

CI28A	C	G	2	A	A	G	A	G	G	C	C
CI31A	C	G	0	A	A	G	G	A	G	C	T
CI3A	T	A	2	C	C	A	G	G	G	C	G
CI64	T	A	2	C	C	A	G	G	G	C	G
CI66	N	N	N	N	N	N	N	N	N	N	N
CI90C	C	G	0	A	A	G	G	A	N	N	N
CI91B	C	G	2	A	A	G	G	T	G	C	N
CM105	C	G	0	A	A	G	G	A	A	C	G
CM174	C	G	0	A	A	G	G	A	A	C	T
CM37	N	N	N	N	N	N	N	N	N	N	N
CM7	C	G	0	A	A	G	G	A	A	C	T
CML10	N	N	N	N	N	N	N	N	N	N	N
CML103	N	N	N	N	N	N	N	N	N	N	N
CML108	C	G	2	A	A	G	G	T	N	C	N
CML11	N	N	N	N	N	N	N	N	N	N	N
CML14	C	G	0	A	A	G	G	A	A	C	T
CML154Q	C	G	2	A	A	G	G	A	G	C	C
CML157Q	T	A	2	C	C	A	G	G	G	C	C
CML158Q	C	G	0	A	A	G	G	A	A	C	C
CML218	N	N	N	N	N	N	N	N	N	N	N
CML220	C	G	0	A	A	G	G	A	A	C	T
CML227											
CML228	N	N	N	N	N	N	N	N	N	N	N
CML238	C	G	0	A	A	G	G	A	A	C	T
CML247	N	N	N	N	N	N	N	N	N	N	N
CML254	C	G	0	A	A	G	G	A	A	C	T
CML258	N	N	N	N	N	N	N	N	N	N	N
CML261	C	G	0	A	A	G	G	A	A	C	T
CML264	C	G	0	A	A	G	G	A	A	C	T
CML277	C	G	0	A	A	G	G	A	A	C	T
CML281	N	N	N	N	N	N	N	N	N	N	N
CML287	C	G	0	A	A	G	G	A	A	C	T
CML311	C	G	0	A	A	G	G	A	A	C	T
CML314	C	G	2	A	A	G	G	A	G	C	C
CML321	T	A	2	C	C	A	G	G	G	C	C
CML322	C	G	2	A	A	G	G	A	G	C	C
CML323	N	N	N	N	N	N	N	N	N	N	N
CML328	C	G	2	A	A	G	G	A	G	C	C
CML331	N	N	N	N	N	N	N	N	N	N	N
CML332	N	N	N	N	N	N	N	N	N	N	N
CML333	C	G	0	A	A	G	G	A	A	C	T
CML341	N	N	N	N	N	N	N	N	N	N	N
CML38	N	N	N	N	N	N	N	N	N	N	N
CML45	C	G	0	A	A	G	G	A	A	C	T
CML5	N	N	N	N	N	N	N	N	N	N	N
CML52	N	N	N	N	N	N	N	N	N	N	N
CML61	N	N	N	N	N	N	N	N	N	N	N
CML69	C	G	0	A	A	G	G	A	A	C	T
CML77	N	N	N	N	N	N	N	N	N	N	N
CML91	N	N	N	N	N	N	N	N	N	N	N
CML92	N	N	N	N	N	N	N	N	N	N	N
CMV3	T	A	2	C	C	A	G	G	G	C	C
CO106	N	N	N	N	N	N	N	N	N	N	N
CO125	C	G	0	A	A	G	G	A	A	C	T
CO255	C	G	2	A	A	G	G	A	A	C	T
D940Y	N	N	N	N	N	N	N	N	N	N	N
DE1	C	G	2	A	A	G	G	A	A	C	T

OH40B	C	G	2	A	A	A	G	G	G	T	G
OH43	N	N	N	N	C	A	G	G	G	C	G
OH43E	C	G	2	A	A	A	N	A	N	C	C
OH603	N	N	N	N	A	N	G	A	N	N	C
OH7B	C	G	2	A	A	A	A	A	N	C	C
Os420	C	G	2	A	A	A	G	G	G	C	C
P39	C	G	2	A	A	A	G	T	G	C	C
PA762	C	G	2	A	A	A	A	G	N	T	G
PA875	N	N	N	N	N	N	N	N	N	N	N
PA880	N	N	N	N	N	N	N	N	N	N	N
PA91	C	G	2	A	A	A	N	A	N	C	N
Q6199	N	N	N	N	N	N	N	N	N	N	C
R168	C	G	2	A	A	A	G	A	G	C	C
R177	T	A	2	C	C	A	A	G	G	C	C
R229	T	A	2	C	C	A	A	G	G	C	C
R4	T	A	2	C	C	A	A	G	G	C	C
SA24	N	N	N	N	N	N	N	N	N	N	N
SC213R	N	N	N	N	N	N	N	N	N	N	N
SC357	C	G	0	A	A	A	N	G	A	N	C
SC55	N	N	N	N	N	N	N	N	N	N	N
SD40	C	G	2	A	A	A	G	A	T	C	C
SD44	C	G	2	A	A	A	G	A	G	C	C
SG1533	C	G	0	A	A	A	G	A	A	N	C
SG18	C	G	0	A	A	A	G	A	A	C	C
T232	C	G	0	A	A	A	N	G	A	C	C
T234	N	N	N	N	N	N	N	N	N	N	N
T8	N	N	N	N	N	N	N	N	N	N	N
Tx303	N	N	N	N	N	N	N	N	N	N	N
TX601	N	N	N	N	N	N	N	N	N	N	N
TZI10	N	N	N	N	N	N	N	N	N	N	N
TZI11	N	N	N	N	N	N	N	N	N	N	N
TZI16	T	A	2	C	C	A	N	G	N	C	N
TZI18	N	N	N	N	N	N	N	N	N	N	N
TZI25	C	G	0	A	A	A	G	A	A	C	C
TZI8	C	G	2	A	A	A	N	G	A	C	C
TZI9	N	N	N	N	N	N	N	N	N	N	N
U267Y	C	G	2	A	A	A	G	A	G	C	C
VA102	C	G	2	A	A	A	G	A	G	C	C
VA14	N	G	2	A	A	A	G	A	G	N	C
VA17	C	G	2	A	A	A	G	A	G	C	C
VA22	C	G	2	A	A	A	G	A	G	C	C
VA26	T	A	2	C	C	A	N	G	N	C	C
VA35	N	N	N	N	N	N	N	N	N	N	N
VA59	C	G	2	A	A	A	G	A	G	C	C
VA85	T	A	2	C	C	A	N	G	G	C	C
VA99	C	G	2	A	A	A	N	A	G	C	C
VAW6	N	N	N	N	N	N	N	N	N	N	N
W117HT	C	G	2	A	A	A	N	A	N	C	N
W153R	N	N	N	N	N	N	N	N	N	N	N
W182B	T	A	2	C	C	A	A	G	G	C	C
W22	T	A	2	C	C	A	A	G	G	C	C
W22R	T	A	2	C	C	A	A	G	G	C	C
W64A	C	G	2	A	A	A	G	A	G	C	C
WD	T	A	2	C	C	A	A	G	G	C	C
WF9	C	G	2	A	A	A	G	A	G	C	C
YU796NS	C	G	2	A	A	A	G	A	G	C	C

