

=ba][fU]i b

8cW/a Ybhcg

8cW/a Ybhcg! ; YbYfU

:]b`UbXÅg

A]gh`CñXAb`ca U__Yyb`SSSSj UfhYb3
 DYX]f`i b`Zcfa i `Uf]c

=fU]Ubc

8cj Y'dcggp`f]cj UFY] `a cXi `c'dYf`SSSS`3

A]`c]b`Oxc_i a Ybhtj]Qcb`a nÖbbYHmß
 DYX]f`U`ZMwU`XY`Yi dYX]V]i b`XY`i b`XcW/a Ybhc

E i UbXc`Ä`gUhc`f]`Ug]Uhc`]`g`c`OxcW/a YbhcÖB

A]gg`A`Oxc_i a Ybhtj]Qcb`a nÖbbYHmß
 DYX]f`Y`i [UF`XY`Yi dYX]V]i b`XY`i b`XcW/a Ybhc

8cj Y`Ä`gUhc`f]`Ug]Uhc`]`g`c`OxcW/a YbhcÖB

? cg_U`Yb_]`Ö`]gmg]cX]g]h`_g]g]j Ub`YbYY3
 DYX]f`U`ZMwU`XY`W`Xi V]XU`XY`i b`8B`=

E i U`Ä`U`XU`U`X]`g`M`Y`bn`U`XY`U`g`U`W`f`H`X`f]`X`Y`b`h]`h`/3

J c]g]h`c`U`H`U`a`]bi`U`ca`U__Yyb`h`Ä`h`A`]gYgg`A3
 DYX]f`U`h`i`XU`d`U`f`Y`Y`b`U`f`i` b`Zcfa`i` `Uf]c`#`a`dfYgc

Di`î`U]i`H`U`f`a`]`U`W`a`d]`U`f`Y]` `a`cXi` `c`3

A]h`A`Xc_i a YbhtY`U`a`]bi`b`d]h`Ä`h`i`cXU`SSSSSSSS
 j`UfhYb3
 DFY[i b]Uf`ei`Ä`XcW/a`Ybhcg` \ `U`mei`Y`dfYg`Y`b`U`f`

E i U]`XcW/a`Ybht`XY`j`c`d`c`f`H`U`f`Y`d`Yf` `SSSS`3

>c]H]j`c]h`h`U`_YU`Oxc_i a Ybht]U`c]g]bi` ``U`h` `Y`c` ``U
 U]bU_]b`SSSSSSSS`
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DYf`f]W]j]YXYf`U`#` `OxcW/a`Ybhc`Q`XY`Y`Z`c`f`b]f`Y
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=`a`]c`#`U`a`]U`OxcW/a`Ybhc`Q`Ä`gUhc`#`U`fi`V`Uhc`#`U

>Ä`h`b`h`Ä` Äb` \`U`_`Ya`i`_`g`Yb`SSSSSS`di`c`Y`g`U`
 =bX]W]f`ei`Y`Y`g`h]g]Zcfa`U`n`U`b`Xc` ``U`gc`]`V]h`i`X`Y`b`bca`Vf`Y`XY`ch`f`U`d`Yf`g`cb`U

Gh`c`W`a`d`Y`h`U`b`Xc`ei`Y`g`U`X`ca`U`b`X`U`d`Yf`V`b`h`c`X]`SSSS`

B`Ä`a`Ä`h]YXchcj`U`h`i`c]H]a`i`_`g`Y`]g]U`
 =bX]W]f`ei`Y` ``U`]bZcfa`U`V]i`b`Y`g`W`b`Z]X`Y`b`V]U` `m`bc`g`Y`f`Y`Y`U`f`%`U`H`Y`f`W`f`cg`

@Y]bZcfa`U`h]cb]g`c`b`c`f`]g`Y`f`j`U`H`Y`

J`c]g]h`c`U`b`U`a`]bi` ``Y`_`j`]h]b`h`Ä`h`Ä`U`_`Ya`i`_`g`Y`g]U`B
 DYX]f`i`b`f`Y`g]i`U`f`Xc`XY` ``U`gc`]`V]h`i`X`

