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EL 650 AND EL 1044

MUTOOROO

PROGRESS REPORTS FOR THE PERIOD 19/4/80 TO 3/10/86

Submitted by

Mines Exploration Pty Ltd and Noranda Australia Ltd
1987

Enquiries: Customer Services
Ground Floor
101 Grenfell Street, Adelaide 5000

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

PRIMARY INDUSTRIES AND RESOURCES SA

CONTENTS ENVELOPE 3872

Transparencies in Cylinder 3872.

WESTERN MINING CORPORATION LIMITED
EXPLORATION DIVISION — ADELAIDE BASE

003

Telephone: 276 9199
P.O. Box 57, St. Marys, S.A. 5042
Corner Fitzgerald Rd. & Forbes St.,
Pasadena, South Australia, 5042

5/80 BDK:SKW
18th September, 1980.

The Director General,
Department of Mines and Energy,
P.O. Box 151,
EASTWOOD. S.A. 5063

Dear Sir,

EXPLORATION LICENCE NO. 650 - MUTOOROO

QUARTERLY REPORT FOR PERIOD ENDED 19th SEPTEMBER, 1980

Similar to other exploration licences held by M.E.P.L., Mutooroo has been reviewed only at a preliminary level following the W.M.C. takeover.

After a more thorough evaluation of the voluminous data available and a field inspection, it will be possible to make recommendations on any potential the area holds for further exploration.

Yours faithfully,

B.D. KAY
OFFICER IN CHARGE, S.A.

c.c. J.H. Lalor
F.B. Taylor

RECEIVED
19 SEP 1980
DEPT. OF MINES
AND ENERGY
SECURITY

WESTERN MINING CORPORATION LIMITED
EXPLORATION DIVISION — S.A. EXPLORATION
P.O. BOX 57, ST. MARYS, S. AUST. 5042
FITZGERALD ROAD, PASADENA,
SOUTH AUSTRALIA 5042
TELEPHONE: (08) 276 9199

004

33/80. BDK:SKW
18th December, 1980.

The Director-General,
Department of Mines and Energy,
P.O. Box 151,
EASTWOOD, S.A. 5063

Dear Sir,

EXPLORATION LICENCE No. 650 - MUTOOROO

QUARTERLY REPORT FOR PERIOD ENDED 19TH DECEMBER, 1980

Work during the quarter was limited to a brief inspection of the voluminous data available on the area, and a short visit to the area while on the way to Broken Hill. Expenditure incurred is therefore only minor.

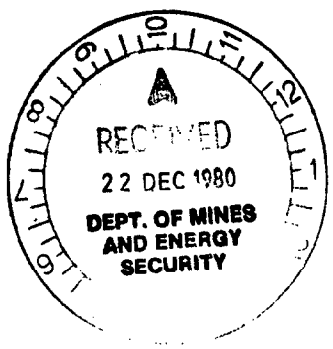
Salaries/Wages	$ 836.00
Administration	1106.00
	$1942.00

Because of commitments in other areas, little work is envisaged in the area in the coming 3 months.

Yours faithfully,

B.D. Kay
Officer in Charge - S.A.

c.c. J.H. Lalor
F.B. Taylor
File



MINES EXPLORATION PROPRIETARY LIMITED

EXPLORATION LICENCE NO. 650

MUTOOROO

REPORT FOR QUARTER ENDED 19TH MARCH, 1981

AUTHOR: MR. B. D. KAY

CONTENTS

1. INTRODUCTION

This report summarises the activities carried in relation to this licensed area for the three months ended 19th March, 1981.

2. WORK CARRIED OUT

No activity fieldwork was carried out. However following the acquisition of in excess of 80% of BH South Limited (of which Mines Exploration Pty. Limited is a wholly-owned subsidiary) a commencement was made to re-assess the feasibility study which had been lodged following the request by the Department in August 1975.

3. CONTINUATION

Re-assessment of the feasibility study will continue.

4. EXPENDITURES

The expenditures recorded for the three months and the term of this Licence are:-

	QUARTER		TOTAL TO DATE	
	$	%	$	%
Salaries & Wages	506	48.3	3,738	40.2
Leasing	-	-	25	0.3
Administration	541	51.7	5,537	59.5
	1,047	100.0	9,300	100.0

The total amount expended for this area is of the order of $629,222.

MINES EXPLORATION PROPRIETARY LIMITED

EXPLORATION LICENCE NO. 650

MUTOOROO

REPORT FOR QUARTER ENDED 19TH JUNE, 1981

AUTHOR: MR. B. KAY

CONTENTS

1. INTRODUCTION

This report summarises the activities carried out in relation to this licensed area for the three months ended 19th June, 1981.

2. WORK CARRIED OUT

Re-assessment of the feasibility study which had been lodged, following the request by the Department in August, 1975, continued.

3. CONTINUATION

Re-assessment of the feasibility study will continue.

4. EXPENDITURES

The expenditures recorded for the three months and the term of this Licence are:-

	QUARTER		TOTAL TO DATE	
	$	%	$	%
Salaries & Wages	-	-	3,738	37.5
Leasing	642	96.3	667	6.7
Administration	25	3.7	5,562	55.8
	667	100.0	9,967	100.0

The total amount expended for this area is of the order of $629,889.

MINES EXPLORATION PROPRIETARY LIMITED

EXPLORATION LICENCE NO. 650

MUTOOROO

REPORT FOR QUARTER ENDED 19TH SEPTEMBER, 1981

AUTHOR: MR. B. KAY

CONTENTS

1. INTRODUCTION

This report summarises the activities carried out in relation to this licensed area for the three months ended 19th September, 1981.

2. WORK CARRIED OUT

Re-assessment of the feasibility study which had been lodged, following the request by the Department in August, 1975, continued. Some delay occurred because of misplacement of the drilllogs required for the re-assessment.

3. CONTINUATION

Re-assessment of the feasibility study will continue.

4. EXPENDITURES

The expenditures recorded for the three months and the term of this Licence are:-

	Quarter		Total to Date	
	$	%	$	%
Salaries & Wages	348	51.0	4,086	38.4
Leasing	-	-	667	6.3
Administration	334	49.0	5,896	55.3
	682	100.0	10,649	100.0

The total amount expended for this area is of the order of $630,571.

MINES EXPLORATION PROPRIETARY LIMITED
(Incorporated in the State of Victoria)

EXPLORATION LICENCE No. 650

MUTOOROO

REPORT FOR QUARTER ENDED 19TH DECEMBER, 1981

by

B.D. KAY

February, 1982

CONTENTS

1. INTRODUCTION

This report summarizes the activities carried out in relation to this licensed area for the three months to 19th December, 1981.

2. WORK CARRIED OUT

Preliminary results of the reassessment of the 1975 feasibility study indicate that the deposit is unlikely to be economic under current costs and metal prices, and the ore reserve would need to be at least doubled to be economically viable. With this is mind, a small geophysical programme has been planned.

3. FUTURE PROGRAMME

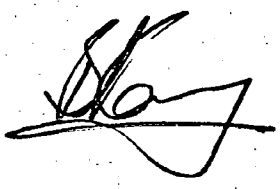
Sirotem traversing will be carried out throughout the exploration licence in early March to define any areas which may have potential for base metal sulphides. These traverses will be approximately east west with a spacing of 2,000 feet, and have been designed to cover favourable stratigraphy, magnetic anomalies, I.P. anomalies or geochemical anomalies from previous exploration in the area.

4. EXPENDITURE

The expenditures recorded for the three months and the term of this licence are:-

	Quarter		Total to Date	
	$	%	$	%
Salaries and Wages	173	34.9	4,259	38.3
Leasing	6	1.3	673	6.0
Stores Services	16	3.2	16	0.1
Administration	300	60.6	6,196	55.6
	495	100.0	11,144	100.0

The total amount expended for this area is of the order of $631,066.



B.D. KAY

MINES EXPLORATION PROPRIETARY LIMITED
(Incorporated in the State of Victoria)

EXPLORATION LICENCE No. 650

MUTOOROO

REPORT FOR QUARTER ENDED 19TH MARCH, 1982

by

B.D. KAY

April, 1982

CONTENTS

018

LIST OF PLANS

1. INTRODUCTION

This report summarizes the activities carried out within E.L. 650 for the three months to 19th March, 1982.

2. WORK CARRIED OUT

Previous geological and geophysical data was assessed in order to plan a Sirotem survey to cover the total exploration licence, and approximately 35 line kms of Sirotem traversing were carried out. Evaluation of these data is in progress.

3. GROUND GEOPHYSICS

Test programmes were initially carried out using Sirotem over the Mutooroo copper-pyrrhotite deposit and as expected the response was strong. Considerable exploration has been carried out in the licence area in the past twenty years and the locations of some of these surveys are shown on Plan 2344-11. Because of the high pyrrhotite content of the Mutooroo deposit, ground magnetic data were also inspected (Plan 2344-40) in order to plan the positions of the Sirotem traverses.

Eleven traverses of Sirotem running approximately east west were completed (location on Plan 2344-11) using a loop of wire 600 feet square, and these results have been plotted in a preliminary form using a 5.8 m sec delay time (Channel 10). A strong response of 218 μv/A is seen over the Mutooroo copper deposit at this delay time (Plan 2344-07) and lesser responses are present in the north west of the exploration licence and just to the north east of the Mutooroo copper deposit. Follow up Sirotem using a smaller loop size (300 ft) was carried out over these anomalies but generally seems to have been ineffective.

4. FUTURE PROGRAMME

Further assessment of the data is necessary to determine if the anomalies are due to overburden or bedrock conductors and if the latter is the case, a small percussion drilling programme may be necessary to eliminate the possibility of a further base metal deposit within the exploration licence.

5. EXPENDITURE

The expenditures recorded for the three month period to 30th March, 1982 are :-

	Quarter		Total to Date	
	$	%	$	%
Salaries and wages	6,611	38.9	10,870	38.6
Leasing	8	0.0	681	2.4
Stores/Services	3,025	17.8	3,041	10.8
Administration	7,356	43.3	13,552	48.2
	17,000	100.0	28,144	100.0

The total amount expended for this area is of the order of $648,066.

B.D. KAY

BROKEN HILL SOUTH LIMITED

SOUTH — NORTH — EZ — NORANDA JOINT VENTURE

GEOLOGICAL PLAN OF MUTOOROO MINE AREA SHOWING I.P. GRID

2000 0 2000 4000 6000

SCALE OF FEET

Amended 17-5-1982 G.C.H.

DATE : FEB., 1970

LEGEND

- SILLIMANITE GNEISS.
- SERICITE SCHIST.
- QUARTZITE.
- AMPHIBOLITE.
- GRANITE GNEISS.
- APLITE.
- LODE.
- POTOSI GNEISS.
- PEGMATITE.

JOINT VENTURE BOUNDARY

Original reconnaissance I.P.
Follow up I.P. (Broken Hill grid)
Follow up I.P. (Mutooroo grid)
Geochem profiles (B.H. South)
Sirotem traverse (W.M.C.)
Sirotem traverse (W.M.C.)

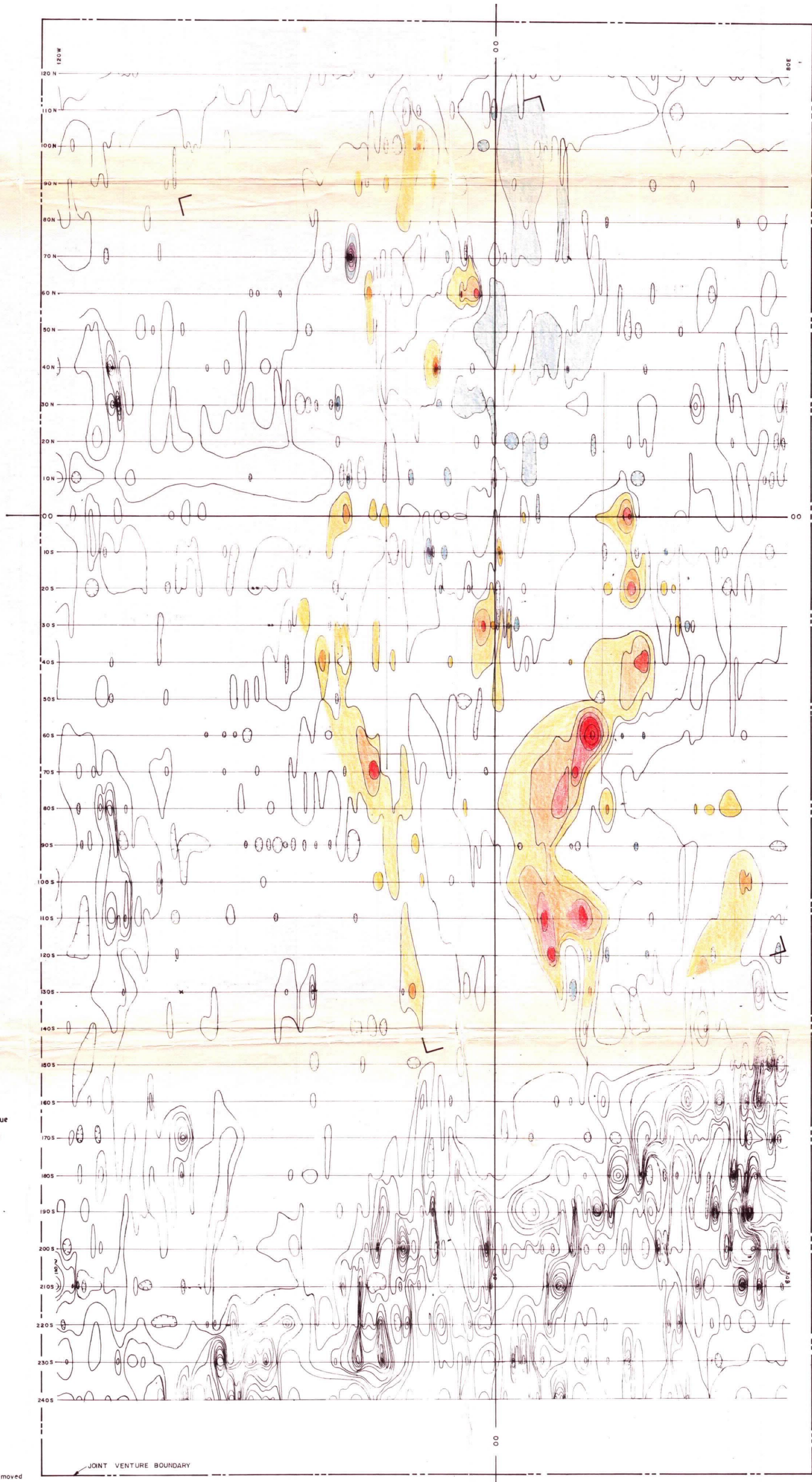
Approximate outline of Mutooroo Cu deposit

MAG. NTH.

PLAN No 2344 -11

DRAWER CLASSIFICATION: MUTOOROO MINES
PLAN No: BHR/9/36

3872-1



Regional gradient of - 2·5 γ per 100ft. in grid E direction removed

SCALE: 1 inch reps. 2000 feet.

MUTOOROO JOINT VENTURE

GROUND MAGNETIC CONTOURS

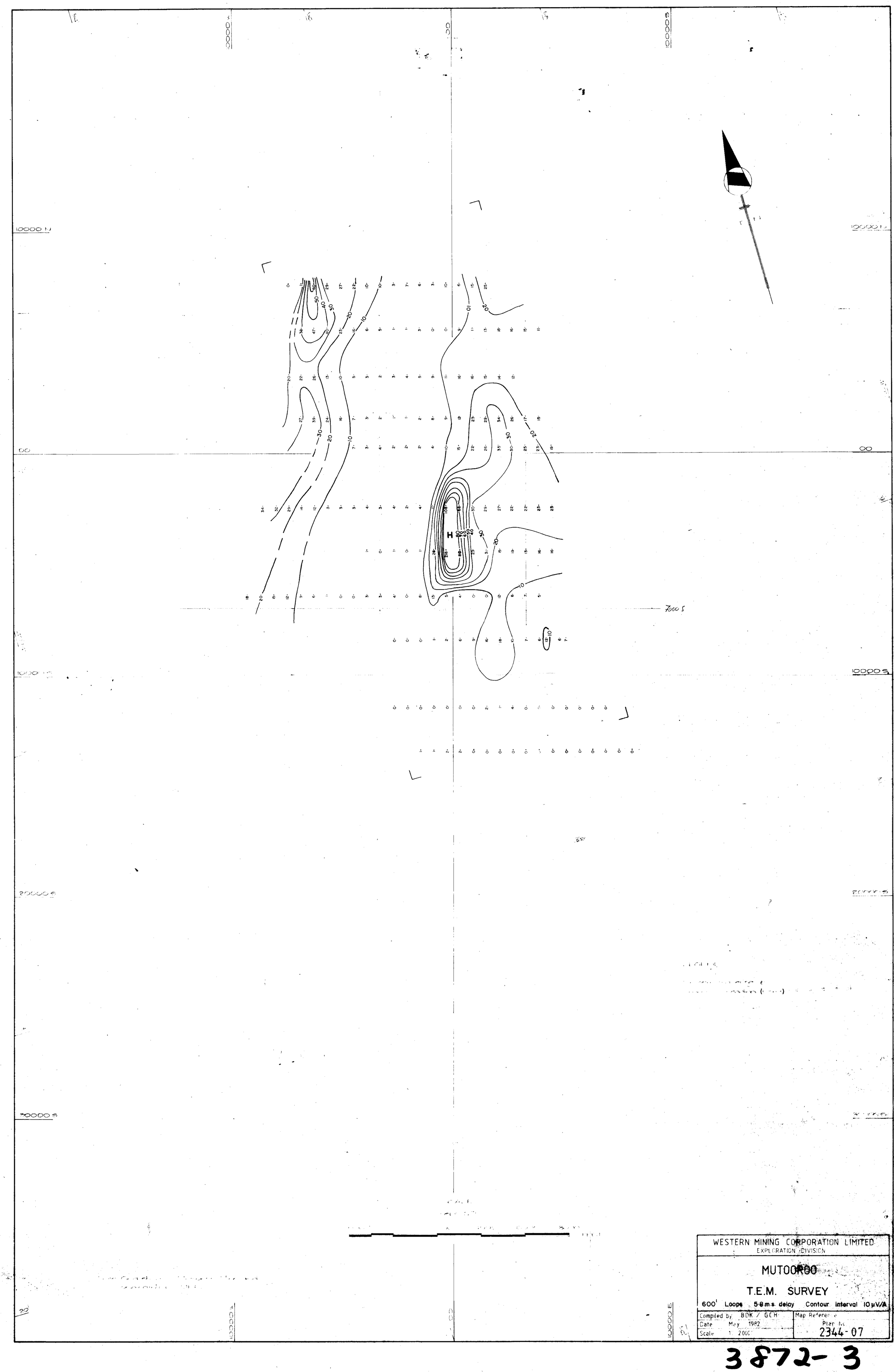
OVERLAY TO PLAN No. 41

PLAN No. 2344

40

23rd. OCT. 1971 RPT. 1971/37A

3872-2


10000N
00
10000S
Zone S
WESTERN MINING CORPORATION LIMITED
EXPLORATION DIVISION
MUTOOROO
T.E.M. SURVEY
600' Loops 5·8 m.s. delay Contour interval 10 µV/A
Compiled by BDK / GCH
Date May 1982
Scale 1 2000
Map Reference
Plan No 2344-07

3872-3

MINES EXPLORATION PROPRIETARY LIMITED
(Incorporated in the State of Victoria)

EXPLORATION LICENCE No. 650
MUTOOROO
REPORT FOR QUARTER ENDED 19th JUNE, 1982

by

B.D. KAY

August, 1982

CONTENTS

LIST OF PLANS

Plan 2344-08 Sheet 1	Mutooroo T.E.M. Survey Profile 7700N. (600' loops).
2344-08 Sheet 2	Mutooroo T.E.M. Survey Profile 1700N. 600' loops (Western End).
2344-08 Sheet 3	Mutooroo T.E.M. Survey Profile 1700N. 600' loops (Eastern End).
2344-08 Sheet 4	Mutooroo T.E.M. Survey Profile 1850N. 300' loops (Eastern End).
2344-08 Sheet 5	Mutooroo T.E.M. Survey Profile 1850N. 300' loops (Western End) - Early Delay Times.
2344-08 Sheet 6	Mutooroo T.E.M. Survey Profile 1850N. 300' loops (Western End) - Later Delay Times.
2344-08 Sheet 7	Mutooroo T.E.M. Survey Profile 7850N. 300' loops.

1. INTRODUCTION

This report summarizes exploration activity for the final three months of Exploration Licence 650 to 19th June, 1982.

2. SUMMARY OF ACTIVITY

Data from the detailed follow-up Sirotem surveys using 300 ft loops were assessed but anomalies other than the one over the Mutooroo copper deposit appear to be only of marginal interest, and no decision has yet been made to test these anomalies by percussion drilling.

3. GROUND GEOPHYSICS

Between the 21st February and 9th March, 1982, there were 198 six hundred feet loops of reconnaissance Sirotem and 46 three hundred feet loops of follow-up detailed Sirotem read within Exploration Licence 650. These reconnaissance traverses were approximately east west with a 2000 ft spacing between lines and the Mutooroo mine imperial grid was used to enable easy comparison with old data. Responses at 5.8 m sec (Channel 10) for these eleven traverses have been supplied in the previous quarterly report on E.L.650 (Plan 2344-07) and show several possibly anomalous areas which are listed in Table 1.

Table 1

Anomaly Co-ordinate	Response at the 5.8 m.s. delay on 600 ft loops	Time Constant (τ)	W.M.C. Interpretation of the decay
4300 S/300 W (Mutooroo Copper Deposit)	218	5 +	Buried halfspace conductor within 75-100 m of surface.
7700 N/6300 W	60	3	Over 100 m of conductive overburden or a thin conductive layer at about 50 m.
1700 N/6300 W	39	2½	About 100 m of conductive overburden or a thin conductive layer at about 50 m.
1700 N/2100 E	34	2½	Nearly 150 m of conductive overburden or a thin conductive layer at about 75 m.
4300 S/4500 E	16	2	Approximately 50 m of conductive overburden or a thin conductive layer at about 30 m.
8300 S/2100 E	18	2	Nearly 150 m of conductive overburden or a thin conductive layer at about 60-70 m.

.../2

The two lines (i.e. L 2000 S and L 4000 S) which cross the Mutooroo deposit at 300 W clearly give a strong anomalous response of over 200 μV/A within a background of 1 - 3 μV/A for a 5.8 m.s. delay, and although there is some conductive cover, there is little doubt that this anomaly is due to a good buried conductor. As is apparent from Table 1, the sources of the other anomalies in the area are much more difficult to estimate. In order to resolve these anomalies, detailed follow-up Sirotem using 300 ft overlapping loops was read over the anomalies to the northeast and northwest of the Mutooroo deposit. (7700 N/6300 W; 1700 N/6300 W; 1700 N/2100 E).

Only weak responses were seen over the three anomalies and it is uncertain whether the responses are due to conductive overburden or a thin conductive layer at shallow depth. Profiles for these anomalies for both 600 ft and 300 ft loops are shown on Plans 2344-08 Sheets 1 to 7.

4. FUTURE PROGRAMME

Sirotem traversing has been very effective in defining the Mutooroo copper deposit and has also defined other weak anomalies to the northwest and northeast. Because of the weak response of these anomalies and the general difficulties within the mining industry, some partners are reluctant to support a small percussion drilling programme to test these anomalies, and this programme has therefore been deferred until the matters have been resolved.

