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EL 14/85 MT CATTLEY, TASMANIA

ANNUAL REPORT

21.8.85 - 20.8.86

By

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Sydney

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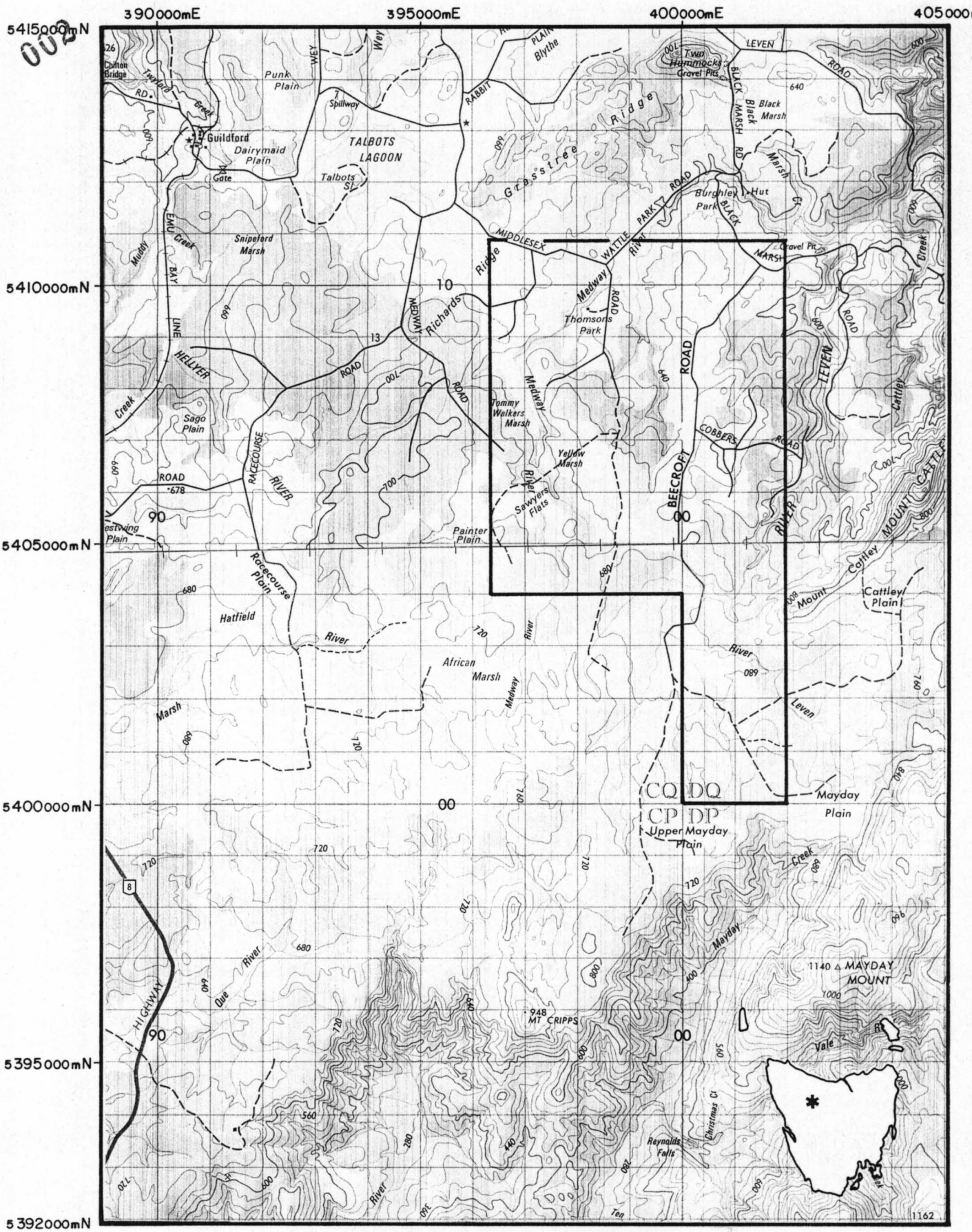


LOCATION PLAN

MOUNT CATTLEY E.L. 14/85 - TASMANIA

Scale 1:100 000

2 1 0 2 4 6

KILOMETRES

993003

5 cm

FIG. 1

1.0 INTRODUCTION

This report describes the work carried out on EL 14/85 during the period August 21 1985 to August 20, 1986.

2.0 LOCATION AND ACCESS (See Figure 1)

The Exploration Licence is located approximately 10km southeast of Guilford and 55km south of Burnie. Access is either via the Murchison Highway and Guilford or via Hampshire and then private roads of Australian Forest Holdings. Within the Licence area there is a well developed network of all weather 2-wheel drive logging roads constructed and maintained by Australian Forest Holdings. A permit is required to use these roads and some have locked gates.

