Open File Envelope No. 3615

EL 523

TELECHIE DAM

PROGRESS REPORTS AND FINAL REPORT TO LICENCE EXPIRY/RENEWAL FOR THE PERIOD 27/8/1979 TO 26/8/1981

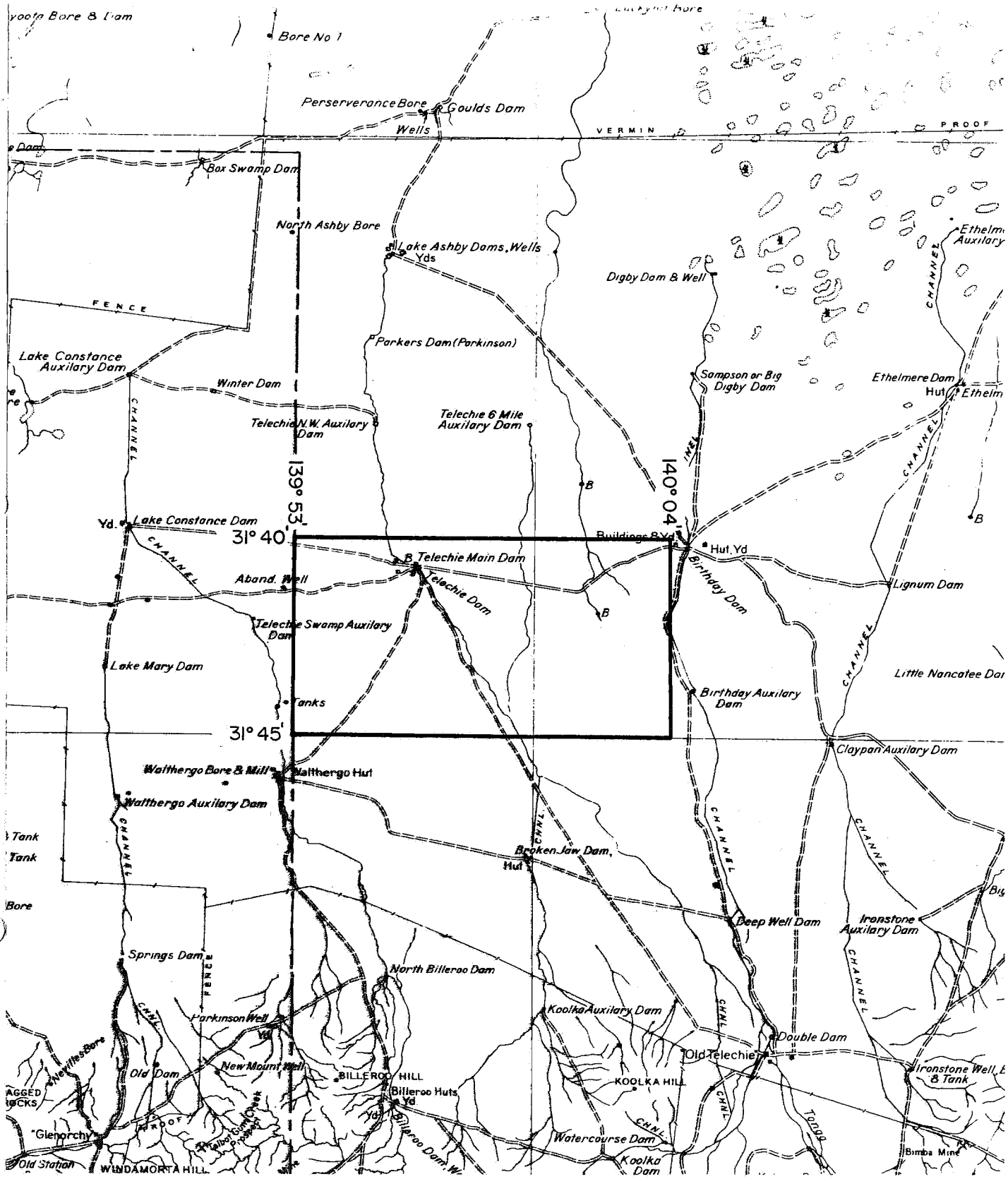
Submitted by
Mines Administration Pty Ltd
1981

Enquiries: Customer Services Branch
Minerals and Energy Resources
7th Floor
101 Grenfell Street, Adelaide 5000

Telephone: (08) 8463 3000
Facsimile: (08) 8204 1880

Government of South Australia
Primary Industries and Resources SA

SCHEDULE A



SCALE 1:250,000

KILOMETRES 5 0 5 10 15 20 25 KILOMETRES

APPLICANT: MINES ADMINISTRATION PTY. LTD. & TETON EXPLORATION DRILLING CO. PTY. LTD.

DM: 235/79 AREA: 161 square kilometres

1:250000 PLANS: CURNAMONA

LOCALITY: TELECHIE DAM AREA—Approx. 70km N.W. of Olary.

DATE GRANTED: 27-8-79 DATE EXPIRED: 26-8-80

Reapp 450

EXPIRED

EL No: 523

ENVELOPE 3615

Transparencies held in cylinder 3614/1

TENEMENT: EL 523 - Telechie Dam.

TENEMENT HOLDER: Mines Administration Pty Ltd., and Teton Exploration Drilling Co Pty Ltd.

CONTENTS

+T = Transparency.

MINES ADMINISTRATION PTY. LIMITED

QUARTERLY REPORT

EL 523 (TELECHIE) SOUTH AUSTRALIA

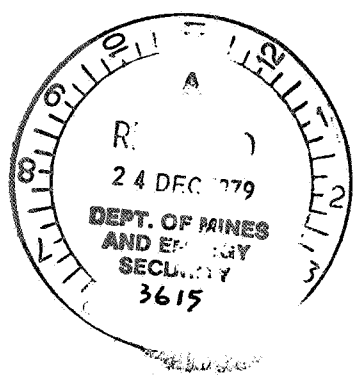
QUARTER ENDED 26-11-79

Exploration Licence 523 was granted to Mines Administration Pty. Limited and Teton Exploration Drilling Company Pty. Ltd on the 27th August 1979, for one year. The tenement covers an area of 161 kms^2 in the southern Lake Frome region of South Australia.

During the quarter ended 26th November 1979, a ground magnetic and gravity survey over an interpreted airborne gravity and magnetic anomaly was completed by Geoex Pty. Ltd. However as yet no report has been received on the results of this survey. The aim of the survey was to indicate that potential for a Precambrian uranium occurrence of the Roxby Downs type within the Exploration Licence.

Exploration expenditure during the quarter totalled $4,821 - a detailed statement is attached.

Steve Burns.
Project Geologist.



Brisbane.

19th December, 1979.

MINES ADMINISTRATION PTY LIMITED

STATEMENT OF EXPENDITURE

EL 523 (TELECHIE)

QUARTER YEAR ENDED 26.11.79

REF : AC/MDE

	$
Salaries and Wages	682
Drafting, Air Photography, Printing, etc.	1
Geophysics Contractor - Other	2,001
Surveying Contractor	2,137
	$4,821

G. B. Monk,
Accountant.

MINES ADMINISTRATION PTY. LIMITED

QUARTERLY REPORT

EL 523 (TELECHIE) SOUTH AUSTRALIA

QUARTER ENDED 26-2-80

Exploration Licence 523 was granted to Mines Administration Pty. Limited and Teton Exploration Drilling Company Pty. Ltd on the 27th August 1979 for a one year period. The tenement covers an area of 161 kms^2 in the southern Lake Frome region of South Australia.

During the quarter ended 26th February, 1980 no field activities were undertaken, however a report by Geoex Pty. Ltd on their gravity and magnetic survey in the area was received. Sections of maps from this report relevant to EL 523 have been attached. An assessment of this report is currently being undertaken.

Expenditure during the quarter totalled $1,656 - a detailed statement is attached.

Steve Burns.
Geologist - MTA

BRISBANE.

3rd April, 1980.

MINES ADMINISTRATION PTY LIMITED

STATEMENT OF EXPENDITURE

EL 297 (TELECHIE)

QUARTER ENDED 29TH FEBRUARY, 1980

REF : AC/MDE

	$
Salaries and Wages	639
Communications	7
Drafting, Air Photography, Printing, etc.	301
Surveying Contractor	709
	$1,656

G. B. Monk,
Accountant.

REPORT ON A

MAGNETIC FIELD AND GRAVITATION FIELD SURVEY

LAKE FROME, S.A.

FOR

MINES ADMINISTRATION PTY. LTD.

TABLE OF CONTENTS

LIST OF FIGURES

APPENDIX

TABULATION OF GRAVITY SURVEY RESULTS

ACCOMPANYING CONTOUR MAPS

In Map Pocket

Sheet 1 Anomaly M1 - Total Magnetic Intensity

Sheet 2 Anomaly M1 - Bouguer Gravity Anomaly

Sheet 3 Anomaly M5 - N. Half Total Magnetic Intensity

Sheet 4 Anomaly M5 - S. Half Total Magnetic Intensity

Sheet 5 Anomaly M5 - N. Half Bouguer Gravity Anomaly

Sheet 6 Anomaly M5 - S. Half Bouguer Gravity Anomaly

Sheet 7 Anomaly M9 - Total Magnetic Intensity

Sheet 8 Anomaly M9 - Bouguer Gravity Anomaly

Sheet 9 Anomaly M10 - Total Magnetic Intensity

Sheet 10 Anomaly M10 - Bouguer Gravity Anomaly

1. INTRODUCTION

During the period from August 18th to October 25th, 1979, a combined level, gravity and total magnetic field survey was conducted over four areas situated in the Lake Frome Area, some 150 km. north of Yunta, S.A. The locations are shown on the accompanying map (Fig. 1).

2. SURVEY PERSONNEL

The survey crew was led at various times by P. MacSkimming, M. O'Callaghan and G. Mackee. Two field assistants were employed. Changes in personnel resulted from interruptions to the survey caused by heavy rain, which made the area inaccessible for several weeks.

3. EQUIPMENT

(a) Surveying. Theodolite and E.D.M. (Electronic distance measuring) device.

(b) Gravity. Lacoste and Romberg geodetic gravimeter model G37, with sensitivity of $\pm$ 0.01 mgals.

(c) Magnetic. Barringer Model GM-122 Proton Precession magnetometer, with sensitivity of $\pm$ 1 nT.

4. SURVEY PROCEDURES

4.1 Grid Survey

Each grid was positioned according to the client's instructions, the direction of the baseline being taken as grid north

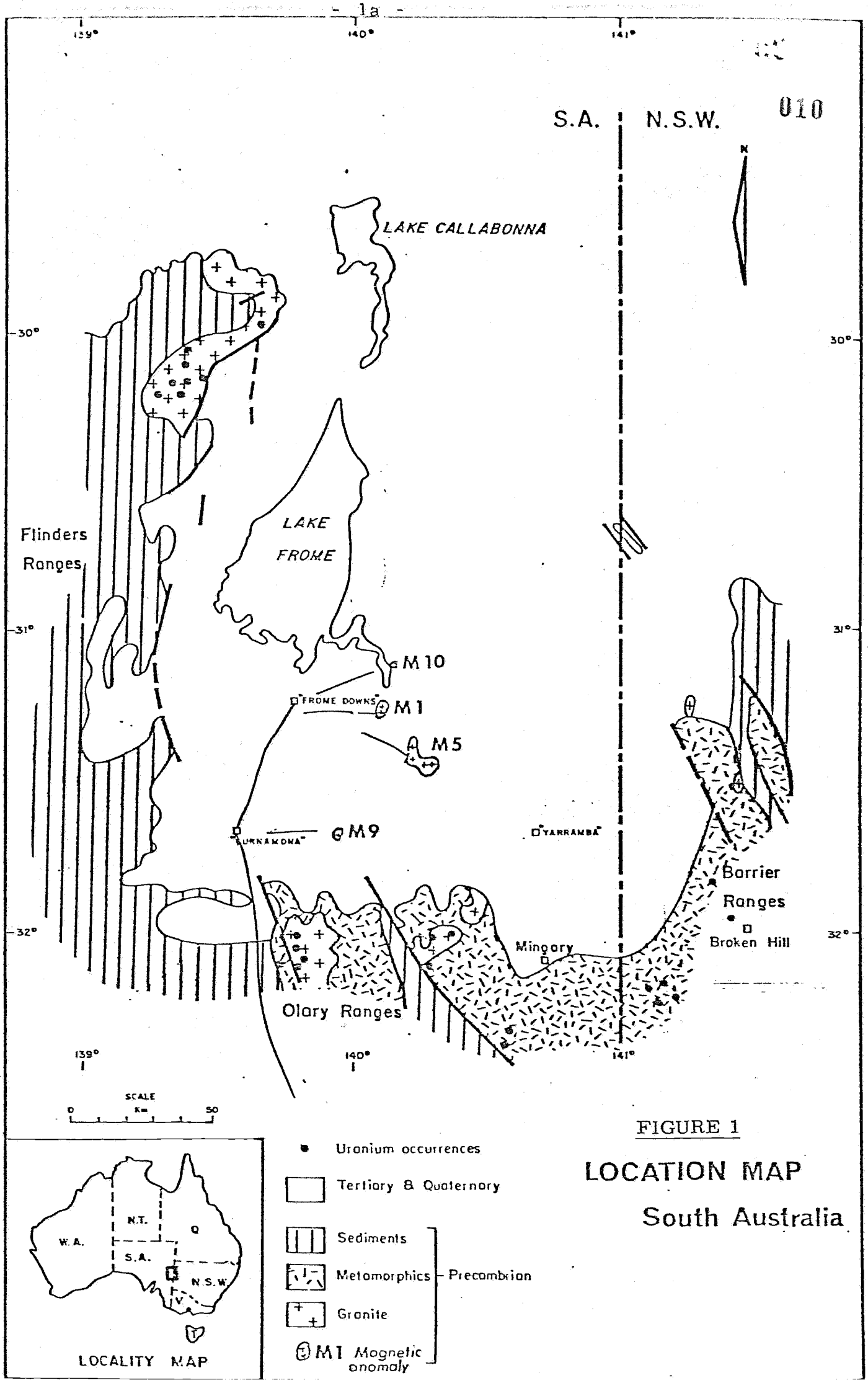


FIGURE 1

LOCATION MAP

South Australia

or grid east. Since the survey objective was to gain further information on airborne magnetic anomalies, ground magnetic measurements were taken immediately to ensure that the grid did in fact cover the anomaly.

The specified stations were surveyed in by Theodolite and E.D.M. device and pegged, staked, flagged and identified by co-ordinates which were written on the stakes.

Vertical angles were also read at each station, and elevations were calculated relative to an arbitrary datum point on each grid, which was assigned the arbitrary value of 100 metres elevation.

