

! " # \$ % & '(  
) \* + , - . / ( \* 0 ( # 1 2 / \* 3 \* 4 1 5 (   
6 \* / + 7 8 ( 9 6 (   
: ; < = (   
!

---

23(. (- \* - > 4, \* 0 2 ? ( @ \* + , - . / A ( 0 2, 3 ? ( 4 + B / 2 3 1 8 C ( 2 - ( < == D A ( 2 - ? 8 - C 8 C ( ? \* ( 4, \* E 2 C 8 (   
. ( 0 \* , + 7 ( 0 \* , ( + - C 8, F, . C + . ? 8 ( 3 ? + C 8 - ? 3 ( ? \* ( 8 G 1 2 B 2 ? ( ? 1 8 ( ? \* 2 / 3 ( \* 0 ( ? 1 8 2, (   
+ - C 8, F, . C + . ? 8 ( 5 8 . . 3 H ( # + B / 2 3 1 8 C ( B 5 ( ? 1 8 ( I - 2 E 8, 3 2 ? 5 ( \* 0 ( 6 2 J ? \* , 2 . ( # 1 2 / \* 3 \* 4 1 5 (   
! ? + C 8 - ? ( I - 2 \* - A ( 4, \* E 2 C 8 3 ( ? 1 8 ( \* 4 4 \* , ? + - 2 ? 5 ( 0 \* , ( 3 ? + C 8 - ? 3 ( 0, \* 7 ( I 6 2 J A (   
. 3 ( K 8 // ( . 3 ( + - 2 E 8, 3 2 ? 2 8 3 ( . - C ( J \* // 8 F 8 3 ( . J, \* 3 3 ( L . - . C . ( . - C ( ? 1 8 ( K \* , / C A ( ? \* (   
4, 8 3 8 - ? ( 4 1 2 / \* 3 \* 4 1 2 J . / ( ? 1 \* + F 1 ? A ( . 2 7 2 - F ( . ? ( 0 \* 3 ? 8, 2 - F ( . - ( 8 - E 2, \* - 7 8 - ? (   
8 - J \* + , . F 2 - F ( 4 1 2 / \* 3 \* 4 1 2 J . / ( C 2 3 J \* + , 3 8 A ( C 8 B . ? 8 A ( . - C ( J \* - ? 8 7 4 / . ? 2 \* - H (   
& / ? 1 \* + F 1 ( J \* - ? 8 - ? ( 2 3 ( 4, 2 - J 2 4 . // 5 ( \*, 2 8 - ? 8 C ( ? \* K . , C ( 4 1 2 / \* 3 \* 4 1 5 ( 3 ? + C 8 - ? 3 A (   
8 - C 8 . E \* + , 3 ( ? \* ( B 8 ( . J J 8 3 3 2 B / 8 ( ? \* ( . // ( C 2 3 J 2 4 / 2 - 8 3 M ( 4 1 2 / \* 3 \* 4 1 5 ( 2 3 A ( . 0 ? 8, (   
. // A ( - \* ? ( 7 8, 8 / 5 ( . - C ( J ? 2 E 2 ? 5 ( 0 \* , ( 4 1 2 / \* 3 \* 4 1 5 ( 3 ? + C 8 - ? 3 ( . / \* - 8 H ( (   
(   
& // ( J \* - 3 ? , + J ? 2 E 8 ( J , 2 ? 2 J 2 3 7 ( . - C ( J \* 7 7 8 - ? 3 ( J \* - J 8, - 2 - F ( . - 5 ( \* 0 ( ? 1 8 ( 4 + B / 2 3 1 8 C (   
K \* , N 3 A ( \*, ( 4, 8 3 8 - ? . ? 2 \* - ( \* 0 ( ? 1 8 ( @ \* + , - . / ( 2 ? 3 8 / 0 A ( 2 3 ( K 8 / J \* 7 8 ( . - C ( 8 - J \* + , . F 8 C ( ? \* (   
0 . J 2 / ? ? . ? 8 ( ? 1 8 ( 0 + , ? 1 8, ( 8 C + J . ? 2 \* - ( \* 0 ( . + ? 1 \* , 3 ( . - C ( 8 C 2 ? \* , 3 H ( (   
2 3 ( 3 + 4 4 \* , ? 8 C ( B 5 ( ? 1 8 ( 0 + - C, . 2 3 2 - F ( 8 0 0 \* , ? 3 ( \* 0 ( ? 1 8 ( # 1 2 / \* 3 \* 4 1 5 ( ! ? + C 8 - ? (   
I - 2 \* - A ( K 2 ? 1 ( 0 2 - . - J 2 . / ( 3 + 4 4 \* , ? ( 0, \* 7 ( ? 1 8 ( I - 2 E 8, 3 2 ? 5 ( \* 0 ( 6 2 J ? \* , 2 . ( ! ? + C 8 - ? 3 0 (   
! \* J 2 8 ? 5 ( . - C ( ? 1 8 ( I - 2 E 8, 3 2 ? 5 ( \* 0 ( 6 2 J ? \* , 2 . ( # 1 2 / \* 3 \* 4 1 5 ( P . J + / ? 5 H ( (   
(   
Q 2 N 8 ( ? 1 8 ( # 1 2 / \* 3 \* 4 1 5 ( ! ? + C 8 - ? ( I - 2 \* - ( ? 2 3 8 / 0 A ( 2 3 ( C 8 C 2 J . ? 8 C ( ? \* (



(  
(  
(  
(

(  
(

(

(

! " # \$ % & ' (

I -2E8,32?5(\*0(62J?\*,2.(I -C8,F,.C+.?8)\*+,-./(\*0(#12/\*3\*415(

(

(

(

!  
!

(  
(  
(

&JN-\*K/8CF878-?3'(

(  
(

RC2?\*,'(

Q2. 7(U.,31.//(

(

V8E28K(L\* 7 72?88'(

Q2. 7(U.,31.//(

P.B2. -(\$ 82-,2J1(

T. 7 .,.(W+JN(

(

!+B72332\*-(L\*\* ,C2-.?\*,'(

!

!

"#\$%&! ' (!) ' \* "'&\* "+!

!

!

\$\$, -. . /! '" , 0112!Y I -2E8,32?5(\*0(! .3N .?J18K. -Z!!

U\* ./(%74, \*E878-?(. -C(\$+7 . -(V2F1?3(2-(?18(&B38- J8(\*0(

P\*+-C. ??\* -3(XX(<(<

!

3 / 4-5-0. -! 6 - .72 .!Y I -2E8,32?5(\*0(62J?\* ,2.Z!

[82?18, (#,838-?A([\*, (R-\*+F1'(\ 15(L\*-38-?(S\*83([\*?(R3?.B/231.(

U\* ./(R)+. /2?5(&7\*-F(L\*7B.?. - ?3(XX(<^(<

(

8 / . /9! 6 : ;25<!Y I -2E8,32?5(\*0(62J?\* ,2.Z!

I380+/(&-F8, '(L\*+-?8,2-F(V8J\*F-2?2\*->W.38C(%-@+3?2J8(XXXXXXXXXXXXXXXXXXXX(:D(

(

\$0/ . = /! > - , < - - !Y ! 27 \* - (P , .38, (I -2E8,32?5Z!

&(S808- J8(\*0(S808. ?2-F(?18(L/\*3+, 8>W.38C(V. C2J. / (! N84?2J. / (

&, F+78-?(K2?1(?18(!8-32?2E2?5(#,2-J24/8(XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX(\_`(<

(

?- . . /! @ : AB / !Y I -2E8,32?5(\*0(\ 2--248FZ(!

V8?+, -2-F(?\* (?18([8K'(%-?8,4,8?2-F(\ ???F8-3?82-03(U8?1\*C\*/\*F5(. -C(

&273(2-(#12/\*3\*412J. / (%-E83?2F. ?2\*-3(XX(``(<

(

!

!



**3 2, /5!CDE, 2F-D- .9! / .4!G : D / .!H0I9K!0. !9J-!  
#LK- .=-!2! ( 2: . 4/902. K!**

!

W, 8-- .(T, 200\*<sub>A</sub>( I - 2E8, 32?5(\*0(! . 3N. ?J18K. -(

(

(

T18(? . C2?2\* - ./( E28K( \*0( 7 \* , ./2?5( 1\*/C3( ?1. ?( ?18, 8( 23( 3\* 7 8?12-F( 2-?, 2-32J( 2-( 1+7 . -( - ?+, 8<sub>A</sub>( 3+J1( . 3( .( + -2E8, 3. / ( 4, 2-J24/8<sub>A</sub>( ?1. ?( 4, \*E2C83(+3(K2?1(\*+, (N- \*K/8CF8(\*0(1+7 . -(, 2F1?3<sub>H</sub>(&JJ\*, C2-F(?\*(?123( E28K<sub>A</sub>(?18(J/\*38, (K8(F8?(?\*(N- \*K2-F(?123(4, 2-J24/8<sub>A</sub>(?18( 7 \* , 8( 7 \* , ./( K8(B8J\* 7 8<sub>H</sub>( V2J1 . , C(V\*, ?5<sub>A</sub>( 1\*K8E8, <sub>A</sub>(, 8<sub>H</sub>8J?3(?123(0\*+ -C. ?2\* - . /23?( E28K(\*0( 7 \* , ./2?5(K2?1(, 8348J?(?\*(1+7 . -(, 2F1?3<sub>A</sub>(. , F+2-F(2-3?8. C(?1. ?( K8(-88C(?\*(. 44, \* . J1(?18(]+83?2\* -(?1, \*+F1(?8//2-F(3?\*, 283(?1. ?(8E\*N8( 088/2-F3( \*0( 35 7 4. ?15<sub>A</sub>( /8. C2-F( ?\*( ?18( B, \* . C8-2-F( \*0( \*+, ( 7 \* , ./(

"!#!"

!

( %-( \*,C8,(?\*(+-C8,3?. -C(V\*,?503( .-?

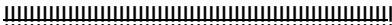
!  
!

"!\$!"



J+,,8-?( J\*-?8G?H` ( ( \ 12/8( V\*,?5( C\*83( -\*?( 8G4/2J2?/5( ,8#8J?( ?18( 8G23?8-J8(\*0(. -( .123?\* ,2J ./ (1+7 . -(- .?+,8A(18(. ,F+83(?1 .?(20(2?(K8,8( ?\*( 8G23?A(?18,8(K\*+/C(B8(a-\*?12-F(2-(?1 .?( - .?+,8(?1 .?(dK\*+/C(B8e( ,8/8E. -?(?\*( \*+, ( 7 \* , ./ (J1\*2J83Hb<sup>i</sup>((T123(23(B8J. +38(V\*,?5(C\*83( -\*?( ,8#8J?(?1 .?(1+7 . -(,2F1?3(. ,8(-8J833. ,5(. -C(K\*,?1K12/8(-?\*2\*-3A(B+?( 18(C\*83( ,8#8J?(?18(0. J?(?1 .?( K8(J. -( ,87\*E8( \*+,38/E83(0, \* 7( \*+, ( 123?\* ,5H`((X2E8-(?123A(K1 .?(8G. J?/5(23(?18(B.323(0\*( ,7 \* , ./ (.J?2\*-A(0\*(, (? ,8. ?2-F( 8. J1( \*?18, (K2?1( ,8348J?A( 20(?18,8(23( -\*?12-F(2-18,8-?( 2-( 1+7 . -(B82-F3(?1 .?(J. //3(0\* ,2?j(T18(. -3K8,(?\*(?123(]+83?2\*-(J. -(B8( 0\*+-C(2-(V\*,?503(J\*-J84?(?0(38-?278-?./ (8C+J. ?2\*-H((

(  
( V\*,?5( .,F+83(0\*(, ( -( .44, \* J1( ?\*( 7 \* , ./ (.J?2\*- (B.38C( \*- ( 38-?278-?./ (8C+J. ?2\*-H(&JJ\* ,C2-F(?\*(V\*,?5A(38-?278-?./ (8C+J. ?2\*- ( 23(?18(\*-/5( 78?1 \*C(?1 .?(23(3+002J28-?0\*( ,J\*-E2-J2-F(2-C2E2C+./3(?\*( 7 \*E8(4.3?(0\*+-C. ?2\*- ./237H( !8-?278-?./ (8C+J. ?2\*-(J. -(B8(C802-8C( .3( ?1 .?( K12J1( J\*-J8-?, .?83( a\*-( 7 . -24+/. ?2-F( 38-?278-?3b( K2?1( 1\*483( ?\*( a8G4. -C( ?18( ,808,8-J8( \*0 k ( 1\*+, (N2-C( \*0( 48\*4/80( . -C( 148\*4/8(2N8(+3H0b<sup>D</sup>(( \$8-J8A(38-?278-?./ (8C+J. ?2\*-(31\*K3(K15(\*-8( 31\*+/C(J. ,8( .B\*+?( .(3?, . -F8,A(\* ,A(2-( \*?18, (K\*,C3A(K15(\*-8(31\*+/C(



^(V2J1 .,C(UH(V\*,?5A(a\$+7 . -(V2F1?3A(V. ?2\*- ./2?5A(. -C(!8-?278-?./2?5Ab(2-(T18( V\*,?5(V8. C8,A(8CH(L1,23?418,(O)H(6\*4. ,2/( .-C(V2J1 .,C(O)H(W8, -3?82-(YL12J183?8, '( W/. JNK8//(#+B/2312-F(Q?CH(: ; < ; ZH(c` cH((  
i(V\*,?5A(a\$+7 . -(V2F1?3Ab(c` ^`H((  
^(V2J1 .,C(V+7 . - .A( " - (V\*,?5(YW8/7 \*3?(T1\*73\*-(Q8. . -2-F(%-JH(: ; ; ; ZH(^`H((  
U2J1./2-\*3(m87B5/.3A(AT\*K. ,C(. (L,2?2J. />!8-?278-?./ (" ,28-?. ?2\*-(2-( \$+7 . -(

"!%!"

J.,8(.B\*+?(3\*78\*-8(K1\*(23(\*+?32C8(\*0(\*-803(7\*,./(J\*77+-2?5H=((  
T1+3A(.JJ\*,C2-F(?\*(V\*,?5A(7\*,./2?5(23(-\*(.(?,.-3J8-C8-?./A(  
+-2E8,3./A(-C2--. ?8(J\*-J84?(C23J\*E8,8C(?1,\*+F1(?18(+38(\*0(,8.3\*-A(  
B+?(23(2-3?8.C(a.(4,\*F,833(\*0(38-?278-?3b(K12J1(23(?18(.B2/2?5(?\*(  
J\*-?2-+8(?\*(388(3272/.,2?283(B8?K88-(\*,+38/E83(-.C(\*?18,3(.3(  
\*+?K82F12-F(K1.?8E8,(C2008,8-J83(72F1?(8G23?H<:(%-(?\*18,(K\*,C3A(  
V\*,?5(B8/28E83(?1.? ?(23(-\*(7\*,./N-\*K/8CF8(?1.?/8.C3(?\*(  
B8?78,78-?(.-C(.-(274,\*E8C(1+7.-,(2F1?3(J+/?+,8A(B+?(.,?18,(?18(  
C8E8/\*478-?( \*0(874.?15 n ?18(.448./(?\*(87\*?2\*-3 n (?1,\*+F1(  
38-?278-?./(8C+J.?2\*-H<<(((

(  
( V\*,?5(23(0\*J+38C(\*-(B,\* .C8-2-F(?18(3J\*48(\*0(\*+, (7\*,./(  
J\*77+-2?5H(%-(?\*18,(K\*,C3A(V\*,?5(.F+83(?1.?(K8(31\*+/C(388N(  
3\*/2C.,2?5A(\*,(?18(C832,8(0\*(,2-?8,3+B@8J?2E8(.F,8878-?(.3(\*44\*38C(  
?\*( \*B@8J?2E2?5(. -C(?18(38.,J1(0\*(,?,+?1H<:( (V2F1?3A(0\*(, (V\*,?5A(. ,8(  
.00\*,C8C(\*-/5(?\*?1\*38(K1\*(J\*+-?(.3(08//\*K(1+7.- (B82-F3H(T\*(J/.27(  
1+7.-,(2F1?3A(\*-8(7+3?(B8.(787B8,(\*0(?18(3.78(7\*,./J\*77+-2?5(  
2-(K12J1(./08//\*K(1+7.- (B82-F3(2C8-?205(.3(B8/\*-F2-F(?\*H<c(((V\*,?5(  
(

0\*,( 38-?278-?./ ( 8C+J.??\*-( 4.,?/5( ,83+/?3( 0,\* 7 ( ?18( 2- .B2/?5( \*0( 0\*+-C.??\*-. /237 (?\*(.C.4?/?\*(J1. -F2-F(7\*, ./ (8-E2,\*- 78-?3(. -C(18/4( 2?3(.C18,8-?3(?\*(,8J\*F-2f8(?1\*38(\*+?32C8(?182,(27 78C2.?8(J2,J/8(Y0\*,( 8G. 74/8a(\*-803(0. 72/5Z( .3(274\*,?. -?H( \$8( .,F+83(?1.?(?, .C2?2\*-. / ( 7\*, ./ (412/\*3\*412J. /(?18\*,283(1. E8(. (123?\*,5(\*0(\*- /5(,8J\*F-2f2-F(. -C(

"!!!"

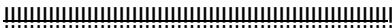
!

!

!

!"

.B/8(?\*(7\*E8(48\*4/8(?\*(.J)?\*-(B8J.+38(2)(B8F3?18(E8,5(]+83)?\*-(.(?  
233+8'(K18?18,(K8(.J?+./5(.8(\*B/2F.?8C(?\*(+,(08/\*K(1+7.-(  
B82-F3(2-(?18(3.78(K.5(K8(.8(\*B/2F.?8C(?\*(+,(J/\*38,(?283)(3+J1(.3(  
0.72/5H^c((%-3?8.CA(.3(W.,8?\*(.,F+83A(a3?\*.,283(K\*+/C(-\*?(\*-/5(18/4(  
?\*(3?,8-F?18-(?18(J.4.J2?5(?\*(3574.?1238(K2?1(?1\*38(K1\*(  
3+008,kB+?(?185(K\*+/C(.3\*(B8(.B/8(?\*(0\*,7(.34\*-?.-8\*+3(.??2)+C8(  
\*,(E2?./274+38(?\*(.J?A(?\*(?.,-30\*,7(?123(38-?278-?(2-\*?(8008J?2E8(  
1+7.-(\*,(3\*J2./3\*/2C.,2?5Hb^-(W5(.8.C2-F(3?\*.,283(K8(.8./2f8(?1.?(  
\*?18,3(-\*?(\*-/5(088/4.2-(/2N8(K8(C\*^A(B+?(.,8(.3\*(K\*.,?15\*(0?18(3.78(  
?,8.?78-?(?1.?(K8(.8H^`((T1+3A(0\*,(V\*.,?5A(3?\*.,5?8/2-F(23(.E2?./5(  
274\*.,?-.?(348J?\*(0(38-32?2f2-F?2-C2E2C+./3(?\*?18(4.2-(.-C(3+008,2-F(  
\*0(\*?18,3(.CA(?18,80\*,8A(K2C8-3(\*+,(a31.,8C(7\*.,/(2C8-??25Hb^i((  
V\*.,?5(.F+83(?1.?(20(.3\*J28?5(K8,8(?\*(+38(-\*E8/3(?\*(J,8.?8(?182,(  
7\*.,/(E\*J.B+./5(?185(K\*+/C(-\*/\*-F8,(.3N(?18738/E83(]+83)?\*-3(  
.B\*+?(1+7.-(-.?+,8(-C(2-3?8.C(K\*+/C(0\*J+3\*(-1\*K(?\*(F8?(/\*-F(  
B8??8,(.-C(1\*K(?\*(B8(7\*,8(J\*70\*.,?B/8(K2?1(\*-8(.-\*?18,H^((T123(  
J1.-F8(K2//2-8(+4(K2?1(.-(2-J,8.38C(.B2/?25(?\*(.JJ84?(C2E8,32?5n  
.- (2-J,8.38(2-(38-?278-?./?25(K12J1(K2//B,\*.C8-(+,(7\*.,/(  
J\*77+-?2283(. -C(//8E2.?8(7\*,8(1+7.- (3+008,2-FH^D((W.,8?\*(3+73(  
+4(V\*.,?503(E28K3(\*-(B\*?1(38-?278-?./(8C+J.??\*-(.-C(?18(+38(\*0(



^c(V\*.,?5A(a\$+7.-(V2F1?3Ab(ci\_>ci`H(  
:-(W.,8?^A(aR?12J3(\*0(R7\*?2\*-3Ab(<;\_H(  
:^(m87B5/.3A(aL,??J./>18-?278-?./Ab(<<<^H(  
:i(m87B5/.3A(aL,??J./>18-?278-?./Ab(<<<^H(  
:^(V2J1.,C(UH(V\*.,?5A(a\$82C8FF8,A(o+-C8.,A(. -C(S2JN8-3Ab(2-(T18(V\*.,?5(V8.C8,A

"!)!"

