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EL 547 AND E 964

MILANG

FIRST PARTIAL SURRENDER REPORT AT LICENCE EXPIRY/RENEWAL, FOR THE PERIOD 13/11/1979 TO 21/2/1985

Submitted by
CRA Exploration Pty Ltd
1985

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

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

Government of South Australia
Primary Industries and Resources SA

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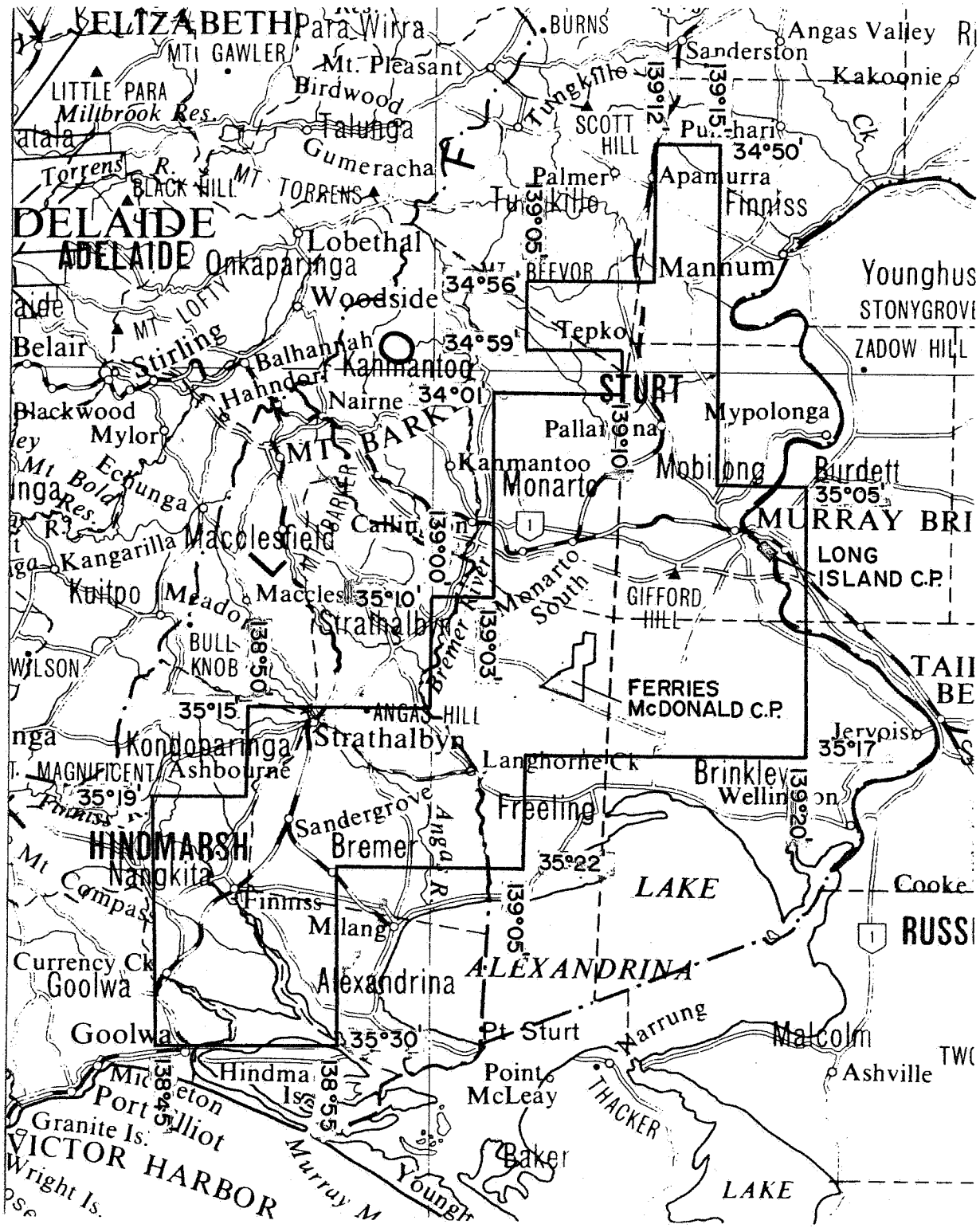
SCHEDULE A



SCALE 1:500,000

KILOMETRES 10 0 10 20 30 40 50 KILOMETRES

APPLICANT: C.R.A. EXPLORATION PTY LTD

DM: 283/79 AREA: 1453 square kilometres

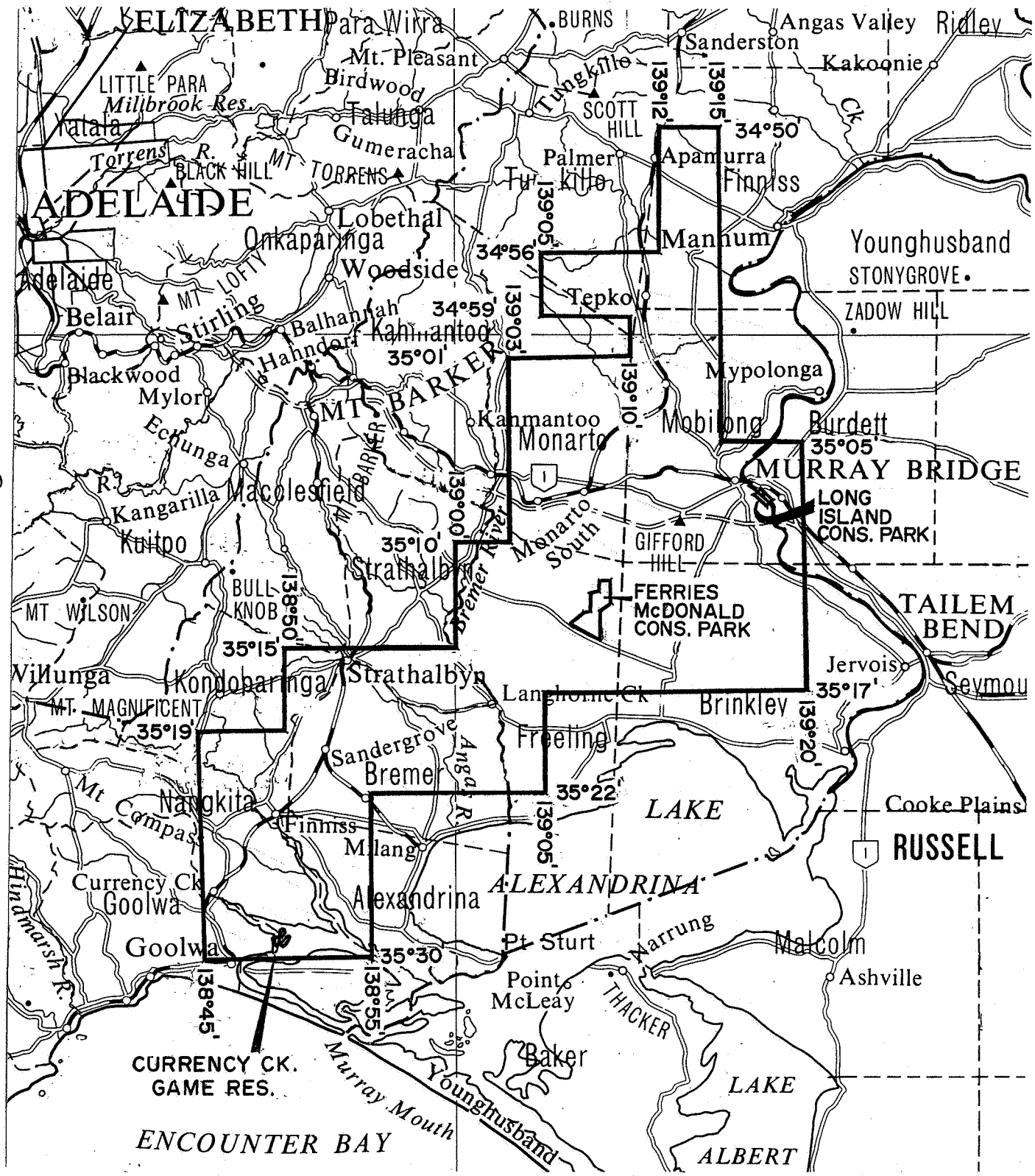
1:250000 PLANS: ADELAIDE BARKER

LOCALITY: STRATHALBYN — MANNUM AREA — APPROX 60 km E of ADELAIDE

DATE GRANTED: 13·11·79 DATE EXPIRED: 12·11·86

EL No: 547

SCHEDULE A



EXPIRED

SCALE 1:500,000

KILOMETRES 10 0 10 20 30 40 50 KILOMETRES

APPLICANT: CRA EXPLORATION PTY. LIMITED

DM: 594/81 AREA: 1453 square kilometres approximately

1:250 000 PLANS: ADELAIDE · BARKER

LOCALITY: STRATHALBYN — MANNUM AREA

DATE GRANTED: 22·2·82 DATE EXPIRED: 21·2·~~83~~ 84 A 85 A

EL No: 964

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TENEMENT HOLDER: CRA Exploration Pty. Ltd.

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CRA EXPLORATION PTY. LIMITED

PARTIAL RELINQUISHMENT REPORT

FOR MILANG E.L. 964, SOUTH AUSTRALIA,

FEBRUARY, 1985.

AUTHOR: P. LEWIS

COPIES TO: CIS CANBERRA
SADME

DATE: 15TH APRIL, 1985

SUBMITTED BY:

ACCEPTED BY:

CONTENTS

1. SUMMARY

Four gravity traverses and 11 rotary mud drill holes were completed within the Reedy Creek sub basin to test for sedimentary uranium deposits within Eocene sediments. The Tertiary sediments intersected are dominantly marine. The drilling did not define any lateral redox fronts and all uranium assays were low.

Detailed aeromagnetic and radiometric surveys were flown over the western margin of the Murray Basin to obtain detailed structural information on the pre-Tertiary basement. Scout drilling was undertaken along the margin of the Murray Basin to test for shallow lignite development. No carbonaceous or lignitic sediments were intersected.

Ground magnetic data was acquired over four discrete aeromagnetic anomalies selected as kimberlite targets. Drill testing of one of the anomalies intersected an altered ultramafic.

Ground magnetic and bedrock geochemical data were acquired over an intense aeromagnetic anomaly north-east of Callington. Drill testing of a zone of anomalous copper geochemistry did not intersect any significant mineralisation.

An INPUT survey was flown over the central part of Milang E.L. 964. Ground magnetic and Sirotem surveys were completed over two coincident magnetic-INPUT anomalies which occur beneath shallow Tertiary cover. Drill testing of these anomalies did not intersect any significant mineralisation.

2. INTRODUCTION

Milang E.L. 964 (formerly E.L. 547) covers an area of 1453 square kilometres centred approximately 70 km SE of Adelaide (plan SAa 3308). The tenement was granted to CRA Exploration Pty. Limited on the 22nd February, 1982. The term of the licence was extended to 36 months on 22nd February, 1984. The area held under title by CRAE in the Kanmantoo Trough was reviewed and an application for one tenement (Hartley E.L.A.) covering Callington E.L. 1061 and parts of Brukunga E.L. 1180, Bull Creek E.L. 1008 and Milang E.L. 964 was lodged with the SADME.

This report describes all work carried out by CRAE in the area to be relinquished under title as E.L. 964 or E.L. 547 (plan SAa 3308).

3. CONCLUSIONS

Work programmes completed by CRA Exploration have significantly downgraded the potential of the area to be relinquished, to host either sedimentary uranium or lignite deposits within the Tertiary sediments of the western Murray Basin, or pyrrhotite associated base metal deposits within Lower Cambrian rocks of the Kanmantoo Trough. Follow up of discrete magnetic anomalies did not disclose any kimberlites.

4. WORK CARRIED OUT

4.1 Uranium Exploration

4.1.1 Reedy Creek Drainage Basin (after Andrews; 1980a,1981)

Reedy Creek flows eastwards into the Murray Basin draining an area of approximately 310 square kilometres of Palaeozoic gneisses, granites and schists. A block faulted Tertiary basin occurs where the creek debouches onto the Murray Basin. Detailed gravity surveys and drilling were completed to test for sedimentary uranium deposits within Eocene sediments in this basin.

4.1.1.1 Gravity (from Andrews & Venables; 1981)

Four gravity traverses (totalling 34.4 line kilometres) were completed across the basin (plan SAa 727). Line 1 was surveyed over the period 7th-10th March and 2nd April, 1980. Equipment used was a La Coste and Romberg gravity meter #544, a theodolite and EDM. Gravity stations were established at 200 m intervals, with repeat readings at 1½-2 hour intervals to correct for tidal effects. The observed gravity readings were reduced using a dial factor of 1.02143 and a Bouguer density of 2.67 gm/cc. Repeatability of the Bouguer gravity values is estimated to be better than ±0.03 milligals.

Lines 2, 3 and 4 were surveyed over the period from December 31, 1980, to January 4, 1981, by Geoterrex Pty. Ltd. Operational details are outlined in the attached Logistics report (Appendix I).

For station relocation purposes, the following benchmarks were occupied:

BM8007	Line 1	Station 00S
BM4015	Line 1	Station 17100S

The Bouguer gravity profiles and interpreted basement models for line 1,2,3 and 4 occur in Appendix I. The basement models were generated using a 2D inversion program and the results checked by being input into a 2D forward-modelling program. Geological control was available at four locations on line 1 and using a uniform density contrast between basement and Tertiary cover of 0.6 gm/cc, the following actual/interpreted depths are obtained:

Location Drill Hole	Actual Depth To Basement	Interpreted Depth To Basement
8500S no. 744 sheet 6728-III	73	72.5
9000S CRAE 80RCRM4	35	47
9800S CRAE 80RCRM6	81	85
10650S CRAE 80RCRM5	<135	170

The depths obtained from interpretation of line 1 were then used as a starting control point for interpretation of the remaining three lines. Listings of interpreted depths to basement for each station of each line are appended.

Line 1: The most prominent feature on the profile is a three milligal low of four kilometres width. This is interpreted to represent a depression with a maximum depth of 170 m, fault bounded to the north at approximately 10 000 m, and shallowing to sub outcrop at the end of the line (17 000 m). A smaller depression of depth 70 m is interpreted to lie between 3000 m and 6000 m. There is occasional basement outcrop between 0 m and 3000 m (Note: a non-linear regional has been subtracted from the Bouguer gravity to produce the observed data shown).

Line 2: This line runs parallel to Reedy Creek from 1000 m to the east end of the line. The interpreted depth to basement along this section of the gravity line is consistent with this situation, with depths varying from 0-13 m. The western end of the line indicates a deepening of basement, and was estimated to be 60 m at 00 m.

Line 3: This profile shows a gradient of three milligals from 00 m to 3000 m, which was interpreted to represent basement rising from approximately 180 m to sub outcrop at the intersection of line 1. The figure of 180 m may have in part be due to 'end effects' inherent in the inversion program; a more realistic figure may be closer to 130 m. The remainder of the line is essentially constant at a depth which was modelled at 40-50 m.

Line 4: Two prominent lows are evident on this profile; a relatively narrow low of 2.5 milligals at 1500 m, and a broader anomaly of three milligals from 6000 m to 9000 m. The former was modelled as a channel of maximum depth 180 m, correlating with the depression at the west end on line 3. The broader low is the equivalent of the fault-bounded depression evident on line 1, and had a maximum interpreted depth of 210 metres.

Aeromagnetic profiles from the 1978 BMR survey of Adelaide-Renmark and Barker-Pinnaroo sheets show an inflexion on lines 1690 to 1770 consistent with a fault. This feature extends from four kilometres south of line 4 to two kilometres north of line 2 (plan SAa 727), trending north-north-west along the western edge of the channel defined on lines 3 and 4. Modelling indicates that the depth to top of the western (uppermost) block is in excess of 100 m, which in conjunction with the gravity data implies a source below the top of the basement. The model is, however, consistent with a vertical displacement of the order of 100 m.

4.1.1.2 Drilling (after Andrews 1980a,1981; Andrews & Wills 1981; Venables 1981)

Three phases of rotary mud drilling were completed. Drill holes 80RCRM1 to 4 were completed by Sides Drilling Company during July, 1980, in the southern reaches of the Reedy Creek basin. Three holes (80RCRM1 to 3) were abandoned in cavernous limestone due to lost circulation without penetrating the target horizon. Drill holes 80RCRM5 and 80RCRM6 (sited near to abandoned holes 80RCRM1 and 80RCRM2) were completed by J.J. Preiss and Sons in October, 1980. Both drill holes penetrated the Tertiary target horizon. Drill holes 81RCRM1 to 5 were completed by Sides and Sons during August, 1981, across the northern part of the basin. Thin carbonaceous Tertiary sequences were intersected in drill holes 81RCRM1 and 81RCRM3. Fluvial Quaternary sequences were intersected in all drill holes. The drill hole locations are shown on plans SAa 443 and 1104 and detailed geological logs occur in Appendix II.

Selected samples of the Tertiary sequences intersected in drill holes 80RCRM1 to 6 were analysed for copper, lead, zinc, gold and uranium. No significant geochemical anomalies were recorded. Zones of weakly anomalous gamma activity recorded in drill holes 81RCRM2 to 3 were analysed for uranium and fluvial quartz sequences were analysed for gold. Maximum uranium assay reported was 18 ppm from the interval 20-20 m in 81RCRM3. All gold assays were below the detection limit of 0.05 ppm. Full assay results occur in Appendix II.

Downhole gamma, density, resistivity and self potential logs were obtained for drill holes 80RCRM1 to 6 using the portable SIE logger. Drill holes 81RCRM1 to 3 were geophysically logged by Century Geophysics for gamma, self potential, neutron-neutron resistance, caliper and density. Composite drill logs are presented in Appendix II.

4.1.1.3 Interpretation (after Andrews 1981)

The Tertiary sediments intersected within the Reedy Creek basin are dominantly marine. The drilling did not define any lateral development of redox fronts within the Tertiary sediments although vertical transition from oxidised to reduced sediments occurs in most drill holes. The Tertiary sediments are invariably reduced as indicated by the presence of fresh glauconite and carbonaceous material.

4.2 Coal Exploration

4.2.1 Airborne Surveys (Andrews & Venables 1981)

Detailed airborne magnetic and radiometric surveys were flown over selected areas (Murray Bridge, Narrung) along the western margin of the Murray Basin to obtain structural and lithological information on the Pre-Tertiary basement. The specifications of the survey are presented in table 1.

Table 1 Airborne Survey Specifications

Survey	Murray Bridge	Narrung
Area sq km	1730	1150
Flight line spacing	300 m	500 m
Flight line direction	E-W	E-W
Line kilometres	5760	2300
Altitude	70 m	80 m
Magnetometer	Geometrics G803	Varian V85
Sampling Interval	0.5 sec (25 m)	0.8 sec (50 m)

Survey	Murray Bridge	Narrung
Sensitivity	1.0 nT	1.0 nT
Spectrometer	Spectra II (1500 c.i.)	Geometrics (2048 c.i.)
Contractor	Geoex	Geosearch
Processing	Geoex	Geosearch

The contoured magnetic data at 1:50 000 is presented in Appendix VII.

The located magnetic data tapes are held by the SADME.

4.2.2 Drilling (after Bubner 1982a; McBain 1982)

Seven rotary mud holes, totalling 778 metres, were drilled within the Milang E.L. by W.L. Sides and Son as part of a major programme in the western Murray Basin. Six of these holes occur in the area to be relinquished (plan SAa 3308).

4.2.2.1 Drill Hole Results

No carbonaceous or lignitic intervals were intersected in the drill holes. The thickness of Tertiary sediments increases to the south, with local variations reflecting relief in the Pre-Tertiary basement. Detailed drill logs, cross sections and a full evaluation of the Murray Basin drilling are presented in McBain 1982.

4.2.2.2 Geochemistry

Selected samples from drill hole 81MBR66 were analysed for copper, lead, zinc, uranium and gold. No anomalous values worthy of follow up were returned. Full assay results occur in McBain 1982.

4.2.2.3 Downhole Geophysics

All holes were geophysically logged for density, caliper, natural gamma, neutron, self potential and resistivity by Century Geophysics. Composite logs occur in McBain 1982.

4.3 Diamond Exploration

4.3.1 Aeromagnetic Interpretation (after Bubner 1982a)

A review of the Murray Bridge and Narrung airborne survey data was undertaken to select point source anomalies. Fifteen anomalies were selected for follow up within the Milang E.L. 964. Four of these occur in the area to be relinquished (Appendix VII).

4.3.2 Ground Magnetics (from Bubner 1982b)

Ground magnetics data was acquired over each anomaly at intervals of ten metres on traverses 50, 100 or 200 m apart. Instruments used were Scintrex MP-2 and GEM GSM-8 magnetometers in conjunction with Scintrex MBS-2 and CMG MR-10 base station recording magnetometers. All data has been diurnally corrected and reduced to a common base level. Plots of ground magnetics, aeromagnetic and altimeter profiles, and grid location maps have been produced at 1:5000 scale.

4.3.2.1 Interpretation (from Bubner 1982b)

Quantitative interpretation was carried out using the magnetic inversion program MAGMODS on the PDP 11/34. In all cases a 3D prism model was chosen, as an approximation to a 'pipe-like' body. Smoothed ground magnetics data was input for all anomalies, plus airborne data where the anomaly was sufficiently defined in the air. Various models were generated assuming a dip in (a) a north-south and (b) an east-west direction.

Initial parameters input to MAGMODS were as follows (see plan no. SAa 1977):

Susceptibility:	500; floating
Dip:	90; floating
Base value:	Estimate; floating
X-gradient:	0; floating
y-gradient:	0; floating
X Position:	Estimate; floating
Y Position:	Estimate; floating
X ½ width:	50 m (deeper bodies); 30 m (shallow bodies); floating
y ½ width:	50 m (deeper bodies); 30 m (shallow bodies); floating
Depth:	100 m (deeper bodies); 50 m (shallow bodies); floating
Thickness:	1000 m (deeper bodies); 500 m (shallow bodies); fixed

The condensed outputs in Appendix III show the relevant calculated parameters and the parameter statistics. Units of the "start" and "fitted" values are as follows:

Magnet:	c.g.s. units
Dip:	degrees from north or east
Base Level:	nT
X Slope:	nT per metre
Y Slope:	nT per metre
X Positive:	grid co-ordinates (metres)
Y Positive:	grid co-ordinates (metres)
X L-width:	metres
Y L-width:	metres
Depth:	metres
Thickness:	metres

The normalized weighted standard deviation (NWSD) of fit is a measure of goodness-of-fit between the observed and calculated data. "Parameter Std Dev" lists the standard deviations of the values of each floating parameter during the iterations, and the correlation matrix lists all floating parameter correlations; rows and columns correspond to the floating parameters in the order they are listed in the "start" and "fitted" parameter list.

"MB4" (Plan Nos. SAa 1636 and SAa 1675)

Eight traverses have defined a 200 nT short-wavelength anomaly in an area of complex magnetic relief. Inversion of data from lines 1000 mN and 950 mE, and the aeromagnetic profile, indicate depths to top of a steeply dipping prism model of 26 to 33 m (Outputs in Appendix III). To test the nature of the magnetic source a 50 m vertical hole sited at 990 mN, 938 mE is proposed. The magnetic interpretation, drill site and drill section are shown in Plan nos. SAa 1675 and SAa 1925, and the calculated and observed profiles from the three models generated are plotted in Plan nos. SAa 1879 - SAa 1883.

"N1" (Plan Nos. SAa 1240 and SAa 1826)

An east-west traverse reveals a definite 20 nT anomaly corresponding to the 5 nT aeromagnetic anomaly, but three north-south traverses failed to further define it. Inversion of data from line 1000 mN indicates a steeply-dipping body at a depth of 73 m produces a reasonable fit to the observed data (Appendix III, Plan Nos. SAa 1908) although considering the relative amplitudes of the anomaly and noise envelope there is a large tolerance. A drill hole sited as shown in Plan Nos. SAa 1826 and SAa 1923 would adequately test the source of the anomaly, but Kanmantoo Group schists were intersected in 80MBR72 150 m to the east, and it is not proposed to drill this anomaly unless encouragement is found from other investigations.

"N2" (Plan Nos. SAa 1241 and SAa 1827)

The target airborne anomaly is a broad feature of 50 nT amplitude, and ground traverses indicate it occurs in an area of relatively complex magnetic relief, with regional gradients and profiles varying from line to line. The general wavelength is suggestive of sources at a depth in excess of 100 m, and no further work is proposed for this prospect at present.

"N3" (Plan Nos. SAa 1242 and SAa 1828)

Two north-south traverses reveal relatively broad anomalies of amplitude up to 400 nT, although the east-west profile indicates the anomaly is probably elongate in the east-west direction. Kanmantoo Group meta-sediments outcrop within the grid area, and the apparent linear nature of the source would suggest it is pyrite-pyrrhotite within these rocks. No further work on this prospect is required at present.

4.3.3 Drilling (after Lewis 1983)

Anomaly MB4 was drill tested during December 1982 as part of a larger rotary mud/core tail drilling programme completed in the western Murray Basin. The drilling was completed by Peter Nitschke Drilling using a Longyear 38 drill rig.

Drill hole 82MB4RM1 was completed at 24.7 m in an altered pyroxenite. The detailed drill log is presented in Appendix IV and the summary log is presented below.

82MB4RM1 (Plan SAa 2059)

Tertiary	0 - 5 m		Clay; yellow-brown, grey, silty
	4 - 15 m		Clay; green-grey, calcareous, glauconitic, minor shell fragments
	15 - 15.6 m		Clay; green-grey, chips of a medium-coarse grained mafic
Pre-Tertiary	15.6 - 24.7 m		Amphibole-gabbro; green, blue-green, medium to coarse grained chloritic, weakly developed layering to top and base, magnetic

B.O.H. 24.7 metres

A sample of the basement was submitted for petrology. The rock is comprised of massive fine chlorite with coarse tremolite and tentatively identified as a retrograded and chloritised pyroxenite (Appendix IV). Nickel (660-750 ppm), chromium (410-450 ppm) and cobalt (60-70 ppm) assays are low for an ultramafic rock. Further assessment of the magnetic data in the vicinity of this ultramafic (?mafic) is warranted.

The hole was geophysically logged for magnetic susceptibility, conductivity, natural gamma and density to 24.5 m (Plan SAa 2020).

4.4 Base Metal Exploration

4.4.1 Salt Creek (after Andrews & Wills 1980, Andrews 1980a)

Salt Creek is an intense airborne magnetic anomaly approximately 14 km north east of Callington. Soil geochemical and ground magnetic data was acquired along a traverse across the anomaly (SAa 524). Anomalous copper assays (max. 600 ppm) were returned over the interval from 1000 m to 1100 m from biotite rich schists and granitic pegmatite sheets. Elevated base metal assays coincident with ground magnetic anomalies at the western end of the traverse are associated with sulphide rich units of the Nairne Pyrite Horizon. Sample ledgers and ground magnetic data are presented in Appendix V.

4.4.1.1 Drilling (after Andrews 1980a)

A percussion drill hole was completed by Nitschke Drilling to test the zone of anomalous copper soil geochemistry. The drill section is shown on Plan SAa 475 and the detailed log and assay results are presented in Appendix V. No significant

mineralisation was intersected with the maximum copper assay being 425 ppm from the interval 64 to 66 m. The results from the drill hole indicate the surface anomaly is due to very weak mineralisation and no further work is warranted.

4.4.2 INPUT Survey (after Lane 1984a)

An INPUT survey was flown over parts of Milang E.L. 964, Callington E.L. 1061 and Bull Creek E.L. 1008 during November, 1983.

Four INPUT anomalies occur in the area to be relinquished. Two of these anomalies fall within the Ferries McDonald Conservation Park. Follow up of the remaining anomalies was undertaken.

4.4.2.1 Ground Geophysical Surveys (from Lane 1984b, Lewis & Lane 1985)

Ground magnetic and Sirotem data was acquired over anomalies InMB38 and InMB39. Additional data was also acquired over a discrete magnetic anomaly adjacent to InMB39 (InMB39A).

INPUT anomaly InMB38 is coincident with a linear magnetic feature near the eastern margin of the Kanmantoo Trough. Ground magnetics (Plans SAa 2815 and SAa 2803) resolved this single feature into two subparallel anomalies.

The Sirotem survey (Plans SAa 2843-2850) revealed two conductors coincident with the linear magnetic trends. The overlapping nature of the EM anomalies makes the interpretation of two separate conductors difficult. Crucial to the interpretation presented here is the migration of the peak position on the anomalies with increasing delay time. This is clearly seen on line 8550N (Plan SAa 2843). On the eastern major peak, the peak position migrates from 9700E at early time to 9650E at late times. Similarly, the peak position on the western major peak migrates from 9430E at early times to 9400E at late times. This parallel migration is not possible for a single conductor. The two peaks on an anomaly for a single conductor migrate outward, away from each other, not parallel to each other. Also, the separation of the two peaks is too large for a single conductor. With a 100 x 100 m transmitter loop, the two peaks for a single conductor are around 150 m apart. The minor peak of a dipping conductor is rarely seen on these results, but is quite clear on line 8550N for the eastern conductor.

It is obvious that at early times, a significant host response is obtained. Interpretation of the conductor properties must then be carried out using data from later times where the ratio of the conductor response to the host response is higher.

Dips were determined for the conductors using formula 12.12 of Buselli et.al. (1983). The depth-to-top and conductivity-thickness product was estimated from nomograms for channels 15 and 20, analogous to the nomograms presented for channels 5 and 8 in Verma et.al. (1984). It is acknowledged that current channelling has significantly increased the response of the conductors at late times such that the interpreted conductivity-thickness products do not reflect the properties of the conductor alone. The estimates, however, give a relative measure of the conductivity-thickness product in different locations along the conductors, assuming the effects of current channelling are fairly constant over the area of the prospect. The estimated properties of the conductors are shown on Plan SAa 2803.

Both of the conductors weaken to the north, but extend beyond the southern limit of the survey area. The greatest conductivity-thickness product along each conductor occurs on line 8950N. The interpreted magnetic bodies for line 8900N using a dipping dyke model are shown on Plan SAa 2884, together with the conductor locations. It is recommended that two 200 m percussion holes be drilled to test the subparallel coincident magnetic/conductive bodies on line 8900N where the bodies have their greatest conductivity-thickness product.

This anomaly is coincident with a magnetic feature separated from a linear magnetic trend. Ground magnetics (Plans SAa 2814 and SAa 2804) defined a magnetic feature which can be divided into 4 sections. The main magnetic trend consists of a single peak to the north of line 9800N, and to the south of line 9500N. From 9800N to 9500N, the trend splits into three distinct subparallel features. This is significant in terms of the 'Mt. Torrens Model' being used to explore these pyrrhotitic horizons for base metals. The fourth magnetic feature is a discrete magnetic high on the eastern edge of the grid, around line 8900N.

The results of the Sirotem survey (Plans SAa 2851-2863) were interpreted in the same manner as these of InMB38. The interpreted properties of the conductors are shown on Plan SAa 2804.

It is recommended that each of the relationships between magnetic bodies and conductors be drill tested. Hole A (Plan SAa 2885) tests the coincident conductive/magnetic feature on the northern section of the linear trend. Hole B (Plan SAa 2886) tests the conductor with the highest conductivity-thickness product. This conductor appears to be offset to the west of the magnetic trend. Holes C and D (Plan SAa 2887) test the region where the main magnetic trend splits into three subparallel features. Hole E (Plan SAa 2888) tests the coincident conductive/magnetic feature on the southern section of the linear trend.

Fine grained, black/green amphibolite float was found around (9700E, 9700N) and also on rock piles at (9500E, 9700N). Small outcrops of weathered biotite schist and micaceous quartzite were found around this latter location, just to the east of the proposed hole D. Calcrete and Tertiary/Quaternary cover sediments extend over the major part of the prospect, however.

The ground magnetic profiles for InMB39 (Plan SAa 2804) show a small, discrete magnetic anomaly to the east of the main linear trend, along lines 8800N and 8900N. This feature was investigated by more detailed magnetics (Plan SAa 2964).

The 100 m x 100 m, in-loop receiver Sirotem data for line 8750N (Plan SAa 2853) shows a possible anomaly on the eastern end of the line, in the region of the modelled magnetic body. An additional line of Sirotem was carried out along line 8800N to investigate this area. Plan SAa 2983 shows a single peak at early times and a more classic double peak anomaly at later times. A westerly dipping sheet conductor would be interpreted to occur at 9650E, some 50 m east of the edge of the magnetic body, although some distortion of the anomaly has occurred due to the presence of a number of fences (Plan SAa 2814). Using a set of nomograms for channels 15 and 20, similar to those given in Verma et.al. (1984), a depth-to-top of 75 m and a conductivity of 70S would be estimated for the conductor.

A more detailed study of the conductor was made using Sirotem in a fixed loop-roving receiver configuration. Measurements of the Z component were made at 25 m intervals along lines 9100, 9000, 8900, 8800 and 8700N using Loop 3 (Plans SAa 2987 to SAa 2991).

Line 9100N shows a crossover anomaly near the front edge of the transmitter loop, and possibly a second feature at 9450E. Line 9000N has a distinct crossover at 9725E. Line 8900N shows a crossover at 9635E. The peak-to-trough separation is around 100 m suggesting a depth-to-top of 50 m, comparable to the 75 m depth-to-top estimated from the coincident loop data along line 8800N. A 200 m percussion hole is recommended to test the conductor along line 8900N (Plan SAa 2965).

The crossovers for lines 8800N and 8700N are weaker than those to the north, suggesting a tailing off of the conductor to the south of line 8900N.

Loops 1 and 2 were placed on the western side of the conductor. The results (Plan nos. SAa 2983 to 2986) show only a host rock response for these two loops, though the lines surveyed were to the south of the strong results obtained using loop 3.

4.4.2.2 Drilling (from Lewis & Lane 1985)

INPUT anomalies InMB39 and InMB39A were drill tested during the quarter. Attempts to test anomaly InMB38 were aborted due to the inability of the rigs to penetrate the overlying unconsolidated Tertiary sands. ~~Seven~~ percussion holes and one rotary mud hole for a total of ~~1186~~ 922 m were drilled by Northbridge Drilling using Schramm 685 and Schramm T66 drill rigs.

Anomaly InMB38 occurs on a linear magnetic feature near the eastern margin of the Kanmantoo Synclinorium (Plan SAa 2876). The results of the ground magnetic and Sirotem surveys conducted over the anomaly revealed two sub-parallel conductive-magnetic horizons dipping steeply to the west (Plan SAa 2803). Drill hole PD84MI2 was sited at 9600E, 8900N and inclined -60° towards 070° to test the zone with the greatest conductivity-thickness product on the eastern conductive horizon. The hole was abandoned at 39 m due to the inability of the rig to penetrate the overlying unconsolidated Tertiary sands. In an attempt to penetrate the cover sequence a second more steeply inclined hole was planned. Drill hole PD84MI7 sited at 9655E, 8900N inclined -80° toward 070° magnetic was abandoned at 30 m after the rods had become bogged in the hole. A third hole RD84MI8 sited 5 m east of PD84MI7 was attempted using rotary mud techniques. The hole was abandoned at 31 m due to lost circulation. The programme was aborted and these two conductive horizons remain untested. Drill logs are presented in Appendix VI and the downhole section on Plan SAa 3078.

Anomaly InMB39 is associated with a 2 km strike length magnetic feature separated from a linear magnetic trend near the eastern margin of the Kanmantoo Synclinorium. InMB39A is associated with a discrete magnetic anomaly adjacent to InMB39 (Plan SAa 2876). The results of the ground magnetic and Sirotem surveys for InMB39 are shown on Plan SAa 2804. Four percussion drill holes (inclined -60° towards 071° magnetic) were completed to test a variety of magnetic/conductive responses.

Drill hole PD84MI3 (Plan SAa 2969) was sited at 8990E, 9900N to test a coincident conductive/magnetic feature at the northern end of the linear magnetic anomaly. The hole was completed at 200 m after intersecting a sequence of quartz-biotite±sericite±feldspar schists interbedded with sulphidic quartz-biotite-chlorite-sericite schists and minor chloritic quartzites. Three main sulphide rich intervals (locally 30-40% sulphides) were intersected from 38 m to 54 m, 100 m to 116 m and 156 m to 174 m. The sulphides consist principally of pyrrhotite and pyrite with trace amounts of chalcopyrite and galena. Rare grains of wolframite were identified in pan concentrates.

Drill hole PD84MI4 (Plan SAa 2970) was sited at 9260E, 9700N to test a conductive horizon below the zone where the magnetic horizon splits into three separate magnetic units. The hole was completed at 186 m after intersecting a sequence of quartz-biotite±sericite±feldspar±chlorite schists overlying a biotite±sericite quartzite. A sulphidic sequence of interbedded quartz-biotite±chlorite schists and quartzites occurs between 60 m and 106 m. This sequence contains up to 15% disseminated fine grained pyrite and pyrrhotite with trace amounts of galena and chalcopyrite. The interpreted conductor below this unit was not intersected hence the anomaly has not been fully explained.

Drill hole PD84MI5 (Plan SAa 2971) was sited at 9150E, 8875N to test a coincident conductive/magnetic feature at the southern end of the linear magnetic anomaly. The hole was completed at 234 m after intersecting a similar sequence to that penetrated in PD84MI3. Sulphide rich quartz-sericite-chlorite±biotite schists were intersected from 40 m to 58 m, 94 m to 106 m, 124 m to 138 m, 152 m to 158 m and 206 m to 218 m. These intervals contain 5-15% (locally to 30%) disseminated, fine grained sulphides (pyrrhotite-pyrite-trace galena-trace chalcopyrite).

Drill hole PD84MI6 was sited to test the conductor along line 8900N (Plan SAa 2965). The hole was completed at 202 m after passing through an unmineralised biotitic quartzite sequence from 72 m (Plan SAa 3077). Two thick quartz veins with some iron staining and coarse pyrite, were intersected near the top of the drill hole. A weakly magnetic, pyritic (up to 20%) biotite rich schist was intersected from 50 m to 56 m. This corresponds to the edge of the magnetic body shown in Plan SAa 2965. Very saline aquifers were intersected at 68 m and 164 m and may be the source of the interpreted conductive horizon. A downhole EM survey would shed more light on the question of the source and position of the conductor, but it is felt that this is not warranted at this stage.

Samples of the basement were collected every two metres. Samples of all sulphidic intervals and selected samples of unmineralised basement were analysed by Amdel for copper, lead, zinc, manganese and silver by I.C.P., gold by A.A.S. and tin and tungsten by X.R.F. techniques. The best assay results from the drill holes are summarised in table 1. All gold assays were below the detection limit of 0.01 ppm. Full assay results and detailed drill logs are presented in Appendix VI. Downhole sections are shown on Plans SAa 2968-2971 and SAa 3077.

Table 1

Summary of Drill Hole Assay Results - InMB39, InMB39A

Drill Hole	Depth	Thickness	Cu	Pb	Zn	Ag
PD84MI3	46 - 54 m	8 m	119	40	816	-
	110 - 116 m	6 m	96	196	956	0.3
	126 - 128 m	2 m	175	225	1520	1
	158 - 164 m	6 m	255	560	3900	2.6
(including	158 - 160 m	2 m	290	1040	4580	5)
PD84MI4	92 - 96 m	4 m	73	117	140	-
	102 - 106 m	4 m	110	24	580	-
PD84MI5	42 - 58 m	16 m	91	414	1219	1
	94 - 104 m	10 m	138	435	1260	1.6
	114 - 118 m	4 m	170	170	1130	-
	124 - 126 m	2 m	225	1420	1620	2
	130 - 138 m	8 m	268	1205	2775	3.7
	152 - 158 m	6 m	130	656	2373	2.3
	206 - 214 m	8 m	85	354	778	1
PD84MI6	54 - 56 m	4 m	2290	-	36	-

4.4.2.3 Interpretation (from Lewis & Lane 1985)

The results of the drilling at anomaly InMB39 has shown the source of the linear coincident magnetic-conductive features to be fine grained pyrrhotite-pyrite schist horizons. Elevated copper, lead and zinc geochemistry is associated with these sulphidic horizons. The current drilling programme adequately tested this anomaly and no further work is recommended. Drill testing of two conductive features separated from and below these magnetic units failed to intersect sulphidic or graphitic conductors. Both drill holes intersected saline aquifers which may be the cause of the anomalies.

Anomaly InMB38 was not tested by the current drilling programme. In the light of the results obtained at anomaly InMB39 the coincident magnetic-conductive features are interpreted as pyrrhotite-pyrite horizons. No further work is planned for this anomaly.

4.4.2.4 Downhole EM Survey (from Lewis & Lane 1985)

A test downhole EM survey was carried out on PD84MI5 using a single loop position. The profile obtained is shown in Plan SAa 2992.

At 10 m, there is a minor conductor, which corresponds to the base of the Tertiary cover. A very minor inflection at 100 m corresponds to a sulphidic interval. A moderate conductor was detected from 130 to 150 m, also corresponding to a sulphidic zone. The major conductor in the hole occurs just below 200 m. A blockage in the hole at this point prevented further readings. A sulphidic interval was intersected from 206 to 216 m.

The anomalous results present in the downhole profile can all be correlated to sulphidic horizons intersected in the drill hole. The survey did, however, allow a ranking of the conductors to be made.

P. LEWIS

PL/pw

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LOCATION

Adelaide	SI 54-09	1:250 000 sheet
Barker	SI 54-13	1:250 000 sheet

KEYWORDS

Assays-drill, Copper, Lead, Zinc, Tin, Tungsten, Silver, Gold, Uranium, Drill-percuss, Drill-rotary mud, Drill-diam, Pyrite, Pyrrhotite, Geophys-mag, Geophys-EM, Geophys-borehole, Geophys-gravity, Coal, Diamonds, Ultrabasic.

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SAa 475	Salt Creek Hole 80SCP1 Drill Section	1: 1 000
SAa 524	Salt Creek Traverse, Magnetic and Geochemical Profiles	1: 50 000
SAa 727	Milang E.L. 547, Tepko Gravity Survey Station Location and Interpretation Plan	1: 50 000
SAa 1104	Reedy Creek 1981, Rotary Mud Drill Sites	1: 25 000
SAa 1240	Profiles of Airborne and Ground Magnetics - Anomaly "N1"	1: 5 000
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SAa 1682	Ground Magnetometer Grid and Magnetic Interpretation - Anomaly "MB17"	1: 5 000
SAa 1826	Ground Magnetometer Grid Location Map - Anomaly "N1"	1: 5 000
SAa 1827	Ground Magnetometer Grid Location Map - Anomaly "N2"	1: 5 000
SAa 1828	Ground Magnetometer Grid Location Map - Anomaly "N3"	1: 5 000
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SAa 1880	Profiles of Airborne and Ground Magnetics - Anomaly "MB4" Line 1000 mE Model G1	1: 5 000
SAa 1881	Profiles of Airborne and Ground Magnetics - Anomaly "MB4" Line 1000 mN Model G2	1: 5 000
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SAa 1905	Profiles of Airborne and Ground Magnetics - Anomaly "MB17" Line 1000 mE Model G1	1: 5 000
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SAa 1907	Profiles of Airborne and Ground Magnetics - Anomaly "MB17" Line 1000 mE Model G2	1: 5 000
SAa 1908	Profiles of Airborne and Ground Magnetics - Anomaly "N1" Line 1000 mN Model G1	1: 5 000
SAa 1923	Magnetic Interpretation and Proposed Drill Section 81N1RM1 - Anomaly "N1"	1: 2 000
SAa 1925	Magnetic Interpretation and Proposed Drill Section 82MB4RM1 - Anomaly "MB4"	1: 2 000
SAa 1928	Magnetic Interpretation and Proposed Drill Section 82MB15RM1 - Anomaly "MB15"	1: 2 000
SAa 1929	Magnetic Interpretation and Proposed Drill Section 82MB16RM1 - Anomaly "MB16"	1: 2 000
SAa 1930	Magnetic Interpretation and Proposed Drill Section 82MB17RM1 - Anomaly "MB17"	1: 2 000

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SAa 2020	Downhole Geophysical Logs 82MB4RM1	1: 200
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SAa 2844	InMB38 " " 8750N	1: 5 000
SAa 2845	InMB38 " " 8950N	1: 5 000
SAa 2846	InMB38 " " 9150N	1: 5 000
SAa 2847	InMB38 " " 9350N	1: 5 000
SAa 2848	InMB38 " " 9550N	1: 5 000
SAa 2849	InMB38 " " 9750N	1: 5 000
SAa 2850	InMB38 " " 9950N	1: 5 000
SAa 2851	InMB39 " " 8350N	1: 5 000
SAa 2852	InMB39 " " 8550N	1: 5 000
SAa 2853	InMB39 " " 8750N	1: 5 000
SAa 2854	InMB39 " " 8950N	1: 5 000
SAa 2855	InMB39 " " 9150N	1: 5 000
SAa 2856	InMB39 " " 9350N	1: 5 000
SAa 2857	InMB39 " " 9550N	1: 5 000
SAa 2858	InMB39 " " 9750N	1: 5 000
SAa 2859	InMB39 " " 9949N	1: 5 000
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SAa 2983	Milang E.L. 964, S.A., InMB39 Sirotem Survey Line 8800N	1: 5 000
SAa 2984	Milang E.L. 964, S.A., InMB39 Loop 1 Sirotem Survey Line 8800N (X Component)	1: 5 000
SAa 2985	Milang E.L. 964, S.A., InMB39 Loop 2 Sirotem Survey Line 8801N (Z Component)	1: 5 000

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SAa 2987	Milang E.L. 964, S.A., InMB39 Loop 3 Sirotem Survey Line 9100N (Z Component)	1: 5 000
SAa 2988	Milang E.L. 964, S.A., InMB39 Loop 3 Sirotem Survey Line 9000N (Z Component)	1: 5 000
SAa 2989	Milang E.L. 964, S.A., InMB39 Loop 3 Sirotem Survey Line 8900N (Z Component)	1: 5 000
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SAa 3077	Milang E.L. 964, S.A., InMB39A Drill Hole Section PD84MI6	1: 1 000
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APPENDIX I

1980, 1981 GRAVITY SURVEYS - REEDY CREEK SUB BASIN

LOGISTICS REPORT

ON A

GRAVITY SURVEY

CONDUCTED NEAR MURRAY BRIDGE S.A.

FOR

C.R.A. EXPLORATION PTY. LTD.

BY

GEOTERREX PTY. LTD.

JANUARY, 1981

PERSONNEL SURVEY DATES.

The crew consisted of three men, two being Geoterrex personnel, one being supplied by C.R.A.. Stephen Wardlaw, a Geoterrex geophysicist, was in charge of the survey.

The Geoterrex personnel flew to Adelaide on December 30th, 1980. In Adelaide it was arranged for Graham Bubner and the C.R.A. member of the crew to accompany the Geoterrex personnel to Murray Bridge where the site for the survey was shown and certain benchmarks and previous gravity stations were located. Work commenced on December 31st and continued through to January 4th, 1981 with a day off on January 1st. The gravity portion of the survey required approximately 2½ days production to complete. After this Mr. Wardlaw, the gravity operator assisted in the levelling operation to speed up progress. Mr. Wardlaw remained in Adelaide until January 5th to complete the data reduction and present rough plots to Mr. Bubner at the C.R.A. office.

SURVEY EQUIPMENT.

The gravity stations were obtained with a standard, undamped Model G Lacoste-Romberg gravity meter (S.N. G-326). The optical levelling was done using a Wild Heerbrugg model level (S.N. 413788). The data reduction was done on a model T.I. 59 calculator and printer.

SURVEY PROCEDURE.

Gravity stations were established at 200 metre intervals along the three roads indicated by C.R.A. A car was used as transport between stations.

Due to the fact that no tidal corrections were available it was necessary to read the base station every 1½ to 2½ hours to a maximum of 4 hours on one occasion. This gravity survey was tied in to the survey previously conducted by C.R.A. across these lines by reading at the previously established stations 9400S and 6200S. These stations intersected our survey at approximately 54.5E. Repeat stations on line 4 and 31E on line 3 respectively were established and evenly distributed throughout the survey period.

During the levelling phase of the survey, existing benchmarks and previous gravity stations were used whenever possible to minimize the amount of looping required as well as gravity stations 8800S and 9400S. Benchmarks used were as follows: 8103, 8633, 8054, 8053 & 8105. One vehicle was also used during the levelling to speed up progress and upon completion of the gravity survey a second vehicle and third man was available to allow even more efficient use of time.

REPEAT STATISTICS.

A total 106 gravity stations were read of which 94 were new stations, 2 were ties to the previous survey and 10 were repeat stations. The percentage of repeats is thereby 10.4%. The standard deviation of the repeats, which is a rough indication of the accuracy of the gravity portion of the survey works out to approximately .02 milligals.

Table 1 and Figure 1 below gives a further breakdown of the repeat data.

TABLE 1

STATION	DRIFT CORRECTED READINGS (Mgal)	DIFFERENCE BETWEEN REPEATS (Mgal)
L2 12E	103.83, 103.84	.01
L2 24E	105.09, 105.10	.01
L2 30E	106.37, 106.34	.03
L3 12E	97.28, 97.30	.02
L3 30E	103.57, 103.60	.03
L3 31E (6200S)	103.95, 103.93	.02
L4 16E	95.35, 95.35	.00
L4 42E	106.06, 106.10	.04
L4 54E	108.70, 108.71	.01
L4 68E	108.33, 108.32	.01

DATA REDUCTION.

The field data was subjected to correction for drift, elevation and latitude before arriving at a final Bouguer gravity. The drift correction was applied first and used for the repeat data. The elevation correction is a combination of free-air correction and Bouguer correction for which a Bouguer density of 2.67 was used. The latitude correction was determined by first calculating theroretical gravity values for the latitudes of $35^{o}S$ and $34^{o}55'S$ which bound the survey area and then establishing a gradient in terms of millgals per kilometre in the north-south direction in this region. The theoretical gravity formula used was: $g_{\phi} = 978.049\ (1+0.0052884\ Sin^{2}\phi-0.0000059\ Sin^{2}2\phi)$ where ϕ is the station latitude.

SUMMARY AND CONCLUSIONS.

The survey proceeded at a good pace and encountered no major problems. A small delay arose when the vehicle used for the gravity survey got bogged in heavy sand at the end of Line 3. This caused the loss of a few hours work as the meter got overheated during the efforts to extract the car. The survey successfully showed a large low at the end of Line 4 matching the low previously found by C.R.A.

SHEET NO. 1	GEOTERREX GRAVITY DATA SHEET			BASE STAT
CLIENT CRA	DATE 31/12/80	INSTRUMENT G 326	REF. LEVEL BOOK = ALT SHEETS =	P_1= P_2= P_3=	CORR BASE (mgals)
JOB NO. 80-74	AREA MURRAY RIDGE	METER CONST 1.06055	OPERATOR SW	C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS (RPT?)	LINE	STAT	RDG (DIV)	TIME	TIDAL Mgals	CORR RDG (Mgal)	ELEV (Meters)	LAT or LAT CORR (Km North of N.S.B.)	LAT CORR (Mgal)	BDUGUER GRAVITY P_1	P_2	P_3	$C_n = 0.3086 \cdot 0.04185 \cdot P_n$ REMARKS
	Z									2.57 ~~2.4~~		2.6	
	BASE		3344.44	8.30						2.67			
			3344.45	8 34									RPT 49.09 12.16
	0		3349.22	8 51		100	95.855	0		126.09		←	[illegible]
	2E		50.11	8.59		101.11	92.665	-.090		126.51			[illegible]
	4E		50.49	9:05		101.51	90.497	-.180		126.41			
	6E		51 62	9:13		102.71	87.349	-.271		126.92			
	8E		51.98	9 19		103 01	86.141	-.361		127.00			
	10E		52.24	9.26		103.37	85.913	-.451		127.16			
	12E		52.68	9.32		103.87	83.430	-.541		127.07			Δ = 2.42
	14E		52.92	9.39		104 09	82.135	-.632		127.00		←	[illegible] E OF YELLOW CC ~80' N
	16E		53.16	9.49		104.24	82.760	-.722		127.30			
	18E		52 03	9.57		103.14	88.927	-.812		121.25			ACROSS FROM SIGN OF WHITE WOOD FENCE
	20E		52 50	10.04		103.64	86.821	-.902		127.26			
	22E		53.70	10.11		104.71	80.246	-.993		127.17			
RPT	24E		53.87	10.17		105.09	80.233	-1.083		127.28		105.10 E	RPT 53.90 12.04
	26E		54 32	10.25		105.56	79.151	-1.173		127.48		←	[illegible]
	28E		54.73	10.35		106.00	76.558	-1.263		127.33			
	30E		55.08	10.42		106.37	75.725	-1.354		127.47			Δ = 6.02
	32E		54 94	10 51		106.22	77.539	-1.444		127.61			
	34E		52.53	11 00		105.46	88.782	-1.534		127.19			
	36E		54.33	11 10		106.21	80.660	-1.624		127.43			
	38E		55 39	11.19		107.27	73.964	-1.715		127.69			
	40E		55.95	11 27		107.76	73.865	-1.805		127.67			
	41E		55.43	11 36		107.72	77.629	~~-1.895~~	-1.850	127.87			[illegible] END OF SOUTH GRID
LAST	~~END~~		49.09	12.16				~~-1.850~~					

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NO. 2	GEOTERREX GRAVITY DATA SHEET				BASE STAT
CLIENT CRA	DATE 31/12/80	INSTRUMENT G 326	REF. LEVEL BOOK = ALT SHEETS =	P_1= P_2= P_3=	CORR BASE (mgals)
JOB NO.	AREA MURRAY BRIDGE	METER CONST. 10055	OPERATOR S.W.	C_1 C_2 C_3	STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 \cdot 0.04185 \cdot P_n$
[RPT?]	3		[DIV]		Mgals	[Mgal]	[Meters]	[Km North of N.S.B.]	[Mgal]	P_1	P_2	P_3	REMARKS
		0E	3340.42	12.31								←	BESIDE WHITE TERRO ON ROAD POST
		2E	41.66	12.39									
		4E	42.74	12.46									
		6E	43.70	12.52									
		8E	44.66	12.59									
		10E	45.77	13 07									
		12E	46.54	13.15								←	~30m FROM W SIDE OF ROAD
		14E	47 73	13 25									
		16E	48.75	13.32									
		18E	49.50	13.40									
		20E	49.15	13.47									
		22E	52.77	13.55									
		24E	51 87	14 02									
		26E	51.95	14 11									
		28E	51 80	14 19									
		30E	52.42	14 27								←	~70m E OF NORTHING
		31E	52 86	14 35								←	ON RD OF 6300
		32E	52.99	14 44									
		34E	53 61	14 53									
		36E	53.12	15 00									
		38E	52.75	15 07									
		40E	52.88	15 15									
		42E	53.12	15.22									
		0E	42.70	17 53	Δ 4 28							→	METER OVERRATED
		41E	55 62	18 10								→	TAPE NOT ABLE TO BE SURVEYED

Norriscript

NO. 3 | GEOTERREX GRAVITY DATA SHEET | BASE STAT

ENT CRA | DATE 2/1/81 | INSTRUMENT G326 | REF. LEVEL BOOK • ALT SHEETS • | $P_1=$ $P_2=$ $P_3=$ | CORR BASE (mgals)

JOB NO. | AREA MURRAY BRIDGE | METER CONST. 1.0055 | OPERATOR S.W. | C_1 C_2 C_3 | STAND. CORR (mgals)

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			$C_n = 0.3086 \cdot 0.04185 \cdot P_n$
[RPT?]	3		[DIV]		Mgals	[Mgal]	[Meters]	[Km North of N.S.B.]	[Mgal]	P_1	P_2	P_3	REMARKS
										7.67			
	L2			9.10									
KM		12E	52.36	9.20		103.84							Δ=3.61
KM		30E	54.72	9.32		106.34							Δ=5.97
	L3					90.81	146.516	0		123.99			
						92.11	139.474	.017		123.95			
						92.26	134.593	.033		124.11			
						94.27	130.035	.050		124.25			
						95.30	126.054	.067		124.50			
						96.45	121.791	.083		124.82			
						97.28	117.867	.100		124.89			
						98.54	113.436	.079		125.27			
						99.61	110.263	.058		125.72			
						100.42	107.141	.037		126.02			
						101.71	104.571	.016		125.84			
						102.01	101.771	-.005		126.29			
						102.93	98.540	-.026		126.64			
						102.93	97.421	-.047		126.43			
						102.97	97.126	-.068		126.39			
						102.57	94.92	-.089		126.52			
						102.95	91.370	-.100		126.79			
						104.45	92.73	-.137		126.97			
						104.69	89.297	-.210		126.89			

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GEOTERREX GRAVITY DATA SHEET

NO. 4 | DATE 2/1/81 | INSTRUMENT G 326 | REF. LEVEL BOOK = ALT SHEETS = | P_1= P_2= P_3= | BASE STAT

CLIENT CRA | AREA MURRAY RIDGE | METER CONST. 166055 | OPERATOR SW. | C_1 C_2 C_3 | CORR BASE (mgals)

JOB NO. | | | | | STAND. CORR (mgals)

$C_n = 0.3086 - 0.04185 \cdot P_n$

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			REMARKS
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[Km North of N.S.B.]	[Mgal]	P_1	P_2	P_3	
										2.67			
		36E	52.63	12.19		104.11	90.588	-.283	126.06				
		39E	52.27	12.26		103.69	92.252	-.357	125.91				
		41E	52.34	12.32		103.80	92.726	-.430	126.06				
		42E	52.60	12.40		104.07	91.649	-.503	126.07				
		44E	52.87	12.47		104.36	90.420	-.577	126.05				
		46E	53.03	12.55		104.6✓	80.712	-.650	126.37				~~Edit~~ BI
	BASE	0E	40.11	1.24									~1.50m FROM GATE
													AT END OF ROAD

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NO. 6

GEOTERREX GRAVITY DATA SHEET

BASE STAT

CLIENT CIRI

DATE 2/1/80

INSTRUMENT G 326

REF. LEVEL BOOK = ALT SHEETS =

P_1 = P_2 = P_3 =

CORR BASE (mgals)

JOB NO.

AREA MURRAY RIDGE

METER CONST. 1060.55

OPERATOR SW

C_1 C_2 C_3

STAND. CORR (mgals)

$C_n = 0.3086 - 0.04185 \cdot P_n$

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]	BOUGUER GRAVITY P_1	P_2	P_3	REMARKS
		L3								2.67			
	BASE	90E	3340.11	1.24								←	~1 mi E of TRAIL
		0E	37.48	1.41		98.61	178.160	-1.800	E	126.05			[illegible] N of ERIM
		2E	34.41	1.47		89.21	172.017	-1.933		125.93			E end of DIKE [illegible]
		4E	31.41	1.57		90.27	166.[illegible]	-2.069		125.77			in here
		6E	40.77	2.02		91.51	161.134	-2.209		125.90			
		8E	41.43	2.11		92.61	154.127	-2.223		125.72			
		10E	42.87	2.18		93.71	149.112	-2.247		125.63			
		12E	42.96	2.25		93.81	142.602	-2.270		124.49			
		14E	43.42	2.32		94.29	135.670	-2.293		123.59			
	Δ=431	16E	44.42	2.37		95.31	131.377	-2.317		123.79		←	N end of DIKE [illegible]
		18E	45.12	2.45		96.03	125.547	-2.340		124.05		←	mid DIKE at RR [illegible]
		20E	7.00	2.52		71.[illegible]	117.618	-2.363		124.16			
	BASE		40.15	3.04				~~-2.387~~					
		22E	43.29	3.16		99.44	114.385	-2.387		124.42			
		24E	47.26	3.29		100.46	110.724	-2.410		124.26			
		26E	50.51	3.37		101.28	105.234	-2.433		125.61		←	RESUME RDGS WHERE FIRST PLUS MARKS AT
		28E	51.10	3.42		102.41	102.936	-2.457		124.96			E END OF BLIND ROUND TRIP
		30E	51.58	3.48		102.91	97.265	-2.480		125.62			
		32E	52.50	3.54		103.87	92.[illegible]	-2.503		125.38			
		34E	53.29	4.00		104.72	91.[illegible]	-2.527		125.74			
		36E	53.69	4.06		105.14	84.[illegible]	-2.550		125.48			
		38E	53.14	4.12		104.41	81.[illegible]	-2.573		125.39			
		40E	54.42	4.20		105.91	77.[illegible]	-2.597		125.38			
		42E	54.56	4.27		106.06	69.[illegible]	-2.620		125.31			Δ=16.26
RIT		54E	57.06	4.41		108.70		~~-2.643~~					Δ=16.26

Norrisprint

NO. 6

GEOTERREX GRAVITY DATA SHEET

BASE STAT

CLIENT CRA | DATE 2/1/88 | INSTRUMENT G 326 | REF. LEVEL BOOK = ALT SHEETS = | P_1= P_2= P_3= | CORR BASE (mgals)

JOB NO. | AREA MIRRA-WARDE | METER CONST. 10655 | OPERATOR SW. | C_1 C_2 C_3 | STAND. CORR (mgals)

$C_n = 0.3086 \cdot 0.04185 \cdot P_n$

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			REMARKS
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[Km North of N.S.B.]	[Mgal]	P_1	P_2	P_3	
		~~52 S~~											
		52											
RPT	L 3	30E	52.25	4 56		103.60							
	BASE	0E	40.20	5.09									

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1042

GEOTERREX GRAVITY DATA SHEET

NO. 7			BASE STAT
CLIENT CPP	DATE 3/1/81	INSTRUMENT [illegible] 326	REF. LEVEL BOOK = / ALT SHEETS =	P_1 = P_2 = P_3 =	CORR BASE (mgals)
JOB NO.	AREA MURRAY RIDGE	METER CONST 1.6055	OPERATOR SW	C_1 C_2 C_3	STAND. CORR (mgals)

$C_n = 0.3086 - 0.04185 \cdot P_n$

REMARKS [RPT?]	LINE	STAT	RDG (DIV)	TIME	TIDAL Mgals	CORR RDG [Mgal]	ELEV [Meters]	LAT [Km North of N.S.B.]	LAT CORR [Mgal]	BOUGUER GRAVITY P_1	P_2	P_3	REMARKS
										2.67			
	BASE	L3 [illegible]	3310.08	9.01									
[illegible]		12 E	46.20	9.11		97.30							[illegible] 02)
[illegible]	[illegible]	31E	52.45	~~9.40~~ 9.23		103.93							6200 [illegible]
[illegible]	L 4 [illegible]	L4 44E	54 49	9.36		106.10							A: [illegible] (0 5)
		[illegible]	54.5[illegible]	9.42		106.20	84.827	-2.643	125.22				
		46 E	55.19	9.49		106.85	81.358	-2.667	125.17				
		48 E	55.92	9.54		107.62	71.064	-2.690	125.47				
		50E	55.77	9.59		107.67	73.61[illegible]	-2.713	125.44				
		52 E	55.61	10.04		107.29	77.209	-2.734	125.10				
~~RPT~~		54 E	56.74	[illegible]		10[illegible].11	73.395	-2.760	125.39				A = 16.36 (00)
		54.5E	57.09	10.17		[illegible]	72.770	-2.786	125.42			←	9400 S [illegible]
		56E	58.06	10.24		[illegible]	63.778	-2.783	125.65				PREVIOUS SURV!
		58E	57.02	10.31		[illegible]	70.[illegible]	-2.801	124.78				
		60E	55.86	10.37		[illegible]	67.446	-2.830	123.03				
		62E	56.14	10.43		[illegible]	64.[illegible]0	-2.853	122.68				
		64E	56.61	10.49		[illegible]	[illegible]	-2.877	122.55				
		66E	56.52	10.57		[illegible]	61.3[illegible]	-2.900	122.46				
		68E	56.57	11.03		[illegible]	[illegible]	-2.876	122.39				1M E OF [illegible]
	BASE	L3 [illegible]E	40.05	11.27									BASE
[illegible]	L[illegible]	12E	44.33	11.42		[illegible]							[illegible] 4.28 ([illegible]
RPT		66E	56.57	12.04		[illegible]							
		70E	56.29	12.09		[illegible]	[illegible]	-2.973		122.26			[illegible] E OF HIGHWAY
		72E	5[illegible].02	12.15		107.74	[illegible]	-2.890		122.25			
		74E	56.80	12.21		107.7[illegible]	[illegible]	-2.856		122.30			
		76E	56.12	12.29		107.84	62.725	-2.942		122.37			

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GEOTERREX GRAVITY DATA SHEET

NO. 8 | DATE 2/11/81 | INSTRUMENT G326 | REF. LEVEL BOOK = ALT SHEETS = | $P_1 =$ $P_2 =$ $P_3 =$ | BASE STAT

CLIENT CRD | AREA MURRAY BRIDGE | METER CONST 1.06055 | OPERATOR SW | C_1 C_2 C_3 | CORR BASE (mgals)

JOB NO. | | | | | STAND. CORR (mgals)

$C_n = 0.3086 - 0.04185 \cdot P_n$

REMARKS	LINE	STAT	RDG	TIME	TIDAL	CORR RDG	ELEV	LAT or LAT CORR		BOUGUER GRAVITY			REMARKS
[RPT?]			[DIV]		Mgals	[Mgal]	[Meters]	[Km North of N.S.B.]	[Mgal]	$2.67P_1$	P_2	P_3	
	4	78E	55.96	12.34		107.67	63.515	-2.879		122.32			
		80E	55.38	12.42		107.06	64.305	+2.875		122.30			
		82E	56.10	12.48		107.82	64.010	+2.871		122.57			
		84E	56.58	12.54		108.32	63.760	-2.868		122.94			
		86E	56.77	12.59		108.52	63.770	-2.864		123.05			
		88E	56.89	13.05		108.66	63.640	-2.861		123.14			
		90E	56.73	13.11		108.70	63.660	-2.857		123.22			
		92E	57.08	13.16		108.86	63.610	-2.854		123.54			← CHECK OPTI PEAK TO SOUTH SIDE OF CROSSBAR
		93.5E	57.25	13.24		107.62	63.415	-2.851		123.68			
	BASE	43.0E	40.07	13.52									

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TEPKO GRAVITY LINE #1 : BASEMENT DEPRESSION MODEL : 25/02/81

$\Delta p = -0.6$ gm/cc

OBSERVED ----

CALCULATED ————

MILLIGALS

5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00

LINE 2
LINE 3
#744
80RCRM4
LINE 4
80RCRM6
80RCRM5

4000
8000
METRES
12000
16000
20000

50
100
150
200
250
300

1041

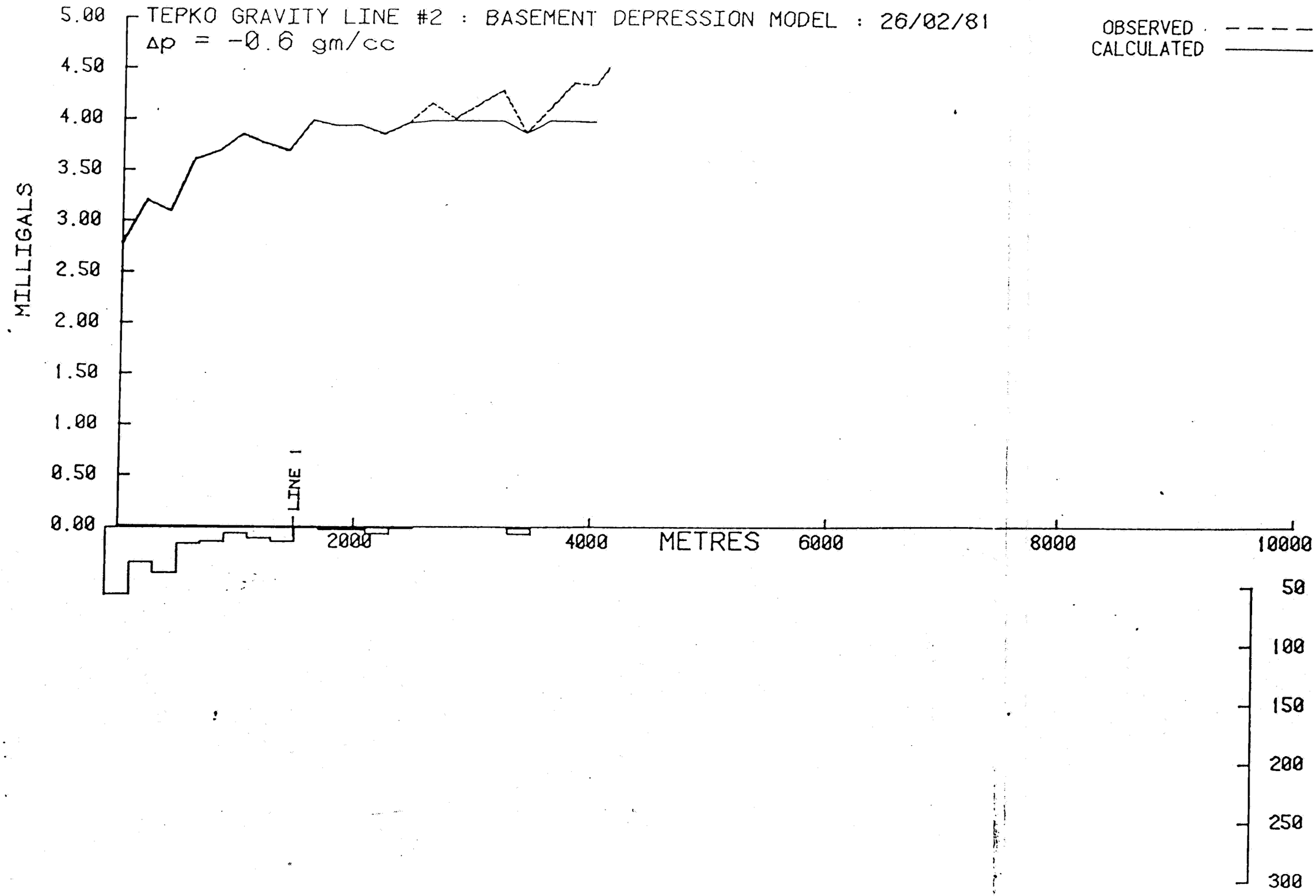
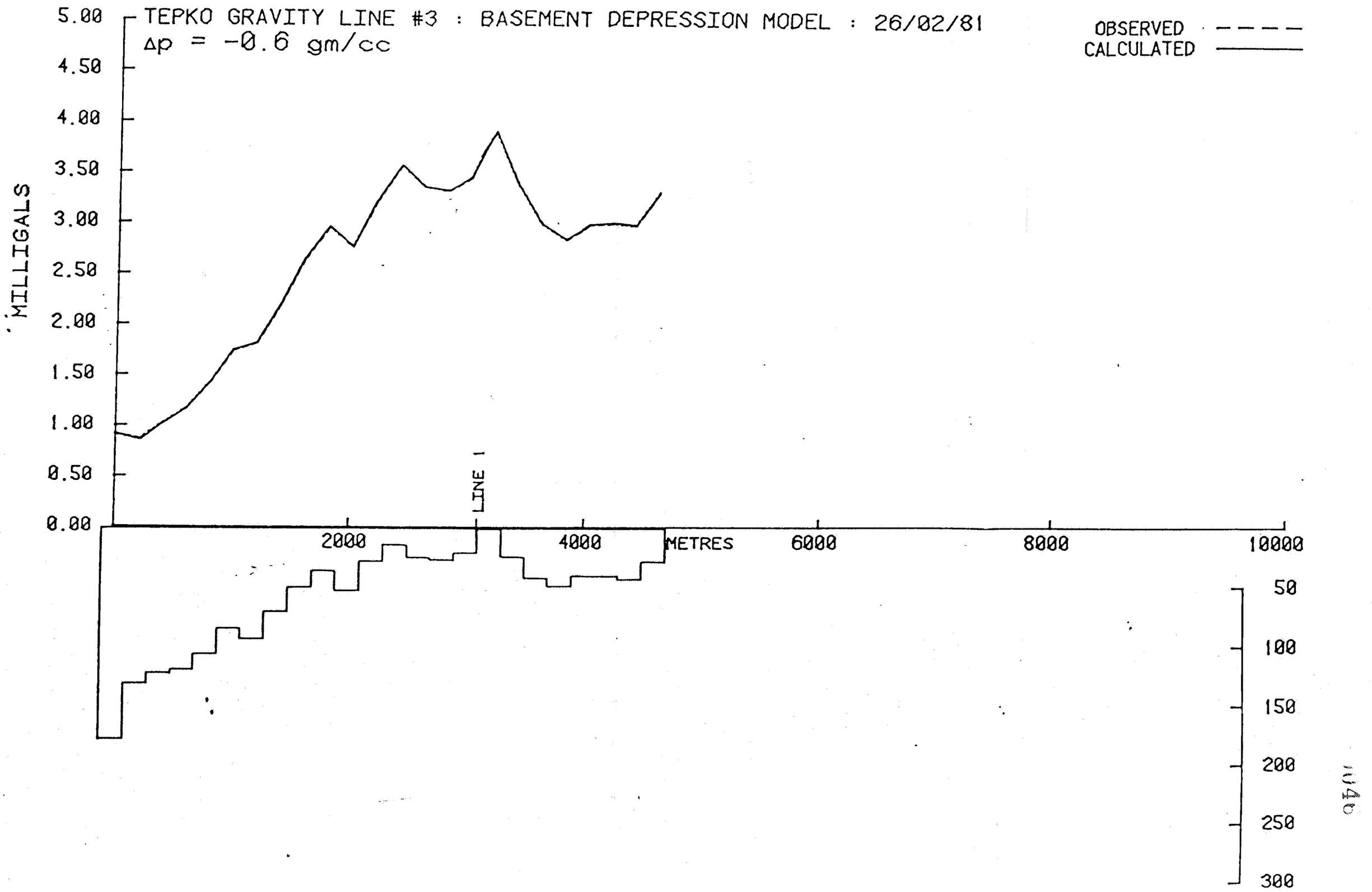

TEPKO GRAVITY LINE #2 : BASEMENT DEPRESSION MODEL : 26/02/81
Δp = -0.6 gm/cc
OBSERVED
CALCULATED
MILLIGALS
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
LINE 1
2000
4000
METRES
6000
8000
10000
50
100
150
200
250
300

FIGURE 2

TEPKO GRAVITY LINE #3 : BASEMENT DEPRESSION MODEL : 26/02/81

$\Delta p = -0.6$ gm/cc

OBSERVED - - - - -
CALCULATED ———



1046

FIGURE 3

TEPKO GRAVITY LINE 4 : BASEMENT DEPRESSION MODEL : 25/02/81

Δp = -0.6 gm/cc

OBSERVED - - - - -
CALCULATED ———

MILLIGALS

5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00

2000
4000
METRES
6000
8000
10000

LINE 1

50
100
150
200
250
300

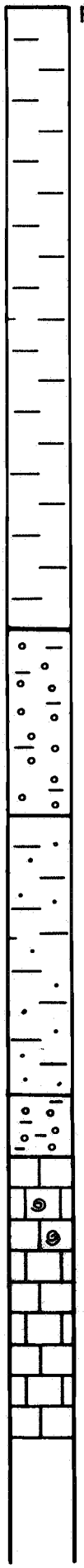
FIGURE 4

APPENDIX II

DETAILED AND COMPOSITE DRILL LOGS AND ASSAY RESULTS - REEDY CREEK SUB BASIN

ASSAY RESULTS — Results in ppm

Drill Hole	Depth (m)	Sample	U	Au
81RCRM2	8-10 m	754728	4	<0.05
	10-12 m	754729	6	<0.05
	12-14 m	754730	6	<0.05
	14-16 m	754731	6	<0.05
	16-18 m	754732	4	<0.05
	18-20 m	754733	8	<0.05
	20-22 m	754734	18	<0.05
	22-24 m	754735	10	<0.05
	24-26 m	754736	12	<0.05
	26-28 m	754737	10	<0.05
	28-30 m	754738	10	<0.05
	30-32 m	754739	8	<0.05
	32-34 m	754740	4	<0.05
81RCRM3	6-8 m	754744	4	N/A
	8-10 m	754745	<4	"
	10-12 m	754746	<4	"
	12-14 m	754747	<4	"
	14-16 m	754748	4	"
	16-18 m	754749	12	"
	18-20 m	754750	12	"
	20-22 m	754751	12	"
	22-24 m	754752	10	"
	24-26 m	754753	8	"
81RCRM4	6-8 m	754768	10	N/A
	8-10 m	754769	8	"
	10-12 m	754770	10	"
	12-14 m	754771	12	"
	14-16 m	754772	10	"
	16-18 m	754773	6	"
	18-20 m	754774	8	"
81RCRM5	6-8 m	754782	<4	N/A
	8-10 m	754783	<4	"
	10-12 m	754784	<4	"
	12-14 m	754785	<4	"
	14-16 m	754786	<4	"
	16-18 m	754787	<4	"
	18-20 m	754788	<4	"
	20-22 m	754789	<4	"
	22-24 m	754790	<4	"
	24-26 m	754791	<4	"
	26-28 m	754792	<4	"
	28-30 m	754793	6	"
	30-32 m	754794	4	"
	32-34 m	754795	<4	"
	34-36 m	754796	<4	"
	36-38 m	754797	<4	"
	38-40 m	754798	<4	"



Red brown clays.

Clay rich gravels, maximum particle size 2cm. predominatly Fe stained quartz, minor pink granite, laterite, trace magnetite, muscovite.

QUATERNARY

Mottled grey red brown sandy clay.

Yellow brown clay rich gravels, angular quartz fragments common.

Buff brown sandy, fossiliferous limestone minor micaceous blue grey clay at top of sequence. Quartz grains well rounded.

TERTIARY

Lost circulation at 46m.

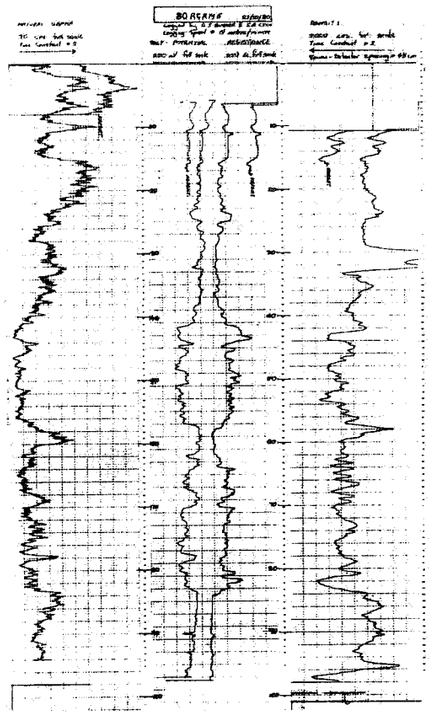
Refer to plan SAa535 for Legend.

C.R.A. EXPLORATION PTY. LIMITED.

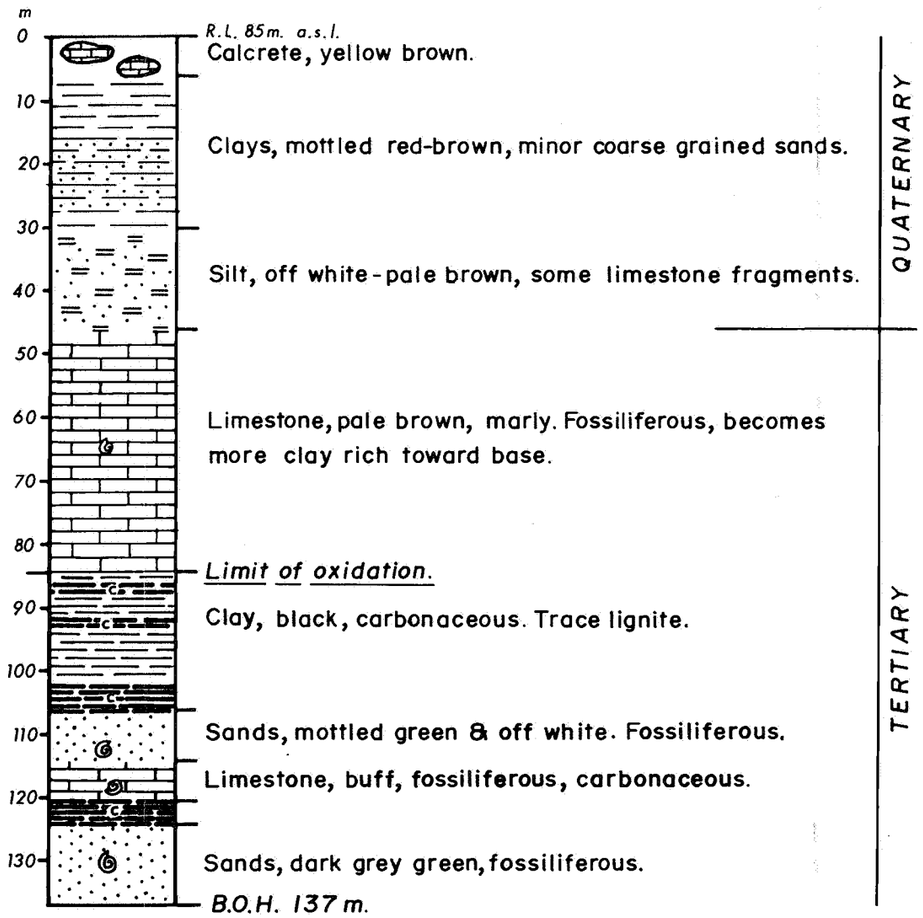
MILANG E.L.547
ROTARY MUD DRILL HOLE
80 RCRM 2

REEDY CREEK AREA
SHEET REF.: BARKER SI54-13

Geol: D.L.A.	Scale: 1: 00	Report N°: 13291
Drawn: J.C.R.	Date: Aug. 1980	Plan N°: SAa 551



80 RCRM 5



CRA EXPLORATION PTY. LTD.