5. EXPENDITURE

The expenditures recorded for the three month period to 22nd June, 1982 are:-

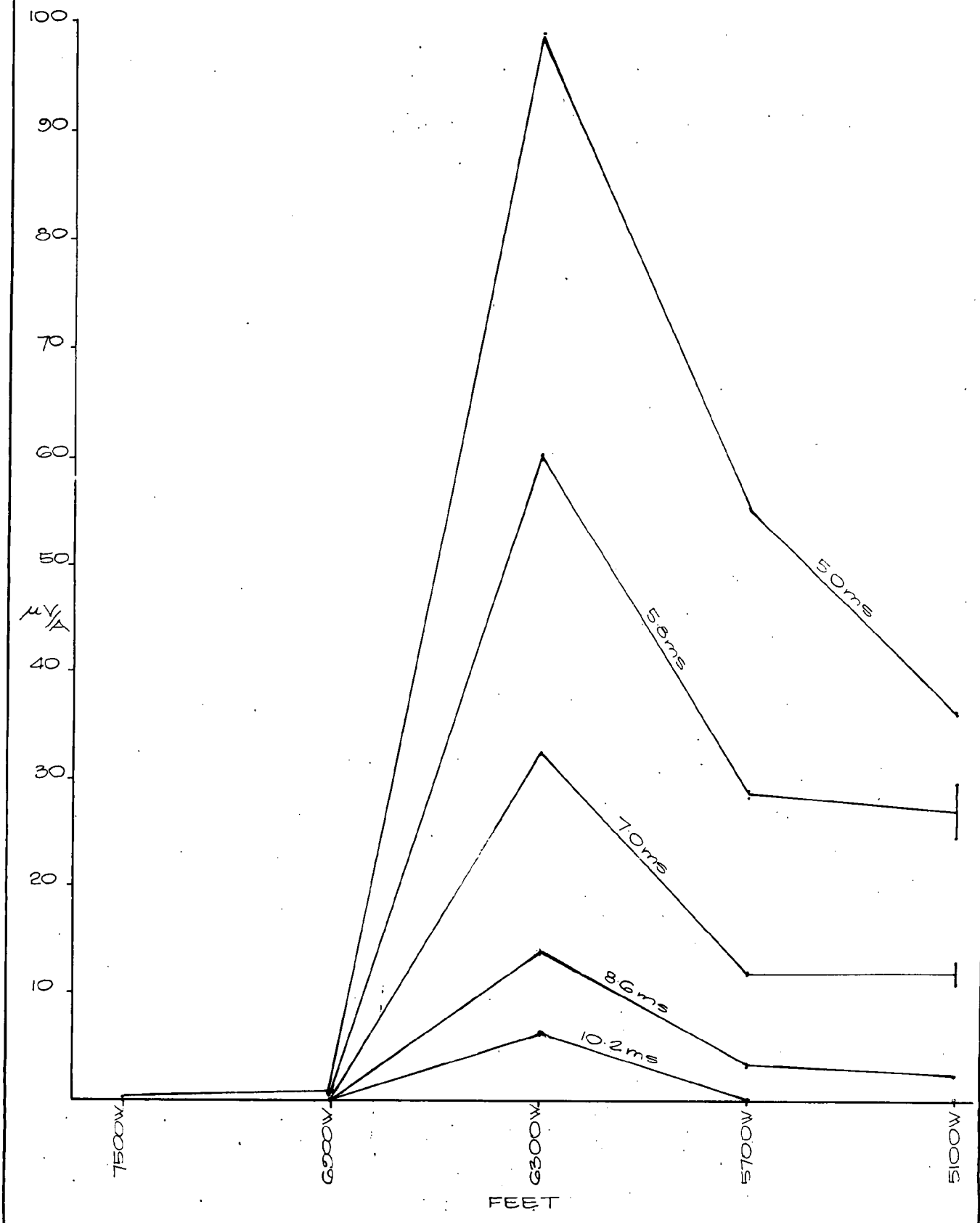
	Quarter		Total to Date	
	$	%	$	%
Salaries and Wages	1,994	22.5	12,864	34.8
Leasing	70	0.8	751	2.0
Stores/Services	4,285	48.4	7,326	19.8
Administration	2,504	28.3	16,056	43.4
	8,853	100.0	36,997	100.0

The total amount expended for this area is of the order of $656,919.

B.D. KAY

MUTOOROO
T.E.M. SURVEY
PROFILE 7700N

600' LOOPS
H.S. 1cm. reps. 150'



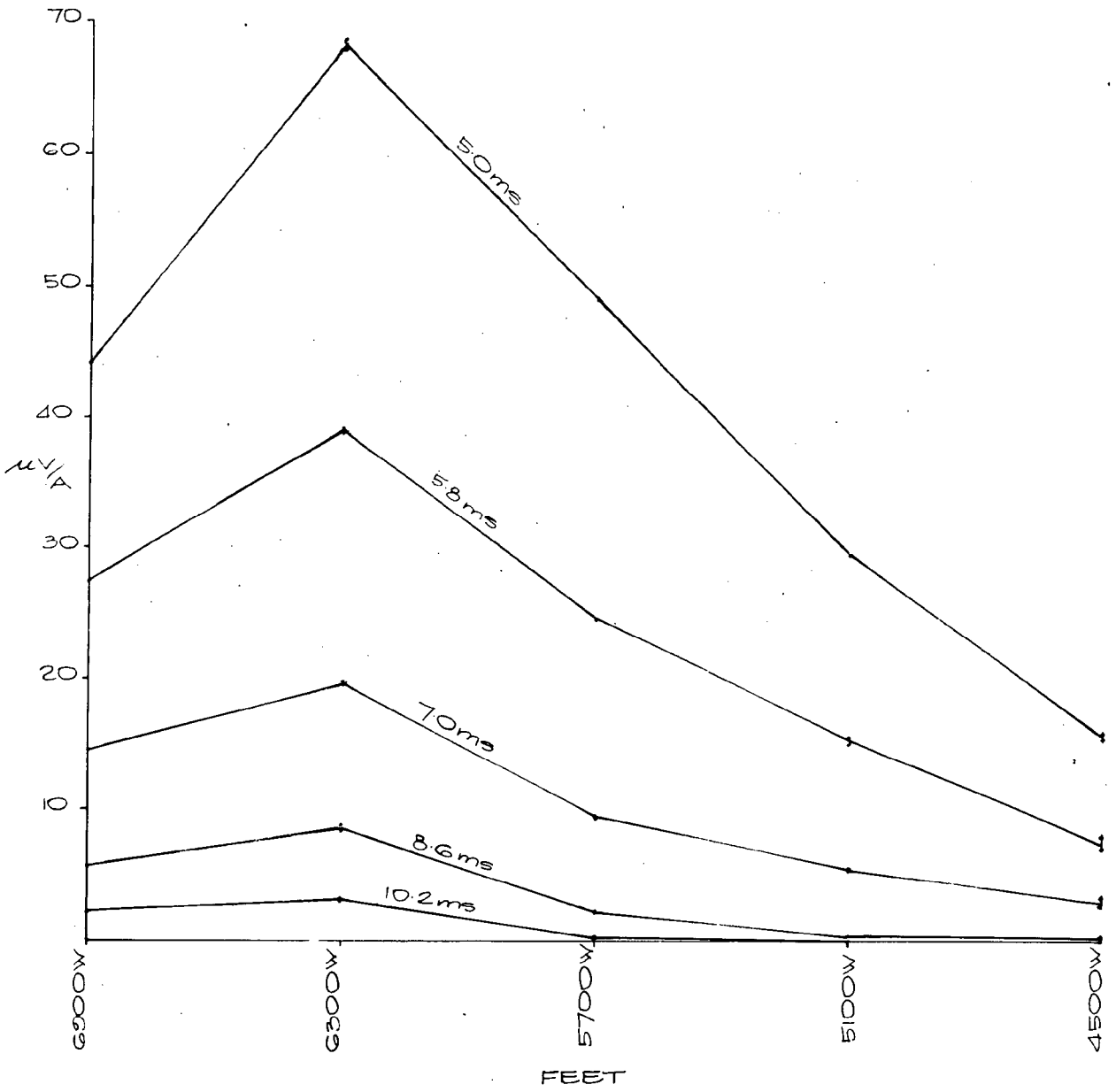
Date 22-7-82
Sheet 1 of 7
Plan No. 2344-08

Mines Exploration Proprietary Limited. Joint Venture

MUTOOROO
T.E.M. SURVEY
PROFILE 1700 N

600' LOOPS

HS. 1cm. reps. 150'



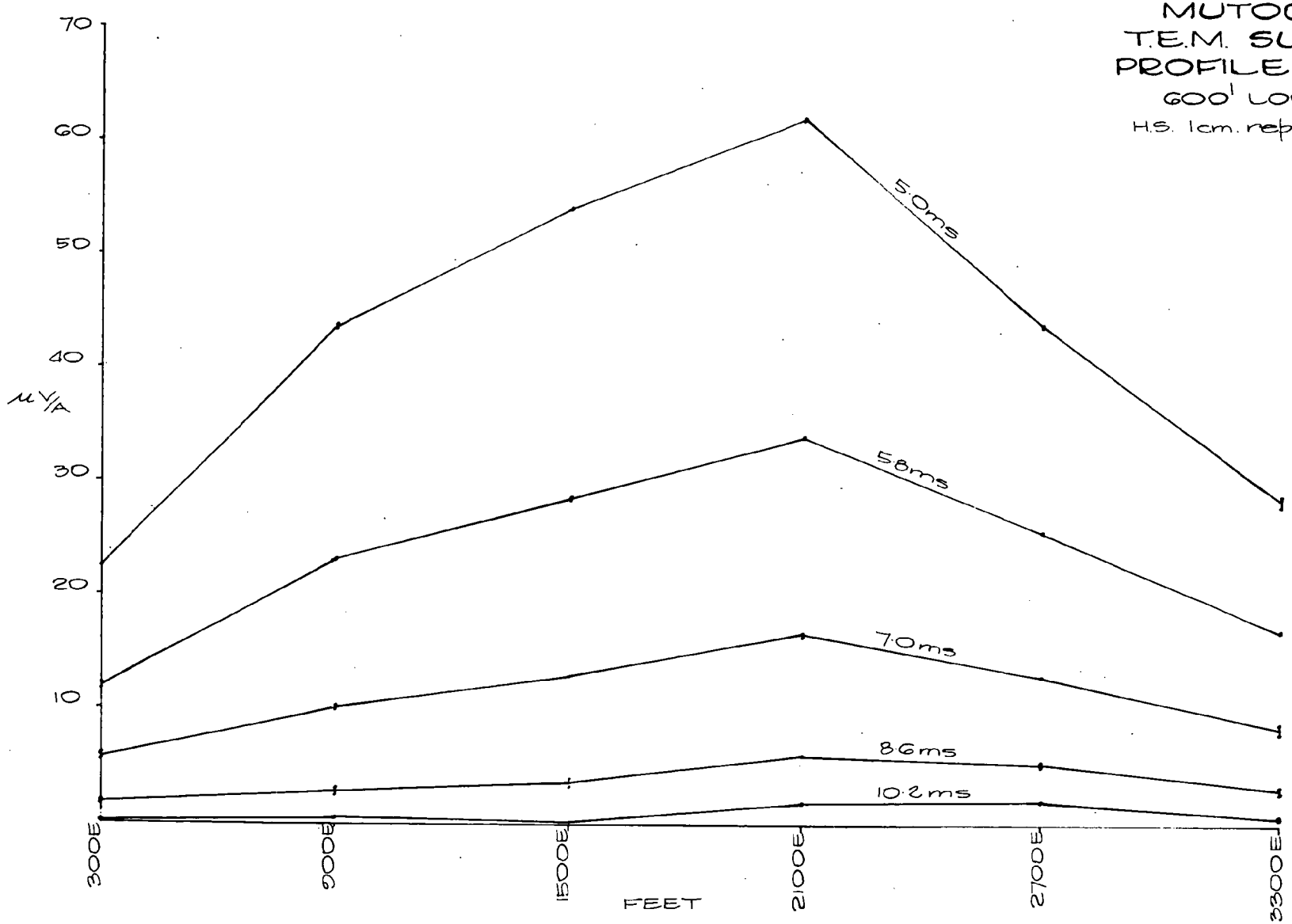
Date 22-7-82
Sheet 2 of 7
Plan No. 2344-08

Mines Exploration Proprietary Limited. Joint Venture

MUTOOROO
T.E.M. SURVEY
PROFILE 1700 N

600' LOOPS

H.S. 1cm. reps. 150'



027

Mines Exploration Proprietary Limited. Joint Venture

Date 22-7-82

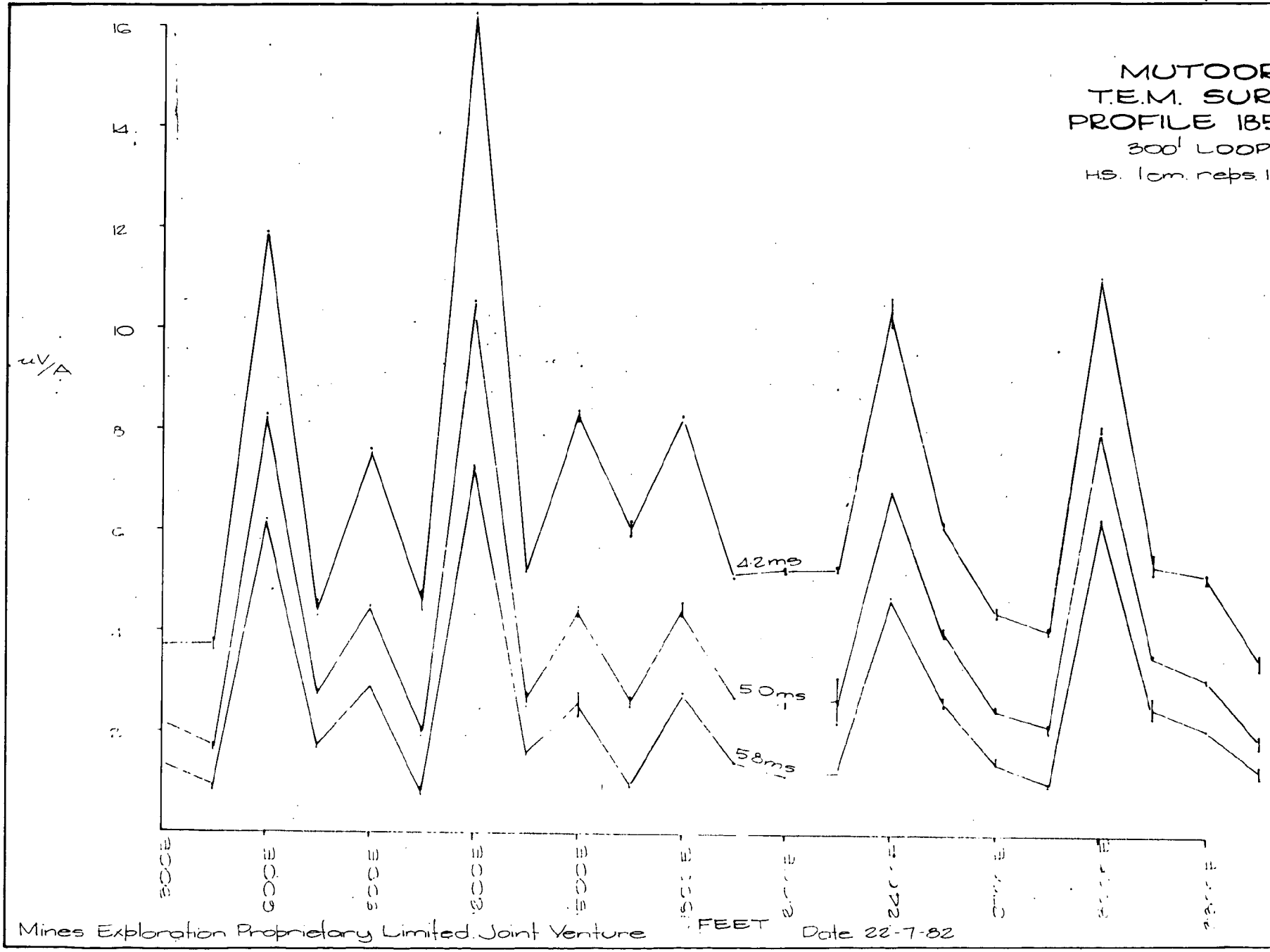
Sheet 3 of 7

Plan No. 2344-08

MUTOOROO
T.E.M. SURVEY
PROFILE 1850 N

300' LOOPS

H.S. 1cm. reps. 150'



028

Mines Exploration Proprietary Limited Joint Venture

Date 22-7-82

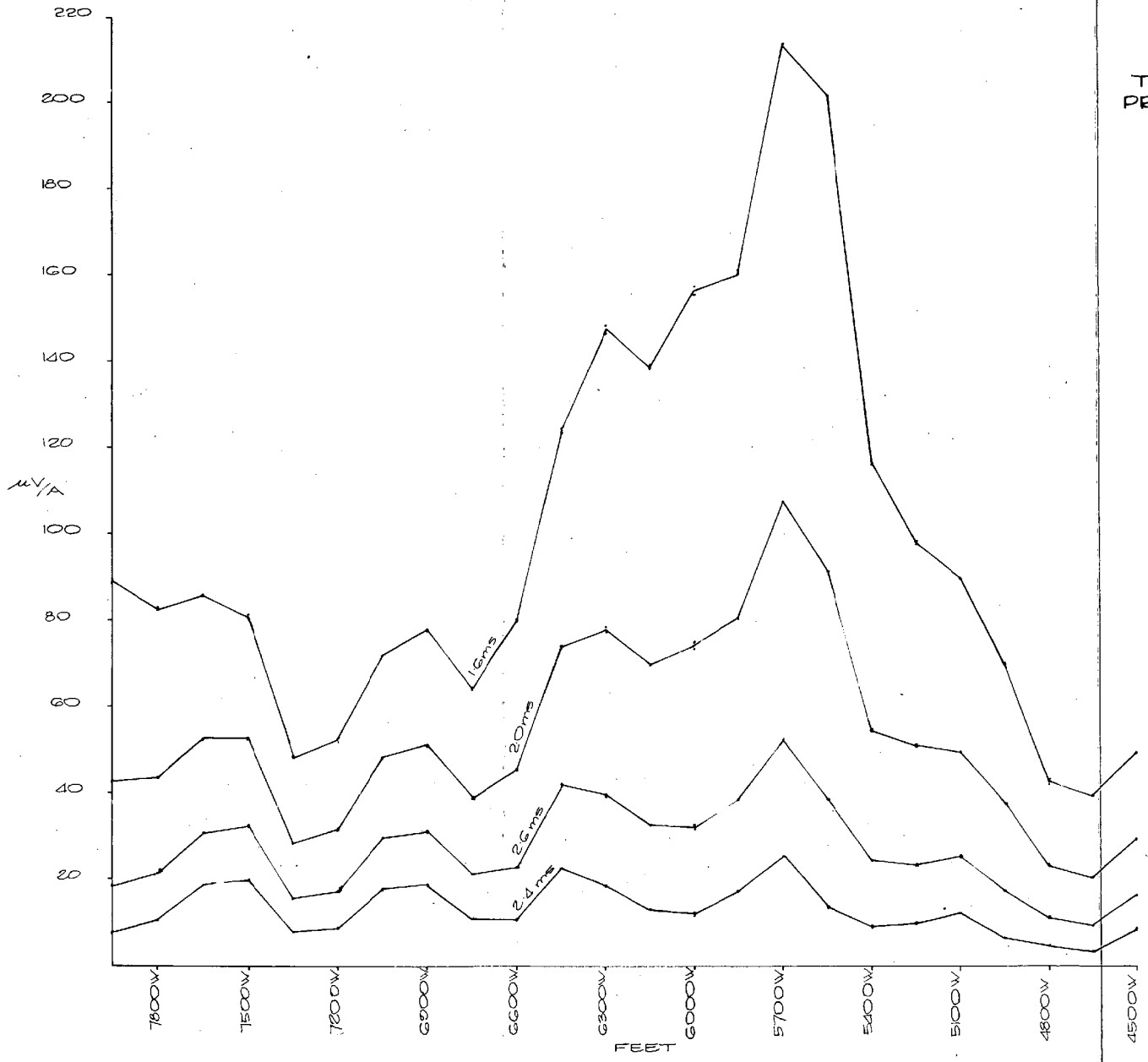
Sheet 4 of 7

Plan No. 2344-08

029

MUTOOROO
T.E.M. SURVEY
PROFILE 1850 N

300' LOOPS
HS. 1cm. reps 150'



Mines Exploration Proprietary Limited. Joint Venture

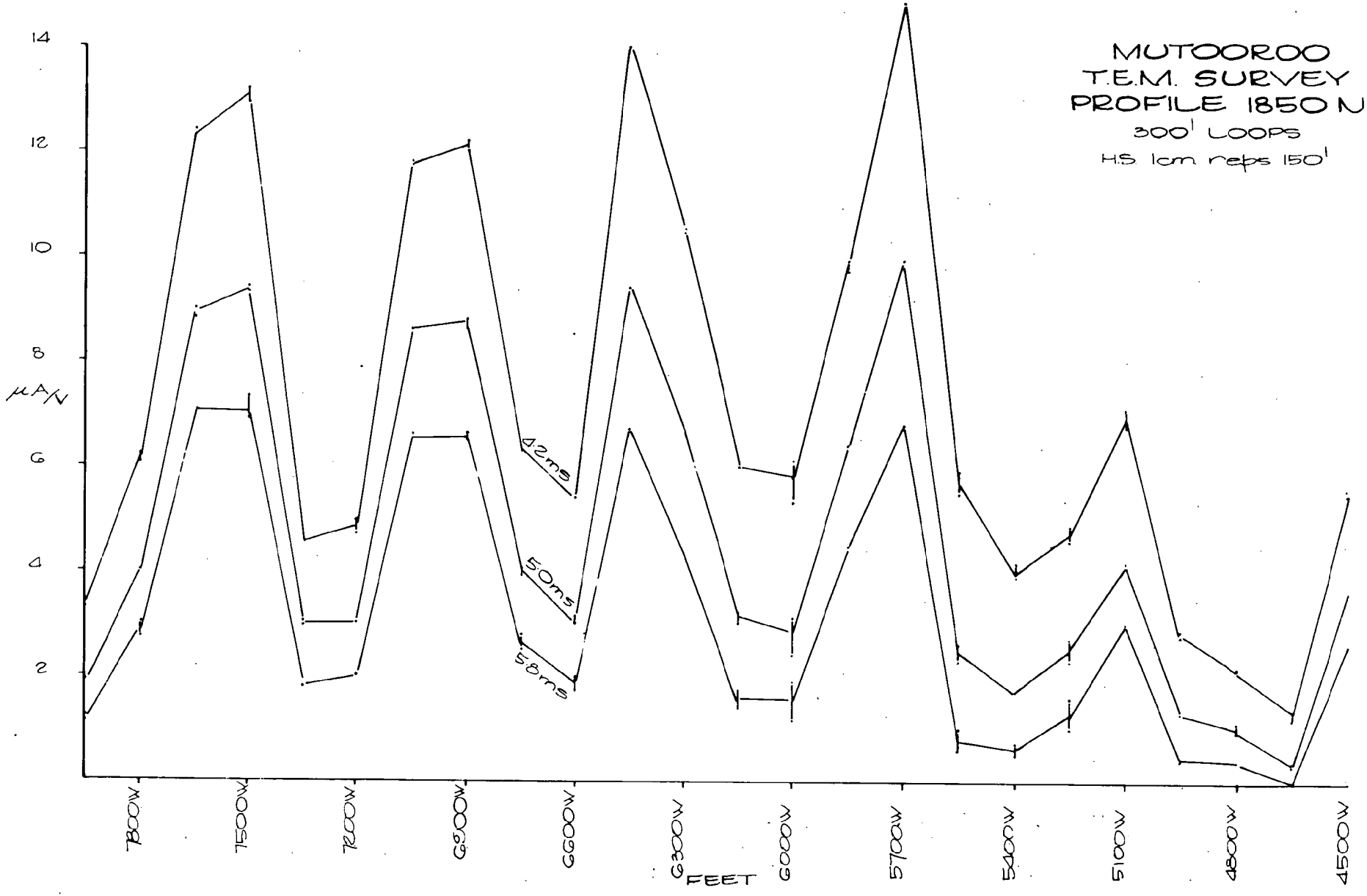
Date 22-7-82

Sheet 5 of 7
Plan No 2344-08

MUTOOROO
T.E.M. SURVEY
PROFILE 1850 N

300' LOOPS

H.S. 1cm reps 150'



030

Mines Exploration Proprietary Limited. Joint Venture

Date 22-7-82

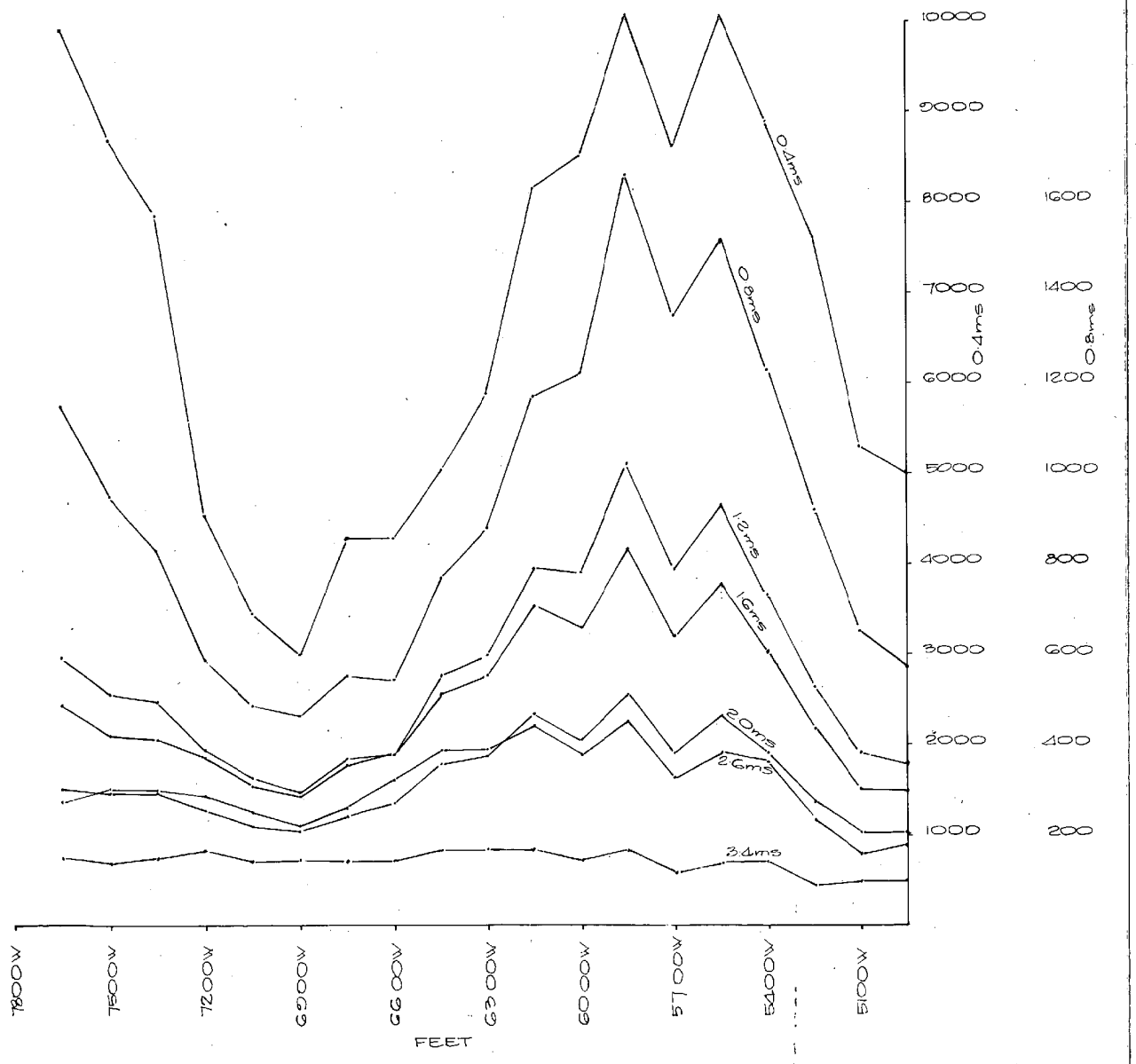
Sheet 6 of 7

Plan No 2344-08

031

MUTOOROO
T.E.M. SURVEY
PROFILE 7850N

300' LOOPS
HS. 1cm. reps 150'



Mines Exploration Proprietary Limited Joint Venture

Date 22-7-82

Sheet 7 of 7
Plan No. 2344-08

MINES EXPLORATION PROPRIETARY LIMITED

(Incorporated in the State of Victoria)

EXPLORATION LICENCE NO. 1044
MUTOOROO
FIRST QUARTERLY REPORT TO 4TH JANUARY, 1983

by

B.D. KAY

February, 1983.