!

!

"!\*!"

. -?20\*+ -C. ?2\* - ./23 7 (4, \* 7 \*?83(?18(2C8. (?1. ?(\*+, (J\* - J84?2\* - (\*0(38/0A(  
?18(/. -F+. F8(K8(+38A(. -C(?18(J\* 7 7 + -2?283(K8(02 -C(\*+, 38/

"!#!"

!

7 \*E8(4.3?(\*+,( - . . , \*K(J\* - J84?2\* - (\*0,(2F1?3(2 - (\*, C8,(?\*(. C\*4? (. (7 \*, 8( 2 - J/+32E8A(B, \* . C8,A( . - C(F/\*B. //5( . 44/2J . B/8(38?( \*0(F+2C8/2 - 83(?1 . ?( K2// ( B8( . C. 4? . B/8( 8 - \*+F1( ?\*( . C@+3?( ?\*( 2 - 8E2?. B/8( J1 . - F83( . - C( C8E8/\*4 7 8 - ?3(?1 . ?(K2//(+ - C\*+B?8C/5(\*JJ+,(\*E8,(?2 7 8H(V\*,?503(E28K( /8. E83( ?18( C\*\*,( \*48 - ( 0\*,( \*+, ( . C. 4?2 - F( ?\*( - 8K( 3?2+ . ?2\* - 3( K2?1( 2 - J, 8. 38C(8. 38H(%?23(35 7 4. ?18?2J(?\*(J2, J+ 7 3?. - J83(?1 . ?(K8(1. E8(- (\* 8G48,28 - J8(K2?1( \*, ( , 8J\*//8J?2\* - (\*0 n 3?2+ . ?2\* - 3(?1 . ?( 7 . 5A( . ?(02,3?( F/. - J8A( . 448. ,( ?\*\*\*(C2002J+/?( \*, (?\*\*\*(+ - 0. 7 2/2. ,( 0\*,( +3(?\*(C8. /(K2?1A( 3+J1(. 3(2 - (?18(J. 38(\*0\*B3?. J/83(. 008J?2 - F(?1\*38(\*0(C2008, 8 - (J+/?+, 83( \*, (+4B, 2 - F2 - F3A(?1+3(/8. C2 - F(+3(?\*(C23, 8F. , C( . - C(2F - \*, 8(?18 7 (. 3(K8( 0. // (B. JN(\* - (a+ - 2E8, 3. /?25b(?\*(?8//(+3(1\*K(?\*(C8. /(K2?1(?18 7 H(W+?(20( K8( . 448. //(?\*(38 - ?2 7 8 - ?A(K8(J. - (388(?1 . ?(?1\*38(2 - E\*/E8C( . , 8(a\* - 8(\*0( +3Hb(RE8 - (20(K8(C\* - (\*?(1. E8(?18(?\*\*\*/3( - 8J833. , 5(?\*(C8. /(K2?1(?18( 233+8( . ?( ?18( 7 \* 7 8 - ?A( ?185( J. - ( B8( C8E8/\*48CA( B8J. +38( \*+, ( 38 - ?2 7 8 - ? . / ( 8C+J. ?2\* - ( K2// ( . // \*K( +3( ?\*( , 8J\*F - 2f8( 32 7 2/ . , ?283( B8?K88 - ( ?18 7 ( . - C( +3A( /8. C2 - F( ?\*( ?182, ( 2 - J/+32\* - ( 2 - (\*+, ( 7 \*, . / ( J\* 7 7 + - ?25H(

(  
( P\*//\*K2 - F(0, \* 7 ( 7 5(4, 8E2\*+3(4\*2 - ?A(%( . , F+8(?1 . ?( V\*, ?503( 8 7 41 . 323( \* - (8 7 \*?2\* - 3( . 3( \*44\*38C(?\*( , 8. 3\* - (K2// ( 7 . N8(+3( 7 \*, 8( ?\*/8, . - ?(2 - (?18(/\* - F(, + - (B5( J, 8. ?2 - F( . ( 1+7 . - ( , 2F1?3( J+/?+, 8(?1 . ?( 0\*J+383(\* - (35 7 4. ?15H(X2E8 - (?1 . ?(V\*, ?5( . , F+83(?1 . ?(?18(E. /+83(?1 . ?( K8(8 - C\*, 38( . , 8(?18( , 83+/?(\*0(3\*J2. /2f. ?2\* - ( . - C(?18(4. , ?2J+/. , (B, . - C( \*0(38 - ?2 7 8 - ? . / (8C+J. ?2\* - (?1 . ?(K8( , 8J82E8CA(K8(J. - - \*?(0. +/?( ?1\*38( K1\*(K8, 8(F2E8 - ( . C2008, 8 - ?(38?( \*0(E. /+83( . - C(K8( 7 +3?( , 80, . 2 - (0, \* 7 (





(  
( P+,?18,A(V\*,?503(.44,\*J1(C\*83(-\*?(@+3?( \*008,(+3(. (31\*,?>  
?8,7( 3\*/+?2\*-H( \ 1.?( 18( 23( .CE\*J.?2-F( 0\*,( 23( .( J\*74/8?8(  
?,.-30\*,7.?2\*-( \*0(1\*K(K8(.44,\*J1(1+7.-,(2F1?3H(&JJ\*,C2-F/5A(?18(  
J\*-?2-+8C(4,\*7\*?2\*-( \*0(3574.?15(\*E8,(.8.3\*-(-. -C,(. ?2\*- . /2?5 n ?18(  
J,8.?2\*-( \*0( .( 72-C(\*48-( ?\*(J1.-F8(. -C(C2E8,32?5 n K2//(0\*3?8,(.(  
3\*J28?5( 2-( K12J1( 2-C2E2C+./3( .,8( 3\*J2./2f8C( 2-( 3+J1( .( K.5( ?\*(  
J\*-323?8-?/5(4,\*?8J?(?182,(08//\*K(48\*4/8(0,\*7(B82-F(1+,?A(B8J.+38(  
38-?278-?./8C+J.?2\*-( -\*?(\*- /5(J+/?2E.?83(\*-803(J.4.J2?5(?\*(088/A(B+?(  
./3\*( \*-803(J.4.J2?5(?\*( .J?H^=(( \ 18-(?.N8-(?F8?18,A(. -(2-J,8.38C(  
J.4.J2?5(?\*(088/(. -C(. -(2-J,8.38C(J.4.J2?5(?\*( .J?(K2//(/8.C(?\*(.(  
J\*77+-2?5(?1.?23(7\*,8(\*48->72-C8C(. -C(?\*/8,. -?H((

(  
( W80\*,8%(J\*-J/+C8A%(K\*+/C(/2N8(?\*(C23J+33(?18(274\*,?. -J8(  
(

088/2-F3(\*0(35 7 4. ?15(. -C(4,\*3\*J2./(. J?2\* -H-((T185(0\*+-C(?1. ?(?18,8(23(. (-\*?. B/8(,8/. ?2\* -(B8?K88-(35 7 4. ?18?2J(088/2-F3(. -C(4,\*3\*J2./B81.E2\*+,A(348J202J. //5(2-(?1. ?(35 7 4. ?15(23(. -(8008J?2E8( 7 \*?2E8(?\*(. J?(2-(4,\*3\*J2./(.K. 53H-((%- (31\*, ?A(?123(3?+C5(. 338338C(N2-C8,F., ?8-(3?+C8-?30( 7 \*, ./ ( 7 \*?2E. ?2\* -3A( B. 38C( \*-( 8 7 \*?2\* -3( 08/?( . -C(@+3?202J. ?2\* -3( F2E8-( 0\*/\*K2-F( 7 \*, ./ ( ?, . -3F,8332\* -3A( .3( 7 \*, ./ (8 7 \*?2\* -3(Y8HFH(F+2/?Z(. -C(?182,( @+3?202J. ?2\* -3(Y8HFH(C8\* -?/\*F2J. /(\*,(. /?, +23?2JZ( a,80/8J?( ?18( J12/C03( 48,3\* - ./ ( .JJ84?. -J8( \*0( ?18( ,+/8(E. /2C?25Hb-(( \ 1. ?(23(348J202J. //5(2-?8,83?2-F(0,\* 7 (?123(3?+C5(23(?1. ?(,83+/?3(C8 7 \* -3?, . ?8C(?1. ?(J12/C,8-( K1\*( 1. C(/\*K(/8E8/3(\*0( 7 \*, ./ (7 \*?2E. ?2\* -(Y?1\*38(K1\*(K8,8(/833(/2N8/5(?\*(. B2C8(B5( 7 \*, ./ (-\*, 7 3Z(C234/. 58C(2 7 4,\*E8C(4,\*3\*J2./ (B81.E2\*+, (K18-( ?185(8G48,28-J8C(/8E8/3(\*0(8/8E. ?8C(35 7 4. ?15A(C8 7 \* -3?, . ?2-F(?1. ?(?18,8(K. 3.(C23?2-J?(/2-N(B8?K88-(7 \*, ./ (. J?2\* -( . -C(35 7 4. ?15H-((T18(,8. 3\*-(?1. ?%(B,2-F(+4(?123(3?+C5(23(?\*(E. /2C. ?8(V\*, ?503(. ,F+ 7 8-?(?1. ?(38-?2 7 8-?(4/. 53(. (F,8. ?8,( ,\*/8( 2-( \*+, ( 7 \*, ./ ( J1\*2J83(?1. -( 4\*3?2-F(?1. ?(?18,8( . ,8(. 123?\* ,2J. / ( 7 \*, ./ ( ,+/83( ?1. ?( 7 +3?( B8( .B2C8C( B5H- ( ( X2E8-( ?18(4,8E./8-J8( . -C(4\*K8,( \*0(35 7 4. ?18?2J(088/2-F3(2-(J12/C,8-A2?(388 7 3(?\*(B8( 7 +J1( 7 \*, 8(B8-802J2. /(?\*(0\*J+3(\*+, (48C. F\*F2J(8-8,F283(\*-(?18(J+/?2E. ?2\* -( . -C( 7 . -24+/. ?2\* -( \*0(\*+, ( .B2/?5(?\*(088/(?1838(088/2-F3A(?18,80\*,8( -8J8332?. ?2-F( . ( 4/. J8( 0\*, ( 38-?2 7 8-?. / ( 8C+J. ?2\* -H(

!!

&4,Hh(: ; ; =Z'(\_Hh

1??4'ggKKK#83?\* ,H\*, Fg3?. B/8: =^cDi : iH(  
-<(U. /?2A(aL12/C,8-03(U\*, ./ (R 7 \*?2\* -Ab(\_` ` Hh(  
-(U. /?2A(aL12/C,8-03(U\*, ./ (R 7 \*?2\* -Ab(\_c Hh(  
-c(U. /?2A(aL12/C,8-03(U\*, ./ (R 7 \*?2\* -Ab(\_` iHh(  
-(X, . -2N(aS2. /?F+8Ab(D)

"!#%!"

P+,?18, 7 \*,8A(%(?12-N(?1.?(20(K8(E28K(\*+, (7 \*,./(.J?2\*-3(.3(,83+/?2-F( - \*?(0,\* 7 (.123?\*,2J./ (7 \*,./(+83A(B+?(2-3?8.C(0,\* 7(35 7 4. ?15A(\*+, ( 7 \*?2E. ?2\*-3( .448., ( ?\*( B8( B\*?1( 7 \*,8( F8--2-8( .-C( 1 \*-83?( Y8HFHA( 7 \*?2E. ?2\*-3( B.38C( \*- (35 7 4. ?15A( /\*E8A( J\* 7 4.332\*-A( 8?JHZ( K12J1( 3+FF83?3(?1.?(38-?2 7 8-?./ (8C+J. ?2\*-( K2// (B8( 7 \*,8(B8-802J2./ ( .3( .( /\*-F>?8, 7 (.44,\* .J1(?\*(1+7 .-(,2F1?3H(T123(23(C+8(?\*(?18(0.J?(?1.?( 088/2-F3(\*0(35 7 4. ?15(K2// (/8.C(+3(?\*(+-C8,3?. -C(-\*?( ?+3?(?1.(K8( 31\*+/C(.J?2-(.(J8,?.2-(K.5A(B+?(K15(K8(31\*+/C(.J?2-(.(J8,?.2-(K.5H((

( V\*,?5( ,8@8J?3( ?18( ?,.C2?2\*-./ ( 0\*+-C. ?2\*-./23?( E28K( \*0( 7 \*,./2?5A( \*4?2-F( 2-3?8.C( 0\*,( .-( .44,\* .J1( B.38C( \*- (38-?2 7 8-?./ ( 8C+J. ?2\*-H(\$8(. ,F+83(?1.?(\*+, (J+, ,8-?(.44,\* .J1(23(- /\*-F8, (+380+/A( .-C(?1.?(K8(-88C(?\*(7 \*E8(4.3?2?H(\$23(E28K(23(B8-802J2./ (0\*,(.(E. ,28?5( \*0(,8.3\*-3H(P2,3?A(J\* 7 4.,8C(?\*(?18(-., \*K-833(\*0(?.,.C2?2\*-./ (E28K3A( V\*,?5(\*008,3(+3(. (7 \*,8(0/8G2B/8(. -C(.C.4?2E8(E28K(\*0(7 \*,./2?5(. -C( 1+7 .-(,2F1?3H( !8J\*-CA( K1.?( V\*,?5(4,\*4\*383(23(. (3\*J28?5(?1.?(23( ?\*/8,.-?( .-C( 7 \*,8( K2//2-F( .-C( .B/8( ?\*( .JJ84?( C2E8,32?5(. -C( C2008,8-J83H( T123(3\*J28?5( 1.3( 7 \*E8C( 4.3?( \*+, ( \*E8,/5( 8GJ/+32E8( \ 83?8, -(J\*-J84?2\*-( \*0(,2F1?3(. -C(23( 7 \*,8(\*48-( .-C(C2E8,38H(T12,C(



-\*h(Y:;;cZ'(^^^>i;Dh(

!  
!

"!#(!"

**\* -09J-, !M, -K- . 9N! \* 2, !& . 2 : IJ0! P J7! ) 2 . K- . 9!  
82-K! \* 29!&K9/L50KJ!/! 3 2, /5!&Q: /5097! # D2 . I!  
) 2DL/9/ . 9KR!**

!

U . C8/82-8(o8-5\*-A(I -2E8,32?5(\*0(62J?\*,2.(

(

(

(

%-( ?123(4.48,A(%(K2//(. ,F+8(?1.?( )800( UJU . 1 . -(23(J\* ,8J?(2-(123(  
. ,F+78-?A(4,\*E2C8C2-(123(o2//2-F2-( \ . ,A(?1.?(?18(2C8.( \*0(.17+?+./(  
J\*-38-?0(?\*(?.N8(\*-(1. ,7(B8?K88-(J\*7B.?. -?3(J. --\*?(B8(+38C(?\*(  
83?.B/231(. (7\* ,./(8)+./25(.7\*-F(@+3?(-C(+ -@+3?(J\*7B.?. -?3(2-(  
K. ,H( ( V. ?18,A( %(.338,?A( ?18( \*,?1\*C\*G503(. ,F+78-?( ?1.?( @+3?(  
J\*7B.?. -?3(C\*(J\*-38-?(12-F83(\*-(. -(2-J\* ,8J?(+ -C8,3?. -C2-F(\*0(  
K1.?(J\*-38-?23A(8008J?2E8/5(J\*-0+32-F(,834\*-38(+ -C8,(7. -24+/. ?2\*-(  
K2?1(0,88(J\*-38-?H(U\* ,8\*E8,A(J\*-38-?A(8E8-(20(? (K8,8(4,838-?A(  
K\*+/C(-\*?(B8(8-\*+F1(?\*(38J+,8(. (7\* ,./(8)+./25(\*0(J\*7B.?. -?3H(  
(

(

(

T\*(0.J2/? . ?8(75(. ,F+78-?(?1.?(UJU . 1 . -(23(J\* ,8J?A(%(K2//(  
B8F2-(B5(B,280/5(\*+?/2-2-F(?18(?K\*(,8/8E. -(?K.53(\*0(+ -C8,3?. -C2-F(  
J\*-38-?(?1.?(?18(\*,?1\*C\*G5(4,\*4\*383'(?18(1W\*G2-F(U. ?J1(U\*C8//(\*0(  
 \ . ,0(-C(?18(1X/.C2. ?\* ,2./(U\*C8//(\*0( \ . ,0H((%K2//(?18-(4,\*J88C(?\*(  
8G4/.2-(K15(UJU . 1 . -(02-C3(B\*?1(. - ./\*F283(0\*(J\*-38-?(2-(K. ,(?(?  
B8(4,\*B/87. ?2J. //5( C23. - ./\*F\*+3( . -C(/. JN2-FH( ( P\*\*K2-F(?123(  
8G4/. - . ?2\*-A(%K2//C23J+33(3\*78(4\*?8-?2./(J\*+ -?8, . ,F+78-?3(?\*(75(  
. ,F+78-?(?1.?(@+3?(J\*7B.?. -?3(C\*(-\*?(J\*-38-?(\*(B82-F(. ?? . JN8C(2-(  
K. ,A(-C(?1.?(B85\*-C(?123A(J\*-38-?(23(2-3+002J28-?(2-(83?.B/2312-F(. (  
7\* ,./(8)+./25(.7\*-F(@+3?(-C(+ -@+3?(J\*7B.?. -?3H((T\*(7.N8(75(  
(

"!#)!"

