

!" #&/  
4;O <548G=>3> 70AB>AC20==O ?@5?0@0BC  
!"® "  
(RISPOLEPT® QUICKLET)

!;:04:

4VNG0 @5G>28=0: 1 B01;5B:0

4>?>28=8: A<>;0 ?>;0:@8;5:A, 65;0B8=, <0=VB (421), 3;VF8=, A8<5B8:>=, :0@1<5@ 934P, =0B@VN  
3V4@>:A84, 0A?0@B0< (951), 70;V70 >:A84 G5@2>=89 (172), :A0=B0=>20 :0<54L, >;VO <OB8 ?5@F52>W.

V:0@AL:0 D>@<0. "01;5B:8, I> 48A?5@3CNBLAO C @>B>2V9 ?>@>6=8=V.

\$0@<0:>B5@0?52B8G=0 3@C?0.=B8?A8E>B8G=V 70A>18. >4 "I N05A X08.

;V=VG=V E0@0:B5@8AB8:8.

>:070==O.

V:C20==O H87>D@5=VW.

V:C20==O <0=V0:0;L=8E 5?V7>4V2 2V4 A5@54=L>3> 4> BO6:>3> ABC?5=O ?@8 1V?>;O@=8E @>7;040E.

>@>B:>AB@>:>25 ;V:C20==O (4> 6 B86=V2) ?5@A8ABCNG>W 03@5AVW C ?0FVT=BV2 7 0;LF359

<5@V2AL:>N 45<5=FVTN 2V4 ?>3> 4> BO6:>3> ABC?5=O, O:V =5 2V4?>2V40NBL =0 B5@0?VN 157

70AB>AC20==O D0@<0:>;>3VG=8E ?@5?0@0BV2, V B>48 A>1V 01> >B>GCNG8

>@>B:>AB@>:>25 A8<0B8G=5 ;V:C20==O (4> 6 B86=V2) ?5@A8ABCNG>W 03@5AVW ?@8

?>254V=>28E ?>@CH5==OE C 4VB59 2V:< 2V4 5 @>:V2 B0 ?V4;VB:V2 7 @V2=5< @>7C<>28E

DC=:FV9, =86G8< 70 A5@54=V9 G8 70B@8N @>7C<>2>3> @>728B:C, O:V 1C;> 4V03=>AB>20=>

2V4?>2V4=> 4> :@8B5@VW2 DSM-IV, C O:8E BO6:VABL 03@5A82=>ABV G8 V=H8E ?@>O2V2

45AB@C:B82=>W ?>254V=:8 28<030NBL ;V:C20==O <548G=8<8 70A>10<8. V:C20==O <548G=8<8

70A>10<8 <0T 1CB8 V=B53@>20=>N G0AB8=>N ?>2=VH>W ?@>3@0<8 ;V:C20==O, O:0 2;;NG0T

?A8E>;>3VG=C ?V4B@8A2VB=V :>=5=B8.

@87=0G0T @8A?5@84>= 48BOG89 =52@>;>3, 0 B0:>6 48BOG89 ?A8EV0B@ 01> ;V:0@, 4>1@5

>1V7=0=89 7 ;V:C20==O< ?>254V=>28E ?>@CH5=L C 4VB59 B0 ?V4;VB:V2.

@>B8?>:070==O.

V?5@GCB;82VABL 4> 0:B82=>3> :>5=BC 01> 4> 1C4L-O:>W 4>?>W @5G>28=8 C A:;04V

?@5?0@0BC.

!>AV1 70AB>AC20==O B0 4>78.

I)(87>D@5=VO.

>@>A;V.

8A?>;5?B® 2V;;5B ?@87=0G0NBL 1-2 @078 =0 4>1C.

>7?>G8=0B8 ?@89<< ?@5?0@0BC A;V4 7 4>78 2 <3 =0 4>1C, =0 4@C389 45=L 4>7C <>6=0 71V;LH8B8

4> 4 <3. VA;O FL>3> 4>7C <>6=0 ?V4B@8 C @07V =5>1EV4=>ABV ?@>4>26C20B8 V=482V4C0;L=C

:>@5:FVN 4>78. ;O 1V;LH>ABV ?0FVT=BV2 2AB0=>2;NTBLAO 4>70 4 - 6 <3 =0 4>1C. 5O:8<

?0FVT=B0< <>65 1CB8 ?>:070=5 ?>ABC?>25 ?V428I5==O 4>78 B0 7=865=0 ?>G0B:>20 V ?V4B@870.

>78, O:V ?5@528ICNBL 10 <3 =0 4>1C, =5 28O28;8 28I>W 5D5:B82=>ABV ?>@V2=O=> 7 <5=H8<8 4>70

<8, 0;5 2>=8 <>6CBL A?@8G8=OB8 ?>O2C 5:AB@0?V@07, I> ?5@528ICNBL 16 <3 =0 4>1C, =5

282G0;0AL, FV 4>78 70AB>A>2C20B8 =5 <>6=0.

0FVT=B8 ;VB=L>3> 2V:C.

5:><5=4>20=0 ?>G0B:>20 4>70 - ?> 0,5 <3 2 @078 =0 4>1C. >7C <>6=0 V=482V4C0;L=> 71V;LH8B8 7 0,5

<3 2 @078 =0 4>1C 4> 1-2 <3 2 @078 =0 4>1C.

VB8

'5@57 =54>AB0B=VABL 40=8E I>4> 5D5:B82=>ABV @8A?5@84>= =5 @5:><5=4>20=>  
70AB>A>2C20B8 4VBO< 4> 18 @>:V2, E2>@8< =0 H87>D@5=VN.

2) 0=V0:0;L=V 5?V7>48, 0A>FV9>20=V 7 1V?>;O@=8< @>7;04>  
>@>A;V.

5:><5=4>20=0 ?>G0B:>20 4>70 ?@5?0@0BC 8A?>;5?B@ 2V::5B AB0=>28BL 2<3 1 @07 =0 4>1C. >7C  
<>6=0 V=482V4C0;L=> 71V;LH8B8, 4>40NG8 4>78 ?> 1 <3/4>1C =5 G0ABVH5 =V6 G5@57 45=L. ?B8  
<0;L=>N 4>7>N 4;O 1V;LH>ABV ?0FVT=BV2 T 4>70 1-6<3 =0 4>1C 4;O B>3>, I>1 >?B8ABV V  
B>;5@0=B=>ABV. # ?0FVT=BV2 7<0=V0:0;L=8<8 5?V7>40<8 4>1>2V 4>78 @8A?5@84>=C ?>=04 6 <3  
=5 4>A;V465=V. /: V ?@8 1C4L-O:>40;LH5 70AB>AC20==O 8A?>;5?BC@ <0T 1CB8 >FV=5=5 B0  
70B25@465=5 2V4?>2V4=> 4> ?>B>G=>W ;;V=VG=>W :0@B8=8.

0FVT=B8 ;VB=L>3> 2V:C.

5:><5=4>20=0 ?>G0B:>20 4>70 0,5 <3 42VGV =0 4>1C. # @07V =5>1EV4=>ABV FN 4>7C <>6=0  
V=482V4C0;L=> 71V;LH8B8, 4>40NG8 4>78 ?> 0,5 <3 42VGV =0 4>1C 4;O 4>AO3=5==O 4>78 2V4 1 4> 2  
<3 42VGV =0 4>1C. !;V4 28O2;OB8 >15@56=VABL, 72060NG8 =0 B5, I> 4>A2V4 ;V:C20==O C  
?0FVT=BV2 ;VB=L>3> 2V:C >1<565=89.

VB8

8A?5@84>= =5 @5:><5=4>20=> 70AB>A>2C20B8 4VBO< 4> 18 @>:V2 7 <0=VTN ?@8 1V?>;O@=8E  
@>7;040E G5@57 =54>AB0B=VABL 40=8E I>4> 5D5:B82=>ABV.

3) 5@A8A8BCNG0 03@5AVO C ?0FVT=BV2 7 45<5=FVTN 0;LF359<5@V2AL:>3> B8?C 2V4 ?>3> 4> BO6:>3>  
ABC?5=O.

5:><5=4>20=0 ?>G0B:>20 4>70 - 0,25 <3 42VGV =0 4>1C. # @07V =5>1EV4=>ABV 4>7C <>6=0  
71V;LH8B8 H;OE< 4>4020==O ?> 0,25 <3 42VGV =0 4>1C =5 G0ABVH5 =V6 G5@57 45=L. ?B8  
<0;L=>N 4>7>N 4;O 1V;LH>ABV ?0FVT=BV2 T 4>70 ?> 0,5<3 42VGV =0 4>1C. 4=0: 4;O 45O:8E  
?0FVT=BV2 5D5:B82=0 4>70 <>65 1CB8 71V;LH5=0 4> 1 <3 42VGV =0 4>1C.  
8A?>;5?B@ =5 @5:><5=4>CTBLAO 70AB>A>2C20B8 ?>=04 6 B86=V2 ?0FVT=B0< 7 ?5@A8ABCNG>N  
03@5AVTN ?@8 45<5=FVW 0;LF359<5@V2AL:>3> B8?C.  
@>BO3< CAVTW B5@0?VW 70 AB0=< ?0FVT=B0 A;V4 ?@>2>48B8 ?>ABV9=89 @53C;O@=89  
=03;04 B0 ?5@V>48G=> ?5@53;O40B8 ?@>4>265==O B5@0?VW.

4) >@CH5==O ?>254V=:8.

VB8 2V:< 2V4 5 4> 18 @>:V2.