CONTENTS

1. INTRODUCTION

This is the first quarterly report for Exploration Licence 1044, and covers exploration activity from the expiry of E.L. 650 on 19th June, 1982, to the 4th January, 1983.

The area is held as a joint venture with Noranda Australia Limited, North Broken Hill Limited, and Electrolytic Zinc Co. of Australasia Limted.

2. SUMMARY OF ACTIVITY

Following the evaluation of the T.E.M. data, a proposal to carry out a small percussion drill programme was submitted to the joint venture partners, such proposal being discussed at a joint venture meeting held in Melbourne in July, 1982. For the reasons set out in our previous report some of the participants were reluctant to support the drilling programme and lengthy discussion ensued at the meeting and subsequently with resolution now obtained by agreement for the programme to proceed to be funded by BH South Limited and Noranda Australia Limited.

Drilling will commence in the near future.

3. EXPENDITURE

Expenditures for the licence area for the period from 22nd June, 1982 (Expiry date of E.L. 650) to the 4th January, 1983 are:-

	Period to 4-1-83	
	$	**%**
Salaries and Wages		
Geological	1,122	15.9
Geophysical	1,278	18.1
Drafting	196	2.8
Leasing	36	0.5
Stores/Services	398	5.6
Administration	4,028	57.1
	$7,058	100.0

The total amount expended for this area is of the order of $663,977.

MINES EXPLORATION PROPRIETARY LIMITED
(Incorporated in the State of Victoria)

SECOND QUARTERLY REPORT TO 4th APRIL, 1983.
FOR
EXPLORATION LICENCE No. 1044 (MUTOOROO)

by

B.D. KAY

MAY, 1983.

CONTENTS

1. INTRODUCTION

This is the second quarterly report for the Exploration Licence, 1044, (Mutooroo), for the three months period to 4th April, 1983.

The area is held as a joint venture with Noranda Australia Limited, North Broken Hill Limited, and Electrolytic Zinc Co. of Australasia Limited.

2. SUMMARY OF ACTIVITY

Because it is likely that an application will be lodged for a retention lease over the Mutooroo copper deposit, some preliminary drafting was undertaken in readiness for the pegging of the mineral claims.

No decision has yet been made concerning the proposed percussion drill programme due to higher priorities elsewhere and disagreement among joint venture partners.

No field work was carried out in the licence area during the period.

3. EXPENDITURE

Expenditure for exploration licence 1044 for the three months to 29th March, 1983, is summarized below.

	3 months to 29-3-83		Cumulative to 29-3-83	
	$	%	$	%
Salaries and Wages				
Geological	120	8.1	1,242	14.6
Geophysical	-	-	1,278	15.0
Drafting	362	24.6	558	6.5
Leasing	-	-	36	0.4
Stores/Services	-	-	398	4.7
Administration	990	67.3	5,018	58.8
	$ 1,472	100.0	$ 8,530	100.0

The total amount expended for this area is approximately $665,449.

B.D. KAY

MINES EXPLORATION PROPRIETARY LIMITED

(Incorporated in the State of Victoria)

THIRD QUARTERLY REPORT TO 4th JULY, 1983

FOR

EXPLORATION LICENCE NO. 1044 (MUTOOROO)

by

B. D. KAY.

AUGUST, 1983.

CONTENTS

1. INTRODUCTION

This is the third quarterly report for the Exploration Licence 1044 (Mutooroo), for the three month period to 4th July, 1983.

The area is held as a joint venture with Noranda Australia Limited, North Broken Hill Limited and Electrolytic Zinc Co. of Australasia Limited.

2. SUMMARY OF ACTIVITY

No active exploration was carried out in the licence area during the quarter and all expenditures recorded are for administrative running of the joint venture.

Negotiations are in progress in an attempt to resolve the question of management of the joint venture, and when agreement is reached, it will be possible to submit applications for retention leases.

3. EXPENDITURE

Expenditure for Exploration Licence 1044 for the three months to 21st June, 1983, is summarized below.

	3 months to 21/6/83		Cumulative to 21/6/83	
	$	%	$	%
Salaries and Wages				
Geological	-	-	1242	13.9
Geophysical	-	-	1278	14.3
Drafting	-	-	558	6.3
Leasing	-	-	36	0.4
Stores/Services	-	-	398	4.4
Administration	398	100	5416	60.7
	398	100	8928	100.0

The total amount expended for this area is approximately $665,847.

B.D. KAY.

MINES EXPLORATION PROPRIETARY LIMITED

(Incorporated in the State of Victoria)

FOURTH QUARTERLY REPORT TO 4th OCTOBER, 1983 and FIFTH QUARTERLY REPORT TO 4th JANUARY, 1984.

FOR

EXPLORATION LICENCE NO. 1044 (MUTOOROO)

by

B.D. KAY

JANUARY, 1984.

CONTENTS

1. INTRODUCTION

This is a combined fourth and fifth quarterly report for the Exploration Licence 1044 (Mutooroo), and covers exploration activity for the licence for the six month period to 4th January, 1984.

The area is held under joint venture with Noranda Australia Limited, North Broken Hill Limited and Electrolytic Zinc Co. of Australasia Limited.

2. SUMMARY OF ACTIVITY

Further discussions have been held with Noranda Australia Limited about a possible change in management of the joint venture, but no agreement has yet been reached.

Because of this, and the non-contributing status of two partners, no exploration has been carried out in the licence area during the six month period.

3. EXPENDITURE

Expenditure for Exploration Licence 1044 for the six months to 3rd January, 1984, is summarized below.

	6 months to 3/1/84		Cumulative to 3/1/84	
	$	%	$	%
Salaries and Wages				
Geological	-	-	1242	13.7
Geophysical	-	-	1278	14.1
Drafting	-	-	558	6.2
Leasing	-	-	36	0.4
Stores/Services	27	24.1	425	4.7
Administration	85	75.9	5501	60.9
	112	100.0	9040	100.0

The total amount expended for this area is approximately $665,959.

B.D. KAY.

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MINES EXPLORATION PROPRIETARY LIMITED

(Incorporated in the State of Victoria)

SIXTH QUARTERLY REPORT TO 4th APRIL, 1984.

FOR

EXPLORATION LICENCE NO. 1044 (MUTOOROO)

by

B. D. KAY

APRIL, 1984.

CONTENTS

1. INTRODUCTION

This is the sixth quarterly report for the Exploration Licence 1044 (Mutooroo), and covers exploration activity for the three months period to 4th April, 1984.

This area is held under joint venture with Noranda Australia Limited, North Broken Hill Limited and Electrolytic Zinc Co. of Australasia Limited.

2. SUMMARY OF ACTIVITY

Considerable progress has been made in negotiations with Noranda Australia Limited who are proposing to purchase the equity of the other partners of the joint venture. There would seem to be only minor legal problems delaying this purchase.

The only expenditure incurred in the licence area during the three month period was therefore of an administrative nature.

3. EXPENDITURE

Expenditure for Exploration Licence 1044 for the three months to 27th March, 1984, is summarized below.

	3 months to 27/3/84.		Cumulative to 27/3/84	
Salaries and Wages	$	%	$	%
Geological	-	-	1,242	13.4
Geophysical	-	-	1,278	13.8
Drafting	-	-	558	6.0
Leasing	5	2.2	41	0.4
Stores/Services	-	-	425	4.6
Administration	227	97.8	5,728	61.8
	232	100.0	9,272	100.0

The total amount expended for this area is approximately $666,191.

B.D. KAY.

MINES EXPLORATION PROPRIETARY LIMITED

(Incorporated in the State of Victoria)

SEVENTH QUARTERLY REPORT TO 4TH JULY, 1984

FOR

EXPLORATION LICENCE NO. 1044 (MUTOOROO)

by

B. J. GOSS

JULY, 1984

CONTENTS

1. INTRODUCTION

This is the seventh quarterly report for the Exploration Licence 1044 (Mutooroo), and covers exploration activity for the three month period to 4th July, 1984.

This area is held under joint venture with Noranda Australia Limited, North Broken Hill Limited and Electrolytic Zinc Co. of Australasia Limited.

2. SUMMARY OF ACTIVITY

Considerable progress has been made in negotiations with Noranda Australia Limited who are proposing to purchase the equity of the other partners of the joint venture. There are however still some legal problems delaying this purchase.

The only expenditure incurred in the licence area during the three month period was therefore of an administrative nature.

3. EXPENDITURE

Expenditure for Exploration Licence 1044 for the three months to 19th June, 1984 is summarized below.

	3 months to 19/6/84		Cumulative to 19/6/84	
Salaries and Wages	$	%	$	%
Geological	154	47.8	1,396	14.6
Geophysical	18	5.6	1,296	13.5
Drafting	34	10.6	592	6.1
Leasing	14	4.3	55	0.6
Stores/Services	-	-	425	4.4
Administration	102	31.7	5,830	60.8
	322	100.0	9,594	100.0

The total amount expended for this area is approximately $676,785.

B. J. GOSS

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EXPLORATION LICENCE NO.1044

MUTOOROO, SOUTH AUSTRALIA

1. INTRODUCTION

This is the eighth quarterly report for Exploration Licence No.1044 (Mutooroo) covering exploration activity for the three months period to 4th October, 1984.

The area is held under a joint venture arrangement with Noranda Australia Limited, Western Mining Corporation Limited, Electrolytic Zinc Company of Australasia Limited and N.B.H. Limited.

2. SUMMARY OF ACTIVITY

Negotiations were finalized and agreement reached whereby Noranda Australia Limited will become the sole beneficial holder of the Licence. The Agreement has now been signed and is being submitted for stamping and approval of the Minister.

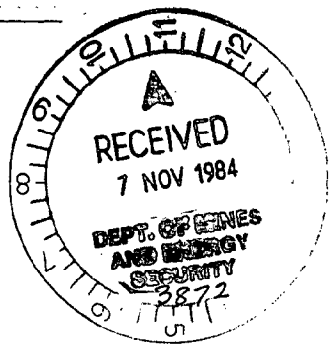
The technical staff of Noranda Australia Limited conducted a detailed appraisal of information acquired in recent years and from this have planned further exploration for the remainder of the 1984 calendar year.

A gravity survey will be conducted over parts of the Exploration Licence in conjunction with magnetic and electromagnetic surveys over certain portions of the gravity survey coverage.

3. EXPENDITURE

Expenditure for Exploration Licence No.1044 incurred by Noranda Australia Limited for the three months to 4th October, 1984, is:-

	$
Geology	800
Geophysics	2,252
Land Administration	615
Supervision	301
Total	3,968



PROJECT 318 - MUTOOROO - SOUTH AUSTRALIA

EXPLORATION LICENCE 1044

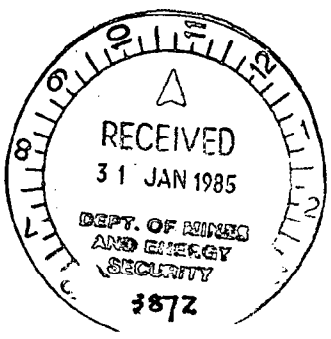
QUARTERLY REPORT FOR THE PERIOD

4th OCTOBER 1984 to 4th JANUARY, 1985

by

P.A. ZARZAVATJIAN

OLARY SI 54-02



noranda
Noranda Australia Limited

CONTENTS

1. INTRODUCTION

This is the ninth quarterly report for Exploration Licence No.1044 (Mutooroo) concerning exploration activity for the three months period to 4th January, 1985.

The work noted below is the first active exploration effort conducted by Noranda Australia Limited after it became the sole beneficial holder of the Licence in October 1984.

2. SUMMARY OF ACTIVITY

As was noted in the preceding quarterly report the proposed gravity, magnetic and electromagnetic surveys planned earlier were completed during the period covered by this report.

A description of field procedures employed for these surveys is given in this report and also a list of expenses incurred during the period. Plans illustrating the final reduced results are being drafted at present. They will be presented in the next quarterly report.

3. RATIONAL? BEHIND CURRENT EXPLORATION PROGRAMME

From the surveys conducted in the past certain areas of interest could be identified. It was decided to conduct limited amount of magnetic and gravity surveys to further investigate these areas. The field programme just completed can be regarded mainly as follow up work to acquire more detailed or new data in localities already covered by previous surveys.

One of the factors considered in the planning of the recently completed field programme was the high pyrrhotite content of the Mutooroo deposit and the probability that the magnetic anomalies recorded in early surveys over the deposit are due to this mineral. It was reasoned that the neighbouring well defined magnetic anomaly to the south-southeast of the Mutooroo Copper Deposit as recorded in a previous survey was well worth further investigation.

The sirotem survey conducted by Western Mining Corporation during February-March 1982 did not reveal the presence of any well defined anomalies associated with the magnetic anomaly in question. The survey however did record local background values (as defined by the 10 μV/A contour for the 5.8 ms delay channel) higher than the normal background for the general survey area. It was decided to cover this locality by detailed gravity and magnetic surveys to investigate the possibility of non-conductive economic sulphides being present here.

For the same reason it was also decided to extend the gravity survey to cover the main mineralized zones of Mutooroo Copper Mine.

Another interesting feature which required appraisal was the long anomalous zone recorded by the sirotem survey referred to above. This zone extends in a northeasterly direction across the northwestern part of the surveyed area. It seems this zone is most likely caused by a conductive rock type such as black pyritic shales. Nevertheless it was thought worthwhile to run a couple of gravity lines across the strongest anomalies of this zone to eliminate the possibility that it is due to massive sulphides.

4. GRIDDING

A total of 16.2 mile (26 kilometres) of gridding was completed in the vicinity of Mutooroo Copper Mine and the area east of it. All lines were surveyed by compass and tape at 400 feet intervals with pegs 200 feet apart.

The imperial system of measuring distances in feet was used for the gridding rather than the presently accepted metric system. The reason for this was to make any correlations of the recently acquired field data with the voluminous work produced over the past twenty years much easier and less subject to errors.

Likewise, it was felt that it would be more advantageous to conduct present surveys over a resurrected version of a previously established grid which appears, from available plans, to have been the basis for extensive surveys and considerable work in the past. Consequently some time was spent in the field to identify and locate the old grid. This exercise proved to be rather difficult but relatively successful. During the gridding it became apparent that there was a divergence of approximately one degree between the old and new grids.

5. GRAVITY SURVEY

5.1. Survey Specifications and Data Reduction

A total of approximately 14.4 line miles (23 line kilometres) were covered by the gravity survey. Stations were read at 200 feet intervals. A Warden pioneer gravity metre serial No. 592 was used for the survey. During the survey the instrument was returned to one of the several base stations at intervals no greater than two hours. The survey was not tied to the national gravity network.

The following corrections were applied to the gravity metre readings to obtain bouguer gravity values :

bouguer gravity = observed gravity + free air correction
- bouguer correction + latitude correction

No terrain corrections were applied.

The observed gravity value was obtained by multiplying the gravity metre reading by the instrument scale factor of 0.10392 milligals/division.

Free air correction factor used was 0.3086h milligals/metre (0.09406h milligals/foot) where h is the station height above the assumed datum.

Tne factor used for the bouguer correction was 0.04185 ρh milligals/metre (0.01277 ρh milligals/foot). For the bouguer correction four densities (ρ), 2.2, 2.4, 2.5, 2.67 grams/cc were chosen for data reduction. As appraisal of results did not indicate any noticeable variation in the relative bouguer gravity values among successive stations for the various densities used, the results of only one density (2.5 g/cc) were plotted as representative of bouguer gravity variations in the survey area.

The latitude gradient correction used was 1.18 milligals/mile.

The average instrument drift for all the loops was less then $\pm$ 0.08 milligals/hour.

An automatic level was used to measure station height variations. For the purposes of this survey an arbitrary datum of 1 000 feet (304.80 metres) was assigned to station 22S/10E. With the exception of lines 78N and 82N the bouguer gravity values were reduced to the 984 foot datum.

Lines 78N and 82N are located at a considerable distance from the major part of the gravity survey area. These lines were established to investigate a target unrelated to that covered by the main survey area. For these reasons it was not necessary to tie the gravity results of these two lines to the rest of the survey. For these two lines a local datum of 1 000 feet (304.80 metres) was assigned to station 82N/52W. Bouguer gravity values were reduced to the 977.44 foot datum.

Closure error in levelling was the order of 1 centimetre.

5.2 Presentation of Results and Interpretation

The final survey results are being drafted at present. These will be presented with the next quarterly report accompanied by a discussion on the interpretation of results.

6. MAGNETIC SURVEY

A Scintrex MP-2 proton precession magnetometer was used to survey 8.9 line miles (14.2 line kilometres) of the recently established grid at 50 feet station spacing. Sensor height

above ground was 10.13 feet. Base station was read at intervals not exceeding 1.5 hours.

Drafted plans and interpretation of results will be included in the next quarterly report.

7. ELECTROMAGNETIC SURVEY

A limited amount of electromagnetic surveying consisting of a total of 1.62 line miles (2.6 line kilometres) was conducted over selected lines. The MaxMin II system was employed for the survey. This system was used in the vertical loop mode to record the null angle of the electromagnetic field. The survey was conducted with a transmitter-receiver separation of 400 feet and a station spacing of 200 feet. The three frequencies employed for the survey were 1777 Hz, 888 Hz and 222 Hz.

The main reason for conducting such a survey was to investigate the type of responses that are obtained with a vertical loop null angle MaxMin II geometry in a Mutooroo type regolith and geological setting.

Survey results and interpretation will be presented in the next quarterly report.

8. FUTURE PROGRAMME

For proper interpretation of the recently acquired gravity and magnetic data as well as other magnetic information available from earlier surveys it would be desirable to measure densities and magnetic susceptibilities of surface rocks as well as those intersected in previously drilled diamond drill holes.

During the recent field programme several surface specimens were collected for this purpose. Diamond drill cores from selected sections of some diamond drill holes are stored at the South Australian Department of Mines Core Library in

Adelaide. Densities and magnetic susceptibilities of available specimens will be measured in the near future before definite conclusions are reached about the significance of anomalies obtained from the recently completed field surveys.

9. EXPENDITURE

Expenditure recorded for the licence area during quarter covered by the report are:-

	$
Labour	11,992
Supplies	1,961
Rentals	830
Transportation	5,586
Miscellaneous	4,108
Consulting Fees	105
Contract	679
Taxes and Fees	972
	26,233

PROJECT 318 - MUTOOROO - SOUTH AUSTRALIA

EXPLORATION LICENCE 1044

QUARTERLY REPORT FOR THE PERIOD

4th JANUARY 1984 to 4th APRIL, 1985

by

P.A.ZARZAVATJIAN

OLARY SI 54-02

noranda
Noranda Australia Limited

CONTENTS

LIST OF PLANS

	Scale	Dwg. No.
Re-gridded Area	1:24000	7133-318-10
Ground Magnetic Profiles - Lines 42S to 54S	1:2400	7133-318-1
Ground Magnetic Profiles - Lines 54S to 82S	1:2400	7133-318-2
Bouguer Gravity profiles - Lines 2S to 18S	1:2400	7133-318-3
Bouguer Gravity Profiles - Lines 22S to 38S	1:2400	7133-318-4
Bouguer Gravity Profiles - Lines 42S to 82S	1:2400	7133-318-5
Bouguer Gravity Profiles - Lines 78N and 82N	1:2400	7133-318-6
Bouguer Gravity Contours Sheet 1	1:2400	7133-318-7
Bouguer Gravity Contours Sheet 2	1:2400	7133-318-8
Electromagnetic Survey - Null Angle, Vertical Loop	1:2400	7133-318-9

1. INTRODUCTION

This is the tenth Quarterly Report for Exploration Licence No. 1044 (Mutooroo) concerning exploration activity for three months period to 4th April, 1985.

2. SUMMARY OF ACTIVITY

During the period covered by this report the following work was completed:-

1. drafting of plans illustrating results of surveys completed during the preceding Quarter.

2. density and magnetic susceptibility measurements of surface and diamond drill cores.

3. interpretation of results of surveys completed towards the end of the year 1984.

All relevant plans are presented, and the completed work discussed in this report.

3. DENSITY AND MAGNETIC SUSCEPTIBILITY MEASUREMENTS

Several days were spent at South Australia Department of Mines' Core Library in Adelaide measuring densities and magnetic susceptibilities of selected diamond drill core samples from Mutooroo. Densities of a suite of surface samples collected from certain parts of the grid were also measured. Approximately 360 density and magnetic susceptibility measurements were completed.

Facilities available at the Geophysical Laboratory were used for all the measurements. The instrument used for magnetic susceptibility measurements was a Bison Model 3101.

Although a large number of holes were drilled in the vicinity of the Mine area, choice of optimum holes for the meaurements was limited by the fact that core from only a few of these holes is stored at the Core Library.

The measurements were conducted to gain some understanding about density differences between major rock types as well as possible variations within the amphibolites which occupy a large part of the gridded area. It is expected that this information will lead to a better interpretation of the recently completed gravity survey results.

Similarly, a less critical but still a satisfactory coverage was made of major rock-type magnetic susceptibilities to help gain a better appreciation of the recently completed detailed magnetic survey as well as past surveys if, in the future, they require re-appraisal. The measurements covered selected core mostly from holes MM 10 (20S/10W), MM 11 (position could not be determined), and some from MM 3 (30S/13.5W), MM 4 (35.5S/11.5W) and MM 9 (54.9S/13.45W)

The results of density and magnetic susceptibility measurements are given in Sections 5 and 6 respectively.

4. GRIDDING.

Plan 7133-318-10 shows the gridded lines and is included in this report primarily for reference. As noted in the last Quarterly Report the present grid is actually a resurrected version of a larger grid that formed the basis for much work in past years.