3.0 TITLE

Exploration Licence 14/85 was granted to Pancontinental Mining Limited on 21 August 1985 for a period of one year.

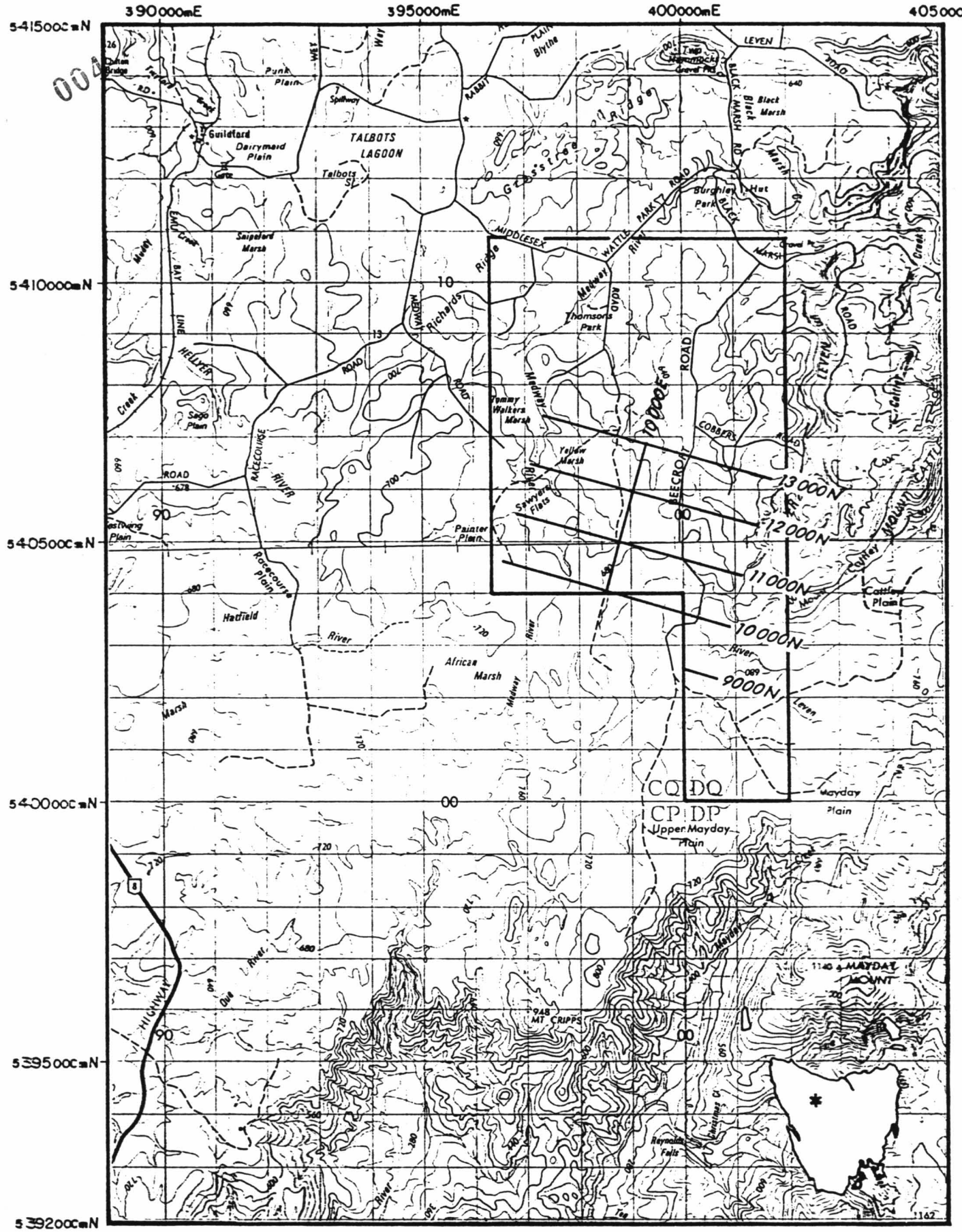
4.0 WORK ACCOMPLISHED

4.1. Gridding

A wide spaced grid, totalling 26.8km, was established over the south central portion of the EL (see Figure 2). Five cross lines, one kilometre apart, from 9000N, to 13000N were cleared using a bulldozer. Beecroft Road was pegged from the 10000N line to its junction with Black Marsh Road in the north eastern corner of the EL.

4.2. Interpretation of Geological Data

See Appendix 1.



