

ARTS4247

 $F YgYUfWX G_]`g']b'hXY'< i a Ub]h]Yg$

HYfa 'C bY''##'&\$&%

7ci fgY⁻Cj Yfj]Yk

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5bbY°Cf6f]Yb		A cbXUmi‱!&cf ch\Yfiha Yg:Vm Uddc]bha Ybh	'	\$&`-' ,) &' , (

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GWkcc`cZ<iaUb]hJYg'UbX'@Ub[iU[Yg

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7ci fgY 8YHJ] g

7 fYX]hDc]bhg**

Gi a a UfmcZh\Y 7ci fgY

H\]g`Wci fgY`k]``\Y`d`mci `hc`XYj Y`cd`U`fUb[Y`cZ\][\Yf!`Yj Y``fYgYUfW\`g_]``g"`\#ik]```Wcj Yf`gi W\`UfYUg`Ug fYgYUfW\`a Yh\cXc`c[mz̃fYgYUfW\`ei Ygh]cbgz`h\Y``]hYfUhi fY`fYj]Yk z`dfYgYbhUh]cb`g_]``gz`UbX`UWUXYa]W k f]h]b["'\#ik]``\Y`d`mci `hc`]XYbh]zmUbX`XYj Y`cd`mci f'fYgYUfW\`dfcdcgU`z`Uff]W``UhY`]hg`dc]bh'UbX`di fdcgYz`UbX`dfYgYbh]h]b`cfU``UbX`k f]hhYb`zcfa "'\#ik]``h\YfYVmgi ddcfhmci `]b`h\Y`g_]``g`mci `bYYX`hc`dfcXi W\`U gi ghU]bYX`fYgYUfW\`dfcYWigi W\`Ug`h\Y`<cbci fg`h\Yg]g"`H\Y`WcbhYbh]g`XY`]j YfYX`h\fci [\`gYa]bUfg`UbX k cf_g\cd"

7 ci fgY @YUfb]b[Ci hWca Yg

%" 9j U`i UhY h\Y`_Ymdf]bW]d`Yg`cZ\][\!ei U`]hmei U`]hmfYgYUfW\`]b`U`fY`Yj UbhX]gW]d`]bY &" @cWUhYž`UbU`mgY`UbX`Yj U`i UhY`fYgYUfW\`fY`Yj Ubhhc`U`gdYW]Z]Whcd]W \" 7 cbghfi WhUbX`Uff]W\`UhY`U`WYUf`UbX`Wc\YfYbhfYgYUfW\`dfcdcgU` (" 5 fh]W\`UhY`h\Y`Yh\]WU``cV`][Uh]cbg`[YbYfUhYX`VmfYgYUfW\`]b`h\Y`\i a Ub]h]Yg

HYUWX]b[GlfUhY[]Yg

H\]g'Wci fgY'Wca df]gYg'U'nk c!\ci f'gYgg]cb'Zfca 'K YY_'%hc'K YY_'-z'Zc``ck YX'Vm'U'g]l !\ci f'<cbci fg Gma dcg]i a ']b'K YY_'% "'H\YfY']g'bc'WUgg'Zfca 'K YY_'%s'hc'K YY_'%z'k\]W\"UfY'Zcf'gY'Zlghi Xm'UbX]bX]j]Xi U`'Wcbgi `hUhjcbg'cb'UggYgga Ybhg''H\Y'nk c!\ci f'gYgg]cbg'UfY'XYg][bYX'nc'YbUV'Y'ghi XYbhg'nc YUfb'nk\Y'g_]``g'cZWcbW']j]b['UbX'a UbU[]b['U'fYgYUfWk'dfc'YWz']bWi X]b['`cWUhjb['nk\Y]f'fYgYUfWk' k]h\]b fY'Yj Ubn'UWXYa]W']hYfUhi fYz'a UbU[]b['nk\Y'fYgYUfWk' dfc'W'ggz'Wcbg]XYf]b['Uddfcdf]UhY'fYgYUfWk a YhkcXgz'UbX'Wca a i b]WUhjb['fYgYUfWk' YZZYWhj Y'm'H\Y'gYa]bUfg'k]``Wcj Yf'ncd]Wg'gi Wk'Ug'hk\Y'`]hYfUhi fY fYj]Yk z'cb`]bY'XUhUVUgYgz'fYgYUfWk' a YhkcXc`c[mz'UbX'Ui hkcf]b['U'hkYg]g''5hhkY'k cf_g\cdgz'ghi XYbhg'k]``k cf_'k]hk'dYYfg'Zfca 'a i 'hjd'Y'X]gW]d']bYg'cb'gdYW]Z]WhUg_g'gi Wk'Ug'g\UfdYb]b['fYgYUfWk'ei Ygh]cbgz VfU]bghcfa]b[']XYUgz'i bXYfghUbX]b['hkY]f'a YhkcXc`c[]Ygz'Z]bY'hi b]b['hkY]f'ha Y`]bYgz'UbX'dfYgYbh]b['U'Wf]h]ei Y'cZWca d'YhYX'hkygyg'''''

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8YHJ]`g.

