HcXUg Ug fY`tei]Ug XY >Ygi g 7f]ghcža Yga c c a U]g g]a d`Yg cV'Yhcgž]a dfYgg]cbUa Y Wta cj Ya U U`a U Wf]gh~ž]bZi bXYa dfcZi bXc fYgdY]hc YžUc a Yga c hYa dc Wli gUa]bhYbgU UhfU, ~c" 5 gYXY XY X]j]bcž]bYfYbhY U hcXc \ca Ya ž gYbhY!gY Ya U`[c UhYbX]XUž Uc WtbhYa d`Uf`i a U`XY`Ug"

 $5g dfcj Ug VJYbhtZJWUg hYa žf WUfcžgYi j U`cf" A Ug c \ca Ya XY Wcfu, ~c fYhcž Uc c`\Uf dUfU c GUbhc Gi Xzf]cžYbWcbhfU i a U dfcj U]bWb`W``Uj Y`a YbhY a U]g j U`]cgU XY gi U Ui hYbhJWJXUXY" E i U`d]bhcf gYf]U WUdUn XY]a U[]bUfžXY [Wf]Ufî Uei Y`U Z]g]cbca]U3 HUbhU [fUbXYnU Y gYfYb]XUXY bUei Y`Y fcghcž hUbhc dYfX~c Y hUbhU Wbgi fU bUei Y`Yg c`\cg ZYWXUXcgžb~c`f`XUXc`U`\ca Ya `U`[i a `]bj YbhUf"`C`\U!gY`Y`Wf..!gY``v `U`ZUWY`XY`>Ygi g`$

9gWJXU'GUbhU

9 bhfYhUbhcža i]hc a Ybcg Wcb\YWJXUg g~c Ug dfYWJcgUg fY`\tei]Ug Xc 8]j]bc A YghfY ei Y i a dYfY[f]bc dcXY YbWcbhfUf Ya F ca U" B YggY gYbhJXcžf U 7]XUXY 9 hYfbU i a j YfXUXY]fc YgWf\text{\text{tb}}c"

5 dYei YbU X]gh| bWJU XU a U[b‡Z]WU 6Ug‡]WU XY G~c >c~c XY @Uhf~cždcXYfz c Z]Y` XYj chUa YbhY gi V]f XY ^cY`\cg cg XY[fUi g XU 9g\WXU GUbhUž `Yj UXU XY >Yfi gU`fa dUfU



%#%\$

F ca Už



"HfUhU!gY'XU'YgWUXU'Xc'DU'zW]c'XY'D' bW]c'D]`UhcgždY`U'ei U`'gi V]i '>Ygi g'ei UbXc'Zc] UdfYgYbhUXc { hi fVU i `i `UbhY XYdc]g XU : `U[Y`U, ~c" Ë c [9\WY < ca cî" =b\Wi g]j Yž Ygh~c Ugg]bU`UXcg hf..g dcbhcg cbXY gY j ...U a Uf\W Xc X]j]bc gUb[i Y gcVfY c a zfa cfY VfUb\C Xcg XY[fUi gžU[cfU'fYj Ygh]Xcg'XY'a UXY]fU"

7ca c b~c gY Wta cj Yf]a U[]bUbXc c < ca Ya !8 Yi gž hcXc WkU[UXUž gi V]bXc dcf Y`U3 5c `cb[c Xcg gfW `cgž Wtbh]bi Ua YbhYž [YfU, " Yg Y [YfU, " Yg XY Yb`Yj UXcg Z]f]g hYa gi V]Xc XY ^cY`\cg YggYg &, XY[fUi gž dYX]bXc dYfX~c dcf gYi g dfŒdf]cg dYWUXcgž ci cZYfYWYbXc i a `Uhc XY`fYdUfU, ~c `Uc '8]j]bc F YXYbhcf"