MILANG E.L. 547

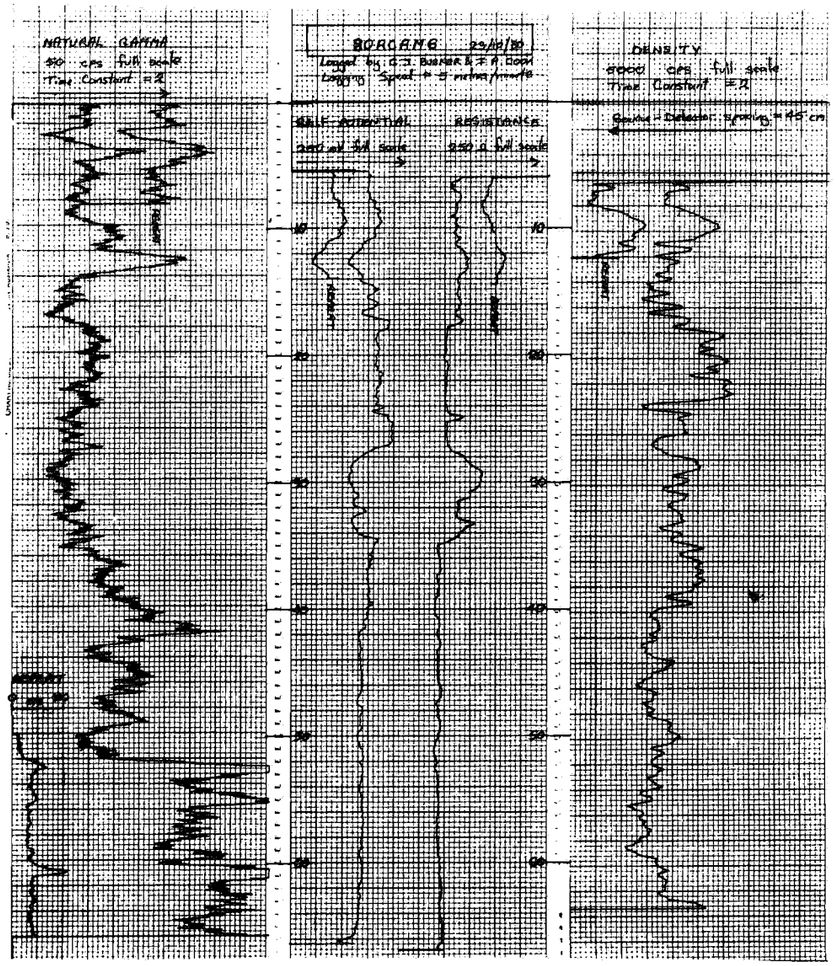
ROTARY MUD DRILL HOLE 80 RCRM 5

REEDY CREEK AREA

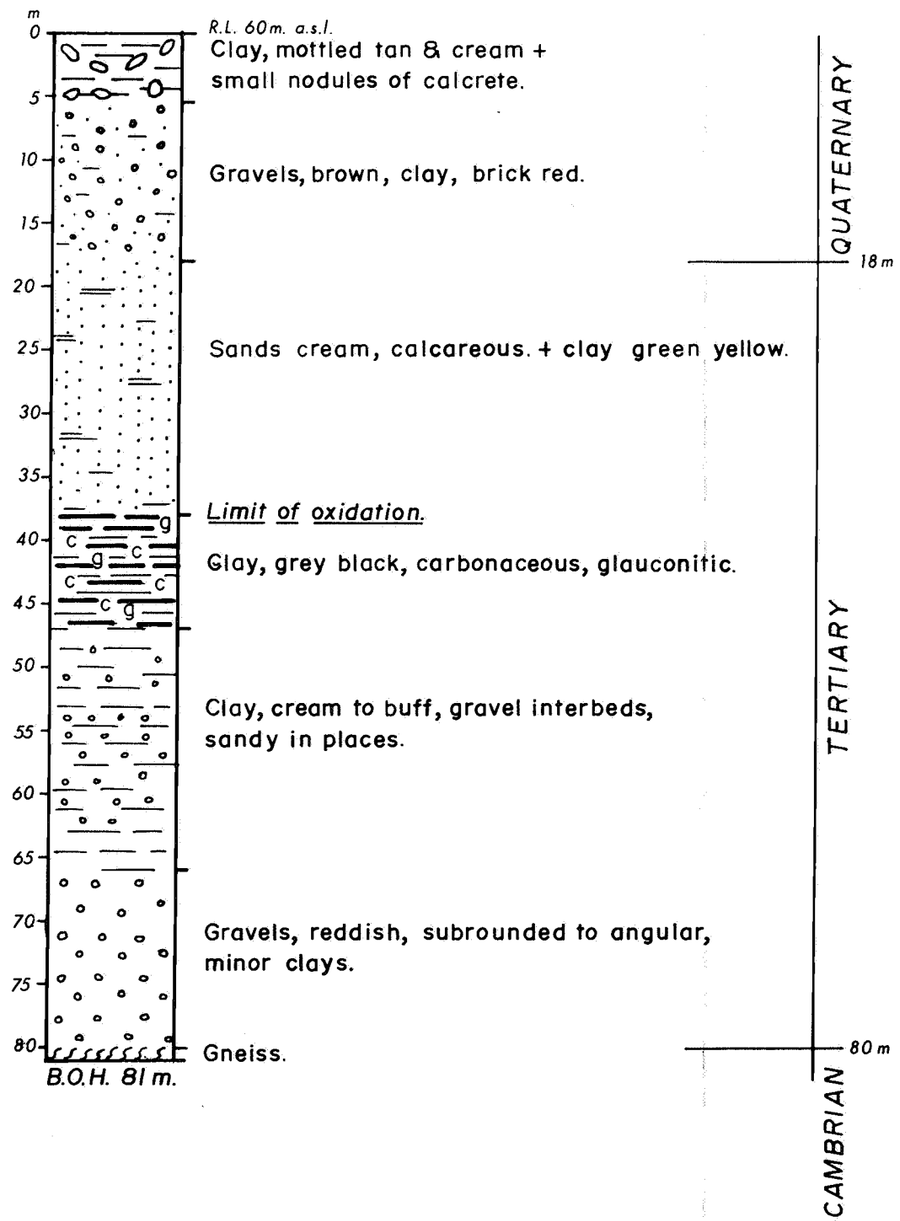
1:250000 MAP REF.: BARKER SI54-13

Geol.: I.A.C.	Date: NOV., 1980	Report N°: 13291
Drawn.: D.R.W.	Scale: 1:1,000.	Plan N°: SAa 617

FIG. 8.



80 RCRM 6



MILANG E.L. 547
ROTARY MUD DRILL HOLE 80 RCRM 6
REEDY CREEK AREA

CRA EXPLORATION PTY. LTD.

MILANG E.L. 547
ROTARY MUD DRILL HOLE 80 RCRM 6
REEDY CREEK AREA

1:250000. MAP REF.: BARKER SI 54-13.

Geol.: I.A.C.	Date: NOV., 1980.	Report N°: 13291
Drawn.: D.R.W.	Scale: 1:500	Plan N°: SAa 618

7852

C.R.A. EXPLORATION PTY LIMITED

Reedy Creek DRILL CORE LOG

PROJECT Milang EL 567

CO-ORDINATES — AZIMUTH - DRILLERS Sides COMMENCED 15/7/80. DEPTH 39m. HOLE No. 80RCRM1

RL COLLAR 51m INCLINATION - DRILL TYPE Mayhew 1000 COMPLETED — CASING LEFT - DPO No(s) B0369.

DEPTH FROM(M)	DEPTH TO(M)	REC %	HOLE DIAM.	GRAPHIC LOG	CUTTINGS DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	CON (%)	ASSAY VALUES
0	2				Red brown clays		835670				
2	4				" " "		71				
4	6				Red brown mottled grey clay		72				
6	8				Dark red brown clays		73				
8	10				Mottled red brown - grey clays		74				
10	12				" " "		75				
12	14				" " "		76				
14	16				" " "		77				
16	18				Clay rich gravel, sand sized particles, Fe stained quartz rare black magnetic grains (Gravel size 2mm ≤ x ≤ 4cm)		78				
18	20				Mottled yellow brown grey clays.		79				
20	22				Mottled grey silty clay, reddish brown Fe staining		680				
22	24				" " " "		81				
24	26				" " " "		82				
26	28				" " " "		83				
28	30				" " " " gradational to sandy clay.		84				
30	32				Mottled yellow brown grey clay + pale off white limestone with minor micaceous carbonaceous patches		85				
32	34				Sandy buff-off white limestone + fossiliferous clayey calcareaide (?)		86				
34	36				" " " "		87				
36	38				" "		835688				
38	39				Lost circulation at 38m.						
					E.O.H. 39m.						

SUMMARY AND SPECIAL COMMENTS

LOGGED BY DLR. DATE

SHEET 1 OF 1

1153

C R A EXPLORATION PTY LIMITED

REEDY CREEK DRILL CORE LOG

PROJECT: Milang EL 547

CO-ORDINATES: ______ AZIMUTH: – DRILLERS: Sides. COMMENCED: 18/7/80 DEPTH: 46m. HOLE No. 80RCRM2

RL COLLAR: 54m INCLINATION: – DRILL TYPE: Mayhew 1000 COMPLETED: ______ CASING LEFT: ______ DPO No(s): 80349.

DEPTH FROM (M)	DEPTH TO (M)	REC %	HOLE DIAM.	GRAPHIC LOG	CUTTINGS DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	CON (%)	ASSAY VALUES
0	2				Red brown clay		835647				
2	4				. .		48				
4	6				. .		49				
6	8				. .		650				
8	10				. .		51				
10	12				. .		52				
12	14				. .		53				
14	16				. .		54				
16	18				. .		55				
18	20				. .		56				
20	22				Mottled red brown - grey clays trace fractured vein quartz.		57				
22	24				Clay rich gravels Clasts predominantly laterite; vein quartz and Fe stained granite.	Immature gravel	58				
24	26				. . . . / . . . trace muscovite	. .	59				
26	28				Mottled grey clays (70%) + gravels (30%)		660				
28	30				Mottled grey - red brown sandy clay		61				
30	32				Mottled yellow brown - red brown sandy clay		62				
32	34				. . . . trace angular vein quartz.		63				
34	36				Yellowish brown clay + gravels + buff brown sandy limestone. trace muscovite		64				
36	38				Buff brown sandy limestone + Fe stained consolidated microconglomerate. (mature) minor blue grey clay	Brachiopods.	65				
38	40				Well rounded quartz rich mature Fe stained conglomerate. + buff brown sandy limestone	. .	66				
40	42				. . . . /	. .	67				
42	44				Fossiliferous buff brown sandy limestone	. .	68				
44	46				. . . . lost circulation 46m.		69				
					B.OH. 46m.						

?Q

CRAE 117 PLAN No 10 404

SUMMARY AND SPECIAL COMMENTS ______

LOGGED BY: DLA DATE: ______

SHEET 1 OF 1

1054

CRA EXPLORATION PTY LIMITED

REEDY CREEK. DRILL CORE LOG

PROJECT MILANG EL 547

CO-ORDINATES _____ AZIMUTH — DRILLERS SIORS

RL COLLAR 50.7m. INCLINATION — DRILL TYPE MAYHEW 1000

COMMENCED 18/7/80. DEPTH 44m. HOLE No. 80 RCRM3

COMPLETED _____ CASING LEFT _____ DPO No(s) B. 0349.

DEPTH FROM(M)	DEPTH TO(M)	REC %	HOLE DIAM	GRAPHIC LOG	CUTTINGS DESCRIPTION	SPECIAL FEATURES WEATH ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No	FROM (M)	TO (M)	CON (%)	ASSAY VALUES
0	2				Red loam.		709				
2	4				Red brown clays.		710				
4	6				" "		11				
6	8				" "		12				
8	10				" " + unconsolidated micro conglomerate		13				
10	12				Mottled red brown - grey clays.		14				
12	14				" " " , trace gravel		15				
14	16				" " "		16				
16	18				" " "		17				
18	20				Sandy yellow brown gravels trace Fe oxides, black manganese staining.		18				
20	22				Gravelly mottled red brown grey clays.		19				
22	24				Silty light brown - grey clays		720				
24	26				" " "		21				
26	28				Silty light brown pallid clays		22				
28	30				" " "		23				
30	32				" " "		24				
32	34				Pale grey clayey unconsolidated micro conglomerate/ gravel		25				
34	36				Fe stained clay rich sandy limestone, minor grey clay		26				
36	38				" " " " trace carbonaceous		27				
38	40				" " " "		28				
40	42				Mottled Fe stained golden - buff brown sandy limestone	Brachiopod Fragments	29				
42	44				Mottled Fe stained golden brown - offwhite sandy limestone	" " "	730				
					Lost circulation 44m. R.O.H. 44m.						

CRAE 117
PLAN No 80-064

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY DLA. DATE _____

SHEET 1 OF 1

1053

CRA EXPLORATION PTY LIMITED

REEDY CREEK DRILL CORE LOG

PROJECT MILANG EL 547.

CO-ORDINATES ____ AZIMUTH — DRILLERS SIGES COMMENCED 19/7/80 DEPTH 40 HOLE No 80RCRM4

RL COLLAR 74m. INCLINATION — DRILL TYPE MAYHEW 1000 COMPLETED ____ CASING LEFT — DPO No(s) B0349

DEPTH FROM(M)	DEPTH TO(M)	REC %	HOLE DIAM	GRAPHIC LOG	CUTTINGS DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	CON (%)	ASSAY VALUES
0	2				Red brown clay		835689				
2	4				light brown clay + calcrete.		690				
4	6				Brown sandy clay + calcrete slightly micaceous		91				
6	8				" " " "		92				
8	10				" " " "		93				
10	12				Mottled blue grey - brown clay.		94				
12	14				Buff - honey brown sandy limestone	Brachiopod fragments	95				
14	16				Pale offwhite - greenish clay rich glauconitic sands	Trace glauconite	96				
16	18				Bleached clayey non calcareous sands, well rounded, trace Fe staining		97				
18	20				Bleached biotite rich granitic sands/detritus		98				
20	22				" " " "	Smoky quartz	99				
22	24				" " " "	" "	700				
24	26				minor epidote. Dark grey biotite - quartz rich gneissic granite	" " trace epidote,	01				
26	28				fragments highly weathered, minor pink feldspar. " " " "	chlorite " "	02				
28	30				" " " "	" "	03				
30	32				Pale fine grained biotite - quartz - feldspar - clay - micagranite dolerite, Fe stained weathered bedrock	" "	04				
32	34				Fe stained highly weathered quartz - feldspar biotite granite	" "	05				
34	36				" " " granite, epidote rich	" "	06				
36	38				" " " granite.	" "	07				
38	40				" " " granite, basal	" "	08				
					B.O.H 40m.						

CRAE 117
PLAN No M 404

SUMMARY AND SPECIAL COMMENTS

LOGGED BY D.L.A. DATE

SHEET 1 OF 1

M156

C.R.A EXPLORATION PTY LIMITED

DRILL CORE LOG

Rotary Mud

CO-ORDINATES 10,650S | AZIMUTH | DRILLERS J.J. Preiss | PROJECT Reedy Creek

RL COLLAR 55m a.s.l. | INCLINATION | DRILL TYPE Investigator Type | COMMENCED 17/10/80 | DEPTH 137m | HOLE No. SDRCRM5

COMPLETED 22/10/80 | CASING LEFT No | DPO No(s) B0299

DEPTH FROM (M)	DEPTH TO (M)	CORE REC. (M)	CORE SIZE	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES
0			6"								
	2				Colorado, yellow brown + silt and clays. (60%)		889901	0	2		
2					+ brown clay						
	4						02	2	4		
4											
	6						03	4	6		
6					Mottled grey red-brown clay						
	8						04	6	8		
8					Mottled red brown clay + coarse grained angular Fe stained						
	10				sands (20%.		05	8	10		
10					" " " " "						
	12				" (30%)		06	10	12		
12					Mottled grey-red brown sands _ clay matrix						
	14						07	12	14		
14					" " " "						
	16				becoming coarser grained.		08	14	16		
16					" " " "						
	18						09	16	18		
18					Red brown - grey mottled clays.						
	20						010	18	20		
20					Silty mottled greyish red brown - brown clays micaceous.						
	22				" " " " "		011	20	22		
22					" "						
	24						012	22	24		
24					" " " " " "						
	26				" " minor coarse grained Fe stained sands		013	24	26		
26					Silty red brown and pale grey clays with minor						
	28				coarse grained sands → fine grained gravel sub rounded		014	26	28		
28					stiff silty pale grey clays						
	30						015	28	30		
30					Off white and pale brown stiff clays, slightly silty						
	32						016	30	32		
32					" " " "						
	34						017	32	34		
34					" " " "						
	36						018	34	36		
36					" " " "						
	38						019	36	38		
38					Yellow brown silty clay						
	40						020	38	40		
40					Yellow brown grey silty clays, minor coarse grained sand						
	42						021	40	42		
42					" " "	Limestone 43m					
	44				+ Limestone fragments		022	42	44		
44					" " "						
	46				"		023	44	46		

CORE BY
PLAN No.

SUMMARY AND SPECIAL COMMENTS 0-6m Colorado, yellow brown; 6-30 clays mottled red brown, minor coarse grained sands 30-46 silt, off white -pale brown, clayey; 46-~~52~~ Limestone, pale brown, marly (52m limit of ex^n) 94-106 Clay, black, carbonaceous, brown lignite

LOGGED BY Ian Cook / Dave Andrews DATE 17/10/80

SHEET 1 OF 2

1165/

CRA EXPLORATION PTY LIMITED

Rotary Mud DRILL CORE LOG

PROJECT Reedy Creek

CO-ORDINATES 10,650 S | AZIMUTH | DRILLERS J.J. Preiss | COMMENCED 17/10/80 | DEPTH 137 m | HOLE No. BORCRM 5

RL COLLAR 95 m a.s.l. | INCLINATION | DRILL TYPE Investigation Type | COMPLETED 22/10/80 | CASING LEFT No | DPO No(s) B0299

DEPTH FROM (M)	DEPTH TO (M)	CORE REC. (M)	CORE SIZE	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES (WEATH., ALTERATION, FRACTURING, VEINING, MINERALIZATION)	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Au	Cu	Pb	Zn	U
46					Pale off white limestone + honey brown limestone, locally clay rich	Fossiliferous									
	48				Limestone pale brown to grey, fossiliferous	Cement (Adelaide-Brighton) contamination	339024	46	48			10	20	16	<4
48					" " " "		25	48	50			16	22	28	8
	50														
50					" " " "		26	50	52			14	22	26	<4
	52														
52					" " " "		27	52	54			14	20	18	<4
	54														
54					" " " "		28	54	56			12	20	16	6
	56														
56					" " " "		29	56	58			10	24	38	<4
	58														
58					" " " "		30	58	60			10	22	20	<4
	60														
60					" " " "		31	60	62			10	20	26	<4
	62				"										
62					" " becoming more clay rich		32	62	64			12	80	30	<4
	64				" " "										
64					"		33	64	66			8	24	24	4
	66														
66					Limestone fragments brown to cream brown + clay red and grey		34	66	68			12	24	30	<4
	68				" " "										
68					"		35	68	70			10	20	32	<4
	70														
70					Limestone, fawn brown in colour + clay, red and grey		36	70	72			8	22	28	<4
	72														
72					" " "		37	72	74			10	22	32	<4
	74														
74					" " "		38	74	76			10	26	36	<4
	76														
76					" " "		39	76	78			8	24	30	<4
	78														
78					" " " + poss. glauconite		40	78	80			8	24	26	<4
	80														
80					" " "		41	80	82			8	26	22	<4
	82														
82					" " "		42	82	84	<.05	10	22		26	<4
	84														
84					Dark grey clay, carbonaceous, limestone contamination.	Limit of oxidation	43	84	86	<.05	8	26		30	<4
	86				" "										
86							44	86	88	<.05	8	24		30	<4
	88				" "										
88							45	88	90	<.05	10	24		58	<4
	90				" "										
90							46	90	92	<.05	10	26		55	<4
	92														

CORE KEY

PLAN NUMBER

SUMMARY AND SPECIAL COMMENTS 106-114 m Sands, mottled greens off white, fossiliferous 114-120 Limestone, buff, fossiliferous, carbonaceous 120-124 clay dark grey

LOGGED BY Ian Cook / Dave Andrews DATE 18/12/80

1058

CRA EXPLORATION PTY LIMITED

Rotary Mud — DRILL CORE LOG

PROJECT Reedy Creek

CO-ORDINATES 10,650 S — AZIMUTH — DRILLERS I.J Preiss — COMMENCED 17/10/80 — DEPTH 137 m — HOLE No 80RCRMS

RL COLLAR 55 m a.s.l — INCLINATION — DRILL TYPE Investigator Type. — COMPLETED 22/10/80 — CASING LEFT N/A — DPO No(s) B0299

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	CORE SIZE	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES (WEATH ALTERATION, FRACTURING VEINING, MINERALIZATION)	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Au	Pb	Zn	U
92					Dark grey carbonaceous (in places lignitic) clays + limestone.										
	94				contamination (~20%)										
94					" " "		889047	92	94		8	<.05	22	55	<4
	96				"										
96					" " "		48	94	96		8	<.05	24	40	<4
	98				"										
98					" " "		49	96	98		10	<.05	24	60	<4
	100				"										
100					" " "		50	98	100		10	<.05	22	60	<4
	102				"										
102					" " "		51	100	102		10	<.05	22	36	<4
	104				"										
104					" " "		52	102	104		10	<.05	22	40	4
	106				"										
106					Fossiliferous sands, mottled green/white, glauconitic	Fossils	53	104	106		10	<.05	24	30	<4
	108														
108					Fossiliferous sands		54	106	108		8	<.05	24	24	<4
	110														
110					Limestone, fossiliferous + dark grey, green clays		55	108	110		6		20	20	<4
	112														
112					" " "		56	110	112		8		22	32	<4
	114														
114					Limestone, fossiliferous - buff coloured and dark grey	Fossils	57	112	114		6		20	40	<4
	116				carbonaceous clays										
116					" " "		58	114	116		8		22	42	<4
	118				"										
118					" " "		59	116	118		8		18	36	<4
	120				"										
120					Carbonaceous clay, dark grey colour, Limestone		60	118	120		8	<.05	20	40	<4
	122				contamination. Thin lenses of lignite.										
122					" " " "		61	120	122		8	<.05	18	38	12
	124				" "										
124					Sands - glauconitic fossilferous - dark grey green - fine		62	122	124		8	<.05	16	30	4
	126				grained, cemented.										
126					" " "		63	124	126		6	<.05	16	30	<4
	128														
128					" " "		64	126	128		6	<.05	14	24	4
	130														
130					" " "		65	128	130		6		12	20	<4
	132														
132					" " "		66	130	132		6		14	24	<4
	134														
134					" " "		67	133	134		6		14	20	<4
	136				EOH 137 m — Lost circulation		68	134	136		6		18	20	<4

SUMMARY AND SPECIAL COMMENTS: Lost circulation 137 m

LOGGED BY Ian Cook/Dave Andrew DATE 22/10/80

SHEET 3 OF 3

CRAE HY PLAN No 1155

1155

CRA EXPLORATION PTY LIMITED

Rotary Mud — DRILL CORE LOG

PROJECT Reedy Creek

CO-ORDINATES 9,800 S | AZIMUTH | DRILLERS J. J Preuss | COMMENCED 22/10/80 | DEPTH 81M | HOLE No. 80RCRM6

RL COLLAR 60m a.s.l | INCLINATION | DRILL TYPE INVESTIGATOR XV | COMPLETED 23/10/80 | CASING LEFT No | DPD No(s) B0299

DEPTH FROM	DEPTH TO	REC %	HOLE DIAM	GRAPHIC LOG	CUTTINGS DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	CON (%)	ASSAY VALUES Cu	Au	Pb	Zn	U
0			6"		Clay, small nodules of calcrete, mottled tan and cream.										
	2				80% clay		889069	0	2						
2					" " "										
	4				"		070	2	4						
4					" " "										
	6				"		71	4	6						
6					Gravel - med to coarse grained (qtz) + clay - brick red.										
	8						72	6	8		<.05				
8					" " " "										
	10						73	8	10		<.05				
10					Sands - yellow brown, mend grained, clay rich + mica										
	12						74	10	12		<.05				
12					" " "										
	14						75	12	14		<.05				
14					mica rich clay - yellow brown + thin lenses of										
	16				brick red clay + gravel		76	14	16		<.05				
16					clay - mica rich - yellow brown + gravel - coarse grained										
	18				Smoky and ironstained quartz		77	16	18		<.05				
18					Sands, calcareous, fine grained, yellow to colourless + clay, greenish										
	20				yellow		78	18	20		10		16	44	<4
20					" " "										
	22				"		79	20	22		12		18	55	<4
22					" " "										
	24				"		80	22	24		14		16	70	<4
24					" " "										
	26				"		81	24	26		10		20	50	<4
26					Sands - calcareous fine grained yellow to colourless + clay										
	28				green yellow		82	26	28		8		18	42	<4
28					" " "										
	30				"		83	28	30		8		16	34	<4
30					" "										
	32				"		84	30	32		8		18	38	<4
32					" " "										
	34				"		85	32	34		8		18	32	<4
34					" Sandy interbeds										
	36				"		86	34	36		10		16	44	<4
36					" " "										
	38				" + qtz gravels in parts, probably interbeds		87	36	38		10	<.05	16	44	<4
38					Carbonaceous clays - grey black colour	Limit of oxidation									
	40						88	38	40.		12	<.05	12	60	6
40					Carbonaceous clays - grey black colour										
	42						89	40	42		16	<.05	20	60	<4
42					" " "										
	44						90	42	44		16	<.05	12	42	<4
44					Clays - carbonaceous - grey black + glauconitic clays - dark										
	46				green.		91	44	46		16	<.05	12	38	<4

CORE AT

PLAN No.

SUMMARY AND SPECIAL COMMENTS 0-6m Clay, mottled tan and cream. 6-18 Gravels, brown, clay, brick red: 18-38 Sands, cream, calcareous Limit Ox. 38m. 38-46 Clay grey black carbonaceous glauconitic 46-66 clay cream to buff, gravel interbeds

LOGGED BY Ian Cook DATE 22/10/80

SHEET 1 OF 2

1961

C R A EXPLORATION PTY LIMITED

Rotary Mud DRILL CORE LOG

PROJECT Reed Creek

CO-ORDINATES 9800S | AZIMUTH | DRILLERS J.J Preiss | COMMENCED 22/10/80 | DEPTH 81 m | HOLE No. 80RCRM6

RL COLLAR 60 m. a.s.l. | INCLINATION | DRILL TYPE Investigator XV | COMPLETED 23/10/80 | CASING LEFT No | DPO No(s). B0299

DEPTH FROM (M)	DEPTH TO (M)	REC %	HOLE DIAM	GRAPHIC LOG	CUTTINGS DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	CON (%)	Cu	Au	Pb	Zn	U
46					Clay - mica rich, non calcareous, cream coloured.										
	48						889092				18	<.05	10	36	4
48					" " " "										
	50						93				14	<.05	12	32	<4
50					Clay - mica rich, cream and red coloured some gravelly										
	52				lenses		94				30	<.05	8	28	<4
52					" " " " Some										
	54				Sandy/gravelly interbeds		95				18	<.05	12	30	<4
54					Clay - cream and red mottling - in part gravelly										
	56						96				16	<.05	12	32	<4
56					Clay - green and red mottling										
	58						97				14	<.05	8	24	6
58					Clay green brown + gravels - qtz, more brown in colour										
	60						98				12	<.05	6	16	<4
60					Clay - green brown with gravel, non calcareous										
	62						99				10	<.05	10	16	4
62					" " "										
	64						100				12	<.05	12	14	8
64					" " "										
	66						101				12	<.05	14	14	4
66					Gravels, subrounded to angular, mainly qtz + clay (50%)										
	68						102				8	<.05	10	10	6
68					" "										
	70						103				10	<.05	8	14	4
70					" "										
	72						104				8	<.05	6	42	4
72					" "										
	74				+ clay 40%		105				8	<.05	6	16	<4
74					" "										
	76						106				6	<.05	6	16	<4
76					Qtz - angular + traces of leukocratic gneisses										
	78				weathered, bedrock also greywackes		107				8	<.05	8	12	<4
78					Weathered gneisses + qtz (angular) med → coarse										
	80				grained + black mica		108				10		6	16	6
80					" "										
	82.														
					EOH 82 M.										

SUMMARY AND SPECIAL COMMENTS 66-80 Gravels, reddish, subrounded to angular, minor clays. 80-81 Gneiss B.O.H. 81m

LOGGED BY Ian Cook DATE 23/10/80

SHEET 2 OF 2

CRAE NY PLAN No.

1061

C R A EXPLORATION PTY LIMITED

81RCRM1 DRILL CORE LOG

PROJECT REEDY CREEK

CO ORDINATES 9316 61349 | AZIMUTH | DRILLERS SIDES | COMMENCED 13/8/81 | DEPTH 47.2m | HOLE No 81RCRM1

RL COLLAR 120m | INCLINATION | DRILL TYPE FAILING | COMPLETED 13/8/81 | CASING LEFT | DPO No(s)

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	CORE SIZE	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES
0	2				Soil, red brown, silty						
2	8				Mottled yellow brown silty clays						
8	12				Mottled yellow brown silty clays with very angular white quartz vein fragments						
12	18				Mottled yellow brown silty clays with biotite content increasing towards base.						
18	24				Mottled yellow brown clays gradational to grey biotite clay at base Biotite up to 25%						
24	30				Dark grey green micaceous clay rich sand, med. grained, poorly sorted with angular vein quartz fragments common.						
30	32				Red brown and pale olive green silty clays; probably glauconitic.						
32	36				Dark grey green micaceous clay rich sand, med. grained, poorly sorted with angular vein quartz fragments common, glauconitic						
36	38				Olive green glauconitic micaceous clayey sands						
38	40				Dark grey green sands (20%) + dark grey green micaceous weathered schist fragments, vein quartz fragments common						
40	47				Dark grey green weathered schist, extensively Fe stained; hard at base.						
					B.O.H. 47m.						

SAMPLES TAKEN AT 2m. INTERVALS FROM

0 - 46m SAMPLE 754701 0-2m

↓

754723 44-46m

CRAE 117
PLAN No M414

SUMMARY AND SPECIAL COMMENTS

LOGGED BY D.L.A. DATE 4/9

SHEET 1 OF 1

1962

C R A EXPLORATION PTY LIMITED

PROJECT REEDY CREEK

81 RCRM 2 DRILL CORE LOG

CO ORDINATES 3322 61349 AZIMUTH DRILLERS SIDES COMMENCED 13/8/81 DEPTH 34m HOLE No 81RCRM2

RL COLLAR 100m. INCLINATION DRILL TYPE FAILING COMPLETED 13/8/81 CASING LEFT DPO No(s)

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	CORE SIZE	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES
0					Mottled pale brown and dark brown clays with angular vein quartz fragments forming up to 30% of sample						
	10										
10					Off white silty clays with trace vein quartz fragments + small (2mm) black Mn(?) concretions. Clays becoming blue grey at base.						
	22										
22					Pale blue grey clay with tr. black Mn(?) concretions, silty						
	24										
24					Pale blue grey silty clay with trace black Mn(?) concretions + variable angular vein quartz fragments						
	32										
32					Clay, as above, 30% + weathered biotite schist (10%) + bimodal sand / quartz fragments. Quartz fragments approx. 3mm, angular Sand; med. grained.						
	34										
34					As above + increasing sand % at base						
	36				Basement?, hard quartzite fragments; grey brown						
					B.O.H. 36m.						
					SAMPLES TAKEN AT 2m INTERVALS FROM 0 - 34m						
					SAMPLE N°s. 754724 0-2m ↓ 754740 32-34m.						

SUMMARY AND SPECIAL COMMENTS

LOGGED BY D.L.A. DATE 14/8/81

SHEET 1 OF 1

CRAE 17
PLAN No M 414

1163

CRA EXPLORATION PTY LIMITED

81RCRM3 — DRILL CORE LOG

PROJECT: REEDY CREEK

CO-ORDINATES: 3323 61335 | AZIMUTH | DRILLERS: SIDES | COMMENCED: 13/8/81 | DEPTH: 48m | HOLE No: 81RCRM3.

RL COLLAR: 115m. | INCLINATION | DRILL TYPE: FAILING. | COMPLETED: 13/8/81 | CASING LEFT | DPO No(s):

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	CORE SIZE	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES
0	4				Red brown soil + rock fragments						
4					Mottled red brown and pale grey micaceous silty clays with angular quartz fragments up to 3cm. minor cgr sand/gravel interbeds						
	30										
30					Mottled pale brown micaceous silty clays with minor cgr sand/gravel interbeds.						
	34				Gravel quartz rich, angular						
34					Mottled pale brown micaceous silty clays with minor cgr sand/gravel interbeds. Lignitic silty balls form up to 5% of sample.						
	40										
40					Gravel, off white mod. ferruginised angular vein quartz + dark biotite rich weathered schist.						
	48										
					B.O.H. 48m.						
					SAMPLES TAKEN AT 2m INTERVALS FROM 0-48m.						
					SAMPLE N°s. : 754741 0-2m ↓ 754764 46-48m						

CRAE 117
PLAN No M414

SUMMARY AND SPECIAL COMMENTS

LOGGED BY: DLA DATE: 14/8/81

SHEET 1 OF 1

1067

CRA EXPLORATION PTY LIMITED

81RCRM4 DRILL CORE LOG

PROJECT Reedy Creek.

CO ORDINATES 3331 61335 | AZIMUTH | DRILLERS SIDES | COMMENCED 14/8/81 | DEPTH 28m | HOLE No 81RCRM4

RL COLLAR 100m. | INCLINATION | DRILL TYPE FAILING | COMPLETED 14/8/81 | CASING LEFT | DPO No(s)

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	CORE SIZE	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES
0	8				Mottled offwhite - yellow brown and red brown clays						
8	20				Mottled red brown clays, variably developed med. grained sands.						
20	24				Mottled pale red brown clays, variably developed med. grained sands.						
24	28m				Red brown sandy clays with minor gravels at base.						
28m					Small quartzite chips, hard. Probable basement.						
					B.O.H. 28m.						
					SAMPLES TAKEN AT 2m INTERVALS FROM						
					0 - 28m.						
					SAMPLE N°. 754765 0-2m						
					↓						
					778 26-28m.						

CRAE 117
PLAN No M414

SUMMARY AND SPECIAL COMMENTS

LOGGED BY DLA. DATE 14/8/81

SHEET 1 OF 1

1165

CRA EXPLORATION PTY LIMITED

PROJECT Reedy Creek

81RCRM5 DRILL CORE LOG

CO ORDINATES 3330 6312 AZIMUTH DRILLERS SIDES. COMMENCED 14/8/81 DEPTH 48m. HOLE No 81RCRM5

RL COLLAR 135m. INCLINATION DRILL TYPE FAILING. COMPLETED 14/8/81. CASING LEFT DPO No(s)

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	CORE SIZE	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES
0	4				Soil, red brown.						
4	22				Red brown silty clays + mottled grey brown silty clays.						
22	24				Dark grey - medium grey silty plastic clays, minor purple brown Fe staining.						
24	46				Mottled brown and grey brown oxidised silty clays.						
46	48				Clays as for 24-46m (70%) + Fe stained sand with angular quartz fragments (<3mm). tr. quartzite fragments.						
					B.O.H. 48m.						
					SAMPLES TAKEN AT 2m INTERVALS FROM 0-48m						
					SAMPLE Nos. 754 779 0-2m ↓ 754 802 46-48m.						

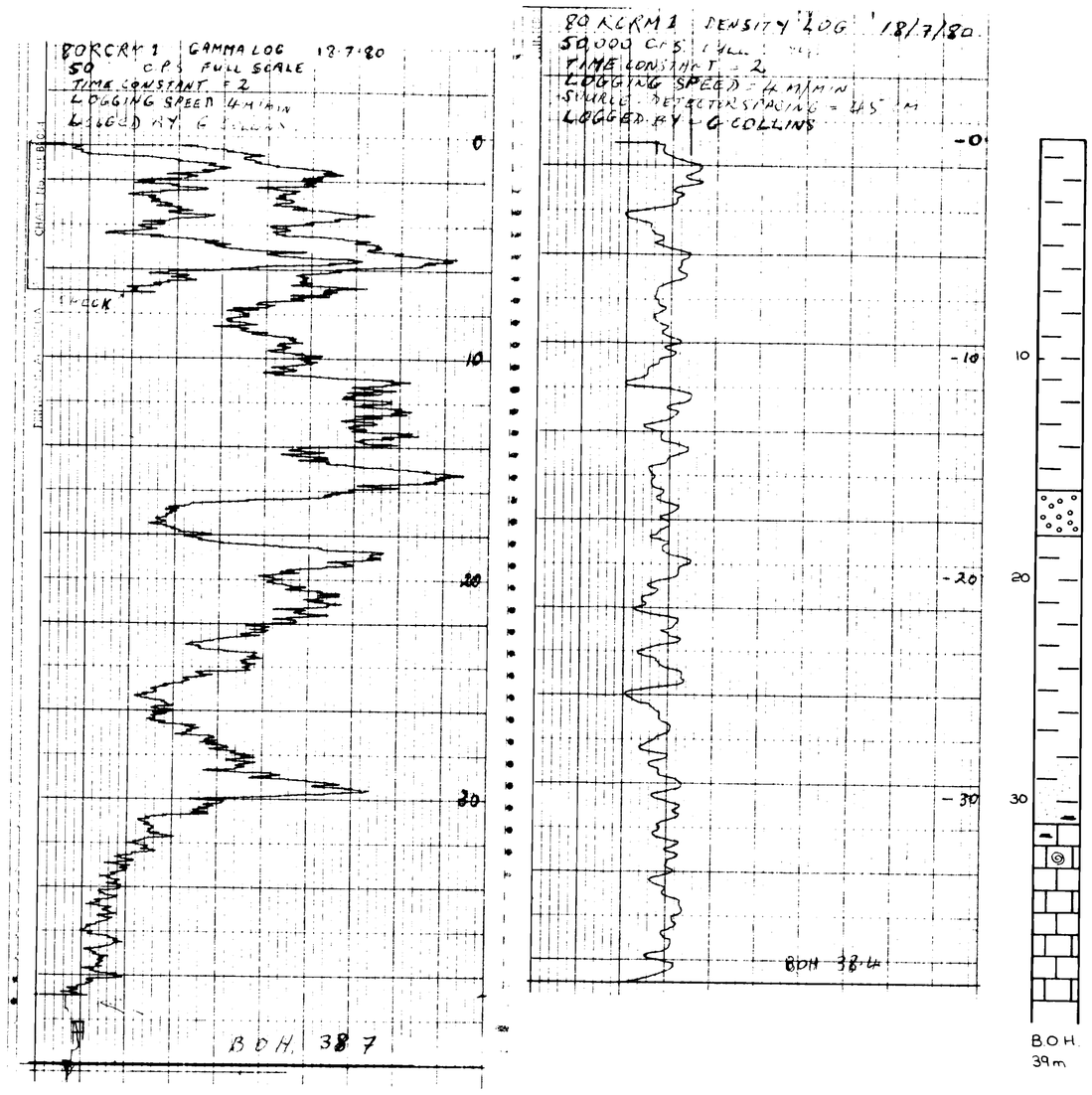
9911

CRAE 117
PLAN No M 414

SUMMARY AND SPECIAL COMMENTS

LOGGED BY D.L.A. DATE 14/8/81

SHEET 1 OF 1



11,600 S
R.L. 51 m.

Red brown and grey mottled clays.

Iron stained clayey gravel maximum partical size 1cm., quartz rich, minor magnetite.

Mottled grey silty clay, minor reddish brown Fe staining becoming more sand rich and micaceous towards base.

Pale off white clayey limestone, minor carbonaceous patches. Locally fossiliferous limestone sand rich, golden brown towards base.

Lost circulation at 39m

QUATERNARY

TERTIARY

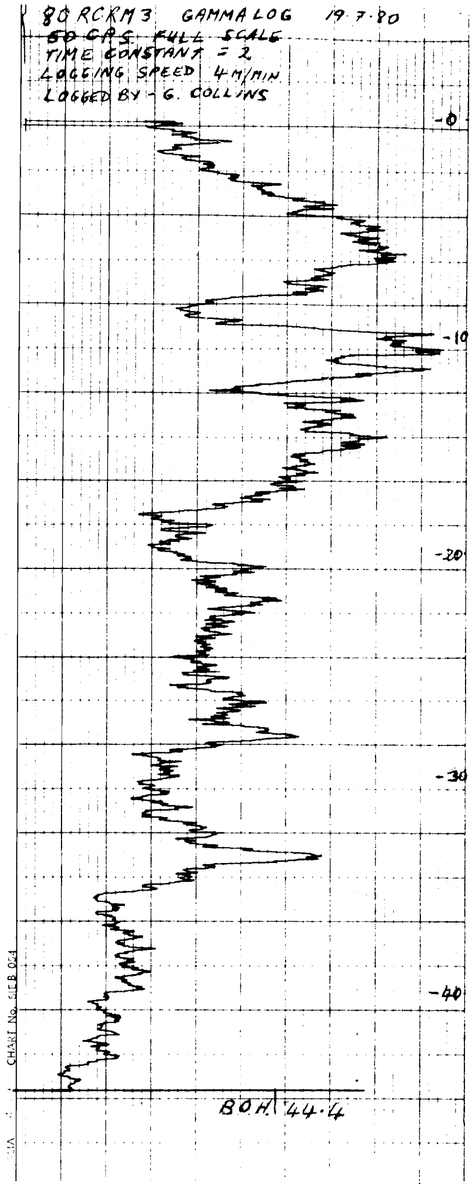
Refer to plan SAa535 for Legend.

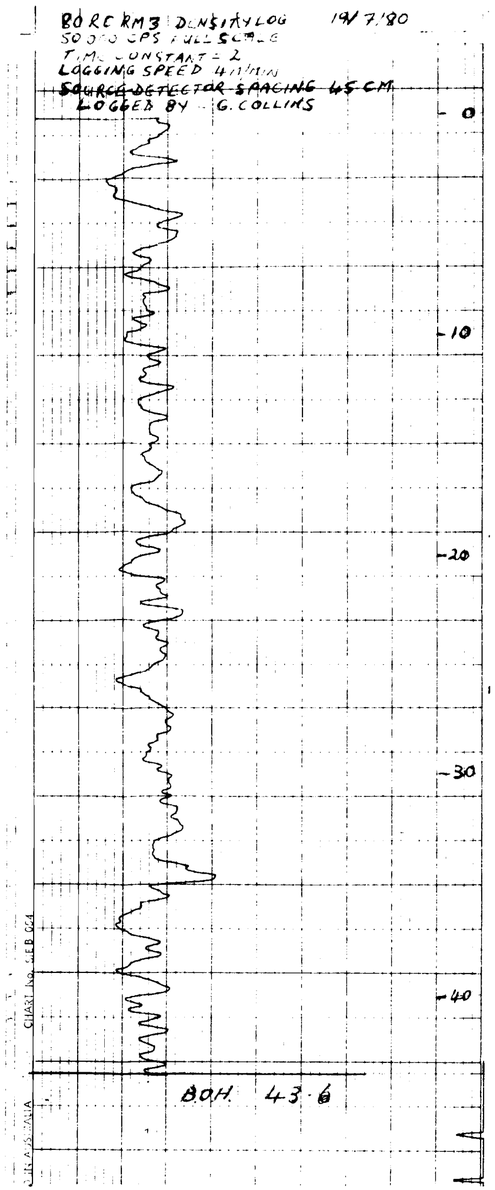
6054(11)-1

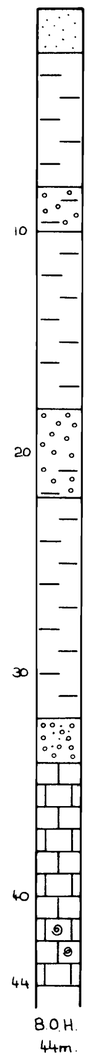
C.R.A. EXPLORATION PTY. LIMITED

MILANG E.L.547
ROTARY MUD DRILL HOLE
80 RCRM 1
REEDY CREEK AREA
SHEET REF. BARKER SI54-13

Geol. D.L.A.	Scale 1:200	Report N° 13271
Drawn: J.C.R.	Date Aug 1980	Plan N°: SAa550







12,400 S
R.L. 50·7 m

Red loam.

Red brown clays.

Red brown clays minor gravel.

Mottled red brown - grey clays.

Sandy yellow brown Fe stained gravels gradational to mottled red brown gravelly clay at base.

Silty pallid light brown clays.

QUATERNARY

Pale grey clay rich unconsolidated fine grained gravel.

Fe stained off white sandy limestone.

Mottled Fe stained golden brown - buff brown sandy limestone, locally fossiliferous.

Lost circulation at 44m.

TERTIARY

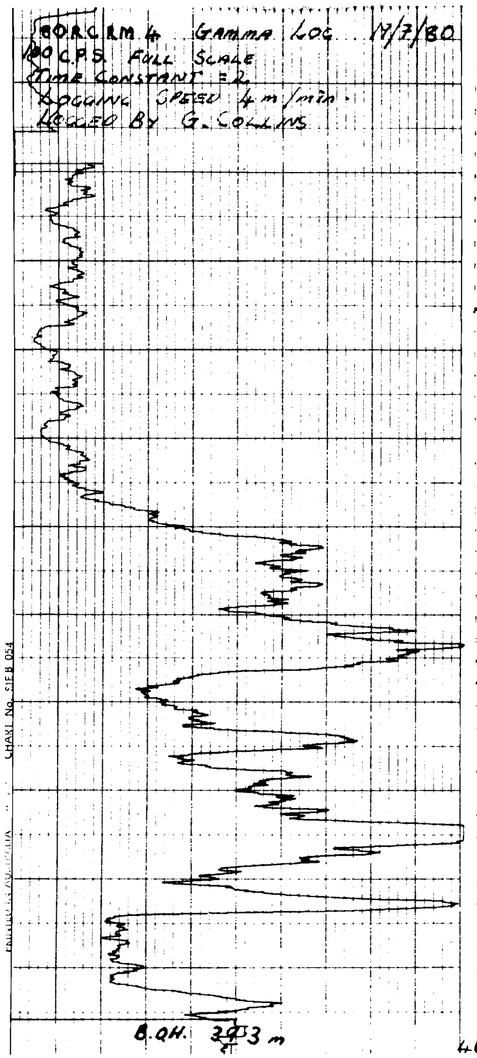
Refer to plan SAa535 for Legend.

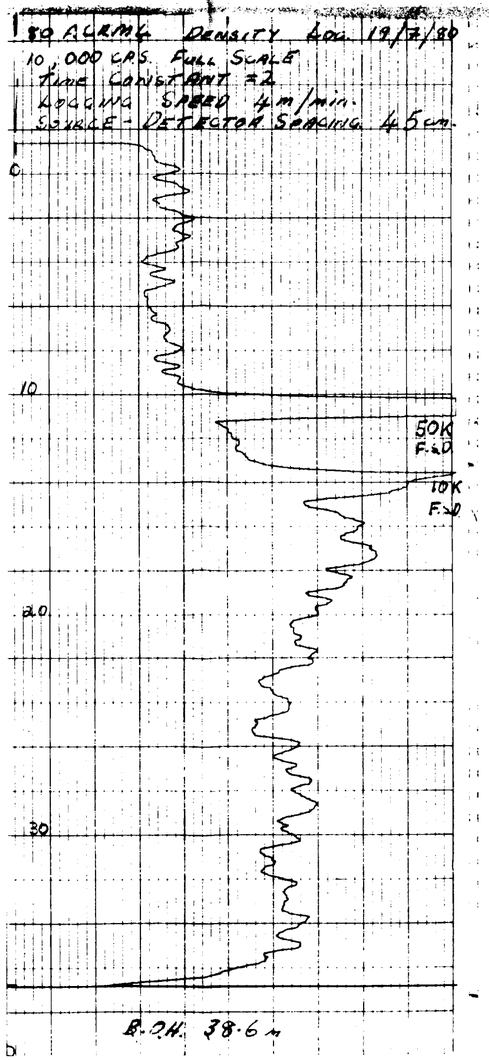
6054(11)-2

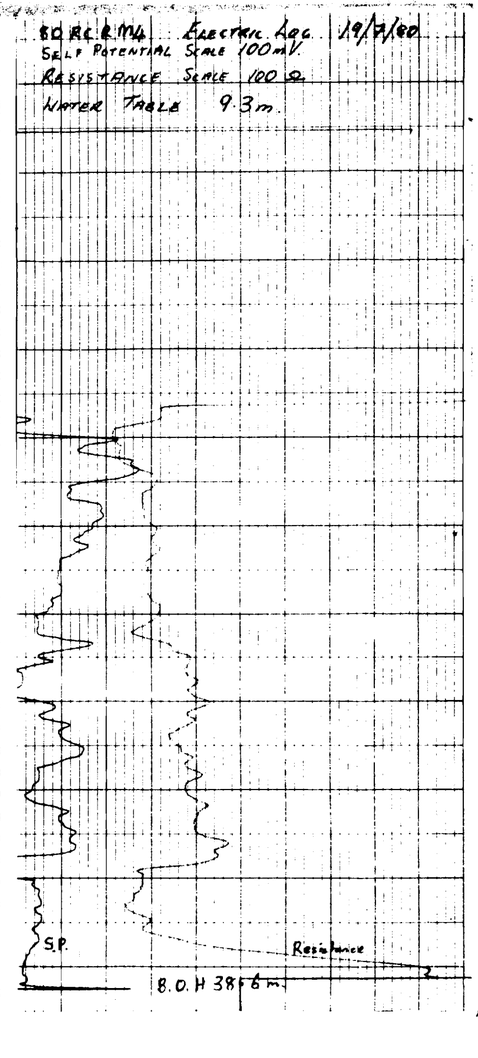
C.R.A. EXPLORATION PTY. LIMITED

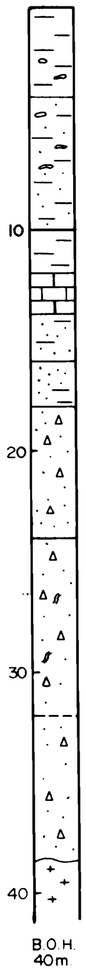
MILANG E.L.547
ROTARY MUD DRILL HOLE
80 RCRM 3
REEDY CREEK AREA
SHEET REF. BARKER SI54·13

Geol. D.L.A.	Scale : 1: 200	Report N° 13291
Drawn : J.C.R.	Date Aug 1980	Plan N° : SAa552









Red brown clay, minor calcrete.

Brown sandy clay, minor calcrete, slightly micaceous.

Mottled blue grey - brown clay.

Buff brown - honey brown fossiliferous sandy limestone.

Pale off white - greenish sands, clayey, trace glauconite.

Bleached clay rich sands, non - calcareous, trace Fe staining.

Biotite rich weathered granitic detritus, epidote rich at base.

Dark grey biotite, smokey grey quartz, gneissic granite detritus.

Epidote - biotite rich Fe stained granitic detritus.

Fe stained pink granite.

Lost circulation at 40m

QUATERNARY

TERTIARY

Refer to plan SAa535 for Legend.

6054(11)-3

C.R.A. EXPLORATION PTY. LIMITED

MILANG E.L.547

ROTARY MUD DRILL HOLE
80 RCRM4

REEDY CREEK AREA
SHEET REF. BARKER SI54-13

Geol. D.L.A.	Scale : 1:200	Report N° 13291
Drawn : J.C.R.	Date Aug 1980	Plan N° : SAa563

R.L. DEPTH (M.)

135m — 0·00

115m — 20·0

95m — 40·0

87m

60·0

B.O.H. 48m

QT QT QT QT QT

CALIPER
Cms

5 10

LONG SPACED DENSITY
APG/CC

1·5 2·5

NATURAL GAMMA
API

0 150

NEUTRON
CPS

170 890

RESISTANCE
OHMS

20 80

REFERENCE

- Silty Clay
- Clay
- Quartz Gravel, Angular
- Quartzite

Logging Data: CENTURY GEOPHYSICS
Hole Diameter 12cm
Probe # 9030A - 146
Sensor # 4 Cal. std. cps = 6588
Cal. run cps = 6852
Cal. bias = -44

NEUTRON TOOL
Probe # 9055A - 30
Sensor # 4 Cal. std. cps = 161
Cal. run cps = 182
Cal. bias = 0

6054(11)-4

CRA EXPLORATION PTY. LIMITED

MILANG E.L. 547

COMPOSITE DRILL LOG
81 RCRM 5

Ref: ADELAIDE SI 54-9	
Scale: 1:200	Drawn: S.J.B.
Author: D.L.A.	Report No: 13291
Date: SEPTEMBER 1981	Plan No: SAa 1036

6054(11)-5

RL (m) DEPTH (m.)

120 — 0·00

100 — 20·0

80 — 40·0

70 — 50·0

8IRCRMI

B.Q.H. 47m

CALIPER
Cms

5 — 11·6
Cms

LONG SPACED DENSITY
APG/CC

1·6 — 2·6
G/CC

NATURAL GAMMA
API

0 — 400
API

NEUTRON
CPS

240 — 840
CPS

RESISTANCE
OHMS

25 — 55
OHMS

Silty clay

Clay

Quartz Gravel, Angular

Schist

G: Glauconite

Logging Data:- CENTURY GEOPHYSICS
Hole Diameter 12cm
Probe # 9030A - 146
Sensor # 4 Cal. std. cps = 6588
Cal. run cps = 6852
Cal. bias = -44

NEUTRON TOOL
Probe # 9055A-30
Sensor # 4 Cal. std. cps = 161
Cal. run cps = 182
Cal. bias = 0

CRA EXPLORATION PTY LIMITED

REEDY CREEK
COMPOSITE DRILL LOG
81 RCR M1

Ref. ADELAIDE SI 54-9	
Author D.L.A.	Drawn D.D.
Scale 1:200	Report no. 13291
Date SEPTEMBER 1981	Plan no. SAa 1078

6054(11)-6

R.L.(m) DEPTH(m.)

81 RCR M2

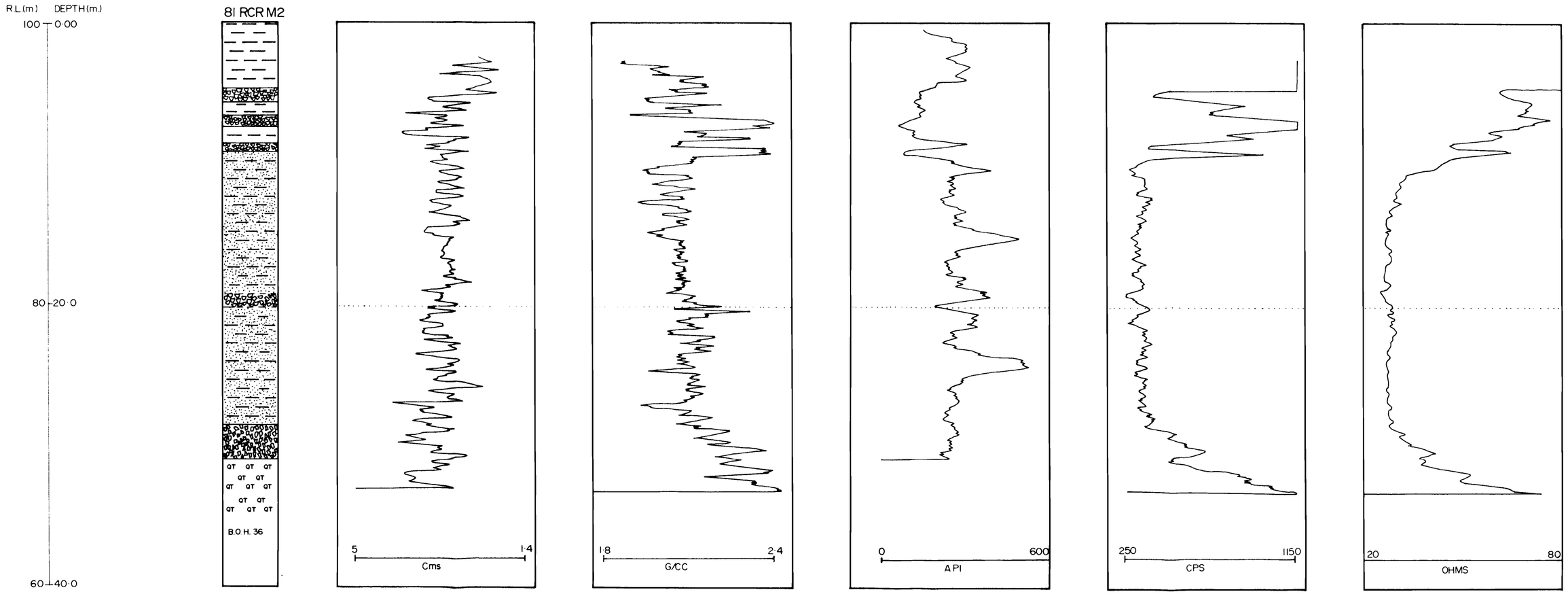
CALIPER
Cms

LONG SPACED DENSITY
APG/CC

NATURAL GAMMA
API

NEUTRON
CPS

RESISTANCE
OHMS



Silty Clay

Clay

Quartz Gravel, Angular

Quartzite

Logging Data: CENTURY GEOPHYSICS
Hole Diameter 12 cms
Probe # 9030A-146
Sensor # 4 Cal. std. cps. = 6588
Cal. run. cps. = 6852
Cal. bias = -44

NEUTRON TOOL
Probe # 9055A-30
Sensor # 4 Cal. std. cps. = 161
Cal. run. cps. = 182
Cal. bias = 0

CRA EXPLORATION PTY LIMITED

REEDY CREEK
COMPOSITE DRILL LOG
81 RCR M2

Ref ADELAIDE SH54-9	
Author D.L.A	Drawn D.D
Scale 1:200	Report no. 13291
Date SEPTEMBER 1981	Plan no. SAa 1079

RL.(m) DEPTH (m)

115 — 0·00

95 — 20·0

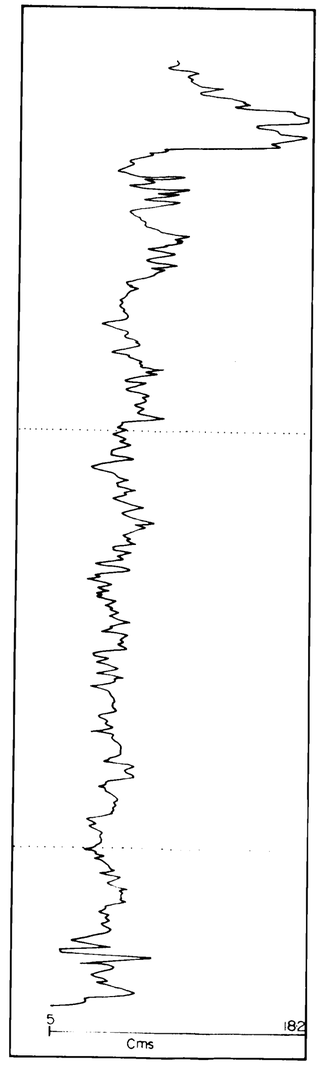
75 — 40·0

65 — 50·0

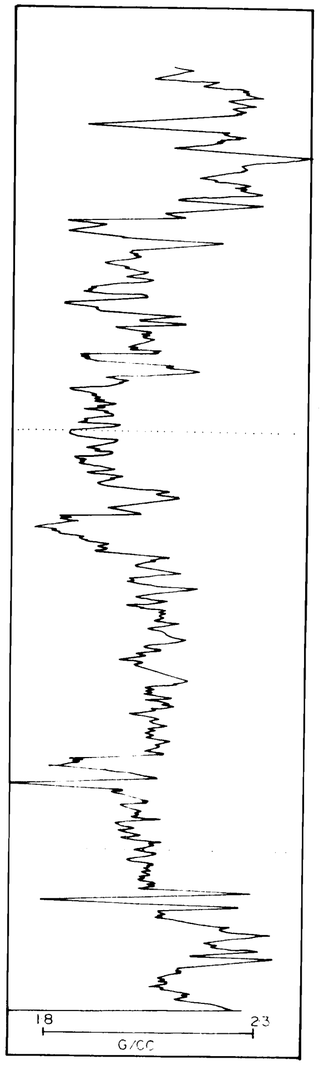
81RCRM3

BOH 48m

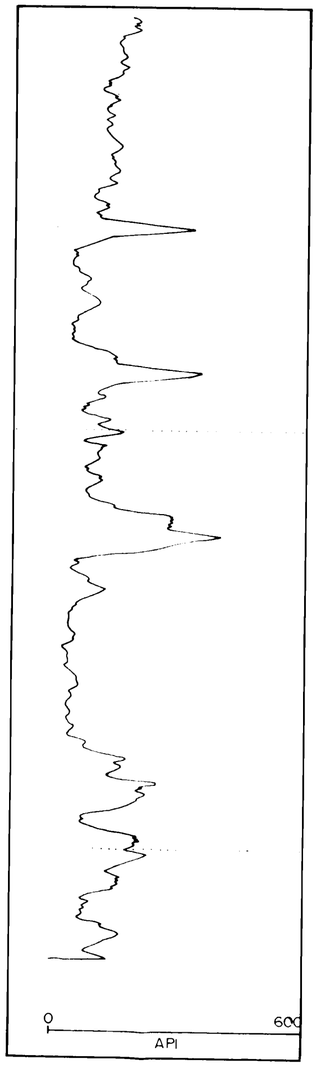
CALIPER
Cms



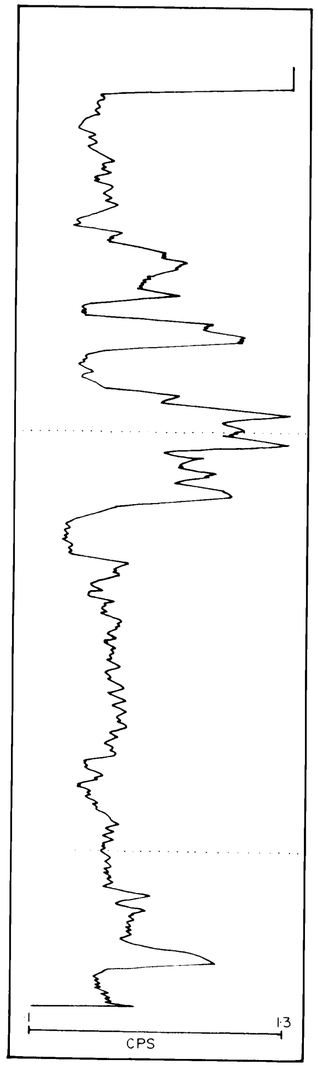
LONG SPACED DENSITY
APG/CC



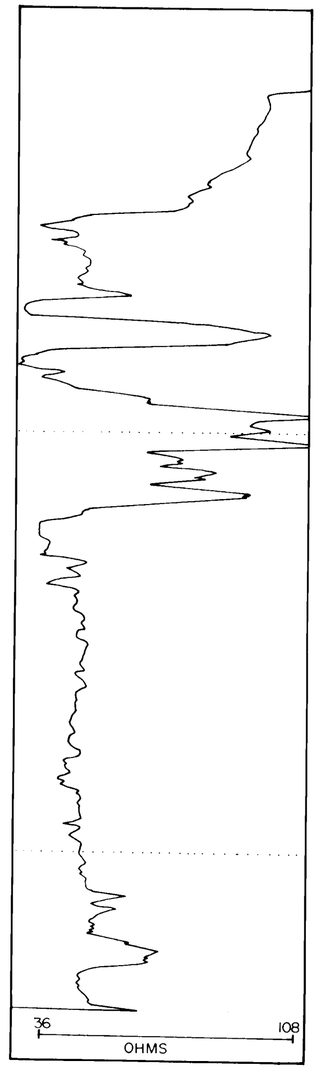
NATURAL GAMMA
API



NEUTRON
CPS



RESISTANCE
OHMS



Silty Clay

Clay

Quartz Gravel, Angular

Lignitic sands

SS SS SS SS SS

Schist

Logging Data: CENTURY GEOPHYSICS
Hole Diameter 12cm
Probe # 9030A - 146
Sensor # 4 Cal. std. cps = 6588
Cal run. cps = 6852
Cal. bias = -44

NEUTRON TOOL
Probe # 9055A-30
Sensor # 4 Cal. std. cps. = 161
Cal. run. cps = 182
Cal. bias = 0

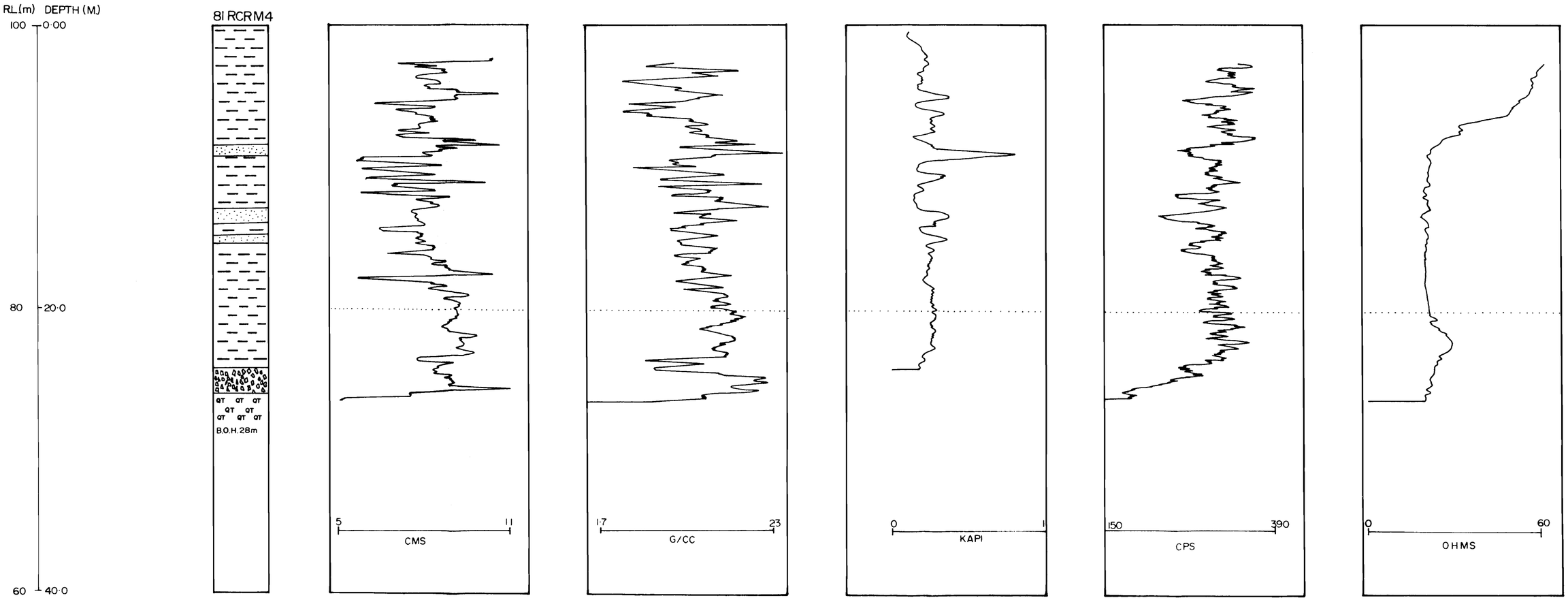
6054(11)-7

CRA EXPLORATION PTY LIMITED

REEDY CREEK
COMPOSITE DRILL LOG
81 RCR M3

Ref ADELAIDE SI54-9	
Author DL A	Drawn DD
Scale 1 200	Report no. 13291
Date September 1981	Plan no. SAa 1080

6054(11)-8



REFERENCE

- Silty Clay
- Clay
- Quartz Gravel, Angular
- Quartzite
- Sand

Logging Data: CENTURY GEOPHYSICS
Hole Diameter 12 cm
Probe # 9030A-146
Sensor # 4 Cal. std. cps. =6588
Cal. run cps =6852
Cal. bias =-44

NEUTRON TOOL
Probe # 9055A-30
Sensor # 4 Cal. std. cps =161
Cal run. cps =182
Cal. bias =0

CRA EXPLORATION PTY LIMITED

REEDY CREEK

COMPOSITE DRILL LOG

81 RCR M4

Ref. ADELAIDE SI 54-9	
Author D.L.A.	Drawn D.D.
Scale 1:200	Report no. 13291
Date September 1981	Plan no. SAa 1081

APPENDIX III

MAGNETIC INTERPRETATION - MAGMOD OUTPUTS

1 IRS PRISM MODEL - LINE 1000NM-950MB MODEL 51

ITERATION NUMBER 10
****

PARAMETER	KEY	START	LIMITS		FITTED	TOLERANCE	RANGE
MAGNET	1	5.000E+02	0.0E-01	0.0E-01	2.755E+02	5.0E+01	2.4E+01
DIP	1	9.000E+01	0.0E-01	0.0E-01	1.402E+02	5.0E+00	7.4E+00
BASE LEVEL	1	3.000E+01	0.0E-01	0.0E-01	3.432E+01	5.0E+01	6.7E+00
X SLOPE	1	0.000E-01	0.0E-01	0.0E-01	1.376E-02	5.0E+00	4.6E-02
Y SLOPE	1	0.000E-01	0.0E-01	0.0E-01	-2.057E-02	5.0E+00	4.8E-02
X POSITION	1	9.500E+02	0.0E-01	0.0E-01	9.410E+02	5.0E+00	4.3E+00
Y POSITION	1	1.000E+03	0.0E-01	0.0E-01	1.021E+03	5.0E+00	9.6E+00
X H-WIDTH	1	5.000E+01	0.0E-01	0.0E-01	5.121E+01	5.0E+00	6.8E+00
Y H-WIDTH	2	5.000E+01	0.0E-01	0.0E-01	9.459E+00	5.0E+00	0.0E-01
DEPTH	1	5.000E+01	0.0E-01	0.0E-01	3.291E+01	5.0E+00	8.4E-01
THICKNESS	0	1.000E+03	0.0E-01	0.0E-01	1.000E+03	0.0E-01	0.0E-01
INCLNATN	0	-6.700E+01	0.0E-01	0.0E-01	-6.700E+01	0.0E-01	0.0E-01
DECLNATN	0	8.300E+01	0.0E-01	0.0E-01	8.300E+01	0.0E-01	0.0E-01
VERTICAL	0	0.000E-01	0.0E-01	0.0E-01	0.000E-01	0.0E-01	0.0E-01
ORIENTATN	0	9.000E+01	0.0E-01	0.0E-01	9.000E+01	0.0E-01	0.0E-01

NORMALIZED WEIGHTED STANDARD DEVIATION OF FIT 0.1035

PARAMETER	STD DEV
	0.65E+03
	0.55E+01
	0.21E+01
	0.10E-01
	0.13E-01
	0.11E+01
	0.45E+01
	0.42E+01
	0.21E+02
	0.67E+01

PARAMETER CORRELATION

1.00									
-0.12	1.00								
-0.33	-0.06	1.00							
-0.01	0.00	-0.04	1.00						
-0.01	0.45	0.16	0.00	1.00					
0.11	0.06	0.03	-0.08	0.02	1.00				
-0.09	0.87	-0.07	0.00	0.34	-0.02	1.00			
-0.43	-0.35	0.11	0.00	-0.17	-0.03	-0.30	1.00		
-1.00	0.16	0.31	0.01	0.03	0.11	0.14	0.40	1.00	
0.93	0.00	-0.41	-0.02	0.04	-0.06	0.02	-0.50	-0.93	1.00

1 M84 PRISM MODEL - LINES 1000MM 750MF MODE= 42

ITERATION NUMBER 9
****

PARAMETER	KEY	START	LIMITS		FITTED	TOLERANCE	RANGE
MAGNET	1	5.000E+02	0.0E-01	0.0E-01	3.134E+02	5.0E+01	2.0E+01
DIP	1	9.000E+01	0.0E-01	0.0E-01	4.752E+01	5.0E+00	1.1E+01
BASE LEVEL	1	3.000E+01	0.0E-01	0.0E-01	3.808E+01	5.0E+01	7.2E+00
X SLOPE	1	0.000E-01	0.0E-01	0.0E-01	-1.455E-04	5.0E+00	5.0E-02
Y SLOPE	1	0.000E-01	0.0E-01	0.0E-01	-4.714E-02	5.0E+00	5.4E-02
X POSITION	1	9.500E+02	0.0E-01	0.0E-01	9.323E+02	5.0E+00	4.2E+00
Y POSITION	1	1.000E+03	0.0E-01	0.0E-01	9.883E+02	5.0E+00	9.5E+00
X H-WIDTH	2	5.000E+01	0.0E-01	0.0E-01	8.737E+00	5.0E+00	0.0E-01
H-WIDTH	1	5.000E+01	0.0E-01	0.0E-01	6.093E+01	5.0E+00	8.5E-01
DEPTH	1	5.000E+01	0.0E-01	0.0E-01	2.747E+01	5.0E+00	9.7E+00
THICKNESS	0	1.000E+03	0.0E-01	0.0E-01	1.000E+03	0.0E-01	0.0E-01
INCLNATN	0	-6.700E+01	0.0E-01	0.0E-01	-6.700E+01	0.0E-01	0.0E-01
DECLNATN	0	8.300E+01	0.0E-01	0.0E-01	8.300E+01	0.0E-01	0.0E-01
VERTICAL	0	0.000E-01	0.0E-01	0.0E-01	0.000E-01	0.0E-01	0.0E-01
ORIENTATN	0	0.000E-01	0.0E-01	0.0E-01	0.000E-01	0.0E-01	0.0E-01

NORMALIZED WEIGHTED STANDARD DEVIATION OF FIT 0.1118

PARAMETER STD DEV

0.40E+03
0.64E+01
0.21E+01
0.12E-01
0.12E-01
0.27E+01
0.23E+01
0.16E+02
0.29E+01
0.49E+01

PARAMETER CORRELATION

1.00									
0.23	1.00								
-0.23	-0.10	1.00							
1.00	0.35	-0.08	1.00						
0.08	0.02	0.14	0.03	1.00					
0.32	0.90	-0.11	0.28	0.02	1.00				
0.21	0.16	-0.02	0.04	-0.12	0.17	1.00			
1.00	-0.24	0.21	-0.01	0.08	-0.32	-0.20	1.00		
-0.19	-0.26	-0.04	-0.10	-0.03	-0.34	-0.20	0.18	1.00	
0.89	0.36	-0.33	0.03	-0.11	0.44	0.26	-0.87	-0.25	1.00

MB4 AIRBORNE DATA - MODEL 01

INCOMPLETE FIT - TOO MANY ITERATIONS

ITERATION NUMBER 51
****

PARAMETER	KEY	START	LIMITS		FITTED	TOLERANCE	RANGE
MAGNET	1	5.000E+02	0.0E-01	0.0E-01	7.989E+02	5.0E+01	0.0E-01
DIP	1	9.000E+01	0.0E-01	0.0E-01	8.750E+01	5.0E+00	0.0E-01
BASE LEVEL	1	2.000E+01	0.0E-01	0.0E-01	1.376E+01	5.0E+01	0.0E-01
X SLOPE	1	0.000E-01	0.0E-01	0.0E-01	-3.198E-03	5.0E+00	0.0E-01
Y SLOPE	1	0.000E-01	0.0E-01	0.0E-01	-1.017E-01	5.0E+00	0.0E-01
X POSITION	1	9.500E+02	0.0E-01	0.0E-01	9.979E+02	1.0E+01	0.0E-01
Y POSITION	1	1.000E+03	0.0E-01	0.0E-01	1.102E+03	1.0E+01	0.0E-01
X H-WIDTH	1	5.000E+01	0.0E-01	0.0E-01	3.402E+01	1.0E+01	0.0E-01
Y H-WIDTH	1	5.000E+01	0.0E-01	0.0E-01	3.478E+01	1.0E+01	0.0E-01
DEPTH	1	1.000E+02	0.0E-01	0.0E-01	1.188E+02	1.0E+01	0.0E-01
THICKNESS	0	1.000E+03	0.0E-01	0.0E-01	1.000E+03	0.0E-01	0.0E-01
INCLNATN	0	-6.700E+01	0.0E-01	0.0E-01	-6.700E+01	0.0E-01	0.0E-01
DECLNATN	0	8.300E+01	0.0E-01	0.0E-01	8.300E+01	0.0E-01	0.0E-01
VERTICAL	0	0.000E-01	0.0E-01	0.0E-01	0.000E-01	0.0E-01	0.0E-01
ORIENTATN	0	0.000E-01	0.0E-01	0.0E-01	0.000E-01	0.0E-01	0.0E-01

NORMALIZED WEIGHTED STANDARD DEVIATION OF FIT 0.0259

PARAMETER STD DEV

0.22E+03
0.13E+02
0.23E+03
0.93E-01
0.23E+01
0.11E+02
0.19E+03
0.16E+03
0.82E+03
0.94E+02

PARAMETER CORRELATION

1.00									
0.93	1.00								
-0.01	0.00	1.00							
-0.09	-0.06	1.00	1.00						
-0.10	-0.07	1.00	1.00	1.00					
-0.84	-0.61	0.01	0.08	0.09	1.00				
-0.94	-0.78	0.01	0.08	0.10	0.90	1.00			
0.90	-0.95	-0.01	0.05	0.06	0.63	0.71	1.00		
-0.99	-0.89	0.00	0.08	0.09	0.86	0.97	0.85	1.00	
-0.94	-0.79	0.01	0.09	0.10	0.89	1.00	0.71	0.98	1.00

1 N1 PRISM MODEL - LINE 1000MN - MODEL G1

0071

ITERATION NUMBER 17
****

PARAMETER	KEY	START	LIMITS		FITTED	TOLERANCE	RANGE
MAGNET	2	5.000E+02	0.0E-01	0.0E-01	9.941E+01	5.0E+01	0.0E-01
DIP	1	9.000E+01	0.0E-01	0.0E-01	8.185E+01	5.0E+00	9.9E+00
BASE LEVEL	1	1.000E+01	0.0E-01	0.0E-01	9.572E+00	5.0E+01	9.8E+00
X SLOPE	1	0.000E-01	0.0E-01	0.0E-01	-2.522E-02	5.0E+00	6.9E-01
Y SLOPE	0	0.000E-01	0.0E-01	0.0E-01	0.000E-01	0.0E-01	0.0E-01
X POSITION	1	1.000E+03	0.0E-01	0.0E-01	9.921E+02	5.0E+00	4.5E-03
Y POSITION	0	1.000E+03	0.0E-01	0.0E-01	1.000E+03	0.0E-01	0.0E-01
X H-WIDTH	1	3.000E+01	0.0E-01	0.0E-01	3.330E+01	5.0E+00	0.0E-01
H-WIDTH	2	3.000E+01	0.0E-01	0.0E-01	9.776E+00	5.0E+00	0.0E-01
PTH	1	5.000E+01	0.0E-01	0.0E-01	7.301E+01	5.0E+00	7.5E+00
HICKNESS	0	5.000E+02	0.0E-01	0.0E-01	5.000E+02	0.0E-01	0.0E-01
INCLNATN	0	-6.700E+01	0.0E-01	0.0E-01	-6.700E+01	0.0E-01	0.0E-01
DECLNATN	0	8.300E+01	0.0E-01	0.0E-01	8.300E+01	0.0E-01	0.0E-01
VERTICAL	0	0.000E-01	0.0E-01	0.0E-01	0.000E-01	0.0E-01	0.0E-01
ORIENTATN	0	0.000E-01	0.0E-01	0.0E-01	0.000E-01	0.0E-01	0.0E-01

NORMALIZED WEIGHTED STANDARD DEVIATION OF FIT 0.0712

PARAMETER STD DEV

0.12E+05
0.22E+02
0.81E+00
0.36E-02
0.13E+02
0.43E+02
0.12E+04
0.52E+02

PARAMETER CORRELATION

1.00							
-0.46	1.00						
-0.43	-0.15	1.00					
0.03	0.68	-0.19	1.00				
-0.04	0.87	-0.36	0.70	1.00			
0.11	-0.13	0.46	0.07	-0.05	1.00		
-1.00	0.46	0.42	-0.03	0.04	-0.12	1.00	
0.86	-0.34	-0.69	-0.01	-0.01	-0.39	-0.85	1.00

APPENDIX IV

DETAILED DRILL LOG, ASSAY RESULTS AND PETROLOGY - ANOMALY MB4

1073

C R A EXPLORATION PTY LIMITED

DRILL CORE LOG

PROJECT: MURRAY BASIN DIAMONDS

CO ORDINATES: 6099970mN 334920mE AZIMUTH: ______
RL COLLAR: ______ INCLINATION: -90°
DRILLERS: PETER NITSCHKE
DRILL TYPE: LONGYEAR 38
COMMENCED: 10-12-82 DEPTH: 24.7m HOLE No: 82 MB4 RM1
COMPLETED: 12-12-82 CASING LEFT: 16m DPO (mesh): 195 . 319

Depth From (m)	Depth To (m)	Core Rec (m)	Mesh Size	Graphic Log	Core Description	Special Features (Weath, Alteration, Fracturing, Veining, Mineralization)	Sample No	From (m)	To (m)	Rec (m)	Cu	Pb	Zn	Co	Cr	Ni	Mn	V
0	14		15, 30, 10, 5, 5, 10, 10		CLAY: YELLOW-BROWN, GREY, GREEN, STIFF - PLASTIC, SILTY IN PARTS, FINE TO MEDIUM GRAINED, CLEAR ROUNDED QUARTZ GRAINS, MINOR SHELLY FRAGMENTS, GLAUCONITIC (1-3%), POLISHED LATERITE AND YELLOW RESINOUS ? SPHENE GRAINS TO BASE													
14	15.6		60		CLAY: GREEN-GREY, BROWN, FRAGMENTS OF GREEN-BLACK, MEDIUM GRAINED MAFIC, MINOR TREMOLITE - SERPENTINE, BROWN ?PHLOGOPITE MICA, SOME CHIPS HAVE SERICITE-CHLORITE SHEEN	TRACE FINE GRAINED MAGNETITE	948356	14	15.6		50	25	85	50	200	530	900	90
					END OF ROTARY DRILLING													
15.6	24.7				MAFIC - ? AMPHIBOLE GABBRO: GREEN, GREEN-BROWN, MASSIVE, MEDIUM GRAINED, TREMOLITE - CHLORITE ROCK, WEAKLY DEVELOPED LAYERING AT 40° TO CORE, OCCASIONAL TREMOLITE - SERPENTINE VEINING, IRON OXIDE STAINING AND COATINGS ON JOINTS	VERY FINE MAGNETITE	948377	15.6	18.6		48	20	85	60	450	660	250	90
							948378	18.6	21.6		42	25	85	70	490	750	210	100
					? AMPHIBOLE GABBRO: AS ABOVE, GREEN GREY, FRESHER, BETWEEN 21.6 AND 22.2m, MORE MAGNETIC, SHARP CONTACTS * PETROLOGY	BLEACHED AT BASE	948374	21.6										
							948379	21.6	24.7		44	20	85	65	410	730	180	90
					E.O.H. 24.7m													
							METHOD				AAS	AAS	AAS	AAS	AAS	AAS	AAS	AAS
							DETn LIMIT				(2)	(2)	(2)	(5)	(10)	(5)	(5)	(20)

SAMPLES WERE ALSO SUBMITTED FOR Au, Ag, As & Mo ANALYSES. ALL Au, As, Ag ASSAYS WERE BELOW DETECTION LIMIT. Mo ASSAYS RANGED FROM 2 TO 4 ppm. SAMPLE 948378 WAS SUBMITTED FOR 32 ELEMENT SCAN BY EMISSION SPECTROSCOPY

CRAE 117
PLAN Number

SUMMARY AND SPECIAL COMMENTS

LOGGED BY: R. LEWIS
DATE: 13-12-82
SHEET 1 OF 1

948374 : aggregate of massive fine chlorite, with coarser randomly disposed tremolite;
accessory disseminated magnetite;
probably a retrograded and chloritised pyroxenite;
part of the rock weakly sheared with a fine foliation in chloritic matrix, which is weakly limonite-stained

The section includes the sharp contact between a massive, fine to medium grained greenish rock and a very pale brownish-greenish rock which has a vague macroscopic fine layered to vaguely foliated structure at approximately 40^{o} to the core.

