



# ARTS3886

@j ]b[ 'GcWJU''>i ghjWV. '9l dYfjYbWV 'UbX'DfUWjWV

HYfa 'Hk c''##'&\$&\$



GWXcc``cZGcWJU``GWYbWVg``#`I BGK ``5ftg`UbX`GcWJU``GWYbWVg


7ci fgY'8YhJ]g


5XX]h]cbU`XYHJ]`g.

5GG9GGA 9BH'89H5=@K @@'69'5J5=@56@9': FCA`K 99?`%B`H<9'7CI FG9'GI DD@9A 9BH5FM  
; I @9'CB`H<9'5FHG" , , \*`A CC8@9'D5; 9

Hi fb]h]b`gYH]b[ . H\]g]g`bchU`Hi fb]h]b`Ugg][ ba Ybh

5ggYgga Ybh' . `K cf\_Vcc\_

GhUfhXUHY . Bch5dd`]WV`Y

@Yb[ h\ . `K YY\_`mYbh]fYg

8YHJ]`g.

K CF?6CC?`89H5=@G`K @@'69'5J5=@56@9': FCA`K 99?`%B`H<9'7CI FG9'GI DD@9A 9BH5FM  
; I @9'CB`H<9'5FHG" , , \*`A CC8@9'D5; 9

Gi Va ]gg]cb`bchYg.=

F Ygci fWg

DfYgW]VYX F Ygci fWg

HK 99? @MF 958 B; G: CF H< G 7CI FG9 K @@ 69 5J 5 @56 @9 H< FCI ; < @9; 5BHC @B? B  
7CI FG9 ACC8 @9 D5; 9: FCA K 99? %

H7 @5GG G7 < 98I @9 K @@ 69 A 589 5J 5 @56 @9 B H< 9 7CI FG9 GI DD @9A 9BH5FM  
B: CFA 5H CB 5B8 5GG9GGA 9BH 89H5 @CB H< 9 7CI FG9 ACC8 @9 D5; 9: FCA K 99? %

F YWca a YbXYX F Ygci fWg

F 958 B; @GHG 5B8: @A 7 @DG K @@ 69 A 589 5J 5 @56 @9 H< FCI ; < H< 9 ACC8 @9 7 @5GG  
D5; 9

7ci fgY 9j U'i Uhjcb UbX 8Yj Y`cda Ybh

Mci fYj U'i Uhj Y ZYXVUW ]g [ U h Y f Y X d Y f ] c X ] W ` m i g ] b [ z U a c b [ ` c h Y f a Y U b g z I B G K f j W c i f g Y ` U b X  
H Y U W X ] b [ ` 9 j U i U h j c b ` U b X ` a d f c j Y a Y b h f A M 9 I d Y f ] Y b W W E d f c W W g g " ` b Z c f a U ` Z Y X V U W ` U b X ` W U g g  
[ Y b Y f U h Y X Z Y X V U W ` U f Y ` U g c ` ] a d c f h U b h z ` U b X ` h Y g Y ` Z Y X V U W ` a Y W X U b ] g a g ` U f Y ` \ Y ` d Z ` ` h c ` a m i W c b h ] b i U `  
X Y j Y ` c d a Y b h c Z h ] g ` W c i f g Y " M c i f Z Y X V U W ` ] g j Y f m ] a d c f h U b h c ` a Y ` U b X ` = i g Y ` m c i f Z Y X V U W ` h c  
W c b h ] b i U ` m i d X U h ` h ] g ` W c i f g Y ` ! Z c f ` Y I U a d ` Y z ` h ] g ` m Y U f ` = U a ` k c f \_ ] b [ ` X ] f Y W h m k ] h ` ] g g i Y g ` h U h k Y ` U f Y ` Z U W X  
k ] h ` h c X U m / # a ` k c f \_ ] b [ ` W Y U h j Y ` m k ] h ` h Y ` c b ` ] b Y ` X Y ` ] Y f m z ` U b X ` = U a ` U X X f Y g g ] b [ ` h Y ` a c c X ` Y ` d U [ Y ` h c ` a U \_ Y  
] h a c f Y ` i g Y f Z ] Y b X ` m ` = \ U j Y ` f Y h c i [ \ h i h Y ` U g g Y g g a Y b h i U g \_ g ` h c ` \ Y ` d ` g h f Y U a ` ` ] b Y ` U b X ` ] a d f c j Y ` h Y ` W c i f g Y  
Z c f ` & \$ & \$ "

=hUb\_mci Zcfmci f'ha Y"

