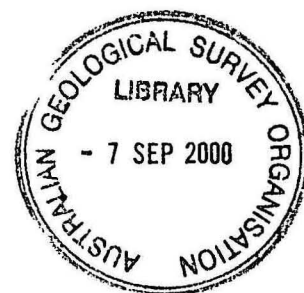


AG80
RECORD
1999/57



Report
of
Seismic Reflection Survey
at
Northparkes Mine, Central N.S.W.

Chief Investigator: Dr Karsten Gohl

Co-Investigator: John Bus

Organisation: Macquarie University
Dept of Earth & Planetary Sciences
North Ryde NSW 2109
Ph.: (02) 9850 8373
Fax: (02) 9850 6904
Email: kgohl@brunhes.es.mq.edu.au

Dates of Survey: 16-18 March 1999

Date of Report: 15 December 1999

BMR
COMPACTUS
1999/57
C1

Introduction and Objectives

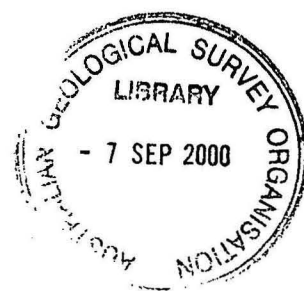
The Goonumbla district near Parkes, central NSW, is a Palaeozoic circular volcanic zone with porphyry intrusions that have a significant exploration potential for copper-gold deposits (Perkins et al., 1990; Heithersay et al., 1990; Clarke and Sherwin, 1990; Hooper et al., 1996). Aeromagnetic and gravity surveying map a large number of isolated, circular features within this district which are associated with porphyry domes. However, the general geological tectonic structure within which those porphyry domes were formed is still quite unknown. Seismic profiling between some of the main porphyry locations could help constrain the geometrical relation of those domes and map the monzonite basement structure and any fault zones.

In an attempt to resolve the structural relationship between porphyry domes and interbedded monzonite and volcanoclastic complexes, a location for a 2-D seismic reflection line was chosen in the area of the Northparkes Mine site on top of and between the Endeavour 48 (E48) and Endeavour 31 (E31) prospects (Fig. 1). The mineralisation at E48, and the nearby E22, 26 and 27 deposits, is associated with complex monzodiorite to quartz-monzonite porphyries and associated zones of hydrothermal alteration (Hooper et al., 1996). The intrusives are typically near-vertical pipe-like bodies with diameters of up to several hundreds of metres and vertical extents of up to 1 km. Geochemistry from borehole samples suggests a close compositional relation between stocks E48 and E31. If the monzonitic porphyry material extends laterally between the stocks, this connection might be observed seismically. Unfortunately, intense rain made continued profiling toward E31 impossible. Also, the planned acquisition of additional 3-D refraction lines (3-D tomography) over an area with the prospect E31 in its centre could not be performed due to the same reason. The refraction lines would have provided necessary information on the velocity structure of the local subsurface.

Seismic Data Acquisition

The seismic reflection data were acquired from 16th to 18th March 1999. They were recorded with a Geometrics Strataview® R48 seismograph of Macquarie University in roll-along mode. The Australian Geological Survey Organisation (AGSO) provided an IVI Mini-Vibrator truck through the Australian National Seismic Imaging Resource (ANSIR) facility as a seismic energy source. The acquisition parameters are listed in the following table:

Number of seismic channels:	48 (with vibrator reference signal written into ch. 1)
Number of geophone per group:	4
Type of geophones:	GS 40-Hz
Vibrator point (VP) spacing:	4 m
Geophone group spacing:	4 m
Shot geometry:	symmetric split-spread
Nominal fold:	24
Vibrator sweeps:	5 linear upsweeps of 40-300 Hz each, stacked before cross-correlation
Sampling interval:	0.5 ms



Recording length: 1 s
Acquisition filter: 10 Hz low-cut, 50 Hz Notch

A total of 383 stacked VP records were recorded over a total profile length of about 1500 m (shot no. 1001-1383; CDP no. 1-785). The seismic survey followed a line through untracked low-density forest and grassland with one conveyor belt and one road crossing. The seismic line grid was surveyed by NORTH staff using DGPS.

Seismic Data Processing and Results

The field data were reformatted from Strataview format (SEG-2) into SEG-Y format and subsequently processed using GLOBE Claritas[®] interactive seismic processing software on a SUN Ultra-1 computer at Macquarie University. In addition, the shot records were given to AGSO (Dr Leonie Jones, Dr Barry Drummond) for processing on their FOCUS[®] processing system.

The seismic processing sequence at Macquarie University included the following steps:

- 1) Definition of source and receiver geometry; writing geometry into trace headers
- 2) Correction for spherical divergence
- 3) Trace balancing
- 4) Sorting from shot gathers into CDP gathers
- 5) Band-pass filter (various filter settings)
- 6) Spectral balancing
- 7) [Deconvolution filters (various filter settings)]
- 8) Velocity analysis
- 9) Normal move-out (NMO) correction with muting
- 10) Stacking
- 11) Band-pass filter (various filter settings)
- 12) Automatic gain control (AGC)
- 13) Display and plotting of stack section

The initial display of shot gathers revealed a high level of coherent and incoherent noise throughout the profile (Fig. 2). Reflection signals appear to be of very low amplitude. After detailed spectral analyses, we tried several band-pass filter settings in an attempt to isolate the noise from coherent reflection signals. A large proportion of the noise below 100 Hz is related to vibrator truck and compressor engine noise. Other low-frequency noise stems probably from crusher operations on the mine sites 800-1500 m distant from the seismic profile. We therefore chose band-pass filters ranging from 100-300 Hz to 200-400 Hz. Although this higher frequency range seems to eliminate most of the cultural and vibrator truck noise, only few shot records show identifiable reflection hyperbolae.

In a lateral variation, a proportion of the shot gathers shows some "ringing" before and parallel to the first arrivals which is an indication for persistent vibrator-generated noise in combination with cross-correlation noise. This correlation noise occurs in vibrator generated data acquired in highly attenuating near-surface conditions. The lateral variations of this "ringing" indicates a change of near-surface ground coupling and near-source conditions along the profile.

The first P-wave arrival itself exhibits a large variety in signal quality. Between shot points 1050 and 1170, the first arrival is not clearly identifiable, an indication for acoustically highly attenuating ground conditions. A reason for these difficult ground conditions is probably the large water content in the weathering zone after extraordinary rainfalls in the weeks prior to this survey.

The lack of continuous reflectors in the shot records did not allow standard velocity analysis on identifiable reflection hyperbolae. In the hope to extract useful reflection information under optimised stack conditions, we generated a range of constant-velocity stacks, each with a variety of band-pass filter settings. Constant stacking velocities ranged from 600 to 3200 m/s. However, only very few and inconsistent reflection events could be made visible.

The best results that may contain any useful information were a stack with a band-pass filter of 70-300 Hz and stacking velocities vertically increasing from 1500 m/s on top and 4000 m/s at 400 ms time-depth (Fig. 3), and a stack produced by AGSO with similar parameters but with the addition of a designed deconvolution operator (Fig. 4). There are three zones with seismic signals of possible interest in both stacks:

- (1) An east-dipping reflector exists between CDP 400 and 600 at 150-300 ms (about 200-500 m depth). This is consistent with the general dip trend of the volcanoclastic-monzonite contact in this area. No other reflection can be observed at this depth along the seismic section.
- (2) A large-amplitude band of signals stretch from CDP 100 to 400 between 50 and 140 ms (about 50-180 m depth) in the area of E48 which appears as a depressional feature. However, this band of signals has to be regarded with great caution, because neither clear first arrivals nor continuous reflection hyperbolae are observed in the shot records from this line segment. This might well be a result of stacked first refraction arrivals due to stacking velocities chosen to be too high in this shallow part of the profile.
- (3) The eastern half of the profile (CDP 400-785) reveals a low-amplitude reflector horizon at very shallow depth (40-70 ms, about 30-70 m) which might indicate the top of basement under the weathered and transported overburden.

Apart from those observations, more interpretative information cannot be extracted from the seismic profile at this stage unfortunately. It is, however, encouraging that despite the low signal-to-noise ratio, a few isolated reflection events down to 500 m depth are observable. This suggests that seismic reflection profiling can provide useful information on structural relationships in a complex geological setting such as in the Northparkes district if the noise level is reduced and source-receiver ground coupling can be improved.

Implications for Future Work

With the experience gathered from this project of high-resolution seismics in a porphyry environment, we can make the following recommendations for future seismic work in Northparkes:

(1) If a vibrator source is used again, then it is necessary to prepare a track of cleared ground or use gravel tracks/roads if possible. It seems critical that high-frequency responses can only be obtained without major attenuation if source and receiver ground coupling is at its optimum. This also required a ground that is not water saturated from rain. If ground clearing is impossible, then the use of explosive sources is the only alternative.

(2) To solve the 'mystery' of the seismic arrivals on top of E48, a refraction profile with densely spaced geophones and a few explosive shots over the western half of the reflection profile could provide useful constraints on the velocity distribution and on lithological contacts at shallow (<100 m) level.