1 0 0 0 N N N 1 0 0 N 0 N N N 1 N 0 1 0 0 N 1 N 1 N N N N 0 0 0 0 1 0 1 N N 1 N 0 N N 0 N N 0 N N 0 N N 0 N 0 0 0 0 1 N 1

T T A A N N T T T T N T N T N T T T A T N T N T N N N T T T T T T N T N T N T N N T N N A N T T C N T

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C C T T N N C C C N C N C N C C T C C N C N C N N N C C C N C N C N C N C N C N C N C N C N T N C T N C

G G G G N N N G G G N N G N N G N N G G G G N G N G N N N G N N N G N N N G N N N G N G N G N G

C T C C N N N C T T T N T N N C N N T C C N N T N T N N N T T T N N T N N T N N N T N N N C N T C N N N

G G G G N N N G G G N N G N N G N N G N N G N N G N N G N N G N N G N N G N N G N N G N G N G N N

G C T T N N N C C C N C N C N C N C G T N N C N C N N N C C C N C N C N N G N N N N C N N N C N N T N C T N N

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T N T T T A A A C N T A N T T A N N T A N A A T T T T T A A N A T T T N T N N N N A T A A T N T T T T N

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T N C C T C C C C N C C N C C C N C C C C C C C T C C N C C C C C C C N C C C C C C T T C C N

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C N C C C T T T T N C T N T C T N N C T N T T C C C C C T T N T C C C N C N N N T T T T C N C C C C T N

G N G G G G G N G N N A G N N G N G A G G G G G N G G N G N N N G A G G N G G G A N

C N T T C C C C C N T N N C T C N N T N N C C C T C T T C C C C C T T N T N N N N C C C C T N T C C C C C N

G N G G G G G N G N N A G N N G N N G A G G G G G N G A G N G N N N G A G G N G G G A N

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N T T T N T N T T T N N G A T N N T T T N T N T T T T T T T T T T T T N G N N T T N T T G T T T T T

N G G T N G N G G T N N G G T N N G T N T N T N N G G N N G G T T G G T G N G N N T G N G G G T G G G

N T T C N C N C C C N N T T C N N T C N C N C N T C C N C C T C C C C C N T N N C C N C C T T C C C T T C

N A A G N G N G G N N G G N N A G N G N N A G N N G A G A G G G N G N G N G G G G G G A G

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N A A G N G N G G N N G G N N A G N A N A N N A G N N G A G A G G N N G N G G G G A G A G

N G G G N C N C C G N N T T G N N G N C N C N N G C C N N C C G G G C C G N N T N N G C N C C T T C C C G G C

N T T T N T N T T T N N C A T N N T T N T N T T T N N T T T T T T T T T T N N C N N T T N T T C C T T T T T

1 0 1 N 1 1 1 1 1 N N 1 N 1 0 0 0 N N 0 N 1 1 N 0 0 N N N N N N N N N 0 N 0 1 N 1 1 N 1 1 0 N 1 0 1 N 1 N 0 0 0 1 0 1 1

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C C T N T T T C C N N T T C C C N N N N C T N C C N N N N N C N C T T N T T C N T C T N T N C C C T C T T