;**O ?0FVT=BV2 7 <0A>N BV;0 > 50 :3** @5:><5=4>20=0 ?>G0B:>20 4>70 AB0=>28BL 0,5 <3 1 @07 =0  
4>1C. # @07V =5>1EV4=>ABV 4>7C 4>72>;OTBLAO :>@83C20B8 H;OE< 4>4020==O 0,5 <3 1 @07 =0  
4>1C =5 G0ABVH5 =V6 G5@57 45=L. ?B8<0;L=0 4>70 4;O 1V;LH>ABV ?0FVT=BV2 1 <3 1 @07 =0  
4>1C. 4=0: 4;O 45O:8E ?0FVT=BV2 4;O 4>AO3=5==O ?>78B82=>3> 5D5:BC 4>AB0B=L> =5 1V;LH5 0,5  
<3 1 @07 =0 4>1C, 2 B>9 G0A O: V=HV <>6CBL ?>B@51C20B8 1,5 <3 1 @07 =0 4>1C.  
;**O ?0FVT=BV2 7 <0A>N BV;0 < 50 :3** @5:><5=4>20=0 ?>G0B:>20 4>70 AB0=>28BL 0,25 <3 1 @07 =0  
4>1C. @8 =5>1EV4=>ABV 4>7C 4>72>;OTBLAO :>@83C20B8 H;OE< 4>4020==O 0,25 <3 1 @07 =0  
4>1C =5 G0ABVH5 =V6 G5@57 45=L. ?B8<0;L=0 4>70 4;O 1V;LH>ABV ?0FVT=BV2 - 0,5 <3 1 @07 =0  
4>1C. 4=0: 4;O 45O:8E ?0FVT=BV2 4>AB0B=L> =5 1V;LH5 =V6 0,25 <3 1 @07 =0 4>1C 4;O  
4>AO3=5==O ?>78B82=>3> 5D5:BC, 2 B>9 G0A O: V=HV <>6CBL ?>B@51C20B8 0,75 <3 1 @07 =0  
4>1C.

/: V ?@8 V=H8E 2840E A8<0B8G=>3> ;V:C20==O, 4>23>B@820;5 70AB>AC20==O ?@5?0@0BC  
8A?>;5?B@ 2V::5B =5>1EV4=> ?5@V>48G=> ?5@53;O40B8 V :>@83C20B8 ?@>BO3< CAVTW  
B5@0?VW. 8A?>;5?B@ =5 @5:><5=4>CTBLAO 70AB>A>2C20B8 4VBO< 2V:< 4> 5 @>:V2, >A;V;L:8  
4>A2V4 70AB>AC20==O ?@5?0@0BC 4VBO< 2V:< 4> 5 @>:V2 >1<565=89.

0FVT=B8 V7 70E2>@N20==O<8 ?5GV=:8 B0 =8@>:.

0FVT=B8 7 =8@>:2>N =54>AB0B=VABN <0NBL <5=HC 740B=VABL 282>48B8 0:B82=C  
0=B8?A8E>B8G=C D@0:FVN, =V6 4>@>A;V 7 =>@<0;L=8< DC=:FV>=C20==O< =8@>:.. 0FVT=B8 7  
?>@CH5==O< DC=:FVW ?5GV=:8 <0NBL ?V428I5=C :>=F5=B@0FVN 2V;L=>W D@0:FVW  
@8A?5@84>=C C ?;072V. ;O ?0FVT=BV2 7 ?>@CH5==O< DC=:FVW =8@>: 01> ?5GV=:8 =570;56=> 2V4

A8G0B:>20 B0 ?>40;LH0 4>70 <0NBL 1CB8 @>74V;5=V =02?V; , 0 B0:>6 ?>B@V1=> 4>B@2V;L=5=>3> B8B@C20==O 4>78.

!/?>AV1 70AB>AC20==O.

8A?>;5?B® 2V;;5B @5:<5=4>20=89 4;O ?5@>@0;L=>3> 70AB>AC20==O. 60 =5 2?;820T =0 01A>@1FVN ?@5?0@0BC.

V4 G0A ?@8?8=5==O 70AB>AC20==O ?@5?0@0BC @5:<5=4>20=> 74V9A=N20B8 F5 ?>ABC?>2>. >AB@V A8<8 2V4BC, 1;N20==O, A?VB=V==O B0 157A>==O. >=8 28=8:0;8 4C65 @V4:> ?V4 G0A @V7:>3> ?@8?8=5==O 70AB>AC20==O 28A>:8E 4>7 0=B8?A8E>B8G=8E ;V:V2 (482. @>74V; «>1VG=V @50:FVW»). >65 B0:>6 2V41CB8AO @5F8482 ?A8E>B8G=8E A86 ?>2V4<;O;>AL ?@> 28=8:=5==O @>7;04V2 <8<>2V;L=>W @CE>2>W 0:B82=>ABV (B0:8E O: 0:0BV7VO, 48AB>=VO B0 48A:V=57VO).

5@5EV4 7 B5@0?VW V=H8<8 0=B8?A8E>B8G=8<8 ?@5?0@0B0<8.

/:I> F5 ;;V=VG=> 28?@0240=>, ?V4 G0A B5@0?VW ?@5?0@0B<< 8A?>;5?B® 2V;;5B @5:> <5=4CTBLAO ?>ABC?>2> ?@8?8=8B8 ?>?5@54=N B5@0?VN V=H8<8 ?@5?0@0B0<8. @8 FL> ?0FVT=B ?5@52>48BLAO 7 B5@0?VW 0=B8?A8E>B8G=8<8 ?@5?0@0B0<8 C D>@», ;V:C20==O ?@5?0@0B<< 8A?>;5?B® 2V;;5B @5:<5=4CTBLAO @>7?>G0B8 70W 70?;0=>20=>W V='T:FVW. 5@V>48G=> A;V4 >FV=N20B8 =5>1EV4=VABL C ?>4>265==V ?>B>G=>W B5@0?VW 0=B8?0@:V=A>=VG=8<8 ?@5?0@0B0<8.

5 2V4:@820B8 1;VAB5@, O:I> 28 =5 3>B>2V 4> 70AB>AC20==O. =OB8 D>;L3C 7 1;VAB5@0 =04 B01;5B:>N. 5 28B8A:0B8 B01;5B:C :@V7L D>;L3C, B> B01;5B:0 <>65 @>7;0<0B8AO. 89<0B8 B01;5B:C 7 1;VAB5@0 ACE8<8 @C:0<8. 5309=> ?>;:0AB8 B01;5B:C =0 O78:. "01;5B:0 ?>G=5 48A?5@3C20B8AO 70 :V;L:0 A5:C=4. @8 =5>1EV4=>ABV <>6=0 28:>@8AB>2C20B8 2>4C.

;O 4>AO3=5==O 4>78 0,25-1 <3 @5:<5=4CTBLAO 70AB>A>2C20B8 8A?>;5?B® @>7G8= >@0;L=89.

>1VG=V @50:FVW.

>1VG=8<8 @50:FVO<8, O:V A?>AB5@V30NBLAO =09G0ABVH5 (G0AB>B0 > 10 %) T: ?0@:V=A>=V7 <, 3>;>2=89 1V;L B0 157A>==O.

57?5:0 70AB>AC20==O ?@5?0@0BC 8A?>;5?B® 2V;;5B 2AB0=>2;5=0 C @57C;LB0BV ;;V=VG=8E 4>A;V465=L B0 C ?>AB<0@:5B8=3>2>4V. "5@B8 70AB>A>2CNBLAO =0ABC?>8< G8=> (>1/10), G0AB> (2V4 >1/100 4> < 10), =5G0AB> (2V4 > 1/1000 4> < 1/100), @V4:> (2V4 > 1/10000 4> < 1/1000) B0 =52V4><> (=5 <>6=0 28@0EC20B8 7 =0O2=8E ;;V=VG=8E 40=8E). A5@548=V 3@C?8 7 >4=VTN G0AB>B>N ?>1VG=V @50:FVW =02545=V C ?>@O4:C 7=865==O BO6:>ABV. >1VG=V @50:FVW 70 A8AB5<>N >@30=V2 B0 G0AB>B>N.

>A;V465==O.

'0AB>: 71V;LH5==O ?@>;0:B8=C 2 :@>2V0, 71V;LH5==O <0A8 BV;0.

5G0AB>: ?>4>265==O V=B5@20;C !>" =0 :0@4V>3@0@<0;L=0 5;5:B@>:0@4V>3@0<0, ?V428I5==O @V2=O B@0=A02V, 7<5=H5==O :V;L:>ABV ;59:>F8BV2, ?V428I5==O B5ABV 5>78=>DV;V2, 7=865==O 35<>3;>1V=C, 71V;LH5==O @V2=O :@50B8=D>AD>:V=078 :@>2V.

V4:>: 7=865==O B5

I>:C A5@FO.

'0AB>: B0EV:0@4VO.

5G0AB>: 0B@V>25=B@8:C;O@=0 1;>;:040, 1;>;:040 3V;;8 ?CG:0 VA0, DV1@8;OFVO ?5@54A5@4L, A8=CA>20 1@048:0@4VO, 2V4GCBBO A5@F518BBO.

I>:C A8AB5<8 :@>2>B2>@5==O B0 ;VW A8AB5<8.

5G0AB>: 0=5<1>F8B>?5=VO.

V4:>: 3@0=C;>F8B>?5=VO.

52V4><>: 03@0=C;>F8B>7.

I>:C =5@2>2>W A8AB5<8.

C65 G0AB>: ?0@:V=A>=V7<b, 3>;>2=89 1V;L.

'0AB>: 0:0B87VOb, 70?0<>@>G5==O, B@5<>@b, 48AB>=VOb, A>;82VABL, A540FVO, ;5B0@3VO, 48A:V=57VO8. 5G0AB>: 2V4ACB=VABL @50:FVW =0 ?>4@07=8.;, 2B@0B0 A2V4<>ABV, A8=>?5, 45?@5A82=89 @V25=L A2V4<>ABV, F5@51@>20A:C;O@=V @>7;048, B@0=78B>@=0 VH5 @CH5==O C2038, 3V?5@A><=VO, >@B>AB0B8G=5 70?0<>@>G5==O, @>7;048 @V2=>2038, ?V7=O 48A:V=57VO, @>7;048 <>2;5==O, 0=>@<0;L=0 :>>@48=0FVO, 3V?5AB57VO.

V4:>: =59@>;5?B8G=89 7;>O:VA=89 A8=4@<, 4V015B8G=0 :><0, F5@51@>20A:C;O@=V @>7;048, VH5;>2=>3> <>7:C, @>7;048 @CEV2.

I>:C >@30=0 7>@C.

'0AB>: =5GVB:VABL 7>@C.

5G0AB>: :>=N=:B82VB, 3V?5@5G59, 284V;5==O 7 >G59, ?@8?CE;VABL >G59, ACEVABL >G59, A;L>7>B5G0, D>B>D>1VO.

V4:>: 7=865==O 3>AB@>B8 7>@C, 70:>GC20==O >G59, 3;0C:><0.

I>:C >@30=0 A;CEC B0 25AB81C;O@=>3> 0?0@0BC.

5G0AB>: 1V;L C 2CE0E, HC< C 2CE0E.

I>:C 48E0;L=>W A8AB5<8.