5. GRAVITY SURVEY

5.1. Presentation of Results

All survey results are presented in profile form (Plans 7133-318-3 to 7133-318-6). In addition, the results over the Mine area where extensive information is available from past work are also presented in contour form (Plans 7133-318-7 and 7133-318-8).

For survey sepcifications and reduction of field values refer to the last Quarterly Report.

5.2. Densities

Density measurements were conducted on specimens taken from outcrops as well as drill cores.

Areas from which surface samples were collected are shown on Plans 7133-318-7 and 7133-318-8. Nearly all the collected samples were relatively fresh. The gravity patterns shown on the contoured plans largely dictated the choice of the sampling areas. Unfortunately this exercise did not prove satisfactory due to lack of exposures in critical places. The sampled areas were selected so that a comparison could be made of amphibolite densities in places showing local gravity highs (areas A, C, D) versus "non-high" areas (area B). While surface exposures were satisfactory for the first 3 localities the latter area hardly contained any outcrops worth sampling. As a result area B is represented by one specimen only compared with 29 for areas A, C and D. This type of sampling is obviously not satisfactory for proper comparative study of amphibolite density variations.

Results of surface sampling are shown in Table I. The specimens from area E are sediments. Those from the remaining areas are amphibolites.

TABLE I

(Refer to Plans 7133-318-7/8 for area location)
(the unit for density is tm^{-3})

Area	No.of specimens	Density range	Mean density	Rock type
A	17	2.95-3.06	3.02	)
B	1	3.02	3.02	)Amphibolite
C	7	2.95-3.06	3.01	)
D	5	3.01-3.08	3.03	)
E	3	2.50-2.61	2.54	Sediments

Table II below gives densities of seclected cores from diamond drill cores.

TABLE II

(Hole locations are given in Section 3)

(The unit for density is tm^3)

Hole	Rock-type	No. of samples	density range	mean density
MM 10 and MM 11				
	Sillimanite gneiss			
	Weathered	7	2.62-2.76	2.63
	Fresh	21	2.52-2.80	2.73
	Granite gneiss	41	2.60-2.73	2.68
	Amphibolite	32	2.96-3.11	3.05
	Siliceous rock and biotite	2	2.66-2.69	2.68
	Quartz biotite sericite schist	5	2.71-2.79	2.76
	Gneiss	8	2.67-2.79	2.71
MM 3 MM 4 MM 9				
	Sericite schist	4	2.73-2.86	2.77
	Amphibolite	4	2.99-3.07	3.04
	Ore Zone			
	MM 3	6	2.80-3.10	2.95
	MM 4	6	3.79-4.15	3.99
	MM 9	4	2.71-2.98	2.83

5.3. DISCUSSION OF RESULTS

5.3.1. Lines 78N-82N (Plan 7133-318-6)

These lines are part of a group (which includes 18N, 70N, 74N) of lines (see Plan 7133-318-10) established to investigate a long zone of high TEM values recorded in a survey by Western Mining Corporation Limited (Plan 2344-07) during May, 1982.

The purpose of the gravity survey was to investigate the presence of gravity highs associated with the TEM zone.

Lines 78N and 82N host the strongest TEM responses within the high zone in question. It is clear from Plan 7133-318-6 that there are no gravity anomalies worthy of note over these lines. Because of the lack of favourable results over above two lines, it was decided not to extend the survey to cover lines 18N, 70N and 74N.

The most likely cause for the long TEM zone appears at this stage to be graphitic and/or pyritic lithologies.

5.3.2. Area East and Southeast of Mutooroo Copper Mine (Plan 7133-318-5)

This area constitutes the main target in the present work programme for reasons outlined in the last Quarterly Report. For the purpose of this discussion the area referred to here lies east of station 10E on plan 7133-318-5. As the bouguer gravity profiles on this plan do not show any anomalies worth following up, its potential is downgraded considerably so far as massive sulphides are concerned.

5.3.3. Area of Mutooroo Copper Mine (Plans 7133-318-3 to 7133-318-5, 7133-318-7, 7133-318-8).

The area referred to here comprises that section of the grid between stations 10W and 10E for all the lines from 2S to 82S.

The gravity pattern here is dominated by a broad high zone that averages 1 milligel and extends northward from 66S to 2S.

Within it two local closures of higher amplitudes can be identified. One is centred on line 46S and is about 1.8 milligals above the general background. The other, approximately 1.5 milligals, is centred on lines 26S-30S. A third anomalous feature, slightly over 0.5 milligals, is prominent on line 66S and extends north to join the closure on line 46S.

It is reasonable to relate the major gravity zone to the amphibolites with which it is closely associated. The three local anomalies noted above are of interest here because their significance depends on the interpretation that is considered valid to explain their presence.

One explanation is that they are expressions of density variations within the amphibolites. Another explanation is that they represent massive sulphide mineralization. The latter idea is supported by the fact that all 3 anomalies occur in the immediate vicinity of known mineralization which can be traced on Plans 7133-318-7 and 7133-318-8 by the positions of the shafts.

On the other hand it would be difficult to attribute a broad anomaly such as that centred on line 46S to narrow sulphide zone(s) similar to that already known to be present.

As for the possibility that the local anomalies represent density variations within the amphibolites, the range in the measured values, as listed in Tables I and II in Section 5.2., is not convincingly large enough to be able to reliably explain the presence of the local anomalies.

Preliminary computer modelling of the major gravity trend including the local anomaly centred on line 46S points to the liklihood that the gravity pattern could be adequately explained by the known density contrasts between the amphibolite and the other lithologies. More modelling is required to be able to arrive at a reliable explanation as to the cause of the local gravity anomalies.

6. MAGNETIC SURVEY

6.1. Presentation of Results

The magnetic survey covered the area east and southeast of Mutooroo Copper Mine only. The results are presented in profile form on Plans 7133-318-1 and 7133-318-2.

6.2. Magnetic Susceptibilities.

Magnetic susceptibility measurements were conducted on core from holes MM 3, MM 4, MM 9, MM 10 and MM 11. It was found that the range of values for some rock-types were confined to narrow limits and hence could be summarized as shown in Table III below. For other lithologies the range in their measured values was too large to be summarized, and therefore are listed individually in Table IV. Amphibolite, sericite schist and the ore zone come under this catagory, although the sericite schist constitutes a very minor component associated with the ore zone.

TABLE III

NOTE: Magnetic susceptibility values ($x10^{-6}$ c.g.s. units) of selected diamond drill cores from holes MM 3, MM 4, MM 9, MM 10, MM 11.

Rock-type	number of samples	value range	mean
Granite gneiss	22	13-90	28
Sillimanite gneiss	12	10-40	28
Quartz biotite sericite schist	5	13-68	31
Gneiss (no sillimanite)	8	14-110	48

TABLE IV
(See note in Table III)

A. ROCK TYPE : AMPHIBOLITE

Depth (m)	Magnetic susceptibility ($x10^{-6}$)
Hole Number : MM 10	
92.1	88
98.0	60
100.3	270-300
107.5	52
108.5	25
109.8	3990-4400
110	4350
110.2	2400
112	57
115	9140
115.3	7180
115.5	8470-14400
117.4	108
118.0	3900
118.3	3000
118.8	5100
118.9	7400
119.0	11000
119.1	3180
119.3	1100
119.6	8300
119.7	8950
119.8	7120
120.1	7330
120.2	6800-7370
122.1	4500-6930
213.4	95
213.7	85
221.5-229.5	22 specimens; range $54-83 \times 10^{-6}$ cgs; mean 71
303.9-309.8	27 specimens; range $15-83 \times 10^{-6}$ cgs; mean 55
Hole Number : MM 11	
330.50	60
331.60	60
341.00	60
344.00	60
345.00	60
347.30	55
349.00	60
350.30	60
351.30	65-70
352.00	57
Hole Number : MM 9	
274.00	58
275.00	60
311.00	65
313.00	65

TABLE IV (Continued)

B. ROCK TYPE : SERICITE SCHIST

Depth (m)	Magnetic susceptibility ($x10^{-6}$)
Hole Number : MM 4	
326.4	7400-7800
327.5	7000-7900
348.00	35
349.00	20

C. ROCK TYPE : ORE ZONE

Hole Number : MM 3	
374-375	510
375-376	7150
380-381	1900
381-382	4750
382	920-1190
384.2	30-60
385	50-90
387-388	2500
Hole Number : MM 4	
338-339	2800
339-340	4200
344.7-345.7	7000
?281.7	48
286	14
313.5	50

6.3. Discussion of Results

The overall recorded character of the magnetic field over the surveyed area is rather simple. All the profiles basically display similar magnetic patterns. Their causes are interpreted as due to formational sources and therefore do not appear worth further follow-up.

7. ELECTROMAGNETIC SURVEY

7.1. Presentation of Results

Survey results are shown on Plan 7133-318-9.

7.2. Discussion of Results

As noted in the last Quarterly Report, the limited amount of electromagnetic survey conducted was purely

of an experimental nature designed to investigate the type of responses obtained with a vertical loop null angle MaxMin II geometry in a Mutooroo type regolith and geological setting.

The area of the present survey was covered previously by a sirotem survey (Plan No. 2344-07) conducted by Western Mining Corporation Limited during May, 1982. The sirotem survey recorded local background values (as defined by the 10 μV/A contour for the 5.8 ms delay channel) higher than the normal background observed for the general survey area. A transmitter loop 600 feet square and a station spacing of 300 feet was used for the sirotem survey.

The MaxMin II system performed very well. All the receiver readings registered relatively precise, noise free nulls. As this survey was conducted at a closer station spacing (100 feet) than the sirotem survey, several minor anomalies were recorded on all the surveyed lines. The most prominent fell between 32E and 34E on all three lines.

The trend of above anomalies is close but subparallel to the major magnetic highs recorded on lines 54S, 58S and 62S (Plans 7133-318-1 and 7133-318-2). Their economic significance, if any at all, cannot be ascertained at present.

8. FUTURE PROGRAMME

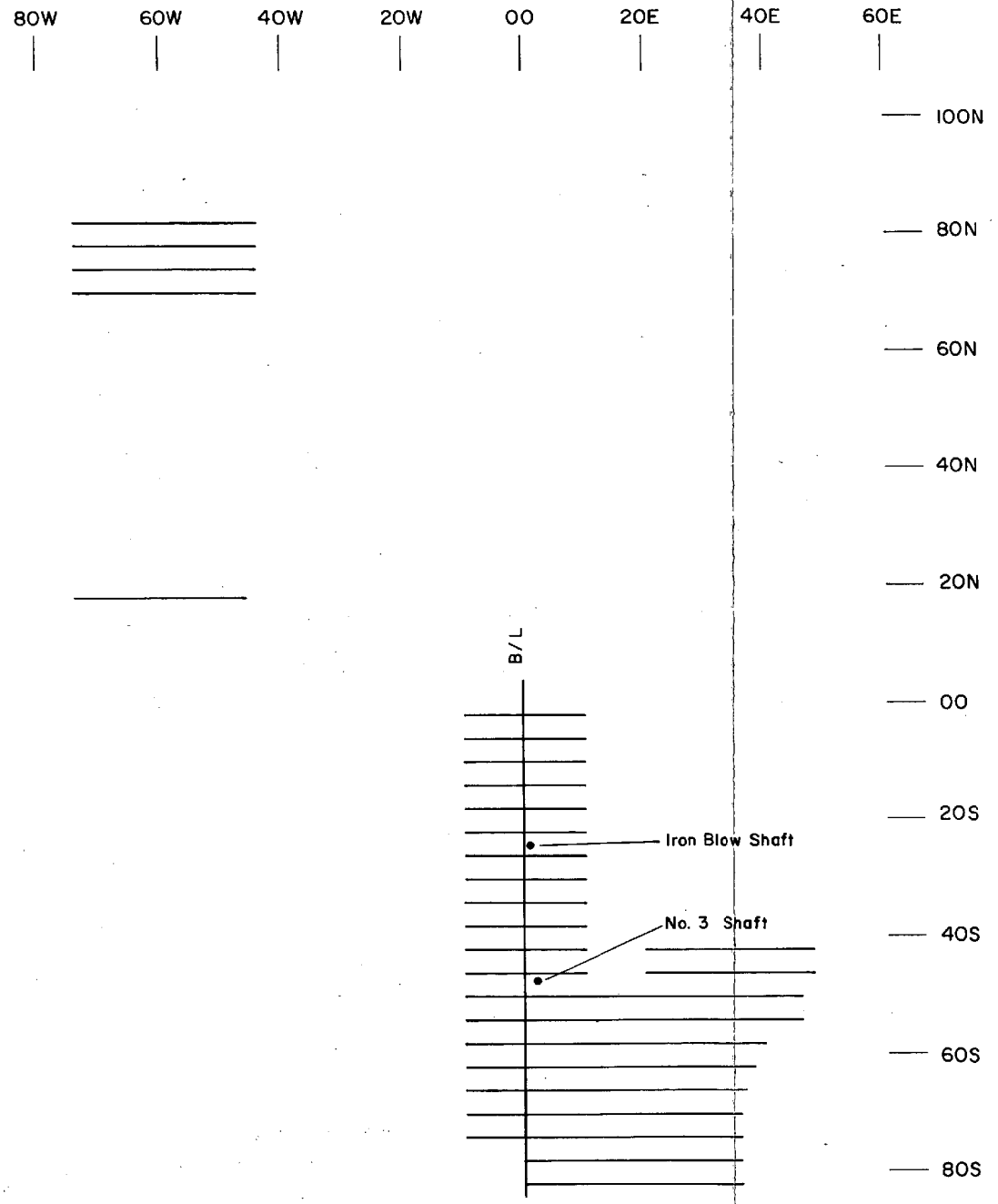
At this stage it is important to define the significance of the local gravity anomalies and therefore the main future effort will involve modelling exercises designed for this purpose.

9. EXPENDITURE

Expenditure recorded for the licence area during the quarter covered by the Report are:-

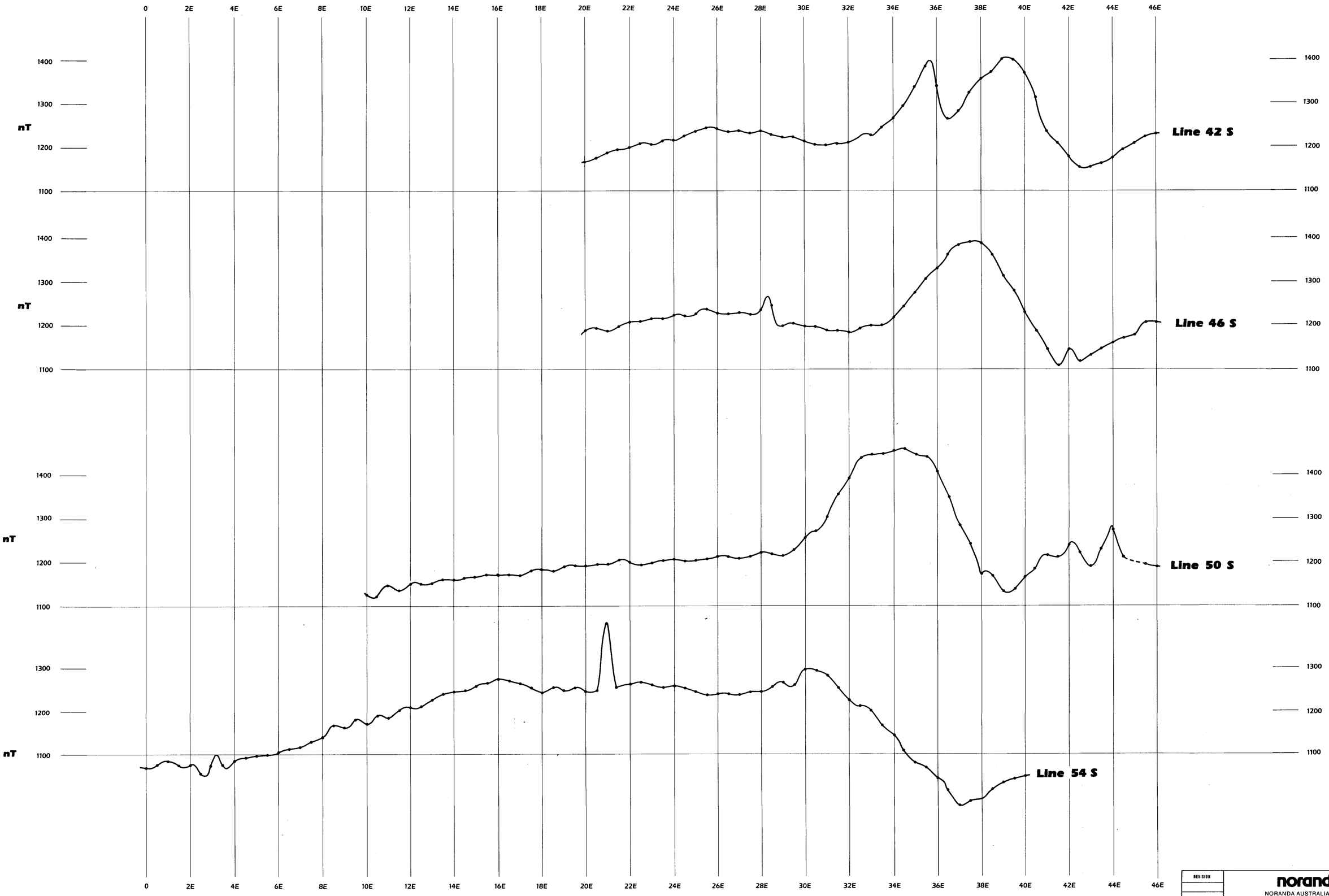
	Period 1.1.1985 to 31.3.85 $
Labour	2,708
Supplies	53
Rentals	-
Transportation	162
Miscellaneous	-
Consulting Fees	-
Contract	-
Taxes and Fees	130
	3,053

072



ALL LINES ARE ESTABLISHED USING COMPASS
AND TAPE WITH PEGS AT 200 FEET INTERVALS

REVISION	noranda NORANDA AUSTRALIA LIMITED
I.I.S. No:	PROJECT: E.L.1044 MUTOOROO, STH. AUSTRALIA
APPROVED BY:	RE - GRIDDED AREA
DATE: DEC. 1984 SCALE: 1 : 24000	DRAWN BY: C. K. SURVEYED BY: P. A.Z
DWG. No. 7133 - 318 - 10 PROJECT No. 318	



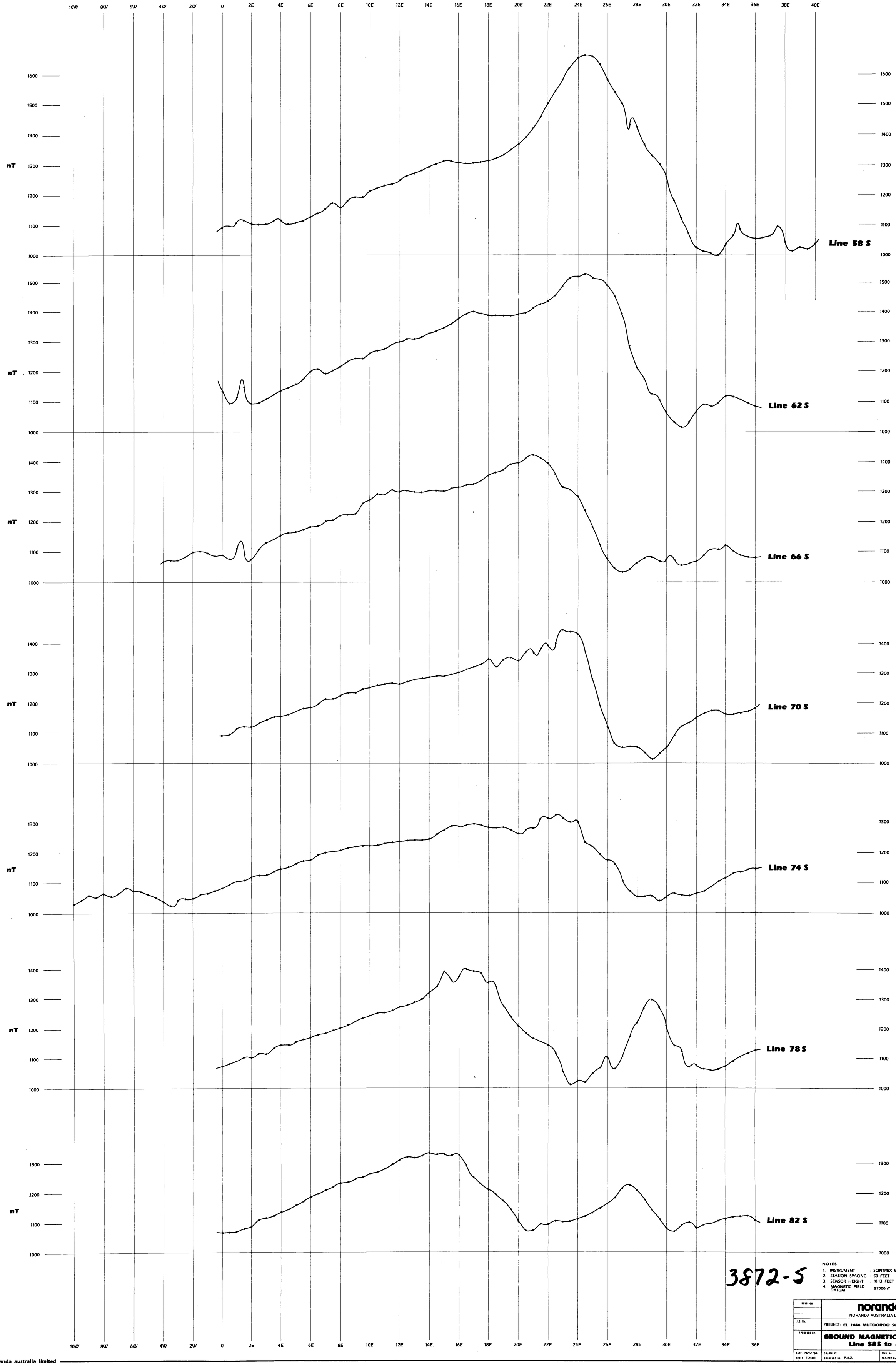
NOTES

1. INSTRUMENT : SCINTREX MP2
2. STATION SPACING : 50 FEET
3. SENSOR HEIGHT : 10.13 FEET
4. MAGNETIC FIELD DATUM : 57000nT

REVISION	noranda NORANDA AUSTRALIA LIMITED	
I.T.S. No:	PROJECT: EL 1044 MUTOOROO SOUTH AUSTRALIA	
APPROVED BY:	GROUND MAGNETIC PROFILES Line 42S to 54S	
DATE: NOV '84 SCALE: 1:2400	DRAWN BY: SURVEYED BY: P.A.Z.	DWG. No. 7133-318-1 PROJECT No. 318

noranda australia limited

3872-4

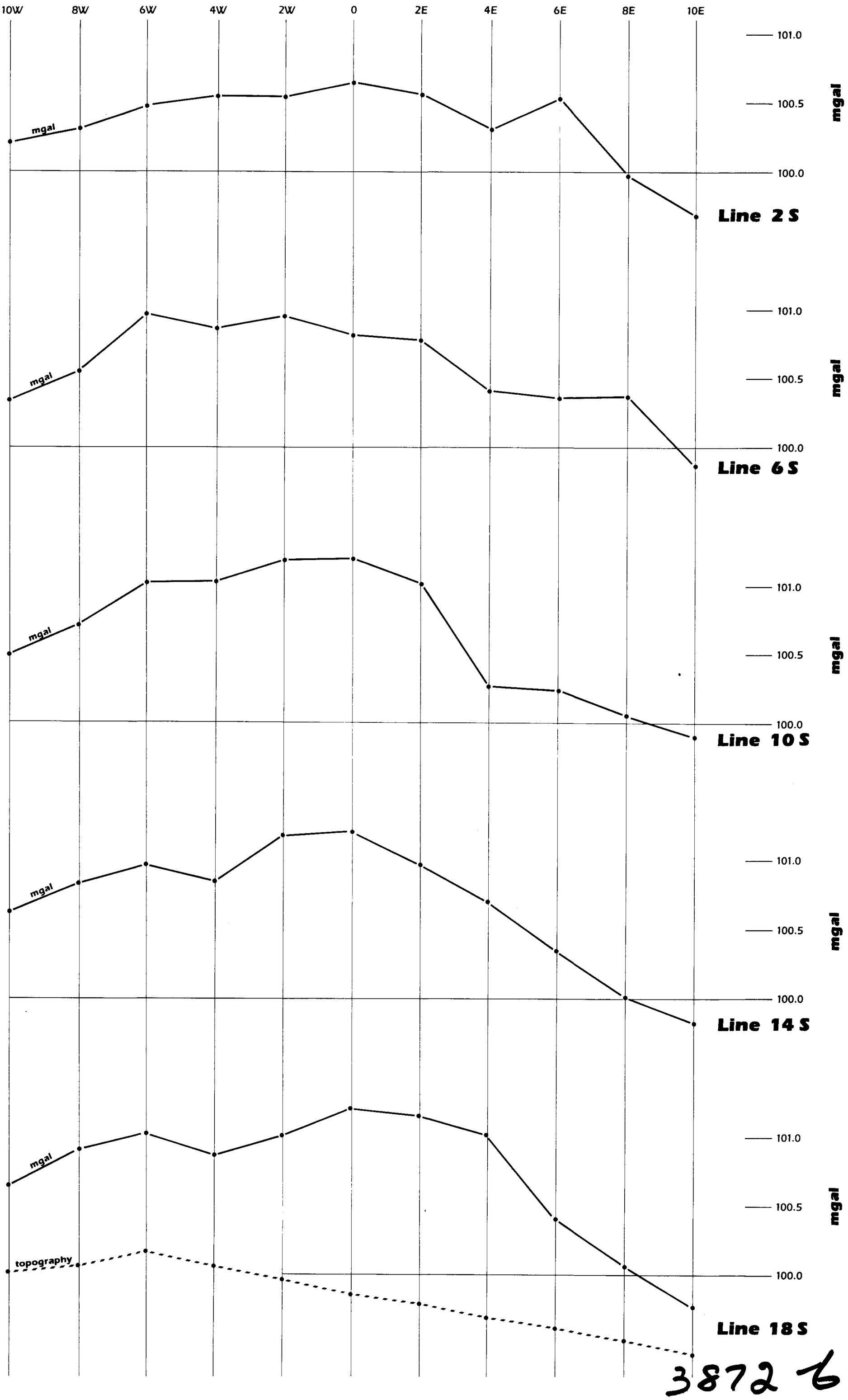


3872-5

NOTES

1. INSTRUMENT : SCINTREX MP2
2. STATION SPACING : 50 FEET
3. SENSOR HEIGHT : 10.13 FEET
4. MAGNETIC FIELD DATUM : 57000nT

