



## ARTS2815

Dc`j]hVg`UbX`GYW f]hm]b`h\Y`ϕXc!DUWjZ]W

HYfa`Hk c`#`&\$%-

7ci fgY`Cj Yfj JYk

`GHJZ`7cbhJWh`8YHJ`g`

`7cbj Ybcfg`

B Ua Y	9a Uj`	5j Uj`UVj]m	@cWjhcb	D\cbY
5`YI UbXYf? cfc`Yj	U" _cfc`Yj 4 i bgk "YXi "Ui	H\i fgXUm %{ .\$\$!%*. \$\$	A cfj Yb`6fck b	Z*%&`-' , ) % , (

GWxcc``7cbhJWh`bZcfa Uhjcb

GWxcc``cZGcWjU`GWYbVWg

Fcca`%) -

A cfj Yb`6fck b`7&\$

Ya Uj`.gcgg4 i bgk "YXi "Ui

d\cbY. \$&`-' , )`% \$+

7ci fgY'8YHJ]`g

7fYX]hDc]bHg`\*`

Gi a a UfmicZ'h\Y'7ci fgY

Gi V'YWhi5fYU. Ba'f[ue S`V ;` fWd Sf[a` S^DWSf[a` e  
H\]g'Wci fgY'Wb'U'gc'VY'ghi X]YX'j'b'h\Y'Zc`ck ]b[ 'gdYW]U'gUh]cb.'3e[S` E fgV[Mé

H\Y' bXc!DUW]Z]W]g'U'bYk 'UbX'XmbUa ]WfY[ ]cbž'cbY'h UhdcgYg:g][ b]Z]Wb'hWXU`Yb[ Yg'UbX'cddcfh b]h]Yg"  
b'h.]g'Wci fgYžmci 'k ]'k ]mci 'k ]h]Yg"

5ggYgga Ybh

5ggYgga YbhHUg\_g`

5ggYgga YbhHUg_	K Y][ \h	8i Y'8UHŸ	Gh XYbh@YUfb]b[ Ci hWta Yg'5ggYggYX
7`Ugg`ZJWŸ]hU]cb`	&)	Bch5dd`]WUVY	&ž ž)
7 f]h]WU`F Yj ]Yk`	&)	\$%# \$+ #&\$%- '\$) . \$\$' DA	' ž( ž)
A U`c`f`9ggUmi	) \$	%- # \$, #&\$%- '\$) . \$\$' DA	%ž&ž( ž)

5ggYgga Ybh8YHU]`g

Hi fb]hb'gYHb[ . 'H\]g'Ugg][ ba Ybh]g'gi Va ]H'X'h'fci [ \ 'Hi fb]hb'UbX'ghi XYbhg'Xc'bchgYY'Hi fb]hb  
g]a ]Uf]mfYdcfrg"

5ggYgga Ybh' . 'A U'cf'9ggUm

GhUfhXUH' . Bch5dd]WUVY

@Yb[ h. '&) \$\$'k cfXg

8YHJ]g. 'H\Y'YggUm]g'h'Y'Z]bU'UggYgga YbhicZ'h'Y'W'ci fgY" #ifYei ]fYg'ghi XYbhg'hc'XYa cbghfUH'  
Yb[ U[ Ya Ybhk ]h' h'Y'W'cfY' h'Ya Yg'UbX' ]ggi Yg'fU]gYX' ]b'h'Y'W'ci fgY'UbX'h'Y'f'UV'] ]mhc'W'cbghf' W'U  
dYfgi Ug]j Y'UbX'k Y'Yj ]XYbW'X'Uf[ i a Ybh'h'Y'k cfX'Yb[ h'cZ'h'Y'YggUm]g'&) \$\$  
k cfXg": YYXVUW\_ 'Gh XYbhg'k ]'fYW'j Y'k f]H'Y'b'ZYXVUW\_ UbX'U'bi a Yf]W' [ fUXY'k ]h' ]b' h'c'k YY\_g'cZ  
gi Va ]gg]cb'h'fci [ \ 'h'Y' i b]j Yfg]m]g '@YUfb]b[ 'A UbU[ Ya YbhGmg'h'Ya 'f@A G' "H\Y'ZYXVUW\_ g\YY'h'fi Vf]Wk ]'  
VY'Uj U]UV'Y'hc'ghi XYbhg'Uh'h'Y'ghUfhicZ'h'Y'W'ci fgY'gc'h'Uh'h'Y'm'W'Ub'k cf\_'hc'k UfXg'gdYW'Z]YX'ghU'X'UfXg"

