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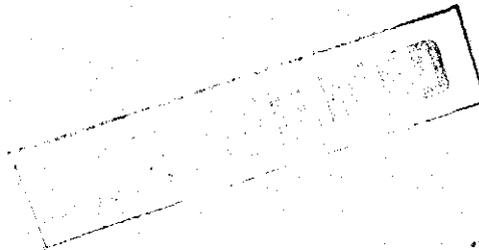
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E.M. 37 SURVEYS,  
MACINTOSH EAST AND  
HENTY RIVER PROSPECTS  
TASMANIA

FOR  
AMOCO MINERALS AUSTRALIA CO.  
MAY - JUNE 1985



P & V GEOPHYSICAL SERVICES  
PERTH. WESTERN AUSTRALIA  
JOB No. 327/333

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## 1. INTRODUCTION

P and V Geophysical Services were requested by Amoco Minerals Australia Company to carry out a Transient Electromagnetic survey in two areas of Tasmania during May and June 1985.

The first survey was at the Macintosh East Prospect, near Cradle Mountain during the period 5th May - 5th June 1985. The later survey was at the Henty River Prospect, near Zeehan, during the period 9th June - 6th July 1985.

## 2. PERSONNEL AND EQUIPMENT

A Senior Geophysicist, Mr P Prevedoros, was Crew Chief for both surveys. A Geonics 30 amp EM 37 system, with repetition frequencies of 25, 6.25 and 2.5Hz; full spare parts kit; Hewlett Packard based data acquisition and A4 printer and plotter were provided by the Contractor.

The Client provided three men for laying the transmitter loop and receiver coil, a truck and food and accommodation for the crew.

## 3. SURVEY PROCEDURES

In each case a 600 metre x 300 metre loop was set out to investigate each zone of interest, the position of each loop being decided by the Client. Loop positioning was controlled significantly by the rugged terrain on many grids. The EM 37 receiver coil was positioned at station intervals of 50 metres (closing down to 25 metres where anomalous values were evident). At each station three readings were taken, in the Down, North (grid north) and East (grid east) directions.

Each component consisted of a positive and negative reading which were then averaged to remove the capacitive offset. Both these polarities were stored individually into memory for later inspection.

## 4. DATA REDUCTION

The data was plotted as profiles for each component at a horizontal scale of 1:5000. The vertical scale for  $\dot{B}$  was decided by the measured values.



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Loop 2

Corners: ( 11000E, 9400N ),(11600E, 9400N )  
 ( 11000E, 9100N ),(11600E, 9100N )

<u>Line</u>	<u>From</u>	<u>To</u>	<u>Length</u> (metres)
11000 E	9450 N	10100 N	650 m
11100 E	9450 N	10100 N	650 m
11200 E	9450 N	10100 N	650 m
11300 E	9450 N	10100 N	650 m
11400 E	9450 N	10100 N	650 m
11500 E	9450 N	10100 N	650 m
11600 E	9450 N	10100 N	650 m

Loop 3

Corners: ( 11300E, 10150N ),(11900E, 10150N )  
 ( 11300E, 10450N ),(11900E, 10450N )

<u>Line</u>	<u>From</u>	<u>To</u>	<u>Length</u> (metres)
11300 E	10150 N	9650 N	500 m
11400 E	10150 N	9650 N	500 m
11500 E	10150 N	9650 N	500 m
11600 E	10250 N	9650 N	600 m
11700 E	10150 N	9650 N	500 m
11800 E	10150 N	9650 N	500 m
11900 E	10150 N	9650 N	500 m

(ii) Heap of RocksLoop 4

Corners: ( 9200E, 9800N ),(9800E, 9800N )  
 ( 9200E, 9500N ),(9800E, 9500N )

<u>Line</u>	<u>From</u>	<u>To</u>	<u>Length</u> (metres)
9200 E	9850 N	10300 N	450 m
9300 E	9850 N	10300 N	450 m
9400 E	9850 N	10300 N	540 m
9500 E	9850 N	10300 N	540 m
9600 E	9850 N	10400 N	550 m
9700 E	9850 N	10300 N	540 m
9800 E	9850 N	10300 N	540 m

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Loop 5Corners:(9800E, 9900N), (10400E, 9900N)  
(9800E, 9600N), (10400E, 9600N)

<u>Line</u>	<u>From</u>	<u>To</u>	<u>Length</u> (metres)
9800 E	9950 N	10400 N	450 m
9900 E	9950 N	10400 N	450 m
10000 E	9950 N	10400 N	450 m
10100 E	9950 N	10400 N	450 m
10200 E	9950 N	10400 N	450 m
10300 E	9950 N	10400 N	450 m
10400 E	9950 N	10400 N	450 m

(iii) CartersLoop 6Corners:(9350E, 9400N), (9950E, 9400N)  
(9350E, 9100N), (9950E, 9100N)

<u>Line</u>	<u>From</u>	<u>To</u>	<u>Length</u> (metres)
9350 E	9450 N	10050 N	600 m
9450 E	9450 N	10050 N	600 m
9550 E	9450 N	10050 N	600 m
9650 E	9450 N	10100 N	650 m
9750 E	9450 N	10150 N	700 m
9850 E	9450 N	10150 N	700 m
9950 E	9450 N	10150 N	700 m

Loop 7Corners:(9950E, 10000N), (10550E, 10000N)  
(9950E, 9700N), (10550E, 9700N)

<u>Line</u>	<u>From</u>	<u>To</u>	<u>Length</u> (metres)
9950 E	10050 N	10600 N	550 m
10050 E	10050 N	10600 N	550 m
10150 E	10050 N	10600 N	550 m
10250 E	10050 N	10600 N	550 m
10350 E	10050 N	10600 N	550 m
10450 E	10050 N	10600 N	550 m
10550 E	10050 N	10600 N	550 m

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6.2 Henty River Prospect

Three loops of different sizes were completed due to the harsh terrain and nature of the original grid.

(ii) YolandeLoop 1

Corners: ( 8 N, 2200 E ), ( 13 N, 2150 E )  
( 8 N, 1900 E ), ( 13 N, 1850 E )

<u>LINE</u>	<u>FROM</u>	<u>TO</u>	<u>LENGTH</u> (metres)
13 N	2200 E	3000 E	800 m
12 N	2325 E	3000 E	675 m
11 N	2250 E	3000 E	750 m
10 N	2250 E	3000 E	750 m
9 N	2275 E	3000 E	725 m
8 N	2250 E	3000 E	750 m

Loop 2

Corners: ( 8 N, 2350 E ), ( 4 N, 2350 E )  
( 8 N, 2050 E ), ( 4 N, 2050 E )

<u>LINE</u>	<u>FROM</u>	<u>TO</u>	<u>LENGTH</u> (metres)
7.5 N	2550 E	3000 E	450 m
7 N	2500 E	3000 E	500 m
6 N	2550 E	3000 E	450 m
5 N	2550 E	3000 E	450 m
4 N	1700 E	3000 E	1300 feet

Loop 3

Corners: ( 4 N, 2450 E ), ( 3 S, 2600 E )  
( 4 N, 2150 E ), ( 3 S, 2300 E )

<u>LINE</u>	<u>FROM</u>	<u>TO</u>	<u>LENGTH</u> (metres)
3 N	1800 E	3500 E	1700 feet
2 N	1800 E	3600 E	1800 feet
1 N	1900 E	3600 E	1700 feet
0 N	1900 E	3800 E	1900 feet
1 S	1800 E	3500 E	1700 feet
2 S	2650 E	3000 E	350 m
3 S	2650 E	3000 E	350 m