4.2 Magnetic and Gravity Surveys

The magnetic survey was done at the same time as gridding and levelling to ensure that the grid was satisfactorily located. Two grids (M5 and M10) had to be modified slightly on the basis of this information. The gravity survey was done subsequently, after the magnetics had been checked at the Adelaide office.

Standard looping procedures were used for drift control on both magnetic and gravity surveys. Base stations were established at convenient locations over each grid (usually on the baseline). Relative field values at these base stations were determined by tight loops, sequential readings being taken at Base stations B1, B2, repeat B1 and repeat B2. Two differences in values are thus determined, as described below. Normal station looping involved taking a reading at a base-station, then readings

at a series of other stations and finally repeating the reading at the base station, the whole loop taking less than one hour.

5. DATA REDUCTION

The method used for obtaining the difference between the gravity readings of two base stations is shown in Figure 2.

The difference in the gravity readings between the two base stations, B1 and B2 is taken as (A+B)/2. The drift-corrected Δg_{obs} for the intermediate station I1 is taken as C. If the two differences A and B differ by more than the prescribed survey accuracy, the loop is repeated. This also applies to intermediate station loops if the base-station readings differ excessively.

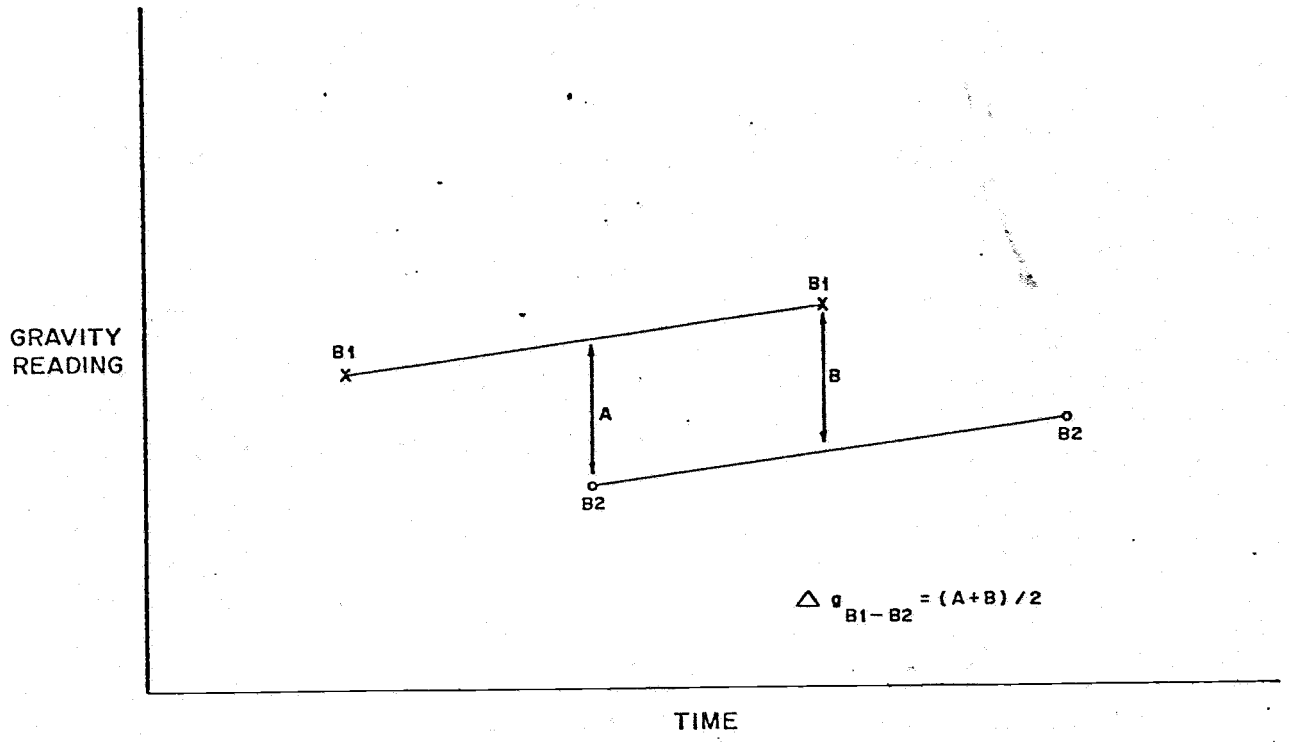
The difference in the readings between the stations was multiplied by the instrument constant to convert the difference into milligals, the instrument having been calibrated in Adelaide using two gravity stations which are part of the Australian standard network. The calibration constant so determined was 1.0465 mgals/instrument unit.

The values of Δg_{obs} were then Bouguer corrected using the formula:

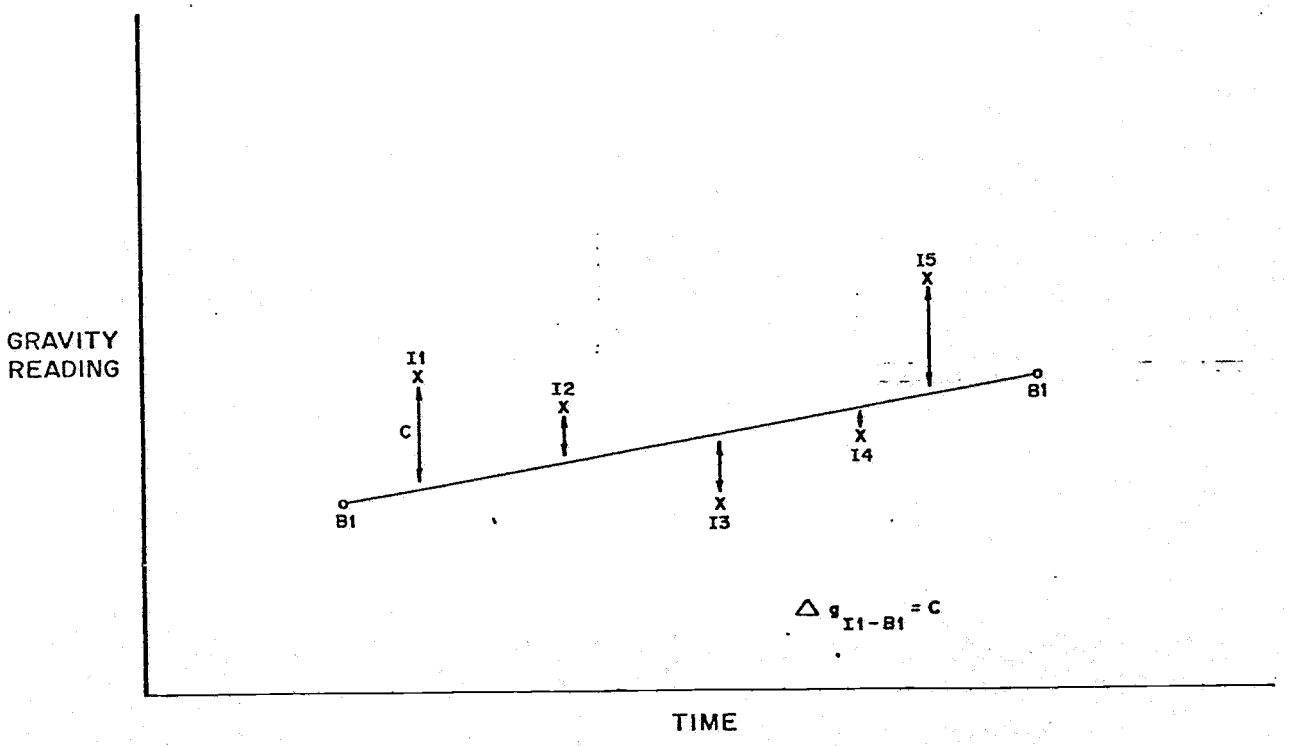
$$\Delta g_{Bouguer} = (0.3086 - 0.04191\rho)\,\Delta h$$

where Δh is the elevation difference between the stations and ρ is the density of the surface rocks in the area. A value of 2.67 was taken for ρ. This value is the average value for the earth's crust, and was selected by default because elevation variations in the areas are too small to permit the calculation of a better value.

$$\text{Thus } \Delta g_{Bouguer} = 0.1967\,\Delta h$$
$$\text{and } \Delta g = \Delta g_{obs} + \Delta g_{Bouguer}$$



(a) BASE STATION DRIFT CORRECTION



(b) INTERMEDIATE STATION DRIFT CORRECTION

FIG. 2 DRIFT CORRECTION PROCEDURE

Once the gravity differences between the stations had been corrected in this way, they were then all made relative to the survey area datum point. They were then used to check for loop misclosures.

The final correction applied to the data was the latitude correction which was calculated for each station using the formula (after - Parasnis, 1966).

$$\Delta g_{Lat.} = 5172.3 \ (\sin^2 \phi_1 - \sin^2 \phi_o)$$

where ϕ_1 is the latitude of the station, and

ϕ_o is the latitude of the survey datum point.

The latitude of the survey datum was taken from the maps provided. The latitude for each station was then calculated by converting the grid co-ordinates to a true northing co-ordinate. This value was then converted from metres into minutes and seconds of latitude and added to the base station latitude to give ϕ_1.

The gravity data were partly reduced in the field to ensure that results were satisfactory. On return to Adelaide at completion of the survey, the basic data were entered into a computer and reprocessing done to ensure that no errors had occurred. This process also permits reduction parameters such as the Bouguer density to be modified with a minimum of labour and will shortly permit the automatic plotting and contouring of the final results.

Copies of the basic data and reduced values in tabulated form are included in this report as Appendix I.

The reduced data were then plotted on a grid with values which were all relative to the survey datum point.

Drift corrections for total field magnetic data were calculated in exactly the same way.

The magnetic data were also reduced relative to the survey datum point and plotted on the grid as such.

6. PRESENTATION OF DATA

The data are presented as contoured maps of total magnetic intensity and Bouguer Gravity Anomaly at a scale of 1:10,000. Contour Intervals are 50 nanoTeslas and 0.5 milligals, respectively.

The gravity data are also presented in tabulated form so that reprocessing can be done if required. The values included for each station are: northing, easting, gravity reading, elevation, Bouguer correction, Latitude correction and Bouguer gravity anomaly.

7. INTERPRETATION

7.1 Anomaly M-1

7.1.1 Magnetics

The airborne anomaly splits into 3 clear peaks on the ground survey, all three being adequately delineated by the readings over the grid. Although the anomalies overlap it is not too difficult to separate them for interpretation purposes, with the reservation that the assumption that the anomalies are symmetrical, necessary to the process, may cause some inaccuracies in the shape and interpretation of the centre anomaly. The two outer anomalies, 1B and 1C, are evidently caused by sources at considerable depth, judging by the long gentle slopes of the flanks. On the assumption that the sides of the causative bodies are steeply dipping, depths of the order of 1,000 metres are derived. If the sides of the sources are gently sloping, with a dome-shaped cone section as might result from uplift of the magnetic basement, for example, then the depth could be considerably less. The ambiguities of potential field interpretation preclude differentiation between the two possibilities without additional evidence being provided.

The third anomaly, 1A, is located between the first two and is the most difficult to interpret because of the overlap of anomalies on both sides. This means that the whole shape of this anomaly (both flanks) is highly dependant on the assumed shapes of the other two. Two sections were taken, on lines 8500E and 9000E and depths of 430 and 310 metres deduced. Even allowing for possible errors, it therefore seems probable that this anomaly is considerably shallower than the other two.

7.1.2 Gravity Survey

The gravity data are generally very smooth, with gentle gradients and low curvatures, all indicative of a lack of density variation in near surface rocks. The regional strike is roughly east-west, the gradient being about +2 mgals per kilometre to the south. Over the southern half of the grid the contours are no longer straight east-west, but show a flexure to the north. Assuming that the regional continues through the southern half of the grid, and subtracting this from the measured field, one obtains a residual anomaly. This anomaly is elongated in the north-south direction and may have a closure between 6000N and 9000N on line 9000E. The doubt is cast by uncertainty of the strength of the regional field at each location since all values on the grid south of about 11000N have a residual component. Anyway, it is most unlikely that this closure could coincide with any of the magnetic anomalies, although the gravitational effect does overlap the magnetic response.

Analysis of this anomaly puts it at a depth of about 1200 metres, assuming a discrete causative body. Again, however, it is possible that shallowing of overburden could cause this effect. The required change, assuming a density difference of 0.5 gm/cc (not exceptional for overburden/bedrock contrast) would be about 150 metres. The depth to the density change in this case is indeterminate, since the shape of the gravity anomaly is determined solely by the gradient of the interface.

7.1.3 Conclusions

The regional gravity increase southwards probably indicates a decreasing thickness of sediments overlying the crystalline basement.

Moreover, it is quite possible that all gravity variations in this area result from changes in cover thickness. If so, and assuming a density contrast of 0.5 gm/cc between sediments and basement, then a basement relief of 650 metres is to be expected, the lowest point being at the north end of the grid, and the 0.5 mgal gravity contour interval being equivalent to 25 metre basement elevation contour interval. A basement ridge would thus extend north-northwest from about 6500N, 9500E. On the other hand a discrete high density body could be present at a depth of about 1200 metres. The former explanation is favoured.

The deeper magnetic features (1B and 1C) are expected to be basement rock changes, thus giving the depth to basement as about 1000 metres. The shallower feature (1A) at a depth of 310 to 430 metres would thus appear to be supra-basement. The limited data would indicate a structure of rectangular plan some 1400 metres by 600 metres striking N75°E and centred at 1090N on Line 9000S, or near the base of the postulated basement ridge.

The two deeper magnetic anomalies are probably too deep to be of further direct interest. Anomaly 1A is more promising, however, and might warrant further work. It's depth makes it a difficult target for most geophysical systems, although an induced polarisation and resistivity survey might prove of value. A further possibility is the drilling of an exploratory hole in this region and the use of drill-hole geophysics to extend the range of exploration to a radius of about 100 metres from the drill-hole.

7.2 Anomaly M5

7.2.1 Magnetics

The airborne anomaly breaks into three clear parts on ground magnetics evidence. The western part, 5A, is extensive, corresponding to the north striking arm of the original anomaly, and could well break-down still further if a more detailed survey were done. The data are clearly quite complex with the southern end of this anomaly overlapping an apparent east striking anomaly centred on 8000E, 5000N (5B). The third anomaly is located at the east end of Line 5000N and is relatively uncontaminated by other effects although still not fully delineated.

Anomaly 5A extends from 5000N to 11000N, with a possible break between 7000N and 9000N. The change in character from an apparently simple, elongated peak at the south end to a wider more complex peak in the north indicates the probability of two separate sources. The southern peak gives a depth indicator of about 450 metres on Line 5000N. More survey lines are required before the shape is clear, but a relatively narrow elongate source is expected. Depth estimates for the northern portion are made difficult by the near surface effect in this region. It seems possible that a deep feature is combined with a more limited body at about 400 metres depth to give this anomaly.