'0AB>: 48A?=>5, =>A>20 :@>2>B5G0, :0H5;L, 70::045=VABL =>A0, 1V;L C D0@8=3>;0@8=3VG=V9 4V;O=FV. 5G0AB>: 48E0==O 7V A28AB<, 0A?V@0FV9=0 ?=52<>=VO, ;535=5289 70ABV9, @5A?V@0B>@=V @>7;048, 2>;>3V E@8?8, 70ABV9=V O28I0 C 48E0;L=8E H;OE0E, 48AD>=VO.

V4:>: A8=4@< 0?=>5 C A=V, 3V?5@25=B8;OFVO.

I>:C B@02=>W A8AB5<8.

'0AB>: 1;N20==O, 4V0@5O, 70?>@, =C4>B0, 014>BV, 2V4GCBBO 48A:>@BC C H;C=:C.

5G0AB>: 48AD03VO, 30AB@8B, =5B@8<0==O :0;C, D5:0;><0.

V4:>: :8H:>20 =5?@>EV4=VABL, ?0=:@50B8B, ?@8?CE;VABL 3C1, E59;VB.

I>:C A5G>284V;L=>W A8AB5<8.

'0AB>: 5=C@57.

5G0AB>: 70B@8

I>:C H:V@8 B0 ?V4H:V@=8E B:0=8=.

'0AB>: 28A8?8, 5@8B5<0.

5G0AB>: 0=3V>=52@>B8G=89 =01@O.;, CH:>465==O H:V@8, ?>@CH5==O H:V@=>3> ?>:@82C, A25@1V6, 0:=5, 7;L>@C H:V@8, 0;>?5FVO, A51>@59=89 45@<0B8B, ACEVABL H:V@8, 3V?5@:5@0B>7.

V4:>: ;C?0.

I>:C :VAB:>2><O7>2>W A8AB5<8 B0 A?>;CG=>W B:0=8=8.

'0AB>: 0@B@0;3VO, 1V;L C A?8=V, 1V;L C :V=FV2:0E.

5G0AB>: <O7>20 A;01:VABL, 1V2, ?>@CH5==O ?>AB028, A:CBVABL AC3;>1V2, 1V;L C<O70E 3@C4=>W ;;VB:8.

V4>: @014>;V7.

I>:C 5=4>:@8==>W A8AB5<8

V4>: =52V4?>2V4=0 A5:@5FVO 0=B84VC@5B8G=>3> 3>@<=>0.

I>:C <5B01>;V7

'0AB>: ?V428I5=89 01> 7=865=89 0?5B8B.

5G0AB>: FC:@>289 4V015BA, 0=>@5:AVO, ?>;V48?AVO, 3V?5@3;V:5

V4>: 3V?>3;V:5

C65 @V4>: 4V015B8G=89 :5B>0F84>7.

52V4><: 2>4=0 V=B>:A8:0FVO.

=D5:FVW B0 V=207VW.

'0AB>: ?=52<=>VO, 3@8?>?>4V1=89 A8=4@<, 1@>=EVB, V=D5:FVW 25@E=VE 48E0;L=8E H;OEV2, V=D5:FVW A5G>282V4=8E H;OEV2.

5G0AB>: A8=CA8B, 2V@CA=V V=D5:FVW, V=D5:FVW 2CE0, B>=78;VB, F5;N;VB, A5@54=V9 >B8B, V=D5:FVW >:0, >:0;V7>20=V V=D5:FVW, 0:0@>45@<0B8B, V=D5:FVW @5A?V@0B>@=>3> B@0:BC, F8AB8B, >=VE>7.

V4>: E@>=VG=89 A5@54=V9 >B8B.

I>:C AC48==>W A8AB5<8.

5G0AB>: 0@B5@V0;L=0 3V?>B5=7VO, >@B>AB0B8G=0 3V?>B5=7VO, ?@8?>?>4V1=89 AB0=,

030;L=V @>7;048.

'0AB>: ?V@5:AVO, AB<;N20=VABL, ?5@8D5@8G=V =01@O:8, 0AB5=VO, 1V;L C 3@C4OE.

5G0AB>: =01@O;;VABL >1;8GGO, ?>@CH5==O E>48, 48A:>@B, 2O;VABL, 3@8?>?>4V1=89 AB0=, A?@030, 48A:>@B C 3@C4OE, >7=>1.

V4>: 35=5@0;V7>20=89 =01@O:, 3V?>B5@< 2V4;>4C C :V=FV2:0E.

I>:C VW A8AB5<8.

5G0AB>: 3V?5@GCB;82VABL.

V4>: 3V?5@GCB;82VABL 4> ;V:V2.

52V4><: 0=0DV;0:B8G=V @50:FVW.

I>:C 35?0B>1V;V0@=>W A8AB5<8.

V4>: 6>2BO=8FO.

I>:C @5?@>4C:B82=>W A8AB5<8 B0 <>;>G=8E 70;>7.

5G0AB>: 0<5=>@5O, A5:AC0;L=0 48ADC=:FVO, ?>@CH5==O 5@5:FVW, ?>@CH5==O 5O:C;OFVW, 30;0:B>@5O, 3V=5:><0ABVO, <5=AB@C0;L=V @>7;048, 203V=0;L=V 284V;5==O.

52V4><: ?@V0?V7

A8EVG=V ?>@CH5==O.

C65 G0AB>: 157A>==O.

'0AB>: B@82>30, 71C465==O, @>7;048 A=C.

5G0AB>: A?;CB0=VABL A2V4><>ABV, <0=VO, 7=865==O ;V1V4>, 2O;VABL, =5@2>2VABL.

V4>: 0=>@307

0□V?5@?@>;0:B8=5>3> F8;;C, 0<5=>@5W, 30;0:B>@5W.

b□:AB@0?V@0@CH5==O: ?0@:V=A>=V7< (3V?5@A5:@5FVO A;8=8, A:5;5B=><O7>20 A:CBVABL, ?0@:V=A>=V7<, A;8=>B5G0, @83V4=VABL A8> :>;5A0, 1@048:V=57VO, 3V?>:V=57VO, A8< «<0A:8» =0 >1;8GGV, A:CBVABL<O7V2, 0:V=57VO, ?>B8;8G=0 @83V4=VABL, <O7>20 @83V4=VABL, ?0@:V=A>=V2AL:0 E>40 B0 0=>@<0;L=89 3;015;O@=89 @5D;5:A), 0:0B87VO (0:0B87VO, =5A?>:V9=VABL, 3V?5@:V=57VO B0 A8=4@× «AB><;5=8E =V3»), B@5<>@, 48A:V=57VO (48A:V=57VO, AC4<=V @CE8 <O7V2, E>@5>0B5B>7, 0B5B>7 B0 ;;>=CA), 48AB>=VO.

8AB>=VO 2;:NG0T 48AB>=VN, <O7>2V A?07<8, 3V?5@B>=VN, B>@B8>;V7, <8<>2V;L=V A:>@>G5==O <O7V2, :=>B@0:BC@0 <O7V2, 1;5D0@>A?07<, @CE8 >:0 =02:>; ?5@54=L>704=L>W >AV, ?0@0;VG O78:0, A?07< >1;8GGO, ;0@8=3>A?07<, B>=VO, >?VAB>B>=CA, >@>D0@8=30;L=89 A?07<, ?;52@>B>=CA, A?07< O78:0 B0 B@871>2O7:>2> <0NBL 5:AB@0?V@0E>465==O.

A# ?;0F51>:=>B@>;L>20=8E 28?@>1C20==OE FC:@>289 4V015B 1C2 70@5TAB@>20=89 C 0,18% 28?04:0E 2 3@C?V, O:C ;V:C20;8 @8A?5@84>=×, C ?>@V2=O==V 7 0,11% 2 3@C?V, 45 70AB>A>2C20;8 ?;0F51>. 030;L=0 G0AB>B0 2AVE ;;V=VG=8E 28?@>1C20=L 1C;0 0,43% C 3@C?V, O:0 26820;0 @8A?5@84>=.

0ABC?=89 ?5@5;V: ?>1VG=8E @50:FV9, ?>2O70=8E V7 70AB>AC20==O< @8A?5@84>=C, I> 1C;8 V45=B8DV:>20=V O: ?>1VG=V @50:FVW ?V4 G0A ;;V=VG=8E 4>A;V465=L ?@8 282G5==V V=T:FV9=>W D>@<8 @8A?5@84>=C ( 8A?>;5?B® >=AB0), 0;5 =5 =5 287=0G5=V O: ?>1VG=V @50:FVW C ;;V=VG=8E 4>A;V465==OE ?5@>@0;L=>W D>@<8 @8A?5@84>=C. # =0ABC?=V9 B01;8FV 28;;NG5=V ?>1VG=V @50:FVW, O:V 7>:@5<0 ?>2O70=V V7 70AB>AC20==O< V=T:FV9=>W D>@<8 - 8A?>;5?B® >=AB0.

>40B:>2V ?>1VG=V @50:FVW, ?>2 O70=V V7 70AB>AC20==O< 8A?>;5?B® >=AB0 0;5 =5 ?5@>@0;L=>W D>@<8 ?@5?0@0BC 8A?>;5?B® 2V;:5B
>A;V465==O: 71V;LH5==O <0A8 BV;0, ?V428I5==O @V2=O 30<<0-3;CB0 @V2=O ?5GV=:>28E D5@<5=BV2
I>:C A5@F52>-AC48==>W A8AB5<8: 1@048:0@4VO
I>:C A8AB5<8 :@>2>B2>@5==O B0 ;VW A8AB5<8: =59B@>?5=VO
I>:C =5@2>2>W A8AB5<8: ?0@5AB57VO, AC4><8
I>:C >@30=0 7>@C: 1;5D0@>A?07<
I>:C >@30=0 A;CEC B0 25AB81C;O@=>3> 0?0@0BC: 25@B83>
I>:C B@02=>W A8AB5<8: 7C1=89 1V;L, A?07< O78:0
I>:C H:V@8 B0 ?V4H:V@=8E B:0=8=: 5:75<0
1>:C :VAB:>2><O7>2>W A8AB5<8 B0 A?>;CG=>W B:0=8=8: 1V;L C AV4=8FOE =D5:FVW B0 V=207VW: V=D5:FVO =86=L>3> 2V44V;C 48E0;L=8E H;OEV2, V=D5:FVO, 30AB@>5=B5@8B, ?V4H:V@=89 01AF5A
>H:>465==O: ?04V==O
I>:C AC48==>W A8AB5<8: 0@B5@V0;L=0 3V?5@B5=7VO
030;L=V @>7;048 V @50:FVW 2 1V;L
A8EVG=V @>7;048: 45?@5AVO

?;82 =0 A8AB5<8 >@30=V2.