REVISION	noranda NORANDA AUSTRALIA LIMITED
I.I.S. No:	PROJECT: EL 1044 MUTOOROO SOUTH AUSTRALIA
APPROVED BY:	GROUND MAGNETIC PROFILES Line 58S to 82S
DATE: NOV '84 SCALE: 1:2400	DRAWN BY: SURVEYED BY: P.A.Z.
	DWG. No. 7133-310-2 PROJECT No. 310

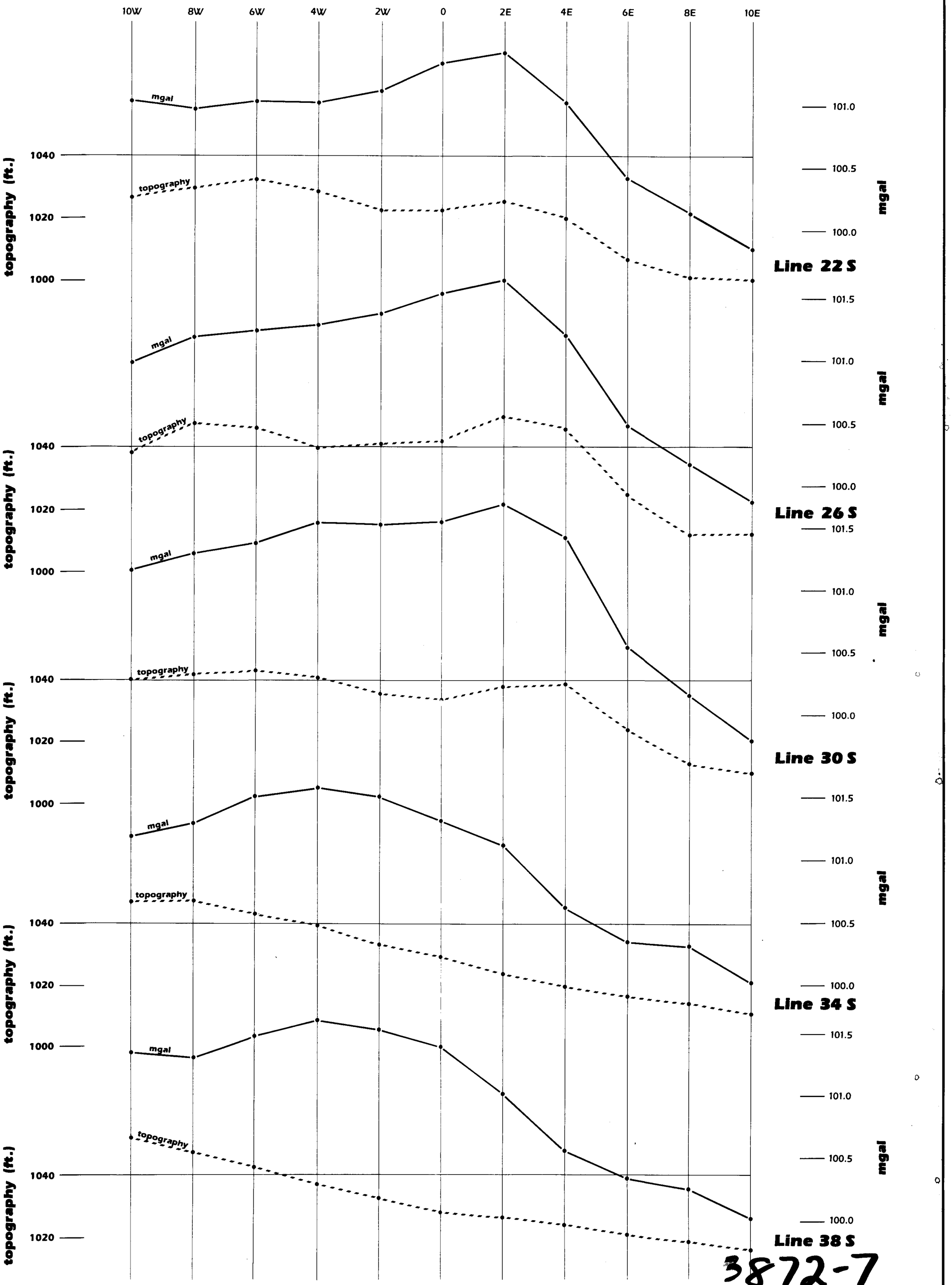


3872 6

NOTES

1. SEE PLAN 7133-318-7 FOR SURVEY SPECIFICATIONS AND REDUCTIONS OF RESULTS
2. VERTICAL SCALE GRAVITY 0.5 mgals/inch
   TOPOGRAPHY 20 feet/inch

REVISION	noranda NORANDA AUSTRALIA LIMITED
I.I.S. No:	PROJECT: E.L. 1044 MUTOOROO SOUTH AUSTRALIA
APPROVED BY:	**BOUGUER GRAVITY PROFILES Lines 2S to 18S**
DATE DEC '84 SCALE 1:2400	DRAWN BY: SURVEYED BY: P.A.Z
DWG. No. 7133-318-3 PROJECT No. 318	

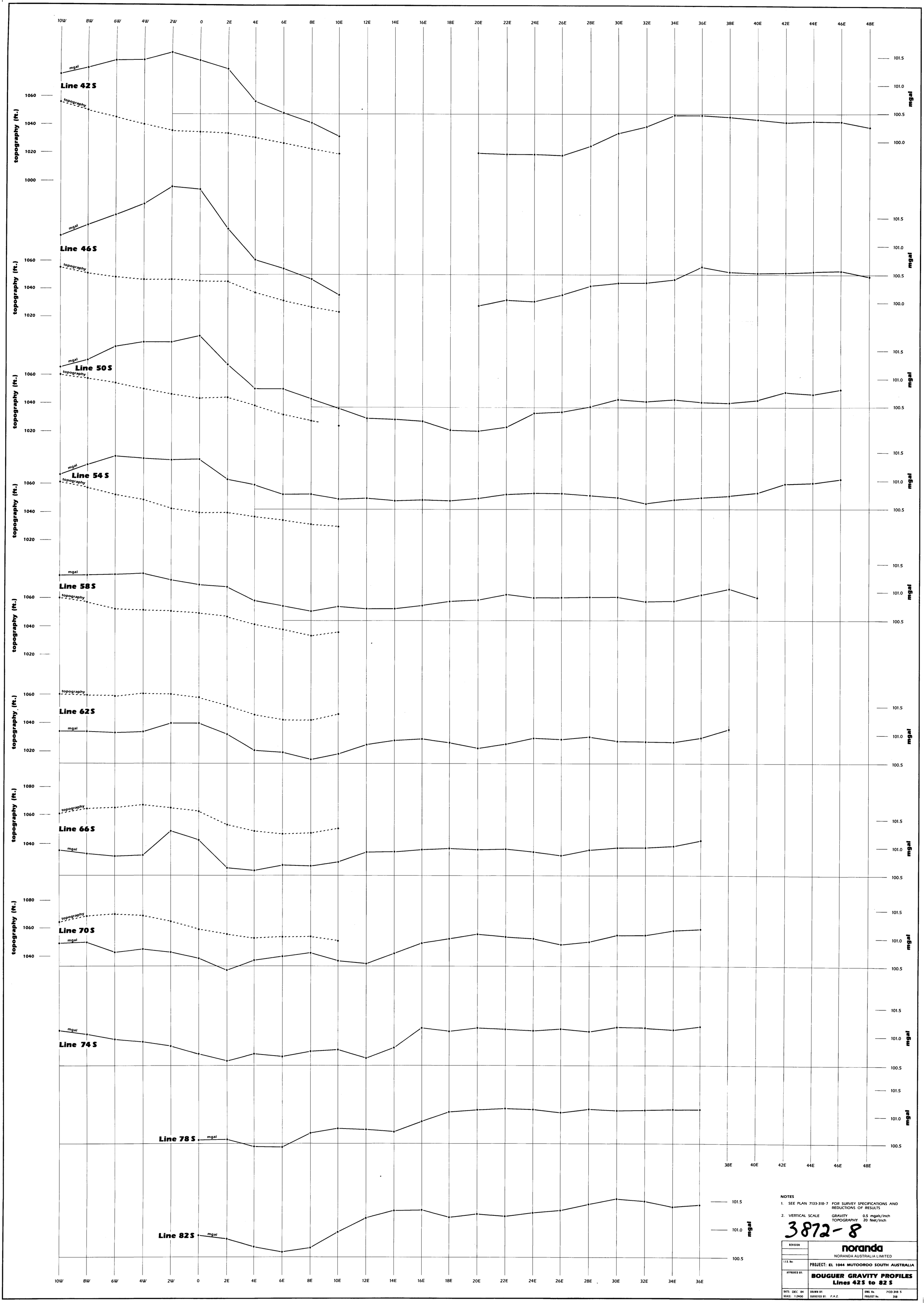


3872-7

NOTES

1. SEE PLAN 7133-318-7 FOR SURVEY SPECIFICATIONS AND REDUCTIONS OF RESULTS
2. VERTICAL SCALE GRAVITY 0.5 mgals/inch
   TOPOGRAPHY 20 feet/inch

REVISION	noranda NORANDA AUSTRALIA LIMITED
I.I.S. No:	PROJECT: EL 1044 MUTOOROO SOUTH AUSTRALIA
APPROVED BY:	**BOUGUER GRAVITY PROFILES** **Lines 22 S to 38 S**
DATE: DEC '84 SCALE: 1:2400	DRAWN BY: SURVEYED BY: P.A.Z.
DWG. No. 7133-318-4 PROJECT No. 318	



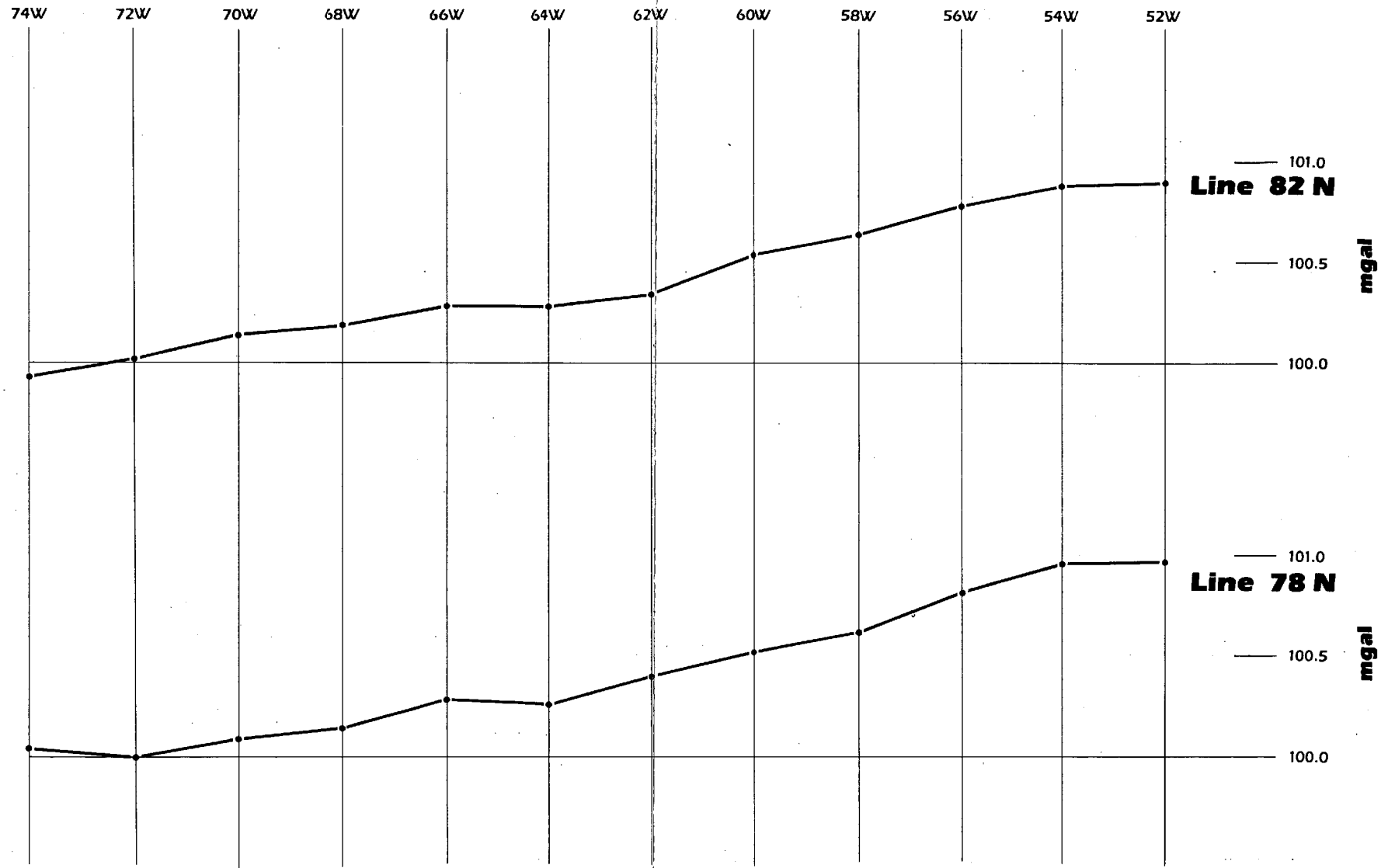
NOTES

1. SEE PLAN 7133-318-7 FOR SURVEY SPECIFICATIONS AND REDUCTIONS OF RESULTS
2. VERTICAL SCALE GRAVITY 0.5 mgals/inch
   TOPOGRAPHY 20 feet/inch

3872-8

REVISION	noranda NORANDA AUSTRALIA LIMITED
I.I.S. No:	PROJECT: EL 1044 MUTOOROO SOUTH AUSTRALIA
APPROVED BY:	BOUGUER GRAVITY PROFILES Lines 42 S to 82 S
DATE: DEC '84 SCALE: 1:2400	DRAWN BY: SURVEYED BY: P.A.Z.
	DWG. No. 7133-318-5 PROJECT No. 318

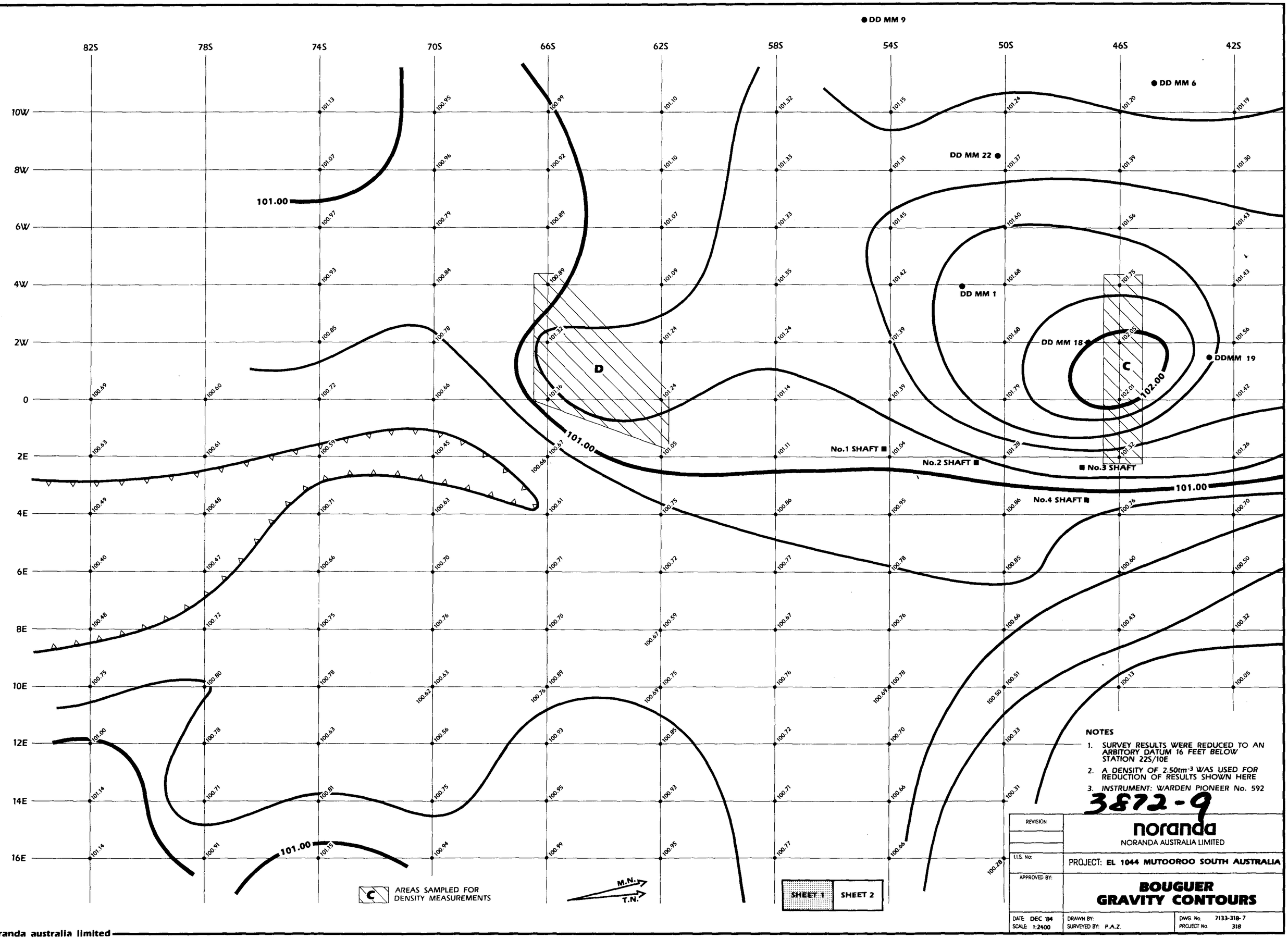
073



NOTES

1. SURVEY RESULTS WERE REDUCED TO AN ARBITORY DATUM 1.31 FEET BELOW STATION 82 N/74 W
2. A DENSITY OF 2.50tm^{-3} WAS USED FOR REDUCTION OF RESULTS SHOWN HERE
3. INSTRUMENT: WARDEN PIONEER No. 592

REVISION	noranda NORANDA AUSTRALIA LIMITED	
I.I.S. No:	PROJECT: EL 1044 MUTOOROO SOUTH AUSTRALIA	
APPROVED BY:	**BOUGUER GRAVITY PROFILES** **Lines 78N and 82N**	
DATE: DEC '84 SCALE: 1:2400	DRAWN BY: SURVEYED BY: P.A.Z.	DWG. No. 7133-318-6 PROJECT No. 318



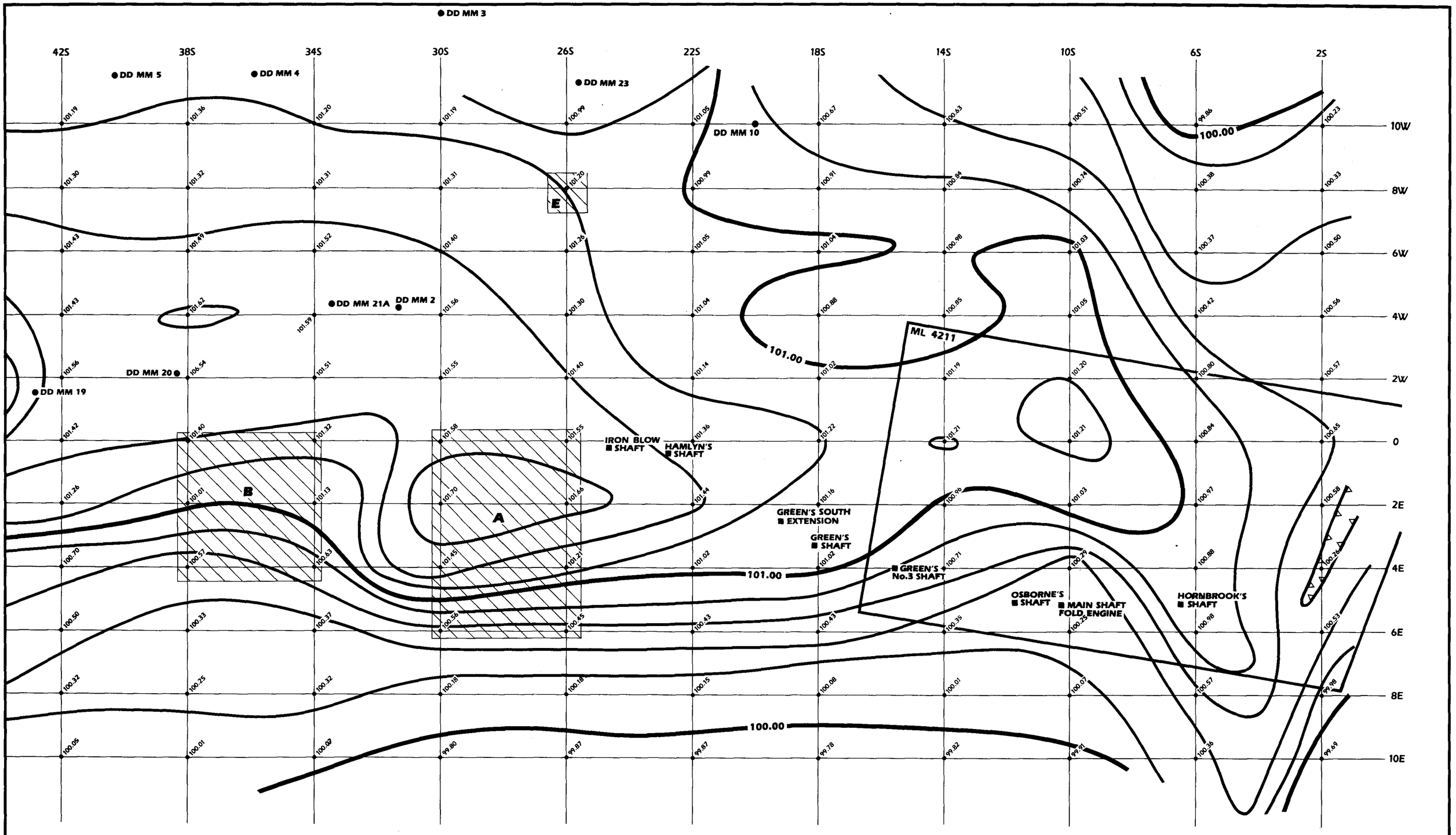
NOTES

1. SURVEY RESULTS WERE REDUCED TO AN ARBITORY DATUM 16 FEET BELOW STATION 22S/10E
2. A DENSITY OF 2.50tm^{-3} WAS USED FOR REDUCTION OF RESULTS SHOWN HERE
3. INSTRUMENT: WARDEN PIONEER No. 592

