

6i g!l bZU```]b A ØbWXYb. A Y\fYfY J Yf`YhnhY i bX [fc » Y GdYffi b[Yb °



8]Y [YbUiYb IaghÀbXY XYg IbZU ``g 'g]bX 'V]g `Ub['ib_ `Uf" '8]Y

ni ghàbX][Yb'6Y\ÒfXYb'\UVYb'VYfY]hg'a]h'XYb'9fa]hhi b[Yb VY[cbbYbž'i a '\YfUi gni Z]bXYbž'k Ug'[YbUi 'ni 'XYa Ni gUa a Ybghc» '[YZØ\fh'\Uh"'8Yf'6i g'k Uf'a]h': U\f[ÀghYbž XUfi bhYf'Ui W.'?]bXYfž'VYgYhnh"'8]Y'Gd]fU'Y'Ub'JYf`YhnhYb'nY][h'X]Y dchYbn]Y``Yb'; YZU\fYb']a 'GhfU»Ybj Yf_Y\f'i bX'X]Y'K]W\h][_Y]h XYf'G]W\Yf\Y]hga U»bU\a Yb']b'ÒZZYbh`]W\Yb'JYf_Y\fga]hhY`b"

GWk YfYf'J cfZU``a]h'Y]bYf'HfUa

± Y]bYa `UbXYfYb`gWk YfYb`JcfZU```]b`A ØbWkYb`_c``]X]YfhY`Ua %\$"`A Àfn`&\$&) `Y]bY`HfUa `a]h`Y]bYa `6i gž`XYf`YVYbZU``gʻj c``Yf?]bXYf`k Uf"`@Ui h'a Yf_i f"XY`k i fXYb`]bg[YgUa h`nk Ò`Z`DYfgcbYb j Yf`Yhnhž`XUfi bhYf`UWkh'?]bXYf`Y]bYf`gYWkghYb`?`UggYž`X]Y`Ui Z`XYa FØW_k Y['j cb`GWk]a a i bhYff]Wkh`k UfYb"`8Yf`6i gZU\fYfž`Y]b * &! 'À\f][Yf`A Ubbž`Yf`]hh`gWk YfY`JYf`Yhni b[Yb`i bX`gc``hY j cfUi gg]Wkh`]Wk`a]h`?fØW_Yb`Ui g`XYa `?fUb_Yb\Ui g`Ybh`UggYb k YfXYb"

8]Y'9fa]hhìi b[Yb'XYf'Dc`]nY]'i a ZUggYb'i bhYf'UbXYfYa 'X]Y
, VYfdfØZi b['XYf'5a dY`gWXU`hi b['i bX'Yj Ybhi Y``Yf'hYWXb]gWXYf
8YZY_hY"'8]Yg'nY][hž'k]Y'k]WXh]['Y]bY'[fØbX`]WXY'I bhYfgi WXi b[
ZØf'X]Y'; Yk À\f`Y]ghi b['XYf'GhfU» Ybj Yf_Y\fgg]WXYf\Y]h']gh''
J Yf_Y\f'Ua 'GhYi VYbd`Uhn'bcfa U`]g]YfhY'g]WX'gdÀhYfž'k À\fYbX'X]Y
6Yf[i b[gUfVY]hYb'ZØf'XYb'6i g'i bX'X]Y'HfUa 'NY]h']b'5bgdfi WX
bU\a Yb'i bX'XYf'6YfY]WX'j cfØVYf[Y\YbX'[YgdYffh'k i fXY''

