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EXPLORATION AT WESTERN CETHANA

REPORT NO.2: AUGUST 1977-NOVEMBER 1979

E.L.s 7/73 AND 10/76, NORTHERN TASMANIA

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Date: 12th November, 1979

Submitted to: R.J. Rebek

Copy: CRAE Library Melbourne
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Department of Mines, Tasmania

CRAE Burnie

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1 SUMMARY

This report is a collation of the data acquired in the period August 1977 - November 1979, during exploration of the West Cethana Pb-Zn prospect in Northern Tasmania.

Only limited surveys have been carried out in the period under review, and this work has downgraded the prospect. No further work is planned.

2 INTRODUCTION

The West Cethana Pb-Zn prospect occurs within E.L.'s 10/76 and 7/73 in Northern Tasmania. E.L. 7/73 is the subject of a Joint Venture with Asarco (Aust) Pty. Ltd.

The prospect lies within the belt of altered Cambrian acid volcanics which have been extensively explored by CRAE at the East Cethana prospect, 2 km to the east.

Little exploration has been done at West Cethana since three unsuccessful diamond drillholes were put down in February 1977. The only results of any significance were in hole 77 CCl which intersected 0.4 m of 8% Zn, 0.2% Pb within highly altered cherty tuffs; and 2.6 m of 1% Pb, 1% Zn as finely bedded galena and sphalerite within black tuff-shale.

Recommendations contained in the report of September 1977 (CRAE No. 9041), that the IP data in the vicinity of drillhole 77 CCl be re-evaluated, have been carried out. In addition, a limited amount of further IP and rock sampling has been undertaken in critical areas to supplement the earlier surveys.

3 RESULTS

Results are shown in the plans and appendices at the back of this report.

Weak IP anomalies suggesting extensions of the mineralisation in drillhole 77 CCl, were checked out in a small gradient array IP survey in November 1977. The IP anomaly at 2870S/19400E was found to be due to a grounded stay wire on a power pole. The anomaly at 110N/900E was not detected, and the original spurious reading is considered to have been due to a high tension power line passing directly over this point at a height of only 20 metres. (See Appendix II).

In August 1979, line 900E was re-measured and extended several hundred metres to the north to cover the contact between the highly altered acid volcanic tuffs and unaltered dacitic volcanics. This contact zone is considered a suitable horizon for the formation of a massive sulphide body and was not adequately covered in earlier IP surveys.

Dipole-dipole IP was run along line 900E from 200N - 760N. A 40 m dipole spacing was used to give deeper penetration than the earlier surveys. Results were negative. (See Appendix III).

J.G. Purvis
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KEYWORDS

Copper, Lead, Zinc, Acid volcanics, geopy. IP

LOCATION

Burnie SK 55-3 1:250 000 map sheet.

LIST OF APPENDICES

Appendix No.

- I Rock Sample Results
- II Gradient Array IP Survey, November 1977
- III Dipole-dipole IP Survey, August 1979