About 60% of the massive greenish rock is seen petrographically to consist of very ragged prisms of tremolite to 1.5 mm and irregular patches of finer decussate tremolite. This tremolite appears to replace former, primary pyroxene crystals. It is randomly, but evenly disposed as a very loose-packed aggregate through a "matrix" of extremely fine, decussate, pale green chlorite. This chlorite may replace a former, second pyroxene (in a pyroxenite), or possibly replace plagioclase (in a gabbro). There is no textural evidence to confirm this however.

Some of the tremolite clusters are selectively crowded with extremely fine magnetite and rarely by carbonate. Accessory, single, subhedral grains of magnetite occur separately in the chloritic matrix, apparently with a primary distribution. Total magnetite content is 3 - 5%.

The other, very pale brownish-greenish rock type in contact with this massive chlorite-tremolite aggregate has essentially the same composition and texture, i.e. ragged prisms and clusters of tremolite through a matrix of ultrafine chlorite. However, there is a foliation, manifest as very closely spaced, wavy, braided cleavages throughout the chlorite matrix, superimposed on the relict massive/crystalline aggregate texture, but generally not strong enough to affect the random disposition of the tremolite. This cleavage has permitted weak leaching and limonite staining throughout this part of the core.

Clusters of extremely fine magnetite, and coarser single crystals are disseminated as in the other half of the rock.

APPENDIX V

SAMPLE LEDGERS, MAGNETIC DATA AND DETAILED DRILL LOG - SALT CREEK ANOMALY

APPENDIX V

GROUND MAGNETIC DATA

Ground magnetic data acquired on the geochemical traverses is tabulated in this appendix. Readings were taken at ten metre intervals using a Scintrex MP-2 proton precession magnetometer, and each traverse was extended 100 metres beyond each end of the geochemical traverse.

A base station was used to monitor the field for the duration of each survey, and the magnetometer readings have been corrected for diurnal variations. The data set for each prospect has been reduced to an arbitrary datum, and the accuracy of the corrected data as listed is estimated at ± 1 gamma.

It should be noted that where a geochemical traverse was carried out from east to west i.e. station numbers increasing to the west, the corresponding magnetometer stations have been assigned the same number, but negative. This is to maintain a positive north/positive east system.

CK 14.1 : GROUND MAG : 07/5/30 [- 90m - +1000m] Az=057NM

Number of stations = 110 File No. : 54

No.	---X---	---Y---
1	-90.00	85.00
2	-80.00	78.00
3	-70.00	73.00
4	-60.00	75.00
5	-50.00	79.00
6	-40.00	81.00
7	-30.00	85.00
8	-20.00	87.00
9	-10.00	94.00
10	0.00	91.00
11	10.00	94.00
12	20.00	95.00
13	30.00	100.00
14	40.00	110.00
15	50.00	113.00
16	60.00	111.00
17	70.00	120.00
18	80.00	129.00
19	90.00	149.00
20	100.00	167.00
21	110.00	186.00
22	120.00	227.00
23	130.00	251.00
24	140.00	260.00
25	150.00	317.00
26	160.00	380.00
27	170.00	359.00
28	180.00	363.00
29	190.00	337.00
30	200.00	286.00
31	210.00	228.00
32	220.00	182.00
33	230.00	148.00
34	240.00	120.00
35	250.00	98.00
36	260.00	75.00
37	270.00	69.00
38	280.00	70.00
39	290.00	64.00
40	300.00	59.00
41	310.00	55.00
42	320.00	54.00
43	330.00	52.00
44	340.00	55.00
45	350.00	59.00
46	360.00	61.00
47	370.00	60.00
48	380.00	60.00
49	390.00	59.00
50	400.00	59.00
51	410.00	73.00
52	420.00	72.00
53	430.00	67.00
54	440.00	68.00
55	450.00	65.00
56	460.00	78.00
57	470.00	70.00
58	480.00	80.00
59	490.00	93.00
60	500.00	76.00
61	510.00	76.00
62	520.00	75.00
63	530.00	84.00
64	540.00	85.00
65	550.00	85.00
66	560.00	87.00
67	570.00	92.00
68	580.00	102.00
69	590.00	95.00
70	600.00	95.00
71	610.00	98.00
72	620.00	96.00
73	630.00	105.00
74	640.00	112.00
75	650.00	121.00
76	660.00	128.00
77	670.00	131.00
78	680.00	137.00
79	690.00	143.00
80	700.00	175.00
81	710.00	176.00
82	720.00	195.00
83	730.00	208.00
84	740.00	208.00
85	750.00	162.00
86	760.00	126.00
87	770.00	65.00
88	780.00	169.00
89	790.00	158.00
90	800.00	138.00
91	810.00	117.00
92	820.00	96.00
93	830.00	100.00
94	840.00	93.00
95	850.00	110.00
96	860.00	100.00
97	870.00	103.00
98	880.00	105.00
99	890.00	100.00
100	900.00	110.00
101	910.00	111.00
102	920.00	108.00
103	930.00	112.00
104	940.00	114.00
105	950.00	117.00
106	960.00	114.00
107	970.00	119.00
108	980.00	117.00
109	990.00	118.00
110	1000.00	125.00

r CK 14.1 : GROUND MAG : 07/5/80 [+1000m - +2090m] Az=057MN

umber of stations = 110 File No. : 55

o.	---X---	---Y---						
1	1000.00	125.00	51	1500.00	740.00	100	1990.00	463.00
2	1010.00	126.00	52	1510.00	682.00	101	2000.00	477.00
3	1020.00	124.00	53	1520.00	649.00	102	2010.00	392.00
4	1030.00	132.00	54	1530.00	667.00	103	2020.00	423.00
5	1040.00	126.00	55	1540.00	703.00	104	2030.00	317.00
6	1050.00	136.00	56	1550.00	722.00	105	2040.00	613.00
7	1060.00	135.00	57	1560.00	756.00	106	2050.00	467.00
8	1070.00	136.00	58	1570.00	713.00	107	2060.00	367.00
9	1080.00	140.00	59	1580.00	652.00	108	2070.00	297.00
10	1090.00	146.00	60	1590.00	571.00	109	2080.00	261.00
11	1100.00	152.00	61	1600.00	555.00	110	2090.00	212.00
12	1110.00	150.00	62	1610.00	604.00			
13	1120.00	148.00	63	1620.00	624.00			
14	1130.00	168.00	64	1630.00	718.00			
15	1140.00	167.00	65	1640.00	721.00			
16	1150.00	168.00	66	1650.00	850.00			
17	1160.00	160.00	67	1660.00	726.00			
18	1170.00	201.00	68	1670.00	619.00			
19	1180.00	202.00	69	1680.00	566.00			
20	1190.00	198.00	70	1690.00	598.00			
21	1200.00	205.00	71	1700.00	921.00			
22	1210.00	218.00	72	1710.00	872.00			
23	1220.00	240.00	73	1720.00	914.00			
24	1230.00	266.00	74	1730.00	743.00			
25	1240.00	303.00	75	1740.00	441.00			
26	1250.00	336.00	76	1750.00	524.00			
27	1260.00	367.00	77	1760.00	579.00			
28	1270.00	414.00	78	1770.00	511.00			
29	1280.00	434.00	79	1780.00	543.00			
30	1290.00	459.00	80	1790.00	391.00			
31	1300.00	526.00	81	1800.00	1089.00			
32	1310.00	591.00	82	1810.00	1038.00			
33	1320.00	629.00	83	1820.00	932.00			
34	1330.00	603.00	84	1830.00	1024.00			
35	1340.00	621.00	85	1840.00	762.00			
36	1350.00	625.00	86	1850.00	692.00			
37	1360.00	622.00	87	1860.00	967.00			
38	1370.00	634.00	88	1870.00	1357.00			
39	1380.00	649.00	89	1880.00	380.00			
40	1390.00	716.00	90	1890.00	1417.00			
41	1400.00	791.00	91	1900.00	1324.00			
42	1410.00	786.00	92	1910.00	1528.00			
43	1420.00	795.00	93	1920.00	1027.00			
44	1430.00	687.00	94	1930.00	666.00			
45	1440.00	649.00	95	1940.00	473.00			
46	1450.00	606.00	96	1950.00	349.00			
47	1460.00	636.00	97	1960.00	454.00			
48	1470.00	650.00	98	1970.00	591.00			
49	1480.00	646.00	99	1980.00	565.00			
50	1490.00	724.00						

C.R.A. Exploration — Soil — Field and Assay Data Sheet

Tenement Milong E. L. Area/Prospect Salt Ck (14) Plan Reference — Collected by KW/FC — Date 28-3-80

Size fraction -10+20# analysed by AMDEL. on D.P.O. § 277 6799398 § 278 from 799399 Date sent 28-3-80 8-4-80 Date results returned 1-4-80

SAMPLE LOCATION				SOIL DESCRIPTION							SITE			BEDROCK			METAL CONTENT IN P.P.M.											OBSERVATIONS
				size																									
Sample Number	Traverse Reference	Distance along traverse metres.	Direction Sampled (Mag)	gravel %	sand %	clay %	Organic Content	colour	Horizon	Soil Type	Depth (m)	Slope Angle	downhill direction	Type of exposure	Depth to Bedrock	Rock Type	Pb	Zn	Cu	Sn	W	U	Ag	Au	Fe %	Mn			
799388	14-1	1500	57	10	45	45	1	50	3	3	0.6	3	3	2	0.6	11	5	2	1	2	5	2	0.5	0.01	1.7	45			
389		1525		35	30	35	1	56	3	2	0.5	10	4	1	0.7	5	5	5	5	2	5	2	0.5	0.01	1.9	60			
390		1550		35	30	35	1	50	3	2	0.3	10	3	1	0.5	11	5	10	1	2	15	4	0.5	0.01	4.5	110			
391		1575		40	20	40	1	50	3	3	0.4	10	4	2	0.7	5	5	2	1	6	5	2	0.5	0.01	2.4	40			
392		1600		30	35	35	1	50	3	3	0.5	5	4	2	0.7	5	5	12	5	6	5	10	0.5	0.01	4.5	110			track at 1615m
393		1625		25	35	40	1	50	3	3	0.5	10	2	1	0.8	11	5	5	1	2	5	4	0.5	0.01	4.8	75			
394		1650		30	30	40	1	50	3	3	0.6	8	2	1	0.8	11	5	5	12	2	5	6	0.5	0.01	4.4	100			
395		1675		25	35	40	1	50	3	3	0.5	8	2	1	1.0	11	5	10	5	4	5	2	0.5	0.01	4.7	140			
396		1700		35	30	35	1	50	3	2	0.4	5	1	1	0.6	11	5	8	1	4	5	4	0.5	0.01	5.6	120			
397		1725		30	30	40	2	50	3	3	0.4	10	2	1	0.7	11	5	10	1	2	5	6	0.5	0.01	5.2	75			
398		1750		20	35	45	1	50	3	2	0.4	10	1	1	0.5	11	5	8	2	2	5	4	0.5	0.01	5.8	130			End Lai 28/3
399		1775		25	35	40	2	50	3	2	0.3	5	2	1	0.6	11	2.5	5	5	2	5	4	0.5	0.01	3.7	80			Start 1/4/80
400		1800		25	35	40	1	52	3	3	0.6	5	2	2	0.8	22	2.5	35	110	4	5	2	0.5	0.01	6.8	140			Magnetite bearing jasperite
401		1825		30	25	45	2	50	3	3	0.4	4	2	1	0.6	11	2.5	12	48	8	5	2	0.5	0.01	5.8	170			Iron & manganese
402		1850		30	25	45	1	54	3	2	0.3	3	2	1	0.6	11	2.5	15	15	2	5	4	0.5	0.01	3.8	200			last sample before flat.
403		1875		35	30	35	2	50	3	3	0.3	5	5	2	1.0	11	2.5	12	10	10	10	2	0.5	0.01	4.5	150			Traverse offset on
404		1900		10	45	45	2	50	3	4	0.7	5	4	3	1.0	11	2.5	10	12	6	5	2	0.5	0.01	5.7	110			327° by 100m sec
405		1925		20	40	40	1	50	3	3	1.0	5	4	3	1.5	11	2.5	8	5	2	5	2	0.5	0.01	5.6	85			
406		1950		20	40	40	1	50	3	3	0.9	5	4	3	1.5	11	2.5	5	5	4	5	2	0.5	0.01	4.3	60			
407		1975		5	45	50	1	50	3	4	1.0	6	4	3	1.5	11	2.5	5	5	10	5	4	0.5	0.01	2.0	55			
408		2010		40	30	30	1	50	3	3	0.3	20	4	1	0.5	11	2.5	5	8	8	5	4			5.5	90			zone calcrete at site of 799403

C.R.A. Exploration — Soil — Field and Assay Data Sheet complete.

Tenement M.Lamy E L Area/Prospect Salt Ch (4). Plan Reference Collected by KW/FC Date 27/28-3-80

Size fraction -10+20# analysed by AMDEL on D.P.O. B.277 Date sent 28-3-80 Date Results Returned 7-5-80.

SAMPLE LOCATION				SOIL DESCRIPTION							SITE			BEDROCK			METAL CONTENT IN P.P.M.												OBSERVATIONS
Sample Number	Traverse Reference	Distance along traverse metres	Direction Sampled (Mag)	size: gravel %	size: sand %	size: clay %	Organic Content	colour	Horizon	Soil Type	Depth (m)	Slope Angle	downhill direction	Type of exposure	Depth to Bedrock	Rock Type	Pb	Zn	Cu	Sn	W	U	Ag	Au	Fe %	Mn			
799368	A-1	1000	57	45	30	25	1	50	3	2	0.4	5	8	2	0.5	5	2.5	60	150	2	10	4	0.5	0.01	5.3	1050			
369		1025		40	30	30	1	50	3	2	0.4	10	1	2	0.6	5	2.5	15	310	4	1.0	6	0.5	0.01	4.3	820			
370		1050		40	30	30	1	50	3	2	0.3	10	1	1	0.5	17	2.5	20	600	4	5	4	0.5	0.01	5.8	640			End for 27-3-80
371		1075		40	30	30	1	50	3	3	0.5	10	1	2	0.7	5	2.5	15	65	6	5	10	0.5	0.01	5.5	460			start 28-3-80.
372		1100		35	30	35	1	50	3	3	0.5	5	1	3	0.8	5	2.5	20	570	8	10	2	0.5	0.01	6.5	500			
373		1125		30	30	40	1	51	3	3	0.5	5	1	3	0.8	17	2.5	8	48	6	10	4	0.5	0.01	3.7	370			
374		1150		35	30	35	1	50	3	3	0.5	5	8	1	0.6	5	2.5	38	80	2	5	4	0.5	0.01	4.0	530			
375		1175		30	35	35	1	50	2	3	1.0	6	8	3	1.5	5	10	8	12	2	15	2	0.5	0.01	3.1	240			Fence at 1190m.
376		1200		30	30	40	1	50	3	3	0.4	10	7	3	0.8	11	5	22	20	2	5	6	0.5	0.01	6.2	580			
377		1225		35	30	35	1	53	3	3	0.6	10	6	2	1.0	11	5	18	10	2	5	6	0.5	0.01	5.1	330			
378		1250		45	20	35	2	50	3	3	0.4	15	6	1	0.5	11	5	5	40	2	10	2	0.5	0.01	2.7	75			abundant vein qtz.
379		1275		35	30	35	1	50	3	3	0.5	20	6	1	0.8	11	5	15	65	2	10	4	0.5	0.01	4.2	160			
380		1300		30	30	40	1	50	3	2	0.5	5	6	1	0.7	11	5	10	32	2	5	4	0.5	0.01	3.9	120			top of hill
381		1325		25	25	50	1	50	3	2	0.6	5	1	1	1.0	11	10	10	30	6	15	10	0.5	0.01	5.8	140			by Track
382		1350		25	30	45	1	50	3	3	0.5	5	1	1	0.7	11	5	2	22	2	5	4	0.5	0.01	3.3	50			
383		1375		30	30	40	1	50	3	3	0.5	5	1	2	1.0	11	5	10	38	2	5	2	0.5	0.01	4.0	120			
384		1400		25	30	45	1	56	3	3	0.5	5	1	2	0.7	11	5	5	35	4	5	2	0.5	0.01	1.8	75			
385		1425		30	25	45	1	50	3	2	0.4	5	1	1	0.6	11	5	5	8	2	5	2	0.5	0.01	1.7	65			
386		1450		35	30	35	2	50	3	2	0.4	15	1	1	0.5	11	10	8	2	6	5	4	0.5	0.01	3.1	100			
387	V	1475	V	5	50	45	1	50	2	4	1.2	3	3	3	3.0	11	5	5	8	2	5	2	0.5	0.01	4.7	85			

1180

C.R.A. Exploration — Soil — Field and Assay Data Sheet

Tenement Milerna E.L. Area/Prospect Salt Ck (14) Plan Reference Collected by KW/FC Date 27-3-80

Size fraction -10+80# analysed by AMDEL on D.P.O. B277 Date sent 28-3-80 Date Results Returned 7-5-80

Sample Number	Traverse Reference	Distance along traverse metres	Direction Sampled (Mag)	gravel %	sand %	clay %	Organic Content	colour	Horizon	Soil Type	Depth (m)	Slope Angle	downhill direction	Type of exposure	Depth to Bedrock	Rock Type	Pb	Zn	Cu	Sn	W	U	Ag	Au	Fe %	Mn	Observations
Sample Location				Soil Description (size)							Site			Bedrock			Metal Content in P.P.M.										
799348	14.1	500	57	45	30	25	1	50	3	2	0.5	5	1	1	0.6	11	5	50	18	2	5	2	0.5	0.01	4.6	470	
349		525		50	30	20	1	65	3	2	0.7	5	1	1	0.5	11	25	15	32	2	5	4	0.5	0.01	1.2	170	
350		550		40	30	30	1	50	3	2	0.4	6	1	1	0.5	11	2.5	40	25	2	5	4	0.5	0.01	3.5	380	
351		575		35	30	35	1	50	3	3	0.4	6	2	1	0.6	11	10	45	20	4	5	2	0.5	0.01	4.2	360	
352		600		30	30	40	1	50	3	2	0.4	10	2	1	0.5	11	2.5	25	10	2	5	6	0.5	0.01	3.3	310	
353		625		25	35	40	1	50	3	3	0.6	5	2	1	1.0	11	2.5	25	2	4	15	4	0.5	0.01	2.5	300	
354		650		35	25	40	1	53	3	3	0.5	5	1	2	0.8	11	2.5	45	10	2	5	2	0.5	0.01	3.3	440	
355		675		35	20	45	1	50	3	2	0.4	10	2	1	0.5	11	2.5	30	12	2	5	6	0.5	0.01	3.0	380	
356		700		35	25	40	1	50	3	3	0.4	10	2	2	0.6	11	2.5	40	20	2	5	4	0.5	0.01	3.3	400	
357		725		40	20	40	1	50	3	2	0.4	25	2	1	0.6	5	10	50	55	2	5	2	0.5	0.01	3.3	470	
358		750		60	30	10	1	27	9	1	0.1	1	3	1	0.0	1	60	480	70	2	5	2	0.5	0.01	9.2	1450	gossan [illegible] in Ck [illegible]
359		775		5	55	40	1	50	2	4	0.9	1	3	3	3.0	3	10	30	12	2	5	2	0.5	0.01	3.4	340	No [illegible] site sample 50m upstream.
360		800		5	25	70	1	50	2	4	1.1	1	3	3	2.0	3	5	20	10	2	5	2	0.5	0.01	2.4	200	from [illegible] River
361		825		35	25	40	2	50	3	2	0.5	30	6	1	0.6	12	2.5	20	8	2	5	4	0.5	0.01	2.0	260	Alluvial Terrace.
362		850		20	35	45	2	50	3	3	0.6	25	6	2	1.0	11	10	65	32	2	5	4	0.5	0.01	5.2	400	
363		875		20	30	40	1	50	3	2	0.5	10	6	1	0.5	11	2.5	25	35	2	5	2	0.5	0.01	2.1	300	
364		900		35	30	35	1	53	3	2	0.6	5	7	2	0.5	5	2.5	200	45	6	5	4	0.5	0.01	3.2	1150	
365		925		35	25	40	1	50	3	2	0.3	5	7	1	0.4	17	2.5	25	45	2	10	6	0.5	0.01	5.9	1600	
366		950		40	25	35	1	52	3	3	0.4	5	8	2	0.5	8	2.5	15	18	2	5	4	0.5	0.01	4.8	1400	pegmatite in [illegible]
367 ↓	↓	975	↓	50	25	25	1	50	3	2	0.4	5	1	1	0.4	5	2.5	45	40	8	5	2	0.5	0.01	5.2	870	

20622

1801

C.R.A. Exploration

Soil

Field and assay

completion

Tenement M. 1/arg E.C. Area/Prospect Salt Ck (14) Plan Reference — Collected by KW/IC/Frank Cortese Date 26/27-3-80

Size fraction -10+20 # analysed by AMDEL. on D.P.O. B277 — Date sent 28-3-80 Date results returned 7-5-80

SAMPLE LOCATION				SOIL DESCRIPTION							SITE			BEDROCK			METAL CONTENT IN P.P.M.											OBSERVATIONS
				size																								
Sample Number	Traverse Reference	Distance along traverse metres.	Direction Sampled (Mag)	gravel %	sand %	clay %	organic content	colour	Horizon	Soil type	Depth (m)	Slope Angle	downhill direction	Type of exposure	Depth to bedrock	Rock Type	Pb ✓	Zn ✓	Cu ✓	Sn	W	U	Ag ✓	Au ✓	Fe % ✓	Mn ✓			
799328	14·1	000	57	25	45	30	1	30	3	3	0·6	3	5	2	0·5	11	5	30	15	2	20	2	0·5	0·01	2·0	250			Start 80m Surface rocks
329		025		20	40	40	1	36	3	2	0·7	3	5	2	0·4	11	5	30	20	2	15	2	0·5	0·01	2·0	200			
330		050		15	45	40	1	36	9	2	0·8	3	5	1	0·5	11	5	60	20	2	5	2	0·5	0·01	3·0	340			
331		075		20	30	50	1	50	3	2	0·8	3	5	3	0·6	11	2·5	45	20	2	10	2	0·5	0·01	3·8	220			Fence at 73 m
332		100		15	45	40	1	23	9	2	0·9	2	3	3	0·5	11	10	65	50	2	10	2	0·5	0·01	3·2	400			
333		125		20	40	40	1	65	9	2	0·8	1	3	3	0·5	2	5	25	12	2	5	2	0·5	0·01	2·6	140			
334		150		30	30	40	1	50	3	2	0·7	3	2	3	0·5	11	2·5	25	15	2	10	2	0·5	0·01	2·6	170			
335		175		30	30	40	1	50	3	3	0·7	3	2	3	0·5	5	25	25	15	2	5	2	0·5	0·01	2·1	100			
336		200		30	30	40	1	65	9	2	0·7	5	2	3	0·5	5	35	75	45	2	5	2	0·5	0·01	2·9	65			End for 26-3-80.
337		225		25	35	40	1	23	3	3	1·2	5	2	3	1·5	11	45	140	45	2	10	4	0·5	0·01	4·2	240			Start 27-3-80.
338		250		0	60	40	1	50	2	5	1·5	6	2	3	2·0	11	15	5	8	4	5	2	0·5	0·01	0·5	40			Conduit get in the way
339		275		0	50	50	1	75	2·5	3	1·4	6	2	3	2·0	11	15	25	18	6	5	2	0·5	0·01	2·1	70			Fence at 260
340		300		70	25	5	1	64	9	1	0·3	5	1	1	0·2	11	2·5	20	15	2	5	6	0·5	0·01	1·2	130			
341		325		20	50	30	1	35	3	2	1·0	5	7	1	1·5	11	5	45	10	4	20	4	0·5	0·01	3·5	500			
342		350		15	45	40	1	54	3	2	1·0	10	7	1	1·2	11	2·5	65	20	12	5	4	0·5	0·01	4·9	380			
343		375		35	45	20	1	50	3	2	0·5	10	8	1	0·7	11	2·5	30	15	4	5	4	0·5	0·01	3·4	360			
344		400		30	50	20	1	50	3	2	0·6	15	7	1	0·6	11	2·5	20	5	2	5	4	0·5	0·01	3·2	350			
345		425		25	45	30	1	50	3	2	0·4	15	7	1	0·5	11	2·5	15	5	2	10	2	0·5	0·01	2·9	260			
346		450		15	45	40	1	50	3	2	0·4	5	1	1	0·5	11	2·5	40	12	2	5	4	0·5	0·01	2·9	320			
347	V	475	V	15	40	45	1	54	3	3	1·0	5	8	3	1·2	11	2·5	35	12	2	5	6	0·5	0·01	2·6	300			under sand bar

28117

C R A EXPLORATION PTY LIMITED

Percussion DRILL CORE LOG

PROJECT Mitiang E.L. Salt Creek.

CO-ORDINATES 975M Traverse 141 | AZIMUTH 060 Mag | DRILLERS Nitschke

RL COLLAR Surface 120m a s l | INCLINATION -60 | DRILL TYPE Ingersol Rand T3

COMMENCED 16/6/80 | DEPTH 200M | HOLE No. 80SCP1

COMPLETED 17/6/80 | CASING LEFT 1M | DPO No(s) 0286

DEPTH FROM (M)	DEPTH TO (M)	REC %	HOLE DIAM.	CUTTINGS DESCRIPTION	SPECIAL FEATURES (WEATH., ALTERATION, FRACTURING, VEINING, MINERALIZATION)
0		30	8	0-1 Soil and weathered rock; 1-2 weathered, oxidised, medium grained biotite schist	
				pegmatite	
10		40	6"	Quartz, biotite fine grained schists plus interbeds of rusty coloured pegmatite, and quartz veining	
		100			
20				Coarse grained biotite schist with augen feldspars	
				pegmatite	
30					
				pegmatite	
40		30			
50					
					Sulphides - chalcopyrite - trace
					" " - trace
60		40		pegmatite	" " - trace
				pegmatite	" " trace
70					
	60				
80					
	100				
90					

SAMPLE No.	FROM (M)	TO (M)	CON (%)	Pb	Zn	Cu	Ag	Au	Sn	W	U	% Fe	Mn
834214	0	4		5	85	75	<1	<0.01	8	<10	<4	4.2	690
15	4	8		<5	105	130	<1	<0.01	4	<10	<4	4.5	700
16	8	12		5	75	190	<1	<0.01	8	<10	4	5.1	940
17	12	16		5	105	60	<1	<0.01	4	15	<4	4.83	705
18	16	20		5	110	60	<1	<0.01	<4	15	<4	5.17	810
19	20	24		5	110	60	<1	<0.01	<4	<10	4	5.10	460
20	24	28		5	55	290	<1	<0.01	4	<10	6	4.75	455
21	28	32		5	60	50	<1	<0.01	<4	20	6	4.83	610
			5										
22	32	36		5	40	35	<1	<0.01	<4	15	4	4.40	660
23	36	40		<5	35	55	<1	<0.01	6	<10	<4	4.30	540
24	40	44		5	25	30	<1	<0.01	<4	<10	4	4.42	630
25	44	48		5	60	45	<1	<0.01	6	<10	6	5.09	670
26	48	52	10	5	40	70	<1	<0.01	<4	10	6	4.27	645
27	52	56											
28	56	58		5	45	165	<1	<0.01	6	15	4	4.53	640
29	58	60		5	45	120	<1	<0.01	<4	<10	6	4.96	730
30	60	62		5	50	150	<1	<0.01	12	<10	<4	5.19	605
31	62	64		<5	35	210	<1	<0.01	8	10	4	5.03	640
32	64	66		<5	35	425	<1	<0.01	<4	10	8	4.87	760
33	66	68	10	<5	30	185	<1	<0.01	<4	<10	4	5.10	735
34	68	70		<5	30	40	<1	<0.01	<4	<10	<4	4.60	740
35	70	72		<5	35	15	<1	<0.01	6	<10	6	5.03	630
36	72	74		<5	30	70	<1	<0.01	6	20	8	4.67	630
37	74	76		<5	30	160	<1	<0.01	<4	<10	<4	4.33	600
38	76	78	15	<5	30	35	<1	<0.01	<4	10	<4	4.75	580
39	78	80		<5	35	5	<1	<0.01	<4	10	4	5.13	660
40	80	82		<5	40	15	<1	<0.01	<4	<10	8	5.07	660
41	82	84		<5	45	35	<1	<0.01	<4	<10	8	4.75	630
42	84	86		5	30	35	<1	<0.01	4	<10	6	4.50	650
43	86	88		<5	35	65	<1	<0.01	10	<10	<4	4.75	560
44	88	90		<5	35	65	<1	<0.01	<4	<10	<4	4.90	550
45	90	92		<5	35	40	<1	<0.01	6	<10	6	4.30	440
46	92	94		<5	30	75	<1	<0.01	4	<10	<4	4.80	360

SUMMARY AND SPECIAL COMMENTS Essentially similar lithology all the way down the hole in respect to the country rock. Some [illegible] [illegible]. Oxidation is present to 200 M as is chloritisation. Water table is at 120 M

LOGGED BY I. A. Cook | DATE 16/6/80

SHEET 1 OF 3

C R A EXPLORATION PTY LIMITED

Percussion **DRILL CORE LOG**

PROJECT Milang E.L. Salt Creek

CO-ORDINATES 975M Traverse 14:1 AZIMUTH 060 Mag DRILLERS Nitschke COMMENCED 16/6/80 DEPTH 200M HOLE No. 80SCP1

RL COLLAR Surface 120M a.s.l. INCLINATION -60 DRILL TYPE Ingersol Rand T3 COMPLETED 17/6/80 CASING LEFT 1 M. DPO No(s) 0286

DEPTH FROM(M)	DEPTH TO(M)	REC %	HOLE DIAM.	GRAPHIC LOG	CUTTINGS DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION
94			6"			
	100					
	110	90				
	120					sulphides — trace
						water.
						sulphides. — trace
						" "
						" "
	130				Essentially fine grained quartz biotite schist with coarse phenocrysts of light colored feldspar. Occasional coarser grained biotite schists and inter-beds of coarse grained leukocratic pegmatite, Quartz veins, sulphides and chloritised schists.	" "
						" "
	140				A well developed fabric is present in the schists	
						pan con - no sulphides
	150					
		70				
	160					
		40				pan con - no sulphides
		30				
	170					
		20				pan con - no sulphides
		5				
	180					
		15				
		5			pegmatite	

SAMPLE No.	FROM (M)	TO (M)	CON (%)	ASSAY VALUES Pb	Zn	Cu	Ag	Au	Sn	W	U	Fe %	Mn
47	94	96	10	5	35	80	<1	<0.01	6	<10	4	5.47	460
48	96	98		<5	35	35	<1	<0.01	6	<10	6	4.62	580
49	98	100		<5	30	30	<1	<0.01	<4	<10	<4	4.68	530
50	100	102	20	<5	30	25	<1	<0.01	4	<10	4	4.66	620
51	102	104		<5	40	18	<1	<0.01	<4	10	<4	4.70	730
52	104	106		<5	35	15	<1	<0.01	<4	<10	4	4.86	660
53	106	108		<5	35	18	<1	<0.01	4	<10	<4	4.61	600
54	108	110		<5	35	25	<1	<0.01	<4	<10	<4	5.00	660
55	110	112		<5	40	18	<1	<0.01	<4	10	6	4.75	640
56	112	114		<5	35	30	<1	<0.01	<4	<10	4	5.27	620
57	114	116		<5	35	15	<1	<0.01	<4	<10	<4	5.12	590
58	116	118		<5	35	30	<1	<0.01	<4	10	4	4.51	370
59	118	120		<5	35	200	<1	<0.01	<4	20	6	4.73	370
60	120	122		<5	30	195	<1	<0.01	<4	<10	<4	4.83	390
61	122	124		<5	30	100	<1	<0.01	<4	<10	4	5.50	800
62	124	126		<5	45	60	<1	<0.01	8	<10	8	5.10	440
63	126	128		<5	90	65	1	<0.01	4	15	8	5.24	460
64	128	130		<5	45	65	1	<0.01	<4	15	4	5.20	370
65	130	132		<5	40	80	1	<0.01	8	<10	4	5.27	355
66	132	134		.	.	.	.	.	.	.	.	.	.
67	134	136		<5	45	95	<1	<0.01	<4	<10	4	4.84	330
68	136	138		<5	100	95	1	<0.01	<4	<10	<4	4.98	370
69	138	140		<5	60	65	1	<0.01	4	<10	6	5.17	455
70	140	142		<5	65	50	1	<0.01	4	<10	<4	5.38	560
71	142	144		<5	50	45	<1	<0.01	<4	15	<4	5.23	480
72	144	148		<5	55	35	<1	<0.01	8	<10	4	5.10	570
73	148	152		<5	50	55	<1	<0.01	8	10	8	4.85	625
74	152	156		<5	45	45	<1	<0.01	<4	<10	6	4.84	660
75	156	160		<5	45	30	<1	<0.01	<4	<10	4	4.75	740
76	160	164		<5	80	30	<1	<0.01	<4	<10	<4	5.63	680
			30										
77	164	168		<5	55	18	<1	<0.01	4	15	<4	5.55	780
78	168	172		<5	95	30	<1	<0.01	8	<10	<4	5.70	520
79	172	176		<5	90	40	<1	<0.01	<4	<10	<4	4.9	555
80	176	180		<5	75	25	<1	<0.01	<4	<10	4	5.42	380
81	180	184		<5	50	40	<1	<0.01	6	10	<4	4.9	410
82	184	188	40	<5	70	40	<1	<0.01	10	<10	6	4.9	405

SUMMARY AND SPECIAL COMMENTS Rate of flow is 500 gallons / hour.

LOGGED BY IA Cook DATE 17/6/80

SHEET 2 OF 3

CRA EXPLORATION PTY LIMITED

Percussion. **DRILL CORE LOG**

PROJECT MILANGA E.L. "Salt creek"

CO-ORDINATES 975 M Traverse 14 L AZIMUTH 060 Mag. DRILLERS Nitschke.

RL COLLAR Surface 120M a.s.l. INCLINATION -60 DRILL TYPE Ingersol Rand T3

COMMENCED 16/6/80 DEPTH 200m HOLE No. BOSCP1.

COMPLETED 17/6/80 CASING LEFT 1M DPO No(s) 0286

DEPTH FROM(M)	DEPTH TO(M)	REC %	HOLE DIAM.	GRAPHIC LOG	CUTTINGS DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	CON (%)	ASSAY VALUES Pb	Zn	Cu	Ag	Au	Sn	W	U	% Fe	Mn
188	190		6"	=																
		30		=			84	188	192		5	70	40	<1	<0.01	<4	15	4	5.01	395
				=																
				=			85	192	196		<5	35	40	1	<0.01	8	<10	4	4.25	370
				=																
	200			=			86	196	200		<5	60	30	<1	<0.01	4	<10	4	5.33	450
					B.O.H.	1														
					Survey 100 M. 35°→055°	Water flow rate 500 gph.														
					200 M 29°→045															

SUMMARY AND SPECIAL COMMENTS 0-2 m soil and weathered rock 2-22 weathered fine biotite schists 22-24 coarse biotite schist 24-200 m fine grained biotite schist with large phenocrysts of feldspar.

LOGGED BY I.A. Cook DATE 17/6/80

SHEET 3 OF 3

0286

APPENDIX VI

DETAILED DRILL LOGS AND ASSAY RESULTS - ANOMALIES InMB38, InMB39, InMB39A

C.R.A. EXPLORATION PTY. LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 070° MAGN DRILLERS NORTHBRIDGE COMMENCED 30-8-84 DEPTH 39 m HOLE No. PD84MT2

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM 685 COMPLETED 3-9-84 CASING LEFT 3-39m DPO No(s) _____

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC (ST X10⁻⁵)	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES
0	8		10		SAND: ORANGE-CREAM, FINE GRAINED, SUBANGULAR TO ROUNDED, CALCAREOUS	TRACE OPAQUES AND ORGANIC	NOT SAMPLED				
			10		WEAKLY CEMENTED IN PARTS, CALCRETISED BANDS, CLAYEY TO BASE	MATTER					
			25								
			15								
8	12		10		SAND: ORANGE BROWN, FINE TO MEDIUM GRAINED, SUBANGULAR TO	MINOR OPAQUES, ? HEMATITE					
			25		ROUNDED, MODERATELY WELL SORTED, MINOR CLAY TO TOP, CALCAREOUS	TRACE MAGNETITE					
12	18		30		SAND, AS ABOVE, MEDIUM GRAINED, WELL SORTED, MAINLY SUBROUNDED						
			30		TO ROUNDED, CALCAREOUS, SOME WEAKLY CEMENTED BANDS						
			25								
18	30		50		SAND: RED-ORANGE, AS ABOVE, SLIGHTLY FERRUGINOUS	MINOR OPAQUES, TRACE MAGNETITE					
			80								
			90								
			80								
			70								
			65								
30	36		40		SAND: ORANGE-BROWN, FINE TO MEDIUM GRAINED, AS ABOVE	MINOR OPAQUES					
			40								
			50								
36	39				LOST RETURN: REAMED WITH CASING						
					B.O.H. 39m						

HOLE ABANDONED DUE TO INABILITY OF RIG TO PENETRATE UNCONSOLIDATED TERTIARY SAND. STEEL CASING REAMED TO 39m, BROKE OFF AT JOINT AT 3m, 36m LEFT IN HOLE.

CRAE 117
PLAN No M414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P LEWIS DATE 3-9-84

SHEET 1 OF 1

1181

C R.A. EXPLORATION PTY. LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° MAGN DRILLERS NORTHBRIDGE COMMENCED 3-9-84 DEPTH 200 m HOLE No. PD84MI3

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM 685 COMPLETED 7-9-84 CASING LEFT 16m DPO No(s) 938, 939

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC (SIx10⁻⁶)	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
0	6		30		SAND; CREAM, FINE GRAINED, SUB-ANGULAR TO ROUNDED, MODERATELY	ABUNDANT OPAQUES, ASH												
			20		WELL SORTED, CALCAREOUS, VERY CLAYEY TO BASE, NODULAR													
			15		CALCRETE PINK-WHITE-ORANGE-BROWN COMMON AT TOP													
6	14		15		SAND; BURNT ORANGE, YELLOW, RED, BROWN, FINE TO MEDIUM GRAINED	TRACE - MINOR OPAQUES.												
10			10		SUBANGULAR TO ROUNDED, MODERATELY WELL SORTED, SLIGHTLY CLAYEY,													
			10		WEAKLY CALCAREOUS, RARE PURPLE-MAROON BANDS 8-10m													
			10															
14	36		15		CLAY; MOTTLED, GREEN-BROWN-ORANGE, WEATHERED SCHIST	WEATHERED BASEMENT	1162323	NOT ANALYSED										
			10		QUARTZ-FELDSPAR-BIOTITE-SERICITE SCHIST; FINE TO MEDIUM GRAINED	MODERATELY FRESH ROCK	324	"	"									
30			40		QUARTZITIC IN PART, PHYLLITIC IN PART, GREEN-GREY, GREY BROWN	MINOR LIMONITE STAINING	325	"	"									
			70		SOME COARSE GRAINED "SWEATOUTS"	LIMONITE STAINING COMMON, TRACE PYRITE	326	"	"									
			75			ABUNDANT LIMONITE STAINING.	327	"	"									
			45			TRACE PYRITE, LIMONITE STAINING	328	"	"									
			60			COMMON.	329	"	"									
36			90		AS ABOVE; INTERBEDDED WITH QUARTZ-BIOTITE-SERICITE SCHIST; GREY,	TRACE - 2% (LOCALLY) PYRITE	330				30	10	86	580	-	-	-	-
			50		FINE TO MEDIUM GRAINED, QUARTZ RICH, MINOR SULPHIDIC BANDS,		331				21	-	92	610	-	-	10	-
			50		MINOR CHLORITE TO BASE.		332				14	-	80	510	-	-	-	-
36	56		60		40% AS ABOVE; 60% QUARTZ-SERICITE-BIOTITE-CHLORITE SCHIST, AS BROW	MIN - 30% SULPHIDES, DISSEMINATED, VEIN	333				10	-	60	460	-	-	-	-
			60		QUARTZ ± BIOTITE - SERICITE - CHLORITE SCHIST; GREEN-GREY-WHITE, SULPHIDIC	1-10% (LOCALLY 25-30%) SULPHIDES,	334				54	24	115	440	-	-	10	-
40			90		QUARTZITIC IN PART, MAINLY PHYLLITIC, MINOR QUARTZ-CALCITE-SULPHIDE	DISSEMINATED, VEIN, & DISCRETE GRAINS	335				62	6	54	245	-	4	15	-
			500		VEINS TO BASE. 30% VEIN QUARTZ WITH SOME SULPHIDE 38-40m	MAINLY PYRITE - PYRRHOTITE, TRACE	336				86	14	125	245	-	4	35	-
			600			CHALCOPYRITE (30-40% SULPHIDES	337				265	-	40	150	-	18	50	-
			700			42-50m)	338				270	-	47	160	-	10	40	-
			475				339				165	44	465	165	-	8	35	-
80			100				340				86	28	1380	125	-	10	20	-
			200				341				110	32	340	155	-	4	20	-
			350				342				115	56	1080	190	-	12	25	-
			150		50% AS ABOVE; 50% QUARTZ-BIOTITE SCHIST; AS BELOW		343				39	18	240	370	-	8	-	-
56	100		100		QUARTZ-BIOTITE ± CHLORITE ± SERICITE SCHIST; FINE TO MEDIUM GRAINED,	TRACE - MINOR SULPHIDES	344				37	8	195	540	-	-	-	-
60			100		GREY, QUARTZ RICH, RARE QUARTZ AND QUARTZ-CALCITE-SULPHIDE		345				25	6	125	420	-	10	10	-
			100		VEINS, THIN QUARTZITE BANDS, CHLORITIC, GREEN-WHITE		346				23	8	135	385	-	4	10	-
			125				347				14	8	74	355	-	4	10	-
			100			40% VEIN QUARTZ.	348				38	-	46	185	-	-	-	-
			150			TRACE - MINOR SULPHIDES, RARE BLACK	349				23	14	98	265	-	4	15	-
90			90			GRAINS ? WOLFRAMITE	350				11	6	68	285	-	-	10	-
			95				351				24	-	72	340	-	6	10	-
			100				352				17	6	90	365	-	-	10	-
			80				353	NOT ANALYSED										
			70				354	"	"									
80			70				355	"	"									
			80				356	"	"									
			60				357	"	"									
			60				358	"	"									
			80				359	"	"									
90			80				360				17	-	45	420	-	-	-	-
			100			MINOR - 2% SULPHIDES, SOME PYRITE	361				38	12	170	405	-	-	10	-
			100			VEINS	362				37	8	275	360	-	4	-	-

CRAE 117
PLAN No M414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P. LEWIS DATE 7-9-84

SHEET 1 OF 3

1188

C R A EXPLORATION PTY LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° MAGN DRILLERS NORTHBRIDGE COMMENCED 3-9-84 DEPTH 200 m HOLE No. PD84MT3

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM 685 COMPLETED 7-9-84 CASING LEFT 16m DPO No(s) 938, 939

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC (SI x 10^{-3})	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
56	100m		70		QUARTZ - BIOTITE ± CHLORITE ± SERICITE SCHIST : AS ABOVE	MINOR - 2% SULPHIDES PYRITE -	1162363				41	-	370	415	-	4	15	-
			50			PYRRHOTITE, TR ? WOLFRAMITE	364				24	-	125	470	-	6	-	-
100			125			MINOR SULPHIDE VEINS	365				25	8	70	510	-	4	15	-
100	116		300		QUARTZ - CHLORITE - SERICITE ± BIOTITE SCHIST ; FINE GRAINED, PHYLLITIC	3-10% (LOCALLY 30-35%) SULPHIDES	366				120	10	760	220	-	8	10	-
			250		WITH QUARTZITE INTERBEDS, BOTH ROCK TYPES SULPHIDIC, MINOR	PYRRHOTITE - PYRITE, TRACE CHALCOPYRITE	367				56	14	255	305	-	4	-	-
			500		VEIN QUARTZ 104-106 m.	?SPHALERITE, GALENA, SULPHIDES VERY	368				160	-	385	135	-	-	10	-
			250		AS ABOVE, 80% QUARTZITE 106-108 m.	FINE GRAINED, DISSEMINATED, MINOR	369				92	16	36	160	-	-	25	-
110			500			DISCRETE GRAINS & VEINS.	370				110	10	180	165	-	6	40	-
			500				371				120	235	1200	215	1	-	15	-
			300		AS ABOVE, 40% QUARTZITE, 20% QUARTZ - BIOTITE SCHIST.		372				78	185	830	330	-	-	10	-
			400				373				90	170	840	340	-	4	10	-
116	148		200		QUARTZ - BIOTITE ± SERICITE SCHIST ; GREY, FINE GRAINED, PHYLLITIC	MINOR - 3% SULPHIDES, PYRITE -	374				66	56	845	440	-	4	10	-
120			95		IN PART, QUARTZITIC IN PART, MINOR CHLORITE ALTERATION,	PYRRHOTITE, TRACE GALENA, MAINLY	375				43	12	185	465	-	6	-	-
			85		THIN SULPHIDIC BANDS 126-128 m, 140-142 m, 146-148 m.	DISSEMINATED, SOME VEINS.	376				92	10	88	465	-	-	10	-
			150		MODERATELY WELL DEVELOPED CLEAVAGE IN PHYLLITIC BANDS,		377				100	22	235	540	-	-	-	-
			150		QUARTZ VEINING COMMON 134-140 m (UP TO 50% OF SAMPLE)		378				86	48	220	650	-	4	-	-
			400		MINOR QUARTZ - SULPHIDE VEINS, QUARTZ - CALCITE - SULPHIDE VEINS.	10-15% SULPHIDES	379				175	225	1520	630	1	-	-	-
140			200				380				64	18	430	660	-	-	-	-
			85				381				19	6	50	510	-	-	-	-
			90				382				66	12	96	640	-	4	-	-
			200				383				305	8	110	435	-	6	-	-
			150				384				155	10	150	970	-	-	-	-
140			65				385				66	-	140	1740	-	6	-	-
			300			10-15% SULPHIDES	386				130	10	260	1.09%	-	10	15	-
			80				387				25	10	105	3380	-	-	-	-
			150				388				14	34	58	940	-	4	-	-
			350			3-7% SULPHIDES	389				120	38	150	1.54%	-	4	20	-
148 150	156		100		QUARTZ - FELDSPAR - BIOTITE ± SERICITE SCHIST ; MEDIUM GRAINED,	TRACE SULPHIDE AS DISCRETE	390				25	42	120	3380	-	4	-	-
			100		QUARTZ RICH, RARE CHLORITE ALTERATION	BLEBS.	391				38	8	100	1300	-	-	10	-
			40				392				12	-	42	800	-	-	10	-
			60				393				12	-	29	850	-	-	10	-
156	174		200		QUARTZ - BIOTITE - SERICITE ± CHLORITE SCHIST ; FINE GRAINED, PHYLLITIC	3-10% (LOCALLY 10-15%) SULPHIDES	394				35	100	120	930	-	4	15	-
160			650		QUARTZ RICH IN PART GRADING INTO QUARTZITE ; GREEN WHITE,	DISSEMINATED PYRRHOTITE - PYRITE, TRACE	395				290	1040	4580	730	5	4	-	-
			450		MEDIUM GRAINED, ALL ROCKS SULPHIDIC, ESSENTIALLY AN	GALENA, ARSENOPYRITE, MINOR VEIN	396				235	580	4160	850	3	-	-	-
			700		INTERBEDDED SCHIST / QUARTZITE SEQUENCE. 20% VEIN QUARTZ	SULPHIDES.	397				240	60	2960	550	-	-	10	-
			200		162-164 m.		398				32	34	140	690	-	4	10	-
			800				399				80	150	600	1120	-	-	-	-
170			500				400				195	20	425	350	-	-	10	-
			700				401				155	8	60	215	-	-	15	-
			700				402				115	-	52	280	-	-	-	-
174	200		200		80% QUARTZ - BIOTITE SCHIST ; AS BELOW, 20% QUARTZITE & PHYLLITE AS ABOVE	1-3% SULPHIDES	403				46	6	29	270	-	-	15	-
			50		QUARTZ - BIOTITE ± SERICITE SCHIST ; FINE TO MEDIUM GRAINED, QUARTZ	TRACE - MINOR PYRITE, MAINLY	404				18	-	33	520	-	4	10	-
180			90		RICH, MINOR CHLORITE ALTERATION, RARE VEIN QUARTZ, AND	AS COATINGS ON FRACTURES, MINOR	405				26	-	26	320	-	6	10	-
			60		QUARTZ - SULPHIDE VEINS GRADES TO BIOTITIC QUARTZITE IN PARTS	DISCRETE GRAINS AND VEINS	406	NOT ANALYSED										
			45				407	"	"									
			55				408	"	"									
			45				409	"	"									

CRAE 117
PLAN No M 414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P. LEWIS DATE 7-9-84

SHEET 2 OF 3

C.R.A. EXPLORATION PTY. LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° MAGN DRILLERS NORTHBRIDGE COMMENCED 3-9-84 DEPTH 200 m HOLE No. PD 84MT 3

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM 685 COMPLETED 7-9-84 CASING LEFT 16m DPO No(s) 938, 939

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mo	Ag	Sn	W	Au
174 ~~190~~	200		40		QUARTZ - BIOTITE ± SERICITE SCHIST; AS ABOVE	TRACE - MINOR PYRITE.	1162410	NOT ANALYSED										
			45				411	"	"									
			55				412	"	"									
			75		50% AS ABOVE; 50% QUARTZITE; WHITE, BIOTITIC, FINE TO MEDIUM GRAINED	TRACE - 3% SULPHIDES	413	"	"									
			60		QUARTZ - BIOTITE ± SERICITE SCHIST; AS ABOVE		414	"	"									
~~200~~			50				415	"	"									
					B.O.H. 200m.													
								METHOD			ICP	ICP	ICP	ICP	ICP	XRF	XRF	AAS
					ALL SULPHIDE INTERVALS ANALYSED BY AMDEL.			DETECTION LIMIT			(2)	(5)	(2)	(5)	(1)	(4)	(10)	(0.01)
					SAMPLES TAKEN EVERY 2m FOR SADME.													

CRAE 117
PLAN No M 414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P. LEWIS DATE 7-9-84

SHEET 3 OF 3

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C.R.A. EXPLORATION PTY. LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° MAGN DRILLERS NORTHBRIDGE COMMENCED 7-9-84 DEPTH 186 m HOLE No. PD 84MI 4

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM 685 COMPLETED 8-9-84 CASING LEFT 6m DPO No(s) _____

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC (SI x 10⁻³)	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
0	2		90		SILT; ORANGE BROWN, FINE GRAINED; CALCRETE, PINK BROWN, NODULAR	MINOR OPAQUES												
2	10		40		BIOTITE - SERICITE SCHIST; GREEN BROWN, FINE GRAINED, MICACEOUS, SOME	IRON STAINING (LIMONITE) AND	1162416											
			30		COARSE GOLDEN BIOTITE (PHLOGOPITE), 20% IRON STAINED VEIN	VEINING COMMON, MINOR OPAQUES	417	NOT ANALYSED										
			30		QUARTZ FROM 6 - 10 m, 20% QUARTZITE; OFF WHITE, BROWN,	DISSEMINATED IN QUARTZITE	418	"	"									
10			30		FINE TO MEDIUM GRAINED, 6 - 10 m, MINOR PURPLISH CLAY		419	"	"									
10	18		25		SILT; FAWN BROWN; FINE GRAINED, POWDERY, MICACEOUS, RARE FRAGMENTS	MINOR LIMONITE STAINING AND	420	"	"									
			25		OF FINE GRAINED, SLIGHTLY MICACEOUS QUARTZITE, SERICITIC SCHIST,	VEINING	421	"	"									
			30		AND PURPLISH WHITE KAOLIN CLAY		422	"	"									
			40				423	"	"									
18	22		25		SILT: YELLOW - BROWN, MICACEOUS, FINE GRAINED, FRAGMENTS OF QUARTZ	MINOR LIMONITE STAINING AND VEINS	424	"	"									
20			35		FELDSPAR SERICITE SCHIST		425	"	"									
22	36		65		QUARTZ - BIOTITE - SERICITE SCHIST; YELLOW GREY, FINE TO MEDIUM GRAINED	MINOR LIMONITE STAINING	426	"	"									
			55		MICACEOUS, MODERATELY WELL DEVELOPED CLEAVAGE, MINOR VEIN		427	"	"									
			90		QUARTZ, SAMPLE POWDERY, BECOMES GREY TO BASE		428	"	"									
30			100			RARE LIMONITE STAINING & VEINS	429	"	"									
			100		SCHIST: AS ABOVE, RARE QUARTZ - CHLORITE VEINING		430	"	"									
			100		SCHIST: AS ABOVE 20% SERICITIC WITH FINE STRINGERS OF LIMONITE	MINOR LIMONITE IN FINE VEINLETS	431	"	"									
			125		SCHIST; AS ABOVE, MINOR SERICITIC SCHIST		432	"	"									
36	60		150		QUARTZ - BIOTITE ± SERICITE SCHIST; GREY, FINE TO MEDIUM GRAINED	TRACE LIMONITE STAINING ON CLEAVAGE	433	"	"									
40			45		MICACEOUS (PHYLLITIC) IN PART, QUARTZ RICH IN PART		434	"	"									
			55		MODERATELY WELL DEVELOPED CLEAVAGE IN PHYLLITIC PARTS,	TRACE PYRITE	435	"	"									
			80		RARE VEIN QUARTZ, RARE CHLORITE ALTERATION		436	"	"									
			55				437	"	"									
			70				438	"	"									
45			45				439	"	"									
			70				440	"	"									
			100			TRACE PYRITE IN QUARTZ VEINS	441	"	"									
			70			AND ALONG FRACTURES	442				12	-	31	315	-	-	10	-
			85				443				28	-	28	350	-	-	-	-
50			100			MINOR - 3% PYRITE, DISSEMINATED	444				52	-	34	470	-	6	-	-
60	64		150		QUARTZITE; GREEN, DARK GREEN, FINE GRAINED, CHLORITIC, SULPHIDIC, SOME	2-5% PYRRHOTITE - PYRITE, VERY FINE	445				60	14	40	485	-	6	10	-
			150		COARSE BIOTITE SELVAGE ON QUARTZ VEINS, 30% SCHIST 60 - 62 m	5-10% GRAINED, DISSEMINATED, SOME	446				96	78	44	485	1	8	-	-
64	106		150		QUARTZ - BIOTITE ± CHLORITE SCHIST; GREY, DARK GREEN GREY, FINE	3-7% VEINING, TRACE GALENA	447				62	78	48	520	-	-	-	-
			100		GRAINED, SULPHIDIC, POOR TO MODERATELY WELL DEVELOPED	2-5%	448				84	84	52	610	-	-	-	-
70			100		CLEAVAGE; WITH THIN INTERBEDS OF QUARTZITE AS ABOVE	1-3%, LOCALLY 10-15% SULPHIDES	449				62	98	56	650	-	-	-	-
			150		MINOR QUARTZ AND QUARTZ SULPHIDE VEINS	1-5% AS ABOVE	450				54	84	49	550	-	-	10	-
			150		SULPHIDES COMPRISE MAINLY VERY FINE GRAINED PYRRHOTITE	1-5%	451				68	94	60	850	-	-	-	-
			250		AND PYRITE WITH TRACE GALENA, ? CHALCOPYRITE PYRITE	1-5%	452				66	46	56	730	-	10	-	-
			325		OCCURS AS ? DIAGENETIC CRYSTALS, PYRRHOTITE VERY FINE GRAINED	5-10% SULPHIDES, AS ABOVE	453				62	6	39	620	-	6	15	-
80			300		DISSEMINATED ALONG CLEAVAGE, OCCURS AS 'FILINGS'	5-10%	454				76	-	30	420	-	6	-	-
			300			5-10%	455				72	10	41	560	-	6	10	-
			250			2-5% SULPHIDES, LOCALLY TO 30%	456				70	26	38	480	-	10	-	-
			325			2-5%	457				88	20	62	620	-	4	10	-
			200			2-5%	458				58	38	52	640	-	6	10	-
90			250			3-7%	459				66	40	52	600	-	-	-	-
			350			5-10% SULPHIDES, LOCALLY TO 20%	460				70	82	160	530	-	10	15	-
			325			SOME ? CHALCOPYRITE	461				56	116	180	650	-	-	-	-

CRAE 117 - PLAN No M 414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P.LEWIS DATE 8-9-84

SHEET 1 OF 2

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C R A EXPLORATION PTY LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° MAGN DRILLERS NORTHBRIDGE COMMENCED 7-9-84 DEPTH 186m HOLE No. PD84MI4

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM 685 COMPLETED 8-9-84 CASING LEFT 6m DPO No(s) 939

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC (SI x10⁻⁵)	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
64	106		850		QUARTZ - BIOTITE ± CHLORITE SCHIST ; QUARTZITE AS ABOVE	5-10%, LOCALLY TO 20% SULPHIDES	1162462				90	120	100	560	-	4	15	-
			300			3-7% LOCALLY TO 10%	463				72	22	41	540	-	6	-	-
100			100			1-3%	464				34	-	36	530	-	-	10	-
			400			5-10%	465				72	120	43	500	1	8	10	-
			600			5-10%	466				105	38	510	740	-	-	10	-
			225			2-5%	467				115	10	650	920	-	4	-	-
106	186		50		QUARTZITE ; GREEN - GREY, WHITE, LIGHT, BIOTITIC, MINOR SERICITE,	TRACE - MINOR SULPHIDES (LOCALLY	468				50	-	39	225	-	-	-	-
110			50		FINE GRAINED, GRADES FROM QUARTZ RICH TO MINOR	TO 3%) PYRITE, MAINLY DISSEMINATED	469				22	-	12	100	-	-	-	-
			55		BIOTITE RICH PARTS. GREENISH : CHLORITE COLOUR IN PARTS	AND ALONG FRACTURES TRACE	470				28	-	13	135	-	-	-	-
			50		WEAKLY CALCAREOUS.	ARSENOPYRITE	471				42	-	13	130	-	4	-	-
			80				472				62	-	13	105	-	-	-	-
			60				473				72	-	14	105	-	-	-	-
120			70				474				68	-	8	110	-	6	-	-
			55				475				52	-	12	115	-	-	-	-
			80		AS ABOVE BIOTITIC		476				50	-	9	110	-	-	-	-
			70				477				37	-	11	145	-	-	-	-
			45		AS ABOVE QUARTZ RICH		478				37	-	12	160	-	-	-	-
130			60				479				45	-	14	85	-	-	10	-
			75				480				42	-	11	165	-	-	-	-
			80				481				40	-	14	150	-	8	10	-
			85			RARE QUARTZ-SULPHIDE VEINS	482				46	-	15	145	-	-	-	-
			90				483				33	-	16	155	-	4	-	-
140			85				484				24	-	16	150	-	-	-	-
			50		AS ABOVE, BIOTITIC		485				15	-	14	145	-	-	-	-
			65				486				23	-	12	165	-	12	-	-
			80		AS ABOVE, MINOR SERICITIC ALTERATION		487	NOT ANALYSED										
			75				488	"	"									
150			50				489	"	"									
			70		AS ABOVE, BIOTITIC.		490	"	"									
			70				491	"	"									
			70		AS ABOVE, QUARTZ RICH.	TRACE SULPHIDE	492	"	"									
			80				493	"	"									
160			80				494	"	"									
			75				495	"	"									
			80				496	"	"									
			90				497	"	"									
			60				498	"	"									
170			60				499	"	"									
			70				500	"	"									
			70				501	"	"									
			70				502	"	"									
			70				503	"	"									
180			70				504	"	"									
			60				505	"	"									
			80				506	"	"									
			100				507	"	"									
					B.O.H. 186m.			DETECTION LIMIT			ICP (2)	ICP (5)	ICP (2)	ICP (5)	ICP (1)	XRF (4)	XRF (10)	AAS (0.01)

CRAE 117
PLAN No M414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P LEWIS DATE 8-9-84

SHEET 2 OF 2

C.R.A EXPLORATION PTY. LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° MAGN DRILLERS NORTHBRIDGE COMMENCED 8-9-84 DEPTH 234m HOLE No. PD84MI5

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM 685 COMPLETED 11-9-84 CASING LEFT 36m DPO No(s) _____

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC (SI X 10⁻⁶)	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
0	4		30	c c c	CALCARETE; PINK BROWN, WHITE, SHEET AT TOP, NODULAR BELOW, MINOR	MINOR OPAQUES												
			20	c c c	SILT AND CLAY TO BASE.													
4	12		30		CLAY; ORANGE-BROWN, RED-BROWN, STIFF, SANDY (SUBROUNDED TO													
			35		ROUNDED, MODERATELY WELL SORTED)													
10			30															
			30															
12	16		30		SAND; RED-BROWN, YELLOW-BROWN, FINE TO MEDIUM GRAINED, SUBANGULAR	MINOR OPAQUES												
			20		TO ROUNDED, CLAYEY IN PART, WEAKLY CALCAREOUS TO BASE													
16	26		25		CLAY; YELLOW-ORANGE-BROWN, SILTY, SLOPPY, MICACEOUS, WEAKLY CALCAREOUS	WEATHERED BASEMENT, RARE OPAQUES												
20			25		. RARE FRAGMENTS OF BLEACHED, SERICITIC SCHIST; FINE GRAINED	MINOR LIMONITE VEINING AND STAINING	116250B	NOT ANALYSED										
			20		CLAY BECOMES VERY PLASTIC NON STICKY TO BASE		509	"	"									
			10				510	"	"									
			10				511	"	"									
26	38		10		CLAY; YELLOW-BROWN, BROWN, BASICALLY AS ABOVE, FRAGMENTS OF BLEACHED	MINOR DISSEMINATED LIMONITE, SOME	512				25	24	260	165	-	-	-	-
30			10		SERICITE SCHIST AND WHITE CLAY WITH DISSEMINATED HEMATITIC SPOTS	HEMATITIC SPOTTING, LIMONITE STAINING	513				25	16	215	150	-	-	-	-
			10		BECOMES GREY-BROWN TO BASE WITH FRAGMENTS OF PHYLLITIC		514				22	16	220	145	-	-	-	-
			10		QUARTZ BIOTITE SCHIST, MINOR QUARTZ VEINING		515				25	20	195	100	-	8	-	-
			20				516				33	12	185	300	-	-	-	-
			20			MODERATELY FRESH ROCK	517				45	28	395	295	-	8	20	-
38	62		20		QUARTZ-SERICITE-CHLORITE ± BIOTITE SCHIST; GREEN GREY, FINE GRAINED,	1-2% SULPHIDES - PYRRHOTITE PYRITE	518				50	26	385	360	-	12	15	-
			60		QUARTZ RICH IN PART, SULPHIDIC, SLIGHTLY GRAPHITIC, RARE VEIN	1-3% TRACE GALENA OCCUR	519				46	28	265	315	-	6	15	-
			200		QUARTZ (60% VEIN QUARTZ), QUARTZ SULPHIDE VEINS 58-60m)	5-10% MAINLY DISSEMINATED	520				110	340	1440	470	1	-	25	-
			250			10-15% ALONG CLEAVAGE, RARE	521				92	540	1180	360	2	6	20	-
			225			10-15% VEINS.	522				90	285	1020	350	-	4	-	-
50			225			10-15%	523				74	330	730	350	1	4	10	-
			300			20-25%	524				80	520	1260	340	1	6	15	-
			100			15-20%	525				84	330	1260	325	-	10	15	-
			100			10-15%	526				92	400	1600	435	1	6	-	-
			200			10-15%	527				105	570	1260	495	2	4	15	-
60			150			10% VEIN SULPHIDE MAINLY	528				190	62	145	160	-	-	20	-
			90			5-10%	529				29	22	120	570	-	6	10	-
62	94		90		QUARTZ-BIOTITE ± SERICITE SCHIST; GREY, GREENISH GREY IN PART, FINE	MINOR - 1% SULPHIDES (LOCALLY TO	530				30	30	110	465	-	-	10	-
70			95		TO MEDIUM GRAINED, QUARTZ RICH IN PART, PHYLLITIC IN PART	15% IN QUARTZITE), MAINLY PYRITE	531				19	24	115	465	-	-	-	-
			80		WITH CRENULATED CLEAVAGE 68-72m, 88-92m, MINOR CHLORITE	PYRRHOTITE, OCCURS AS DISCRETE	532				16	10	70	410	-	-	10	-
80			70		ALTERATION, SOME QUARTZ & SULPHIDE VEINING 72-74m, 78-82m	GRAINS AND DISSEMINATED ALONG	533	NOT ANALYSED										
			55		10% LIGHT GREEN QUARTZITE 49-68m	CLEAVAGE, RARE VEINS.	534	"	"									
			70				535	"	"									
			90				536	"	"									
			85				537	"	"									
90			75				538	"	"									
			90				539	"	"									
			60				540	"	"									
			90				541	"	"									
			100				542	"	"									
100			40				543	"	"									
			40				544				48	8	98	600	-	8	-	-
			60				545				44	12	120	550	-	4	-	-

CRAE 117
PLAN No M 414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P. LEWIS DATE 11-9-84

SHEET 1 OF 3

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C.R.A. EXPLORATION PTY. LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° MAGN DRILLERS NORTHBRIDGE COMMENCED 8-9-84 DEPTH 234m HOLE No. PD84MI5

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM 685 COMPLETED 11-9-84 CASING LEFT 36m DPO No(s) _____

DEPTH FROM(M)	DEPTH TO(M)	CORE REC. (M)	MAGN SUSC (SI X10⁻⁶)	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
94	106		300		QUARTZ - BIOTITE - SERICITE SCHIST; GREY, FINE TO MEDIUM GRAINED,	5-10% SULPHIDES, LOCALLY TO 15%	1162546				125	270	850	1020	1	-	-	-
			225		GRADATIONAL TO AND INTERBEDDED WITH QUARTZITE: GREEN	3-7% DISSEMINATED PYRRHOTITE	547				82	420	530	1020	1	6	15	-
100			200		GREY, FINE GRAINED, SULPHIDIC, ? SLIGHTLY CHLORITIC	2-5% PYRITE TRACE GALENA.	548				58	145	180	710	-	-	10	-
			550			2-5% LOCALLY TO 20%, SULPHIDES	549				240	520	1920	630	3	-	15	-
			575			2-5% AS ABOVE VERY FINE GRAINED	550				185	820	2820	810	3	-	-	-
			125			1-3%	551				47	66	215	530	-	-	15	-
106	110		100		SCHIST: QUARTZITE AS ABOVE GRADING INTO QUARTZ-BIOTITE SCHIST,	MINOR - 2% SULPHIDES	552				70	38	105	660	-	-	15	-
110			65		QUARTZ RICH		553				29	46	200	910	-	8	10	-
110	124		250		QUARTZ - BIOTITE ± SERICITE SCHIST; GREY, FINE TO MEDIUM GRAINED	MINOR - 3% SULPHIDES, FINE GRAINED	554				195	50	640	1380	-	8	10	-
			125		QUARTZ RICH IN PART, PHYLLITIC IN PART WITH CRENULATED	DISSEMINATED ALONG CLEAVAGE,	555				110	76	245	860	-	-	10	-
			200		CLEAVAGE 110 - 116m, MINOR CHLORITE ALTERATION, SULPHIDIC	RARE VEINLETS.	556				150	130	1560	1940	-	-	-	-
			250		IN PART		557				190	210	700	3380	-	6	10	-
120			250				558				140	44	290	5150	-	10	15	-
			200				559				125	26	220	3000	-	-	15	-
			175				560				84	20	166	1420	-	-	10	-
124	138		700		SERICITE - CHLORITE - QUARTZ - BIOTITE SCHIST; GREEN - GREY, FINE GRAINED	20-25% SULPHIDES, LOCALLY TO 30%	561				325	1420	1420	1100	2	-	10	-
			225		PHYLLITIC, SULPHIDIC, QUARTZ RICH GRADING INTO QUARTZITE	MIN - 3% FINE GRAINED DISSEMINATED	562				54	68	140	1560	-	4	15	-
130			350		126 - 130 m	5-10% PYRRHOTITE - PYRITE TRACE	563				76	68	98	1420	-	6	-	-
			400			15-20% GALENA.	564				275	1140	2200	960	4	-	25	-
			400			10-15%	565				220	860	3700	1140	3	-	-	-
			600			10-15%	566				285	1660	3700	1420	6	6	-	-
			850			10-15%	567				290	1160	1500	2200	2	-	-	-
138	140		125		QUARTZ - BIOTITE ± SERICITE SCHIST; GREY, FINE TO MEDIUM GRAINED	MIN - 2% SULPHIDES	568				21	44	160	1020	-	-	-	-
			150		QUARTZ RICH, MINOR CHLORITE ALTERATION, GRADES INTO	MINOR SULPHIDES	569				12	24	98	900	-	-	-	-
			150		SERICITE - CHLORITE BIOTITE SCHIST 150 - 152m		570				12	18	96	910	-	4	10	-
			225			MINOR - 2% SULPHIDES	571				125	445	670	890	1	6	-	-
			175			TRACE - MINOR SULPHIDES	572				22	98	125	880	-	4	-	-
160			150			TRACE SULPHIDES	573				16	16	72	860	-	4	10	-
			200			TRACE - 3%, LOCALLY 10-25%	574				50	120	425	1100	-	-	-	-
152	158		700		SERICITE - CHLORITE ± BIOTITE SCHIST; GREEN GREY, FINE GRAINED,	10-15% SULPHIDES, DISSEMINATED VERY	575				180	530	3620	760	2	-	-	-
			625		SULPHIDIC WITH GREEN SILICEOUS SULPHIDIC QUARTZITE BANDS	15-20% FINE GRAINED PYRRHOTITE -	576				110	690	1480	500	2	-	-	-
			450		(60% 154 - 156m)	10-15% PYRITE TRACE GALENA	577				100	750	2020	630	3	-	-	-
158	160	206	125		QUARTZ - BIOTITE ± SERICITE SCHIST; LIGHT GREY, GREY, FINE TO MEDIUM	MINOR - 1% SULPHIDES	578				38	46	180	600	-	8	-	-
			125		GRAINED, QUARTZ RICH, MINOR CHLORITE ALTERATION, GRADES	TRACE SULPHIDE, AS DISCRETE GRAINS	579				41	32	125	600	-	-	-	-
			100		INTO QUARTZITIC SCHIST 164 - 168m, RARE QUARTZ VEINING	AND DISSEMINATION ALONG	580				47	22	80	550	-	-	10	-
			175		190 - 192 m, 198 - 200 m. MINOR SERICITE - CHLORITE SCHIST AT	CLEAVAGE AND FRACTURES	581				16	8	52	600	-	4	-	-
			175		TOP (158 - 160 m) AND BOTTOM (204 - 206 m)		582	NOT ANALYSED										
170			150				583	"	"									
			150				584	"	"									
			175				585	"	"									
			150				586	"	"									
			175				587	"	"									
180			90				588	"	"									
			175				589	"	"									
			175				590	"	"									
			175				591	"	"									
			150				592	"	"									

CRAE 117
PLAN No M414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P. LEWIS DATE 11-9-84

SHEET 2 OF 3

1194

C R A. EXPLORATION PTY. LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° MAGN DRILLERS NORTHBRIDGE COMMENCED 8-9-84 DEPTH 234m HOLE No. PDB4MT5

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM 685 COMPLETED 11-9-84 CASING LEFT 36m DPO No(s) _____

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC (ST x10⁻³)	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
158 190	206		125		QUARTZ - BIOTITE ± SERICITE SCHIST ; AS ABOVE.	TRACE - 1% SULPHIDES	1162593	NOT ANALYSED										
			125			TRACE SULPHIDES	594	"	"									
			125				595	"	"									
			175				596	"	"									
			150				597	"	"									
200			175			TRACE - 5% SULPHIDES (UP HOLE CONTAM)	598	"	"		44	10	62	640	-	-	-	-
			40			TRACE - 1%	599				44	10	62	640	-	-	-	-
			35			TRACE - 1%	600				28	6	41	620	-	-	10	-
			150			TRACE - 3%	601				30	8	44	620	-	-	-	-
206	218		500		SERICITE - CHLORITE ± QUARTZ SCHIST; GREEN, FINE GRAINED, PHYLLITIC AT	10-15% SULPHIDES, LOCALLY TO 20%	602				110	480	820	375	2	-	15	-
210			300		TOP (TO 212m), QUARTZ RICH IN PART TO BASE, SULPHIDE, MINOR	10-15% PYRRHOTITE - PYRITE, TRACE	603				88	315	830	490	1	4	15	-
			450		QUARTZ ± CALCITE ± SULPHIDE VEINING 206-214m, SOME VERY	15-20% GALENA	604				84	340	810	530	1	4	-	-
			500		BLUE GREEN CHLORITE IN PARTS.	15-20%	605				58	280	650	840	-	4	10	-
			250			MINOR - 5%	606				72	160	200	760	1	6	-	-
			750			3-7%	607				92	88	415	770	1	6	10	-
218 220	234		40		QUARTZ - BIOTITE ± SERICITE SCHIST ; GREY, FINE TO MEDIUM GRAINED,	TRACE - MINOR SULPHIDES, MAINLY AS	608				37	-	29	540	-	-	-	-
			40		QUARTZ RICH, PHYLLITIC IN PART (222-226m) RARE CHLORITE	COATINGS ALONG FRACTURES, SOME	609				14	-	26	490	-	-	-	-
			45		ALTERATION, RARE QUARTZITE FRAGMENTS 222-226m.	THIN VEINLETS.	610	NOT ANALYSED										
			35				611	"	"									
			30				612	"	"									
230			40				613	"	"									
			45				614	"	"									
			40				615	"	"									
					B.O.H. 234m													
								METHOD			ICP	ICP	ICP	ICP	ICP	XRF	XRF	AAS
								DETECT^N	LIMIT		(2)	(5)	(2)	(5)	(1)	(4)	(10)	(0.01)

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CRAE 117
PLAN No M 414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P. LEWIS DATE 11-9-84

SHEET 3 OF 3

C.R.A. EXPLORATION PTY. LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° DRILLERS NORTHBRIDGE COMMENCED 12-11-84 DEPTH 202m HOLE No. PD84MI 6

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM T 66 COMPLETED 17-11-84 CASING LEFT 29m DPO No(s) 942