!

.,F+ 7 8-?A%(K2//(B8F2)-(B5(8G4/.2-2-F(?18(?8, 7 (1J\*-38-?0A(. -C(K1. ?(  
2?(7 8.-3(0\*, (. (48,3\*- (?\*(F2E8(J\*-38- ?H((T\*(0. J2/? . ?8(?123(C23J+332\*- A(

!  
!  
"!#\*!"



3+,E2E2-Fa(B\*?1(F/.C2.?\*,3(J.- (B8(+ -C8,3?\*\*\*C(.3(F2E2-F(a8G(. -?8(J\*-38-?b(Y78.-2-F(J\*-38-?(10,\*7(B80\*,8(?18(8E8-?0A(\*,(J\*-38-?2-F(10,\*7(?18(\*+?38?0Z(?\*(B8(.?? .JN8C(YUJU.1.-(`DZH((T18(\*,?1\*C\*G5(C,.K3(4.,./8/3(B8?K88-(?123(0\*,7(\*0(J\*7B.?(.-C(K.,A(3+FF83?2-F(?1.?(B\*?1(32C83(\*0(. (K.,(. ,8(aJ\*748//8Cb(?\*(02F1?(B5(?1\*38(?1.?(C832F-(.(K.,(. -CA(?1+3A(B\*?1(J.- (B8(+ -C8,3?\*\*\*C(.3(02F1?2-F(\*+?(?0(. -[8]+./ (3\*,?( \*0(-8J8332?5(\*,(J\*8,J2\*-(YUJU.1.-(`DZH((%-(?18(0\*\*K2-F(38J?2\*-(?0(?123(4.48,A(%K2//8G4/.2-(K15(-82?18,(?0(?1838(4,\*4\*38C(7\*C8/3(\*0(K.,(3.?230283(UJU.1.-H(

(  
( %-(,834\*-38(?\*(?18(1W\*G2-F(U.?J1(U\*C8/0A(UJU.1.- (02,3?(7.N83(?18(C23?2-J?2\*-(B8?K88-(J\*-38-?2-F(?\*(B8(.?? .JN8CA(. -C(.F,882-F(?\*(.JJ84?(?18(,23N(\*0(B82-F(?? .JN8C(p(.C23?2-J?2\*-(?1.?A(18(.338,?3A(?18(7\*C8/(0.2/3(?\*(,8J\*F-2f8(YUJU.1.-(`:ZH(( \18,8(J\*-38-?(B5(@+3?(J\*7B.?. -?3(?\*(?.N8(\*-(1.,7(23(?\*(@+3?205A(. -C(7.N8(48,72332B/8(?? .JN3(B5(+ -@+3?(J\*7B.?. -?3(Y3+J1(.3(23(?18(J.38(0\*,(B\*G8,3ZA(.F,882-F(?\*(?.N8(\*-(.(,23N(23(-\*?12-F(7\*,8(?1.-(. (,8J\*F-2?2\*-(?0(4\*?8-?2./ (K,\*-F3(?1.?(7.5(B8(48,48?,.?8C(.F.2-3?(?187H)+3?(J\*7B.?. -?3A(UJU.1.-(. ,F+83A(-82?18,(.F,88(?\*(B8(N2//8CA(-\*,(K.2E8(?182,(2F1?(-\*?(?\*(B8(N2//8CA(K18-(?185(8-?8,(2-?\*(J\*7B.?(

"!#h!"



3+002J28-?( J\*-C2?2\*-( 2-( 83?.B/2312-F( .( 7\* ,./[ 8]+./2?5( . 7\*-F( J\* 7B.?. -?3(YUJU . 1. -( ^Z\ \ 12/8(2?(388 73(?1.?(?18(#+3?(J\* 7B.?. -?( 7+3?(J\*-38-?(?\*(B82-F(?.?JN8C2-(\*,C8,(0\*(,?18(+ -#+3?(J\* 7B.?. -?(?\*( B8(48, 7 2??8C(?\*(.??JN(2?(./3\*(388 73(J/8.,( ?1.?(?123(23(2-( -\* (K.5( 8-\*+F1H((T18(C2008,8-?(#+3?-833>E./8-J83(\*0(?18(?K\*(32C83(C\*(-\*(? J8.38(?\*(B8(2 7 4\*,?. -?A(8E8-(20(#+3?(J\* 7B.?. -?3(J\*-38-?(?\*(?.N8(\*-(.( /2.B2/2?5(\*0(1., 7H((T1.?(+ -#+3?(?.?JN3(4,\* 7\*?8(. -(+ -#+3?(J.+38A(. -C( ?1.?(#+3?(.??JN3(C808-C(. (#+3?(J.+38A( 7.??8,3H(( \ 2?1(\*,( K2?1\*+?( J\*-38-?A(2?(388 73A(?18,8(23(3?2//(. (7\* ,./[2-8]+./2?5(B8?K88-(#+3?(.-C( +-#+3?(J\* 7B.?. -?3H(

(

( \$ .E2-F(-\*K(\*+?/2-8C(?18(\*,?1\*C\*G503?K\*(4,\*4\*38C(7\*C8/3( 0\*(, (+-C8,3?. -C2-F( J\*-38-?( 2-( K.,A( .-C( 8G4/.2-8C( UJU . 1. -03( ,834\*-38(?\*(?1838(7\*C8/3A(%(K2//(-\*K(B,280/5(?+,-(?\*(3\* 7 8(4\*?8-?2./ ( J\*+-?8,..F+7 8-?3( ?\*( 7 5( 3?. -J8H(( &3( %( K2// ( 4,\*J88C( ?\*( .,F+8A( UJU . 1. -(23(J\*, ,8J?(K18-(18(C8-283(?1.?( .448./3(?\*(J\*-38-?(J. -( 83?.B/231(. ( 7\* ,./[8]+./2?5( . 7\*-F(J\* 7B.?. -?3H((%(K2//(.??8 7 4?(?\*(c0.0018Tc

"!\$#!"

!





.3(J/8.,(.3(%02-C2)?\*(B8(?1.?(&--.(C\*83(-\*(IJ\*-38-?0(?\*(1.E2-F(38G(  
K2?1(L1.,/83A(?18-(2?(.448.,3(8]+./5(K,\*-F(?\*(.338,?(?1.?(@+3?(  
J\*7B.?.-?3(IJ\*-38-?0(?\*(B82-F(.??JN8C(K18-(?185(02F1??.(C808-32E8(  
K.,H((T18(7\*C8/3(?1.?(?18(\*,?1\*C\*G5(4,\*4\*383A(?18-A(.448.,(?\*(  
723+38(?18(?8,7(IJ\*-38-?0(. -Cg\*,(723+-C8,3?.-C(K1.?(2?(78.-3(1?\*(  
J\*-38-?0H(  
(

( U5(38J\*-C(4\*2-?( \*0(C23.F,8878-?(K2?1(?18(\*,?1\*C\*G503(  
.448./(?\*(J\*-38-?(2-(83?.B/2312-F.(7\*,./[8]+./2?5(\*0(J\*7B.?.-?3(23(  
?1. ?A(.3(UJU.1.-(. ,F+83A(8E8-(20(@+3?(J\*7B.?.-?3(J\*+/C(J\*-38-?(?\*(  
?.N8(\*-(/2.B2/2?5(?\*(.??JN(2-(K.,(YK12J1(%(1.E8(3+FF83?8C(23(-\*(?  
J/8.,/5(?18(J.38ZA(?18,8(K\*+/C(3?2//8G23?(.(7\*,./[2-8]+./2?5(B8?K88-(  
+-@+3?(.-C(@+3?(J\*7B.?.-?3H(T18(0\*//K2-F(3J8-. ,2\*(7.5(B8(+38C(?\*(  
2//+3?,. ?8(?18(2-3+002J28-J5(\*0(@+3?(J\*7B.?.-?(J\*-38-?(2-(J,8. ?-F(  
?123(7\*,./[8]+./2?5'(

!  
!"\$&!"

?1.?(2(.448.,3(.3(?1\*+F1(L1.,/83(23(2-?8-?( \*- (3?8442-F(\*-&-- .03( ?\*83A(K18?18,( \* ,(- \*?( 318(J\* -38-?3H(( %-( ?8, 7 3( \*0(J\* 7 B. ?A( ?123(23( 4.,. //8/8C(B5(?18(\*008-32E8( .?? .JN(B5(+ -@+3?(J\* 7 B.?. -?3H(( \ 12/8(. -( \* ,?1\*C\*G(+3)?( \ .,(?18\*,23?( 7 .5(.338,?(?1.?(.( @+3?(J\* 7 B.?. -?(C\*83( 1J\* -38-?0( ?\*( B82-F( .?? .JN8CA( 2?( 23( K\*,?1( - \*?2-F( ?1.?( ?18( + -@+3?( J\* 7 B.?. -?30(.?? .JN(C\*83( - \*?( 12-F8(\* -( ,8J82E2-F(?1.?(J\* -38-?H(( %-( ?123(K.5A(2?(C\*83( - \*?( .448.,(.3(?1\*+F1(?18(3\*,?( \*0(J\* -38-?(?1.?(23( C23J+338C(2-(?1838(. ,F+ 7 8-?3(23(\*0(. -(8]+. /3\*,?H((!8J\* -C/5A(2-(?123( 3J8-. ,2\*A(L1.,/83(,8J82E83(&-- .03(48, 7 2332\*-(?\*(3?84(1.,C(\*-(18,( ?\*83A(J. +32-F(18,(4. 2-H((T123(388 7 3/2N8(. -( \*B@8J?2E8/5(B.C(\*,(K, \* -F( ?12-F(?\*(C\*H(( T1.?( &-- .( .F,883(?\*( 123( 7 \*,. //5(K, \* -F(J\*+,38( \*0( .J?2\*-(C\*83( - \*?( 7 .N8(2?( . -5(/833(K, \* -FH((V. ?18,A(?18( .J?2\*-(2?38/0( J. -(B8(+ -C8,3? \*\*C(.3(1\*/C2-F(. (C23?2-J?(1+ -@+3?- 8330(?\*(2?H((T123(23( ,80/8J?8C(2-(?18(3418,8(\*0(K.,A(K18,8(J\* 7 B.?. -?3(02F1?(0\*(,.(J8,?. 2-( J. +38H(( T1838( J. +383A( B8( ?18 7( @+3?( \*,( + -@+3?( Y. -C( ?\*( E. ,52-F( C8F,883ZA(. ,8(- \*?(8, .38C(B5(J\* -38-?( \*0(2-C2E2C+./ (J\* 7 B.?. -?3H((%?) 388 7 3( C884/5( J\*+ -?8,2-?+2?2E8( ?\*( . ,F+8( ?1.?( ?18( N85(0. J?\*,( ?1.?( C8?8, 7 2-83(?18(@+3?- 833(\*0(. (K.,(0, \* 7(?18(\*+?38?(p(?18(@+3?(J. +38(p( 23( - \*?( .-( 8]+. //5( 8338-?2./ ( J\* -32C8, .?2\*-( K18-( .??8 7 4?2-F( ?\*( 83?.B/231( .( 7 \*,./ ( 8]+. /2?5( . 7 \* -F( J\* 7 B.?. -?3H(( T12,C/5A( ?123( 3J8-. ,2\*(C8 7 \* -3?, .?83(?18(2-3+002J28-J5(\*0(J\* -38-?(2-(83?.B/2312-F( .(7 \*,./ (8]+. /2?5( . 7 \* -F(J\* 7 B.?. -?3(B5(31\*K2-F(?18(K.5(2-(K12J1( L1.,/830( 3?8442-F( \*-( &-- .03( ?\*83( -8F. ?2E8/5( .008J?3( L., 7 8-H(( \ 18-( L1.,/83( 3?843( 1.,C( \*-( &-- .03( ?\*83A( 18( .?3\*( Y./B82?( + -N- \*K2-F/5Z( C\*83( 1., 7 (?\*( L., 7 8-A( B5( K.5(\*0( C. 7 .F2-F( 18,(

"!\$! !"





"!\$)!

!





32?+. ?2\* -(\*0(48,323?8-?2-@+3?2J83(?\*(K12J1(?185(. ,8(3+B@8J?H(T18(K.5( P2,3?( [ .?2\*-3(. ,8(,8J\*F-2f8C(+ -C8,(?18(? ,. -32?2\* -./(4\*/2?2J3( 7 \*C8/( 4,8E8-?3(?18 7 (0,\* 7 (B,2-F2-F(?\*(?18(0\*,8(?182,(. J?+./(J\*- J8,-3H( [ \*?( \*- /5(C\*83(?18(2 7 4\*32?2\* -(\*0(?123(7 \*C8/(?\* (?123(J\*- ?8G?(0. 2/(?\*(. CC,833( 353?8 7 2J( 2-@+3?2J83( Y8HFH( J\*- ?2-+8C( \*JJ+4. ?2\*-( \*0( +-J8C8C( ?8,,2?\*,5ZA(B+?(2?(,80,. 7 83(?18(32?+. ?2\*-(. 3(\*0(. 02-2318CA(+ -@+3?(8E8-?( 2-( ?18(4. 3?A( K12J1(?18-(0,. 7 83(?18( ,834\*- 32B2/?5(\*0(?18(3?. ?8( .3( 3. ?23028C( B5( ,84. ,. ?2\*-3( 0\*,( ?1.?( 8E8-?( ./\*-8H( &J?2\*-( 2-( ?123( 0,. 7 8K\*,N(4\*32?2\*-3(P2,3?( [ .?2\*-3( .3( 7 8 7 B8,3(\*0(. (3\*J2./(F,\*+4(

!  
!"%, !"

,8F.,C2-F(P2,3?( [ . ?2\*-3(?1 . ?(0.2,(,8J\*F-2?2\* -(\*0(P2,3?( [ . ?2\* -3(B5(?18( 3?. ?8(1.3(/\*-F(B88-(.JJ\* 7 4/2318C#(T18(48,323?8-J8(\*0(?123(4\*/2?2J ./(.44,\* .J1(Y./\*-F( K2?1( ?18( C23J\*+,38( ?1 . ?( .JJ\* 7 4. -283( 2?Z( \*- /5( 3?,8-F?18-3( ?18( 2//+32\*-( \*0( ,2F1?8\*+3-833( \*0( ?123( 0\*, 7( \*0( ,8J\*F-2?2\*-#(T18(?8,,.2-(\*0(/8F2?2 7 . ?8(4\*/2?2J ./((J\*-J8,-3(?1 . ?(P2,3?( [ . ?2\*-3( J. -( 1.E8( 23( ?18,80\*,8( 8G4/2J2?/5( C8/2-8. ?8C( . -C( ?\*( F\*( B85\*-C n 3+J1(.3(2-(,8B8//2\*+3(\*,(48,323?8-?(.J?2\*-3(0\*,(?18(4+,4\*38( \*0(J1. -F2-F(1\*K(?18(3?. ?8(,8J\*F-2f83(?18 7 n 23(8.32/5(J\*-32C8,8C(

"!%#!"

!

3?.N8(2-(?18(233+83#(T1+3#(./.(J/.273(B5(3+J1(. (F,\*+4(K2//(B8(18.,C(  
.3( J\*72-F( 0,\*7( ?123( B2.38C#( 4.,?2./ ( 4\*32?2\*-#( K2?1( 274\*,?. -(  
J\*-38]+8-J83(0\*,(?18(-.?.+,8(\*0(?18(J/.273(2?(J.- (7.N8#( ( ( ( (

!  
!"%\$!"

&-\*?18,(274\*,?.-?(0.J?\*,(23(?18(F,.C+./(.B3\*,4?2\*-(\*(?18(3?.?8>0.B,2J.?8C(-\*?2\*-(\*(0(P2,3?( [. ?2\*-(3?.?+3(B5(?18(F8-8,./(4+B/2JH(T123(418-\*78-\*-(7.N83(2?(8348J2.//5(C2002J+/?(\*?J\*78(?\*(E28K(P2,3?( [. ?2\*-3(.3(1.E2-F(?\*18,(4\*/2?2J./?(3?.-C2-F3(?\*K.,C3(?18(3?.?8(Y0\*,(8G.74/8A(8)+./(\*-83ZA(B8J.+38(?18(233+8(23(K2?1(. (3\*J2./J.?8F\*,5\*(?0(2C8-?202J.?2\*-H(T\*(,8J\*F-2f8(3\*78\*-8(.3(P2,3?( [. ?2\*-3(B8J\*783(?\*(,8J\*F-2f8(?187(.3(.123?\* ,2J.//5(7.,F2-. /2f8C(72-\* ,2?5(Y2-3?8.C( \*0( .3(48,?.2-2-F(?\*( B\*?1( 123?\* ,2J.//5( .-C( J+, ,8-?/5(\*44,8338C(3\*J2./ (F, \*+43ZH(%-(?+, -A(2C8-?2052-F(P2,3?( [. ?2\*-3(.3(123?\* ,2J.//5(7.,F2-. /2f8C(72-\* ,2?283( /8F?272f83( J8,?.2-(8G4/. -.?2\*-3(0\*,(?182,(B81.E2\*+,(-C(C8/8F?272f83(?\*18,3H((%-(7.-5(J.383n/2N8(7\*3?(C.5(?\*(C.5(2-?8, .J?2\*-3n\*-8(C\*83(-\*(48,J82E8(\*-838/0(.3(1.E2-F(?18(?278(-C(/823+,8(?\*(3?\*4(-C(.J?+./5(?./N(K2?1(. (P2,3?( [. ?2\*-3(48,3\*-(.B\*+?(K18?18,(-(.J?(?0(?182,3(23(/8F?272.?8(0\*,(?187(?\*(7.N8(-C(?\*(18.,(?182,(32C8>>8348J2.//5(32-J8(\*-803(J\*-J84?2\*-(\*(0(K1\*(P2,3?( [. ?2\*-3(. ,8(-8J833..2/5(2-0\*,73(K18?18,(-4.,?2J+/. ,(.J?2\*-(Y3+J1(.3(B,2-F2-F(+4(. (J8,?.2-(J\*-E8,3.?2\*-./?\*42JZ(J\*-J8,-2-F(P2,3?( [. ?2\*-3(7.N83(38-38\*(,-\*?A\*(,7.N83(7\*,8(38-38(Y.-C(23(?1+3(7\*,8(+,F8-?Z(?1.-(-\*?18,H(!2-J8A(2-(?123(J.38A(?18(J\*-?8-?(?0(?123(3\*J2./ (J.?8F\*,5(B,2-F3(K2?1(2?(J8,?.2-(8G48J?8C(435J1\*/?F2J./ (J\*-C?2?\*-3A(?18,8(23(. ,8.C5>?\*>1.-C(8G4/. -.?2\*-(0\*,(. -5(\*B38,E8C(J\*-C+J?(?1.?(C\*83-0?0.// (K2?12-(?18(J\*-C+J?(K12J1(23(J\*-32C8,8C(/8F?272.?8(0\*,(787B8,3(\*0(?1.?(J.?8F\*,5H((V.?18,(?1.-3882-F(.J?2\*-3(?1.?(C\*-0?0.// (2-?\*( \*-803(J.?8F\*,5\*(?0(/8F?272.?8(P2,3?( [. ?2\*-3(.J?2\*-3(.3(. (0\*,7(\*0(38/0>J\*-3J2\*+3(C84.,?+,8(0,\*7(?1.?(

"!%#!"

