Mobil Energy Minerals Australia Inc.

(INCORPORATED IN DELAWARE, U.S.A.; LIMITED LIABILITY)
(REGISTERED AS A FOREIGN COMPANY IN THE STATE OF VICTORIA)

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Exploration Licence 3526 - Sargent &
Exploration Licence 3560 - West Sargent
Final Report

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EXPLORATION LICENCE 3526 - SARGENT AND EXPLORATION LICENCE 3560 - WEST SARGENT

FINAL REPORT

Period : October 1982 to October 1983

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Author : A.P. Bravo

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SUMMARY

Exploration licences 3526 and 3560 were granted to Mobil Energy Minerals Australia Incorporated on October 1, 1982.

The mineral sought was uranium, either associated with Lower Proterozoic graphitic schist bands or as is typical of mineralisation in the Rum Jungle area at the contact between Coomalie Dolomite and Whites Formation.

The exploration programme consisted of surface geological mapping, magnetometer and scintillometer traversing, followed by short gravity and EM traversing in areas of interest. A total of 17 rotary air-blast drill holes (237 metres) were used for subsurface mapping and geochemical sampling.

Most of the work was carried out in EL 3560 where a small radiometric anomaly and a minor geophysical target were identified. A short diamond hole to 95.30 metres was drilled to test the geophysical anomaly which was found to be due to the presence of magnetite quartzite.

As the results obtained from exploration in EL 3560 were not encouraging a decision was made not to proceed with further exploration into EL 3526 and both were relinquished.

Expenditure on EL 3526 for the period 1/10/82 to 30/9/83 was $

Expenditure on EL 3560 for the period 1/10/82 to 5/10/83 was $

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1. INTRODUCTION

Exploration Licences 3526, Sargent and 3560, West Sargent were granted to Mobil Energy Minerals Australia Incorporated on October 1, 1982.

The two licence areas are located approximately 85 kilometres south-southeast of Darwin and 14 kilometres south of Batchelor between latitudes 131°00' and 131°02' east. Figure 1 shows the location and boundaries of the two licences.

Access to the area is via Batchelor, then by graded road to Cameron Downs homestead and then by dirt track south into West Sargents. An alternative route from Batchelor south along the old railway track gives access to the Sargents licence.

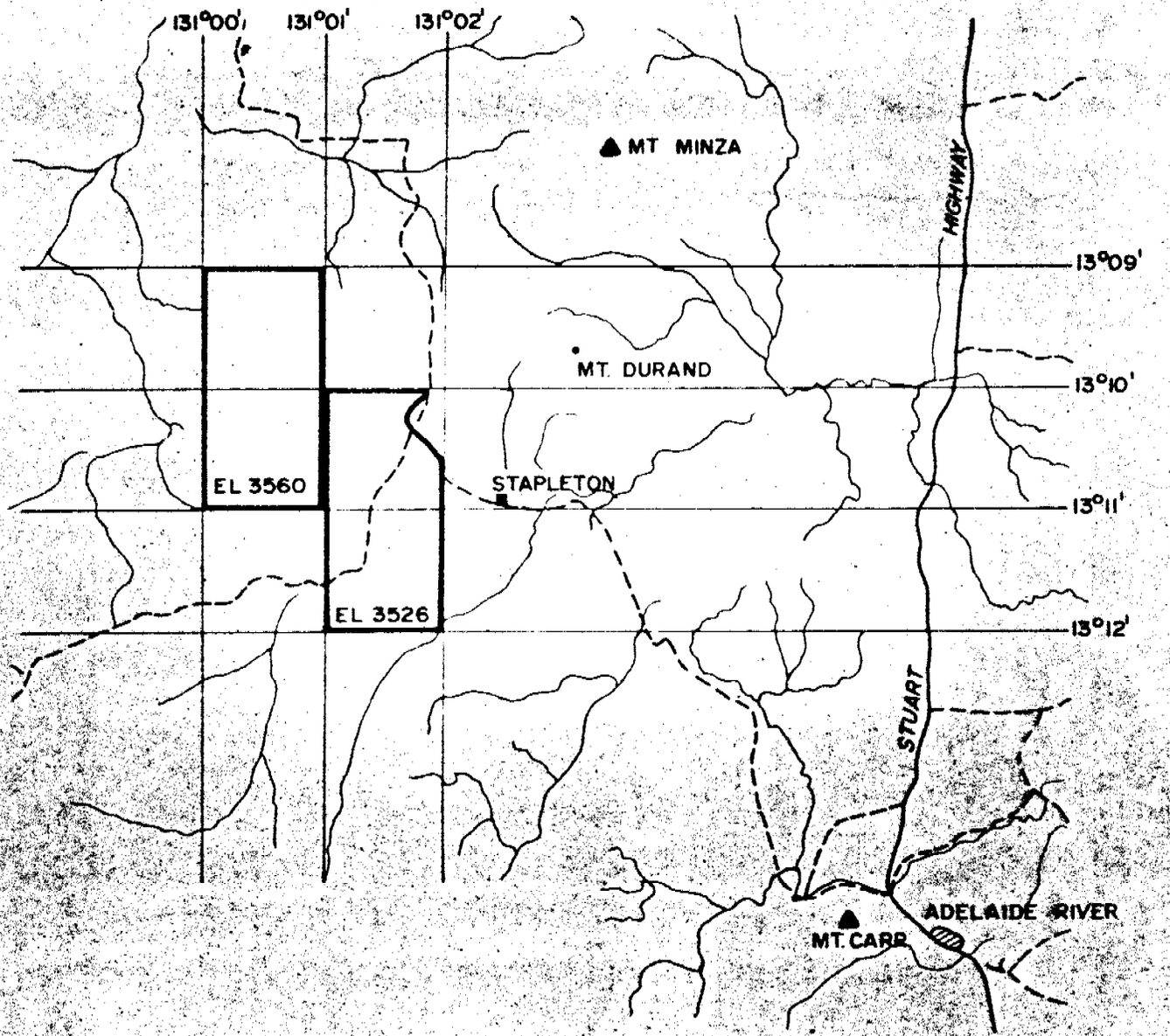
The area, which is largely open forest and grassland has been fenced but not cleared.

Two possible exploration targets were recognised :

(i) Alligator Rivers-type uranium mineralisation in the lowermost sediments of the Batchelor Group, immediately overlying Archean basement.

(ii) Rum Jungle (White's)-type copper-uranium mineralisation in graphitic shales of the Masson Formation near the contact with underlying Coomalie Dolomite. The prospective contact is known to be overlain unconformably by haematitic quartz breccia in the licence areas.

This report summarises work carried out between October 1982 and September 1983. Exploration consisted of geological mapping, ground magnetic and radiometric surveying, followed by selected gravity and GEM-8 EM traverses. The geophysical anomalies generated were tested by rotary air-blast drilling and one diamond drill hole.



0 1 2 3 4 KILOMETRES
SCALE 1:100,000

Figure 1

MOBIL ENERGY MINERALS AUSTRALIA					
PROJECT RUM JUNGLE					
EL 3526 & EL 3560 (SARGENTS & WEST SARGENTS) EL. BOUNDARIES					
COMPILED	DATE 1·2·83	BY E.R.M.	ADDNS	DATE	BY
DRAWN	8·2·83				
SCALE	1:100,000		DWG No.	3.3205.1.079	

Most of the exploration was carried out within EL 3560 with a view to extending the work into EL 3526. However, the results indicated that further work was not warranted in EL 3526 and the two areas were relinquished.

2. PREVIOUS EXPLORATION

The area of EL's 3526 and 3560 was previously covered by EL 1219, which was granted to International Mining Corporation N.L. (IMC) in July 1978. That same year IMC commissioned Geometrics International to fly an airborne magnetic and gamma ray spectrometer survey over the area.

Subsequent exploration was carried out during 1979 by Marathon Petroleum Australia Ltd. as operator in a joint venture with IMC. The programme included gridding, photo-geology, detailed interpretation of the airborne spectrometric and magnetic data with follow-up investigations of anomalies, reconnaissance scintillometer and radon surveys as well as rock and soil geochemical sampling. Follow-up work included a combined resistivity/EM survey, Track-Etch and percussion drilling.

The Track-Etch survey covered the Coomalie Dolomite/Masson Formation contact but only 27 cups were set within the area covered by EL's 3526 and 3560. An anomalous area was identified in the southwest corner of EL 3526.

3. CURRENT INVESTIGATION & RESULTS

3.1 Gridding

Nineteen lines were surveyed within EL 3560 and tied to the A.M.G. using theodolite and chain. Each line was 1900 metres long and the lines were 200 metres apart. Lines on which gravity was measured were also levelled.

3.2 Geology

EL 3560 covers the southeastern margin of the Waterhouse Complex where it is in contact with steeply dipping Lower Proterozoic sediments of the Batchelor Group. These sediments are in turn overlain unconformably by the Depot Creek Sandstone member of the Tolmer Group whose basal unit comprises haematitic quartz breccia (HQB). The HQB crops out extensively in the eastern half of EL 3560 and together with the laterite and alluvial cover obscures the geology eastward into EL 3526. However, Coomalie Dolomite is known to occur and the contact between Coomalie Dolomite and overlying carbonaceous shales which strikes through EL 3526 was delineated by Marathon Petroleum Australia Ltd. during earlier exploration.

Plan 1 shows the geology of the gridded area which was mapped in detail.

The Waterhouse Complex consisted predominantly of pink porphyritic granite with coarse tabular feldspars often aligned indicative of flow banding. Very few zenoliths or inclusions were noted but bands of quartz chlorite schist and veins with quartz and amethyst were recorded in granite proximal to the contact with Lower Proterozoic metasediments.

The basal unit of the Lower Proterozoic forms a prominent low ridge which trends generally north/south along the margin of the granite Complex. The unit dips steeply to the east and is less than 100 metres thick. It consists of fine to medium grained, well sorted, clean quartzite. Drilling has shown that it becomes a magnetite quartzite at depth and is overlain by coarse grained amphibolite containing phlogopite and some disseminated sulphides.

The amphibolite occupies the intervening area between the basal quartzite ridge and a discontinuous ridge of silicified dolomite further east (177.7E/424N).

This in turn is overlain by fine to medium grained, clean, indurated quartzite and a small pebble conglomerate which disappears below haematitic quartz breccia on line 450N.

The haematitic quartz breccia in this area is a distinctive, red brown,indurated unit comprising a variety of types ranging from haematitic siltstone to haematitic quartz grit to haematitic shale breccia, in which the silicified shale fragments appear to be after carbonate.

'Pudding-stone' laterite forms a discontinuous crust over the eastern half of EL 3560 especially in areas of fluctuating water level surrounding small lakes and swampy ground.

3.3 Magnetics

All the grid lines in EL 3560 were surveyed with readings taken at 25 metre intervals using a Geometrics G-856 Proton Precession Magnetometer.

The ground magnetic results were contoured and were plotted also as profiles of total magnetic intensity (see Plans 2 and 3 respectively).

The magnetic response was generally flat over the granite, peaking over the basal quartzite and becoming noisey with increased magnetic intensity over the lateritic areas.

3.4 Radiometrics

The grid was surveyed using an Urtec UG-135 portable, differentiating gamma ray spectrometer. Readings were taken at 25 metre intervals at ground level. TC1, TC2, potassium, uranium and thorium channels were read at each station. The TC2, uranium and potassium results were plotted and contoured and have been included (see Plans 4, 5 & 6 respectively). TC2 which is less sensitive than the TC1 channel was preferred because it provides more reliable data.

The radiometric response was moderate over the Granite Complex with TC1 spot highs to 445 cps above a background of 200 cps. Values were generally low background of 80 cps over the amphibolite. One zone of interest peaking at 550 cps over the metasediments background of 120 cps was located on lines 448N and 450N in the vicinity of 183E.

Further radiometric traversing was carried out to define the small anomaly on these lines taking readings at 10 metre spacing. The results were plotted as radiometric profiles as shown on Plan 7. The response which was narrow but specific was found to be associated with several thin bands of small quartz pebble conglomerate.

3.5 Gravity

In order to profile the granite margin and the dolomite formations gravity stations were read at 50 metre intervals along lines 424N, 428N, 432N, 440N.

Readings were tied back to a point on the access track at 176.6E/439.2N. A Worden Pioneer extended range model was used for the survey.

The observed gravity values were corrected for drift, latitude and elevation using a Bouguer density of 2.67 kg/m^3. The strong regional gradient increasing to the east is due to increasing thickness of Lower Proterozoic sediments. The effect of this was removed by assuming a constant regional gradient to produce the residual gravity profiles shown on Plan 8. The original and regional gravity profiles are plotted on Plan 9. A small residual anomaly was located coinciding with the basal Lower Proterozoic at 173E/424N.

3.6 Electro-magnetics

Detailed EM traverses were conducted over zones of interest on four lines viz. 424N, 428N, 448N and 450N.

McPhar GEM-8 multi-frequency EM equipment was used in the in-line mode with the transmitter in the west. Transmitter-receiver separation was 200 metres. The signal was transmitted through a 10 metre loop doubled over once and laid horizontally. All frequencies were transmitted untuned. Channels 0-6 (frequencies 41 to 2624 H_z) were strong enough for reasonable readings although Channel 6 became unreliable at times when the ground became more conductive, because of the large spacing. Stations were read at 100 metre intervals with readings at 50 metre intervals over zones of interest.

The results have been presented as pseudo-sections of tilt angle (Plans 10, 11, 12, 13) and for line 448N were converted to apparent conductivities (Plan 14, 15, 16).

Because there is no high conductivity at the surface, anomalies were strong and well defined and as shown from the results on line 448 were related to lithological differences.

3.7 Resistivity

Zonge Engineering and Research Organisation were contracted to carry out a test survey and provide complex resistivity data for the West Sargents licence. However, problems occurred and it was decided to use the equipment for a resistivity-phase survey in the dipole-dipole mode. Readings were taken at 50 metre intervals to n=6 along lines 424 and 448. Line 448 was extended beyond EL 3560 into EL 3526 to cover the Coomalie Dolomite/Whites Formation contact.

Two anomalous zones were identified as possibly conductive features at the eastern end of lines 448 and 424 respectively. The anomalies were interpreted as characteristic of highly conductive lithological units.

A report on the survey compiled by Zonge Engineering and the results have been included in Appendix 1.

3.8 Drilling

The stratigraphy across EL 3560 was tested by rotary air-blast (RAB) drilling to bedrock. The work was carried out by Stanley Drilling Company in October, 1982. 17 holes were drilled for a total of 237 metres.

To test the bedrock geochemistry a bottom of hole sample was taken from each RAB hole and submitted to Australian Laboratory Services for analysis. Samples were analysed for Cu, Pb, Zn, Co, Ni, Cr, Th and U by AAS.

Each hole was radiometrically logged using a SIE T450 downhole gamma logging device.

The location of all RAB holes is shown on Plan 1. Details of the RAB drilling together with a lithological summary and analytical results are included in Table 1. Copies of the drill logs and downhole gamma logs are included in Appendix 2 & 3.

A coincident gravity, EM and magnetic anomaly at 173.75E/424N was tested with a short diamond drill hole WSD1 to 95.30 metres. The anomaly was shown to be due to magnetite quartzite at depth. A drill log of the hole has been included in Appendix 2.

A number of intervals were selected for geochemical sampling as set out over the page.

Sample No	Interval	Description	Type
WSD1	63.70-64.0m	Amphibolite containing sulphides (2-5%) in coarse grained segregation. Pyrite/ chalcopyrite present.	Analysis
WSD2	85.0-85.44m	Dark green to black amphibolite (?chloritised)	Analysis
WSD3	88.7-88.9m	Quartzite containing interstitial spotty magnetite.	Analysis
WSD4	91.10-91.47m	Magnetite rich quartzite (70% magnetite)	Analysis specific gravity
WSD5	92.8-93.14m	Fine to medium quartzite with interstitial magnetite	Analysis

Half-core samples were analysed for Cu, Pb, Zn, Ni, Co, Ag, U, Au and Pt. The results, which were not encouraging have been included in Appendix 4 .

4. CONCLUSIONS

The 1982-83 programme utilised a number of geophysical techniques to explore EL 3560 for Alligator Rivers-type uranium deposits.

A small anomalous area of radioactivity was discovered in the northeast corner of the licence area. The radioactivity, which was confined to narrow bands of small pebble conglomerate, presumed to be part of the Crater Formation was spatially related to the Tolmer unconformity and may be of the same age.

The generally poor geophysical response has reduced the likelyhood that significant uranium mineralisation is present and it is considered that the area has been adequately tested.

As there is little encouragement for exploration to proceed into EL 3526 it was decided that both areas should be relinquished.

TABLE 1

TABLE 1: Summary of Rotary Air Blast Drilling - West Sargent EL 3560

Commencement Date: October 4, 1982
Completion Date: October 5, 1982

Hole No WSRAB	Depth Drilled (m)	Water Table (m)	AMG Co-ords	Local Co-ords	Depth γ Logged	Radiometric Summary	Lithological Summary	Petrol Sample No	Sample No	Sample Interval (m)	Analytical Results (ppm)								
											Cu	Pb	Zn	Co	Ni	Cr	Th	U	Sn
1	14	13	85438.7N 7174.4E		12.6	b/g 120cps, peak 180cps at 12.4m	porphyritic granite		2056	13-14	20	30	35	10	10	40	40	7	
2	19	15	85439.6N 7178.3E		18.0	b/g 10cps	amphibolite		2055	18-19	100	20	60	40	60	30	16	2	
3	7		85440.6N 7182.1E		5.5	b/g 30cps	haematitic quartz breccia in f.g. purple sandstone		2054	6-7	10	20	10	10	20	40	20	3	
4	4		85441.5N 7186.0E		3.4	b/g 30cps	haematitic quartz breccia in f.g. purple sandstone		2053	3-4	10	20	5	15	20	20	24	4	
5	8		85431.1N 7183.4E		7.1	b/g 10cps peak 40cps at 2m	fine grained feldspathic sandstone		2052	7-8	2	30	5	15	10	10	12	1	
6	20		85430.2N 7178.5E		12.0	b/g 10cps	amphibolite schist		2051	19-20	80	30	130	55	90	10	16	1	
7	20		85431.7N 7173.2E		19.5	b/g 150cps, falls to 50cps below 13m	amphibolite schist		2057	19-20	60	20	155	60	60	10	16	3	
									2066	5-6	20	30	60	15	10	10	88	16	
									2067	6-7	20	30	40	10	10	20	72	14	
									2068	7-8	20	30	50	10	10	15	72	13	
									2069	8-9	15	25	50	10	10	10	76	13	
									2070	3-4	20	30	50	10	20	10	92	14	
									2071	4-5	15	35	55	10	20	10	72	12	
8	21		85432.0N 7169.5E		16.0	b/g 100cps peak 175cps at 12m	granite		2058	20-21	10	30	30	10	10	40	32	6	
									2072	11-12	10	150	105	10	20	20	44	10	
									2073	12-13	10	110	120	10	15	15	60	14	
									2074	13-14	10	65	75	10	15	20	56	13	
9	14		85423.0N 7168.0E		13.0	b/g 100cps peak 150cps at 11m	granite		2059	13-14	15	20	15	10	10	15	52	13	
10	16		85422.7N 7192.1E		15.4	b/g 150cps	granite		2060	15-16	20	30	30	10	5	30	60	14	
									2075	8-9	10	25	30	5	10	10	76	14	
									2076	9-10	10	20	35	5	10	20	72	14	
									2077	10-11	10	30	50	10	10	10	76	21	
									2078	11-12	10	25	45	10	10	20	68	20	
11	20		85424.7N 7175.5E		19.2	b/g 30cps	limonitic siltstone		2061	19-20	190	25	55	90	45	60	12	2	
									2062	dupl	190	25	55	80	45	60	12	5	
12	20		85424.7N 7180.0E		19.0	b/g 40cps	limonitic purple/red siltstone		2063	19-20	40	30	10	20	30	10	20	6	

TABLE 1: Continued

Hole No WSRAB	Depth Drilled (m)	Water Table (m)	AMG Co-ords	Local Co-ords	Depth γ Logged	Radiometric Summary	Lithological Summary	Petrol Sample No	Sample No	Sample Interval (m)	Analytical Results (ppm)								
											Cu	Pb	Zn	Co	Ni	Cr	Th	U	Sn
13	4		85431.2N 7181.4E		2.8	b/g 20cps	quartzite: dark grey/ pink		2064		20	20	10	15	15	40	12	1	
14	6		85431.0N 7185.3E		5.5	b/g 20cps peak 40cps at 1m	fine grained feldspathic sandstone		2065		10	40	5	10	10	40	12	2	
15	19	18	85439.2N 7176.3E		17.9	b/g 100cps	granite		2079 2103	18-19 14-15	15 20	50 55	40 40	10 10	20 10	35 <5	52 44	9 8	
16	15		85440.0N 7180.0E		14.2	b/g 10cps	amphibolite schist		2080	14-15	85	20	65	45	90	15	12	<1	
17	10		85441.0N 7184.1E		9.5	b/g 35cps	haematitic quartz breccia (haematitic siltstone)		2081	9-10	2	15	5	10	20	15	28	<1	

APPENDIX 1

Report on CSAMT/CR Survey
Woolner/Batchelor Projects
Darwin, Northern Territories
for Mobil Energy Minerals Australia, Inc.

Report on CSAMT/CR Survey
Woolner/Batchelor Projects
Darwin, Northern Territories
for Mobil Energy Minerals Australia, Inc.

October 7, 1983

INTRODUCTION

At the request of Mobil Energy Minerals Australia, Inc. (Mobil), a crew of three was provided by Zonge Engineering and Research Organization (ZERO) to perform electrical surveys. This crew was mobilized from Adelaide, South Australia, on August 22, 1983. Personnel arrived in Darwin, Northern Territories, on August 26. All arrangements for this survey were made through Geophysical Exploration Consultants Pty Limited (GEC), Melbourne, Victoria.

The crew consisted of crew chief/geologist Mark Thoman, geophysicist Steve Figgins, and field assistant Peter Hoffman. Les Starkey from Mobil met with the crew and provided information pertaining to the project.

PROJECT SUMMARY

Surveys were to be completed in two project areas specified by Mobil: Woolner and Batchelor. It was planned for ZERO to conduct a controlled source audio-frequency magnetotelluric survey (CSAMT) on the Woolner prospect and provide complex resistivity (CR) coverage for the Batchelor prospect. Problems occurred which reduced the scope of this project. No data were collected on the Woolner prospect; only resistivity-phase (RP) data were acquired on the Batchelor prospect with a select number of CR spectra.

Because of the highly conductive nature of the mud-flats in the area of the Woolner prospect, it was not possible to use the Geotronics EMT-5000 transmitter. Loop resistance of the grounded transmitter dipole constructed for the Woolner prospect was 12 ohm-meters; efforts to increase the loop resistance in order to show operation of the EMT-5000 were unsuccessful. This transmitter will not handle low resistance loads and is sensitive to inductance. The EMT-5000 has been the standard transmitter used by ZERO for CSAMT measurements for survey operations to date. All EMT-5000 transmitters now in use by Zonge Engineering will be replaced by the ZERO GGT-20, a general applications EM transmitter, by January of 1984. The GGT-20 is capable of operating with either a grounded dipole or

loop antenna at frequencies from DC to 10 kHz. Survey conditions, such as found at Woolner, would not be a problem with this transmitter.

Initial concern by the crew over the quality of the CR data collected on the Batchelor prospect was unfortunate. This concern influenced the decision to select standard resistivity-phase (RP) coverage for the surveys completed on the Batchelor prospect rather than the proposed CR coverage. As it turned out, good quality CR data could have been obtained on this prospect and a select number of CR spectra were acquired on both line 424N and line 448N. The decision to obtain RP data, however, was fully justified considering the pressing need to acquire data as expeditiously as possible in the remaining survey time.

Interpretation presented in this report is given for the RP data completed on the Batchelor prospect as well as the CR data points which were also acquired. The crew arrived on the Woolner prospect August 27; operations were terminated August 30. The crew remobilized to the Batchelor prospect on August 31, completing operations on September 6; the crew demobilized to Darwin on September 7.