GRID LOCATION PLAN

MOUNT CATTLEY E.L. 14/85 - TASMANIA

Scale 1:100 000

993005

2 1 0 2 4 6

KILOMETRES

5 cm

FIGURE 2

5.0. FUTURE PROGRAM

A drilling program to check the thickness of the basalt cover has been designed. It will include 3-6 holes. The bedrock underneath the basalt cover will be sampled to obtain lithological and structural information. This information will determine whether or not the sub-basalt geology is prospective.

6.0. EXPENDITURE

The expenditure for the year ended August 20, 1986, totalled $89,996 and was made up as follows:

Manning	$13,828
Materials & Supplies	299
Consultants & Contractors	47,374
Travel, Freight & Equipment	9,821
Repairs & Maintenance	137
Administration Expenses	6,913
Overheads	11,624
	$89,996

APPENDIX 1

INTERPRETATION OF MT CATTLEY SIROTEM DATA

APPENDIX 1

Interpretation of Mt Cattley Sirotem Data

1. Introduction

Between 19 March and 10 April 1986, McSkimming Geophysics surveyed 26.8 line km of 200m loop size Sirotem over Pancontinental's Mt Cattley EL in N.W. Tasmania (see location Figure 1). The survey had three objectives:

1. To determine the thickness of the basalt over the area considered most prospective
2. To search for conductive orebodies beneath the basalt and
3. To search for conductive geological units beneath the basalt.

The 1 km grid line spacing was designed to quickly determine the area where basalt thickness is less than 100m. A future detailed survey would only survey this area, of <100m basalt thickness, for a conductive orebody.

2. Survey Details

From previous company reports and personal communication, the basalt was expected to have an apparent resistivity in the range of 10-100 ohm metres, the Mt Reid Volcanics 200-10,000 ohm metres and a Hellyer type orebody <10 ohm metres. Access to the area is good and the average topographic variation is approximately 20m. Accordingly, a 200m moving loop, medium power, early time plus standard time Sirotem survey was selected. Readings were taken every 200m with a remote vector receiver in the middle of the loop. The ramp turn off time was regularly noted to assist interpretation.

Five, 1 km separated, approximate E-W, lines plus an approximate N-S road was surveyed to produce 138 soundings (see Figure 1). The data was stored on field cassettes and supplied to Pancontinental on a 9 track tape. The data was then edited and the early time and standard time readings merged for each station.

3. Interpretation

The data was interpreted with the aid of transient electromagnetic programs called "GRENDL" and "PLASI" (these programs were developed by the CSIRO under AMIRA sponsorship).

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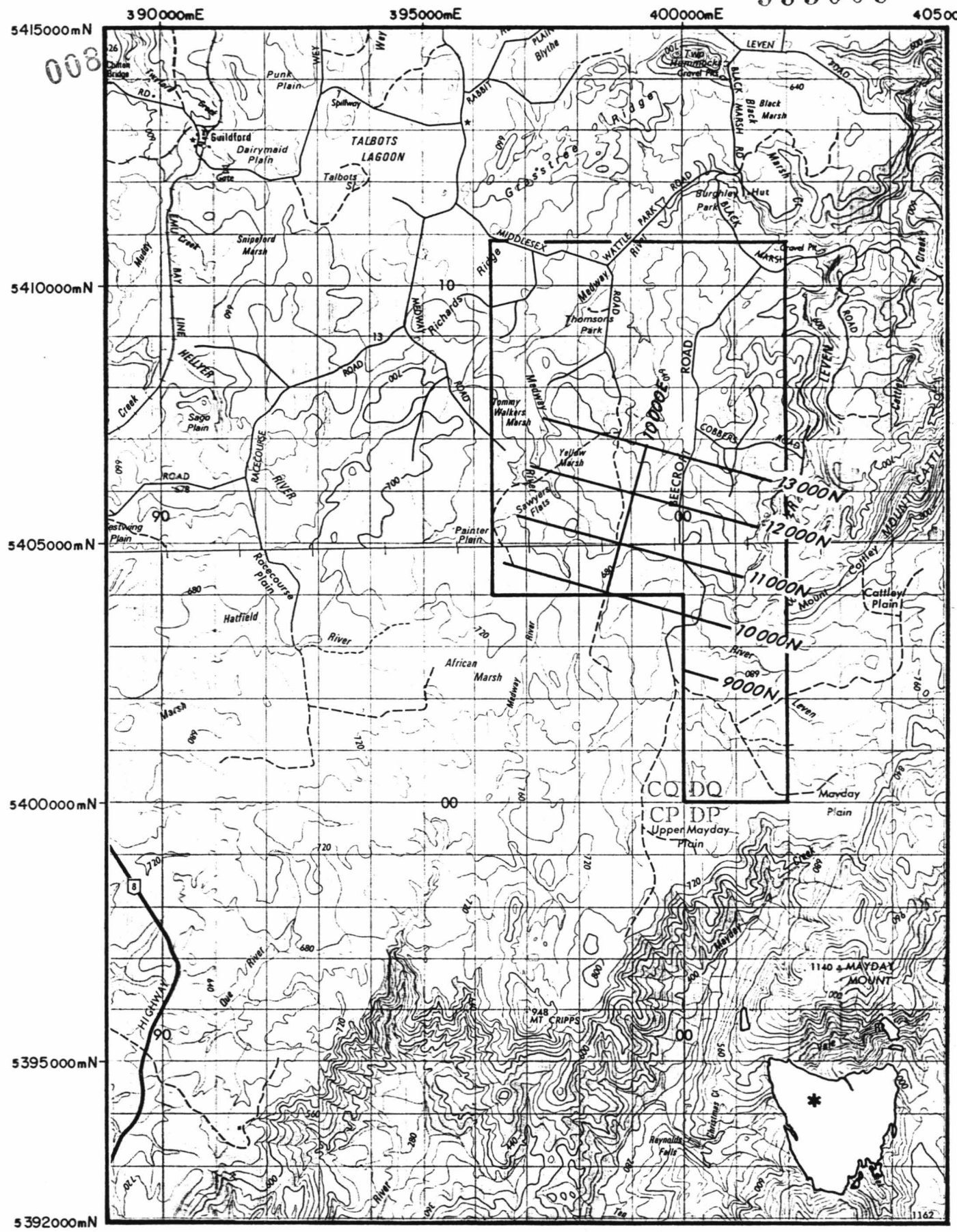

