



ARTS3812

A Ub]Ugž'DUb]Wg'UbX'7 fUg\Yg.; `cVU'Dc`j]WU`9Wčbca m
]b'Ub'9fU'cZ7 f]g]g

HYfa 'H\fYY`##'&\$%-

7ci fgY'8YHJ]`g

7fYX]hDc]bhr`*`

Gi a a UfmicZhY'7ci fgY

Gi VYWh5fYU. Ba f[ue S` V ;` fWd Sf[a` S^DWSf[a` e

H\Y'dYf]cX`Zca` h\Y`YUfm%- +\$g`jg`cZYb`bchYX`Ug`U'dUfhW`Ufmj`c`UhY`cbY`Zcf`hY`[`cVU`dc`]hW`
YWcbca mfl` D9E`H\]g`j`c`Uh`]m\Ug`g][`b]Z]W]bh]a`d`]W]h]cbg`Zcf`hY`k`Umg`]b`k` \]W`k`Y`UfY`UV`Y`Z`cf`bch`h`
]j`Y`ci`f`]j`Yg`h`cXUm`UbX`Zcf`hY`Z`h`fY`gi`ghU]bUV]`]micZdc`]hW`!YWcbca`]WdfUW]W`"Mc`i`k`]`VY`Ug`_YX`]b`
h`]g`V`i`fgY`h`c`k`cf`_`ci`hk` \Uh`h`YgY`]a`d`]W]h]cbg`UfY`Z`UbX` \ck` h`Ym` \Uj`Y`Uf]g`Yb`Z`Vm`YI`Ua`]b]b[`h`Y`[`cVU`
dc`]hW`YWcbca`m]b`U`j`Uf]YmicZ`Z`cfa`g`Z`UbX`h`fci`[`a`i`h`d`Y`dYfgdYW]j`Yg`"Mc`i`k`]`VY`Yb`W`i`fU`[`YX`h`c`
h`]b`_`fY`ZYW]j`Y`m`UbX`]a`U`[`]b`Uh]j`Y`m`UV`ci`hei`Yg`h]cbg`]b`h`Y`;` D9`Z`cf`k` \]W`h`Y`fY`UfY`bc`YUgm`Ub`gk`Yfg`Z`
]b`Wi`X]b[`ei`Yg`h]cbg`c`Z`dck`Yf`Z`df]j`]Y`[`Y`Z`W`a`a`cb`g`Ybg`Y`Z`]bghUV]`]m`UbX`h`Y`cb`[`c]b[`fc`Y`c`Z`W]g]g!Xf]j`Yb`
W]d]hU]gh[`fck`h`"Mc`i`k`]`VY`Ug`_YX`h`c`a`U`_Y`XYW]g]cbg`UV`ci`h`m`ci`f`j`]Yk`g`c`b`h`Y`Udd`UfY`bh`m`g`m`h`a`]W`
b`Uh`fY`c`Z`W]d]hU]gh]bghUV]`]m`H`c`[`Y`h`Y`f`Z`k`Y`k`]`XYW]XY`h`c`k` \Uh`YI`h`Y`b`h`Z`UbX`k` \m`Z`h`Y`[`cVU`dc`]hW`
YWcbca`m` \Ug`V`Y`Y`b`X`ca`]b`Uh`X`V`m`W]g]g`Z`XY`j`Y`c`d]b[`Ub`i`b`XY`fg`h`UbX]b[`c`Z`h`Y`g`h`i`W`h`fY`UbX`dfUW]W]g`c`Z`
[`cVU`dc`]hW`!YWcbca`]WfY`Uh]cbg`Z`]b` \]g`h`c`f]W`"UbX`W`c`b`h`Ya`dc`fU`f`m`d`Y`fgdYW]j`Y"