References

- Clarke, I. and L. Sherwin (eds.): Geological setting of gold and copper deposits in the Parkes area, New South Wales. *Records of the Geological Survey of New South Wales, Vol. 23, Part 1*, 196 pp, New South Wales Department of Minerals and Energy, 1990.
- Heithersay, P.S., W.J. O'Neill, P. van der Helder, C.R. Moore, and P.G. Harbon: Goonumbla porphyry copper district – Endeavour 26 North, Endeavour 22 and Endeavour 27 copper-gold deposits. In *Geology of the Mineral Deposits of Australia and Papua New Guinea* by F.E. Hughes (ed.), pp. 1385-1398, The Australasian Institute of Mining and Metallurgy, Melbourne, 1990.
- Hooper, B., P.S. Heithersay, M.B. Mills, J.W. Lindhorst, and J. Freyberg: Shoshonite-hosted Endeavour 48 porphyry copper-gold deposit, Northparkes, central New South Wales. *Australian J. Earth Sci.*, 43, 279-288, 1996.
- Perkins, C., I. McDougall, J. Claoué-Long, and P.S. Heithersay: $^{40}\text{Ar}/^{39}\text{Ar}$ and U-Pb geochronology of the Goonumbla porphyry Cu-Au deposits, New South Wales, Australia. *Economic Geology*, 85, 1808-1824, 1990.

Field Crew

Members of the seismic field crew were:

Karsten Gohl	Macquarie University	Chief Investigator
John Bus	Macquarie University	Honours Student and Co-Investigator
Tara Deen	Macquarie University	Honours Student
Duncan Bradey	Macquarie University	Honours Student
Kevin Wake-Dyster	AGSO-ANSIR	Research Scientist
Alex Takken	AGSO-ANSIR	Technician
Carlie Byrne	North Pty Ltd	Staff Geophysicist
Paul ??	North Pty Ltd	Surveyor

Acknowledgments

This project was funded through an *ASEG Research Foundation Grant* and an *ARC Small Grant* to Karsten Gohl and John Bus. The Mini-Vibrator, the geophones and a cable truck were provided by AGSO-ANSIR. We are grateful to Kevin Wake-Dyster and Alex Takken for their field work efforts. North Ltd Pty provided logistical and staff support and made other geophysical and geological data available for this project. Many thanks to Phil McInerney, Stuart Smith, Carlie Byrne, and Paul ?? of North Ltd Pty for their support and advice.

Figures

Fig. 1. Airphoto map of Northparkes Mine with location of seismic reflection line.

Fig. 2. Example of shot gathers.

Fig. 3. Stacked CDP section, processed at Macquarie University.

Fig. 4. Stacked CDP section, processed at AGSO.



Fig. 1. Airphoto of Northparkes Mine with location of seismic reflection survey from March 1999. Numbers along line indicate CDP numbers corresponding to the line geometry.

SHOT 1015

SHOT 1139

SHOT 1235

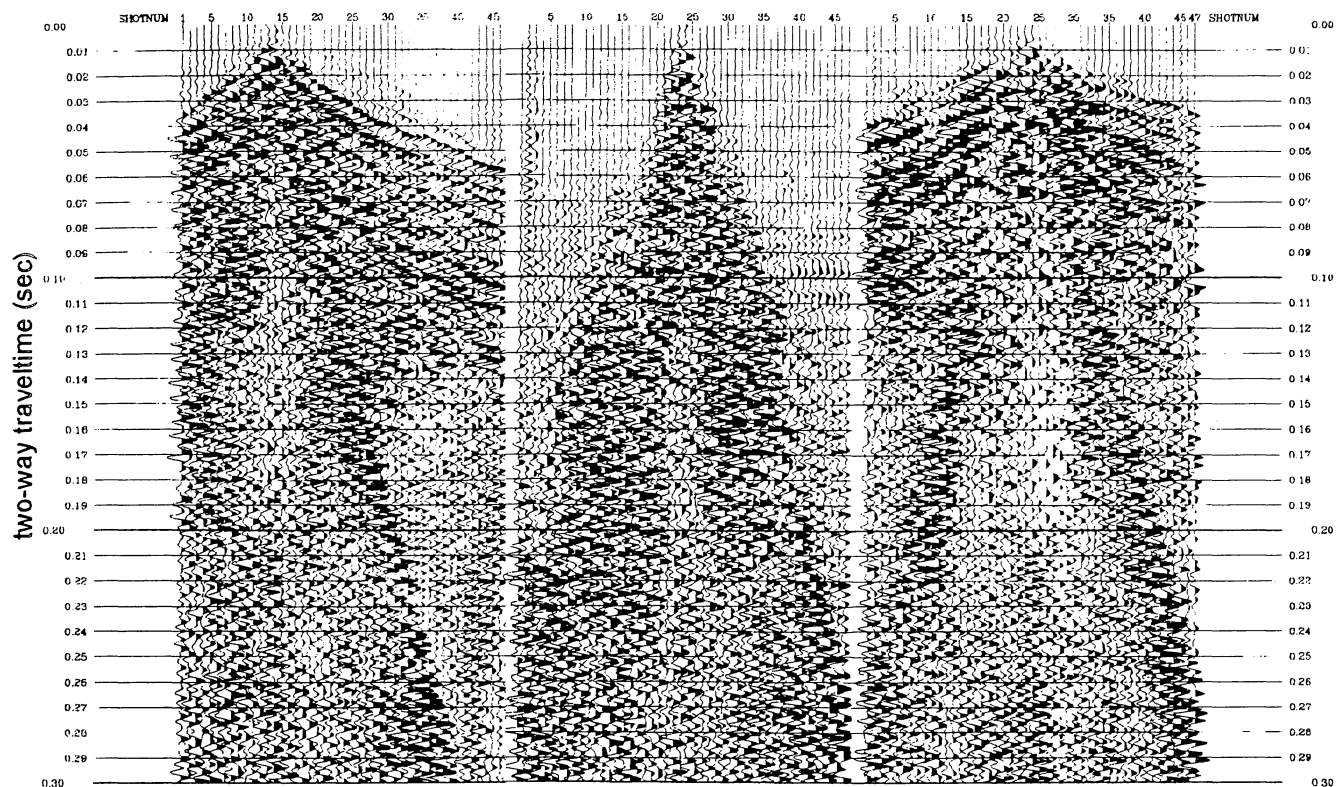


Fig. 2. Examples of shot records from seismic reflection line. These records are BP filtered with 100-300 Hz and spectrally balanced.

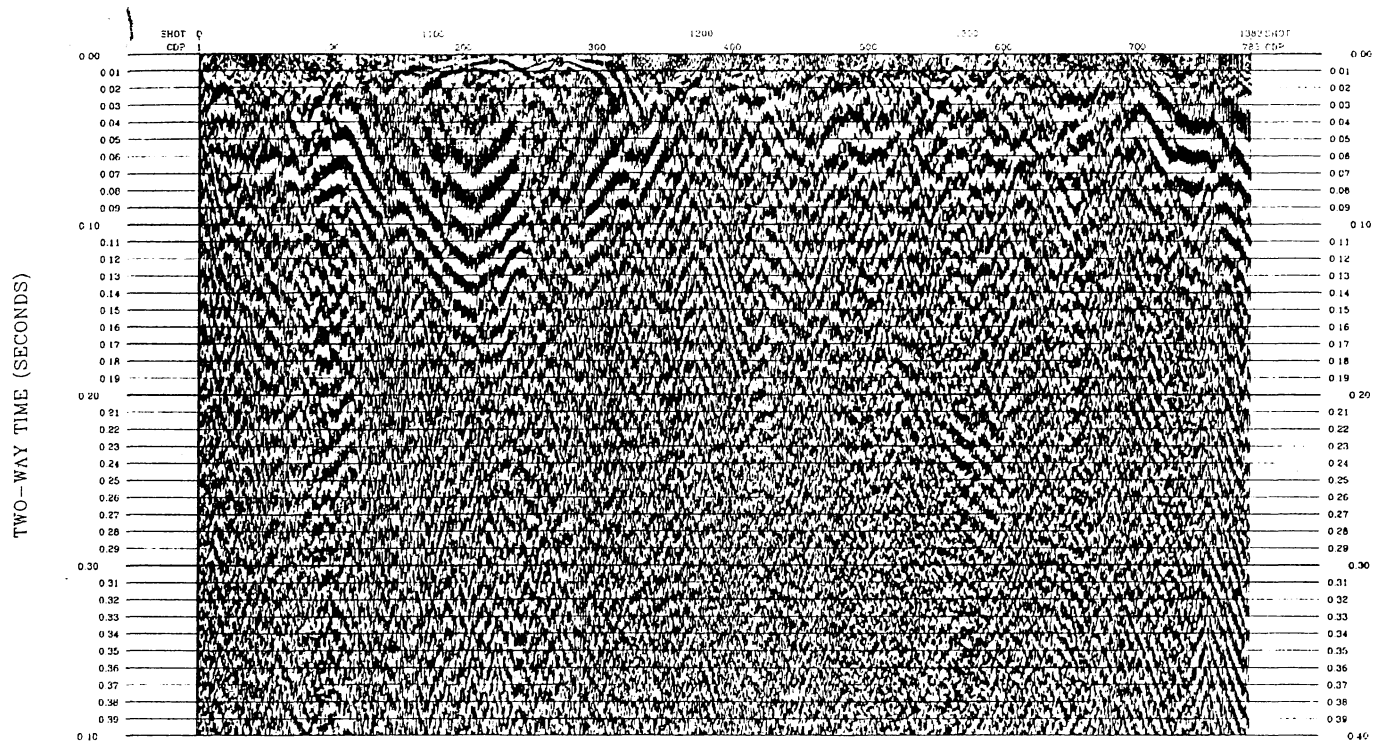


Fig. 3. Stacked section. BP 70-300 Hz, no spectral balance, AGC, processed at Macquarie University.