# ?>AB<0@:5B8=3>289 ?5@V>4 ?V4 G0A 70AB>AC20==O @8A?5@84>=C, O: V V=H8E  
0=B8?A8E>B8G=8E 70A>1V2, 4C65 @V4:> A?>AB5@V30;0AL ?@>;>=30FVO V=B5@20;CQT. =HV  
2?;828 =0 A5@F5 A?>AB5@V30;8AO ?@8 70AB>AC20==V 0=B8?A8E>B8G=8E ?@5?0@0BV2, O:V  
?>4>26CNBL V=B5@20; Q". &V 2?;828 2;;NG0NBL: H;C=>G:>2C 0@8BG:V2, H;C=>G:>2C  
B0EV:0@4VN, @0?B>289 ;5B0;L=89 =0A;V4>:, A5@F5289 =0?04 B0 B@V?>BV==O<5@5EBV==O  
H;C=>G:V2.

5=>7=0 B@><I>5<I>;VO.

V4 G0A 70AB>AC20==O 0=B8?A8E>B8G=8E ?@5?0@0BV2 2V47=>W B@><I>5<I>;VW, 2;;NG0NG8  
28?04:8 5<I>;VW ;535=52>W 0@B5@VW B0 28?04:8 B@><I>7C 3;81>:8E 25= (G0AB>B0 =52V4><0).

IV;LH5==O <0A8 BV;0.

'0AB8=0 4>@>A;8E E2>@8E =0 H87>D@5=VN, O:V 70AB>A>2C20;8 8A?>;5?B@ 2V;;5B, B0  
'0FVT=BV2, O:V 70AB>A>2C20;8 ?;0F51>, 7 :@8B5@VT< 71V;LH5==O <0A8 BV;0 > 7 %,  
'>@V2=N20;8AL 2 >1T4=0=8E 6- B0 8-B86=528E ?;0F51>:>=B@>;L>20=8E 4>A;V465==OE. 57C;LB0B8  
40=8E 4>A;V465=L 2:07CNBL =0 AB0B8AB8G=> 7=0GCIC 1V;LHC G0AB>BC 71V;LH5==O<0A8 BV;0  
4;O ?0FVT=BV2, O:V 70AB>A>2C20;8 8A?>;5?B@ 2V;;5B (18 %) ?>@V2=O=> 7 3@C?>N, C O:V9  
70AB>A>2C20;8 ?;0F51> (9 %). >1T4=0=8E ?;0F51>:>=B@>;L>20=8E B@8B86=528E 4>A;V465==OE  
4>@>A;8E ?0FVT=BV2 7 <0=VTN C 3>AB@V9 D>@B0 71V;LH5==O <0A8 BV;0, I> AB0=>28;0 > 7 %,  
1C;0 ?>@V2=N20=>N 2 3@C?>V, 2 O:V9 70AB>A>2C20;8 8A?>;5?B@ 2V;;5B (2,5 %) B0 2 3@C?>V  
'?;0F51> (2,4 %), B0 1C;0 B@>E8 28I>N 2 0:B82=V9 :>=B@>;L=V9 3@C?>V (3,5 %).

# 4>23>B@820;8E 4>A;V465==OE C 3@C?>V 4VB59 B0 ?V4;VB:V2 7 @>7;040<8 ?>254V=:8 B0 V=H8<8  
45AB@C:B82=8<8 ?>254V=:>28<8 ?>@CH5==O<8 2V4AL 71V;LH5==O<0A8 BV;0 2 A5@54=L>7,3 :3  
'?VA;O 125 :3 =0 @V:. ;O 4VB59 B0 ?V4;VB:V2 2V:> 12- 16 @>:V2 40=5 7=0G5==O 71V;LH5==O<0A8  
BV;0 2V4 3 4> 5 :3 =0 @V: 715@V30TBLAO 4;O 4V2G0B, C B>9 G0A O: 71V;LH5==O<0A8 BV;0 C  
E;>?FV2 AB0=>28BL 1;87L:> 5 :3 =0 @V:.

>40B:>20 V=D>@<0FVO 4;O >A>1;828E 3@C? ?0FVT=BV2.

>1VG=V @50:FVW, O:V 2V4N G0AB>B>N C ?0FVT=BV2 ;VB=L>3> 2V:C 7 45<5=FVTN G8 4VB59, =0  
2V4@>A;8E ?0FVT=BV2, >?8A0=V =86G5.

0FVT=B8 ;VB=L>3> 2V:C 7 45<5=FVTN.

>1VG=8<8 @50:FVO<8, ?@> O:V ?>2V4><;O;>AO C ;V=VG=8E 4>A;V465==OE ?0FVT=BV2 ;VB=L>3>  
2V:C 7 45<5=FVTN, 1C;8 B@0=78B>@=0 VH5B>N 28=8=:5==O 1,4 % B0 1,5 % 2V4?>2V4=>. @V<  
B>3>, =0ABC?=V ?>1VG=V @50:FVW A?>AB5@V30;8AO 7 G0AB>B>N > 5 % C ?0FVT=BV2  
' ;VB=L>3> 2V:C 7 45<5=FVTN V 7 I>=09<5=H5 242VGV 1V;LH>N G0AB>B>N, =V6 2 V=H8E 3@C?0E  
4>@>A;8E ?0FVT=BV2: V=D5:FVW A5G>282V4=8E H;OEV2, ?5@8D5@8G=89 =01@O.; ;5B0@3VO B0  
' :0H5;L.

### VB8.

0ABC?=V ?>1VG=V @50:FVW A?>AB5@V30;8AL C 3@C?>V ?54V0B@8G=8E ?0FVT=BV2 (2V:> 2V4 5  
4> 17 @>:V2) 7 G0AB>B>N > 5 % B0 I>=09<5=H5 7 242VGV 1V;LH>N G0AB>B>N, =V6 C 3@C?>V  
4>@>A;8E ?0FVT=BV2, I> A?>AB5@V30;0AL C ;V=VG=8E 4>A;V465==OE: A>=;82VABL/A540FVO,  
AB><;5=VABL, 3>;>2=89 1V;L, ?V428I5=89 0?5B8B, 1;N20==O, V=D5:FVW 25@E=VE 48E0;L=8E  
H;OEV2, 70;:045=VABL =>A0, 014>

5@54>7C20==O.

!8<8. # 7030;L=>7=0:8 B0 A8<8 ?5@54>7C20==O, I> A?>AB5@V30;8AL, F5 2V4>=;82VABL V A540FVN,  
B0EV:0@4VN B0 0@B5@V0;L=C 3V?>B5=7VN, 0 B0:>6 5:AB@0?V@0Q" V AC4>8. V47=0G0;>AL, I>  
'?5@54>7C20==O 8A?>;5?B@><1V=0FVW 7 ?0@>:A5B8=>< ?>2O70=5 7 28=8=:5==O< B@V?>BV==O-  
<5@5EBV==O H;C=>G:V2.

# @07V 3>AB@>3> ?5@54>7C20==O A;V4 ?@>0=0;V7C20B8 <>6;82VABL ;V:0@AL:>W 270T<>4VW  
' :V;L:>E ?@5?0@0BV2.

V:C20==O. !;V4 70157?5G8B8 B0 ?V4B@8EV4=VABL 48E0;L=8E H;OEV2 4;O 70157?5G5==O  
045:20B=>W 25=B8;OFVW B0 >:A835=0FVW. !;V4 @>73;O=CB8<>6;82VABL ?@<820==O H;C=:0  
(?VA;O V=BC10FVW, O:I> ?0FVT=B =5?@8B<=>89) B0 ?@87=0G5==O 0:B82>20=>3> 2C3V;;O @07<  
V7 ?@=>=>A=8< 70A>1>< =5 ?V7=VH5 =V6 70 3>48=C ?VA;O ?@89>070=5 A5@F52>-AC48==5  
<=>VB>@C20==O, I> 2;;NG0T 157?5@5@2=C @5TAB@0FVN 4;O 28O2;5==O<>6;828E 0@8B  
8A?>;5?B@ 2V;;5B =5<0T A?5F8DVG=>3> 0=B84>BC. "0:8< G8=><, A;V4 28:>=C20B8 2V4?>2V4=V  
?V4B@848. @B5@V0;L=C 3V?>B5=7VN B0 AC48==89 :>;0?A A;V4 ;V:C20B8 B0:8<8 70E>40<8 O:  
2=CB@VH=L>25==V 2;820==O B0/01> A8;V=5@3VG=V ?@5?0@0B8. !;V4 ?@>4>26C20B8 ?>ABV9=5  
<548G=5 A?>AB5@565==O B0 <=>VB>@8=3 4> <><5=BC, :>;8 ?0FVT=B >4C60T.

**0AB>AC20==O C ?5@V>4 203VB=>ABV 01> 3>4C20==O 3@C44N.**

03VB=VABL. 5<0T 4>A2V4C 70AB>AC20==O ?@5?0@0BC 203VB=82V4=> 4> ?>AB<0@:5B8=3>28E  
40=8E, A?>AB5@V30;8AL >1>@>B=V 5:AB@0?V@0<=>VB>@C20B8 =>2>=0@>465=8E. 8A?5@84>=  
=5<02 B5@0B>35==>3> 2?;82C C 4>A;V465==OE =0 B20@8=0E, >4=0: A?>AB5@V30;8AL V=HV  
?@>O28 @5?@>4C:B82=>W B>:A8G=>ABV. >B5=7V9=89 @878: 4;O ;N459 =52V4<89. ">;5?B@ 2V;;5B  
=5 @5:><5=4CTBLAO 70AB>A>2C20B8 ?V4 G0A 203VB=>ABV, O:I> =0 B5 =5<0T 01A>;NB=>W  
=5>1EV4=>ABV. /:I> ?V4 G0A 203VB=>ABV =5>1EV4=> ?@8?8=8B8 70AB>AC20==O ?@5?0@0BC, B>  
F5 =5 A;V4 @>18B8 @V7:>.  
5@V>4 3>4C20==O 3@C44N. # 4>A;V465==OE =0 B20@8=0E @8A?5@84>= V 9-  
3V4@>:A8@8A?5@84>= ?@>=8:0;8 C <>;>: A?>AB5@565==O, I> @8A?5@84>= V 9-  
3V4@>:A8@8A?5@84>= <>6CBL B0:>6 ?@>=8:0B8 C 3@C4=5 <>;>: ;N48=8 C =525;8:V9 :V;L:>ABV. 5  
<0T 40=8E I>4> ?>1VG=8E @50:FV9 C =5<>2;OB, O:8E 3>4CNBL 3@C44N. ">4C20==O 3@C44N  
<0NBL 1CB8 72065=8<8 2V4=>A=> ?>B5=7V9=8E @878:V2 4;O 48B8=8.