T N T N T T T T N N T N T G G G N N N N T T N T T N N N N N N N T T N T T G N T G T N T N G G T G T T

G N T N T T T G G N N T N T G G G N N N N G T N G G N N N N N N N G T N T T G N T G T N T N G G T G T T

T N C N C C C T N N C N C T T T N N N N C C N C C N N N N N N C C N C C T N C N C N T T T C T C C

A N G N G G A N N G N G G G N N N N G N N G N N N N N G N G N G G N G N G G N G G G G G G G G G G

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C C C C C N C C C C C C T C C C C N C C C T C C C T C C C T C C C N C C C C C N C C C C C N C C C N C C C
G G G T N G T T T T T G T T T G T T T G T T G T T G T T G N G N G T N G G T T T N T T N G G G
3 3 3 0 0 3 3 0 0 0 0 3 3 0 0 3 3 3 3 3 3 3 0 3 3 3 3 3 3 0 3 3 3 0 3 3 3 0 3 3 3 0 3 3 0 3 3 3
9 9 9 0 0 9
C C C C G C C G C C G G G G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C
C C C C G C C G C C G G G G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C
G G G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C
1 1 1 1 0 0 1 1 0 0 0 0 1 0 1 1 0 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1
G G G A A G A A A A A G A G A A A G A G A G A G A G A G A G A G A G A G A G A G A G A G A G A G A G A G A G A
8
G G G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C G C C
1 0 1 1 1 2 0 1 2 2 2 2 1 2 2 1 2 2 1 1 2 2 1 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2
A A A A A A A A A A A T A A A A A A A A A A A T A A A A A T A A A A A T A A A A A T A A A A A T A A A A A

ASL14	ASL15	ASL16	ASL17	ASL18	ASL19	ASL20	ASL21	ASL22	ASL23	ASL24	ASL25	ASL26
5	8	4	4	T	C	C	G	G	T	C	A	121
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	N	G	N	C	A	121
N	N	N	N	N	N	C	C	C	N	C	N	N
0	0	4	0	T	C	C	C	G	T	C	A	N
5	0	0	0	T	C	C	G	G	T	C	A	N
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	N
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
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0	0	4	4	A	A	T	A	C	G	G	A	0
5	8	0	0	T	C	C	G	G	T	C	A	121
0	0	4	4	A	A	T	A	C	G	G	A	0
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0	0	4	4	A	A	T	A	C	G	G	A	0

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N	N	N	N	N	N	T	T	C	C	C	N	A	121
0	0	4	4	A	A	A	A	A	A	A	A	A	0
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N	N	N	N	N	N	N	N	N	N	N	N	N	N
G	2	G	27	11	0	T	C	G	T	A	0	3	G
G	0	C	0	1	5	C	C	A	C	T	1	0	C
T	2	G	27	11	0	C	C	A	C	T	0	3	G
T	2	G	0	1	5	C	C	A	C	T	1	3	C
G	2	G	0	1	5	C	C	A	C	C	1	3	C
N	2	G	0	1	5	C	C	A	C	C	1	3	C
N	N	N	N	N	N	N	N	N	N	N	N	N	N
N	2	G	27	11	0	T	C	G	T	A	0	3	G
T	2	G	0	1	5	C	C	A	C	T	1	3	C
T	2	G	27	11	0	T	C	G	T	A	0	3	G
G	N	N	N	1	5	C	C	A	C	C	1	3	C
T	2	G	0	1	5	C	C	A	C	C	1	3	C
T	2	G	0	1	5	C	C	A	C	C	1	3	C
T	2	G	0	1	5	C	C	A	C	C	1	3	C
T	0	C	0	1	5	C	C	A	C	C	1	0	C
T	2	G	27	11	0	T	C	G	T	A	0	3	G
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N	2	G	0	1	5	C	C	A	C	C	1	3	C
G	2	G	0	1	5	C	C	A	C	C	1	3	C
G	2	G	0	1	5	C	C	A	C	C	1	3	C
G	0	C	0	1	5	C	C	A	C	C	1	0	C
G	2	G	0	1	5	C	C	A	C	C	1	3	C
G	2	G	27	11	0	T	C	G	T	A	0	3	G
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N	2	G	27	11	0	T	C	G	T	A	0	3	G
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N A N A A G A A G A A N N G A A A A N N G A N G N N A A N A G G G A A G N G G A A N N N A N A A A A A A N N

AL1_17	AL1_18	AL1_19	AL1_20	AL1_21	AL1_22	AL1_23	AL1_24	AL1_25	AL1_26	AL1_27
A A A G N G N A G N G N G N N N G N A A N G N A A N N G N G N N N A A N G N N N N A A N G N N N A A N G N G A A N	C C C T T N T N C T T N T T N T N N T N N C C N T T N C C N N T T N T N N N C C N T N T T N T N T C N	G G A G N G N A A N A G N N A N N G N A A N N A N N N G N A A N N A N N A N A G N	T T A T N T N T A A N A T N N N A N N T T N A A N T N N N T T N A N N A N A T T N	T T A T N T N T A A N A T N N N A N N T T N A A N T T N A N N A N N A T T N	2 0 0 2 0 N 0 N 0 2 2 N 2 0 N 0 N N N 2 N N 0 N 2 N 0 N N N 2 N 2 N N 2 N N 2 N 2 N 2 N 2 N 2 0 N	A A A C A N A N A C C N C A N A N N C N N A A N C C N A N A N N C A N C N N N A A N C N N C N N C A N	G G G C G N G N G C C N C G N G N N N N G N C C N G N C C N G N C C N N N N G N C C N N N N N N N G N C C N C C N C C G N	T T T C T N C N T C C N C T N C N N C N N T T N C C N T N N C C N N N T T N C C N N C C T T N	4 4 4 0 4 N 0 N N 0 N N 0 N N 0 N N N N 4 N 4 N 0 N 4 N N N 0 N N N N 4 N 0 N N N 0 N N N 0 N N 0 N N 0 4 N	A A A G A N A N N G N G N G N N G N N N A A N G N A A N N G A N G N N N A A N G N N G N G N G A N