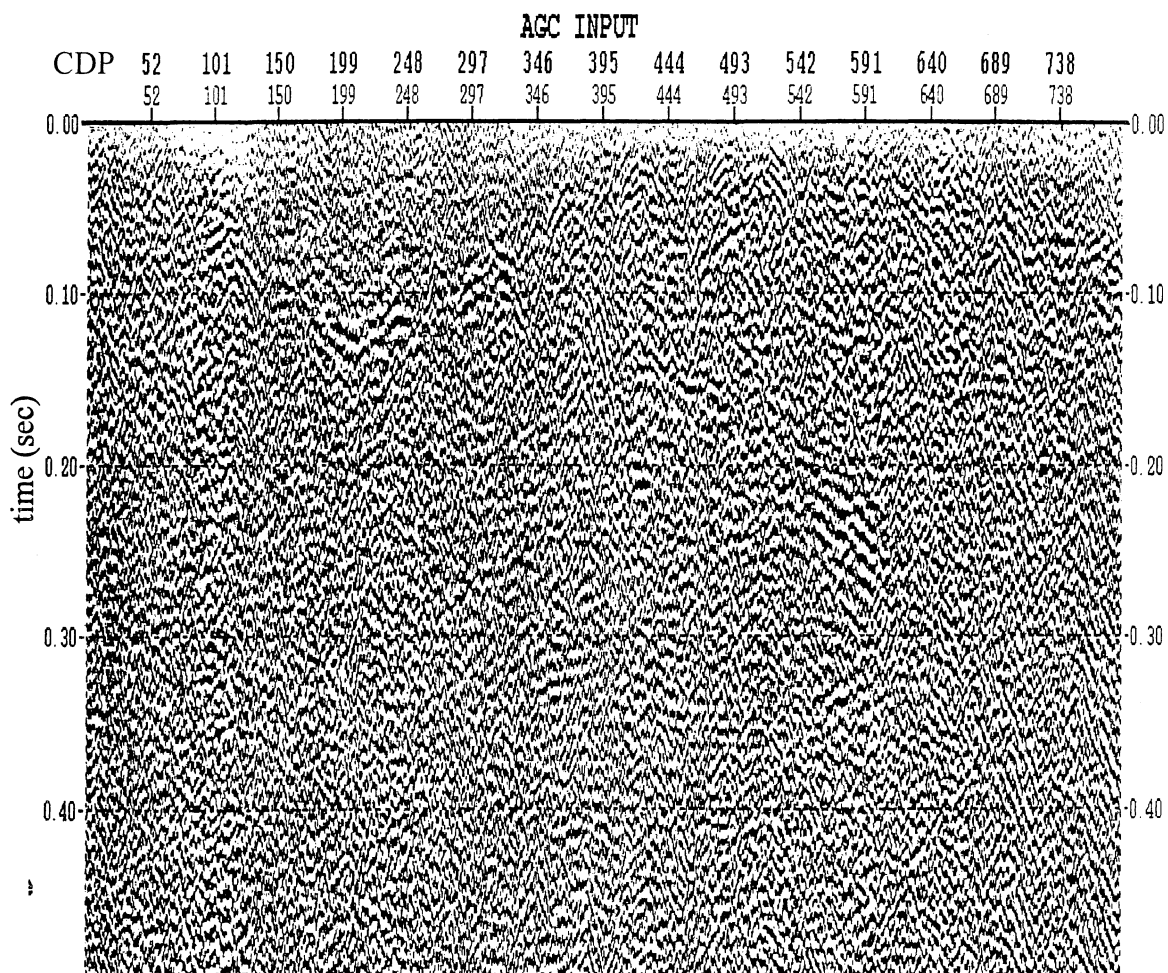


Fig. 4. Stacked section, AGC, processed at AGSO.

Appendix

CDP line locations:

Note: The correct Northing coordinates start with 6356731.31 !

Northparkes 1999

Seismic Reflection Profile

Macquarie University

CDP information

CDP	East	North	Height	Distance	Fold	Inline	X-line
1	597482.62	656731.31	0.00	0.00	0	0	0
2	597484.31	656730.25	0.00	0.00	0	0	0
3	597486.06	656729.25	0.00	0.00	1	0	0
4	597487.75	656728.19	0.00	0.00	2	0	0
5	597489.50	656727.12	0.00	0.00	3	0	0
6	597491.12	656725.94	0.00	0.00	3	0	0
7	597492.81	656725.00	0.00	0.00	5	0	0
8	597494.56	656723.94	0.00	0.00	6	0	0
9	597496.25	656722.94	0.00	0.00	7	0	0
10	597497.94	656721.88	0.00	0.00	8	0	0
11	597499.62	656720.81	0.00	0.00	9	0	0
12	597501.38	656719.75	0.00	0.00	10	0	0
13	597503.06	656718.69	0.00	0.00	11	0	0
14	597504.75	656717.62	0.00	0.00	12	0	0
15	597506.44	656716.62	0.00	0.00	13	0	0
16	597508.12	656715.50	0.00	0.00	14	0	0
17	597509.81	656714.44	0.00	0.00	15	0	0
18	597511.56	656713.50	0.00	0.00	16	0	0
19	597513.25	656712.38	0.00	0.00	17	0	0
20	597514.94	656711.25	0.00	0.00	17	0	0
21	597516.62	656710.25	0.00	0.00	19	0	0
22	597518.31	656709.19	0.00	0.00	20	0	0
23	597520.06	656708.12	0.00	0.00	21	0	0
24	597521.75	656707.12	0.00	0.00	22	0	0
25	597523.50	656706.06	0.00	0.00	23	0	0
26	597525.19	656705.00	0.00	0.00	24	0	0
27	597526.88	656704.00	0.00	0.00	25	0	0
28	597528.62	656702.94	0.00	0.00	25	0	0
29	597530.31	656701.88	0.00	0.00	26	0	0
30	597532.00	656700.88	0.00	0.00	26	0	0
31	597533.75	656699.75	0.00	0.00	27	0	0
32	597535.44	656698.75	0.00	0.00	27	0	0
33	597537.12	656697.69	0.00	0.00	28	0	0
34	597538.88	656696.62	0.00	0.00	28	0	0
35	597540.50	656695.50	0.00	0.00	27	0	0
36	597542.25	656694.56	0.00	0.00	29	0	0
37	597544.00	656693.50	0.00	0.00	30	0	0
38	597545.62	656692.44	0.00	0.00	29	0	0
39	597547.38	656691.38	0.00	0.00	31	0	0
40	597549.06	656690.31	0.00	0.00	31	0	0
41	597550.81	656689.31	0.00	0.00	32	0	0
42	597552.50	656688.25	0.00	0.00	32	0	0
43	597554.19	656687.19	0.00	0.00	33	0	0
44	597555.88	656686.19	0.00	0.00	33	0	0
45	597557.62	656685.19	0.00	0.00	35	0	0
46	597559.31	656684.06	0.00	0.00	33	0	0
47	597561.06	656683.12	0.00	0.00	35	0	0
48	597562.75	656682.12	0.00	0.00	35	0	0
49	597564.50	656681.12	0.00	0.00	36	0	0
50	597566.19	656680.00	0.00	0.00	33	0	0
51	597567.88	656679.00	0.00	0.00	35	0	0
52	597569.62	656678.00	0.00	0.00	34	0	0
53	597571.25	656676.88	0.00	0.00	33	0	0
54	597573.00	656675.88	0.00	0.00	33	0	0
55	597574.69	656674.88	0.00	0.00	33	0	0
56	597576.50	656673.81	0.00	0.00	32	0	0
57	597578.19	656672.81	0.00	0.00	32	0	0
58	597579.81	656671.75	0.00	0.00	31	0	0
59	597581.62	656670.75	0.00	0.00	31	0	0
60	597583.31	656669.69	0.00	0.00	30	0	0
61	597585.00	656668.62	0.00	0.00	30	0	0
62	597586.69	656667.62	0.00	0.00	29	0	0
63	597588.44	656666.56	0.00	0.00	29	0	0
64	597590.19	656665.62	0.00	0.00	28	0	0
65	597591.88	656664.56	0.00	0.00	28	0	0