GRID LOCATION PLAN

MOUNT CATTLEY E.L. 14/85 - TASMANIA

Scale 1:100 000

2 1 0 2 4 6

KILOMETRES

FIGURE 1

5 cm

Basalt Thickness

Initially apparent resistivities for each transient decay were calculated. This data provided a guide for the correct starting model for each inversion using program "GRENDL" (the inversion program "GRENDL" calculates the best fit model to the field data given a reasonably good starting model). After much experimentation with different models, all the data was run through the inversion program using 2 different models. Many further models and inversions were run on data where the original two models gave a poor result. The various inversion results were analysed at each station and an estimate of basalt thickness plotted on a 1:10,000 grid plan. The estimated accuracy in each thickness is also plotted at each station (most are within ± 10%). Where the accuracy is poor, (>±20%) it means that there are possibly strong lateral changes in the geology affecting the data.

Plate 1 shows the plotted basalt thickness contoured at 50m intervals.

The depths range from a maximum of 310m in the west to 0m in the east. From basement outcrop in the east, the basalt appears to rapidly thicken to between 200-250m. This suggests paleo topographic control - perhaps from more resistive acid volcanics to a less resistive sedimentary facies (Western Sequence Mt Reid Volcanics?).

On the two northern lines (12000N and 13000N) there is a local marked thinning of the basalt to < 100m. This area could overly prospective volcanics. There are no conductors that might represent orebodies evident in the data. This area should be drill tested to confirm the basalt thickness interpretations and to identify the sub-basalt geology. If both the thickness and geology are favorable, then I recommend infill T.E.M. to search for a conductive orebody beneath the < 100m basalt area.

On line 10,000N there is a small zone of basalt near 100m in thickness. This area should also be drill tested to confirm the basalt thickness and to identify the geology.

Recommended drill holes:

Grid Coordinates	Targets
1. 12000N 10100E	Basalt 110m, geology
2. 12000N 10500E	Basalt 60m, geology
3. 12000N 10800E	Basalt 110m, geology

Possible additional holes:

4. 12000N 11500E	Basalt 90m, geology
5. 10000N 10000E	Basalt 100m, geology
6. 17000N on Beecroft Rd (450N of 11000N)	Basalt 65m, geology