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

%` ÆYbh]Zm`UbX`ci`h]bY`h`Y`W`c`b`h`g`h`X`UbX`X]j`YfgY`W`UfUW]Y`f`c`Z`b`h`f`b`Uh]cbU`Dc`]hW`"9Wcbca`m`fUg`
UW]XYa`]W]X]g]W]d`]b`Y`E`UbX`h`Y`[`cVU`dc`]hW`YWcbca`m`fUg`Ub`UfY`b`U`E`/
&"` 8YgW]VY`UbX`X]gW`gg`U`j`Uf]YmicZ`XYV`UhY`g`UbX`Udd`f`c`UW]Yg`gi`ffci`bX]b[`UW]cb`UbX`dc`]W]h`a`U`_]b[
]b`h`Y`[`cVU`dc`]hW`YWcbca`m`
'` "@cW]h`Z`df]c]f]h]gY`UbX`Udd`m`Udd`f`c`df]U`h`]b`Z`cfa`Uh]cb]b`#`c`b`h`f`b`Uh]cbU`Dc`]hW`"9Wcbca`m`f`D9E`]b`
U`g`cd` \]g]h]W]h`X`UbX`d`Y`fgi`Ug]j`Y`a`Ubb`Y`f`Z`i`g]b[`WYUf`UbX`Y`Z`Y`W]j`Y`c`fU`UbX`k`f]h`Y`b`W`c`a`a`i`b]W]h]cb`
g_]`g`/
(` 5bU`mgY`Z`YI`d`U]b`UbX`W]h]e`i`Y`U`X`j`Ub`W`X`"]h`f`U`h`f`Y`g`UbX`]X`Y`U`g`f`Y`U`h]b[`h`c`h`Y`h`Y`c`f]Y`g`UbX`dfUW]W]g`
c`Z`D9E`]b`Wi`X]b[`U`j`Uf]YmicZ`W`c`b`W`d`h`g`Z`h`Y`c`f]Y`g`UbX`W]h]h`[`c`f]Y`g`c`Z`Ub`U`mg]g`/
)` "Gi`a`a`Uf]gY`UbX`Y`j`U`i`Uh`Y`XYV`UhY`g`UbX`Udd`f`c`UW]Yg`]b`#`c`D9E`]b`Z`cfa`YX`V`m`Ub`i`b`XY`fg`h`UbX]b[`c`Z`
Y`h`W]h`]g`gi`Y`g`UbX`U`g`Y`Z`f`Y`Z`YI`]j`Y`U`k`UfY`b`Y`gg`c`Z`h`Y`f`Y`U`g`c`b`Y`X`j`]Y`k`g`c`Z`c`h`Y`fg`"

HYUW]b[`GhFUhY[]Yg`

F Uh]cbU`Y

H\]g`W`i`fgY`g`YY`_`g`h`c`Y`b`W`i`fU`[`Y`UbX`f`Y`k`U`f`X`g`h`i`XY`b`h`g`U`g`]b`XY`d`Y`b`XY`bh`Y`U`f`b`Y`fg`k` \c`Udd`f`c`UW]`h`Y`j`f`
g`h`X]Y`g`k`]h`Y`b`h`i`g]U`ga`UbX`X]j[`Y`b`W`"G`h`XY`b`h`g`k`]`Z`b`X`a`i`W`c`Z`h`]g`W`i`fgY`XY`a`UbX]b[`UbX`a`UbmicZ`
h`Y`h`Y`c`f]Y`g`UbX`Udd`f`c`UW]Y`g`k`Y`k`]`W`c`j`Y`f`U`f`Y`]b`f]b`g]W]h`m`W`U`Y`b[]b[" `#`]g`]a`dc`f`U`b`h`h`U`h`g`h`XY`b`h`g`h`f`m`
U`k`Umg`h`c`YI`dfY`gg`h`Ya`g`Y`j`Y`g`]b`U`g`Y`Z`U`k`U`f`Y`UbX`Z`i`Y`b`h`a`Ubb`Y`f`Z`h`U`h`h`Y`f]b`h`f`d`Y`fg`c`b`U`g_]`g`U`f`Y`i`g`Y`X`
h`c`h`Y`j`f`a`U`I`]a`i`a`Z`h`U`h`h`Y`j`f`W]h`W`"Ub`U`mg]g`UbX`d`f`c`V`Ya`!g`c`]b[`g_]`g`U`f`Y`V`Y]b[`YI`h`Y`b`XY`X`UbX`d`f`c`a`c`h`X`
U`h`U`"h`a`Y`g`UbX`h`U`h`h`Y`m`U`f`Y`Z`f`Y`h`c`h`]b`_`W`Y`U`h]j`Y`m`i`5`gg][`ba`Y`b`h`g` \U`j`Y`V`Y`Y`b`X`Y`g][`b`Y`X`h`c`Z`Z`f`g`h`XY`b`h`g`
Z`YI`]j]`]m`UbX`W`c`]W`Z`k` \]Y`f`Y`e`i`]f]b[`g`ci`b`X`c`f[`U`b]g`U`h]cbU`"UbX`W`c`a`a`i`b]W]h]cb`g_]`g`"