DATA SUMMARY AND CONCLUSIONS

Two anomalous zones are identified in the RP data; each zone has different electrical characteristics. Line 424N has an anomaly in the vicinity of stations 178 and 179 that could be classified as a conductive feature, possibly associated with moderate polarization extending to the east. The feature producing the polarization response is not completely bounded by survey coverage to the east.

Line 448N has an anomaly exhibiting both low resistivities and high polarization which is identified just east of station 187. The feature is not bounded by survey coverage to the east.

The anomalous zone located just to the east of station 178 is characteristic of a localized, highly conductive geologic unit. A similar response could be expected from massive sulfides with associated disseminated mineralization, or a highly fractured zone with very conductive ground water. In the second case, the polarization response would have to be related to adjacent structure. On line 448N, the anomalous feature identified east of station 189 is definitely characteristic of geologic structure containing carbonaceous and/or pyritic material.

Collection of CR data would have provided additional information which could have aided in further identification of the source of each electrically derived anomalous zone.

DETAILED DISCUSSION OF DATA

Coverage on the Batchelor prospect consisted of two east-west resistivity-phase (RP) survey lines: line 424N and line 448N. Dipole-dipole survey coverage was provided using a dipole length of 100 meters. Line 448N is located 2,400 meters north of line 424N; all station numbers are referenced from the same north-south baseline. A grounded metal fence, oriented approximately north-south, crosses both survey lines and is shown on the location map.

This grounded fence does not influence the electrical data to any great extent. A low phase diagonal centered on stations 178 and 179 on line 448N is the only obvious feature which can be attributed to this fence.

A general description of the surface geology was provided by Mobil; geologic trends appear to be oriented north-south. This information was matched with features identified on the apparent resistivity pseudosections for each

line; the approximate location of each contact is shown on Figure 1 and each contact is described in more detail below. Note that all geologic structure appears to generally dip to the east.

Line 424N

Station 172: approximate location of the lateral contact between granite and schist. Granites appear to have resistivities on the order of 500 to 1,000 ohm-meters; schists, 1,000 to 3,000 ohm-meters.

Station 174: approximate location of the lateral contact between the schist and dolomite. Resistivities of the dolomite appear to be in the range of 100 to 200 ohm-meters. A weak near-surface polarization feature is identified in the vicinity of this contact. A weathered surface appears to extend between station 174 and station 182 with the exception of an apparent surface exposure of dolomite near station 178 and station 179. Surface weathering could have characteristic resistivities of 10 to 20 ohm-meters.

Station 178/Station 179: a highly conductive structural unit is identified as a possible near-surface feature; top of this structure should be located within 100 meters of the surface. Negative phase values are usually indicative of sharp resistivity contrasts occurring across an electrically defined contact where the background polarization response is low. While the apparent resistivity pseudosection only shows a low resistance feature coincident with the negative phases, the negative phase values themselves would tend to indicate the occurrence of a resistivity contrast that could be on the order of 100 to 1. Moderately high phase values occurring just to the east of station 179 would tend to indicate the possibility of polarizable material extending in this direction. Phase values are greater than would be expected from simple inductive array coupling for this survey. Line 424N does not extend far enough east to fully identify the source of this polarizable response, although sulfides might possibly account for these results.

Line 448N

Survey coverage extends east past station 179, but this line is 2.4 km further to the north. There is no evidence of the conductive/polarizable structures identified in the vicinity of station 178 and station 179 on line 424N.

Station 183: Approximate location of a lateral contact between dolomite to the west and conglomerate/hematite structure to the east. It is expected that resistivities of the conglomerate would range between 200 and 500 ohm-meters.

Station 185: appears to identify the contact between the conglomerate and hematite. The resistivities of the hematite could be as high as 4,000 ohm-meters.

Station 189: approximate location of contact between the hematite and rocks associated with the "Whites Formation". The contact is identified both by resistivity and polarizability. Resistivities of this formation could be on the order of 10 to 20 ohm-meters; phase values indicate a polarization response on the order of 40 milliradians (or greater). Only four readings were taken defining this structure; additional measurements would be necessary to discuss this contact in more detail. The magnitude of the polarization response could suggest that graphite, or a combination of graphite/pyrite, is associated with the "White Formation".

Modeling has not been used to substantiate resistivities assigned to each structural unit discussed. Values indicated should be considered as no more than initial guesses.

CR spectra were obtained on both line 424N and line 448N. Field spectra appears to be primarily associated with the dolomite structure. The decoupled spectra (I.P. response) indicates that neither the dolomite or dolomite/schist contact are associated with significant mineralization, at least in the limited areas of the spectral measurements. The n=1 decoupled spectra taken on line 448N may be indicative of sulfides, but only near surface in trace quantities, if at all. The next two spectra of interest would be the n=3 from this line as well as the n=1 from line 424N, but data scatter make any observations inconclusive. Decoupling results on line 424N indicate high resistivity structure at depth (possibly the dolomite/schist contact). Results of line 448N indicate a low resistivity surface layer (possibly surface weathering); observations at depth are inconclusive. Note that coupling coefficients are used to evaluate resistivity layering. It is unfortunate that full spectral measurements were not acquired on the far east end of both lines 424N and 448N; this information would have allowed a more detailed analysis of the source of each polarization anomaly.

Results of the five CR spectra measured on line 424N and line 448N are included in this report; this information is presented in both tabular form as well as in complex plane plots. On line 424N, the n=2 through n=5 spectra are satisfactory with

only the data at 56 Hz being influenced somewhat by slight drift in the 50/150 Hz notch filter. The n=1 spectra has significant noise, but this is the result of current regulation. High electrode resistances restricted the current used for the n=1 measurement to 0.3 amperes. The transmitter used for the survey does not regulate current effectively below 0.4 amperes. The data collected at the fundamental frequency are thought to be accurate; however the harmonic terms are significantly effected by the loss of current regulation. No transmitter related effects are observed for the CR data on line 448N.

Van Reed

Norman R. Carlson

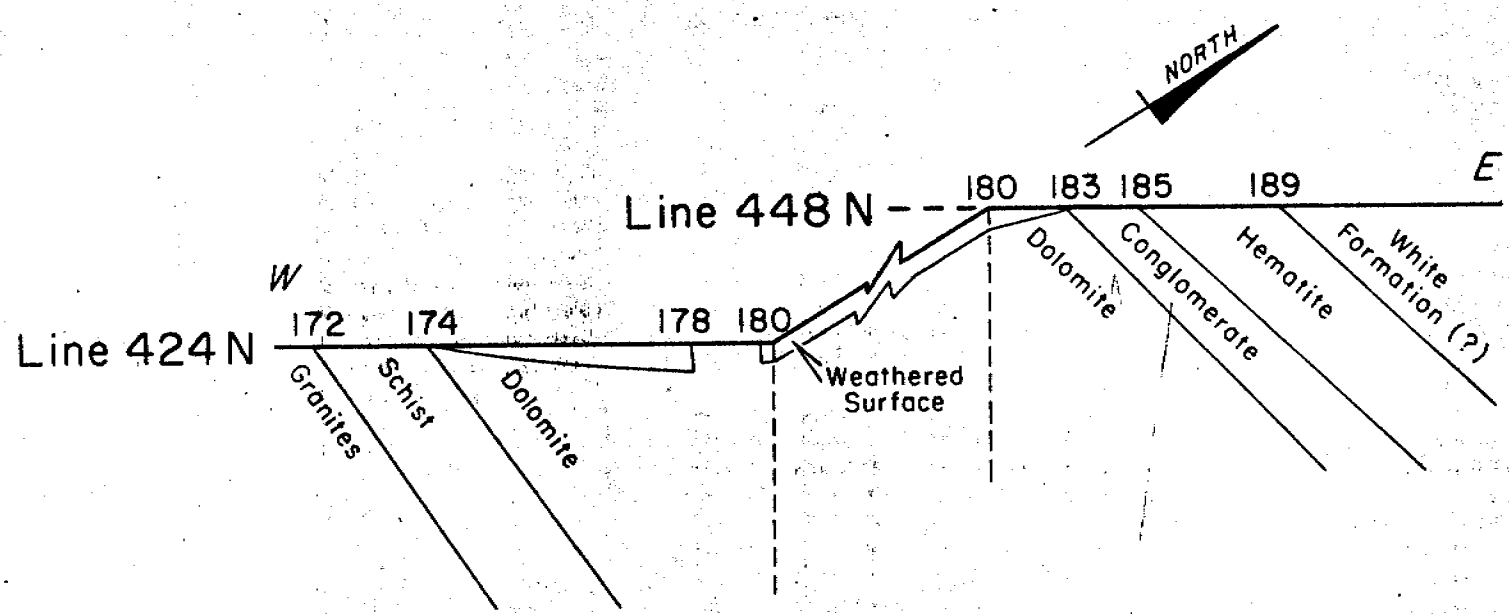


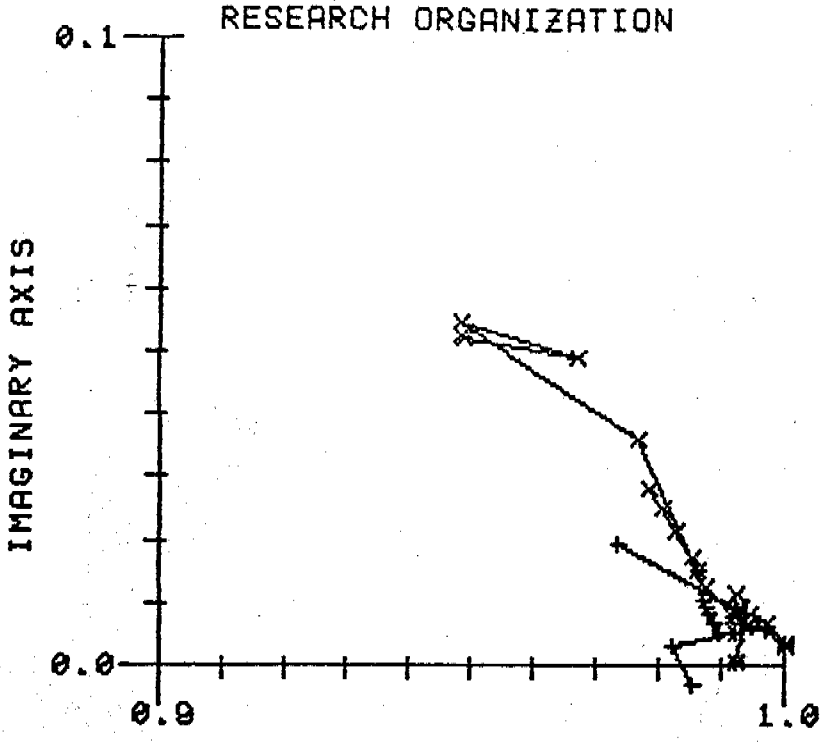
FIGURE I.

IDEALIZED GEOLOGIC SECTION

(NO SCALE)

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: RAW DATA
and: DECOUPLED I.P.

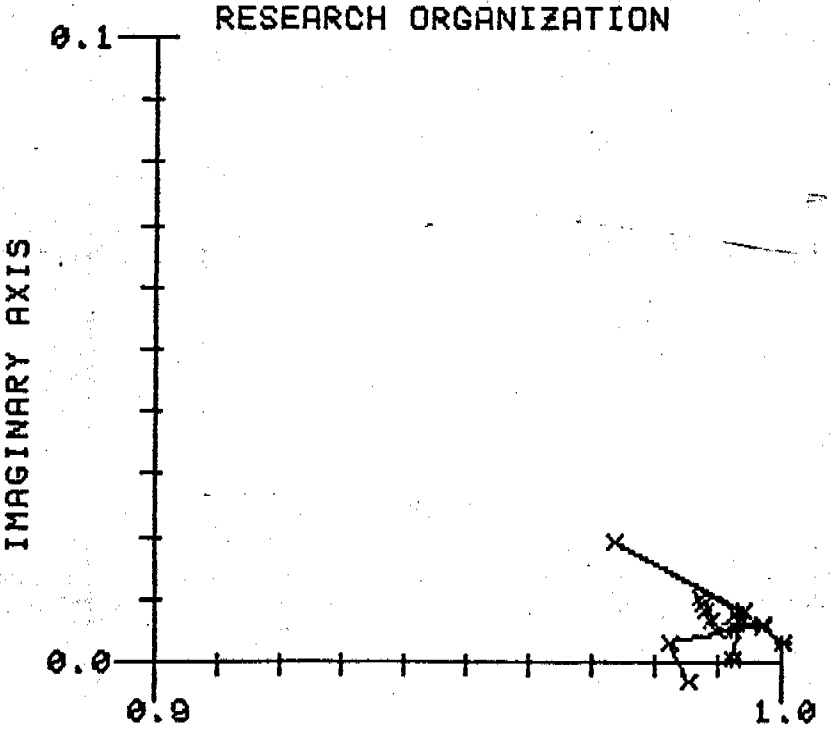


Batchelor
Rcvr: 71.0 Job : 383 Rho : 458.4
Xmtr: 73.0 Date : Sep 83 LoPhz: 3.8
N-sp: 1.0 Line : 424N A-sp: 100.0m

83C24 "
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: DECOUPLED I.P.

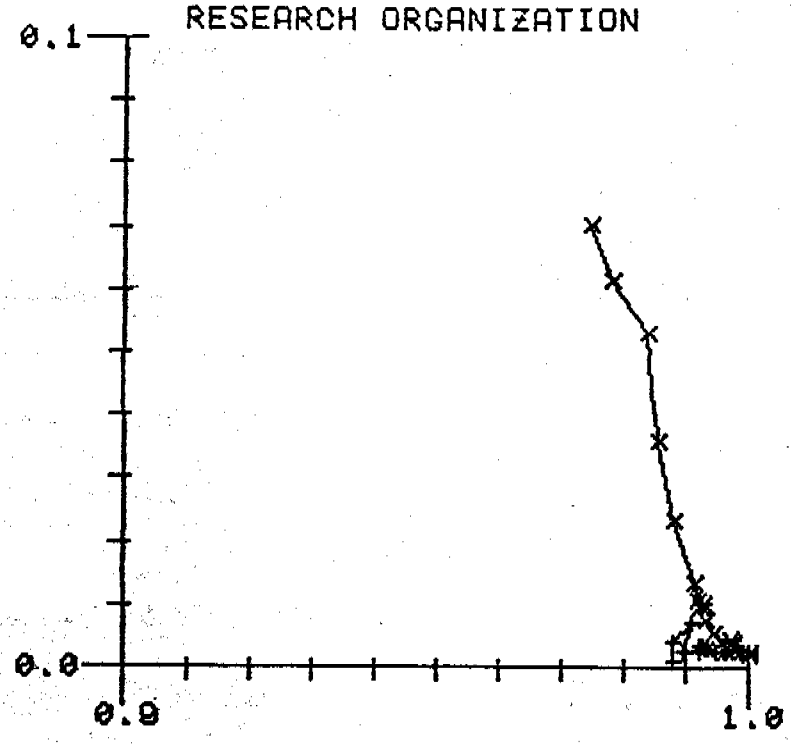


Batchelor
Rcvr: 71.0 Job : 383 Rho : 458.4
Xmtr: 73.0 Date : Sep 83 C-Phz: 3.3
N-sp: 1.0 Line : 424N A-sp: 100.0m

83C24 "
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: RAW DATA
and: DECOUPLED I.P.

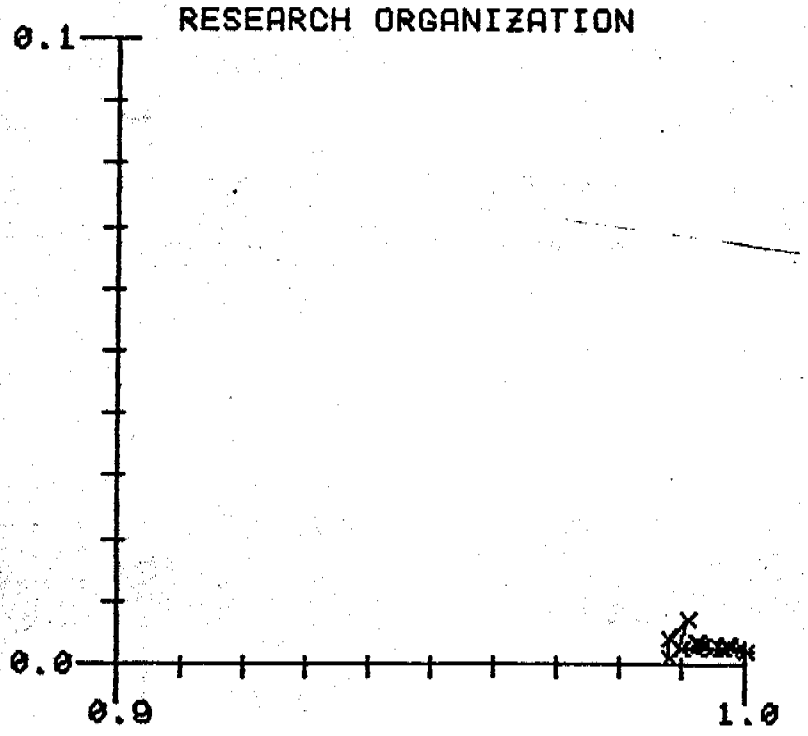


Batchelor
Rcvr: 71.0 Job : 383 Rho : 51.1
Xmtr: 74.0 Date : Sep 83 LoPhz: 2.4
N-sp: 2.0 Line : 424N A-sp: 100.0m

83C24 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: DECOUPLED I.P.

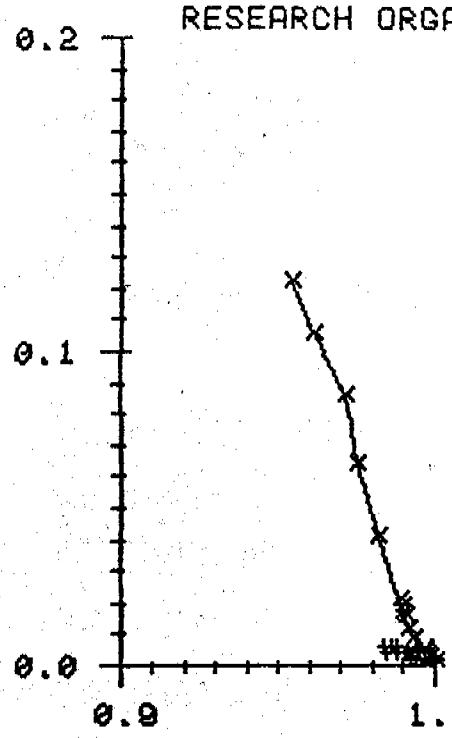


Batchelor
Rcvr: 71.0 Job : 383 Rho : 51.1
Xmtr: 74.0 Date : Sep 83 C-Phz: 2.3
N-sp: 2.0 Line : 424N A-sp: 100.0m

83C24 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: RAW DATA
and: DECOUPLED I.P.

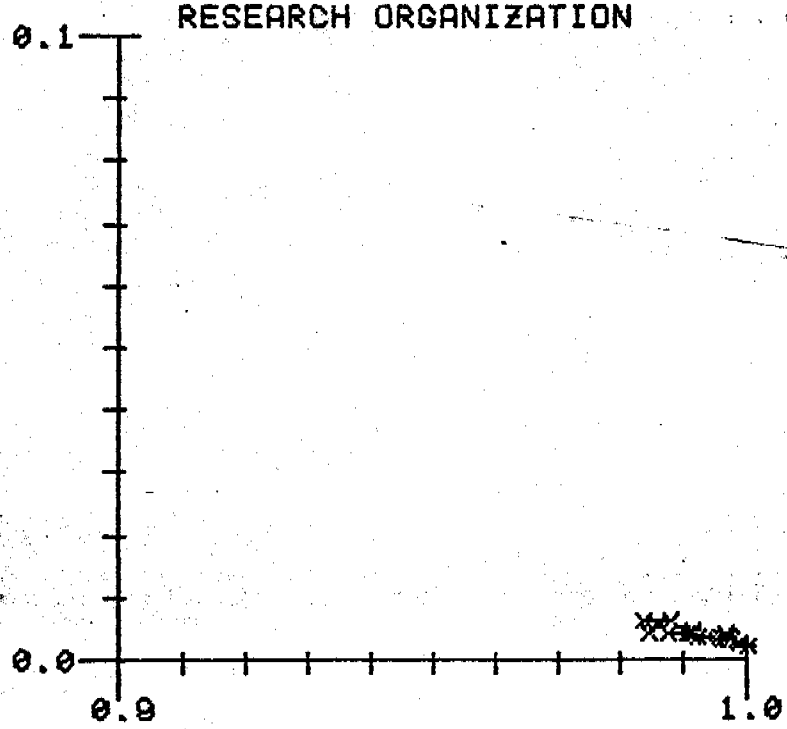


Batchelor
Rcvr: 71.0 Job : 383 Rho : 52.9
Xmtr: 75.0 Date : Sep 83 LoPhz: 2.5
N-sp: 3.0 Line : 424N A-sp: 100.0m

83C24 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: DECOUPLED I.P.

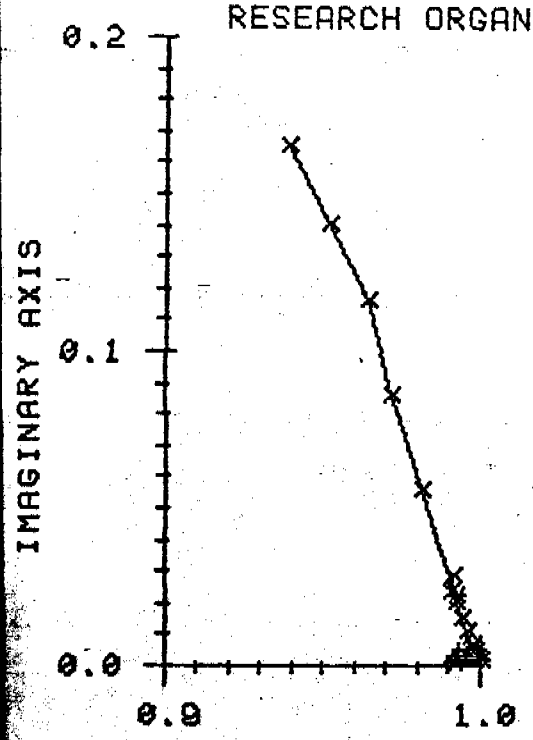


Batchelor
Rcvr: 71.0 Job : 383 Rho : 52.9
Xmtr: 75.0 Date : Sep 83 C-Phz: 2.2
N-sp: 3.0 Line : 424N A-sp: 100.0m

83C24 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: RAW DATA
and: DECOUPLED I.P.

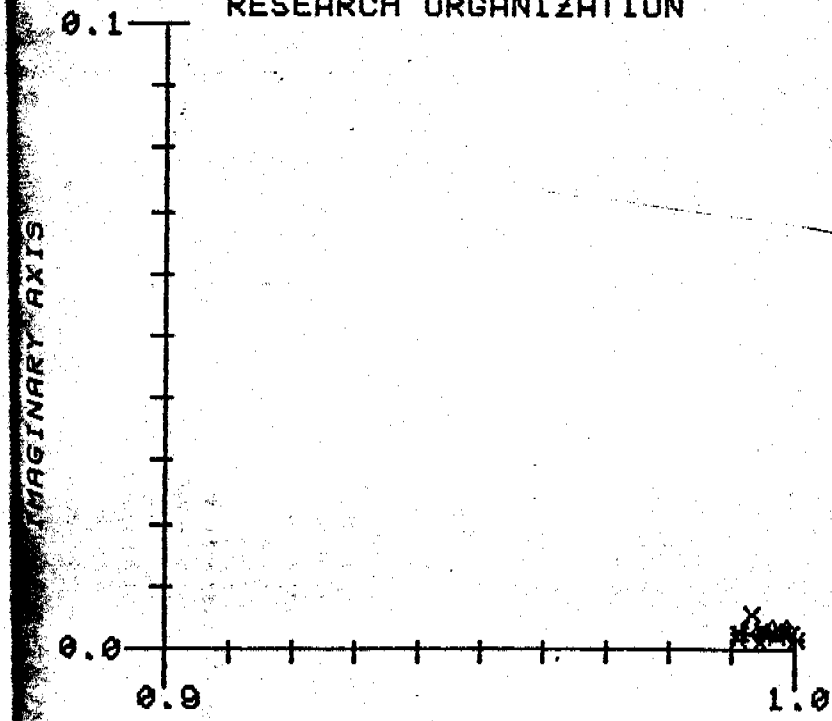


Batchelor
Rcvr: 71.0 Job : 383 Rho : 73.2
Xmtr: 76.0 Date : Sep 83 LoPhz: 2.2
N-sp: 4.0 Line : 424N A-sp: 100.0m

83C24 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: DECOUPLED I.P.