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N	N	N	N	C	T	0	A	A	G	0	T	T	T	T	G	0	T	T	T	C
0	0	A	1	T	G	0	G	G	G	3	T	T	T	C	T	3	C	T	T	G
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4	7	N	0	T	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
N	N	N	N	T	G	0	G	G	G	3	T	T	T	T	G	3	T	T	T	G
0	0	A	1	T	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
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0	0	N	1	C	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	T	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	C	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	T	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	C	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	T	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	C	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	T	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	C	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	T	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G
0	0	N	1	C	G	0	A	A	G	3	T	T	T	T	G	3	T	T	T	G

N 0 N 4 4 4 0 0 4 0 4 N N 4 0 0 0 0 N N 4 0 N 4 N N 0 0 N N 4 4 4 0 0 4 N 4 4 0 0 0 N N 0 0 0 0 0 0 0 0 0 0 0 N
N 0 N 7 7 7 0 0 7 0 7 N N 7 0 0 0 0 N N 7 0 N 7 N N 0 0 N N 7 7 7 0 0 7 N 7 7 0 0 0 N N 0 0 0 0 0 0 0 0 0 0 0
N A N G G G A A G G N N G A A A G N N G A N G N N A A N N G G A A G N G A A A N N N A N A G A G N A A A N N
N 1 N 0 0 0 1 1 0 1 0 N N 0 1 1 1 N N 0 1 N 0 N N 1 N N 0 0 1 1 0 N 0 0 1 1 1 N N 1 1 1 1 1 1 1
N C C C N C N C C C N C C C N T N N C C N N N C N C T T T N T C C C C C N C C T T C N T C N C N N N N C C
N G G G N G N G G N G G N G G N G G N G T G G N G N N N N G G
N 3 0 3 N 0 N 0 3 N 0 3 N 0 3 N 0 3 N 3 0 N 3 N 3 N 0 0 0 0 3 3 3 3 3 3 3 3 N 0 0 0 0 3 3 3 3 3 3 3 3 3 3 3 3
N G A G N A N G G N A G N G G N A N G A N A G G G A G G G A G G G A G G G A G G N G N N N N N A G
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N T C T N C N T T T N C T N T T T N C N T N C N C T T T T T C T T T T T N C C T T T T C C C N T T T T C T T T T N T N N N C T
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N T C T N C N G T N C T N G T N T C N T N G N C G G G G C T T T T N C C G G G C T G G G N T N N N N C G

AL2_10	AL2_11	AL2_12	AL2_13	AL2_14	AL2_15	AL2_16	AL2_17	AL3_1	AL3_2	AL3_3	AL3_4
A	6	G	C	A	G	8	C	1	1	4	N
A	6	G	C	A	G	0	C	N	N	N	N
G	0	G	C	T	A	8	G	1	1	4	C
A	6	G	C	A	N	0	C	1	1	4	G
N	N	N	N	N	G	N	N	N	N	N	N
G	6	T	T	T	A	8	C	1	1	4	G
A	0	G	C	T	A	8	G	N	N	0	N
A	6	G	C	A	N	0	C	1	1	4	G
A	6	G	C	A	G	0	C	0	0	4	G
A	0	G	C	T	A	8	G	0	1	4	G
A	6	C	C	T	G	8	C	N	N	N	N
G	6	T	T	T	G	8	C	N	N	N	N
N	N	N	N	N	A	N	N	1	1	4	G
A	0	G	C	T	A	8	G	N	N	N	N
A	0	N	N	N	A	N	N	1	1	4	G
A	0	N	N	N	A	N	N	N	N	N	N
A	6	G	C	A	G	0	C	N	N	N	N
A	0	N	N	N	A	N	N	1	1	4	C
N	N	N	N	N	N	N	N	N	1	4	N
N	N	N	N	N	N	N	N	N	N	N	N
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N	N	N	N	N	A	N	N	1	1	4	G
G	6	C	C	T	A	8	C	1	1	4	G
A	6	G	C	A	G	0	C	N	N	4	N
A	6	G	C	A	G	0	C	1	1	4	G
A	6	G	C	A	G	0	C	1	1	4	G
A	6	G	C	A	G	0	C	N	N	0	N
A	0	G	C	T	A	8	G	N	N	N	N
A	0	N	N	N	A	N	N	1	0	N	N
A	0	N	N	N	A	N	N	N	N	N	N
A	6	G	C	A	G	0	C	N	N	N	N
A	0	N	N	N	A	N	N	1	1	4	G
A	0	N	N	N	A	N	N	1	1	4	G
A	0	N	N	N	A	N	N	N	N	N	N
A	0	N	N	N	A	N	N	1	1	4	G
A	0	N	N	N	A	N	N	N	N	N	N
A	0	N	N	N	A	N	N	1	1	4	G
A	0	N	N	N	A	N	N	N	N	N	N
A	6	G	C	A	G	0	C	N	0	4	C
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A	6	G	C	A	G	0	C	1	1	4	G
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A	0	N	N	N	A	N	N	1	1	4	G
A	0	N	N	N	A	N	N	N	N	N	N
A	6	G	C	A	G	0	C	N	N	4	N
A	6	G	C	A	G	0	C	1	1	4	N
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A	0	N	N	N	A	N	N	N	N	N	N
A	0	N	N	N	A	N	N	N	N	N	N
A	0	N	N	N	A	N	N	N	N	N	N
A	6	G	C	A	G	0	C	N	N	4	N
A	6	G	C	A	G	0	C	N	N	4	N
A	6	G	C	A	G	0	C	N	N	4	N
A	6	G	C	A	G	0	C	N	N	4	N
A	0	N	N	N	A	N	N	1	1	4	G