HYUW]b[`GhFUhY[]Yg`

GYa]bUfg'UbX'Wci fgY'UggYgga Ybhtg'UfY'h\Y'_Ymia YUbg'Vmik \]W\`YUfb]b[`ci hWca Yg'UfY'Yj U'i UH\X']b'h.]g
Wci fgY"5h'h\Y" \$\$\$`Yj Y`žgh XYbhtg'UfY'YI dYW\X'hc'UhtYbX'h\fYY`\ci fg'cZgYa]bUfg'U'k YY_"H\.]g'Wci fgY

5ggYgga Ybh

@UH'dYbU'h]Yg'k]''VY']a dcgYX'Uh'hY'i gi U'fUH'cZ) i 'dYf'XUm'

9I h'bg]cbg'a i ghVY'gci [\hj]U'hY'W'bfU'gYX'gmghYa 'UbX'a i ghVY'Udd']YX'Zcf'VY'Zcf'Y'hY'Xi Y'XUH'

K cfx'Wci bh]bZ]b[Ya Ybhg'k]''VY']a dcgYX'Uh'hY'fUH'cZ' i 'Zcf'Yj Yfm%\$\$'k cfxg'f'cf'dUfh'hYfYcZ'hUh mci f'Ugg][ba Ybh]g'cj Yf'hY'gYh']a]h'H\YfY'jg'Ub'U'ck UbW'cZ'Z'cf'-%\$i /]'Y''Zmci f'YggUm]g'' '\$\$ k cfxg'j]b''Yb[h']hk]''bchVY'dYbU'gYX''Z]h]g'' '\$%k cfxg'mci 'k]''cgY'' i ''Z]h]g'' (\$%k cfxg'mci 'k]' fYW'j] Y'U'*i 'dYbU'mz'UbX'gc'cb''H\Y'k cfx'Wci bh]bWi XYg'U''hY]h]b'hY'a U]b'VeXmicZ'hY'Ugg][ba Ybh' b! hY] h'fYZfYbW'g'UfY']bWi XYX''C b'm'hY'fYZfYbW''g]hcf'V]V]c[fUd\mUbX'hY'cj YfU''h'hY']g'YI W' XYX''

5'dYbU'hmcZ' i 'k]''VY']a dcgYX'Zcf'ZU]i fY'hc'i gY'hY'<Uf] UfX'f]b!hY] h'gmghYa 'cZfYZfYbW]b[''GYY \h'hdg.#gh XYbh'i bgk "YXi "Ui #Uf] UfX'fYZfYbW]b["

Mci 'ghUbX'hc''cgY VY'hk YYb') 'UbX'&\$'a Uf_g'Zcf'dccf'fYZfYbW]b['UbX'Uhf]Vi h]cb'cZgci fW'g''H\YfY']g'5 @C'H'cZUgg]ghUbW'Uj U]UV'Y'hc'mci 'hc'\Y'd'mci ''YUfb'UVci h'fYZfYbW]b[z'Uhf]Vi h]cb'UbX'Uj c]X]b[d'U[]Uf]ga ''Zmci 'UfY'bchigi fY'>I GH'5G?'GYY'\h'hdg.#gh XYbh'i bgk "YXi "Ui #gi ddcfh'fYZfYbW]b[! Ugg][ba Ybhg''