**VB8.**

#=0A;V4>: =5AB0GV 40=8E I>4> 5D5:B82=>ABV @8A?5@84>= =5 @5:><5=4>20=> 70AB>A>2C20B8  
4VBO< 4> 18 @>:V2 E2>@8< =0 H87>D@5=VN.  
8A?5@84>= =5 @5:><5=4>20=> 4;O 70AB>AC20==O 4VBO< 4> 18 @>:V2 7 1V?>;O@=>N <0=VTN  
2=0A;V4>: =5AB0GV 40=8E 7 5D5:B82=>ABV.  
8A?>;5?B@ 2V;;5B =5 @5:><5=4CTBLAO 70AB>A>2C20B8 4VBO< 2V:<< 4> 5 @>:V2, >A;V;L:8 4>A2V4  
70AB>AC20==O ?@5?0@0BC 4VBO< 2V:<< 4> 5 @>:V2 >1<565=89.

5@54 B8< O: ?@87=0G8B8 @8A?5@84>= 48B8=V G8 ?V4;VB:C 7 ?>@CH5==O<8 ?>254V=:8, WE  
?>B@V1=> ?>2=VABN ?5@52V@8B8 =0 =0O2=VABL DV78G=8E B0 A>FV0;L=8E ?@8G8=  
03@5A82=>W ?>254V=:8, B0:8E O: 1V;L B0 =52V4?>2V4=V 7>2=VH=V ?>B@518.  
# 40=V9 3@C?V ?0FVT=7V2 A540B82=89 5D5:B @8A?5@84>=C <0T 1CB8 @5B5;L=> :>=B@>;L>20=8  
< G5@57 V<>2V@=V =0A;V4:8 2?;82C =0 740B=VABL 4> =02G0==O.AC20==O @8A?5@84>=C <>65  
?>:@018B8 2?;82 A540FVW =0 740B=VABL :>=F5=B@C20B8 C203C 4VB59 B0 ?V4;VB:V2.  
0AB>AC20==O @8A?5@84>=C ?>2O70=5 7 A5@54=V< ?V428I5==O< <0A8 BV;0 B0 V=45:AC <0A8  
BV;0 ("). ABV C 4>23>B@820;8E 2V4:@8B8E 4>A;V465==OE 1C;8 C <560E >GV:C20=8E 2V4?>2V4=8E  
4> 2V:C =>@23>B@820;>3> ;V:C20==O @8A?5@84>=< =0 AB0B525 4>7@V20==O B0 7@VAB =5  
282G02AO 045:20B=>.  
#=0A;V4>: ?>B5=7V9=8E 2?;82V2 ?@>;>=3>20=>W 3V?5@?@>;0:B8=57@V20==O 4VB59 B0  
?V4;VB:V2 ?>B@V1=> ?@>2>48B8 @53C;O@=5 <548G=5 >1AB565==O 3>@<>=0;L=>3> AB0BCAC,  
O:5 2;;NG0T 28ABC, <0A8 BV;0, @V2=O AB0B52>3> @>728B:C, <=>VB>@C20==N <5=AB@C0;L=>W  
DC=:FVW B0 V=H8E DC=:FV9 B0 ?0@0<5B@V2, =0 O:V 2?;820T ?@>;0:B8=.  
V4 G0A ;V:C20==O @8A?5@84>=< A;V4 74V9A=N20B8 @53C;O@=C >FV=:C 5:AB@0?V@07;04V2  
@CE>2>W 0:B82=>ABV. ;O A?5F8DVG=8E @5:><5=40FV9 I>4> A?>A>1C 70AB>AC20==O 4VBO< B0  
?V4;VB:0< 482. @>74V; «!>AV1 70AB>AC20==O B0 4>78».

A>1;82>ABV 70AB>AC20==O.

V428I5=89 @V25=L ;5B0;L=>ABV C ?0FVT=7V2 ;VB=L>3> 2V:C 7 45<5=FVTN.  
!5@54 ?0FVT=7V2 ;VB=L>3> 2V:C 7 45<5=FVTN, O:V ;V:C20;8AL 0B8?>28<8 0=B8?A8E>B8G=8<8 ;V:0  
<8, A?>AB5@V302AO ?V428I5=89 @V25=L ;5B0;L=>ABV ?>@V2=O=> ? ?0FVT=B0<8 7 3@C?8  
?;0F51> 2 <5B0-0=0;V7V 17 :>=B@>;L>20=8E 4>A;V465=L 0B8?>28E 0=B8?A8E>B8G=8E ;V:V2,



2::NG0NG8 8A?>;5?B®. # ?;0F51>:=B@>;L>20=>A;V465==V V7 70AB>AC20==O< ?@5?0@0BC  
8A?>;5?B® E2>@8< FVTW :0B53>@VW G0AB>B0 28?04:V2 ;5B0;L=>ABV AB0=>28;0 4,0 %  
?>@V2=O=> 7 3,1 % C 3@C?V ?;0F51> ?0FVT=BV2, O:V ;V:C20;8AO 8A?>;5?B®. V4=>H5==O H0=AV2  
(95 % B>G=89 4>2V@G89 V=B5@20;) AB0=>28;> 1,21 (0,7, 2,1). !5@54=V9 2V: ?0FVT=BV2, O:V ?>  
<5@>;8, 1C2 86 @>:V2 (4V0?07>= - 67-100 @>:V2). 57C;LB0B8 42>E 25;8:8E >3;O4>28E 4>A;V465=L  
?>:070;8, I> ?0FVT=B8 ;VB=L>3> 2V:C 7 45<5=FVTN, O:V ;V:C20;8AL 728G09=8<8 0=B8?A8E>B8G=8  
<8 70A>10<8, <0NBL <0;89 ?V428I5=89 @878: ;5B0;L=>ABV, ?>@V2=O=> 7 B8<8, O:V =5 ;V:C20;8AL.  
A=CNBL =5?>2=V 40=V, 73V4=> 7 O:8<8 <>6=0 40B8 AC2>@C >FV=:C B>G=>3> @V2=O @878:C, 4>  
B>3> 6 ?@8G8=0 ?V428I5=>3> @878:C =52V4><0. 0AHB01, =0 O:89 <>6=0 ?>H8@8B8 @57C;LB0B8  
>3;O4>28E 4>A;V465=L, I> AB>ACNBLAO ?V428I5=>W A<5@B=>ABV, ?>2O70=>W V7  
70AB>AC20==O< 0=B8?A8E>B8G=>3> ?@5?0@0BC O: ?@>B82038 ?52=8<(/V9) E0@0:B5@8AB8:0<(/  
FV) ?0FVT=BV2, =5 <>6=0 GVB:> 287=0G8B8.

4=>G0A=5 70AB>AC20==O 7 DC@>A5  
# ?;0F51>:=B@>;L>20=>A;V465==V C ?0FVT=BV2 ;VB=L>3> 2V:C 7 45<5=FVTN ?V428I5=89 @V25=L  
;5B0;L=>ABV A?>AB5@V302AO ?@8 >4=>G0A=>A>2C20==V DC@>A5=>< (7,3 %; A5@54=V9 2V: - 89  
@>:V2, 4V0?07>= - 75-97 @>:V2) ?>@V2=O=> 7 ?0FVT=B0<8, O:V ;V:C20;8AO BV;L:8 @8A?5@84>=><  
(3,1 %; A5@54=V9 2V: - 84 @>:V2, 4V0?07>= - 70-96 @>:V2) 01> BV;L:8 DC@>A5< (4,1 %; A5@54=V9  
2V: - 80 @>:V2, 4V0?07>= - 67-90 @>:V2). V428I5==O @V2=O ;5B0;L=>ABV C ?0FVT=BV2, O:V  
;V:C20;8AO DC@>A5< >4=>G0A=> 7 @8A?5@84>=>< A?>AB5@V30;>AO C 42>E ;;V=VG=8E  
4>A;V465==OE 7 G>B8@L>E. 4=>G0A=5 70AB>AC20==O @8A?5@84>=>C 7 V=H8<8 4VC@5B8:0<8 (2  
>A=>2=>

5 2AB0=>2;5=> ?0B>DV7V>;>3VG=8E <5E0=V70A=5==O FL>3> D0:BC, ?>ABV9=0 ?@0:B8:0  
4>A;V465==O ?@8G8= A<5@BV 2V4ACB=O. 4=0: A;V4 4>B@8A>1;82>W >15@56=>ABV ?@8  
?@87=0G5==V ?@5?0@0BC C B0:8E 28?04:0E, 0 B0:>6 ?>B@V1=> ?@>25AB8 >FV=:C @878:V2 B0  
283>4 FVTW :<<1V=0FVW 01> >4=>G0A=>3> 70AB>AC20==O 7 V=H8<8 ?>B5=V9=8<8 4VC@5B8:0  
<8, ?5@H =V6 ?@87=0G0B8 ?@5?0@0B. 5 28O2;5=> ?V428I5==O ?>:07=8:0 ;5B0;L=>ABV ?0FVT=BV2,  
O:V >4=>G0A=> 70AB>A>2C20;8 V=HV 4VC@5B8G=V 70A>18 @07< V7 @8A?5@84>=> 2V4  
;V:C20==O 453V4@0B0FVO 1C;0 7030;L=8< D0:B>@< @878:C ;5B0;L=>ABV V <0T @5B5;L=>  
:=B@>;N20B8AO C ?0FVT=BV2 7 45<5=FVTN.

?O@=V =51060=V @50:FVW.