5XX]h]cbU'XYHJ]g.

H\]g'Z]bU'YggUm]W'Ub'VY'cb'U'hc'd]WcZ'mci f']bh'fY'ghVi h'VUgYX'cb'cf'fY'UH'X'hc'h'Y'W'cb'h'Y'bhicZ'h'Y'W'ci fgY  
UbX' #f'h'hc'f]U'X]gW'gg]cbg" H\]g'YggUm]g'h'Y'Z]bU'UggYgga Ybh'Z'f'h'Y'W'ci fgY" H\]fci [ \ ci h'h'Y'h'Y'fa ž'mci  
g\ci 'X'h' ]b\_ UVci h'U'hc'd]WcZ'mci f']bh'fY'ghUbX'\ck ]h'W'Ub'VY'UbU'm'YX" H\Y'Z]bU'YggUm]g'Xi Y'cb'5i [ i gh  
%-"

Hi fb]hb'gYHb[ . 'H\]g'Ugg][ ba Ybh]g'gi Va ]H'X'h'fci [ \ 'Hi fb]hb'UbX'ghi XYbhg'Xc'bchgYY'Hi fb]hb  
g]a ]Uf]mfYdcfrg"

5 HfYbXUbW F Yei JfYa Ybhg

6 ch YWf fYg UbX hi hcfjU'g UfY a UbXU hcfmWUggYg j' b 5F HG&, %) j' b H&ž &\$%- "

7 ci fgY GWYXi Y

[J Jyk WUgg hja YhUVY](#)