66	597593.56	656663.44	0.00	0.00	27	0	0
67	597595.31	656662.50	0.00	0.00	27	0	0
68	597597.00	656661.44	0.00	0.00	26	0	0
69	597598.75	656660.44	0.00	0.00	26	0	0
70	597600.44	656659.38	0.00	0.00	25	0	0
71	597602.12	656658.38	0.00	0.00	25	0	0
72	597603.88	656657.44	0.00	0.00	24	0	0
73	597605.62	656656.38	0.00	0.00	24	0	0
74	597607.25	656655.31	0.00	0.00	23	0	0
75	597609.06	656654.38	0.00	0.00	24	0	0
76	597610.75	656653.25	0.00	0.00	23	0	0
77	597612.50	656652.25	0.00	0.00	24	0	0
78	597614.19	656651.25	0.00	0.00	23	0	0
79	597615.94	656650.25	0.00	0.00	24	0	0
80	597617.62	656649.19	0.00	0.00	23	0	0
81	597619.31	656648.19	0.00	0.00	24	0	0
82	597621.06	656647.19	0.00	0.00	23	0	0
83	597622.75	656646.12	0.00	0.00	24	0	0
84	597624.50	656645.12	0.00	0.00	23	0	0
85	597626.25	656644.12	0.00	0.00	24	0	0
86	597628.00	656643.06	0.00	0.00	23	0	0
87	597629.69	656642.06	0.00	0.00	24	0	0
88	597631.44	656641.12	0.00	0.00	23	0	0
89	597633.12	656640.00	0.00	0.00	24	0	0
90	597634.81	656639.00	0.00	0.00	23	0	0
91	597636.50	656637.94	0.00	0.00	24	0	0
92	597638.31	656637.06	0.00	0.00	22	0	0
93	597640.00	656635.94	0.00	0.00	23	0	0
94	597641.69	656634.94	0.00	0.00	23	0	0
95	597643.44	656633.94	0.00	0.00	24	0	0
96	597645.12	656632.94	0.00	0.00	23	0	0
97	597646.88	656631.94	0.00	0.00	24	0	0
98	597648.56	656630.88	0.00	0.00	23	0	0
99	597650.31	656629.94	0.00	0.00	24	0	0
100	597652.06	656628.94	0.00	0.00	23	0	0
101	597653.75	656627.88	0.00	0.00	24	0	0
102	597655.50	656626.81	0.00	0.00	23	0	0
103	597657.19	656625.88	0.00	0.00	24	0	0
104	597658.88	656624.75	0.00	0.00	23	0	0
105	597660.62	656623.81	0.00	0.00	24	0	0
106	597662.38	656622.81	0.00	0.00	23	0	0
107	597664.06	656621.81	0.00	0.00	24	0	0
108	597665.81	656620.75	0.00	0.00	23	0	0
109	597667.50	656619.75	0.00	0.00	24	0	0
110	597669.25	656618.81	0.00	0.00	23	0	0
111	597671.00	656617.69	0.00	0.00	24	0	0
112	597672.69	656616.75	0.00	0.00	23	0	0
113	597674.44	656615.75	0.00	0.00	24	0	0
114	597676.12	656614.62	0.00	0.00	23	0	0
115	597677.88	656613.62	0.00	0.00	24	0	0
116	597679.62	656612.69	0.00	0.00	23	0	0
117	597681.31	656611.69	0.00	0.00	24	0	0
118	597683.06	656610.62	0.00	0.00	23	0	0
119	597684.81	656609.62	0.00	0.00	24	0	0
120	597686.50	656608.62	0.00	0.00	23	0	0
121	597688.19	656607.62	0.00	0.00	24	0	0
122	597689.94	656606.56	0.00	0.00	23	0	0
123	597691.69	656605.62	0.00	0.00	24	0	0
124	597693.38	656604.50	0.00	0.00	24	0	0
125	597695.06	656603.44	0.00	0.00	24	0	0
126	597696.88	656602.56	0.00	0.00	23	0	0
127	597698.56	656601.50	0.00	0.00	24	0	0
128	597700.25	656600.50	0.00	0.00	23	0	0
129	597702.00	656599.44	0.00	0.00	24	0	0
130	597703.69	656598.50	0.00	0.00	23	0	0
131	597705.38	656597.44	0.00	0.00	24	0	0
132	597707.19	656596.44	0.00	0.00	23	0	0
133	597708.88	656595.38	0.00	0.00	24	0	0
134	597710.56	656594.44	0.00	0.00	23	0	0
135	597712.38	656593.38	0.00	0.00	24	0	0
136	597714.06	656592.38	0.00	0.00	23	0	0
137	597715.75	656591.31	0.00	0.00	24	0	0
138	597717.44	656590.31	0.00	0.00	23	0	0
139	597719.12	656589.25	0.00	0.00	24	0	0
140	597720.94	656588.38	0.00	0.00	23	0	0
141	597722.62	656587.31	0.00	0.00	24	0	0
142	597724.38	656586.31	0.00	0.00	23	0	0
143	597726.06	656585.25	0.00	0.00	24	0	0
144	597727.75	656584.19	0.00	0.00	23	0	0
145	597729.50	656583.25	0.00	0.00	24	0	0
146	597731.25	656582.19	0.00	0.00	23	0	0

147	597732.94	656581.19	0.00	0.00	24	0	0
148	597734.62	656580.19	0.00	0.00	23	0	0
149	597736.38	656579.19	0.00	0.00	24	0	0
150	597738.12	656578.12	0.00	0.00	23	0	0
151	597739.88	656577.12	0.00	0.00	24	0	0
152	597741.56	656576.12	0.00	0.00	23	0	0
153	597743.25	656575.12	0.00	0.00	24	0	0
154	597745.00	656574.06	0.00	0.00	23	0	0
155	597746.69	656573.06	0.00	0.00	24	0	0
156	597748.38	656572.00	0.00	0.00	23	0	0
157	597750.12	656571.00	0.00	0.00	24	0	0
158	597751.81	656569.94	0.00	0.00	23	0	0
159	597753.50	656568.94	0.00	0.00	24	0	0
160	597755.25	656567.94	0.00	0.00	23	0	0
161	597757.00	656566.88	0.00	0.00	24	0	0
162	597758.69	656565.88	0.00	0.00	23	0	0
163	597760.38	656564.81	0.00	0.00	24	0	0
164	597762.12	656563.81	0.00	0.00	23	0	0
165	597763.81	656562.75	0.00	0.00	24	0	0
166	597765.56	656561.75	0.00	0.00	23	0	0
167	597767.25	656560.75	0.00	0.00	24	0	0
168	597768.94	656559.69	0.00	0.00	23	0	0
169	597770.75	656558.75	0.00	0.00	24	0	0
170	597772.44	656557.69	0.00	0.00	23	0	0
171	597774.12	656556.62	0.00	0.00	23	0	0
172	597775.88	656555.62	0.00	0.00	23	0	0
173	597777.56	656554.62	0.00	0.00	24	0	0
174	597779.25	656553.56	0.00	0.00	23	0	0
175	597780.94	656552.44	0.00	0.00	24	0	0
176	597782.62	656551.44	0.00	0.00	23	0	0
177	597784.38	656550.44	0.00	0.00	24	0	0
178	597786.06	656549.31	0.00	0.00	23	0	0
179	597787.81	656548.38	0.00	0.00	24	0	0
180	597789.50	656547.38	0.00	0.00	23	0	0
181	597791.25	656546.25	0.00	0.00	24	0	0
182	597792.94	656545.25	0.00	0.00	23	0	0
183	597794.62	656544.19	0.00	0.00	24	0	0
184	597796.31	656543.12	0.00	0.00	23	0	0
185	597798.06	656542.12	0.00	0.00	24	0	0
186	597799.75	656541.12	0.00	0.00	23	0	0
187	597801.50	656540.06	0.00	0.00	24	0	0
188	597803.25	656539.00	0.00	0.00	23	0	0
189	597804.94	656538.00	0.00	0.00	24	0	0
190	597806.62	656536.94	0.00	0.00	23	0	0
191	597808.31	656535.81	0.00	0.00	24	0	0
192	597810.00	656534.81	0.00	0.00	23	0	0
193	597811.75	656533.75	0.00	0.00	24	0	0
194	597813.38	656532.69	0.00	0.00	24	0	0
195	597815.12	656531.62	0.00	0.00	24	0	0
196	597816.81	656530.56	0.00	0.00	23	0	0
197	597818.50	656529.50	0.00	0.00	24	0	0
198	597820.19	656528.50	0.00	0.00	23	0	0
199	597821.94	656527.50	0.00	0.00	24	0	0
200	597823.62	656526.38	0.00	0.00	23	0	0
201	597825.31	656525.38	0.00	0.00	24	0	0
202	597827.06	656524.38	0.00	0.00	23	0	0
203	597828.75	656523.25	0.00	0.00	24	0	0
204	597830.38	656522.12	0.00	0.00	23	0	0
205	597832.12	656521.19	0.00	0.00	24	0	0
206	597833.75	656520.00	0.00	0.00	23	0	0
207	597835.50	656518.94	0.00	0.00	24	0	0
208	597837.25	656518.06	0.00	0.00	23	0	0
209	597838.88	656516.81	0.00	0.00	24	0	0
210	597840.56	656515.75	0.00	0.00	23	0	0
211	597842.25	656514.75	0.00	0.00	24	0	0
212	597844.00	656513.69	0.00	0.00	23	0	0
213	597845.62	656512.62	0.00	0.00	24	0	0
214	597847.31	656511.56	0.00	0.00	23	0	0
215	597849.06	656510.44	0.00	0.00	24	0	0
216	597850.75	656509.44	0.00	0.00	23	0	0
217	597852.44	656508.38	0.00	0.00	24	0	0
218	597854.12	656507.25	0.00	0.00	24	0	0
219	597855.75	656506.19	0.00	0.00	24	0	0
220	597857.50	656505.19	0.00	0.00	23	0	0
221	597859.19	656504.06	0.00	0.00	24	0	0
222	597860.88	656502.94	0.00	0.00	23	0	0
223	597862.56	656501.88	0.00	0.00	24	0	0
224	597864.25	656500.81	0.00	0.00	23	0	0
225	597865.94	656499.69	0.00	0.00	24	0	0
226	597867.62	656498.62	0.00	0.00	23	0	0
227	597869.31	656497.56	0.00	0.00	24	0	0