5bgh]Y[XYf'JYf_Y\fgi bZÀ``Y']b'A ØbWXYb

8]Y 'Øb[ghYb'JcfZà``Y'[YgY``Yb'g]W\'ni 'Y]bYa
VYgcf[b]gYffY[YbXYb'HfYbX']b'XYf'JYf_Y\fgg]W\Yf\Y]h']b
A ØbW\Yb"@Ji h'XYf'JYf_Y\fgi bZJ``!GhUh]gh]_'XYf'Dc`]nY]'A ØbW\Yb
ZØf'XUg'\J\f'\&\\$\&('[UV'Yg']bg[YgUa h'(-"+)-'JYf_Y\fgi bZà``Yž'k Ug
Y]bYa '5bgh]Y['jcb'\&\ž+'i']a 'JYf[`Y]W\'ni a 'Jcf'U\f'Ybhgdf]W\'h''
HÒX`]W\Y'JYf_Y\fgi bZà``Y'gh]Y[Yb'jcb'\&\'Ui Z'\-ž'k Ug'Y]bYb
U`Ufa]YfYbXYb'5bgh]Y['jcb'), ž'i'XUfghY``h''6YgcbXYfg
VYgcf[b]gYffY[YbX']gh'X]Y'HUhgUW\Yž'XUgg'X]Y'NU\``XYf
JYf_Y\fghchYb']a 'GhUXh[YV]Yh'VY]'*'']Y[hž'k À\fYbX'XYf
@UbX_fY]g'XfY]'HcXYgZÀ``Y'jYfnY]W\bYhY''8]YgY'NU\`Yb

 $\label{eq:continuity} $$j\ YfXYi\ h`]WXYbž`XUgg`A\ U$ bU\ a\ Yb`ni\ f`JYfVYggYfi\ b[`XYf\ JYf_Y\ fgg]WXYf\ Y]h`Xf]b[\ YbX`YfZcfXYf`]WX`g]bX"$

9]b 'VYgcbXYfYg'5i [Yba Yf_'`]Y[h'Ui W\'Ui Z'XYb'JYf`YhnhYb.'=a $\pm J \cdot f' \cdot \& \cdot \& (k \cup fYb' + "))'$ 'DYfgcbYb 'Y]W\'hi bX'* &) 'DYfgcbYb gW\'k Yf'j Yf`Yhnhž'k Ug'g]W\'YVYbZU``g'Ui Z'G]W\'Yf\Y]hgVYXYb_Yb']a \OZZYbh`]W\'Yb'JYf_Y\f'Ui gk]f_h"'8]Y'Dc`]nY]'UddY``]Yfh'Ub'U``Y JYf_Y\fghY]`bY\a Yfž'j YfUbhk cfhi b[gVYk i ggh'ni 'ZU\fYb'i bX'X]Y JYf_Y\fgfY[Y`b'ni 'VYUW\hYbž'i a '_\ØbZh][Y'I bZ\`Y'ni 'j Yfa Y]XYb i bX'XUg'G]W\'Yf\Y]hgb]j YUi ']a 'A \ØbW\YbYf'JYf_Y\f'ni 'Yf\\O\Yb''

8]Y'U_hi Y``Yb'9fY][b]ggY'i bX'GhUh]gh]_Yb'i bhYfghfY]W\Yb'X]Y
Bchk YbX][_Y]hž'X]Y'G]W\Yf\Y]h']a 'GhfU» Ybj Yf_Y\f'_cbh]bi]Yf`]W\
ni '[Yk À\f`Y]ghYb"'5b[Yg]W\hg'XYf']a a Yf'\Ài Z][Yf'k YfXYbXYb
I bZÀ``Y'a U\bh'X]Y'Dc`]nY]'ni f'j cfg]W\h][Yb': U\fk Y]gY'i bX'VYhcbh
X]Y'6YXYi hi b['dfÀj Ybh]j Yf'A U» bU\a Yb']a 'ÒZZYbh`]W\Yb'J Yf_Y\f"

8 Y hU]`g		
J c f ZU``	JYf_Y\fgi bZU``	
Cfh	: Y`XVYf[ghfU» Yž', %+' + 'A ØbWX Ybž	
	8 Ying Wilb X	
J Y f`Y hn hY	%)	
Ei Y``Yb	• k k k "hn"XY	
	• k k k "a Yf_i f"XY	
	• k k k "hn"XY	

6Ygi WXYb G]Y i bg Ui Z. b!U["bYh