Hja YhUV Y

8UhY	HmdY	7cbhYbh
K YY_% " ' >i bY! '+>i bY	@YWh fY	Cj Yfj JYk / '@c [ ]ghVg cZ7 ci fgY. Dc jhVg UbX GYW f]hm]b hY' bXc!DUWZWX]ZYfYbh Yj Y'g cZ UbU mg]g/a U'cf UWfcfg j' b hY' bXc!DUWZWFY [ ]cb"
	Hi hcfjU'	Dc jhVg UbX GYW f]hm]b hY' bXc!DUWZWX]ZYfYbh Yj Y'g cZ UbU mg]g/a U'cf UWfcfg j' b hY' bXc!DUWZWFY [ ]cb"
K YY_&. %\$>i bY! '%(>i bY	@YWh fY	HLY WcbW dhcZ hY' bXc!DUWZWXi ZYfYbh UddfcUWX Yg' h' WcbW dh U]n]b [ 'U'fY [ ]cb/Wf]hWU [ ] Ycdc jhVg j' g" WUggjWU [ ] Ycdc jhVg"
	Hi hcfjU'	Gh XYbhg! YX X]gW gg]cb VUgYX' cb hY' Ugg][ bYX fYUX]b [ g. 'K \UhXcYg hY' h'fa " bXc!DUWZV Wcbj Ym h Uh hY' h'fa "5g]U!DUWZV W' XcYg' bcb3' K \Uhg] b hY' bUa Y " bXc!DUWZV B" K \mfYcf]Ybh [ fUbX' ghfU h [ m h' hY' bXc!DUWZV B' K \Uh]g' hY' "[ Ycdc jhW' ]a U [ ]bUh]cb"3' g' bXc!DUWZV U b ]bbcW bhcf bYi hU' XYgW] dh]cbz'cf]g] hUb]a U [ ]bYX' UbX' a Ubi ZWf fYX gi dYf fY [ ]cb XYg][ bYX' h' \YX [ Y' U [ U]bghU dYfW]j YX' G]bc! W' b h' f]WfY [ ]cbU' cfXYf3
K YY_ " . %>i bY! '&%>i bY	@YWh fY	DfcV Ya Uh]n]b [ hY' 7cbW dh 'K \Uh]g' U'F Y [ ]cb3! HLY 7 f]hWU [ ] Ycdc jhVg cZ bXc!DUWZV
	Hi hcfjU'	Gh XYbhg! YX X]gW gg]cbg VUgYX' cb hY' Ugg][ bYX fYUX]b [ g. 'K \Uh]g' hY' "[ Ycdc jhWU' ]a U [ ]bUh]cb"3' 8c b h' YWf U'g cZ ghU h' WUZhgd Uh]U' nY' Zc fY [ ] b' dc ]Wf]b hY' f' YI YfW]gY cZ dck Yf3' K \UhUfY hY' ghfYb [ h'g UbX' k YU_bYggYg cZ h]b ]b [ 'UVci h hY' k cfX' ]b [ ] Ycdc jhWU' h'fa g3
K YY_( . '&(>i bY! '&,>i bY	@YWh fY	Gmg h' a !' Yj Y' ]bhY fbUh]cbU' fY' Uh]cbg] b hY' bXc! DUWZV 7 \ ]bU' UbX' hY' i b] h' X' G hU h' g
	Hi hcfjU'	Gh XYbhg! YX X]gW gg]cbg VUgYX' cb hY' Ugg][ bYX fYUX]b [ g. ' g' dYUWZ ' dck Yf' h' Ubg] h'cb VY h' YYb hY' i b] h' X' G hU h' g UbX' 7 \ ]bU' dcgg] V' Y' cf]g' hY' k cfX g] X]b [ ] b h' hY' h' i W' X] X Y g' h' U d 3' K \UhUfY hY' ]a d' ]W h]cbg cZ 7 \ ]bU' g' Wcb h] bi ci g' f]gY' h' hY' bXc! DUWZWFY [ ]cb3' g' ghfU h' [ ] Wf]j U' fm VY h'k YYb' 5a Yf]WU UbX' 7 \ ]bU' ]bYj ]hUVY3' G \ ci 'X' hY' i G' Wcb h] ]b' cf Yb [ U [ Y' 7 \ ]bU3' 8c Yg' gYW f]hm UfW h' YWf fY i' h'ja Uh' mia UbU [ Y' cf]g]a d' m' fY ZY W h' hY' bXc! DUWZV g' dck Yf' dc jhVg 3

Vertical line on the left side of the page.

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Vertical line on the right side of the page.

		YghUV`jg\ a YbhcZhY`5g]U`#ZUghfi Wñ fY`UbX #j Ygha Ybhi6Ub`f5=#E`U`a U`c`f`X]d`ca UhWUbx ghfUH[ ]WV`i bXYf3
K YY_`%\$.`.)`5i [i gh!`- 5i [i gh	@YWñ fY	5b`#Xc!DUWZ]W7 Ybhi fm3
	Hi hcf]U`	H\Y`:`i hi fY`cZK cfX`Dc`]hWg.`K ]`#F YgYa V`Y`hY DUghB`K ]`7\]bU`Xca ]bUH`h`Y`&%ghVWbhi fm3`8cYg ]bH`fbUH]cbU`df]a UWñia UH`Yf3`H\Y`YbX`cZ\]g]c]fmicf h`Y`VY[ ]bb]b[ `cZhY`#Xc!DUWZ]WV`bhi fm3



F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

5`fY`Yj UbhWci fgY`]bZcfa Uhcb`UbX`fYei ]fYX`fYUX]b[ g`UfY`Uj U]UV`Y`cb`hAY`A ccX`Y`g]hY`Zcf`h]g`Wci fgY`"  
D`YUgY`fY[ i`Ufm`WXYW`Zcf`i dXUH`gZ`Ubbci bW`a YbfgZ`UbX`chAY`fY`Yj UbhWci fgY`fY`UH`X`]bZcfa Uhcb`cb  
A ccX`Y`"