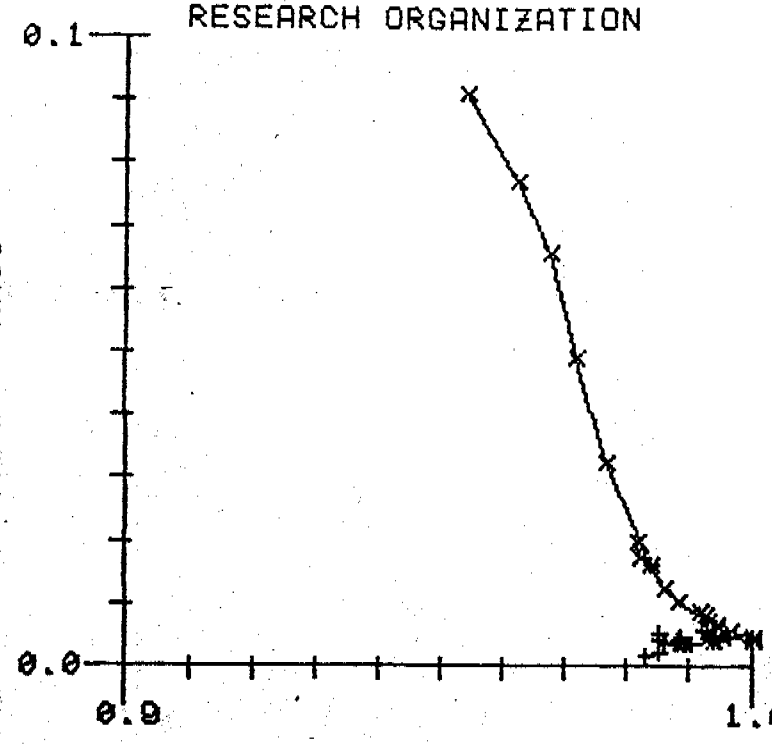


Batchelor
Rcvr: 71.0 Job : 383 Rho : 73.2
Xmtr: 76.0 Date : Sep 83 C-Phz: 1.8
N-sp: 4.0 Line : 424N A-sp: 100.0m

83C24 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: RAW DATA
and: DECOUPLED I.P.



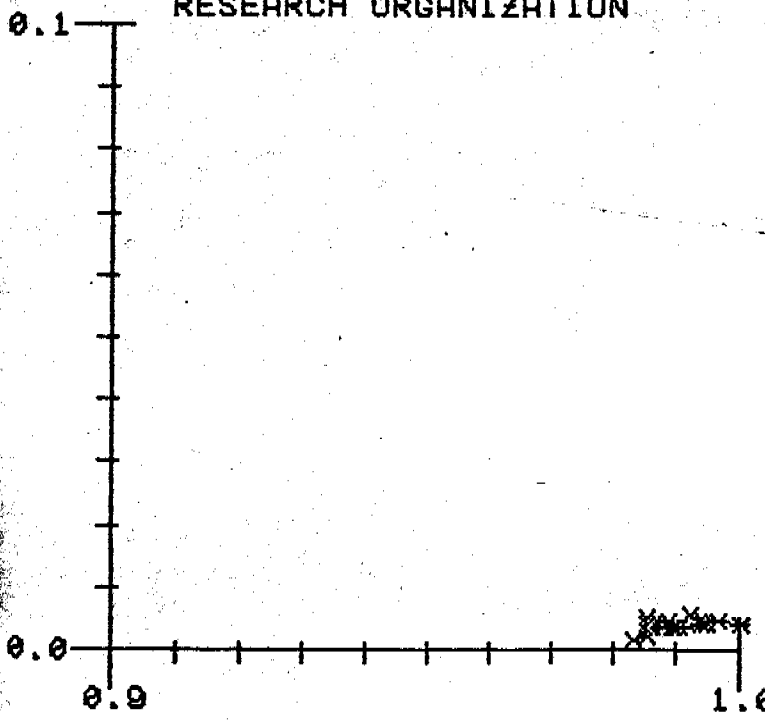
Batchelor

Rcvr:	79.0	Job :	383	Rho :	27.1
Xmtr:	81.0	Date :	Sep 83	LoPhz:	4.7
N-sp:	1.0	Line :	448N	A-sp:	100.0m

83C48 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: DECOUPLED I.P.



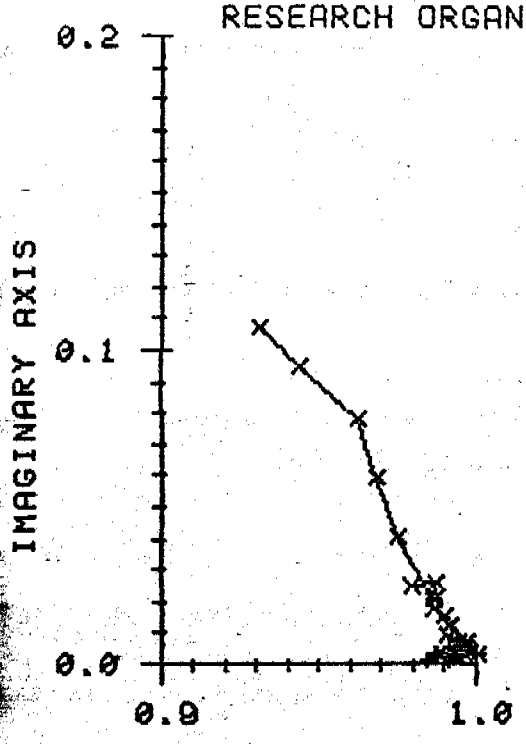
Batchelor

Rcvr:	79.0	Job :	383	Rho :	27.1
Xmtr:	81.0	Date :	Sep 83	C-Phz:	4.2
N-sp:	1.0	Line :	448N	A-sp:	100.0m

83C48 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: RAW DATA
and: DECOUPLED I.P.

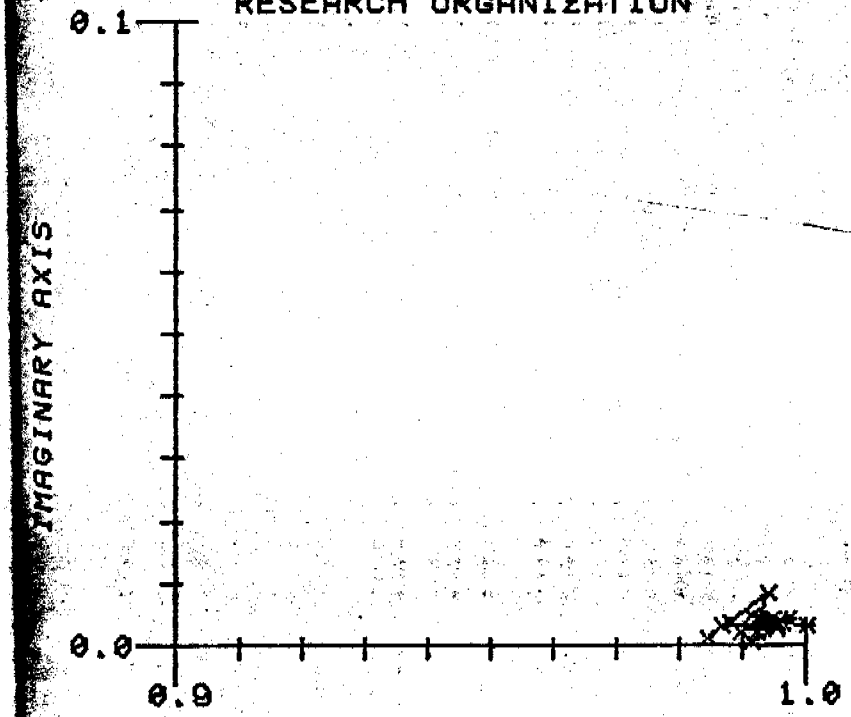


Batchelor
Rcvr: 79.0 Job : 383 Rho : 28.8
Xmtr: 82.0 Date : Sep 83 LoPhz: 3.6
N-sp: 2.0 Line : 448N A-sp: 100.0m

83C48 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: DECOUPLED I.P.

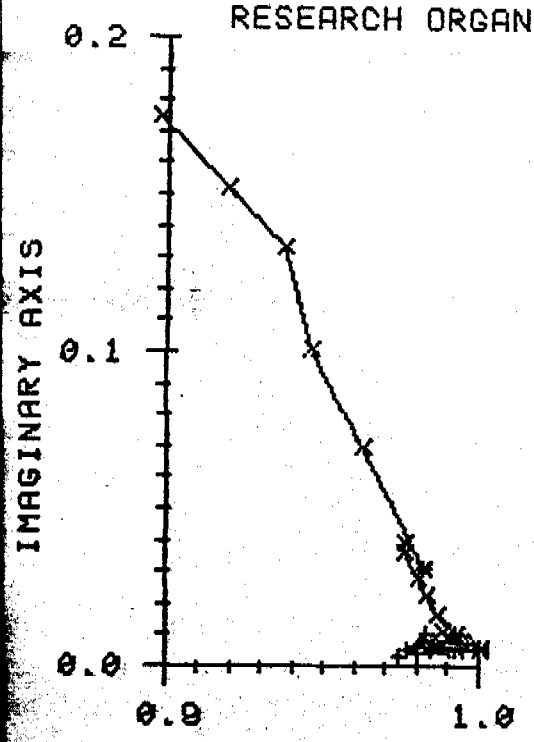


Batchelor
Rcvr: 79.0 Job : 383 Rho : 28.8
Xmtr: 82.0 Date : Sep 83 C-Phz: 3.1
N-sp: 2.0 Line : 448N A-sp: 100.0m

83C48 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: RAW DATA
and: DECOUPLED I.P.

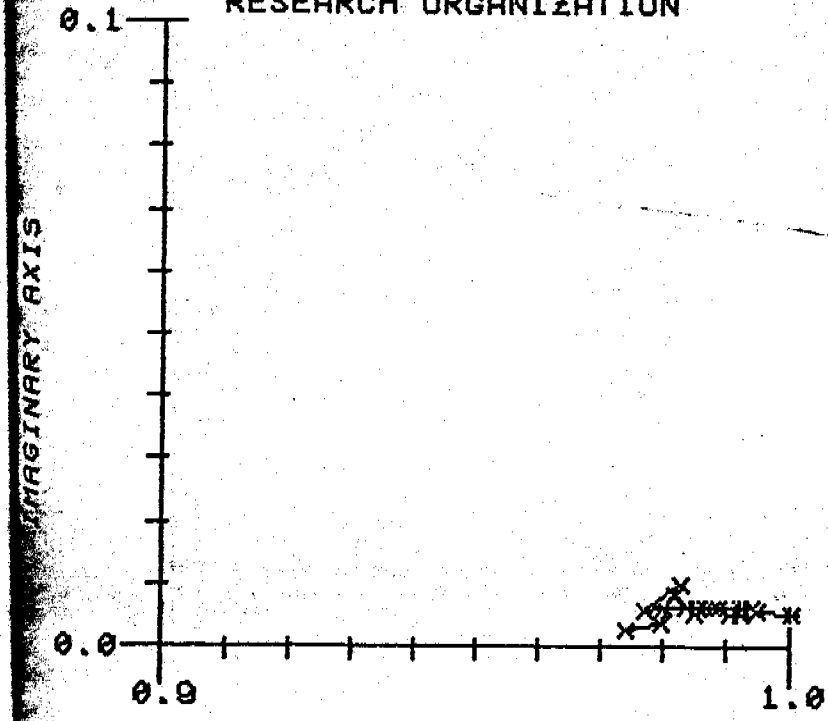


Batchelor
Rcvr: 79.0 Job : 383 Rho : 78.7
Xmtr: 83.0 Date : Sep 83 LoPhz: 5.9
N-sp: 3.0 Line : 448N A-sp: 100.0m

83CU8 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: DECOUPLED I.P.

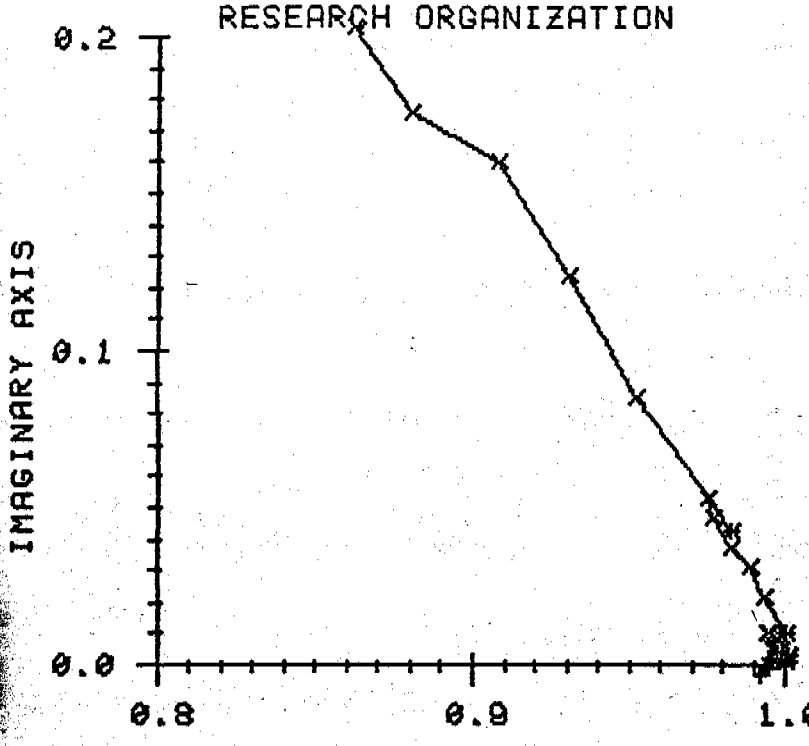


Batchelor
Rcvr: 79.0 Job : 383 Rho : 78.7
Xmtr: 83.0 Date : Sep 83 C-Phz: 5.3
N-sp: 3.0 Line : 448N A-sp: 100.0m

83CU8 *
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: RAW DATA
and: DECOUPLED I.P.

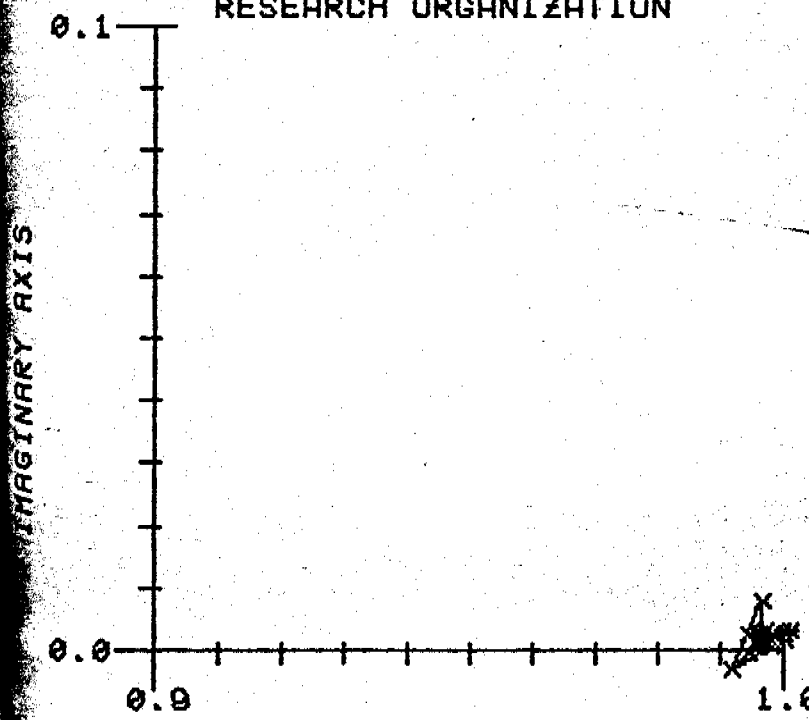


Batchelor
Rcvr: 79.0 Job : 383 Rho : 58.1
Xmtr: 84.0 Date : Sep 83 LoPhz: 2.6
N-sp: 4.0 Line : 448N A-sp: 100.0m

82C48 "
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: DECOUPLED I.P.

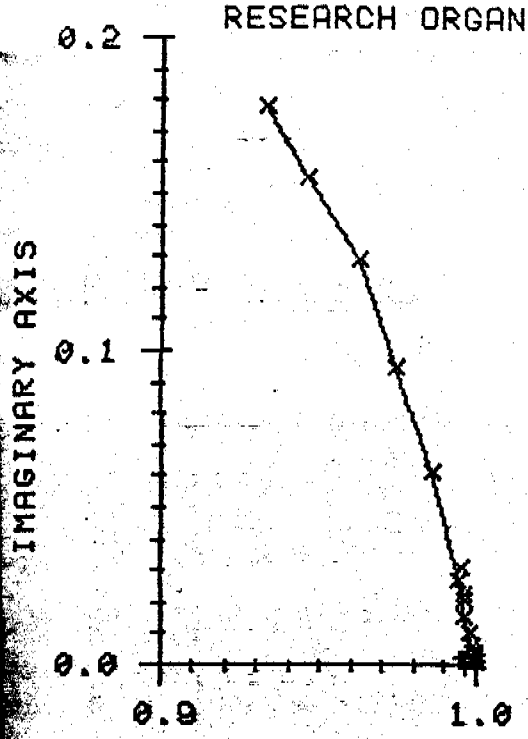


Batchelor
Rcvr: 79.0 Job : 383 Rho : 58.1
Xmtr: 84.0 Date : Sep 83 C-Phz: 1.4
N-sp: 4.0 Line : 448N A-sp: 100.0m

82C48 "
CRRED 2D

ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: RAW DATA
and: DECOUPLED I.P.

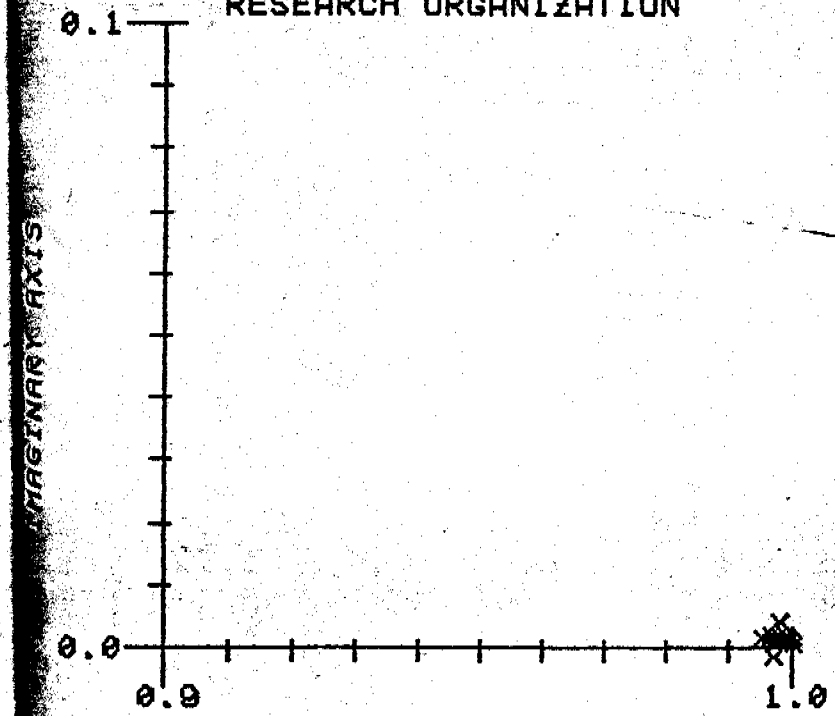


Batchelor
Rcvr: 71.0 Job : 383 Rho : 114.6
Xmtr: 77.0 Date : Sep 83 LoPhz: 1.1
N-sp: 5.0 Line : 424N A-sp: 100.0m

83C24 *
CRRED 2D

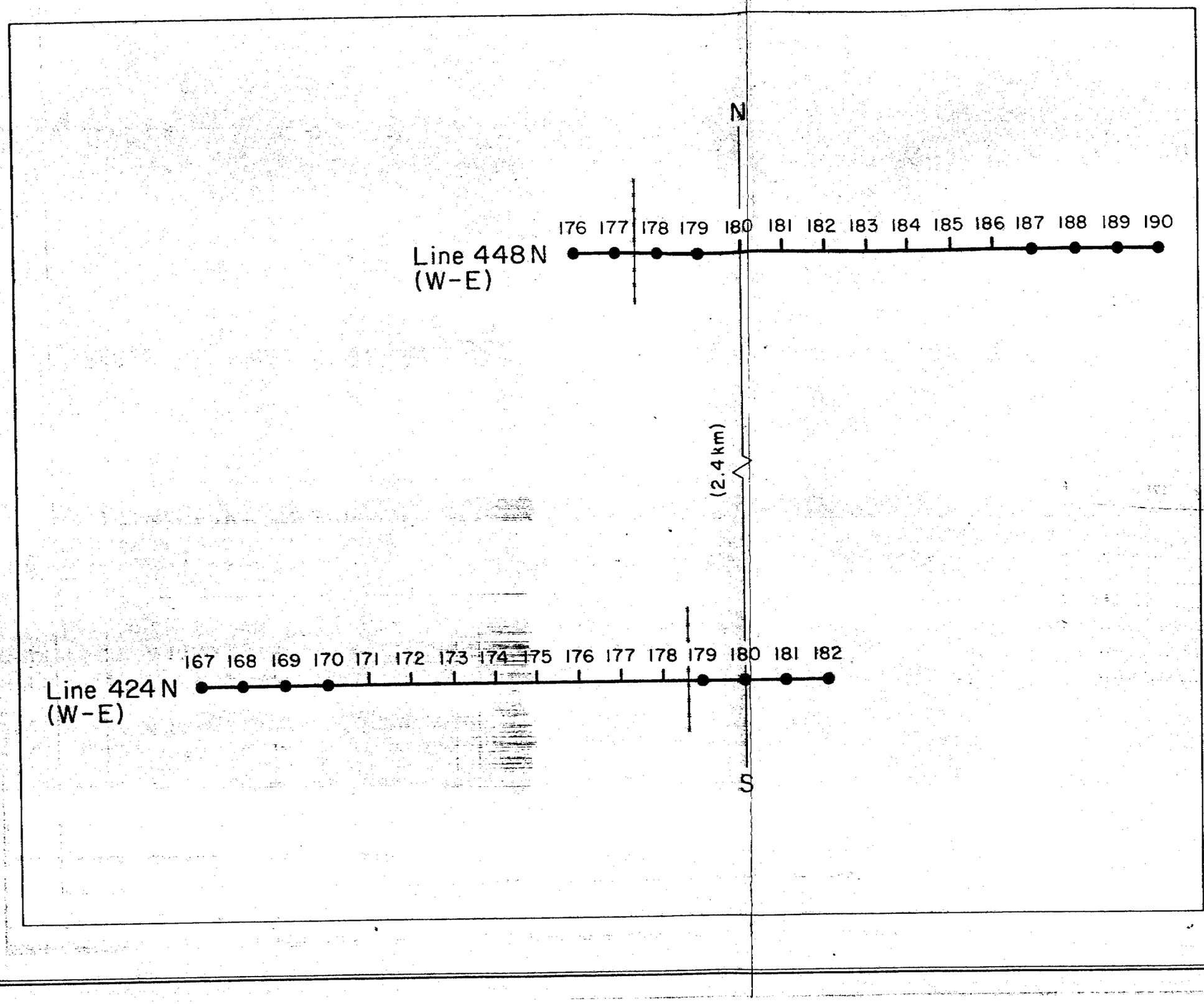
ZONGE ENGINEERING &
RESEARCH ORGANIZATION

Plot of: DECOUPLED I.P.