# @0=4>20=>:-:=B@>;L>20=>A;V465==V ?0FVT=BV2 7 45<5=FVTN, O:V 70AB>A>2C20;8 45O:V  
0B8?>2V 0=B8?A8E>B8G=V 70A>18, A?>AB5@V30;>AO ?V428I5==O @878:C 28=8:=5==O  
F5@51@>20A:C;O@=8E =51060=8E @50:FV9 ?@81;87=> 2 3 @078. 1T4=0=V 40=V H5AB8  
?;0F51>:=B@>;L>20=8E 4>A;V465=L 8A?>;5?BC®, O:89 70AB>A>2C20;8 2 >A=>2=>3> 2V:C (2V:<< >  
65 @>:V2) 7 45<5=FVTN, ?>:070;8, I> F5@51@>20A:C;O@=V ?>1VG=V @50:FVW (A5@9>7=V B0  
=5A5@9>7=V, 7=><, B0 C 1,2 % (8/712) ?0FVT=BV2, O:V 70AB>A>2C20;8 ?;0F51>. V4=>H5==O  
H0=AV2 (95 % B>G=89 4>2V@G89 V=B5@20;) AB0=>28;> 2,96 (1,34, 7,50). 5E0=V7< FL>3>  
?V428I5=>3> @878:C =52V4><89. V428I5=>3> @878:C =5 <>6=0 C=8:=CB8 C @07V 70AB>AC20==O  
V=H8E 0=B8?A8E>B8G=8E 70A>1V2 G8 70AB>A>2CNG8 ?@5?0@0B 2 V=H8E 3@C?0E ?0FVT=BV2.  
8A?>;5?B® ?>B@V1=> 70AB>A>2C20B8 7 >15@56=VABN ?0FVT=B0<, 7 D0:B>@< @878:C @>728B:C  
V=AC;LBC.

878: 28=8:=5==O F5@51@>20A:C;O@=8E ?>1VG=8E @50:FV9 1C2 VAB>B=> 28I8< C ?0FVT=BV2 7 45  
<5=FVTN 73> 01> AC48==>3> B8?C ?>@V2=O=> 7 ?0FVT=B0<8 7 0;LF359<5@V2AL:>N 45<5=FVTN.  
">

V:0@O< @5:><5=4>20=> >FV=N20B8 @878:8 B0 283>48 70AB>AC20==O 8A?>;5?BC® 2V::;5B C  
?0FVT=BV2 ;VB=L>3> 2V:C 7 45<5=FVTN, 2@0E>2CNG8 D0:B>@8 @878:C V=AC;LBC  
V=482V4C0;L=> 2 :>6=>3> ?0FVT=B0. 0FVT=BV2 01> >AV1, I> 4>3;O40NBL E2>@8E, ?>B@V1=>  
?>?5@548B8 ?@> =5>1EV4=VABL =5309=>3> 725@=5==O 4> ;V:0@O C @07V 28=8:=5==O >7=0: B0 A8  
B5=V9=8E F5@51@>20A:C;O@=8E @50:FV9, B0:8E O: @0?B>20 A;01:VABL 01> >=V1;8GGO, @C:  
01> =V3, 0 B0:>6 ?@>1;5<8 V7 7>@< 01> <>2;5==O

8A?>;5?B@ 2V::;5B @5:<5=4CTBLAO 70AB>A>2C20B8 ;8H5 ?@>BO3<< :>@>B:>3> ?5@V>4C 4;O  
;V:C20==O ?5@A8ABCNG>W 03@5AVW C ?0FVT=BV2 7 0;LF359<5@V2AL:>N 45<5=FVTN 2V4 ?>3>  
4> BO6:>3> ABC?5=O O: 4>40B>: 4> B5@0?VW 157 70AB>AC20==O <548G=8E ?@5?0@0BV2, O:0 <0;>  
>1<565=C 5D5:B82=VABL 01> 1C;0 7>2AV< =55D5:B82=>N, B0 C @07V, :>;8 VA=CT ?>B5=FW9=89  
@878: 70240B8 H:>48 A>1V G8 >B>GCNG8  
0FVT=B0< ?>B@V1=> @53C;O@=> ?@>2>48B8 ?>2B>@=V >3;O48, B0:>6 <0T ?5@53;O40B8AL  
?>B@510 C ?>40;LH>

@B>AB0B8G=0 3V?>B5=7VO.

# 72'07:C 7 B8<, I> 8A?>;5?B@ 2V::;5B T 0-1;>:0B>@<, <>65 28=8:0B8 >@B>AB0B8G=0 3V?>B5=7VO,  
>A>1;82> C ?>G0B:>289 ?5@V>4 ?V41>@C 4>78. # ?>AB<0@:5B8=3>2>4V A?>AB5@V30;>AL  
28=8:=5==O ;V=VG=> 7=0GCI>W 0@B5@V0;L=>W 3V?>B5=7VW ?@8 AC?@>2V4=>AC20==V  
@8A?5@84>=C 7 0=B83V?5@B5=782=8< ;V:C20==O;5?B@ 2V::;5B A;V4 70AB>A>2C20B8 7  
>15@56=VABN 4;O ;V:C20==O ?0FVT=BV2 V7 70E2>@N20==O<8 A5@F52>-AC48==>W A8AB5<8  
(=0?@8::;04, A5@F520 =54>AB0B=VABL, V=D0@:B:0@40, ?>@CH5==O ?@>2V4=>ABV :0@40), 0  
B0:>6 ?@8 7=52>4=5==V, 3V?>2>;5 F5@51@>20A:C;O@=8E ?>@CH5==OE; ?@8 FL>7C A;V4  
71V;LHC20B8 ?>ABC?>2>, 73V4=> 7 @5:<5=40FVO<8 (482. «!>AV1 70AB>AC20==O B0 4>78»). @8  
28=8:=5==V 0@B5@V0;L=>W 3V?>B5=7VW A;V4 @>73;O=CB8 ?8B0==O I>4> 7<5=H5==O 4>78.

V7=O 48A:V=57VO/5:AB@0?V@0

@8 70AB>AC20==V ?@5?0@0BV2 V7 2;0AB82>ABO<8 0=B03>=VABV2 4>D028E @5F5?B>@V2 2V4  
AL 28=8:=5==O ?V7=L>W 48A:V=57VW, I> E0@0:B5@87CTBLAO <8<>2V;L=8<8 @8B@<< @878:C  
@>728B:C ?V7=L>W 48A:V=57VW. /:I> 28=8:0NBL >7=0:8 B0 A8<8 ?V7=L>W 48A:V=57VW, A;V4  
@>73;O=CB8 ?8B0==O I>4> 2V4B8G=8E ?@5?0@0BV2.

59@>;5?B8G=89 7;>O:VA=89 A8=4@>

@8 70AB>AC20==V ;0A8G=8E =59@>;5?B8G=8E ;V:0@AL:8E 70A>1V2 2V4;5?B8G=>3> 7;>O:VA=>3>  
A8=4@> E0@0:B5@87CTBLAO 3V?5@B5@>40B:>2V >7=0:8 2::;NG0NBL 3;>1V=C@VN (@014>;V7) B0  
3>AB@5 ?>@CH5==O DC=:FVW =8@>:. # @07V @>728B:C =59@>;5?B8G=>3> A8=4@>1EV4=> 2V4  
B8G=V ?@5?0@0B8, 2::;NG0NG8 8A?>;5?B@ 2V::;5B.

%>@>10 0@:V=A>=0 B0 45<5=FVO 7 BV;LFO<8 52V.

V:0@V <0NBL 7206C20B8 =5157?5:C 01> :>@8ABL ?@8 ?@87=0G5==V 0=B8?A8E>B8G=8E 70A>1V2,  
C B>;5?B@ 2V::;5B, ?0FVT=B0< 7 E2>@>1>N 0@:V=A>=0 01> 45<5=FVTN 7 BV;LFO<8 52V.  
0AB>AC20==O @8A?5@84>=C <>65 ?>3V@H8B8 ?5@51V3 E2>@>18 0@:V=A>=0. 0FVT=B8, E2>@V  
=0 1C4L-O:5 7 2:070=8E 2815 70E2>@N20=L, <>6CBL <0B8 ?V428I5=89 @878: 70E2>@N20==O =0  
=59@>;5?B8G=89 7;>O:VA=89 A8=4@<, 0 B0:>6 ?V428I5=C GCB;82VABL 4> 0=B8?A8E>B8G=8E  
?@5?0@0BV2; B0:8E ?0FVT=BV2 1C;> 28::;NG5=> 7 ;V=VG=8E 4>A;V465=L. >40B:>2> 4>  
5:AB@0?V@0

V?5@3;V:5289 4V015B.

V?5@3;V:5289 4V015B 01> 703>AB@5==O VA=CNG>3> 4V015BC 1C;8 >?8A0=V ?V4 G0A ;V:C20==O  
?@5?0@0B<< 8A?>;5?B@ 2V::;5B. # 45O:8E 28?04:0E ?>?5@54=T 71V;LH5==O <0A8 BV;0 <>65 1CB8  
?5@5410GC20=8< D0:B>@>T4=0==O 7 :5B>0F84>7<< 7CAB@VG0NBLAO 4C65 @V4:>, 7  
4V015B8G=>N :><>N @V4:>. V4?>2V4=89 ;V=VG=89 <=>VB>@8=3 4>FV;L=> ?@>2>48B8 C  
2V4?>2V4=>ABV 7 :5@V2=8<8 ?@8=F8?0<8 70AB>AC20==O 0=B8?A8E>B8G=8E ?@5?0@0BV2.  
0FVT=BV2, O:V >B@82V 0=B8?A8E>B8G=V ?@5?0@0B8, 2 B> 8A?>;5?B@ 2V::;5B, A;V4 ?5@52V@8B8  
=0 =0O2=VABL A8V48?AVO, ?>;VC@VO, ?>;VD03VO V A;01:VABL) "0:>6 ?0FVT=BV2 7 FC:@>28<  
4V015B<< A;V4 @53C;O@=> ?5@52V@OB8 =0 ?>3V@H5==O ?>:07=8:0 @V2=O 3;N:>78.

IV;LH5==O <0A8 BV;0

@> 7=0G=5 71V;LH5==O <0A8 BV;0 ?>2V4<<;O;>AL C 7207:C 7 28:>@8AB0==O< 8A?>;5?B@ 2V::;5B.  
030 ?>28==0 @53C;O@=> :=B@>;N20B8AO.

V?5@?@>;0:B8=5

>A;V465==O =0 :C;LBC@0E B:0=8= 2:07CNBL =0 B5, I> @VAB ;VB8= C ?CE;8=0E<>;>G=>W 70;>78  
;N48=8 <>65 1CB8 AB820=89 ?@>;0:B8=>G0 4>AV GVB:>3> 7207:C AB>A>2=> 70AB>AC20==O

0=B8?A8E>B8G=8E 70A>1V2 C ;V=VG=8E B0 5?V45;>3VG=8E 4>A;V465==OE =5 ?>:070=>, @5:>  
<5=4CTBLAO 7 >15@56=VABN ?@87=0G0B8 @8A?5@84=> ?0FVT=B0< 7 2V4?>2V4=>N ?0B>;>3VTN  
2 0=0<=57V. 8A?>;5?B@ 2V;;5B ?>B@V1=> 7 >15@56=VABN 70AB>A>2C20B8 ?0FVT=B0< 7 =0O2=>N  
3V?5@?@>;0:B8=5

>4>265==O V=B5@20;C QT.