228	597870.94	656496.50	0.00	0.00	23	0	0
229	597872.62	656495.38	0.00	0.00	24	0	0
230	597874.38	656494.31	0.00	0.00	23	0	0
231	597876.00	656493.19	0.00	0.00	24	0	0
232	597877.69	656492.12	0.00	0.00	23	0	0
233	597879.38	656491.06	0.00	0.00	24	0	0
234	597881.00	656489.94	0.00	0.00	23	0	0
235	597882.69	656488.81	0.00	0.00	24	0	0
236	597884.38	656487.75	0.00	0.00	23	0	0
237	597886.06	656486.62	0.00	0.00	24	0	0
238	597887.75	656485.56	0.00	0.00	23	0	0
239	597889.44	656484.50	0.00	0.00	24	0	0
240	597891.06	656483.31	0.00	0.00	23	0	0
241	597892.75	656482.25	0.00	0.00	23	0	0
242	597894.44	656481.19	0.00	0.00	23	0	0
243	597896.06	656480.00	0.00	0.00	24	0	0
244	597897.75	656478.94	0.00	0.00	24	0	0
245	597899.50	656477.88	0.00	0.00	24	0	0
246	597901.12	656476.69	0.00	0.00	24	0	0
247	597902.75	656475.56	0.00	0.00	24	0	0
248	597904.44	656474.50	0.00	0.00	23	0	0
249	597906.06	656473.38	0.00	0.00	24	0	0
250	597907.75	656472.31	0.00	0.00	23	0	0
251	597909.44	656471.25	0.00	0.00	24	0	0
252	597911.00	656470.00	0.00	0.00	23	0	0
253	597912.75	656469.00	0.00	0.00	24	0	0
254	597914.44	656467.88	0.00	0.00	23	0	0
255	597916.06	656466.69	0.00	0.00	24	0	0
256	597917.69	656465.56	0.00	0.00	23	0	0
257	597919.38	656464.44	0.00	0.00	24	0	0
258	597921.00	656463.25	0.00	0.00	23	0	0
259	597922.69	656462.25	0.00	0.00	24	0	0
260	597924.31	656461.06	0.00	0.00	23	0	0
261	597925.94	656459.94	0.00	0.00	24	0	0
262	597927.62	656458.81	0.00	0.00	23	0	0
263	597929.25	656457.69	0.00	0.00	24	0	0
264	597930.88	656456.56	0.00	0.00	23	0	0
265	597932.56	656455.44	0.00	0.00	23	0	0
266	597934.19	656454.25	0.00	0.00	23	0	0
267	597935.81	656453.12	0.00	0.00	24	0	0
268	597937.50	656452.06	0.00	0.00	23	0	0
269	597939.12	656450.88	0.00	0.00	24	0	0
270	597940.75	656449.69	0.00	0.00	23	0	0
271	597942.38	656448.62	0.00	0.00	24	0	0
272	597944.06	656447.44	0.00	0.00	24	0	0
273	597945.69	656446.31	0.00	0.00	24	0	0
274	597947.31	656445.12	0.00	0.00	23	0	0
275	597948.94	656444.00	0.00	0.00	24	0	0
276	597950.56	656442.81	0.00	0.00	23	0	0
277	597952.19	656441.62	0.00	0.00	24	0	0
278	597953.81	656440.44	0.00	0.00	23	0	0
279	597955.38	656439.19	0.00	0.00	24	0	0
280	597956.88	656437.88	0.00	0.00	23	0	0
281	597958.44	656436.56	0.00	0.00	24	0	0
282	597959.88	656435.19	0.00	0.00	23	0	0
283	597961.31	656433.81	0.00	0.00	24	0	0
284	597962.69	656432.38	0.00	0.00	23	0	0
285	597964.12	656431.00	0.00	0.00	24	0	0
286	597965.50	656429.56	0.00	0.00	23	0	0
287	597966.88	656428.12	0.00	0.00	24	0	0
288	597968.31	656426.75	0.00	0.00	23	0	0
289	597969.69	656425.31	0.00	0.00	24	0	0
290	597971.06	656423.88	0.00	0.00	23	0	0
291	597972.50	656422.44	0.00	0.00	23	0	0
292	597973.88	656421.00	0.00	0.00	23	0	0
293	597975.38	656419.69	0.00	0.00	23	0	0
294	597976.75	656418.25	0.00	0.00	23	0	0
295	597978.12	656416.75	0.00	0.00	24	0	0
296	597979.50	656415.31	0.00	0.00	23	0	0
297	597981.00	656413.94	0.00	0.00	24	0	0
298	597982.44	656412.56	0.00	0.00	23	0	0
299	597983.75	656411.06	0.00	0.00	24	0	0
300	597985.19	656409.62	0.00	0.00	23	0	0
301	597986.56	656408.19	0.00	0.00	24	0	0
302	597988.00	656406.81	0.00	0.00	23	0	0
303	597989.38	656405.38	0.00	0.00	24	0	0
304	597990.81	656403.94	0.00	0.00	23	0	0
305	597992.19	656402.50	0.00	0.00	24	0	0
306	597993.56	656401.06	0.00	0.00	23	0	0
307	597995.00	656399.62	0.00	0.00	24	0	0
308	597996.38	656398.25	0.00	0.00	23	0	0

309	597997.75	656396.81	0.00	0.00	24	0	0
310	597999.12	656395.38	0.00	0.00	23	0	0
311	598000.56	656394.00	0.00	0.00	24	0	0
312	598001.94	656392.50	0.00	0.00	23	0	0
313	598003.38	656391.00	0.00	0.00	24	0	0
314	598004.75	656389.56	0.00	0.00	23	0	0
315	598006.19	656388.19	0.00	0.00	24	0	0
316	598007.56	656386.69	0.00	0.00	23	0	0
317	598008.88	656385.19	0.00	0.00	24	0	0
318	598010.31	656383.81	0.00	0.00	23	0	0
319	598011.75	656382.44	0.00	0.00	23	0	0
320	598013.06	656381.00	0.00	0.00	23	0	0
321	598014.38	656379.50	0.00	0.00	24	0	0
322	598015.81	656378.00	0.00	0.00	23	0	0
323	598017.19	656376.56	0.00	0.00	24	0	0
324	598018.50	656375.12	0.00	0.00	23	0	0
325	598019.94	656373.62	0.00	0.00	24	0	0
326	598021.38	656372.25	0.00	0.00	23	0	0
327	598022.69	656370.75	0.00	0.00	24	0	0
328	598024.06	656369.25	0.00	0.00	23	0	0
329	598025.44	656367.88	0.00	0.00	24	0	0
330	598026.81	656366.38	0.00	0.00	23	0	0
331	598028.19	656365.00	0.00	0.00	24	0	0
332	598029.56	656363.56	0.00	0.00	23	0	0
333	598030.94	656362.06	0.00	0.00	24	0	0
334	598032.25	656360.56	0.00	0.00	23	0	0
335	598033.62	656359.12	0.00	0.00	24	0	0
336	598035.00	656357.69	0.00	0.00	23	0	0
337	598036.31	656356.19	0.00	0.00	24	0	0
338	598037.69	656354.69	0.00	0.00	23	0	0
339	598039.06	656353.19	0.00	0.00	24	0	0
340	598040.38	656351.75	0.00	0.00	23	0	0
341	598041.75	656350.25	0.00	0.00	24	0	0
342	598043.06	656348.75	0.00	0.00	23	0	0
343	598044.44	656347.25	0.00	0.00	24	0	0
344	598045.81	656345.81	0.00	0.00	23	0	0
345	598047.19	656344.31	0.00	0.00	24	0	0
346	598048.50	656342.81	0.00	0.00	23	0	0
347	598049.81	656341.38	0.00	0.00	24	0	0
348	598051.19	656339.94	0.00	0.00	23	0	0
349	598052.56	656338.44	0.00	0.00	24	0	0
350	598053.88	656336.94	0.00	0.00	23	0	0
351	598055.19	656335.44	0.00	0.00	24	0	0
352	598056.56	656334.00	0.00	0.00	23	0	0
353	598057.88	656332.50	0.00	0.00	24	0	0
354	598059.19	656331.00	0.00	0.00	23	0	0
355	598060.56	656329.56	0.00	0.00	24	0	0
356	598061.88	656328.00	0.00	0.00	23	0	0
357	598063.19	656326.50	0.00	0.00	23	0	0
358	598064.50	656325.00	0.00	0.00	22	0	0
359	598065.81	656323.44	0.00	0.00	23	0	0
360	598067.19	656322.06	0.00	0.00	23	0	0
361	598068.50	656320.56	0.00	0.00	24	0	0
362	598069.75	656319.00	0.00	0.00	23	0	0
363	598071.12	656317.50	0.00	0.00	24	0	0
364	598072.38	656315.94	0.00	0.00	23	0	0
365	598073.69	656314.50	0.00	0.00	24	0	0
366	598075.06	656313.00	0.00	0.00	23	0	0
367	598076.38	656311.44	0.00	0.00	24	0	0
368	598077.69	656310.00	0.00	0.00	23	0	0
369	598078.94	656308.38	0.00	0.00	24	0	0
370	598080.25	656306.94	0.00	0.00	23	0	0
371	598081.56	656305.44	0.00	0.00	24	0	0
372	598082.88	656303.88	0.00	0.00	23	0	0
373	598084.19	656302.38	0.00	0.00	24	0	0
374	598085.50	656300.81	0.00	0.00	23	0	0
375	598086.81	656299.31	0.00	0.00	24	0	0
376	598088.12	656297.81	0.00	0.00	23	0	0
377	598089.38	656296.25	0.00	0.00	24	0	0
378	598090.69	656294.69	0.00	0.00	23	0	0
379	598092.00	656293.25	0.00	0.00	24	0	0
380	598093.38	656291.75	0.00	0.00	23	0	0
381	598094.56	656290.19	0.00	0.00	24	0	0
382	598095.88	656288.69	0.00	0.00	20	0	0
383	598097.06	656287.00	0.00	0.00	24	0	0
384	598098.50	656285.56	0.00	0.00	23	0	0
385	598099.69	656284.06	0.00	0.00	24	0	0
386	598101.06	656282.56	0.00	0.00	23	0	0
387	598102.31	656281.00	0.00	0.00	24	0	0
388	598103.56	656279.44	0.00	0.00	23	0	0
389	598104.88	656277.94	0.00	0.00	24	0	0