Batchelor
Rcvr: 71.0 Job : 383 Rho : 114.6
Xmtr: 77.0 Date : Sep 83 C-Phz: 0.7
N-sp: 5.0 Line : 424N A-sp: 100.0m

83C24 *
PRED 2D



Receiver only station

Transmitter & receiver station

Fence

0 100 200 300 400

METERS

RP SURVEY

LINE DETAIL

BATCHELOR PROSPECT
DARWIN, NORTHERN TERRITORIES

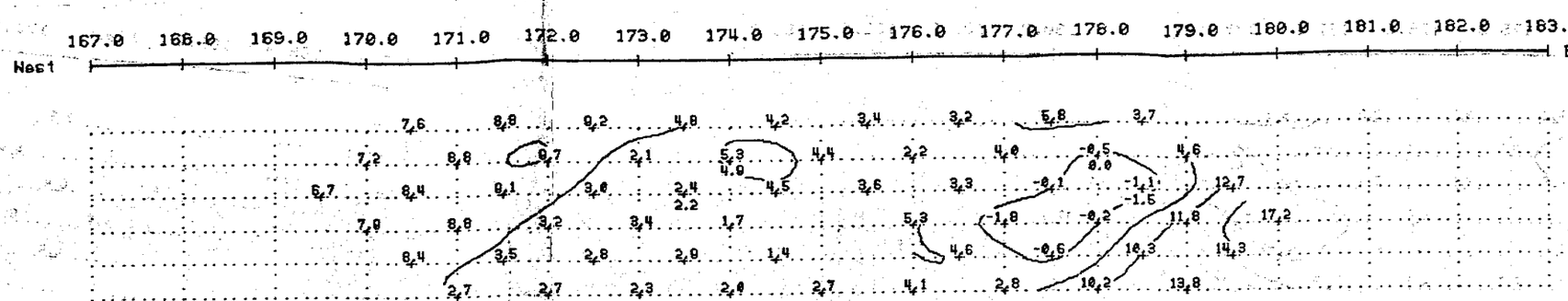
SEPTEMBER, 1983

for

MOBIL ENERGY MINERALS

ZONGE ENGINEERING
& RESEARCH ORGANIZATION
Tucson, Arizona USA

File No. 5A 8383A



ZONGE ENGINEERING & RESEARCH ORGANIZATION

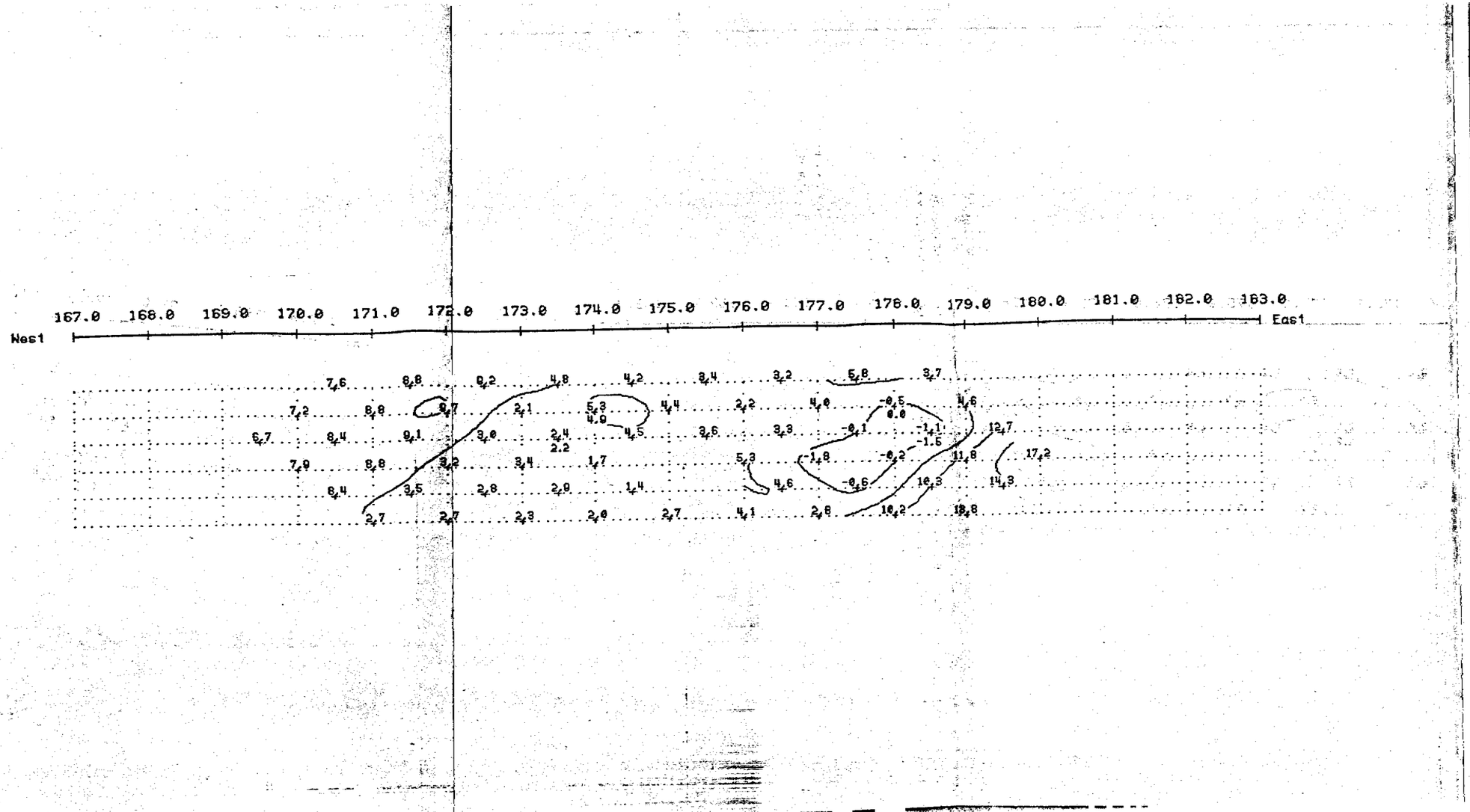
For : MOBIL ENERGY MINERALS AUST INC
DATE : Sep 89 JOB: 383

Project: Batchelor
LINE : 424N A-SP: 328.ft, 100.m
Line Orientation : East

R/P SURVEY DATA
Raw PHASE, 0.125 Hz

ARITHMETIC CONTOURS, Interval: 5.00
0.0000
5.000
10.00
15.00

CPLOT 2B NOT AVERAGED. WED, OCT 25 1989



ZONGE ENGINEERING & RESEARCH ORGANIZATION

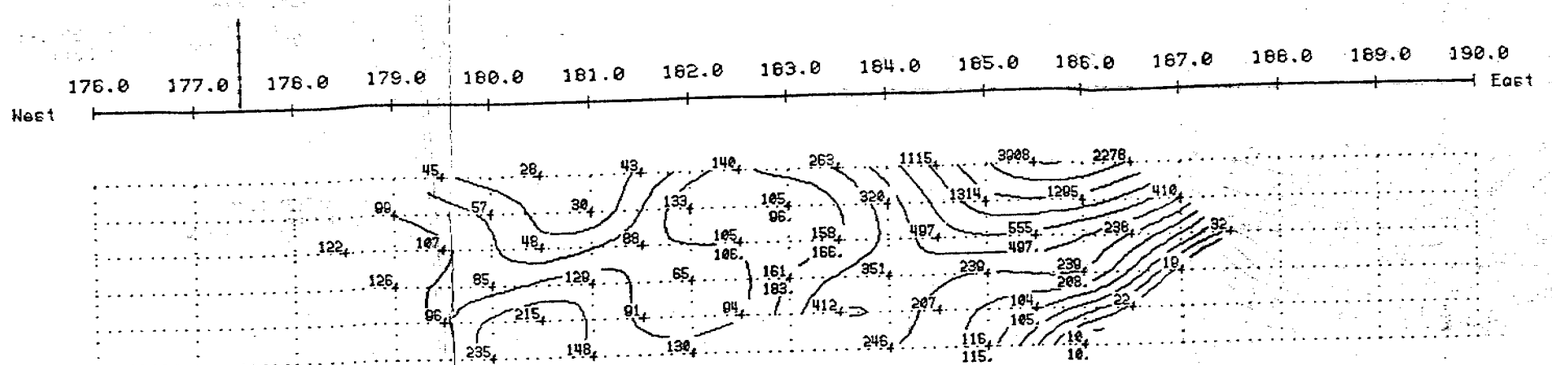
For : MOBIL ENERGY MINERALS AUST INC
DATE : Sep 83 JOB: 383

Project: Batchelor
LINE : 424N A-SP: 328.ft, 100.m
Line Orientation : East

R/P SURVEY DATA
Raw PHASE, 0.125 Hz

ARITHMETIC CONTOURS, Interval: 5.00
0.0000
5.000
10.00
15.00

CPLOT 38 NOT AVERAGED. WED, OCT 05 1983



ZONGE ENGINEERING & RESEARCH ORGANIZATION

For : MOBIL ENERGY MINERALS AUST INC
DATE : Sep 83 JOB: 383

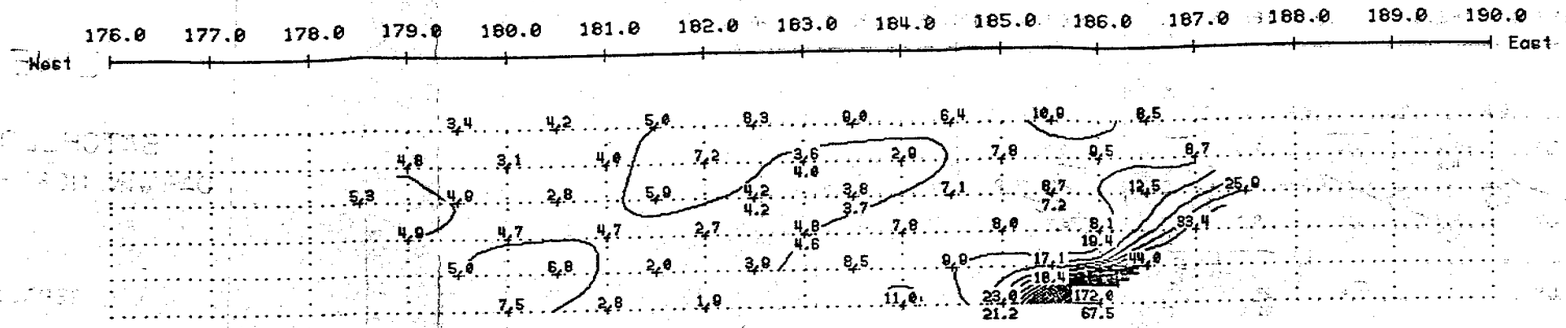
Project: Batchelor
LINE : 44BN A-SP: 328.ft, 100.m
Line Orientation : East

R/P SURVEY DATA
Apparent RESISTIVITY

LOGARITHMIC CONTOURS, Interval: 0.20

10.00	251.2
15.85	398.1
25.12	630.9
39.81	1000.
63.10	1585.
100.0	2512.
158.5	3981.

CPLOT 28 NOT AVERAGED. WED, OCT 05 1983



ZONGE ENGINEERING & RESEARCH ORGANIZATION

For : MOBIL ENERGY MINERALS AUST INC
DATE : Sep 83 JOB: 383

Project: Batchelor
LINE : 448N A-SP: 328.ft, 100.m
Line Orientation : East

R/P SURVEY DATA
Raw PHASE, 0.125 Hz

ARITHMETIC CONTOURS, Interval: 5.00

5.000	50.00	95.00	135.0
10.00	55.00	100.0	140.0
15.00	60.00	105.0	145.0
20.00	65.00	110.0	150.0
25.00	70.00	115.0	155.0
30.00	75.00	120.0	160.0
35.00	80.00	125.0	165.0
40.00	85.00	130.0	170.0
45.00	90.00		

CPLOT 2B NOT AVERAGED. WED, OCT 05 1983

APPENDIX 2

DRILL LOG FORM

TITLE NAME/NO.: West Sargent

PROJECT NAME: .....

CO-ORDINATES
LOCAL .....
AMG ....8543.8.7N..717.4.4E.....
COLLAR R.L. .....

HOLE No.: WSRAB1
BEARING .....
INCLINATION Vert

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphi log
1				Surface rubble, quartz & feldspars and lateritic concretions in pale orange-red silt.		
2				"		
3				Fragments of granitic material - large quartz and feldspar crystals		
4				Granitic material A/A		
5				"		
6				"		
7				"		
8				"		
9				"		
10				"		
11				"		
12				"		
13				"		
14				Weathered granitic material (porphyritic)	2056	

DRILLING CO:. Stanley..... LOG BY. EM.....
RIG TYPE/MODEL RAB/Mole Pione CORE/HOLE SIZE & LENGTH ..4½".....
DRILLER:. G. Shrimp..... CASING SIZE & LENGTH ..... PAGE 1. OF 1..
START:...4/10/82..... WATER TABLE ...13.5m.....
FINISH:..... " VERTICAL SCALE ..... HOLE T.D. ..14m..

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral compone incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG .....8543 9.6N 7.178.3E.....
COLLAR R.L. .....

HOLE No.: WSRAB2
BEARING .....
INCLINATION .....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Brown ferruginous soil and angular quartz float		
2				Limonitic siltstone/schist-weathered to yellow bwn colour		
3				"		
4				"		
5				"		
6				"		
7				"		
8				Very dark green "amphibolite"		
9				"		
10				"		
11				"		
12				"		
13				"		
14				"		
15				"		
16				"		
17				"		
18				"		
19				"	2055	

DRILLING CO: Stanley
RIG TYPE/MODEL: RAB/Mole Piano
DRILLER: G. Shrimp
START: 4/10/82
FINISH: "

CORE/HOLE SIZE & LENGTH .....4½".....
CASING SIZE & LENGTH .....
WATER TABLE .....15m.....
VERTICAL SCALE .....

LOG BY EM
PAGE 1 OF ... 1
HOLE T.D. 19m

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG ....8544O,6N,7182,1E.....
COLLAR R.L. .....

HOLE No.: WSRAB3
BEARING .....
INCLINATION Vert

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Hematitic quartz (angular) rubble		
2				"		
3				Hematitic quartz breccia		
4				"		
5				"		
6				"		
7				"	2054	

DRILLING CO: Stanley
RIG TYPE/MODEL: RAB/Mole Pione
DRILLER: G. Shrimp
START: 4/10/82
FINISH: "

CORE/HOLE SIZE & LENGTH ....4½"
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY..EM.....
PAGE .. OF ...
HOLE T.D. 7m.....

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG 8544.1.5N 7186.0E
COLLAR R.L. .....

HOLE No.: WSRAB4
BEARING .....
INCLINATION West

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				HQB rubble		
2				"		
3				"		
4				HQB - abandoned	2053	

DRILLING CO: Stanley
RIG TYPE/MODEL RAB/Mole Pioneer
DRILLER: G. Shrimp
START: 4/10/82
FINISH: "

CORE/HOLE SIZE & LENGTH ....4½"
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY...EM
PAGE 1 OF 1
HOLE T.D. 4m

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent...

CO-ORDINATES
LOCAL .....
AMG .....8543.1.1N 7183.4E.....
COLLAR R.L. .....

HOLE No.: WSRAB5.....
BEARING .....
INCLINATION Vert.....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Fine yellow-brown sands		
2				A/A with lateritic cement		
3				"		
4				"		
5				Very fine grained white quartz sand in clay matrix		
6				"		
7				"		
8				"	2052	

DRILLING CO: Stanley
RIG TYPE/MODEL: RAB/Mole Pioneer
DRILLER: G. Shrimp
START: 4/10/82
FINISH: "

CORE/HOLE SIZE & LENGTH 4½"
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY: EM
PAGE 1 OF 1
HOLE T.D. 8

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG 85430.2N 7178.5E
COLLAR R.L. .....

HOLE No.: WSRAB6
BEARING .....
INCLINATION Vert

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Ferruginous quartz rubble and silt		
2				Weathered schist - clayey, micaceous, limonitic		
3				"		
4				Dark green brown weathered amphibolite (as in WSRAB2)		
5				"		
6				"		
7				"		
8				"		
9				"		
10				"		
11				"		
12				"		
13				"		
14				"		
15				"		
16				"		
17				"		
18				"		
19				"		
20				"		

DRILLING CO: Stanley
RIG TYPE/MODEL: RAB/Mole Pione
DRILLER: G. Shrimp
START: 4/10/82
FINISH: "

CORE/HOLE SIZE & LENGTH ....4½"
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY....EM....
PAGE .. OF ...
HOLE T.D. 20m

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG 8543.7N 7173.2E
COLLAR R.L. .....

HOLE No.: WSRAB7
BEARING .....
INCLINATION Vert

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Ferruginous quartz rubble & orange-brown silt		
2				"		
3				Granitic material, predominantly quartz & feldspar		
4				"	2070	
5				"	2071	
6				"	2066	
7				"	2067	
8				"	2068	
9				"	2069	
10				"		
11				"		
12				"		
13				Limonitic weathered schists (f.g)		
14				"		
15				"		
16				"		
17				Dark green coloured f.g. schist		
18				"		
19				"		
20				"Qtz-biotite-muscovite schist & some quartz-tourmaline vein materials	2051	

DRILLING CO: Stanley
RIG TYPE/MODEL RAB/Mole Pioneer
DRILLER: G. Shrimp
START: 4/10/82
FINISH: .....

CORE/HOLE SIZE & LENGTH ..... 4½" .....
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY. EM.....
PAGE 1 OF 1
HOLE T.D. 20m

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG ..8543 2..0N..7169.5E.....
COLLAR R.L. .....

HOLE No.: WSRAB8
BEARING .....
INCLINATION .....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Ferruginous silt and quartz float		
2				Weathered granitic material (2 feldspars - quartz		
3				"		
4				"		
5				"		
6				"		
7				"		
8				"		
9				"		
10				"		
11				"		
12				"	2072	
13				"	2073	
14				"	2074	
15				"		
16				"		
17				" + Tr. Amphibolite		
18				"		
19				"		
20 21				" "	2058	

DRILLING CO:...Stanley.....
RIG TYPE/MODEL RAB/Mole Pioneer
DRILLER:...G. Shrimp.....
START:...4/10/82.....
FINISH:.....".....

CORE/HOLE SIZE & LENGTH ....4½".....
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY..EM.....
PAGE .1 OF .1.
HOLE T.D.21m....

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG ..8542 3..0N..7168.0E.....
COLLAR R.L. .....

HOLE No.: WSRAB9.....
BEARING .....
INCLINATION ..Vert.....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Granitic material, quartz, 2 feldspars		
2				"		
3				"		
4				"		
5				"		
6				"		
7				"		
8				"		
9				"		
10				"		
11				"		
12				"		
13				"		
14				Fresh massive granite	2059	

DRILLING CO: Stanley
RIG TYPE/MODEL: RAB/Mole Pione
DRILLER: G. Shrimp
START: 4/10/82
FINISH:

LOG BY. EM
CORE/HOLE SIZE & LENGTH ..... $4\frac{1}{2}$"
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

PAGE .. OF ...
HOLE T.D. 14m...

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG ....8542.2.7N-7192.1E.....
COLLAR R.L. .....

HOLE No.: WSRAB10
BEARING .....
INCLINATION .....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Granitic material in ferruginous rubble		
2				"		
3				Fine/red granitic material		
4				"		
5				"		
6				"		
7				"		
8				"		
9				"	2075	
10				"	2076	
11				"	2077	
12				"	2078	
13				"		
14				"		
15				"		
16				Hard pink fine/med grained granite	2060	

DRILLING CO.: Stanley
RIG TYPE/MODEL: RAB/Mole Pioneer
DRILLER: G. Shrimp
START: 4/10/82
FINISH: "

CORE/HOLE SIZE & LENGTH ..4½"
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY: EM
PAGE .. OF ...
HOLE T.D. 16m

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent....

CO-ORDINATES
LOCAL .....
AMG 8542.4.7N 7175.5E.....
COLLAR R.L. .....

HOLE No.: WSRAB11.....
BEARING .....
INCLINATION .....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphi Log
1				Yellow-brown, limonitic siltstone (weathered)		
2				"		
3				"		
4				"		
5				"		
6				"		
7				"		
8				"		
9				"		
10				"		
11				"		
12				"		
13				"		
14				"		
15				"		
16				"		
17				"		
18				"		
19				"		
20				"	2061	
21				"	2062	

DRILLING CO:....Stanley.....
RIG TYPE/MODEL: RAB/Mole Pioneer
DRILLER:.....G. Shrimp.....
START:.....4./10./82.....
FINISH:.....".....

CORE/HOLE SIZE & LENGTH ....4½"....
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY. EM.....
PAGE .. OF ...
HOLE T.D. 20m...

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG ..8542.4..7N..7.180..0E.....
COLLAR R.L. .....

HOLE No.: WSRAB12.....
BEARING .....
INCLINATION Vert.....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Ferruginous silt with surface quartz float		
2				"		
3				"		
4				"		
5				Purple-brown siltstone with white/red mottled clay		
6				"		
7				Purple brown ferruginous siltstone-limonitic I/P		
8				"		
9				"		
10				"		
11				" + white clay		
12				"		
13				"		
14				"		
15				"		
16				" with minor sandstone layers (red/buff coloured)		
17				"		
18				" limonitic I/P - quartz pebbles (conglom?)		
19				"		
20				"	2063	

DRILLING CO: Stanley
RIG TYPE/MODEL: RAB/Mole Pioneer
DRILLER: G. Shrimp
START: 4/10/82
FINISH: "

CORE/HOLE SIZE & LENGTH .....4½".....
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY. EM.....
PAGE .. OF ...
HOLE T.D. 20m...

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....

PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG ....8543.1.2N..718.1.4E.....
COLLAR R.L. .....

HOLE No.: WSRAB13
BEARING .....
INCLINATION Vert

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				Fine sand and angular/sub rounded quartzite		
2				limonitic clays, fine sand and hard lateritic layer		
3				@ 2.5m with quartz clasts		
4				Very dark grey/pink quartzite-no reaction to acid? Coomalie Dol?	2064	

DRILLING CO: Stanley
RIG TYPE/MODEL: RAB/Mole Pioneer
DRILLER: G. Shrimp
START: 5/10/82
FINISH: "

CORE/HOLE SIZE & LENGTH ....4 1/2"
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY EM
PAGE .. OF ...
HOLE T.D. 4

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componer incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
CO-ORDINATES LOCAL
AMG 85431.0N 7185.3E
COLLAR R.L. .....
HOLE No WSRAB14
BEARING .....
INCLINATION Vert.

PROJECT NAME: West Sargent

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Log
1				(purple-red (ferruginous)sandstone - rounded qtz		
2				(grains mod. well sorted. Lateritic cement.		
3				"		
4				similar sand in clay matrix (cream)yellow-brown, limonitic in parts		
5				"		
6				Hard ferruginous (lateritic) sandstone. Rounded grains and mod well sorted with (feldspathic) clay matrix	2065	

DRILLING CO: Stanley
RIG TYPE/MODEL: RAB/Mole Pioneer
DRILLER: G. Shrimp
START: 5/10/82
FINISH: "
CORE/HOLE SIZE & LENGTH 4½"
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....
LOG BY: EM
PAGE .. OF ...
HOLE T.D. 6m

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral compon incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciatic (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
CO-ORDINATES
LOCAL .....
AMG ...85439.2N..7176.3E.....
COLLAR R.L. .....
HOLE No.: WSRAB15...
BEARING .....
INCLINATION .....

PROJECT NAME: .West..Sargent..

