Hi h]cfg

B Ua Y	9a U]`	5j U]`UV]`]m	@cW]h]cb	D\cbY
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@cW]h]cb. GWcc`C Z]W]ZA cfj Yb`6fck b`6i]X]b[ž@Yj Y`&ž&),

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9a U]`. [\U`4 i bgk "YXi "Ui](#)

7ci fgY'8YHJ]`g

7fYX]hDc]bhtg`*`

Gi a a UfmicZhY'7ci fgY

H\]g`Wci fgY`]g`ZcfVUWU[fci bX`gdYU_Yfg`UhhY`bhfafa YX]UH`@Yj Y`" `#i]g`cdYb`hc`gh`XYbhtg`k`lc`\Uj`Y`[fck`b`i`d`]b`U`ZJa`]mcf`Ybj`]fcb`a`Ybhk`\YfY`A`UbXUf]b`cf`Ubm7\]bYgY`X]UYWg`\Uj`Y`VYYb`i`gYX`]b`XU]m`g]h`U]hcbg`" `#ifYei`]fYg`U`fYUgcbUV`Y`Yj`Y`cZgdc_Yb`7\]bYgY`UbX`U`k`cf_]b[`_bck`YX[Y`cZbc`Ygg`h`Ub`%\$\$\$`W`UfUW`Yfg`" `#h`h`g`Wci fgY`Z`mci`k`]`" `ja`dfcj`Y`mci`f`7\]bYgY`g_]`g`]b`h`Y`UfYUg`cZgdYU_]b[`z`]ghYb]b[`z`fYUX]b[`UbX`k`f]h]b[`z`UbX`k`]`a`U_Y`g][b]Z]W]bh[U]bg`]b`h`Y`UWci`]g]hcb`cZ]cW]Vi`UfmUbX`[fUa`a`Uf`Mci`k`]`U`gc`VY`]b]fcXi`WYX`hc`gcW]U`z`W`h`fU`UbX`\]g]hcf]W]`_bck`YX[Y`]b`h`Y`WcbhY`hcZ`h`Y`7\]bYgY`gdYU_]b[k`cfX`" `#`UXX]hcb`hc`XU]mX]gWci fgY`UbX`UVghfUW]X]YUg`z`hcd]W]h`U`hifYei`]fY`W]h]W]`h`]b_]b[`UbX`\][\Yf`Ub[i U[Y`]b]h[fU]hcb`UfY`k`cj`Yb`]b]hc`h`g`Yj`Y`cZ`Ub[i U[Y`gh`Xm`

7ci fgY`@YUfb]b[`Ci hWca Yg

%`I`bXYfghUbX`U`k`]XY`fUb[Y`cZ`hY`h`g`Z`ca`j`Uf]ci`g`gci`fW]g`UbX`cb`U`j`Uf]YfmicZ`hcd]W]g`&`7`ca`dcgY`g`l`cfh`YggUm]g`]b`7\]bYgY`cb`U`[]j`Yb`hcd]W`'`" `5`Wci`]fY`Wca`a`i`b]W]h]cb`g_]`g`z`UbX`]XYb]h]Zm`Wca`a`i`b]W]h]cb`g]m`Yg`]b`7\]bYgY`(`" `8`Ya`cbghfU]h`]b]hafa`YX]UH`!`Yj`Y`_bck`YX[Y`cZ`]b[i]gh]WVY\Uj`]ci`f`z`gc`W]Ym`UbX`W`h`fY`]b`h`Y`7\]bYgY`!`gdYU_]b[`k`cfX`

HYUW]b[`GhfUH[]Yg`

H\]g`Ub[i U[Y`Wci fgY`fYei`]fYg`mci`hc`UH`Y`bX`WUggYg`hc`hU]b[`Zci`f`\ci`fg`dYf`k`YY_]`cbY`&!`ci`f`Y`W]h`fY`UbX`cbY`&!`ci`f`h`hc`f]U`" `H\Y`Y`W]h`fY`Wci`Yfg`bYk`j`cW]Vi`Ufm`z`hY`h`z`[fUa`a`U]h]W]`g]h]f`W]h`fY`z`UbX`gcW]U`z`W`h`fU`UbX`\]g]hcf]W]`Uk`UfYbYgg`]b`h`Y`7\]bYgY`WcbhY`h`H\Y`h`hc`f]U`h]f[Y]h]k`cf`Vcc_]Y`Yf]W]gYg`UbX`dfcj`]XY`cddcf]b`]h]Yg`Zcf`gh`XYbhtg`hc`gdYU_`7\]bYgY`UbX`UXXfYgg`Ubm]fYUX]b[`UbX`k`f]h]b[`]gg]Yg`Mci`UfY`U`gc`fYei`]fYX`hc`gdYbX`U`a`]b]a`i`a`cZ` \ci`fg`dYf`k`YY_]`hc`gh`Xmci`h]g]XY`h`Y`WUgg`]b`cfXYf`hc`UW]Y]j`Y`U`gU]hgZ]W]hcfm`YUfb]b[`ci`hWca`Y`"