Di`î`X`U`f`a`]i`b`U`f]W]j`i`H`U`X]`W`b`g]`[`b`U`XY` `U`X`ca`U`b`X`U`B

8cW/a Ybhcg! `8UhcgdYf`gcbU`Yg

:]b`UbXÅg

=fU]Ubc

=ba][fUM]i b 8cW/a Ybhcg



A]_À'g]bi b'b]a Yg]`cb3
DfY[i bHUF`U`U [i]Yb`W/a c`gY`Ua U

7ca Y'g]`W]Ua U3

J c]g]h_c`_YfrcUa]bi ``Y`grtblma` ÀdU]__Ug]`'U
grtblma` ÀU]_Ug]3
DfY[i bHUF`U`U [i]Yb`g]`i [Uf`mig` ZYXU`XY`bUM]a]Ybhc

Di Î `X]fa]]'`g`c`i c[c`Y`U`g` U`XU`U`X]'`bUg]`H`U3

A]gg`À'g]b`À`Ug]`h3
DfY[i bHUF`U`U [i]Yb`X]`bXY`j]j`Y

8cj Y'f]g]`YXY3

A]_À'g]bi b`cgc]`H`Yg]`cb3
DfY[i bHUF`U`U [i]Yb`g]`X]fY`W]i`b

E i U`Ä]'`g`c]'bX]f]`mc3

A]b`_À'a`U`b`_U`b]U]bYb`g]b`À`c`Y`h3
DfY[i bHUF`U`U [i]Yb`W`1/2`Y`g]g]`bUM]`cbU]`XUX

E i U`Ä`U`g]`U`V]`H`U`X]'`bU`bn`U3

? cg`_U`g]b`À`g]U]`i`h]`U`U`U`b3
DfY[i bHUF`U`U [i]Yb`W`1/2`Xc`Y`[]`U`dU`Ég

E i U`bXc`Ä`U`f]j`U`c`#U]'`b`@]`U`c`b3

J c]g]h_c`b`À`H`À'a]bi ``Y`Y`b_]`Ç`cX]g]h`g]Ug]3
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Di Î `a`cgf`U`f`a]`U`g]`U`W`H`U`X]'`X`Y`b]h]`h3

8cW/a Ybhcg!`9g]U`Xc`V]j]`

:]b`U`bX`Åg
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=bX]W]f`h`i`Y`g]U`Xc`V]j]`

=H]U`bc
= `a]c`g]U`c`V]j]Y`Ä`SSSSSSSSSS"

bU]a`U`c`b
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W]W]Y`f`b`É`#`b`i`V]`Y`f`Z`

bU]a]g]gg]U
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V`b]i [U`c`#U

U]j`a`i`g]Y`c`gg]U
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Y`f`c`b`b`i`h
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=ba][fUM]i b 8cW/a Ybhcg



Uj c`]]hcgU
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9ghUxc`V]]]`

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Uj c`]]hcgU
9ghUxc`V]]]`

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`Yg_]`
9ghUxc`V]]]`

j YXcj c#U

Cb_c`g]bi ``U`Udg]U3
DFY[i bhUF`U`U[i]Yb`g]`h]YbY`\`^cg

< U`Z[]`3

5g i _c`hUci XYggUg]`a i]hU`Yb_]`O]hA3
DFY[i bhUF`U`U[i]Yb`g]`fYg]XY`Vzb`dYfgcbUg]U`g] `VWF[c

< U`ZLa]`]UF]`U`VWF]Vz3

C`Yb`a i i hUa UggU`dYf`Yb]`_UbggU`hU`U]g]b`m`hYb`
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J cffY]`f]Vzb[]i b[Yfa]`U`U`a]U`ZLa][]`U`

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:]b`UbXAg

=hU]Ubc

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J cffY]`]gV]]j Yfa]`U``fUbu[fUZY

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DFY[i bhUF`ei A`XcW/a Ybhcg]h]YbYg`ei Y`dfYg]bhUF

E i U`]XcW/a Ybh]`XYj`c`dcf`hUFY3

A U`gU`c`fY_]ghYfO]hA]bYb`^`chU_]b3
DFY[i bhUF`g]`YI]ghYb`hU]g]XY`Ya dUXfcbUa]Ybh