F YWca a YbXYX`F Ygci fWg

hZcfa Uhcb`UVci hUXX]hcbU`fYUX]b[ g`UbX`fYgci fWg`]g`U`gc`a UXY`Uj U]UV`Y`cb`hAY`A ccX`Y`g]hY`Zcf`h]g`  
Wci fgY`"

7ci fgY`9j U`i Uhcb`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[`h`c`gi`Va`]h`mci`f`Ugg][`ba`Ybh`h`fci`[`\`Hi`fb]h]b`z`d`YUgY`  
H`Y`d`\`cb`Y`9I`H`fb`U`Gi`ddcfh`cb`-`,`),`"`,`"`,`"`,`%`cf`Ya`U]`h`Ya`cb`YI`H`fb`U`H`h`gi`ddcfh`4`i`bgk`"YXi`"Ui`"Gi`ddcfh`  
\`ci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`cb`k`YY`XUmg`UbX`-`.\$\$Ua`-`).\$\$da`cb`k`YY`YbXg`f`l`\*)`XUmg`U`m`Y`U`f`l`"Ẓmci`  
UfY`i`bUV`Y`h`c`gi`Va`]h`mci`f`Ugg][`ba`Ybh`Xi`Y`h`c`U`Z`U`h`k`]h`Hi`fb]h]b`mci`a`Um`U`dd`m`i`Z`f`Ub`YI`H`bg]cb`z`Vi`h`mci`  
a`i`gh`f`Y`h`U]b`mci`f`h]W`Y`h`bi`a`VY`f`Z`ca`9I`H`fb`U`Gi`ddcfh`f`U`cb[`k`]h`Ub`m`c`h`Y`f`f`Y`j`Ub`h`X`c`W`a`Y`b`h`g`l`h`c`  
]b`Wi`XY`U`g`Y`j`]X`Y`b`W`h`c`gi`ddcfh`mci`f`YI`H`bg]cb`U`dd`]W`h]cb"Ẓmci`Ya`U]`9I`H`fb`U`Gi`ddcfh`mci`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.

7 cdm]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`U`b[ ]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[ YhYf`ei chYg`UbX`dUfUd`fUgYg`]bhc`U`bYk`k \c`Yz`k ]h`ci hUddfcdf]UHY`fYZYfYbW]b[ "

7 c`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\_]7 c`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 bXYfghUjX'mci f'f][ \hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[ ]Uf]ga ž'Wc'dmf][ \hžI BGK 'Gh XYbh7cXY'cZ7cbXi W'UjX'5W'W'dhUV'Y'I gY'cZ I BGK '⇒H'F'Ygci f'W'g'Dc`]W'h
- VY'Uk UfY'cZ'Y'ghUjX'UfX'g'cZVY\Uj ]ci f'YI dY'W'X'cZYj Yfmc'bY'j]b'h'Y'I BGK 'W'a a i b]m
- `cW'U'Y'gY'fj ]W'g'UbX'j]bZ'c'fa U]cb'UVci hi BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZ'Y'gY'UfY'Ug'k ]`VY'ZJa ]]Uf'hc'mci ž'c'h'Y'fg'k ]`VY'bYk "; U]b]b[ 'U'gc`X'i bXYfghUjX]b[ 'cZU`'h'Y fY'U'Y'X'UgdY'W'g'cZ9@-G9'k ]`'Y'd'mci 'a U\_Y'h'Y'a cgh'cZ'mci f'gh X]Yg'Uhl BGK ""

[\h'c.##j V'Y'W'i \]X'Y'g"\]VfUfm'i bgk "Y'X'i "U'i #' \]g'Y'#U'V'c'i h' \]g'Y](#)

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`mdc`]WYg/