A A A G G N A G G N A N G A G N G N G A A

6 6 6 6 N 6 6 N 0 N 6 6 N 6 N 6 6 6

G C G T T N G T T N G N T G T N T T C C

C C C T T N C T T N C N T C T N T T C C

A T A T T N A T T N T N T A T N T N T T T

G G G G N G G N A N G G N N N G G

0 8 0 8 8 N 0 8 8 N 8 8 0 8 N N N 8 8

C C C C C N C C C C C N C C C C C G

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0 N N 1 N 1 N 1 N 0 1 0 0 N N 1 0 N

4 N N 4 N 4 N 4 N 4 N 4 4 4 4 N N 4 4 N

G N N G N G N G N G N G C C G N N G G N

G A G G A G G G G N G G A G G A N G G G G G N G N A N G A

6 0 6 6 6 6 6 6 6 N 6 6 6 0 6 6 6 0 6 N 6 6 6 6 N 6 N 0 N 6 6

T G T T C T T T T N T T T G T T C G T N T T T T T N T N G N G

T C T T C T T T T N T T T C T T C C T N T T T T N T N C N C C

T T T T T T T N T T T T T T T T T T T N T N T N T A

G A G G G G G N G G A G G G A G N G G G G N G N A N G G

8 8 8 8 8 8 8 8 8 N 8 8 8 8 8 8 8 8 8 N 8 8 8 8 N 8 8 0

C G C C G C C C C C C N C C C C G C C C G N C C C C C N C N G N C C

0 1 1 0 1 0 1 1 N 0 0 1 1 0 1 0 0 0 N N 0 N 1 N N N 1 1 N

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G G G G G N C G G G G G N N G N C N G N N G G N G N

N N A N N G A N N N A A A A A A N A G A N N N G N A G N N N G N G A N A G N A A A A A A N N N N A A A G N

N N 0 N N 6 0 N N 0 0 0 0 6 0 0 0 0 0 0 6 0 0 6 0 6 6 0 N N N N N 0 0 6 0 N

N N Z N Z G N Z Z G N Z Z G G G C C G N Z N Z N Z N Z N Z T N T G N G C C G N Z N Z G G G

N N C N Z C C N Z C C C C C C N C C N Z N Z N Z N Z N Z C T N C C C C C C N Z C C C

N N T N N T T N N T T T T T T T N T T T N T T T T N A T T A T N N N N T T A T N

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N N 8 N N 8 0 8 8 8 0 8 N

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T T A T T A N T T N A T N T T N A N T N A T T T T A T T T T A T T T T T N T N N N A T

A A G A A G N G A N G A N G A N G N A N G G G G A A A A N G G G G A G G G N A N N N G A

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N N N G G G G G N N G N G N G N G C N N G G N N G G C C G N N G N N G N G G G N G G G

A N N C N C N C N C N A A A A N N N C A N
A C C A C A C C N A A C C C A C A A G N N A N A N C N N C N C N C N
C N N N N C C C N C N T C T T C N N C T T
T C C T C T C C N C T C C C T C T T C N C T N C N C N C N C N C N
C N N N N C C C N C N C C C C C C C C C C C C C C C C C N C N C N C N C N T T N
T N N N N T T T N T N A A A A A N N T A A
A T T A T A T T N A A T A T A A T N T A N A N T N A N T T N T T N
1 N N N N 1 1 1 N 1 N 2 2 2 2 2 N N 1 2 2
2 1 1 2 1 2 1 1 N 2 2 1 2 1 2 1 2 2 0 N 1 2 N 2 N 1 N 2 N 1 1 N
T N T N C N T C N N C C C N N N N N N N C
C C C N C C N C N C C C C C C N C C N C C N C C N C N C N C N
A N A N G N A G N N G G A N N N N N N G
G G G N G G N G N G N G G G G N G N G N G N G N G N G N G N G N
G T G N G N G T N N G T G G N N G N N T T
G T G N T T N G N G T G T G N G N T G N T T T N N G N G T N G G
8 8 8 0 N 8 8 N 0 8 8 0 8 N 8 8 N N 8 8
8 8 0 N 8 8 N 8 8 N 8 8 0 8 8 0 0 N 8 8 N 8 8 N N 0 N 0 8 N 8 8
T G T T G N T G N G T G G T N T T N N G G
G G G N G G N T N T N T G G G T G G G N G T N G G N N G N G N T T
A G A A A N A G N A A G A A N N A N N G G
G G A N G G N G N A N A G A A A A N G N G G N N A N A G N G A
A A A A A N A A A A A A N N A N N G A
G G A N A G N A N A N A G A A A A N G A N G G N N A N A G N A A
T A T A A N T A N A A A A T N A A N N A A
A A A N A N A N A N A A A A A A N A N A A A N A N A N A T

N N A N C C C C C C N N N N C C A N C C C C C C A N C C A A C N N N C C C N C A C C C C N N A C

N N C N C C C C C C N N N N C C T N C C C C C C T T C N N N C C C N C C T C C C C N N C C

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N N N G N T G G N N N G N G N G N T N G G G N T G G G G N G N G T T G G T T T G - G N G T T T T T