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Geol. Log
1				Granitic material in ferruginous sand		
2				"		
3				" leached (white)		
4				"		
5				"		
6				"		
7				"		
8				"		
9				"		
10				"		
11				"		
12				"		
13				"		
14				"		
15				"		
16				"		
17				"		
18				"		
19				" hard (fresh) granite	2079	

DRILLING CO:..Stanley.....
RIG TYPE/MODEL:..RAB/Mole Pioneer.....
DRILLER:.....G. Shrimp.....
START:.....5/10/82.....
FINISH:.....".....

CORE/HOLE SIZE & LENGTH .....4½".....
CASING SIZE & LENGTH .....
WATER TABLE .....18m.....
VERTICAL SCALE .....

LOG BY..EM.....
PAGE .. OF ...
HOLE T.D.19m...

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral compon incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciatio (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: ..West.Sargent.

CO-ORDINATES
LOCAL
AMG ..8544U:0N 7180:0E.....
COLLAR R.L. .....

HOLE No. WSRAB16
BEARING .....
INCLINATION .....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
1				lateritised quartz rubble		
2				"		
3				very fine clayey silt - pale yellowy green		
4				"		
5				"		
6				"		
7				"		
8				Traces of grey green clay in clayey silt A/A		
9				"		
10				"		
11				"		
12				amphibolite schist		
13				"		
14				"		
15				"	2080	

DRILLING CO:...Stanley.....
RIG TYPE/MODEL:...RAB Mole/Pioneer.....
DRILLER:....G...Shrimp.....
START:.....5/10/82.....
FINISH:.....".....

CORE/HOLE SIZE & LENGTH ....4½".....
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY...EM.....
PAGE .. OF ...
HOLE T.D.15.....

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral compon incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciatio (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: .....
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG .....8544 1.0N 7184.1E.....
COLLAR R.L. .....

HOLE No.: WSRAB17....
BEARING .....
INCLINATION .....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Geol. Log
1				Hematitic quartz rubble		
2				"		
3				Very fine sst/siltstone-deep red, hematitic and angular quartz		
4				"		
5				"		
6				"		
7				Very hard hematitic siltstone		
8				"		
9				"		
10				"	2081	

DRILLING CO:....Stanley.....
RIG TYPE/MODEL:Mole Pioneer
DRILLER:.....G...Shrimp.....
START:.....5/10/82.....
FINISH:.....".....

CORE/HOLE SIZE & LENGTH .....
CASING SIZE & LENGTH .....
WATER TABLE .....
VERTICAL SCALE .....

LOG BY....EM...
PAGE .. OF ...
HOLE T.D. 10m...

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral compon incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciatio (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: EL 3560

PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL 173.75E 424N
AMG 7174E 85424N
COLLAR R.L.

HOLE No.: WSD1
BEARING 270°
INCLINATION -60°

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
2				chocolate brown puggy clay over pale green		
4				saprolite		
6				yellow silty clay		
8				light tan silty clay		
10				puggy clay		
12				light tan silty clay		
14				"		
16				pale green silty clay - v. fine chips		
18				becoming olive green - amphibolite chips		
20				" "		
22				" "		
24				dark olive green clay - amphibolite		
26				" " "		
28				1st water return		
30				olive green mud		
32				" " "		
34				fresh amphibolite chips		
36				" " "		
38				" " "		
40				" " "		

DRILLING CO: Gaden Drilling Co.
RIG TYPE/MODEL: Warman 1000
DRILLER: Morris
START: 21/9/83
FINISH: 23/9/83

CORE/HOLE SIZE & LENGTH NQ to 50.85 metres
CASING SIZE & LENGTH NQ 4 metres
WATER TABLE 28 metres
VERTICAL SCALE 1:200

LOG BY APB
PAGE 1 OF 5
HOLE T.D. 95.30m

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral component incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: EL 3560

PROJECT NAME: West Sargent

CO-ORDINATES 173.75E 424N
LOCAL
AMG 7174E 854.24N
COLLAR R.L.

HOLE No.: WSD1
BEARING 270°
INCLINATION -60°

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphi Log
42				amphibolite chips		
44	PRE-COLLAR			" "		
46				" "		
48				" "		
50				dark green to black coarsely crystalline amphibolite with occasional sulphides.		

LOG BY: APB

DRILLING CO: Gaden Drilling
RIG TYPE/MODEL: Warman 1000
DRILLER: Morris
START: 21/9/83
FINISH: 23/9/83

CORE/HOLE SIZE & LENGTH NQ to 50.85m
CASING SIZE & LENGTH
WATER TABLE
VERTICAL SCALE 1:200

HOLE T.D. 95.30m

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral compone incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: EL 3560
PROJECT NAME: West Sargent
CO-ORDINATES
LOCAL .....
AMG .....
COLLAR R.L. .....
HOLE No.: WSD1
BEARING 270°
INCLINATION -60°

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
51m				50.85m - dark green to black med-coarse amphibolite with felted mass of acicular hornblende crystals foliation 45° to LCA		
52	2.85			51.4-51.7 prominent quartz phenocrysts		
53				52.45-53.0 quartz carbonate vein 3mm @ 10° to LCA		
54	53.7			Disseminated sulphides <1% (pyrite/chalcopyrite)		
55	3.0					
56				Alteration zones signified by increase in coarseness of hornblende		
57	56.7			>chlorite & bronze mica? phlogopite		
58				med-coarse amphibolite		
59	3.0					
60	59.70			" "		
61						
62	3.0			" "		
63	62.70			62.13 - fine grained amphibolite with spotty segregations of coarsely crystalline material		
64	3.0			10-20mm across. Increase in sulphides 2-5% associated with coarse aggregates	WSD1	
65						
66	65.70					
67	3.0			Fine grained amphibolite		
68				" "		
69	68.7					
70				" "		

DRILLING CO: Gaden Drilling Co
RIG TYPE/MODEL: Warman 1000
DRILLER: Morris
START: .....
FINISH: .....
CORE/HOLE SIZE & LENGTH: BQ
CASING SIZE & LENGTH: .....
WATER TABLE: .....
VERTICAL SCALE: 1:100
LOG BY: APB
PAGE 3 OF 5
HOLE T.D. .....

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral component incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: ...EL..3560..... CO-ORDINATES LOCAL ..... HOLE No.: WSD1
PROJECT NAME: West..Sargent... AMG ..... BEARING .270°.....
COLLAR R.L. ..... INCLINATION ..60°.....

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
71m				70.80m - banded coarse grained amphibolite 10-12 cm thick		
	71.70			Bands consist of acicular coarse hornblende chlorite and bronze mica.		
72						
	3.0			Interstitial sulphides finely disseminated to 1%		
73						
				" " "		
74						
	74.70					
75						
	3.0			75.80 - spotty amphibolite - segregations mainly <15mm with quartz core surrounded by chlorite &		
76				amphibole		
77						
	77.70					
78						
	3.0					
79						
80						
	80.70			80.07 - dark green coarse amphibolite, granular felted to porphyritic texture. Sulphides to 1%		
81						
	3.0					
82						
83						
	83.70					
84						
	3.0					
85				85.94 - contact amphibolite with quartz biotite schist @ 45° to LCA	WSD2	
86						
	86.70			86.16 - 86.18 quartz vein 86.18 - develops crenulated gneissic texture		
87				foliation 45° to LCA.		
	3.0			86.63 - 87.0 quartz vein concordant with foliation		
88						
				86.70 - contact with quartz magnetite rock magnetite 40° to contact 35° to LCA	WSD3	
89						
	89.70			fine-med grained well sorted whitish quartzite		
90						

DRILLING CO: Gaden Drilling LOG BY: APB
RIG TYPE/MODEL: Warman..1000... CORE/HOLE SIZE & LENGTH ....BQ.....
DRILLER: ...Morris..... CASING SIZE & LENGTH ..... PAGE 4 OF 5.
START:..... WATER TABLE .....
FINISH:..... VERTICAL SCALE 1:100 ..... HOLE T.D.....

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componen incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: EL 3560
PROJECT NAME: West Sargent
CO-ORDINATES LOCAL 173.75E 424N
AMG 7174E 8542 4N
COLLAR R.L. .....
HOLE No.: WSD1
BEARING 270°
INCLINATION -60°

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
				88.75 - quartzite and finely banded magnetite alternate with coarse magnetite rock (70-80% magnetite).		
91m					WSD4	
92	92.70			92.55 - becoming more quartzitic broken core with fractures	WSD5	
93				50° to LCA. Haematite iron staining along fractures		
94	94.60					
95	95.30			E.O.H. 95.30 metres		

DRILLING CO: Gaden Drilling
LOG BY A.P.B.
RIG TYPE/MODEL: Warman 1000
CORE/HOLE SIZE & LENGTH BQ
DRILLER: Morris
CASING SIZE & LENGTH NQ plastic 4 metres
PAGE 5 OF 5
START: 21/9/83
WATER TABLE 28 metres
FINISH: 23/9/83
VERTICAL SCALE 1:100
HOLE T.D 95.30

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral compone incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: EL 3560
PROJECT NAME: West Sargent
CO-ORDINATES LOCAL 173.75E 424N
AMG 7174E 8542N
COLLAR R.L.
HOLE No.: WSD1
BEARING 270°
INCLINATION -60°

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphi Log
42				amphibolite chips		
44	PRE-COLLAR			" "		
46				" "		
48				" "		
50				dark green to black coarsely crystalline amphibolite with occasional sulphides.		

DRILLING CO: Gaden Drilling
RIG TYPE/MODEL: Warman 1000
DRILLER: Morris
START: 21/9/83
FINISH: 23/9/83
CORE/HOLE SIZE & LENGTH NQ to 50.85m
CASING SIZE & LENGTH
WATER TABLE
VERTICAL SCALE 1:200
LOG BY APB
PAGE 2 OF 5.
HOLE T.D. 95.30

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral compone incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: EL 3560
PROJECT NAME: West Sargent

CO-ORDINATES
LOCAL .....
AMG .....
COLLAR R.L. .....

HOLE No.: WSD1
BEARING 270°
INCLINATION -60°

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
51m				50.85m - dark green to black med-coarse amphibolite with felted mass of acicular hornblende crystals foliation 45° to LCA		
52	2.85			51.4-51.7 prominent quartz phenocrysts		
53				52.45-53.0 quartz carbonate vein 3mm @ 10° to LCA		
54	53.7			Disseminated sulphides <1% (pyrite/chalcopyrite)		
55	3.0					
56				Alteration zones signified by increase in coarseness of hornblende		
57	56.7			>chlorite & bronze mica? phlogopite		
58				med-coarse amphibolite		
59	3.0					
60	59.70			" "		
61						
62	3.0			" "		
63	62.70			62.13 - fine grained amphibolite with spotty segregations of coarsely crystalline material		
64	3.0			10-20mm across. Increase in sulphides 2-5% associated with coarse aggregates	WSD1	
65						
66	65.70					
67	3.0			Fine grained amphibolite		
68				" "		
69	68.7					
70				" "		

DRILLING CO: Gaden Drilling Co
RIG TYPE/MODEL: Warman 1000
DRILLER: Morris
START: .....
FINISH: .....

CORE/HOLE SIZE & LENGTH: BQ
CASING SIZE & LENGTH: .....
WATER TABLE: .....
VERTICAL SCALE: 1:100

LOG BY: APB
PAGE 3 OF 5
HOLE T.D. .....

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componen incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: ...EL..3560..... CO-ORDINATES
LOCAL ..... HOLE No.: WSD1
AMG ..... BEARING .270°
PROJECT NAME: West.Sargent... COLLAR R.L. ..... INCLINATION ..60°

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphic Log
				70.80m - banded coarse grained amphibolite 10-12 cm thick		
71m	71.70			Bands consist of acicular coarse hornblende chlorite and bronze mica.		
72	3.0			Interstitial sulphides finely disseminated to 1%		
73				" " "		
74	74.70					
75	3.0			75.80 - spotty amphibolite - segregations mainly <15mm with quartz core surrounded by chlorite & amphibole		
76						
77	77.70					
78	3.0					
79						
80	80.70			80.07 - dark green coarse amphibolite, granular felted to porphyritic texture. Sulphides to 1%		
81	3.0					
82						
83	83.70					
84	3.0					
85				85.94 - contact amphibolite with quartz biotite schist @ 45° to LCA	WSD2	
86	86.70			86.16 - 86.18 quartz vein 86.18 - develops crenulated gneissic texture		
87	3.0			foliation 45° to LCA. 86.63 - 87.0 quartz vein concordant with foliation		
88				86.70 - contact with quartz magnetite rock magnetite 40° to contact 35° to LCA	WSD3	
89	89.70			fine-med grained well sorted whitish quartzite		
90						

DRILLING CO: Gaden Drilling LOG BY: APB
RIG TYPE/MODEL: Warman..1000... CORE/HOLE SIZE & LENGTH ....BQ.....
DRILLER:...Morris..... CASING SIZE & LENGTH ..... PAGE 4 OF 5.
START:..... WATER TABLE .....
FINISH:..... VERTICAL SCALE 1:100 ..... HOLE T.D.....

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral componen incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

DRILL LOG FORM

TITLE NAME/NO.: EL 3560
PROJECT NAME: West Sargent
CO-ORDINATES: LOCAL 173.75E 424N; AMG 7174E 8542N; COLLAR R.L. .....
HOLE No.: WSD1
BEARING 270°
INCLINATION -60°

DEPTH	Length Drilled	RECOVERY L/V	RECOVERY %	DESCRIPTION: See footnotes for information required.*	SAMPLE NUMBER & TYPE	Graphi Log
				88.75 - quartzite and finely banded magnetite alternate with coarse magnetite rock (70-80% magnetite).		
91m					WSD4	
92	92.70			92.55 - becoming more quartzitic broken core with fractures	WSD5	
93				50° to LCA. Haematite iron staining along fractures		
94	94.60					
95	95.30			E.O.H. 95.30 metres		

DRILLING CO.: Gaden Drilling
RIG TYPE/MODEL: Warman 1000
DRILLER: Morris
START: 21/9/83
FINISH: 23/9/83
CORE/HOLE SIZE & LENGTH ..BQ.....
CASING SIZE & LENGTH ..NQ..plastic..4..metres.....
WATER TABLE .....28..metres.....
VERTICAL SCALE .....1:100.....
LOG BY A.P.B.....
PAGE 5 OF 5.
HOLE T.D 95.30m

*DESCRIPTION: Colour & ROCK NAME: degree of weathering or alteration, proportion, grain size & roundness of mineral compone incl. matrix; bedding (quantitative, angle to LCA), schistosity (ditto), fractures/joints (ditto), brecciation (quantitative); ORE MINERALS (%, grain size & names); VISUAL ESTIMATE OF GRADE.

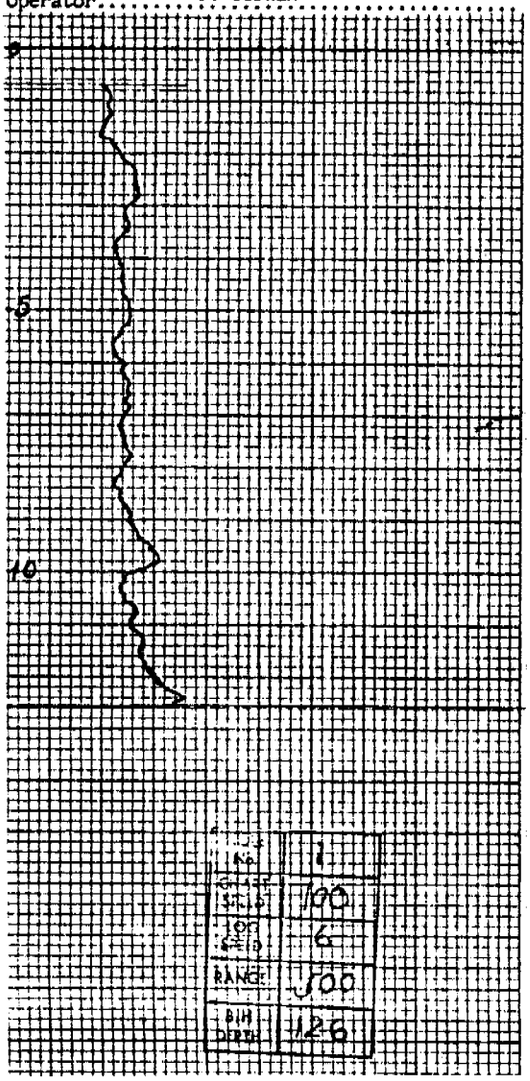
APPENDIX 3

During logging the time constant was set at 2 seconds and the sonde recovered at a speed of six metres/minute.

MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

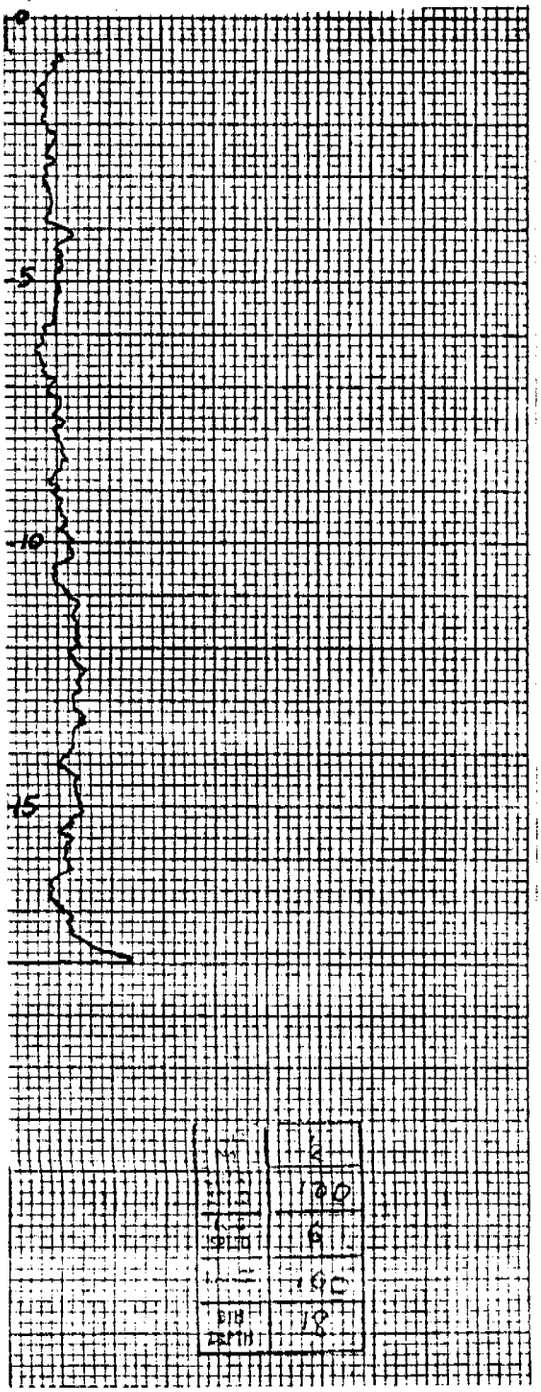
Hole Number...WSRAB.1....
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m)....14m.....
Logged Depth (m).....12.6m.....
Range.....500cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

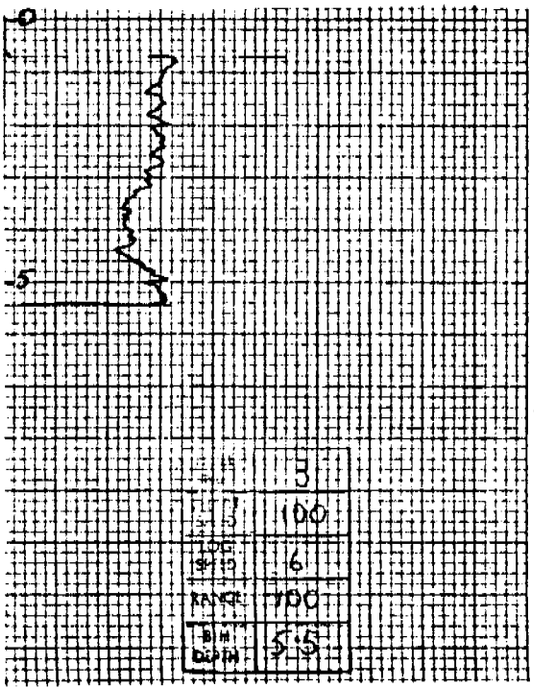
Hole Number...WSRAB.2....
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m)....19m.....
Logged Depth (m).....18m.....
Range.....100cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

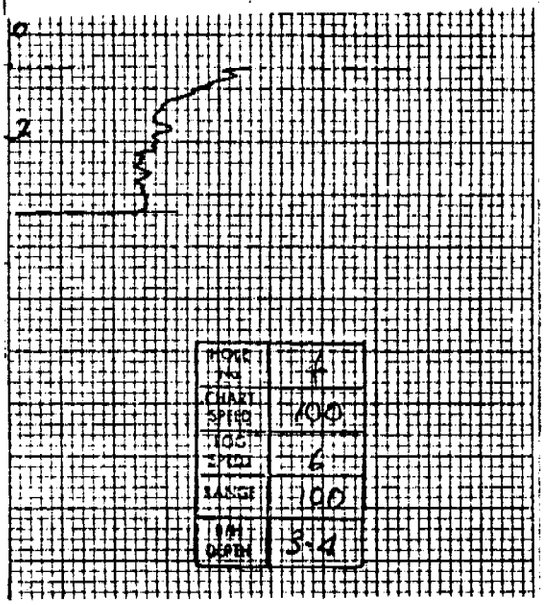
Hole Number...WSRAB 3....
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m)....7m.....
Logged Depth (m).....5.5m.....
Range.....100cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

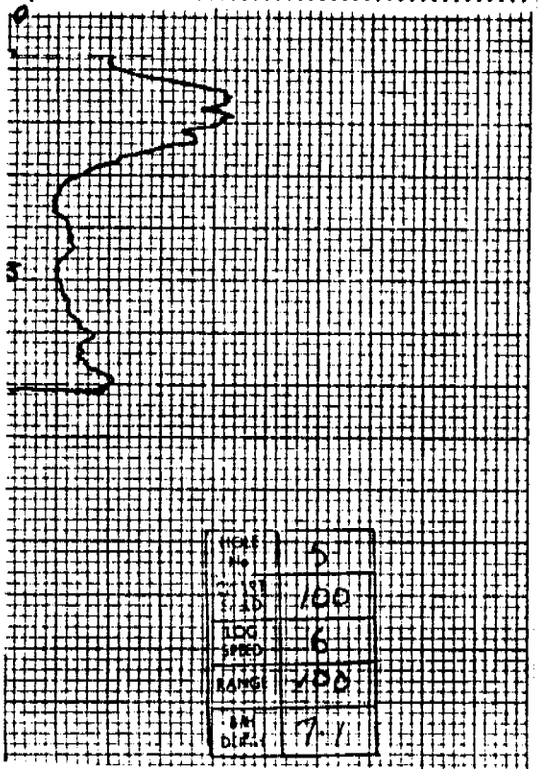
Hole Number...WSRAB 4....
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m)....4m.....
Logged Depth (m).....3.4m.....
Range.....100cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