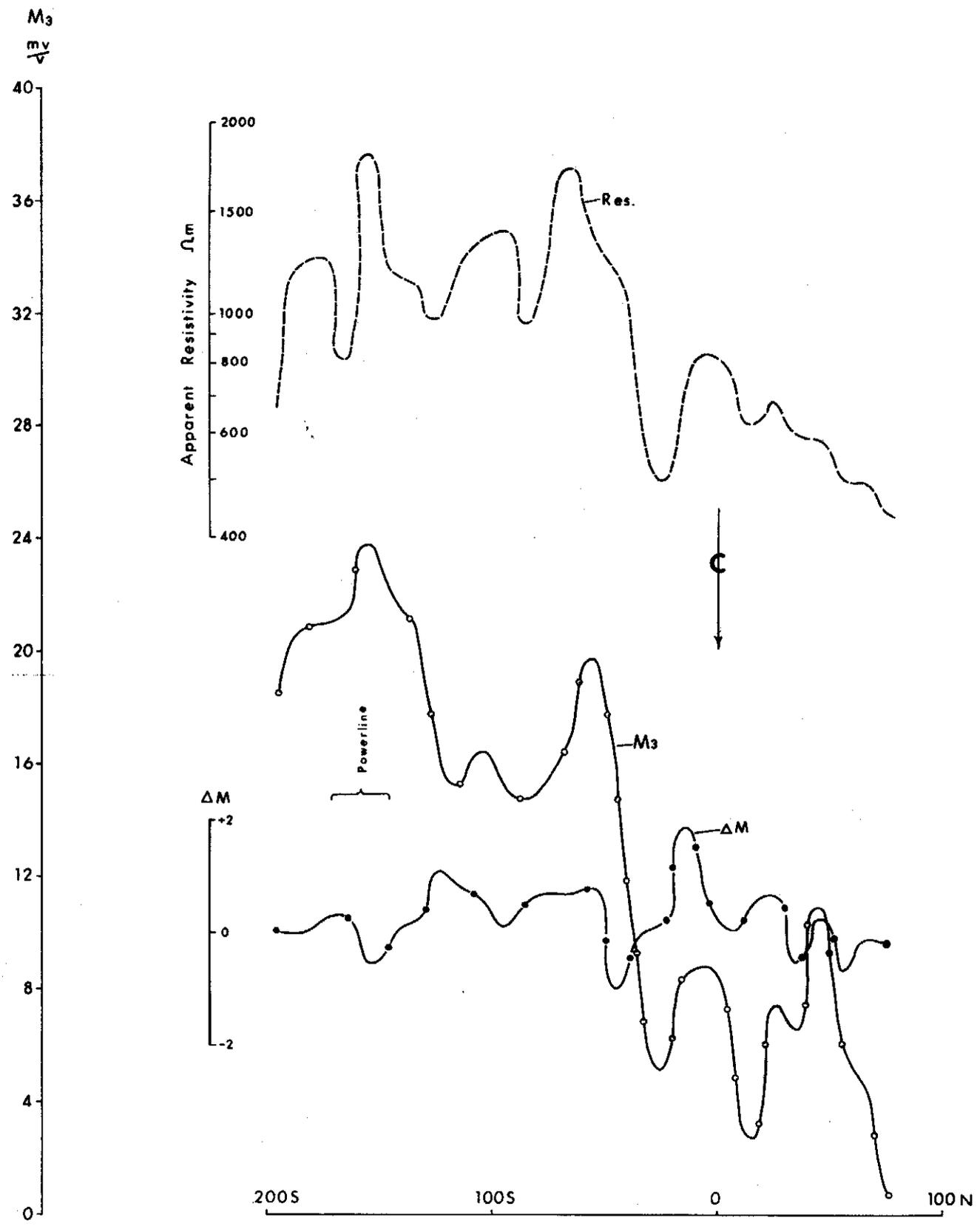
APPENDIX I

ROCK SAMPLE RESULTS

APPENDIX II

GRADIENT ARRAY IP SURVEY
NOVEMBER 1977