N N N A N G G A N N N G N G N A N A G N A N A A A N G A A A N G N N G A A A G A A A A A A A G A

N N N A N A G A N N N G N G N A N A G N A N A

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N N N C C C C C N C C A N N C C C N C C N C C A N N C C C N N N A C A A A N N C N N A N N C N C N A C C C C N C C A
 N N N C C C C C C C T N N C C C N C C N C C N C C N C C C T T C C T N N C N T T N N C N C N T C C C N C C T T
 N N N C T T T C C C N N C C N C C N C
 N N N T T T T T T T N N T T T N T T N T T T N T T T A A T A T T A N N T N A A N N T N A T T T T N T T A
 N N N 1 1 1 0 1 1 1 N N 1 1 N 1 N 1 N 1 N 1 N 1 N 1 2 2 1 2 1 1 2 N N 1 N 2 2 N N 1 N 1 N 2 1 1 N 1 1 2
 C N N C C T C C N N T N C C N C N N N N N C C N C C C T N N N C C C T N N N C C C N C C C N C N C N
 G N N G G A G N N A N G N G N N N N N G N N N G N N N G N N N A G G A N N N G N G N G G N G N G N
 G T G G G G T N N G N G N N N N G N N T G T T N N N T T N N G T T G N T N G T N G G N G N G N
 8 8 8 8 8 0 8 N N 8 8 0 8 8 N N N N N 8 N 0 N N 8 0 8 8 N N N 8 8 8 8 8 0 8 N 8 8 0 8 8 0 0 0
 T G T T T T G N N T N G G T N N N N N T N G N N G G G N N N G G N T G G T N G N G N T G G N G G N
 G G A A G A G N N A N G A A G N N N N N G N A N N G A G N N G G N A G G A A N G N A G N A G A A N
 A G A A A A A N N A N A A A A N N N N A N A N N G A G N N G G N A G G A A N G N A G N A A A A N
 A A T A A T A A N N T N A A A A N N N N A N A N N A A A A N N A A A N T A A T N A N A A N A A A A N

A A A A T A A A T N A A T A A N N A A A N T N A A N N A A A A T A A A N T A A N N N A N T T A N

A A A A A A - A A A N A G A A G N N N A A A N A N N A A A G A A A A N A A N N N A N A A A N

A A A A A A - A A G A N G A A G N N N A A A N A N A A G G A A A A N A A N G N N N A N A A A N

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G G G G N G N G A N G A N G N N N G N N A N N G G G N A G G N A G N G N N N N G N A A G N

C C C C N C N C T N C C T N C N N C N C N N T N N C N C N T C C C N T C N C N N N C N T T C N

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C C C A C C C C N C A N N N C C N N C C C N C C C N C C C N A C N C A N C N C C N N N C C A N C N A N N N A N N

0	6	A	C	2	G	3	T	T	0	7	0
7	0	G	T	4	C	0	T	T	7	7	0
0	6	A	C	4	C	0	T	T	7	7	0
0	6	G	T	4	C	6	T	T	0	0	N
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0	6	G	T	4	C	0	T	T	0	0	0
7	0	A	T	N	C	6	T	T	0	6	0
N	N	G	T	5	C	0	T	T	3	0	N
0	6	G	T	4	C	0	T	T	0	6	0
7	0	G	T	5	C	6	T	T	3	0	7
0	6	A	T	2	G	3	T	T	0	N	0
N	N	N	T	5	C	N	T	T	N	0	N
0	6	G	T	N	C	0	T	T	0	6	0
N	N	N	T	N	C	0	T	T	3	0	7
N	0	G	T	4	C	0	T	T	0	6	0
7	0	G	T	4	C	6	T	T	3	0	7
7	0	G	T	4	C	0	T	T	3	0	7
0	6	N	T	5	C	N	T	T	3	0	0
7	0	G	T	N	C	0	T	T	N	0	N
7	0	G	T	4	C	0	T	T	3	0	0
0	6	N	T	5	C	6	T	T	3	0	0
0	6	G	T	5	C	6	T	T	3	0	0
0	6	G	T	5	C	6	T	T	3	0	0
N	N	N	T	N	C	0	T	T	3	0	N
7	0	G	T	4	C	3	T	T	3	0	7
0	6	N	T	N	C	0	T	T	N	0	N
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7	0	G	T	4	C	6	T	T	3	0	7
0	6	N	T	5	C	N	T	T	3	0	0
N	N	N	T	N	C	6	T	T	N	0	N
0	6	G	T	5	C	6	T	T	3	0	7
7	0	G	T	4	C	0	T	T	3	0	7
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0	6	G	T	5	C	6	T	T	3	0	7
0	6	A	T	2	G	3	T	T	0	7	7

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60306360NN3N0666NNNNNN6N6NN000N00630063N0N60066663

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33003033NNN0N03333NNNN3N3N3333333333333333333333330

227027222NN7N72222NNNN2N2NN2222222222222222222222227

11011011NN0N1111NNNN1N1NN11111111111101110N11N11112227

AL5_21	AL5_22	AL5_23	AL5_24	AL8_1	AL8_2	AL8_3	AL8_4	AL8_5	AL8_6	AL8_7	AL8_8	AL8_9
T	A	A	G	3	18	A	2	G	T	G	3	A
T	A	A	G	3	18	A	0	G	T	G	3	A
T	G	G	C	3	18	A	0	G	T	G	3	A
T	A	A	N	N	N	N	N	N	N	N	N	N
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N	N	N	N	3	18	A	0	N	T	G	3	A
T	A	A	G	N	N	A	N	N	T	N	N	A
T	A	A	G	3	0	A	0	G	T	G	3	A
T	G	G	C	3	18	A	0	G	T	G	3	A
T	G	G	C	0	N	G	2	A	C	A	0	G
C	G	G	C	0	N	G	2	A	C	A	0	G
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T	G	G	N	0	N	N	2	A	N	A	0	G
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T	A	A	G	N	N	A	N	G	T	N	N	A
C	G	G	C	3	18	A	0	N	T	G	3	A
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T	G	G	C	3	18	A	0	N	T	G	3	A
T	A	A	G	N	N	A	N	G	T	N	N	A
T	A	A	G	N	3	18	N	N	T	G	3	A
N	N	N	N	3	18	A	0	N	T	G	3	A
T	N	N	N	3	18	A	0	N	T	G	3	A
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T	A	A	G	0	N	A	2	G	C	A	0	G
T	A	A	G	3	18	A	0	G	T	G	3	A
T	A	A	G	3	0	A	0	G	T	G	3	A
N	N	N	N	3	0	A	0	G	T	G	3	A