390	598106.12	656276.44	0.00	0.00	12	0	0
391	598107.25	656274.75	0.00	0.00	24	0	0
392	598108.50	656273.19	0.00	0.00	23	0	0
393	598109.88	656271.75	0.00	0.00	24	0	0
394	598111.19	656270.19	0.00	0.00	23	0	0
395	598112.44	656268.62	0.00	0.00	24	0	0
396	598113.69	656267.12	0.00	0.00	23	0	0
397	598114.94	656265.50	0.00	0.00	24	0	0
398	598116.25	656264.00	0.00	0.00	23	0	0
399	598117.50	656262.38	0.00	0.00	24	0	0
400	598118.69	656260.88	0.00	0.00	23	0	0
401	598119.94	656259.38	0.00	0.00	24	0	0
402	598121.19	656257.75	0.00	0.00	23	0	0
403	598122.38	656256.25	0.00	0.00	24	0	0
404	598123.69	656254.62	0.00	0.00	24	0	0
405	598124.88	656253.06	0.00	0.00	25	0	0
406	598126.12	656251.56	0.00	0.00	24	0	0
407	598127.44	656250.00	0.00	0.00	24	0	0
408	598128.62	656248.38	0.00	0.00	23	0	0
409	598129.88	656246.88	0.00	0.00	24	0	0
410	598131.12	656245.25	0.00	0.00	23	0	0
411	598132.38	656243.69	0.00	0.00	24	0	0
412	598133.56	656242.12	0.00	0.00	23	0	0
413	598134.81	656240.56	0.00	0.00	24	0	0
414	598136.00	656239.00	0.00	0.00	23	0	0
415	598137.25	656237.44	0.00	0.00	24	0	0
416	598138.50	656235.88	0.00	0.00	23	0	0
417	598139.69	656234.25	0.00	0.00	24	0	0
418	598140.94	656232.69	0.00	0.00	23	0	0
419	598142.12	656231.06	0.00	0.00	24	0	0
420	598143.38	656229.50	0.00	0.00	23	0	0
421	598144.56	656227.88	0.00	0.00	24	0	0
422	598145.75	656226.31	0.00	0.00	23	0	0
423	598146.94	656224.75	0.00	0.00	24	0	0
424	598148.19	656223.12	0.00	0.00	23	0	0
425	598149.38	656221.56	0.00	0.00	24	0	0
426	598150.56	656219.94	0.00	0.00	26	0	0
427	598151.75	656218.38	0.00	0.00	23	0	0
428	598153.00	656216.81	0.00	0.00	25	0	0
429	598154.12	656215.12	0.00	0.00	23	0	0
430	598155.38	656213.50	0.00	0.00	25	0	0
431	598156.62	656212.00	0.00	0.00	24	0	0
432	598157.81	656210.31	0.00	0.00	25	0	0
433	598159.00	656208.75	0.00	0.00	24	0	0
434	598160.12	656207.12	0.00	0.00	25	0	0
435	598161.38	656205.50	0.00	0.00	28	0	0
436	598162.56	656203.88	0.00	0.00	24	0	0
437	598163.75	656202.31	0.00	0.00	26	0	0
438	598164.88	656200.69	0.00	0.00	25	0	0
439	598166.12	656199.12	0.00	0.00	25	0	0
440	598167.31	656197.50	0.00	0.00	26	0	0
441	598168.44	656195.88	0.00	0.00	26	0	0
442	598169.56	656194.25	0.00	0.00	25	0	0
443	598170.75	656192.62	0.00	0.00	26	0	0
444	598172.00	656191.00	0.00	0.00	27	0	0
445	598173.12	656189.38	0.00	0.00	25	0	0
446	598174.38	656187.81	0.00	0.00	24	0	0
447	598175.56	656186.25	0.00	0.00	25	0	0
448	598176.88	656184.69	0.00	0.00	32	0	0
449	598178.12	656183.12	0.00	0.00	24	0	0
450	598179.56	656181.69	0.00	0.00	23	0	0
451	598180.94	656180.25	0.00	0.00	24	0	0
452	598182.38	656178.94	0.00	0.00	24	0	0
453	598183.88	656177.50	0.00	0.00	31	0	0
454	598185.31	656176.12	0.00	0.00	22	0	0
455	598186.94	656174.94	0.00	0.00	25	0	0
456	598188.50	656173.75	0.00	0.00	26	0	0
457	598190.12	656172.50	0.00	0.00	26	0	0
458	598191.69	656171.25	0.00	0.00	23	0	0
459	598193.31	656170.12	0.00	0.00	26	0	0
460	598194.94	656168.88	0.00	0.00	23	0	0
461	598196.50	656167.75	0.00	0.00	26	0	0
462	598198.12	656166.62	0.00	0.00	24	0	0
463	598199.81	656165.44	0.00	0.00	26	0	0
464	598201.44	656164.31	0.00	0.00	25	0	0
465	598203.06	656163.12	0.00	0.00	25	0	0
466	598204.75	656162.06	0.00	0.00	25	0	0
467	598206.44	656161.00	0.00	0.00	26	0	0
468	598208.19	656159.94	0.00	0.00	25	0	0
469	598209.88	656158.88	0.00	0.00	27	0	0
470	598211.56	656157.81	0.00	0.00	25	0	0