3418,8(\*0(B82-Fa(. -C(35 7 4?\* 7 .?2J(\*0(48,1.43(?\*\*(-.,\*K(.J\*-J84?  
\*0(P2,3?( [ .?2\*-3(2-(\*-803( 7 2-Ca(\* -803(J. ?8F\*,5(\*0(IP2,3?( [ .?2\*-30(  
2-?3?8.C/8.C3(?\*?18(8G4/. -.?2\*-(\*0(3+J1(.J?3(.3(2,,. ?2\*- ./H(T1+3A(2-(  
. -5(J.38A(K18-(C8./2-F(K2?1(P2,3?( [ .?2\*-3(48,3\*-3A(-?\*?12-F(-8KA(  
2-?,2F+2-Fa(27 4\*,?. -?(23(4,838-?(2-(-+J+3?\* 7 .,5(B81.E2\*+, (B8J. +38(  
?18,8(23(-\*(B81.E2\*+, (?1.?(J. -(B8(+J+3?\* 7 .,5H(&/3\*A(32-J8(?123(  
B81.E2\*+, (23(J\*-32C8,8C(2,,. ?2\*- ./A( ?18,8(23(-\*(+38(2-(?,52-F(?\*(  
8-F.F8(K2?1(P2,3?( [ .?2\*-3(48\*4/8(?1,\*+F1(. -5(, .?2\*- ./( 7 8?1\*C3A(  
/2N8(+C8,?.N2-F(.38,2\*+3(J\*-E8,3. ?2\*- (.B\*+?(4\*/2?2J3(K2?1(?18(1\*48(  
\*0( 8-/2F1?8-2-F( ?18 7 H( T1+3A( .3( U2//3( 3+FF83?3A( 3+J1( 2C8-??5(  
J\*-J84?3(. ,8(1.,C(?\*?2C8-?205(B8J.+38(K8(a388(?1,\*+F1(?18 7 b(. -C(  
?1+3(C\*(-\*?( -\*?2J8(?18 7 (YU2//3( : \_Z n ?1+3A(-?\*?12-F(32F-202J. -?(J. -(  
8E8,(J\* 7 8(0, \* 7 (. -(8E8,5C.5(8-J\*+-?8,(K2?1(. (P2,3?( [ .?2\*-3(48,3\*-H(  
P+,?18, 7 \*,8A( -\*?( \*-/5( C\*83( ?123( 4,\*B/8 7 (. 008J?( 48\*4/8(2-( ?18(  
F\*E8, - 7 8-?(K1\*(K\*,N(2-(4\*32)?\*-3(?1.?(C8./K2?1(J\* 7 4/. 2-?3(0,\* 7 (  
P2,3?( [ .?2\*-3 n ?1+3( ,8-C8,2-F( 4\*/2J5( C8J232\*-3( B.38C( \*- ( ?1838(  
3. 7 8(J. ?8F\*,283(\*0(2C8-?202J. ?2\*- (/833(,8J\*F-2f.B/8(.3(3+348J? n B+?(  
??./3\*(.008J?3(?18(7 8C2. n 32-J8(? (7+3?(J. ?8,(?\*(?18(4+B/2J(? .3?8A(. -C(  
K\*+/C(B8(4,833+,8C(-\*?(?\*(4,838-?( 7 .?8,2./ (3+FF83?2E8(\*0(. -\*?18,(  
3?. ?+3(0\*(, (P2,3?( [ .?2\*-3( B8J. +38(\*0(?18( ,23N(\*0(? (B82-F( K2C8/5(  
48,J82E8C(.3(\*BE2\*+3/5(K,\*-Fa(. -C(?1+3(B. - ./(. -C(/.JN2-F(2-?8,83?(  
YK18,8.3A( 0\*(, ( 8G. 7 4/8A( -\*E8/( C8E8/\*4 7 8-?( B5( ?18( 3?. ?8( 2-(  
.44,\* .J183(?\*C8./K2?1(P2,3?( [ .?2\*-3(? , + 7 .>>32-J8(.CC,8332-F(?18(  
48,J82E8C(32F-202J. -?(3\*J28?./ (4,\*B/8 7 (\*0(?182,(2,,. ?2\*- ./( .J?2\*-3(  
. -C( 4\*332B/8( J/. 2 7 3>>J\*+/C( B8( J\*-32C8,8C( 2-?8,83?2-FZH( !\*J2./

!

"!%&!"

!



78C2.A(B5(J\*-0\*, 72-F(?\*(?1838(3\*J2./ (8G48J?. ?2\*-3A(. /3\*(, 82-0\*, J83( 3\*J2./ (J\*-J84?2\*-3(+ -C8, /52-F(?1838(8G48J?. ?2\*-3(. 3(-\*, 7./A(32-J8( \*?18,( E28K3( \*- (?18( 3+B@8J?( 7. ??8,( K\*+ /C-0?( , 8J82E8( J\*E8, .F8W( J\*E8, .F8(B5(3\*J2./ (78C2.(YC+8(?\*(K1.?(23(, 8F., C8C(. 3(2?3(4\*/?2J./ ( 0+-J?2\*-Z( 23( J\* 7 7 \*- /5( 48, J82E8C( .3( , 84, 838-?2-F( ?18( C2008, 8-( ?3?. -C4\*2-?3( ?1.?( \*-8(J. -(?. N8( \*- ( . -( 233+8A( ?1+3( , 8?, .J?2-F( \*?18,( E28K3( .3( , 8F., C3( ?\*( K1.?( P2, 3?( [ .?2\*-3( J. -( /8F?2? 7. ?8/5( B8( 48, J82E8C(. 3(C\*2-F(. 3(B82-F(/8F?2? 7. ?8H( (

( ( ( (

T18( ?12, C( . -C( / . 3?( . 348J?( \*0( ?18( 4, \*B/87( ?1.?( %( 1. E8( 2C8-?2028C(. 3(274\*, ?, .-?(?\*(. JJ\*+-?(0\*, (2-(., ?2J+/. ?2-F(. (78. -2-F0+/( , 834\*-38( ?\*( ?18( +-@+3?( 32?+. ?2\*- ( \*0(P2, 3?( [ .?2\*-3( 23(?18( 233+8( \*0( +, F8-J5( 2-( , 8C, 833( \*0( ?18( 32?+. ?2\*-H( T18( 4, 838-?( -8\*J\*/\*-2./ ( , 8J\*F-?2?\*- ( \*0(P2, 3?( [ .?2\*-3( 8-J\*+, .F83(., J237(?\*K., C3(?187H(%0( ?18( 3\*J2./ ( F, \*+4( K2?1( K12J1( 5\*+( 2C8-?205( 23( 48, J82E8C( .3( B. JNK., C3A(2-8008J?2E8A( . -C(, 2CC/8C(K2?1(?8-C8-J283(?\*K., C3(0./38( J\*-3J2\*+3-833A(?18, 8(23(.(F, 8. ?8,( /2N8/21\*\*C(?1.?(5\*+(K2// (B8J\* 78( + -3+, 8( \*0( 5\*+, 38/0( . -C( 5\*+, ( J+/?+, ./ ( 8-C8. E\*+, 3A( B8J. +38( 3+J1( J/. 273(4, 83+44\*38( . -(8423?8 7 \*/\*F2J./ ( . CE. -?. F8(\*E8, (P2, 3?( [ .?2\*-3( . B\*+?( ?18( K\*, ?1( \*0( ?182, (K. 53( \*0( B82-FH( T18( 353?8 72J(4, \*B/8 73( K12J1(. 008J?( ?18 7( . -C(?1\*38(?185(/\*E8( . -C(J., 8( . B\*+?( C2, 8J?/5( . -C( K12J1( ?185( 8G48, 28-J8( 3\*( J/8., /5( . 3( 2-@+3?2J83A( K2// ( J\*-?2-+8( ?\*( 4, \*J88C( \*- (?182, ( C8E. 3?. ?2-F( J\*+, 38( +-?2/( ?185( ., 8( J\*, , 8J?8CA( 7.N. 2418\*E-1(3)-1cmB98447. 12cmBT-?0. 24\*3-11Tf, (87. )

"!%!"

!

?18(4\*/?2J ./(-3? . - ?2 . ?2\* - (\*0(?18( 7 23,8J\*F-2f8C(J .?8F\*,5(\*0(P2,3?(  
 [ . ?2\* -3M(?18(2-@+3?2J8(\*0(B82-F,(8C+J8C(?\*( .(4 . J?2J .//5(+ - .33.2/.B/8(  
 3\*J2./(J .?8F\*,5A( . -C(/.3?(?18(+,F8-J5(\*0(J\*, ,8J?2-F(?18(2-@+3?2J8H(  
 ( ( ( ( ( ( (

%-( ?18( 0\*\*//K2-F( . - . /5323A( . -F8,( K2// B8( ,8E8./8C( ?\*( B8(  
 4., .C2F7 .?2J .//5(?18(,2F1?( ,834\* -38(?\*(353?8 7 2J(2-@+3?2J83H(P2,3?(%(  
 K2// ( . - . /5f8( ?18( 32F-202J. -J8( \*0( ?18( 0\*, 7( \*0( . -F8,A(?18-( ?18(  
 32F-202J. -J8(\*0(0\*, 7( 2-( . -F8,A(?18-( K1 .?(K\*+/C(B8( .(/8F?2 7 .?8(  
 J\*-?8-?(0\*(, (?123(0\*, 7 A( . -C(02- .//5(%K2// ( . - . /5f8(?18(/8F?2 ? 7 .J5(\*0(  
 C84/\*52-F( . -F8,H(T1 , \*+F1\*+?A(%(K2//31\*K(1\*K( . -( . -F, 5(, 834\* -38(  
 23(?18(,2F1?( ,834\* -38(?\*( .(32?+ .?2\* -(\*0(353?8 7 2J(2-@+3?2J8A(8348J2 .//5(  
 ? .N2-F(2-?\*(. JJ\*+-? (?18(?1, 88(C200J+/?283(\*+/?2-8C(. B\*E8(?1 . ?(3+J1(. (   
 32?+ .?2\* -(4, 838-?3H(T18(0\*\*//K2-F( . - . /5323(? , 8. ?3( . -F8,( 2-3\*0. , ( .3(2?(  
 J\*+/C( B8( +38C( .3( . -( 8008J?2E8( 7 8. -3( \*0( 8G4, 8332\* -M( J. 383( \*0(  
 +- , 8. 3\* - .B/8( . -F8,(K2//B8(/80?(?\*(?18(32C8H(  
 ( ( ( ( ( ( (

T18(0\*, 7(\*0( . -F8,(4,27 . , 2/5(8G4, 83383( .(38-38(\*0(+,F8-J5(  
 ?\*( ?23( ,8J2428-?H( T123( +,F8-J5( 2 7 4/283( -\*( \* -/5( ?18( \*B@8J?2E8(  
 2 7 4\*, ? . -J8(\*0( . -(233+8A(B+?( . /3\*(?18(2 7 4\*, ? . -J8(\*0(2?(B82-F( 7 . C8(  
 N- \*K-( ?\*(?18( ,8J2428-?H(%(2 7 4/283(?1 . ?( .( 7 . -2083? .?2\* -(\*0(+,F8-J5(  
 23( -8J833 ., 5( 0\*(, ?18( J\* 7 7 + -2J .?2\* -(\*0( ?18( 2-0\*, 7 .?2\* -( ?\*( B8(  
 3+JJ8330+H(T1+3(?18(8G4, 8332\* -(\*0(+,F8-J5 n /8?03(? . N8( . -(2-J, 8. 38(  
 \*0(E\*2J8(E\*/+ 7 8( .3( . -(8G. 7 4/8 n 0, . 7 83(?18(48,3\* -( . ?(K1\* 7(?18(  
 . -F8,(23(C2,8J?8C(.3(-\*?( \*- /5(/. JN2-F(2-0\*, 7 .?2\* -A(B+?( . /3\* /(. JN2-F(  
 ?18( J .4. J?25( Y2-( ?182,( -\*, 7 ./ ( K. 5( \*0( ,8J82E2-F( . -C(4, \*J8332-F(

2-0\*, 7.??\*-Z( ?\*( 4,\*48,/5( C8./ ( K2?1( J8,?.2-( .348J?3( \*(0( ?18( 3?, .2F1?0\*,K.,C(J\* 7 7+-2J.??\*-(\*(0(?18(2-0\*, 7.??\*-H(T123(J\*+/C(B8( B8J. +38\*(0(4,8@+C2J83(J\*-J8,-2-F(?18(2 7 4\*,?. -J8\*(0(K1.?(?1.?(?548( \*(0(48,3\*- (1.3(?\*(3.5A(\*,(.B\*+?(?18(?\*42J\*(?0(?18(J\* 7 7+-2J.??\*-(Y?18( ,2F1?8\*+3-833\*(?0(?18(P2,3?( [ .??\*-30(J.+38(2-(L.-.C.(0\*(,2-3? . -J8ZH( %-(?18(38J\*-C(J.38(2?(23(-\*?8K\*,?15A(1\*K8E8,A(?1.?(?18(4,8@+C2J8( 2-08J?3(?18(348.N8,A(32-J8(0\*(,?18(348.N8,(?\*(?.N8(.3(,8.3\*- .B/8(. ( 4\*32?2\*-(C88 7 8C(+,-,8.3\*- .B/8(23(0\*(,?18 7 (?\*(B8(+,-,8.3\*- .B/8H(%-( .-5(J.38A(2?(23(?18(.33+7 4?2\*-3(?1.?(?18(48,3\*-(1.3(7 .C8(?1.?(,8-C8,( ?18(-\*, 7./ (J\* 7 7+-2J.??\*-(2-8008J?2E8H(

( ( ( ( ( ( (

&-(8G4,8332\*-(\*(0(. -F8,(?1.?(0, . 7 83(\*-8(.3(B8.,2-F(.428J8( \*(0(2-0\*, 7.??\*-(?1.?(23(2 7 4\*,?. -(?\*(J\* 7 7+-2J.??\*(?\*(?18(,8J2428-?( 12F1/2F1?3(?18(348.N8,03(48,J84?2\*-(\*(0(4,8@+C2J83(2-(?18(,8J2428-?( ?1.?(+-C8, 7 2-8(?18(4\*332B2/?5\*(0(3+JJ8330+/(J\* 7 7+-2J.??\*-(\*(?18( 233+8(0,\* 7 (.J?+./5(\*JJ+, ,2-FH(&-(8G4,8332\*-(\*(0(. -F8,(C8 7 .-C3(?1.?( \* -8(,8J\*F-2f8(?1.?( \*-803(.33+7 4?2\*-3(.B\*+?(?18(K1\*/8(8E8-?(\*(?18( J\* 7 7+-2J.??\*-(J\*+/C(B8(K,\*-F\*(,A(2-(.-5(J.38A(1.E8(?\*(B8(38?(.32C8( 0\*(, ?18( J\* 7 7+-2J.??\*-( ?\*( 8008J?2E8/5( B8( C8/2E8,8C)( ?18( .-F,5( J\* 7 7+-2J.??\*-(4,\* 7 2383(?1. ?A(+ -C8,( ?1838( J\*-C2?2\*-3A( K1.?( ?18( ,8J2428-?(\*(?18(J\* 7 7+-2J.??\*-(K2//F8?(23(.K\*,?15(@+3?20J.??\*-(0\*(, ( 4+?2-F(?1838(4,8@+C2J83(.32C8(. -C(8-?8,?.2-2-F(?18(4\*332B2/?5( \*(0( /23?8-2-F(?\*(?18(2-?8,/\*J+?\*,(.3(. ,.??\*- ./(B82-F(J.4.B/8\*(0(2-32F1?( 2-?\*( ?18( 3+B@8J?( 7.??8,A( K1\*( 31\*+/C( \*-/5( B8( J\*-C8 7 -8C(.3( 2,,.??\*- ./(K18-(F2E8-(?18(7 \*3?(8G4/2J?(8E2C8-J8H(T18(. -F,5(48,3\*-(

"!%)!"

!



% ( K2// ( - \*K( ?+, -( ?\*( ?18( ]+83?2\*-( \*0( 1\*K( . -F,5(
 J\* 7 7+-2J .?2\*-( 7 . -2083?3(+,F8-J5H(&3(1.3(B88-(C23J+338CA(2?(\*-/5(
 7 .N83(38-38(0\* ,( ?18(/23?8-8,( ?\*(3?4(?\*/23?8->>. -C(3+348-C(3\* 7 8(\*0(
 ?182,( 4,8@+C2J83>>20(2?(23(+ -C8,3?)\*C(B5(?18(/23?8-8,( ?1. ?( ?\*(C\*(3\*(
 K\*+ /C(B8(2-(?182,(B83?(2-?8,83?(F2E8-(?18(32?+. ?2\*-(Y3\* 7 8?12-F(K12J1(
 . -F8,( 23(+380+/( 2-( J\* 7 7+-2J .?2-FZH(%-( ?\*?18,( K\*,C3A( \*- /5( 20( ?18(
 7 .?8,(23(4\*, ?, .58C(.3(+,F8-?(0\* ,( ?18(/23?8-8,( . -C(?1+3(.3(-88C2-F(?\*(
 ?.N8(4,8J8C8-J8(\*E8,( ?182,( \*?18,(2-?8,83?3H(%-(?18(J.38(?1. ?(?18(. -F8,(
 23(-?\* ( . -800\*, ?(?\*(J\* 7 7+-2J .?8( . -5?12-F(B+?(23(\*-/5(35 7 4? \* 7 .?2J(
 \*0( .(4.332\*-(?\*(C83? , \*5(\*,( 1+,?(3\* 7 8?12-FA( -\*( 7 .?8,( 20(?18( .J?(B8(
 ,2F1?( \* ,(- \*?A(2?(23(J8. ., /5( .(B.C(?12-FH(T18( ]+83?2\*-(?1+3( . ,2383(\*0(
 1\*K(?18(8G4,8332\*-( \*0( . -F8,(J. -(B8(,8J\*F-2f8C(.3(/8F?2? 7 .?8H((

T\*( /8F?2? 7 .?8( ?238/0A( ?18( . -F,5( 8G4,8332\*-( ?8 7 4?3( ?18(
 ,8J2428-?( ?\*( 388(?18( 8G4,8332\*-( .3(2, . .?2\* - ./ ( . -C(?1+3(B,2-F3(?18(
 32F-202J. -J8( \*0( ?18( @+CF8 7 8-?( \*0( 2, . .?2\* - ./?5A( K2?1( .// ( ?23(
 4,83+44\*32?2\* -3A(?\*(?18(3+,0. J8(\*0(?18(J\* 7 7+-2J .?2\*-H(T18(3\*/+?2\*-(
 ?\*(?18(4, \*B/8 7 (\*0( ,8J\*F-?2?\*->B.38C(2-@+3?2J8(23(?\*(B,8.N(?1, \*+F1(
 ?18(3+,0. J8(\*0( ./ (?18(B81. E2\*+,3(K12J1( . ,8(+3+ .//5( .33\*J2. ?8C(K2?1(
 3\* 7 8(3\* ,?( \*0(2, . .?2\* - ./?5(K12J1A(?\*(+38(\*+, (8G. 7 4/8A(P2,3?( [ . ?2\* -3(
 . ,8(J\* 7 7 \* -/5(3+B@8J?(?\*(H(T18(K.F8,( 23(?1. ?(?18( ,8J2428-?( \*0(?18(
 J\* 7 7+-2J .?2\*-(K2// (B8J\* 7 8( .?8-?2E8(?\*(?18(32F-202J. -J8(\*0(?182,(
 \*K- / \*\*N2-F0\*( , . -(8G4/ . - .?2\*-(?1. ?( .E\*2C3(?18(+3+ ./(.33+ 7 4?2\*-( \*0(
 8-?2,8/5( . .?2\* - ./ ( J\* 7 7+-2J .?2\*-H( &-( 2 7 4/2J .?2\*-( 23( ?1. ?(
 8G4,8332\* -3(\*0( . -F8,(J. -(B8(E8,5(C2E8,38( . -C( 7 8. -3(. /3\*(?1. ?(8. J1(
 \* -8(23(2-C2E2C+ .//5(32F-202J. -?(B8J. +38(8. J1(+ -3+JJ8330+/(. ?8 7 4?A(

"!%#!"