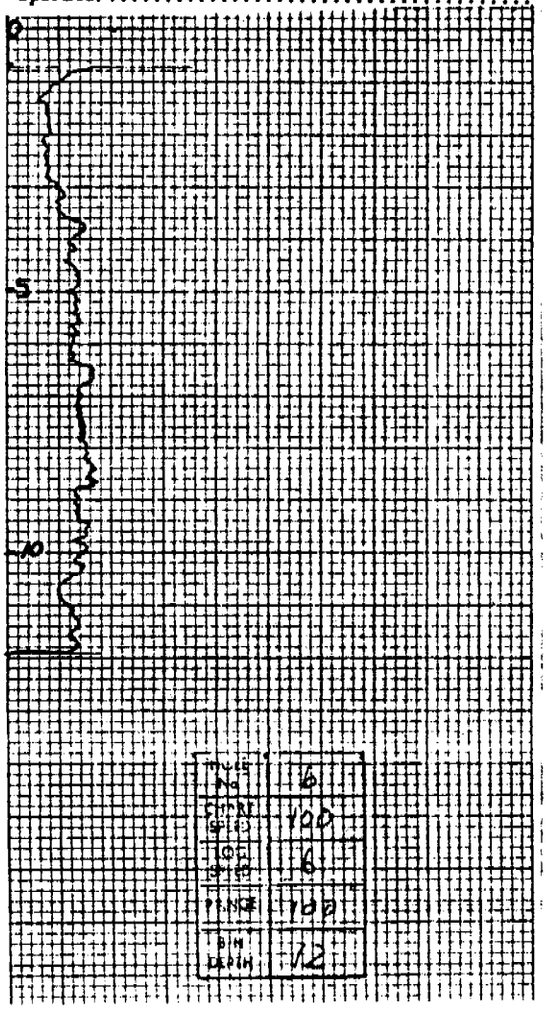
Hole Number...WSRAB 5....
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m).....8m.....
Logged Depth (m).....7.1m.....
Range.....100cps.....
Chart Speed.....100
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

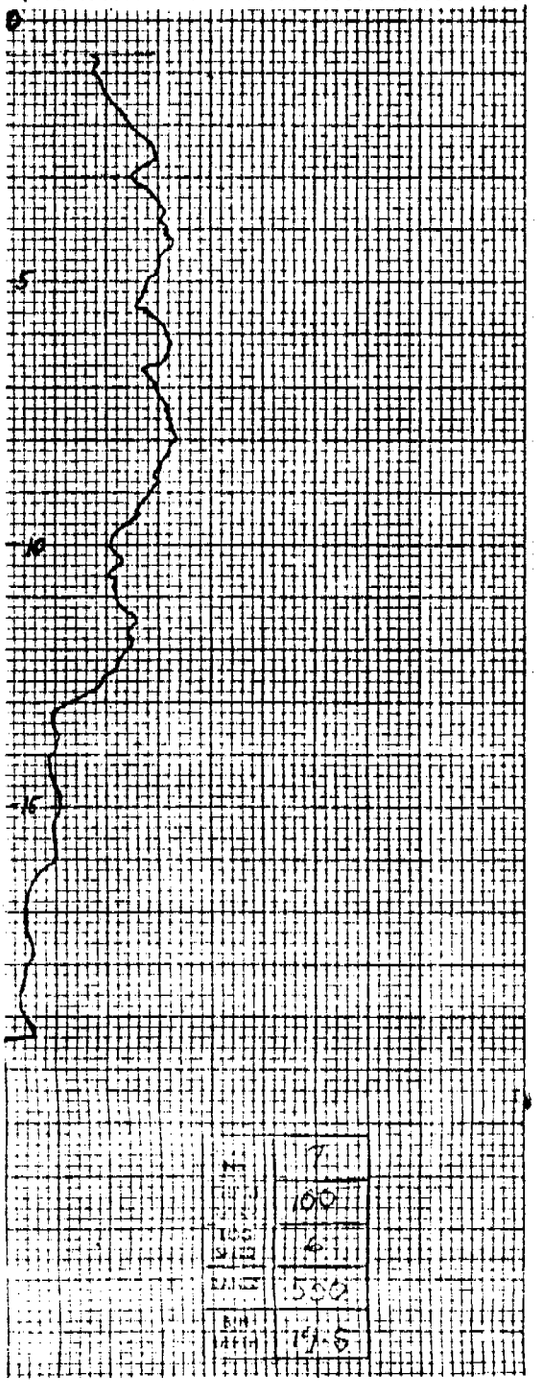
Hole Number...WSRAB 6....
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m).....20m.....
Logged Depth (m).....12m.....
Range.....100cps.....
Chart Speed.....100
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

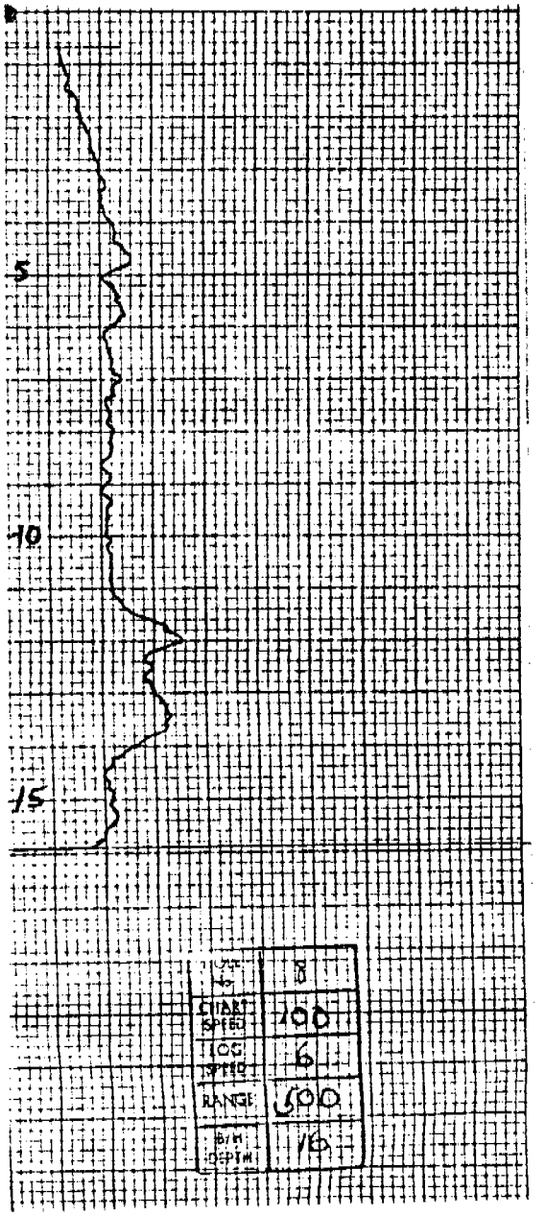
Hole Number...WSRAB 7....
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m).....20m.....
Logged Depth (m).....19.5m.....
Range.....500cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

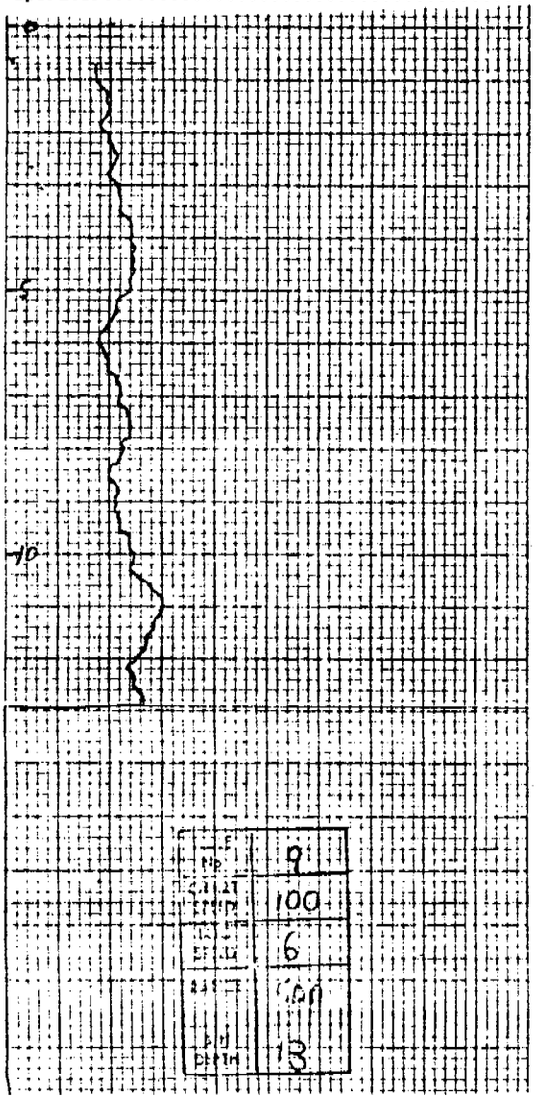
Hole Number...WSRAB 8....
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m).....21m.....
Logged Depth (m).....16m.....
Range.....500cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

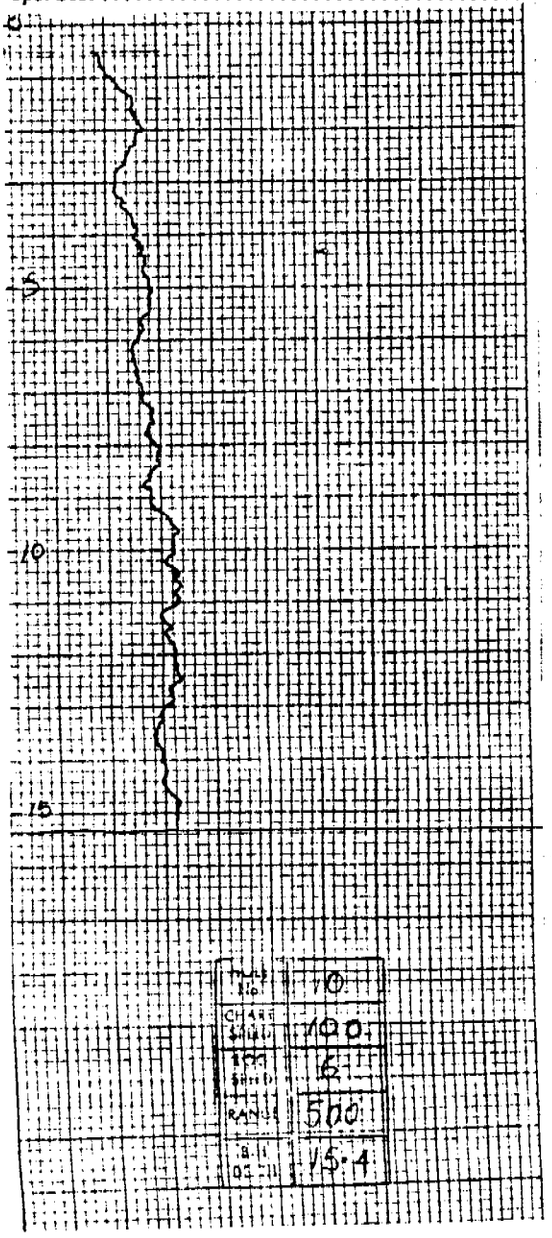
Hole Number...WSRAB 9....
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m)....14m.....
Logged Depth (m).....13m.....
Range.....500cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

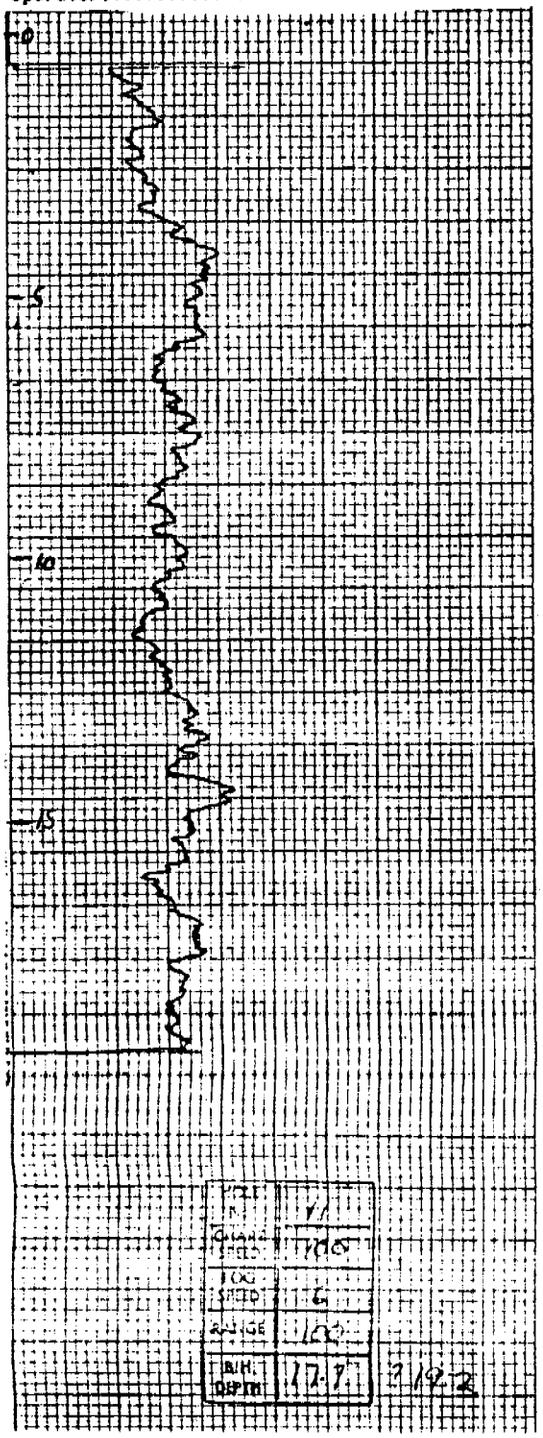
Hole Number...WSRAB 10...
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m)....16m.....
Logged Depth (m).....15.4m.....
Range.....500cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

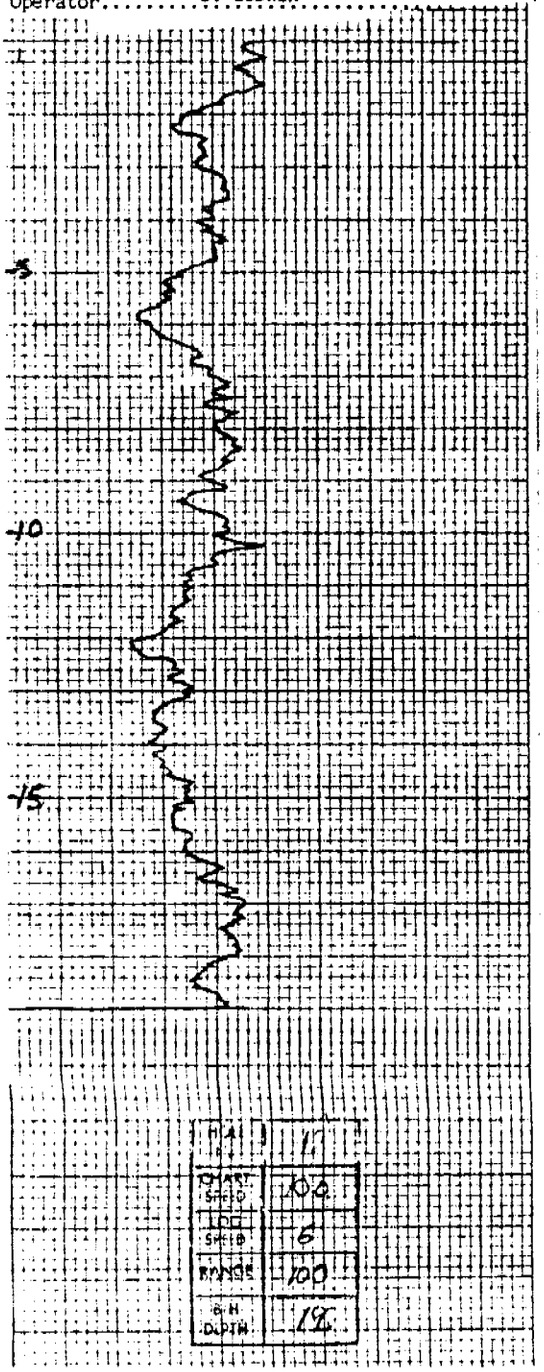
Hole Number...WSRAB 11...
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m)....20m.....
Logged Depth (m).....19.2m.....
Range.....100cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

Hole Number...WSRAB 12...
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....4/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m)....20m.....
Logged Depth (m).....19m.....
Range.....100cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

Hole Number...WSRAB.13...

Project.....RUM JUNGLE.....

Prospect/EL.....WEST SARGENT.....

Date.....5/10/1982.....

Non Cored.....Cored.....

Drilled Depth (m).....4m.....

Logged Depth (m).....2.8m.....

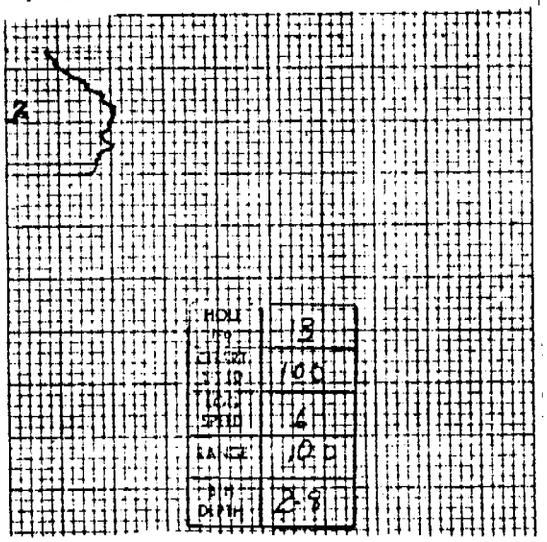
Range.....100cps.....

Chart Speed.....100.....

Cased from.....to.....metres

PVC.....Steel.....

Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

Hole Number...WSRAB.14...

Project.....RUM JUNGLE.....

Prospect/EL.....WEST SARGENT.....

Date.....5/10/1982.....

Non Cored.....Cored.....

Drilled Depth (m).....6m.....

Logged Depth (m).....5.5m.....

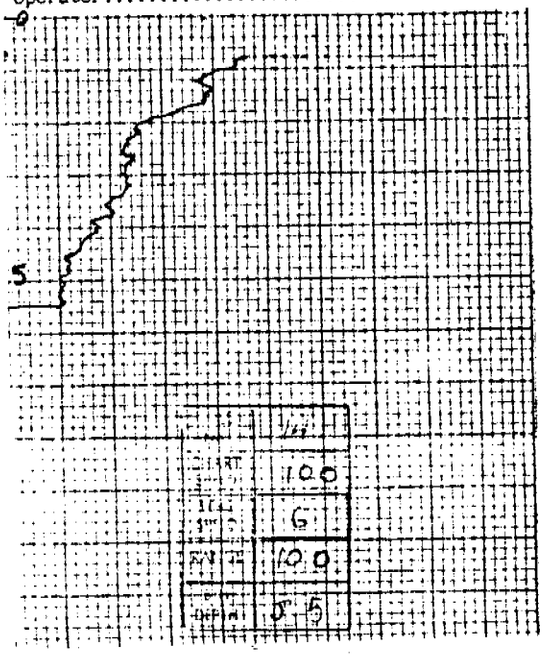
Range.....100cps.....

Chart Speed.....100.....

Cased from.....to.....metres

PVC.....Steel.....

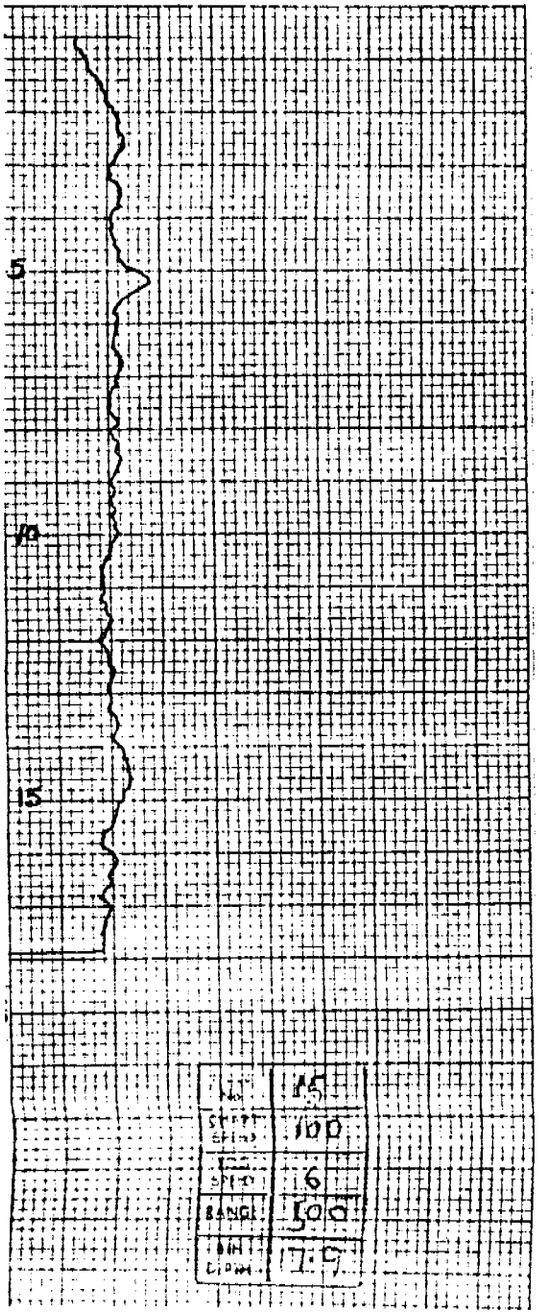
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

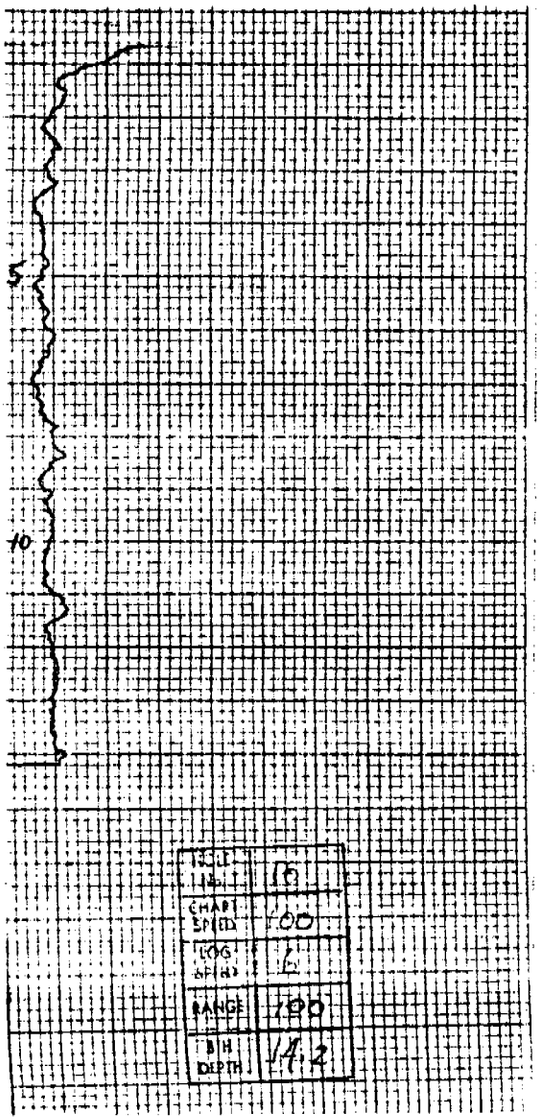
Hole Number...WSRAB 15...
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....5/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m).....19m.....
Logged Depth (m).....17.9m.....
Range.....500cps.....
Chart Speed.....100.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

Hole Number..WSRAB 16...
Project.....RUM JUNGLE.....
Prospect/EL.....WEST SARGENT.....
Date.....5/10/1982.....
Non Cored.....Cored.....
Drilled Depth (m).....15m.....
Logged Depth (m).....14.2m.....
Range.....100cps.....
Chart Speed.....200.....
Cased from.....to.....metres
PVC.....Steel.....
Operator.....J. GODWIN.....



MOBIL ENERGY MINERALS AUSTRALIA INC

SIE DOWNHOLE RADIOMETRIC LOGGING DATA

Hole Number...WSBAB.17...

Project.....BUM.JUNGLE.....

Prospect/EL.....WEST.SABGENT.....

Date.....5/10/1982.....

Non Cored.....Cored.....

Drilled Depth (m)....10m.....

Logged Depth (m).....9.5m.....