Anomaly 5B is very poorly defined. It was planned to survey a north-south line through this anomaly at about 8000E to give better control of its location but strong magnetic storms at the time made readings impossible. Since the anomaly was reasonably

located and a gravity survey was completed, the delays inherent in finishing the magnetics were not considered justified. However, it is unfortunate that the data available are not sufficient to permit any depth estimates.

Anomaly 5C was also scheduled for more detailed magnetic readings, which were not taken for the same reason. However, the fact that this anomaly is elongate perpendicular to the survey lines means that depth estimates were possible, the resulting figures being between 550 and 700 metres. The anomaly appears to be elongate and simple, but this conclusion is based on very limited data and is therefore tentative. Moreover, the anomaly could extend further north.

7.2.2 Gravity Survey

The gravity survey shows a gravity high in the area of magnetic anomaly 5A. This high is a regional feature, being large in extent and causing gradients over the whole grid. It is thought to result from a shallowing of depth to basement in this area, the basement being more dense than overlying sediments. The net amplitude of the gravity anomaly, 10 mgals, would require a decrease in depth of 500 metres, assuming a density contrast of 0.5 gm/cc.

A second gravity high coincides with magnetic anomaly 5C. This could again result from a basement shallowing, but could also be a discrete density feature. In the latter case, the smooth curvatures and gentle gradients indicate considerable depth, a maximum figure of 1800 metres being computed.

7.2.3 Conclusions

The gravity variations are considered to show variations in depth to crystalline basement, the contour interval of 0.5 mgals translating into a basement elevation contour interval of 25 metres and a total relief of 550 metres. On this basis, basement highs are located in the vicinity of anomalies 5A and 5C (10,000N, 4000E and 4500N, 12,200E), with elevation of 550 metres and 170 metres above the lowest point in the south-east corner of the grid. The possibility that discrete high density targets exist in these locations cannot be completely discounted.

The magnetic anomalies are generally delineated but not well defined. Depths of 400 to 450 metres are determined for the western arm (5A) and 550 to 700 metres for the 5C anomaly. This difference in depths (150 - 300 metres) agrees in general terms with the difference, suggested by the gravity interpretation (380 metres), of depth to basement.

On the principle that a magnetic anomaly without gravitational expression is not interesting, anomaly 5B does not warrant further consideration. Otherwise, it should be further detailed magnetically to pin-point the target and depth more accurately.

The other two anomalies 5A and 5C, are interesting geophysically and are not apparently too deeply buried. Since neither anomaly is well defined, an extension of geophysical work is warranted to fully delineate 5C and to provide more detail on both anomalies. A closer spaced magnetic grid, including an extension northward for anomaly 5C would assist here. If an exploratory

drill-hole is contemplated, it might be best located at anomaly 5A, north end, where all indications are for shallower depths to basement.

Other geophysical techniques are not recommended at this time.

7.3 Anomaly M9

7.3.1 Magnetic Anomaly

The airborne anomaly has clearly been located and centred on the grid. Equally clearly there is another anomaly, which the airborne contouring took to be continuous with this, to the west. The ground anomaly is circular in plan and gentle in gradient and curvature, indicating considerable depth of burial. Type curves indicate some 1150 - 1500 metres.

7.3.2 Gravity survey

This shows a regional trend increasing at a rate of some .25 mgals/100 metres to the south-east. While there is no clear gravity anomaly coincident with the magnetic high, there is some disturbance in the regional trend onthe south-east flank of it. This consists of a weak gravity high closure centred on 4000N, 4000E and a break in the pattern to the south and east of this. Possible causes are a change in depth to basement or some structural or compositional change in the basement itself. The available information does not permit depth estimates.

7.3.3 Conclusions

The gravitational picture again probably indicates varying thickness of sedimentary cover, being shallowest in the south-east of the grid and showing a relief of 300 metres in all, assuming a density contrast of 0.5 gm/cc.

The source of the magnetic anomaly is circular in plan, and evidently at considerable depth. It is probably too deep to be of further direct interest.

7.4 Anomaly M10

7.4.1 Magnetic Anomaly

The airborne anomaly occurs on one flight line only, with an amplitude of about 40 nT. The grid laid down appears to be offset from the anomaly but nevertheless shows it clearly, centred at 2600E on Line 500N. The grid was extended to the south, but time and magnetic storms prevented coverage of the extra line.

This anomaly is evidently fairly shallow. The near surface noise, sparse reading density and low amplitude of this anomaly make a detailed interpretation impossible. However, a depth to top not exceeding 200 metres, and possibly much less, is indicated. The plan section is elongated north-south, with a width of about 300 metres.

7.4.2 Gravity Survey

The gravity regional pattern strikes roughly north-south. A weak gravity high strikes through the magnetic anomaly. However, the depth to this feature, if it is a discrete body rather than a change in overburden thickness, for instance, is too great for it to coincide with the magnetic source. It is suspected that the overburden is thinner in this region than elsewhere (up to 100 metres thinner) to fully account for variations here.

7.4.3 Summary

The gravity anomaly is not impressive and probably reflects depths to basement. The magnetic anomaly, though not

large, is clear and shallow enough to be interesting. A kimberlite pipe is a possible cause of this anomaly.

A detailed magnetic survey, and possibly conductivity survey work, should precede drilling.

8. GENERAL CONCLUSIONS

The ground surveys in this area successfully located and detailed the airborne magnetic anomalies in all four cases. The ground magnetic anomalies proved to be more complex than airborne areas in 3 instances, resulting in multiple targets. Estimates of depth to the targets were possible in most cases, resulting in a range from 200 to 1000 metres.

The gravity surveys are of excellent quality and generally show regional features, in all cases interpreted as resulting from variations in depth to crystalline basement. Where Bouguer gravity anomaly closures indicated the possibility of discrete target, the estimated depths were over 1000 metres.

Recommendations for further work are:

Anomaly M1. An exploratory drill-hole with down-hole geophysics to extend the range of exploration.

Anomaly M5. Detailed magnetics to delineate the anomalies and possibly an exploratory drill-hole in the indicated shallower basement area.

Anomaly M9. No further geophysical work.

Anomaly M10. Detailed and extended magnetic work to delineate the anomaly preparatory to drilling. Resistivity mapping, with either electromagnetic or galvanic techniques, is suggested also prior to drilling.

for GEOEX PTY. LTD.

A. R. Dodds
Senior Geophysicist

13th December, 1979.

APPENDIX

MINAD5 AREA MS GRAVITY SURVEY

SURVEY NAME : MINAD5

SURVEY CONSTANTS:-
INSTRUMENT CONSTANT = 1.0465
ROCK DENSITY USED FOR BOUGUER CORRECTIONS= 2.67
DATUM VALUES :
CO-ORDINATES NORTHING = 11000 EASTING = 4800 METRES
ELEVATION = 99.5 METRES
LATITUDE = 31.4 DEGREES
ORIENTATION OF GRID 1.2 DEGREES EAST OF TRUE NORTH

NORTHING METRES	EASTING METRES	GRAVITY READING SCALE DIVS	ELEVATION METRES	BOUGUER MGALS	LATITUDE MGALS	FINAL GRAVITY MGALS
3000	5000	1.05	108.09	1.69	-5.77	6.98
3000	5200	.87	109.09	1.89	-5.77	6.99
3000	5400	.84	109.64	1.99	-5.77	7.07
3000	5600	.58	110.73	2.21	-5.77	7.02
3000	5800	.15	111.60	2.38	-5.78	6.75
3000	6000	.25	111.14	2.29	-5.78	6.76
3000	6200	.48	108.98	1.86	-5.78	6.56
3000	6400	.70	108.32	1.73	-5.79	6.64
3000	6600	.63	108.48	1.77	-5.79	6.60
3000	6800	.05	110.34	2.13	-5.79	6.39
3000	7000	-.17	110.52	2.17	-5.80	6.20
3000	7200	-.43	111.17	2.30	-5.80	6.07
3000	7400	-.27	109.67	2.00	-5.80	5.93
3000	7600	-.10	107.96	1.66	-5.80	5.76
3000	7800	-.33	107.99	1.67	-5.81	5.53
3000	8000	-.66	108.72	1.81	-5.81	5.34
3000	8200	-1.08	109.51	1.97	-5.81	5.08
3200	8200	-.78	107.59	1.59	-5.67	5.14
3400	8200	-.69	106.34	1.35	-5.53	5.13
3600	8200	-.90	106.45	1.37	-5.38	5.09
3800	8200	-.76	105.43	1.17	-5.24	5.17
4000	8200	-.78	104.66	1.01	-5.09	5.14
4200	8200	-.99	104.91	1.06	-4.95	5.13
4400	8200	-.97	104.05	.89	-4.81	5.12
4600	8200	-.87	103.06	.70	-4.66	5.17
4800	8200	-.93	102.41	.57	-4.52	5.13
5000	8200	-1.28	103.49	.78	-4.37	5.13
5200	8200	-1.27	102.63	.62	-4.23	5.12
5400	8200	-1.45	102.81	.65	-4.08	5.11
5600	8200	-1.61	102.43	.58	-3.94	5.03
5800	8200	-1.67	101.87	.47	-3.80	5.00
6000	8200	-1.94	101.99	.49	-3.65	4.90
5000	8000	-.37	102.40	.57	-4.37	5.31
5000	7800	-.61	102.13	.52	-4.37	5.54
5000	7600	-.22	101.46	.39	-4.36	5.80
5000	7400	.00	101.04	.30	-4.36	5.94
5000	7200	.09	101.54	.40	-4.36	6.14
5000	7000	.38	101.21	.34	-4.35	6.36
5000	6800	.43	101.63	.42	-4.35	6.50
5000	6600	.23	102.66	.62	-4.35	6.46
5000	6400	.28	102.94	.68	-4.35	6.61
5000	6200	.08	105.25	1.13	-4.34	6.87
5000	6000	.55	105.00	1.08	-4.34	7.30
5000	5800	.91	104.81	1.04	-4.34	7.61

5037066

820

5000	5600	1.25	104.86	1.05	-4.33	7.97
5000	5400	1.47	105.19	1.12	-4.33	8.26
5000	5200	1.98	103.92	.87	-4.33	8.52
5000	5000	2.01	103.81	.85	-4.32	8.54
10500	4800	1.19	98.05	-.29	-.36	10.55
10500	4600	1.27	98.05	-.29	-.36	10.62
10500	4400	1.54	98.12	-.27	-.35	10.91
10500	4200	1.31	99.20	-.06	-.35	10.90
10500	4000	1.08	100.00	.10	-.35	10.83
10500	3800	1.02	99.81	.06	-.35	10.74
10500	3600	1.33	98.53	-.19	-.34	10.80
10500	3400	1.50	97.81	-.33	-.34	10.83
9500	3400	1.29	102.42	.57	-1.06	10.81
9500	3600	1.74	100.49	.19	-1.06	10.87
9500	3800	2.04	99.17	-.06	-1.07	10.91
9500	4000	2.07	99.22	-.06	-1.07	10.94
9500	4200	1.56	101.19	.33	-1.07	10.82
9500	4400	1.12	102.78	.65	-1.07	10.70
9500	4600	1.70	99.92	.08	-1.08	10.70
10500	4800	1.19	98.05	-.29	-.36	10.55
10500	5000	1.27	98.00	-.30	-.36	10.61
10500	5200	1.10	98.13	-.27	-.37	10.46
10500	5400	.52	99.07	-.08	-.37	10.06
10500	5600	-.04	99.78	.06	-.37	9.64
10500	5800	-.38	99.91	.08	-.38	9.32
10500	6000	-.46	98.65	-.17	-.38	8.99
10500	6200	-1.16	99.12	-.07	-.38	8.39
9500	6200	-.19	98.82	-.13	-1.10	8.57
9500	6000	.07	99.57	.01	-1.10	8.98
9500	5800	.51	98.69	-.16	-1.10	9.26
9500	5600	.89	98.75	-.15	-1.09	9.65
9500	5400	1.38	98.74	-.15	-1.09	10.14
9500	5200	1.57	98.87	-.12	-1.09	10.36
9500	5000	1.63	99.09	-.08	-1.08	10.46
9500	4800	1.73	99.21	-.06	-1.08	10.59
5000	8200	-1.28	103.55	.80	-4.37	5.14
5000	8400	-1.58	104.12	.91	-4.38	4.95
5000	8600	-1.68	103.28	.74	-4.38	4.68
5000	8800	-1.41	101.34	.36	-4.38	4.57
5000	9000	-1.55	101.20	.33	-4.38	4.40
5000	9200	-1.67	101.98	.49	-4.39	4.43
5000	9400	-1.86	103.03	.69	-4.39	4.45
5000	9600	-2.26	103.92	.87	-4.39	4.21
5000	9800	-2.67	104.77	1.04	-4.40	3.97
5000	10000	-3.29	106.30	1.34	-4.40	3.65
5000	10200	-3.21	104.85	1.05	-4.40	3.44
5000	10400	-3.57	105.10	1.10	-4.41	3.13
5000	10600	-3.97	106.40	1.36	-4.41	2.98
5000	10800	-3.39	103.39	.77	-4.41	2.97
5000	11000	-2.85	100.78	.25	-4.42	2.99
5000	11200	-2.44	98.98	-.10	-4.42	3.04
5000	11400	-2.34	99.20	-.06	-4.42	3.18
5000	11600	-2.11	99.17	-.06	-4.42	3.40
5000	11800	-1.67	97.36	-.42	-4.43	3.48
5000	12000	-1.59	96.46	-.60	-4.43	3.39
5000	12200	-1.71	97.11	-.47	-4.43	3.39
5000	12400	-1.56	96.28	-.63	-4.44	3.37