K18,8( . -F8,( 0.2/3( ?\*( B,8.N( ?1,\*+F1( ?18( B.,,28,( \*0( 4,8@+C2J8A( B8J\* 7 83( . - \*?18,A(-8K(2-3?. -J8(\*0(?18(+3+./.(,80.,.2-(?1.?(4\*?8-?2./(/23?8-8,3( 1.E8( B8J\* 7 8( . JJ+3? \* 7 8C( ?\*A( ?1+3( ,82-0\*,J2-F( ?18( .33\*J2.??\*-(B8?K88-(. -F8,(. -C(?18(8G4/. . .??\*-( \*0(2,,.??\*-. /2?5(.3( K8//(.3(8G4. -C2-F(?18(.,. -F8(\*0(418- \* 7 8-. (?1.?(?18(8G4/. . .??\*-( J\*E8,3(YK12J1(. /3\*(2 7 4/283( ?1.?(?18( 32?+.??\*-( 23( 7 \*,8( C2,8( ?1. -( 8G48J?8C(?\*(?18(/23?8-8,ZH(T123( 7 8. -3(?1.?(3+B38]+8-?(.??8 7 4?3(?\*( J\* 7 7 +-2J. ?8(?18(3. 7 8(J\* -?8-?(K2//(B8(2-J,8.32-F/5(4,833+,8C(?\*( 8 7 4/\*5(-8K(0\*, 7 3(\*0(. -F8,H(%-(,8./2?5A(3+J1(8G4,8332\*-3(J. -(?.N8( ?18(0\*, 7 (\*0(. (K1\*/83./8(+4,232-F(\*0( -+ 7 8,\*+3(B. -C3(K1\*(B/\*JN( 4+B/2J(?.,.-32?(. -C(. JJ833(?\*/(. -C(?1.?(?185(C88 7 (2 7 4\*,?. -? n 3+J1( .3(C+,2-F(?18( U \* 1. KN( !?. -C\*00(YL\*+/?1.,C(<:Z n \*,(.3(. (38??/8,( B8J\* 7 2-F(. (J/\*38(0,28-C(\*0(. (P2,3?( [ .??\*-(. -C(?18-(.(.(J8,?. 2-(4\*2-?( 1.E2-F(. (C2J3+332\*-(./ \*-F(?18(/2- 83(Y20(- 88C(B8Z(\*0(?18(4.??8,-(\*0( . -F8,(Y./?1 \*+F1(2?(J\*+/C(B8(2-02-2?8/5(F8-?/8ZH(&/?1 \*+F1(2?(23(\*0?8-( ?1 \*+F1(?1.?(. -F8,(2-E\*/E83(3J,8. 7 2-FA(58//2-FA(E2\*/8-J8A(8?JHA(20(K8( ,8J\*//8J?(8E8-(0\*,(. (08K(38J\*-C3(K8(J. -(./(?12-N(\*0(E8,5(a+- . -F,5b( 7. -2083?. ??\* -3(\*0(. -F8,(?1.?(.,8(58?(E8,5(7+J1(. -F,5H(

( ( ( ( ( ( (

[ \*K(%(K2//(?+, -(?\*(?18(233+8(\*0(K1.?(N2-C(\*0(4,833+,8(?18( 0\*, 7(\*0(. -F8,(8G8,?3\*(-(?18(J\* -?8-?3(\*0(/8F2?2 7 .?8(. -F,5(3?. ?8 7 8-?3( . -C(31\*K(?1.?(2?(23(48,08J?/5(3+2?8C(?\*(8G4,8332\*-( \*0(,8J\*F-2??\*-> B.38C( 2-@+3?2J83H( T18( 7 \*3?( 2 7 4\*,?. -(? 08.?,+,8( \*0( . -F,5( J\* 7 7 +-2J.??\*-(?1.?(%(2C8-?2028C(23(?1.?(2?(48, 7 2?3(\*-8(?\*(8G4\*38( 48,J84?+./(/2 7 2?.??\* -3(?1.?(K\*+/C(\*?18,K238(-\*(?18, 7 2?(.(,8J2428-?(

!  
!  
!"&,"!

?\*( 388( K1.?( ?18( J\* 7 7 + -2J. ?\*(, 23( ?,52-F( ?\*( 8G4\*38H( &-F8,( 23( -8J833.,5(2-(\*,C8,(?\*( 7 .N8(?18(?\*42J(\*0(J\* 7 7 + -2J. ?2\*- (E232B/8(.3( ?18(J\* 7 7 + -2J. ?\*(,3883(2?A( .-C(\*-/5(?18-(23(\*-8( .B/8(?\*(?+CF8(2?3( K\*,?1( .-C(18-J80\*,?1(,88E./+. ?8(?18(?,+?10+/-833(\*0(\*-803(\*,2F2- ./ (48,J84?+./ (E./+83H(T123(23(\*-/5(-8J833.,5(20(?18,8(23( .(48,J84?+./ (4,8?+C2J8(?1. ?(/283(2-(?18(K.5(\*0(K.5(\*0(K1.?(23(2-?8-C8C(?\*(B8( C8/2E8,8C( .-C( 20( ?18,8( 23( .-( 2-?+3?2J8( 2-( J\*-32C8,2-F( ?18( J\* 7 7 + -2J. ?2\*-.3(3\* 7 81\*K(+-.B/8(?\*(4,\*E2C8(K1.?(2?(23(2-?8-C8C( ?\*(4,\*E2C8H( ( (

( (

Q.3?/5A(?18(J+83?2\*-(.,2383(\*0(1\*K(\*-8(J\*+/C(/8F2?27. ?8/5(B8( 3\*( J8,?.2-(.3( ?\*( +38( .-F8, n.3( /2C( \*+?( .B\*E8 n ?\*( 8G4,833( 3\* 7 8?12-FH( &3(K8(1.E8( ./,8.C5(388-A( .-F8,(,8/283(\*-(.(J/.278C( 4\*32?2\*-( \*0( 8423?87\*/F2J./(.+?1\*,2?5H(T18( J+83?2\*-( 23'( J.-(. (32?+. ?2\*-( \*JJ+,(2-(K12J1(3\* 7 8\*-8 n K2?1\*+?(,8J\*+,38(?\*(.-F8, n K\*+/C(B8(2-(?18(4\*32?2\*-( ?\*( J\* 7 7 + -2J. ?8(3\* 7 8?12-F(?\*(.-?\*18,( 48,3\*-(K1\*A(K8,8(2?( -\*?(J\* 7 7 + -2J. ?8C(A(K\*+/C(8-C(+4(/\*32-F(\*+?( \*- (3\* 7 8(F\*\*C(\*,(J\*-?2-+2-F(?\*(J\*-?,2B+?8(?\*(2-?+3?2J8(C8342?8(B82-F( 2-(.(4\*32?2\*-( ?\*( 32F-202J.-?/5(,8C+J8( 2?j( T123( .33+783( ?1.?( ?18( 348.N8,A(N-\*K2-F(K8//(?18(J+/?+,8(?1. ?(?18(,8J2428-?(2-1.B?23A(N-\*K3( ?185(K\*+/C(B8(2-3+/. ?8C(0,\* 7(F.2-2-F(?123(N-\*K/8CF8(. -C(/3\*(?1.?( 3+J1(2-3+/. ?2\*-(K\*+/C(B8(3\* 7 81\*K(1.,70+H(T123( 7+3?(2-E\*/E8( 3\* 7 8(F\*\*C(,8.3\*-3(0\*(, ?12-N2-F(?1.?(?18(,8J2428-?(23(/.JN2-F(2-( 32F-202J.-?(N-\*K/8CF8H(T18(/8F2?27.J5(\*0(?18(. -F,5(8G4,8332\*-(./3\*( ,8]+2,830,\* 7(?18(,8J2428-?(.(J\*-J84?+./J/\*38C-833(\*0(?182,(1\*,2f\*-(

"!&#!"

!







7\*C8/( B5( ?18( F8-8,./( 4+B/2J( B8J.+38( \*0( ?182,( 2-?8,- ./2f8C( .-C( 2-J\*,8J?(- \*?2\*-3(\*0(P2,3?( [ .?2\*-(3?.?+3H(U\*3?(274\*,?.-?/5A(3+J1(. ( ,834\*-38(7+3?(./3\*(C8./ (K2?1(?18(+,F8-J5(\*0(J1.-F8(,8]+2,8C(B5(. ( 32?+.?2\*-(\*(0\*-F\*2-F(2-@+3?2J8H(&-F8,(2-(J\*77+-2J.?2\*-A(.JJ\*,C2-F( ?\*(75(. -./5323A(23(. -( .44,\*4,2.?8(,8.J?2\*-(?\*(8G.J?/5(?123(N2-C(\*0( 4,\*B/87(C+8(?\*2?3(.B2/2?5(?\*(B54.33(?18(4,\*B/873(@+3?(-\*?8C#(T18( 274/2J.?2\*-( \*0(?123(23(?1.?(.-F8,(31\*+/C(B8(/\*\*N8C(.?(K2?1(F,8.?8,( 3574.?15A(8348J2.//5(2-(J.383(2-(K12

!  
!"&&!"

**#!8 -1- .=-!21!8 -1-/90 . I!9J-!) 52K: , -T\$ /K-4!  
H/40=/5!+ ; -E90=/5!# , I: D - .9!B09J!9J-!+- . K090F097!  
M,0 . =0E5-!**

!

W2. -J.(68,088A(127\*-(P,.38,(I -2E8,32?5(

(

!

&JJ\*,C2-F(?\*(?18(J/\*3+,8>B.38C( , .C2J./((3N84?2J./(. ,F+ 7 8-?A(2?(23(  
274\*332B/8(0\* ,( +3(?\*(1 .E8(N-\*K/8CF8(\*0(?18( 7 .0\* ,2?5(\*0(8E8,5C.5(  
4,\*4\*32?2\*-3(B8J .+38(K8(J . -0?(1 .E8(N-\*K/8CF8(\*0(?18(C8-2./3(\*0(?18(  
3N84?2J./((154\*?18383(?185(8-?.2/(Y#,2?J1 . ,C(=iZH(%-(L1 .4?8,(i(\*0(123(

"!&'!"

!

.,F+8( ?1.?( ?18( 38-32?2E2?5( 4,2-J24/8( J. -A( 2-C88C( 4,\*E2C8( ?18( -8J833.,5(J\*+-?8,8G. 7 4/83(?\*(?18(J/\*3+,8(4,2-J24/8 n (3\*7 8?12-F( #,2?J1.,C( C8-283( B8J.+38( 18( ?12-N3( ?18( 38-32?2E2?5( 4,2-J24/8( C8 7 . -C3( .-( 8E./+. ?2\*-( 4,\*J833( ?1.?( J. - -\*?( B8( .44/28C( K18-( J\*-32C8,2-F( 3N84?2J./ ( 3J8-.,2\*3H( T123( 4.48,( K2//( 31\*K( ?1.?( #,2?J1.,C03( J\*-J8,-3( .,8( -\*?( 3+002J28-?( ,8.3\*-( ?\*( ,8?8J?( ?18( 38-32?2E2?5( 4,2-J24/8( .3( .( 3\*/+?2\*-( ?\*( J/\*3+,8>B.38C( ,.C2J./ ( 3N84?2J23 7 H((

(

!\*A(K1.?(23(?18(J/\*3+,8>B.38C(, .C2J./ (3N84?2J./ (.,F+7 8-?( . -C(1\*K(J. -(,8?8J?2-F(?18(J/\*3+,8(4,2-J24/8(C808. ?(2?j(T18(.,F+7 8-?( ,8/283(\*-(3\*7 8?12-F(J. //8C(?18(J/\*3+,8(4,2-J24/8A(K12J1(3?. ?83(?1.?(

1. E8(N- \*K/8CF8(\*0(8E8,5C.5(4,\*4\*32?)\*-3(Y#,2?J1.,C(=iZh([ \*KA(?123( .,F+78-(?38873(?\*(B8(C8C+J?E8/5(E./2CA(3\*(2-(\*,C8,(?\*(C808.?(2?(K8( 7+3?(C8-5(?18(?,+?1(\*0(\*-8(\*0(?18(4,872383H(#,87238(<388773(J)+2?8( C2002J+/?(?\*(,80+?8H(T18(K1\*/8(4\*2-?(?0(3N84?2J.//(154\*?18383(23(?1.?( K8( .,8(+-.B/8(?\*(N-\*K(?185(. ,8(0./38n( (?182,(C8-2./3( .,8A(B5( C802-2?2\*-A(+ -N-\*K.B/8(Y#,2?J1.,C(=iZh(T18,80\*,8A(20(K8( .,8(?\*( C808.?(?123(. ,F+78-?A(K8(7+3?(C8-5(#,87238(:H(" -8(K.5(?\*(C\*(?123( 23(?\*(C8-5(?18(J/\*3+,8(4,2-J24/8A(B8J.+38(20(?18(J/\*3+,8(4,2-J24/8(23( 0./38A(?18-(K8(. ,8(.B/8(?\*(1.E8(N-\*K/8CF8(\*0(8E8,5C.5(4,\*4\*32?)\*-3( K2?1\*+?( N-\*K2-F(?18( C8-2./(\*0( 3\*78( 3N84?2J.//( 154\*?18383( Y#,2?J1.,C(=iZh(T123(23(?18(3\*/+?2\*-(?1.?(%(C808-C(2-(?123(4.48,H(( (

"-8(K.5(?\*(C8-5(?18(J/\*3+,8(4,2-J24/8(23(?\*(.448./(?\*(?18( 38-32?E2?5(4,2-J24/8(Y#,2?J1.,C(=iZh(T18(38-32?E2?5(4,2-J24/8((3?.?83( ?1. ?A(2-(\*,C8,(0\*,(. (3+B@8J?(?\*(B8(J\*-32C8,8C(.3(1.E2-F(N-\*K/8CF8( ?1.?(4(YK18,8(4(23(3\*78(4,\*4\*32?)\*-Za(?18(3+B@8J?03(?,+8(B8/280(7+3?( B8(3+J1(?1. ?A(20(4(1.C(B88-(0./38(Y2H8H(2-(?18(-8.,83?(4\*332B/8(K\*/C( K18,8(4(23(0./38Za(?18(3+B@8J?( K\*+/C(-\*(1.E8(B8/28E8C(?1.?(4( Y#,2?J1.,C(<=A(:Zh(%-(?\*18,(K\*,C3A(?18(3+B@8J?03(B8/280(7+3?(B8( 38-32?E2E8(?\*(?18(0.J?3(2-(\*,C8,(?\*(B8(J\*-32C8,8C(N-\*K/8CF8( Y#,2?J1.,C(<=Zh(T123(4,2-J24/8A(K18-(?N8-(.3(. (3+002J28-(J\*-C2?2\*-( 0\*(N-\*K/8CF8A(//\*K3(+3(?\*(4,\*E2C8(J\*+-?8,8G.74/83(?\*(?18(J/\*3+,8( 4,2-J24/8nJ.383(K18,8(K8(N-\*K(. (4,\*4\*32?)\*-(-C(K1.?(2?(8-?.2/3( Y3+J1(.3'(%0(.23(?,+8A(?18-(B(7+3?(B8(?,+8ZA(B+?(K8(C\*-0?(N-\*K(?1.?( ?18(4,\*4\*32?)\*-(8-?.2/8C(YBZ(23(?,+8(Y#,2?J1.,C(=^Zh(P\*(,2-3?.-J8A(

"!&!)"





C8C+J?2\*-A(0\*,(2-3?. -J8H(T\*(2//+3?,..?8(0+3?(1\*K(/.,F8(?18(F.4(2-(  
J8,?.2-?5(23(B8?K88-(N-\*K/8CF8(F.2-8C(B5(2-C+J?2\*-(.-C(  
N-\*K/8CF8(F.2-8C(B5(C8C+J?2\*-A(%(2-?,\*C+J8(?18(0\*//K2-F(4.2,(\*(0(  
8G.74/83H(L\*-32C8,(?18(0\*//K2-F(C8C+J?2E8(.,F+78-?H(Y<Z(&//(0231(  
/2E8(2-(K.?8,H(Y:Z(!./7\*-(.,8(0231H(YcZ(T18,80\*,8A(3./7\*-(/2E8(2-(  
K.?8,H(%?23(-\*?(E8,5(/2N8/5A(2-(0.J?2?03(274\*332B/8A(?1.??(K8(J\*+/C(B8(  
K,\*-F(.B\*+?(YcZA(4,\*E2C8C(?1.?Y<Z(. -C(Y:Z(.,8(J\*.,8J?H(%-(J\*-?,.3?A(  
3+44\*38(?1.?(%(1.E8(/K.53(.,,2E8C(\*-(?278(?\*(75(D';;.7(J/.33A(  
K18-(%0E8(/80?(1\*78(.?(^';;.7H(%0(%(2-08,(?1.?(%(K2//(?18,80\*,8A(  
./K.53(B8(\*-(?278(?\*(75(D';;.7(J/.33(20(%(/8.E8(.?(^';;.7A(%(K2//(  
B8(7.N2-F(.J/.27(B.38C(\*-(2-C+J?2E8(,8.3\*-2-FH(\8(J.-388(?1.?(  
?123(?548(\*0(J/.27(23(7\*,8(/2N8/5(?\*(B8(K,\*-FH(T1\*+F1(2?(7.5(B8(

!  
!" , !"