471	598213.25	656156.81	0.00	0.00	25	0	0
472	598215.00	656155.75	0.00	0.00	23	0	0
473	598216.75	656154.88	0.00	0.00	25	0	0
474	598218.50	656153.88	0.00	0.00	25	0	0
475	598220.25	656152.94	0.00	0.00	24	0	0
476	598222.00	656152.00	0.00	0.00	25	0	0
477	598223.75	656151.06	0.00	0.00	24	0	0
478	598225.56	656150.06	0.00	0.00	24	0	0
479	598227.25	656149.12	0.00	0.00	23	0	0
480	598229.00	656148.06	0.00	0.00	23	0	0
481	598230.75	656147.12	0.00	0.00	24	0	0
482	598232.56	656146.25	0.00	0.00	23	0	0
483	598234.31	656145.25	0.00	0.00	24	0	0
484	598236.06	656144.25	0.00	0.00	23	0	0
485	598237.75	656143.25	0.00	0.00	24	0	0
486	598239.50	656142.31	0.00	0.00	23	0	0
487	598241.31	656141.38	0.00	0.00	24	0	0
488	598243.06	656140.38	0.00	0.00	23	0	0
489	598244.75	656139.44	0.00	0.00	24	0	0
490	598246.56	656138.44	0.00	0.00	23	0	0
491	598248.31	656137.44	0.00	0.00	24	0	0
492	598250.06	656136.50	0.00	0.00	23	0	0
493	598251.81	656135.56	0.00	0.00	24	0	0
494	598253.50	656134.56	0.00	0.00	23	0	0
495	598255.31	656133.62	0.00	0.00	24	0	0
496	598257.06	656132.62	0.00	0.00	23	0	0
497	598258.81	656131.69	0.00	0.00	24	0	0
498	598260.56	656130.69	0.00	0.00	23	0	0
499	598262.25	656129.69	0.00	0.00	24	0	0
500	598264.06	656128.75	0.00	0.00	23	0	0
501	598265.81	656127.81	0.00	0.00	24	0	0
502	598267.56	656126.81	0.00	0.00	23	0	0
503	598269.25	656125.75	0.00	0.00	24	0	0
504	598271.06	656124.88	0.00	0.00	23	0	0
505	598272.81	656123.94	0.00	0.00	24	0	0
506	598274.56	656122.88	0.00	0.00	23	0	0
507	598276.25	656121.94	0.00	0.00	24	0	0
508	598278.06	656120.94	0.00	0.00	23	0	0
509	598279.75	656120.00	0.00	0.00	24	0	0
510	598281.56	656119.00	0.00	0.00	23	0	0
511	598283.31	656118.06	0.00	0.00	24	0	0
512	598285.06	656117.12	0.00	0.00	23	0	0
513	598286.75	656116.06	0.00	0.00	24	0	0
514	598288.56	656115.12	0.00	0.00	23	0	0
515	598290.25	656114.12	0.00	0.00	24	0	0
516	598292.00	656113.19	0.00	0.00	23	0	0
517	598293.75	656112.19	0.00	0.00	24	0	0
518	598295.44	656111.12	0.00	0.00	23	0	0
519	598297.25	656110.25	0.00	0.00	24	0	0
520	598299.00	656109.25	0.00	0.00	23	0	0
521	598300.69	656108.25	0.00	0.00	24	0	0
522	598302.44	656107.25	0.00	0.00	23	0	0
523	598304.25	656106.31	0.00	0.00	24	0	0
524	598305.94	656105.38	0.00	0.00	23	0	0
525	598307.69	656104.31	0.00	0.00	24	0	0
526	598309.44	656103.38	0.00	0.00	23	0	0
527	598311.12	656102.31	0.00	0.00	24	0	0
528	598312.88	656101.38	0.00	0.00	23	0	0
529	598314.62	656100.38	0.00	0.00	24	0	0
530	598316.38	656099.38	0.00	0.00	23	0	0
531	598318.12	656098.44	0.00	0.00	24	0	0
532	598319.88	656097.50	0.00	0.00	23	0	0
533	598321.62	656096.56	0.00	0.00	24	0	0
534	598323.38	656095.44	0.00	0.00	23	0	0
535	598325.06	656094.50	0.00	0.00	24	0	0
536	598326.81	656093.50	0.00	0.00	23	0	0
537	598328.56	656092.50	0.00	0.00	24	0	0
538	598330.25	656091.50	0.00	0.00	23	0	0
539	598332.00	656090.56	0.00	0.00	24	0	0
540	598333.75	656089.56	0.00	0.00	23	0	0
541	598335.50	656088.56	0.00	0.00	24	0	0
542	598337.25	656087.56	0.00	0.00	23	0	0
543	598339.00	656086.62	0.00	0.00	24	0	0
544	598340.75	656085.62	0.00	0.00	23	0	0
545	598342.50	656084.62	0.00	0.00	24	0	0
546	598344.25	656083.69	0.00	0.00	23	0	0
547	598346.00	656082.69	0.00	0.00	24	0	0
548	598347.69	656081.69	0.00	0.00	23	0	0
549	598349.44	656080.69	0.00	0.00	24	0	0
550	598351.19	656079.69	0.00	0.00	23	0	0
551	598352.88	656078.69	0.00	0.00	24	0	0

552	598354.62	656077.69	0.00	0.00	23	0	0
553	598356.38	656076.69	0.00	0.00	24	0	0
554	598358.06	656075.69	0.00	0.00	23	0	0
555	598359.88	656074.75	0.00	0.00	24	0	0
556	598361.62	656073.81	0.00	0.00	23	0	0
557	598363.38	656072.81	0.00	0.00	24	0	0
558	598365.06	656071.81	0.00	0.00	23	0	0
559	598366.81	656070.81	0.00	0.00	24	0	0
560	598368.50	656069.75	0.00	0.00	23	0	0
561	598370.25	656068.81	0.00	0.00	24	0	0
562	598372.00	656067.81	0.00	0.00	23	0	0
563	598373.69	656066.75	0.00	0.00	24	0	0
564	598375.50	656065.81	0.00	0.00	23	0	0
565	598377.19	656064.88	0.00	0.00	24	0	0
566	598378.94	656063.88	0.00	0.00	23	0	0
567	598380.69	656062.81	0.00	0.00	24	0	0
568	598382.44	656061.81	0.00	0.00	23	0	0
569	598384.12	656060.88	0.00	0.00	24	0	0
570	598385.88	656059.88	0.00	0.00	23	0	0
571	598387.62	656058.81	0.00	0.00	24	0	0
572	598389.38	656057.94	0.00	0.00	23	0	0
573	598391.12	656056.88	0.00	0.00	24	0	0
574	598392.81	656055.88	0.00	0.00	23	0	0
575	598394.56	656054.88	0.00	0.00	24	0	0
576	598396.31	656053.94	0.00	0.00	23	0	0
577	598398.06	656052.94	0.00	0.00	24	0	0
578	598399.75	656051.88	0.00	0.00	23	0	0
579	598401.50	656050.88	0.00	0.00	24	0	0
580	598403.25	656049.94	0.00	0.00	23	0	0
581	598404.94	656048.88	0.00	0.00	24	0	0
582	598406.62	656047.88	0.00	0.00	23	0	0
583	598408.38	656046.88	0.00	0.00	24	0	0
584	598410.12	656045.94	0.00	0.00	23	0	0
585	598411.88	656044.88	0.00	0.00	24	0	0
586	598413.56	656043.88	0.00	0.00	23	0	0
587	598415.31	656042.88	0.00	0.00	24	0	0
588	598417.06	656041.94	0.00	0.00	23	0	0
589	598418.75	656040.88	0.00	0.00	24	0	0
590	598420.50	656039.88	0.00	0.00	23	0	0
591	598422.25	656038.94	0.00	0.00	24	0	0
592	598424.00	656038.00	0.00	0.00	23	0	0
593	598425.75	656037.00	0.00	0.00	24	0	0
594	598427.50	656036.00	0.00	0.00	23	0	0
595	598429.19	656034.94	0.00	0.00	24	0	0
596	598430.88	656033.94	0.00	0.00	23	0	0
597	598432.62	656033.00	0.00	0.00	24	0	0
598	598434.38	656031.94	0.00	0.00	23	0	0
599	598436.12	656030.94	0.00	0.00	24	0	0
600	598437.81	656030.00	0.00	0.00	23	0	0
601	598439.56	656028.94	0.00	0.00	24	0	0
602	598441.31	656028.00	0.00	0.00	24	0	0
603	598443.00	656027.00	0.00	0.00	24	0	0
604	598444.75	656026.00	0.00	0.00	23	0	0
605	598446.44	656024.88	0.00	0.00	24	0	0
606	598448.19	656024.00	0.00	0.00	23	0	0
607	598449.94	656022.94	0.00	0.00	24	0	0
608	598451.69	656022.06	0.00	0.00	23	0	0
609	598453.38	656020.94	0.00	0.00	24	0	0
610	598455.12	656020.00	0.00	0.00	23	0	0
611	598456.81	656018.94	0.00	0.00	24	0	0
612	598458.56	656017.88	0.00	0.00	23	0	0
613	598460.31	656016.94	0.00	0.00	24	0	0
614	598462.06	656016.00	0.00	0.00	23	0	0
615	598463.81	656015.00	0.00	0.00	24	0	0
616	598465.56	656014.00	0.00	0.00	23	0	0
617	598467.25	656013.00	0.00	0.00	24	0	0
618	598468.94	656012.00	0.00	0.00	23	0	0
619	598470.75	656011.00	0.00	0.00	24	0	0
620	598472.44	656009.94	0.00	0.00	23	0	0
621	598474.19	656009.00	0.00	0.00	24	0	0
622	598475.88	656008.00	0.00	0.00	23	0	0
623	598477.62	656007.00	0.00	0.00	24	0	0
624	598479.38	656005.94	0.00	0.00	23	0	0
625	598481.06	656004.94	0.00	0.00	24	0	0
626	598482.81	656004.00	0.00	0.00	23	0	0
627	598484.50	656002.88	0.00	0.00	24	0	0
628	598486.25	656002.00	0.00	0.00	23	0	0
629	598488.00	656000.94	0.00	0.00	24	0	0
630	598489.75	656000.00	0.00	0.00	23	0	0
631	598491.44	655998.88	0.00	0.00	24	0	0
632	598493.12	655997.88	0.00	0.00	23	0	0