=[fY^U'XU'ÍGUbhU'7fi n'XY'>Yfi gU`fa Î

GU]bXc XU GWU`U GUbHJž dcXY c dYfY[f]bc X]f][]f!gY U i a U][fY'U dfŒ]a Už U XU GUbHJ 7fi n XY >Yfi gU`fa ž a UbXUXU Wcbghfi]f Ya F ca U dY`U a ~Y Xc =a dYfUXcf 7 cbghUbh]bcž GUbHJ < Y`YbUž dUfU UVf][Uf Ug fY` \pm i]Ug XU DU]I ~c XY B cggc GYb\cf >Ygi g 7f]ghcž'hfUn]XUg'dcf'Y`U`XU'HYffU'GUbHJ"

I a U'dUfhY'XU'GUbhU'7fi n

8]f][]i!gYGUbhU<Y`YbU{HYffUGUbhUWtacd]YXcgc]bhi]hcXYYbWtbhfUfUGUbhU7finXYBcggcGYb\cf>Ygig7f]ghc":c]]bZcfaUXUXYeiYdfcjUjY`aYbhYY`UYghUf]Ubc`cWU`XcGUbhcGYdi`Wfcždc]gcgfcaUbcgWtghiaUjUaYbhYffUf^bhcUcWtfdcXcWtbXYbUXccg]bghfiaYbhcgih]`]nUXcgbcgid`‡WJc"

DUfU]adYX]fUXYjc,~cXcgdf]aY]fcgWf]gh~cgžcGUbhcGYdi`WfcZcfUWtVYfhcXYYbhi`\cžgYbXcWtbghfi‡XcUc``UXc`ia`hYad`c'dUfU'J..bigžYiaU'YghzhiU'dUfU'>•d]hYf°

 $\label{eq:continuous} \mbox{Dcf cfXYa} \mbox{ XY GUbhU < Y`YbUž YggY hYa d`c Zc] XYghfi ‡Xc Y U Yghzhi U ZY]hU Ya dYXU, cg"9a gY[i]XUž]b]\W]ufUa !gY Ug Yg\W]i U, "Yg" B c X]U ' XY a U]c XY ' &* ž ZcfUa Yb\WbhfUXUg bc `c\W' hf..g \Wfi nYg" Hi Xc]bX]\W]i U gYfYa U XY B cggc F YXYbhcf Y Ug Xcg Xc]g$







`UXf" Yg" 7ca cždcffa žgUVYf ei U`U'XY >Ygi g3

B YggU dYfd`Yl]XUXYž cWtffYi i a U gc`i, ~c Uc 6]gdc A UWtf]c. a UbXci hcWUf i a U XY`Ug bi a U a i `\Yf a i]hc XcYbhYžWfhc XY ei Y U Dfcj]X..b\YU gY a Ub]ZYghUf]U dUfU fYj Y`Uf ei U` U j YfXUXY]fU GUbhU 7 fi n" 5 c WtbhUhc Wta U df]a Y]fU Y U gY[i bXUž bUXU c\WtfYi " E i UbXcždcffa ž`\Y Zc] hc\WXU U h\Yf\Wf]fUžU a i `\Yf]a YX]UhUa YbhY fY\\text{Vtci dcf Wta d`Yhc U'gU• XY"'B ~c`\Uj]U'a U]g'X•j]XU"

>i V]`cgUž U =a dYfUhf]n ZYn Yf][]f bc `cWU` U [fUbX]cgU 6Ug‡]WU XU GUbHU 7fi nž HUa Vfa VX Ua UXU =[fY'U Xc GUbhc GYdi `Wfc ci XU FYggi ffY], ~cžcbXY Z]Wci [i UfXUXU U df]bW]dU``dUfhY`XU'7fi n"

Ci hfU dUfhY Zc] Ybj]UXU dUfU 7cbghUbh]bcd`UžcbXY 7cbghUbh]bc U fYWYVYi Wta [fUbXY XYj c, ~c" Hca UXc XY fYgdY]hc dcf YggU fY` \pm i]Užc a cbUfWU dfc]V]i XYgXY Ybh~c c gi d` \pm W[c'XU'Wfi W]Z]I ~c'Ya 'hcXc'c' \pm a dff]c'F ca Ubc"