Gi Va ]gg]cb`cZ5ggYgga YbhiHUg\_g

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

≠mci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UH`Ya` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`h`fci`[`\`Hi`fb]h]b`z`d`Y`Ug`Y`  
HY`Yd`cb`Y`9I`HY`fb`U`Gi`ddc`fh`cb`-`,`)`"``"``%`cf`Ya`U]`h`Ya`i`cb`YI`HY`fb`U`HY`hgi`ddc`fh`4`i`bgk`"YXi`"Ui`""Gi`ddc`fh`  
`l`ci`fg`Uf`Y`,`.\$`\$Ua`-`-%`\$.\$`\$da`i`cb`k`YY`\_X`Umg`U`b`X`-`.\$`\$Ua`-`-`).`\$`\$da`i`cb`k`YY`\_Y`b`X`g`f`l`\*)`X`Umg`U`m`Y`U`f`l`"≠mci`  
Uf`Y`i`b`U`V`Y`h`c`gi`Va`]hmc`i`f`Ugg][`ba`Ybhi`Xi`Y`h`c`U`Z`Ji`h`k`]h`Hi`fb]h]b`mci`i`a`Um`U`dd`m`Z`c`f`U`b`YI`HY`bg]cb`z`Vi`hmc`i`  
a`i`gh`f`Y`h]b`mci`f`h]W`Y`h`bi`a`V`Y`f`Z`ca`9I`HY`fb`U`Gi`ddc`fh`f`U`cb[`k`]h`U`b`m`c`h`Y`f`f`Y`Y`U`b`h`X`c`W`a`Y`b`h`g`k`h`c`  
]b`Wi`X`Y`U`g`Y`j`]X`Y`b`W`h`c`gi`ddc`fh`mci`f`YI`HY`bg]cb`U`dd`]W`h]cb`"≠mci`Ya`U]`9I`HY`fb`U`Gi`ddc`fh`mci`k`]`  
Ui`h`ca`U`h]W`U`m`f`Y`W`]j`Y`U`h]W`Y`h`bi`a`V`Y`f`z`Vi`h]Z`mci`HY`Y`d`l`cb`Y`mci`k`]`b`Y`Y`X`h`c`g`d`Y`W`Z]W`U`m`U`g`\_`Z`c`f`c`b`Y`"  
Hi`fb]h]b`U`gc`d`fc`j`]X`Y`g`i`d`X`U`h`Y`g`c`b`h`Y`]f`g`m`g`h`Y`a`i`g`h`U`h`g`c`b`H`k`]h`Y`f`"

;`Y`b`Y`f`U`m`z`U`gg`Y`g`g`a`i`gh`V`Y`gi`Va`]h`Y`X`Y`Y`W`f`c`b]W`U`m`j`]U`Y`]h`Y`f`Hi`fb]h]b`c`f`U`A`cc`X`Y`  
U`gg][`ba`Y`b`h`i`h`]b`g`h`U`b`W`g`k`Y`f`Y`h`l`g`]g`b`c`h`d`c`g`g]V`Y`z`]h`k`]`V`Y`g`h`U`h`Y`X`c`b`mci`f`W`c`i`fg`Y`g`A`cc`X`Y`g`]h`k`]h`  
U`h`Y`fb`U`h]`Y`gi`Va`]gg]cb`X`Y`h]g`"

:`c`f`]b`Z`c`fa`U`h]c`b`c`b`l`c`k`h`c`gi`Va`]h`U`gg][`ba`Y`b`h`g`c`b`]b`Y`j`]U`A`cc`X`Y`.\`h`d`g`#`g`h`X`Y`b`h`i`bgk`"YXi`"Ui`#`c`k`!  
gi`Va`]h`U`gg][`ba`Y`b`h`a`cc`X`Y`"

## 5 WUXYa ]W< cbYgmiUbX`D`U[ ]Uf]ga

D`U[ ]Uf]ga `]g`i`g]b[ `h`Y`k`c`f`X`g`c`f`]X`Y`U`g`c`Z`c`h`Y`f`g`i`U`b`X`d`f`Y`g`Y`b`h]b[ `h`Y`a` `U`g`m`c`i`f`c`k`b`" `#`W`U`b`h`U`\_`Y`a` `U`b`m`  
Z`c`f`a`g`Z`Z`c`a` `X`Y`]V`Y`f`U`h`Y` `W`X`Y`U`h]b[ `h`c` `U`W`W`Y`X`Y`b`h`U` `m`i`W`c`d`m]b[ `Z`c`a` `U`g`c`i`f`W` `k` ]h`c`i`h`U`W`\_`b`c`k` `Y`X[ `Y`a` `Y`b`h`

I`B`G`K` `[`f`c`i`d`g`d`U[ ]Uf]ga `]b`h`c` `h`Y` `Z`c` `c`k` ]b[ `W`U`h`Y`[`c`f`]Y`g.



- i bXYfghUbx'mci f'f][ \hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[ ]Uf]ga ž'Wcdmf][ \hž' BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5Ww'dhUV'Y'I gY'cZ I BGK '⇒H'F Ygci fW'g'Dc`]Wm
- VY'Uk UfY'cZh'Y'ghUbxUfXg'cZVY\Uj ]ci f'YI dYW'X'cZYj Yfmcby'jb'h'Y'I BGK 'Wca a i b]m
- `cWJh'gYfj ]W'g'UbX'jbZcfa Uh'cb'UVci hl BGK 'UbX'I BGK '@VfUfm

Gca Y'cZh'YgY'UfYUg'k ]`VY'ZJa ]]Uf'hc'mci ž'ch'Yfg'k ]`VY'byk "; U]b]b[ 'U'gc`X'i bXYfghUbx]b[ 'cZU`h'Y fY'UH'X'UgdYW'g'cZ9@G9'k ]`Y'd'mci 'a U\_Y'h'Y'a cghcZmci f'gh X]Yg'Uhl BGK ""

[\hd. #gj V'YW'f i \]XYg" \]VfUfm'i bgk "YXi "Ui #' \]gY#JVci h' \]gY](#)

5 WUXYa ]W=Zcfa Uh]cb

: cf`YggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[ `tc.

- fYei Yg]Zcf`YI H`bg]cb/
-