5037062
5037066

629

1000	10400	-.89	103.71	.83	-7.29	2.65
1000	10600	-1.11	104.01	.89	-7.29	2.49
1000	10800	-1.58	104.72	1.03	-7.29	2.15
1000	11000	-2.05	105.58	1.20	-7.30	1.85
1000	11200	-2.41	106.41	1.36	-7.30	1.65
1000	11400	-2.83	107.09	1.49	-7.30	1.37
1000	11600	-3.16	107.46	1.57	-7.31	1.10
1000	12000	-4.24	110.62	2.19	-7.31	.63
1000	12200	-4.09	110.38	2.14	-7.31	.73
1000	12400	-4.08	110.60	2.18	-7.32	.78
1000	12600	-4.51	111.64	2.39	-7.32	.56
1000	12800	-4.90	112.24	2.51	-7.32	.28
1000	13000	-5.21	113.17	2.69	-7.33	.15
1000	13200	-5.20	112.83	2.62	-7.33	.09
1000	13400	-5.33	112.67	2.59	-7.33	-.07
1000	10400	-.89	103.71	.83	-7.29	2.65
1000	10200	-.81	103.53	.79	-7.28	2.70
1000	10000	-.66	103.26	.74	-7.28	2.79
1000	9800	-.51	103.80	.85	-7.28	3.06
1000	9600	-.77	105.92	1.26	-7.28	3.21
1000	9400	-.52	106.06	1.29	-7.27	3.50
1000	9200	-.09	104.95	1.07	-7.27	3.71
1000	9000	-.06	107.08	1.49	-7.27	4.16
1000	8800	.39	106.22	1.32	-7.26	4.45
1000	8600	.49	106.23	1.32	-7.26	4.56
1000	8400	.46	107.09	1.49	-7.26	4.69
1000	8200	.66	107.19	1.51	-7.25	4.92
1000	8000	.70	107.48	1.57	-7.25	5.02
1000	7800	.41	109.06	1.88	-7.25	5.04
1000	7600	.39	109.40	1.95	-7.24	5.09
1000	7400	.11	111.08	2.28	-7.24	5.15
9500	4800	1.77	99.21	-.06	-1.08	10.63
10000	4800	1.12	100.80	.26	-.72	10.66
10500	4800	1.19	98.05	-.29	-.36	10.55
3000	8200	-1.08	109.51	1.97	-5.81	5.08
1000	10400	-.89	103.71	.83	-7.29	2.65
5000	12600	-1.43	95.52	-.78	-4.44	3.34
5000	12800	-1.22	94.89	-.91	-4.44	3.43
5000	13000	-1.26	94.84	-.92	-4.45	3.38
5000	12200	-1.71	97.11	-.47	-4.43	3.39
5200	12200	-1.75	96.58	-.57	-4.29	3.39
5400	12200	-1.98	96.60	-.57	-4.15	3.31
5000	12200	-1.71	97.12	-.47	-4.43	3.39
4800	12200	-1.09	95.71	-.75	-4.58	3.59
4600	12200	-1.07	96.20	-.65	-4.72	3.56
4400	12200	-.97	96.45	-.60	-4.87	3.56
4200	12200	-.81	96.64	-.56	-5.01	3.62
4000	12200	-.82	97.56	-.38	-5.15	3.64
4000	12400	-1.05	97.98	-.30	-5.16	3.49
4000	12600	-1.48	98.88	-.12	-5.16	3.24
4000	13000	-2.03	100.63	.22	-5.17	3.03
4000	13200	-2.32	101.42	.38	-5.17	2.89
4000	11800	-1.26	97.52	-.39	-5.15	3.21
4000	11600	-1.73	98.87	-.12	-5.14	3.00
4000	11400	-2.22	100.62	.22	-5.14	2.86
4000	11200	-1.96	99.15	-.07	-5.14	2.84
4000	11000	-2.21	100.53	.20	-5.14	2.85

5037066

030

4000	12200	-.82	97.56	-.38	-5.15	3.64
3800	12200	-1.19	99.26	-.05	-5.30	3.46
3600	12200	-1.36	99.72	.04	-5.44	3.24
3400	12200	-1.38	99.56	.01	-5.59	3.05
3200	12200	-1.81	100.44	.18	-5.73	2.65
3000	12200	-2.20	101.90	.47	-5.87	2.40
2800	12200	-2.52	103.30	.75	-6.02	2.21
2600	12200	-2.88	104.77	1.04	-6.16	1.99
3000	12400	-2.29	102.56	.60	-5.88	2.44
3000	12600	-2.47	103.54	.79	-5.88	2.44
3000	12800	-2.95	104.87	1.06	-5.88	2.23
3000	13000	-3.10	105.01	1.08	-5.89	2.10
3000	13200	-3.33	105.16	1.11	-5.89	1.90
3000	12200	-2.20	101.88	.47	-5.87	2.40
3000	12000	-2.05	100.92	.28	-5.87	2.36
3000	11800	-1.70	99.69	.04	-5.87	2.47
3000	11600	-1.72	99.92	.08	-5.86	2.50
3000	11400	-1.62	99.35	-.03	-5.86	2.49
3000	11200	-1.63	99.53	.01	-5.86	2.51
3000	11000	-1.50	99.61	.02	-5.86	2.67
3000	10800	-1.60	100.85	.27	-5.85	2.82
3000	10600	-1.72	102.52	.59	-5.85	3.03
3000	10400	-1.45	101.90	.47	-5.85	3.17
3000	10200	-1.54	102.93	.67	-5.84	3.29
3000	10000	-1.37	103.80	.85	-5.84	3.64
3000	9800	-1.30	104.53	.99	-5.84	3.85
3000	9600	-1.40	105.68	1.22	-5.83	3.98
3000	9400	-1.51	106.92	1.46	-5.83	4.12
3000	9200	-1.89	108.82	1.83	-5.83	4.12
3000	9000	-1.92	109.68	2.00	-5.83	4.26
3000	8800	-1.68	109.78	2.02	-5.82	4.52
3000	8600	-1.37	109.09	1.89	-5.82	4.70
3000	8400	-1.35	109.71	2.01	-5.82	4.84
3000	8200	-1.06	109.51	1.97	-5.81	5.10
11000	4800	.00	99.50	.00	.00	10.00
10000	4800	1.12	100.80	.26	-.72	10.66
11000	4800	.00	99.50	.00	.00	10.00
9000	4800	2.62	97.28	-.44	-1.44	10.74
7000	5000	2.52	100.00	.10	-2.88	9.74
9000	4800	2.62	97.28	-.44	-1.44	10.74
5000	5000	2.01	103.81	.85	-4.32	8.54
3000	5000	1.05	108.09	1.69	-5.77	6.98
11000	4800	.00	99.50	.00	.00	10.00
11000	5000	.17	97.98	-.30	-.00	9.87
11000	5200	-.05	97.98	-.30	-.01	9.64
11000	5400	-.31	98.03	-.29	-.01	9.39
11000	5600	-.49	98.01	-.29	-.01	9.20
11000	5800	-.59	97.60	-.37	-.02	9.02
11000	6000	-.79	96.79	-.53	-.02	8.66
11000	6200	-1.47	97.40	-.41	-.02	8.10
11000	6400	-1.67	96.37	-.62	-.02	7.69
11000	6600	-1.62	95.55	-.78	-.03	7.57
11000	6800	-1.81	95.88	-.71	-.03	7.45
11000	7000	-1.88	95.58	-.77	-.03	7.31
11000	7200	-2.17	95.80	-.73	-.04	7.06
11000	7400	-2.16	94.66	-.95	-.04	6.85
10000	7200	-.38	97.40	-.41	-.76	6.84

5037064
5037066

031

10000	7000	-1.41	97.03	-.49	-.75	7.35
10000	6800	-1.09	96.94	-.50	-.75	7.65
10000	6600	-1.58	100.50	.20	-.75	7.87
10000	6400	-1.20	100.55	.21	-.74	8.26
10000	6200	-.38	98.77	-.14	-.74	8.73
10000	6000	.19	97.97	-.30	-.74	9.15
10000	5800	.33	99.26	-.05	-.74	9.55
10000	5600	.14	101.85	.46	-.73	9.87
10000	5400	-.03	103.38	.76	-.73	10.01
10000	5200	.60	101.40	.37	-.73	10.24
10000	5000	1.11	100.53	.20	-.72	10.59
10000	4800	1.13	100.82	.26	-.72	10.67
11000	4800	.00	99.50	.00	.00	10.00
11000	4600	.63	97.92	-.31	.00	10.32
11000	4400	.92	97.45	-.40	.01	10.52
11000	4200	1.07	97.42	-.41	.01	10.67
11000	4000	1.07	96.79	-.53	.01	10.55
11000	3800	1.16	96.32	-.63	.02	10.55
11000	3600	1.17	96.47	-.60	.02	10.59
11000	3400	1.16	96.24	-.64	.02	10.54
11000	3200	1.11	96.27	-.64	.02	10.50
11000	3000	.49	98.92	-.11	.03	10.40
11000	2800	.67	97.66	-.36	.03	10.34
11000	2600	.65	97.15	-.46	.03	10.23
11000	2400	.32	97.95	-.30	.04	10.05
11000	2200	.31	97.62	-.37	.04	9.98
11000	2200	.31	97.62	-.37	.04	9.98
11000	2000	.02	98.49	-.20	.04	9.86
11000	1800	.06	98.18	-.26	.05	9.84
11000	1600	-.48	100.28	.15	.05	9.72
11000	1400	-.42	99.93	.08	.05	9.71
10000	1200	-.12	100.35	.17	-.67	9.38
10000	1400	.08	99.84	.07	-.67	9.48
10000	1600	.27	99.65	.03	-.67	9.62
10000	1800	.49	99.26	-.05	-.68	9.77
10000	2000	.72	99.13	-.07	-.68	9.97
10000	2200	.74	99.92	.08	-.68	10.14
10000	2400	.92	100.05	.11	-.68	10.34
10000	2600	1.12	100.01	.10	-.69	10.54
10000	2800	1.27	100.10	.12	-.69	10.70
10000	3000	1.87	98.45	-.21	-.69	10.97
10000	3200	2.03	98.27	-.24	-.70	11.09
10000	3400	1.91	98.41	-.21	-.70	11.00
10000	3600	1.70	98.74	-.15	-.70	10.85
10000	3800	1.71	98.83	-.13	-.71	10.87
10000	4000	1.92	98.59	-.18	-.71	11.03
10000	4200	2.02	98.87	-.12	-.71	11.18
10000	4400	1.73	98.99	-.10	-.71	10.91
10000	4600	1.40	99.55	.01	-.72	10.69
10000	4800	1.11	100.80	.26	-.72	10.64
9000	4800	2.62	97.28	-.44	-1.44	10.74
9000	4600	2.51	97.32	-.43	-1.44	10.65
9000	4400	2.43	98.02	-.29	-1.43	10.71
9000	4200	2.37	98.43	-.21	-1.43	10.72
9000	4000	2.39	98.40	-.22	-1.43	10.75
9000	3800	2.25	99.17	-.06	-1.43	10.76
9000	3600	1.94	100.62	.22	-1.42	10.73

9000	3400	1.65	101.67	.43	-1.42	10.66
9000	3200	1.48	102.53	.60	-1.42	10.66
9000	3000	1.39	102.78	.65	-1.41	10.62
9000	2800	1.48	101.76	.44	-1.41	10.51
9000	2600	1.10	103.13	.71	-1.41	10.40
9000	2400	1.06	102.79	.65	-1.40	10.31
9000	2200	.79	103.33	.75	-1.40	10.14
9000	2000	.97	101.46	.39	-1.40	9.96
9000	1800	.73	101.37	.37	-1.40	9.70
9000	1600	.57	101.52	.40	-1.39	9.57
9000	1400	.67	100.44	.18	-1.39	9.46
9000	1200	.45	100.38	.17	-1.39	9.24
7000	1200	.40	107.66	1.61	-2.83	9.18
7000	1400	1.10	106.19	1.32	-2.83	9.59
7000	1600	1.80	103.91	.87	-2.83	9.84
7000	1800	1.98	103.24	.74	-2.84	9.88
7000	2000	2.06	103.27	.74	-2.84	9.96
7000	2200	2.09	103.41	.77	-2.84	10.02
7000	2400	2.16	103.72	.83	-2.84	10.14
7000	2600	2.12	104.72	1.03	-2.85	10.30
7000	2800	1.93	105.57	1.19	-2.85	10.27
7000	3000	1.93	105.85	1.25	-2.85	10.33
7000	3200	1.86	106.32	1.34	-2.86	10.34
7000	3400	1.39	108.30	1.73	-2.86	10.26
7000	3600	2.02	105.41	1.16	-2.86	10.32
7000	3800	2.62	102.78	.65	-2.87	10.40
7000	4000	2.84	102.00	.49	-2.87	10.46
7000	4200	2.75	102.29	.55	-2.87	10.43
7000	4400	2.47	103.32	.75	-2.88	10.35
7000	4600	2.87	100.95	.29	-2.88	10.28
7000	4800	2.81	100.11	.12	-2.88	10.05
7000	5000	2.52	100.00	.10	-2.88	9.73
5000	5000	2.01	103.81	.85	-4.32	8.54
5000	4800	2.06	103.59	.80	-4.32	8.54
5000	4600	1.94	104.76	1.03	-4.32	8.66
5000	4400	1.93	106.61	1.40	-4.32	9.02
5000	4200	2.61	105.84	1.25	-4.31	9.55
5000	4000	3.21	105.03	1.09	-4.31	9.99
5000	3800	3.56	104.18	.92	-4.31	10.18
5000	3600	3.52	103.43	.77	-4.30	9.99
5000	3400	3.36	103.57	.80	-4.30	9.86
5000	3200	3.31	103.77	.84	-4.30	9.85
5000	3000	3.21	104.03	.89	-4.29	9.80
5000	2800	3.05	104.42	.97	-4.29	9.73
5000	2600	3.03	104.74	1.03	-4.29	9.77
5000	2400	2.84	105.74	1.23	-4.29	9.78
5000	2200	2.47	106.91	1.46	-4.28	9.64
5000	2000	2.20	107.35	1.54	-4.28	9.47
5000	1800	1.96	107.82	1.64	-4.28	9.32
5000	1600	1.70	107.74	1.62	-4.27	9.04
5000	1400	1.56	107.47	1.57	-4.27	8.85
5000	1200	1.44	107.46	1.57	-4.27	8.74
5000	1000	1.25	108.16	1.70	-4.26	8.69
3000	1200	1.31	111.57	2.37	-5.71	7.98
3000	1400	1.59	109.45	1.96	-5.71	7.84
3000	1600	1.77	108.39	1.75	-5.71	7.80
3000	1800	1.93	107.89	1.65	-5.72	7.87