Zmci 'gi Va]hk cf_Zcf'h]g'Wci fgY'hUhmc'i '\Uj Y'U'fYUXmigi Va]hYX'Zcf'UggYgga Ybh]b'Ubch'Yf'Wci fgY'Uh h']g'i b]j Yfg]h'icf'Ubm'ch'Yf']bgh]h' h]cbz']b'k \c'Y'cf']b'dUf'z'cf']Zmci 'Wc'dma UH'f]U'Z'ca 'Ubch'Yf'gci fW'UbX Xc' bch'Uhf]Vi h' h'Uh'a UH'f]U'hc']hg'cf][]bU'Ui h'cfz'mci f'k cf_k]''VY'fYZfYX'hc'hY'GW'cc'Gh XYbh'9h]Wg

5 hYbXUbW F Yei]fYa Ybhg

Gh XYbhg UFY gfhcb [mYbWci fU[YX hc UHhYbX U WUggYg UbX fYj]Yk YWfi fY fYWcfX]b[g"

7 ci fgY GWXYXi Y

[J Yk WUgg ha YhUVY](#)

Hja YhUVY

8 UHr	HmdY	7 cbhYbh
K YY_% %* GYdhYa VYf! &\$GYdhYa VYf	GYa]bUf	H\Y VUg]Mg !]VYfU YWcbca]Mg
K YY_&.& GYdhYa VYf! &+GYdhYa VYf	GYa]bUf	H\Y VUg]Mg ! A Ufl]ghYWcbca]Mg
K YY_."." \$GYdhYa VYf! (C Wc VYf	GYa]bUf C b]bY 5Wij]jm	H\Ycf]g]b[XYj Y cda Ybh :]fgh]bXYdYbXYbh YUfb]b[UWij]jm
K YY_(.+C Wc VYf! % C Wc VYf	GYa]bUf 5ggYgga Ybh	H\Y [cVU Z]bUbWU gmgHYa g! cf][]bg UbX [cj YfbUbW C b]bY ei]n
K YY_) : % (C Wc VYf! % C Wc VYf	GYa]bUf	: fca ghUV]]mhc W]g]g. H\Y 5g]Ub :]bUbWU 7 f]g]g
K YY_*.&%C Wc VYf! &) C Wc VYf	GYa]bUf	: fca W]g]g hc W]g]g. H\Y ; cVU :]bUbWU 7 f]g]g
K YY_+. & C Wc VYf! % Bcj Ya VYf	GYa]bUf 5ggYgga Ybh	H\Y bYk bcfa U. gYW UF ghu[bUh]cb cf U A Ufl]Ub W]g]g cZWd]hU 3 :]a UbUmg]g
K YY_) : (Bcj Ya VYf! Bcj Ya VYf	GYa]bUf C b]bY 5Wij]jm	H\Y]bhYfbUh]cbU hfUX]b[gmgHYa f&L H\Y f]g_g UbX fYk UfXg cZdfYZfYbh]U]ga &bX]bXYdYbXYbh YUfb]b[UWij]jm
K YY_- : % Bcj Ya VYf! % Bcj Ya VYf	GYa]bUf	H\Y]bhYfbUh]cbU hfUX]b[gmgHYa f&L ? Ym Wcbhfcj Yfg]Yg]b]bhYfbUh]cbU hfUXY
K YY_%. % Bcj Ya VYf! && Bcj Ya VYf	GYa]bUf	H\Y D9 cZ7]a UH 7 f]g]g
K YY_%%&) Bcj Ya VYf! &- Bcj Ya VYf	5ggYgga Ybh	:]bU 9ggUm

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

5`a UbXUhfmiUbX`gi dd`Ya YbUfmiYUX]b[g`Zcf`gYa]bUfg`k]`VY`dcghYX`cb`a ccX`Yz`Ug`k]`fYgci fWg`Zcf`
hY`ZbU`YggUm`

