## 

91 d`cfY`h\Y`XYW]bY`cZ:`cf]XU/ \$' - /g`W]hfi g`]bXi ghfmž Xf]j Yb`Vm`X]gYUgY`UbX`bUhi fU``X]gUghYfgž`Ug`k Y`XY`j Y`]bhc Yl dYfh`]bg][ \hg`UbX`Zi hi fY`dfcgdYWhg"



CfUb[Y'7cibhmž: `cf]XUžIG5 !! ⊕ && ) ž: `cf]XUg'W]hfig ]bXighfm']g'ZUW]b['U'Wf]g]g'h\Uh'\Ug'XYYd'fcchg']b'Vch\'X]gYUgY'UbX X]gUghYf"'K]h\'U'\]ghcfm'cbWY'aUf\_YX'Vm'Xca]bUbWY']b'cfUb[Y 't]WY'dfcXiWh]cbž'h\Y'ghUfh`]b['fYU`]hm'hcXUm'fYjYU`g'U'g][b]Z]WUbh Xfcd']b'W]hfig'm]Y`Xg"'8Ub'F]W\Ymž'h\Y'79C'cZ'F]jYfZfcbh'DUW\_]b[ 7cadUbm']b'⊕X]Ub'F]jYf'7cibhmž'k\c'\Ug'VYYb']b'h\Y']bXighfm g]bWY'%-, %ž'dc]bhg'hc'U'hfciV`]b['hfYbX"'':`cf]XU'igYX'hc'YUX'h\Y bUh]cb']b'cfUb[Y'dfcXiWh]cbž'Vih'kY'bck'[fck'cb`m'U'ZfUWh]cb'cZ k\Uh'kY'cbWY'X]Xž'F]W\Ym'g\UfYX"'H\]g'gYbh]aYbh'fYgcbUhYg k]h\'H7DU`ag'JUV\_'FUbXU``ž'k\c'gdYbh'acbh\g']bjYgh][Uh]b['h\Y WJigYg'cZ'h\]g'XYW]bY"

 $\label{eq:full_field} F Ub X U^{``i} b Wcj Y f Y X h Uh h Y d f b W d U^{``} U X j Y f g U f m^{i} b h ]g^{'} Z ][ h^{i}]g$ 

< ck Yj Yfžbch'U```]g``cgh"' ŧðg][ \hg`Zfca 'FUbXU`` g`fYgYUfW\`g\ck h\Uh`k \]`Y`h\Y`]bXi ghfm`]g`XYYd`m`hfci V`YXž`]bbcj Uh]cbg`gi W\`Ug [YbY`YX]h]b[ 'hYW\bc`c[mž`]bWi X]b[ '7F =GDF ža Um`dUj Y`h\Y`k Um

## 5'; `]a a Yf'cZ'<cdY

H\Y'd`][\h'cZ:`cf]XU g'W]hfi g'cfW\UfXg']g'Wca dci bXYX'Vm'bUhi fU` X]gUghYfg"'H\Y'I "G" 8YdUfha Ybh'cZ'5[f]W' `hi fY'bchYg'h\Uh \i ff]WUbYg'\Uj Y'YI UWYfVUhYX'h\Y'XYW]bYž'k ]h\'Zci f'a U^cf'ghcfa g \]hh]b['VYhk YYb'&\$\$('UbX'&\$\$) ž'Zi fh\Yf'XUa U[]b['Wfcdg'UbX gdfYUX]b['X]gYUgYg'`]\_Y'W]hfi g'WUb\_Yf"'A cfY'fYWYbh`mž'\i ff]WUbYg ]b'&\$%+'UbX'&\$&&']bZ]WhYX'UXX]h]cbU``\Ufa ž`YUX]b['hc'U dfcXi Wh]cb'ci h`cc\_'h\Uh'fYa U]bg'i bWYfhU]bž'k ]h\'h\Y'ZcfYWUgh'Zcf cfUb[Y'dfcXi Wh]cb']b'h\Y'&\$&' &('gYUgcb'Uh'a YfY`m', (\*ž\$\$\$ hcbg\_cbY'cZ'h\Y'`ck Ygh']b'bYUf`m'-\$'mYUfg"

5WWcfX]b['hc'l b]jYfg]hm'cZ': `cf]XU'fYgYUfWX ž'g]bWY'&\$\$) ž :`cf]XU'\Ug'gYYb'U'ghU[[Yf]b['-&i 'fYXiWh]cb']b'cfUb[Y dfcXiWh]cbž'Xfcdd]b['Zfca 'U'dYU\_'cZ'&(&'a ]``]cb'VclYg'hc''igh %\$("\*'a]``]cb']b'&\$%("'H\]g'XYW]bY'cb`m'k cfgYbYX'cjYf'h\Y mYUfgž'k]h\'gi fjYmg'fYjYU`]b['h\Uh'Ub'cjYfk\Y'a]b['-\$i 'cZ W]hfi g'UWfYU[Y']g'bck']bZYWhYX'k]h\'<@6"'; fckYfg'\UjY'kUhWXYX h\Y]f'hfYYgž'UbX'`]jY`]\ccXgž'gi ZZYf'g][b]Z]WUbh`m'' =b'ZUWhž'\*\$i 'cZ gi fjYmYX'[fckYfg'fYdcfhYX'm]Y`X'`cggYg'[fYUhYf'h\Ub'(\$i ž'U