3000	2000	1.99	107.47	1.57	-5.72	7.84
3000	2200	2.06	107.44	1.56	-5.72	7.90
3000	2400	2.07	108.18	1.71	-5.73	8.05
3000	2600	2.05	108.15	1.70	-5.73	8.02
3000	2800	2.12	107.91	1.65	-5.73	8.05
3000	3000	2.08	107.93	1.66	-5.73	8.01
3000	3200	1.91	107.89	1.65	-5.74	7.82
3000	3400	1.38	108.72	1.81	-5.74	7.45
3000	3600	1.45	108.27	1.73	-5.74	7.43
3000	3800	1.43	108.51	1.77	-5.75	7.46
3000	4000	1.14	109.29	1.93	-5.75	7.31
3000	4200	1.24	108.90	1.85	-5.75	7.33
3000	4400	1.41	107.57	1.59	-5.76	7.24
3000	4600	1.59	107.18	1.51	-5.76	7.34
3000	4800	1.41	107.54	1.58	-5.76	7.23
3000	5000	1.07	108.09	1.69	-5.77	6.99
9000	4800	2.62	97.28	-.44	-1.44	10.74
9000	5000	2.44	97.51	-.39	-1.44	10.60
9000	5200	2.28	97.43	-.41	-1.45	10.43
9000	5400	2.03	97.84	-.33	-1.45	10.25
9000	5600	1.38	98.34	-.23	-1.45	9.70
9000	5800	1.06	99.51	.00	-1.46	9.61
9000	6000	.97	99.59	.02	-1.46	9.53
9000	6200	.39	101.11	.32	-1.46	9.25
9000	6400	.13	101.15	.32	-1.46	8.99
9000	6600	-.32	101.79	.45	-1.47	8.66
9000	6800	-.85	102.70	.63	-1.47	8.31
9000	7000	-1.49	103.41	.77	-1.47	7.80
9000	7200	-1.55	101.79	.45	-1.48	7.42
7000	7200	-1.02	99.20	-.06	-2.92	6.00
7000	7000	-1.14	101.17	.33	-2.91	6.28
7000	6800	-.54	100.56	.21	-2.91	6.75
7000	6600	-.42	101.79	.45	-2.91	7.12
7000	6400	-.38	103.24	.74	-2.91	7.45
7000	6200	-.15	103.45	.78	-2.90	7.72
7000	6200	-.15	103.84	.85	-2.90	7.80
7000	6000	.40	103.45	.78	-2.90	8.28
7000	5800	.99	102.65	.62	-2.90	8.71
7000	5600	1.37	101.95	.48	-2.89	8.96
7000	5400	1.79	101.09	.31	-2.89	9.22
7000	5200	2.13	100.63	.22	-2.89	9.47
7000	5000	2.53	100.00	.10	-2.88	9.75

MINAD Area M9 Grav. Survey

SURVEY NAME : MINAD9

SURVEY CONSTANTS:-
INSTRUMENT CONSTANT = 1.0465
ROCK DENSITY USED FOR BOUGUER CORRECTIONS= 2.67
DATUM VALUES :
CO-ORDINATES NORTHING = 5000 EASTING = 3050 METRES
ELEVATION = 100.42 METRES
LATITUDE = 31.683333 DEGREES
ORIENTATION OF GRID 50.5 DEGREES EAST OF TRUE NORTH

NORTHING	EASTING	GRAVITY READING	ELEVATION	BOUGUER	LATITUDE	FINAL GRAVITY
METRES	METRES	SCALE DIVS	METRES	MGALS	MGALS	MGALS
5000	3050	.00	100.42	.00	.00	10.00
5000	4000	.11	101.79	.27	-.53	9.85
5000	3050	.00	100.42	.00	.00	10.00
5000	4500	.31	100.29	-.03	-.81	9.47
5000	5000	.83	99.76	-.13	-1.09	9.61
5000	5500	1.17	99.03	-.27	-1.37	9.52
5000	6000	.80	98.65	-.35	-1.65	8.80
5000	6000	.80	98.65	-.35	-1.65	8.80
5200	6000	.35	98.48	-.38	-1.56	8.41
5400	6000	-.20	98.74	-.33	-1.46	8.01
5600	6000	-.58	98.48	-.38	-1.37	7.67
5800	6000	-.91	97.67	-.54	-1.28	7.27
6000	6000	-1.30	97.44	-.59	-1.19	6.92
6200	6000	-1.59	96.76	-.72	-1.10	6.60
6400	6000	-1.78	96.03	-.86	-1.00	6.35
6600	6000	-2.11	96.23	-.82	-.91	6.16
6800	6000	-2.20	96.00	-.87	-.82	6.11
7000	6000	-2.51	95.87	-.89	-.73	5.87
6000	5500	-1.30	97.65	-.54	-.91	7.25
5800	5500	-.85	97.01	-.67	-1.00	7.48
5600	5500	-.43	96.83	-.71	-1.09	7.77
5400	5500	.10	96.64	-.74	-1.18	8.17
5200	5500	.72	98.81	-.32	-1.28	9.13
5000	5500	1.20	99.03	-.27	-1.37	9.56
5000	6000	.80	98.65	-.35	-1.65	8.80
4800	6000	1.13	99.01	-.28	-1.74	9.11
4600	6000	1.66	98.42	-.39	-1.83	9.43
4400	6000	2.05	98.48	-.38	-1.92	9.74
4200	6000	2.31	98.96	-.29	-2.02	10.00
4000	6000	2.50	99.48	-.18	-2.11	10.20
3800	6000	2.71	100.07	-.07	-2.20	10.44
3600	6000	3.27	100.75	.06	-2.29	11.04
3400	6000	3.53	101.65	.24	-2.39	11.38
3200	6000	3.78	101.07	.13	-2.48	11.43
3000	6000	4.06	101.13	.14	-2.57	11.63
3800	5500	2.56	99.96	-.09	-1.92	10.55
4000	5500	2.60	99.49	-.18	-1.83	10.58
4200	5500	2.60	99.08	-.26	-1.74	10.59
4400	5500	2.10	99.11	-.26	-1.65	10.20
4600	5500	1.81	98.87	-.30	-1.55	9.95
4800	5500	.49	99.25	-.23	-1.46	9.80
5000	5500	1.20	99.03	-.27	-1.37	9.56
5000	5000	.83	99.76	-.13	-1.09	9.61
5200	5000	.37	99.16	-.25	-1.00	9.12

035

5400	5000	-.38	99.16	-.25	-.91	8.49
5600	5000	-.73	98.07	-.46	-.81	7.99
5800	5000	-1.09	98.04	-.47	-.72	7.72
6000	5000	-1.34	97.11	-.65	-.63	7.38
6200	5000	-1.98	97.19	-.64	-.54	6.85
6400	5000	-2.55	97.87	-.50	-.44	6.51
6600	5000	-2.85	97.53	-.57	-.35	6.23
6800	5000	-3.27	97.35	-.60	-.26	5.87
7000	5000	-3.27	97.35	-.60	-.17	5.96
6000	4500	-1.83	98.64	-.35	-.35	7.47
5800	4500	-1.26	98.67	-.34	-.44	7.95
5600	4500	-.60	98.92	-.30	-.53	8.57
5400	4500	-.30	99.45	-.19	-.63	8.88
5200	4500	-.05	99.75	-.13	-.72	9.10
5000	4500	.32	100.31	-.02	-.81	9.49
5000	5000	.83	99.76	-.13	-1.09	9.61
4800	5000	1.14	100.44	.00	-1.18	9.96
4600	5000	1.68	100.28	-.03	-1.27	10.38
4400	5000	1.94	100.35	-.01	-1.37	10.56
4200	5000	2.07	100.70	.06	-1.46	10.66
4000	5000	1.87	101.18	.15	-1.55	10.47
3800	5000	2.04	101.11	.14	-1.64	10.53
3600	5000	2.44	100.84	.08	-1.73	10.79
3400	5000	2.64	100.88	.09	-1.83	10.91
3200	5000	2.46	101.51	.21	-1.92	10.76
3000	5000	2.82	101.70	.25	-2.01	11.06
3800	4500	1.81	101.98	.31	-1.36	10.75
4000	4500	2.00	101.44	.20	-1.27	10.93
4200	4500	2.21	101.20	.15	-1.18	11.18
4200	4500	1.81	100.84	.08	-1.18	10.71
4400	4500	1.81	100.84	.08	-1.09	10.81
4600	4500	1.27	100.79	.07	-.99	10.35
4800	4500	.98	100.12	-.06	-.90	9.92
5000	4500	.32	100.31	-.02	-.81	9.49
5000	4000	.11	101.79	.27	-.53	9.85
5200	4000	-.31	100.84	.08	-.44	9.33
5400	4000	-.63	100.37	-.01	-.35	9.01
5600	4000	-.88	99.43	-.19	-.25	8.67
5800	4000	-1.03	98.73	-.33	-.16	8.48
6000	4000	-1.48	98.48	-.38	-.07	8.07
6200	4000	-2.14	98.32	-.41	.02	7.47
6400	4000	-2.56	97.71	-.53	.11	7.02
6600	4000	-3.27	97.65	-.54	.21	6.39
6800	4000	-3.81	97.21	-.63	.30	5.86
7000	4000	-4.27	96.92	-.69	.39	5.43
7000	3050	-4.95	97.26	-.62	.92	5.35
6800	3050	-4.66	97.74	-.53	.83	5.64
6600	3050	-4.25	98.39	-.40	.74	6.09
6400	3050	-3.52	98.09	-.46	.64	6.67
6200	3050	-2.60	98.24	-.43	.55	7.52
6000	3050	-1.88	98.74	-.33	.46	8.25
5800	3050	-1.37	99.22	-.24	.37	8.76
5600	3050	-1.02	100.00	-.08	.28	9.18
5400	3050	-.61	100.37	-.01	.18	9.56
5200	3050	-.35	100.84	.08	.09	9.82
5000	3050	-.02	100.42	.00	.00	9.98
5000	4000	.11	101.79	.27	-.53	9.85

5037070

036

4800	4000	.64	101.25	.16	-.62	10.18
4600	4000	1.22	101.52	.22	-.71	10.72
4400	4000	1.55	102.55	.42	-.81	11.17
4200	4000	1.80	102.67	.44	-.90	11.34
4000	4000	1.99	102.17	.34	-.99	11.34
3800	4000	1.73	102.64	.44	-1.08	11.09
3600	4000	1.38	103.86	.68	-1.18	10.88
3400	4000	1.30	103.73	.65	-1.27	10.69
3200	4000	1.29	103.03	.51	-1.36	10.45
3000	4000	.71	103.79	.66	-1.45	9.92
3000	3050	.39	104.88	.88	-.92	10.35
3200	3050	.85	104.39	.78	-.83	10.80
3400	3050	.54	103.82	.67	-.74	10.48
3600	3050	.01	103.54	.61	-.64	9.98
3800	3050	-.10	102.94	.50	-.55	9.84
4000	3050	.12	102.56	.42	-.46	10.08
4200	3050	.16	102.18	.35	-.37	10.14
4400	3050	.22	101.50	.21	-.28	10.16
4600	3050	.29	101.50	.21	-.18	10.32
4800	3050	.21	101.02	.12	-.09	10.24
5000	3050	-.02	100.42	.00	.00	9.98

SURVEY CONSTANTS:
INSTRUMENT CONSTANT = 1.0465
ROCK DENSITY USED FOR BOUGUER CORRECTIONS= 2.67
DATUM VALUES :
CO-ORDINATES NORTHING = 1500 EASTING = 1600 METRES
ELEVATION = 101.44 METRES
LATITUDE = 31.1 DEGREES
ORIENTATION OF GRID 0 DEGREES EAST OF TRUE NORTH

NORTHING METRES	EASTING METRES	GRAVITY READING SCALE DIVS	ELEVATION METRES	BOUGUER MGALS	LATITUDE MGALS	FINAL GRAVITY MGALS
500	1600	.88	99.99	-.29	-.72	9.88
500	1400	.70	100.00	-.28	-.72	9.70
500	1200	.24	100.85	-.12	-.72	9.41
500	1000	-.46	101.83	.08	-.72	8.90
500	800	-1.18	104.44	.59	-.72	8.69
500	600	-1.34	105.75	.85	-.72	8.79
500	400	-1.52	106.64	1.02	-.72	8.79
500	200	-.87	103.61	.43	-.72	8.84
1000	1600	-.22	103.00	.31	-.36	9.72
1000	1400	-.13	102.32	.17	-.36	9.69
1000	1200	.22	100.34	-.22	-.36	9.65
1000	1000	.17	99.84	-.31	-.36	9.49
1000	800	-.54	101.86	.08	-.36	9.19
1000	600	-1.49	104.75	.65	-.36	8.80
1000	400	-1.38	103.81	.47	-.36	8.73
1000	200	-1.15	103.04	.31	-.36	8.81
1500	200	-1.42	103.28	.36	.00	8.94
1500	400	-1.20	103.68	.44	.00	9.24
1500	600	-.77	102.73	.25	.00	9.48
1500	800	-.42	101.79	.07	.00	9.65
1500	1000	-.59	102.81	.27	.00	9.68
1500	1200	-.21	101.72	.06	.00	9.84
1500	1400	-.01	101.25	-.04	.00	9.95
1000	1600	-.22	103.00	.31	-.36	9.72
1000	1800	-.35	103.60	.42	-.36	9.72
1000	2000	-.70	105.58	.81	-.36	9.76
1000	2200	.01	102.93	.29	-.36	9.94
1000	2400	.77	100.05	-.27	-.36	10.14
1000	2600	1.07	99.04	-.47	-.36	10.24
1000	2800	1.07	99.20	-.44	-.36	10.27
1000	3000	1.05	99.27	-.43	-.36	10.27
1000	3200	.62	101.08	-.07	-.36	10.19
1500	3200	.47	101.41	-.01	.00	10.47
1500	3000	.89	99.44	-.39	.00	10.50
1500	2800	.98	99.04	-.47	.00	10.51
1500	2600	.81	99.60	-.36	.00	10.44
1500	2400	.77	99.46	-.39	.00	10.38
1500	2200	.62	99.77	-.33	.00	10.29
1500	2000	.56	99.41	-.40	.00	10.16
1500	1800	.45	99.49	-.38	.00	10.07
1500	1600	.00	101.44	.00	.00	10.00
250	1600	1.22	99.35	-.41	-.90	9.91
250	1800	1.39	99.23	-.43	-.90	10.06
250	2000	1.47	99.80	-.32	-.90	10.25
250	2200	1.45	100.88	-.11	-.90	10.44

250	3400	1.29	102.73	.25	-.90	10.65
250	2600	1.60	101.74	.06	-.90	10.76
250	2800	1.77	101.11	-.06	-.90	10.81
250	3000	1.56	101.52	.02	-.90	10.68
250	3200	1.34	101.50	.01	-.90	10.46
500	3200	1.46	99.51	-.38	-.72	10.36
500	3000	1.40	100.36	-.21	-.72	10.47
500	2800	1.14	101.95	.10	-.72	10.52
500	2600	1.15	101.90	.09	-.72	10.52
500	2400	1.15	101.68	.05	-.72	10.48
500	2200	.61	103.03	.31	-.72	10.21
500	2000	1.00	100.53	-.18	-.72	10.10
500	1800	.98	100.04	-.28	-.72	9.99
500	1600	.85	99.99	-.29	-.72	9.85