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC (SI x 10⁻⁵)	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
0	4		10		LOAM; PINK-GREY, RED BROWN, SANDY		1162651				12	10	25	105	–	6	10	–
			10				652				10	12	28	62	–	4	–	–
4	6		5		QUARTZ FRAGMENTS, SAND; YELLOW MINOR CLAY	WEATHERED BASEMENT, MINOR IRON STNG	653				6	–	9	28	–	6	–	–
6	12		10		AS ABOVE 50%; 50% SAND; YELLOW-GREY, CLAYEY, FINE GRAINED, MICACEOUS		654				46	16	24	155	–	4	–	–
10			12		SAND; YELLOW-GREY, CLAYEY, FINE GRAINED, MICACEOUS, FRAGMENTS OF		655				115	–	24	145	–	12	–	–
			12		WEATHERED SANDY SCHIST		656				60	22	31	115	–	10	–	–
12	20		0		QUARTZ FRAGMENTS; MINOR CLAY COATING FRACTURES, IRON STAINED,	MINOR IRON STAINING.	657				24	12	20	34	–	6	–	–
			0		MINOR SERICITIC SCHIST SELVAGES — QUARTZ BLOW		658				20	38	33	32	–	8	10	–
			0				659				52	6	13	34	–	6	–	–
20			6				660				49	–	14	52	–	10	–	–
20	24		15		QUARTZ-BIOTITE SCHIST; FINE GRAINED	DAMP, TRACE PYRITE, PARTLY WEATHERED	661				125	–	10	125	–	6	–	–
			30		80% AS ABOVE; 20% QUARTZ VEINS WITH CHLORITE ALTERATION AND PYRITE	2-5% PYRITE	662				370	6	27	210	–	6	–	–
24	28		15		80% VEIN QUARTZ WITH CHLORITE ALTERATION; 20% BIOTITE SCHIST, MINOR PYRITE	TRACE - 1% PYRITE	663				115	16	37	115	–	4	10	–
			20		80% QUARTZITE; PURE, MINOR PALE GREEN CHLORITE, 20% VEIN QUARTZ	TRACE PYRITE, 2% COARSE GOLDEN BIOTITE	664				31	24	54	82	–	–	–	–
28	38		50		QUARTZ VEIN MATERIAL; MINOR CHLORITE ALTERATION (SELVAGES),	1-2% PYRITE	665				82	32	33	44	–	–	10	–
			110		SOME COARSE PYRITE IN PART, MINOR QUARTZITE AT TOP,	2-5% PYRITE	666				465	36	17	38	–	6	15	–
			125		MINOR BIOTITE QUARTZITE AND CALC-SILICATE ALTERATION AT	1% PYRITE	667				54	34	11	36	–	6	15	–
			125		BASE	TRACE PYRITE	668				35	34	12	34	–	4	15	–
			180			TRACE PYRITE	669				10	16	7	32	–	4	10	–
38	40		200		75% QUARTZ VEIN; 25% BIOTITE QUARTZITE; FINE TO MEDIUM GRAINED	TRACE PYRITE	670				17	22	14	96	–	6	15	–
40	50		110		50% BIOTITE RICH QUARTZITE; 50% PSAMMOPELITE	TRACE - 1% PYRITE	671				52	16	33	345	–	6	10	–
			110		AS ABOVE 40%: 60%, SOME COARSE BIOTITE AND PYRITE	2-3% PYRITE	672				155	20	34	325	–	8	–	–
			150		80% BIOTITE QUARTZITE; 20% GREEN CHLORITIC QUARTZITE, TRACE ?CARBONATE	1% PYRITE, TRACE PYRRHOTITE, CARBONATE	673				62	8	34	310	–	8	–	–
			120		BIOTITE QUARTZITE, TRACE FINE DENSE WHITE MINERAL ?CARBONATE,	TRACE PYRITE, PYRRHOTITE	674				16	–	27	295	–	4	–	–
60			140		MINOR CHLORITE ALTERATION ON FRACTURES		675				37	8	29	305	–	6	10	–
50	56		100		BIOTITE RICH SCHIST; WITH SOME COARSE GRAINED BIOTITE, COARSE	1-2% PYRITE	676				180	–	68	670	–	6	10	–
			150		PYRITE, MINOR BIOTITE QUARTZITE AS ABOVE, TRACE CALC-SILICATE	10% PYRITE	677				960	–	46	440	–	10	–	–
			250		SOME VEIN QUARTZ	15-20% PYRITE	678				3620	–	26	240	–	10	–	–
56	64		350		PALE GREEN QUARTZITE, SOME BIOTITE PRESENT ESPECIALLY ON FRACTURES	TRACE PYRITE, TRACE MAGNETITE	679				235	8	16	160	–	4	10	–
60			300		SLIGHTLY PYRITIC, MAINLY ALONG FRACTURES, MINOR BIOTITE		680				115	8	15	170	–	–	–	–
			300		PSAMMOPELITE 60-62 m, SMALL % GARNET 62-64 m	TRACE - 1% PYRITE, PYRRHOTITE, TR. MAGNET	681				150	6	14	150	–	–	10	–
			280			TRACE - 1% PYRITE, TRACE GARNET	682				96	10	12	140	–	6	15	–
64	66		110		80% BIOTITE GARNET QUARTZITE; 20% BIOTITE SCHIST	1% GARNET, TRACE PYRITE, DENSE OPAQUE	683				90	8	32	295	–	4	–	–
66	70		300		SLIGHTLY PYRITIC PALE GREEN BIOTITE QUARTZITE	TRACE PYRITE, TRACE GARNET	684				56	8	20	260	–	–	–	–
70			100		90% AS ABOVE, 10% BIOTITE PSAMMOPELITE, TRACE CALC-SILICATE, MINOR CHLORITE	1% PYRITE, ALONG CHLORITIC FRACTURES	685		WET		86	–	22	370	–	6	15	–
70	72		45		80% SLIGHTLY PYRITIC BIOTITE PSAMMOPELITE, 20% BIOTITE QUARTZITE, SOME CALC-SIL	2-3% PYRITE	686				160	10	28	355	–	4	–	–
72	78		50		BIOTITIC QUARTZITE, SLIGHTLY PYRITIC, MINOR PSAMMOPELITE, SOME GREENISH	TRACE - 1% PYRITE	687				74	–	28	260	–	6	–	–
			45		QUARTZITE, BARE VEIN QUARTZ 72-76 m	TRACE PYRITE	688				27	–	20	200	–	4	–	–
			35				689				80	8	19	320	–	–	–	–
78	84		45		QUARTZITE, FINE GRAINED, SLIGHTLY BIOTITIC, VERY CONSISTENT	TRACE PYRITE	690				14	–	11	110	–	4	10	–
			35				691	NOT ANALYSED										
			30		QUARTZITE, AS ABOVE, BIOTITE POOR IN PART, BIOTITE RICH IN PART	TRACE PYRITE	692	"	"									
84	100		40		QUARTZITE, SMALL AMOUNT OF BIOTITE, 10% VEIN QUART 84-86 m	TRACE PYRITE	693	"	"									
			60				694	"	"									
90			80				695				30	–	9	115	–	–	–	–
			50				696				64	8	10	155	–	6	–	–
			30				697	NOT ANALYSED										

CRAE 117
PLAN No M 414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY K.D. TUCKWELL DATE 17-11-84

SHEET 1 OF 3

1196

C R A EXPLORATION PTY LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° MAGN DRILLERS NORTHBRIDGE COMMENCED 12-11-84 DEPTH 202 m HOLE No. PD84MT6

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM T66 COMPLETED 17-11-84 CASING LEFT 22m DPO No(s) _____

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC (SI x 10^{-5})	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
84	100		50		QUARTZITE, AS ABOVE	TRACE PYRITE	1162698	NOT ANALYSED										
			30				699	"	"									
100			30				700	"	"									
100	134		35		QUARTZITE; GREY, FINE TO MEDIUM GRAINED, BIOTITIC, MINOR SERICITE AND	TRACE - MINOR PYRITE, OCCURS AS	701	"	"										
			40		CHLORITE, WEAKLY CALCAREOUS, BIOTITE RICH IN PART, BIOTITE POOR IN PART	DISSEMINATED GRAINS, THIN VEINLETS	702	"	"										
			35		GRADATIONAL TO A QUARTZ-BIOTITE ± SERICITE SCHIST; FINE TO	AND COATINGS ON FRACTURES	703	"	"										
			45		MEDIUM GRAINED, QUARTZ RICH FROM 104-108m, 110-116m, 120-122m		704	"	"										
110			45		126-134m. HAVE A LIGHT GREENISH WHITE QUARTZITE (? ALTERATION)		705				22	-	10	285	-	4	-	-
			45		PRESENT IN PART, 20% 102-104m, 50% 106-110m, 30% 110-112m,		706				24	-	14	205	-	6	-	-
			45		10% 112-114m, 20% 114-116m, 20% 122-124m, 10% 128-130m,		707	NOT ANALYSED										
			50		50% 130-132m, 10% 132-134m, RARE QUARTZ ± SULPHIDE ±		708	"	"										
			50		CALCITE VEINING, THIN.		709	"	"										
120			40				710	"	"										
			50				711	"	"										
			45				712	"	"										
			50				713	"	"										
			60				714	"	"										
130			60				715				20	-	10	255	-	-	10	-
			60				716				23	-	14	260	-	8	-	-
			65				717	NOT ANALYSED										
134	146		60		QUARTZITE, LIGHT GREY, SLIGHTLY GREENISH IN PART, FINE TO MEDIUM	TRACE - MINOR PYRITE MAINLY AS	718	"	"										
			60		GRAINED, BIOTITIC, WEAKLY CALCAREOUS, BECOMES BIOTITE RICH TO	COATINGS, SOME DISSEMINATED	719	"	"										
140			60		BASE	GRAINS AND THIN VEINLETS	720	"	"										
			35				721	"	"										
			45				722	"	"										
			35				723	"	"										
146	170		45		QUARTZITE, GREY, FINE TO MEDIUM GRAINED, BIOTITIC, MINOR SERICITE IN	TRACE - MINOR PYRITE, MAINLY	724	"	"										
150			40		PART, BIOTITE RICH, WEAKLY CALCAREOUS, GRADATIONAL TO A	AS COATINGS ON FRACTURES	725				29	-	8	250	-	6	10	-
			35		QUARTZ-BIOTITE SCHIST FROM 146-148m, 158-166m, HAVE		726				30	-	9	295	-	-	-	-
			50		SOME SULPHIDE RICH FRAGMENTS BUT < 1% SULPHIDES OVERALL		727	NOT ANALYSED										
			60				728	"	"										
			45				729	"	"										
160			50			MINOR - 1% PYRITE, OCCURS AS	730	"	"										
			45			THIN WISPS, DISSEMINATED AND	731	"	"										
			30			COATINGS	732	"	"										
			30			STRONGER AQUIFER, VERY SALTY, HOLE	733	"	"										
			30			MAKING AROUND 1000 GALLONS/HOUR	734	"	"										
170			30				735				27	8	17	180	-	-	-	-
170	202		30		QUARTZITE; LIGHT GREY, GREENISH WHITE, FINE TO MEDIUM GRAINED	TRACE - MINOR PYRITE	736				19	-	7	250	-	8	-	-
			35		BIOTITE RICH IN PART, BIOTITE POOR IN PART, SOME SULPHIDIC		737	NOT ANALYSED										
			35		FRAGMENTS, WEAKLY CALCAREOUS, RARE VEIN QUARTZ 182-189m,	MINOR - 1% PYRITE DISSEMINATED,	738	"	"										
			30		188-190m, RARE BLUISH-GREEN ? CHLORITE ON FRACTURES 170-172m	SOME VEINS	739	"	"										
180			35		198-200m	MINOR PYRITE, DISSEMINATED AND	740	"	"										
			30			COATINGS ON FRACTURES	741	"	"										
			30				742	"	"										
			30				743	"	"										
			35				744	"	"										

CRAE 117
PLAN No M414

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY K.D. TUCKWELL / P. LEWIS DATE 17-11-84

SHEET 2 OF 3

C.R.A. EXPLORATION PTY. LIMITED

PERCUSSION DRILL CORE LOG

PROJECT KANMANTOO TROUGH BASE METALS

CO-ORDINATES _____ AZIMUTH 071° DRILLERS NORTHERIDGE COMMENCED 12-11-84 DEPTH 202 m HOLE No. PD84MT6

RL COLLAR _____ INCLINATION -60° DRILL TYPE SCHRAMM T66 COMPLETED 17-11-84 CASING LEFT 29m DPO No(s) _____

DEPTH FROM(M)	DEPTH TO(M)	CORE REC (M)	MAGN SUSC SI×10⁻⁶	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES WEATH., ALTERATION, FRACTURING VEINING, MINERALIZATION	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES Cu	Pb	Zn	Mn	Ag	Sn	W	Au
170 ~~190~~	202		25		QUARTZITE; AS ABOVE	TRACE - MINOR PYRITE MAINLY AS	1162745				30	10	12	240	-	12	-	-
			25			COATINGS ON FRACTURES	746				39	8	13	265	-	8	-	-
			30				747	NOT ANALYSED										
			20				~~748~~	"	"									
			20				~~749~~	"	"									
~~200~~			20			MINOR - 1% PYRITE, SOME DISSEMINATED	750				105	-	10	225	-	8	-	-
			25			TRACE - MINOR PYRITE	751				41	-	8	230	-	8	10	-
					B.O.H. 202 m													
								METHOD			ICP	ICP	ICP	ICP	ICP	XRF	XRF	AAS
								DETECTN	LIMIT		(2)	(5)	(2)	(5)	(1)	(4)	(10)	(0.01)

SUMMARY AND SPECIAL COMMENTS _____

LOGGED BY P.LEWIS DATE 17-11-84

SHEET 3 OF 3

CRAE 117
PLAN No M414

86/11

C.R.A. EXPLORATION PTY LIMITED

PERCUSSION / ROTARY MUD DRILL CORE LOG

PROJECT: KANMANTOO TROUGH BASE METALS

CO-ORDINATES: ____ AZIMUTH: 070° MAGN DRILLERS: NORTHBRIDGE COMMENCED: 19-11-84 DEPTH: 30m / 31m HOLE No.: PD84 MI 7 / RD84 MI 8

RL COLLAR: ____ INCLINATION: -80° DRILL TYPE: SCHRAMM T66 COMPLETED: 23-11-84 CASING LEFT: – DPO No(s): –

DEPTH FROM (M)	DEPTH TO (M)	CORE REC (M)	MAGN SUSC (SI x 10^-5)	GRAPHIC LOG	CORE DESCRIPTION	SPECIAL FEATURES (WEATH., ALTERATION, FRACTURING, VEINING, MINERALIZATION)	SAMPLE No.	FROM (M)	TO (M)	REC (M)	ASSAY VALUES
					PD 84 MI 7						
0	2		5		SILT: ORANGE-GREY, SUBANGULAR-ROUNDED, POORLY SORTED, LOOSE, SANDY	WEAKLY CALCAREOUS, ORGANIC MATTER	NOT SAMPLED.				
2	8		10		SILT: CREAM-FAWN, WEAKLY CEMENTED, MINOR CALCRETE TO TOP, CLAYEY	MINOR OPAQUES					
			15		IN PART, ORANGE-BROWN, GREY CLAYEY SAND AT BASE, CALCAREOUS.						
			10								
8 / 10 ◄	12		5		SAND: YELLOW-ORANGE, FINE GRAINED, SUBANGULAR TO ROUNDED, WELL	RARE OPAQUES					
			20		SORTED, CALCAREOUS, MINOR POLISHED LATERITE GRAINS	,					
12	14		50		SAND: BURNT ORANGE, AS ABOVE.						
14	20		50		SAND: BURNT ORANGE, BI-MODAL; FINE GRAINED, SUBANGULAR TO ROUNDED	MINOR OPAQUES, MINOR FERRUGINOUS					
			30		MEDIUM TO COARSE GRAINED, WELL ROUNDED, MODERATELY WELL	STAINING, CALCAREOUS					
20 ◄			40		SORTED, SOME WEAKLY CEMENTED BANDS, GRAINS SLIGHTLY POLISHED						
20			20		SAND: ORANGE-BROWN, FINE TO MEDIUM GRAINED, MODERATELY WELL	RARE OPAQUES, MINOR FERRUGINOUS					
			10		SORTED, WEAKLY CEMENTED BANDS AND CLAY BANDS, CALCAREOUS	STAINING					
			10								
			10								
30 ◄			10								
					B.O.H. 30 m HOLE ABANDONED DUE TO INABILITY OF RIG TO						
					PENETRATE UNCONSOLIDATED TERTIARY SAND						
					RD 84 MI 8						
0	31 m		NO SAMPLES.		AS ABOVE FOR PD 84 MI 7. HOLE WAS MOVED 5 m EAST (070° MAGN)						
					ATTEMPTED TO BE DRILLED TO BASEMENT USING ROTARY MUD.						
					LOST CIRCULATION AT 28 M. HOLE ABANDONED AT 31 M						
					DUE TO LOST CIRCULATION.						
					PROGRAMME ABORTED						

SUMMARY AND SPECIAL COMMENTS: ____

LOGGED BY: P. LEWIS DATE: 23-11-84

SHEET 1 OF 1

CRAE 117
PLAN No M414

APPENDIX VII

AEROMAGNETIC CONTOURS SHOWING ANOMALIES FOLLOWED UP - AREA TO BE RELINQUISHED

139°00'00"
139°5'00"
35°00'00"
35°7'30"
35°15'00"
SALT CREEK
80 SCP 1
MILANG E.L.964
In MB 38
In MB 39, 39A
Portion of Milang E.L. 964 retained under Hartley E.L.1280
325000 N
322500 N
320000 N
317500 N
315000 N
312500 N
310000 N
307500 N
305000 N
302500 N
300000 N
297500 N
320000 E
322500 E
325000 E
327500 E
330000 E
332500 E
335000 E
337500 E
340000 E

SCALE 1:50000

0 1000 2000 3000 4000 5000

METRES

C.R.A.

MURRAY BRIDGE AREA S.A.

CONTOURS OF RESIDUAL TOTAL MAGNETIC INTENSITY

6054(11)-9

ECHUNGA | MOBILONG | MILANG | ALEXANDRINA | WELLINGTON

SHEET 1 OF 6

Ref.: Barker SI 54-13 Report No. 13291 Plan No. SAa 3348

MILANG EL964

MURRAY BRIDGE
TOWNSHIP

139°15'00"
139°22'30"
139°30'00"
35°00'00"
35°7'30"
35°15'00"
125000 N
122500 N
120000 N
117500 N
115000 N
112500 N
110000 N
107500 N
105000 N
102500 N
100000 N
342500 E
345000 E
347500 E
350000 E
352500 E
355000 E
357500 E
360000 E
362500 E

SCALE 1:50000

0 1000 2000 3000 4000 5000

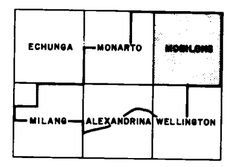
METRES

C.R.A.

MURRAY BRIDGE AREA S.A.

CONTOURS OF RESIDUAL TOTAL MAGNETIC INTENSITY

6054(11)-10



SHEET 2 OF 6

Ref: Barker SI 54-13 Report No. 13291 Plan No. SAa 3349

138°45'00"
138°52'30"
139°00'00"
35°15'00"
35°22'30"
35°30'00"

Portion of Milang E.L.964 retained under Hartley E.L.1280

MILANG E.L.964

95000 N
92500 N
90000 N
87500 N
85000 N
82500 N
80000 N
77500 N
75000 N
72500 N
70000 N

297500 E
300000 E
302500 E
305000 E
307500 E
310000 E
312500 E
315000 E
317500 E

SCALE 1:50000

0 1000 2000 3000 4000 5000

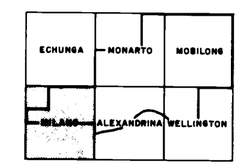
METRES

C.R.A.

MURRAY BRIDGE AREA S.A.

CONTOURS OF RESIDUAL TOTAL MAGNETIC INTENSITY

6054(II)-11



SHEET 3 OF 6

Ref.: Barker S1 54-13 Report No. 13291 Plan No. SAa 3350

Portion of Milang E.L.964
retained under Hartley E.L. 1280

MB4

MILANG E.L. 964

MILANG E.L. 964

139°00'00"
139°07'30"
139°15'00"
35°15'00"
35°22'30"
35°30'00"
97500 N
95000 N
92500 N
90000 N
87500 N
85000 N
82500 N
80000 N
77500 N
75000 N
72500 N
70000 N
320000 E
322500 E
325000 E
327500 E
330000 E
332500 E
335000 E
337500 E
340000 E

SCALE 1:50000

0 1000 2000 3000 4000 5000

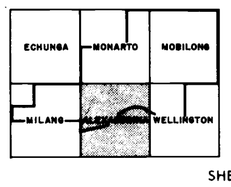
METRES

C.R.A.

MURRAY BRIDGE AREA S.A.

CONTOURS OF RESIDUAL TOTAL MAGNETIC INTENSITY

6054(II)-12



SHEET 4 OF 6

Ref.: Barker S1 54-13 Report No. 13291 Plan No. SAa 3351

MILANG E.L. 964

139°15'00"
139°22'30"
139°30'00"
35°15'00"
35°22'30"
97500 N
95000 N
92500 N
90000 N
87500 N
85000 N
345000 E
347500 E
350000 E
352500 E
355000 E
357500 E
360000 E
362500 E

SCALE 1:50000

0 1000 2000 3000 4000 5000

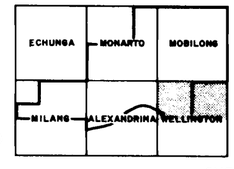
METRES

C.R.A.

MURRAY BRIDGE AREA S.A.

CONTOURS OF RESIDUAL TOTAL MAGNETIC INTENSITY

6054(11)-13

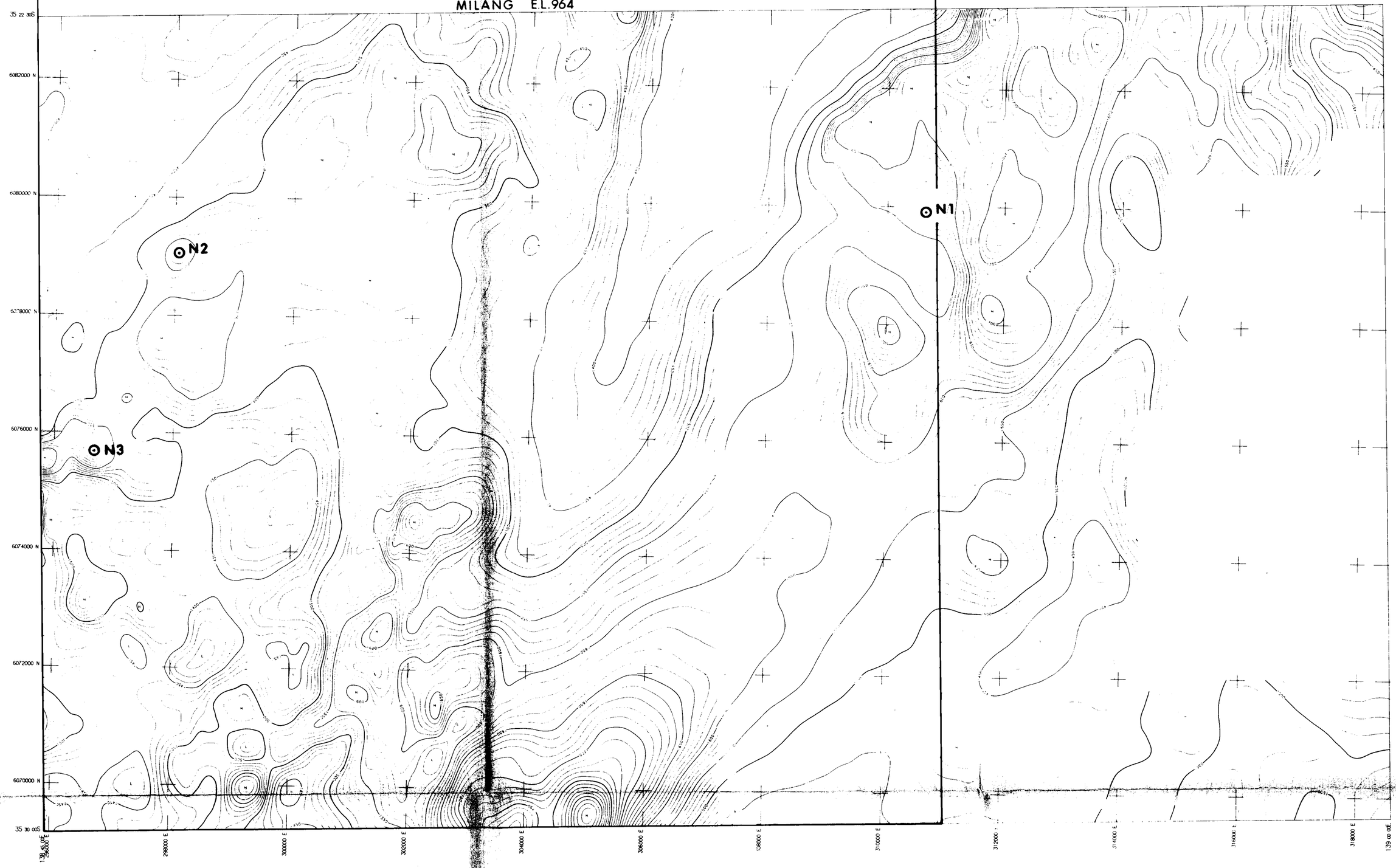


SHEET 5 OF 6

Ref.: Barker SI 54-13 Report No. 13291 Plan No. SAa 3352

6054(11)-14

MILANG E.L.964



AIRBORNE SURVEY SPECIFICATIONS

AIRCRAFT	: NOMAD 22B
MAGNETOMETER	: VARIAN V85 PROTON PRECESSION UNIT. RECORDING TO 0·1 NANO-TESLA.
SPECTROMETER	: GEOMETRICS GR800D. 2048 Cu. Ins. 33·6 LITRES NaI CRYSTAL. DIFFERENTIAL RECORDING Th., U., K. & TOTAL COUNT.
ACQUISITION	: DIGITAL - TO 9 TRACK MAGNETIC TAPE. GRAPHIC - TO MARS 6 MULTI CHANNEL CHART RECORDER.
FLIGHT PATH	: VINTEN 16mm Mk IV SCIENTIFIC CAMERA HAVING A FIDUCIAL REFERENCE.
DETECTOR HEIGHT	: 80 m MEAN GROUND CLEARANCE.
NOMINAL FLIGHT LINE SPACING	: TRAVERSE LINES - 500 m TIE LINES - 5000 m
FLIGHT LINE RECOVERY	: VISUALLY TO 1:25000 CONTROLLED PHOTO COVER. RECOVERY INTERVAL 40 FIDUCIALS (1·96 Km)

LEGEND

10 NANO-TESLA CONTOUR

50 NANO-TESLA CONTOUR

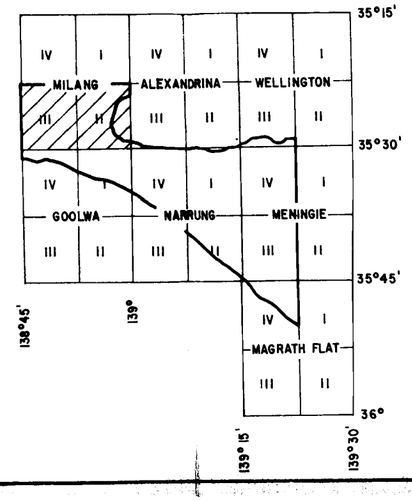
250 NANO-TESLA CONTOUR

SCALE 1:50000

2 1 0 2 4

KILOMETERS

SHEET LAYOUT



FLOWN & PRESENTED BY
GEOSEARCH PTY. LTD.

PERTH W.A. GS 0205

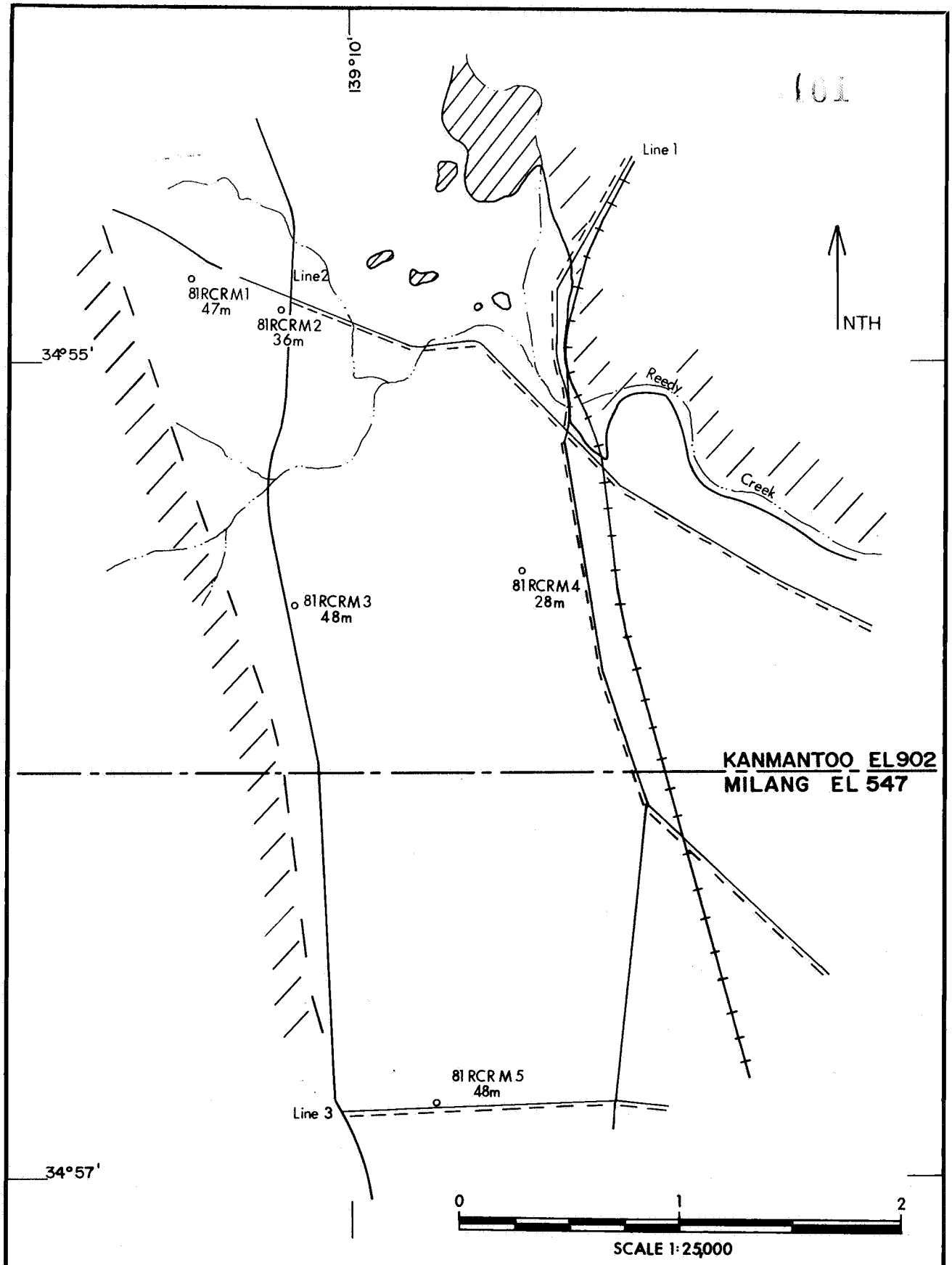
CRA EXPLORATION PTY. LTD.

MAGNETIC CONTOURS
MILANG

Ref.: Barker SI 54-13

SHEET 6 OF 6

Scale : 1:50,000	Report No.: 13291
Date : Sept., 1980	Plan No. : SAa 3353



Line1 --- Gravity Traverse

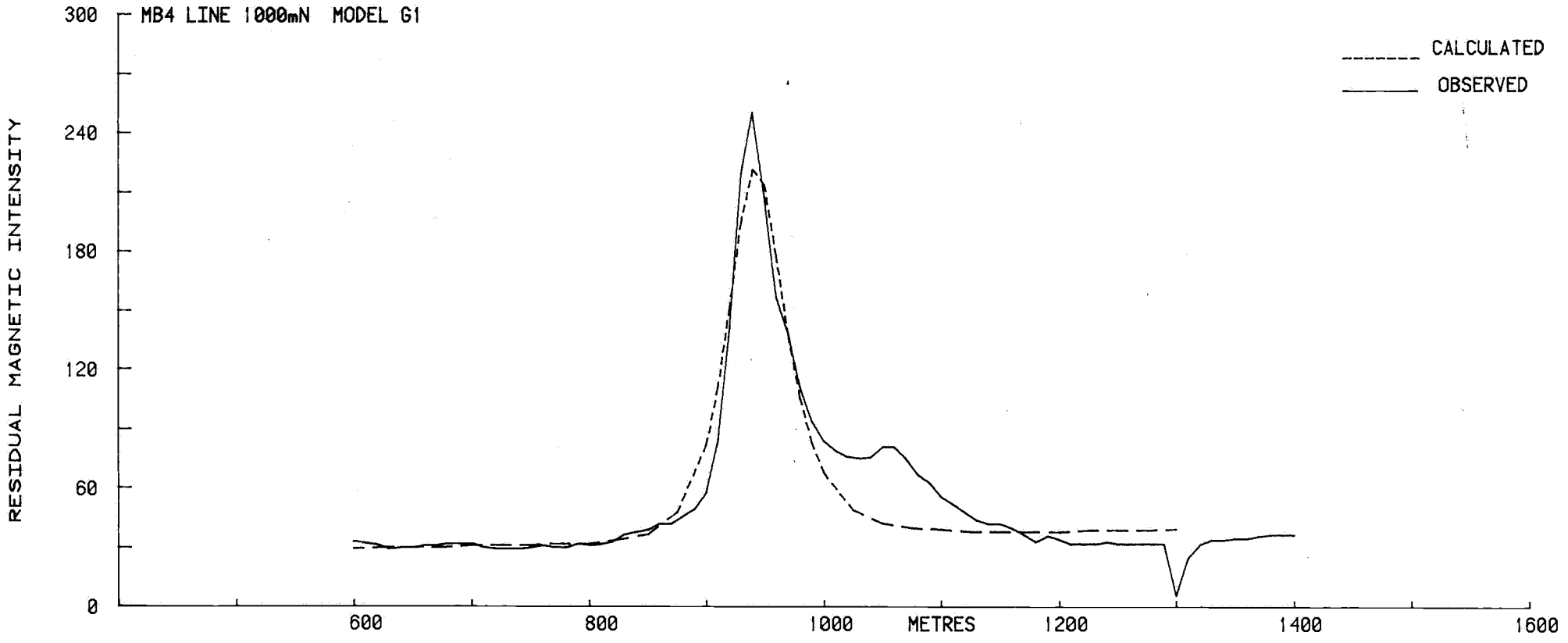
o 81RCRM3 36m — Rotary mud drillhole with depth to basement in metres

Approximate limit of Kanmantoo outcrop

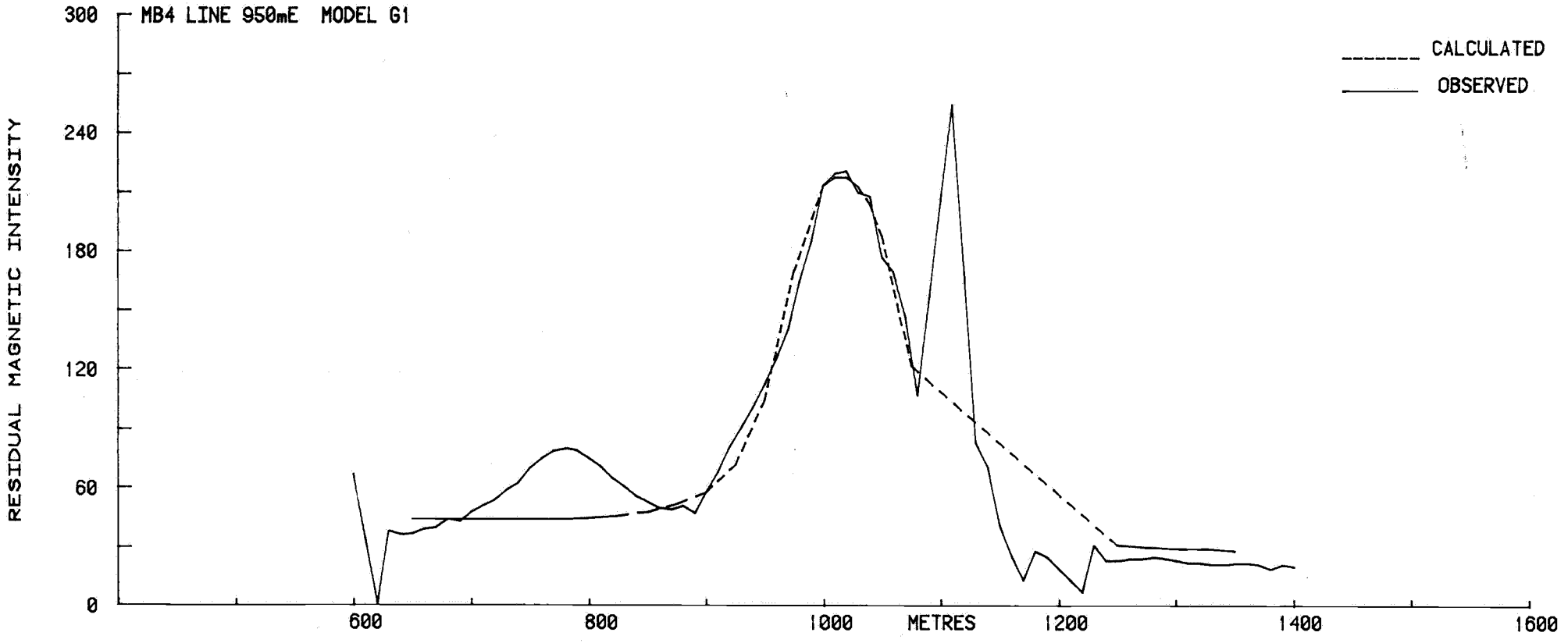
C. R. A. EXPLORATION PTY. LIMITED

REEDY CREEK 1981
ROTARY MUD DRILL SITE LOCATIONS

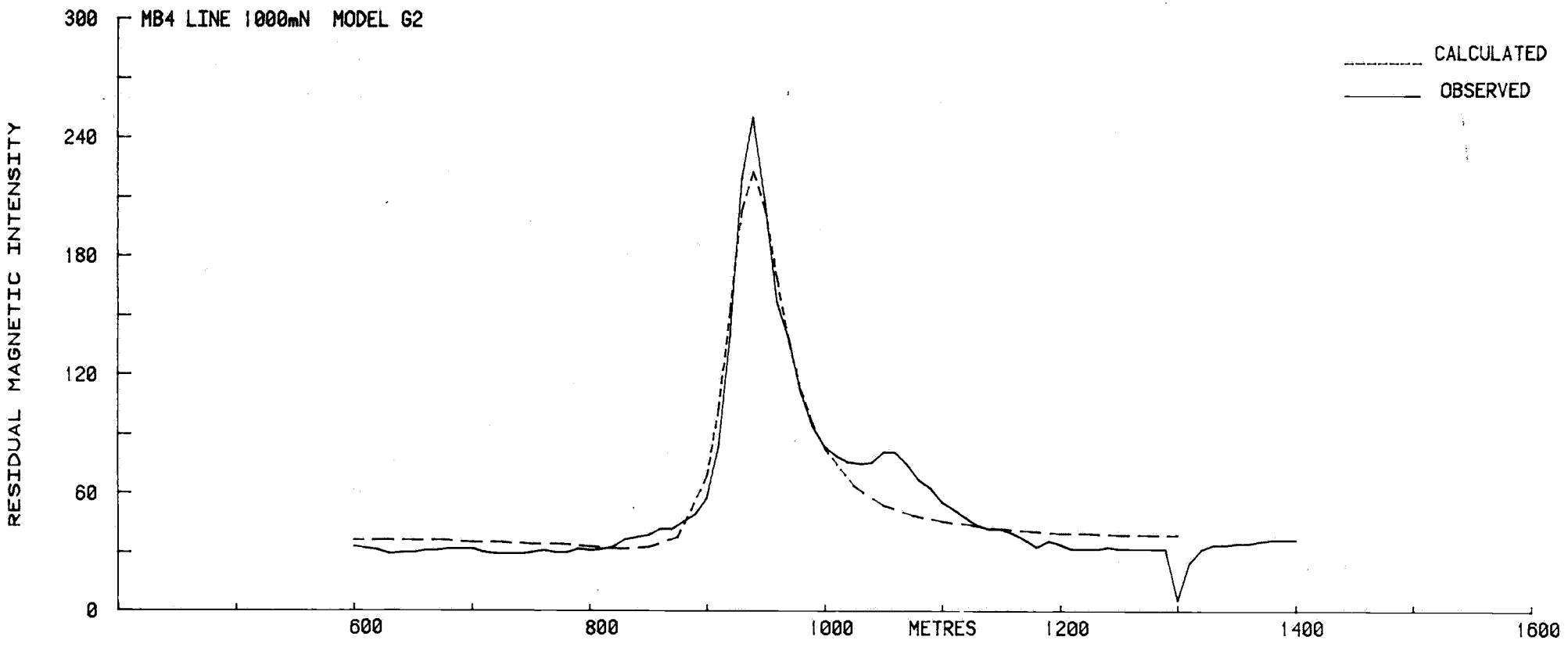
Ref. ADELAIDE SI54-9	
Scale 1:25,000	Drawn D.D.
Author D.L. A	Report No. 13291
Date FEB., 1985	Plan No. SAa 1104



C. R. A. EXPLORATION PTY. LIMITED	
MILANG E.L. 964 PROFILES OF AIRBORNE AND GROUND MAGNETICS ANOMALY "MB4"	
Ref. BARKER SI 54-13	
Scale 1:5000	Drawn
Author G.J.B.	Report No. 13291
Date FEB., 1985	Plan No. SAa 1879



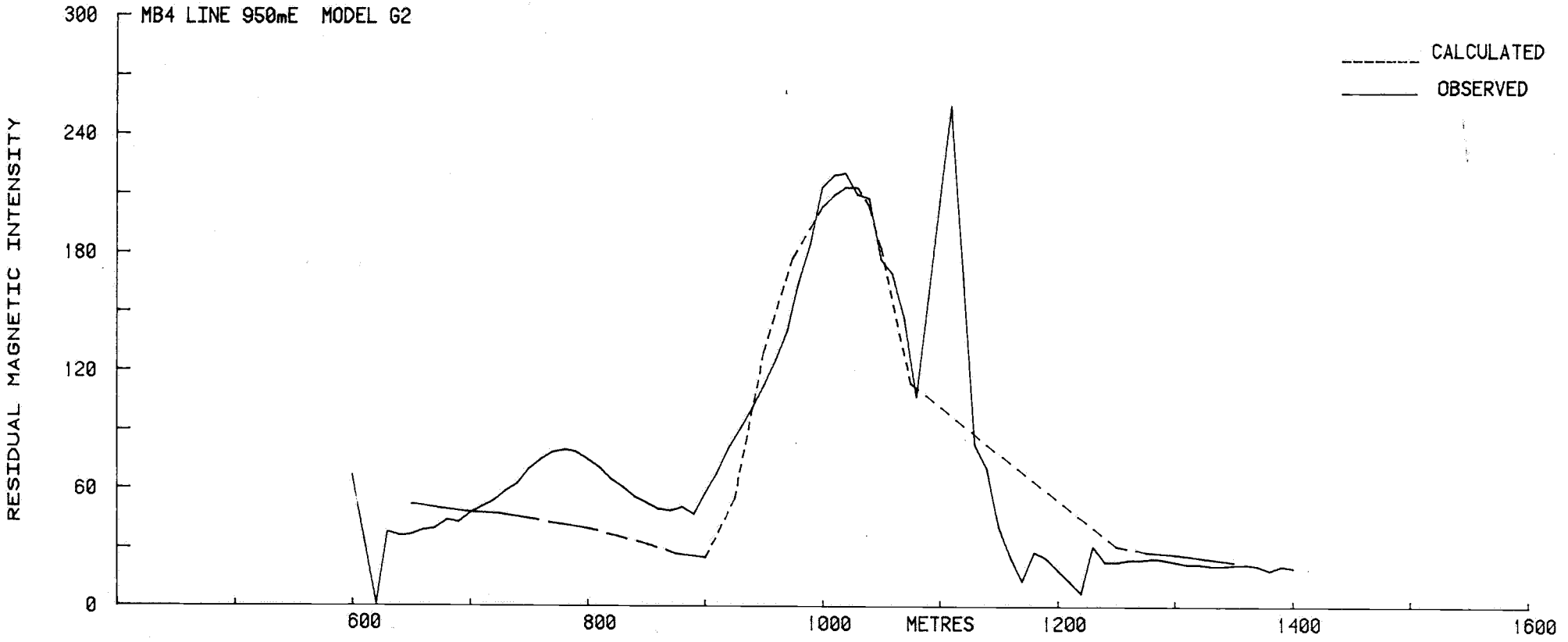
C. R. A. EXPLORATION PTY. LIMITED	
MILANG E.L. 964 PROFILES OF AIRBORNE AND GROUND MAGNETICS ANOMALY "MB4"	
Ref. BARKER SI 54-13	
Scale 1:5000	Drawn
Author G.J.B.	Report No. 13291
Date FEB., 1985	Plan No. SAa 1880



C. R. A. EXPLORATION PTY. LIMITED

MILANG E.L. 964
PROFILES OF AIRBORNE AND GROUND MAGNETICS
ANOMALY "MB4"

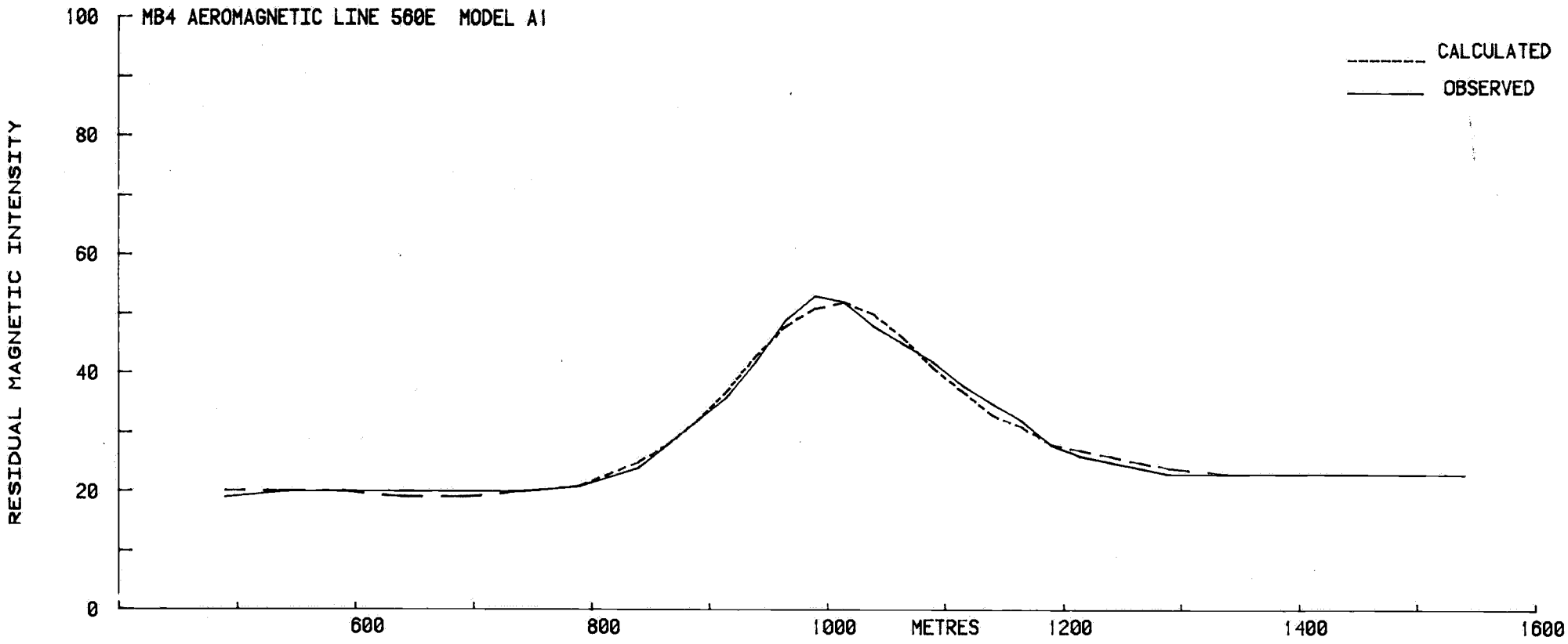
Ref.	BARKER SI 54-13		
Scale	1:5000	Drawn	
Author	G.J.B.	Report No.	13291
Date	FEB., 1985	Plan No.	SAa 1881



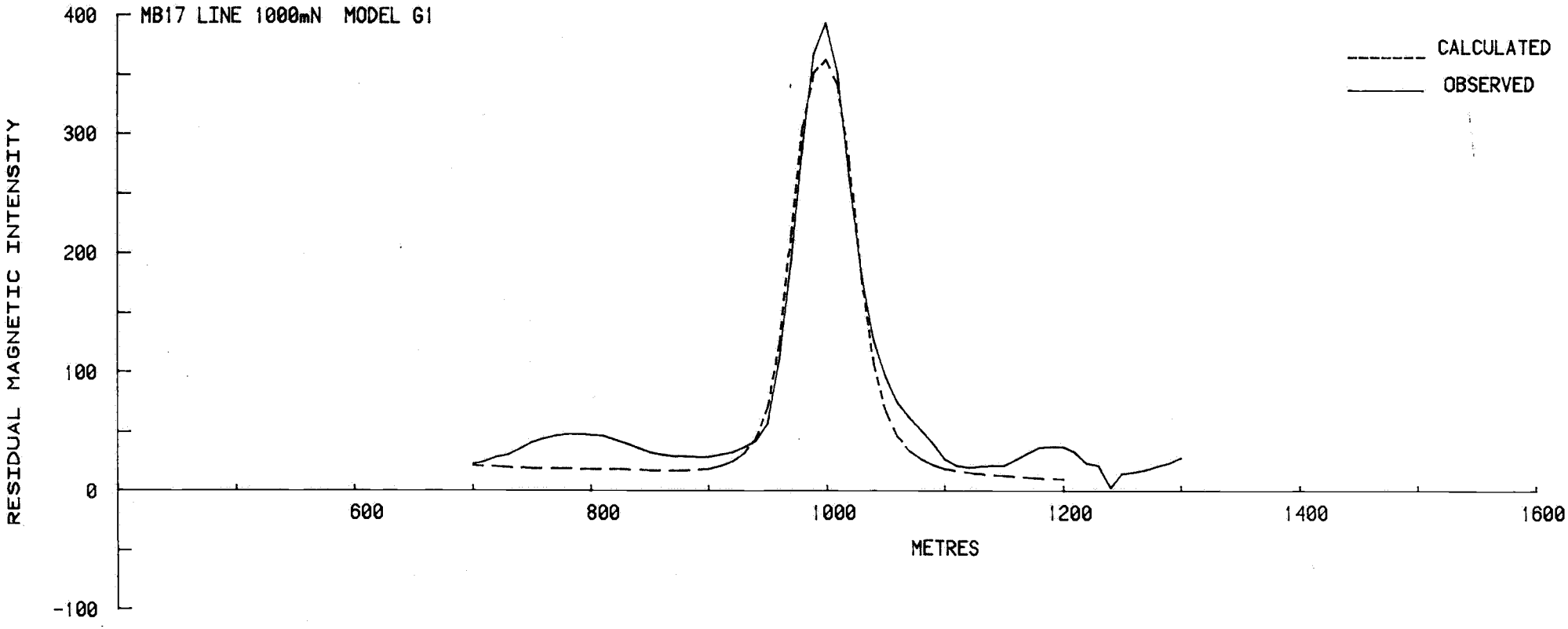
C. R. A. EXPLORATION PTY. LIMITED

MILANG E.L. 964
PROFILES OF AIRBORNE AND GROUND MAGNETICS
ANOMALY "MB4"

Ref.	BARKER SI 54-13	
Scale	1:5000	Drawn
Author	G.J.B.	Report No. 13291
Date	FEB., 1985	Plan No. SAa 1882



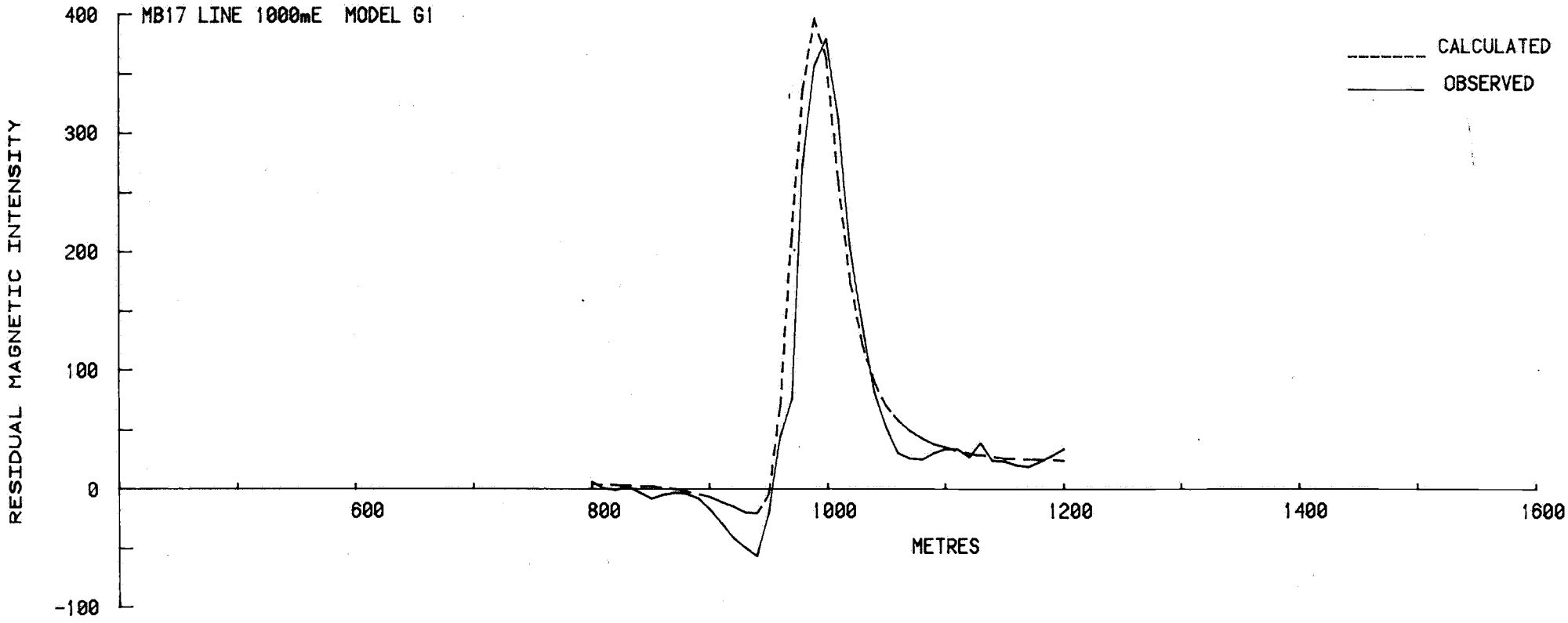
C. R. A. EXPLORATION PTY. LIMITED	
MILANG E.L. 964 PROFILES OF AIRBORNE AND GROUND MAGNETICS ANOMALY "MB4"	
Ref. BARKER SI 54-13	
Scale 1:5000	Drawn
Author G.J.B.	Report No. 13291
Date FEB., 1985	Plan No. SAa 1883



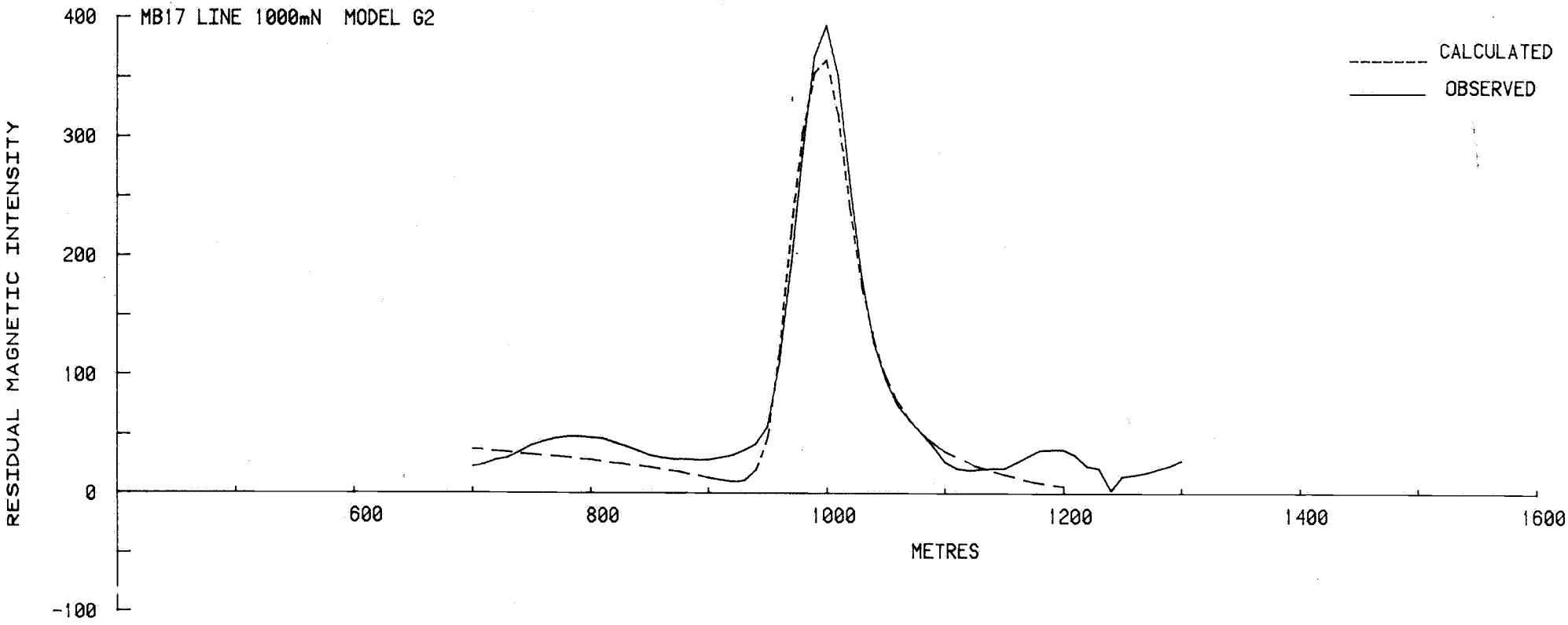
C. R. A. EXPLORATION PTY. LIMITED

MILANG E.L. 964
PROFILES OF AIRBORNE AND GROUND MAGNETICS
ANOMALY "MB17"

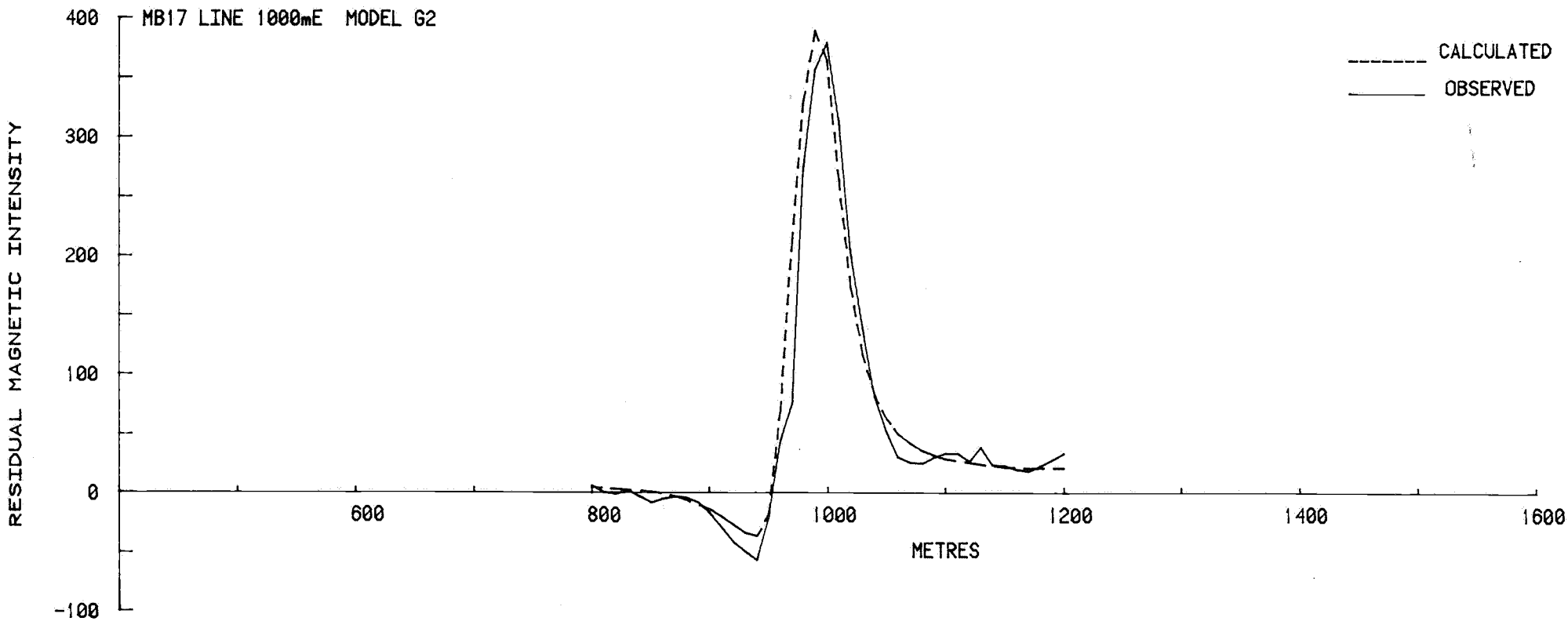
Ref. BARKER SI 54-13	
Scale 1:5000	Drawn
Author G.J.B.	Report No. 13291
Date FEB., 1985	Plan No. SAa 1904



C. R. A. EXPLORATION PTY. LIMITED	
MILANG E.L. 964 PROFILES OF AIRBORNE AND GROUND MAGNETICS ANOMALY "MB17"	
Ref. BARKER SI 54-13	
Scale 1:5000	Drawn
Author G.J.B.	Report No. 13291
Date FEB., 1985	Plan No. SAa 1905



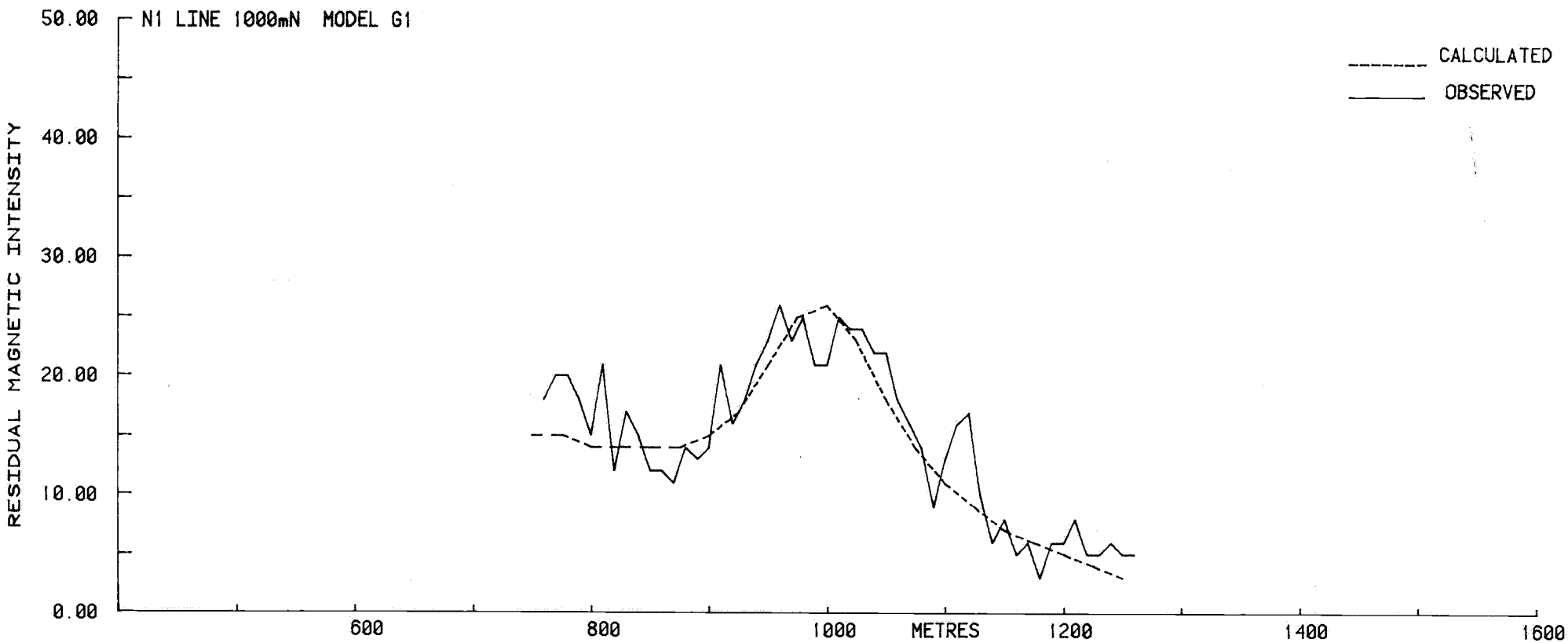
C. R. A. EXPLORATION PTY. LIMITED	
MILANG E.L. 964 PROFILE OF AIRBORNE AND GROUND MAGNETICS ANOMALY "MB17"	
Ref. BARKER SI 54-13	
Scale 1:5000	Drawn
Author G.J.B.	Report No. 13291
Date FEB., 1985	Plan No. SAa 1906



C. R. A. EXPLORATION PTY. LIMITED

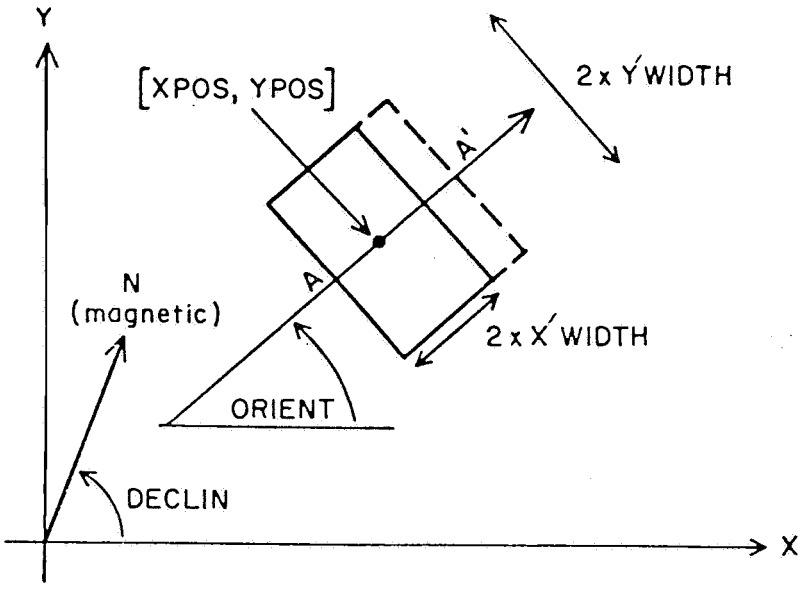
MILANG E.L. 964
PROFILES OF AIRBORNE AND GROUND MAGNETICS
ANOMALY "MB17"

Ref.	BARKER SI 54-13		
Scale	1:5000	**Drawn**	
Author	G.J.B.	**Report No.**	13291
Date	FEB., 1985	**Plan No.**	SAa 1907

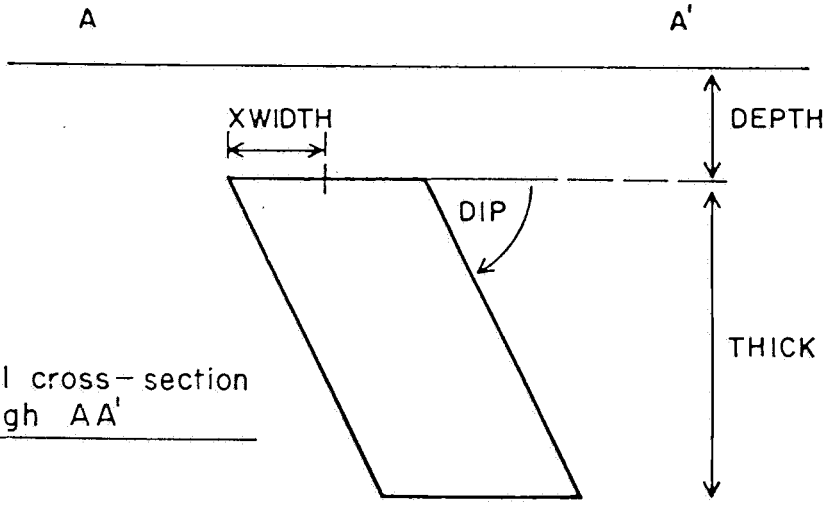


C. R. A. EXPLORATION PTY. LIMITED	
MILANG E.L. 964 PROFILES OF AIRBORNE AND GROUND MAGNETICS ANOMALY "N1"	
Ref. BARKER SI 54-13	
Scale 1:5 000	**Drawn**
Author GJB	**Report No.** 13291
Date FEB., 1985	**Plan No.** SAa 1908

MAGMOD - Strike and depth limited tabular body (dipping prism)



Plan view

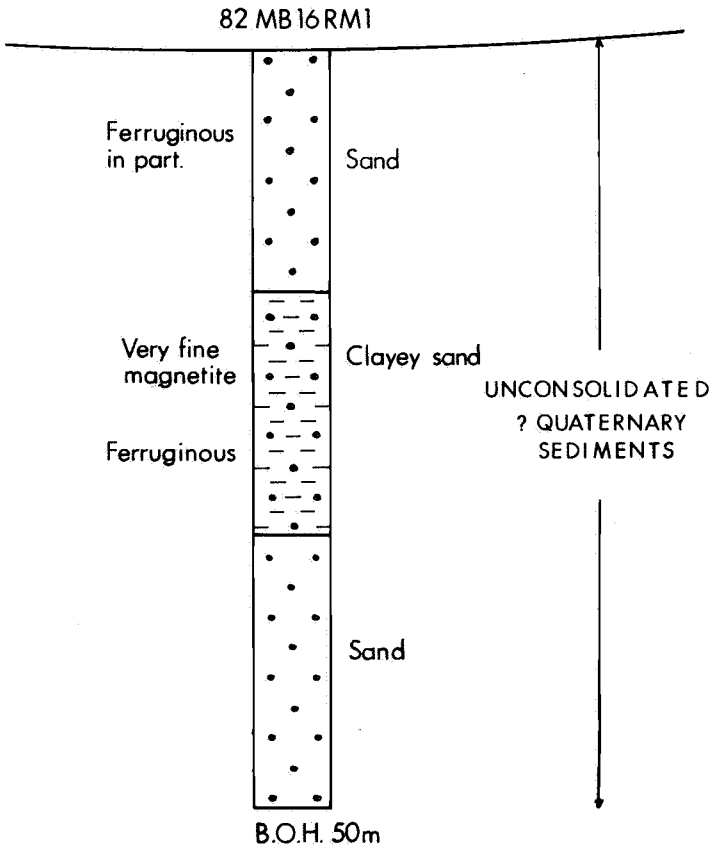


Vertical cross-section through AA'

Parameters

MAGNET	magnetization	May be fitted
DIP	dip, degrees (between 0 and 180)	
BASE	base level at [XPOS, YPOS]	
XSLOPE, YSLOPE	base level slopes in X- and Y- directions, respectively	
XPOS, YPOS	X and Y coordinates of the centre of the top of the body	
X'WIDTH, Y'WIDTH	half widths of top of body	
DEPTH	depth to top of body	
THICK	depth extent of body	
INCLIN	inclination of inducing field	May NOT be fitted
DECLIN	azimuth (ccw from X axis) of field	
VERT	=0 for total field, =1 for vertical field	
ORIENT	azimuth of strike perpendicular AA'	

MURRAY BASIN DIAMONDS
ANOMALY MB16

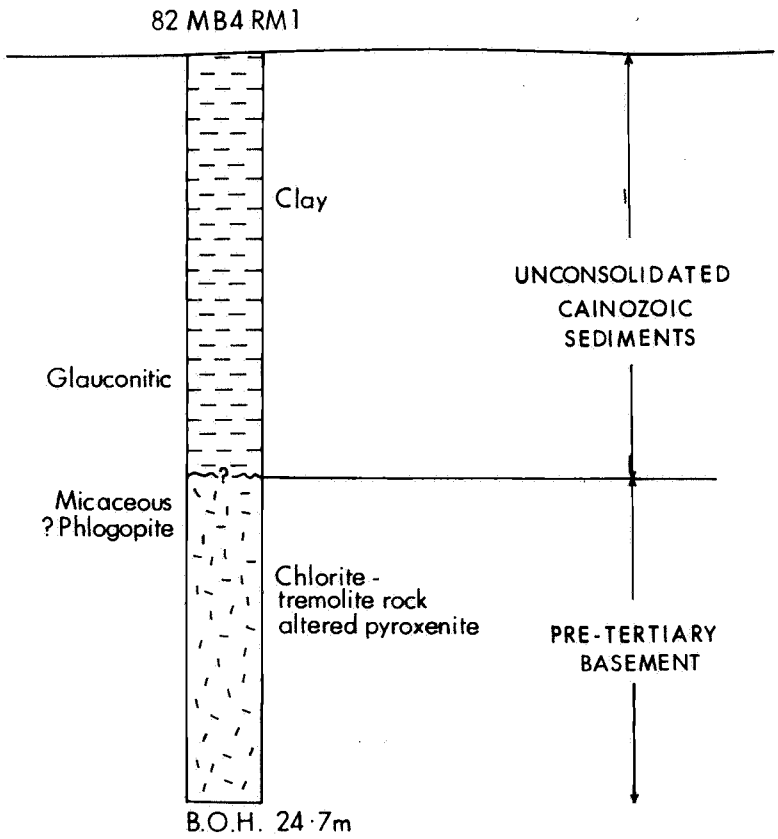


C R A EXPLORATION PTY. LIMITED	
MILANG E.L.964 DRILL HOLE 82 MB16 RM1	
Ref. BARKER SI54-13	
Scale 1:500	Drawn J.C.R.
Author P.L.	Report No. 13291
Date FEB., 1985	Plan No. SAa 2032

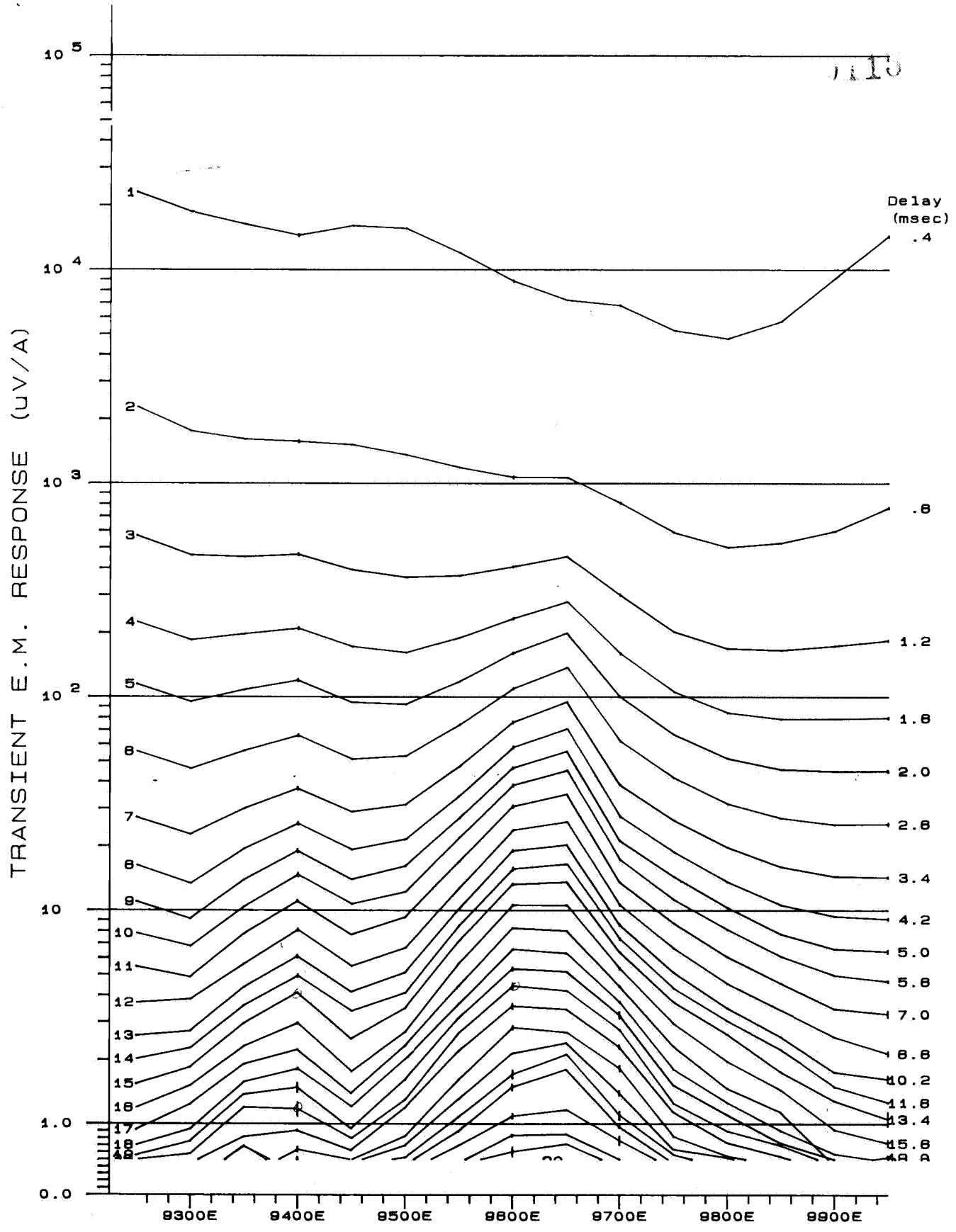
MURRAY BASIN DIAMONDS

ANOMALY MB4

114



C R A EXPLORATION PTY. LIMITED	
MILANG E.L.964 DRILL HOLE 82 MB 4 RM1	
Ref. BARKER SI 54-13	
Scale 1:250	Drawn J.C.R.
Author P.L.	Report No. 13291
Date FEB., 1985	Plan No. SAa 2059



CRA EXPLORATION PTY. LTD.

MILANG E.L. 964 S.A.