5 a ~Y Xc =a dYfUXcf `Yj ci dUfU F ca U c fYghUbhY" I a]a dcfhUbhY \mathbb{Z} fU[a Ybhc f j YbYfUXc Uhf \c^Y bU a YbW]cbUXU Í =[fY^U XU GUbhU 7 fi n XY >Yfi gU`fa Ξci hfc bU 6Ug‡]WU XY'G~c'DYXfc"

la 7fUjc

 $: cfUa \ Yb WbhfUXcg bc \ a \ Yga \ c \ `cWU` \ cg \ WfUj \ cg \ i \ gUXcg \ dUfU \ dfY[\ Uf \ bU \ 7fi \ n \ c \ 8]j]bc F YXYbhcf" C =a \ dYfUXcf \ 7cbghUbh]bc]b Wfi ghci i a \ XYggYg \ WfUj \ cg \ Ya \ f]Wb X]UXYa U XY d ffc`Ugži gUXc \ dcf Y`Y Ya \ cWUg]" Yg gc`Yb Yg" 9a)) $\ zcg ci \ hfcg \ ZcfUa \ `Yj \ UXcg \ dUfU \ F \ ca \ Uz \ dY`c \ Zi \ hi \ fc \ DUdU \ G~c ; \ fY[\ CF]c \ A \ U[\ bc" \ I \ a \ XY`Yg \ f \ j \ Yb YfUXc \ bc \ Yg\ Tb]c \ XU \ [=[\ fY'U \ XU \ GUbhU`7fi \ n`XY`>Yfi \ gU` fa \ î"$

5 'hUVi `YhU'=BF>

B YggY a Yga c YgWf‡b]c c dYfY[f]bc dcXYfz WbhYa d`Uf hUa Vfa U hUVi `YhU Wba U]bgWf], ~c Í >Ygi g B UnUfYbc F Y] Xcg >i XYi gĨ Ë Ya \YVfU]Wbž[fY[c Y `Uh]a Ë a UbXUXU ZJI Uf dcf'D]`Uhcg'bU'7fi n'Xc'GU'j UXcf"





 $5\,\text{Wa U.} = \left[\,\text{fY'U'XU'GUb'hU'7fi n'XY'>Yfi gU'fa "'B Y`Už'Ya 'j U']cgtgg]a c \\ \text{fY']}\text{Wf}]cž'WcbgYfj Ua !gY'fKU'Ygei YfXU'dUfU'U'X]fY]hUŁ'i a 'ZfU[a Ybhc XU'Wc`i bU'XU'ZU[Y`U, ~cži a 'Xcg'WfUj cgžc'XYXc'XY'G~c'Hca fži a U'dUfhY'XU'GUb'hU'7fi nži a 'Ygd]b\c'XU'WcfcU'Y'U'hUVi 'YhU'=BF>$

la '9gd]b\c'XU'7cfcU

5c Wtbhfzf]c Xc ei Y gY 'i `[Už Wta i a YbhYž U 7cfcU XY 9gd]b\cg XY B cggc GYb\cf b~c h]b\U U Zcfa U XY i a X]UXYa Už a Ug U XY i a VUffYhYž Wta &% Wa XY X]|a Yhfcž WtVf]bXc!@\Y hcXU U WUVY, U" v ZY]hU XY fUa cg XY `cb[cg Ygd]b\cg hfUb, UXcg" 8 Ydc]g XY Wt`cWz!`U bU UXcfzj Y` ZfcbhY XY >Ygi gž cg U`[cnYg [c`dYUfUa!bU XY a cXc U dfcj cWUf [fUbXYg`ZYf]a YbhcgžWta c`dcXY`gYf`UhYghUXc`dY`Ug`a UbW\Ug`XY`gUb[i Y`bc`GUbhc`Gi Xzf]c"

