



ARTS3690

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7ci fgY`Cj Yfj]Yk

GhJZZ'7cbhJWw'8YhJ]`g

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B Ua Y	9a U]	5j U]'UV']]m	@cWJhcb	D\cbY
A Yb[]gh `5a VYfVYf	a "Ua VYfVYf4 i bgk "YXi "Ui	H65	A 6` &(%	

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@cWJhcb. 'GWxcc``C Z]WZA cfj Yb`6fck b`6i]X]b[ž@Yj Y`&ž&),

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D\cbY. 'ž*%&'- ' ,) `* , %

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

7ci fgY'8YHJ]`g

7fYX]hDc]bqg`*`

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

H\]g`W`ci fgY`k]`YbUV`Y`mci`hc`XYj`Y`cd`g_]`g`]b`YI`fUW]b[`UbX`gmb`h`Yg]g]b[`]bZc`fa`Uh]cb`fY[`UfX]b[`]b[i]gh]WX]j`Yfg]m`i`#]g`Ygh]a`UH`X`h`U`h`h`Y`fY`U`fY`c`j`Y`f`*`z`\$`\$`U`b[i U[Yg`gdc`_`Yb`]b`h`Y`k`c`f`X`h`c`X`Um`i`A`cg`h`c`Z`h`Y`g`Y`U`b[i U[Yg`U`fY`Y`b`X`U`b[Y`f`Y`X`U`b`X`U`f`Y`]b`i`f[Y`b`h`b`Y`Y`X`c`Z`X`c`W`a`Y`b`h`U`h`c`b`U`b`X`X`Y`g`W]d`h`c`b`" `#]g`U`b`Y`g`g`Y`b`h`U`[`c`U`c`Z`]b[i]gh]Wg`z`h`Y`g`W]Y`b`h`Z`W`g`h`X`m`i`c`Z`U`b[i U[Y`z`h`c`i`b`X`Y`f`g`h`U`b`X`h`c`k`U`h`Y`I`h`Y`b`h`h`Y`g`Y`U`b[i U[Yg`U`f`Y`X]Z`Y`f`Y`b`h`Z`c`a`Y`U`W`X`c`h`Y`f`"H`Y`g_]`g`U`b`X`_`b`c`k`Y`X[Y`U`W`e`i`]f`Y`X`]b`i`b`X`Y`f`U_]b[`U`W`e`i`fgY`]b`]b[i]gh]W`m`d`c`c[m`U`f`Y`W]h`W]h`c`h`Y`h`U]b]b[`c`Z`]b[i]gh]W`d`f`c`Z`Y`g`g]c`b`U`g`k`U`c`W`U`b`Y`b[U[Y`]b`h`Y`X`c`W`a`Y`b`h`U`h`c`b`U`b`X`X`Y`g`W]d`h`c`b`c`Z`U`b[i U[Yg`

7ci fgY`@YUfb]b[`Ci hW`ca Yg

%` =>Y`b`h`Z`m`W`e`b`W`d`h`U`U`b`X`Y`a`d]f]W]`]g`g`i`Y`g`]b`h`m`d`c`c[]W]`]b[i]gh]W`g`Z`c`W`g]b[`c`b`a`c`f`d`U`c`c[m`U`b`X`g`m`b`h`U`I`"
&`" `9`I`h`U`W`h`U`b`X`g`m`b`h`Y`g]g`Y`]b`Z`c`fa`U`h]c`b`f`Y[`U`f`X]b[`]b[i]gh]W`X]j`Y`f`g]m`i`
'`" `9`j`U`i`U`h`Y`U`b`X`U`d`d`f`U]g`Y`X]Z`Y`f`Y`b`h`m`d`c`h`Y`g`Y`g`U`V`c`i`h`i`b`j`Y`f`g`U`d`U`h`Y`f`b`g`]b`]b[i]gh]W`g`f`i`W`h`f`Y`"
(`" `5`b`U`m`g`Y`h`m`d`c`c[]W]`X`U`h`U`b`X`U`f[i Y`h`Y`a`Y`f]h`g`c`Z`h`Y`U`b`U`m`g]g`"