10000	10000	97.92	-.21243632	3.0531491E-02		11.393078
10000	9000	101.28	.44847668	6.1062982E-02		11.671155
10000	8000	95.53	-.68255004	9.1594474E-02		10.994492
10000	7000	92.82	-1.2156079	.12212596	9.3826756	
10000	7000	92.82	-1.2156079	.12212596	9.3826756	
9800	7000	91.66	-1.4437802	-2.1765235E-02		9.4920021
9600	7000	93.52	-1.0779176	-.16565644	9.5360684	
9400	7000	94.89	-.80843823	-.30954764	9.6093316	
9200	7000	94.31	-.92252441	-.45343884	9.8170468	
9000	7000	95.2	-.74746114	-.59733004	9.9476363	
8800	7000	93.99	-.9854685	-.74122124	10.141313	
8600	7000	94.82	-.82220725	-.88511244	10.307193	
8400	7000	95.52	-.68451704	-1.0290036	10.363782	
8200	7000	96.94	-.40520262	-1.1728948	10.46781	
8000	7000	97.26	-.34225852	-1.316786	10.538605	
7800	7000	97.11	-.37176357	-1.4606772	10.584974	
7600	7000	97.34	-.3265225	-1.6045684	10.711322	
7400	7000	97.91	-.21440333	-1.7484596	10.789432	
7200	7000	98.84	-3.1472048E-02		-1.8923508	10.896495
7000	7000	100	.1967003	-2.036242	10.975543	
6800	7000	100.66	.3265225	-2.1801332	11.134147	
6600	7000	101.52	.49568476	-2.3240244	11.253603	
6400	7000	100.41	.27734742	-2.4679156	11.482647	
6200	7000	100.43	.28128143	-2.6118068	11.604315	
6000	7000	101.99	.5881339	-2.755698	11.746346	
5800	7000	103.04	.79466921	-2.8995892	11.887477	
5600	7000	104.28	1.0385776	-3.0434804	11.982262	
5400	7000	103.54	.89301936	-3.1873716	12.25269	
5200	7000	102.59	.70615408	-3.3312628	12.476579	
5000	7000	104.09	1.0012045	-3.475154	12.585878	
5400	8000	103.98	.97956749	-3.2179031	13.758109	
5600	8000	104.06	.99530352	-3.0740119	13.472974	
5800	8000	101.53	.49765176	-2.9301207	13.218631	
6000	8000	99.76	.14949223	-2.7862295	13.187035	
6200	8000	100.94	.38159858	-2.6423383	13.186293	
6400	8000	98.92	-1.5736024E-02		-2.4984471	13.079359
6600	8000	100.11	.21833733	-2.3545559	12.960236	
6800	8000	98.92	-1.5736024E-02		-2.2106647	12.938077
7000	8000	99.16	3.1472048E-02		-2.0667735	12.893714
7200	8000	99.32	6.2944096E-02		-1.9228823	13.016752
7400	8000	97.65	-.26554541	-1.7789911	13.130406	
7600	8000	95.97	-.59600191	-1.6350999	13.231628	
7800	8000	95.57	-.67468203	-1.4912087	13.160794	
8000	8000	98.14	-.16916226	-1.3473175	12.904983	
8200	8000	97.88	-.22030434	-1.2034263	12.804129	
8400	8000	97.62	-.27144641	-1.0595351	12.582928	
8600	8000	96.4	-.51142078	-.91564393	12.528705	
8800	8000	95.95	-.59993592	-.77175273	12.369549	
9000	8000	97.24	-.34619253	-.62786153	12.196841	
9200	8000	96.61	-.47011372	-.48397033	12.049371	
9400	8000	97.57	-.28128143	-.34007913	11.733264	
9600	8000	96.62	-.46814671	-.19618793	11.37634	
9800	8000	95.25	-.73762612	-5.2296727E-02		11.14087
10000	8000	95.53	-.68255004	9.1594474E-02		10.978794
10000	8000	95.53	-.68255004	9.1594474E-02		10.994492
10200	8000	96.54	-.48388274	.23548567	10.745778	
10400	8000	96.16	-.55862885	.37937687	10.699808	

10600	8000	95.62	-.6648470	.5232680	10.564809	
10800	8000	95.46	-.69631906	.66715928	10.279558	
11000	8000	94.82	-.02220725	.81105048	10.046401	
11200	8000	95.1	-.76713117	.95494168	9.7482805	
11400	8000	94.49	-.88711835	1.0988329	9.526257	
11600	8000	94.34	-.9166234	1.2427241	9.2848332	
11800	8000	91.84	-1.4083741	1.3866153	9.1253436	
12000	8000	91.62	-1.4516482	1.5305065	8.8963133	
12200	8000	93.18	-1.1447957	1.6743977	8.6249719	
12400	8000	91.52	-1.4713182	1.8182889	8.4475731	
12600	8000	91.23	-1.5283613	1.9621801	8.0739612	
12800	8000	92.94	-1.1920038	2.1060713	7.63329	
13000	8000	93.43	-1.0956207	2.2499625	7.2822918	
13200	8000	94.63	-.85958031	2.3938537	6.8302559	
13400	8000	92.01	-1.3749351	2.5377449	6.4535598	
13600	8000	91.6	-1.4555822	2.6816361	6.0720414	
13800	8000	92.68	-1.2431459	2.8255273	5.5807039	
14000	8000	94.41	-.90285438	2.9694185	5.0707116	
14200	8000	92.27	-1.323793	3.1133097	4.6209917	
14400	8000	92.95	-1.1900368	3.2572009	4.1242291	
14600	8000	92.54	-1.2706839	3.4010921	3.6903856	
14800	8000	91.73	-1.4300112	3.5449833	3.2929771	
15000	8000	91.32	-1.5106583	3.6888745	2.8800637	
15200	8000	90.99	-1.5755694	3.8327657	2.4357938	
15400	8000	88.24	-2.1164952	3.9766569	2.1224792	
15000	7000	89.58	-1.8529168	3.719406	2.1758991	
14800	7000	89.62	-1.8450488	3.5755148	2.584056	
14600	7000	89.62	-1.8450488	3.4316236	3.0523673	
14400	7000	89.92	-1.7860387	3.2877324	3.4541086	
14200	7000	91.92	-1.3926381	3.1438412	3.829198	
14000	7000	93.92	-.99923752	2.99995	4.2723099	
13800	7000	92.37	-1.304123	2.8560588	4.8177083	
13600	7000	93.3	-1.1211917	2.7121676	5.2282559	
13400	7000	92.51	-1.2765849	2.5682764	5.6876839	
13200	7000	93.29	-1.1231587	2.4243852	6.053029	
13000	7000	93.62	-1.0582476	2.280494	6.4083464	
12800	7000	91.28	-1.5185263	2.1366028	6.7250965	
12600	7000	91.3	-1.5145923	1.9927116	6.9932743	
12400	7000	92.31	-1.315925	1.8488204	7.3829304	
12200	7000	90.25	-1.7211276	1.7049292	7.7861515	
12000	7000	90.23	-1.7250616	1.561038	8.0202988	
11800	7000	92.66	-1.2470799	1.4171468	8.2183444	
11600	7000	92.63	-1.2529809	1.2732556	8.4714547	
11400	7000	93.8	-1.0228416	1.1293644	8.6414228	
11200	7000	93.33	-1.1152907	.98547317	8.77659	
11000	7000	92.55	-1.2687169	.84158197	8.91357	
10800	7000	94.56	-.87334933	.69769077	8.9191189	
10600	7000	92.63	-1.2529809	.55379957	8.9973337	
10400	7000	91.67	-1.4418132	.40990837	9.1616977	
10200	7000	93.93	-.99727052	.26601717	9.1640966	
10000	7000	92.82	-1.2156079	.12212596	9.3879081	
10000	9000	101.28	.44847668	6.1062982E-02		11.671155
10200	9000	100.58	.31078647	.20495418	11.379103	
10400	9000	98.48	-.10228416	.34884538	11.177946	
10600	9000	98.9	-.01967003	.49273658	10.912597	
10800	9000	97.11	-.37176357	.63662778	10.720092	
11000	9000	96.76	-.44060867	.78051898	10.418398	

11200	9000	96.41	-.50945378	.92441018	10.085309	
11400	9000	94.5	-.88515135	1.0683014	9.670365	
11600	9000	95.36	-.71598909	1.2121926	9.392146	
11800	9000	94.37	-.91072239	1.3560838	9.2418864	
12000	9000	91.84	-1.4083741	1.499975	9.1026583	
12200	9000	90.77	-1.6188435	1.6438662	8.8634077	
12400	9000	91.48	-1.4791863	1.7877574	8.6969611	
12600	9000	91.97	-1.3828031	1.9316486	8.419218	
12800	9000	91.84	-1.4083741	2.0755398	8.1032406	
13000	9000	91.86	-1.4044401	2.219431	7.7330483	
13200	9000	92.39	-1.300189	2.3633222	7.3428257	
13400	9000	93.29	-1.1231587	2.5072134	6.8579422	
13600	9000	90.71	-1.6306455	2.6511046	6.4158591	
13800	9000	90.9	-1.5932724	2.7949958	5.8959684	
14000	9000	92.28	-1.321826	2.938887	5.348526	
14200	9000	93.88	-1.0071055	3.0827782	4.7972652	
14400	9000	95.19	-.74942814	3.2266694	4.3040762	
14600	9000	94.52	-.88121734	3.3705606	3.8557182	
14800	9000	93.21	-1.1388947	3.5144518	3.4384471	
15000	9000	92.05	-1.3670671	3.658343	2.9983559	
15200	9000	92.92	-1.1959378	3.8022342	2.4761764	
15400	9000	85.31	-2.6928271	3.9461254	2.2795608	
15600	9000	81.45	-3.4520903	4.0900166	2.0199988	
15800	9000	79.27	-3.8808969	4.2339078	2.0124059	
15600	10000	84.72	-2.8088803	4.0594851	2.8681398	
15800	10000	80.74	-3.5917475	4.2033763	2.7733438	
16000	10000	76.31	-4.4631298	4.3472675	2.6318927	
15600	10000	84.72	-2.8088803	4.0594851	2.8681398	
15400	10000	91.82	-1.4123082	3.9155939	3.0795532	
15200	10000	92.66	-1.2470799	3.7717027	3.4619328	
15000	10000	93.92	-.99923752	3.6278115	3.848439	
14800	10000	92.81	-1.2175749	3.4839203	4.2187604	
14600	10000	92.94	-1.1920038	3.3400291	4.4510178	
14400	10000	91.01	-1.5716354	3.1961379	4.75423	
14200	10000	90.74	-1.6247445	3.0522467	5.0176897	
14000	10000	91.8	-1.4162422	2.9083555	5.3125308	
13800	10000	93.14	-1.1526638	2.7644643	5.599658	
13600	10000	89.57	-1.8548838	2.6205731	6.1558568	
13400	10000	89.5	-1.8686528	2.4766819	6.495284	
13200	10000	90.58	-1.6562165	2.3327907	6.7626642	
13000	10000	89.73	-1.8234118	2.1888995	7.0899427	
12800	10000	92.08	-1.3611661	2.0450083	7.2251597	
12600	10000	91.82	-1.4123082	1.9011171	7.5324464	
12400	10000	93.17	-1.1467627	1.7572259	7.7849131	
12200	10000	92.9	-1.1998718	1.6133347	8.0902329	
12000	10000	94.26	-.93235942	1.4694435	8.3655966	
11800	10000	93.44	-1.0936537	1.3255523	8.6673811	
11600	10000	95.04	-.77893319	1.1816611	8.8539079	
11400	10000	94.16	-.95202945	1.0377699	9.1648204	
11200	10000	95.58	-.67271503	.89387869	9.2374537	
11000	10000	97.59	-.27734742	.74998749	9.7034626	
10800	10000	97.89	-.21833733	.60609629	10.031949	
10600	10000	98.1	-.17703027	.46220509	10.35843	
10400	10000	99.6	.11802018	.31831389	10.687494	
10200	10000	97.98	-.20063431	.17442269	10.999358	
10000	10000	97.92	-.21243632	3.0531491E-02		11.408775
10000	11000	99	0	0	10	

9800	11000	99.45	8.8515135E-02		-.1438912	10.284736
9600	11000	97.45	-.30488547	-.2877824	10.673597	
9400	11000	99.35	6.8845105E-02		-.4316736	10.908669
9200	11000	100.16	.22817235	-.5755648	11.258985	
9000	11000	99.95	.18686528	-.719456	11.544712	
8800	11000	99.99	.1947333	-.8633472	11.879614	
8600	11000	101.16	.42487265	-1.0072384	12.107139	
8400	11000	100.53	.30095146	-1.1511296	12.540482	
10000	9000	101.28	.44847668	6.1062982E-02		11.671155
9800	9000	99.83	.16326125	-8.2828218E-02		12.074016
9600	9000	99.6	.11802018	-.22671942	12.476156	
9400	9000	100.18	.23210635	-.37061062	12.812626	
9200	9000	100.84	.36192855	-.51450182	13.138669	
9000	9000	101.22	.43667467	-.65839302	13.304987	
8800	9000	101.04	.40126861	-.80228422	13.371617	
8600	9000	102.02	.59403491	-.94617542	13.362934	
8400	9000	100.38	.27144641	-1.0900666	13.6604	
8200	9000	99.1	.01967003	-1.2339578	14.049607	
8000	9000	99.28	5.5076084E-02		-1.377849	14.218445
7800	9000	97.2	-.35406054	-1.5217402	14.413664	
7600	9000	96.66	-.4602787	-1.6656314	14.608317	
7400	9000	99.58	.11408617	-1.8095226	14.400426	
7200	9000	99.93	.18293128	-1.9534138	14.518982	
7000	9000	99.13	2.5571039E-02		-2.097305	14.594471
6800	9000	100.04	.20456831	-2.2411962	14.57202	
6600	9000	100.56	.30685247	-2.3850874	14.655993	
6400	9000	100.31	.25767739	-2.5289786	14.803039	
6200	9000	102.2	.62944096	-2.6728698	14.910564	
6000	9000	101.73	.53699182	-2.816761	15.098056	
5800	9000	100.1	.21637033	-2.9606522	15.407953	
7000	10000	101.39	.47011372	-2.1278365	14.830577	
7200	10000	103.97	.97760049	-1.9839453	14.513943	
7400	10000	103.47	.87925034	-1.8400541	14.282161	
7600	10000	103.24	.83400927	-1.6961629	13.993606	
7800	10000	99.99	.1947333	-1.5522717	13.738917	
8000	10000	99.48	9.4416144E-02		-1.4083805	13.662143
8200	10000	100.49	.29308345	-1.2644893	13.549474	
8400	10000	100.11	.21833733	-1.1205981	13.320367	
8600	10000	100.11	.21833733	-.97670691	13.30205	
8800	10000	100.1	.21637033	-.83281571	13.088165	
9000	10000	101.23	.43864167	-.68892451	12.857822	
9200	10000	101.65	.52125579	-.54503331	12.676192	
9400	10000	100.75	.34422552	-.40114211	12.527938	
9600	10000	100.63	.32062149	-.25725091	12.261021	
9800	10000	98.51	-9.6383147E-02		-.11335971	11.90942
10000	10000	97.92	-.21243632	3.0531491E-02		11.424473
10000	11000	99	0	0	10	
10200	11000	98.59	-8.0647123E-02		.1438912	9.7440616
10400	11000	98.06	-.18489828	.2877824	9.5482391	
10600	11000	98.22	-.15342623	.4316736	9.2840724	
10800	11000	97.42	-.31078647	.5755648	9.0665358	
11000	11000	94.21	-.94219444	.719456	8.7202966	
11200	11000	93.2	-1.1408617	.8633472	8.3934305	
11400	11000	93.27	-1.1270927	1.0072384	8.1691182	
11600	11000	93.09	-1.1624988	1.1511296	7.9950483	
11800	11000	12000	2340.9303	1.2950208	2349.8236	
11800	11000	93.26	-1.1290597	1.2950208	7.7642436	