5 7cfcU dYfa UbYWi bU 6Ug‡]WU Xc A cbhY G]~cžYa >Yfi gU`fa žUhf %\$)'žei UbXc Zc] `Yj UXU dUfU 7cbghUbh]bcd`U" 9a %&', ž c =a dYfUXcf 6U`Xi \sharp bc = YbhYY[ci!U Ë 'i bhUa YbhY Wta U dcbhU XU `Ub, U XY @cb[]bi g Ë Wta c dYb\cf XY Ya dffgh]a c WtbhfU \sharp Xc Wta VUbWtg XY J YbYnU" 8 Y Wta i a UWtfXc Wta YggY =a dYfUXcfž G~c @i \sharp g =L ž F Y] XY : fUb, UžfYg[Uhci U fYZYf]XU X \sharp j]XU Y fYWVVYi Ya gYi dU \sharp g Ug Xi Ug dfYW]cgUg fY` \sharp ei]Ugž Wta hcXUg Ug XYa cbghfU, "Yg XY j YbYfU, ~c" C df \sharp df]c fY]ž U fU]b\U!a ~Yž]b•a Yfcg dfY`UXcg Y df \sharp bV]dYg ZcfUa YbWtbhfz!`cg dYfhc XU W]XUXY XY GYbg" G~c @i \sharp g Y gYi]fa ~cž F cVYfhc XE5fhc]gžXYgWU`, cgžUg``Yj UfUa `Uhf`U`7UhYXfU``XY`GUbhc`9ghYj ~cžbYggU``W]XUXY"

8 YgY cgc XY UWc`\Yf Ya `i [Uf X][bc h-c]bYgh]a zjY]g fY`\pii]Ugz c FY] gUbhc ZYn Wtbghfi]f Ya DUf]g i a U j YfXUXY]fU '@U XU Ufei]hYhi fU [@h]WU. U GU]bhY 7\UdY`\Y fl7 UdY`\U GUbhU\pii a U a UfUj]`\cgU][fY'\U XY j]hfU]gz ei Y Yl hUg]U hcXcg ei Ubhcg hYa U j Ybhi fU XY Wtb\YW.!`U"

5 hi U`a YbhYžU 7 cfcU XY 9gd]b\cg Yghz bcg HYgci fcg XU 7 UhYXfU` XY B chfY 8 Ua Y XY DUf]g"'9a 'F ca U'YbWcbhfU!gY'UdYbUg'i a 'XYggYg'Ygd]b\cg"

O dedo de São Tomé

7i f]cgUa YbhYžYbhfY YggUg fY`‡ei]Ugžbc a Yga c YgWf‡b]cžYghz hUa Vfa c Å XYXc XYG~c Hca fžc 5dŒghc`c]bWffXi `cžei Y hcWci U WXU[U Xc `UXc Xc 8]j]bc F YXYbhcfžUdŒg U F Yggi ffY], ~c"

5 '7c'i bU'XU': 'U[Y'U, ~c

8 c dcfhu` XY GUbhU A Uf]U A U]cfž 'z gY Uj]ghU U = [fY 'U XY GUbhU DfUl YXYg" G]b [Y`U bU UdUf..bW]Užc'ei Y`WbhYfz'Y`U3

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Dcf ia WcffYXcf gY WXY[U U ia U dYei YbU WVdY`Už 5‡ Ya ia U Wc`i bU VYa]`ia]bUXUž Yghz Yl dcghU U 7c`i bU XU : `U[Y`U, ~c" v]a dfYgg]cbUbhY Gi U g]a d`]WJXUXY fY`cei YbhY"



cfbUhc'U`[ia žWca cj Y'dfcZi bXUa YbhY"'HYa 'UdYbUg') \$ 'Wa 'XY'U'hi fUž' & Wa XY`Uf[ifUbUVUgYY&\$ Wa bchcdcžcbXY\zia UUf[c`UXYZYffcbUeiU`YfUa UhUXcg cg'gid`]WJUXcg" v 'ZY]hU'XY'a zfa cfY'VfUbWc'Wca '[fcggcg'[f~cg'dfYhcg"

BcGUbhcGi Xzf]cXYHif]a žWcbhUa!gYUga UfWUgXYaU]gXYWfa [c`dYgXYZU[Y`cfYWfV]XcgdcfBcggcGYb\cf"57c`ibUXU:`U[Y`U,~cZc]`YjUXUdUfUFcaUYa %&%žbchYadc`Xc`DUdU'=bcW.bWc'=="