HYUW]b[`G`h`f`U`h`Y[]Yg`

H`Y`h`Y`U`W]b[`g`h`f`U`h`Y[]Y`g`]b`j`c`j`Y`Y`W`h`i`f`Y`g`z[`f`c`i`d`X]g`W`g`g]c`b`g`z`U`b`X`W`U`g`g`d`f`Y`g`Y`b`h`U`h]c`b`g`"K`U`Y`h`Y`f`Y`k`]`V`Y`g`c`a`Y`g`U`c`f`h]b`h`c`X`i`W`h]c`b`g`h`c`h`Y`h`Y`c`f]Y`g`]b`Y`W`h`i`f`Y`Z`c`fa`U`h]a`c`g`h]a`Y`k`]`V`Y`g`d`Y`b`h`c`b`]b`h`f`U`W]j`Y`[`f`c`i`d`X]g`W`g`g]c`b`g`W`e`b`g]X`Y`f]b[`]`Y`m`W`e`b`W`d`h`g`U`b`X`]g`g`i`Y`g`"H`Y`W`e`i`fgY`U`g`U`g`Y`a`]b`U`f]g`m`Y`]b`h`f`U`W]j`Y`Z`c`fa`U`h`k`U`Y`f`Y`m`c`i`k`]`V`Y`f`Y`e`i`]f`Y`X`h`c`Y`U`X`X]g`W`g`g]c`b`h`f`c`i`[`U`W`U`g`g`d`f`Y`g`Y`b`h`U`h]c`b`g`"5`_`Y`m`W`e`a`d`c`b`Y`b`h`c`Z`h`Y`W`e`i`fgY`]b`j`c`j`Y`g`k`U`h]g`W]Y`X`"5`X`c`d`h`U`@`U`b[i U[Y`k`U`Y`f`Y`m`c`i`k`]`V`Y`U`g`g][`b`Y`X`c`b`Y`U`b[i U[Y`U`b`X`Y`I`h`U`W`h`U`b`X`g`m`b`h`Y`g]g`Y`[`f`U`a`a`U`h]W]`]b`Z`c`fa`U`h]c`b`c`b`h`Y`U`U`g]g`c`Z`U`j`U]U`V`Y`f`Y`Z`f`Y`b`W`[`f`U`a`a`U`f`g`U`b`X`c`h`Y`f`g`W`X`c`U`f`m`U`h]W]Y`g`c`b`h`Y`U`b[i U[Y`"M`c`i`k`]`V`Y`f`Y`e`i`]f`Y`X`h`c`a`U`_`Y`U`X`Y`h]Y`X`d`f`Y`g`Y`b`h`U`h]c`b`c`b`h`Y`[`f`U`a`a`U`h]W]d`f`c`d`Y`f`h]Y`g`c`Z`m`c`i`f`U`X`c`d`h`Y`X`U`b[i U[Y`"

5ggYgga Ybh

5ggYgga YbhHUg_g

5ggYgga YbhHUg_	K Y][\h	8i Y'8UŶ	Gh XYbh@YUfb]b[

@Yb[h. j Uf]UV`Y

8YHJ]g.

Mci `k]`dcgh]b`hY`@A G`mci f`gi a a UfmcZUbX`fYZYW]cbg`cb`hY`Ugg][bYX`fYUX]b[g" Mci `UFY`YI dYWYX`hc
Xc`%\$`dcgh]cZUddfcI]a UH`m%\$\$`k cfXg`YUWX": YYXVUW`k]`VY`dfcj]XYX`j]U`]b!WUgg`X]gW`gg]cb"

5XX]h]cbU`XYHJ]g.

GYY`A ccX`Y`Zcf`XYHJ]g`UbX`fY[i `Uf`i dXUH`g"

Hi fb]h]b`gYH]b[.`H\]g`]g`bchU`Hi fb]h]b`Ugg][ba Ybh

5ggYgga Ybh(. `DfYgYbhU]h]cb

@Yb[h.) `a]bi hYg

8YHJ]g.

Gh XYbh]Xc`U)` `a]bi hY`dfYgYbhU]h]cb" Mci `k]`fYVW]j Y`]bX]j]Xi U`ZYXVUW`j]U`U`fi Vf]W

5XX]h]cbU`XYHJ]g.

GYY`A ccX`Y`Zcf`XYHJ]g`UbX`fY[i `Uf`i dXUH`g"

Hi fb]h]b`gYH]b[.`H\]g`Ugg][ba Ybh]g`gi Va]hYX`h`fci [\`Hi fb]h]b`UbX`gh XYbh]Xc`bchgYY`Hi fb]h]b
g]a]Uf]mfYdcf]g"

5 hYbXUbW F Yei]fYa Ybhg

5 hYbXUbW cZhi hcf]U'g:]g'a UbXUhc fm]b'h]g'Wci fgY" 5 hYbXUbW]g'fU_Yb'Uh'hY'h hcf]U'g"i bYI W gYX UVgYbWw Z'ca 'a cfY'h.Ub'&\$i 'cZhi hcf]U'g'k]'fYgi 'h]b'hY'Uk UfX'cZZU]'[fUXY"' b'h hcf]U'g'z'mci 'k]'UWw]j Y'm Yb[U[Y'k]h'WcfY'Wci fgY'Wcbh'bh'YbUV']b['mci 'hc'U'fU]b'7 @C '%UbX'7 @C ' ' "

7 ci fgY'GWYXi `Y

[J \]yk WUgg'ha YhUVY](#)