7.5(1.E8(J1.-F8CA(K8(. ,8(-\*(,8]+2,8C(?\*(.B.-C\*-(2?H(%?(23(3?2//  
, .?2\*-. /(?\*(B8/28E8(?18(4, \*4\*32?2\*-(2-( ]+83?2\*-(.-C(K8(3?2//(\*+F1?(?\*(  
B8/28E8(2?H( \ 8(. ,8( 78,8/5(. JN-\*K/8CF2-F(?1.(?\*(+, (B8/280(23(/833(  
38J+,8A(. -C(-\*( ]+2?8(C838,E2-F(\*0(?18(-. 78(IN-\*K/8CF80H((  
(  
(P2- ./5A( #,2?J1.,C( J/.273( ?1.(? ?18( 38-32?2E2?5( 4,2-J24/8A(  
+-C8,3??\*C( J\*,8J?/5A( C\*83-0?( .J?+./5( 4,\*E2C8( ?18(  
J\*+-?8,8G. 74/83(?\*(?18(J/\*3+,8(4,2-J24/8(?1.(?2?03(78.-?(?\*(Y==ZH(&3(  
-\*?8C(8.,/28,(2-(?18(B\*\*NA(?18(4\*332B/8(K\*-/C(K8(7+3?(J\*-32C8,(  
K18-(C8?8,72-2-F(20(. (B8/280(23(38-32?2E8(23(?18(-8.,83?(4\*332B/8(  
K\*-/C(K18,8(?18(4, \*4\*32?2\*-(B82-F(J\*-32C8,8C(23(0./38A(. -C(?18(  
3+B#8J?(+383(a?18(3. 78(B8/280>0\*,72-F(78?1\*C(.3(2-(?18(.J?+./(  
K\*-/Cb(Y#,2?J1.,C(: iZH(%-(J1.4?8,(iA(#,2?J1.,C(872-C3(+3(?1.(?aK1.(?  
J\*-3?2?+?83(\*-803(B8/280>0\*,72-F(78?1\*C(-88C3(?\*(B8(+ -C8,3??\*C(  
8G?8,-./23?2J.//5b(Y==Z n \*+?32C8(?18(72-C(\*0(?18(.F8-?H(T123(78.-3(  
?1.(?aK1.(?J\*+-?3(23(K1.(?2-(0.J?(F.E8(,238(?\*(5\*+, (B8/280(. -C(-\*(?  
YK12J1(J\*+/C(B8(C2008,8-?Z(K1.(?5\*+(B8/28E8(F.E8(,238(?\*(5\*+,(  
B8/280b(Y==ZH(T123(23(J8,?.2-/5(?,+8H( \ 8(K\*+/C-0?(K.-?(?\*(  
723.??,2B+?8(N-\*K/8CF8(?\*(.(3+B#8J?(K1\*(C\*83-0?(.J?+./5(N-\*K(?18(  
4,\*4\*32?2\*-(2-( ]+83?2\*-A(C+8(?\*(?\*(+, (2-J\*,8J?(8E./+ .?2\*-( \*0(?182,(  
B8/280(.3(38-32?2E8(K18-(2?(23-0?H( \ 8(7+3?(2C8-?205(1\*K(?185(. ,8(  
0\*,72-F(?182,(B8/2803A2-(\*,C8,(?\*(C8?8,72-8(K1.(?B8/2803(?185(K\*+/C(  
0\*,7(2-(J8,?.2-(4\*332B/8(K\*-/C3H((  
(

"! #!"

( \$\*K8E8,A(#,2?J1.,C(F\*83(\*-(?\*(3.5(?1.?A(2-(?18(J.38(\*0(3N84?2J./154\*?18383A(K8(J.--\*?(+38(?18(38-32?2E?25(4,2-J24/8(?\*(31\*K(?1.?.(3+B@8J?(23(+-.B/8(?\*(N-\*K(?1.?(?185(. ,8(2-(.(F2E8-(3N84?2J./3J8-. ,2\*A(B8J.+38(?18(3. 78(B8/280>0\*, 72-F(78?1\*C(+38C(B5(?18(3+B@8J?(2-(?18( ,8./K\*,/C(23(-\*?(.E./ .B/8(?\*(?187(2-(?18(3N84?2J./3J8-. ,2\*H(#,2?J1.,C(J/.273(?1.?3N84?2J./154\*?18383(a2-E\*/E8(?18(.F8-?0\*, 72-F(B8/2803(2-(E8,5(C2008,8-?(K.530,\*7(1\*K(?185(K\*+/C(0\*, 7(?1\*38(B8/2803(K8,8(?18(3N84?2J./154\*?18323(-\*?(?\*( \*B?.2-b(Y==Z#(T.N8(?18(8G. 74/8(\*0(?18(B.,2-(2-(.(E.?(3N84?2J./154\*?18323H(T18(B8/280(?1.?(\*-8(23(-\*?(.(B.,2-(2-(.(E.?(23(0\*, 78C(+32-F(a.( 72G?+,8(\*0(48,J84?2\*-(.-C(2-08,8-J8b(Y#,2?J1.,C(==Z#(#,2?J1.,C(. ,F+83(?1.?K8(J.--\*?(+38(?18(38-32?2E?25(4,2-J24/8(?\*(31\*K(?1.?.(3+B@8J?(23(+-.B/8(?\*(N-\*K(?1.?(?185(. ,8(.(B.,2-(2-(.(E.?A(B8J.+38(?18( 3. 78( B8/280( 0\*, 72-F( 78?1\*C n 48,J84?2\*- n 23(+-.E./ .B/8(?\*(?18(8-E.??8C(3+B@8J?H(\$8(3?.?83(?1.?(?18(8-E.??8C(3+B@8J?(aC\*83(-\*?(48,J82E8(. -5?12-Fb(Y#,2?J1.,C(==Z#(C23.F,88H(T18(8-E.??8C(3+B@8J?(23(48,J82E2-F(K1.?( .448.,3(?\*(B8(.- (8E8,5C.5(K\*,/Ca(@+3?/(2N8(?182(.,8.>K\*,/C(J\*+-?8,4.,?H(T185(. ,8(B\*?1(1.E2-F(48,J84?2\*-3(\*0(K.N2-F(+4A(F\*2-F(?\*(K\*,NA(8?J8?8.,H(T18(\*-/5(C2008,8-J8(23(?18(3\*+,J8(\*0(?1\*38(48,J84?+./8G48,28-J83H(P\*,(?18( ,8.>K\*,/C(3+B@8J?A(?18(3\*+,J8(23(?18(.J?+./K\*,/Ca(K12/8(0\*,(?182,(8-E.??8C(J\*+-?8,4.,?A(?18(3\*+,J8(23(?18(3?27+/.?2\*(-0,\*7(?18(8E2/(3J28-?23?H(W\*?1(3+B@8J?3(. ,8( 1.E2-F(48,J84?2\*-3(\*0(/208>2N8(8G48,28-J83(. -C(2-08.,2-F(?1.? (?1838( 8G48,28-J83( ,84,838-?(

!

"! \$!"

!

+- .E./ .B/8(?\*(?18(8-E.??8C(3+B@8J?(20(K8(J\*-32C8,(48,J84?2\*-(?\*(B8(
 3\*78?12-F(/2N8(.-(274,2-?2-F(\*0(8G?8,-./(\*B@8J?3(\*-(?18(3+B@8J?03(
 72-C#(T123(K\*+/C(B8(.-(8G?8,-./23?(J\*-J84?2\*-(\*(0(48,J84?2\*-n
 K1.?(C8?8,72-83(?18(B8/280(0\*,72-F(78?1\*C(23(?18(3\*+,J8(\*0(?18(
 48,J84?2\*-3A(.?18,(?1.-(?18(2-?8,-./4,\*J833(2-(?18(3+B@8J?03(72-C#((
 (
 (\$\*K8E8,A(K8(J\*+/C(2-3?8.C(E28K(48,J84?2\*-(.3(?18(3+B@8J?03(
 72-C(,8J8E2-F(. -C(2-?8,4,8?2-F(3?27+/2(Y?123(K\*+/C(B8(.-(
 2-?8,-./23?(J\*-J84?2\*-(\*(0(48,J84?2\*-n(K1.?(C8?8,72-83(?18(B8/280(
 0\*,72-F(78?1\*C(23(?18(2-?8,-./4,\*J833(\*JJ+,,2-F(2-(?18(3+B@8J?03(
 72-C#(T18(38-32?E2?5(4,2-J24/8(78,8/5(??.?83(?1.?(K8(7+3?2C8-?205(
 K1.?(F.E8(.238(?\*(?18(B8/280(a8G?8,-./23?J.//5b(Y#,2?J1.,C(==Zn(
 78.-2-F(?1.?(?18(0.J?(\*(K1.?(B8/280>0\*,72-F(78?1\*C(K.3(+38C#(
 -88C(-\*(B8(a.JJ8332B/8(?\*(?18(.F8-?b(Y#,2?J1.,C(<<Z#(L\*-,.,5(?\*(
 K1.?(#,2?J1.,C(38873(?\*(?12-N#(?18(38-32?E2?5(4,2-J24/8(7.N83(-\*(
 J/.27(.B\*+?(1\*K(K8(\*+F1?(?\*(+-C8,3?.-C#(\*,(C802-8#(?18(B8/280>
 0\*,72-F(78?1\*C(2?38/0#(T18,80\*,8#(K8(. ,8(.B/8(?\*(+38#(K2?12-( ,8.3\*-A(
 .-5(C802-2?2\*-(\*(0(48,J84?2\*-(K8(J1\*\*38#(2-J/+C2-F(?18(2-?8,-./23?(
 C802-2?2\*-(C83J,2B8C(.B\*E8#(I32-F(.-(2-?8,-./23?(C802-2?2\*-(\*(0(
 48,J84?2\*-(78.-3(?1.?(?18(B8/280>0\*,72-F(78?1\*C(23(.E./ .B/8(?\*(
 B\*?1(?18( ,8./ (K\* ,/C(3+B@8J?( .-C(?182,(8-E.??8C(J\*+-?8,4.,#(T123(
 .//K3(+3(?\*(+38(?18(38-32?E2?5(4,2-J24/8(?\*(8E./+ .?8(?18(B8/280\*(0(
 ?18(8-E.??8C(3+B@8J?A(31\*K2-F(?1.?(?185(J.-0?(N-\*K(K18?18,(?185(
 .,8(. (B.,2-(2-(.(E.#( \8( ,8(?18,8B5(.B/8(?\*(4,\*C+J8( ,8/8E.-?(

"! %!"

J\*+-?8,8G. 7 4/83( ?\*( ?18(J/\*3+,8(4,2-J24/8A( @+3?)( .3( ?18(38-32??E2?5(4,2-J24/8(K.3(7 8. -?(?)\*H((  
(  
( %-( J\*-J/+32\*-A( #,??J1.,C03( J\*-J8,-3( .B\*+?( +32-F( ?18(38-32??E2?5(4,2-J24/8(?\*(C808.?(?18(J/\*3+,8>B.38C(.,.C2J../(3N84?2J../(.,F+7 8-?(.,8(-\*?(.3(?,\*+B/2-F(.3(18(3+FF83?3H( \ 8(J.- (8G4/.2-(?18(J/\*3+,8( 4,2-J24/803( 2-?+2??E8( 4/.+32B2/?2?5( K2?1\*+?( 7 .N2-F( 2?(-8J833.,2/5( ?,+8A( K8( C\*( -\*?( 1.E8( ?\*( .B.-C\*-( ?18(38-32??E2?5(4,2-J24/8( @+3?(B8J. +38(2?(C\*83-0?(.//?K(0\*(,2-C+J?E8(N-\*K/8CF8A( .-C(K2?1(.(4,\*48,(+ -C8,3?. -C2-F(\*0(K1.?(?18(38-32??E2?5(4,2-J24/8(,8]+2,83A(K8(J.-(+38(2?)\*?(C8-5(?18(J/\*3+,8(4,2-J24/8H(T18,80\*,8A(?123(3\*/+?2\*- (?\*( ?18(3N84?2J03( J\*-J8,-( 3?2// (388 7 3( ]+2?8( 4/.+32B/8H( %0( #,??J1.,C(K23183(?\*(C8-5(?18(4/.+32B2/?2?5(\*0(+32-F(?18(38-32??E2?5(4,2-J24/8(?\*(,8@8J?(?18(J/\*3+,8(4,2-J24/8A( 18(K2//(-88C(?\*(4,\*E2C8(.-?\*18,(.??\*-. /8H(!

!

(  
(

\ \*.N3(L2?8C(

(

#,??J1.,Ca(S+ -J.-H(R423?8 7 \*/\*F5H(: -C(8CH(#./F,.E8(U .J 7 2//.-A(: ;<iH

(  
(

(

!

"! &!"

!



\ 12/8( ?18( ?18, .48+?2J( +-C8,3?. -C2-F( \*0( ( 23( +B2]+2?+3( 2-(  
38J\*-C.,5( /2?, .?+,8A( 3+J1( 4,8E./8-J8( 23( \*48-( ?\*( ]+83?2\*-H( T123(  
,8.C2-F(1.3(, .?18,(4,\*B/8 7 .?2J(2 7 4/2J. ?2\*-3(B8J.+38(2(?/2N8-3(?18(  
412/\*3\*412J./ ( 4,\*B/8 7 3( ?1.?( 412/\*3\*418,3( 8-J\*+-?8,( ?\*( 7 8-?./(  
.00/2J?2\*-3H(T18(48,E.32E8-833(\*0(?18(?18, .48+?2J(,8.C2-F(,8 7 .2-3(  
C+B2?. B/8A(32-J8(?123(C23J+332\*-(8 7 8,F8C(0,\* 7( .(3 7 .//(-+ 7 B8,( \*0(  
,8 7 .,N3( 0\*+-C( 2-( \ 2??F8-3?82-03( K\*,N( Y!.E2JN85( :;<^'( =`ZH(  
S8342?8(?18(0,8]+8-J5(\*0(?18(?18, .48+?2J(,8.C2-F(. 7 \*-F(3J1\*./.,3A(  
2?(23(-\*?(?18( 7 \*3?(.44,\*4,2.?8(K.5(?\*(2-?8,4,8?( H( \ 2??F8-3?82-03(  
?8G?(388N3(?\*( ./?8,(1\*K(K8(?12-N( .B\*+?(/. -F+.F8( .-C( .B\*+?(?18(  
4,.J?238(\*0( 412/\*3\*415( 2?38/0H( ( 23( 7 \*,8( .44,\*4,2.?8/5( ,8.C( .3(  
8-J\*+, .F2-F(+3?\*(,8?+,-(?\*(?18(?.,C2?2\*- ./ (4,.J?238(\*0(412/\*3\*415(p(  
?1.?(23(?1,\*+F1(34\*N8-(C2./\*F+8(K2?1(\*?18,3H((

(

( %- ( (<;=A( \ 2??F8-3?82-(3?.?83(?1.?'((

d%- (412/\*3\*415e( k(K8( 7 .5(-\*?( .CE. -J8( .-5(N2-C(\*0(?18\*,5H(  
T18,8( 7 +3?( -\*?( B8( .-5?12-F( 154\*?18?2J./ ( 2-( \*+, (

!  
!" (!"

!

B8K2?J1 7 8 - ?(\*0(\*+, (+-C8,3?. -C2-F(B5(?18(,83\*+,J83(\*0(\*+,  
/. -F+.F8H(

(

( %-( 7 . -5( K .53( ?123( 3+FF83?2\*-( .B\*+?( 1\*K( ?\*( 4, .J?238(  
412/\*3\*415( 23( C2. 7 8?,2J. //5( \*44\*38C( ?\*( ?18( K.5( 2?( 1.3( B88-(  
4, .J?238C(?1, \*+F1\*+?(?18(123?\*,5(\*0(412/\*3\*415(p(?1. ?23A(?18(4, .J?238(  
\*0(4,\*4\*32-F(. (C\*J?,2-8(?\*(B8(J,2?2]+8C(. -C(. - ./5f8C(B5(\*?18,3(2-(  
. -( .??8 7 4?(?\*(.,2E8(J/\*38,(?\*(?18(?,+?1H(&CC2?2\* - ./5A( \ 2??F8-3?82-(  
C\*83(-\*?(J,8. ?8(123(\*K-(348J2./2f8C(E\*J. B+/. ,5(?\*(8G4,833(12 7 38/0(  
p(18(.J?+. //5(2-?,\*C+J83(08K(\*,2F2- ./(?8, 7 3(Y2H8H(/. -F+. F8(F. 7 83ZH(  
I -/2N8(412/\*3\*418,3(3+J1(.3(o. -?(. -C(\$ 8F8/(K1\*(+38(J\*-E\*/+?8C(  
/. -F+.F8(\*0(?182,\*K-(7 .N2-F(K12J1(-88C3(?\*(B8(C8J2418,8C(B80\*,8(  
\*-8( J. -( B8F2-( ?\*(. - ./5f8( ?182,( .,F+ 7 8-?3cA( \ 2??F8-3?82-( +383(  
)

"! )!"

!

J. -(B8/2-N8C(Y?1\*+F1(-\*?(-8J833..2/5(2-(?18(\*,C8,(?185(.448..Z(2-(  
2-?,2J.?8(K.53H(" -8(72F1?(B8(?874?8C(?\*(J\*-3?,+J?(.(438+C\*>?18\*,5(  
B5(7.-24+/.?2-F(\ 2??F8-3?82-03(C2E8,38(,87.,N3A(\*,(?\*(274\*38(.(  
C\*J?,2-8(+4\*-(?18(?8G?A(B+?(?\*(C\*(3\*(K\*+/C(B8(2-J\*-323?8-?(K?1(123(  
.27H( W8J.+38( 18( 4,838-?3( -\* ( C\*J?,2-8A( 2?( J.- ( B8( 2778-38/5(  
J1.//8-F2-F(?\*(02F+,8(\*+?(1\*K(?\*(8E8-(,834\*-C(?\*( \ 2??F8-3?82-03(  
K,2?2-F(32-J8A(2-(412/\*3\*415(K8(. ,8(?.+F1?(?\*(,834\*-C(?\*(.(?8G?(B5(  
J,2?2J.//5(8G.72-2-F(?18(. ,F+78-?(4+?(0\*,?1H(U\*,8\*E8,A(?1,\*+F1\*+?(  
?18( 123?\* ,5( \*0( ?2\*,/?(J,)-1(2\*415)10(?)-11(387)1(. ,)F+78CF2-1(\*)

!  
!"\*!"