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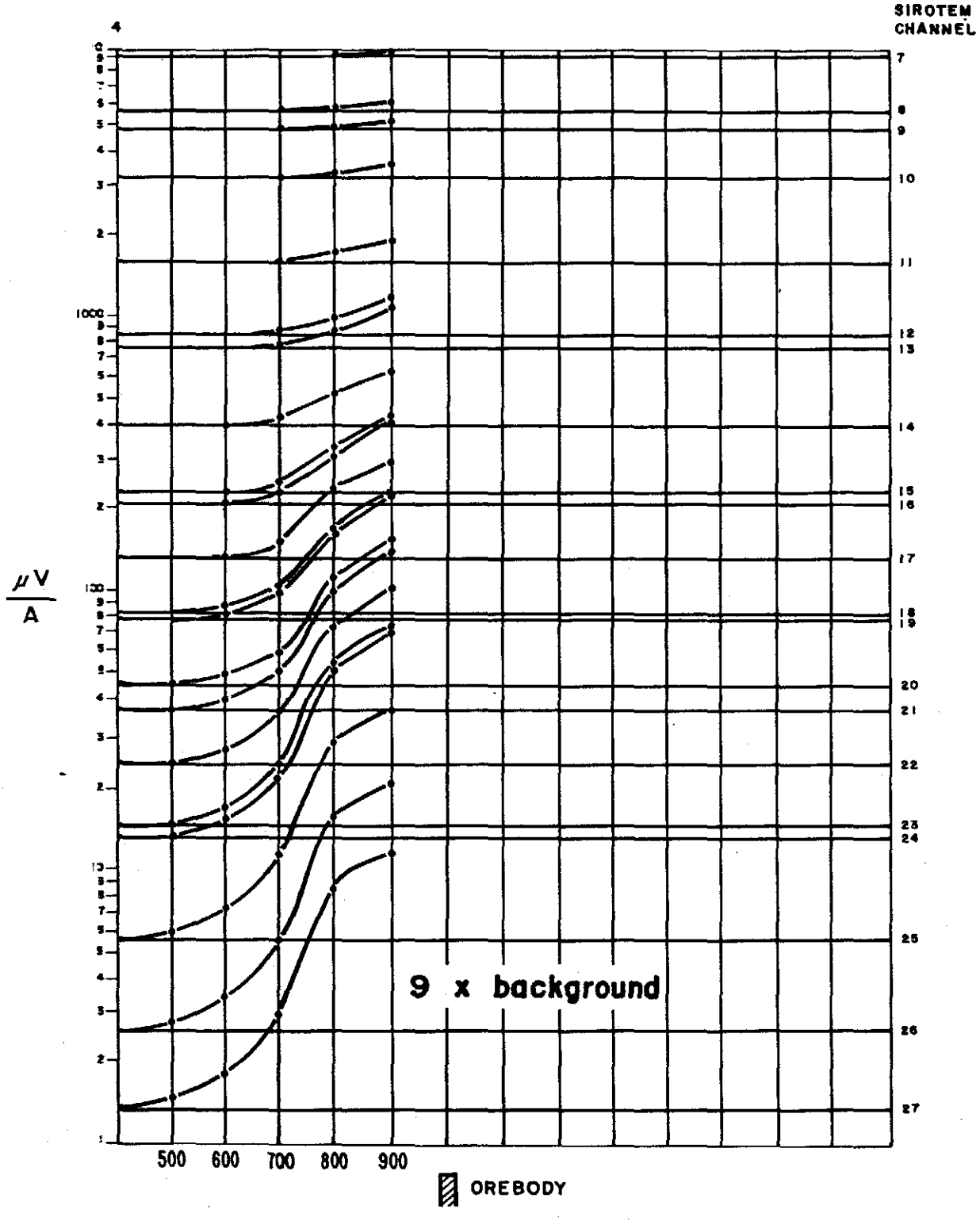


ρ_1 = 40 Ωm ρ_2 = 5000 Ωm

thickness of upper layer = 100 m

(GRENDL PROGRAMME)