GRID INMB38 Job No. (521)

SIROTEM Survey by SOLO Geophysics & Co. 22/ 4/84

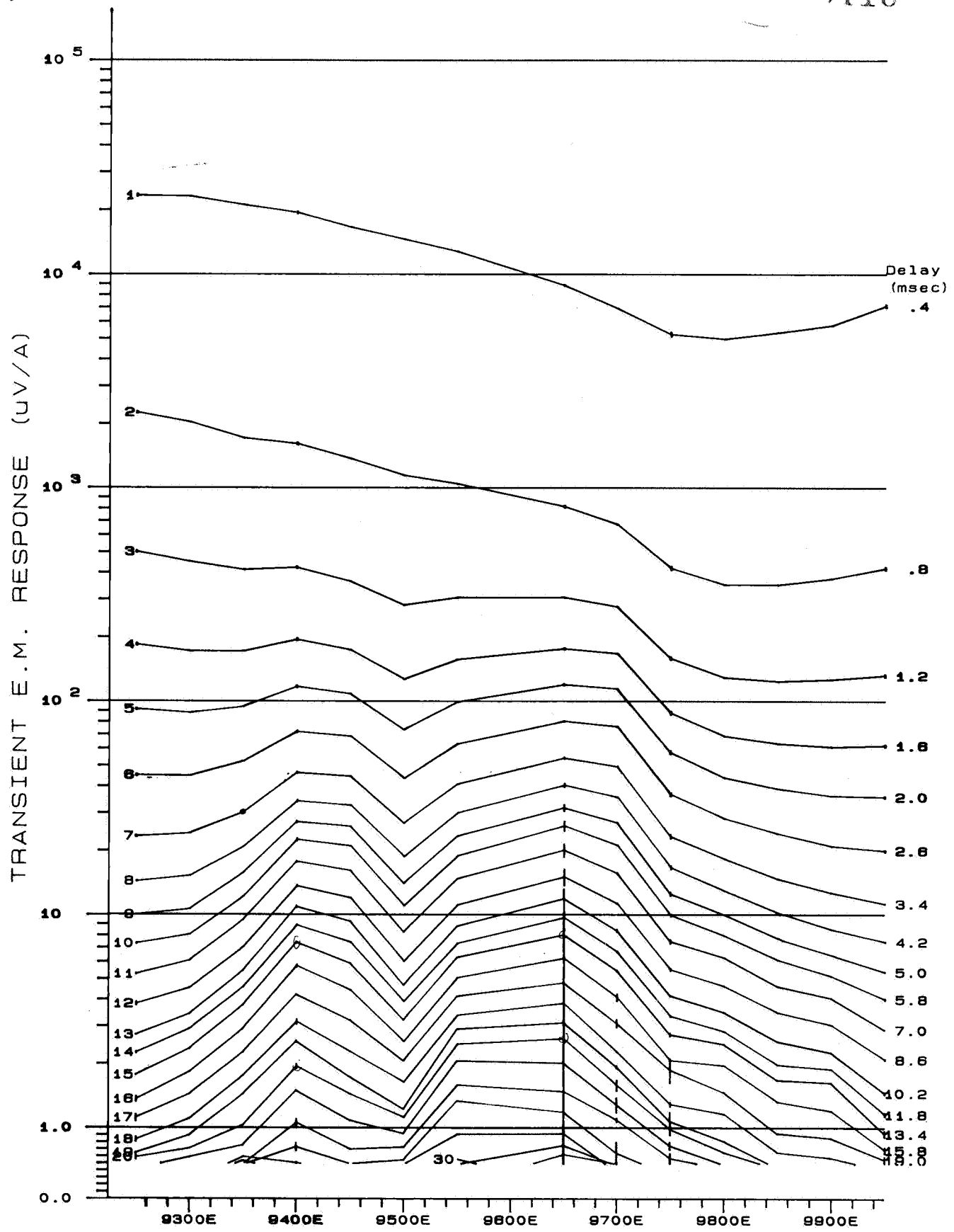
LINE : 8950 NORTH Reading interval 50.0 m

SCALE 1 : 5000 Loop size : 100 m

LOOP configuration : In-loop receiver

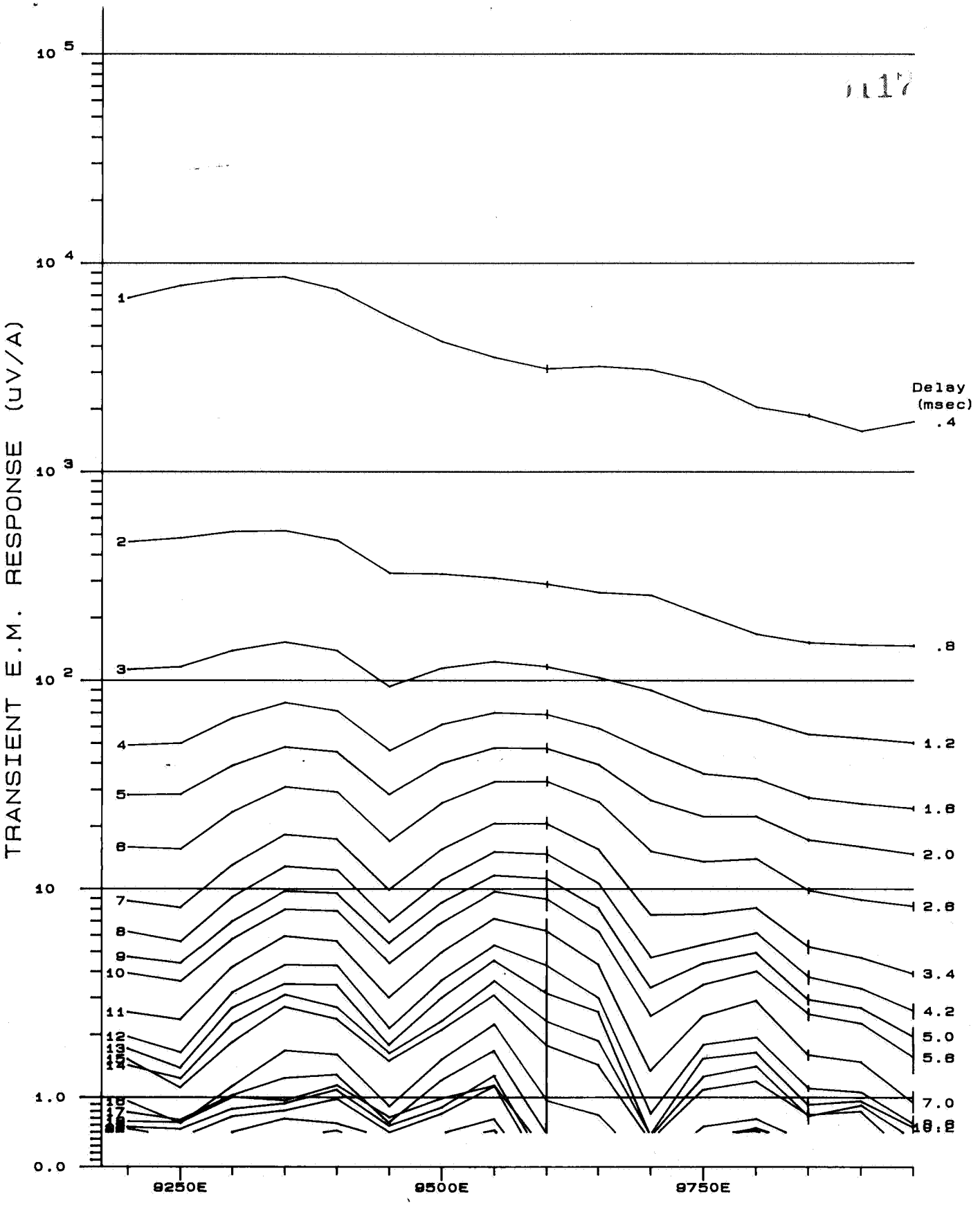
Plotted : 12:36 PM 15/ 5/84

REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2845



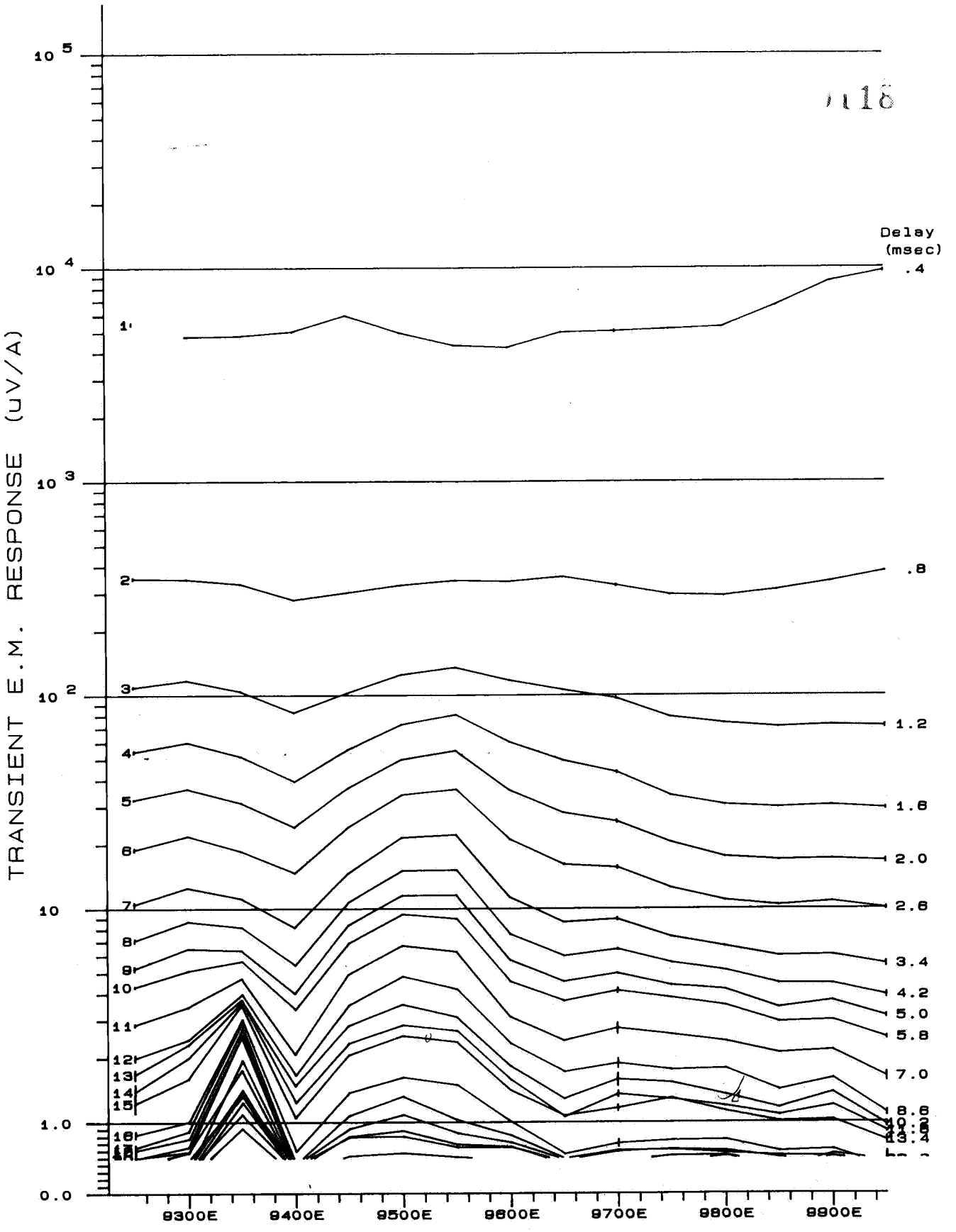
CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB38 Job No. (521)

SIROTEM Survey by SOLO Geophysics & Co. 22/ 4/84
LINE : 9150 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 12: 41 PM 15/ 5/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2846



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB38 Job No. (521)

SIROTEM Survey by SOLO Geophysics & Co. 19/ 4/84
LINE : 9350 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 12:52 PM 15/ 5/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2847



CRA EXPLORATION PTY. LTD.

MILANG E.L. 964 S.A.

GRID INMB38 Job No. (521)

SIROTEM Survey by SOLO Geophysics & Co. 19/ 4/84

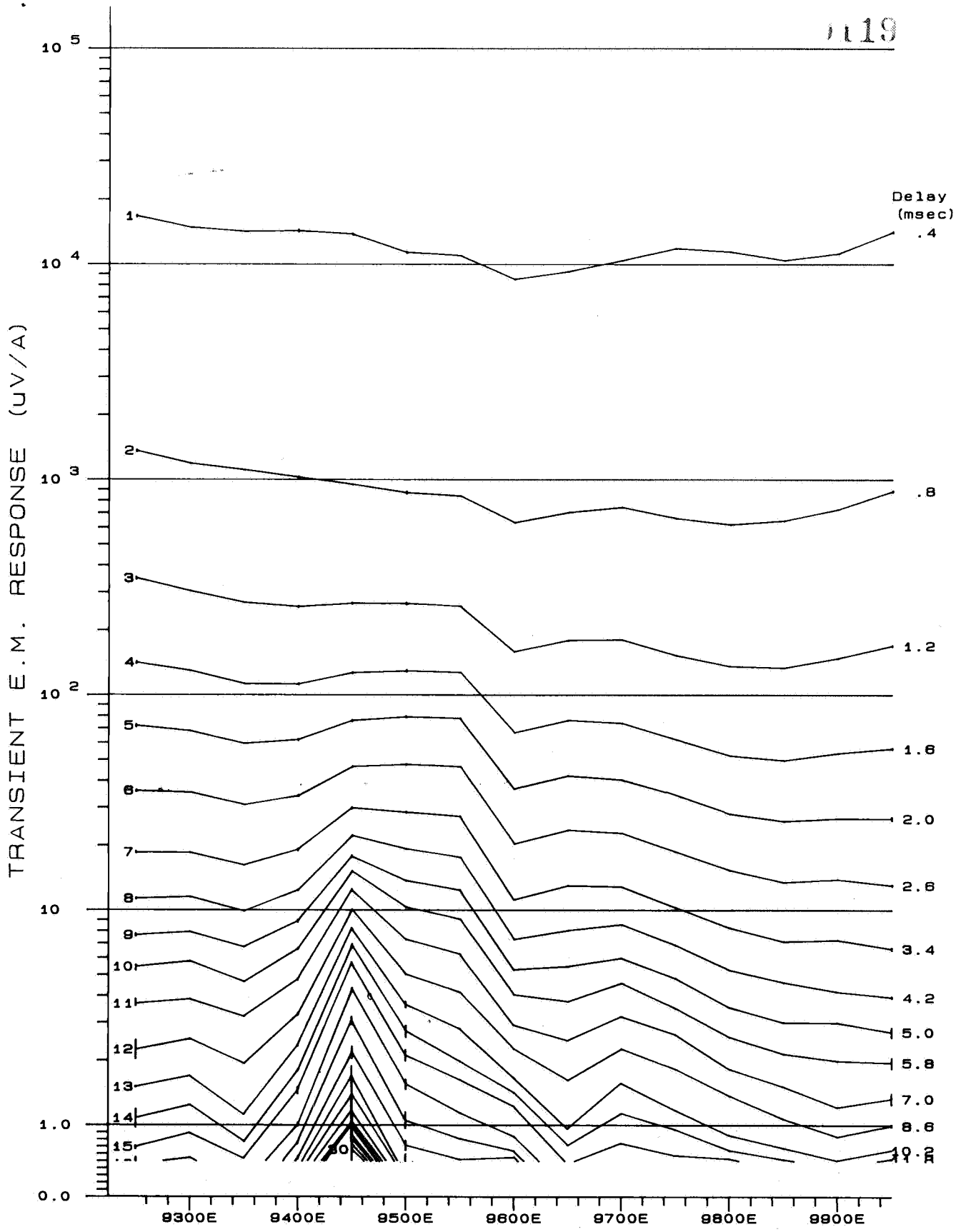
LINE : 9550 NORTH Reading interval 50.0 m

SCALE 1 : 5000 Loop size : 100 m

LOOP configuration : In-loop receiver

Plotted : 12:55 PM 15/ 5/84

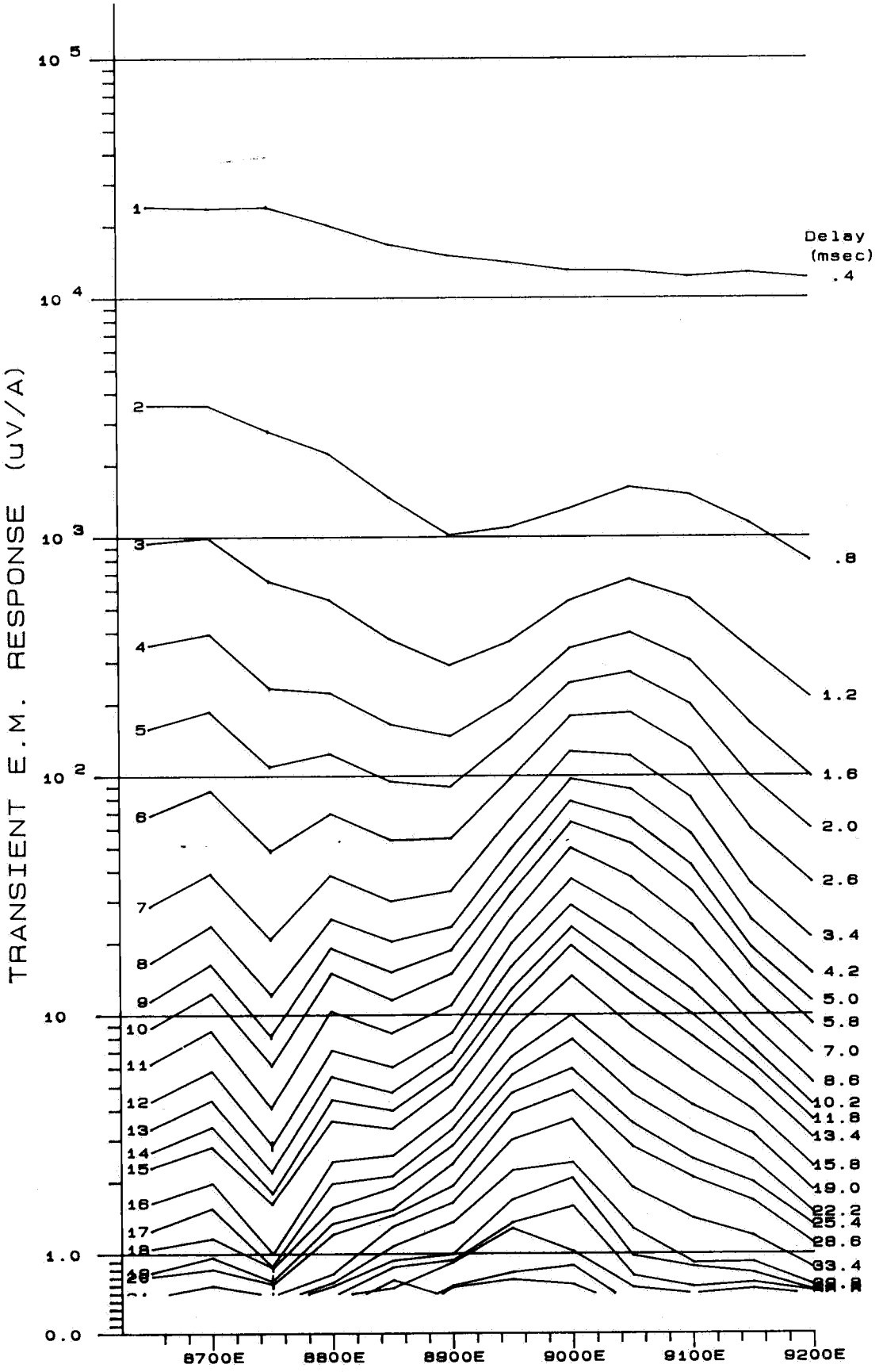
REF: BARKER SI 54-13 REPORT NO. 13291 PLAN NO. SAa 2848



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.

GRID INMB38 Job No. (521)

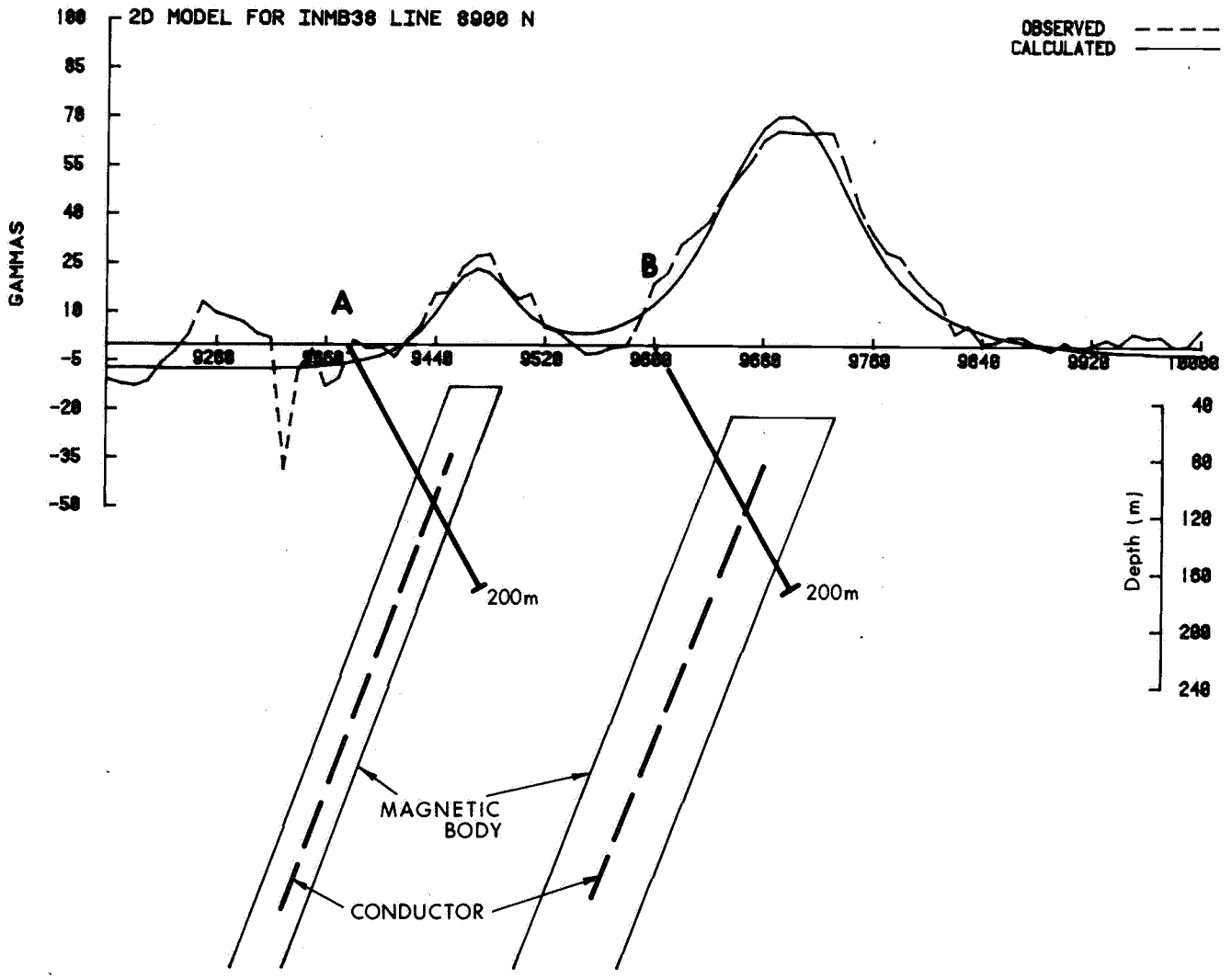
SIROTEM Survey by SOLO Geophysics & Co. 19/ 4/84 - 20/ 4/84
LINE : 9750 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 1:00 PM 15/ 5/84
REF: BARKER SI 54-13 REPORT No. 13291 PLAN No. SAa 2849



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB39 (Job No. 521)

SIROTEM Survey by SOLO Geophysics & Co. 16/ 4/84
LINE : 9949 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 8:59 AM 16/ 5/84
REF: BARKER SI 54-13 REPORT No. **13291** PLAN No. SAa 2859

SOLO



Hole 'A'
Collar 8900N, 9366E
- 60° to 070° (mag.)

Hole 'B'
Collar 8900N, 9600E
- 60° to 070° (mag.)

Body 'A'

Magnetic Body
Depth to top 35m
Centre 9470E
Thickness 35m
Dip 70°W
Susc.-thickness product 0·12 SI

Body 'B'

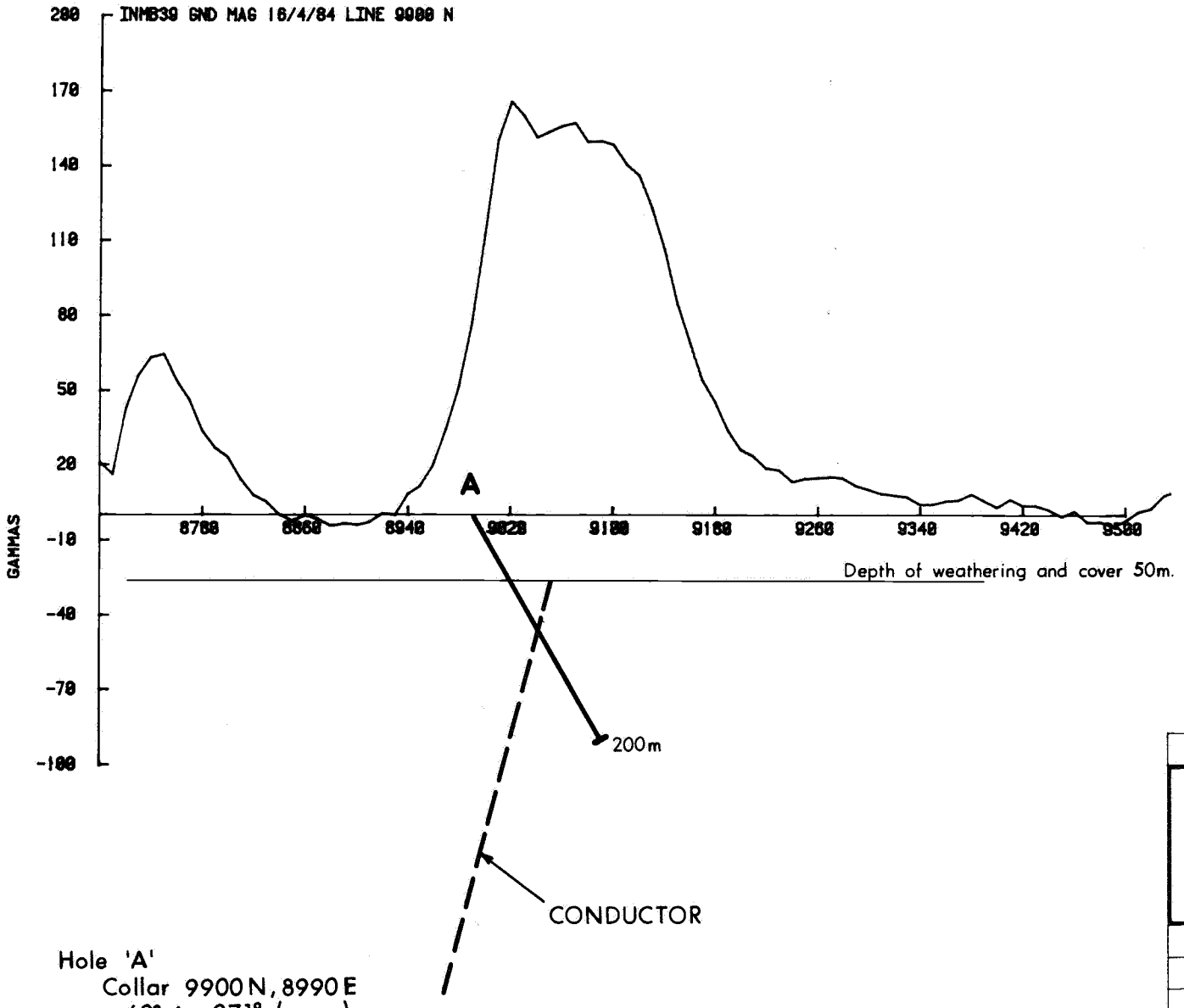
Magnetic Body
Depth to top 50m
Centre 9695E
Thickness 70m
Dip 70°W
Susc-thickness product 0·56 SI

CRA EXPLORATION PTY LIMITED

MILANG E.L.964 — S.A.

PROPOSED DRILL HOLES 'A'&'B' In MB 38

REFERENCE	BARKER SI 54-13		
SCALE	1 : 5000		
AUTHOR	R. L.	REPORT	13291
DATE	FEB., 1985	PLAN No	SAa 2884

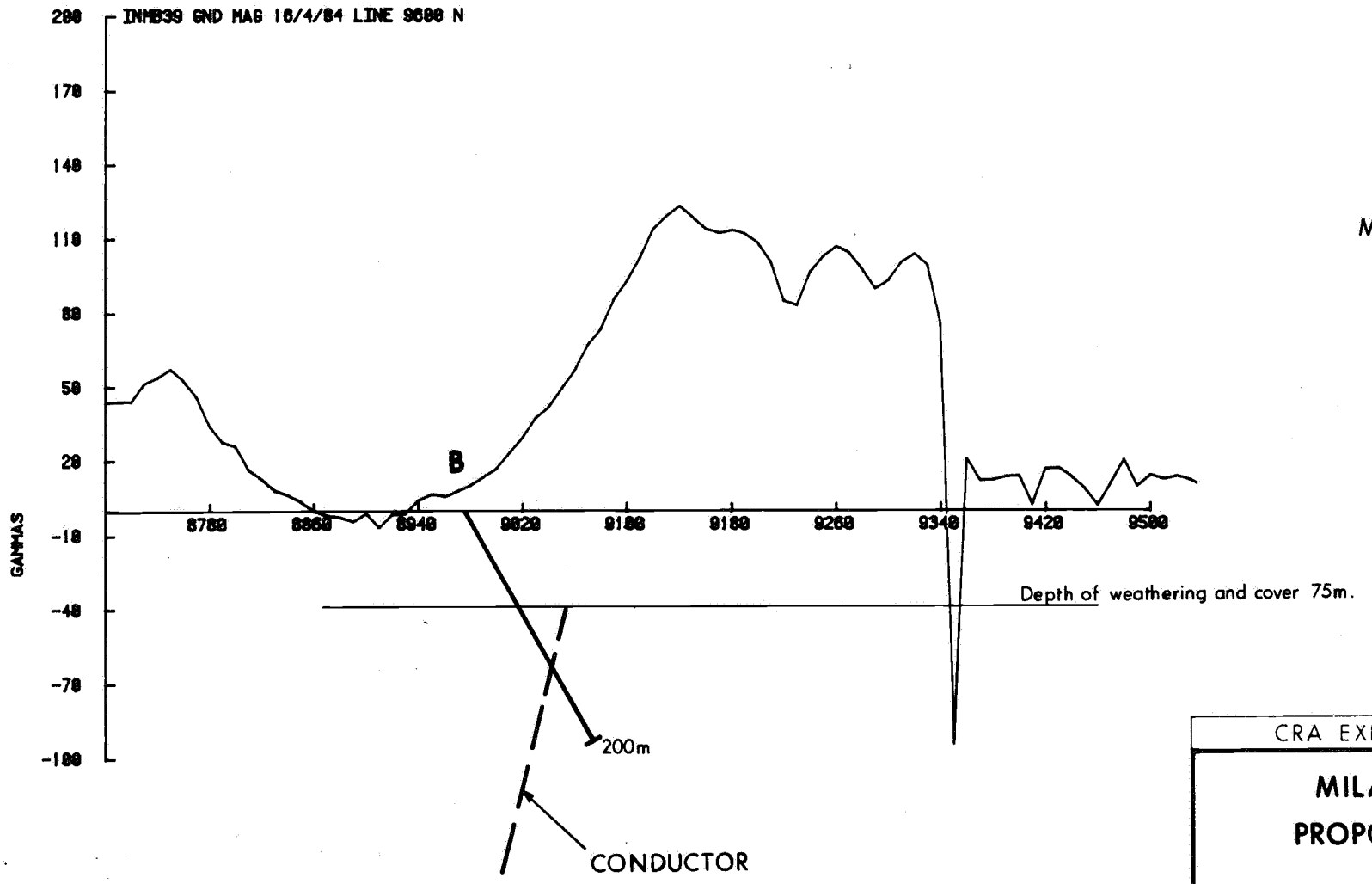


Modelled susceptibility-thickness product 1·3 SI

CRA EXPLORATION PTY LIMITED

MILANG E.L.964 — S.A.
PROPOSED DRILL HOLE 'A' In MB 39

REFERENCE	BARKER SI 54-13		
SCALE	1 : 5000		
AUTHOR	R.L.	REPORT	13291
DATE	FEB., 1985	PLAN No	SAa 2885



Modelled susceptibility - thickness product 1·0 SI

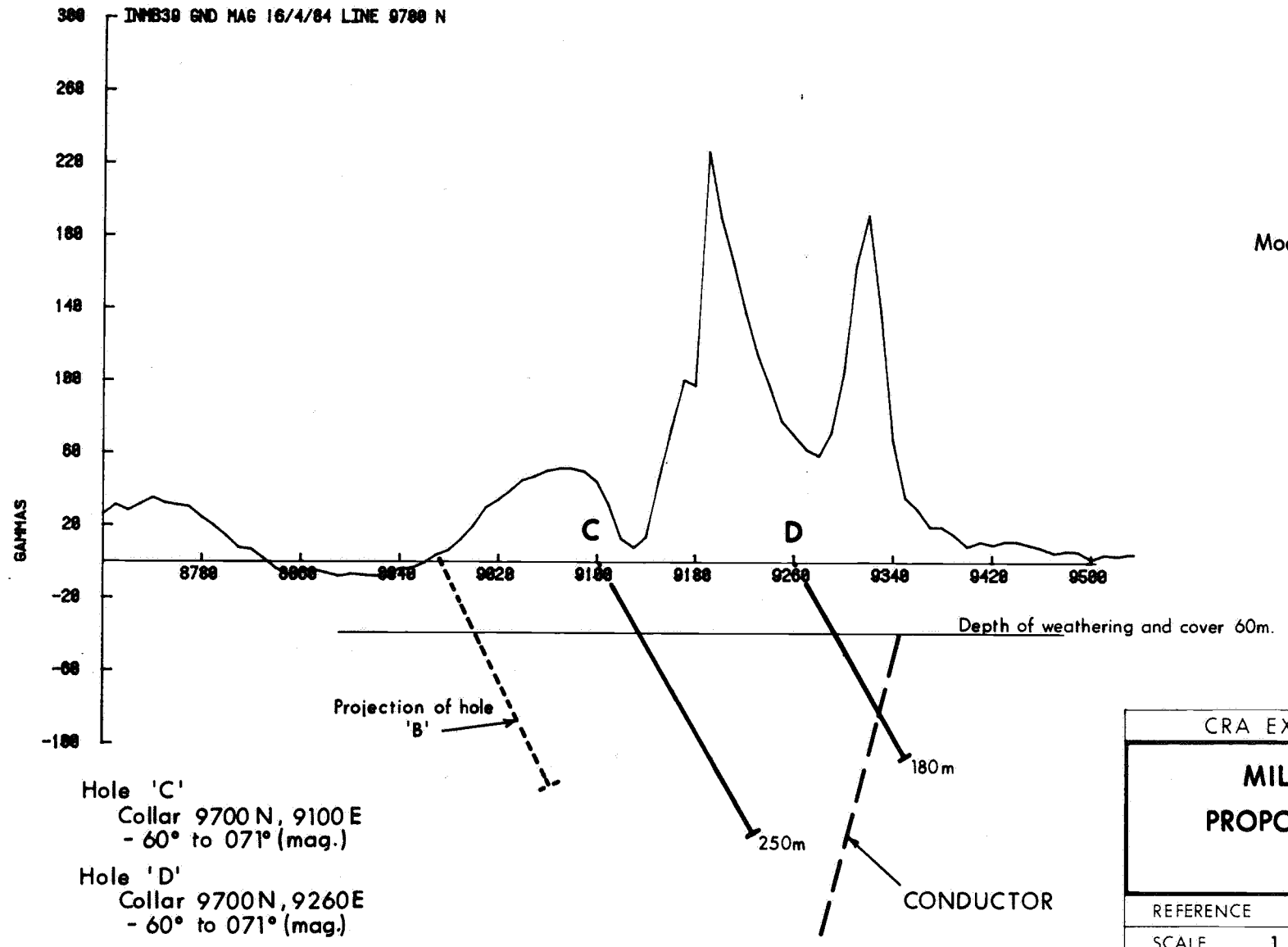
Hole 'B'
Collar 9600N, 8975E
-60° to 071 (mag.)

CRA EXPLORATION PTY LIMITED

MILANG E.L. 964 – S.A.

PROPOSED DRILL HOLE 'B'
InMB 39

REFERENCE	BARKER SI 54-13		
SCALE	1 : 5000		
AUTHOR	R.L.	REPORT	13291
DATE	FEB, 1985	PLAN No	SAa 2886



Modelled susceptibility - thickness product Body 'C' 0·6 SI
Body 'D' 0·4 SI

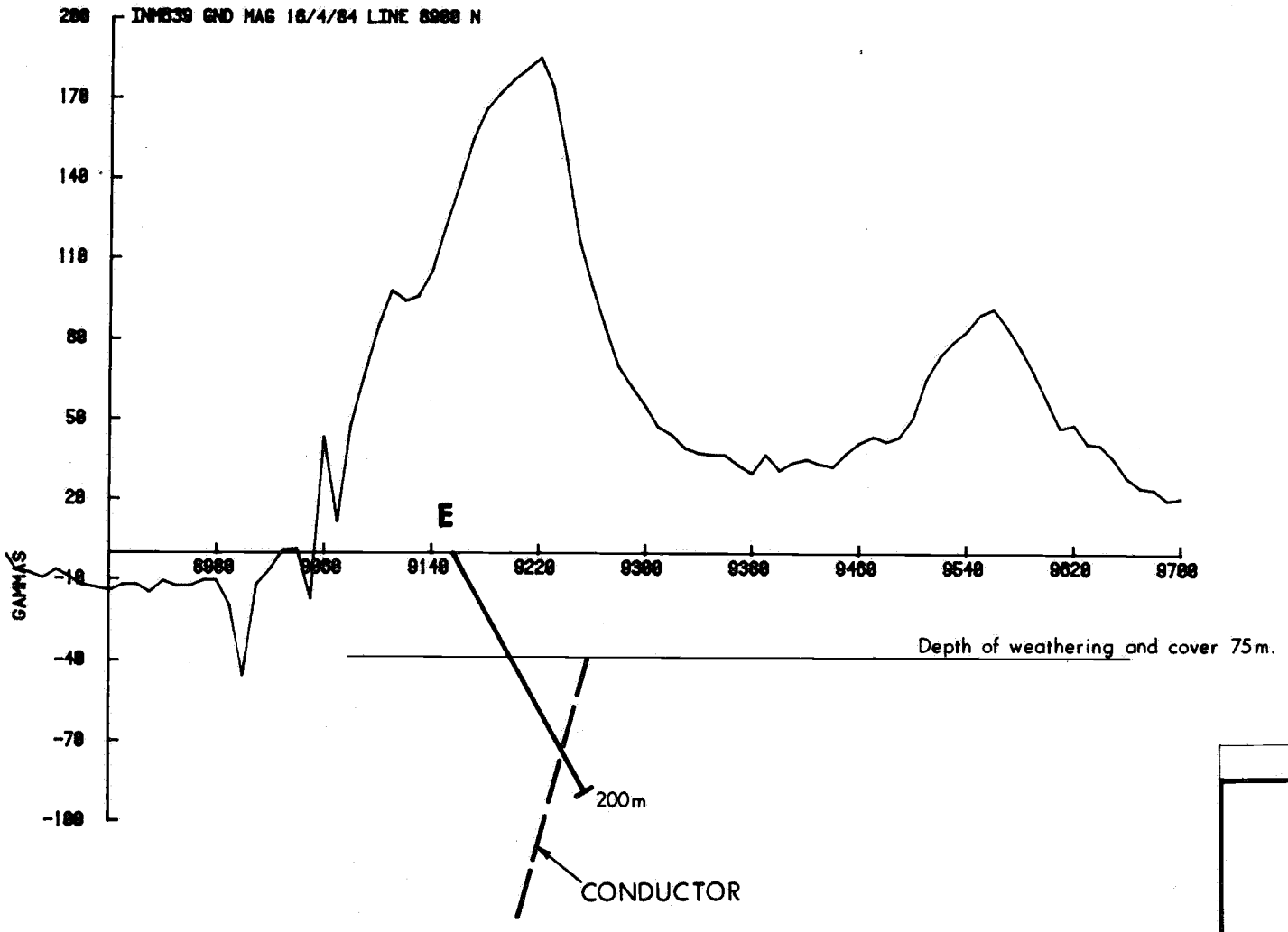
Hole 'C'
Collar 9700 N, 9100 E
- 60° to 071° (mag.)

Hole 'D'
Collar 9700 N, 9260 E
- 60° to 071° (mag.)

CRA EXPLORATION PTY LIMITED

MILANG E.L. 964 – S.A.
PROPOSED DRILL HOLE 'C'&'D' In MB 39

REFERENCE	BARKER SI 54-13		
SCALE	1 : 5000		
AUTHOR	R.L.	REPORT	13291
DATE	FEB., 1985	PLAN No	SAa 2887



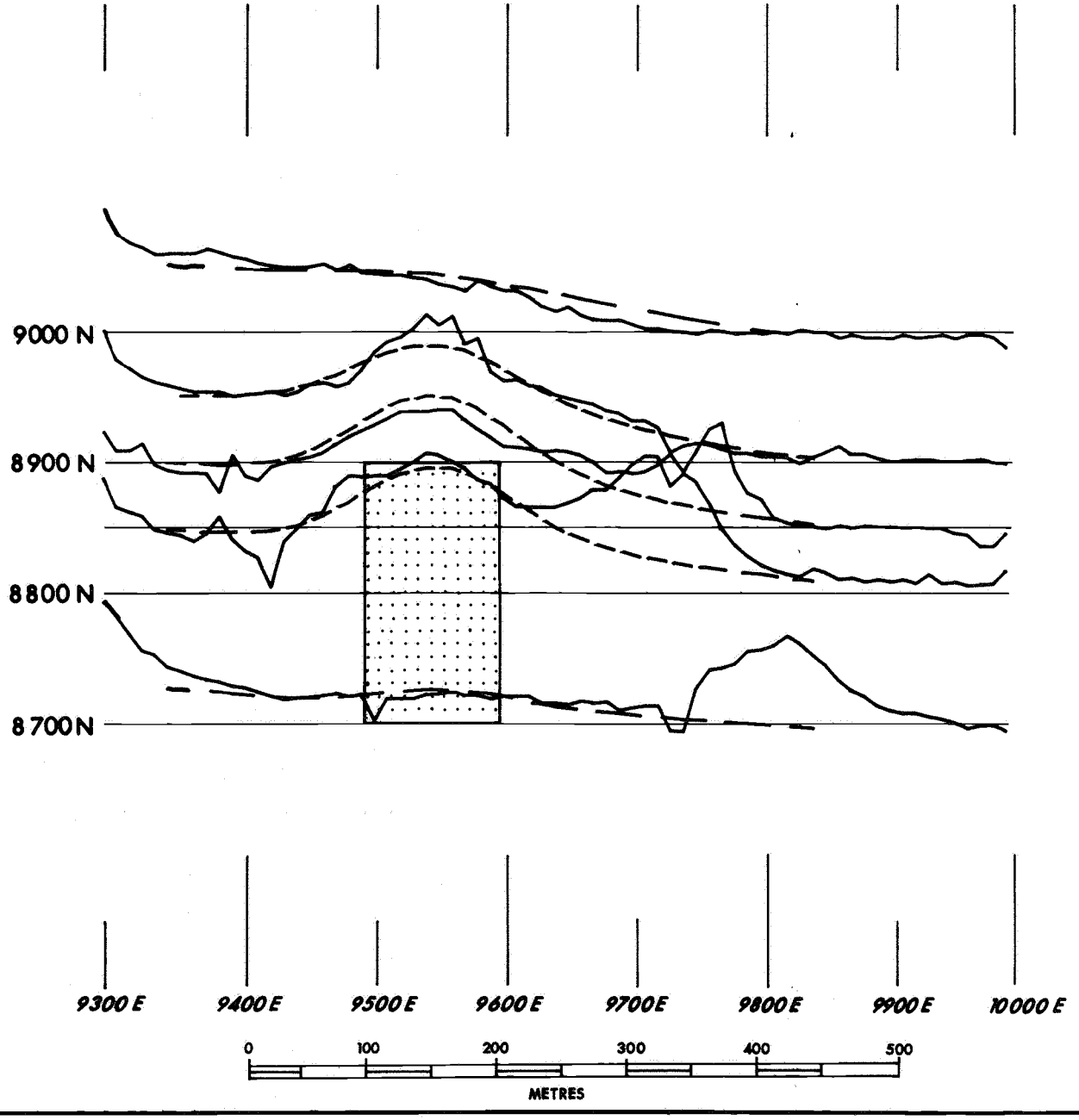
Modelled susceptibility-thickness product 1·75 SI

Hole 'E'
Collar 8900N, 9150E
-60° to 071° (mag.)

CRA EXPLORATION PTY LIMITED

MILANG E.L.964 – S.A.
PROPOSED DRILL HOLE 'E' In MB 39

REFERENCE	BARKER SI 54-13		
SCALE	1 : 5000		
AUTHOR	R. L.	REPORT	13291
DATE	FEB., 1985	PLAN No	SAa 2888



— OBSERVED

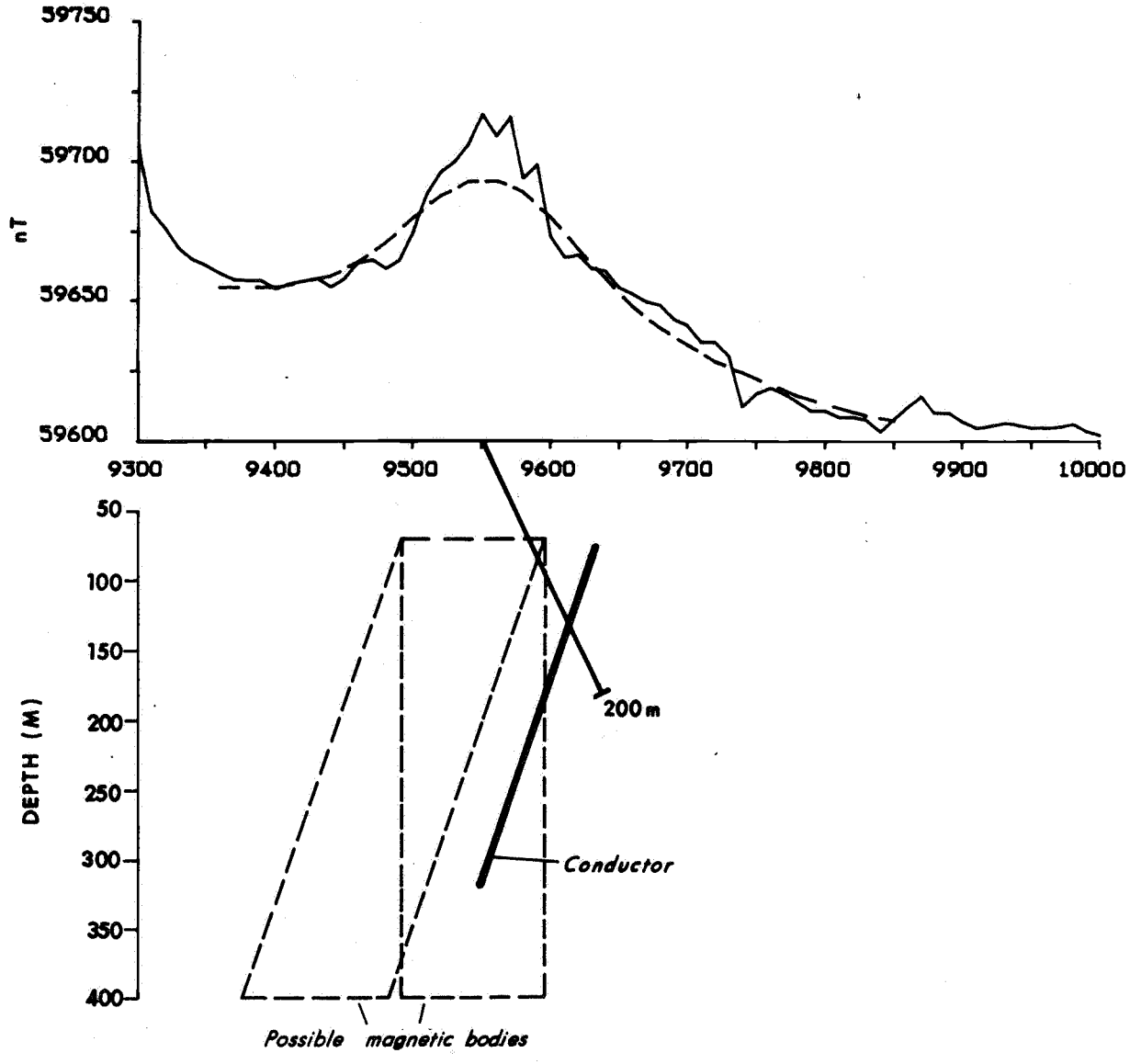
– – MAGMOD PRISM MODEL

Magnetic body
Depth to top 64m
Depth to bottom 400m
Dip 90°
Susceptibility (SI) 750×10^{-5}
Station interval 10m
Vertical scale 1cm = 50nT
Profile plotted with a base level of 59600 nT

CRA EXPLORATION PTY LIMITED

MILANG EL 964 - S.A.
INMB 39
ADDITIONAL GROUND MAGNETIC PROFILES

REFERENCE	BARKER SI 54 -13	
SCALE	1:5,000	
AUTHOR	R J LL	REPORT 13291
DATE	FEB., 1985	PLAN No SAa 2964



CRA EXPLORATION PTY LIMITED

MILANG EL 964 - S.A.
INMB 39
PROPOSED DRILL HOLE 'F'

REFERENCE	BARKER SI54-13	
SCALE	1:5000	
AUTHOR	RJLL	REPORT 13291
DATE	FEB., 1985	PLAN No SAa 2965

139°00'
34°45'
139°15'
34°45'
50'
50'
55'
55'
35°00'
139°00'
35°00'
139°15'

81 RCRM 5

TEPKO

80 RCRM 4
Qpl 21 3 m C • 54 9m
To - m 33 6m

80 RCRM 6
80 RCRM 2
80 RCRM 5
80 RCRM 1
80 RCRM 3

Reedy Creek

17200 S

LEGEND

- Quaternary alluvium
- Tertiary laterite
- Basic rocks
- Kanmantoo Gp. undifferentiated
- Acid intrusives
- Limit of Reedy Creek drainage basin
- Gravity line
- 80 RCRM 4 — Rotary Mud Drill Hole

Scale
0 1 2 3 4 5 kms

60 54 (I) - 1

C.R.A. EXPLORATION PTY. LIMITED

MILANG E.L. 964

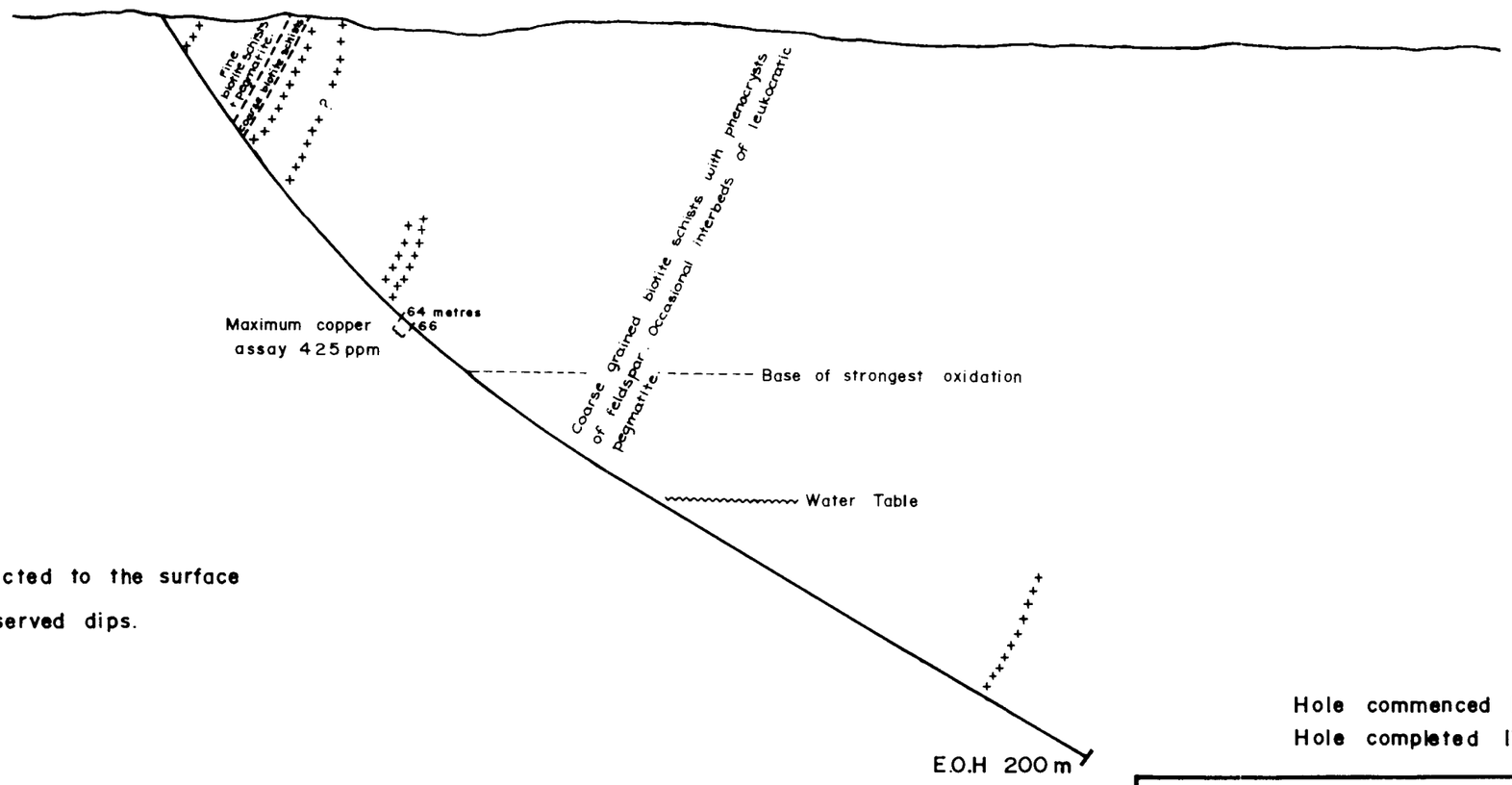
REEDY CREEK DRAINAGE BASIN

REF: ADELAIDE SI54-9, BARKER SI54-13

Geol.: D.L.A.	Date: FEB., 1985	Report N°: 13291
Drawn: D.R.W./J.C.R	Scale: 1:50,000	Plan N°: 443

Metres Along Traverse 14-1	W 950	925	1000	1025	1050	1075	1100	1125	1150	E 1175	
	18	40	150	310	600	65	570	48	50	12	Cu assays in p.p.m.

collar at 975m, 120m a.s.l.
Declination: 60°, Azimuth: 060°.



LEGEND

+++ Pegmatite

N.B.: Lithological boundaries projected to the surface on the basis of locally observed dips.

Hole commenced 16/6/80.
Hole completed 17/6/80.

C.R.A. EXPLORATION PTY. LIMITED.

MILANG E.L. 547

SALT CREEK PROSPECT

DRILL SECTION 80 SCP 1.

Sheet Reference: BARKER SI54-13

Geol.: I.A.C.	Scale: 1:1,000	Report N°: 13291
Drawn: S.J.B.	Date: FEB., 1985	Plan N°: SAa 475

6054(1)-2

SALT CK 14.1

GROUND MAG (0-2000 nT)
AEROMAG (0-2000 nT)
Pb (0-500 ppm)
Zn (0-500 ppm)
Cu (0-500 ppm)
Fe (0- 50 %)
HOR. SCALE 1:5000

10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00

150 300 450 600 750 900 1050 1200 1350 1500 1650 1800 1950 2100

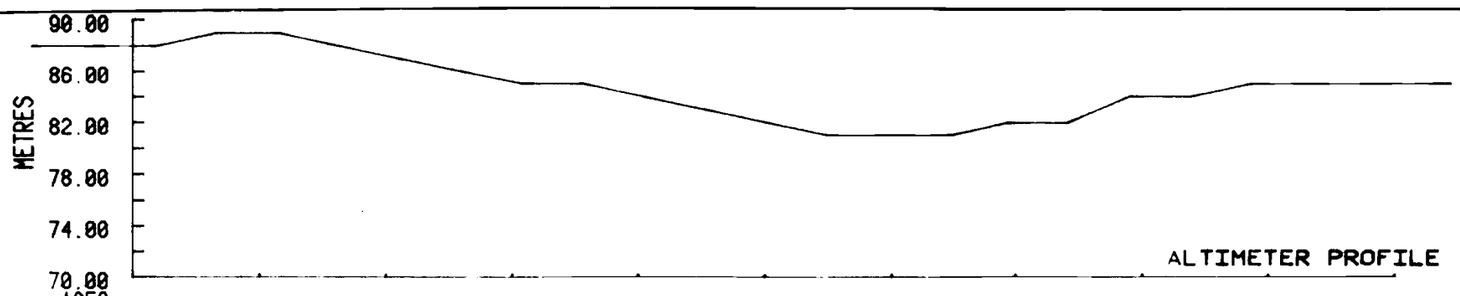
METRES

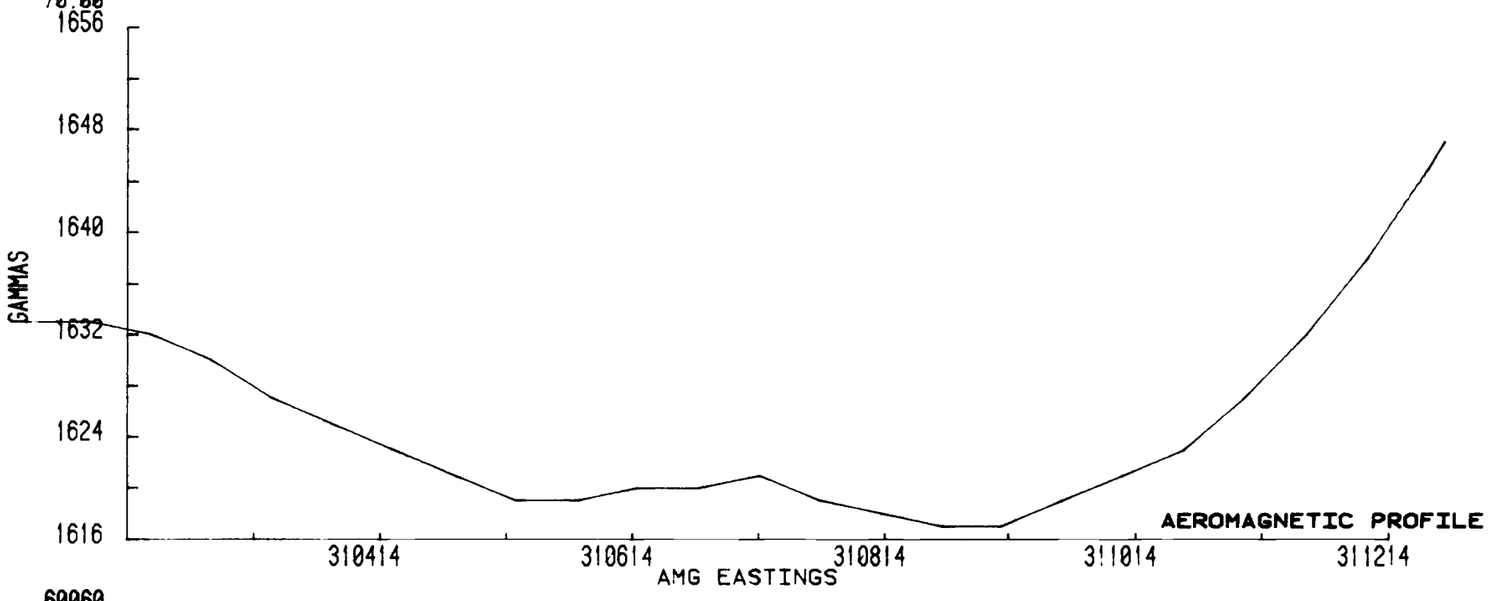
1:250,000 Map Ref.: BARKER SI 54-13.

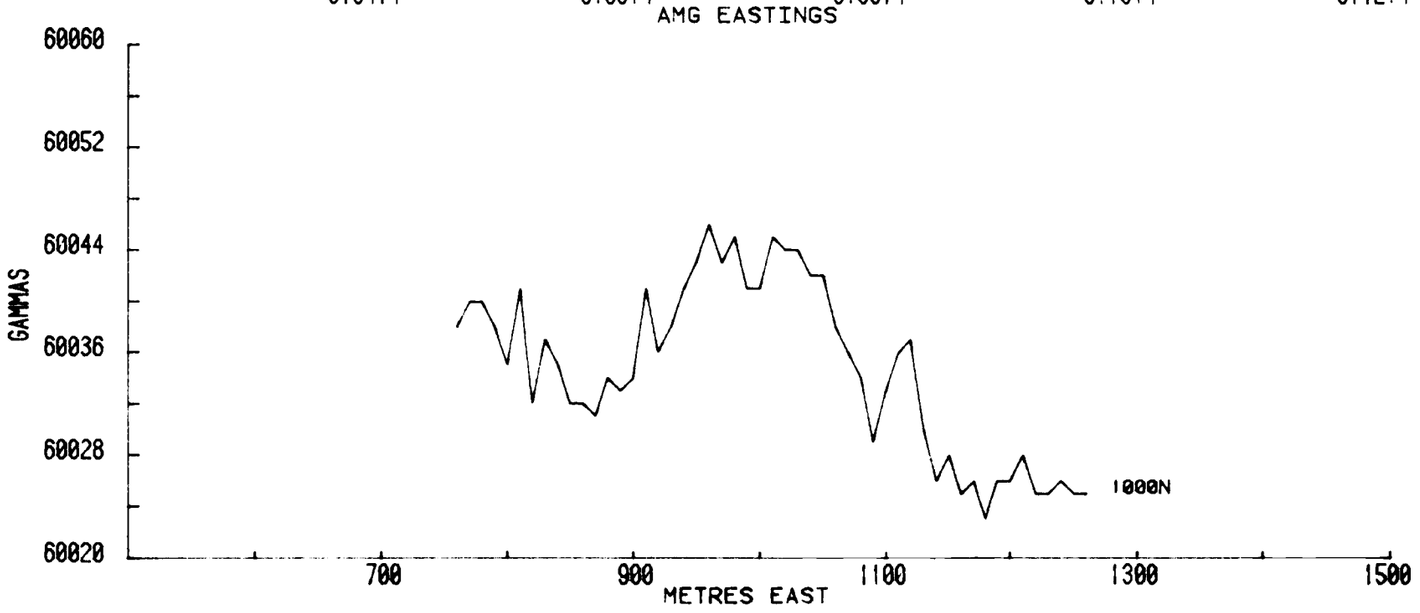
C.R.A. EXPLORATION PTY. LTD.	
MILANG E.L. 547	
MAGNETIC & SOIL GEOCHEMICAL PROFILES	
SALT CREEK *TRAVERSE*	
Geol.: K.J.W.	Report No: 13291
Date: FEB., 1985	Plan No.: SAa 524

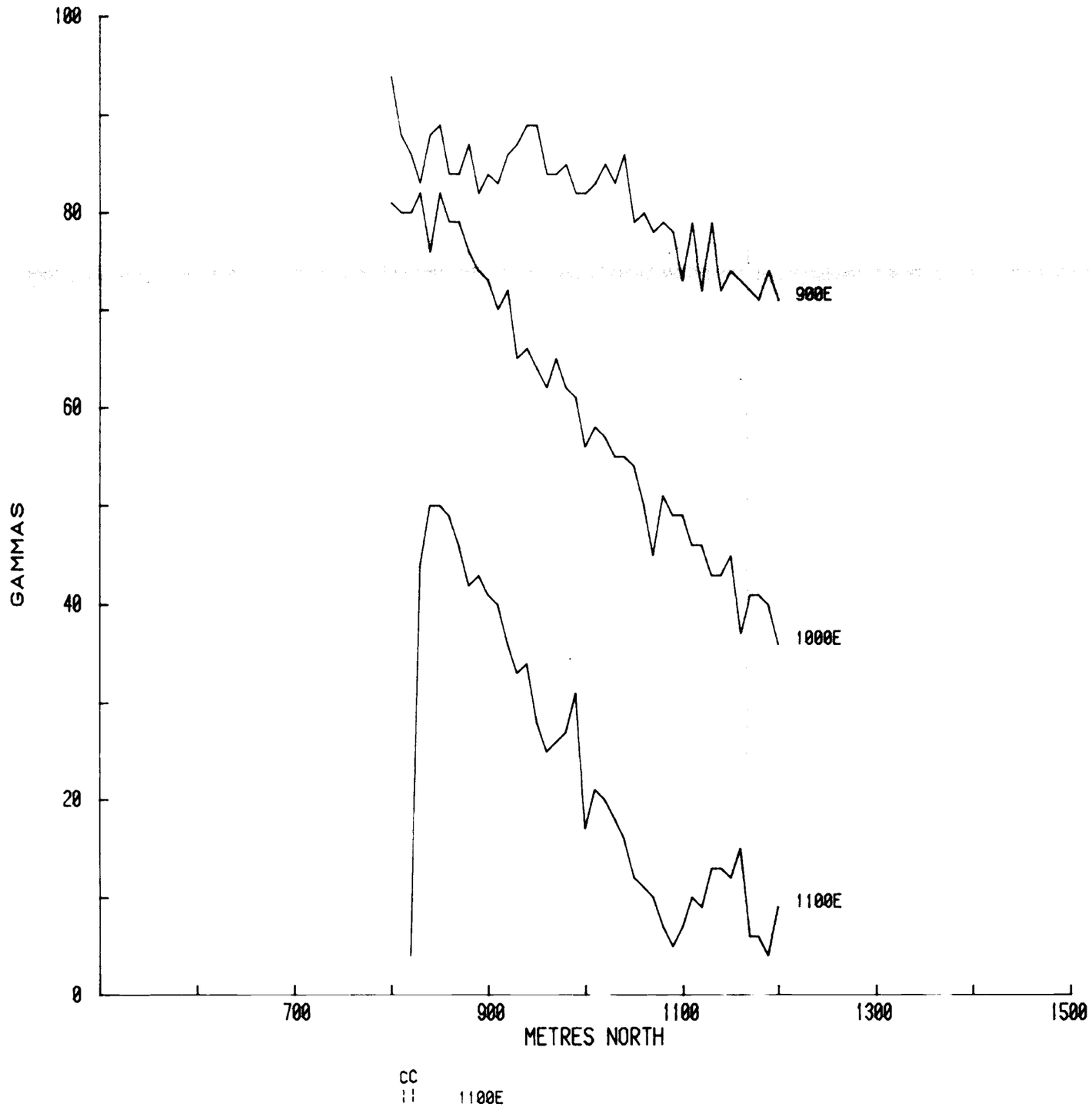
FOR GROUND LOCATION SEE PLAN SAa 424

6054 (1)-3









Magnetometer : Scintrex MP-2
Sensitivity : +/- one nT
Noise envelope : +/- two nT
Line orientation : 0,90 degrees AMG
Station spacing : 10 metres
Survey date : 23/12/81

Aeromagnetic line no. 108.1

1000N/1000E = 6080300N/310652E

F : Fence
L : Telephone or power line
C : Other cultural features

6054(1)-4

CRA EXPLORATION PTY. LIMITED

MILANG E.L. 964

PROFILES OF AIRBORNE AND GROUND MAGNETICS

ANOMALY N1

Ref. BARKER SI 54-13	
Scale 1 : 5000	Drawn
Author G.J.B.	Report No. 13291
Date FEB., 1985	Plan No. SAa 1240

MILANG E.L. 547

KANMANTOO E.L. 467

BRUKUNGA E.L. 501

MYPOLONGA E.L. 659

Palmer

Summerfield

Tepko

Pallamana

Mannum

RIVER MURRAY

MURRAY BRIDGE

CAMBRAI RAILWAY

MONARTO

Reedy Creek

LINE 1
0 (BM8007)
1000

LINE 2
0
1000
2000
2000
3000
4000
5000

LINE 3
0
1000
2000
3000
4000
6000
7000
8000

LINE 4
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
9000
10,000
11,000
12,000
13,000
14,000
15,000
16,000
17,000
BM 4015

F
F
F_G
F_G

Interpreted depth to basement (metres)

<50
50-100
100-150
150-200
>200

F ——— F Fault inferred from aeromagnetics

F_G ——— F_G Fault inferred from gravity

14,000 Gravity station & number (metres)

0 5

KILOMETRES

T.N. M.N.

6°45'

34°50'
139°05'
330 000
139°10'
340 000
139°15'
61 40 000
34°55'
61 30 000
35°00'
61 20 000
35°05'

6054(I)-5

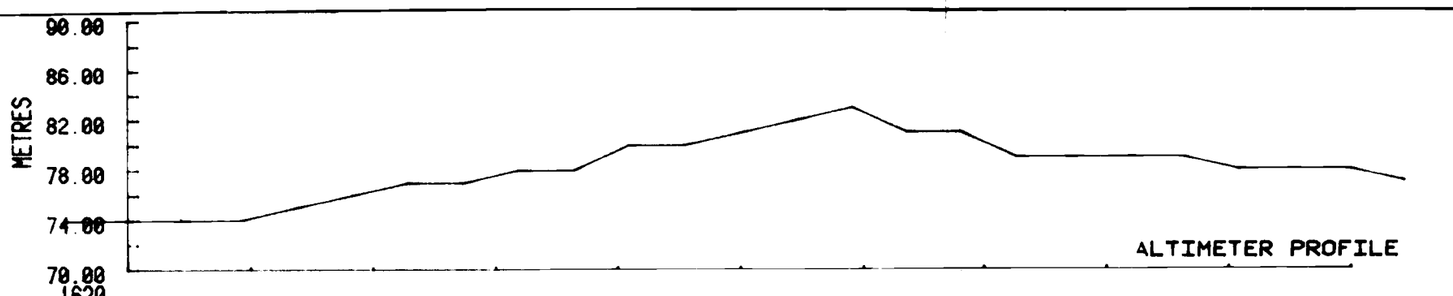
C.R.A. EXPLORATION PTY. LTD.

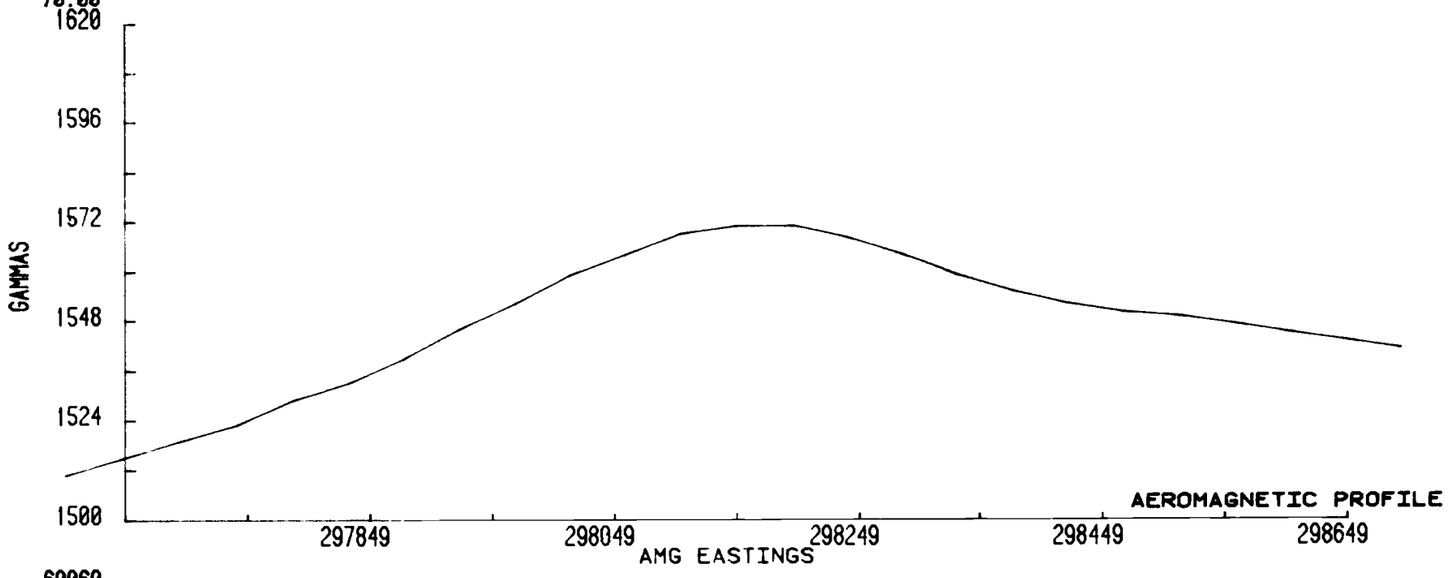
MILANG E.L. 547

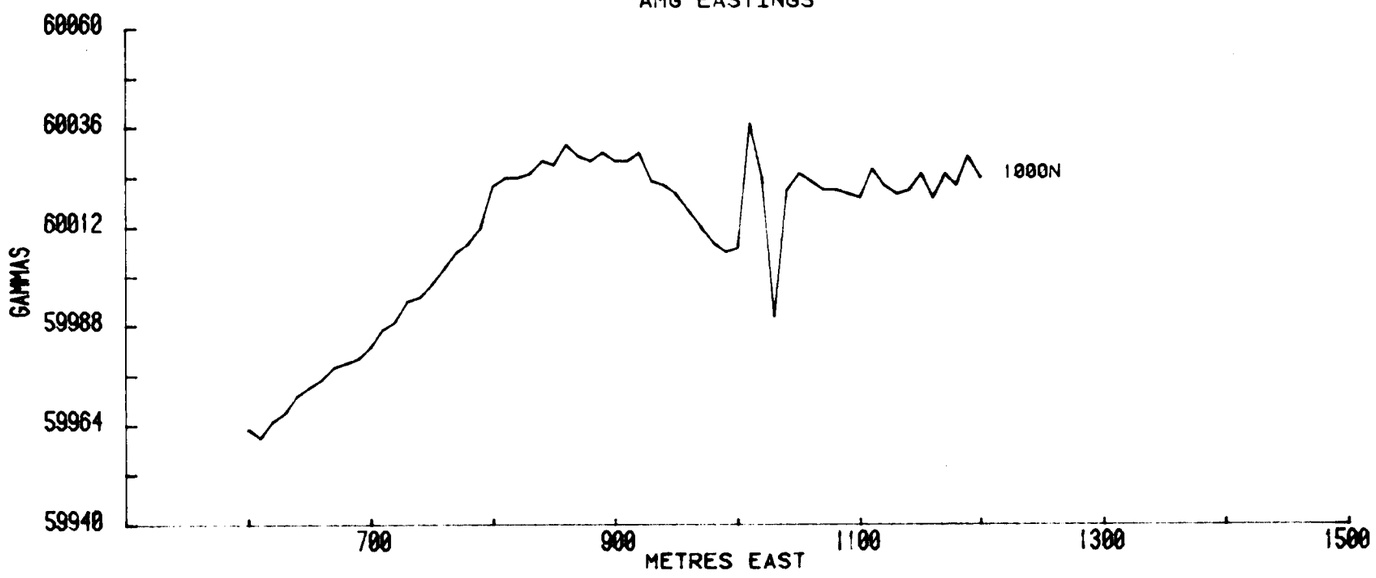
TEPKO GRAVITY SURVEY
STATION LOCATION AND
INTERPRETATION MAP

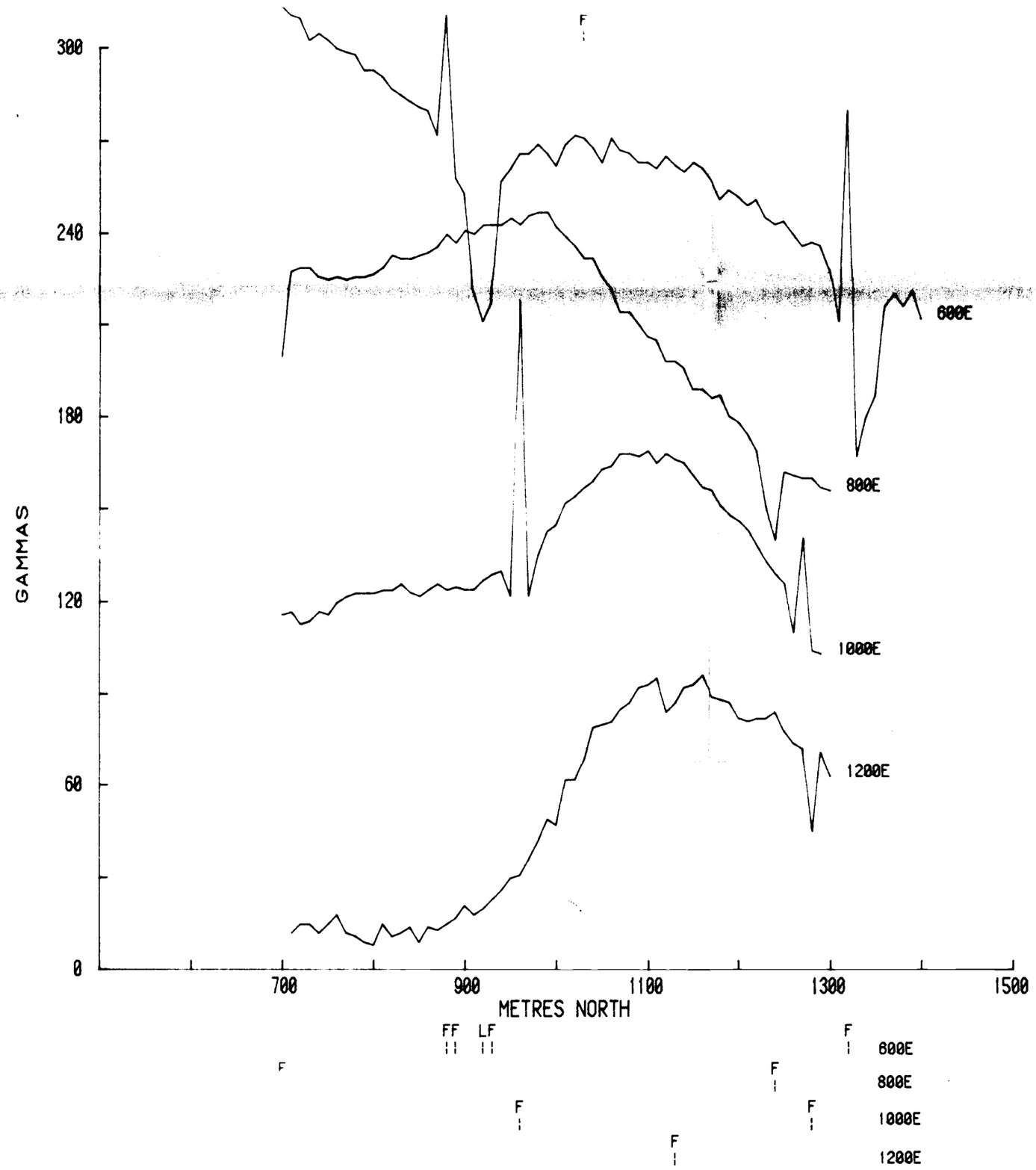
SHEET REF. ADELAIDE SI 54-9, BARKER SI 54-13

Geophys: G.J.B	Scale: 1:50,000	Rep. No. 13291
Drawn: S.W.	Date: FEB., 1985	Plan No: SAg 727









Magnetometer : Scintrex MP-2
Sensitivity : +/- one nT
Noise envelope : +/- two nT
Line orientation : 0,90 degrees AMG
Station spacing : 10 metres
Survey date : 21/12/81

Aeromagnetic line no. 110.1

1000N/1000E = 6079085N/298085E

F : Fence
L : Telephone or power line
C : Other cultural features

6054(1)-6

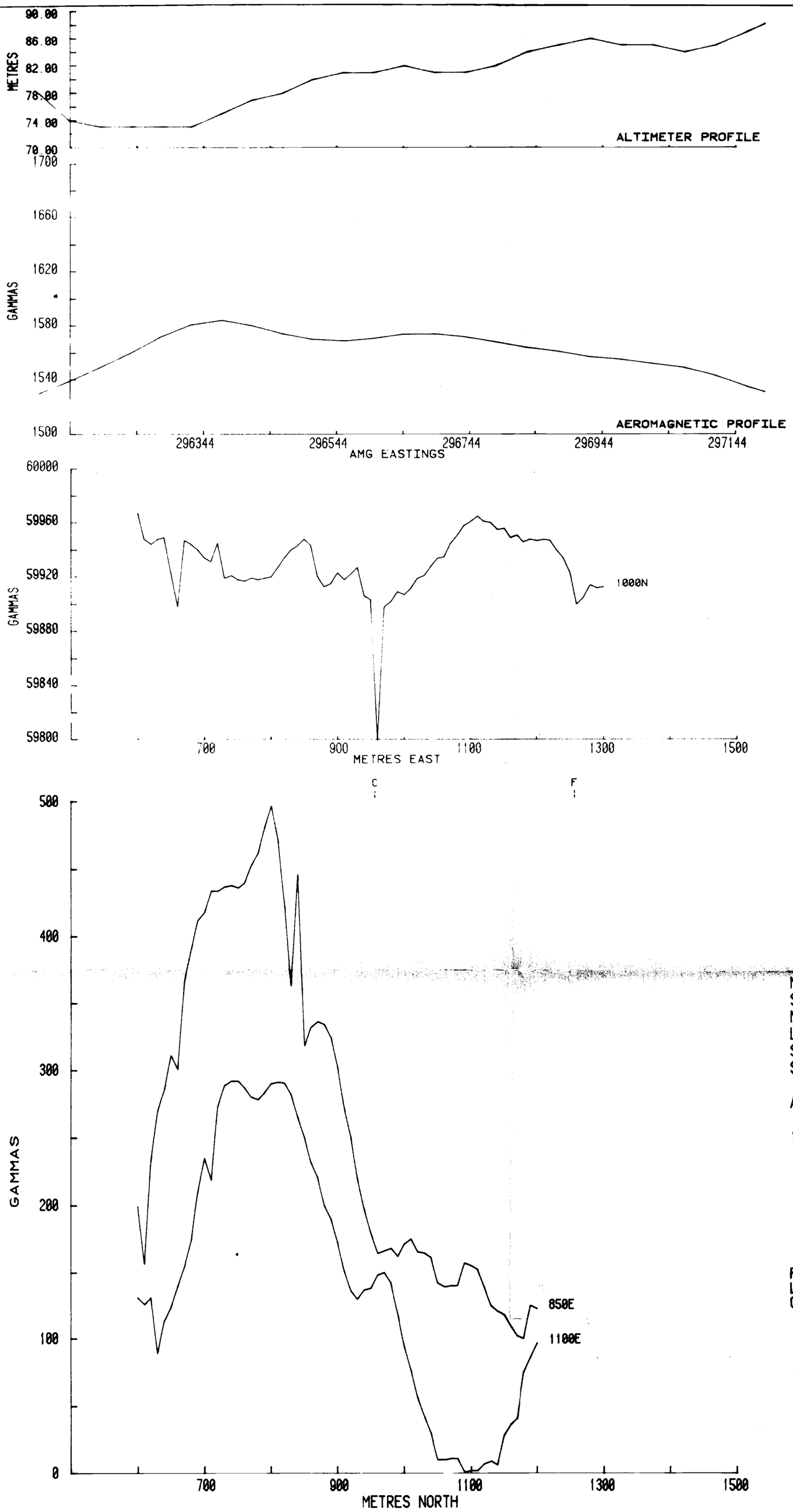
CRA EXPLORATION PTY. LIMITED

MILANG E.L. 964

PROFILES OF AIRBORNE AND GROUND MAGNETICS

ANOMALY N2

Ref. BARKER SI 54-13	
Scale 1:5000	Drawn
Author G.J.B.	Report No. 13291
Date Feb.'85	Plan No. SAa 1241



Magnetometer : Scintrex MP-2
Sensitivity : +/- one nT
Noise envelope : +/- two nT
Line orientation : 0,90 degrees AMG
Station spacing : 10 metres
Survey date : 23/12/81

Aeromagnetic line no. 116.1

1000N/1000E = 6075999N/296644E

F : Fence
L : Telephone or power line
C : Other cultural features

6054(1)-7

CRA EXPLORATION PTY. LIMITED

MILANG E.L. 964

PROFILES OF AIRBORNE AND GROUND MAGNETICS

ANOMALY N3

Ref. BARKER SI 54-13	
Scale 1:5000	Drawn
Author G.J.B.	Report No. 13291
Date Feb. '85	Plan No. SAa 1242

330000mE

330500mE

AMG N.
GRID N.
T.N.
MAG. N.