H]a YhUVY`

8UhY	HmdY	7cbhYbh
K YY_%' '%A Umi!' (>i bY	@YWhi fY	. b'fciXi W]b['hY'Wci fgY/UXa]b]ghfU]h] Y'a U'hYfg/ \]ghcf]WU'VUW_[fci bX'hc'hmdc'c[m
	Hi hcf]U`	8]gW gg]cb'cb'K YY_%'YWhi fY Wcbh'bhUbx YI YfW]gYg" D`YUgY'bchY'h.UhZ f'hYf'XYH]g'UbX']bZcfa U]cb]bWi X]b['hY'fYUX]b[]ghZcfYUWX'k YY_'UbX]bghf] W]cb'Zcf'h hcf]U'fUg_gz'WUgg#cb']bY'UWw]j]hYg UbX'YI dYWU]h]cb'k]'VY'Uj U]UV'Y'cb'A ccX'Y" @YWhi fY#i hcf]U'hc d]W]g'UbX'UggYgga YbhgWYXi `Y UfY'gi VYWhic'WU]b[Y" Mci 'a i ghWcbgi 'hA ccX'Y'Zcf fY[i `Uf'i dXUfYg"
K YY_&.' +>i bY!'%% >i bY	@YWhi fY	fH'A YhcXc'c[]WU' =ggi Yg/hY'dfcVYa 'cZgUa d']b[/ YI d'U]b]b[`Ub[i U[Y'i b]j YfgU'g fH'DUfhicZgdYYW'gmghYa g/Hmdc'c[]WU'X]gh]bW]cbg]b'k cfx!Zcfa U]cb

		bci b`d\lUgY
	Hi hcf]U`	8]gW gg]cb`cb`K YY_) ``YVh fY`Vc`bhYbh`
K YY_*.) `>i `m!`-`>i `m	A cXi `Y	: `YI]V`]hmK YY_``Bc`WUggYg"
K YY_+. %&>i `m!`%*`>i `m	@YVh fY	J c]W`gmghYa g/H\Y`dUgg]j Y`j c]W`]b`h\Y`k cfX`g`Ub[i U[Yg
	Hi hcf]U`	8]gW gg]cb`cb`K YY_+``YVh fY`Vc`bhYbh`
	5ggYgga Ybh	≠!WUgg`HYgh`
K YY_ , . %`>i `m!`&`>i `m	@YVh fY	7 `Ui gY`hmdYg/7 ccfx]bUh]cb#7 ca d`Ya YbhUh]cb
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K YY_ - . &*`>i `m!`" \$`>i `m	@YVh fY	F Y`Uhj Y`7 `Ui gYg/5Xj Yfv]U`7 `Ui gYg
	Hi hcf]U`	8]gW gg]cb`cb`K YY_- ``YVh fY`Vc`bhYbh`
K YY_ %\$. &`5i [i gh!`*`5i [i gh	@YVh fY	GdYYVX`UW`X]gh]bW]cb`]b`[fUa a Uf/GYa Ubh]W`hmdc`c`[m
	Hi hcf]U`	8]gW gg]cb`cb`K YY_ %\$``YVh fY`Vc`bhYbh`

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

GYY`@Y[Ubhc`cb`hY`Wci fgY`A ccX`Y`dU[Y`Zcf`]b_g`hc`fYgci fWg"

- G\cdYbzH" fYX"Ł&\$\$+#&\$%">S` YgSYWFkba`aYk S` V E k` fSuf[U 6 WēUd[bf[a` "'7 Ua Vf]X[Y I b]j Yfg]mDfYgg" J c`i a Yg`ž`ž`UbX`==Œ6cc_`Uj U]UV`Y`UhihY`I BGK` @]VfUfm
- H\Y`C I ZcfX`< UbXVcc_`cZ@]b[i]gh]WHmdc`c[mfc < @HŁ&\$\$#&\$%&Œ6cc_`Uj U]UV`Y`UhihY`I BGK @]VfUfm

F YWca a YbXYX`F Ygci fWg

Gi Va]gg]cb 'cZ5ggYgga YbhiHUg_g

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

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'm'YUfI" 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]W]m'fYW]j Y'U'h]W_Yhbi a VYfž'Vi h]Zmci 'HY'Yd\cbY'mci 'k]'b'YX'hc'gdYW]Z]W]m'Ug_ 'Zcf'cbY"
Hi fb]h]b'U'gc'dfcj]XYg'i dXUH'g'cb'H'Y]f'gmgh'Ya 'ghU'g'cb'Hk]HYf"

; YbYfU'mž'UggYgga YbhiHUg_g'a i ghVY'gi Va]HYX'Y'YW'fcb]W]m'j]U'Y]H'Yf'Hi fb]h]b'cf'U'A ccX'Y
Ugg][ba YbH' 'b]bg]UbVW'g'k \YfY'H'g]g'bc]hdccg]V'Yž'hk]'VY'gh'UH'X'cb'mci f'Wci fgY'g'A ccX'Y'g]H'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`U`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]]hYg'Ug'U'gh XYbhUhl BGK
-

5 WUXYa]WbZcfa Uh]cb

: cf`YggYbh]U`gh XYbh]bZcfa Uh]cb`fY`Uh]b[`tc.

- fYei Ygh]Zcf`YI H`bg]cb/
- `Uh`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk `cZa Uf_g/
- I B GK `<YU`h`UbX`GUZY`midc`]WYg/
- YI Ua]bUh]cb`dfcW`Xi fYg/
- gdYW]U`W`bg]XYfUh]cb`]b`hY`Yj YbhcZ]`bYgg`cf`a]gUXj Ybh fY/
- gh XYbhYei]mUbX`X]gUV`]m/
- UbX`c`hYf`YggYbh]U`UWUXYa]W]bZcfa Uh]cbz`gYY