12000	11000	93.95	-.99333652	1.438912	7.6095605
12200	11000	93.38	-1.1054557	1.5828032	7.541915
12400	11000	93.37	-1.1074227	1.7266944	7.5111667
12600	11000	93.77	-1.0287426	1.8705856	7.3308355
12800	11000	93.9	-1.0031715	2.0144768	7.0241403
13000	11000	93.49	-1.0838187	2.158368	6.6373894
13200	11000	91.54	-1.4673842	2.3022592	6.355855
13400	11000	89.04	-1.959135	2.4461504	6.1178779
13600	11000	88.42	-2.0810892	2.5900416	5.8153999
13800	11000	87.88	-2.1873073	2.7339328	5.5443555
14000	11000	86.33	-2.4921928	2.877824	5.3362687
14200	11000	85.47	-2.6613551	3.0217152	5.2115801
14400	11000	84.77	-2.7990453	3.1656064	5.0660386
14600	11000	83.45	-3.0586897	3.3094976	4.8194729
14800	11000	84.92	-2.7695402	3.4533888	4.5199636
15000	11000	87.18	-2.3249975	3.59728	4.224105
15200	11000	92	-1.3769021	3.7411712	3.7934341
15400	11000	89.07	-1.953234	3.8850624	3.6487809

BOX SWAMP DAM

RUTHERFORDS DAM

WILD HORSE LAGOON

1A

1B

1C

5500N 6000N 7000N 8000N 9000N 10000N 11000N 12000N 13000N 14000N 15000N 16000N

7000E 8000E 9000E 10000E 11000E

N

RECEIVED
8 APR 1980
DEPT. OF MINES AND ENERGY SECURITY
3615

CONTOUR INTERVAL ..... 100 nT

GEOEX 3615-1

PTY. LTD.

MINAD – TETON AUSTRALIA

AREA M1, LAKE FROME – S.A.

CONTOUR MAP OF TOTAL MAGNETIC INTENSITY

SCALE 1:10000

SURVEYED OCT. '79			APPROVED A.R.D.
DRAWN R.G.Z.	PROJECT NO 79262		SHEET NO 1

5000N 6000N 7000N 8000N 9000N 10000N 11000N 12000N 13000N 14000N 15000N 16000N

BOX SWAMP DAM

RUTHERFORDS DAM

WILD HORSE LAGOON

7000E 8000E 9000E 10000E 11000E

10.0 10.5 11.0 11.5 12.0 12.5 13.0 13.5 14.0 14.5 15.0

9.5 9.0 8.5 8.0 7.5 7.0 6.5 6.0 5.5 5.0 4.5 4.0 3.5 3.0 2.5 2.0

3.0 2.5 2.0 1.5 1.0 0.5

N

REFERENCE

TOTAL BOUGUER ANOMALY CONTOURS

INTERPRETED RESIDUAL BOUGUER ANOMALY CONTOURS

CONTOUR INTERVAL ..... 0·5 mgals

GEOEX PTY. LTD. 3615-2

MINAD - TETON AUSTRALIA

AREA M1, LAKE FROME - S.A.

CONTOUR MAP OF BOUGUER GRAVITY ANOMALY

DENSITY 2·67gms/cc SCALE 1:10000

SURVEYED OCT. '79		APPROVED A.R.D.
DRAWN R.G.Z.	PROJECT N° 79262	SHEET N° 2

1000E 2000E 3000E 4000E 5000E 6000E 7000E 8000E

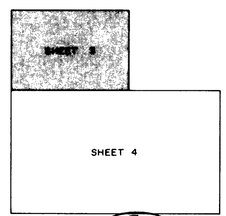
11000N

10000N

9000N

5A

SHEET INDEX



CONTOUR INTERVAL ..... 50 nT

GEOEX 3615-3
PTY. LTD.

MINAD – TETON AUSTRALIA

AREA M5, LAKE FROME – S.A.

CONTOUR MAP OF TOTAL MAGNETIC INTENSITY

SCALE 1:10000

SURVEYED OCT. '79		APPROVED A R D
DRAWN S J.	PROJECT Nº 79262	SHEET Nº 3

ROAD
FENCE

SULLIVANS DAM

5A

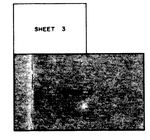
5B

5C

1000E 2000E 3000E 4000E 5000E 6000E 7000E 8000E 9000E 10000E 11000E 12000E 13000E

7000N 6000N 5000N 4000N 3000N 2000N 1000N

SHEET INDEX



CONTOUR INTERVAL ..... 50 nT

GEOEX 3615-4
PTY. LTD.

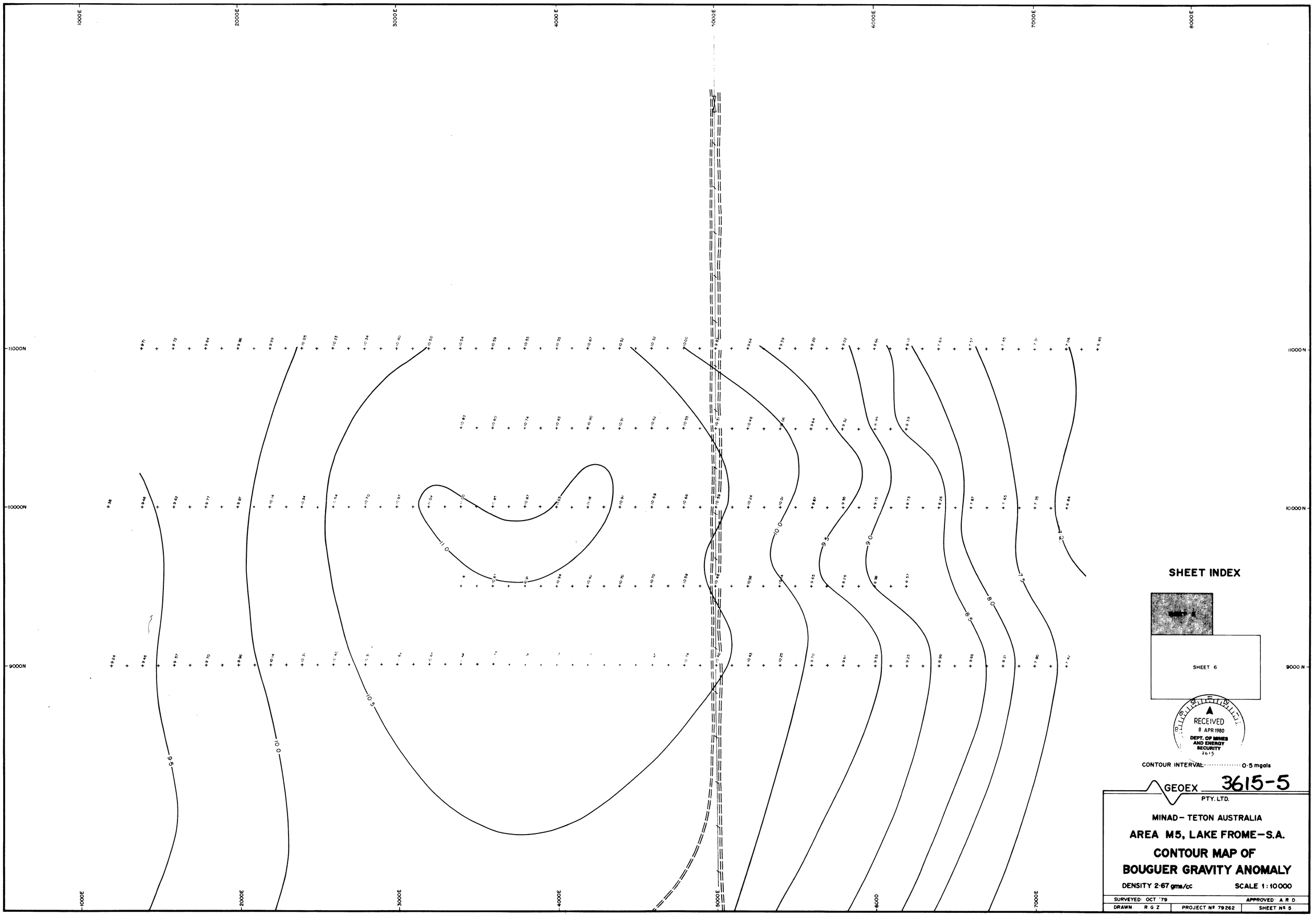
MINAD – TETON AUSTRALIA

AREA M5, LAKE FROME – S.A.

CONTOUR MAP OF TOTAL MAGNETIC INTENSITY

SCALE 1:10000

SURVEYED OCT '79			APPROVED: A.R.D.
DRAWN R.G.Z.	PROJECT Nº 79262		SHEET Nº 4



SHEET INDEX

CONTOUR INTERVAL ..... 0·5 mgals

GEOEX PTY. LTD. 3615-5

MINAD – TETON AUSTRALIA

AREA M5, LAKE FROME – S.A.

CONTOUR MAP OF BOUGUER GRAVITY ANOMALY

DENSITY 2·67 gms/cc SCALE 1:10000

SURVEYED: OCT '79		APPROVED: A R D
DRAWN: R G Z	PROJECT Nº 79262	SHEET Nº 5

ROAD
FENCE

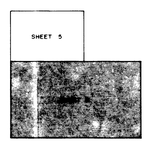
SULLIVANS DAM

7000N
6000N
5000N
4000N
3000N
2000N
1000N

1000E
2000E
3000E
4000E
5000E
6000E
7000E
8000E
9000E
10000E
11000E
12000E
13000E

CONTOUR INTERVAL ..... 0·5 mgals

SHEET INDEX



GEOEX 3615-6
PTY. LTD.

MINAD – TETON AUSTRALIA

AREA M5, LAKE FROME – S.A.

CONTOUR MAP OF BOUGUER GRAVITY ANOMALY

DENSITY 2·67 gms/cc SCALE 1:10000

SURVEYED: OCT '79		APPROVED: A.R.D
DRAWN: R.G.Z.	PROJECT Nº 79282	SHEET Nº 6

3000E 4000E 5000E 6000E

139°55'

7000 N

6000 N

5000 N

4000 N

3000 N

Old road (overgrown)

YARD

CURNAMONA

FENCE

350 400 450 500 550 600 650 750 800 850 900 950

500 400 300

31°40'

3050 E 4000 E 5000 E 6000 E

N

CONTOUR INTERVAL ..... 50 nT

GEOEX PTY. LTD.

3615-7

MINAD – TETON AUSTRALIA

AREA M9, LAKE FROME – S.A.

CONTOUR MAP OF TOTAL MAGNETIC INTENSITY

SCALE 1:10000

SURVEYED: OCT. '79		APPROVED: A.R.D	
DRAWN: R.G.Z.	PROJECT Nº 79262	SHEET Nº 7	

3000E 4000E 5000E 6000E

139°55'

7000N

6000N

5000N

4000N

3000N

5·5 6·0 6·5 7·0 7·5 8·0 8·5 9·0 9·5 10·0 10·5 11·0 11·5

Old road (overgrown)

YARD

CURNAMONA

FENCE

3050E 4000E 5000E 6000E

31°40'

N

RECEIVED
8 APR 1980
DEPT. OF MINES AND ENERGY SECURITY
3615

CONTOUR INTERVAL ..... 0·5 mgals

GEOEX PTY. LTD. 3615-8

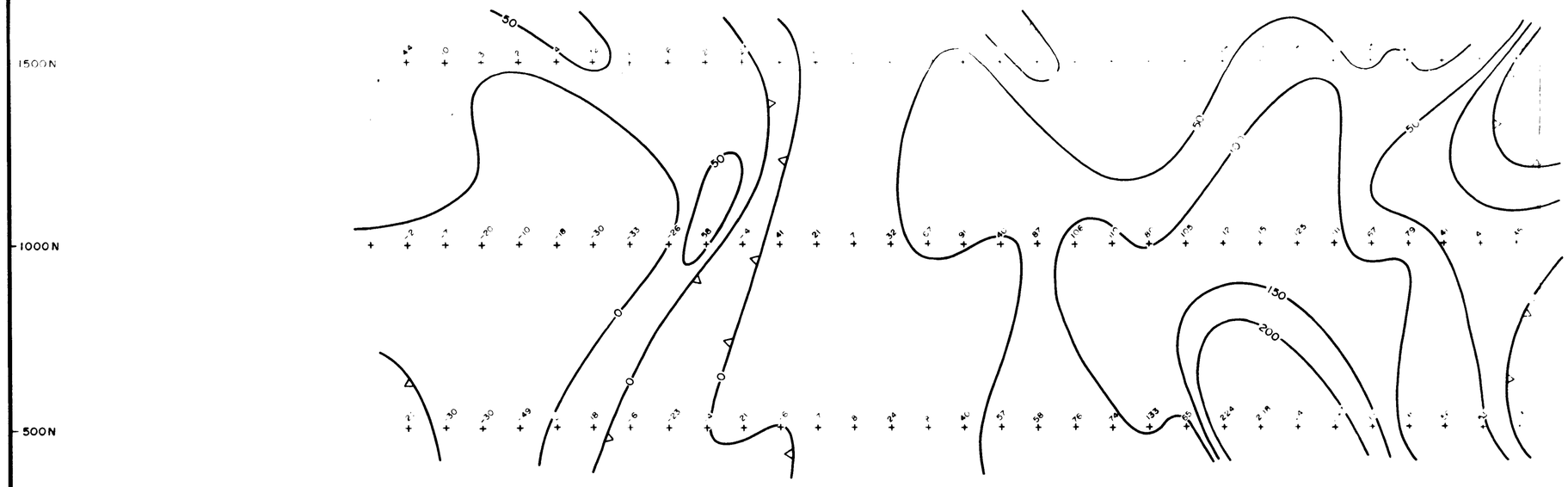
MINAD - TETON AUSTRALIA

AREA M9, LAKE FROME - S.A.