6111000mN

6110500mN

6110000mN

Aeolian Sands

800mE
900mE
1000mE
1100mE
1200mE

LINE 990E

14413

14408

1000mN

SC. 261
HUNDRED
MONARTO

LEGEND

- 14413 — Airborne survey flight line and fiducial
- Ground magnetometer traverse
- Fence
- Sand dunes

6054(1)-8

SCALE

METRES 50 0 50 100 150 200 250 METRES

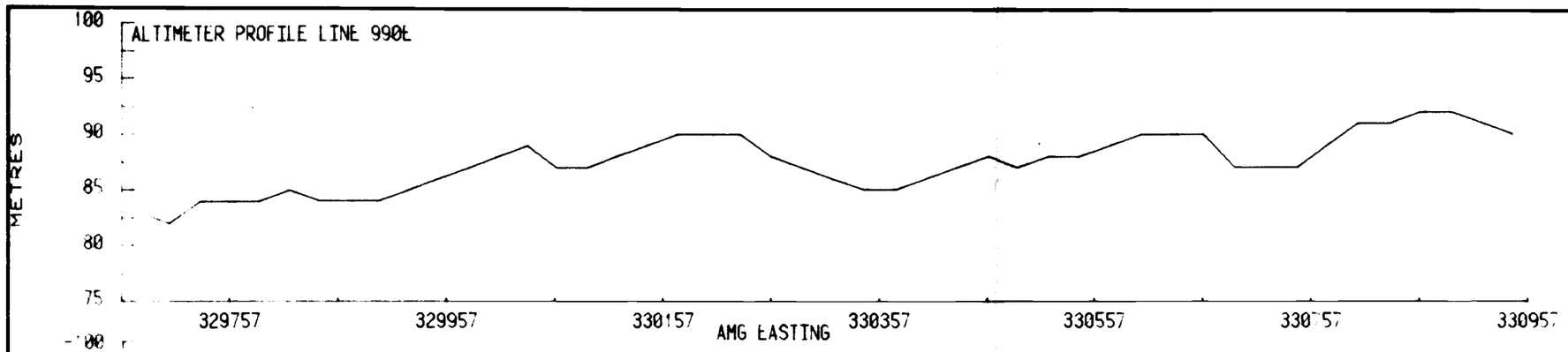
CRA EXPLORATION PTY. LIMITED

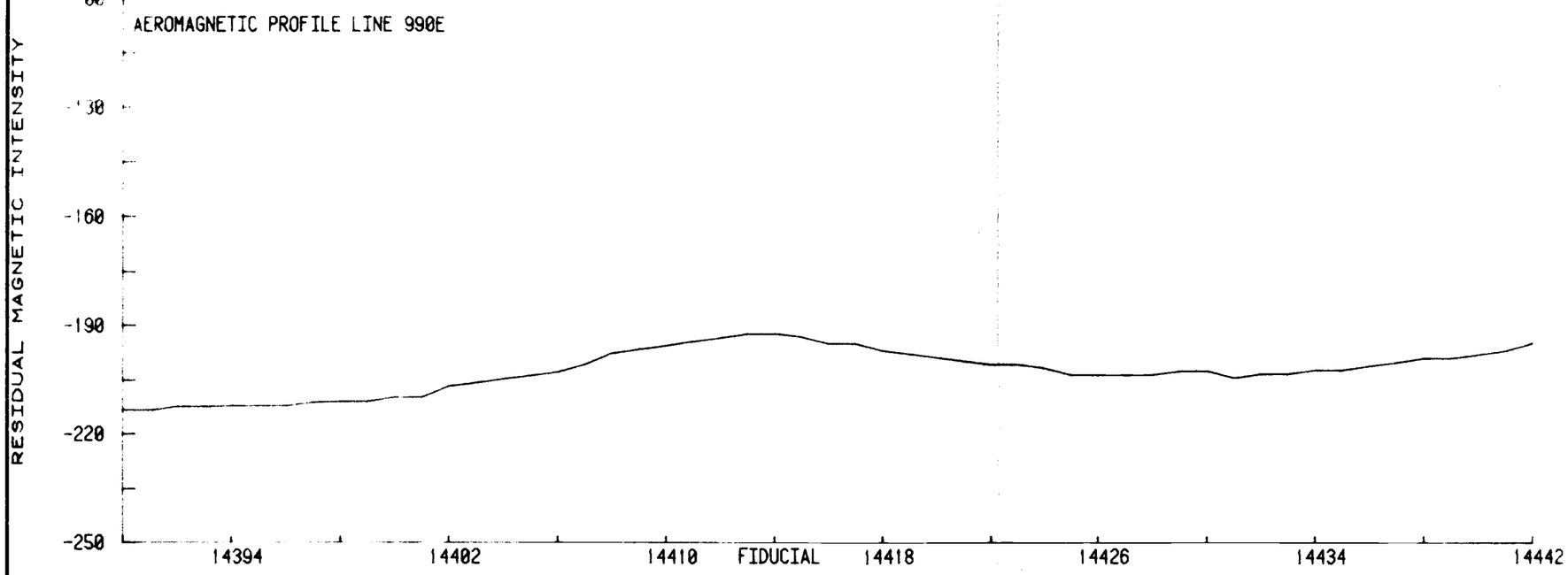
MILANG E.L. 964

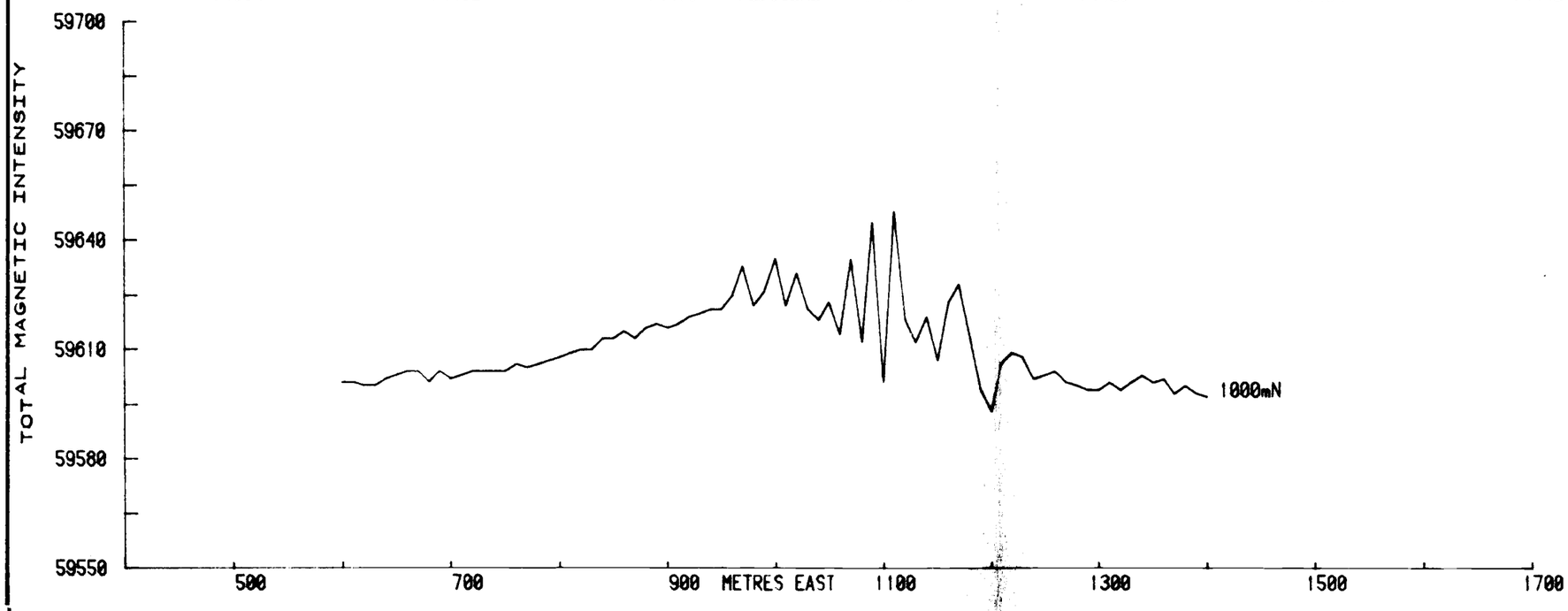
GROUND MAGNETOMETER GRID
LOCATION MAP
ANOMALY "MB 2"

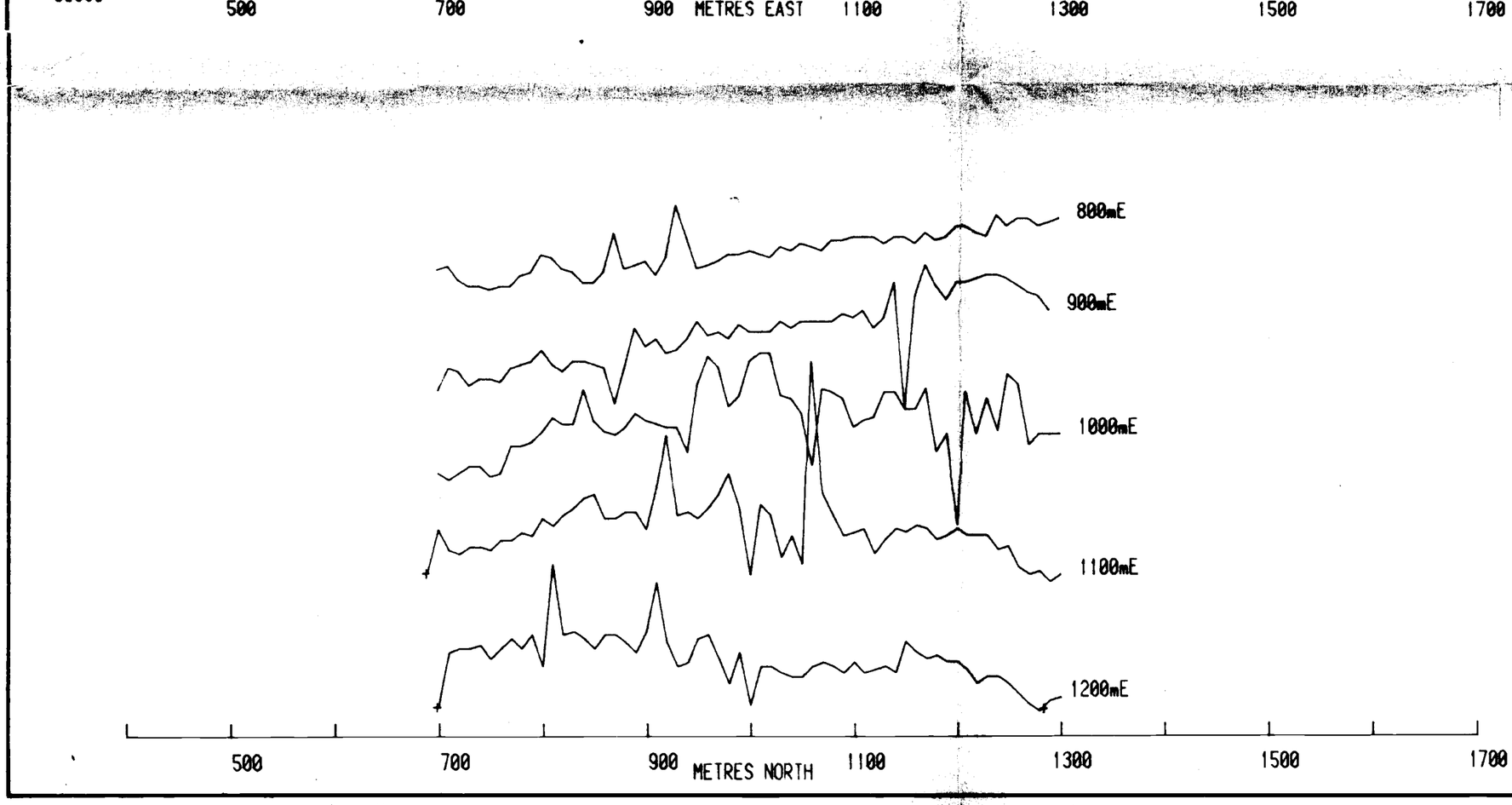
Ref: BARKER S154-13	
Author: G.J.B.	Scale: 1:5,000
Drawn: S.J.B.	Report No: 13291
Date: Feb. '85	Plan No: SAa 1573

6054(1)-9









AIRBORNE SURVEY : MURRAY BRIDGE
1:25,000 SHEET : MONARTO 2
LOCATION : PLAN SAa 1573

LINE ORIENTATION : 2,92 DEGREES AMG
STATION SPACING : 10 METRES
LINE SPACING : 100 METRES
MAGNETOMETER : SCINTREX MP-2
SENSITIVITY : +/- 1.0 nT
SURVEY DATE : MARCH 1982
FILTER : 50 nT SPIKE

VERTICAL SCALE : 15 nT/CM

+ : FENCES, ETC.

CRA EXPLORATION PTY LIMITED

MILANG E.L.964

PROFILES OF AIRBORNE AND GROUND MAGNETICS

ANOMALY "MB2"

REF. BARKER SI 54-13	
SCALE 1:5000	
AUTHOR G.J.B.	REPORT 13291
DATE April '85	PLAN No SAa 1635

6054(1)-10

ALTIMETER PROFILE LINE 560E

METRES

100
95
90
85
80
75

334449 334649 334849 335049 335249 335449 335649

AMG EASTING

AEROMAGNETIC PROFILE LINE 560E

RESIDUAL MAGNETIC INTENSITY

0
-80
-160
-240
-320
-400

14109 14117 14125 FIDUCIAL 14133 14141 14149 14157

TOTAL MAGNETIC INTENSITY

60000
59920
59840
59760
59680
59600

500 700 900 1100 1300 1500 1700

METRES EAST

1000mN

700mE
800mE
900mE
950mE
1000mE
1100mE
1200mE

500 700 900 1100 1300 1500 1700

METRES NORTH

AIRBORNE SURVEY : MURRAY BRIDGE
1:25,000 SHEET : MONARTO 2; ALEXANDRINA 1
LOCATION : PLAN SAa 1675

LINE ORIENTATION : 0,90 DEGREES AMG
STATION SPACING : 10 METRES
LINE SPACING : 50,100 METRES
MAGNETOMETERS : SCINTREX MP-2; GEM GSM-8
SENSITIVITY : +/- 1.0 nT
SURVEY DATE : MARCH; MAY 1982
FILTER : 50 nT SPIKE

VERTICAL SCALE : 40 nT/CM

+ : FENCES, ETC.

CRA EXPLORATION PTY LIMITED

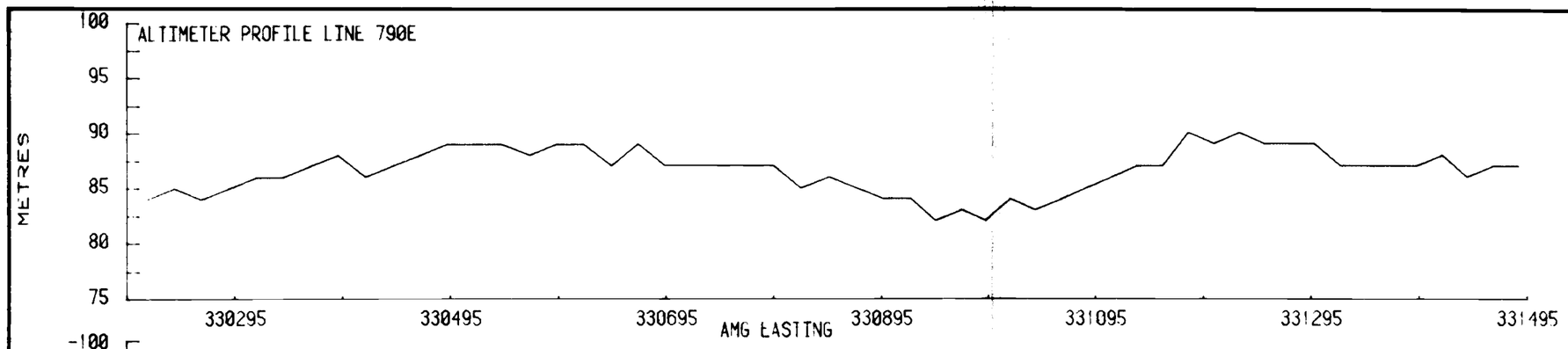
MILANG E.L. 964

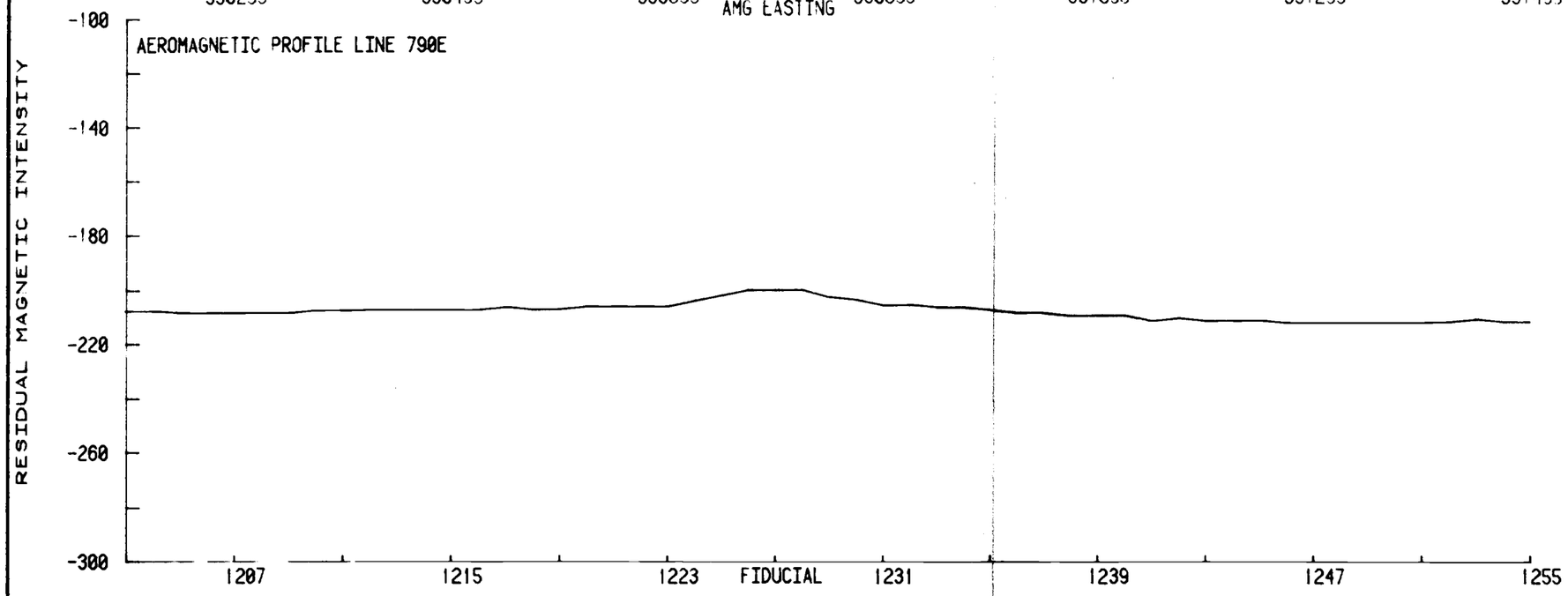
PROFILES OF AIRBORNE AND GROUND MAGNETICS

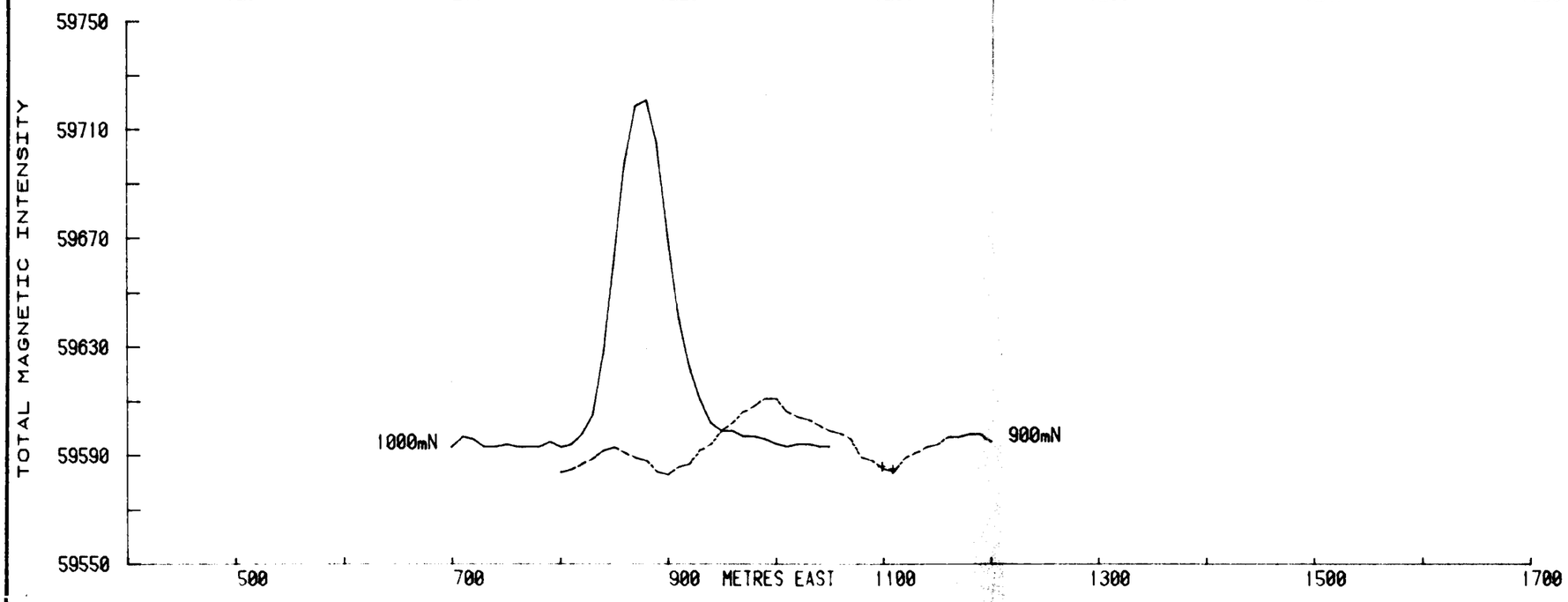
ANOMALY "MB4"

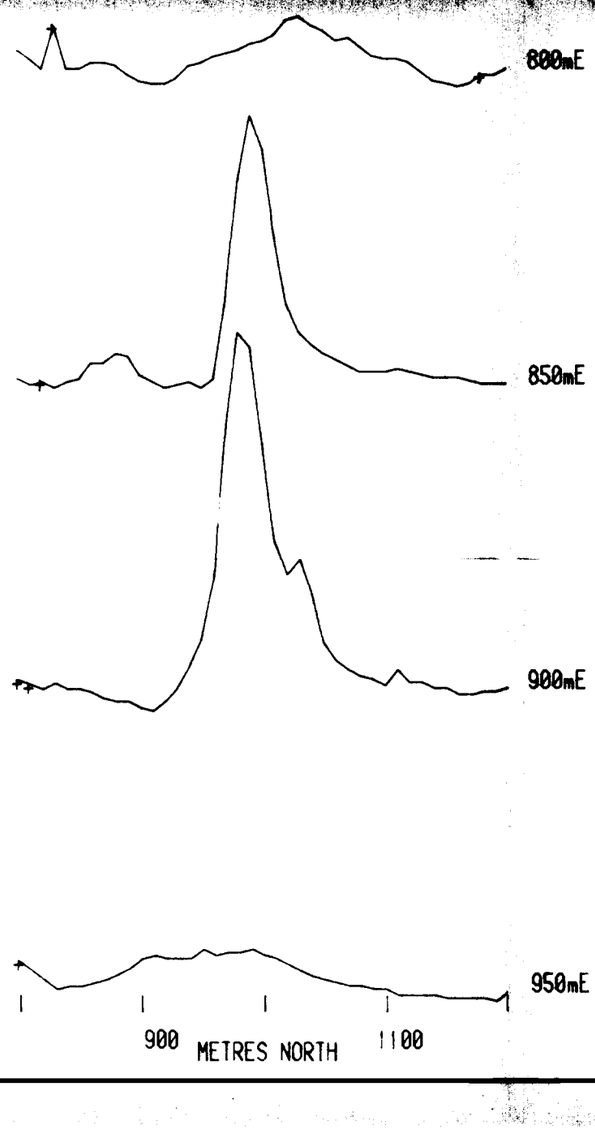
REF. BARKER SI 54-13	
SCALE 1:5000	
AUTHOR G.J.B.	REPORT 13291
DATE April '85	PLAN NoSAa 1636

6054(1)-11









AIRBORNE SURVEY : MURRAY BRIDGE
1:25,000 SHEET : MONARTO 2
LOCATION : PLAN SAa 1680

LINE ORIENTATION : 359,89 DEGREES AMG
STATION SPACING : 10 METRES
LINE SPACING : 50 METRES
MAGNETOMETER : GEM GSM-8
SENSITIVITY : +/- 1.0 nT
SURVEY DATE : MAY 1982
FILTER : 50 nT SPIKE

VERTICAL SCALE : 20 nT/CM

\+ : FENCES,ETC.

CRA EXPLORATION PTY LIMITED

MILANG E.L.964

PROFILES OF AIRBORNE AND GROUND MAGNETICS

ANOMALY "MB15"

REF. BARKER SI 54-13

SCALE 1:5000

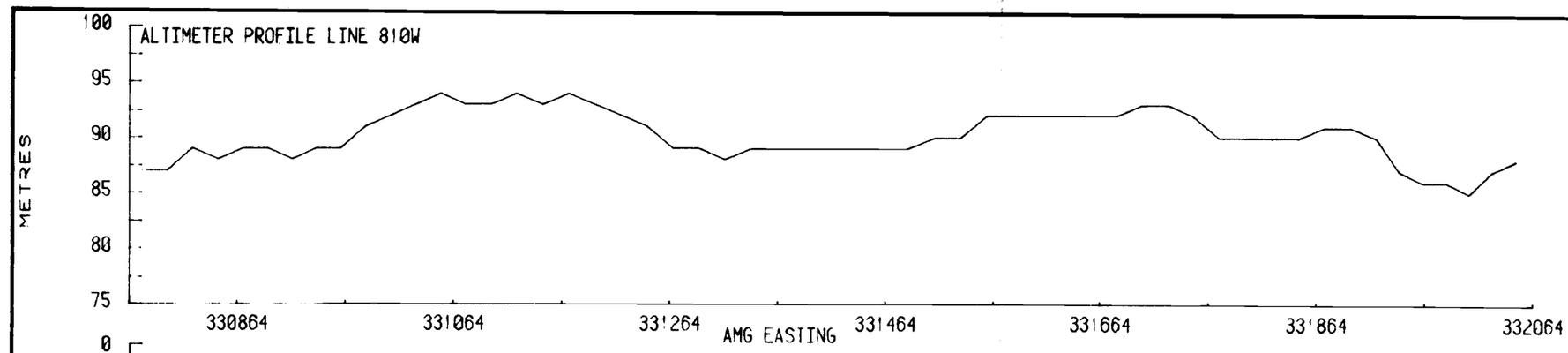
AUTHORG.J.B.

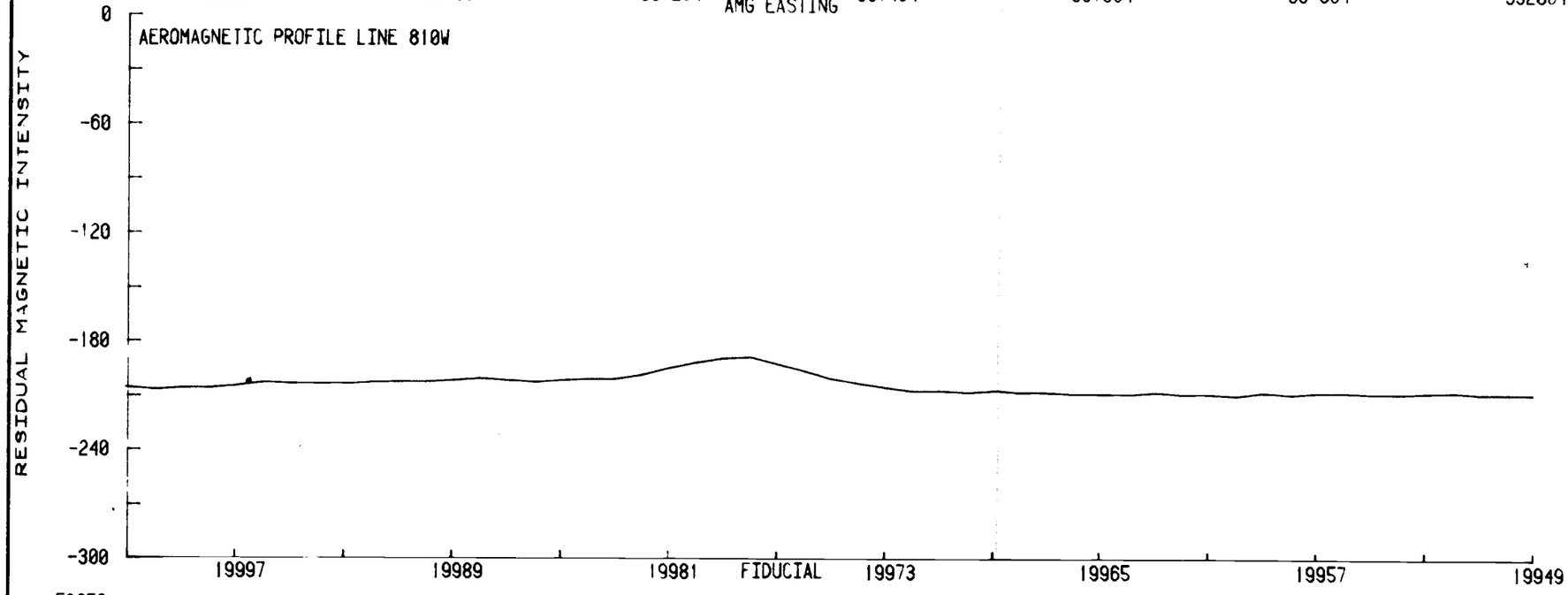
DATE 5/85

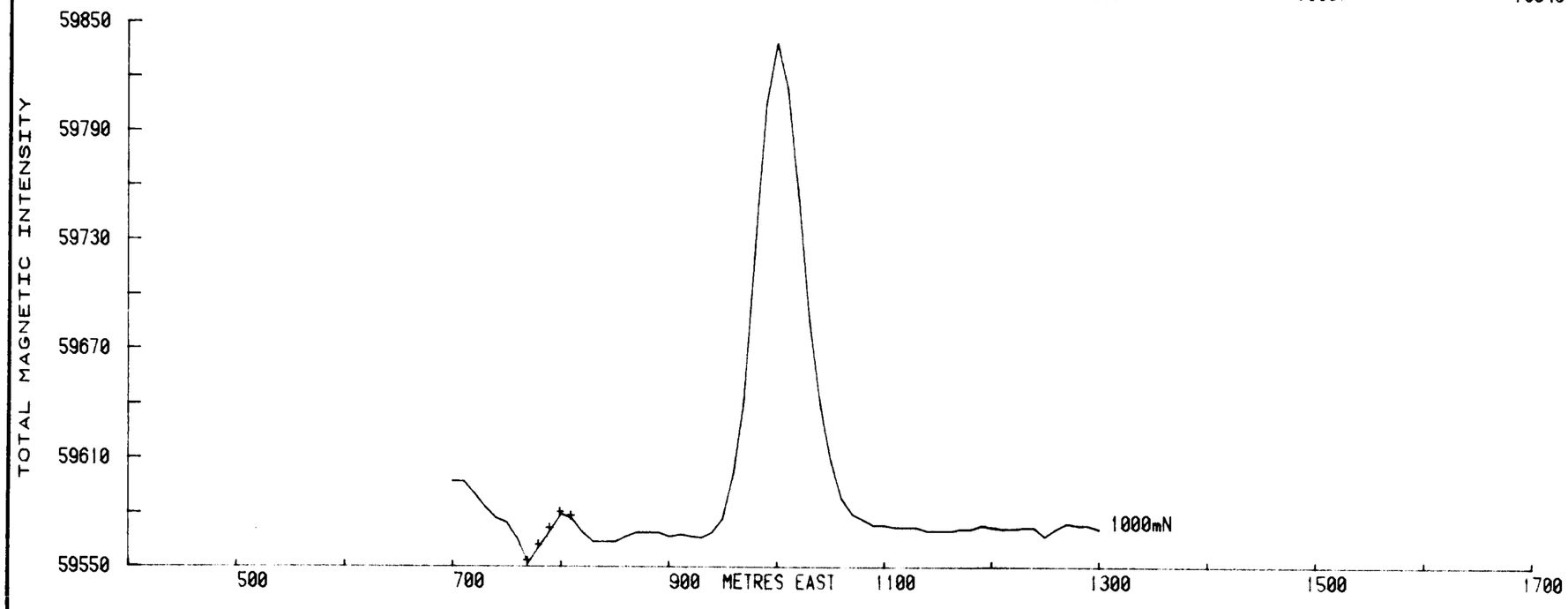
REPORT 13291

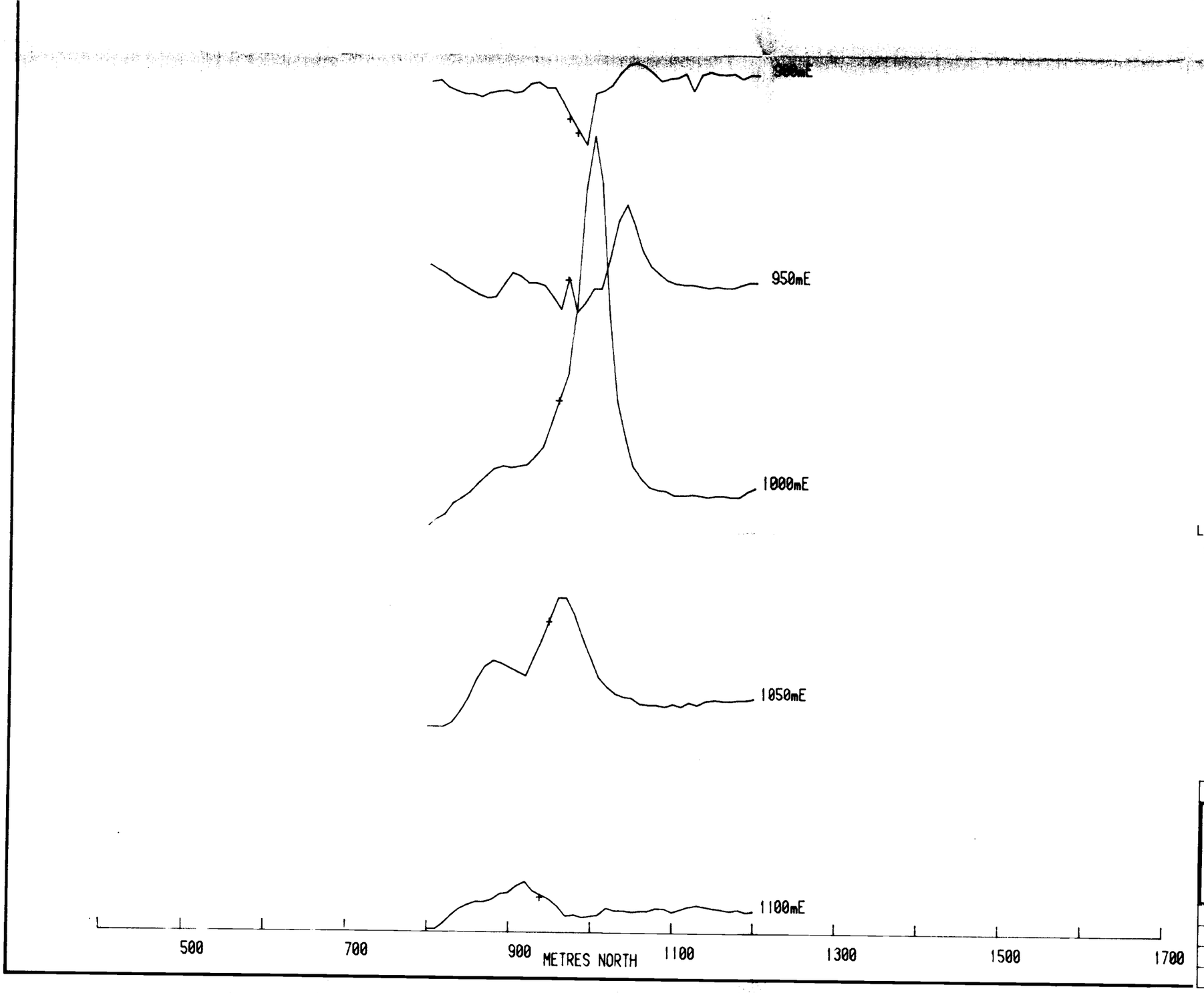
PLAN NoSAa 1645

6054(1)-12









AIRBORNE SURVEY : MURRAY BRIDGE
1:25,000 SHEET : MONARTO 2
LOCATION : PLAN SAa 1681

LINE ORIENTATION : 0,90 DEGREES AMG
STATION SPACING : 10 METRES
LINE SPACING : 50 METRES
MAGNETOMETER : GEM GSM-8
SENSITIVITY : +/- 1.0 nT
SURVEY DATE : MAY 1982
FILTER : 50 nT SPIKE

VERTICAL SCALE : 30 nT/CM

+ : FENCES, ETC.

CRA EXPLORATION PTY LIMITED

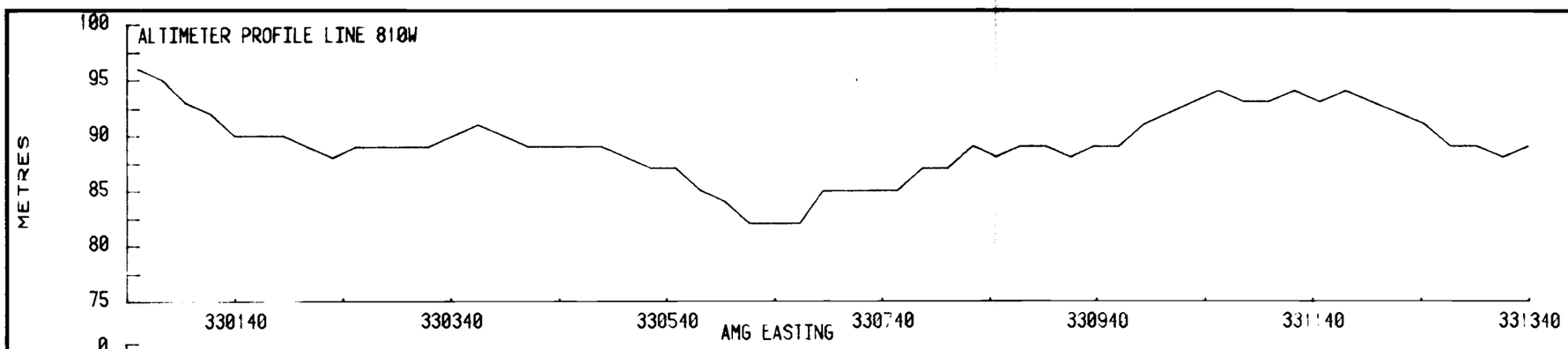
MILANG E.L.964

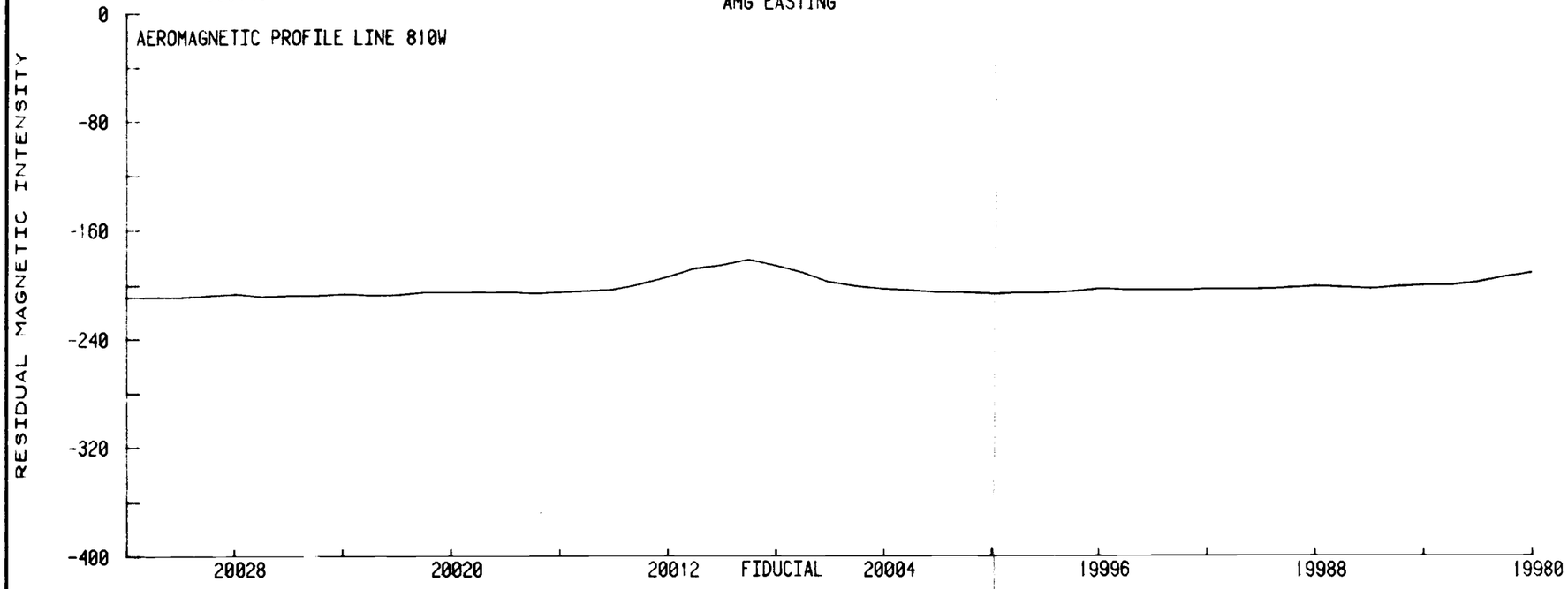
PROFILES OF AIRBORNE AND GROUND MAGNETICS

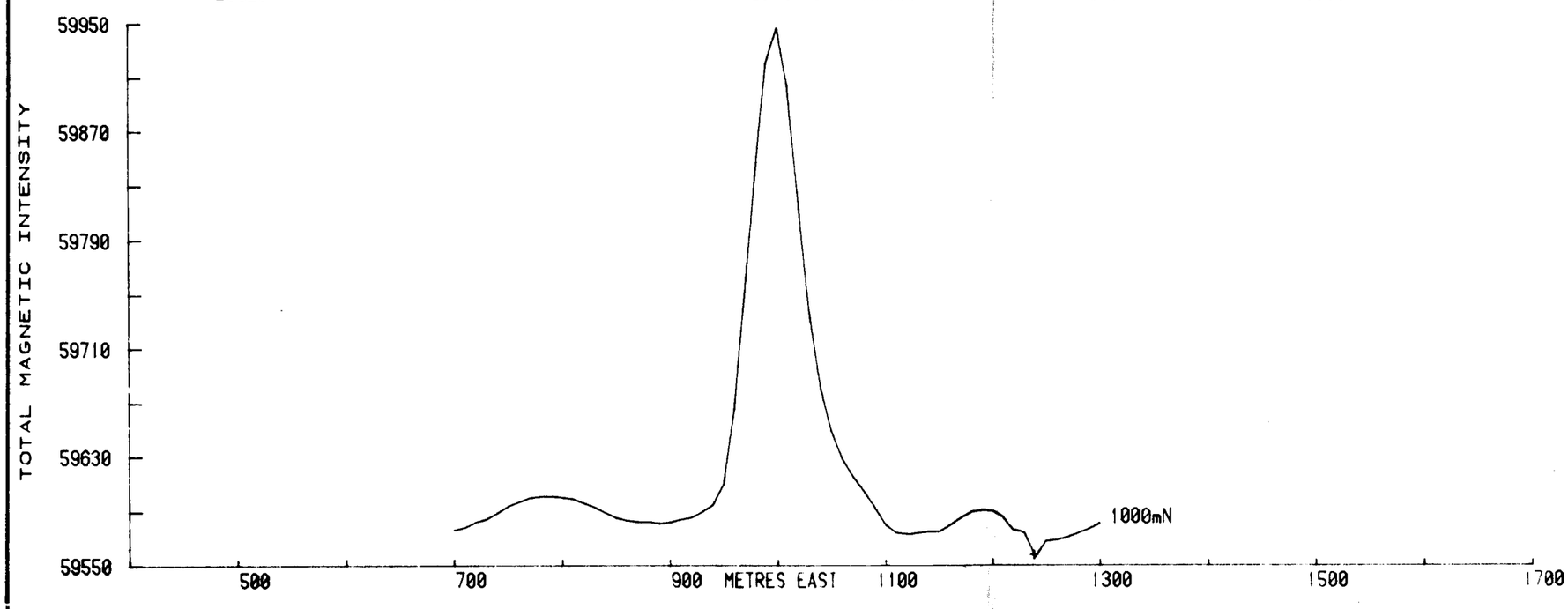
ANOMALY "MB16"

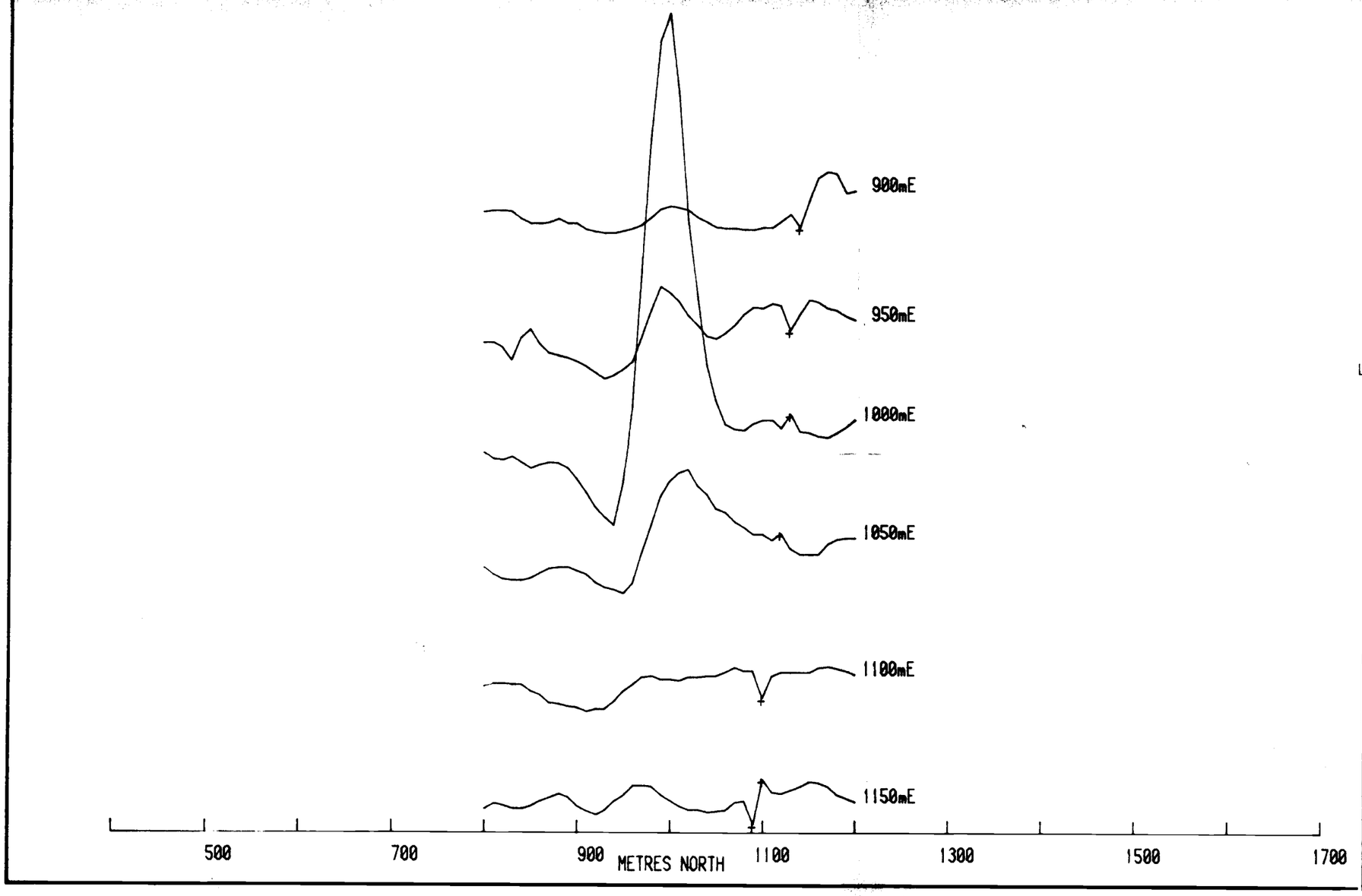
REF. BARKER SI 54-13	
SCALE 1:5000	
AUTHOR G.J.B.	REPORT 13291
DATE Feb. '85	PLAN No SAa 1646

6054(1)-13









AIRBORNE SURVEY : MURRAY BRIDGE
1:25,000 SHEET : MONARTO 2
LOCATION : PLAN SAa 1682

LINE ORIENTATION : 0,90 DEGREES AMG
STATION SPACING : 10 METRES
LINE SPACING : 50 METRES
MAGNETOMETER : GEM GSM-8
SENSITIVITY : +/- 1.0 nT
SURVEY DATE : MAY 1982
FILTER : 50 nT SPIKE

VERTICAL SCALE : 40 nT/CM

\+ : FENCES, ETC.

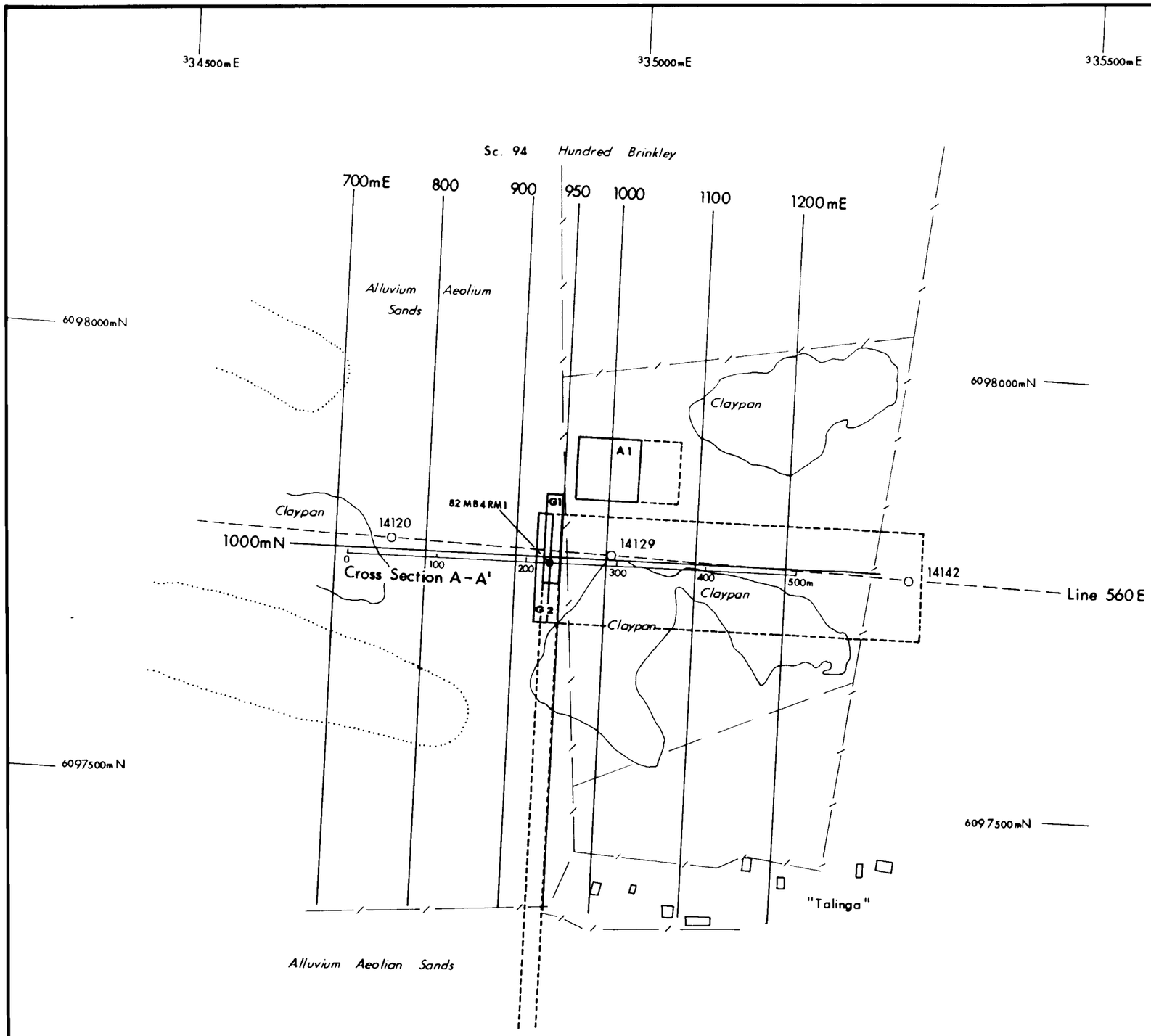
CRA EXPLORATION PTY LIMITED

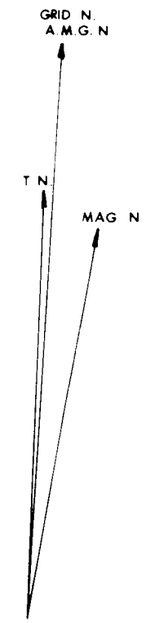
MILANG E.L. 964

PROFILES OF AIRBORNE AND GROUND MAGNETICS

ANOMALY "MB17"

REF. BARKER SI 54-13	
SCALE 1:5000	
AUTHOR G.J.B.	REPORT 13291
DATE Feb. '85	PLAN NoSAa 1647





LEGEND

- Ground magnetometer Traverse
- Fence
- ..... Sand dunes
- 14129 / O Airborne survey flight line and fiducial

Ground magnetometer grid co-ords. of 82MB4RM1
990 mN, 938mE

Refer Plan No SAa1925 for interp. legend.

6054(1)-14

CRA EXPLORATION PTY LIMITED

MILANG E.L. 964

GROUND MAGNETOMETER GRID
AND MAGNETIC INTERPRETATION
ANOMALY "MB4"

Ref. BARKER SI 54-13	
Author G. J. B.	Drawn D. D.
Scale 1:5000	Report No. 13291
Date FEB., 1985	Plan No. SAa 1675

330500mE

331000mE

331500mE

A.M.G. N

GRID N
T.N.

MAG. N

6105000mN

6105000mN

800 850 900 950mE

Alluvium Aeolian Sands

Sc. 209

Hundred Freeling

82MB15 RM1

1227

1232

Line 790E

1000 mN

0 100 200 300 400 500

G1

G2

CROSS-SECTION AA'

900mN

6104500mN

6104500mN

Alluvium Aeolian Sands

Sc. 210

Hundred Freeling

LEGEND

Ground magnetometer

Fence

Airborne survey flight line and fiducial

Ground magnetometer grid co-ords. of 82 MB 15RM1
975mN, 875mE

Refer Plan No. SAa1928 for interp. legend.

SCALE

METRES 0 100 200 300 400 500 METRES

330500mE

331000mE

331500mE

6054(1)-15

CRA EXPLORATION PTY LIMITED

MILANG E.L. 964

GROUND MAGNETOMETER GRID &
MAGNETIC INTERPRETATION
ANOMALY "MB15"

Ref. BARKER S154-13	
Author C.S.B.C	Drawn D.D.
Scale 1:5000	Report No. 13291
Date FEB., 1985	Plan No. SAa1680

331000mE

331500mE

332500mE

A.M.G. N
GRID N.

T.N.

MAG. N

Sc. 270
Hundred Monarto

6105500mN

900 950 1000 1050 1100mE

Alluvim Aeolian Sands

19988

19977

19954

Line 810 W

1000mN

0 100 200 G1 300 400 500

G2

CROSS-SECTION A-A'

82 MB16RM1

6105500mN

Alluvium Aeolian Sands

6105000mN

Sc. 211
Hundred Freeling

6105 000 m N

331000mE

331500mE

332000mE

LEGEND

Ground Magnetometer Traverse

Fence

19977 Airborne survey flight line and fiducial

Ground magnetometer grid coordinates of 82 MB16 RM1: 985mN, 998mE.

Refer Plan No. SAa1929 for interp. Legend

6054(1)-16

CRA EXPLORATION PTY. LIMITED

MILANG E.L. 964

GROUND MAGNETOMETER GRID
& MAGNETIC INTERPRETATION
ANOMALY "MB16"

Ref. BARKER SI 54-13	
Auther C.S.B.C	Drawn D.D.
Scale 1:5000	Report No. 13291
Date FEB., 1985	Plan No SAa 1681

330000mE

330500mE

331000mE

A.M.G.N
GRID N
T N
MAG.N

Alluvium Aeolian sands

6105500mN

Sc. 272
Hundred Monarto

900 950 1000 1050 1100 1150mE

20022

20008

19988

Line 810W

1000 mN

0 100 200 G2 G1 300 400 500

CROSS-SECTION A-A'

82MB17RM1

6105500mN

6105000mN

6105000mN

Alluvium Aeolian Sands

Sc. 209
Hundred Freeling

LEGEND

Ground Magnetometer Traverse

Fence

20008 Airborne survey flight line and fiducial

Ground magnetometer grid co-ordinates for 82 MB 17 RM1 : 980mN, 995mE

Refer Plan No. SAa 1930 for interp. Legend

SCALE

METRES 0 100 200 300 400 500 METRES

330000mE

330500mE

331000mE

6054(1)-17

CRA EXPLORATION PTY. LIMITED

MILANG E.L. 964

GROUND MAGNETOMETER GRID
& MAGNETIC INTERPRETATION
ANOMALY "MB17"

Ref. BARKER S154-13	
Author C.S.B.C.	Drawn D.D
Scale 1:5000	Report No. 13291
Date FEB., 1985	Plan No. SAa 1682

310500mE

311000mE

311500mE

GRID N
A.M.G. N

T.N.

MAG. N

Sc. 153
Hundred Alexandrina

6080500mN

900mE

1000mE

1100mE

Alluvium

5704 0 100 200 G1 300 5711 400 500m 5727 — Line 108·1E

Cross Section A-A'

1000mN

82N1RM1

LEGEND

——— Ground Magnetometer Traverse

---O--- 5711 Airborne Survey flight line and fiducial

Ground magnetometer grid co-ords. of 82 N1 RM1
1000 m N, 1000 m E.

Refer Plan No SAa 1923 for interp. legend.

Alluvium

6080000mN

SCALE 1:5000

METRES 100 0 100 200 300 400 500 METRES

6054(1)-18

311500mE

CRA EXPLORATION PTY. LIMITED

MILANG E.L. 964
GROUND MAGNETOMETER GRID
AND MAGNETIC INTERPRETATION
ANOMALY "N1"

Ref. BARKER SI 54-13	
Scale 1:5000	Drawn D.D.
Author G.J.B	Report No. 13291
Date FEB., 1985	Plan No. SAa 1826

310500mE

311000mE

297500mE

298000mE

298500mE

6079500mN

6079000mN

600mE

800mE

1000mE

1200mE

Sc. 264

Hundred Nangkita

Alluvium

Alluvium

4515

4524

4540

1000mN

Line 110·1E

GRID N.
A.M.G. N

T.N.

MAG N

SCALE 1:5000

METRES 100 0 100 200 300 400 500 METRES

CURRENCY CREEK 5Km

LEGEND

Ground Magnetometer Traverse

4524 Airborne Survey Flight line and Fiducial

Fence

Road

6054(1)-19

CRA EXPLORATION PTY. LIMITED

MILANG E.L. 964

GROUND MAGNETOMETER GRID

LOCATION MAP

ANOMALY "N2"

Ref.	BARKER S154-13		
Scale	1:5000	Drawn	D.D.
Author	G.J.B	Report No.	13291
Date	FEB., 1985	Plan No.	SAa 1827

296000mE

296500mE

297000mE

GRID N.
A.M.G. N.

T. N.

MAG. N

Sc. 2020
Hundred Nangtika

850mE

1100mE

Line 116·1 E

6076000mN

1608

1610

1000mN

6076000mN

Sc. 2010
Hundred Nangkita

6075500mN

Alluvium, scattered outcrop
of Kanmantoo Group Rocks

LEGEND

Ground Magnetometer Traverse

1608 Aiborne Survey Flight line and Fiducial

Fence

6054(1)-20

6075500mN

SCALE 1:5000

METRES 100 0 100 200 300 400 500 METRES

296000mE

296500mE

297000mE

CRA EXPLORATION PTY. LIMITED

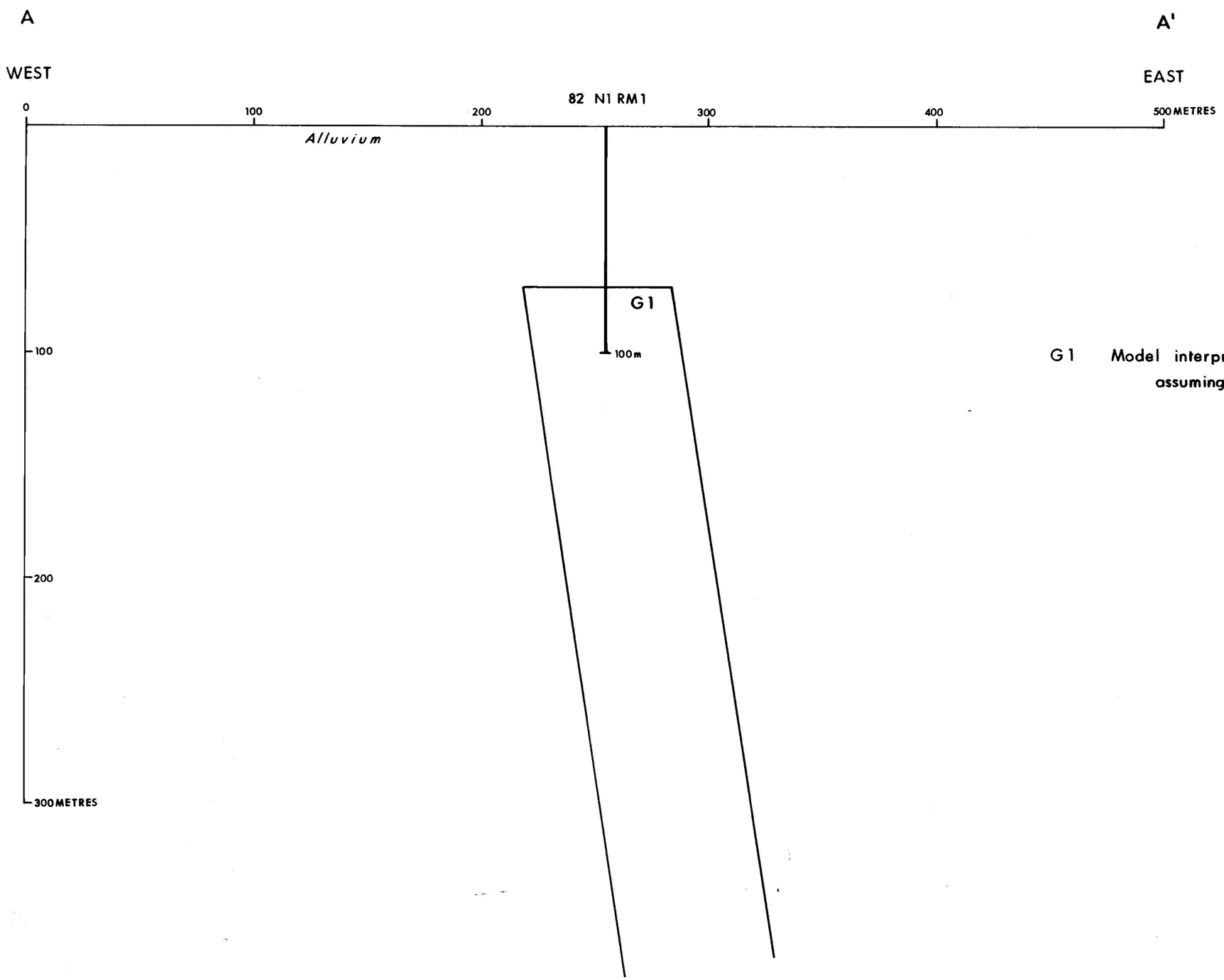
MILANG E.L. 964

GROUND MAGNETOMETER GRID

LOCATION MAP

ANOMALY "N3"

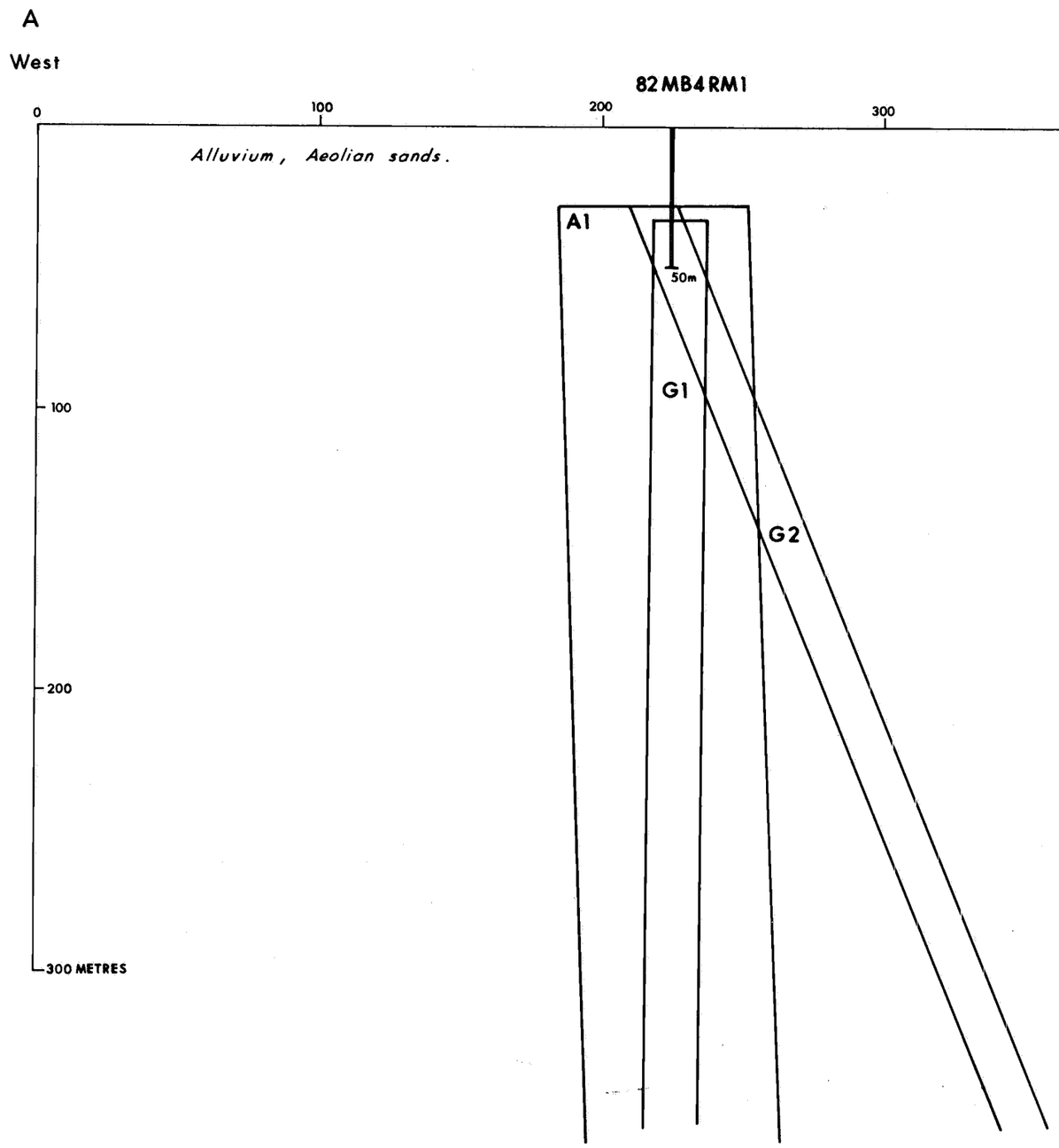
Ref. BARKER S154-13	
Scale 1:5000	Drawn D. D.
Author G. J. B.	Report No. 13291
Date FEB., 1985	Plan No. SAg 1828



G1 Model interpreted from ground magnetics data assuming dip in E–W plane.

6054(11)-15

CRA EXPLORATION PTY LIMITED		
MILANG E.L. 964 MAGNETIC INTERPRETATION & PROPOSED DRILL SECTION 82 N1 RM1 ANOMALY "N1"		
REF.	BARKER SI 54-13	
SCALE	1 : 2000	
AUTHOR	G.J.B.	REPORT No. 13291
DATE	FEB., 1985	PLAN No SAa 1923



G1 Model interpreted from ground magnetics data assuming dip in N-S plane.

G2 As for G1, assuming dip in E-W plane.

A1 Model interpreted from airborne data assuming dip in E-W plane, and projected South and West for superimposition on G2

6054(11)-16

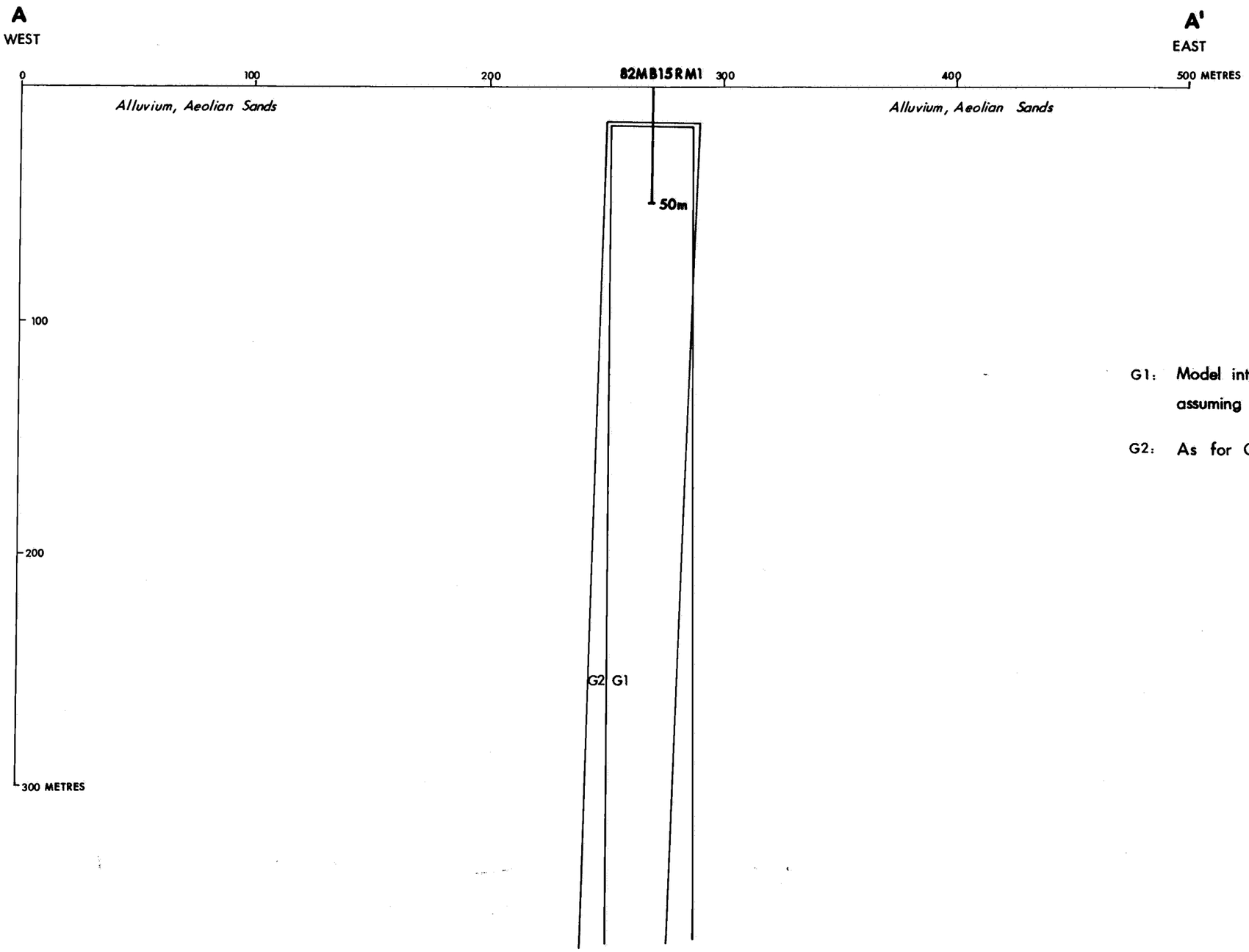
CRA EXPLORATION PTY LIMITED

MILANG E.L. 964

MAGNETIC INTERPRETATION & PROPOSED DRILL SECTION 82 MB4 RM 1

ANOMALY "MB4"

REF.	BARKER SI 54-13	
SCALE	1 : 2000	
AUTHOR	G. J. B.	REPORT No. 13291
DATE	FEB., 1985	PLAN No SAa 1925



G1: Model interpreted from ground magnetics data assuming dip in N-S plane.

G2: As for G1, assuming dip in E-W plane.

6054(11)-17

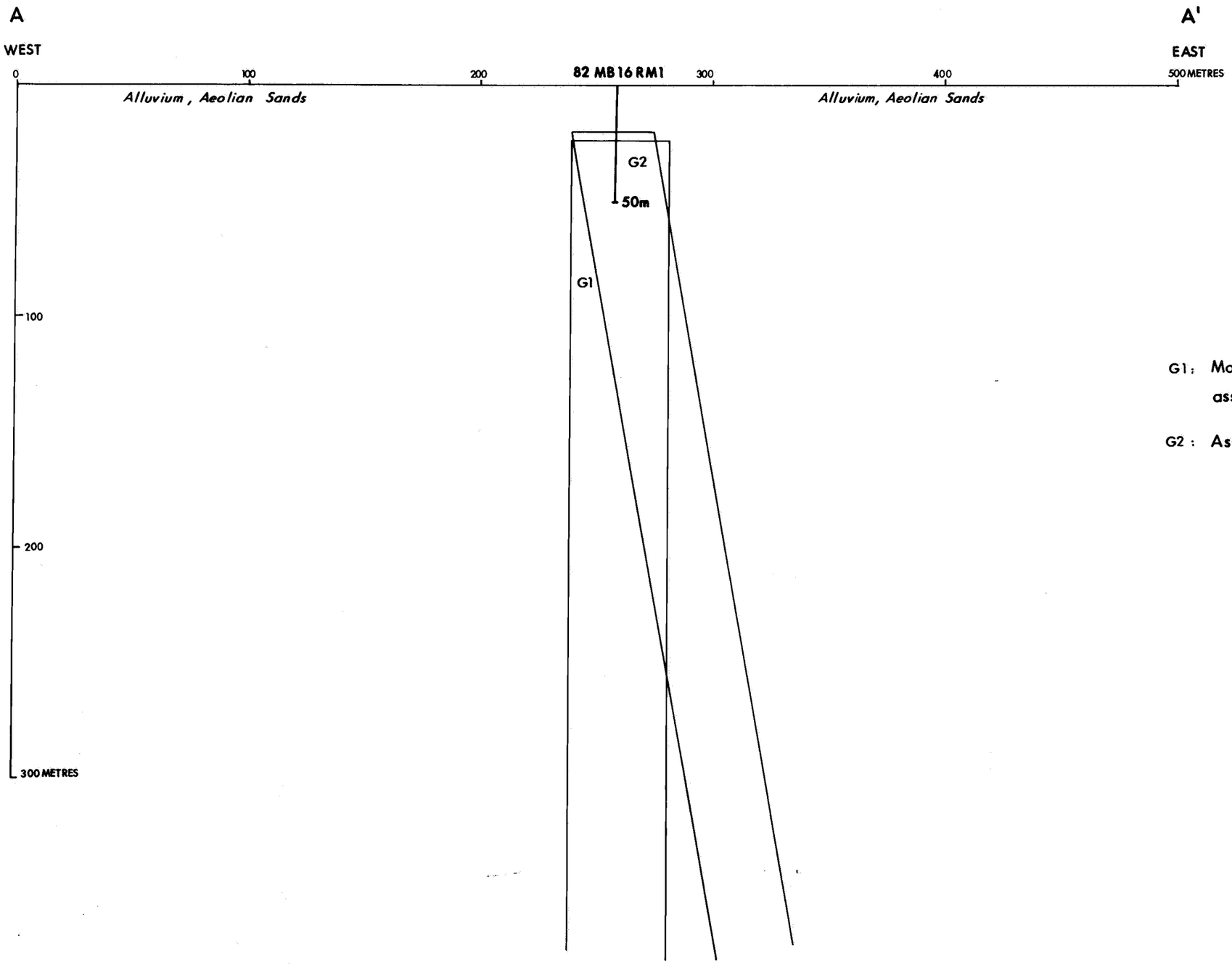
CRA EXPLORATION PTY. LIMITED

MILANG E.L. 964

MAGNETIC INTERPRETATION & PROPOSED DRILL SECTION 82 MB 15 RM1

ANOMALY "MB15"

Ref. BARKER SI 54 - 13	
Scale 1: 2000	Drawn D. D.
Author G. J. B	Report No. 13291
Date FEB., 1985	Plan No. SA a 1928



G1: Model interpreted from ground magnetics data assuming dip in N-S plane.