T T T C T T T T T N T C T T T T N C C N N T T	A G A G G G A G N G G G A N G G N N G G	A G A G G G A G N G G G A N G G N N G G	G C G C C C G C C N C C C C G N C C N N C C	N N 3 N 3 3 3 0 N N 3 3 3 3 3 3 3 N	N N 0 N 0 0 18 N N N N 18 N 18 N N 18 0 18 0 0 N	N N A N A A A G N N A A G N A A A A A N	N N 0 N 0 0 0 2 N N 2 N N 0 0 2 N 0 0 0 0 0 N	N N G N G G G A A N N G A N G G N G G N	N N T N T T T C C N N T T C N T T T T T N	N N 3 N 3 3 3 0 N N 3 3 3 0 N N 3 3 3 3 N	N N A N A A A G N N A A G N A A A A A A N	
T T T N T T T N C N C T T T T C T T T C T T T N T T T T T N T T N T T T T	G G G N G G N G N G N G N G N G G G G G G G G G N G G G N G G N G G A	G G G N G G N G N G N G N G G G G G G G G G G G G G N G G N G G N G G A	C C C N C C N C C N C C N N C C N N C C C C N N C C N C C N C C N N N N N C C C C N	3 3 3 3 N 3 N N 3 N N N N 3 N N N 3 N N N 3 3 3 3 3 3 3 3 3 N N N 0 3 3 N N	0 18 0 18 0 18 N N 18 N N N N 18 N N N 18 N N N 0 18 18 18 18 0 18 18 18 0 18 N N N N 18 N N N	A A A A A A N N A N N N A A N N N A A A A A A A A A A A A A N N G A A N N	0 0 0 0 0 N N 0 N N 0 N N N 0 N N N 0 0 0 0 0 0 0 0 0 0 0 0 N N 2 0 0 N N	G G G G G G G N N G N N G N N G N N G G G G G G G G G G G G N N A G G N N	T T T T T N N T N N N T T N N N T T T T T T T T T T T T N N C T T N N	G G G G G G N G N N G N N N G N N N G G N N A G G N N	3 3 3 3 3 N 3 3 N N N N 3 N N N 3 N N N 3 3 3 3 3 3 3 3 3 3 N N 0 3 3 N N	A A A A A N A A N N A A N N A A N N A A A A A A A A A A A A N A G A A N N

N N N T T T T T T N N T T T T T C N T T T T T N T T T T T N T T T T T T T T T T T N T T T T T C T T C T T T T C T T T T N T T C C T T C
N N N G G G G G N N G N G N G N G G G G N G G G G G N G G G G G N G G G A G G A A G G G N G G G A G
N N N G G G G N N G N G N G N G G G N G G G N G G G A G G A A G G G N G G G A G
N N N C C C C N N C N C C C C C N N N N C C C C N C C C C C C N C C N C N C N C C
N N 3 N N N 3 3 N 3 3 0 0 N 3 3 3 N N N 0 0 N 3 N N 3 N N 0 N 3 3 3 3 3 3 3 3 3 N 3 3 0 0 3 N
N N 0 N N N 18 0 N 18 18 N N N 18 0 0 0 N N N N N N N N N 18 18 N N N 0 0 N N 18 0 18 18 18 18 18 18 0 N N 18 18 18 N N
N N A N N N A N A A G N A A A N N N G N A N N A N N A A A A A A A A N N N N N A A A G A N N
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N N T N N N T T T C C N T T T N N N C C N T N N C N T T T T T N N T T T T T N N N G N N G G G N N G G G A G N N
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N N C N N N C

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T A A T T T T N T A T A T T A T T T T N T N N T T T A T A A A
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A C N A A C N N N N A A N A A A A A A A A
A A A A C A A N C A A C N A C C A A A A A A N A C A N N A N A N
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T T T T C T T N C T T T C N T C C T T T T T T T N T C T N N T N T N
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G G G A N A G G N G N G G A N G G A A N A A A G N G A G A A G N N A A A A A G G N A A N

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T T T T T T T T T N T N T T T T T G T G