CONTOUR MAP OF BOUGUER GRAVITY ANOMALY

DENSITY 2·67 gms/cc SCALE 1 : 10000

SURVEYED OCT '79		APPROVED: A.R.D.
DRAWN: R.G.Z.	PROJECT Nº 79262	SHEET Nº 8



CONTOUR INTERVAL ..... 50 nT

GEOEX 3615-9
PTY. LTD.

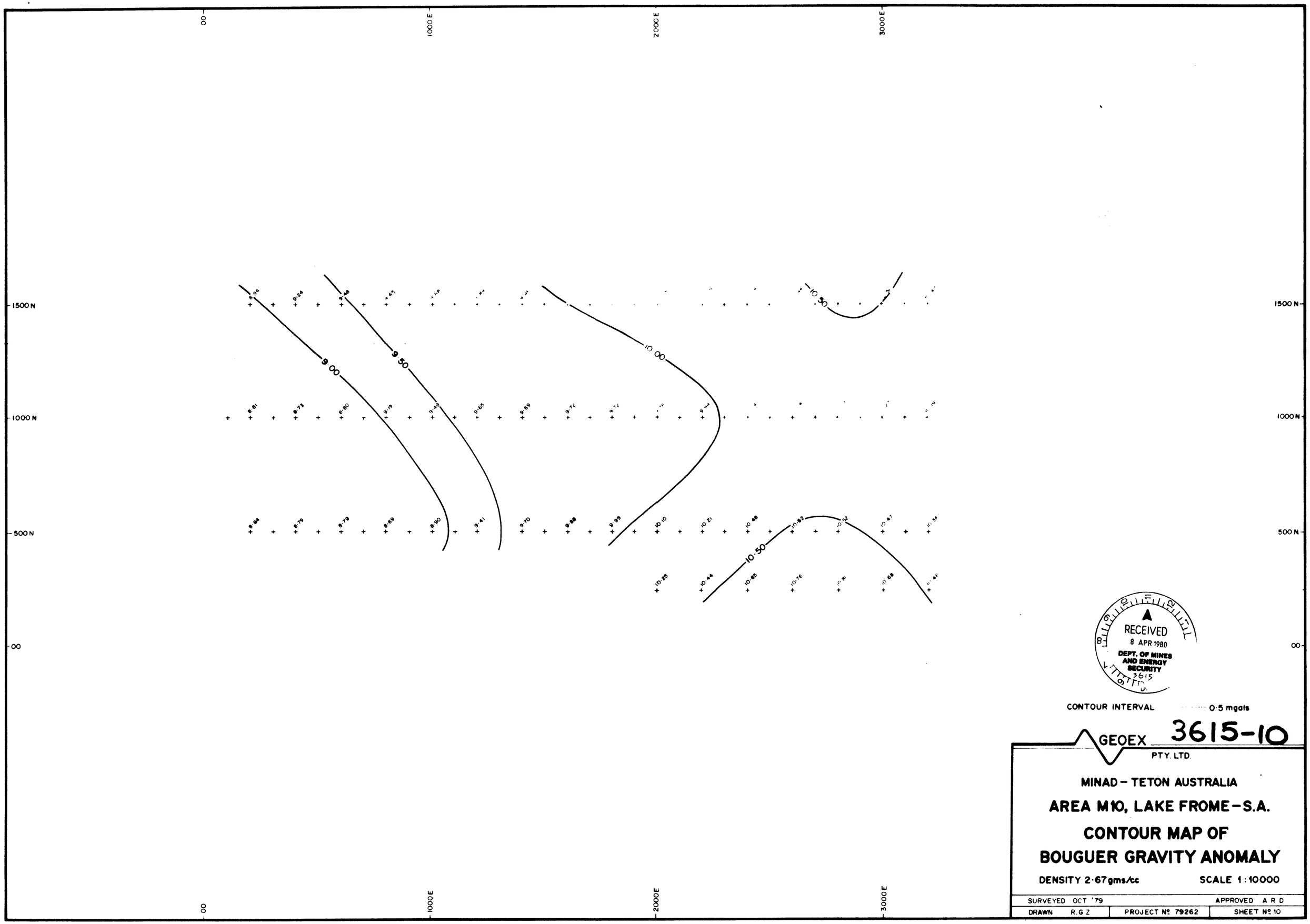
MINAD – TETON AUSTRALIA

AREA M10, LAKE FROME – S.A.

CONTOUR MAP OF TOTAL MAGNETIC INTENSITY

SCALE 1:10000

SURVEYED: OCT '79			APPROVED A.R.D.
DRAWN R.G.Z.		PROJECT № 79262	SHEET № 9



RECEIVED
8 APR 1980
DEPT. OF MINES AND ENERGY SECURITY
3615

CONTOUR INTERVAL ..... 0·5 mgals

GEOEX PTY. LTD. 3615-10

MINAD – TETON AUSTRALIA

AREA M10, LAKE FROME – S.A.

CONTOUR MAP OF BOUGUER GRAVITY ANOMALY

DENSITY 2·67 gms/cc SCALE 1:10000

SURVEYED OCT '79		APPROVED A R D
DRAWN R.G.Z	PROJECT Nº 79262	SHEET Nº 10

MINES ADMINISTRATION PTY. LIMITED

QUARTERLY REPORT

EL 523 (TELECHIE) SOUTH AUSTRALIA

QUARTER ENDED 26-5-80

Exploration Licence 523 was granted to Mines Administration Pty. Limited and Teton Exploration Drilling Company Pty. Ltd on the 27th August 1979 for a one year period. The tenement covers an area of 161 kms^2 in the southern Lake Frome region of South Australia.

During the quarter ended 26th May, 1980 no field activities were undertaken.

Expenditure during the quarter totalled $1,206 - a detailed statement is attached.

Steve Burns.

Geologist - MTA

BRISBANE.

24.6.80

MINES ADMINISTRATION PTY LIMITED

STATEMENT OF EXPENDITURE

EL 523 TELECHIE

QUARTER YEAR ENDED 26.5.80

REF : AC/MDE

	$
Salaries and Wages	1,006
Communications	2
Drafting, Air Photography, Printing, etc.	94
Geophysics Contractor - Other	104
	$1,206

G. B. Monk,
Accountant.

MINES ADMINISTRATION PTY. LIMITED

QUARTERLY REPORT
EL 523 (TELECHIE) SOUTH AUSTRALIA
QUARTER ENDED 26.8.1980

Exploration Licence 523 was granted to Mines Administration Pty. Limited and Teton Exploration Drilling Company Pty. Ltd. on the 27th August 1979, for one year. A further 12 months extension of term was granted in August 1980. The tenement covers an area of 161 km^2 in the southern Lake Frome region of South Australia.

During the quarter ended 26th August 1980, no field activities were carried out. A ground magnetic and gravity survey is planned for October - November 1980. The survey is a follow up to a previous survey carried out in October 1979. The aim of the survey is to fully delineate a gravity and magnetic anomaly located in the north of the EL during the previous survey.

It is also planned that the northern boundary of the Exploration Licence be surveyed in during September 1980.

Expenditure during the quarter totalled $996 - a detailed statement is attached.

Brisbane.

25.9.80

MINES ADMINISTRATION PTY. LIMITED

STATEMENT OF EXPENDITURE

EL 523 TELECHIE

QUARTER YEAR ENDED 26.8.80

REF: AC/MDE

	$
Salaries and Wages	942.00
Travel & Accommodation	49.00
Drafting, Air Photography, Printing, etc	5.00
	996.00

G. B. MONK,
ACCOUNTANT.

000049

QUARTERLY REPORT

EL 523 TELECHIE
SOUTH AUSTRALIA

QUARTER ENDING 26.11.80

A ground gravity-magnetic geophysical follow-up programme was conducted by Geoex over anomaly M5.

M. Flook

M FLOOK
GEOLOGIST

Brisbane.

17th December 1980

MINES ADMINISTRATION PTY. LIMITED

STATEMENT OF EXPENDITURE

EL 523 TELECHIE

QUARTER YEAR ENDED 26.11.80

REF: AC/MDE

GEOPHYSICAL & GEOLOGICAL COSTS	$	$
Salaries & Wages	1,332	1,332
LOGISTICS		
Travel & Accommodation	152	
Vehicle Hire	44	
Communications	39	235
		$1,567

G.B. Monk,
Accountant.

000051

QUARTERLY REPORT

EL 523 TELECHIE

SOUTH AUSTRALIA

QUARTER ENDED 26.2.81

Revision of ground gravimetric and magnetic geophysical surveys in early December showed that anomaly M9 west had been omitted from previous work.

A programme was formulated and Geox Pty Ltd contracted to carry out the required surveys.

The field work is incomplete as yet but a report is expected during the next quarter.

Surveying of the northern EL boundary foreshadowed previously was carried out to completion in early December.

An expenditure statement is appended.

J L CURTIS
Snr Geologist - Exploration

Encl:

BRISBANE

31st March, 1981.

MINES ADMINISTRATION PTY LIMITED

STATEMENT OF EXPENDITURE

EL 523 TELECHIE

QUARTER YEAR ENDED 28.2.81

REF : AC/MDE

	$
Salaries and Wages	996
Consultants Fees	768
Travel and Accommodation	29
Communications	25
Drafting, Air Photography, Printing, etc.	10
Geophysics Contractor - Logging	1,200
Geophysics Contractor - Other	150
Surveying Contractor	3,361
Rents on Prospecting Areas	130
	$6,669

G. B. Monk,
Accountant.

QUARTERLY REPORT
EL 523 TELECHIE
SOUTH AUSTRALIA

QUARTER ENDED 26.5.81

Ground gravimetric and magnetic geophysical surveys over the M9E and W anomalies were completed by Geox Pty Ltd.

Preliminary release of data has enabled J Ashley to apply computer modelling to the anomalies.

Both magnetic sources lie in close proximity to an arcuate 1.5 to 2 mgal gravimetric anomaly. The western magnetic anomaly is substantially shallower than the eastern magnetic anomaly by 300 to 400 m or more.

In anticipation of an early decision to drill the western anomaly additional geophysical consultation is being actively sought and appropriate advice to the Department, land holders and contractors has been forwarded.

An expenditure statement is appended.

Lindsay Curtis
Snr Geologist - Exploration SA

ENC:

Adelaide
18.6.81

MINES ADMINISTRATION PTY LIMITED
STATEMENT OF EXPENDITURE
EL 523 - TELECHIE
QUARTER YEAR ENDED 26.5.81

	$
Salaries and Wages	2086
Labour	247
Travel and Accommodation	173
Vehicle Hire	50
Freight	20
Drafting, Printing, Etc	27
Geophysics Contractor - Logging	980
Geophysics Contractor - Other	5311
	8894

M A NORRIS
ADMINISTRATION OFFICER

000055

QUARTERLY REPORT

EL 523 TELECHIE

SOUTH AUSTRALIA

QUARTER ENDED 26.8.81

Exploration Licence 523 was granted to Mines Administration Pty Ltd and Teton Exploration Drilling Company Pty Ltd on 27th August 1979 for a one year period which was subsequently extended until 26.8.81.

The original tenement covered an area of 161 kms^2 which has been included within a new licence application currently before the South Australian Department of Mines and Energy.

Recently Teton Exploration Drilling Company Pty Ltd of the USA has formed with North Kalgurli Mines NL, Teton Australia Pty Ltd on an equal share basis to which all operation of Teton Exploration Company Pty Ltd in Australia has been assigned.

During the period assessment of the M9 magnetic anomalies has been completed and a decision to proceed with a diamond drill hole at 139° 56' E 31° 45' S down to a depth of 600 m made to test the western part of the anomaly.

Juett Consolidated Pty Ltd has been contracted to install a cased pre collar and Action Core Drillers Pty Ltd for diamond drilling.

Approval for a Frome Embayment landsat photo linear study by Robertson Research Pty Ltd was also granted.

An expenditure of $ 6,817 was incurred during the period. Details are provided in the enclosed statement.

J L CURTIS
SNR GEOLOGIST SA
MINES ADMINISTRATION PTY LIMITED

BRISBANE.

28th October, 1981.

MINES ADMINISTRATION PTY LIMITED

STATEMENT OF EXPENDITURE

EL 523 TELECHIE

QUARTER YEAR ENDED 26.8.81

REF: AC/MDE

GEOPHYSICAL & GEOLOGICAL COSTS	$	$
Salaries & Wages	5,552	
Consultants Fees	833	
Drafting Supplies, etc.	25	6,410
LOGISTICS		
Travel & Accommodation	366	
Communications	3	
Freight	8	
Equipment Hire	30	407
		6,817

G.T. Hall,
Accountant.

000057

TERMINAL REPORTS

EXPLORATION LICENCES EL 522 ETHELMERE

EL 523 TELECHIE

EL 614 LAKE NAMBA

Exploration Licences EL 522 and 523 expired on the 26.8.81 and Exploration Licence EL 614 was surrendered conditionally on the 26.10.81 when EL 911 Billeroo Creek was granted. EL 911 encloses all the above areas, which were formerly held by Mines Administration Pty Limited and Teton Exploration and Drilling Company Pty Limited. The new licence has been granted in the names of Mines Administration Pty Limited and Teton Australia Pty Limited. Teton Australia Pty Limited now wholly owns the former assets of Teton Exploration and Drilling Company Pty Limited within Australia.

During the relevant reporting periods work has continued on evaluating deep basement targets.

Preparation for drilling at anomaly M10 (formerly EL 614) have been advanced by grading an access track to the drill collar and the water supply.

Evaluation of drill hole ETM5A-1 (formerly EL 522) continued with the completion of specific gravity measurements of core samples.

A pre collar at anomaly M9 (formerly EL 523) was established to a depth of 135m. The collar was steel cased to 127m and intersected a typical Tertiary sequence with slightly oxidized basal sands between 96 and 122m.

The pre collar was drilled by Juett Consolidated Pty Ltd of Underdale and the diamond drilling has been contracted to Action Core Drillers Pty Ltd of Parkside. Diamond drilling will commence in early November.

Water for drilling will be drawn from close by at Telechie Main Dam.

Expenditure for this interim period for all the areas amounted to $15,621, the bulk of which $13,097 being in respect of the pre collars at M9, M10 and additional geophysical assessment of anomaly M9. Expenditure statements for all the areas are enclosed with a summary sheet.

JL CURTIS
SNR GEOLOGIST SA
FOR MINES ADMINISTRATION PTY LIMITED