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GhUfhXUhY. Bch5dd`]WUV`Y

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%) \$\$`k`cfXg"`Mcif`HUg_`]g`hc`giVa]hU`Wf]h]WU``YjU`iUh]cb`cZcbY`fYW\bh<cbcifg`h\Yg]g`]b`mcif`X]gW]d`]bY" Mcif`Wf]h]eiY`g\ci`X`Wcbg]XYf`h\Y`Zc``ck]b[.`UE'H\Yg]g`hcd]WVE@|hYfUhifY`fYj]Yk`WE'H\Yg]g`ghfiWhifY`XE5ggYggaYbh&`H\Yg]g`Wf]h]eiY

	<u>l</u>	

Fygci fWyg

DfYgWf]VYX F Ygci fWYg

F Ygci fWyg'k]``'VY'gi dd`]YX']b'WUgg"

FYWca a YbXYX FYgci fWyg

B#5

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

 $\label{eq:continuous} Ghi XYbhiZYXVUW_k]``VY`[Uh\YfYX'h\fci[\A m9I dYf]YbWY"' \pm i]g'U'k Umg'UbU'mgYX'UbX'Wcbg]XYfYX']bd'Ubb]b['\Zcf'h\]g'Wci fgY"'$

Gi Va]gg]cb cZ5ggYgga YbhHUg_g

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

Image: Ybwei bhyfu'dfcv'ya k \yb'uhhya dhjb['hc'gi va]hmci f'Ugg][ba Ybhh\fci [\ 'Hi fb]h]bž'd'YUgY

Hy'Yd\cby'9| hy'fbu''Gi ddcfhcb'-',) '' ' ' %cf'Ya U]''h\Ya 'cb'Y! hy'fbu'hy'hgi ddcfh4 i bgk "YXi "Ui "''Gi ddcfh
\ci fg'UfY', .\$\$Ua '-'%\$.\$\$da 'cb'k YY_XUmg'UbX'-.\$\$Ua '-').\$\$da 'cb'k YY_YbXg'fl *) 'XUmg'U'mYUft'''=Z'mci
UfY'i bUV'Y'hc'gi va]hmci f'Ugg][ba YbhXi Y'hc'U'ZJi 'hk]h\ 'Hi fb]h]b'mci 'a Um'Udd'mZcf'Ub'Y! hy'bg]cbž'Vi hmci
a i ghfYhJ]b'mci f'h]W_Yhbi a VYf'Zfca '9! hy'fbU''Gi ddcfhfU'cb['k]h\ 'Ubmch\Yf'fy'Yj UbhXcW a Ybhgt'hc
]bWi XY'Ug'Yj]XYbW' hc'gi ddcfhmci f'Y! hy'bg]cb'Udd']WUh]cb"'=Zmci 'Ya U]''9! hy'fbU''Gi ddcfhmci 'k]'`
Ui hca Uh]WJ'`mfYW']j Y'U'h]W_Yhbi a VYfZ'Vi h]Zmci 'hY'Yd\cbY'mci 'k]``bYYX'hc'gdYW]Z]WJ'`mUg_'Zcf'cbY''
Hi fb]h]b'U'gc'dfcj]XYg'i dXUhy'g'cb'h\Y]f'gmghYa 'ghUh' g'cb'Hk]hyf''

; YbYfU`mž'UggYgga YbhiHug_g'a i ghVY'gi Va]hhYX'Y`YVWfcb]\WJ``mij]U'Y]h\Yf'Hi fb]h]b'cf'U'A ccX`Y Ugg][ba Ybh''=b']bgHJb\W'g'k \YfY'h\]g']g'bchdcgg]V`Yž']hk]```VY'gHJhYX'cb'mci f'\\circ i fgY'g'A ccX`Y'g]hY'k]h\U`hYfbUh]j Y'gi Va]gg]cb'XYHJ]`g"

cfi]bZcfa Uhjcbicbi\ckihcigi Va]hUgg][ba Ybhgicbi]bYij]UiA ccXiY.i\hdg.#gh XYbhi bgk "YXi "Ui #\ck! gi Va]hUgg][ba Ybha ccXiY

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

D`U[]Uf]ga i]gii g]b[ih\Yik cfXgicfi]XYUgicZch\YfgiUbXidfYgYbh]b[ih\Ya iUgimci fick b"i=hWJbihU_Yia Ubm Zcfa gžZfca iXYi]VYfUhYiWXYUh]b[ihciUWW]XYbhU`mWcdm]b[iZfca iUigci fWYik]h\ci hiUW_bck iYX[Ya Ybh'

IBGK [fcidg'd'U[]Uf]ga]bhc'h\Y'Zc``ck]b['WUhY[cf]Yg.

• i bXYfgHJbX'mci f'f][\hg'UbX'fYgdcbg]V]`]h]Yg'Ug'U'gh XYbh'Uhil BGK