H\Y`Wci fgY`U]a`g`hc`Yb`UbW]`UbX`UggYgg`gh`XYbhtg`Zci`f`Ub[i U[Y`g_]`g`h`fci`[\ci`h`h`Y`Wci fgY`k`YfY`g]h]f`W]h`fU`UbX`]b]h]fUW]j`Y`a`Y`h`c`Xg`UfY`Yei`U`m`Udd`]YX`" `#`YUW]`Yggcbz`mci`k`]`gh]Ufhk`]h`j`cW]Vi`Ufm`UbX`g]h]f`W]h`fU`dfUW]W]k`\]W]k`]`h`Yb`VY`Z`ck`YX`Vm]h]Ug_]UgYX`UW]j`]h]Yg`" `7`cbg]XYf]b[`h`U]h]mci`UfY`VUWU[fci bX`YUfbYfgz`U`gi`Vgh]Ub]h]U`Ua`ci`b]hcZ`WUgg`k`]`VY`WcbXi`WYX`]b`7\]bYgY`" `H\Y`Ub[i U[Y`cZ]bg]h]f`W]h]cb`]b`h`Y`WUgg`]g`df]a`Uf]m]h`Y`h]f[Yh`Ub[i U[Y`UbX`9b[`]g`\`k`]`VY`i`gYX`cb`m]k`\Yb`bYW]ggUfm`hc`WUf]Zm]gg]Yg`" `H\Y`UggYgga`Ybhtg`k`]`fYei`]fY`mci`hc`XYa`cbghfU]h`U`gc`]X`Wca`dfY`Ybg]cb`UbX`cd]h]a`U`i`gY`cZ`WcbhY`bhtg`Wci`YfYX`]b`h`Y`h]i`h]cc_]fU]hYf`h`Ub`hc`fYdYU]h]f`X]a`Yb]Ufm`_bck`YX[Y`UWci`]fYX`Vm]fch`"

5ggYgga Ybh

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+`\$`a `]bi hŸg"

: YYXVUW_`UbX`Wta a Ybhg`]b`hi hcf]U`g"

5XX]h]cbU`XYHU]`g.

D`YUgY`fYZf`hc`A ccX`Y`UbX`]b!WUgg`Ubbci bWŸa Ybhg`Zcf`U``i d!hc!XUHŸ`UggYgga Ybh]bZcfa U]cb`Zcf
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5ggYgga Ybh&.`; fci d`DfYgYbhUH]cb

GHUfhXUHŸ. `Bch5dd`]WUV`Y

8YHU]`g.

Gh XYbhg`UFY`U`cWŸhX`]b[fci dg`UhŸY`ghUfhcZŸY`hŸfa žUbX`YUW`[fci d`dfYgYbhg]cb`Ub`Ugg][bYX`hcd]W
%)`!`&\$`a `]bi hŸg"

C fU`ZYXVUW_]b`WUgg

5XX]h]cbU`XYHU]`g.

D`YUgY`fYZf`hc`A ccX`Y`UbX`]b!WUgg`Ubbci bWŸa Ybhg`Zcf`U``i d!hc!XUHŸ`UggYgga Ybh]bZcfa U]cb`Zcf
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5ggYgga Ybh` .`HYgh%

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8YHJ]`g.

HYgh]b[`j cWJVi `Ufmž [fUa a Ufž'a UghYfmcZk f]h]b[`WUfUWYfg`UbX`k f]h]b[`g_]`g`f@Yggcb`%%!`@Yggcb`%+L/
%&\$`a `]bi h`g"

: YYXVUW`UbX`Wca a Ybhg`]b`h`hcf]U`g

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

D`YUgY`fYZf`h`A ccX`Y`UbX`]b!WUgg`Ubbci bW`a Ybhg`Zcf`U``i d!h`!XUH`UggYgga Ybh]bZcfa Uh]cb`Zcf
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Gi Va]gg]cb 'cZ5ggYgga YbhiHUg_g