## 8Y₩]b]b[`DfcXiWh]cb`UbX`=bWfYUgYX 7\U``Yb[Yg

## FUbXU``bchYX"

Wihfi g`[fYYb]b[`X]gYUgY`fki Ub[`cb[V]b[žcf`<@6Ł"`Cf][]bU``m fYdcfhYX`]b`Gci h\`:`cf]XU`Ufci bX`&\$`mYUfg`U[cž'h\]g`X]gYUgY XfUgh]WU``m`fYXi WYg`Wfcd`m]Y`Xg`UbX`WUb`Yj Yb`\_]``h\Y`hfYYg"`H\Y ]bj Ug]j Y`]bgYWh'h\Uh`gdfYUXg`h\Y`X]gYUgY`\Ug`hi fbYX`k \Uh`k Ug cbWY`U`fcVi gh`]bXi ghfm`]bhc`U`ghfi [[`]b[`cbY"` <]ghcf]WU``fYWcfXg g\ck`h\Uh`W]hfi g`[fYYb]b[`\UX`VYYb`[U]b]b[``U`Zcch\c`X`Zcf`mYUfg VYZcfY`dfcXi WYfg`hfi `m`fYWc[b]nYX`h\Y`[fUj]hm`cZ`h\Y`g]hi Uh]cbž Zcf'X]qYUqY!fYq]qhUbh'W]hfi q'Zfi ]hq"'H\]q'hYW\bc`c[]WU``YUd'Wci`X i`h]a UhY`m'\Y`d`fYj]hU`]nY`Ub`]bXi qhfm'h\Uh'\Ug``cb[`VYYb`cb`h\Y XYZYbg]j Y"

8 Yqd]hY h\Y Zcfa ]XUV Y cVqhUWYq h\Uh [ fck Yfq ZUW ž F ]WX Ym fYa U]bg`cdh]a ]gh]WUVci h`h\Y`dchYbh]U``Zcf`fYWcj Yfm"` 9j Yfm h\fYUh'\Ug'U'WcibhYfž'UbX'k]h\'h\Y'f][\h'giddcfhž'kY'a][\h'mYh gYY:: `cf]XU'fYhi fb'hc']hg'W]hfi g![fck]b['[`cfm" '<]g'ghYUXZUgh Wca a ]ha Ybh'hc'UXj cWUWh']b'h\Y'5[f]W `hi fU`'HfUXY'5Xj ]qcfm 7ca a ]hhYY'Vc`qhYfq`h\]q`\cdYž'Uq`qi ddcfh'Zfca ']bXi qhfm`YUXYfq VYWca Yg`]bWfYUg]b[`m'Wf]h]WU`"

=b 'gi a a Ufmž'h\Y'ghcfm'cZ': `cf]XU g'W]hfi g']g'cbY'cZ'Vch\'W\U``Yb[Y UbX'fYg]`]YbWY"'5g'FUbXU``g'h\cfci [\']bj Ygh][Uh]cb'g\ck gž'h\Y fcchgʻcZʻ]hgʻXYW]bYʻfi bʻXYYdžhUb[`YX`k]h\`h]a Y`UbX`hfci V`Y"'MYhž Ugʻh\Y`]bXi ghfm`cc\_gʻZcf`gc`i h]cbgž`h\YfY gʻXYZ]b]hY`m`gca Yh\]b[ hc<sup>·</sup>VY<sup>·</sup>gU]X<sup>·</sup>Zcf<sup>·</sup>h\Y<sup>·</sup>XYhYfa ]bUh]cb<sup>·</sup>cZ<sup>·</sup>h\cgY<sup>··</sup>]\_Y<sup>·</sup>F ]WXYm<sup>·</sup>k \c Wcbh]biY'hc'Z][\h'Zcf'U']]VfUbh'ZihifY"

8 Y hU]`g	
Cfh	CfUb[Y'7cibhmž:`cf]XUžIG5
EiY``Yb	• k k k "hWdU`a "Wca
	YX]g"]ZUg"i Z`"YXi
	• W]hfig]bXighfm"bYh

6Ygi WXYb'G]Y'i bg'Ui Z a Y]b!k ]Yb"bYh

9 1 1 9 9	
Cfh	CfUb[Y'7cibhmž:`cf]XUžIG5
EiY``Yb	• k k k "hWdU`a "Wca
	YX]g"]ZUg"i Z`"YXi
	• W]hfig]bXighfm"bYh