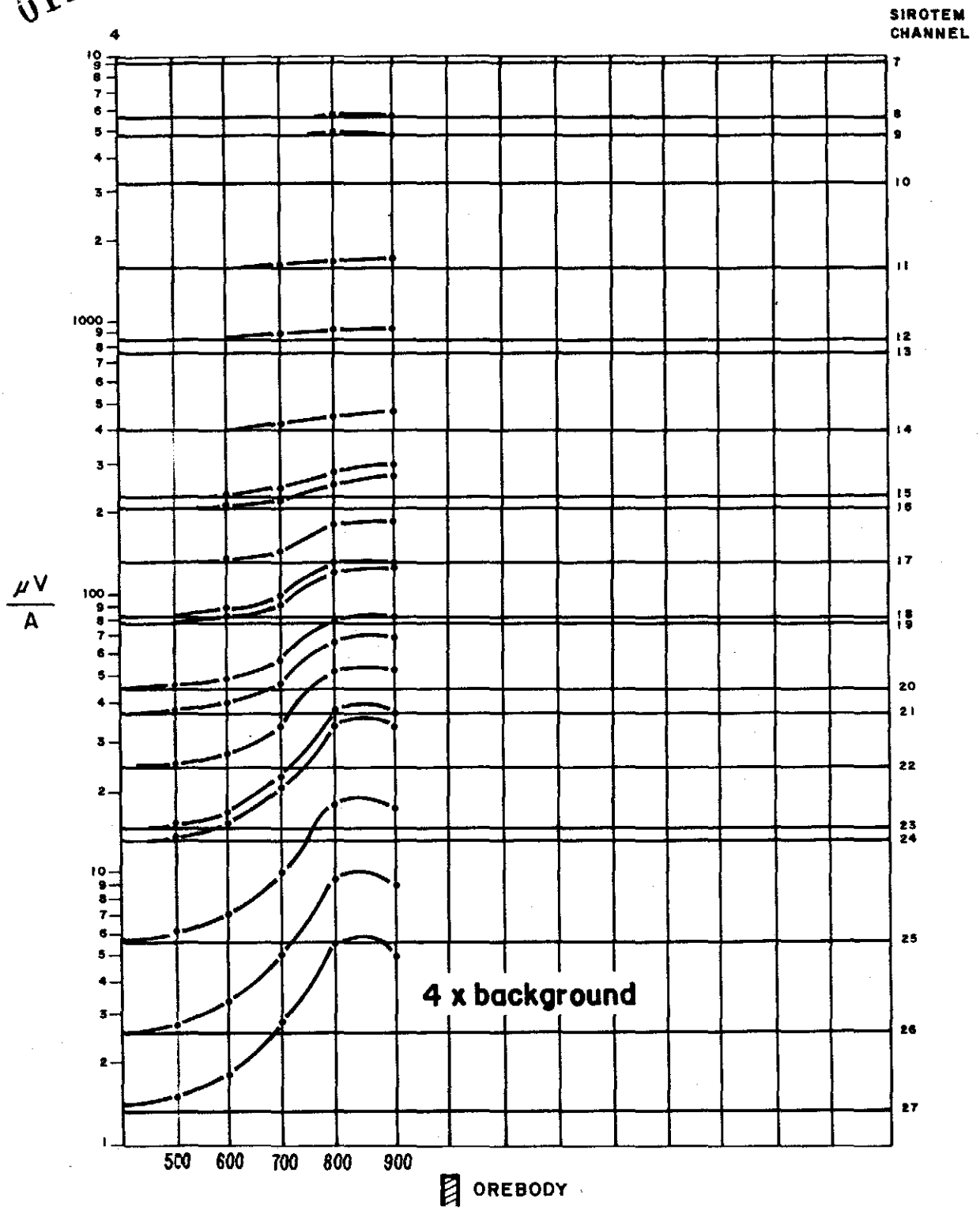
1200m x 200m x 25m = 15 mt

∂t = 50 S, dip = 90°, plunge = 0°

(PLASI PROGRAMME)

TWO LAYER HALFSPACE AND OREBODY AT 100m

FIGURE 2



ρ_1 = 40 Ωm ρ_2 = 5000 Ωm 1200m x 200m x 25m = 15 mt

thickness of upper layer = 100 m δt = 50S, dip = 90°, plunge = 0°

(GRENDL PROGRAMME) (PLASI PROGRAMME)