# ?>AB<0@:5B8=3>2>4V 4C65 @V4:> A?>AB5@V30;8AO 28?04:8 ?>4>265==O V=B5@20;C Q". !;V4 7  
>15@56=VABN 70AB>A>2C20B8 8A?>;5?B@ 2V;;5B, O: V V=HV 0=B8?A8E>B8G=V 70A>18, ?0FVT=B0  
< V7 A5@F52>-AC48==8< 70E2>@N20==O<, ?0FVT=B0< V7 2@>465=8< A8=4@>>< ?>4>265==O  
V=B5@20;C Q", 1@048:0@4VTN G8 ?>@CH5==O<8 5;5:B@>;VB=>3> >1:0;VT<03=VTA:V;L:8 <>65  
?V428IC20B8 @878: 0@8B<>35==8E @50:FV9, B0 ?@8 ACQ".

0?048.

!;V4 7 >15@56=VABN 70AB>A>2C20B8 8A?>;5?B@ 2V;;5B ?0FVT=B0<, O:V <0NBL =0?048 AC4< G8  
V=HV AB0=8 2 0=0<=57V, O:V ?>B5=FV9=> 7=86CNBL AC4<=89 ?>@V3.

@V0?V7

A=CT <>6;82VABL 28=8:=5==O ?@V0@87;5?B>: 9>3> 0;LD0-04@5=5@3VG=>W 1;>:CNG>W 4VW.

53C;OFVO B5

=B8?A8E>B8G=V ;V:0@AL:V 70A>18 <>6CBL ?>@CHC20B8 740B=VABL BV;0 4> 7=865==O  
>A=>2=>W B5<5=4CTBLAO 2V4?>2V4=89 4>3;O4 ?0FVT=B0<, O:8< ?@87=0G5=> 8A?>;5?B@ 2V;;5B,  
O:I> 2>=8 1C4CBL ?V44020B8AO 2?;82C C<>2, I> <>6CBL A?@8G8=OB8 ?V428I5==O >A=>2=>W B5  
:8E B52=VH=L>3> A5@54>28I0, AC?@>2V4=0 B5@0?VO ?@5?0@0B0<8 7 0=B8E>;V=5@3VG=>N  
0:B82=VABN G8 2?;82 7=52>4=5==O.

5=>7=0 B@><1>5<1>;VO.

?8A0=V 28?04:8 25=>7=>W B@><1>5<1>;VW ?@8 70AB>AC20==V 0=B8?A8E>B8G=8E ;V:0@AL:8E  
?@5?0@0BV2. A:V;L:8 ?0FVT=B8, O:V ;V:CNBLAO 0=B8?A8E>B8G=8-8 ;V:0@AL:8<8 70A>10<8,  
G0AB> <0NBL =01CBV D0:B>@8 @878:C 4;O 28=8:=5==O 25=>7=>W B@><1>5<1>;VW, 2AV<>6;82V  
D0:B>@8 @>728B:C B@><1>5<1>;VW =5>1EV4=> V45=B8DV:C20B8 ?5@54 B0 ?V4 G0A ;V:C20==O  
8A?>;5?B>25AB8 2V4?>2V4=V ?@525=B82=V 70E>48.

40B=VABL 2?;820B8 =0 H284:VABL @50:FVW ?@8 :5@C20==V 02B>B@0=A?>@B< 01> @>1>BV 7 V=H8<8  
<5E0=V7<0<8.

8A?>;5?B@ 2V;;5B <>65 <0B8 =525;8:89 01> ?>B@0=A?>@B< C=0A;V4>: ?>B5=FV9=>3> 2?;82C =0  
=5@2>2C A8AB5@30= 7>@C (482. @>74V; <<1VG=V @50:FVW>>). # ?@>F5AV ;V:C20==O @5:>  
<5=4CTBLAO CB@8B@0=A?>@B< 01> @>1>B8 7 V=H8<8 <5E0=V7<0<8, 4>:8 =5 AB0=5 2V4<>N  
V=482V4C0;L=0 GCB;82VABL ?0FVT=BV2 4> ?@5?0@0BC.

70T<>4VO 7 V=H8<8 ;V:0@AL:8<8 70A>10<8 B0 V=HV 2848 270T<>4V9.

/: V 7 V=H8<8 0=B8?A8E>B8G=8<8 ;V:0@AL:8<8 70A>10<8, A;V4 4>B@815@56=>ABV ?@8  
70AB>AC20==V ?@5?0@0BC 8A?>;5?B@ >4=>G0A=> 7 ;V:0@AL:8<8 70A>10<8, I> ?>4>26CNBL  
V=B5@20; Q", B0:8<8 O: 0=B80@8B?V@0:0W=040@>=, A>B0;>;), B@8F8;;VG=8<8 0=B845?@5A0=B0  
<8 (B>1B> 0<03=VT

?;82 8A?>;5?BC@ 2V;;5B =0 V=HV ;V:0@AL:V 70A>18.

@0E>2CNG8 B5, I> 8A?>;5?B@ 2V;;5B <0T 2?;82, C ?5@HC G5@3C, =0 F5=B@0;L=C =5@2>2C A8AB5  
3> A;V4 7 >15@56=VABN 70AB>A>2C20B8 AC7 V=H8<8 ?@5?0@0B0<8 F5=B@0;L=>W 4VW, B0:8<8  
O: 0;>3>;L, >?V0B8, 0=B83VAB04V075?V=8 2=0A;V4>: ?V428I5=>3> @878:C A540FVW.

8A?>;5?B@ 2V;;5B <>65 ?@>B84VOB8 5D5:BC ;52>4>?8 B0 V=H8E 03=>VABV2 4>?0B0:0 :<1V=0FVO  
740TBLAO =5>1EV4=>N, 7>:@5<0 2 >AB0==V9 AB04VW E2>@>18 0@:V=A=>0, @5:><5=4>20=>  
?@87=0G8B8 =09=86GC 5D5:B82=C 4>7C 4;O :>6=>3> B8?C ;V:C20==O.

;V=VG=> 7=0GCI0 0@B5@V0;L=0 3V?>B5=7VO A?>AB5@V30;0AL ?@8 >4=>G0A=>AC20==V  
@8A?5@84>=C B0 0=B83V?5@B5=782=8E ;V:V2 C ?>AB<0@:5B8=3>2>4V.

8A?>;5?B@ =5 ?@>O2;OT ;V=VG=> 7=0GCI8E 5D5:BV2 =0 D0@<0>:V=5B8:C ;V:BVN, 20;L?@>0BC,  
483>:A8=C 01> B?>V@0<0BC.

?;82 V=H8E ;V:0@AL:8E 70A>1V2 =0 8A?>;5?B@ 2V;;5B.

@8 70AB>AC20==V :0@10<075?V=C 2V4AO 7=865==O :>=F5=B@0FVW 0:B82=>W  
0=B8?A8E>B8G=>W D@0:FVW 8A?>;5?BC@ 2V::5B C ?;072V. =0;>3VG=V 5D5:B8<>6CBL  
A?>AB5@V30B8AL ?@8 70AB>AC20==V, =0?@8::04, @8DOW=C B0 D5=>10@1VB0;C, O:V B0:>6  
V=4C:CNBL ?5GV=:>289 D5@<5=B !# 4 B0 -3;V:>?@>B5W=. @8 2V4g@) 4>7C ?@5?0@0BC 8A?>;5?B@  
2V::5B =5>1EV4=> ?5@53;O=CB8.

§;C>:A5B8= V ?0@>:A5B8=, 2D6-V=3V1VB>@8 ?5GV=:>28E D5@<5=BV2, ?V428ICNBL  
:>=F5=B@0FVN @8A?5@84>=C C ?;072V, 0;5<5=H5, =V6 0:B82=C 0=B8?A8E>B8G=C D@0:FVN.  
2060TBLAO, I> V=HV V=3V1VB>@8 CYP 2D6, B0:V O: EV=V48=, 0=0;>3VG=> 2?;820NBL =0  
:>=F5=B@0FVN @8A?5@84>=C 2 ?;07 0 ?>G0B:C ;V:C20==O 01> ?@8 2V4:A5B8=C 01> ?0@>:A5B8=C  
4>7C 8A?>;5?B@ =5>1EV4=> 2V4:>@83C20B8.

5@0?0@ !# 4 B0 -g@ ?V428ICT :>=F5=B@0FVN @8A?5@84>=C C ?;072V. 0;0=B0=575?V; =5  
28O2;ONBL ;V=VG=> 7=0GCI8E 5D5:BV2 =0 D0@<0:>:V=5B8:C @8A?5@84>=C B0 0:B82=>W  
0=B8?A8E>B8G=>W D@0:FVW. \$5=>BV078=8, B@8F8::;VG=V 0=B845?@5A0=B8 B0 45O:V β-  
1;>:0B>@8 <>6CBL ?V428IC20B8 :>=F5=B@0FVN @8A?5@84>=C 2 ?;072V, 0;5 =5 :>=F5=B@0FVN  
0=B8?A8E>B8G=>W D@0:FVW. @ ?5GV=:>28E D5@<5=BV2 !# 4, =5 7@V2 (=0?@8::04,  
<5B8;D5=V40BC) C :><1V=0FVW 7 8A?>;5?B>

4=>G0A=5 70AB>AC20==O 8A?>;5?BC@ ?5@>@0;L=> 7 ?0;V?5@84>=>< =5 @5:><5=4CTBLAO,  
>A:V;L:8 ?0;V?5@84>= T 0:B82=8< <5B01>;VB< @8A?5@84>=C V WE :><1V=0FVO <>65 ?@8725AB8  
4> 4>40B:>2>3> 2?;82C 0:B82=>W 0=B8?A8E>B8G=>W D@0:FVW.

\$0@<0:>;>3VG=V 2;0AB82>ABV.