1 1 1 2 2 1 1 2 N 1 N 2 1 0 1 2 1 1 1 1 2 1 N 2 1 0 0 2 1 2 1 1 1 2 1 1 1 N 1 N 1 1 2 1 2 1 1 2 0

G G G G G G C G N G G G G G C G G N C C G G G G N G N C G C G C G G G G

G G G N N G G G N N G N G A G N G G G N G G G G G G A G A N N G N N G G G G G G N G G N

G G G G N G G G N G N G C G N G G G G G G G G G G G C G C N N G G G G G G G G G N G G N

G G G A N A G G N G N G G A A N G G A A N A A G N G A G A A A A N N A A A A A G G N A A N

A A A A N A A A A N A A A G A N A N

T T T T N T C C C T T T T T T T C T T C C C C T T T C C C C T T T N T T T C C C C T N T C C N

T T T T N T A A A T T T T T T T A T T A A A T A T T T A A A T A T T T N T T T T A A A T N T A A N

A A A A N A G G A A A A A A A A G A A A G A A G A G A A A N A A A G A G A N A A G N

T T T T N T C C T T T T T T T T T T C T T C T T C T T C T T C T T T N T T T C T C T N T T C N

0 0 7 7 7 N 7 7 N 7 0 7 7 0 7 7 7 7 7 7 7 0 N 7 0 7 7 7 7 0 0 N 0 0 7 7 7 7 N N 7 7 N

T T T T N T T N T T T T T T T T T T T T T T T T A T T T T T N T T T A T T A N N T A T N

T T T T N T A A T T T T T T T A T T A T A T T T T A T A T N N T T A N

G G T T T N T T T T G T T T T T T T T T T T T T T T G G T G G T T T T N N T T T N

T T G T T N T T T T T T G N T G N N G G T N

1 1 1 1 1 N 1 2 2 1 1 1 1 1 1 2 1 1 1 2 1 1 1 1 1 1 1 2 1 2 0 N N 1 0 2 N

C G C C C N G C C C G G N C G G G C C C N C G N G G G C G G G G G C G G G C G G N N G G C N

N N N G N N N N N N G N G N A G G N N N G N N N N N G A A N N N G N N N G G G N N G N N

N N N G N N N N N N G N G N C G G N N N G N N G C G G G G C C N N N G N N G N N G G G N N G N N

N N N G N N N N N N G N G A N A G G N N N G N N G A G A G G A A N N N A N N G N N G A N N G N N

N N N A N N N N N N A N A A N G A A A N N N A N N A N N A N N A N N A N N A A A N N A N N

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TTTTCTTTNTNTNTNTNTNTNTNTNTNTNTNTNTNTNT

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NNAAA AA AAA AAA AAA AAA AAA CAAA A A A A A

NNGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGGTGG

T T G G N G T T T T G G T G G G G T G T T T T T T G T N T T G T T T T G N T T G T T T T G N G T T N
A A A A N A A A C A A A A A A A C C A A A A A A C A C A N A C A N
0 0 0 1 0 N 1 0 0 0 0 0 1 1 0 0 1 0 0 0 1 0 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0 0 N 0 0 1 0 0 0 0
T T T T C T C T T N C T C T T T T N T T N T T N T T N T T N T T N T T N C T T T C C C T T T C T C N
G A A G A A G A A N G G G G A G N G N G N A A N N G G N A A N G G A A G G G A G G G N
C C C C C C C C C N C C A A C C N C C N C C C N C
C G G C C C G G G N C C C G G N C C G G N C
C G G G C G N G N G C C C N G N C C G N G N G N G N G G G G G G C
C T T C C C N T C N C T C C C C N T C N T N C C T N N N N T N N C C C N T N C C T T C C C C C C C C C C C C C C
0
T C T T T T C C T T T C T
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2 2 0 2 2 0 2 2 0 0 0 2 0 2
4 6 4 4 4 4 4 6 4 6
C T T C T T C T T T T T T T T T T T T C T C C T T N T C T T C T T C T T C T T C T T C T T C T T C T T C T T C T T
T T C T C C T T T T C T T C T T T T C T T C T T C T T N C C T T T C T C N C T C T T C C T T C C T T T C C C T

N N T T T T T T T T N T T N T T N T T T T C T T
N N T N C C C T T T T N N N T T T T T N N N T T T T N T T T T T N T T T T T T
A A A A A G A
A G A G A A A G A A G A A A A A A A A A G G G A A G A A G G
C C N C C T C C C C C T C C T C C C C C C
C C G C N G C C N C C G C G G G N C N G
C C T C N T C C N C C T C T T T T N C N T
N C T T N C N C C T C N N T T N T C C C T T C C N C C C T C C
T C C C N C C C N C T C C C C C C N T N C
N C C C N C C C T N N C C C N C C T T C C C T T N C C C C C T
G T T T N T C T N N G T C T T T T N G N T
N C T T N G N C C T G N N T T N T C G G C T T T G C N C C C T T C G
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G A N N N A G N N N N G N A N N G N N N G A N N N N A A G N

NNNAGNNANANGAGNANANANGANNAGNANNANGGNGNAA

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T CNTCTCCNCCNTNCNCTNCTNCTCNCCCTNCTNCTCCTCCTC

CTNCTCCTCNTNTNCNTNCNCCCTNCCCTNCCCTNCCCTNCCCT

CGNCGCCCNNGNCCNCCNCCNCCNCCNCCNCCNCCNCCNCCNCC

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NNAAAAAAGAAAAAAGAAAAAGAAAAAGAAAAAGAAAGGA

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NNNTTTTNTTTNTTTNTTTNTTTNTTTNTTTNTTTNTTTNTTTNTTT

A G A G N G N N N N N A N N A N N N A A A A N N G A N N N N G A N N N N A N N A N N N N G A N G N

T T T N T G C T T T T N G N T N N T C G T G N N T C N G T N T N G T T C C N N N T N C T N G C T C T N T C T T

C C C N C T C C C C C N T N C N N C C T C C N N C C N C

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A A A A G G A A A G A A A A A A A A A A A A A A A G A A A A A G A A A A A A A A A A A A A A A G N N A G A N

G G G A A A A G A A G A G G A G G A A G G G A A A N N A A A N

T T T T T N T T T T C T T T T T T T T T N T N T T T T T N T N N T C T T N T T T C T T T T N T C T T T C N N T N N N T N