F YWca a YbXYX`F Ygci fWg

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

Gi Va]gg]cb`cZ5ggYgga YbhHUg_g

Gi Va]gg]cb`cZ5ggYgga YbhHUg_g

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

Ẓmci `YbWci bhYf`U`dfcV`Ya `k \Yb`U`H`Ya dh]b[`hc`gi Va]hmc i f`Ugg][ba YbhHfci [\`Hi fb]h]bžd`YUgY
H`Yd\cbY`9I H`fbU`Gi ddcfhcb`-` ,) `` `` ` %cf`Ya U]`H`Ya `cb`YI H`fbU`H`hgi 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`m`Y`UfL` Ẓmci
UfY`i bUV`Y`hc`gi Va]hmc i f`Ugg][ba YbhXi Y`hc`U`ZU` `hk]H`Hi fb]h]b`mci `a UmiUdd`miZc`f`Ub`YI H`bg]cbžVi hmc i
a i ghfY`H]b`mci f`h]W`Yhbi a VYf`Zca `9I H`fbU`Gi ddcfhfU`cb[`k]H`Ubmch`Yf`fY`Yj UbhXcW a Yb`hgL`hc
]bWi XY`Ug`Yj]XYbW`hc`gi ddcfhmci f`YI H`bg]cb`Udd`]W]h]cb" Ẓmci `Ya U]`9I H`fbU`Gi ddcfhmci `k]`

5 WUXYa]W<c bYghmUbX`D`U[]Uf]ga

D`U[]Uf]ga `]g`i g]b[`hY`k cfXg`cf]XYUg`cZchYfg`UbX`dfYgYbh]b[`hYa `Ug`mci f`ck b" `hWUb`hU`Y`a Ubm
Zcfa gZ`Zca `XY`]VYfUHY`WXYU]b[`hc`UWV]XYbhU`mW`dm]b[`Zca `U`gci fW`k]h`ci hUW_bck`YX[Ya Ybh`

I BGK `[fci dg`d`U[]Uf]ga `]bhc`hY`Zc`ck]b[`WUHY`[cf]Yg.

7cdm]b[.`i g]b[`hY`gUa Y`cf`j Yfmg]a]Uf`k cfXg`hc`hY`cf][]bU`hYI hcf]XYU`k]h`ci hUW_bck`YX[]b[`hY`
gci fW`cf`i g]b[`ei chU]cb`a Uf_g" `H\]g`U`gc`Udd`]Yg`hc`]a U[YgZ`UfhUbX`XYg][b`dfc`YWgZ`Ug`k Y`Ug`
dfYgYbhU]cbg`k \YfY`gca YcbY`dfYgYbh]g`UbchYf`g`]XYUg`cf`k cfXg`k]h`ci hWYX]h`

hUddfcdf]UHY`dUfUd`fUg]b[.`7`Ub[]b[`U`ZYk`k cfXg`UbX`d`fUgYg`k`Y`a cghmifYU]b]b[`hY`cf][]bU`
ghfi W`fY`UbX`#`f`dfc[fYgg]cb`cZ]XYUg`cZ`hY`cf][]bU`Z`UbX`]bZcfa U]cb`k]h`ci hUW_bck`YX[Ya Ybh`H\]g`U`gc`
Udd`]Yg`]b`dfYgYbhU]cbg`k \YfY`gca YcbY`dUfUd`fUgYg`UbchYf`g`]XYUg`cf`k cfXg`k]h`ci hWYX]hU`bX`hc`
d]YW]b[`hc[Y`hYf`ei chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk`k \c`Yz`k]h`ci hUddfcdf]UHY`fYZYfYbW]b["

7c`i g]cb.`k cf_]b[`k]h`chYfg`Vi hdUgg]b[`cZ`hY`k cf_]Ug`U`dYfgcb`g`]bX]j]Xi U`k cf_]7c`i g]cb`U`gc`
]bWi XYg`dfcj]X]b[`mci f`k cf_]hc`UbchYf`gh`XYbhVYZc`fY`hY`Xi Y`XUHY`Zc`f`Zc`hY`di fdcgY`cZ`hY`a

- 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][\hžI 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 ""

[\hfd.##ji V'YWf i \]XYg" \]VfUfm'i bgk "YXi "Ui #' \]gY#JVci h' \]gY](#)

5 WUXYa]WbZcfa Uh]cb`

: cf`YggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[`rc.

- fYei Ygh]Zc`fYI h`bg]cb/
- `Uh]`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk `cZa Uf_g/
- I BGK `<YU`h`UbX`GUZY`midc`]WYg/