\$0@<0:>48=0

5E0=V7< 4VW. 8A?5@84>= - F5 A5;5:B82=89 <>=>0=VAB 7 C=V:0;L=8<8 2;0AB82>ABO<8. V= 28O2;OT  
28A>:C 0DV==VABL I>4> A5@>B>=V=5@3VG=8E 5-2 V 4>D0D2-@5F5?B>@V2. 8A?5@84>=  
72'O7CTBLAO B0:>6 7 α<sub>1</sub> -04@5=5@3VG=8<8 @5F5?B>@0<8 B0 7 <5=H>N 0DV==VABN - 7 1-3VAB02-  
04@5=5@3VG=8<8 @5F5?B>@0<8. 8A?5@84>= =5 28O2;OT 0DV==>ABV 2V4=>A=> E>;V=5@3VG=8E  
@5F5?B>@V2. %>G0 @8A?5@84>= T ?>BC6=8< D2-0=B03>=VAB<, I> ?>2'O7CNBL 7 9>3>  
5D5:B82=VABN I>4> ?@>4C:B82=>W A8<0B8:8 H87>D@5=VW, 2V= =5 A?@8G8=OT 7=0G=>3>  
?@83=VG5==O <>B>@=>W 0:B82=>ABV B0 <5=H>N N V=4C:CT :0B0;5?AVN ?>@V2=O=> 7 ;:0A8G=8  
<8 =59@>;5?B8:0<8. 10;0=A>20=89 F5=B@0;L=89 0=B03>=V7< 2V4=>A=> A5@>B>=V=C B0 4>D0  
1VG=8E 5D5:BV2 V @>7H8@NT B5@0?52B8G=89 2?;82 ?@5?0@0BC 7 >E?>;5==O< =530B82=8E B0  
0D5:B82=8E A8D@5=VW.

\$0@<0:>:V=5B8:0.

8A?>;5?B@ 2V::5B C D>@:, I> 48A?5@3CNBLAO C @>B>2V9 ?>@>6=8=V, B0 @>7G8= 4;O  
?5@>@0;L=>3> 70AB>AC20==O T 1V>5:2V20;5=B=8<8 4> B01;5B>;, 2:@8B8E >1>;>=:>N.  
8A?5@84>= <5B01>;V7CTBLAO 4> 9-3V4@>:A8@8c?5@84>=C, O:89 <0T ?>4V1=C 4> @8A?5@84>=C  
D0@<0:>;>3VG=C 4VN (482. @>74V; «V>B@0=AD>@<0FVO B0 5;V  
IA>@1FVO. VA;O ?5@>@0;L=>3> ?@89=> ?>2=VABN 01A>@1CTBLAO B0 4>AO30T ?V:>28E  
:>=F5=B@0FV9 C ?;072V C <560E 2V4 >4=VTW 4> 42>E 3>48=. 1A>;NB=0 1V>4>ABC?=VABL  
@8A?5@84>=C ?@8 ?5@>@0;L=>28BL 70 % (CV=25 %). V4=>A=0 1V>4>ABC?=VABL @8A?5@84>=C  
?@8 ?5@>@0;L=>20=>W D>@<8 AB0=>28BL 94 % (CV=10 %), ?>@V2=O=> V7 ?@5?0@0B< C D>@  
7G8=C. 60 =5 2?;820T =0 01A>@1FVN ?@5?0@0BC, B=> <>6=0 ?@87=0G0B8 =570;56=> 2V4 ?@89>  
206=0 :>=F5=B@0FVO @8A?5@84>=C 2 >@30=V7ABV ?0FVT=BV2 4>AO30TBLAO ?@>BO3<< 1 4=O.  
V2=>206=0 :>=F5=B@0FVO 9-3V4@>:A8@8A?5@84>=C 4>AO30TBLAO ?@>BO3<< 4-5 4V1.  
>7?>4V;. 8A?5@84>= H284:> @>7?>4V;OTBLAO 2 >@30=V72V @8A?5@84>= 72'O7CTBLAO 7 0;L1C<  
V :8A;8< α<sub>1</sub>-3;V:>?@>B5W=>= =0 90 % 72'O7CTBLAO 7 1V;;0<8 ?;07<8 :@>2V, 9-  
3V4@>:A8@8A?5@84>= - =0 77 %.

V>B@0=AD>@<0FVO B0 5;V 8A?5@84>= <5B01>;V7CTBLAO !# 2D6 4> 9-3V4@>:A8@8A?5@84>=C,  
O:89 G8=8BL 0=0;>3VG=C 4> @8A?5@84>=C D0@<0:>;>3VG=C 4VN. 8A?5@84>= V 9-  
3V4@>:A8@8A?5@84>= CB2>@NNBL 0:B82=C 0=B8?A8E>B8G=C D@0:FVN. !# 2D6 T >1T:B<  
35=5B8G=>3> ?>;V<>@DV72D6 <5B01>;V70B>@8 H284:> ?5@5B2>@NNBL @8A?5@84>= =0 9-  
3V@>:A8@8A?5@84>=, C B>9 G0A O: ?>2V;L=V !# 2D6 <5B01>;V70B>@8 ?5@5B2>@NNBL 9>3>  
=01030B> ?>2V;L=VH5. %>G0 H284:V <5B01>;V70B>@8 <0NBL =86GV :>=F5=B@0FVW  
@8A?5@84>=C B0 28IV 9-3V4@>:A8@8A?5@84>=C, =V6 ?>2V;L=V, D0@<0:>:V=5B8G=0 4VO  
@8A?5@84>=C B0 9-3V4@>:A8@8A?5@84>=C T ?>T4=0=>N (B>1B> 2>=8 AB0=>2;OBL 0:B82=C  
0=B8?A8E>B8G=C D@0:FVN), ?VA;O 70AB>AC20==O >4=VTW 01> 1030BL>E 4>7 T >4=0:>2>N C

?>2V;L=8E B0 H284:8E <5B01>;V70B>@V2 CYP 2D6.  
=H8< H;OE<< <5B01>;V7;5?B@ 2V;;5B T N-4570;;V;C20==O. >A;V465==O in vitro =0 A><0E ?5GV=:8 ;N48=8  
2:07CNBL =0 B5, I> @8A?5@84>= C ;;V=VG=>>1'@C=B>20=8E :>=F5=B@0FVOE VAB>B=> =5 V=3V1CT  
<5B01>;V7< ;V:0@AL:8E 70A>1V2, O:V <5B01>;V7CNBLAO V7>78<0<8 F8B>E@>CYP 12, CYP 26, CYP 2!8/9  
/10, CYP 2D6, CYP 21, CYP 4 B0 CYP 5. '5@57 B8645=L ?VA;O 70AB>AC20==O ?@5?0@0BC 70 % 4>78  
282>48BLAO 7 A5G5N, 14 % - 7 :0;>=F5=B@0FVO @8A?5@84>=C V 9-3V4@>:A8@8A?5@84>=C C A5GV  
4>@V2=NT 35-45 % ?@89=OB>W 4>78. =HC G0AB8=C AB0=>2;OBL =50:B82=V<5B01>;VB8. VA;O  
?5@>@0;L=>3> ?@89>@8E =0 ?A8E>78 ?5@V>4 =0?V2282545==O AB0=>28BL ?@81;87=> 3 3>48=8. 5@V>4  
=0?V2282545==O 9-3V4@>:A8@8A?5@84>=C B0 0:B82=>W 0=B8?A8E>B8G=>W D@0:FVW 4>AO30T 24  
3>48=.

V=V9=VABL. >=F5=B@0FVW @8A?5@84>=C C ?;072V ?@>?>@FV9=V 4> 4>78 ?@5?0@0BC (C <560E  
B5@0?52B8G=8E 4>7).

0FVT=B8 ;VB=L>3> 2V:C, ?0FVT=B8 7 ?>@CH5==O<8 DC=:FVW =8@>: B0 ?5GV=:8.>A;V465==O  
>4=>@07>2>3> ?@89> 2 A5@54=L>W 0=B8?A8E>B8G=>W D@0:FVW C ?;072V, =0 38 % 4>2H89 ?5@V>4  
=0?V2282545==O V 7=865==O ;V@5=AC 0:B82=>W 0=B8?A8E>B8G=>W D@0:FVW =0 30 % C ?0FVT=BV2  
;VB=L>3> 2V:C V =0 60 % - C ?0FVT=BV2 7 =8@>:2>N =54>AB0B=VABN. # ?0FVT=BV2 7 ?5GV=:>2>N  
=54>AB0B=VABN A?>AB5@V30;8AL =>@<0;L=V @V2=V :>=F5=B@0FVW @8A?5@84>=C C ?;072V, 0;5  
A5@54=T 7=0G5==O 2V;L=>W D@0:FVW @8A?5@84>=C C ?;072V 1C;> 71V;LH5=5 =0 35 %.

VB8. \$0@<0>:V=5B8:0 @8A?5@84>=C, 9-3V4@>:A8@8A?5@84>=C B0 2V;L=>W 0:B82=>W D@0:FVW C  
4VB59 ?>4V1=0 4> B0:>W C 4>@>A;8E.

!B0BL, @0A0 B0 :C@V==O.>?C;OFV9=89 D0@<0>:V=5B8G=89 0=0;V7 =5 28O282 2848<>3> 2?;82C AB0BV,  
@0A8 G8 :C@V==O =0 D0@<0>:V=5B8:C @8A?5@84>=C G8 0:B82=>W 0=B8?A8E>B8G=>W D@0:FVW.

\$0@<0F52B8G=V E0@0:B5@8AB8:8.

A=>2=V DV78:>-EVABV:

B01;5B:8 ?> 2 <3 - A2VB;>-@>652>3> :>;L>@C ;V>DV;V7>20=V :204@0B=V; 7 >4=>3> 1>:C<0NBL =0?8A  
«R2».

"5@ABV.2 @>:8.

#<>28 715@V30==O.  
15@V30B8 ?@8 B5ABC?=>

#?0:>2:0.

> 4 B01;5B:8 C 1;VAB5@V 7 AK AP® ?;V2:8 B0 0;NW D>;L38. > 7 1;VAB5@V2 C :0@B>==V9 ?0GFV.

0B53>@VO 2V4?CA:C. 0 @5F5?B>

8@>1=8:, 2V4?>2V40;L=89 70 28?CA: A5@VW.

/=AA5=-!V;03 !?.., B0;VO/  
Janssen Cilag S.p.A., Italy.

VAF57=0E>465==O 28@>1=8:0, 2V4?>2V40;L=>3> 70 28?CA: A5@VW.

V0 !/=AA5=, 04100 >@3> !0= VH5;L, 0BV=0, B0;VO/  
Via C. Janssen, 04100 Borgo S. Michele, Latina, Italy.