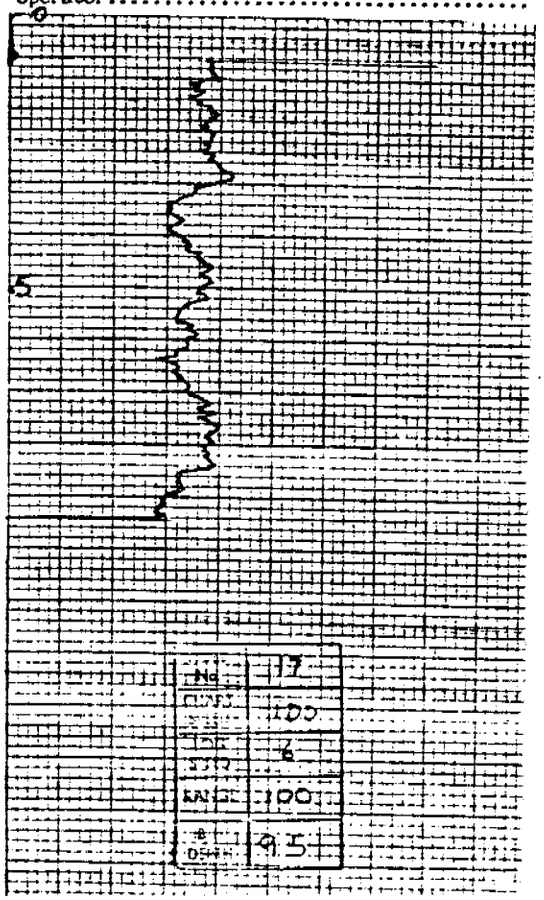
Range.....100cps.....

Chart Speed.....100.....

Cased from.....to.....metres

PVC.....Steel.....

Operator.....J. GODWIN.....



APPENDIX 4

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

Phone (09) 458 7999 — 52 Murray Road, Welshpool, W.A. 6106 — Telex AA92560

ANALYTICAL REPORT No. 197 8 14 597

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Mobil Energy Minerals Australia
PO Box 1510
Darwin
N.T. 5794

ORDER No.: 0280

PROJECT:

DATE RECEIVED: 23.9.83

RESULTS REQUIRED: Urgent

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
	5.10.83	3	5

STATE OF SAMPLES		PRE-TREATMENT							ANALYSIS			
RUN BE	SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE		REFER TO ANALYSIS SECTION	PREPARATION	METHOD
0	WSD1-5		1	3	2 4				Cu Pb Zn Ni Co Ag U Au Pt		101 101	101 101 401 313 311

RESULTS TO: As Above

RESULTS TO:

REMARKS

STATE OF SAMPLES

hole core	WC
lit core	SC
cutting	CU
rock	Ro
il	SO
ulp	PU
ater	WA
tissue	TI
stream sediment	SS
eavy mineral	HM

ANALYSIS — PREPARATION

perchloric acid	A1	cold acid	CA
hydrochloric acid	A2	specific sulphide	SS
nitric acid	A3	other mixed acids	Ma
aqua regia	A4	alkaline attack	AA
nitric-perchloric	A5	volatilization	VO
HF mixture	A6	ignition	IG
HF under pressure	A7	pressed powder (XRF)	PP
fusion	A8	glass fusion (XRF)	GF

ANALYSIS — METHOD

atomic absorbtion	AAS
x-ray fluorescence	XRF
spectrophotometry	SPEC
colorimetry	COL
chromatography	CHR
titration	TTN
other chemicals means	CHEM
miscellaneous	MISC
fluorescence	FLUOR
inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
JBD	197.8 14 597			1 OF 2

TUBE No.	SAMPLE No.	Co	Ni	Cu	Zn	Ag	Pt	Au	Pb	U
1	1	75	145	770	45	x	0.009	0.015	40	x
2	2	115	175	475	85	x	x	0.005	10	x
3	3	35	90	10	25	x	x	0.005	10	9
4	4	15	60	5	30	0.5	x	0.010	20	10
5	5	15	40	x	10	0.5	x	0.010	5	x
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
HSO	197.R 14 597			2 OF 2

TUBE No.	SAMPLE No.	Co	Ni	Cu	Zn	Ag	Pt	Au	Pb	U
1	R 1	80	155	795	45	0.5	–	–	45	–
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	5	5	5	5	0.5	0.008	0.005	5	5
24	DIGESTION	101	101	101	101	101			101	
25	METHOD	101	101	101	101	101	311	313	101	401

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER _____

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.
Phone (09) 458 7999 — 52 Murray Road, Welshpool, W.A. 6106 — Telex AA92560

ANALYTICAL REPORT No. 197.S 14 623

THIS REPORT MUST BE READ IN CONJUNCTION WITH THE ACCOMPANYING ANALYTICAL DATA

Mobil Energy Minerals Australia
PO Box 1510
Darwin
N.T. 5794

ORDER No.: 0281
PROJECT:
DATE RECEIVED: 3.10.83
RESULTS REQUIRED:

No. OF PAGES OF RESULTS	DATE REPORTED	No. OF COPIES	TOTAL No. OF SAMPLES
	12.10.83	3	1

STATE OF SAMPLES	PRE-TREATMENT									ANALYSIS			
REFER BELOW	SAMPLE NUMBERS	DRY	CRUSH	SPLIT	PULVERISE	SIEVE	OTHER SEE REMARKS	NONE	REFER TO ANALYSIS SECTION	PREPARATION	METHOD
1	WSD 4							1	S.G.		605

RESULTS TO: As Above

RESULTS TO:

REMARKS

STATE OF SAMPLES

whole core	WC
split core	SC
cutting	CU
rock	Ro
soil	SO
pulp	PU
water	WA
tissue	TI
stream sediment	SS
heavy mineral	HM

ANALYSIS — PREPARATION

perchloric acid	A1	cold acid	CA
hydrochloric acid	A2	specific sulphide	SS
nitric acid	A3	other mixed acids	Ma
aqua regia	A4	alkaline attack	AA
nitric-perchloric	A5	volotilization	VO
HF mixture	A6	ignition	IG
HF under pressure	A7	pressed powder (XRF)	PP
fusion	A8	glass fusion (XRF)	GF

ANALYSIS — METHOD

atomic absorbtion	AAS
x-ray fluorescence	XRF
spectrophotometry	SPEC
colorimetry	COL
chromatography	CHR
titration	TTN
other chemicals means	CHEM
miscellaneous	MISC
fluorescence	FLUOR
inductively coupled plasma	ICP

AUTHORISED OFFICER

ANALABS

A division of MacDonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
ASO	197.8 14 623	12.10.83	0281	1 OF 1

TUBE No.	SAMPLE No.	S.G.								
1	4	3.22								
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23	DETECTION	101								
24	DIGESTION									
25	METHOD	605								

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

170 E

180 E

450 N

440 N

430 N

420 N

TRUE NORTH

APgt

Pll

Puo

Plr

Ple1

qt

q

WS RAB 1

WS RAB 2

WS RAB 3

WS RAB 4

WS RAB 5

WS RAB 6

WS RAB 7

WS RAB 8

WS RAB 9

WS RAB 10

WS RAB 11

WS RAB 12

WS RAB 13

WS RAB 14

WS RAB 15

WS RAB 16

WS RAB 17

BMR RJ 70

WS D1

amethyst

LEGEND

- Puo — Haematised siltstone, chert; Haematite quartzite breccia
- Plr — Fine grained quartzite; ○○○○ quartz pebble conglomerate
- Pll — Amphibolite; = = silicified dolomite
- Ple1 — Fine to medium quartzite;
- APgt — Pink porphyritic granite, gneiss and minor chloritic schist
- Geological boundary
- ? — " " inferred, concealed
- Fault
- 40 — Strike and dip of strata
- 40 — Strike and dip of foliation
- Platey flow direction
- Paleocurrent direction from trough axis
- Vein, q - quartz, t - tourmaline
- Prospect
- RAB drillhole
- 60° — Diamond drillhole
- Track
- Stream
- Swamp
- Fence

Plan 1.

SCALE 1:5000

100 0 100 200 300 400 metres

MOBIL ENERGY MINERALS AUSTRALIA

PROJECT RUM JUNGLE

E.L. 3560 – WEST SARGENT

GEOLOGY AND DRILLHOLE LOCATIONS

	DATE	BY		DATE	BY
COMPILED	10/83	A.P.B.	ADDNS		
DRAWN	10/83	C.S.D.S.			
SCALE	1:5000		DWG No	3·3205·1·168	

CR 84/9

170E

180E

450N

440N

430N

420N

N

Scale 1:5,000

0 1 2 3 4 5 Km.

MOBIL ENERGY MINERALS AUSTRALIA

PROJECT RUM JUNGLE

EL 3560 WEST SARGENT

GROUND MAGNETIC, CONTOUR PLAN

	DATE	BY		DATE	BY
COMPILED	10/83		ADDNS		
DRAWN	10/83	H.S.			
SCALE	1:5000		DWG No	3·3205·1·162	

CR 84/9

170E

180E

LINE 454

LINE 452

LINE 450

450N

LINE 448

LINE 446

LINE 444

LINE 442

LINE 440

440N

LINE 438

LINE 436

LINE 434

LINE 432

LINE 430

430N

LINE 428

LINE 426

LINE 424

LINE 422

LINE 420

420N

LINE 418

450N

440N

430N

420N

← GRAVITY

← GRAVITY EM

← GRAVITY EM

?

N

Scale 1:5,000

0 1 2 3 4 5 Km.

MOBIL ENERGY MINERALS AUSTRALIA

PROJECT RUM JUNGLE

EL 3560 WEST SARGENT

GROUND MAGNETICS,
TMI PROFILES

	DATE	BY	ADDNS	DATE	BY
COMPILED	10/83	L.S.			
DRAWN	10/83	H.S./L.U.			
SCALE	1:5000		DWG No	3·3205·1·0161	

CR 84/9

170E

180E

450N

440N

430N

420N

40
50
20
30
20
10
20
30
10
40
30
10
30
10
10
20
30
20
10
20

N

Scale 1:5,000

0 1 2 3 4 5 Km.

Plan 4.

MOBIL ENERGY MINERALS AUSTRALIA

PROJECT RUM JUNGLE

EL 3560 WEST SARGENT

TOTAL COUNT CONTOUR PLAN

	DATE	BY	ADDNS	DATE	BY
COMPILED	10/83	LJS/TvS			
DRAWN	10/83	LU/HS			
SCALE	1:5000		DWG No	3·3205·1·151	

CR 84/9

MOBIL ENERGY MINERALS AUSTRALIA

PROJECT RUM JUNGLE

EL 3560 WEST SARGENT

URANIUM COUNT PLAN

	DATE	BY	ADDNS	DATE	BY
COMPILED	10/83	LJS/TvS			
DRAWN	10/83	LU/HS			
SCALE	1:5000		DWG No	3·3205·1·150	

CR 84/9

170E

180E

450N

440N

430N

420N

N

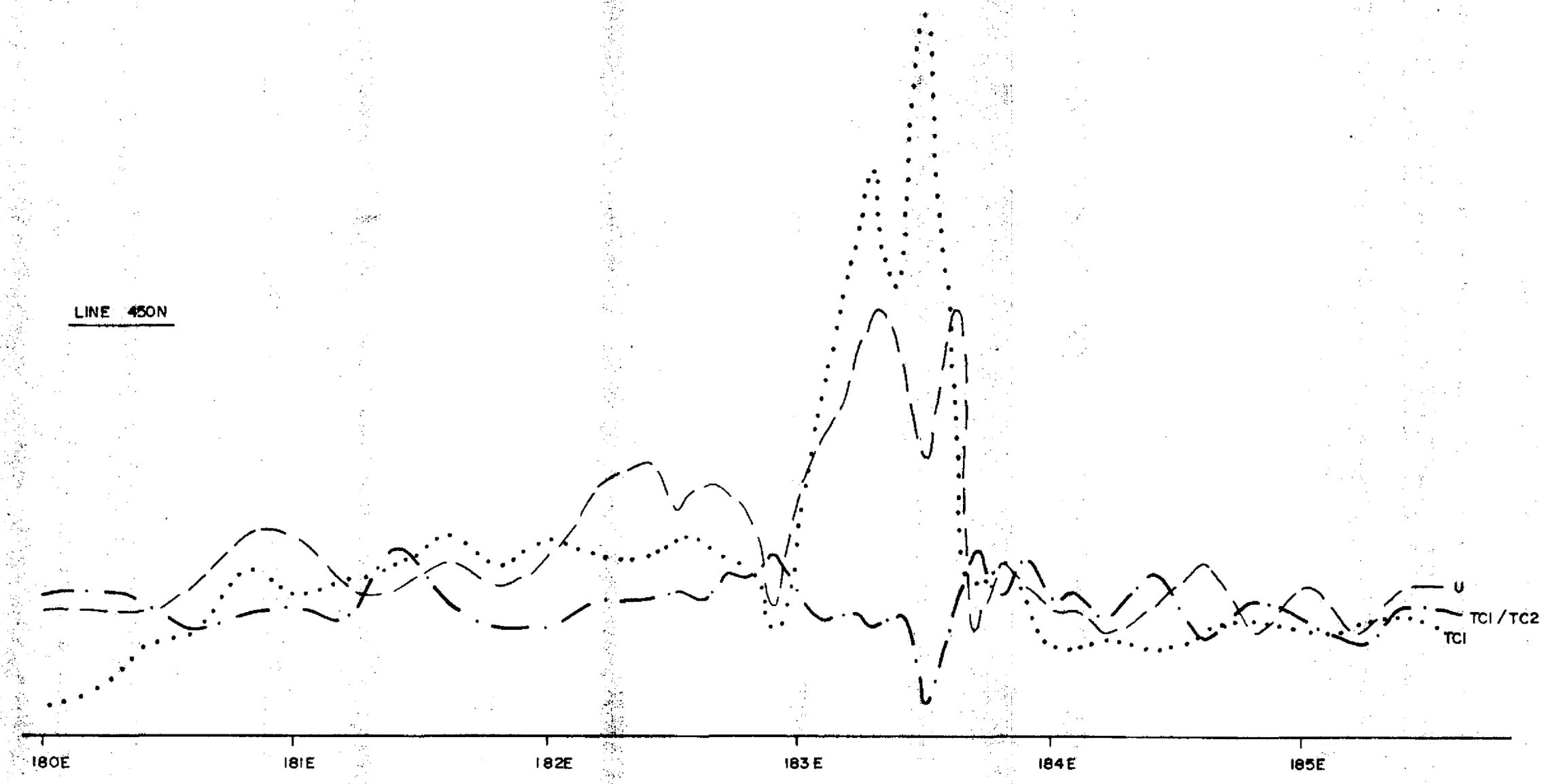
Scale 1:5,000

0 1 2 3 4 5 Km.

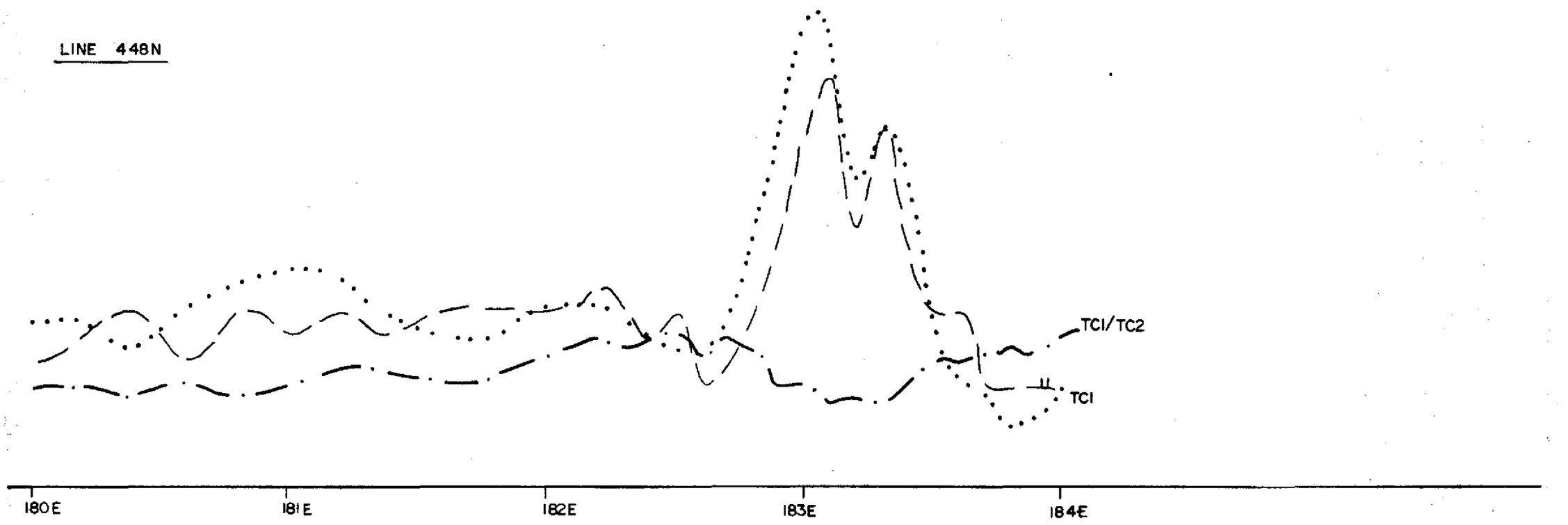
MOBIL ENERGY MINERALS AUSTRALIA						
PROJECT RUM JUNGLE						
EL 3560 WEST SARGENT						
POTASSIUM COUNT CONTOUR PLAN						
	DATE	BY		DATE	BY
COMPILED	10/83	LJS/TvS	ADDNS		
DRAWN	10/83	LU/HS			
SCALE	1:5000		DWG No	3·3205·1·152	

CR 84/9.

LINE 450N



LINE 448N



MOBIL ENERGY MINERALS AUSTRALIA

PROJECT RUM JUNGLE CR84/9

WEST SARGENT

RADIOMETRIC PROFILES
LINES 450N AND 448N

	DATE	BY		DATE	BY
COMPILED	10/83	LJS	ADDNS		
DRAWN	10/83	HS			
SCALE	1:2,000		DWG No	3'3205'1'163	

170E

180E

450N

440N

RESIDUAL 440N

RESIDUAL 432N

430N

RESIDUAL 428N

N

Scale 1:5,000

0 1 2 3 4 5 Km.

RESIDUAL 424 N

420N

NOTE:
2·5cm = 1 milligals

MOBIL ENERGY MINERALS AUSTRALIA

PROJECT RUM JUNGLE CR 84/9

EL 3560 WEST SARGENT
GRAVITY, RESIDUAL DETAILED TRAVERSES

	DATE	BY	ADDNS	DATE	BY
COMPILED	10/83	APB			
DRAWN	10/83	H.S.			
SCALE	1:5000		DWG No	3·3205·1·177	

PLAN 8

170E

180E

450N

440N

430N

420N

ORIGINAL 440N

REGIONAL 440N

REGIONAL 432N

ORIGINAL 432N

REGIONAL 428N

ORIGINAL 428N

ORIGINAL 424N

REGIONAL 424N

N

Scale 1:5,000

0 1 2 3 4 5 Km.