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Ʒmci 'YbWci bHYf'U'dfcV'Ya 'k \Yb'UH'Ya dh]b['hc'gi Va]hmc i f'Ugg][ba YbhiH'fci [\ 'Hi fb]h]bž'd'YUgY
HY'Yd\cbY'9I HYfbU'Gi ddcfhcb'-',) " ' ' %cf'Ya U] 'H'Ya 'cb'YI HYfbU'HY'fgi ddcfh4 i bgk "YXi "Ui "'Gi ddcfh
\ci fg'UfY', .\$\$Ua '—%\$.\$\$da 'cb'k YY_XUmg'UbX'-. \$\$Ua '—) .\$\$da 'cb'k YY_YbXg'fI *) 'XUmg'U'mYUfI" Ʒmci
UfY'i bUV'Y'hc'gi Va]hmc i f'Ugg][ba YbhiXi Y'hc'U'Zi 'hk]H'Hi fb]h]b'mci 'a UmUdd'm'Zcf'Ub'YI HYbg]cbž'Vi hmc i
a i ghfYHU]b'mci f'h]W_Yhbi a VYf'Z'ca '9I HYfbU'Gi ddcfhfU'cb['k]H'UbmcH'Yf'fY'Yj UbhXcW a YbHg'k'hc
]bWi XY'Ug'Yj]XYbVW'hc'gi ddcfhmc i f'YI HYbg]cb'Udd'jW]h]cb" Ʒmci 'Ya U] '9I HYfbU'Gi ddcfhmc i 'k]
Ui 'ca UH]WU'm'fYW]j Y'U'h]W_Yhbi a VYfž'Vi h]Zmci 'HY'Yd\cbY'mci 'k]'bYYX'hc'gdYW]Z]WU'mUg_'Zcf'cbY"
Hi fb]h]b'U'gc'dfcj]XYg'i dXUH'g'cb'H'Y]f'gmgh'Ya 'ghU'hi g'cb'Hk]HYf"

; YbYfU'mž'UggYgga YbhiHUg_g'a i ghVY'gi Va]HYX'Y'YW'fcb]WU'mj]U'Y]H'Yf'Hi fb]h]b'cf'U'A ccX'Y
Ugg][ba YbH' 'b]bgHUbVW'g'k \YfY'H'g]g'bc'hd'cgg]V'Yž'hk]'VY'gh'UH'X'cb'mci f'Wci fgY'g'A ccX'Y'g]HY'k]H
U'HYfbUH] Y'gi Va]gg]cb'XYHU]g"

: cf]bZ'fa UH]cb'cb'\ck 'hc'gi Va]hUgg][ba YbHg'cb]bY'j]U'A ccX'Y. \h'hdg.#gh XYbH'i bgk "YXi "Ui #ck!
gi Va]hUgg][ba YbH'a ccX'Y

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

D`U[]Uf]ga `]g`i`g]b[`h`Y`k`c`f`X`g`c`f`]X`Y`U`g`c`Z`c`h`Y`f`g`i`U`b`X`d`f`Y`g`Y`b`h]b[`h`Y`a` `U`g`m`c`i`f`c`k`b``#W]b`h]U`_`Y`a`U`b`m`
Z`c`f`a`g`Z`Z`c`a` `X`Y`]V`Y`f`U`h`Y` `W`X`Y`U`h]b[`h`c` `U`W`W`Y`X`Y`b`h]U`m`i`W`c`d`m]b[`Z`c`a` `U`g`c`i`f`W` `k`]h`c`i`h`U`W`_`b`c`k` `Y`X[`Y`a` `Y`b`h`

I`B`G`K` `[`f`c`i`d`g`d`U[]Uf]ga `]b`h`c` `h`Y` `Z`c` `c`k`]b[`W`U`h`Y`[`c`f]Y`g.

- i bXYfghUbx'mci f'f][\hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[]Uf]ga ž'Wcdmf][\hž' BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5Ww'dhUV'Y'I gY'cZ I BGK '⇒H'F Ygci fW'g'Dc`]Wm
- VY'Uk UfY'cZh'Y'ghUbxUfXg'cZVY\Uj]ci f'YI dYW'X'cZYj Yfmcby']b'h'Y'I BGK 'Wca a i b]m
- 'cWJh'gYfj]W'g'UbX'j]bZcfa Uh'cb'UVci hl BGK 'UbX'I BGK '@VfUfm

Gca Y'cZh'YgY'UfYUg'k]''VY'ZJa]]Uf'hc'mci ž'ch'Yfg'k]''VY'byk "'; U]b]b['U'gc'X'i bXYfghUbx]b['cZU''h'Y fY'UH'X'UgdYW'g'cZ9@G9'k]''\Y'd'mci 'a U_Y'h'Y'a cghcZmci f'gh X]Yg'Uhl BGK ""

[\hd. #gj V'YW'f i \]XYg" \]VfUfm'i bgk "YXi "Ui #' \]gY#JVci h' \]gY](#)

5WUXYa]b=Uk Ucb]W=Zcfa Uh]cb

: cfYggYbh]U`gh XYbh]bZcfa Uh]cb`fY`UH]b[`tc.

- fYei Yg]Zcf`YI H`bg]cb/
- `UH`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk `cZa Uf_g/
- I BGK `<YU`h`UbX`GUZY`mdc`]WYg/
- YI Ua]bUH]cb`dfcW`Xi fYg/
- gdYW]U`W`bg]XYfUH]cb`]b`h`Y`Yj`YbhU`)

+