?18(.008J?2\*-3(\*0(?18(3\*+/(K18-(2?(C832,83A(\*,(J/2-F3(?\*A(\*,(  
,8@8J?3A(\*,(,8J\*2/3(0,\*7A(3\*78?12-FH(%-(?123(K.5A(/2?)/8(B5(  
/2?)/8A(%/8.,-?(?\*(+ -C8,3?. -C(K1.?(?12-F3?18(K\*,C3A(K12J1(%(  
18.,C(+?8,8C2-(?182,(,8348J?2E8(4/.J83(2-(E.,2\*+3(38-?8-J83(  
32F-2028C#(&-C(\*-J8(%(F\*?(75(?\*-F+8(. ,\*+-C(?1838(32F-3A(%(  
+38C(?187(?\*(8G4,833(75(K23183(Y#%(<ZH((

(

( &+F+3?2-803(J/.27(18,8(,80/8J?3(?18(J\*77\*-/5(18/C(-\*?2\*-(-  
.B\*+?(C8E8/\*42-F(?18(3N2//(\*0/.-F+.F8A(K12J1(23(?1.?(\*-8(/8.,-3(B5(  
,8J\*F-2f2-F(. -(\*B@8J?(.-C(.33\*J2.?2-F(. (K\*,C(K2?1(2?H(\$\*K8E8,A(  
\ 2??F8-3?82-(K.-?3(?\*(31\*K(+3(?1.?(?123(23(-\*?(J\*-323?8-?(K2?1(1\*K(  
K8( .J?+./5( /8.,-(/.-F+.F8A(. -C( 18( .273( ?\*( 4\*2-?( \*+?( ?18(  
2-.C8]+.J283(\*0(&+F+3?2-803(.JJ\*+-?H(\ 2??F8-3?82-(K.-?8C(?\*(C\*(  
?123(B8J.+38A(a k K18?18,(\*,(-\*?(K8(. ,8(.K.,8(\*0(?123A(?18(0.J?(?1.?(  
K8(? .J2?/5(.33+78?23(J\*, ,8J?-833?8-C3(?\*(F\*E8,-(\*+,(?12-N2-F(.B\*+?(  
K\*,C3(. -C(78.-2-Fa(. -C(?1+3(2?(1.3(B8.,2-F3(\*-?18(K.5(K8(?12-N(  
.B\*+?(7.-5(\*0(?18(4,\*B/873(\*0(412/\*3\*415b(Y\$8,?fB8,F(: ;<\_ '( <p  
\_ :ZH(%-(,834\*-38(?\*(?123(8GJ8,4?0,\*7(&+F+3?2-803(?8G?A(\ 2??F8-3?82-(-  
-\*?83(?1.?(aT1838(K\*,C3A(2?(38873(?\*(78A(F2E8(+3(. (4.,?2J+/. ,(  
42J?+,8(\*0(?18(8338-J8(\*0(1+7.-(/.-F+.F8b(Y <ZH(%-(\*?18,(K\*,C3A(  
&+F+3?2-8(23(J/2-F2-F?\*(.-2C8.(\*0(1\*K(18(?12-N3/.-F+.F8(23/8.,-?M(  
18(?12-N3(?123( (B8(?18(J\*, ,8J?(.JJ\*+-?(0\*(./.-F+.F8(/8.,-2-FH(  
(  
(

"! h!"

!



/. ,F8(2-( H(a \ 1.?( \ 2??F8-3?82-(23(? ,52-F(?\*(J,8. ?8(18,8A(1\*K8E8,A( 23(K1.?(72F1?(B8(J.//8C(.C23?. -J2-F(8008J?-'(K8(. ,8(3\*(.JJ+3?\*78C( ?\*(\*48, .?2-F(K2?1(K\*,C3?1.?(K8(. ,8(-\*?(.K. ,8(\*0?18(J\*74/8G2?5(\*0( K1.?(23(2-E\*/E8C(2-(C\*2-F(?123b(Y\$8,?fB8,F(: ;<\_ '( \_ :Zh(%-(\*?18,( K\*,C3A(?123(3J8-. ,2\*(.2C3(?18(,8.C8,(K1\*(/2N8/5(C\*83(J\*-32C8,(./(?18( 2-?,2J.J283(?1.?(/. -F+.F8(+38(8-J\*74.3383A(+/-833(?185(?18738/E83( 1.E8(8-J\*+-?8,8C(. (38,2\*+3(3?,+FF/8(K2?1(/. -F+.F8H` (P+,?18,7\*,8A( 2?( B8J\*783( .B+-C. -?/5( J/8.,( 1\*K( 8.J1( K\*,C(2-( ?123( 8G.74/8( ,8]+2,83(. (+-2]+8(?548(\*0(3N2//(K18-(K8(J\*-32C8,(3\*78\*-8(K1\*(23( @+3?(B8F2--2-F(?\*( 7.3?8,(?1838(K\*,C3(Y2H8H(3\*78\*-8(K1\*(3+008,3( 0,\*7( 8G?,878( 787\*,5( 4,\*B/873Zh( T18( 4+,4\*38( B812-C( ?123( 3J8-. ,2\*( 23( ?1.?( ?A( a k 2-3?. -?2.?83( .-( 274\*,?. -( 08.?,+8(\*0( \ 2??F8-3?82-03(K.5(\*0(C\*2-F(412/\*3\*415'(18(23(-\*?(3\*(7+J1(F2E2-F(



(((---(&-(2-?8,83?2-F(J1\*2J8(\*0(41, .38(B8J. +38(2?B,2-F3(?\*(72-C.(?18.?,2J./)

"!(#!"

!

.,F+78-?3<sup>i</sup>(.3(K\*,N2-F(\*-(\*+, (1.B2?3(\*0(?1\*+F1?H(T1.?(23A(18(23( ? ,52-F(?\*(7.N8(+3(.K.,8(\*0\*+, (? .J2?(.33+74?2\*-3(2-(\*,C8,(?\*/2B8,.?8( +3(0,\*7(?187b(Y\$8,?fB8,F(:;<\_'(\_cZH(\ \ ??1(?123(.27(2-(72-Ca(123( 2-J/+32\*-( (8GJ8,4?(B8J\*783(7+J1(J/8.,8,H(&+F+3?2-8( 1\*/C3(\*-(?\*(?18(2C8.(\*(0(1\*K(18(?12-N3(/.-F+.F8( (B8(.J]+2,8C( .-C(\ \ ???F8-3?82-03(31\*4N8848,(3J8-. ,2\*(J1.//8-F83(?1.?( -\*?2\*-H( \$8-J8A(\ \ ???F8-3?82-(K.-?3(?\*(./?8,(?18(K.5(K8(?12-N(.B\*+?( /.-F+.F8H(( ( &7\*-F3?(3J1\*/.,3A(?18,8(23(7+J1(C2E8,32?5(K2?1(,8348J?(?\*( \ ???F8-3?82-03(78?1\*C(\*0(J.,,52-F(\*+?(?123(./?8,.?2\*-H(X8-2.( !J1u-B.+7308/C(C2E2C83(.8.C8,3(\*0(\ \ ???F8-3?82-(2-?\*(?K\*(B,\* .C( F,\*+43'(1,83\*/+?8(.8.C8,30(.-C(13?.-C.,C(.8.C8,3H0(V83\*/+?8(.8.C8,3( J/.27(?1.?( \ ???F8-3?82-03(4,27.,,5(.27(2-(B\*?1(123(8.,/5(.-C(/.?8,( K\*,N3(K.3A(a k(\*008,2-F.(?18,.45(?1.?(K2//(J+,8(+3(\*0(?18(2//+32\*-( \*0(78.-2-F(3\*78?12-F(K18,8(K8(.8.//5(78.-(-?\*12-Fb( Y!J1u-B.+7308/C(:;< ;'\_i\_=ZH(\ \ 18,8.3(3?.-C.,C(.8.C8,3(7.2-?.2-( ?1.?(18(K.3(J\*-J8,-8C(K2?1(7\*,8(?1.- (78,8(?18,.45(-C(?1.?(?18,8( 23(. (3+B3?.-?2./(.7\*+-(?\*(C23J\*-?2-+2?5(B8?K88-( \ ???F8-3?82-03( 8.,/2-1(J5(.87.5K7\*,N3H(V

!  
!"(\$!"

\ 2??F8-3?82-( 2-( ?123( K.5( .,8( J\* 7 7 2??8C( ?\*( -\* -38-38( 7\* -23 7 A  
- . 7 8/5(?18(.338,?2\* -(?1. ?0,\* 7 (?18(48,348J?2E8(\*0/\*F2J(?18,8(23(\* -/5(  
\*-8(?548(\*0(-\* -38-38(p(4/. 2-(F2BB8,231A(. -C(?1. ?(?185(. /3\*(C8-5(?1. ?(  
a( k( ?18,8( 23( 3\* 7 8?12-F( K8( 1J. - -\*?( C\*( 2-( 412/\*3\*4150b(  
Y!J1u-B.+ 7 308/C( : ; < ; '( i ` ; Zh( W\*?1( ?18( 1,83\*/+?80( . -C( ?18(  
13+B3?. - ?2./0(,8. C2-F3(\*0( \ 2??F8-3?82-(.,8(2-3+002J28-?(?\*(.C8]+. ?8/5(  
.JJ\*+-?(0\* ,( ?18(J\* 7 4/8G2?283(K2?12-( \ 2??F8-3?82-03(

"!(%)!"

!



412/\*3\*415( . -C( 435J1\* . - ./5323( \* - /5( ?K2J8( 2-( 123( 4\*3?1+7\*+3/5(
 4+B/2318C( K\*,N3H( P+,?18, 7\*,8A( 2-( ?1838( ,87 .,N3( 18( 23( -\*(
 J\*-J8,-8C( K2?1( 7 .N2-F( .-( .- ./\*F5( B8?K88-( 412/\*3\*415( . -C(
 435J1\* . - ./5323A( B+?( 2-3?8.C( 23( C2,8J?2-F( \*+, ( 0\*J+3( ?\*K.,C( ?18(
 .- ./\*F283( ?18738/E83( Y!.E2JN85( :;<^'( =ip==Zh( %-C88CA(
 \ 2??F8-3?82-( \*0?8-( C2,8J?3( \*+, ( 0\*J+3( ?\*( ?18( +38( \*0( .- ./\*F283(
 ?1,\*+F1\*+?(123(/. ?8,(K\*,N3H(I -C8,3?. -C2-F(?18(-?\*2\*-(\*(0(412/\*3\*415(
 .3(?18,.45(,.?18,(?1.-(@+3?(B82-F(3272/.,(?\*(2?A(23(-(\*E8,/5(/?8,./
 ,8.C2-F(\*0( \ 2??F8-3?82-q3(,87 .,N3(Y!.E2JN85( :;<^'(<;;Zh( \$8-J8A(
 ?18,.48+?2J(,8.C2-F3( ?1.? (J\*74.,8( \ 2??F8-3?82-q3( 412/\*3\*415( ?\*(
 435J1\* . - ./5323( C\*( -\*(? (.JJ+,.?8/5(,84,838-(? (123( K\*,N(Y!.E2JN85(
 :;<^'(<<iZh((
 (
 ( \$+?J12-3\*-(23(\*-8(3J1\*/.,(K1\*(48,J82E83( \ 2??F8-3?82-03(
 78?1\*C3( .3( ?18,.48+?2J( . -C( 412/\*3\*412J./ ( ]+83?2\*-3( .3( 78-?./(
 C23?+,B. -J83H(\$8(7.2-?.2-3(?1.?(?18(?18,.48+?2J(2-?8,4,8?.?2\*-(C\*83(
 -\*?(J\*772?( \ 2??F8-3?82-(?(?18(+?-8-.B/8(412/\*3\*412J./ (4\*32?2\*-3H(
 W8J.+38( \*0( ?123A( ?123(,8.C2-F( 23( .B/8( ?\*A( a( k( 7.N8( 38-38( \*0(
 \ 2??F8-3?82-03( ?8G?( .3( .( K1\*/8( k b( T18,80\*,8A( ?18( ?18,.48+?2J(
 ,8.C2-F( 23( ?18( \*- /5( \*-8( \$+?J12-3\*-( C8873( ?\*( B8( .JJ+,.?8(
 Y\$+?J12-3\*-( : ; ; ^'(i=cZh( \$8(7.2-?.2-3(?1.?( \ 2??F8-3?82-(,808.,8C(
 ?\*(123(78?1\*C3( .3(?18,.48+?2J(. -C(8E8-(F\*83(3\*(0.,(.3(?\*(3.5(?1.?(
 .0?8,(<=: =h(?18(7\*?2E.?2-F(0\*,J8(B812-C( \ 2??F8-3?82-03(412/\*3\*415(
 K.3(?\*(,8/28E8(78-?./(C23?+,B. -J83(K12J1(878,F8C(0,\*7(3?,+FF/2-F(
 K2?1(412/\*3\*412J./ (C2/877.3(Y\$+?J12-3\*-( : ; ; ^'(i=\_Zh((

"(!!"

(  
( P\*,( \$+?J12-3\*-A( \ ???F8-3?82-03( 78?1\*C\*/\*F5( 2-( ( 23(  
?18,.48+?2J( 2-( ?18(38-38( ?1.?( ?1,\*+F1( 123( ,87. ,N3A( 18( 18/43( ?\*(  
/2B8,.?8(+3(0,\*7(?18(4.,?2J+/. ,(42J?+,8(K8(1\*/C(\*-?\*(. -C(?\*(31\*K(+3(  
?1.?(?18,8(. ,8(\*?18,(K.53(\*0(3882-F(?12-F3H( \ 18-(412/\*3\*418,3(. ,8(  
J\*-0,\*-?8C(B5( .-( .44.,8-?/5(274\*332B/8(412/\*3\*412J./ (C2/8777.A(  
3.2C(C2/8777.(J. -(B8(?.,J8C(?\*( \*-803(B82-F(K2?12-(?18(+ -J\*-3J2\*+3(  
\*,(+- .JN- \*K/8CF8C(1\*/C(\*0( .(J8,?.2-(42J?+,8(\*0(1\*K(?12-F3( 7+3?(  
B8H(T18(F\*./(\*0(?18(412/\*3\*412J./(?18,.423?(23(?\*(0, .J?+,8(?123(1\*/C(  
?1.?(?18(42J?+,8(1.3(\*-(?18(2-C2E2C+./ ( .-C(C87\* -3?,.?8(?\*(?187(  
./?8,-.?2E8(K.53(\*0(3882-F(?12-F3H(T123(2-C2E2C+./ (23(?18-(3+44\*38C(  
?\*(B8(J+,8C(\*0(?182,(78-?./ (C23?+,B. -J8A(\*-J8(?185(. ,8(,8/8.38C(0,\*7(  
?18(F,24(\*0(?18(42J?+,8A(. -C(1.E8(0,88/5(.JJ84?8C(?18(./?8,-.?2E8(\*-8(  
.3(E./2C(H aT18(.JJ84?.. -J8(\*0(-8K(42J?+,83(38,E83(?\*(/\*38-(?18(  
?1\*+F1?>J\*-3?,.2-2-F(F,24(\*0(?18\*/C(42J?+,8A(?18(42J?+,8(?1.?(1.C/8C(  
?18(412/\*3\*418,(?\*(?18(38872-F/5(2-3+,7\*+-.?B/8(412/\*3\*412J./(  
4,\*B/877A(. -C(?1+3(?\*(3+008,2-F(?18(,83+/?.-?(78-?./ (C23?+,B. -J8b(  
Y\$+?J12-3\*-( : ; ^'( i =\_ZH( P+,?18,7\*,8A(0\*( \$+?J12-3\*-(.( 78-?./(  
C23?+,B. -J8(23(-?\*(.( (\*0(.(412/\*3\*412J./ (C2/8777.A(B+?(  
( 2-( 0.J?(.( 78-?./ (C23?+,B. -J8H( T123( .338,?2\*-( 23(4+?.?2E8/5(  
3+44\*,?8C(B5( \ ???F8-3?82-03(48,J84?2\*-( \*0(412/\*3\*412J./ (C2/8777.3(  
.3(4,\*B/8773(\*0(?18(K2//K12J1(. ,8(,\*?8C(2-(4.,?2J+/. ,(4.?1\*/\*F283^A(  
))))))

(((^(1272./5A(V8.C. -C(\$+?J12-3\*-(J./27(?1.?(?18,.4503(F\*./23(?\*/2B8,.?8(\*-8(  
0,\*7(K1.?(72F1?(B8(,808.,8C(?\*(.3(4.?1\*/\*F283(\*0(?18(72-Ca(. -C(K12/8(2?J. -(B8(  
J.,.28C(\*+2-( -+78,\*+3(K.53A( \ ???F8-3?82-(8G4/\*,8C(\*-8(\*0(?1838(. -C(C8J2C8C(  
\*-(?18(\*-8(K12J1(K.3(?18(B83?(.JJ\*,C2-F(?\*(127(YV8.C. -C(\$+?J12-3\*-( : ; <\_(  
<\_cZH((

!  
!  
!"((!"





. - C(?123(23(2-?8-C8C(?\*(,83+/?(2-(.(,8\*,28-?.?2\*-(\*0(?182,(?1\*+F1?3(  
YV8.C(. - C(\$+?J12-3\*-(; ;<\_('<` : Zh(" ?18,(3J1\*/.,3(8J1\*(?123(E28K(  
.3( K8//H( P\*(, (2-3?- .J8h( ! .E2JN85( .338,?3h( a \ ??F8-3?82-03( .,?( \*0(  
F, . 7 7 .?J./ (2-E83?2F. ?2\*-(,8]+2,83(.J1. -F8(2-(7 \*C8(\*0(?1\*+F1?\*(, (  
412/\*3\*412J./ (4, .J?2J8b( Y! .E2JN85( : ;<^'(< ; iZh( !272/.,/5h( V\* 7 (  
\$. .,h( J/.273( ?1. ?h( aT18( 02,3?( ?12,?5>\*CC( 4.,.F, .413( \*0( ?18(  
 ( Y \ ??F8-3?82-( <=>` cZ( 4,838-?3(?18(4. ?28-?( K2?1( . -(  
./?8, -. ?2E8(K.5(\*0(J\*-J82E2-F( 78. -2-Fh(/\*\*38-2-F(?18(F,24(\*0(?18(  
42J?+,8(?1.?(1.3(B88-(J.+32-F(?18(3+008,8,(3+J1( 78-?./(-F+231 k b(  
Y\$. .,h(: ; ;D'(\_D`Z(\$8/2N8-3(?18(78-?./ (J\*-C2?2\*-(?1.?( \ ??F8-3?82-(  
23(3+44\*38C/5(\*008,2-F(?18, .45(0\*,(?\*(4.,.-\*2.H((  
(  
( % ( .F,88(?1.?( \ ??F8-3?82-( 23( ?,52-F( ?\*( 0,88(+3(0, \* 7 ( ?18(  
4.,?2J+/. ,(42J?+,8(K8(1\*/C(\*-\*?\*(?0(1\*K(?12-F3( 7+3?(B8( .-C(?\*(31\*K(  
+3(?1.?(?18,8(.,8(\*?18,(K.53(\*0(3882-F(?12-F3(p(?123(2C8.(23(3+44\*,?8C(  
B5(?18(8GJ8,4?(0,\* 7 ( h( K18,8( &+F+3?2-8(J/2-F3(?\*(123(  
42J?+,8(\*0(1\*K(/.-F+.F8( 7+3?( B8( .J]+2,8C(h( .-C( \ ??F8-3?82-03(  
31\*4N8848,(3J8- .,2\*(18/43(?\*(0,88(+3(0,\* 7 (?123(42J?+,8(B5(\*008,2-F(  
. (C2008,8-?(J\*-J84?2\*-(?0(1\*K(/.-F+.F8(23/8., - ?h(\$\*K8E8, h(K\*+/C(  
-\*?(.F,88(?1.?( \ ??F8-3?82-?3(412/\*3\*415(23(?18, .48+?2Jh(V8\*,28-?2-F(  
?18(K.5(2-(K12J1(\*-8(?12-N3(23(-\*?(B83?(C83J,2B8C( .3(? ,8. ?2-F( .(  
78-?./ (C23?+,B. -J8(\*,(. - (2// -833(2-( -88C(\*0(.(J+,8h(-\*,(23(2/(./2F-8C(  
K2?1( \ ??F8-3?82-03(.273(2-( !+J1(. (48,348J?2E8(.J?+./5(,83+/?3(  
2-( 7. -5(4,\*B/87 .?J(274/2J. ?2\*-3(P2,3?/5h( ?18(2C8.( \*0(?18, .45(23(  
J/\*38/5/(2-N8C(?\*(?18(2C8.3(\*0(.(4. ?28-?h(2// -833(\*, (C23\*, C8,h(?18, .423?(