3872-9

REVISION	noranda NORANDA AUSTRALIA LIMITED
I.L.S. No:	PROJECT: EL 1044 MUTOOROO SOUTH AUSTRALIA
APPROVED BY:	**BOUGUER GRAVITY CONTOURS**
DATE DEC '84 SCALE 1:2400	DRAWN BY: SURVEYED BY: P.A.Z.
DWG. No. 7133-318-7 PROJECT No. 318	

noranda australia limited



SHEET 1 | SHEET 2

3873-10

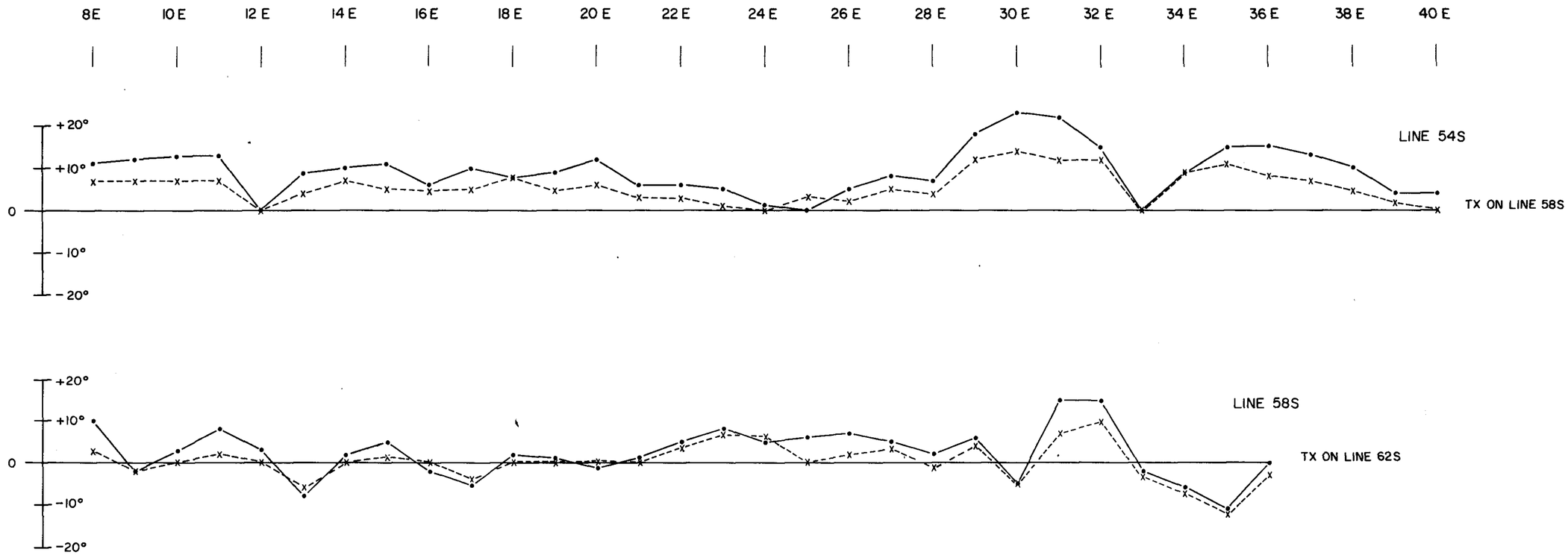
NOTES

1. SURVEY RESULTS WERE REDUCED TO AN ARBITORY DATUM 46 FEET BELOW STATION 22S/10E
2. A DENSITY OF 2.50tm^{-3} WAS USED FOR REDUCTION OF RESULTS SHOWN HERE
3. INSTRUMENT: WARDEN PIONEER No. 592

A AREAS SAMPLED FOR DENSITY MEASUREMENTS

REVISION	noranda NORANDA AUSTRALIA LIMITED
L.I.S. No:	PROJECT: EL 1044 MUTOOROO SOUTH AUSTRALIA
APPROVED BY:	**BOUGUER GRAVITY CONTOURS**
DATE DEC '84 SCALE 1:2400	DRAWN BY: SURVEYED BY: P.A.Z.
	DWG. No. 7133-318-8 PROJECT No. 318

noranda australia limited



1. Broadside configuration was used to conduct the field survey with the transmitter and receiver 400 feet apart.

2. MaxMin II sytem was employed for the survey.

3. 1777 Hz •——•——•
   888 Hz x----x---x
   222 Hz did not register

4. Scale - 1 inch = 200 feet

3872-11

REVISION	noranda NORANDA AUSTRALIA LIMITED	
I.I.S. No:	PROJECT: MUTOOROO, SOUTH AUSTRALIA	
APPROVED BY:	ELECTROMAGNETIC SURVEY NULL ANGLE , VERTICAL LOOP	
DATE: NOV. 1984 SCALE: AS SHOWN	DRAWN BY: C. K. SURVEYED BY: P.A.Z.	DWG. No. 7133 - 318 - 9 PROJECT No. 318

Noranda
302 Hay Street Subiaco
P.O. Box 179, Subiaco, W.A. 6008
Tel.: (09) 381 5858

L 074

noranda

25th June, 1985

The Director-General,
Department of Mines & Energy,
P.O. Box 151,
EASTWOOD. S.A. 5063

Dear Sir,

Re: Exploration Licence 1044

As requested in your letter dated 7th May, 1985 reference EL 1044, please find enclosed herewith copies of basic field data from the gravity survey conducted at Mutooroo during 1984.

Yours faithfully,
NORANDA AUSTRALIA LIMITED

P.A. ZARZAVATJIAN
Chief Geophysicist

Encl:

SHEET NO. 1	GRAVITY DATA SHEET				BASE STAT
CLIENT	DATE 3/12/1984	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =	$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA MUTOOROO	METER CONST.	OPERATOR	C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR (MILES)		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]		[Mgal]	2.2	2.4	2.5	2.67 REMARKS
Resetting Ht meter ✓			1227.9	3:49									
			1228.7	3:54									
			1228.8	3:59									
			1229.0	4:05									
Base I	58S	10E	1225.2	5:23			315.58	2.049					
		11	1225.3	5:27	~	100.0000	315.58	2.049	~	100.95	100.82	100.76	100.64
		8E	1225.9	5:37	~		314.77	2.036	~	100.86	100.74	100.67	100.57
		6E	1223.7	5:43	~		316.31	2.023	~	100.98	100.84	" .77	100.66
		4E	1222.3	5:47	~		317.41	2.010	~	101.07	100.93	" .86	100.73
		2E	1221.6	5:51	~		318.89	1.996	~	101.34	101.19	101.11	100.97
		00	1220.1	5:55	~		319.75	1.983	~	101.39	101.22	" .14	101.00
		2W	12198	6:00	~		320.34	1.970	~	101.50	101.33	" .24	101.10
		4W	1220.4	6:05	~		320.50	1.957	~	101.61	101.44	" .35	101.21
		6W	1219.7	6:10	~		320.68	1.944	~	101.59	101.42	" .33	101.18
		8W	1216.6	6:15	~		322.15	1.930	~	101.61	101.42	" .33	101.17
	58S	10W	1213.3	6:20	~		323.25	1.917	~	101.52	101.33	" .23	101.06
	62S	10W	1213.3	6:26	~		323.10	1.988	~	101.39	101.20	" .10	100.94
		8W	1213.5	6:31	~		323.05	2.001	~	101.39	101.20	" .10	100.94
		6W	1214.3	6:37	~		322.62	2.015	~	101.35	101.16	" .07	100.91
		4W	1213.7	6:43	~		323.084	2.028	~	101.38	101.18	" .09	100.92
		2W	1215.7	6:47	~		322.98	2.041	~	101.53	101.34	" .24	101.08
		00	1217.1	6:52	~		322.26	2.054	~	101.52	101.33	" .24	101.08
		2E	1218.9	6:56	~		320.49	2.067	~	101.31	101.14	" .05	100.90
		4E	1220.0	7:00	~		318.52	2.081	~	100.98	100.82	100.75	100.62

Norrisprint

SHEET NO. 2	GRAVITY DATA SHEET									BASE STAT
CLIENT	DATE 3/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =			$P_1=$ $P_2=$ $P_3=$				CORR BASE (mgals)
JOB NO.	AREA MUTOORAU	METER CONST.	OPERATOR			C_1 C_2 C_3				STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR (MICES)		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[Km North]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	62S	6E	1222.4	7:05			317.22	2.094		100.93	100.79	100.72	100.59
	"	8E	1221.1	7:11			317.36	2.107		100.81	100.67	100.59	100.47
	"	10E	1220.6	7:16			318.46	2.120		100.98	100.83	100.75	100.62
Base 1	58S	10E	1225.4	7:23			315.58	2.049					
													DRIFT = -0.09 x 10^{-3}

Norrisprint

SHEET NO. 3	GRAVITY DATA SHEET			
CLIENT	DATE 4/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =	
JOB NO.	AREA MUTOOROO	METER CONST.	OPERATOR	

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR	
[RPT?]	"		[DIV]		Mgals	[Mgal]	[Meters]	[Mgal]	
~~RPT~~	~~62S~~	~~8E~~	~~1220.8~~	~~10:08~~			~~317.36~~	~~2.107~~	
~~Base 1~~	~~62S~~	~~10E~~	~~1224.1~~	~~10:44~~			~~315.58~~	~~2.049~~	
~~RPT~~	~~62S~~	~~8E~~	~~1220.8~~	~~10:23~~			~~317.36~~	~~2.107~~	
~~RPT~~	~~70S~~	~~0~~	~~1211.1~~	~~10:37~~			~~323.57~~	~~2.196~~	
		~~2E~~	~~1214.6~~	~~10:42~~			~~322.57~~	~~2.209~~	
		~~4E~~	~~1217.1~~	~~10:48~~			~~320.95~~	~~2.222~~	
		~~6E~~	~~1218.7~~	~~10:54~~			~~320.86~~	~~2.336~~	
		~~8E~~	~~1219.6~~	~~10:59~~			~~320.82~~	~~2.349~~	
	~~70S~~	~~10E~~	~~1216.1~~	~~11:04~~			~~320.13~~	~~2.362~~	
~~RPT~~	~~62S~~	~~10E~~	~~1224.3~~	~~11:10~~			~~315.07~~	~~2.191~~	
~~RPT~~	~~62S~~	~~8E~~	~~1220.3~~	~~11:18~~			~~317.36~~	~~2.107~~	
~~Base 1~~	~~62S~~	~~10E~~	~~1224.1~~	~~11:35~~			~~315.58~~	~~2.049~~	
Base 1	"	"	1224.1	11:37			315.58	2.049	
	54S	10E	1226.5	11:42	—	—	313.63	1.978	—
		8E	1226.2	11:48	—	—	314.07	1.965	—
		6E	1224.4	11:53	—	—	315.03	1.952	—
		4E	1224.4	11:58	—	—	315.81	1.939	—
		2E	1223.0	12:06	—	—	316.91	1.925	—
		0	1226.4	12:13	—	—	316.84	1.912	—
		2W	1224.9	12.21	—	—	317.60	1.898	—
		4W	1221.6	12:25	—	—	319.36	1.886	—
		6W	1219.1	12:31	—	—	320.73	1.873	—
		8W	1214.9	12:36	—	—	322.15	1.859	—
	54S	10W	1210.6	12:42	—	—	323.51	1.846	—
	50S	10W	1211.1	12:49	—	—	323.30	1.775	—
	50S	8W	1214.0	12:55	—	—	322.56	1.788	—

Norrisprint

	BASE STAT
$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
C_1 C_2 C_3	STAND. CORR (mgals)

BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
2.2	2.4	2.5	2.67 REMARKS
100.86	100.75	100.69	100.59
100.89	100.82	100.76	100.66
100.96	100.84	100.78	100.67
101.14	101.01	" .95	100.83
101.25	101.11	101.04	100.92
101.60	101.46	" .39	101.27
101.62	101.47	" .39	101.27
101.67	101.50	" .42	101.28
101.71	101.54	" .45	101.30
101.59	101.41	" .31	101.16
101.45	101.25	" .15	100.99
101.54	101.34	" .24	101.08
101.66	101.47	" .37	101.21

077

SHEET NO. 4	GRAVITY DATA SHEET									BASE STAT			
CLIENT	DATE 4/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =							CORR BASE (mgals)			
JOB NO.	AREA Motooroo	METER CONST.	OPERATOR							STAND. CORR (mgals)			

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]		6W	[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	50S	~~1218.5~~	1218.5	13:00	~	~	321.49	1.802	~	101·87	101·65	101.60	101·45
		4W	1221.7	13:06	~	~	320.34	1.815	~	101·94	101·77	" .68	101·54
		2W	1224.0	13:11	~	~	319.26	1.828	~	101·92	101·76	" .68	101·55
		00	1227.1	13:15	~	~	318.29	1.841	~	102.02	101·87	" .79	101·66
		2E	1221.9	13:22	~	~	318.59	1.854	~	101·51	101·36	" .28	101·15
		4E	1221.9	13:26	~	~	316.64	1.868	~	101·07	100·93	100.86	100·75
		6E	1225.7	13:31	~	~	314.75	1.881	~	101·04	100·92	" .85	100·75
		8E	1226.7	13:35	~	~	313.40	1.894	~	100·83	100·72	" .66	100·57
	50S	10E	1227.1	13:39	~	~	312.46	1.907	~	100·65	100·55	" .50	100·41
Base 1	58S	10E	1225.2	13:47	~		315.58	2.049					DRIFT = -0.88 x 10⁻³
RPT	62S	8E	1221.5	13:55			317.36	2.107	~				
Base 1	58S	10E	1225.3	14:21			315.58	2.049					DRIFT = -0.31 x 10⁻³
RPT	62S	8E	1221.9	14:27	~		317.36	2.107	~	100·89	100·74	100.67	100·55
RPT	62S	10E	1221.6	14:34	~		318.46	2.120	~	101·08	100·92	" .85	100·71
	62S	12E	1221.3	14:38	~		318.80	2.133	~	101·08	100·93	" .85	100·72
		14E	1222.6	14:44	~		318.67	2.147	~	101·17	101·01	" .93	100·80
		16E	1224.6	14:48	~		317.84	2.160	~	101·17	101·02	" .95	100·82
		18E	1225.8	14:52	~		317.09	2.173	~	101·11	100·96	" .89	100·77
		20E	1227.0	14:56	~		316.16	2.186	~	101·01	100·87	" .80	100·69
	58S	20E	1229.6	15:01	~		314.80	2.115	~	101·05	100·91	" .87	100·76
		18E	1228.3	15:06	~		315.38	2.102	~	101·05	100·92	" .85	100·74
		16E	1227.0	15:11	~		315.62	2.089	~	100·97	100·84	" .77	100·66
		14E	1225.8	15:17	~		315.96	2.076	~	100·91	100·78	" .71	100·60
		12E	1225.8	15:21	~		315.99	2.062	~	100·92	100·79	" .72	100·61
Base 1	58S	10E	1226.9	15:26	~		315.58	2.049					DRIFT = -2.56 x 10⁻³
Base 2	58S	20E	1230.1	15:37		100.3415	314.80	2.115	~	101·05	100·93	" .86	100·76

Norrisprint

SHEET NO. 5	GRAVITY DATA SHEET				BASE STAT
CLIENT	DATE 4/12/1984	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =	$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA Mutoraa	METER CONST.	OPERATOR	C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
Base 1	58S	10E	1226.8	15:45			315.58	2.049					DRIFT = 0.55×10^{-3}
Base 2	58S	20E	1230.0	15:53	1	100.34155	314.80	2.115	—	101.05	100.93	100.87	100.76
		22E	1230.7	15:58	1		314.99	2.128	—	101.15	101.02	" .96	100.85
		24E	1232.0	16:03	1		314.14	2.142	—	101.07	100.95	" .89	100.79
		26E	1233.7	16:08	1		313.43	2.155	—	101.08	100.97	" .91	100.81
		28E	1234.8	16:13	1		313.01	2.168	—	101.08	100.97	" .92	100.83
		30E	1235.8	16:18	1		312.54	2.181	—	101.07	100.96	" .91	100.82
		32E	1236.1	16:22	1		312.09	2.194	—	100.98	100.88	" .83	100.75
		34E	1236.5	16:27	1		312.03	2.208	—	101.00	100.90	" .84	100.76
		36E	1237.9	16:31	1		311.95	2.221	—	101.11	101.01	" .96	100.87
		38E	1238.9	16:37	1		311.99	2.234	—	101.20	101.10	101.05	100.97
	58S	40E	1239.2	16:43	1		312.12	2.247	—	101.05	100.95	100.90	100.81
	62S	40E	1236.8	16:51	1		314.40	2.318	—	101.39	101.27	101.21	101.11
		38E	1235.9	16:55	1		314.28	2.305	—	101.29	101.17	101.11	101.01
		36E	1236.0	16:59	1		313.43	2.292	—	101.13	101.01	100.96	100.86
		34E	1236.0	17:03	1		313.06	2.279	—	101.06	100.95	" .89	100.80
		32E	1236.0	17:06	1		313.05	2.265	—	101.07	100.96	" .90	100.81
		30E	1235.6	17:11	1		313.16	2.252	—	101.07	100.96	" .91	100.81
		28E	1236.9	17:16	1		312.81	2.239	—	101.14	101.03	" .98	100.89
		26E	1234.5	17:21	1		313.81	2.226	—	101.12	101.00	" .95	100.85
		24E	1233.0	17:27	1		314.61	2.213	—	101.15	101.03	" .97	100.86
		22E	1230.5	17:32	1		315.33	2.199	—	101.06	100.93	" .86	100.75
RPT		20E	1228.0	17:38	1		316.16	2.186	—	100.99	100.85	" .78	100.69
Base 2	58S	20E	1230.7	17:48		100.34155	314.80	2.115					DRIFT = -0.63×10^{-3}
Base 3	79S	16E	1226.4	18:04			319.20	2.444	—	101.05	100.89	" .81	100.67
Base 2	58S	20E	1230.8	18:17			314.80	2.115					DRIFT = -0.36×10^{-3}

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SHEET NO. 6	GRAVITY DATA SHEET				BASE STAT
CLIENT	DATE 4/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =	$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA MOTOOROO	METER CONST.	OPERATOR	C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
Base 3	78S	16E	1226.1	10:29			319.20	2.444		106.79	106.63	106.55	106.42
Base 2	58S	20E	1230.6	10:42			314.80	2.115					DRIFT = 0.83×10^{-5}
Base 1	58S	10E	1227.2	10:50			315.58	2.049					

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SHEET NO. 7	GRAVITY DATA SHEET						BASE STAT
CLIENT	DATE 5/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$		CORR BASE (mgals)
JOB NO.	AREA Mutoora	METER CONST.	OPERATOR		C_1 C_2 C_3		STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
Base 1	58S	10E	1225.7	7:34									
Base 2	58S	20E	1229.1	7:42									
	66S	20E	1229.2	7:53	\		316.13	2.257	—	101.19	101.05	100.99	100.87
		22E	1231.3	7:56	\		315.10	2.270	—	101.17	101.05	" .98	100.88
		24E	1231.9	8:01	\		314.63	2.284	—	101.13	101.00	" .94	100.84
		26E	1231.2	8:05	\		314.67	2.297	—	101.05	100.93	" .87	100.76
		28E	1232.2	8:09	\		314.64	2.310	—(5)	101.14	101.02	" .96	100.85
		30E	1232.6	8:13	\		314.70	2.323	—	101.18	101.06	101.00	100.89
		32E	1233.9	8:19	\		314.14	2.336	—	101.19	101.07	" .01	100.91
		34E	1235.0	8:23	\		313.78	2.350	—	101.21	101.09	" .03	100.94
	66S	36E	1234.3	8:28	\		314.67	2.363	—	101.32	101.19	" .13	101.03
	70S	36E	12339	8:34	\		315.34	2.434	—(10)	101.35	101.22	" .16	101.05
		34E	1233.9	8:38	\		315.15	2.421	—	101.33	101.20	" .14	101.03
		32E	1232.9	8:42	\		315.25	2.407	—	101.26	101.14	" .07	100.96
		30E	1232.0	8:47	\		315.53	2.394	—	101.25	101.12	" .06	100.95
		28E	1229.6	8:52	\		316.11	2.381	—	101.15	101.01	100.95	100.83
		26E	1228.1	8:56	\		316.58	2.368	—15	101.11	100.97	" .90	100.79
		24E	1228.8	9:00	\		316.63	2.355	—	101.22	101.08	101.01	100.89
		22E	1228.4	9:04	\		316.84	2.341	—	101.25	101.11	" .04	100.92
		20E	1229.2	9:07	\		316.60	2.328	—	101.30	101.16	" .09	100.97
		18E	1227.6	9:11	\		316.94	2.315	—	101.22	101.08	" .01	100.89
		16E	1225.7	9:15	\		317.49	2.302	—	101.16	101.02	100.94	100.82
		14E	1222.0	9:19	\		318.34	2.289	—	100.98	100.83	" .75	100.62
		12E	1218.4	9:23	\		319.13	2.275	—	100.80	100.64	" .56	100.42
RPT.	70S	10E	1217.0	9:27	\		320.13	2.262	—	100.89	100.73	" .63	100.49
RPT.	66S	10E	1217.8	9:33	\		320.07	2.191	—	101.05	100.88	" .80	100.65

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SHEET NO. 8	GRAVITY DATA SHEET								BASE STAT
CLIENT	DATE 5/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$				CORR BASE (mgals)
JOB NO.	AREA Meteora 200	METER CONST.	OPERATOR		C_1 C_2 C_3				STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
Base 2	58S	20E	1227.8	9:46									DRIFT = 1.09×10^{-3}
Base 3	78S	16E	1223.6	10:01	"	"	319.20	2.444	—	101.15	100.99	100.91	100.77
	78S	18E	1224.7	10:05	"	"	319.54	2.457	—	101.32	101.16	" .07	100.94
	78S	20E	1224.0	10:09	"	"	320.05	2.470	—	101.34	101.17	" .09	100.95
	"	22E	1224.5	10:13	"	"	319.92	2.483	—	101.35	101.18	" .10	100.96
	"	24E	1224.4	10:17	"	"	320.02	2.497	—	101.35	101.18	" .10	100.96
	"	26E	1223.9	10:22	"	"	320.19	2.510	—	101.32	101.15	" .07	100.92
	"	28E	1226.7	10:26	"	"	319.21	2.523	—	101.38	101.22	" .14	101.00
	"	30E	1229.1	10:31	"	"	317.85	2.536	—	101.32	101.17	" .10	100.97
	"	32E	1228.4	10:35	"	"	318.37	2.549	—	101.34	101.18	" .11	100.98
	"	34E	1227.4	10:41	"	"	319.00	2.563	—	101.36	101.20	" .12	100.98
	"	36E	1227.6	10:44	"	"	318.92	2.576	—	101.36	101.19	" .11	100.97
	82S	34E	1226.8	10:50	"	"	320.09	2.634	—	101.44	101.27	" .19	101.05
NOTE STATION SEQUENCE		36E	1226.5	10:55	"	"	320.46	2.647	—	101.48	101.30	" .22	101.07
		32E	1228.5	11:01	"	"	319.59	2.620	—	101.53	101.37	" .29	101.15
		30E	1228.6	11:05	"	"	319.71	2.607	—	101.58	101.42	" .34	101.20
		28E	1226.2	11:11	"	"	320.37	2.594	—	101.49	101.32	" .24	101.09
		26E	1223.2	11:16	"	"	321.34	2.589	—	101.39	101.21	" .12	100.97
		24E	1222.0	11:20	"	"	321.63	2.568	—	101.36	101.17	" .08	100.93
		22E	1222.2	11:25	"	"	321.20	2.554	—	101.29	101.11	" .03	100.88
		20E	1222.2	11:29	"	"	321.29	2.541	—	101.33	101.15	" .06	100.91
		18E	1221.7	11:35	"	"	321.17	2.528	—	101.27	101.09	" .00	100.85
	82S	18E	1222.6	11:39	"	"	321.19	2.515	—	101.38	101.20	" .11	100.96
Base 3	78S	16E	1223.7	11:44			319.20	2.444					DRIFT = -0.1×10^{-3}
	78S	14E	1221.6	11:50	"		319.28	2.431	—	100.96	100.79	100.71	100.58
	"	12E	1221.6	11:54	"		319.79	2.417	—	101.02	100.86	" .78	100.64