TWO LAYER HALFSPACE AND OREBODY AT 150m

FIGURE 3

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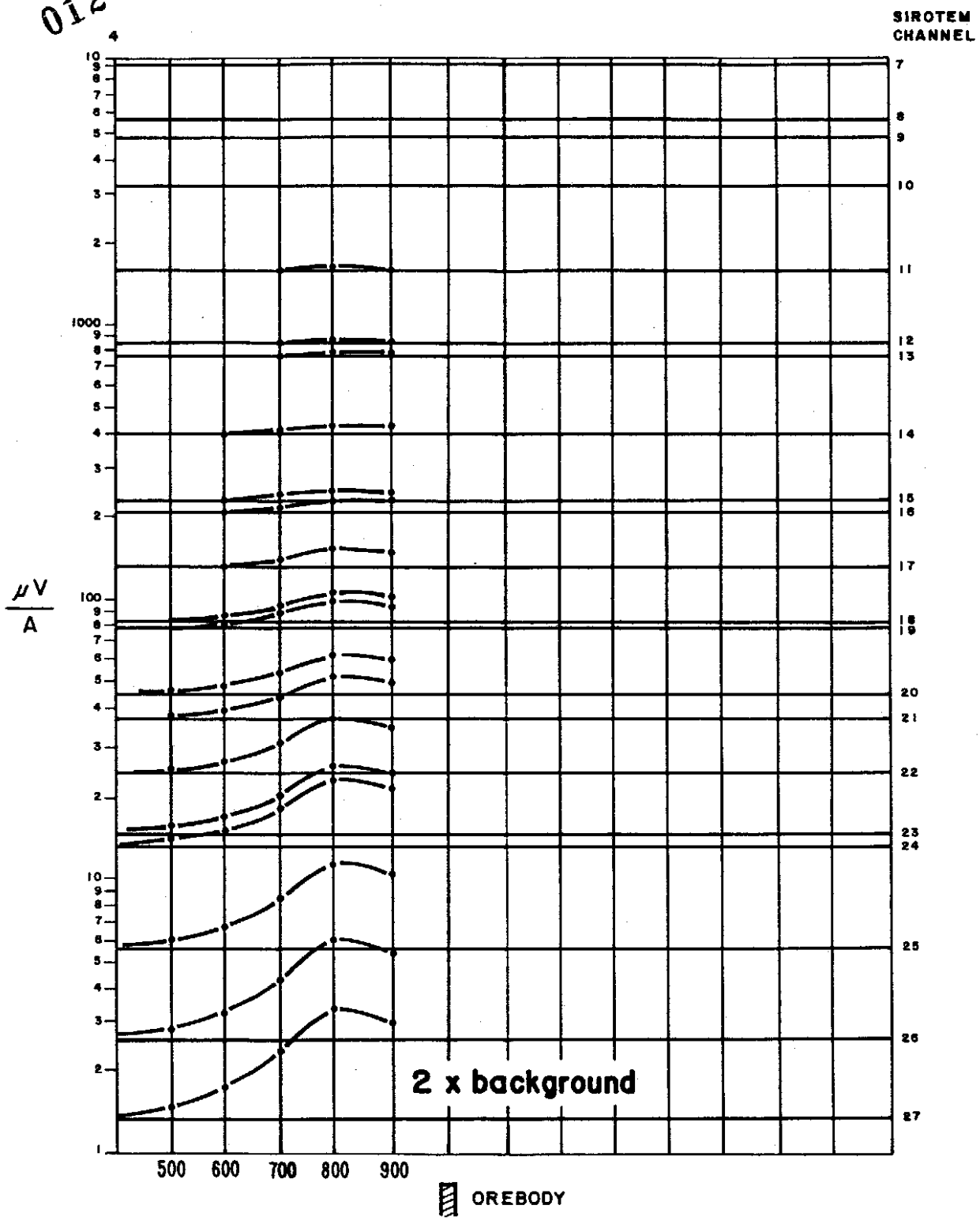

ρ_1 = 40 Ωm ρ_2 = 5000 Ωm
thickness of upper layer = 100 m
(GRENDL PROGRAMME)

1200m x 200m x 25m = 15 mt
∂t = 50S, dip = 90°, plunge = 0°
(PLASI PROGRAMME)

TWO LAYER HALFSPACE AND OREBODY AT 200m

FIGURE 4

3.2. Sub-Basalt Conductors

There are no significant conductors interpreted to lie beneath the basalt. This is partly because the basalt is generally 200-250m thick and therefore effectively screens any deeper conductor.

3.3. Bedrock Apparent Resistivities

The sub-basalt apparent resistivity resulting from the "GRENDL" inversions were contoured and are presented on Plate 2. These apparent resistivities are not very accurate but may be a guide to variations in the bedrock resistivities and hence lithologies. Acid volcanics would be expected to be resistive and sediments more conductive than the volcancics. Thus the higher resistivity zones on Plate 2 may correspond with acid volcanics and the rest correspond with sediments.

4. Recommendations

The interpreted basalt thickness relies heavily on the interactive "GRENDL" inversions. Drill holes are necessary to check this interpretation and to identify the prospectivity of the sub-basalt geology. The 5 drill holes recommended in Section 3.1. are necessary to answer these questions.

5873

E.L. 14/85

Beecroft Road

10000 E

11000 N

12000 N

13000 N

EDGE EFFECT DEPTHS > 100 m

Interpretation based on "GRENDL" inversion of early time and standard time Sirotem data

SURVEY PARAMETERS

Medium power Sirotem

200 m loop size

Remote vector receiver in centre of loop

Ramp time typically 140 μsec

Surveyed March 19 - April 10, 1986 by McSkimming Geophysics

CONTOURS

Contours are interpreted basalt thickness in metres.