7]`gcbc`XY`Y`gdYg]`dYf`]gV]]j Yf]g]`U``fUbu[fUZY3

Hi `]b`fY_]ghYfO]a AAb`Ug]]bdU[]_U`b]"
=bX]VWF`ei Y`ei]YfYg]fY[]ghUF`h` `Xca]V]]]c

Gcbc`ei]`dYf`YZZY`hi UfY]` `Wla V]c`X]`Xca]V]]]c"

=ba][fUM]i b 8cW/a Ybhcg

< U i U]g]b`h`Uu`f`cgfY`_]gYf]chhYb"
=bX]WUf`ei Y`ei]YfYg`gc`]W]hUf`i b`Wfh]Z]WUhc`XY`Vi YbU`VzbXi VhU

J cffY]`chhYbYfY`i b`Wfh]Z]WUhc`X]`Vi cbU`VzbXchU'

< U i U]g]b`u`YU`c`Yg`Yi`i`dU`
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J cffY]`ZUFY`Xca UbXU`dYf`]`dYfa Yggc`X]`gc[]]cfbc"

8cW/a Ybhcg!`GY[i fc`XY`g]i X

:]b`UbXÅg

=fU]Ubc

A]bi`u`c`]g]a`i`i`hla`U`mgra`ng
g]fU`g`U`i`i`h`_gYb`"]]hYb"

J cffY]`ZUF`YXY`Y`Xca UbXY`g`f]Ugg]WfUh]cbY`g]b]hUf]U'

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HUf]]h]Yb`c`m`g]h]g]h]g]fU`g`U`i`i`h`g]U3
DFY[i`b]hUf`g]b`W]g]h]g]i`b`gY[i`fc`XY`g]i`X`df]j`U`Xc

< c`V]gc[`bc`X]i`b]f]Ugg]WfUh]cbY`g]b]hUf]U`df]j`U`U3

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7`cg]U`Ä`W`dYf`hc`XU`f]Ugg]WfUh]cbY`g]b]hUf]U3

G]f]fU`U`i`i`h`
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GdYgY`cg]Y`XU`]YfY

9f]_c]g]Ä`Ä`f]_i`g]h]b]b]i`_g]h`
9`Ya`d`c`XY`W`V`Vf]h`fU`XY`gY[i`fc`XY`g]i`X

GdYgY`dYf`u`V`W`bg`h]h]cbY`X]i`bc`gd]W]U]g]U

8]U[`bcg]b]Yb`h`h]a`i`g`
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?]fi`f[]g]Yh]c]a`Ybd]h]Yh`
9`Ya`d`c`XY`W`V`Vf]h`fU`XY`gY[i`fc`XY`g]i`X

CdYfUh]cb]`W]fi`f[]W]Y

Dgm_]Uf]b]Yb`c]h`c`
9`Ya`d`c`XY`W`V`Vf]h`fU`XY`gY[i`fc`XY`g]i`X

HfU]h]Ua`Ybhc`dg]W]Uf]W`

< Ua`a`Ug]c]h`c`
9`Ya`d`c`XY`W`V`Vf]h`fU`XY`gY[i`fc`XY`g]i`X

7i`fY`XYb]h]U]

G]`a`Ä`c]h`c`
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=ba][fUM]i b 8cW/a Ybhcg



8cW/a Ybhcg! 'J]gUXc

:]b`UbXÅg

A]_g]`g]bÅ`Ubchia U\Ubi `cj]]g a]U3

DfY[i bHf`U`U[i]Yb`dcf`ei Å`gc`]V]hU`i b`j]gUXc`XY`YbhfUXU

=hU]Ubc

DYf`ei U`]`a chj]`f]W]YXY`]`j]gbc`X]b[fYggc`3

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DfY[i bHf`g]`bYVWg]hUgi b`j]gUXc`XY`YbhfUXU`U`dUÉg

< c`V]gc[bc`X]`i b`j]gbc`dYf`Ybhf`UFY`]b`@UYgYQ3

? i]b_Uj c]b`d]XYbhÅ`j]]g a]Ub]3

=bZcfa UfY`XY`W`a`c`U`a`d`]Uf`h`i`j`]gUXc

7 ca`Y`d`cggc`dfc`i`b[UFY`]`a`]c`dYfa`Yggc`X]`gc[[]cfbc`3

A]_g]`j]]g a]\U_Ya i _gYb]`cb`m`Åhm3

DfY[i bHf`dcf`ei Å`gY`U`fYV\U`hUXc`h`i`gc`]V]h`X`XY`j]gUXc

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J c]b_c`\U_YU`a`U`b`_`U`bg]U]g] i`hU3