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SHEET NO. 9	GRAVITY DATA SHEET									BASE STAT
CLIENT	DATE 5/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$					CORR BASE (mgals)
JOB NO.	AREA MUTOORAU	METER CONST.	OPERATOR		C_1 C_2 C_3					STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]		[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	78S	10E	1219.2	11:59			320.75	2.404		101.06	100.88	100.80	100.65
	"	8E	1216.8	12:03			321.56	2.391		100.99	100.81	100.72	100.57
	"	6E	1212.8	12:07			322.32	2.378		100.75	100.57	" .47	100.31
	"	4E	1211.4	12:13			323.03	2.365		100.77	100.58	" .48	100.32
	"	2E	1210.7	12:18			323.97	2.351		100.91	100.71	" .61	100.44
	"	00	1208.5	12:28			324.99	2.338		100.92	100.71	" .60	100.42
	82S	00	1210.2	12:30			325.03	2.409		101.01	100.80	" .69	100.52
	"	2E	1211.7	12:34			324.04	2.422		100.93	100.73	" .63	100.46
	"	4E	1212.1	12:40			323.24	2.436		100.78	100.59	" .49	100.33
	"	6E	1212.8	12:44			322.51	2.449		100.68	100.49	" .40	100.24
	"	8E	1215.2	12:49			321.78	2.462		100.75	100.57	" .48	100.32
	"	10E	1219.5	12:54			321.00	2.475		101.01	100.84	" .75	100.60
	"	12E	1223.0	12:59			320.54	2.488		101.26	101.08	101.00	100.85
	"	14E	1224.8	1:03			320.41	2.502		101.40	101.23	" .14	101.00
RPT	82S	16E	1223.5	1:07			321.19	2.515		101.40	101.23	" .14	100.99
Base 3	78S	16E	1224.4	1:15			319.20	2.444					DRIFT = -0.8×10^{-3}
Base 3	78S	16E	1224.7	1:51			319.20	2.444					
RPT	78S	18E	1226.1	1:55			319.54	2.457		101.35	101.18	101.10	100.96
RPT	"	20E	1225.7	1:59			320.05	2.470		101.40	101.23	101.15	101.00
RPT	"	22E	1226.5	2:03			319.92	2.483		101.43	101.27	101.18	101.04
RPT	"	24E	1226.1	2:07			320.02	2.497		101.39	101.23	101.14	101.00
Base 3	78S	16E	1225.0	2:18			319.20	2.444					DRIFT = -1.15×10^{-3}
	74S	16E	1228.8	2:24			318.10	2.373		101.38	101.23	101.15	101.02
	"	18E	1228.8	2:27			317.95	2.386		101.33	101.18	101.10	100.97
	"	20E	1229.1	2:32			318.14	2.399		101.37	101.22	101.15	101.02
	"	22E	1228.4	2:38			318.53	2.412		101.36	101.20	101.13	100.99

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SHEET NO. 10	GRAVITY DATA SHEET					BASE STAT
CLIENT	DATE 5/4/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA Mutooroo	METER CONST.	OPERATOR		C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	74S	24E	1229.2	2:43	〃	〃	318.19	2.426	〃	101.33	101.18	101.11	100.98
	〃	26E	1230.3	2:47	〃	〃	317.90	2.439	〃	101.36	101.21	〃 .14	101.01
	〃	28E	1231.0	2:52	〃	〃	317.44	2.452	〃	101.31	101.17	〃 .09	100.97
	〃	30E	1233.2	2:55	〃	〃	316.73	2.465	〃	101.37	101.23	〃 .16	101.04
	〃	32E	1233.6	3:00	〃	〃	316.66	2.478	〃	101.37	101.23	〃 .16	101.04
	〃	34E	1232.3	3:05	〃	〃	317.18	2.492	〃	101.32	101.18	〃 .11	100.98
	〃	36E	1233.6	3:09	〃	〃	316.92	2.505	〃	101.38	101.24	〃 .17	101.05
RPT	70S	16E	1228.4	3:23	〃	〃	317.49	2.302	〃	101.17	101.03	100.95	100.83
RPT	74S	16E	1230.0	3:32	〃	〃	318.10	2.373	〃	101.37	101.22	101.14	101.01
Base3	78S	16E	1226.5	3:37			319.20	2.444					DRIFT = -1.97×10^{-3}
	74S	14E	1226.6	3:43	〃	〃	318.61	2.431	〃	101.04	100.89	100.81	100.67
	74S	12E	1223.0	3:47	〃	〃	314.47	2.417	〃	100.87	100.71	〃 .63	100.49
	〃	10E	1221.9	3:51	〃	〃	320.33	2.333	〃	101.03	100.86	〃 .78	100.63
	〃	8E	1219.5	3:56	〃	〃	321.36	2.320	〃	101.02	100.84	〃 .75	100.60
	〃	6E	1216.8	4:01	〃	〃	322.19	2.307	〃	100.94	100.75	〃 .66	100.50
	〃	4E	1216.0	4:05	〃	〃	322.80	2.293	〃	101.00	100.81	〃 .71	100.55
	〃	2E	1213.5	4:12	〃	〃	323.42	2.280	〃	100.88	100.69	〃 .59	100.42
	〃	00	1213.2	4:17	〃	〃	324.17	2.267	〃	101.03	100.83	〃 .72	100.55
	〃	2W	1212.8	4:21	〃	〃	324.91	2.254	〃	101.16	100.95	〃 .85	100.67
	〃	4W	1211.8	4:26	〃	〃	325.77	2.241	〃	101.25	101.04	〃 .93	100.75
	〃	6W	1210.9	4:31	〃	〃	326.67	2.278	〃	101.30	101.08	〃 .97	100.76
	〃	8W	1211.7	4:36	〃	〃	326.41	2.214	〃	101.40	101.18	101.07	100.88
	〃	10W	1214.4	4:41	〃	〃	325.23	2.201	〃	101.45	101.24	101.13	100.95
RPT	66S	10E	1222.2	4:56	〃	〃	320.07	2.191	〃	101.14	100.97	100.89	100.75
	〃	12E	1222.8	5:01	〃	〃	320.06	2.204	〃	101.18	101.02	100.93	100.79
	〃	14E	1224.6	5:06	〃	〃	319.31	2.218	〃	101.19	101.03	100.95	100.81

[redacted]

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SHEET NO. 11	GRAVITY DATA SHEET										BASE STAT	
CLIENT	DATE 5/12/84		INSTRUMENT		REF. LEVEL BOOK = ALT SHEETS =					$P_1=$ $P_2=$ $P_3=$		CORR BASE (mgals)
JOB NO.	AREA Meltwater		METER CONST.		OPERATOR					C_1 C_2 C_3		STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	665	16E	1226.8	5:11	↓	↓	318.54	2.231	—	101.23	101.07	100.99	100.86
	"	18E	1229.6	5:16	↓	↓	317.28	2.244	—	101.23	101.08	101.01	100.89
RPT	"	20E	1232.5	5:20	↓	↓	316.13	2.257	—	101.26	101.13	101.06	100.94
RPT	705	16E	1230.2	5:27	↓	↓	317.49	2.302	—	101.27	101.12	101.05	100.92
Base 3	785	16E	1227.2	5:34			319.20	2.444					DRIFT = -0.62×10^{-3}
RPT	705	16E	1230.1	5:43			317.49	2.302					

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SHEET NO. 12	GRAVITY DATA SHEET									BASE STAT
CLIENT	DATE 6/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$					CORR BASE (mgals)
JOB NO.	AREA MUTOOROO	METER CONST.	OPERATOR		C_1 C_2 C_3					STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.6	2.67 REMARKS
Base 1	58S	10E	1228.6	7:57			315.58	2.049					
Base 2	58S	20E	1231.7	8:05	↓		314.80	2.115	—	101.05	100.93	100.87	100.76
	54S	22E	1233.7	8:11	↓		312.94	2.057	—	100.93	100.83	100.77	100.68
	"	20E	1232.3	8:16	↓		313.23	2.044	—	100.86	100.75	100.70	100.60
	"	18E	1231.3	8:20	↓		313.49	2.031	—	100.83	100.72	100.66	100.56
	"	16E	1230.8	8:24	↓		313.66	2.017	—	100.83	100.71	100.66	100.56
	"	14E	1230.9	8:28	↓		313.56	2.005	—	100.83	100.72	100.66	100.57
	"	12E	1231.5	8:32	↓		313.38	1.991	—	100.87	100.76	100.70	100.61
RPT	"	10E	1231.5	8:36	↓		313.66	1.978	—	100.95	100.83	100.78	100.68
RPT	50S	10E	1230.4	8:42	↓		312.47	1.907	—	100.66	100.56	100.51	100.42
	"	12E	1230.1	8:46	↓		311.84	1.920	—	100.48	100.38	100.31	100.25
	"	14E	1230.8	8:51	↓		311.45	1.933	—	100.45	100.36	100.31	100.23
	"	16E	1230.1	8:55	↓		311.73	1.947	—	100.43	100.33	100.28	" .20
	"	18E	1228.7	9:00	↓		311.71	1.960	—	100.26	100.16	100.11	100.03
	"	20E	1228.7	9:03	↓		311.75	1.973	—	100.25	100.15	100.10	100.02
	"	22E	1231.3	9:07	↓		310.79	1.986	—	100.30	100.21	100.16	100.09
	"	24E	1234.8	9:12	↓		310.28	2.000	—	100.54	100.45	100.41	100.34
	"	26E	1235.6	9:16	↓		310.04	2.013	—	100.56	100.47	100.43	100.36
	"	28E	1235.6	9:20	↓		310.53	2.026	—	100.65	100.56	100.52	100.44
	"	30E	1236.7	9:25	↓		310.66	2.039	—	100.78	100.69	100.65	100.57
	"	32E	1234.4	9:29	↓		311.72	2.052	—	100.76	100.66	100.61	100.52
	"	34E	1233.6	9:34	↓		312.42	2.066	—	100.80	100.70	100.65	100.56
	54S	34E	1236.5	9:39	↓		311.44	2.137	—	100.82	100.72	100.67	100.59
	"	32E	1235.0	9:43	↓		311.82	2.123	—	100.76	100.66	100.61	100.52
	"	30E	1234.8	9:47	↓		312.38	2.110	—	100.87	100.77	100.72	100.63
	"	28E	1236.2	9:52	↓		311.81	2.097	—	100.91	100.81	100.76	100.68

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SHEET NO. 13	GRAVITY DATA SHEET									BASE STAT
CLIENT	DATE 6/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$					CORR BASE (mgals)
JOB NO.	AREA MUTOOROO	METER CONST.	OPERATOR		C_1 C_2 C_3					STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	54S	26E	1236.2	9:55	/		311.87	2.084	—	100.94	100.84	100.79	100.76
	"	24E	1235.3	10:00	/		312.28	2.071	—	100.95	100.85	100.79	100.7
RPT	"	22E	1233.7	10:03	/		312.94	2.057	—	100.95	100.84	100.79	100.69
Base 2	58S	20E	1231.5	10:08			314.80	2.115					DRIFT = 0.17 x10^{-5}
Base 2	58S	20E	1231.5	10:17			314.80	2.115					
RPT	54S	34E	1236.5	10:30	/		311.44	2.137	—	100.81	100.71	100.66	100.58
	"	36E	1237.8	10:35	/		311.16	2.150	—	100.86	100.77	" .72	100.64
	"	38E	1238.4	10:38	/		311.04	2.163	—	100.88	100.79	" .74	100.66
	"	40E	1239.4	10:44	/		310.84	2.176	—	100.91	100.82	" .78	100.70
	"	42E	1240.7	10:48	/		310.94	2.189	—	101.09	100.99	" .95	100.87
	"	44E	1241.4	10:53	/		310.92	2.203	—	101.10	101.01	" .96	100.89
	"	46E	1241.9	10:56	/		311.12	2.216	—	101.18	101.09	101.04	100.96
	50S	46E	1238.6	11:02	/		311.00	2.145	—	100.94	100.85	100.80	100.73
	"	44E	1239.5	11:06	/		310.42	2.132	—	100.87	100.78	" .74	100.66
	"	42E	"	11:10	/		310.19	2.118	—	100.89	100.80	" .76	100.69
	"	40E	1238.8	11:14	/		310.17	2.105	—	100.76	100.68	" .63	100.56
	"	~~38E~~ 38 ~~40E~~	1237.0	11:18			310.58					?	
	"	36E	1236.6	11:24	/		311.03	2.079	—	100.74	100.65	" .60	100.52
RPT	"	34E	1234.0	11:28	/		312.42	2.066	—	100.78	100.68	" .63	100.54
	46S	30E	1234.9	11:34	/		310.05	1.968	—	100.48	100.40	" .35	100.28
	"	28E	1236.4	11:37	/		308.94	1.955	—	100.41	100.33	" .30	100.23
	"	26E	1234.3	11:42	/		308.85	1.942	—	100.18	100.11	" .07	100.01
	"	24E	1233.1	11:46	/		309.15	1.929	—	100.13	100.05	" .02	99.95
	"	22E	1230.9	11:51	/		309.85	1.915	—	100.17	100.09	" .05	99.98
	"	20E	1230.9	11:55	/		309.83	1.902	—	100.07	99.99	99.95	99.88
	42S	20E	1231.5	12:00	/		308.23	1.831	—	99.87	99.80	" .76	99.70

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SHEET NO. 14	GRAVITY DATA SHEET					BASE STAT
CLIENT	DATE 6/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA Motor Road	METER CONST.	OPERATOR		C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[illegible]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	42S	22E	1231.1	12:04	/		308.44	1.844	—	99.85	99.78	99.75	99.69
	"	24E	1232.3	12:08	/		307.90	1.858	—	99.84	99.78	99.74	99.69
Base 2	58S	20E	1232.6	12:18			314.80	2.115					DRIFT = 0.94 x 10^{-3}
" "	"	"	1232.9	12:39			314.80	2.115					
RPT	46S	24E	1234.1	12:48	/		309.15	1.929	—	100.15	100.08	100.04	99.97
"	"	26E	1235.9	12:53	/		308.85	1.942	—	" .25	" .18	" .14	99.08
"	"	28E	1237.6	12:57	/		308.94	1.955	—5	100.43	100.35	" .32	100.25
"	"	30E	1236.6	1:01	/		310.05	1.968	—	100.54	100.46	" .42	100.35
	"	32E	1233.7	1:06	/		311.38	1.981	—	100.50	100.40	" .35	100.27
	"	34E	1232.0	1:10	/		312.64	1.995	—	100.57	100.47	" .42	100.33
	"	36E	1236.9	1:14	/		311.38	2.008	—	100.79	100.69	" .64	100.56
	"	38E	1239.2	1:18	/		309.87	2.021	—10	100.68	100.59	" .55	100.48
	"	40E	1239.7	1:22	/		309.57	2.034	— 1	100.64	100.56	" .52	100.45
	"	42E	1240.5	1:26	/		309.37	2.047	—	100.66	100.58	" .54	100.48
	"	44E	1240.0	1:31	/		309.82	2.061	—	100.68	100.60	" .56	100.49
	"	46E	1240.0	1:35	/		310.03	2.074	—	100.67	100.59	" .55	100.48
	"	48E	1238.3	1:40	/		310.45	2.087	—15	100.59	100.50	" .46	100.38
	46S	50E	1237.6	1:46	/		310.97	2.100	—	100.54	100.45	" .40	100.32
	42S	50E	1235.9	1:55	/		310.40	2.029	—	100.37	100.28	" .24	100.17
	"	48E	1237.0	1:58	/		309.78	2.016	—	100.36	100.28	" .24	100.17
	"	46E	1238.8	2:02	/		309.31	2.003	—	100.45	100.37	" .34	100.27
	"	44E	1239.4	2:05	/		308.98	1.990	—10	100.45	100.38	" .34	101.28
	"	42E	1239.4	2:08	/		308.86	1.976	—	100.44	100.37	" .33	100.27
	"	40E	1240.3	2:12	/		308.61	1.963	—	100.49	100.42	" .38	100.32
	"	38E	1239.3	2:16	/		309.24	1.950	—	100.53	100.45	" .42	100.35
	"	36E	1238.3	2:19	/		310.38	1.937	—	100.68	100.60	" .55	100.48

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SHEET NO. 15	GRAVITY DATA SHEET					BASE STAT
CLIENT	DATE 6/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA MUTOOROO	METER CONST.	OPERATOR		C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	42S	34E	1235.4	2:23	/		311.33	1.924	—	100.60	100.50	100.45	100.37
	"	32E	1234.9	2:27	/		310.55	1.910	—	100.38	100.29	100.25	100.17
	"	30E	1235.8	2:30	/		309.47	1.897	—	100.25	100.17	100.13	100.06
	"	28E	1236.0	2:35	/		308.21	1.884	—	100.00	99.93	99.90	99.84
	"	26E	1235.4	2:38	/		307.62	1.871	—	99.82	99.76	99.73	99.67
	"	24E	1234.9	2:41	/		307.90	1.858	—	99.85	99.78	99.75	99.69
Base2	58S	20E	1235.2	2:50			314.80	2.115					DRIFT = -1.82×10^{-3}
Base1	58S	10E	1232.2	3:17			315.58	2.049					
	46S	10E	1231.0	3:27	/		311.90	1.836	—	100.28	100.18	100.13	100.05
	"	8E	1232.3	3:31	/		312.67	1.823	—	100.59	100.49	" .43	100.34
	"	6E	1230.8	3:35	/		314.19	1.810	—	100.78	100.66	" .60	100.50
	"	4E	1228.8	3:39	/		315.94	1.797	—	100.96	100.83	" .76	100.65
	"	2E	1229.4	3:45	/		318.34	1.783	—	101.55	101.40	101.32	101.19
	"	00	1235.8	3:52	/		318.42	1.770	—	102.24	102.09	102.01	101.88
	"	2W	1235.3	3:56	/		318.83	1.757	—	102.29	102.13	" .05	101.92
	"	4W	1232.8	4:00	/		318.80	1.744	—	101.98	101.83	101.75	101.61
	"	6W	1229.0	4:06	/		319.49	1.731	—	101.80	101.64	" .56	101.42
	"	8W	1225.3	4:10	/		320.48	1.717	—	101.65	101.48	" .39	101.25
	"	10W	1221.0	4:13	/		321.68	1.704	—	101.49	101.29	" .20	101.05
	42S	10W	1220.0	4:18	/		321.73	1.633	—	101.46	101.28	" .19	101.04
		8W	1224.6	4:22	/		320.01	1.646	—	101.55	101.38	" .30	101.16
		6W	1229.3	4:28	/		318.37	1.660	—	101.66	101.50	" .43	101.30
		4W	1232.4	4:33	/		316.91	1.673	—	101.64	101.50	" .43	101.31
		2W	1237.5	4:37	/		315.51	1.686	—	101.85	101.72	" .56	101.55
		00	1235.8	4:42	/		315.29	1.699	—	101.61	101.48	" .42	101.31
		2E	1235.1	4:46	/		314.95	1.712	—	101.45	101.32	" .26	101.15

SHEET NO. 16		GRAVITY DATA SHEET								BASE STAT			
CLIENT		DATE 6/12/84		INSTRUMENT		REF. LEVEL BOOK = ALT SHEETS =			$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)			
JOB NO.		AREA MUTOOROO		METER CONST.		OPERATOR			C_1 C_2 C_3	STAND. CORR (mgals)			
REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[K[redacted]]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	42S	4E	1231.9	4:52	/		313.94	1.726	/	100.88	100.76	100.70	100.70
	"	6E	1232.5	4:56	/		312.72	1.739	/	100.66	100.55	" .50	100.41
	"	8E	1233.2	5:01	/		311.61	1.752	/	100.47	100.37	" .32	100.24
	"	10E	1233.0	5:05	/		310.50	1.765	/	100.18	100.09	" .05	99.97
BASE 4	34S	10E	1235.4	5:16	/		308.33	1.623					
Base 1	58S	10E	1233.2	5:24			315.58	2.049					DRIFT = -0.82×10^{-3}
Base 4	34S	10E	1235.5	5:40		100.2390	308.33	1.623					
Base 1	58S	10E	1233.2	5:54			315.58	2.049					DRIFT = 0.000

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SHEET NO. 17			GRAVITY DATA SHEET								BASE STAT
CLIENT		DATE 7/12/84	INSTRUMENT		REF. LEVEL BOOK = ALT SHEETS =			$P_1=$ $P_2=$ $P_3=$			CORR BASE (mgals)
JOB NO.		AREA	METER CONST.		OPERATOR			C_1 C_2 C_3			STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[ ]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
Base 4	34S	10E	1233.4	7:32	″		308.33	1.623	″	100.12	100.05	100.02	99.96
	″	8E	1234.5	7:37	″		309.17	1.610	″	100.43	100.36	100.32	100.25
	″	6E	1233.4	7:42	″		309.88	1.597	″	100.49	100.41	″ .37	100.30
	″	4E	1233.5	7:47	″		311.03	1.584	″	100.77	100.68	″ .63	100.55
	″	2E	1235.8	7:51	″		312.25	1.570	″	101.29	101.18	101.13	101.05
	″	00	1234.5	7:56	″		313.68	1.557	″	101.49	101.37	″ .32	101.22
	″	2W	1233.7	7:59	″		314.98	1.544	″	101.70	101.58	″ .51	101.41
	″	4W	1230.6	8:03	″		316.86	1.531	″	101.80	101.66	″ .59	101.47
	″	6W	1227.3	8:08	″		318.08	1.518	″	101.74	101.59	″ .52	101.39
	″	8W	1222.7	8:12	″		319.36	1.504	″	101.56	101.40	″ .31	101.18
	″	10W	1221.4	8:17	″		319.39	1.491	″	101.45	101.28	″ .20	101.06
	38S	10W	1221.0	8:22	″		320.76	1.562	″	101.62	101.44	″ .36	101.21
	″	8W	1223.7	8:26	″		319.29	1.575	″	101.57	101.41	″ .32	101.19
	″	6W	1228.5	8:30	″		317.73	1.589	″	101.72	101.57	″ .49	100.37
	″	4W	1232.8	8:34	″		316.23	1.602	″	101.83	101.69	″ .62	100.51
	″	2W	1235.0	8:39	″		314.77	1.615	″	101.73	101.60	″ .54	100.44
	″	00	1236.6	8:43	″		313.32	1.628	″	101.57	101.45	″ .40	100.30
	″	2E	1233.8	8:48	″		312.88	1.641	″	101.17	101.06	″ .01	100.91
	″	4E	1231.4	8:52	″		312.08	1.655	″	100.72	100.62	100.57	100.49
	″	6E	1230.9	8:56	″		311.21	1.668	″	100.47	100.38	″ .37	100.25
	″	8E	1231.4	9:00	″		310.61	1.681	″	100.38	100.29	″ .25	100.17
	″	10E	1230.6	9:03	″		309.92	1.694	″	100.13	100.05	″ .01	99.94
RPT	42S	10E	1230.8	9:08	″		310.50	1.765	″	100.20	100.11	″ .07	99.99
Base 4	34S	10E	1232.9	9:14			308.33	1.623					DRIFT = 0.51 x10⁻⁴
	30S	10E	1230.8	9:21		✓	307.93	1.552	″	99.90	99.84	99.80	99.75
	″	8E	1232.5	9:25		✓	308.83	1.539	″	100.29	100.22	100.18	100.12

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SHEET NO. 18	GRAVITY DATA SHEET								BASE STAT
CLIENT	DATE 7/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$				CORR BASE (mgals)
JOB NO.	AREA Motocross	METER CONST.	OPERATOR		C_1 C_2 C_3				STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[illegible]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	305	6E	1230.3	9:30			311.74	1.526		100.71	100.61	100.56	100.48
	"	4E	1229.2	9:34			316.59	1.513		101.66	101.52	101.45	101.33
	"	2E	1231.7	9:38			316.49	1.499		101.91	101.77	" .70	100.59
	"	00	1232.8	9:43			315.27	1.486		101.78	101.65	" .58	101.47
	"	2W	1231.0	9:48			315.97	1.473		101.76	101.62	" .55	101.44
	"	4W	1227.9	9:53			317.49	1.460		101.78	101.63	" .56	101.43
	"	6W	1225.1	9:58			318.03	1.447		101.63	101.48	" .46	101.27
	"	8W	1224.7	10:03			317.70	1.433		101.53	101.38	" .31	101.18
	"	10W	1224.7	10:07			317.066	1.420		101.41	101.26	" .19	101.07
	265	10W	1226.1	10:11			314.92	1.349		101.18	101.05	100.99	100.88
	"	8W	1223.1	10:16			317.57	1.362		101.42	101.25	101.20	101.08
	"	6W	1224.8	10:20			317.11	1.376		101.48	101.33	" .26	101.14
	"	4W	1229.1	10:25			315.17	1.389		101.49	101.36	" .30	101.19
	"	2W	1229.7	10:29			315.40	1.402		101.59	101.46	" .40	101.29
	"	00	1230.3	10:33			315.90	1.415		101.74	101.61	" .55	101.43
	"	2E	1227.0	10:38			318.21	1.428		101.88	101.73	" .66	101.53
	"	4E	1225.0	10:42			317.08	1.442		101.42	101.27	" .21	101.08
	"	6E	1230.0	10:47			310.88	1.455		100.58	100.49	100.45	100.36
	"	8E	1235.8	10:51			306.66	1.468		100.26	100.20	" .18	100.13
	"	10E	1232.9	10:57			306.77	1.481		99.96	99.90	99.87	99.83
Base 4	345	10E	1232.8	11:02			108.33	1.023					DRIFT = 1.3×10^{-3}
	225	10E	1236.0	11:17			304.80	1.410		99.93	99.88	99.87	99.83
	"	8E	1238.2	11:21			305.00	1.397		100.21	100.17	100.15	100.11
	"	6E	1236.5	11:25			307.23	1.384		100.53	100.46	" .43	100.38
	"	4E	1235.0	11:30			310.84	1.371		101.16	101.07	101.02	100.95
		2E	1235.5	11:35			312.52	1.359		101.59	101.49	" .44	101.35