200 ± 50 - basalt thickness ± range in metres

RECOMMENDED DRILLHOLES

↑ 1-5

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PANCONTINENTAL MINING LIMITED

PANCON EXPLORATION DIVISION

MT. CATTLEY PROJECT
EL 14/85 - TASMANIA

INTERPRETED BASALT THICKNESS

SCALE 1:10000

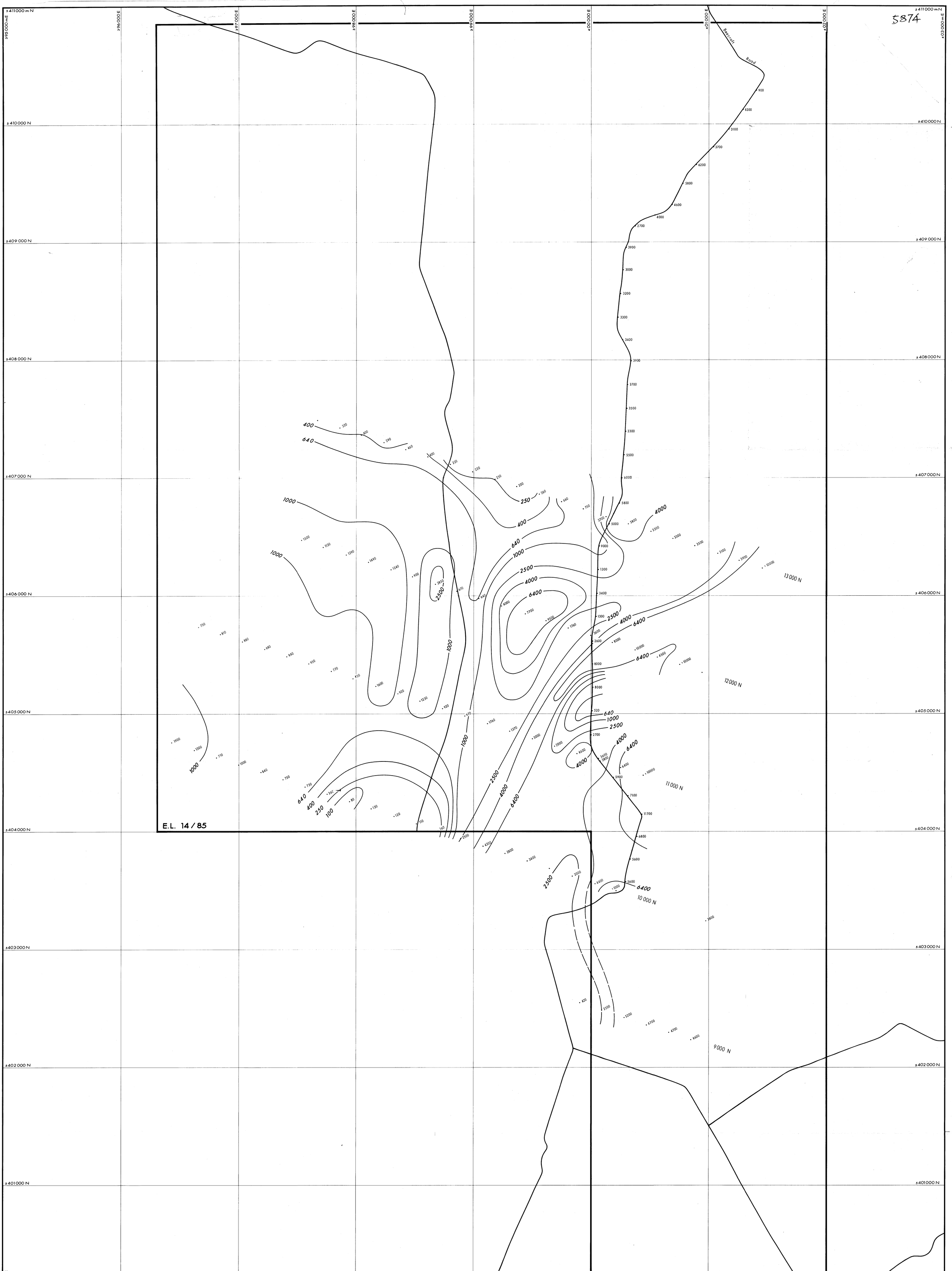
0 200 400 600 800 1000

METRES

Compiled D. Wilson	Date June, 1986	Dwg. Nº 36/E/2
Report Nº	Map Ref. SK 55-3	PLATE 1

86-2587 5 cm 873

5874



Interpretation based on "GRENDL" inversion of early time and standard time Sirotem data. Accuracy generally poor.

CONTOURS

Logarithmic contours based on 100, 160, 250, 400, 640, 1000 cycle. 710 - bedrock apparent resistivity from "GRENDL" inversion bedrock.

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PANCON EXPLORATION DIVISION

MT. CATTLEY PROJECT
EL 14/85 - TASMANIA

INTERPRETED BEDROCK APPARENT RESISTIVITIES

SCALE 1:10000
0 200 400 600 800 1000
METRES

Compiled D. Wilson	Date June, 1986	Dwg. Nº 36/E/3
Report Nº	Map Ref. SK 55-3	PLATE 2

5 cm

87-2587

5874