NOTE:
2·5cm. = 1milligal

MOBIL ENERGY MINERALS AUSTRALIA

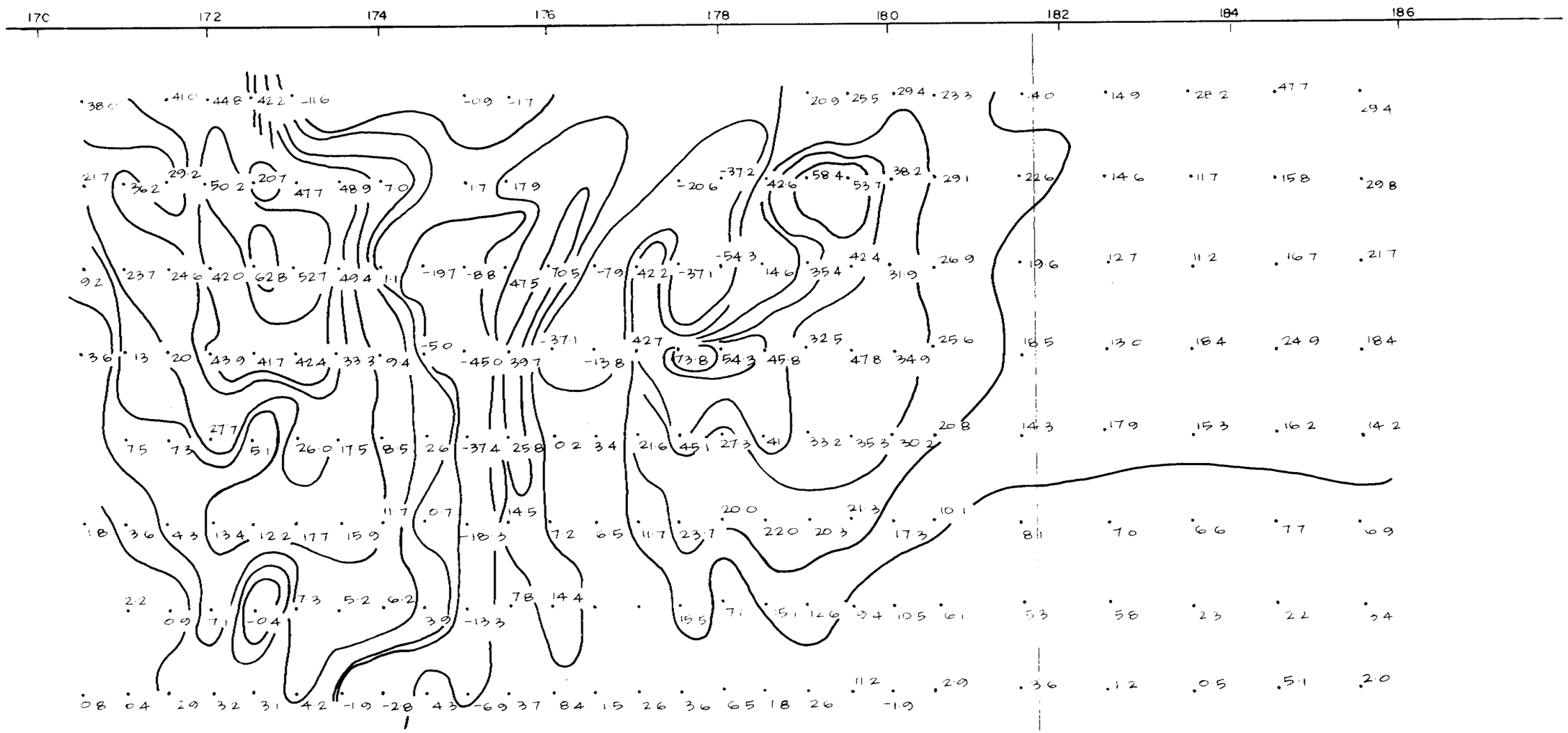
PROJECT RUM JUNGLE CR 84/9

EL 3560 WEST SARGENT

DETAILED GRAVITY TRAVERSES

	DATE	BY	ADDNS	DATE	BY
COMPILED	10/83	APB			
DRAWN	10/83	H.S.			
SCALE	1:5000		DWG No	3·3205·1·176	

PLAN 9



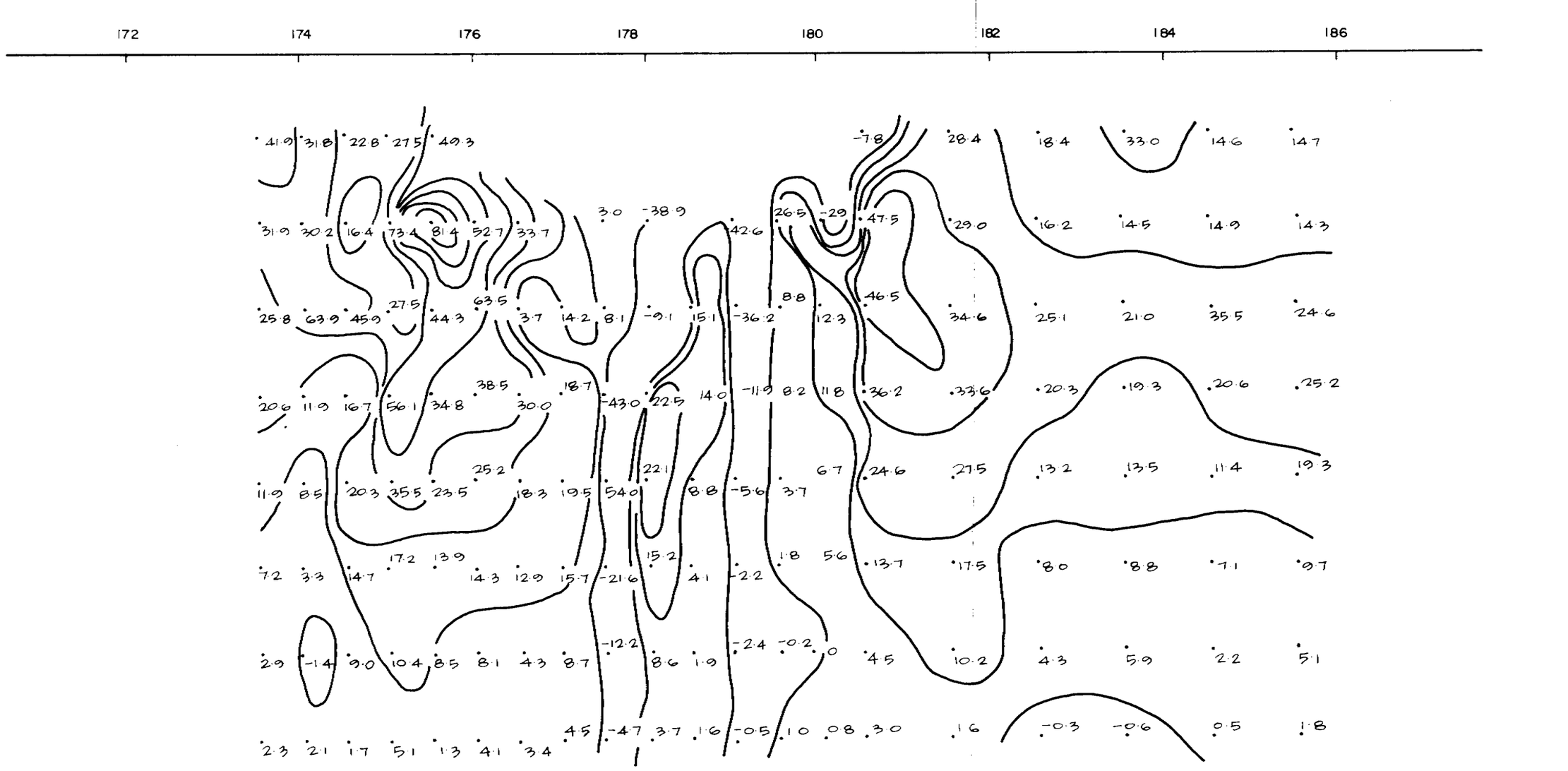
MOBIL ENERGY MINERALS AUSTRALIA

PROJECT RUM JUNGLE CR 84/9

WEST SARGENT

TILT ANGLE
LINE 424 N

	DATE	BY	ADDNS	DATE	BY
COMPILED	10/83	LJS			
DRAWN	10/83	HS			
SCALE	1:5000		DWG No	3320511 71	



MOBIL ENERGY MINERALS AUSTRALIA

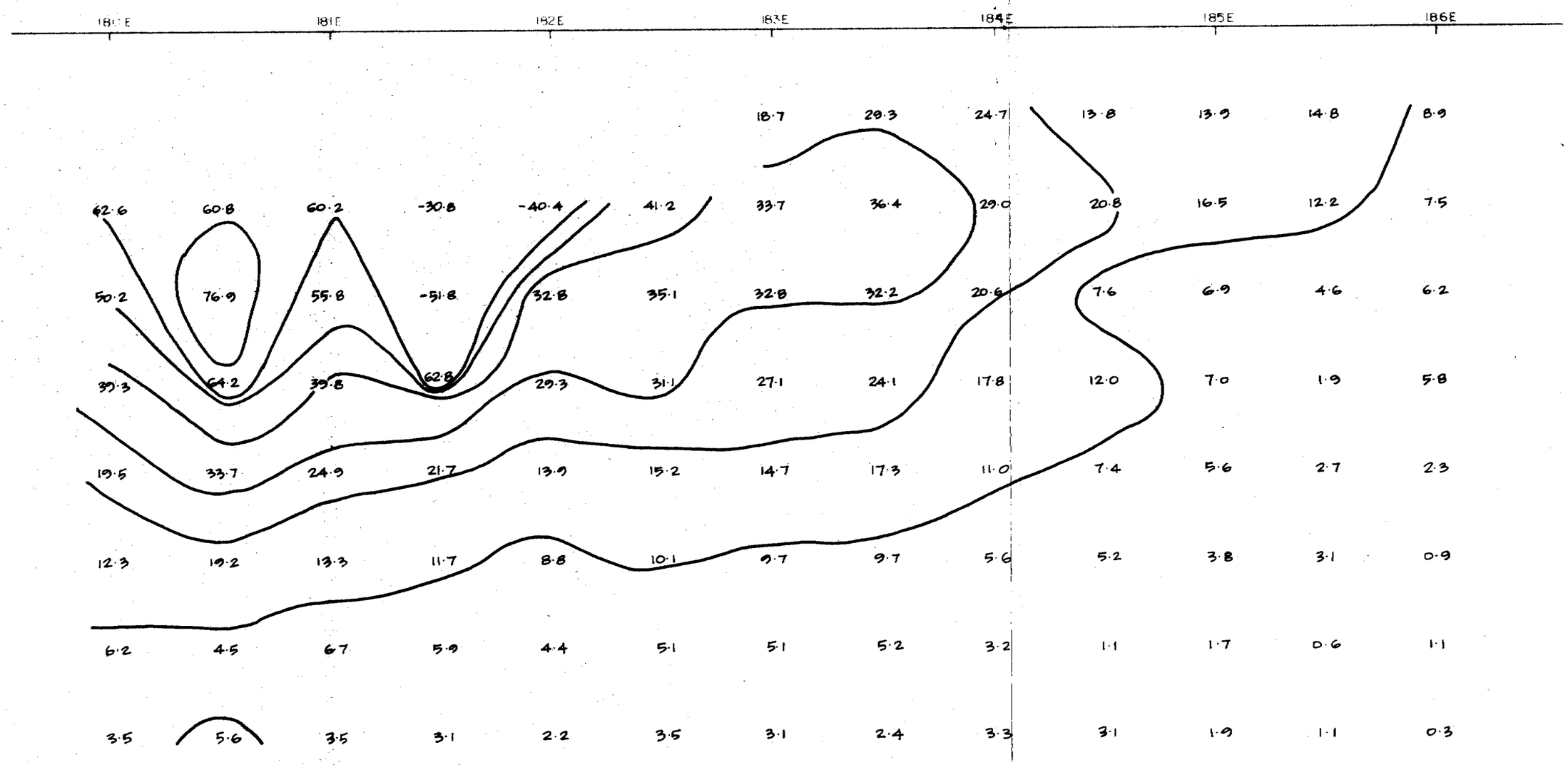
PROJECT RUM JUNGLE CR84/9

WEST SARGENT

TILT ANGLE

LINE 428N

	DATE	BY		DATE	BY
COMPILED	10/83	LJS	ADDNS		
DRAWN	10/83	LU/HS			
SCALE	1:5,000		DWG No	3'3205'1'172	



MOBIL ENERGY MINERALS AUSTRALIA

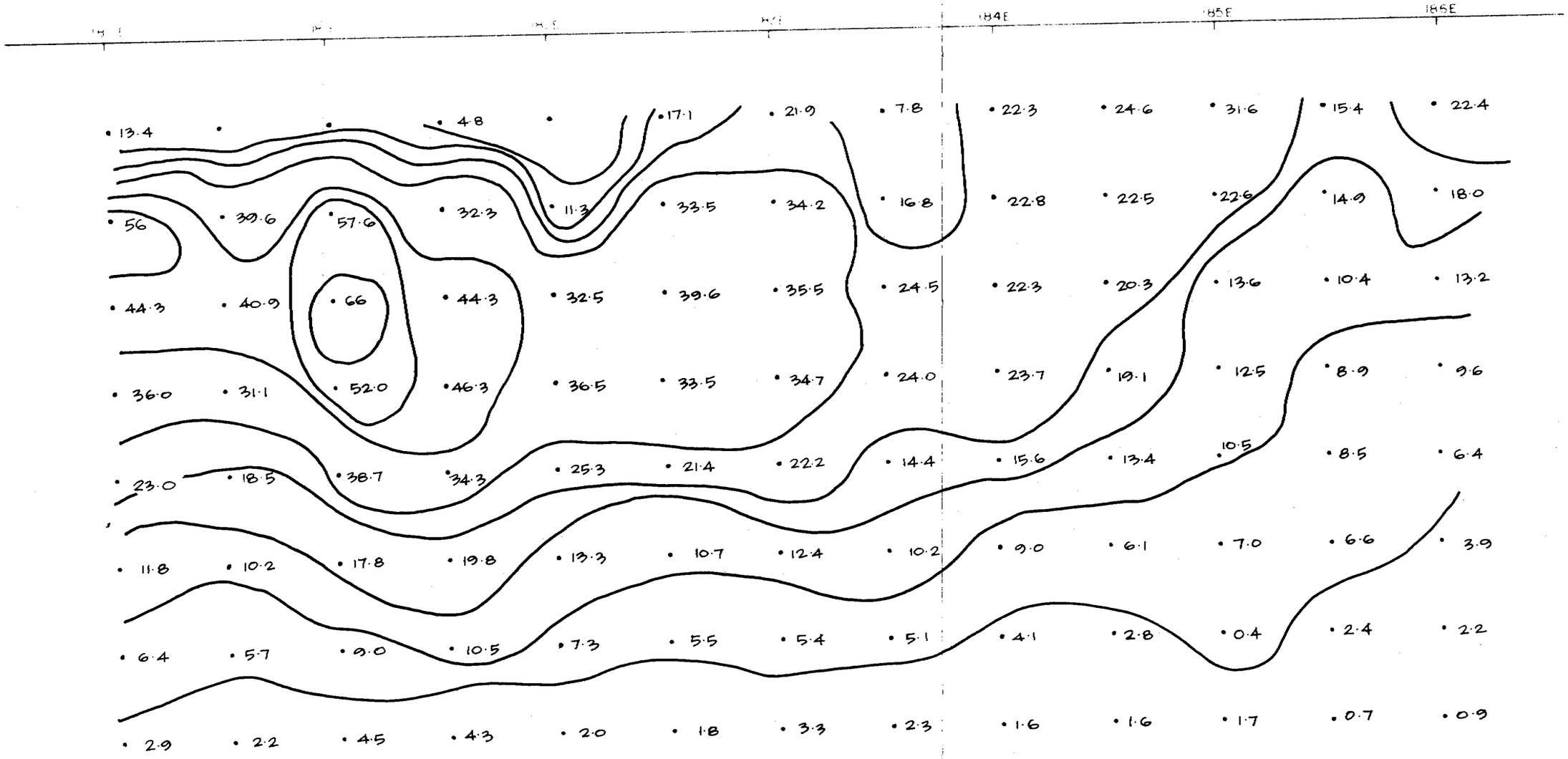
PROJECT: RUM JUNGLE CR84/9

WEST SARGENT

TILT ANGLE

LINE 448N

	DATE	BY		DATE	BY
COMPILED	10/83	LJS	ADDNS		
DRAWN	10/83	LW/HS			
SCALE	1:2,000		DWG No	3 3205	170



MOBIL ENERGY MINERALS AUSTRALIA

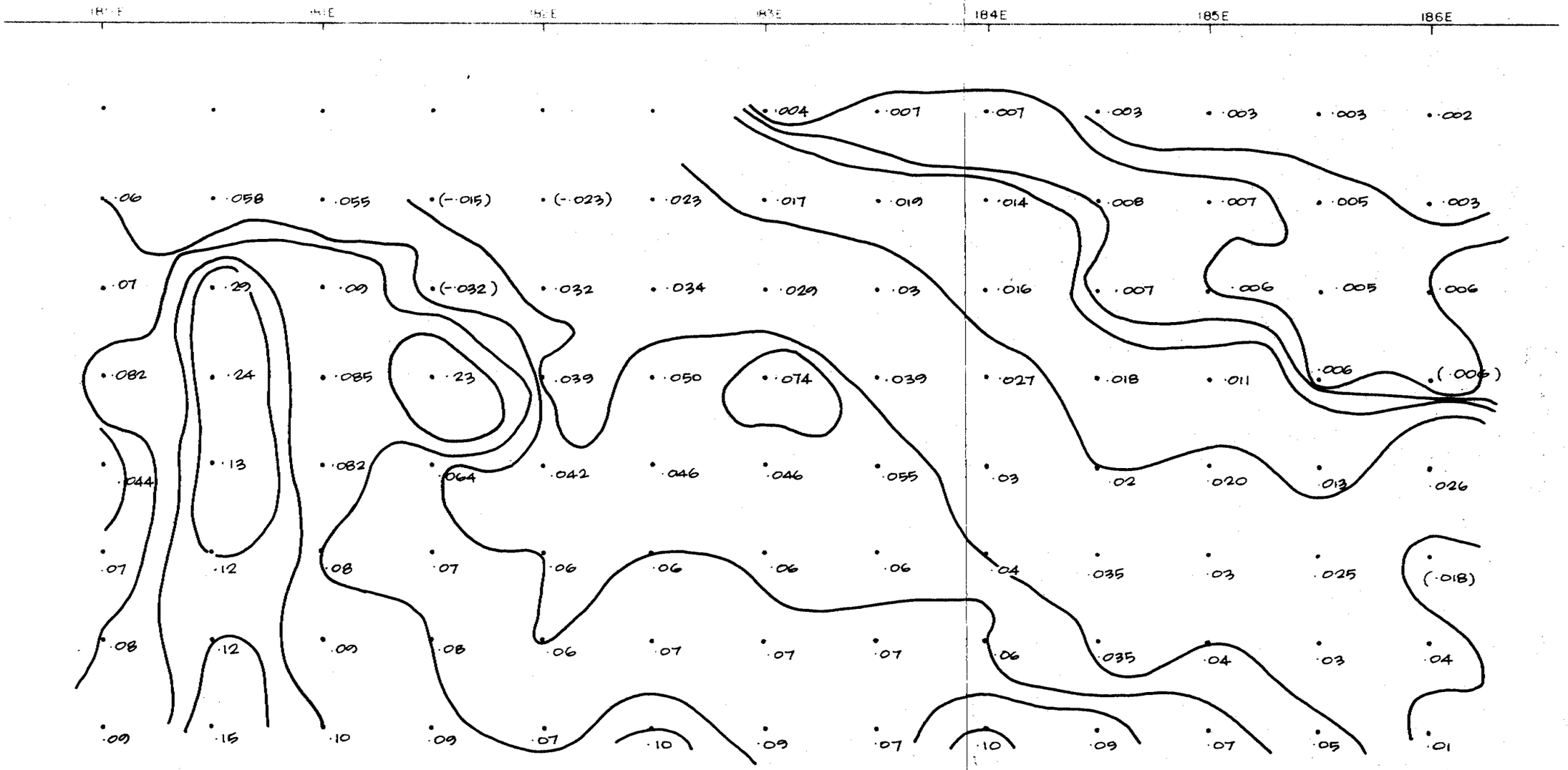
PROJECT RUM JUNGLE CR84/9

WEST SARGENT

TILT ANGLE

LINE 450N

	DATE	BY		DATE	BY
COMPILED	10/83	LJS	ADDNS		
DRAWN	10/83	LW/HS			
SCALE	1:2,000		DWG No	3 3205	173



MOBIL ENERGY MINERALS AUSTRALIA

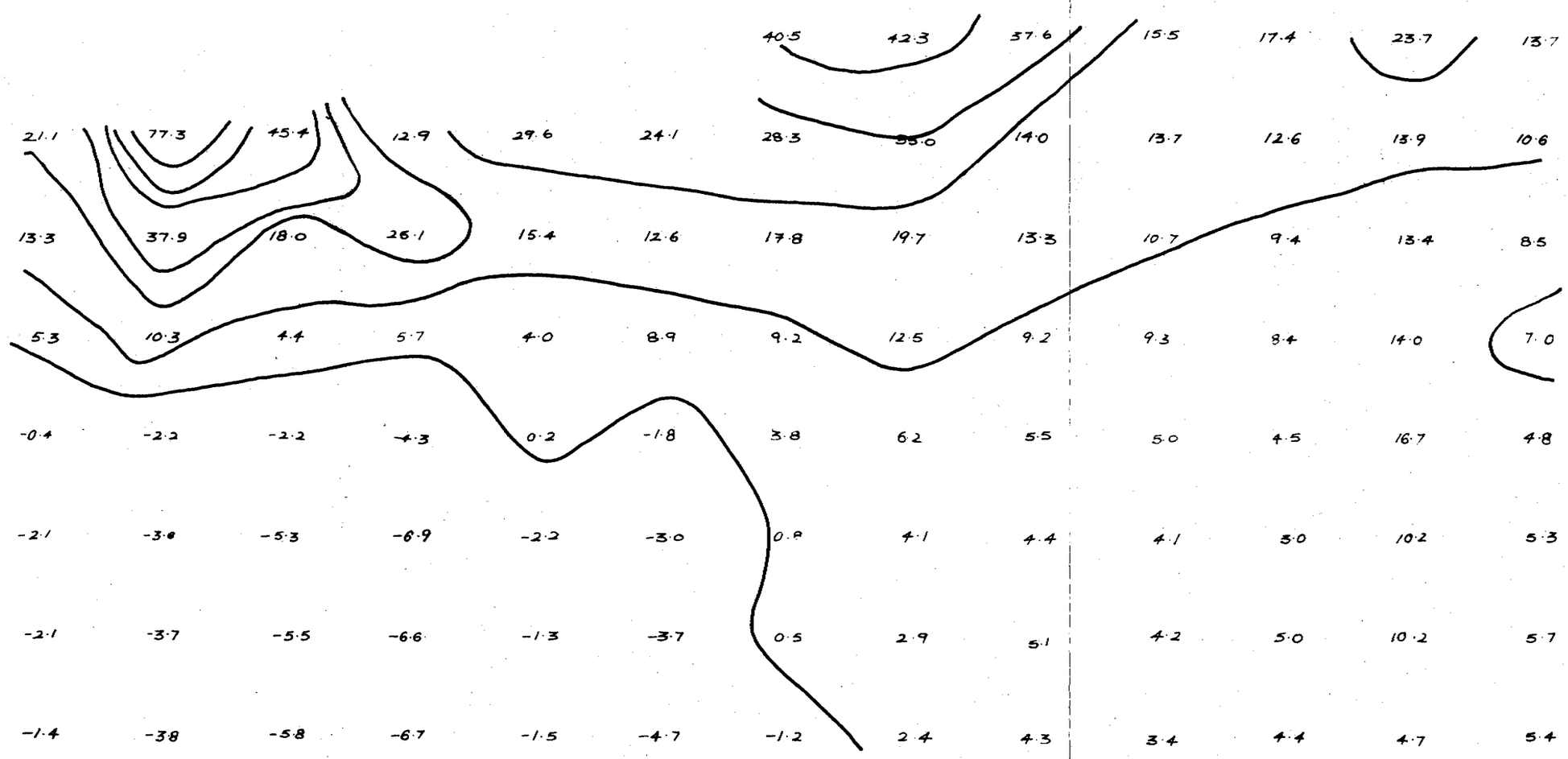
PROJECT RUM JUNGLE CR 84/9

WEST SARGENT

TILT ANGLE CONDUCTIVITY

LINE 448N

	DATE	BY	ADDNS	DATE	BY
COMPILED	10/83	LJS			
DRAWN	10/83	LJ/HS			
SCALE	1:2,000		DWG No	3 3205	174



MOBIL ENERGY MINERALS AUSTRALIA

RUM JUNGLE CR84/9

WEST SARGENT

ELLIPTICITY

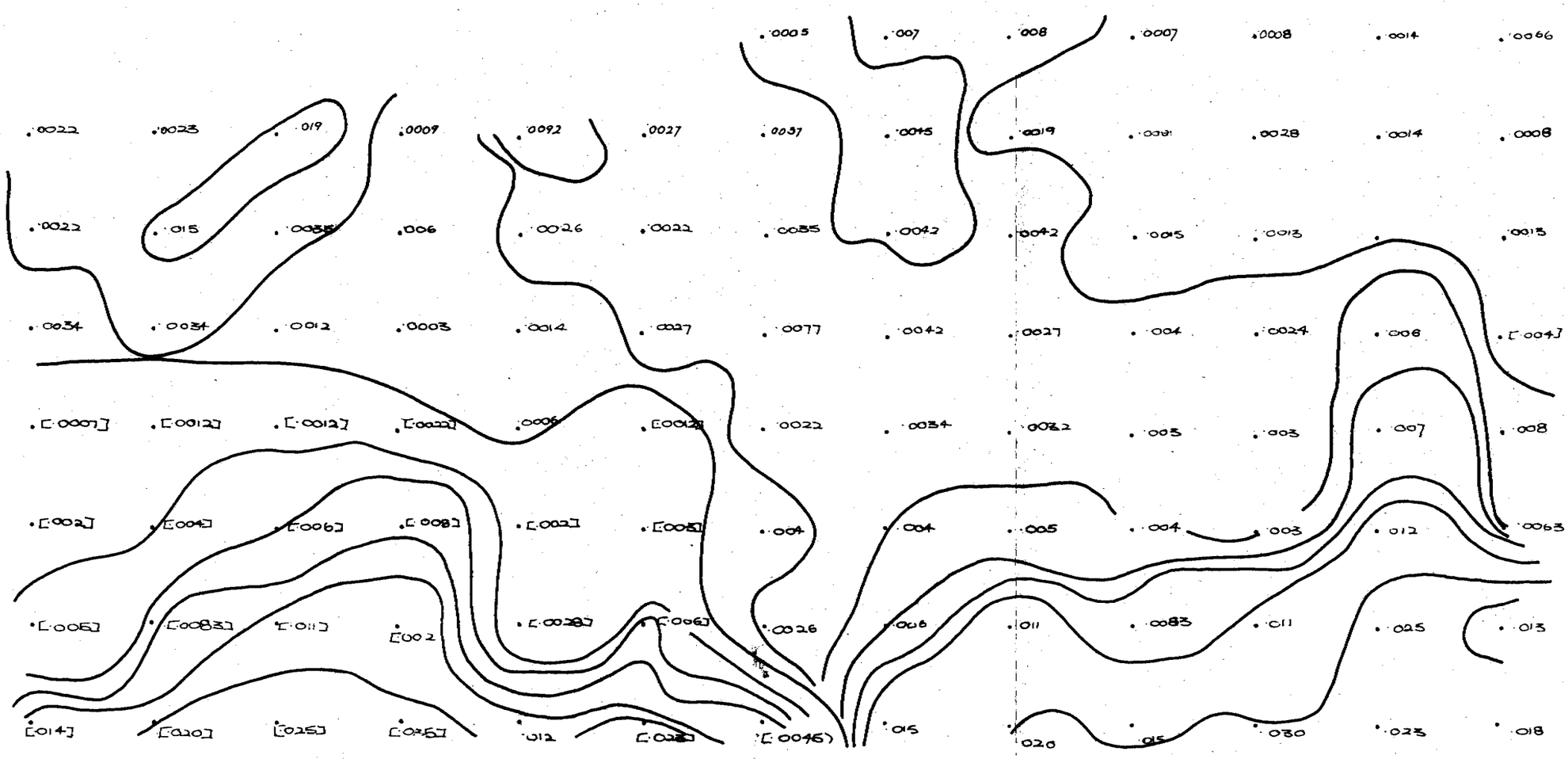
LINE **448N**

10/83 LJS

10/83 HS

1:2000

33205 **165**



MOBIL ENERGY MINERALS AUSTRALIA

RUM JUNGLE CR 84/9

WEST SARGENT

ELLIPTICITY **CONDUCTIVITY**

LINE **448N**

10/83 LJS

10/83 HS

1:2000

DWG No 33205 | **164**