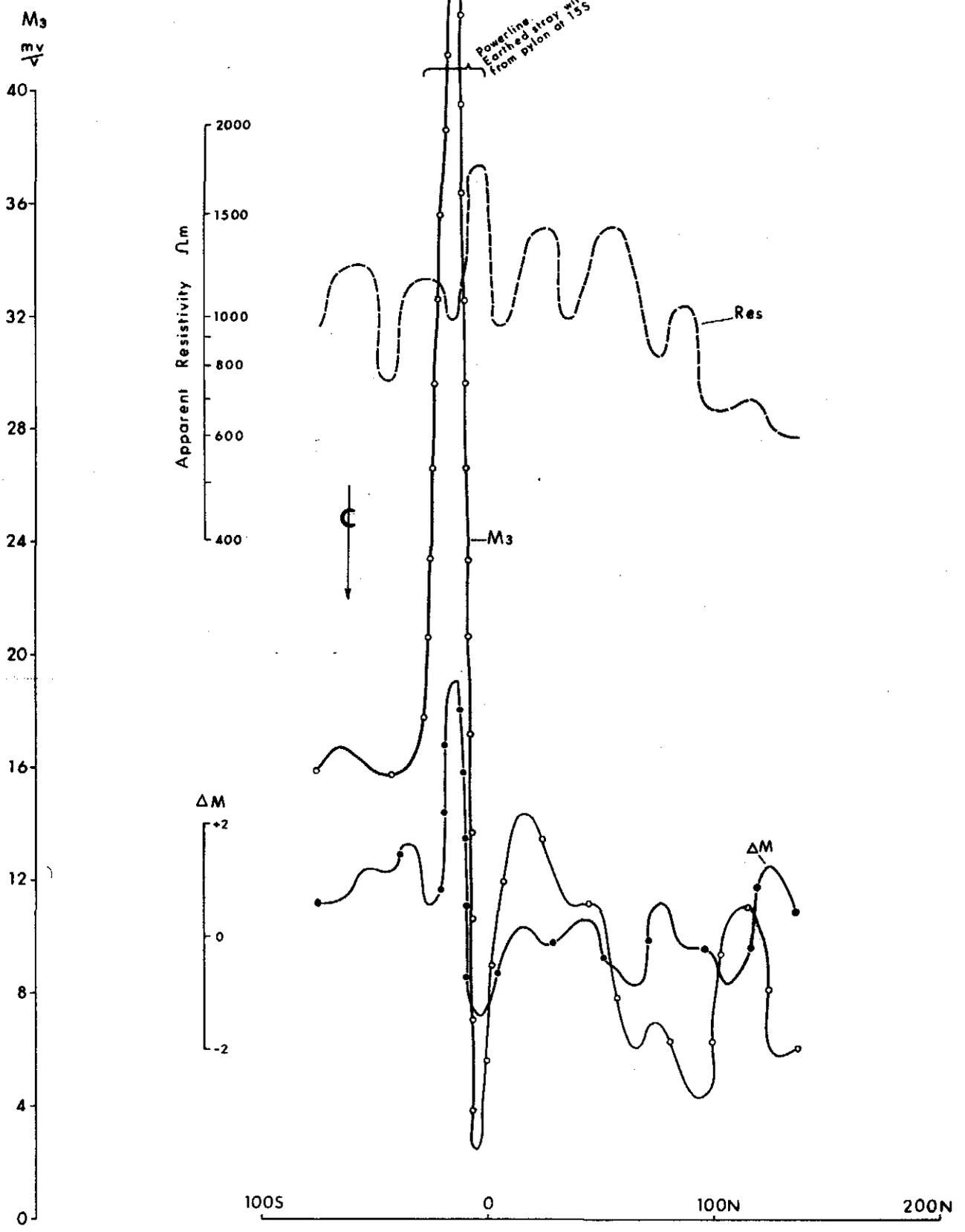
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WSET CETHANA
800E