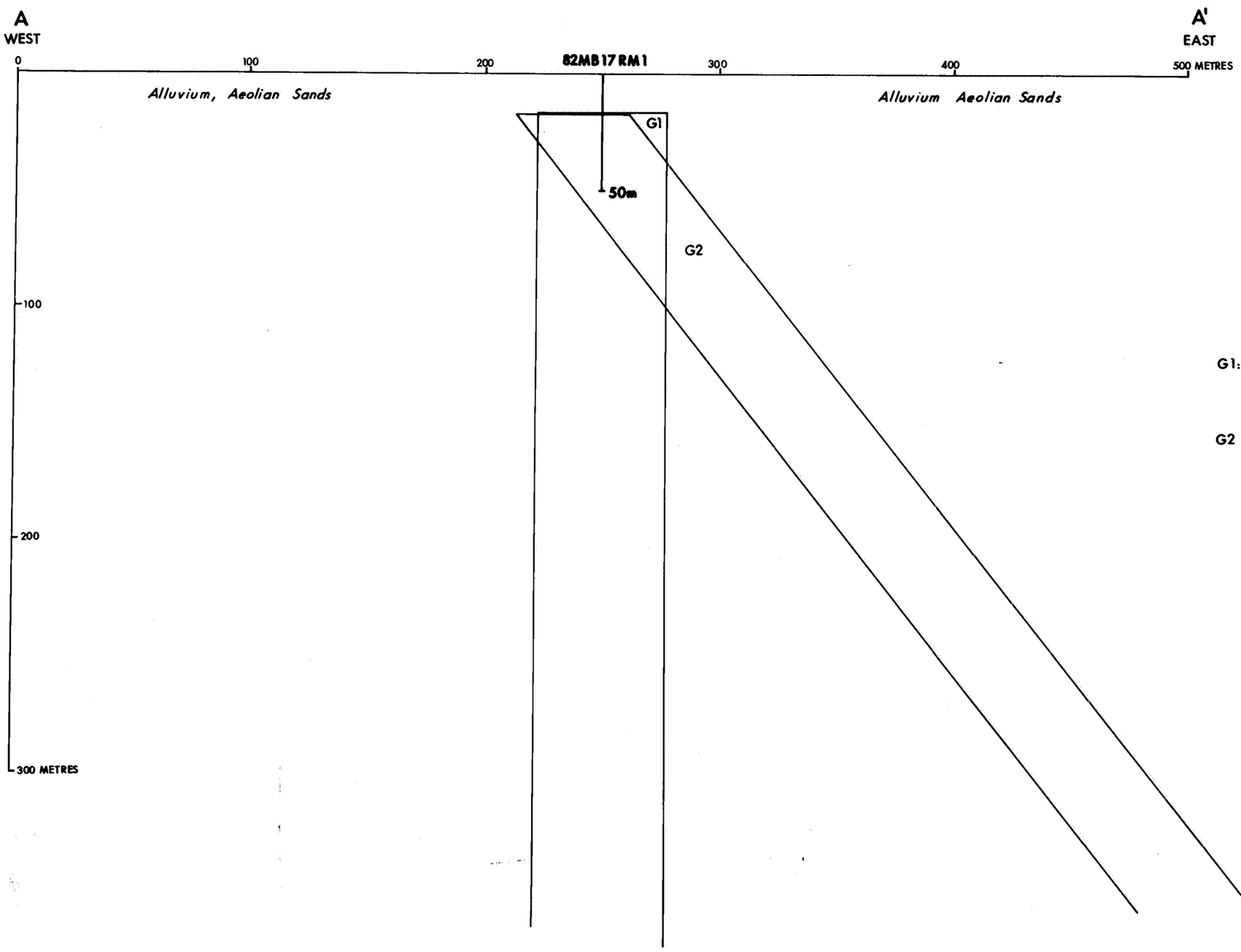
G2: As for G1, assuming dip in E-W plane.

6054(11)-18

CRA EXPLORATION PTY LIMITED

MILANG E.L.964
MAGNETIC INTERPRETATION
AND
PROPOSED DRILL SECTION 82MB16RM1
ANOMALY "MB16"

REF. BARKER SI 54-13	
SCALE 1:2000	
AUTHOR G.J.B.	REPORT No. 13291
DATE FEB., 1985	PLAN No SAa 1929



G1: Model interpreted from ground magnetics data assuming dip in N - S plane.

G2 : As for G1, assuming dip in E-W plane.

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CRA EXPLORATION PTY. LIMITED

MILANG E.L. 964

MAGNETIC INTERPRETATION & PROPOSED DRILL SECTION 82 MB17 RM1

ANOMALY "MB17"

Ref. BARKER S154-13	
Scale 1:2000	Drawn D. D.
Author G. J. B.	Report No. 13291
Date FEB., 1985	Plan No. SAa 1930

CRA EXPLORATION PTY. LIMITED

DOWNHOLE LOG 82 MB 4 RM 1

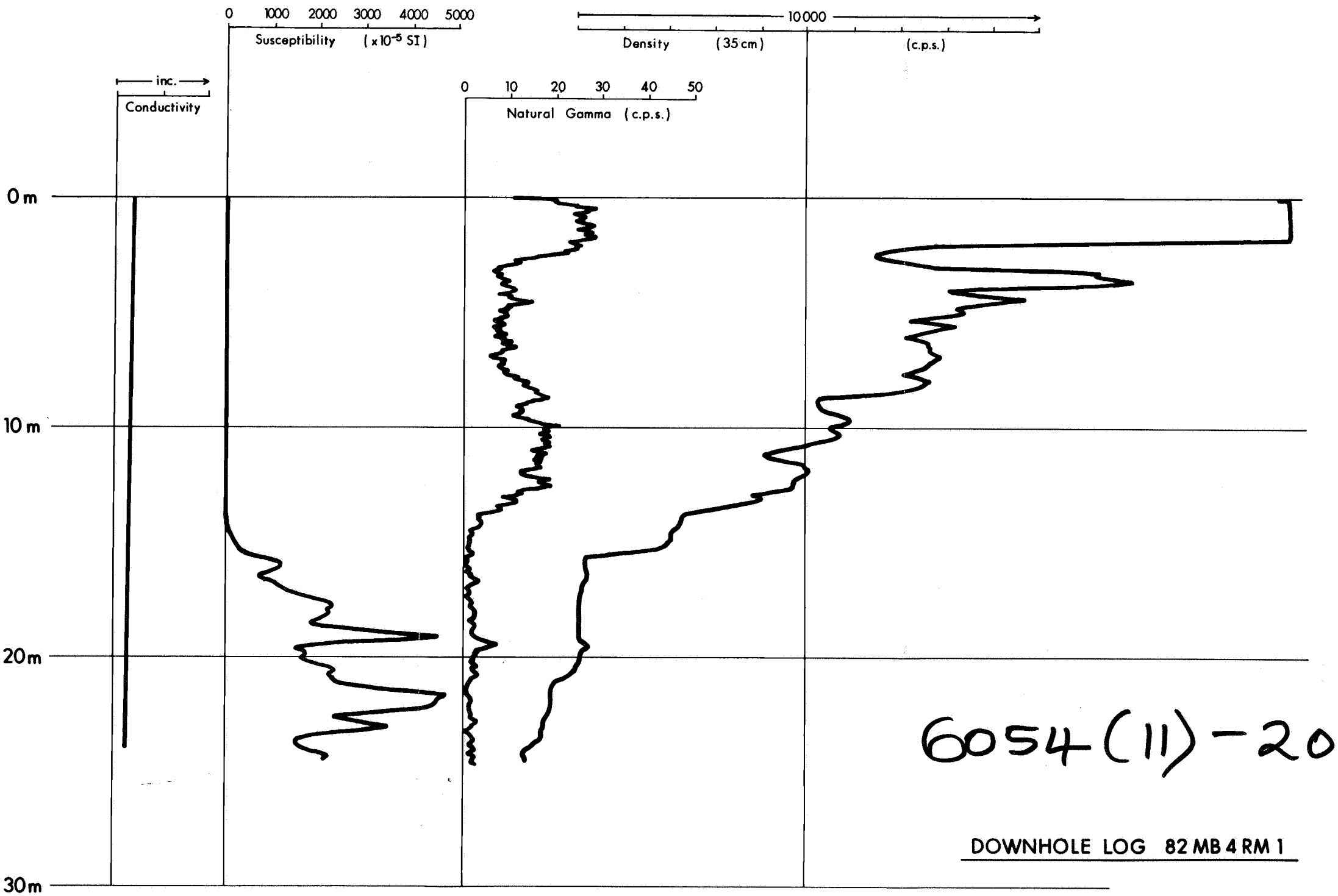
MILANG E.L.964

ANOMALY "MB 4"

AMG Coords : 6097770mN, 334920mE
Lat. 35°14'59", Long. 139°11'08"

TOTAL DEPTH : 24·5m
DEPTH LOGGED : 24m
R.L. - A.H.D. : 5 ± 1m
CASING : 4"PVC to 24·5m

DATE : 21-12-82
LOGGER : SIE T450E
RATEMETER T.C. : 2
LOGGING SPEED : 5m/min.
OPERATOR : G.J.B.



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DOWNHOLE LOG 82 MB 4 RM 1

SHEET REF. : BARKER S154-13

Report No. 13291 SAa 2020

DOWNHOLE LOG 82MB16GRM1

MILANG E.L. 964

ANOMALY "MB 16"

A.M.G. Coords : 6105260mN; 331330mE

Lat. 35° 10' 54" S; Long. 139° 08' 51"

Total depth : 50·0m

Depth logged : 41m

R.L. - A.H.D. : 126 ± 1m

Casing 4" PVC to 50·0m

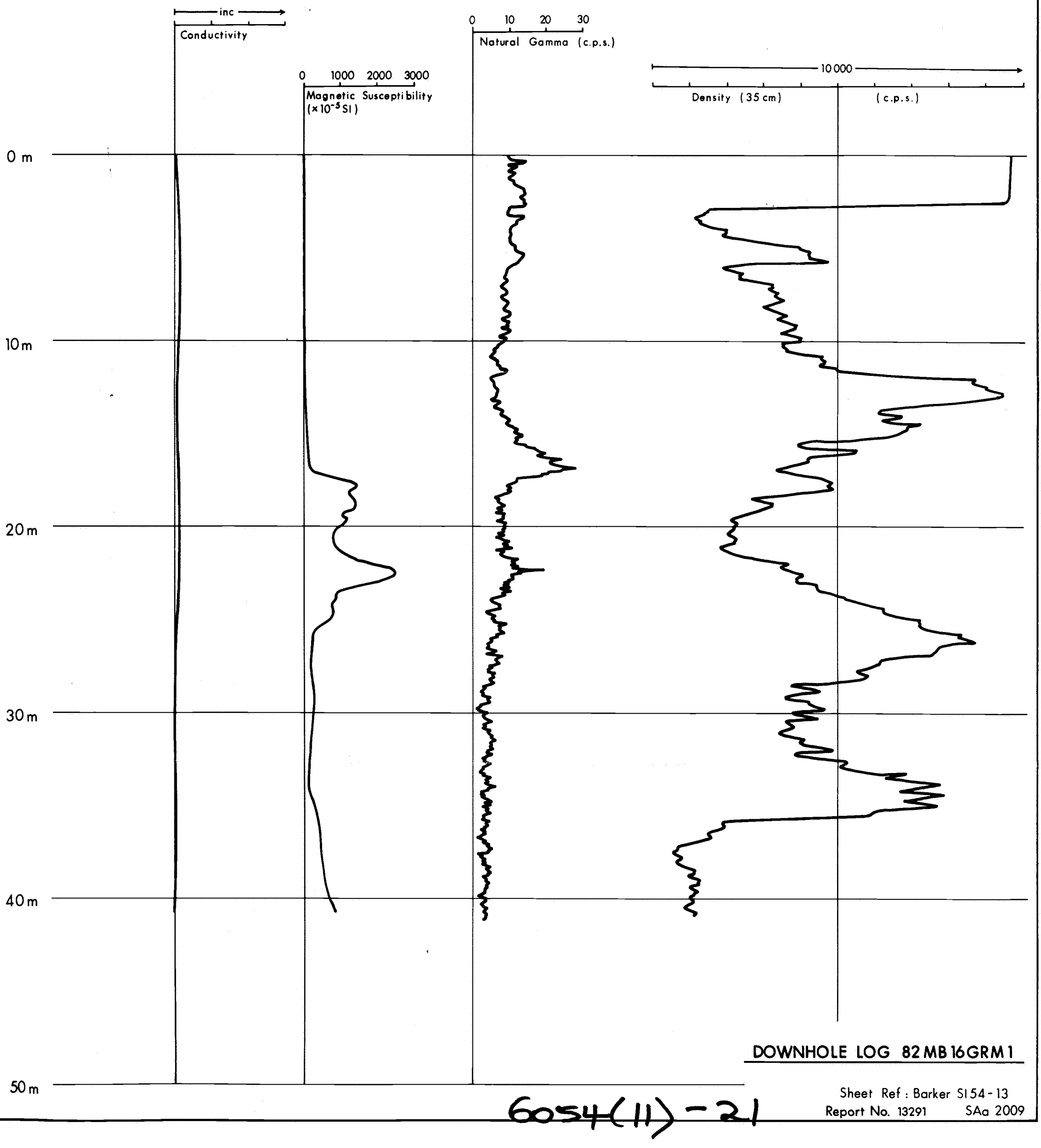
Date : 22-12-82

Logger : SIE T450E

Ratemeter T.C. : 2

Logging speed : 5m/min

Operator : G.J.B.

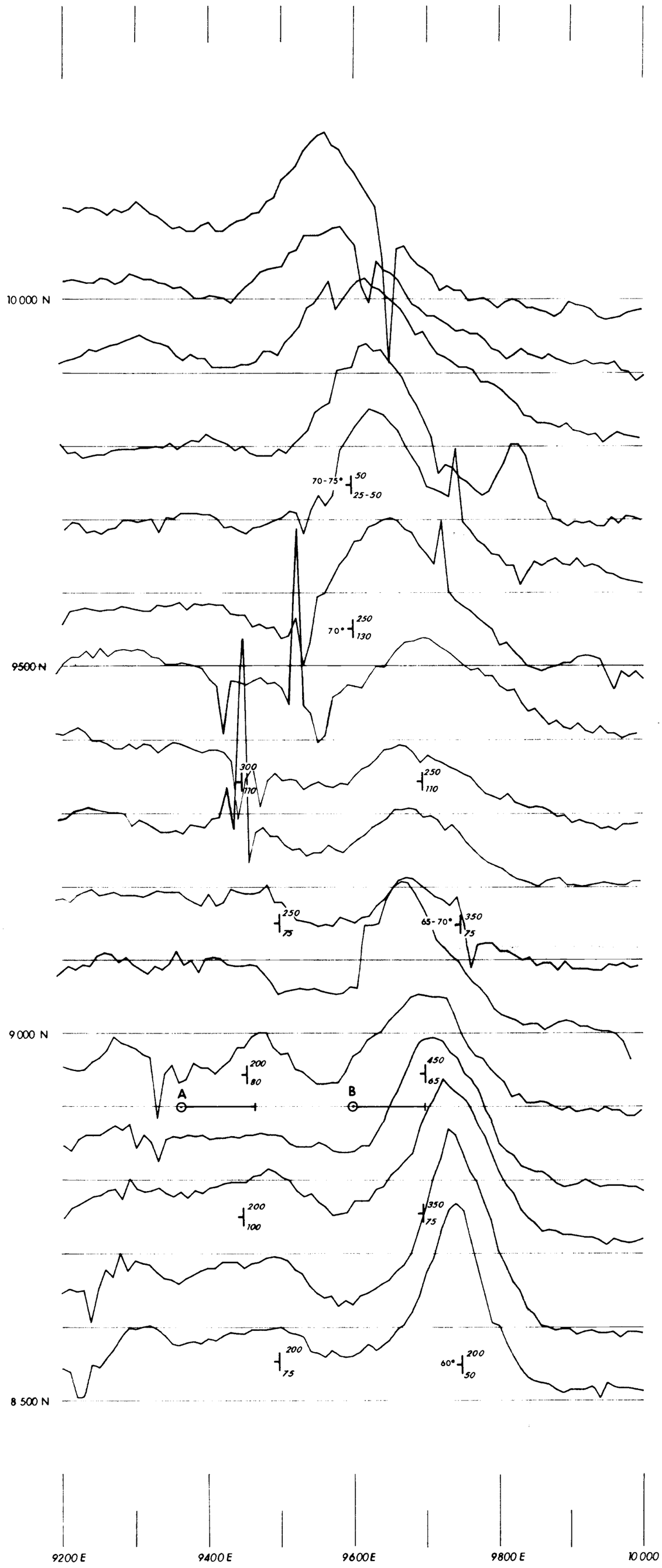


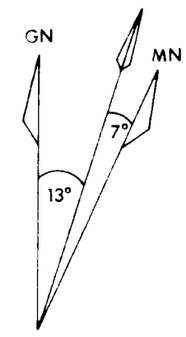
DOWNHOLE LOG 82MB16GRM1

Sheet Ref : Barker SI54-13

Report No. 13291 SAa 2009

6054(11)-21





Station interval 10m
Vertical scale: 1cm = 25 nT
Profiles plotted with a base level of 59500 nT.

0 100 200 300 400 500 metres

Proposed drill holes

Dip 70° 300/110 *Conductivity - thickness (s)*
Interpreted conductors
Depth to top (m)

6054(11)-22

CRA EXPLORATION PTY LIMITED	
MILANG, EL 964 – S. A. INMB 38 GROUND MAGNETIC PROFILES	
REF. BARKER SI54-13	
SCALE 1:5000	
AUTHOR RJLL	REPORT No. 13291
DATE FEB., 1985	PLAN No SAa 2803

8600 E 8800 E 9000 E 9200E 9400 E 9600 E

10 500 N

70° 250 / 45

70-75° 250 / 90

10 000 N

300 / 50

PD84 MI-3

75° 400 / 40-60

C

PD84 MI-4

B

70° 500 / 75

9500 N

80 / 50

60° 50 / 25-50

25-250 / 25-100

9 000 N

75° 175 / 75

PD84MI 5

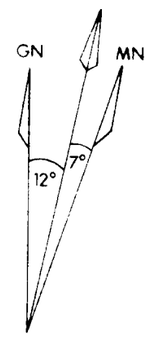
F

60-70° 80 / 25

50° 250 / 40

8 500 N

8600E 8800E 9000E 9200E 9400E 9600E



Station interval: 10m
Vertical scale : 1cm = 50 nT
Profiles plotted with a base level of 59600 nT.

0 100 200 300 400 500
metres

B Propose drill holes

Dip 70° 120 Conductivity - thickness (s)
Interpreted conductors
40 Depth to top (m)

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CRA EXPLORATION PTY LIMITED	
MILANG, EL 964 - S.A. INMB 39 GROUND MAGNETIC PROFILES	
REF. BARKER SI 54 -13	
SCALE 1:5000	
AUTHOR RJLL	REPORT 13291
DATE FEB., 1985	PLAN No SAa 2804

10 600 N

10 400 N

10 200 N

10000 N

PD84MI 3

9800 N

PD84MI4

C

9600 N

B

9400 N

9 200 N

9 000 N

F

PD84MI5

8 800 N

8 600N

LOOP 3

Farm buildings

LOOP 1

LOOP 2

8 400 N

GN

MN

12°

LEGEND

Grid lines

Fence

Gate

6101850 N (approx)
333500 E

B — Proposed drill hole

6054(11)-24

0 100 200 300 400 metres

8600 E

8800 E

9000E

9200E

9400E

9600E

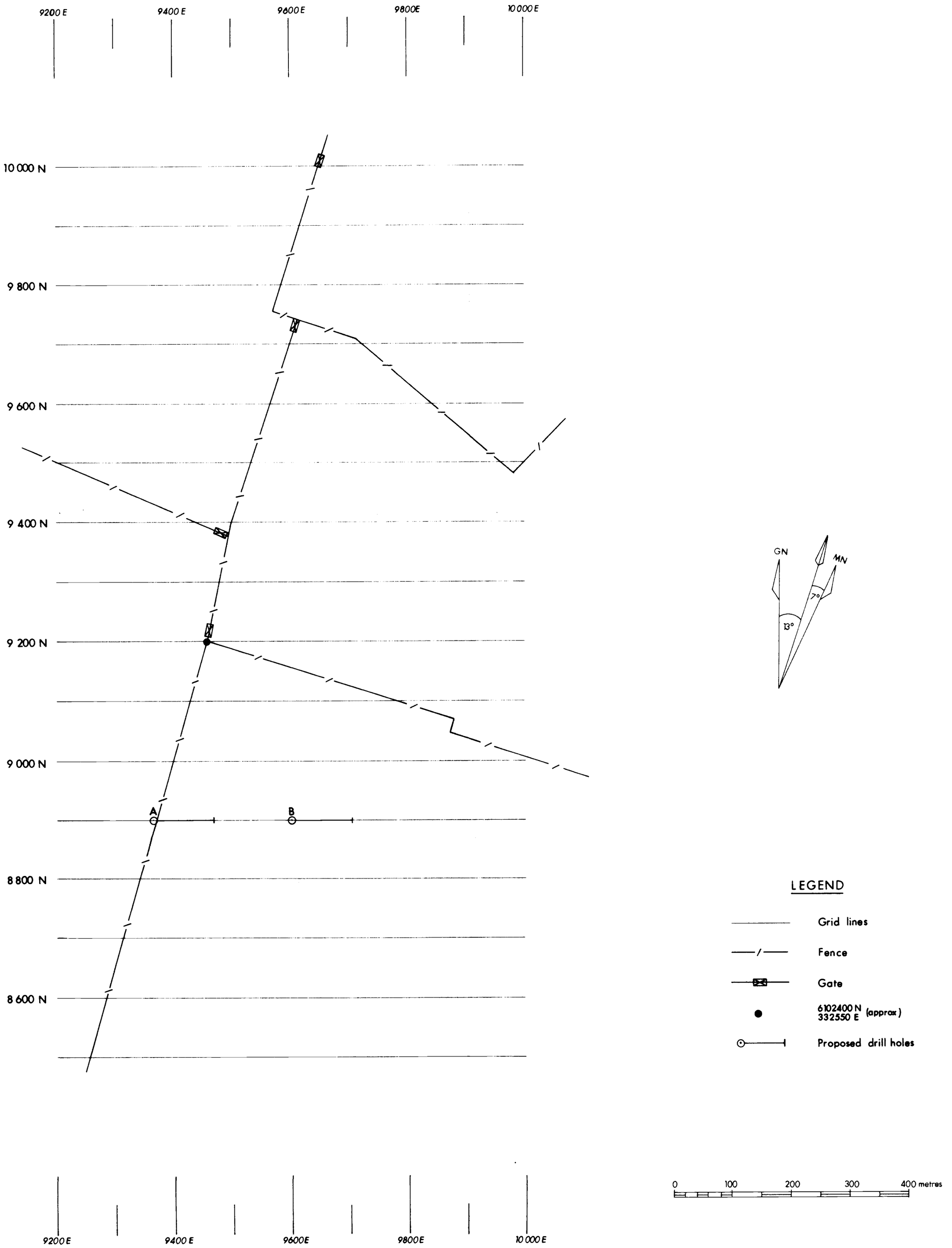
9800 E

10000 E

CRA EXPLORATION PTY LIMITED

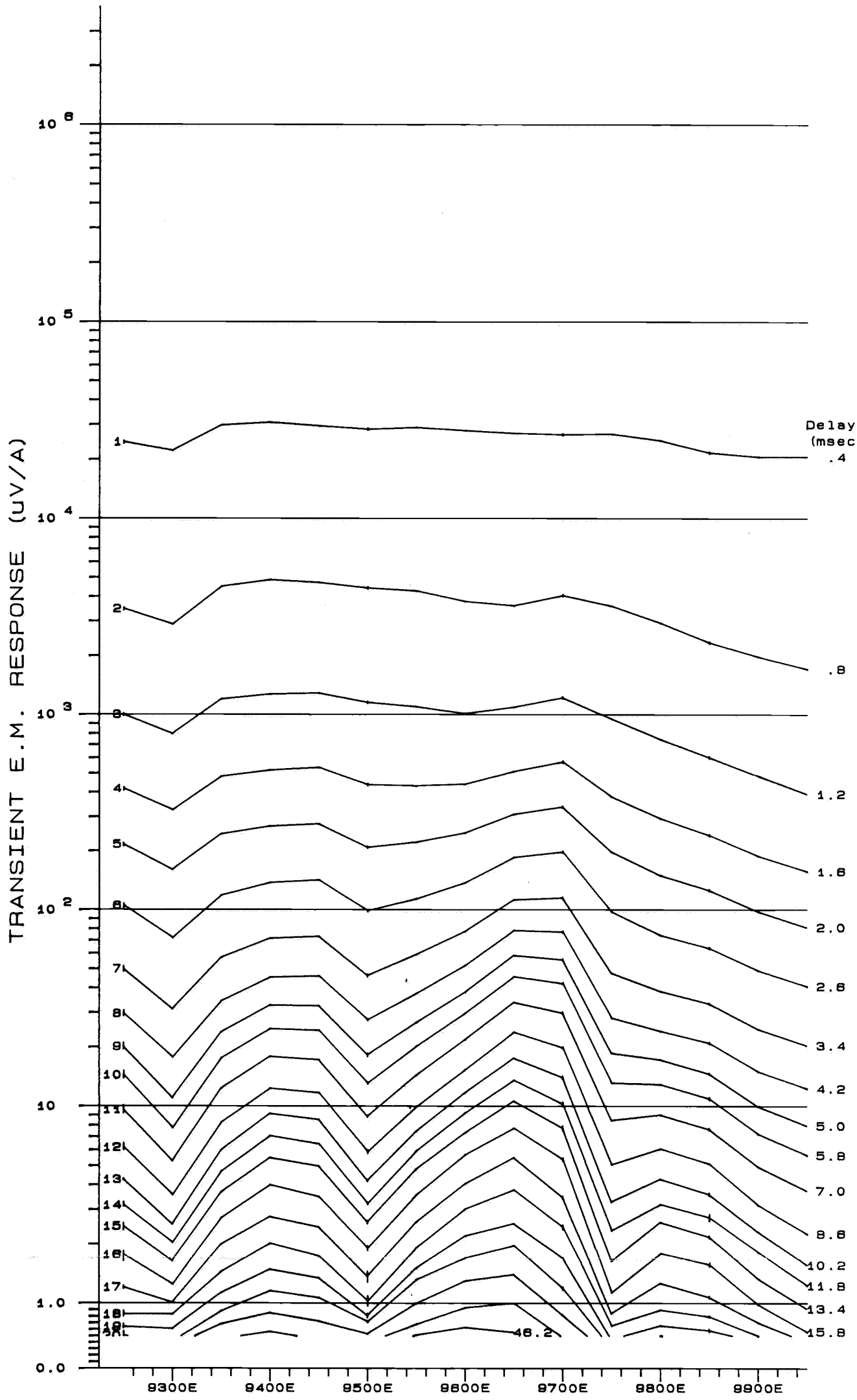
MILANG, EL 964 – S.A.
INMB 39 GRID

REF	BARKER SI 54 - 13		
SCALE	1:5000		
AUTHOR	RJLL	REPORT No.	13291
DATE	FEB., 1985	PLAN No.	SAa 2814



6054(11)-25

CRA EXPLORATION PTY LIMITED	
MILANG, EL 964 – S.A. INMB 38 GRID	
REF BARKER SI54-13	
SCALE 1:5000	
AUTHOR RJLL	REPORT No. 13291
DATE FEB., 1985	PLAN No. SAa 2815



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB38 Job No. (521)

SIROTEM Survey by SOLO Geophysics & Co. 4/ 6/84
LINE : 8550 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 1:41 PM 22/ 6/84

REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2843

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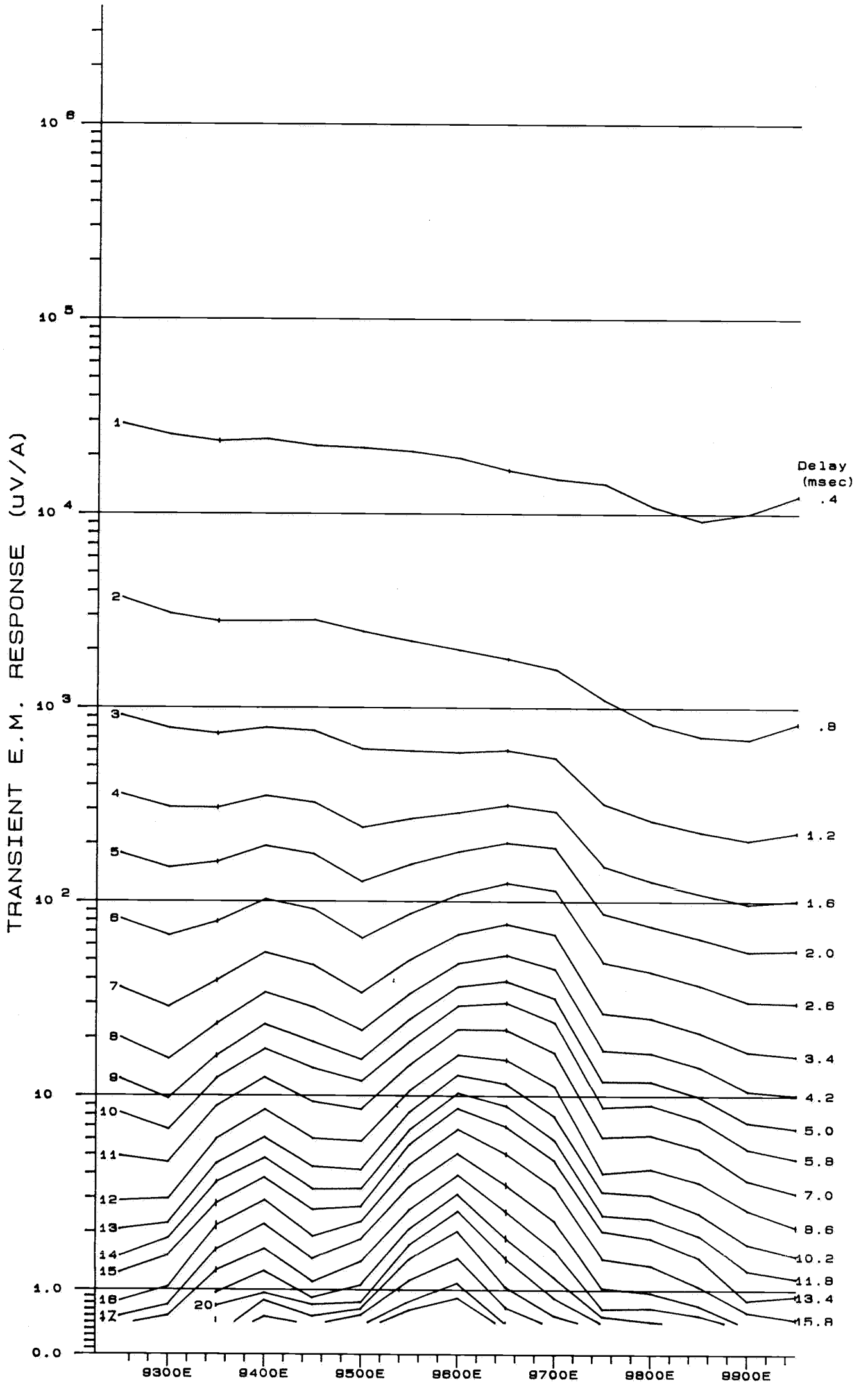
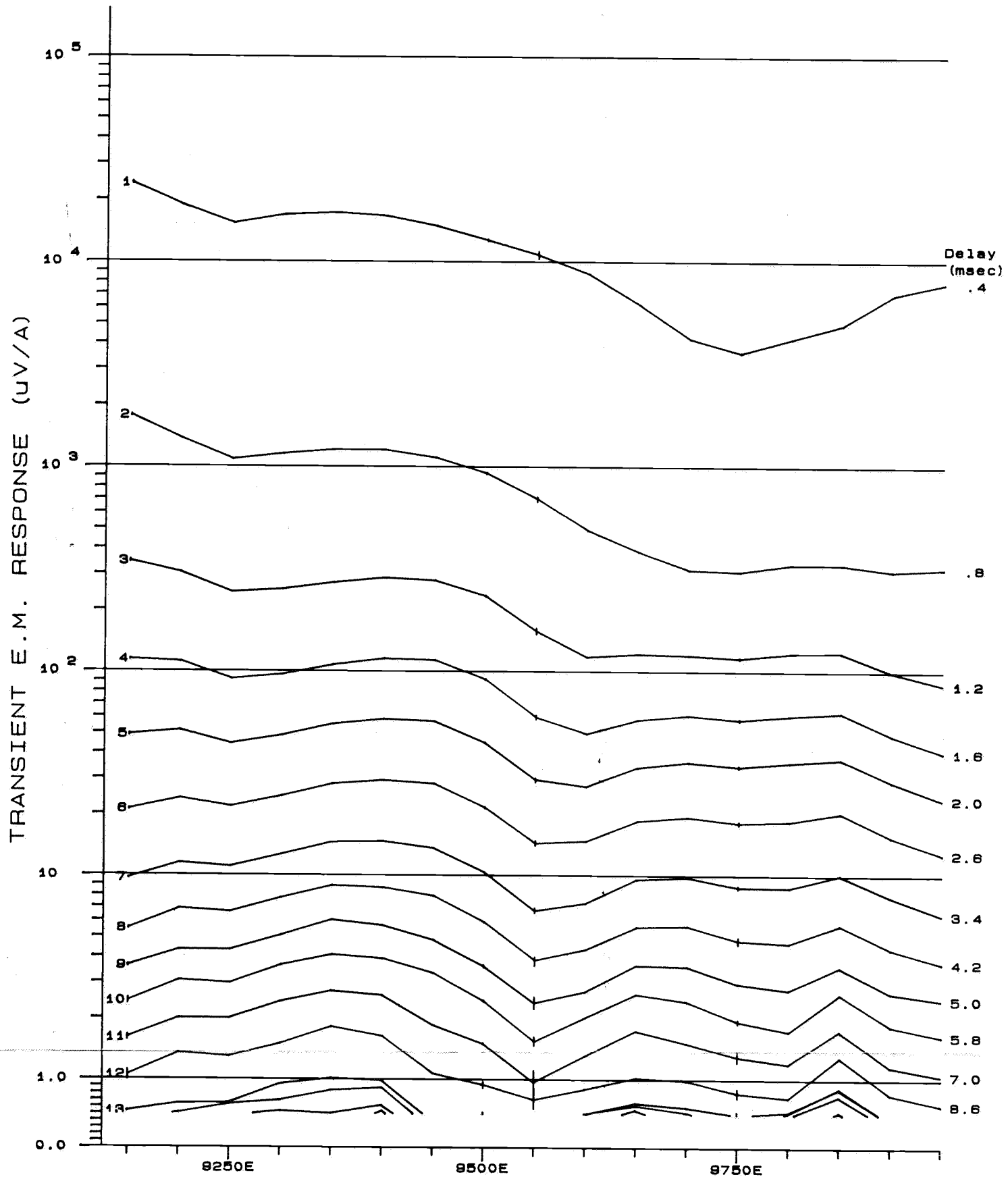


CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB38 Job No. (521)

SIROTEM Survey by SOLO Geophysics & Co. 4/ 6/84
LINE : 8750 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 1:45 PM 22/ 6/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2844

6054(11)-27

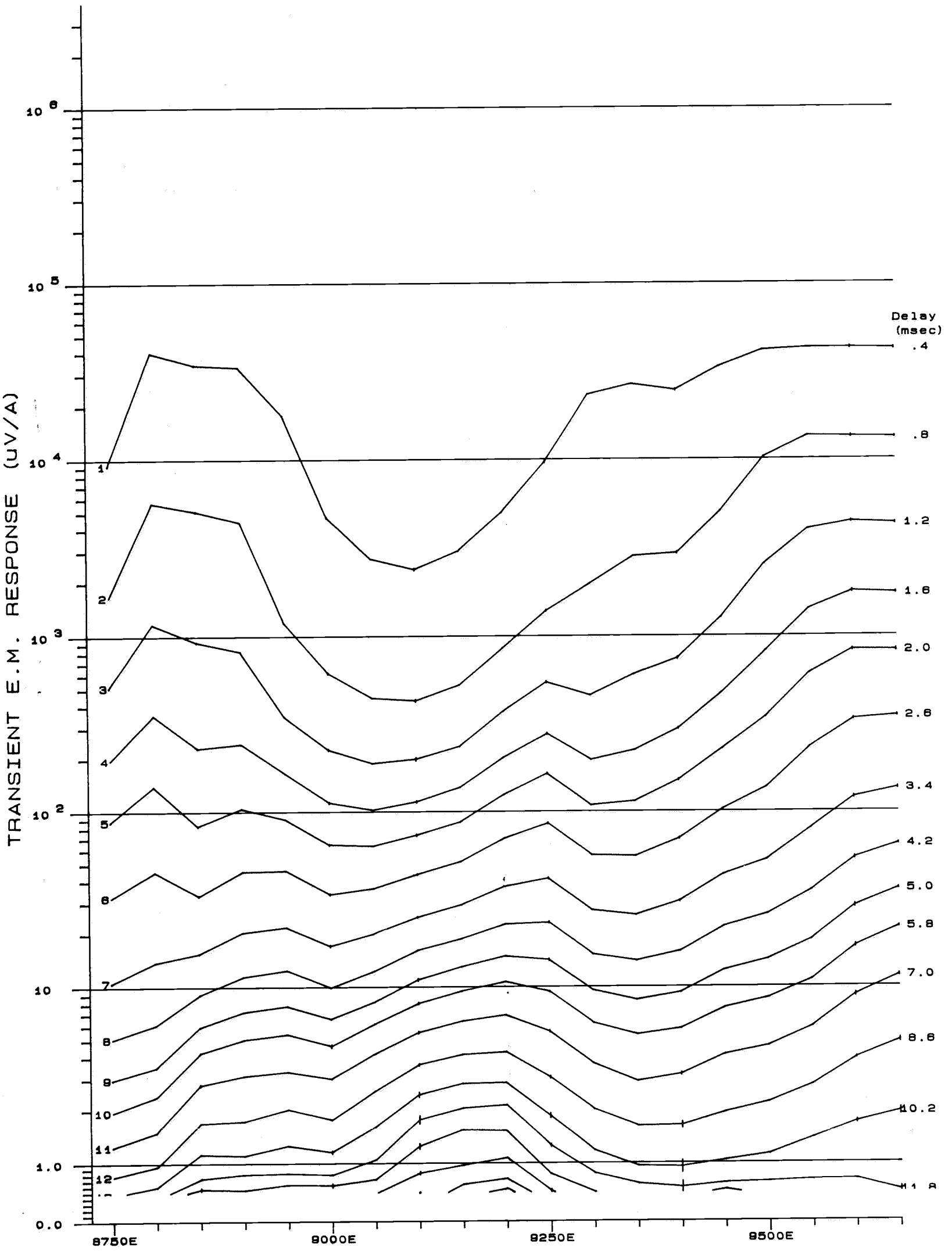


CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB38 Job No. (521)

SIROTEM Survey by SOLO Geophysics & Co. 21/ 4/84
LINE : 9950 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 1:18 PM 15/ 5/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2850

SOLO

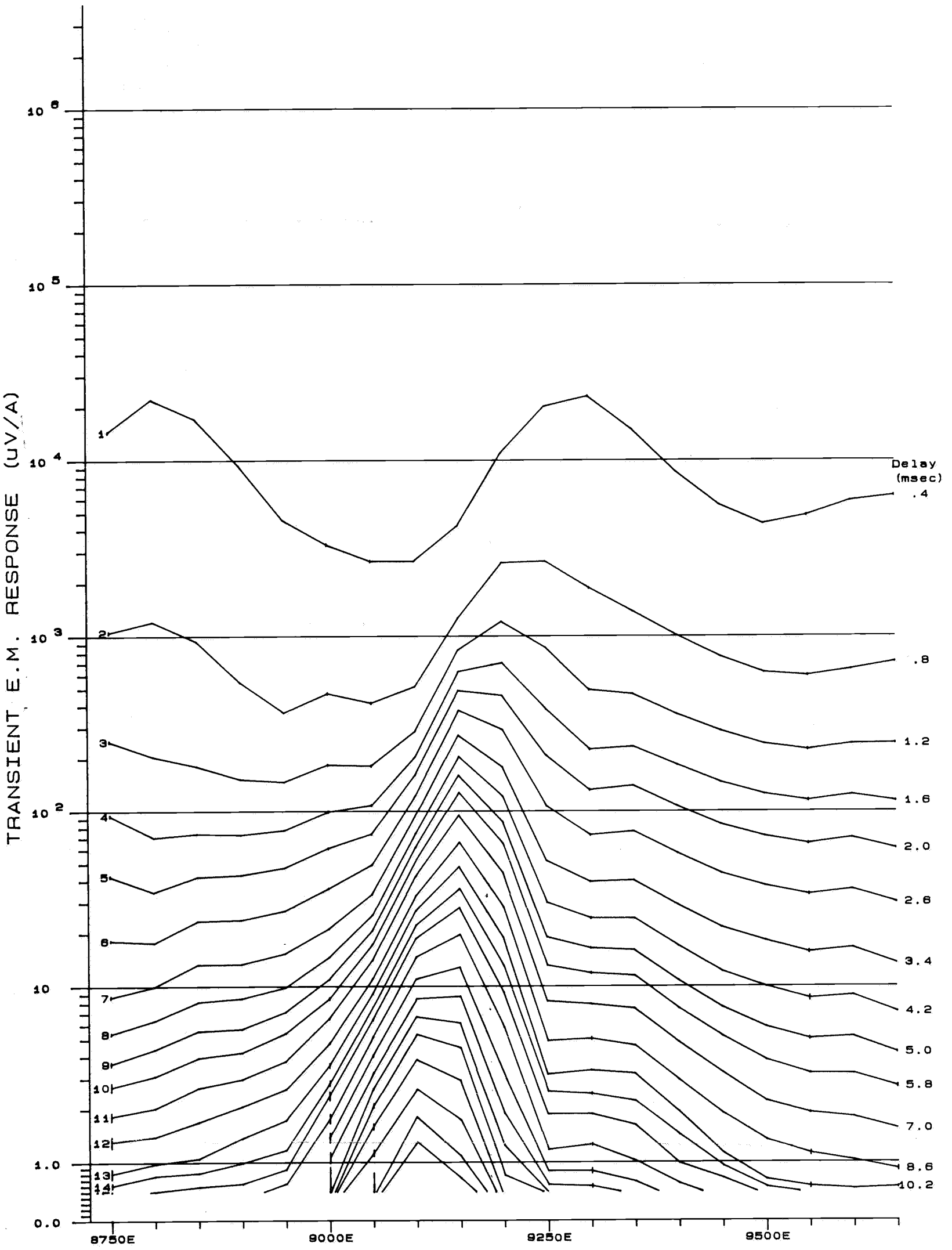
6054(11)-28



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
INMB39 (Job No. 521T)

SIROTEM Survey by SOLO Geophysics & Co. 5/ 6/84
LINE : 8350 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 2:53 PM 22/ 6/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2851

6054(11)-29

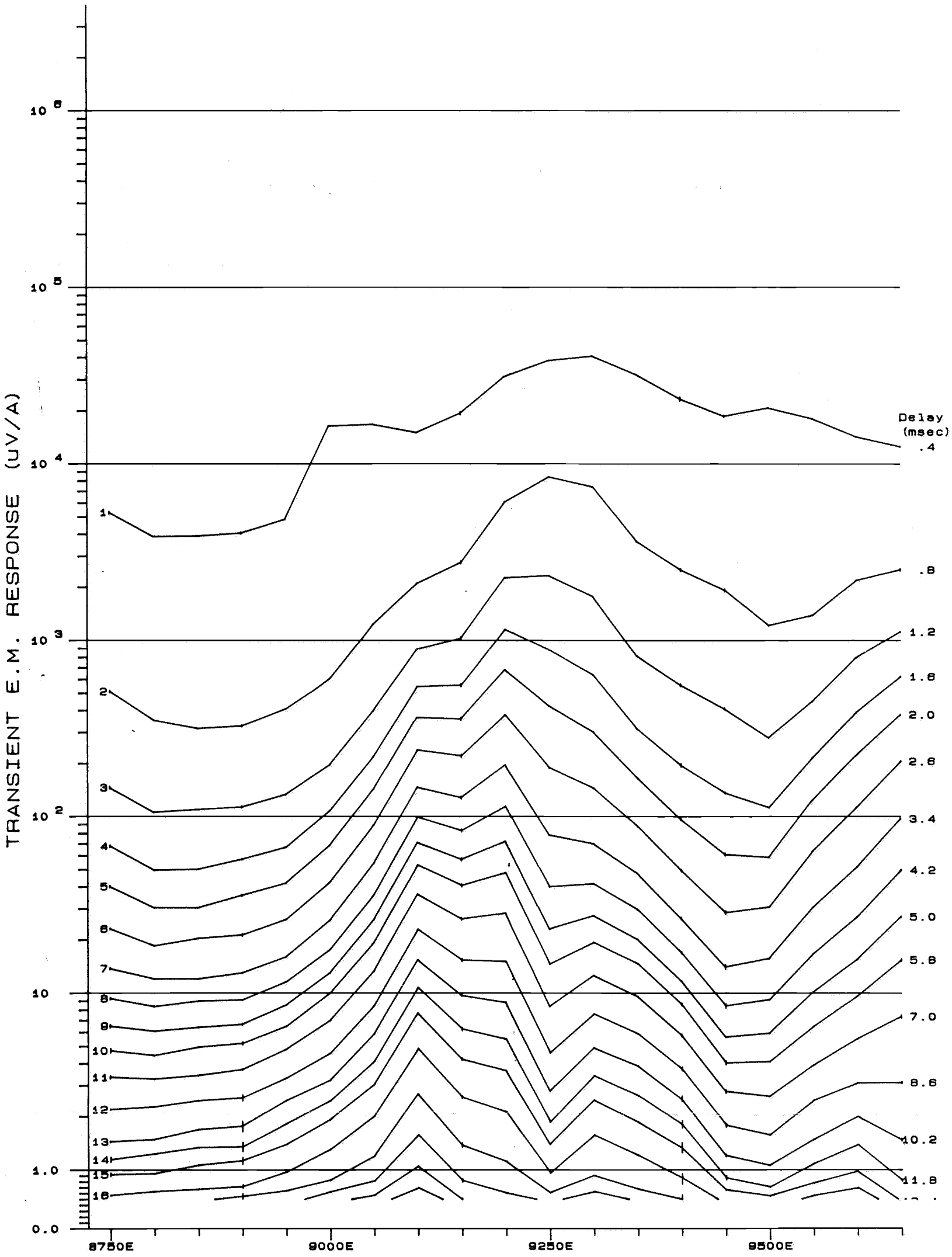


CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
INMB39 (Job No. 521T)

SIROTEM Survey by SOLO Geophysics & Co. 3/ 6/84
LINE : 8550 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 2:57 PM 22/ 6/84

REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2852

6054(11)-30



CRA EXPLORATION PTY. LTD.

MILANG E.L. 964 S.A.

INMB39 (Job No. 521T)

SIROTEM Survey by SOLO Geophysics & Co. 2/ 6/84

LINE : 8750 NORTH Reading interval 50.0 m

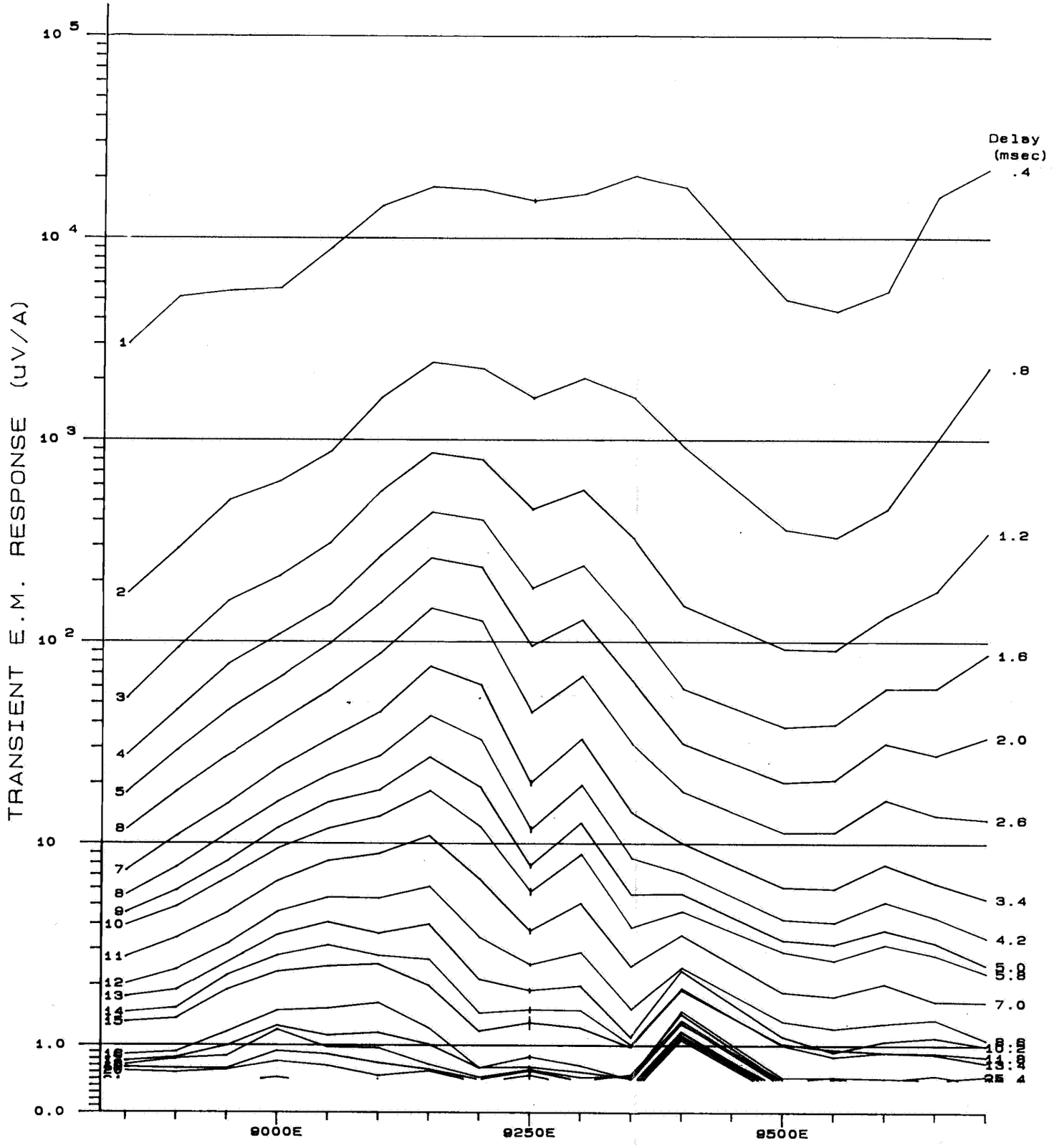
SCALE 1 : 5000 Loop size : 100 m

LOOP configuration : In-loop receiver

Plotted : 3:02 PM 22/ 6/84

REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2853

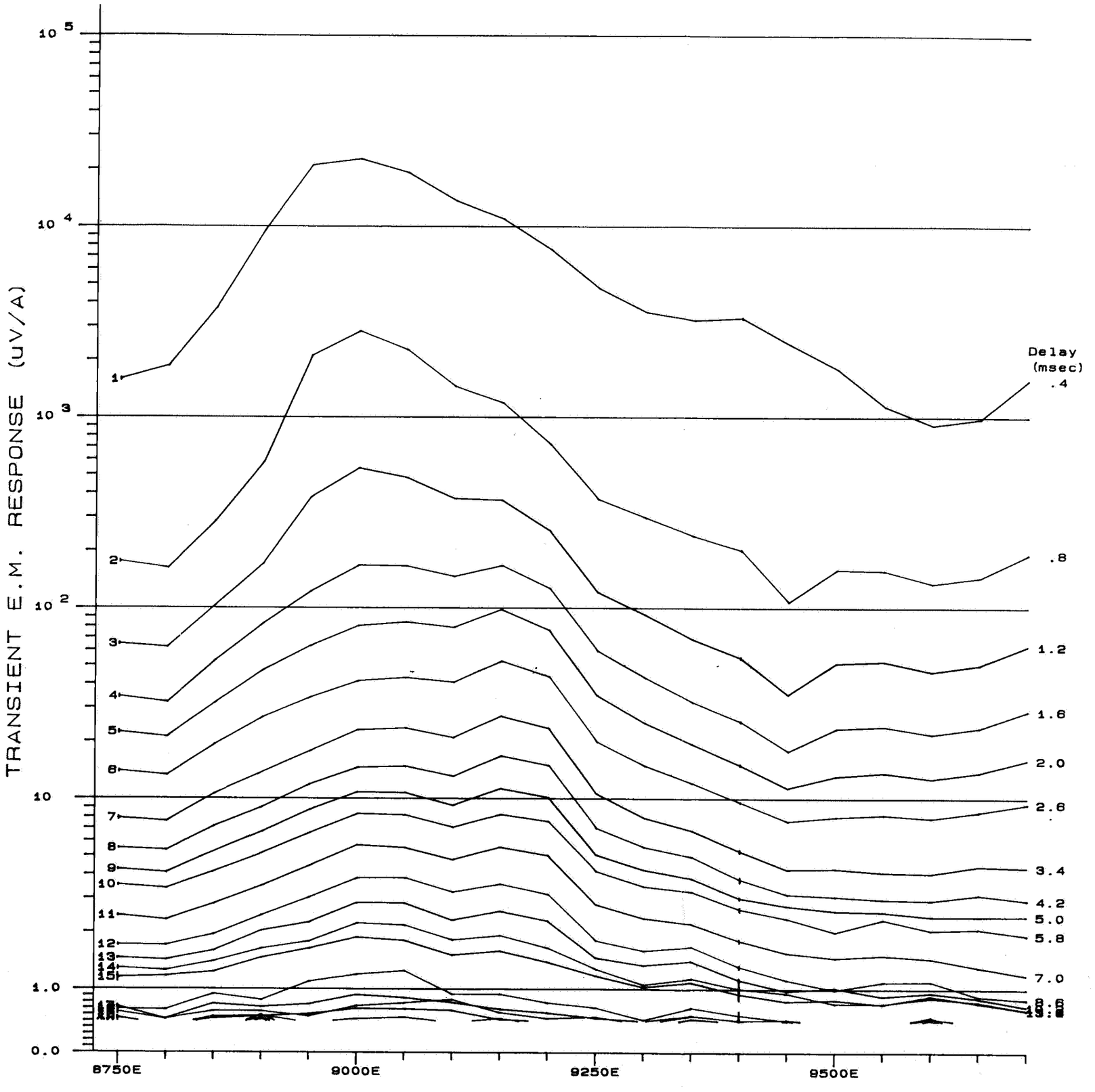
6054(11)-31



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB39 (Job No. 521)

6054(11)-32

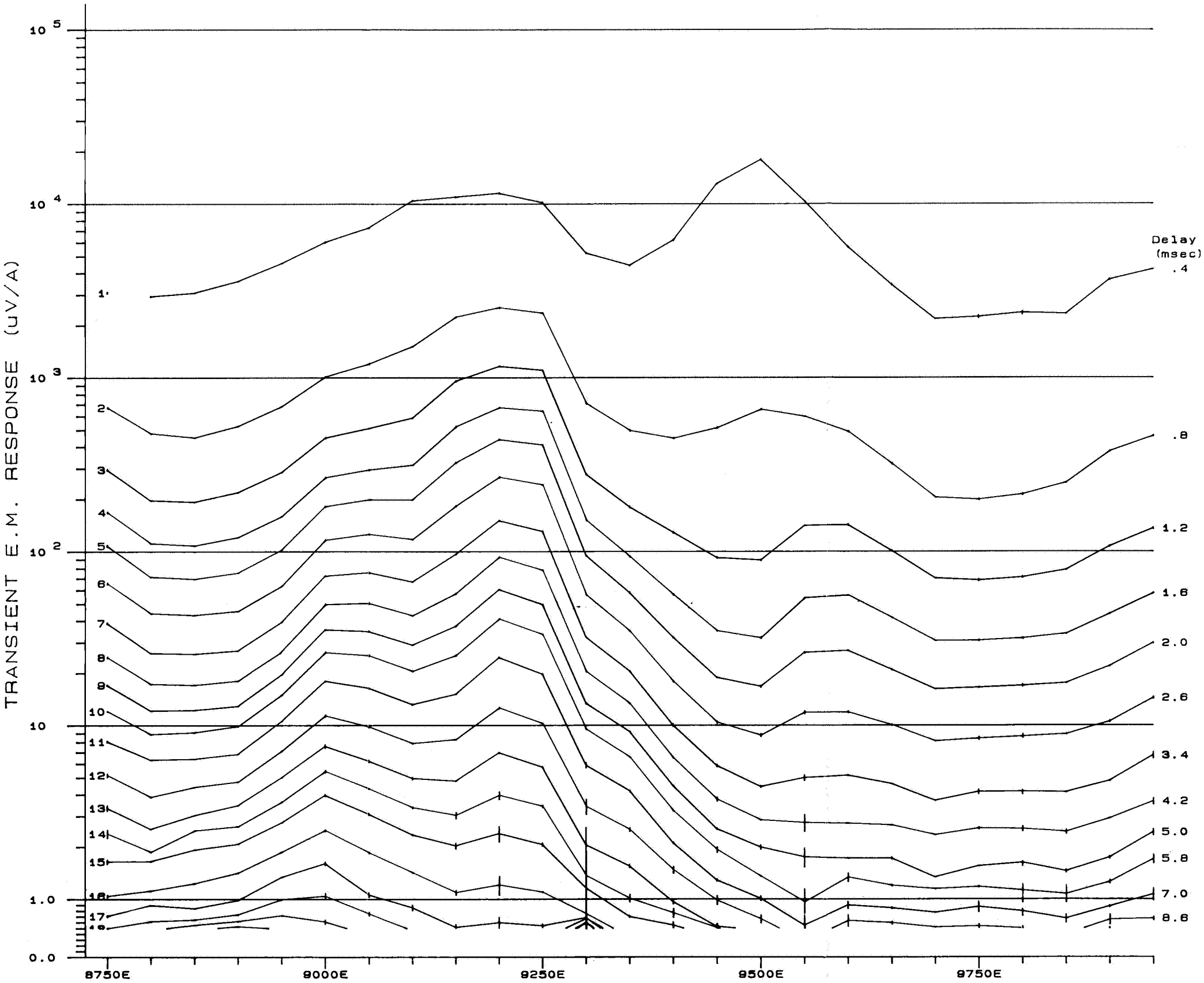
SIROTEM Survey by SOLO Geophysics & Co. 17/ 4/84
LINE : 8950 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 11:39 AM 15/ 5/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2854



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB39 (Job No. 521)

6054(11)-33

SIROTEM Survey by SOLO Geophysics & Co. 17/ 4/84
LINE : 9150 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 11:43 AM 15/ 5/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2855

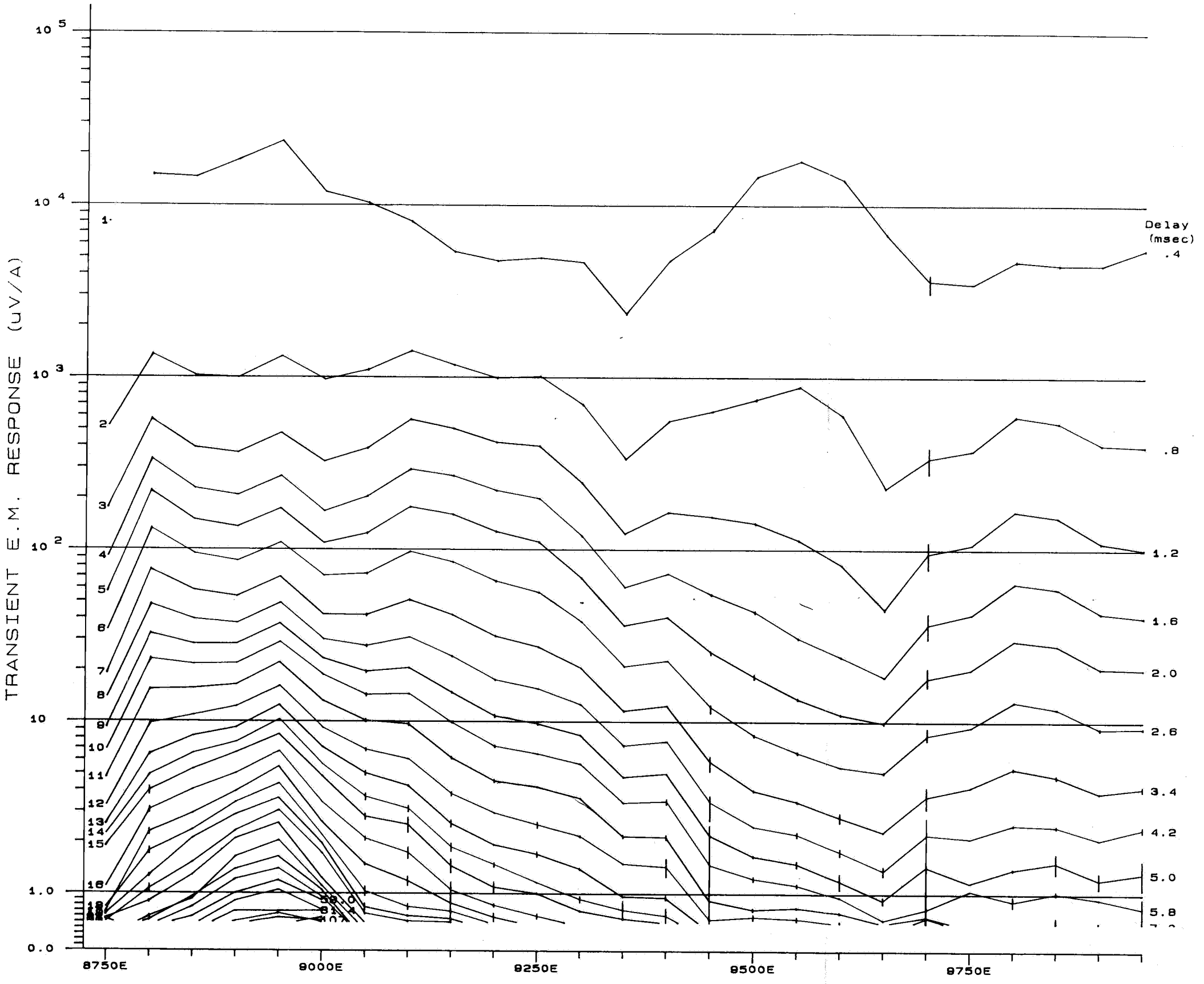


CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB39 (Job No. 521)

SIROTEM Survey by SOLO Geophysics & Co. 14/ 4/84 - 17/ 4/84
LINE : 9350 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 11: 47 AM 15/ 5/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2856

SOLO

6054(11)-34

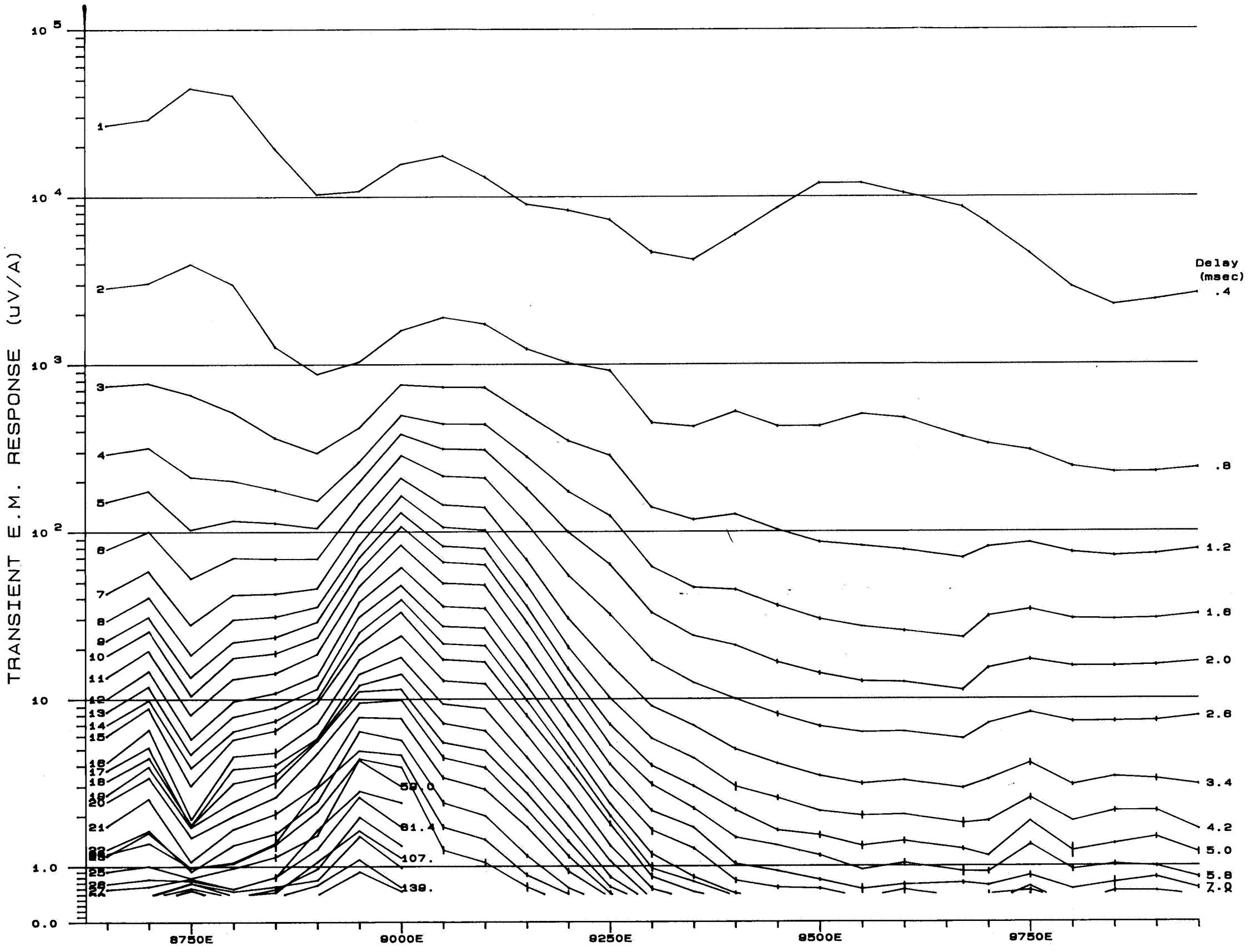


CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB39 (Job No. 521)

6054(11)-35

SIROTEM Survey by SOLO Geophysics & Co. 14/ 4/84 - 17/ 4/84
LINE : 9550 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 11:51 AM 15/ 5/84
REF: BARKER SI54-13 REPORT No.13291 PLAN No. SAa 2857

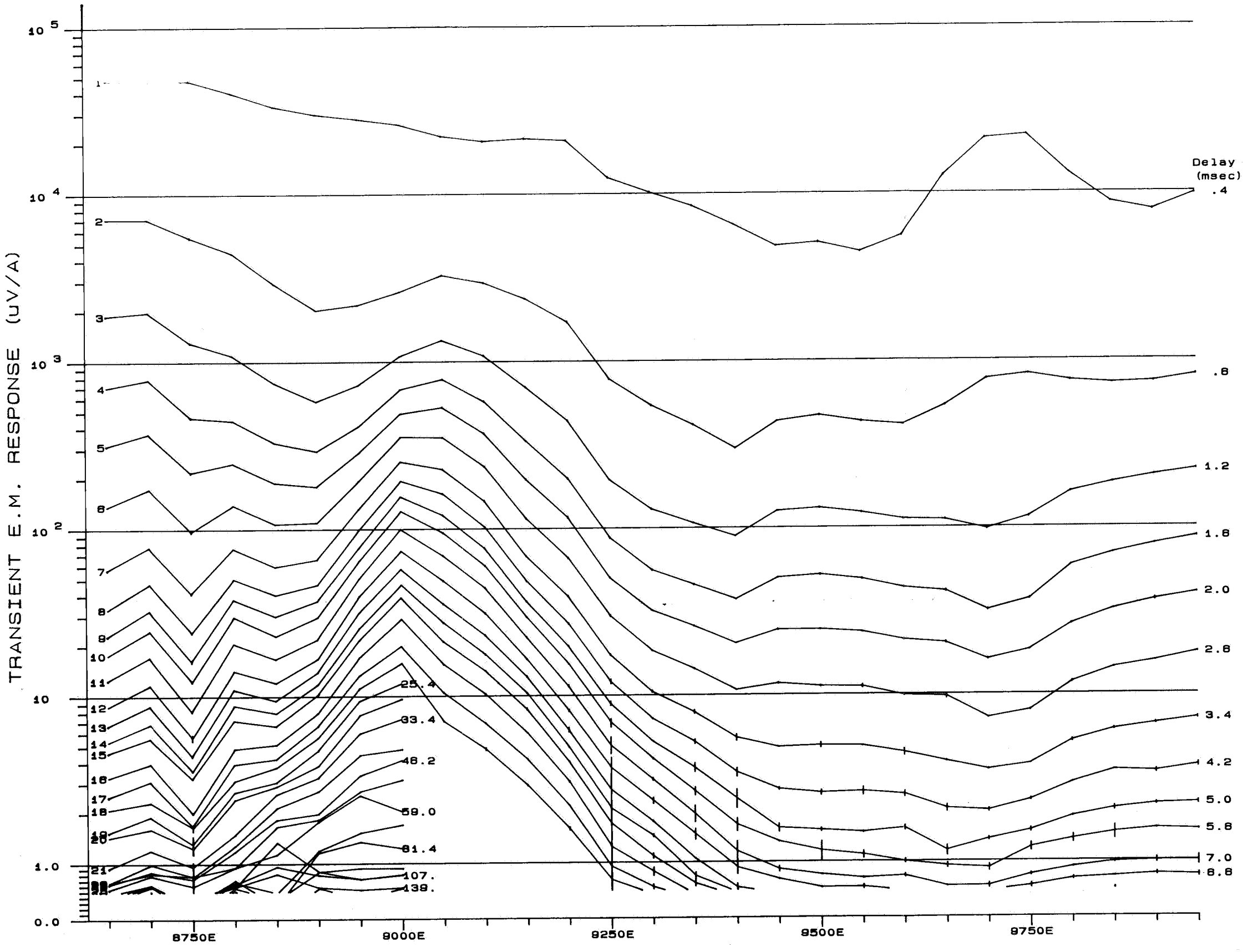
SOLO



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB39 (Job No. 521)

6054(11)-36

SIROTEM Survey by SOLO Geophysics & Co. 16/ 4/84
LINE : 9750 NORTH Reading interval 30.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 12:32 PM 15/ 5/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2858

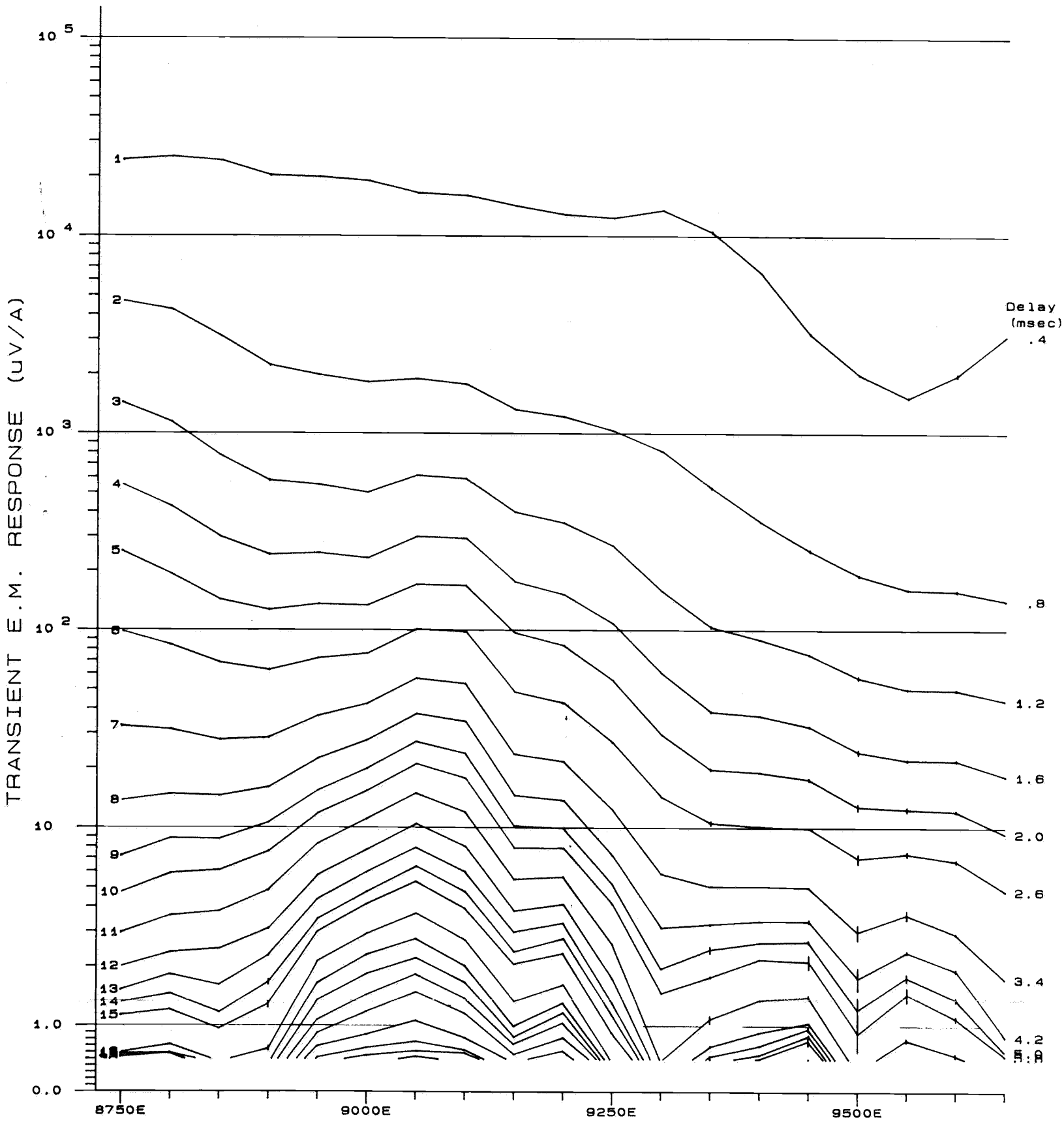


CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB39 (Job No. 521)

SIROTEM Survey by SOLO Geophysics & Co. 12/ 4/84 - 17/ 4/84
LINE : 9950 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 12:08 PM 15/ 5/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2860

SOLO

6054(11)-37

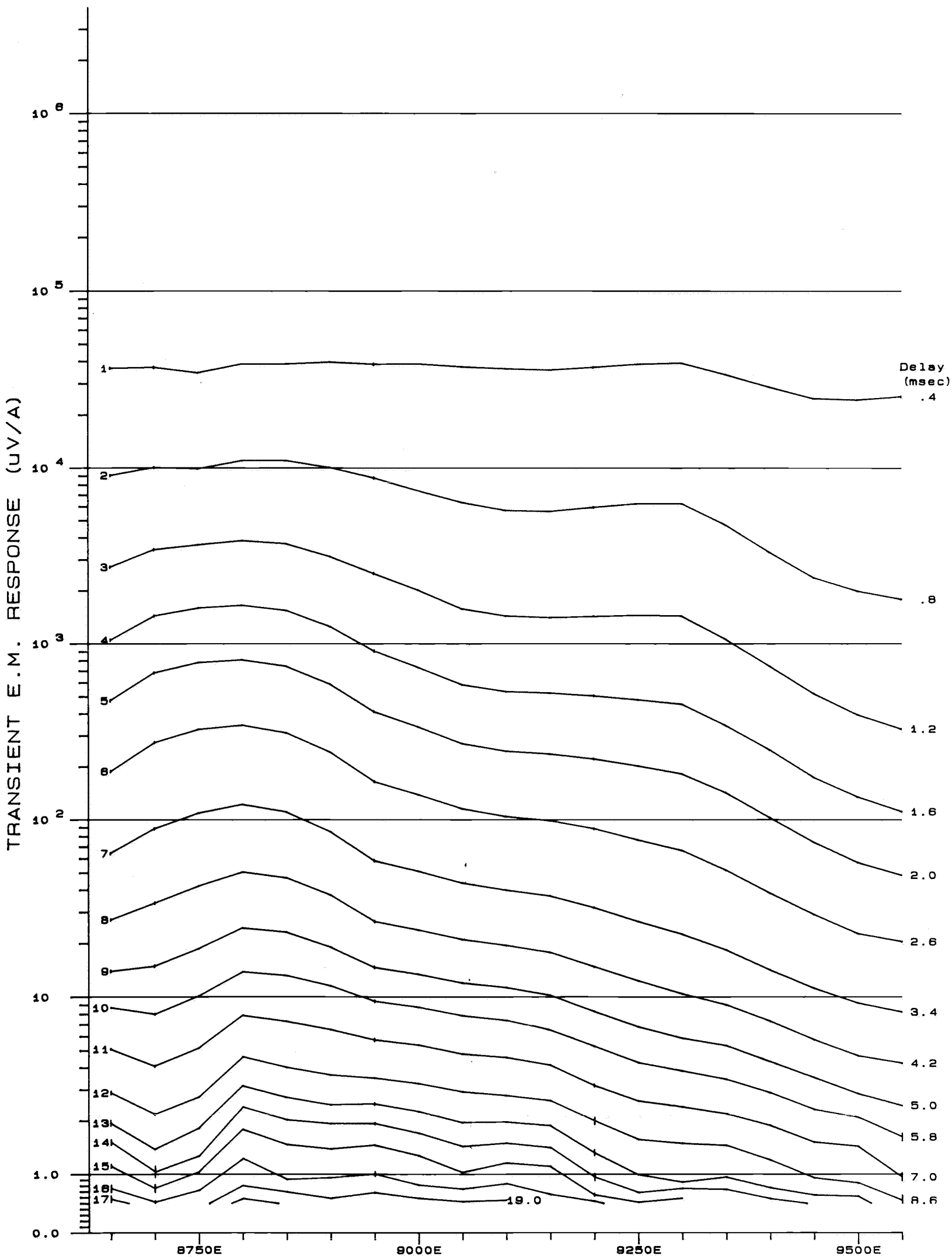


CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
GRID INMB39 (Job No. 521)

SIROTEM Survey by SOLO Geophysics & Co. 12/ 4/84 - 18/ 4/84
LINE : 10150 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 12:16 PM 15/ 5/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2861