SHEET NO. 19	GRAVITY DATA SHEET					BASE STAT
CLIENT	DATE 7/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA MUTOOROO	METER CONST.	OPERATOR		C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	22S	00	1235.8	11:41	✓	—	311.96	1.344	✓	101.51	101.41	101.36	101.28
	"	2W	1233.8	11:47	✓	—	311.86	1.331	✓	101.29	101.19	" .14	101.06
	"	4W	1229.4	11:51	✓	—	313.56	1.318	✓	101.21	101.10	" .04	100.95
	"	6W	1226.6	11:55	✓	—	314.97	1.305	✓	101.24	101.11	" .05	100.94
	"	8W	1227.7	11:59	✓	—	314.07	1.291	✓ 5	101.17	101.05	100.99	100.89
	"	10W	1228.3	12:03	✓	—	314.00	1.278	—	101.22	101.11	101.05	100.95
	18S	10W	1229.6	12:09	✓	—	311.10	1.207	✓	100.81	100.72	100.67	100.59
	"	8W	1230.6	12:15	✓	—	311.88	1.220	✓	101.06	100.96	" .91	100.83
	"	6W	1229.7	12:19	✓	—	313.06	1.234	✓	101.21	101.10	101.04	100.95
	"	4W	1230.4	12:23	✓	—	311.99	1.247	✓ 10	101.03	100.93	100.88	100.79
	"	2W	1234.4	12:27	✓	—	310.72	1.260	✓	101.15	101.06	101.02	100.94
	"	00	1239.3	12:31	✓	—	309.29	1.273	✓	101.33	101.26	" .22	101.15
	"	2E	1240.4	12:36	✓	—	308.55	1.286	✓	101.27	101.20	" .16	101.10
	"	4E	1241.4	12:40	✓	—	307.49	1.300	✓	101.11	101.05	" .02	100.97
	"	6E	1238.1	12:45	✓	—	306.35	1.313	✓	100.50	100.45	100.43	100.08
	"	8E	1237.1	12:48	✓	—	305.27	1.326	✓	100.15	100.14	100.08	100.05
	"	10E	1237.2	12:53	✓	—	303.83	1.339	✓	99.83	99.80	99.78	99.75
RPT	22S	10E	1237.0	12:58	✓	—	304.80	1.410	✓	99.93	99.89	99.87	99.83
Base 4	34S	10E	1234.0	1:07		14	308.33	1.623					DRIFT = 1.03×10^{-3}
Base 5	18S	10E	1237.1	1:16			303.83	1.339					
Base 4	34S	10E	1234.3	1:25			308.33	1.623					DRIFT = -1.73×10^{-2}
Base 5	18S	10E	1237.7	2:04			303.83	1.339					
	14S	10E	1238.8	2:09	✓		303.33	1.268	—	99.86	99.83	99.82	99.80
	"	8E	1239.4	2:13	✓		303.94	1.255	✓	100.06	100.02	100.01	99.98
	"	6E	1240.0	2:17	✓		305.50	1.242	— 103	100.41	100.37	" .35	100.31
		4E	1241.5	2:22	✓		306.32	1.229	✓ 1	100.79	100.73	" .71	100.66

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SHEET NO. 20	GRAVITY DATA SHEET									BASE STAT
CLIENT	DATE 7/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =		$P_1=$ $P_2=$ $P_3=$					CORR BASE (mgals)
JOB NO.	AREA MUTOOROO	METER CONST.	OPERATOR		C_1 C_2 C_3					STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[Mgal]		2.2	2.4	2.5	2.67 REMARKS
	14S	2E	1240.0	2:28	/		308.35	1.215	✓	101.06	100.99	100.96	100.90
	"	00	1237.8	2:34	/		310.71	1.202	✓	101.34	101.25	101.21	101.13
	"	2W	1236.5	2:38	/		311.28	1.189	✓	101.33	101.23	101.19	101.11
	"	4W	1235.1	2:42	/		310.31	1.176	✓	100.97	100.89	100.85	100.77
	"	6W	1235.1	2:46	/		310.94	1.163	✓	101.12	101.03	" .98	100.88
	"	8W	1234.3	2:51	/		310.68	1.149	✓	100.98	100.89	" .84	100.77
	"	10W	1234.3	2:55	/		309.61	1.136	✓	100.75	100.67	" .63	100.56
	10S	10W	1235.6	3:00	/		308.03	1.065	✓	100.61	100.54	" .51	100.45
	"	8W	1236.5	3:04	/		308.86	1.078	✓	100.85	100.78	" .74	100.68
	"	6W	1238.8	3:07	/		309.24	1.092	✓	101.14	101.06	101.03	100.96
	"	4W	1242.3	3:12	/		307.75	1.105	✓	101.15	101.09	" .05	101.00
	"	2W	1243.6	3:16	/		307.97	1.118	✓	101.31	101.24	" .20	101.15
	"	00	1243.6	3:20	/		308.13	1.131	✓	101.31	101.24	" .21	101.15
	"	2E	1245.3	3:25	/		306.56	1.144	✓	101.12	101.06	" .03	100.99
	"	4E	1231.9	3:33	/		309.95	1.158	✓	100.42	100.33	100 .29	100.22
	"	6E	1244.0	3:40	/		303.77	1.171	✓	100.30	100.27	" .25	100.22
	"	8E	1245.0	3:44	/		302.52	1.184	✓	100.10	100.08	" .07	100.05
	10S	10E	1245.1	3:48	/		301.85	1.197	✓	99.94	99.92	99.91	99.90
RPT	14S	10E	1242.0	3:53	/		303.33	1.268	✓	99.83	99.81	99.79	99.77
Base 5	18S	10E	1241.5	3:58			303.83	1.339					DRIFT = -3.46×10^{-3}
Base 5	18S	10E	1242.0	4:20			303.83	1.339					
RPT	14S	10E	1242.7	4:26			301.85	1.268					
Base 6	82N	52W	1222.2	4:49	✓	100.00	304.80	0.373	✓	101.83	100.98	100.95	100.91
	"	54W	1221.2	4:55	✓		305.24	0.359	✓	101.02	100.96	" .93	100.88
	"	56W	1221.2	4:58	✓		304.72	0.346	✓	100.92	100.86	" .83	100.78
	"	58W	1221.2	5:02			304.03	0.333	✓	100.77	100.72	" .69	100.65

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SHEET NO. 21	GRAVITY DATA SHEET			BASE STAT
CLIENT	DATE 7/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =	$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA MUTOOROO	METER CONST.	OPERATOR	C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	82N	60W	1221.2	5:05	✓		303.43	0.320	✓	100.65	100.60	100.58	100.54
	"	62W	1220.3	5:10	✓		302.85	0.306	✓	100.44	100.40	" .38	100.34
	"	64W	1220.0	5:14	✓		302.96	0.293	✓	100.43	100.39	" .37	100.37
	"	66W	1220.7	5:19	✓		302.40	0.280	✓	100.39	100.35	" .33	100.30
	"	68W	1221.7	5:23	✓		301.31	0.267	✓	100.26	100.23	" .22	100.19
	"	70W	1223.0	5:26	✓		300.41	0.254	✓	100.21	100.19	" .18	100.16
	"	72W	1224.0	5:30	✓		299.28	0.240	✓	100.07	100.05	" .05	100.04
	"	74W	1224.8	5:34	✓		298.40	0.227	✓	99.99	99.98	99.98	99.98
	78N	74W	1225.6	5:38			298.74	0.2983	✓	100.03	100.02	100.02	100.02
	"	72W	1224.5	5:42			299.61	0.3115	✓	100.00	99.99	99.98	99.97
	"	70W	1223.7	5:45			300.19	0.3247	✓	100.09	100.07	100.07	100.05
	"	68W	1223.7	5:48			300.60	0.3379	✓	100.16	100.14	" .13	100.11
see new picture on P. 24 →	"	66W	1224.5	5:53	reading in doubt		301.95	0.3511	✓	100.51	100.47	" .46	100.43
	"	64W	1222.8	5:57			301.94	0.3643	✓	100.30	100.27	" .25	100.23
	"	62W	1223.3	6:00			302.50	0.3775	✓	100.45	100.42	" .40	100.37
	"	60W	1224.2	6:03			302.71	0.3907	✓	100.57	100.53	" .51	100.48
	"	58W	1224.5	6:07			303.28	0.4039	✓	100.69	100.65	" .62	100.59
	"	56W	1225.1	6:11			304.02	0.4171	✓	100.90	100.85	" .82	100.78
	"	54W	1225.0	6:14			304.84	0.4303	✓	101.04	100.98	" .96	100.91
	"	52W	1223.1	6:17			305.97	0.4435	✓	101.06	100.99	" .96	100.90
Base 6	82W	52W	1224.6	6:22									DRIFT = -2.68×10^{-5}
		126	stations read for 7/12/84										
10 Base stations				20000 ft completed									
4 repeat stations													

Norrisprint

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SHEET NO. 22	GRAVITY DATA SHEET								BASE STAT
CLIENT	DATE 9/12/84	INSTRUMENT		REF. LEVEL BOOK = ALT SHEETS =			$P_1=$ $P_2=$ $P_3=$		CORR BASE (mgals)
JOB NO.	AREA	METER CONST.		OPERATOR			C_1 C_2 C_3		STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$	
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67	REMARKS
Base 5	18S	10E	1241.8	7:24			303.83	1.339						
RPT	14S	10E	1242.2	7:30	″		303.33	1.268	″	99.81	99.78	99.77	99.74	
RPT	10S	10E	1245.0	7:35	″		301.85	1.197	″	99.87	99.85	99.85	99.83	
	6S	10E	1245.7	7:40	″		301.14	1.126	″	99.87	99.86	99.86	99.85	
	″	8E	1244.6	7:43	″		304.17	1.113	″	100.43	100.39	100.38	100.35	
	″	6E	1244.8	7:48	″		303.97	1.100	″ (9)	100.42	100.39	100.37	100.35	
	″	4E	1243.4	7:52	″		304.83	1.087	″	100.48	100.48	100.42	100.39	
	″	2E	1246.9	7:56	″		304.76	1.073	″	100.86	100.82	100.80	100.76	
	″	00	1247.4	8:00	″		304.61	1.060	″	100.89	100.86	100.84	100.80	
	″	2W	1247.8	8:03	″		304.97	1.047	″	101.03	100.99	100.97	100.93	
	″	4W	1244.0	8:07	″		306.37	1.034	″ (10)	100.96	100.90	100.88	100.83	
	″	6W	1243.2	8:11	″		307.20	1.020	″	101.07	101.01	100.98	100.93	
	″	8W	1240.0	8:16	″		306.71	1.007	″	100.65	100.59	100.57	100.52	
	″	10W	1238.4	8:20	″		306.43	0.994	″	100.44	100.39	100.36	100.31	
	2S	10W	1239.7	8:25	″		304.69	0.923	″	100.29	100.25	100.23	100.20	
	″	8W	1242.2	8:30	″		303.98	0.936	″ (15)	100.38	100.35	100.33	100.31	
	″	6W	1243.9	8:35	″		303.94	0.945	″ (16)	100.55	100.51	100.50	100.47	
	″	4W	1246.2	8:39	″		303.15	0.963	″ (17)	100.60	100.57	100.56	100.54	
	″	2W	1245.6	8:44	″		303.54	0.976	″ (18)	100.61	100.58	100.57	100.54	
	″	00	1248.3	8:48	″		302.63	0.989	″ (19)	100.68	100.66	100.65	100.63	
	″	2E	1244.6	8:53	″		304.22	1.002	″ (20)	100.63	100.60	100.58	100.55	
	″	4E	1242.0	8:57	″		304.09	1.016	″ (21)	100.31	100.28	100.26	100.23	
	″	6E	1244.9	9:00	″		303.98	1.029	″	100.58	100.54	100.53	100.50	
	″	8E	1245.6	9:04	″		300.99	1.042	″	99.99	99.98	99.98	99.97	
	″	10E	1244.5	9:08	″		300.47	1.055	″	99.69	99.69	99.69	99.69	
RPT	6S	10E	1244.6	9:12	″		301.14	1.126	″	99.83	99.82	99.81	99.80	

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SHEET NO. 23	GRAVITY DATA SHEET				BASE STAT
CLIENT	DATE 9/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =	$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA	METER CONST.	OPERATOR	C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[redacted]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
RPT	105	10E	1244.2	9:17	/		301.85	1.197	⌐	99.87	99.85	99.84	99.83
RPT	145	10E	1241.5	9:22	/		303.33	1.268	✓	99.82	99.80	99.78	99.76
Base 5	185	10E	1240.9	9:26			303.83	1.197					

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SHEET NO. 24	GRAVITY DATA SHEET				BASE STAT
CLIENT	DATE 9/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =	$P_1=$ $P_2=$ $P_3=$	CORR BASE (mgals)
JOB NO.	AREA MUTOO ROO	METER CONST.	OPERATOR	C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	MILES [Km North of N.S.Bl]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
Base 6	82N	52W	1220.2	11:00			304.80	0.227					
RPT.	82N	62W	1217.8	11:08			302.85	0.386		100.42	100.38	100.36	100.23
"	78N	64W	1219.4	11:15			301.94	0.364		100.31	100.27	100.26	100.23
"	"	66W	1221.1	11:19			301.25	0.351		100.34	100.31	100.30	100.27
"	"	68W	1220.3	11:23			300.60	0.338		100.12	100.10	100.09	100.07
Base 6	82N	52W	1221.7	12:08			304.80	0.227					

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SHEET NO. 25 — GRAVITY DATA SHEET

CLIENT | DATE 10/12/84 | INSTRUMENT | REF. LEVEL BOOK = ALT SHEETS =

JOB NO. | AREA Mutooroo | METER CONST. | OPERATOR

REMARKS [RPT?]	LINE	STAT	RDG [DIV]	TIME	TIDAL Mgals	CORR RDG [Mgal]	ELEV [Meters]	LAT or LAT CORR [Km North of N.S.B.]	[Mgal]	BASE STAT
Base 1	585	10E	1236.2	3:08			2.049			
〃	〃	〃	1236.2	3:11			〃			
〃	〃	〃	1236.2	3:13			〃			
	665	2E	1225.6	3:24	-	321.06	2.138		✓	
	〃	4E	1228.5	3:29	-	319.42	2.152		✓	
	〃	6E	1230.7	3:33	-	318.87	2.165		✓	
	〃	8E	1230.1	3:36	-	319.23	2.178		✓	
	〃	10E	1229.4	3:41	-	320.07	2.191		✓	
	705	10E	1228.65	3:46	-	320.13	2.262		✓	
	〃	8E	1228.30	3:51	-	320.92	2.249		✓	
	〃	6E	1227.7	3:55	-	320.86	2.236		✓	
	〃	4E	1226.9	3:59	-	320.85	2.222		✓	
	〃	2E	1223.6	4:03	-	321.57	2.209		✓	
	〃	00	1223.6	4:06	-	322.57	2.196		✓	
	〃	2W	1221.1	4:10	-	324.36	2.183		✓	
	〃	4W	1219.2	4:15	-	325.57	2.170		✓	
	〃	6W	1217.7	4:19	-	326.05	2.157		✓	
	〃	8W	1220.1	4:25	-	325.63	2.143		✓	
	〃	10W	1222.6	4:30	-	324.24	2.130		✓	
	665	10W	1223.9	4:34	-	323.62	2.059		✓	
	〃	8W	1221.3	4:38	-	324.46	2.072		✓	
	〃	6W	1220.4	4:42	-	324.82	2.086		✓	
	〃	4W	1219.3	4:45	-	325.24	2.099		✓	

P_1 = P_2 = P_3 = | CORR BASE (mgals)

C_1 C_2 C_3 | STAND. CORR (mgals)

$C_n = 0.3086 - 0.04185 - P_n$

BOUGUER GRAVITY 2.2	2.4	2.5	2.67 REMARKS
100.92	100.75	100.66	100.51
100.85	100.69	100.61	100.47
100.94	100.78	100.71	100.57
100.94	100.78	100.70	100.56
101.03	100.86	100.76	100.64
100.88	100.71	100.62	100.48
101.82	100.85	100.76	100.61
100.96	100.78	100.70	100.55
100.89	100.72	100.63	100.48
100.72	100.54	100.45	100.29
100.94	100.76	100.66	100.50
101.08	100.88	100.78	100.60
101.17	100.94	100.84	100.66
101.12	100.90	100.79	100.61
101.29	101.07	100.96	100.78
101.25	101.05	100.95	100.78
101.29	101.09	100.99	100.82
101.23	101.03	100.92	100.75
101.20	100.99	100.89	100.71
101.16	100.95	100.89	100.66

SHEET NO. 26	GRAVITY DATA SHEET				BASE STAT
CLIENT	DATE 10/12/84	INSTRUMENT	REF. LEVEL BOOK = ALT SHEETS =	P_1= P_2= P_3=	CORR BASE (mgals)
JOB NO.	AREA MUTOOROO	METER CONST.	OPERATOR	C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 - 0.04185 - P_n$
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[~~Min North~~]	[Mgal]	2.2	2.4	2.5	2.67 REMARKS
	66S	2W	1222.9	4:50			324.71	2.112		101.63	101.42	101.32	101.15
	"	00	1225.5	4:54			323.77	2.125		101.46	101.26	101.16	100.99
RPT	"	2E	1226.4	4:57			321.06	2.136		100.94	100.76	100.67	100.52
Base1	58S	10E	1237.1	5:05			315.58	2.049					

Norrisprint

NORANDA AUSTRALIA LIMITED

ELEVENTH QUARTERLY REPORT TO 4TH JULY, 1985

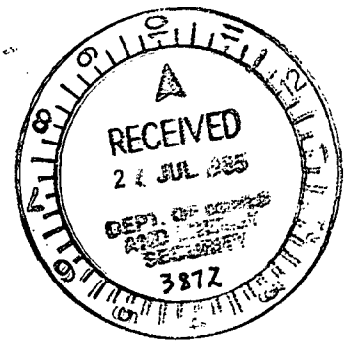
FOR

EXPLORATION LICENCE NO.1044 (MUTOOROO)

BY

P.A.ZARZAVATJIAN

July, 1985



CONTENTS

1. INTRODUCTION

This is the eleventh quarterly report for Exploration Licence No. 1044 (Mutooroo), and covers exploration activity for the three months period to 4th July, 1985.

2. SUMMARY OF ACTIVITY

The principal work during this quarter concentrated on a broad review of the geology in the general area of Mutooroo Copper Mine with the aim of explaining local gravity highs discussed in the previous quarterly report. Also, enquiries were made to locate a suitable three dimensional computer programme that can be usefully employed to model the source of the gravity anomalies in question.

3. EXPENDITURE

Expenditure for Exploration Licence 1044 for the months to 4th July, 1985, is summarized below:

Geology	$ 324.60
Geophysics	$5,626.79
Land Admin.	$ 370.98
Supervision	$1,340.00
TOTAL	$7,662.37

NORANDA AUSTRALIA LIMITED

TWELFTH QUARTERLY REPORT TO 4TH OCTOBER, 1985

FOR

EXPLORATION LICENCE NO. 1044 (MUTOOROO)

SUMMARY OF ACTIVITIES

Research has continued into the interpretation of the gravity anomaly centred on Line 46S.

To date no three dimensional computer programme appears to be readily available, and the existing programmes researched must be greatly modified to meet the existing Noranda computer systems. This work is continuing.

EXPENDITURE

Expenditure for Exploration Licence No. 1044 for the quarter ending 4th October, 1985, is summarized below:-

Geology	593
Geophysics	1,568
Supplies	5
Land Admin.	141
Supervision	231
	$2,538

NORANDA AUSTRALIA LIMITED

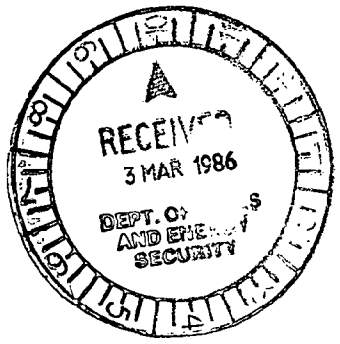
THIRTEENTH QUARTERLY REPORT TO

4th JANUARY, 1986

for

EXPLORATION LICENCE NO.1044

(MUTOOROO)



NORANDA AUSTRALIA LIMITED
THIRTEENTH QUARTERLY REPORT TO 4th JANUARY, 1986
FOR EXPLORATION LICENCE NO. 1044 (MUTOOROO)

SUMMARY OF ACTIVITIES

Activity during the quarter was restricted to a review of gravity information collected earlier in 1985 by Noranda.

During the most recent phase of the field exploration programme two to three local gravity anomalies were recorded. One anomaly which appeared to be worth further investigation is a circular feature about 0.6 milligals above background and centred at 46S/1W. Correlation of the anomaly position with previous drilling results indicate that the source of this anomaly would probably have been intersected by holes DDMM6 and DDMM18. The interpreted geological section shows hole DDMM6 intersected 20 feet of copper mineralisation assaying 2.19% and holes DDMM18, 12 feet assaying 1.93%. These intersections are of the same order of magnitude as intersections in other holes drilled elsewhere along the strike of the zone of interest. Likewise, the host rock geology for the above two holes is similar to that of the other holes. As the localized nature of the gravity high in question as well as its shape make it difficult to relate the anomaly to the geometry of the sulphides intersected in the drill holes, it is most likely that the gravity high is the expression of density variations within the host rocks.

FUTURE PLANS

We are considering applying for a Retention Lease over the area of known mineralisation and to allow the Licence to expire this year. We will be writing to the Department of Mines and Energy in the near future concerning the application for such a lease.

EXPENDITURE

An expenditure of $250 relating to geophysical interpretation was incurred for Exploration Licence No. 1044 during the quarter.

NORANDA AUSTRALIA LIMITED
FOURTEENTH QUARTERLY REPORT TO
30 APRIL 1986
FOR
EXPLORATION LICENCE NO. 1044
MUTOOROO

SUMMARY OF ACTIVITIES

During the quarter ended 3 April 1986, Noranda continued to review the geological and geophysical data in the area of the Mutooroo Copper Mine. No field activity was carried out.

EXPENDITURE

Recorded expenditure on Exploration Licence No. 1044 for the quarter to 3 April 1986 is $400.48 relating to geological supervision.

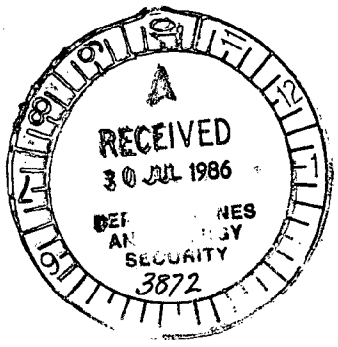
NORANDA AUSTRALIA LIMITED
FIFTEENTH QUARTERLY REPORT TO
3RD JULY, 1986
FOR
EXPLORATION LICENCE NO. 1044
MUTOOROO

SUMMARY OF ACTIVITIES

No field activity was carried out during the quarter ended 3rd July, 1986. Noranda continued a limited review of the geological and geophysical data on the Mutooroo area. The main purpose of the recent data review was to determine whether additional geophysical surveys could be effectively employed in future exploration, particularly around the Mutooroo Copper Mine.

EXPENDITURE

No significant expenditure was recorded against Exploration Licence No. 1044 during the quarter.



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NORANDA AUSTRALIA LIMITED
SIXTEENTH QUARTERLY REPORT TO
3 OCTOBER 1986
FOR
EXPLORATION LICENCE NO. 1044
MUTOOROO

SUMMARY OF ACTIVITIES

No active field work was undertaken during the quarter ended 3 October 1986. Noranda continued a monitoring role on the Mutooroo copper project.

EXPENDITURE

Recorded expenditure on Exploration Licence No. 1044 for the Quarter to 3 October 1986 was $255.15 relating to geological and administrative supervision on the project.