5 \ UghY XU GUb hU @Ub, U

8 YgWtVYfhU bc GUbhc GYdi `WfcžU @Ub, U Wta U ei U` c Wfbhi f]~c @cb[]bi g dYfZl fci c `UXc Xc GYb\cf XC `Yj UXU XY >Yfi gU`fa dUfU 5bh]cei]U" B U]a]b..bWJU XU]bj Ug~c a ci fUža ~cg d]YXcgUg U YbhYffUfUa Uhfzg Xc U`hUf XU =[fY'U XY G~c DYXfc" 8i fUbhY U Df]a Y]fU 7fi nUXUž Ya % \$+ž cg Wf]gh~cg YbWtbhfUj Ua !gY g]h]UXcg bYggU WJXUXYž Ya dYf][cgU g]hi U, ~c" 9bh~cži a a cbY ei Y hYj Y fYj Y`U, ~c gcVfYbUhi fU`ž]bX]Wti cžcWU` cbXY Y`U YghUj U YbhYffUXU" Gi U XYgWtVYfhU XYgdYfhci c Ybhi g]Uga c Y XYi bcj Ug YbYf[]Ug Ucg Wfi nUXcgžei Y`XYffchUfUa `Ya `gY[i]XU`cg`gUffUWfbcg"

>z j]a cgž UWJa Už Wta c U dcbhU XU GU[fUXU @Ub, U Zc] `Yj UXU dUfU DUf]g Y XYdcg]hUXUž 1 bhc Wta U 7cfcU XY 9gd]b\cgž bU GU]bhY 7\UdY``Y" 8 i fUbhY U F Yj c`i, ~c : fUbWfgUž]bZY`]na YbhY YggU dfYWJcgU fY` \pm i]U XYgUdUfYWfi " 5 \UghY dYfa UbYWfi Ya 7cbghUbh]bcd`Už a Yga c XYdc]g XU hca UXU XU WJXUXY dY`cg hi fWtg" 9 Ya %(- &ž c gi `h-c 6U1UnYh Ybj]ci !U Uc DUdU \pm bcW.bWJc J \Longrightarrow ž YgWUfYWfbXc ei Y U dcbhU gY YbWtbhfUj U Ya dcXYf`Xc`fY]`XU`: fUb, U"

5 hi U`a YbhY YggU\UghY fj YbYfUXU bU 6 Ug‡`]WU XY G~c DYXfcžUc`UXc XY i a U Yghzhi U XY'G~c'@cb[]bi gžc'Wbhi f]~c'a zfh]f"

5 VYbZUnY^U'dfcl]a]XUXY'Xc'gcVfYbUh' fU'

5]a dfYgg~c XU dfcl]a]XUXY Xc gcVfYbUhi fU`ž Xc Ua cf XY i a 8 Yi g ei Y gY YbWUfbci Y gcZfYi c]b]a U[]bzj Y` dUfU bcg gU`j UfždYfj UXY Y dYfZi a U U U`a U Xc Z]Y` ei Yž Wtbhf]hcžWtbhYa d`U`i a U`Uj a U`Ug`fY` tei]Ug`XY`bcggc`8]j]bc`F YXYbhcf"

HYfa]bUXU YggU ÍdYfY[f]bU, ~cÎ dY`Ug fY`‡ei]Ug XY >Ygi gž bcg fYghU bU U`a U i a U j U`]cgU WbWi g~c" Dcf j YnYgž UggU`hU! bcg U gYbgU, ~c XY ei Y 8 Yi g Yghz X]ghUbhYž dci Wb UWYgg‡j Y` U bcggcg dYX]Xcg ci cfU, "Yg" B UXU XY a U]g ZU`gc Y dYfb]Wjcgc dUfU U j]XU Ygd]f]hi U`` 8 Yi g Yghz dfŒ]a c XY bŒg Y ci j Y Ug bcggUg g• d`]WUg Wba c gY ZcggYa Ug XY i a Z]`\c • b]WbžYl hfYa Ua YbhY Ua UXc" fF Yj]ghU 5 fUi hcg Xc 9j Ub[Y`\cžA Uf, c#&\$\$(žb" &+žd" '('{"+b})



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