412/\*3\*415H( \ 2??F8-3?82-03(4\*2-?23(?1.?(412/\*3\*415(23(-\*(.(  
3J28-J8(.B\*+?(.(4.,?2J+/.,(3+B@8J?(7.??8,A(B+?(?1.?(2?(23(.-(  
2-02-2?8(38?( \*0( 78?1 \*C3A(K.53(\*0(C8./2-F(K2?1(.(4.,?2J+/.,(  
N2-C( \*0( ]+83?2\*-A( -. 78/5( ?1\*38( B.38C( \*- ( J\*-J84?+./(  
J\*-0+32\*-3(YS8(U838/(; < ` ` ^ ; ZH((

(

( P+,?18, 7 \*,8A(K1.?(38?3(412/\*3\*418,3(.4.,?(0,\*7(\*?18,3(K1\*(  
C8./(K2?1(412/\*3\*412J./4\*-C8,2-F3(23(?1.?(?182,(K\*,N(23(\*0?8-?2783(  
8G4/2J2?/5(J\*-J8,-8C(K2?1(J\*-J84?+./J\*-0+32\*-3A(-C(?18,80\*,8A(?18(  
C2008,8-J8A( S8( U838/( J\*-J/+C83A( 23( 78,8/5( ]+.-???.?2E8( -\*?  
]+./?.?2E8H( \$8-J8A(?1\*38(K1\*(C8E\*?8(?182,(/208(?\*?18(4,.J?238(\*0(  
412/\*3\*415( .,8(-\*(?18(\*-/5(\*-83(?\*(F,.44/8(K2?1(412/\*3\*412J./(  
]+83?2\*-3(YS8(U838/(; < ` ` ^ ; p^<ZH(T1+3A(20(7.-5(\*?18,3(,.238(  
?1838(]+83?2\*-3(/3\*(.3(S8(U838/(3+FF83?3A(.8(K8(?18-(?\*C887(./(  
?1838(2-C2E2C+./3(.3(B82-F(.00/2J?8C(K2?1(.(78-?/(2//-833(?\*\*j(  
T.N2-F(?123(274/2J.?2\*-(0+,?18,A(.8(K8(?18-(?\*3.5(?1.?(./(?1\*38(  
412/\*3\*418,3(?1,\*+F1\*+?(?18(4,.J?23803(123?\*5(1.E8(B88-(3+008,2-F(  
0,\*7(78-?/(2//-833H(%0(K8(1.C(C8J2C8C(3\*(.-C(4,\*J88C8C(?\*1?,8.?0(  
?187A(K\*+/C(K8(-\*(1.E8(/\*3?( \*+?( \*- (- + 78,\*+3(?,+/5(E./+.B/8(  
2-32F1?3j(  
(

(

( U\*,\*8\*E8,A( 20( K8( J\*-J82E8( \*0( 412/\*3\*418,3( .3( ?18( \*- /5(  
2-C2E2C+./3(K1\*(J\*-J8,-(?18738/E83(K2?1(412/\*3\*412J./2- ]+2,283A(  
(

!  
!  
!" , !"



2?(K\*+/C(B8(2- .JJ+, .?8(?\*(?.N8(?123(3?.?8 7 8-?( .3( 7 8. -2-F(?1.?( ( 412/\*3\*412J./((C2/8 7 7 .3(J. -( \*,(K2//B8(8-?2,8/5(J/8. ,8C(+4H(L/8. ,2-F(+4( 3+J1( C2/8 7 7 .3( J. -( B8( .JJ\* 7 4/2318C( ?1, \*+F1( ?18, .45A( B+?( \ 2??F8-3?82-( 23( -\*(? (J/.2 7 2-F(?1.?( K8( K2//, 8. J1( ?18( 8-C(\*0( \*+, ( 412/\*3\*412J./((K\*, NA( 32-J8( \*+, (+, F8(?\*( 7 23+-C8, 3?. -C(K2// (J. +38( -8K( ]+8, 283(?\*( ., 238( . -C(\* /C(\* -83(?\*( J, \*4(+4(2-( . (C2008, 8-?(0\*, 7 H( \$8- J8A(K12/8(2?(23(4\*332B/8(?\*(J/8. , (+4( ]+83?2\* -3(2-(412/\*3\*415A(?123( C\*83(-\*(?27 4/5(?1.?(?18(8-C(\*0(412/\*3\*415(23(27 7 2-8-?(YS8(U838(/ : ; < ` '( ^ ^ ZH(U\*, 8\*E8, A(B8J. +38(K8(+38(/. -F+. F8A(K8( ., 8(4, \* -8(?\*( J\* -J84?+ ./ (E+/-8, .B2/2?283(K12J1(7 .N8(?18(2C8. (\*0(?18(J+ / 7 2- .?2\* - (\*0(412/\*3\*415(2-J\* -J82E. B/8(YS8(U838(/ : ; < ` '( ^ ^ DZH(P+, ?18, 7 \*, 8A(

!  
!  
"!)\$!"

%-( (<cc( \ 2??F8-3?82-(-\*?83a(aT18,8(23(-\*?)(.32-F/8(412/\*3\*412J./(  
78?1\*Ca(?1\*+F1(?18,8(. ,8(2-C88C( 78?1\*C3a(C2008,8-?(?18,.4283(.3(2?(  
K8,8hb( T123( ,87 .,N( a k J\*-?.2-3( ?18( \*- /5( 8G4/2J2?( ,808,8-J8( ?\*(  
?18,.45(2-( \ 2??F8-3?82-03(8-?2,8( b(YS8(U838/(; <`'( ` i iZH(  
\$8-J8a( C8342?8( ?18( 8G?8-32E8( 8741.323( \*- ( ?18( ?18,.48+?2J(  
2-?8,4,8?.?2\*-A( ?18( ,8/.?2\*-( B8?K88-( 412/\*3\*415( .-C( ?18,.45( 23(  
,. ,8/5( 78-?2\*-8C#( &( C2/2F8-?( ,8.C8,( \*0( \ 2??F8-3?82-( 02-C3( ?1.?(  
412/\*3\*415( 23( -\*?( /2?8, ./5(?18,.45( B+?( \*- /5( 3272/.,( ?\*( 2?#( \ 1.?(  
\ 2??F8-3?82-(.JJ\* 74/23183(2-( 23(?18(. /?8,.?2\*-( \*0(\*+, (J\* -J84?2\*-(  
.B\*+?(

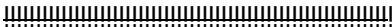
"!)%!"

!

(  
( T1+3A( % ( 7 .2-? .2-( ?1 .?( ?18( ?18, .48+?2J( ,8.C2-F3( \*+?/2-8C(  
.B\*E8(. ,8Q- J\*-32?8-(?K2?1( \ 2??F8-3?82-03(.273( .-C(78?1\*?C3Q2-( H(  
T\*(?008,( 75( ,8.C2-F\*(0(1\*K( \ 2??F8-3?82-(4,\*J88C3(?\*/2B8, .?8(+3(  
0,\*7(\*+, (42J?+,8(\*0(1\*K(?12-F3( (B8A(%(,8?+, -(?\*(?18(- \*?8K\*, ?15(  
8/878-?3( \*0( 123( ?8G?( K12J1( %( ,808,,8C( ?\*( .?( ?18( B8F2--2-F'(   
\ 2??F8-3?82-03( 3?.?878-( .B\*+?( -\*(? (.CE. -J2-F( ?18383( 2-(  
412/\*3\*415A( 123( 0\*, 7A( .-C( 123( 3?5/8( \*0( /. -F+.F8H( T1838(  
J1., , J?8,23?2J3(C87 \* -3?, .?8(123(800\*, ?(?\*(0,88(+3(0, \*7(\*+, (42J?+,8(\*0(  
1\*K(412/\*3\*415( (B8(4,.J?238CH(W5(3+44/52-F(?18( ,8.C8,(K2?1(  
-+78,\*+3(J\*778-?3(,8F.,C2-F(F, .77.?2J./2-E83?2F.?2\*-A(2-3?8.C(  
\*0(?18383(\*,(.C\*J?,2-8A( \ 2??F8-3?82-(J\*748/3(+3(?\*(E8,B.//5(C23J+33(  
123(?8G?(K2?1(?\*18,3H(I4\*-( ,8.C2-F( (./\*-8A(\*-8(J. -(J8,?.2-/5(B8F2-(  
?\*(C, .K(J\*--8J?2\*-3(B8?K88-(?18(,87.,N3(.-C(C8E8/\*4(?182,( \*K-(  
2-32F1?3(2-( ,834\*-38H(\$ \*K8E8,A(20(\*-8(3?\*43(?18,8A(?185( 7233( 7+J1(  
\*0(?18( ,2J1-833( .-C(C84?1(?1.?( \ 2??F8-3?82-03(K\*,N(1.3(?\*(?008,H(  
S23J+332\*-( .B\*+?(?18(?8G?( K2?1( \*?18,3( .//\*K3( \*-8(?\*( 7.N8(-8K(  
J\*--8J?2\*-3( .7\*-F(?18(,87.,N3(?1.?(?185(1.C(-\*(?388-(B80\*,8A(?\*(  
8GJ1.-F8(2-?8,4,8?.?2\*-3A(.-C(?\*(7.N8(38-38(\*0(K1.?(23(B82-F(3.2CH(  
\ 18-(.(412/\*3\*412J./ (K\*,N(? .N83(?18(0\*, 7(\*0(./2-8.,(. ,F+78-?(2?  
23(4\*332B/8(?\*( ,8.C(?18(?8G?(./\*-8A(?18-( ,8.C(K1.?(?18,3(1.E8(K,??8-(  
\*-(?18(.,F+78-(.-C(,834\*-C(B5(K,??2-F(\*-803(\*K-(4.48,H(T1+3A(2?  
23(8-?2,8/5(4\*332B/8(?\*(F\*(?1, \*+F1(?123(4,\*J833(K2?1\*+?(8E8,(1.E2-F(  
E8,B.//5( 34\*N8-( ?\*( \*?18,3( .B\*+?( ?18( .,F+78-( 2-( ]+83?2\*-H(  
(



\$ \*K8E8,A(\*-8(J. -( \*- /5(F.2-(3\*( 7+J1(2-32F1?(B5(/\*\*N2-F(.?(K\*,C3( \*- (.4.F8H((  
(  
( &CC2?2\*-. //5A(2?(23(8E2C8-?( \ 2??F8-3?82-(C\*83(- \*(K. -?(+3?(\*( @+3?),(8.C(123(38-?8-J83A(?12-N(.B\*+?(?18 7 (B,280/5A(. -C(?18-(/.5(?18 7 ( .32C8H(%-C88CA(18(.3N3(+3?(\*(B8( 7+J1( 7 \*,8(.J?2E8(K18-(8-F.F2-F( K2?1(123(?8G(. -C(0,8]+8-?/5(?8//3(+3?(\*(12 7 .F2-80(\*,(J.,,5(\*+?( .-( .J?2\*-H<sup>D</sup>(P\*,(8G. 7 4/8A(.( cc;A(18(.3N3(+3A(a%3(?12-N2-F(.N2-C(\*0( 348.N2-Fjb(V.?18,(?1. -(,834\*-C(K2?1(. -(.,F+7 8-?A(18(.3N3(+3?( J.,,5(\*+?(.(3J8-. ,2\*(3\*(?1.?(K8(J. -(J\* 7 4/8?8(?18(2-E83?2F.?2\*-( \*+,38/E83H(P+,?18,(\*-(?18(3. 7 8(,8 7 .,NA(18(\*,C8,3(+3A(a! .5'(I r 83A( ?123(48-(23(B/+ -?H(" 1(K8//A(2?0//C\*H0(P2,3?A(K2?1(?1\*+F1?M(?18-(K2?1\*+?( ?1\*+F1?M(?18-( @+3?( ?12-N(?18(?1\*+F1?(K2?1\*+?( ?18(K\*,C3Hb(%-( ?18( 0\*//K2-F(,8 7 .,N(18(3.53A(a% 7 .F2-8(48\*4/8(K1\*(J\*+/C(?12-N(\*- /5( ./\*+CH(Y&3(?18,8(. ,8(48\*4/8(K1\*(J. -(,8.C(\*- /5(./\*+CHZb(Y (cc<ZH( !+J1(,8 7 .,N3( .,8( 7 8. -2-F/833(20(?18(,8.C8,(0.2/3?(8-F.F8(K2?1( ?18 7 ( B5( J.,,52-F(\*+?( ?182,( \*K-( 2-E83?2F.?2\*-( .3( \ 2??F8-3?82-( 3+FF83?3H(T1, \*+F1(0\*, 7 A( \ 2??F8-3?82-(?1+3(J\* 7 48/3(+3?(\*(8-F.F8( 2-(C23J\*+,38(K2?1(\*?18,3(.B\*+?(K1.?(K8(1.E8(,8.CH(



(((P(

"!)! !"

!

(  
( U\*,8\*E8,A( \ 2?F8-3?82-03(874/\*578-?(\*0(K1.?(%,808,(?\*(.3(  
13?,.2F1?0\*,K.,C/.-F+.F8A0(.//\*K3(127(?\*(,.238(J,+J2./A(78.-2-F0+/(  
412/\*3\*412J./([+83?2\*-3( 2-( .( 7\*,8( 2-J/+32E8( 7.--8,( ?1.-)

!  
!"(!"

?\*( ?1\*38( K2?1( . ( B. JNF, \*+-C( 2-( 412/\*3\*415H( T1+3A( \ 2??F8-3?82-(  
.??874?3(?\*(8-J\*+, .F8(+3(?\*(4, .J?238(412/\*3\*415(2-( .(J\*77+- ./(  
2-?8, .J?2E8(0.312\*-H(V.?18,(?1.-.(.338,(.(C\*J?,2-8(\*48-(?\*(C8B.?8(B5(  
08/\*K( 412/\*3\*418,3( .-C( 3J1\*./.,3A( 123( ?8G?( 23( 8GJ84?2\*- .//5(  
2-?8, .J?2E8(B8J.+38(\*0(?18(27.F2-.,5(3J8-.,2\*3(.-C(2-?8,/\*J+?\*,(18(  
J,8.?83(0\*,(?18,(8.C8,(?\*(8-F.F8(K2?1H(!+J1(.-(\*,2F2-./0\*,7(1.3(?18(  
4\*?8-?2/( ?\*( 18/4( ?18( ,8.C8,( C8E8/\*4( E./+.B/8(2-32F1?3(32-J8(2?  
2-E2?83(?187(?\*(B8J\*78(.J?2E8(4.,?2J24.-?3(2-(?18(C2./\*F+8(?1.?(  
\ 2??F8-3?82-(2-?,\*C+J83A(2-3?8.C(\*0(.4.332E8,(8J2428-?(\*0(C\*F7.?2J(  
E28K3(.3(23(-\*,7./5(?18(J.38(K2?1(\*?18,(412/\*3\*418,3H(\ 12/8(3+J1(  
(.E28K(7.5(.448.,(-8KA(\ 2??F8-3?82-(23(. ,F+.B/5(,8?+,-2-F(?\*(?18(  
4,.J?238(\*0(412/\*3\*415(J.,.28C(\*+?(B5(!\*J.,. ?83A(K1\*(3272?./,5(C2C(  
-\*?(4,\*0833(. (J,88C(\*0(123(\*K-A(B+?(., ?18,(8-F.F8C(2-(C2./\*F+8(K2?1(  
\*?18,3(?\*(J1./8-F8(?182,(B8/2803H(\ 2??F8-3?82-03(4, .J?238(\*0(+32-F(  
-\*>?8J1-2J./(\ /.-F+.F8A( 2-J/+32E8( ?\*( 2-?8,/\*J+?\*,3( \*0( ./(  
B. JNF, \*+-C3A( ,80/8J?3( !\*J., ?830(4, .J?238( B8J.+38( ?18(/.??8,( K.3(  
K2//2-F( ?\*( ?./N( 412/\*3\*415( K2?1( @+3?(. B\*+?(. -5\*-8A( -\*( \*-/5(  
0\*,7./5(8C+J.?8C(2-C2E2C+./3H(%-(3+7A( (23(. -( .J+?8/5(J\*74/8G(  
K\*,N(K12J1(8G4/\*,83(. (C2E8,32?5(\*0(412/\*3\*412J./([+83?2\*-3(.-C(23(  
2-(7.-5(K.53(. (,8E\*+/?2\*-.,5(?8G?(K2?1(,8348J?(?\*(1\*K(K8(4, .J?238(  
412/\*3\*415H(  
(

\ \* ,N3(L2?8C(  
(

W,8J1?A(W8,?\*/?H(aT18.?,8(0\*(,Q8.,-2-FHb(W,8J1?(!\*+,J8B\*\*N8(8C2?8C(B5(  
L.,\*/(U.,?2-(.-C(\$8-,5(W2./A(?.,-3/?.?8C(B5(RC2?1(&-C8,3\*-A(  
V\*+?/8CF8A(: ; ; ;H(  
"!)D)!"



1??4'gg8B\*\*NJ8-?,./#4,\* ]+83?#J\* 7 g/2Bg+K2- -248FgC8?.2/#.J??\*- jC\*J%  
Sw\_D` i\_ : :#(  
!J1u-B.+ 7 308/C#(X8-2.#(a&(1V83\*/+?80(Q.?8,( \ ???F8-3?82-jb(  
U8?.412/\*3\*415#(E\*/#(<#(-\*#(^A(" J?#(: ;<;A(44#(i\_=p iD#(  
RW!L " 1\*3?#(C\*2'<;#<<<<g@#<\_i^>==^c#(: ;<;#;<i i\_#GH(  
\ ???F8-3?82-A(Q+CK2F#(#12/\*3\*412J./(%-E83?2F.??\*-3#(T,.-3/.?8C(B5(  
X#R#U#(&-3J\* 7 B8(8?(/#(V8E238C(\_?1(8C??)\*-A( \ 2/85>W/.JNK8//A(  
: ; ;=##  
( (

"!)#!"

!

!

I [%6RV!%Tr("P(6%LT"V%&(#\$%Q"! "#\$ r(  
!TISR[T(I [% " [(  
!

!

23(/K.53/\*\*N2-F(0\*,(\*+??. -C2-F(833.53(?\*(4+B/231H((  
!+B 7 2332\*-3(J. -(B8(38-?(?\*(+E2J43+ y F7 .2/HJ\* 7 (  
(  
(  
%0(5\*+(K\*+/C(/2N8(?\*(J\*-?. J?(?18(#12/\*3\*415(!?+C8-?(I -2\* -(5\*+(  
J. -(C\*(3\*(.(?(+E2J43+ y F7 .2/HJ\* 7 (\*,(  
(  
&TT [ (#12/\*3\*415(!?+C8-?30(I -2\*-(  
S84.,?78-?(?\*(#12/\*3\*415(p(I -2E8,32?5(?\*(62J?\*,2.(  
#H" H(W\*G(c;\_`(`

!

"!\* ,!"

!