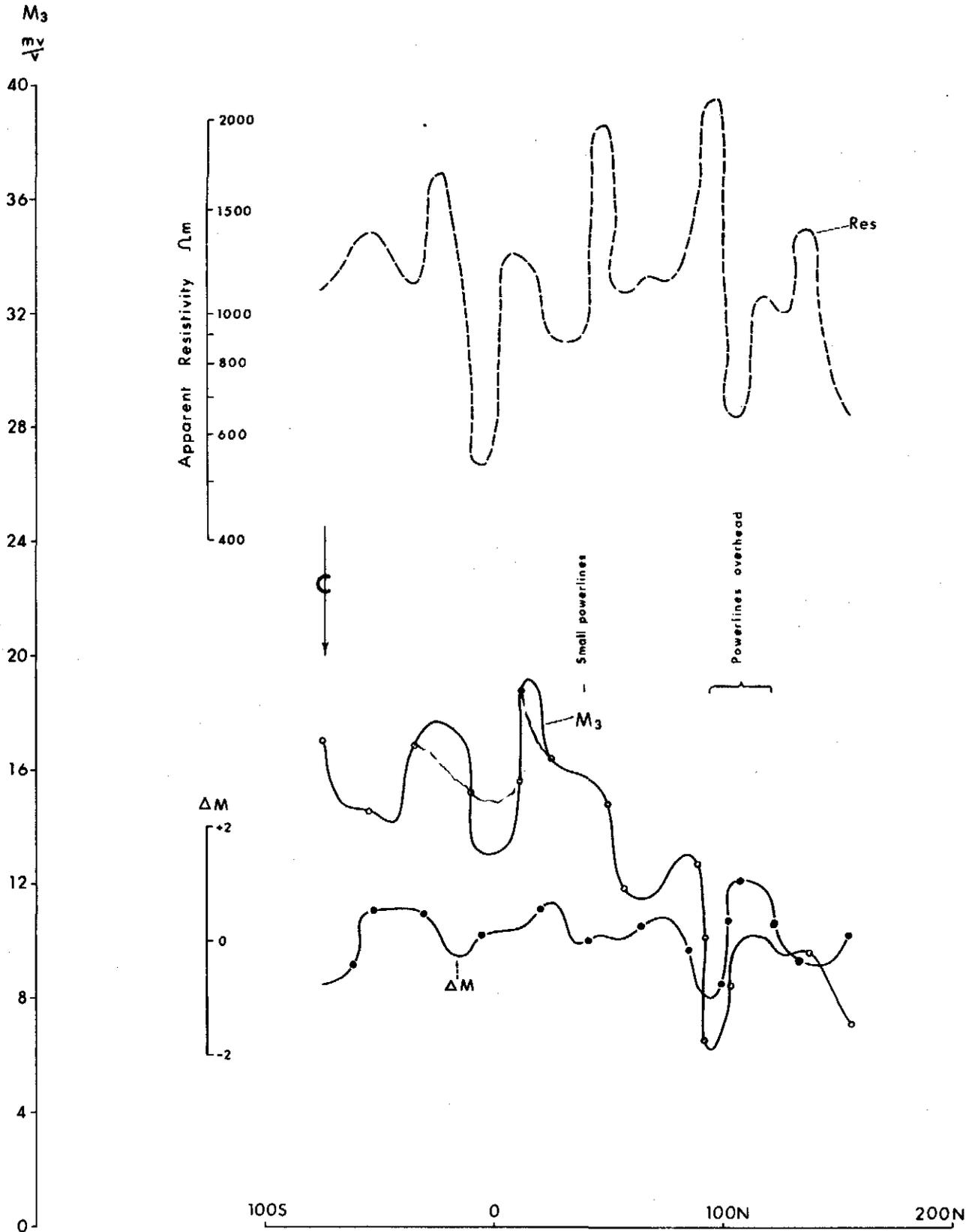
EIP GRADIENT ARRAY
MODE 3

003



WSET CETHANA
 850E
 EIP GRADIENT ARRAY
 MODE 3

010



WSET CETHANA
900E

EIP GRADIENT ARRAY
MODE 3

012

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APPENDIX III

DIPOLE-DIPOLE IP SURVEY

AUGUST 1979

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APPENDIX

III

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From : T.C. KERR

TASMANIAN I.P. : AUGUST 1979

1 Introduction

In August, an independent operator, Mark Winter, was contracted to run a number of I.P. lines in Tasmania. An I.P.R.-7 receiver and battery-powered LoPo transmitter were hired from Geoterrex for the work.

Coverage consisted of:

- 1 spread of 40m dipoles on lines 21750E at East Cethana to trace the deep anomaly recorded at the north end of the line with 20m dipoles.
- 1 spread of 40m dipoles on line 900E at West Cethana
- lines 0, 1 and 2 at the Beulah Prospect. Dipoles were 25m and an additional 50m dipole spread was run on line 2.
- Pseudosections are included, and results will be discussed referring to them.

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2 Results

2.1 East Cethana

The pseudosection shows an apparent contact about 135N. North of this the chargeabilities rise; but so do the resistivities, resulting in a low metal factor. The subtle anomaly noted on the earlier survey was apparently the fringe of this contact zone. (The earlier survey was read with a Huntec Mk4 receiver. The chargeability should be doubled to compare them with the recent survey). No I.P. target is present

2.2 West Cethana

A very weak anomaly is present about 440N on line 900E. It is not accompanied by any significant conductivity and cannot be nominated as a target. A minor resistivity anomaly appears at 580N, and there may be a major change of rock type about 700N.

2.3 Beulah

The most prominent feature is a combined chargeability plus resistivity high labelled "A" on the pseudosections. As the resistivities are high, it probably represents, at best, a disseminated target. Additionally, the closure of the contours at depth implies a fairly thin source. A further formation change appears on the resistivity pseudosection about 125N, but unaccompanied by any significant change in the polarizability.

The known mineralization is effectively outlined on line 2 by the chargeability readings of up to three times background inside the 5 millisecond contour. These form a wide "pant-leg" indicative of a flat tabular source. This should come to surface. Barring surface oxidation, there is no indication of enhanced mineralization at depth; and the source may be, in fact, confined to the near subsurface. There is no coherent resistivity anomaly.

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Geophysically, there is no individual drill target present; and it is suspected that near surface exploration will explain the anomaly adequately.

3 Conclusions

No drill target was outlined by I.P. at the three sites tested. No further geophysical work can be recommended using the current geological model and target mineralization.