DfY[i bHf`g]`di`YXYg`gc`]V]hU`U`fYg]XYbV]U`dYfa`UbYbhY`Yb`Y`dUÉg

Dcggc`chYbYfY`]`X]f]h`c`X]`gc[[]cfbc`dYfa`UbYbhY`3

8cW/a Ybhcg! `DYfa]gc`XY`V`bXi`V]f

:]b`UbXÅg

HUfj]hgY_c`a]bi b`j U]\hU`U`hcb]`fY`_g]Yf]`_]`d]3

DfY[i bHf`g]`h]YbYgei`Y`V`a`V]Uf`U`a`UfÉW`U`XY`V`b`V`Y`

=hU]Ubc

8Y`c`W`a`V]UfY`U`hUf[`U`X]`]a`a`Uf]W`U`h]cbY`XY`U`a`]U`a`U`W]bU3

< U i U]g]b`fY`_g]Yf]`XÅ`U`cbYi`j`cb]`"

=bX]W]f`ei`Y`ei`]YfYg`a`Uf]W`U`f`h`i`j`Y`ÉW`c`

J`c`f`f`Y]`]a`a`Uf]W`U`f`Y]`]`a`]c`j`Y]W`c`"

?`Y`d`U`_`c`U`c`_`c`f`h]b]`hÅ`Å`3

DfY[i bHf`dcf`U`j`U`]X`Yn`XY`h`i`dYfa`]gc`XY`V`bXi`V]f`Yb`Y`dUÉg`XY`XYg]bc

@U`a`]U`d`U`h`b`h`Y`X]`[`i`]XU`Å`j`U`]XU3

< U i U]g]b`\U_YU`j`Å`]U`_`U]g]U`U`c`_`c`f`h]U`"

Gc`]V]hUf`i`b`dYfa`]gc`XY`V`bXi`V]f`dfcj`]g]cbU`

J`c`f`f`Y]`Z]UfY`Xca`UbXU`dYf`i`b`dYfa`Yggc`dfcj`j`]gcf]c`X]`[`i`]XU`

< U i U]g]b`g`cf]hU`SSSSSSSS`"

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J`c`f`f`Y]`dfY`bchUfY`f`SSSSSSSSSS`"

=ba][fUM]i b 8cW/a Ybhcg



h'cf]U_c_YYb
H]dc'XY'Yi La Yb

YgJa Y'X]'h'cf]U

]b'gg]U'cb
H]dc'XY'Yi La Yb

YgJa Y'X] '[i]XU

< U i U]g]b'a i i h'W'SSSSSSSSSSS'U'c_cfh]gg]b]"
=bX]WUf'ei Y'ei]YfYg'W/a V]Uf'U [i b'cg'XU'hcg'XY'hi 'dYfa]gc'XY'V'ebXi V]f

J cffY]'W/a V]UfY'SSSSSSSSSSS'g' `U'a]U'dU'Yb'h'X]' [i]XU'

c'g]h'Y'hu
8 U'hc'g'ei Y'g'Y'dcXf'É]b'W/a V]Uf

`f]b'X]'f]m'c

b]a YÀ
8 U'hc'g'ei Y'g'Y'dcXf'É]b'W/a V]Uf

] 'b'ca Y

_i j W
8 U'hc'g'ei Y'g'Y'dcXf'É]b'W/a V]Uf

`U'Z'c'c

< U i U]g]b'']g'Ah'À'`i c_]U'U'c_cfh]b]"
=bX]WUf'ei Y'ei]YfYg'U' U]X]'f'W'h'Y'[cf'É]g'g' dYf]cfYg'U'hi 'dYfa]gc'XY'V'ebXi V]f

J cffY]'W'bg]' [i]f'Y'`U'dU'Yb'h'Y'dYf'U'h'f'Y'W'h'Y'[cf]Y'

< U i U]g]b'i i g]U'U'c_cfh]b]"
=bX]WUf'ei Y'ei]YfYg'f'Ybcj Uf'hi 'dYfa]gc'XY'V'ebXi V]f