SOLO

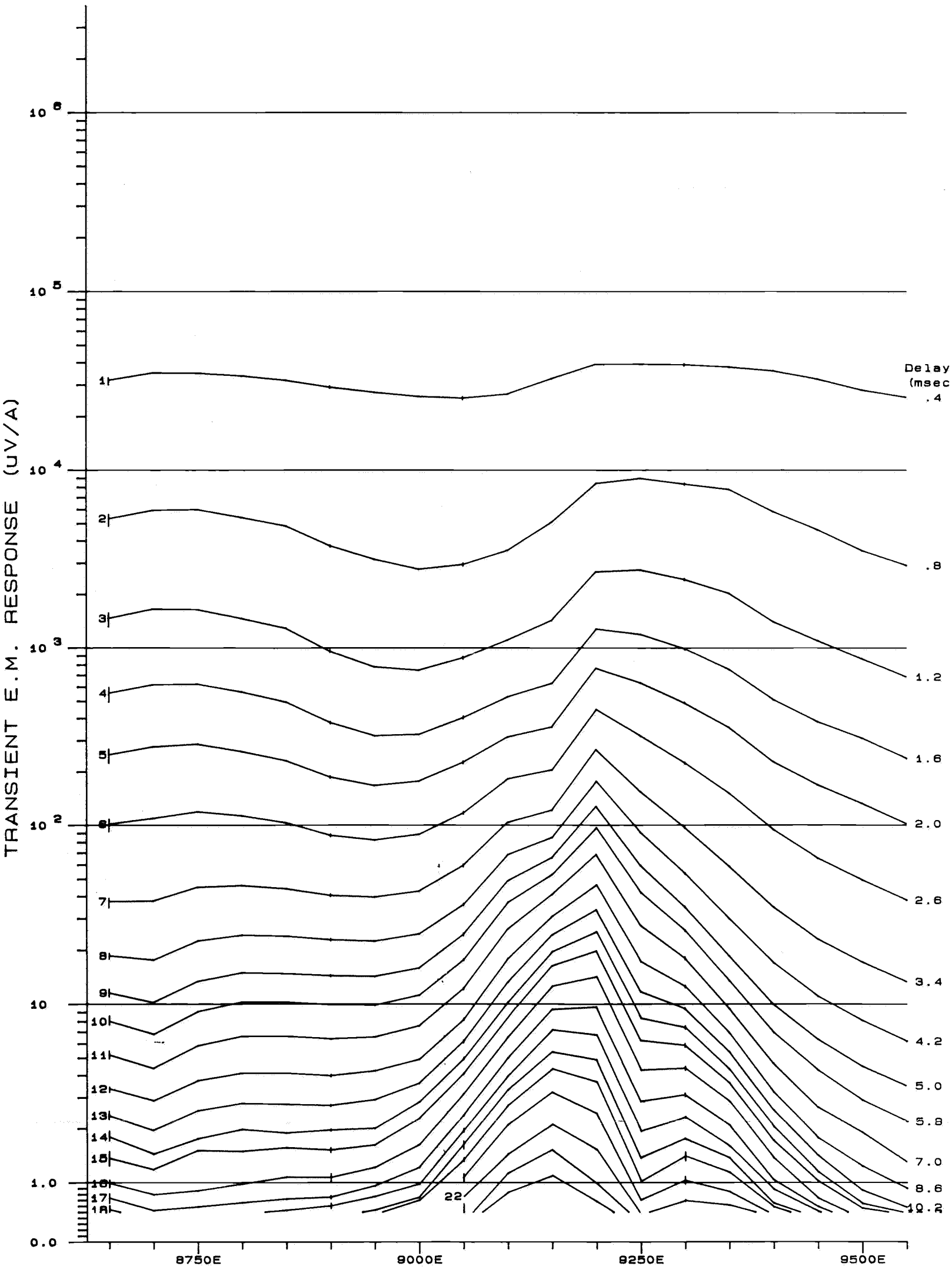
6054(11)-38



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
INMB39 (Job No. 521T)

SIROTEM Survey by SOLO Geophysics & Co. 1/ 6/84
LINE : 10350 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 3:06 PM 22/ 6/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2862

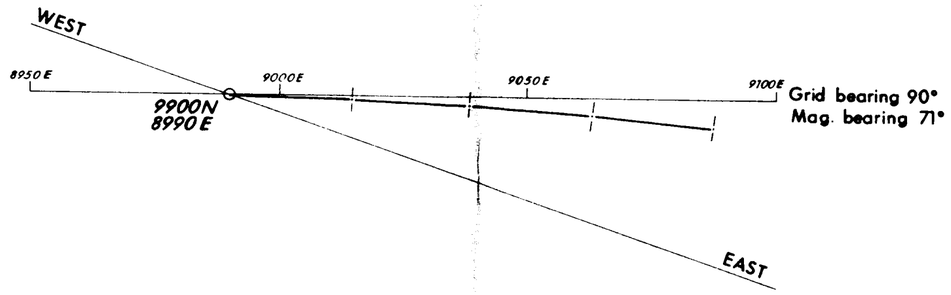
6054(11)-39



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964 S.A.
INMB39 (Job No. 521T)

SIROTEM Survey by SOLO Geophysics & Co. 2/ 6/84
LINE : 10550 NORTH Reading interval 50.0 m
SCALE 1 : 5000 Loop size : 100 m
LOOP configuration : In-loop receiver
Plotted : 3:09 PM 22/ 6/84
REF: BARKER SI54-13 REPORT No. 13291 PLAN No. SAa 2863

6054(11)-40



ANALYTICAL RESULTS

DEPTH FROM	TO	SAMPLE NUMBER	Sn	W	Cu	Pb	Zn	Mn	Au	Ag
PD84MI3										
32	34	1162332	-	-	14	-	80	510	-	-
34	36	333	-	-	10	-	60	460	-	-
36	38	334	-	10	54	24	115	440	-	-
38	40	335	4	15	62	6	54	245	-	-
40	42	336	4	35	86	14	125	245	-	-
42	44	337	18	50	265	-	40	150	-	-
44	46	338	10	40	270	-	47	160	-	-
46	48	339	8	35	165	44	405	165	-	-
48	50	340	10	20	86	28	1380	125	-	-
50	52	341	4	20	110	32	340	155	-	-
52	54	342	12	25	115	56	1080	190	-	-
54	56	343	8	-	39	18	240	370	-	-
56	58	344	-	-	37	8	195	540	-	-
96	98	364	-	-	24	-	125	470	-	-
98	100	365	4	15	25	8	70	510	-	-
100	102	366	6	10	120	10	700	220	-	-
102	104	367	4	-	56	14	195	305	-	-
104	106	368	-	10	160	-	95	195	-	-
106	108	369	-	25	92	16	86	160	-	-
108	110	370	6	40	110	10	180	165	-	-
110	112	371	-	15	120	235	1200	215	1	-
112	114	372	-	10	78	185	830	330	-	-
114	116	373	4	10	90	370	840	340	-	-
116	118	374	4	10	66	56	345	440	-	-
118	120	375	-	-	43	12	195	405	-	-
120	122	376	-	10	92	10	66	465	-	-
122	124	377	-	-	100	22	275	540	-	-
124	126	378	4	-	65	46	230	550	-	-
126	128	379	-	-	125	320	1520	530	1	-
128	130	380	-	-	64	36	450	440	-	-
130	132	381	-	-	19	6	60	310	-	-
154	156	393	-	10	12	-	29	850	-	-
156	158	394	4	15	31	100	120	930	-	-
158	160	395	4	-	130	1040	4580	730	5	-
160	162	396	-	-	255	960	4160	650	3	-
162	164	397	-	10	240	60	2960	550	-	-
164	166	398	4	10	37	34	140	690	-	-
166	168	399	-	-	80	150	600	1120	-	-
168	170	400	-	10	195	20	425	350	-	-
170	172	401	-	15	155	8	60	215	-	-
172	174	402	-	-	11	-	52	200	-	-
174	176	403	-	15	48	6	29	270	-	-
176	178	404	4	10	15	-	23	520	-	-
178	180	1162405	6	10	20	-	20	320	-	-
DETECTION LIMIT			(4)	(10)	(2)	(5)	(2)	(5)	(1)	(0.01)
METHOD			XRF			ICP				AAS

- Below Detection Limit

Base of oxidation

Interval assayed

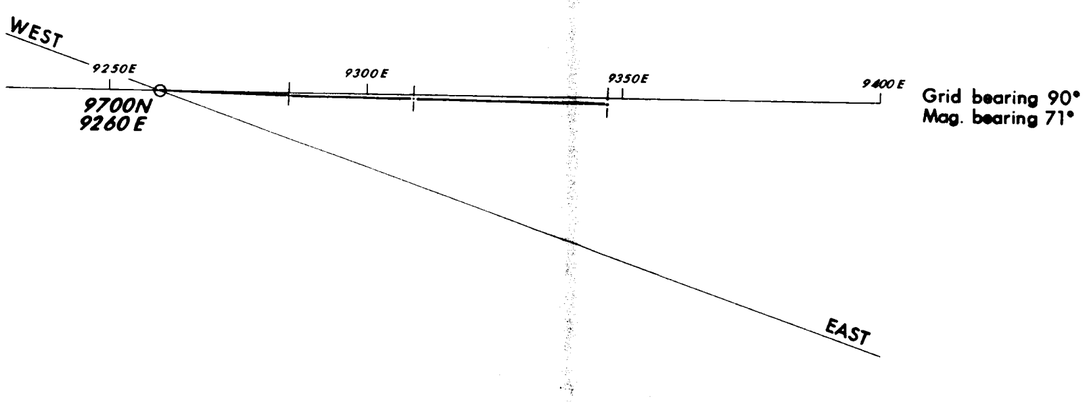
0 10 20 30 40 50 60 70 80 90 100 metres

CRA EXPLORATION PTY LIMITED

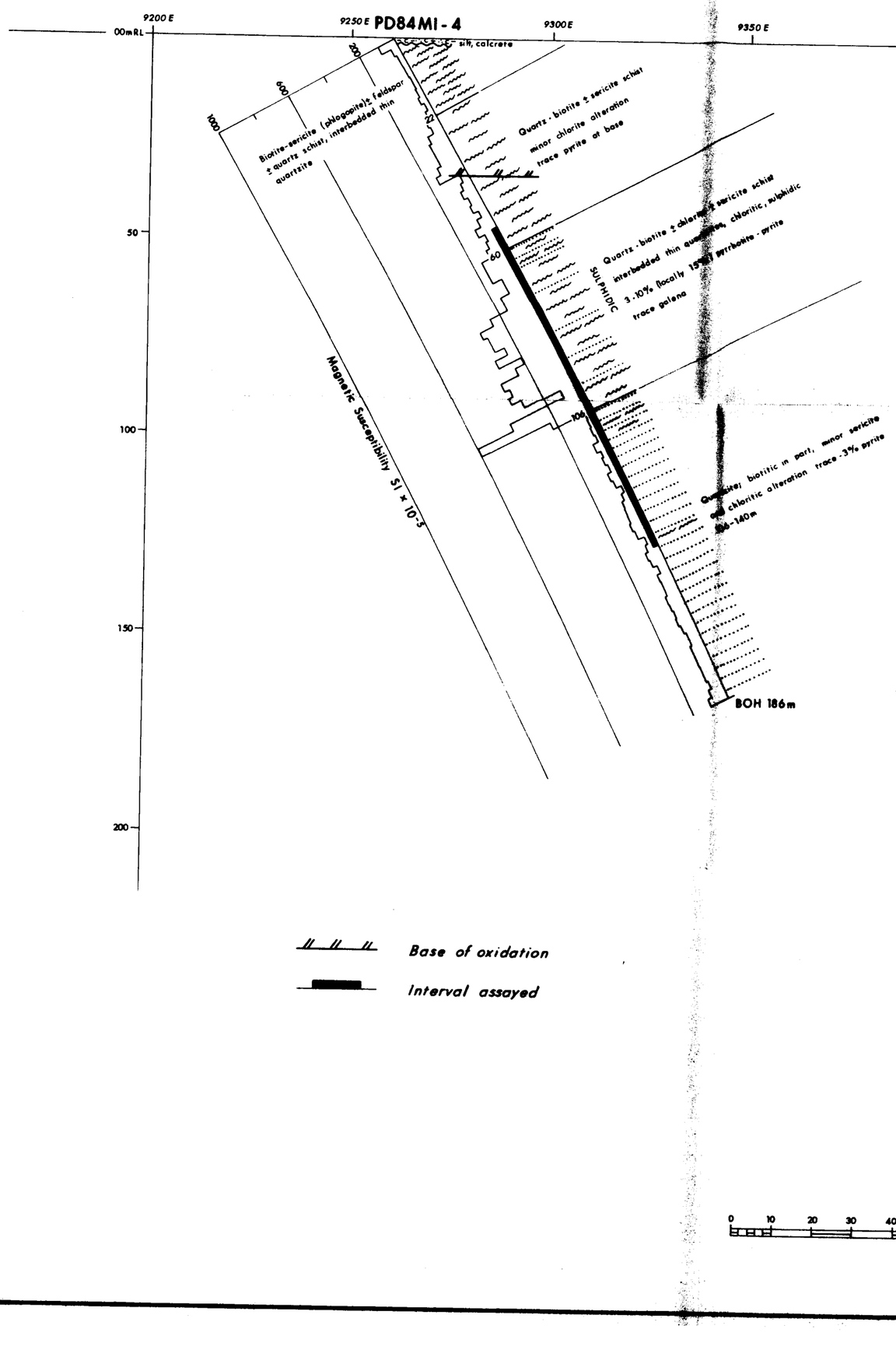
MILANG EL 964 - S.A.
INMB 39
DRILL HOLE SECTION PD84MI - 3

Ref.	BARKER SI54-13		
Scale	1:1,000		
Author	P L	Report No.	13291
Date	FEB., 1985	Plan No.	SAg 2969

6054(11)-41



Grid bearing 90°
Mag. bearing 71°



ANALYTICAL RESULTS

DEPTH FROM	TO	SAMPLE NUMBER	Sn	W	Cu	Pb	Zn	Mn	Ag	Au
PD84MI4										
84	86	1162457	4	10	38	20	62	520	-	-
86	88	458	-	10	38	36	52	640	-	-
88	90	459	-	-	66	40	52	600	-	-
90	92	460	10	15	70	82	160	550	-	-
92	94	461	-	-	56	115	140	650	-	-
94	96	462	4	15	90	120	100	560	-	-
96	98	463	6	-	72	22	41	540	-	-
98	100	464	-	10	34	-	36	530	-	-
100	102	465	8	10	72	120	43	500	1	-
102	104	466	-	10	105	88	810	740	-	-
104	106	467	4	-	116	10	650	920	-	-
106	108	468	-	-	50	-	89	856	-	-
108	110	469	-	-	24	-	12	100	-	-
DETECTION LIMIT			(4)	(10)	(2)	(5)	(2)	(5)	(1)	(0.01)
METHOD			XRF				ICP			AAS

- Below Detection Limit

Base of oxidation

Interval assayed

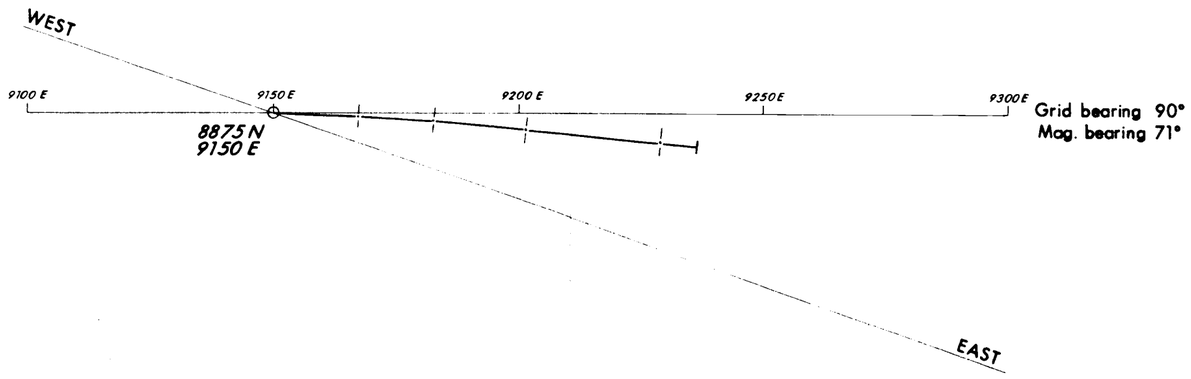
0 10 20 30 40 50 60 70 80 90 100 metres

6054(11)-42

CRA EXPLORATION PTY LIMITED

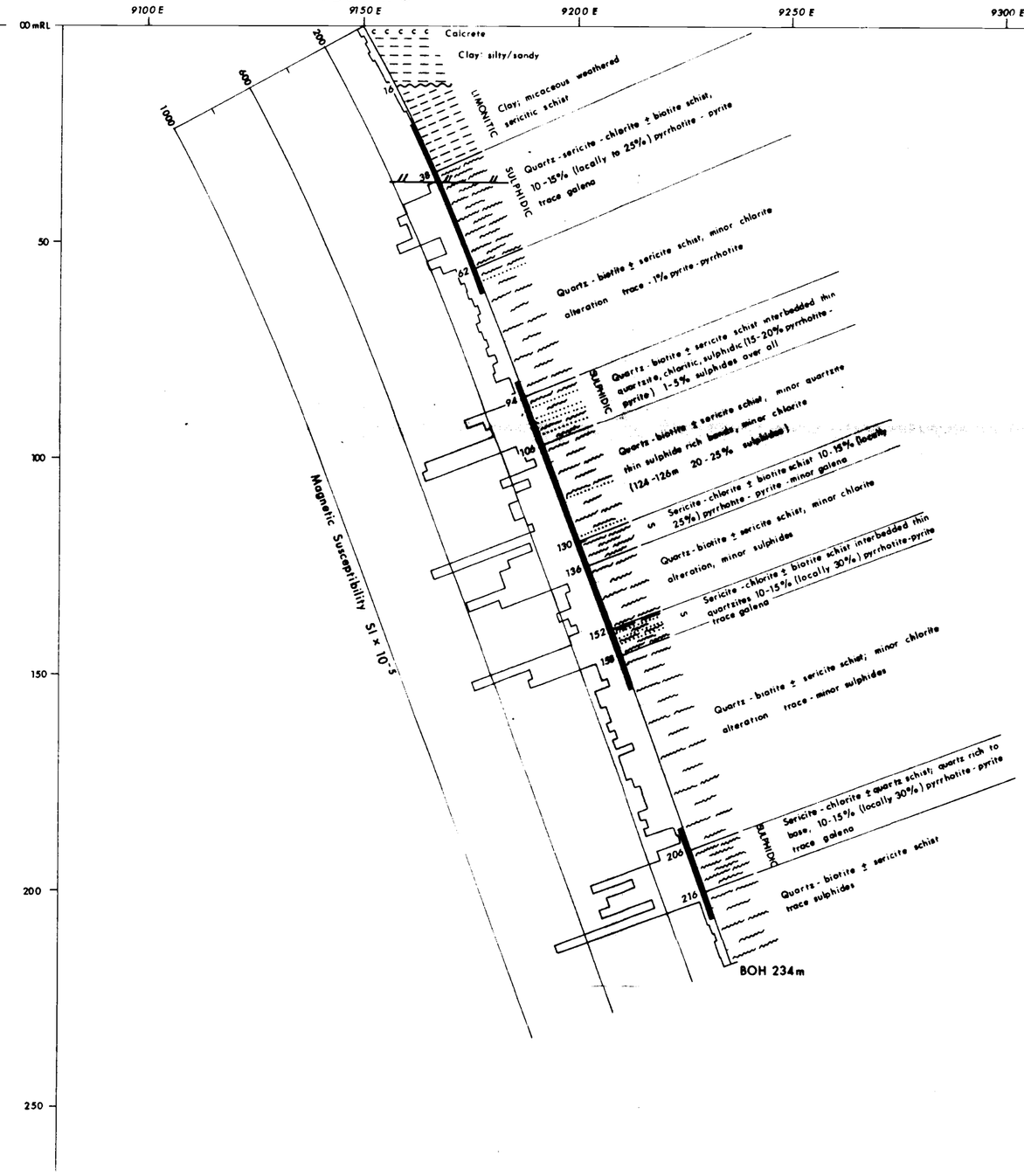
MILANG EL 964 - S.A.
INMB 39
DRILL HOLE SECTION PD84MI-4

Ref.	BARKER 5154-13		
Scale	1:1,000		
Author	P L	Report No.	13291
Date	FEB., 1985	Plan No.	SAa 2970



Grid bearing 90°
Mag. bearing 71°

PD84MI-5



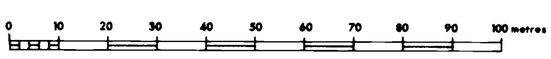
Base of oxidation

Interval assayed

ANALYTICAL RESULTS

DEPTH (m) FROM	DEPTH (m) TO	SAMPLE NUMBER	Pb	Zn	Cu	Ag	Fe	Mn	Sn	As
PD84MI5										
38	40	1162518	12	15	50	26	385	360	-	-
40	42	519	6	15	46	28	265	335	-	-
42	44	520	-	25	110	340	1440	430	1	-
44	46	521	6	20	92	540	1180	360	2	-
46	48	522	4	-	90	265	1020	350	-	-
48	50	523	4	15	74	330	730	320	1	-
50	52	524	8	15	86	530	1760	340	1	-
52	54	525	10	15	64	350	1260	320	-	-
54	56	526	6	-	62	400	1600	435	1	-
56	58	527	4	15	105	570	1260	495	2	-
58	60	528	-	20	140	62	145	160	-	-
60	62	529	6	10	20	22	120	570	-	-
62	64	530	-	10	30	30	110	465	-	-
90	92	544	6	-	48	8	95	609	-	-
92	94	545	4	-	44	12	120	550	-	-
94	96	546	-	-	125	270	850	1020	1	-
96	98	547	6	15	82	420	530	1020	1	-
98	100	548	-	10	58	145	180	710	-	-
100	102	549	-	15	240	520	1450	630	3	-
102	104	550	-	-	185	820	2820	810	3	-
104	106	551	-	15	47	66	215	530	-	-
106	108	552	-	15	70	38	105	660	-	-
108	110	553	8	10	29	46	200	910	-	-
110	112	554	8	10	195	50	640	1380	-	-
112	114	555	-	10	110	76	245	860	-	-
114	116	556	-	-	150	130	1560	1940	-	-
116	118	557	6	10	190	210	700	3380	-	-
118	120	558	10	15	140	44	290	5150	-	-
120	122	559	-	15	125	26	220	3000	-	-
122	124	560	-	10	84	20	165	1620	-	-
124	126	561	-	10	225	1420	1620	1100	2	-
126	128	562	4	15	94	68	140	1560	-	-
128	130	563	6	-	76	68	98	1620	-	-
130	132	564	-	25	275	1140	2200	960	4	-
132	134	565	-	-	220	860	3700	1140	3	-
134	136	566	6	-	285	1660	3700	1420	6	-
136	138	567	-	-	130	1160	1700	2200	2	-
138	140	568	-	-	21	44	160	1020	-	-
140	142	569	-	-	12	24	75	900	-	-
148	150	573	4	10	36	16	75	860	-	-
150	152	574	-	-	50	120	425	1100	-	-
152	154	575	-	-	160	530	3600	760	2	-
154	156	576	-	-	110	690	1480	500	2	-
156	158	577	-	-	100	750	2020	630	3	-
158	160	578	8	-	38	66	180	600	-	-
160	162	579	-	-	41	32	125	600	-	-
204	206	601	-	-	30	8	44	630	-	-
206	208	602	-	15	110	460	820	375	2	-
208	210	603	4	15	68	315	830	490	1	-
210	212	604	4	-	84	340	810	530	1	-
212	214	605	4	10	48	280	650	840	-	-
214	216	606	6	-	72	160	500	760	1	-
216	218	607	6	10	92	88	415	770	1	-
218	220	608	-	-	37	-	89	540	-	-
220	222	609	-	-	14	-	36	470	-	-
DETECTION LIMIT			(4)	(10)	(5)	(5)	(2)	(5)	(1)	(0.01)
METHOD			XRF				ICP			AAS

- Below Detection Limit

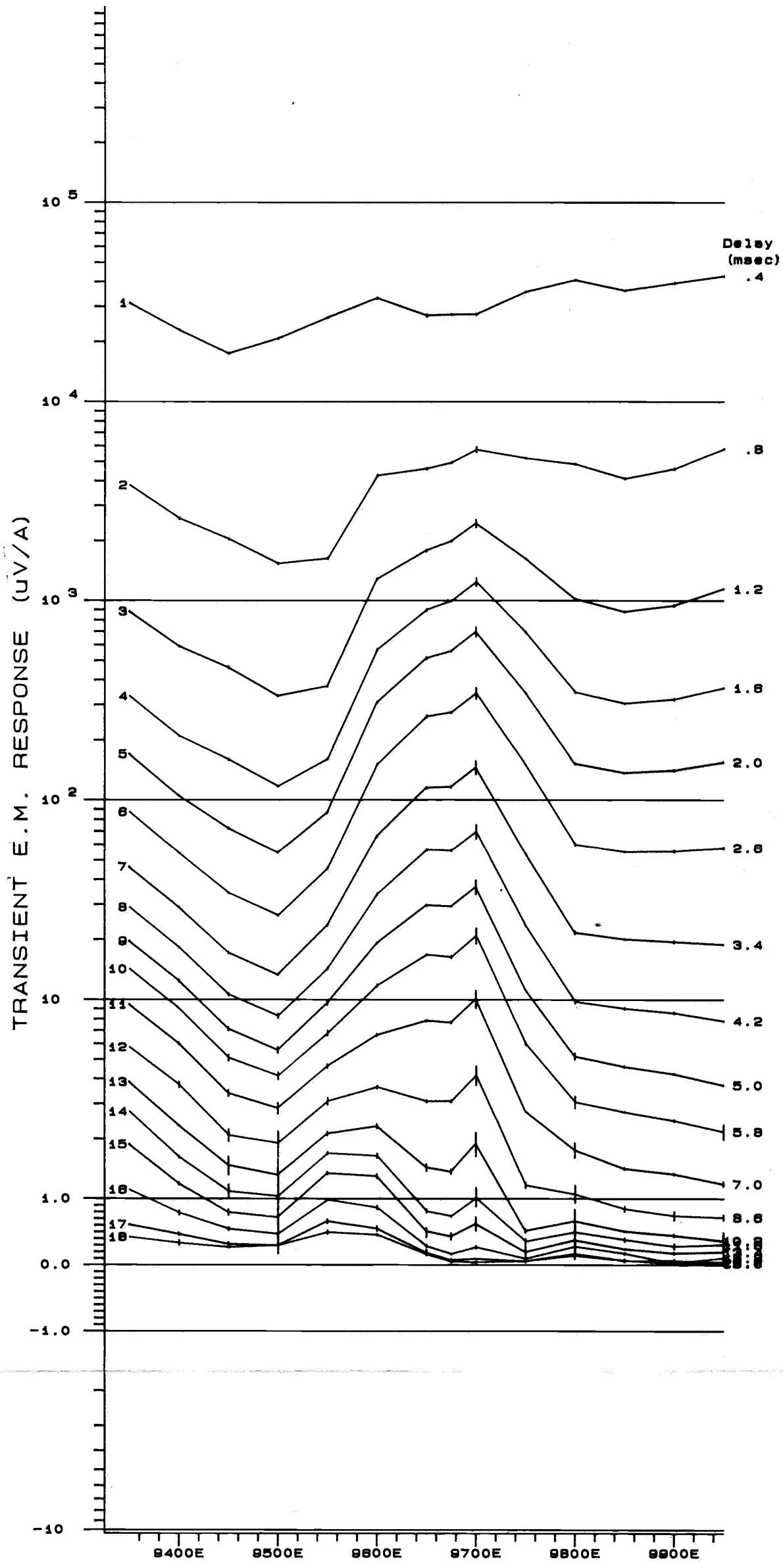


6054(11)-43

CRA EXPLORATION PTY LIMITED

MILANG EL 964 - S.A.
INMB 39
DRILL HOLE SECTION PD84MI-5

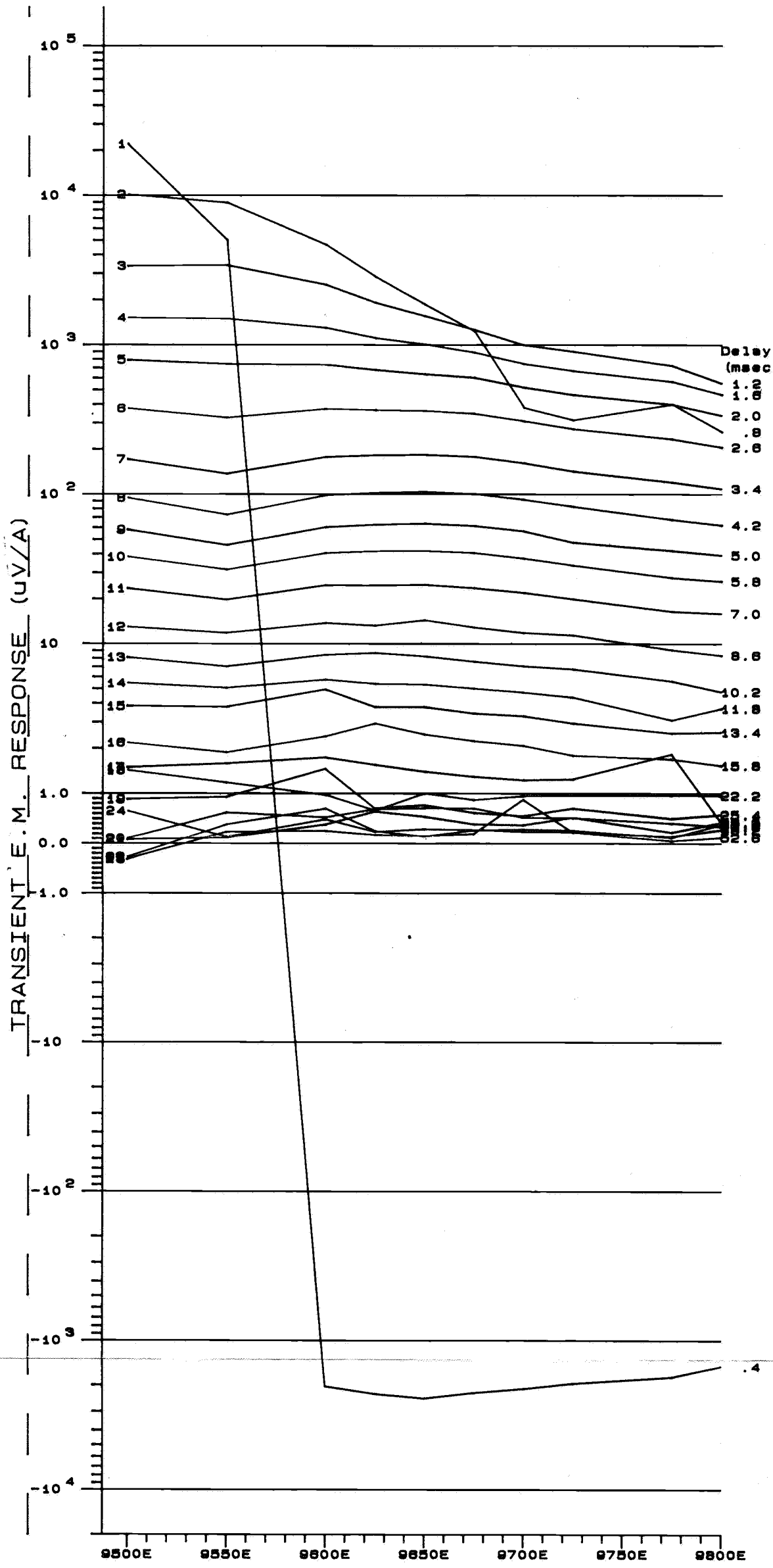
Ref.	BARKER S154-13		
Scale	1:1,000		
Author	P L	Report No.	13291
Date	FEB., 1985	Plan No.	SAa 2971



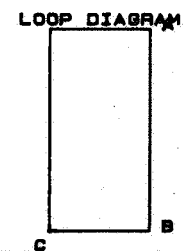
CRA EXPLORATION PTY. LTD.
MILANG E.L. 964, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SA a 2983**
DETAIL EXTNS. INMB39
SIROTEM Survey by SOLO Geophysics & Co. 1/10/84
LINE : 8800 NORTH Reading interval 25.0 m
SCALE 1 : 5000 Loop size : 10 m
LOOP configuration : In-loop receiver
Plotted : 12:00 PM 17/10/84

SOLO

6054 (11)-44



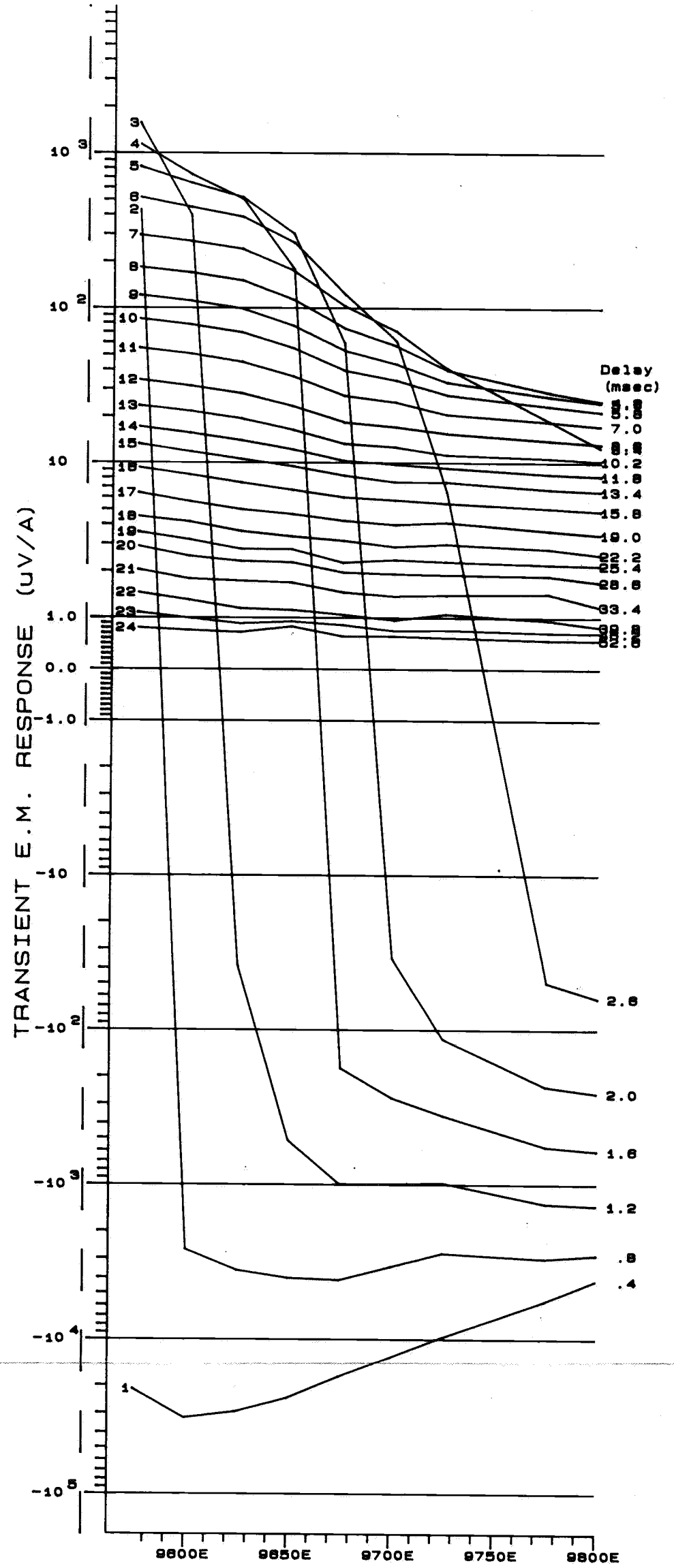
CRA EXPLORATION PTY. LTD.
MILANG E.L. 964, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SAg 2984**
LOOP NO 1 INMB39
SIROTEM Survey by SOLO Geophysics & Co. 2/10/84
LINE : 8800 NORTH Reading interval 25.0 m
SCALE 1 : 2500 Loop size : 300 x 600 m
LOOP configuration : TURAM mode (X component)
Plotted : 12:05 PM 17/10/84



A = (9100N, 9450E)
B = (8500N, 9450E)
C = (8500N, 9150E)

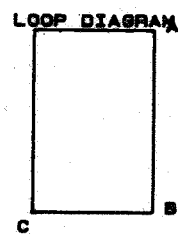
SOLO

6054 (11)-45



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SAa 2985**
LOOP NO 2 INMB39
SIROTEM Survey by SOLO Geophysics & Co. 2/10/84
LINE : 8801 NORTH Reading interval 25.0 m
SCALE 1 : 2500 Loop size : 400 x 600 m
LOOP configuration : TURAM mode (Z component)
Plotted : 3:18 PM 16/10/84

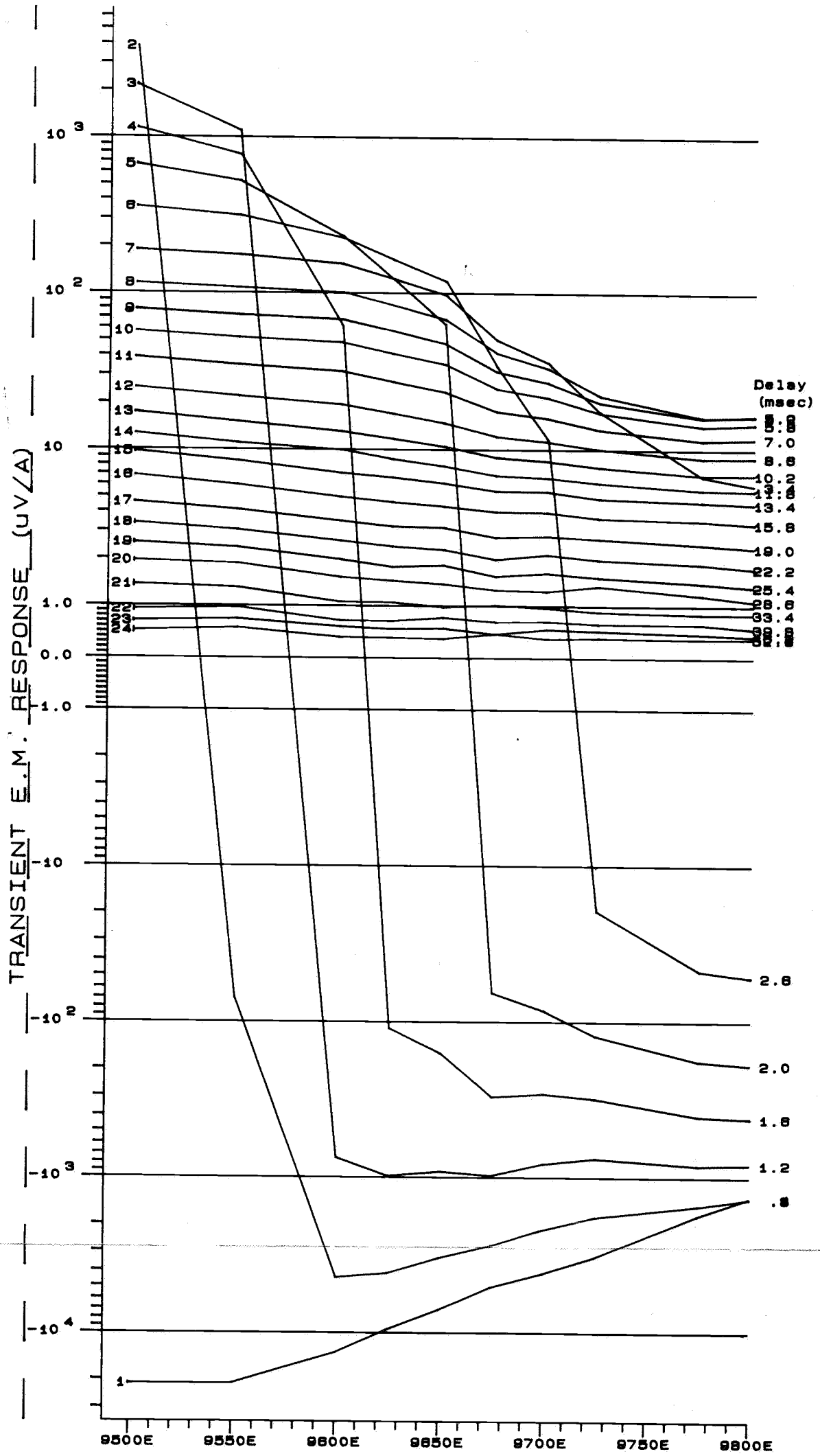
LOOP DIAGRAM



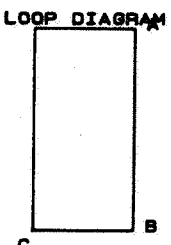
A = (9100N, 9550E)
B = (8500N, 9550E)
C = (8500N, 9150E)

SOLO

6054 (11)-46



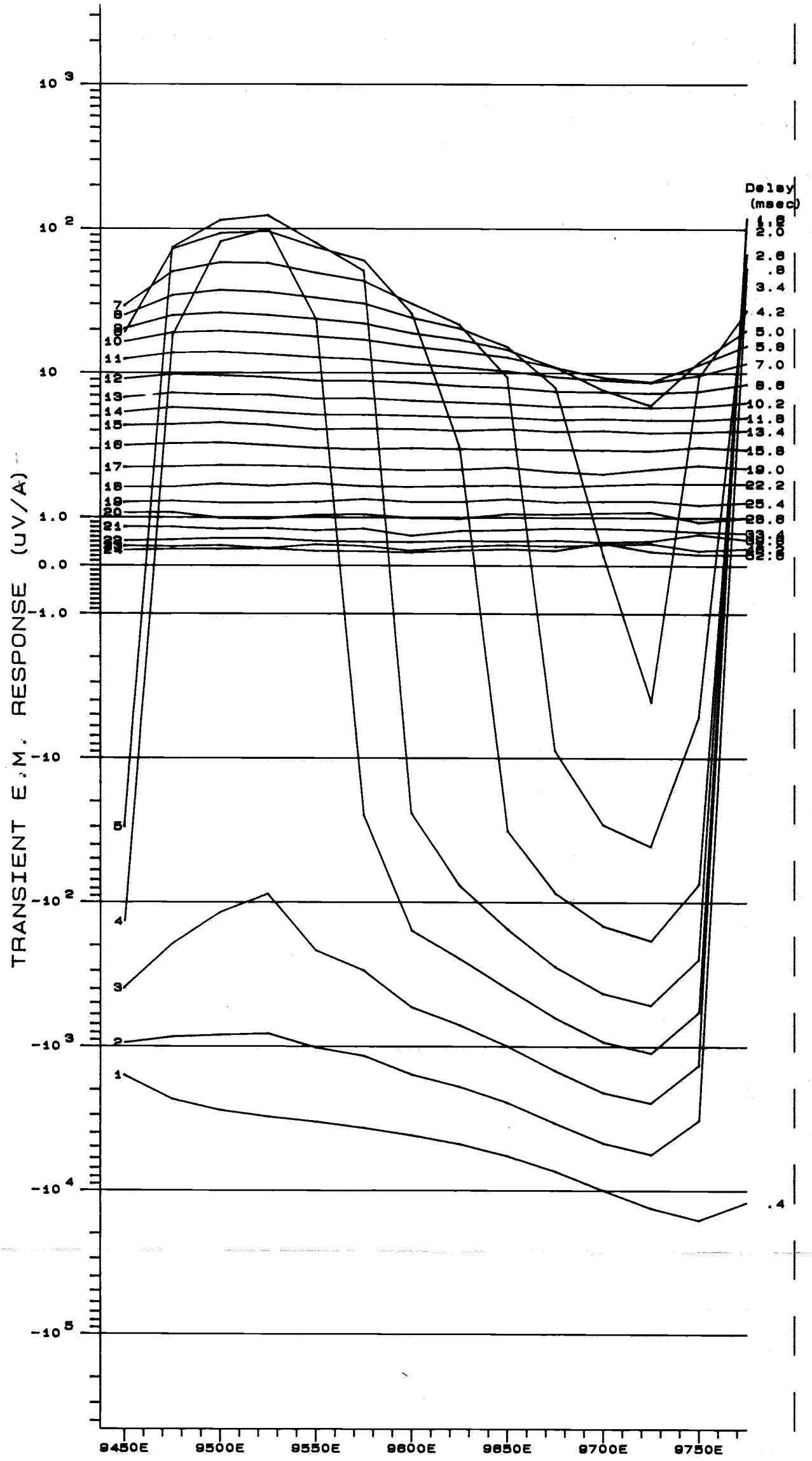
CRA EXPLORATION PTY. LTD.
MILANG E.L. 964, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SAa 2986**
LOOP NO 1 INMB39
SIROTEM Survey by SOLO Geophysics & Co. 2/10/84
LINE : 8800 NORTH Reading interval 25.0 m
SCALE 1 : 2500 Loop size : 300 x 600 m
LOOP configuration : TURAM mode (Z component)
Plotted : 9:59 AM 11/10/84



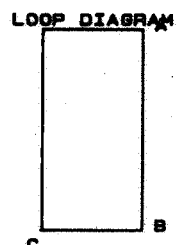
A = (9100N, 9450E)
B = (8500N, 9450E)
C = (8500N, 9150E)

SOLO

6054(11)-47



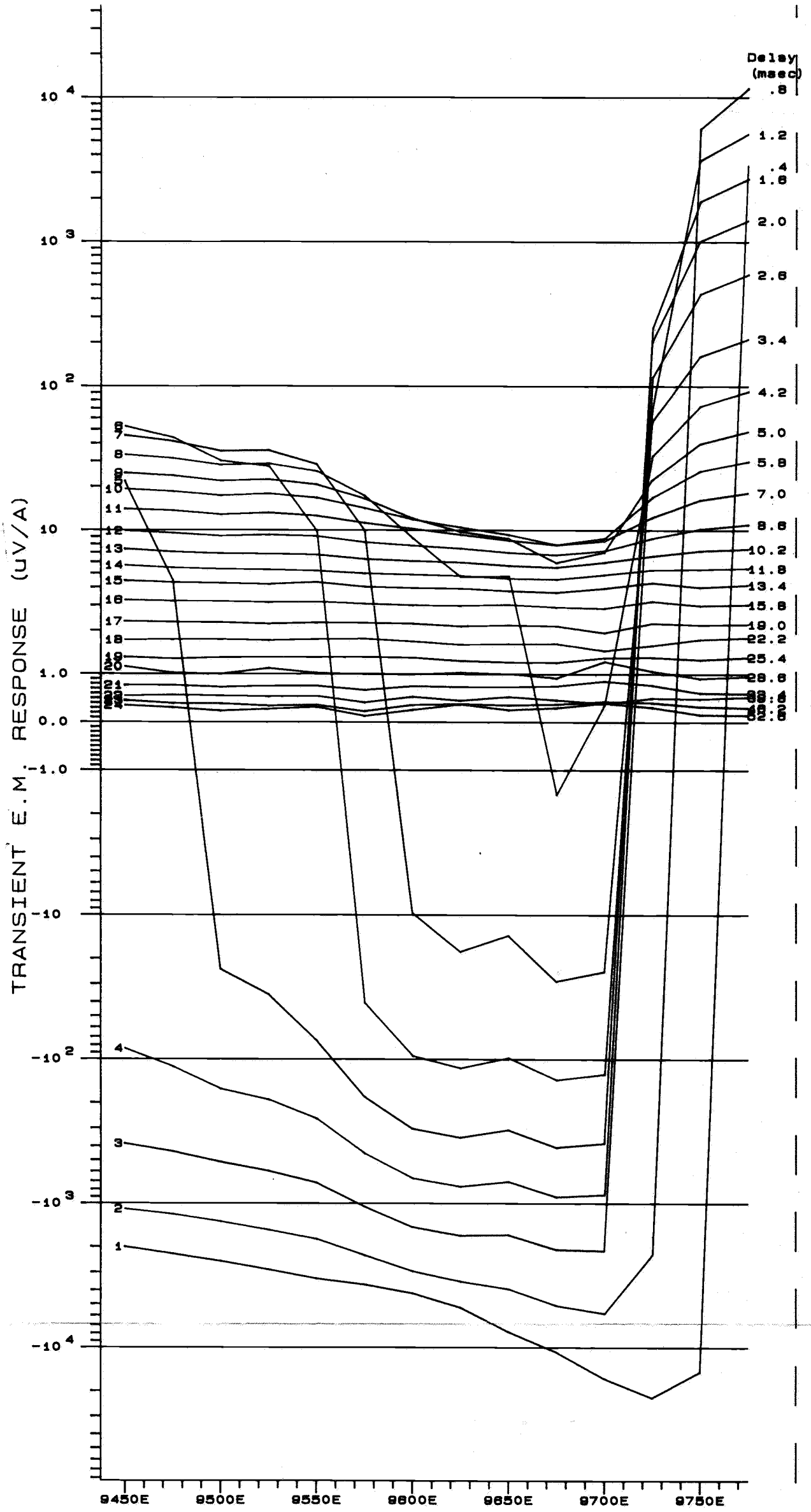
CRA EXPLORATION PTY. LTD.
MILANG E.L. 984, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SAa 2987**
LOOP NO 3 INMB39
SIROTEM Survey by SOLO Geophysics & Co. 3/10/84
LINE : 9100 NORTH Reading interval 25.0 m
SCALE 1 : 2500 Loop size : 250 x 500 m
LOOP configuration : TURAM mode (Z component)
Plotted : 3: 11 PM 16/10/84



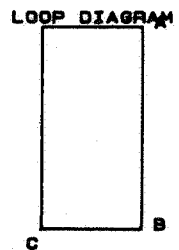
A = (9100N, 10050E)
B = (8600N, 10050E)
C = (8600N, 9800E)

SOLO

6054(11)-48



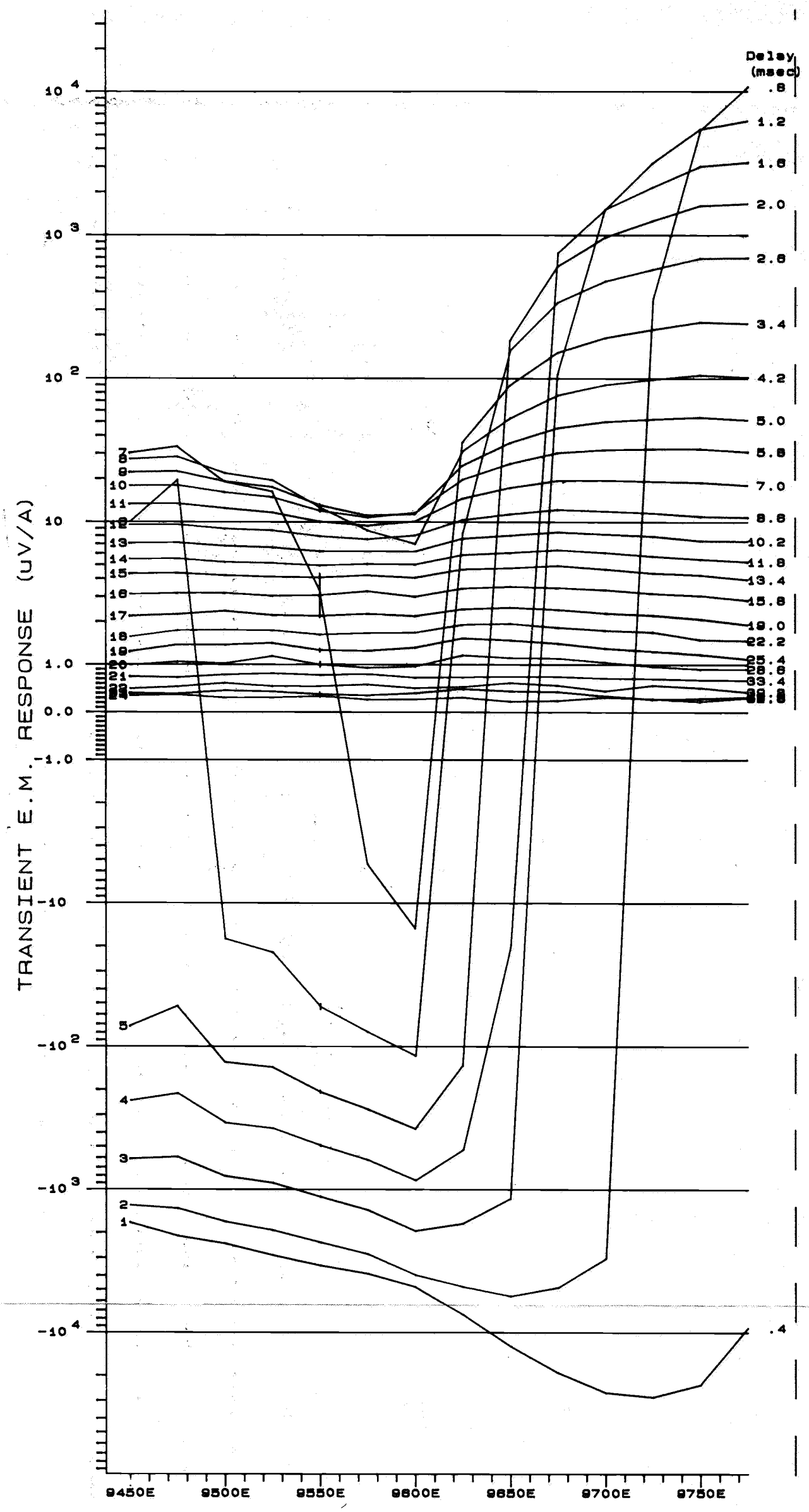
CRA EXPLORATION PTY. LTD.
MILANG E.L. 964, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SAa 2988**
LOOP NO 3 INMB39
SIROTEM Survey by SOLO Geophysics & Co. 3/10/84
LINE : 9000 NORTH Reading interval 25.0 m
SCALE 1 : 2500 Loop size : 250 x 500 m
LOOP configuration : TURAM mode (Z component)
Plotted : 12:26 PM 17/10/84



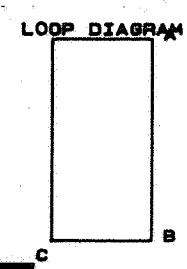
A = (9100N, 10050E)
B = (8600N, 10050E)
C = (8600N, 9800E)

SOLO

6054 (11)-49



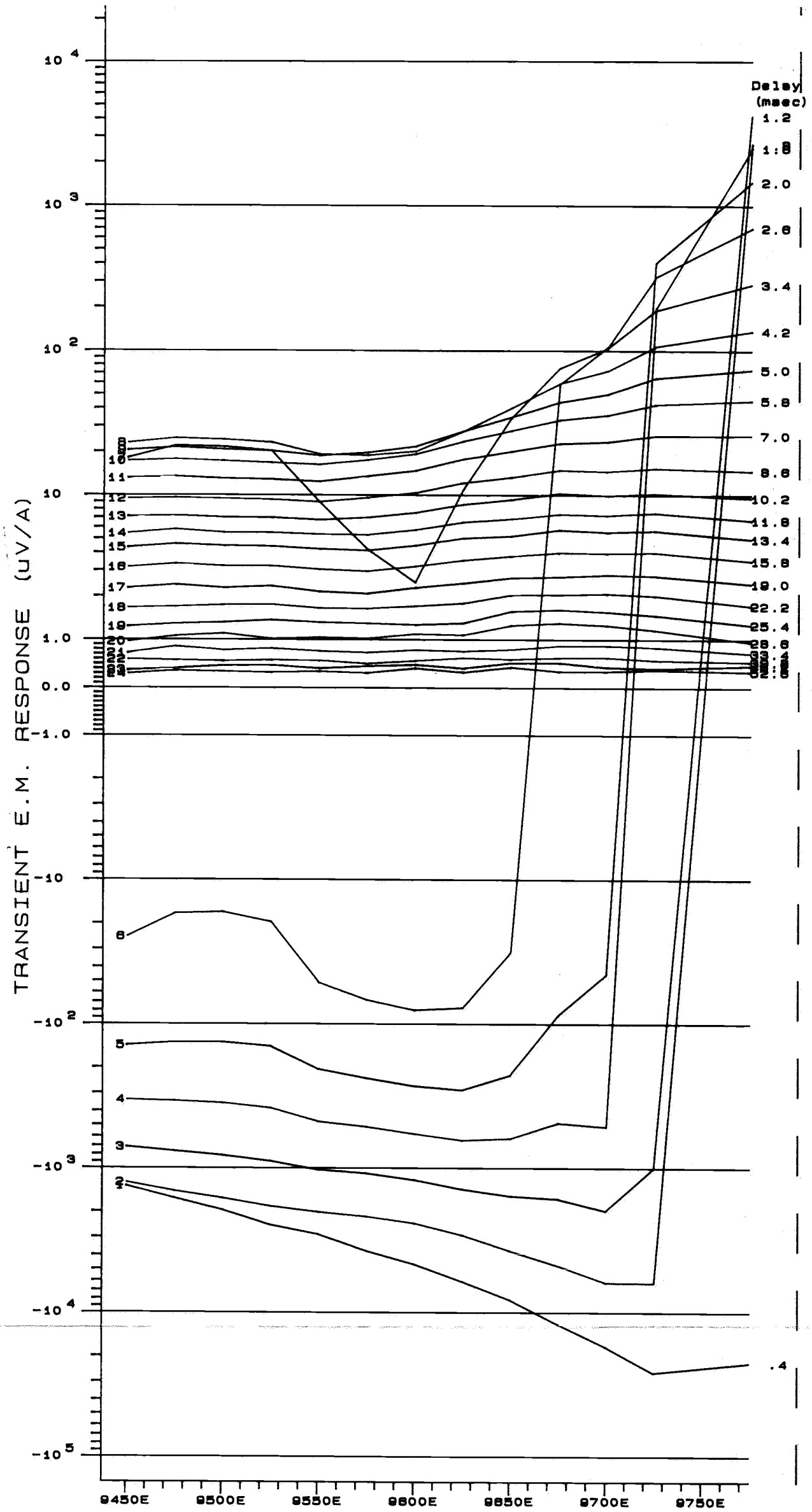
CRA EXPLORATION PTY. LTD.
MILANG E.L. 964, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SAa 2989**
LOOP NO 3 INMB39
SIROTEM Survey by SOLO Geophysics & Co. 3/10/84
LINE : 8900 NORTH Reading interval 25.0 m
SCALE 1 : 2500 Loop size : 250 x 500 m
LOOP configuration : TURAM mode (Z component)
Plotted : 12:21 PM 17/10/84



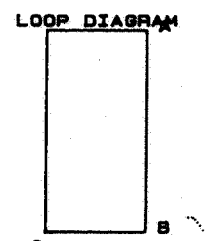
A = (9100N, 10050E)
B = (8600N, 10050E)
C = (8600N, 9800E)

SOLO

6054 (11)-50



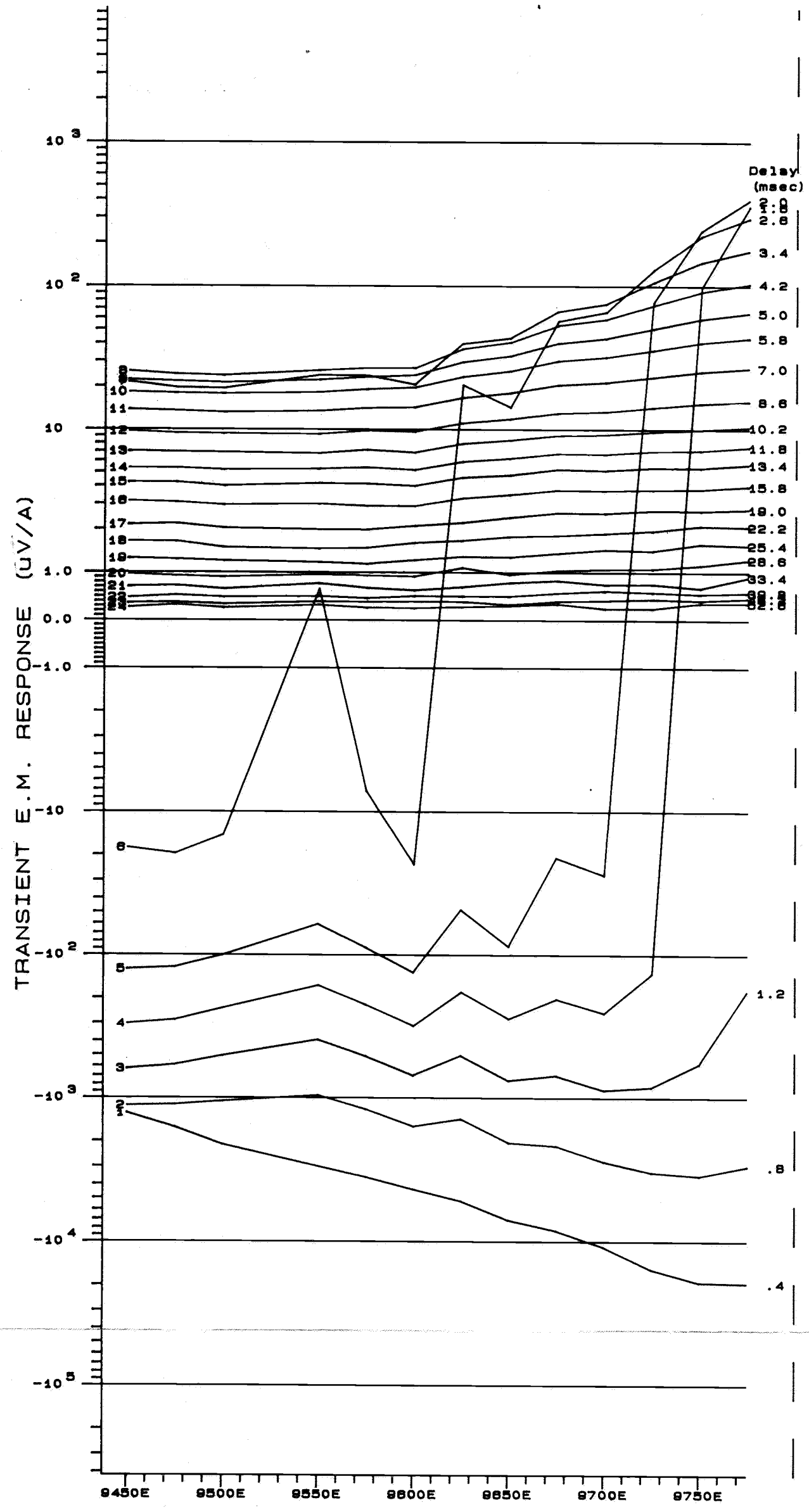
CRA EXPLORATION PTY. LTD.
MILANG E.L. 964, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SAa 2990**
LOOP NO 3 INMB39
SIROTEM Survey by SOLO Geophysics &' Co. 3/10/84
LINE : 8800 NORTH Reading interval 25.0 m
SCALE 1 : 2500 Loop size : 250 x 500 m
LOOP configuration : TURAM mode (Z component)
Plotted : 12: 17 PM 17/10/84



A = (9100N, 10050E)
B = (8800N, 10050E)
C = (8800N, 9800E)

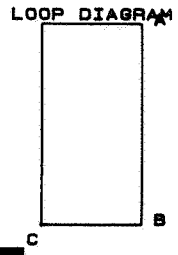
SOLO

6054 (11)-51



CRA EXPLORATION PTY. LTD.
MILANG E.L. 964, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SAa 2991**
LOOP NO 3 INMB39
SIROTEM Survey by SOLO Geophysics & Co. 4/10/84
LINE : 8700 NORTH Reading interval 25.0 m
SCALE 1 : 2500 Loop size : 250 x 500 m
LOOP configuration : TURAM mode (Z component)
Plotted : 12:31 PM 17/10/84

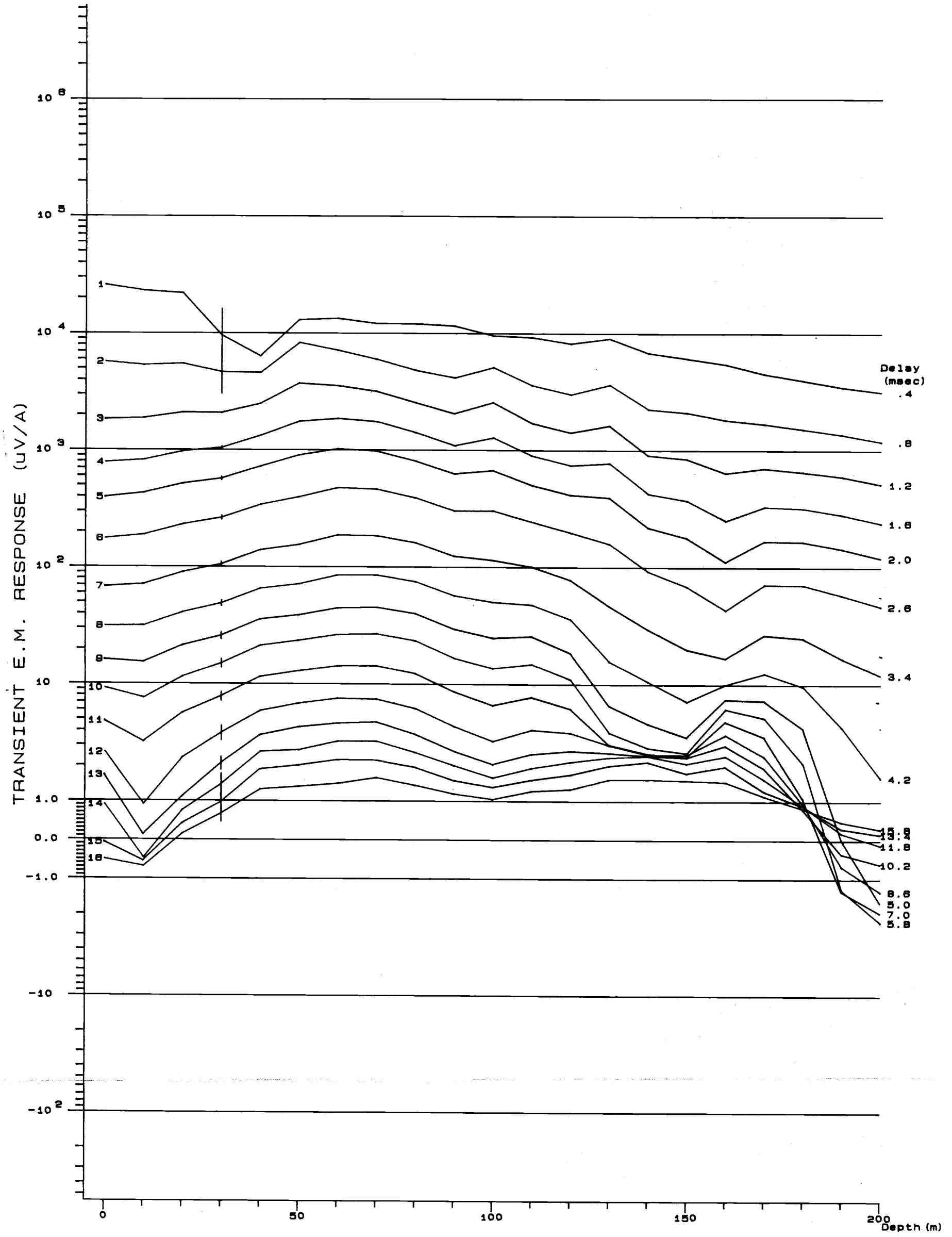
LOOP DIAGRAM



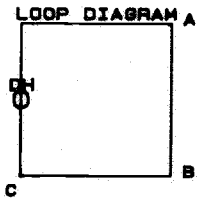
A = (9100N, 10050E)
B = (8600N, 10050E)
C = (8600N, 9800E)

SOLO

6054(11)-52



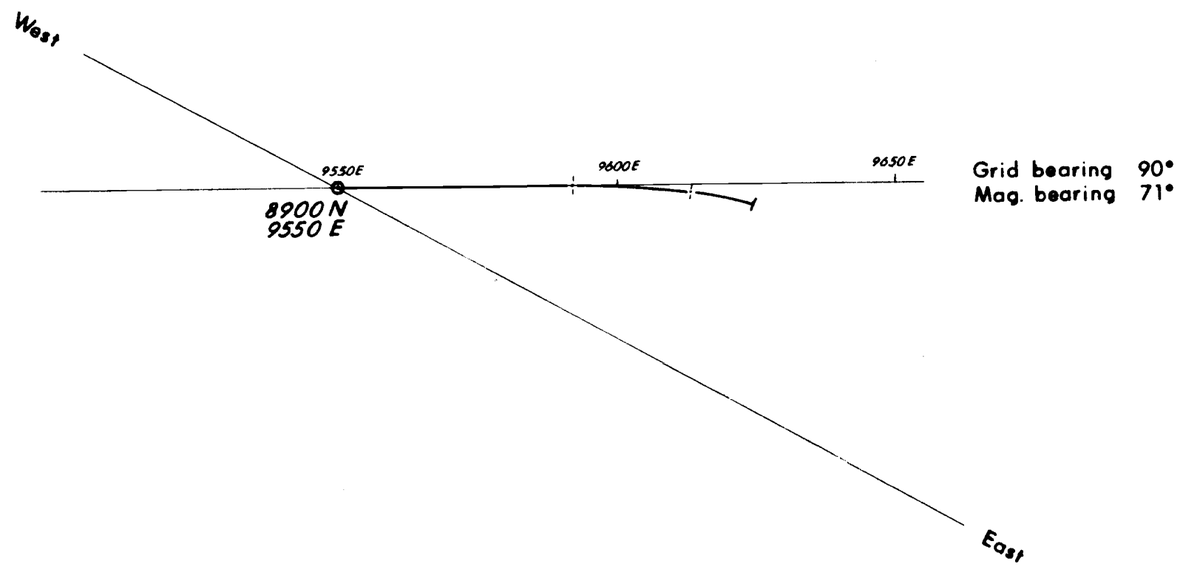
CRA EXPLORATION PTY. LTD.
MILANG E.L. 964, S.A.
REF: BARKER SI 54-13 REPORT 13291 PLAN No **SAa 2992**
HOLE PD84MI5 INMB39
SIROTEM Survey by SOLO Geophysics & Co. 4/10/84
SOLO hole ref.200 Reading interval 10.0 m
SCALE 1 : 1000 Loop size : 100 x 100 m
LOOP configuration : Drill hole
Plotted : 12:36 PM 17/10/84



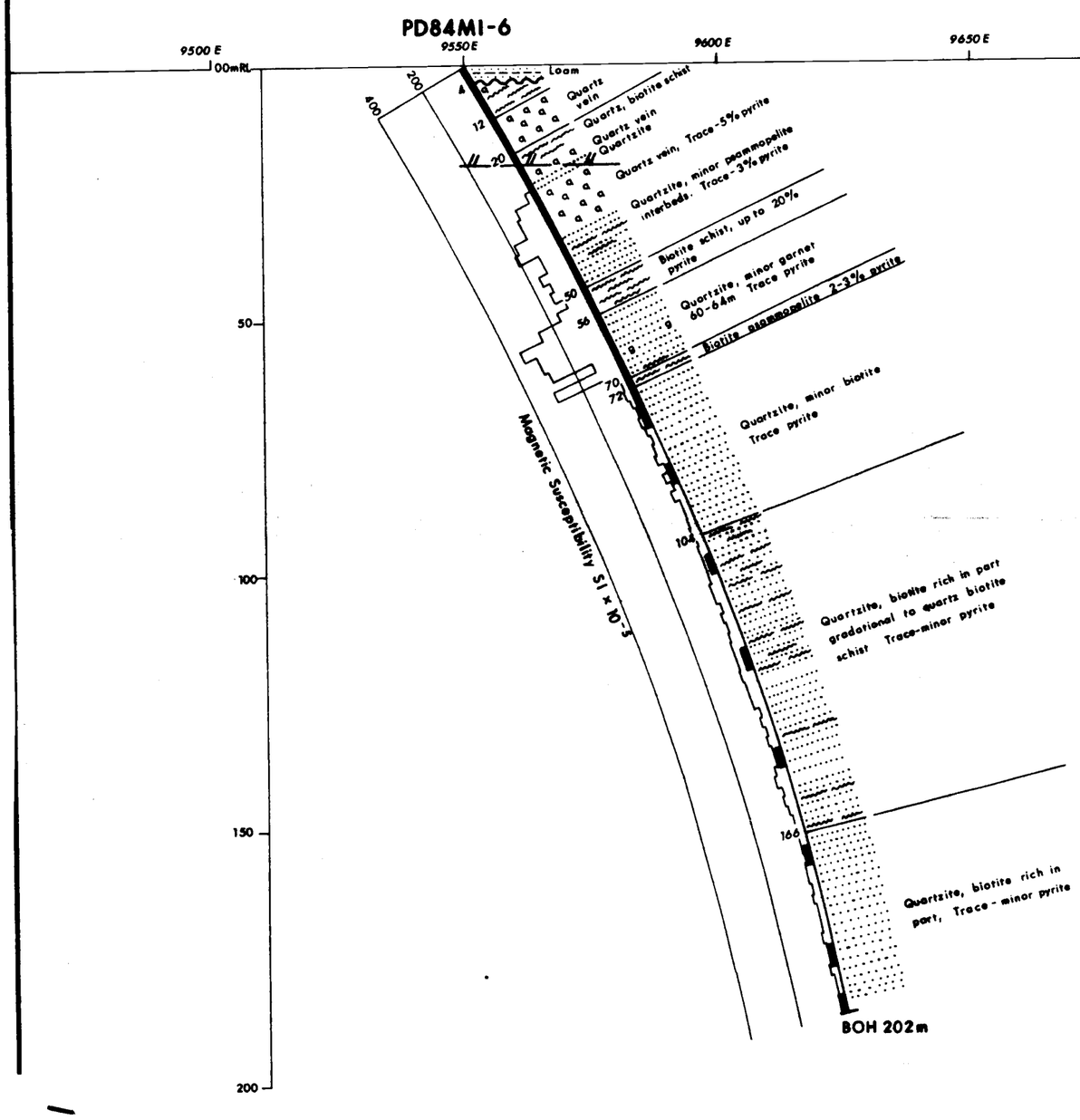
A = (8920N, 9250E)
B = (8920N, 8250E)
C = (8920N, 9150E)
DH= (8870N, 9150E)

SOLO

6054 (11)-53



Grid bearing 90°
Mag. bearing 71°



ANALYTICAL RESULTS

DEPTH FROM	TO	SAMPLE NUMBER	Cu	Pb	Zn	Ag	Mn	Sn	W	Au
PD84MI6										
28	30	1162665	82	32	33	<1	44	<4	10	<0.01
30	32	1162666	465	36	17	<1	36	6	15	<0.01
32	34	1162667	54	34	11	<1	36	6	15	<0.01
34	36	1162668	35	34	12	<1	34	4	15	<0.01
36	38	1162669	10	16	7	<1	32	4	10	<0.01
38	40	1162670	17	22	14	<1	96	6	15	<0.01
40	42	1162671	52	16	33	<1	345	6	10	<0.01
42	44	1162672	155	20	34	<1	325	8	<10	<0.01
44	46	1162673	62	8	34	<1	310	8	<10	<0.01
46	48	1162674	16	<5	27	<1	295	4	<10	<0.01
48	50	1162675	37	8	29	<1	305	6	10	<0.01
50	52	1162676	180	<5	68	<1	670	6	10	<0.01
52	54	1162677	960	<5	46	<1	440	10	<10	<0.01
54	56	1162678	3620	<5	26	<1	240	10	<10	<0.01
56	58	1162679	235	8	16	<1	160	4	10	<0.01
58	60	1162680	115	8	15	<1	170	<4	<10	<0.01
60	62	1162681	150	6	14	<1	150	<4	10	<0.01
62	64	1162682	96	10	12	<1	140	6	15	<0.01
64	66	1162683	90	8	32	<1	295	4	<10	<0.01
66	68	1162684	56	8	20	<1	260	<4	<10	<0.01
68	70	1162685	86	<5	22	<1	370	6	15	<0.01
70	72	1162686	160	10	28	<1	355	4	<10	<0.01
72	74	1162687	74	<5	28	<1	260	6	<10	<0.01
74	76	1162688	37	<5	20	<1	200	4	<10	<0.01
76	78	1162689	80	8	19	<1	220	<4	<10	<0.01
78	80	1162690	14	<5	11	<1	110	4	10	<0.01

Base of oxidation

Interval assayed

0 20 40 60 80 100 metres

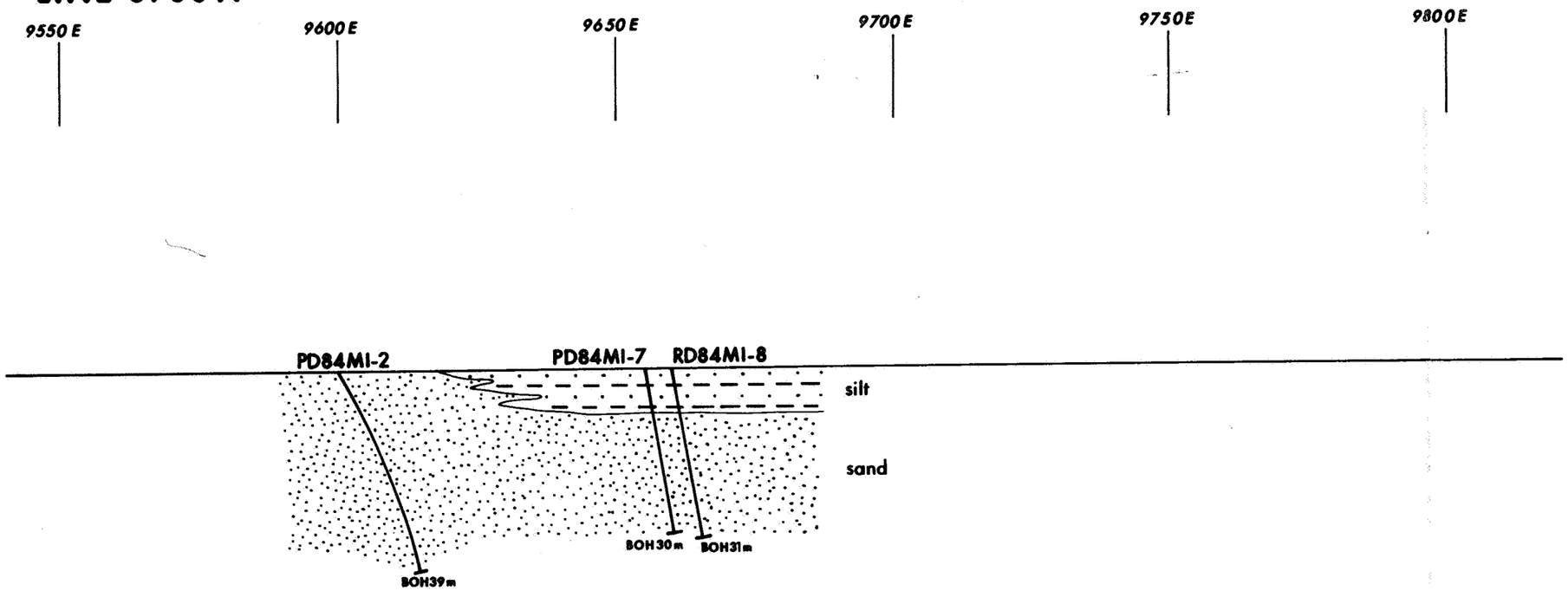
6054(11)-54

CRA EXPLORATION PTY LIMITED

MILANG EL 964 - S.A.
INMB 39a
DRILL HOLE SECTION PD84MI-6

Ref.	BARKER SI54-13	
Scale	1:1000	
Author	P L	Report No. 13291
Date	FEB, 1985	Plan No. SAa 3077

LINE 8900 N



6054(11)-55

CRA EXPLORATION PTY LIMITED

MILANG EL964 - S.A.
Anomaly InMB-38
DRILL HOLE SECTIONS OF
PD84MI-2, PD84MI-7 & RD84MI-8

REF.	BARKER SI 54-13	
SCALE	1:1000	
AUTHOR	P L	REPORT 13291
DATE	FEB.,1985	PLAN No SAa 3078

138°30' 139°00' 139°30'

T.N.

ADELAIDE

VINCENT ST. GULF

ADELAIDE SI54-9
BARKER SI54-13

35°00'

Springton
Cambrai
Black Hill
Sanderston
Mt. Pleasant
Birdwood
Tungkilo
Mt. Torrens
Hermann Hill
Mt. Lofty
Shephard Hill
Brukunga
Nairne
Marino Rocks
Port Noarlunga
Willunga
ALDINGA BAY

45'

139°12' 139°15' 34°50'

RIVER MURRAY

MANNUM

139°05' 34°56'

81RCRM1 81RCRM2 81RCRM3 81RCRM4 81RCRM5

Tepko

80RCRM4 80RCRM6 80RCRM2 80RCRM5 80RCRM1 80RCRM3

139°03' 34°59'

Hoffman

35°01'

80SCP13

139°10'

Burdett

35°05'

MURRAY BRIDGE

Bartlett

139°00'

35°10'

Bremer

PD84MI2, PD84MI7, RD84MI8.
PD84MI3
PD84MI4
PD84MI6
PD84MI5
81MBR65
81MBR66

82MB4RM1

81MBR67

138°50' 35°15'

STRATHALBYN

15'

TAILEM BEND

35°17'

139°20'

Wellington

138°45' 35°19'

138°55' 35°22'

139°05'

81MBR71
81MBR72
81MBR73

Milang

LAKE ALEXANDRINA

35°30'

Goolwa

138°30' 139°00'

KEY

- Major Road.
- Railway.
- EL Boundary
- o 82MB4RM1 CRAE Drill holes
- Area of Milang E.L.964 to be retained under Hartley E.L.1280.

SCALE 1:250,000

5 0 5 10 15 KMS

6054(11)-56

C.R.A. EXPLORATION PTY. LIMITED.

MILANG E.L. 964

DRILLHOLE LOCATION MAP
AREA TO BE RELINQUISHED
SHEET REF's.: ADELAIDE SI 54-9, BARKER SI 54-13

Geol.: P L	Scale: 1:250,000	Date Feb. '85
	Report No.: 13291	Plan No.: SAa 3308