T.C. Kerr
T.C. Kerr

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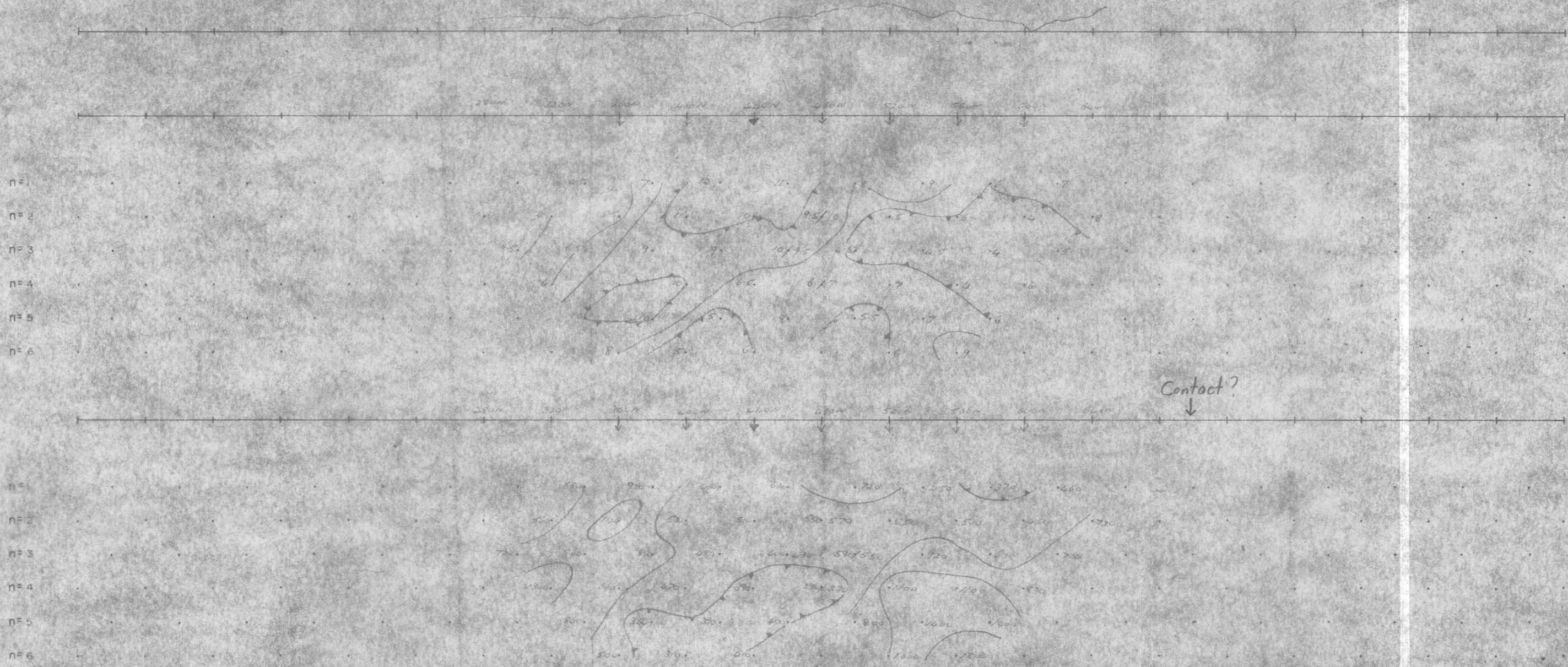
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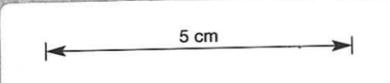
Culture Plan

Apparent Chargeability (msecs)

Apparent Resistivity (ohm.m)



Transmitter type: *PHUNTEC 5KV, 100A, 100W*
 Timing sequence: 2 sec on / 2 sec off
 Receiver type: *Somtrex IFR-7*
 Integration time: 450 to 1100msecs after cut off
 IP measured over one current pulse



SURVEY COMPILED & INTERPRETED BY
geotrex limited
 SYDNEY

<i>CRA EXPLORATION</i>		
INDUCED POLARIZATION and RESISTIVITY SURVEY		
<i>WEST CETHANA PROSPECT</i>		
LINE: 9005		
Array: Dipole - Dipole	Dipole length: 40 metres	
Date: 19-8-77	Job No: 85	Scale: 1:2500