J cffY]'f]b'bcj Uf'Y'`U'a]U'dU'Yb'h'Y'X]' [i]XU'

< U i U]g]b'i i g]U'SSSSS'U'c_cfh]b]"
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J cffY]'f]W]'Y'X'Y'f'Y]' 'Xi d]'W'h'c'XY'`U'a]U'dU'Yb'h'Y'X]' [i]XU'
SSSSSSSSSS"

_U'X'cbb'Y'Yb
D'f'c'V'Ya U'g'V'eb'Y' 'dYfa]gc'XY'V'ebXi V]f

ga U'f'f]h'U

j U'f'U'g]h'i b
D'f'c'V'Ya U'g'V'eb'Y' 'dYfa]gc'XY'V'ebXi V]f

fi V'U'U

j U f]c]h'i b'Y'Yb
D'f'c'V'Ya U'g'V'eb'Y' 'dYfa]gc'XY'V'ebXi V]f

X'Y'Y'f]c'f'U'U

=ba][fUM]i b 8cW/a Ybhcg



< U i U]g]b]j U]HUUU`c_]Y`cg]ub]" J cffY]ZUFYf]Vf]gc`Vdb]fc]`f]h]fc`XY`U'a]U'dU]Yb]H`
=>X]W]f`ei Y`ei]YfYg]fY]W]ff]f`U`fY]h]fUXU`XY`h`dYfa]gc`XY`Vdb]Xi]V]f

8cW/a Ybhcg! 'BUM]cbU]XUX

:]b`UbX]Ag

=H]U]bc

< U i U]g]b`\U_YU`@ UubQ_Ubg]U]g] i H]U"

J cffY]`dfYg]Yb]H]U`Y`Xca UbXU`dYf`U`V]H]UX]b]Ubr]U
Q] [Y]h]j c`XY`dU]g]Q

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A]gg]j c]b]`a c]H]U`h`U`Q_]Y`Yb]Q_c_]Y]g]Yb]3

8cj Y`d]c]gg]c]g]M]j Y]fa]U`H]g]h]X]O]b]i U]C]3

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A]bi ``U`cb]d]i \X]U]g]f]_c]g]Y_]g]H]f]"

Bcb`c`d]f]Y]W]X]Y]b]h]d]Y]b]U]"

=>X]W]f`ei Y`bc`h]Y]b]Y]g]U]b]H]W]X]Y]b]h]g]d]Y]b]U]Y]g

A]bi ``U`cb]j U]X]H]U]j U]h]U]j]X]ch]Q_]Y`Yb]Q_]Y`Y]gg]A"

< c]`j] Y`c`f]W]Y]g]c`X]O]b]i U]C]

=>X]W]f`ei Y`h]Y]b]Y]g]Y`b]j Y`XY`]X]ca U]f]Y]ei Y]f]X]c

< U i U]g]b]j U]f]U]U]U`b]`@ UubQa Uub]h] b]H]a i g]H]g]j]b]"

J cffY]`dfYg]Yb]H]U`Y`Xca UbXU`dYf`f]Y]g]a Y`X]V]H]UX]b]Ubr]U
Q] [Y]h]j c`XY`dU]g]Q

=>X]W]f`ei Y`ei]YfYg]b]g]M]j]V]f]H]Y`Yb]Y`Y]i U]a Yb]XY`W`h`i f]U] [Y]b]Y]f]U`XY`dU]g]XY`XY]g]j]bc

? i]b_U]d]U`c]b`_U]bg]U]g] i XYb`\U_Ya]b]Y]b`a U_g]U]3

E i U]`g]c]bc`Y`g]d]Y]g]d]Y]f`U`X]ca UbXU`X]V]H]UX]b]Ubr]U]3

=>Z]c]fa U]f]Y`gc]V]f]Y`U]g]h]U]g]U]g]XY`U]gc`]V]h] X`XY`bUM]cbU]XUX

A]bi b]d]i c`]g]cb]`cb]`@ UubQ_U]bg]U]j]b]Y]b]"

=`a]c`V]b]j]i [Y`A`X]V]H]UX]b]Ubr]U]Q] [Y]h]j c`XY`dU]g]Q

=>X]W]f`U`bUM]cbU]XUX`XY`h`i `W]b]m]i [Y