633	598494.88	655996.94	0.00	0.00	24	0	0
634	598496.62	655995.88	0.00	0.00	23	0	0
635	598498.38	655994.94	0.00	0.00	24	0	0
636	598500.00	655993.88	0.00	0.00	20	0	0
637	598501.81	655992.88	0.00	0.00	24	0	0
638	598503.50	655991.88	0.00	0.00	23	0	0
639	598505.31	655990.94	0.00	0.00	24	0	0
640	598507.00	655989.94	0.00	0.00	23	0	0
641	598508.75	655988.94	0.00	0.00	24	0	0
642	598510.50	655987.94	0.00	0.00	23	0	0
643	598512.19	655986.94	0.00	0.00	24	0	0
644	598513.94	655986.00	0.00	0.00	23	0	0
645	598515.69	655985.00	0.00	0.00	24	0	0
646	598517.38	655983.88	0.00	0.00	23	0	0
647	598519.06	655982.88	0.00	0.00	24	0	0
648	598520.81	655981.94	0.00	0.00	23	0	0
649	598522.56	655980.81	0.00	0.00	23	0	0
650	598524.25	655979.88	0.00	0.00	23	0	0
651	598526.00	655978.88	0.00	0.00	24	0	0
652	598527.75	655977.88	0.00	0.00	23	0	0
653	598529.44	655976.81	0.00	0.00	24	0	0
654	598531.19	655975.81	0.00	0.00	23	0	0
655	598532.94	655974.88	0.00	0.00	24	0	0
656	598534.62	655973.88	0.00	0.00	24	0	0
657	598536.38	655972.81	0.00	0.00	24	0	0
658	598538.12	655971.88	0.00	0.00	23	0	0
659	598539.88	655970.88	0.00	0.00	24	0	0
660	598541.56	655969.81	0.00	0.00	23	0	0
661	598543.31	655968.81	0.00	0.00	24	0	0
662	598545.00	655967.88	0.00	0.00	23	0	0
663	598546.75	655966.88	0.00	0.00	24	0	0
664	598548.50	655965.88	0.00	0.00	23	0	0
665	598550.25	655964.88	0.00	0.00	24	0	0
666	598551.94	655963.88	0.00	0.00	23	0	0
667	598553.62	655962.88	0.00	0.00	24	0	0
668	598555.38	655961.81	0.00	0.00	23	0	0
669	598557.12	655960.81	0.00	0.00	24	0	0
670	598558.88	655959.88	0.00	0.00	23	0	0
671	598560.62	655958.81	0.00	0.00	24	0	0
672	598562.31	655957.81	0.00	0.00	23	0	0
673	598564.00	655956.81	0.00	0.00	24	0	0
674	598565.75	655955.81	0.00	0.00	23	0	0
675	598567.50	655954.81	0.00	0.00	24	0	0
676	598569.25	655953.81	0.00	0.00	23	0	0
677	598571.00	655952.88	0.00	0.00	24	0	0
678	598572.69	655951.81	0.00	0.00	23	0	0
679	598574.44	655950.81	0.00	0.00	24	0	0
680	598576.12	655949.81	0.00	0.00	23	0	0
681	598577.88	655948.88	0.00	0.00	24	0	0
682	598579.62	655947.75	0.00	0.00	23	0	0
683	598581.31	655946.81	0.00	0.00	24	0	0
684	598583.06	655945.75	0.00	0.00	23	0	0
685	598584.75	655944.75	0.00	0.00	24	0	0
686	598586.50	655943.75	0.00	0.00	23	0	0
687	598588.25	655942.81	0.00	0.00	24	0	0
688	598589.94	655941.75	0.00	0.00	23	0	0
689	598591.69	655940.69	0.00	0.00	24	0	0
690	598593.38	655939.69	0.00	0.00	23	0	0
691	598595.12	655938.75	0.00	0.00	24	0	0
692	598596.88	655937.75	0.00	0.00	23	0	0
693	598598.62	655936.75	0.00	0.00	24	0	0
694	598600.38	655935.75	0.00	0.00	23	0	0
695	598602.12	655934.81	0.00	0.00	24	0	0
696	598603.81	655933.69	0.00	0.00	23	0	0
697	598605.56	655932.75	0.00	0.00	24	0	0
698	598607.25	655931.75	0.00	0.00	23	0	0
699	598609.00	655930.81	0.00	0.00	24	0	0
700	598610.75	655929.69	0.00	0.00	23	0	0
701	598612.50	655928.75	0.00	0.00	24	0	0
702	598614.19	655927.69	0.00	0.00	23	0	0
703	598615.88	655926.69	0.00	0.00	23	0	0
704	598617.62	655925.69	0.00	0.00	23	0	0
705	598619.38	655924.75	0.00	0.00	24	0	0
706	598621.06	655923.69	0.00	0.00	23	0	0
707	598622.81	655922.69	0.00	0.00	24	0	0
708	598624.50	655921.62	0.00	0.00	23	0	0
709	598626.31	655920.75	0.00	0.00	24	0	0
710	598628.00	655919.75	0.00	0.00	23	0	0
711	598629.75	655918.69	0.00	0.00	24	0	0
712	598631.50	655917.69	0.00	0.00	23	0	0
713	598633.19	655916.75	0.00	0.00	24	0	0

714	598634.88	655915.69	0.00	0.00	23	0	0
715	598636.62	655914.69	0.00	0.00	24	0	0
716	598638.38	655913.69	0.00	0.00	23	0	0
717	598640.06	655912.69	0.00	0.00	24	0	0
718	598641.81	655911.69	0.00	0.00	23	0	0
719	598643.56	655910.69	0.00	0.00	24	0	0
720	598645.31	655909.75	0.00	0.00	23	0	0
721	598647.06	655908.81	0.00	0.00	24	0	0
722	598648.75	655907.75	0.00	0.00	23	0	0
723	598650.50	655906.69	0.00	0.00	24	0	0
724	598652.25	655905.75	0.00	0.00	23	0	0
725	598654.00	655904.81	0.00	0.00	24	0	0
726	598655.69	655903.69	0.00	0.00	23	0	0
727	598657.44	655902.75	0.00	0.00	24	0	0
728	598659.19	655901.75	0.00	0.00	23	0	0
729	598660.94	655900.75	0.00	0.00	24	0	0
730	598662.62	655899.75	0.00	0.00	23	0	0
731	598664.38	655898.81	0.00	0.00	24	0	0
732	598666.12	655897.81	0.00	0.00	23	0	0
733	598667.81	655896.69	0.00	0.00	24	0	0
734	598669.56	655895.75	0.00	0.00	23	0	0
735	598671.25	655894.75	0.00	0.00	24	0	0
736	598673.00	655893.69	0.00	0.00	23	0	0
737	598674.75	655892.75	0.00	0.00	24	0	0
738	598676.50	655891.75	0.00	0.00	23	0	0
739	598678.25	655890.81	0.00	0.00	24	0	0
740	598680.00	655889.75	0.00	0.00	23	0	0
741	598681.75	655888.75	0.00	0.00	23	0	0
742	598683.44	655887.75	0.00	0.00	22	0	0
743	598685.19	655886.81	0.00	0.00	22	0	0
744	598686.94	655885.81	0.00	0.00	21	0	0
745	598688.62	655884.81	0.00	0.00	21	0	0
746	598690.38	655883.81	0.00	0.00	20	0	0
747	598692.12	655882.75	0.00	0.00	20	0	0
748	598693.88	655881.81	0.00	0.00	19	0	0
749	598695.56	655880.81	0.00	0.00	19	0	0
750	598697.31	655879.81	0.00	0.00	18	0	0
751	598699.00	655878.75	0.00	0.00	18	0	0
752	598700.75	655877.81	0.00	0.00	17	0	0
753	598702.50	655876.88	0.00	0.00	17	0	0
754	598704.25	655875.88	0.00	0.00	16	0	0
755	598705.94	655874.75	0.00	0.00	16	0	0
756	598707.69	655873.81	0.00	0.00	15	0	0
757	598709.50	655872.94	0.00	0.00	15	0	0
758	598711.12	655871.88	0.00	0.00	14	0	0
759	598712.88	655870.81	0.00	0.00	14	0	0
760	598714.62	655869.94	0.00	0.00	13	0	0
761	598716.38	655868.94	0.00	0.00	13	0	0
762	598718.12	655867.94	0.00	0.00	12	0	0
763	598719.88	655866.94	0.00	0.00	12	0	0
764	598721.62	655865.94	0.00	0.00	11	0	0
765	598723.31	655864.94	0.00	0.00	11	0	0
766	598725.06	655863.88	0.00	0.00	10	0	0
767	598726.81	655863.00	0.00	0.00	10	0	0
768	598728.56	655861.94	0.00	0.00	9	0	0
769	598730.25	655861.00	0.00	0.00	7	0	0
770	598732.00	655860.00	0.00	0.00	7	0	0
771	598733.75	655859.00	0.00	0.00	8	0	0
772	598735.50	655858.00	0.00	0.00	7	0	0
773	598737.25	655857.06	0.00	0.00	7	0	0
774	598738.94	655855.94	0.00	0.00	6	0	0
775	598740.69	655855.06	0.00	0.00	6	0	0
776	598742.44	655854.12	0.00	0.00	5	0	0
777	598744.19	655853.12	0.00	0.00	5	0	0
778	598745.88	655852.12	0.00	0.00	4	0	0
779	598747.69	655851.12	0.00	0.00	4	0	0
780	598749.38	655850.12	0.00	0.00	3	0	0
781	598751.12	655849.12	0.00	0.00	3	0	0
782	598752.88	655848.19	0.00	0.00	2	0	0
783	598754.56	655847.12	0.00	0.00	2	0	0
784	598756.31	655846.19	0.00	0.00	1	0	0
785	598758.06	655845.25	0.00	0.00	1	0	0