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**MICROFILMED**

ZEEHAN BASE METAL PROSPECT

MARCH REPORT 1971

S.P.L. 46

McINTYRE MINES (AUSTRALIA) PTY. LIMITED

ZEEHAN BASE METAL PROSPECT (JOB NO. 118)Location and access

The prospect lies 5 miles southeast of the town of Zeehan, Tasmania and is diagonally traversed by the Zeehan - Queenstown sealed highway. The topography is rugged and the northeast sector is not easily accessible, although Anomaly No. 1 can be reached via an old timber road and our short, precipitous track. The Mariposa area is easily accessible on foot from the highway.

Title situation and equity

The prospect is wholly owned by the company under the terms of Special Prospecting Licence No. 46 granted by the Tasmanian Department of Mines. It comprises an area of 18.7 square miles and there are no specific financial commitments other than continued exploration supported by monthly reports and statement of expenditures.

Geological environment

The prospect covers a belt of lower Cambrian rocks similar to those containing the major orebodies at Mt. Lyell (copper), Renison (tin) and Rosebery (lead, zinc, silver). In the northwest sector of the prospect a small lead-silver-zinc orebody of 100,000 tons lies along the Gordon limestone Crotty sandstone contact and further investigation of this favourable contact is warranted.

Work completed to the end of last month with costs

Stream sediment geochemistry is not well regarded in Tasmania owing to high rainfall and steep stream gradients. However, because of McIntyre's successful previous experience in New Zealand in virtually similar conditions, a broad programme of stream sediment sampling was completed during the past two field seasons. A number of anomalous lead values were obtained in the north-east sector of the prospect about 900' above the general level of the country on the slopes of Mt. Dundas. Access to this Anomaly No. 1 was effected by bulldozing a track from Howard's Private Road up the slopes of Mt. Dundas. The area around the anomaly was gridded and soil sampled. Soil sampling showed a well-defined lead anomaly about 400' long and striking north-south. This field season additional line cutting was completed in the Anomaly No. 1 area and Compagnie Generale de Geophysique were engaged to test the area with geophysical surveys.

In previous seasons, the area around the Mariposa Mine was gridded and an attempt was made to soil sample the area with little success due to the button grass swamps which usually overlies the Gordon Limestones. A self-potential survey by our crew was meaningless and seemed to reflect topography rather than mineralization. This season the grid was re-established and made ready for an induced polarisation survey.

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Zeehan Base Metal Prospect (Contd)

Compagnie Generale de Geophysique (C.G.G.) completed some trial induced polarization lines over the Anomaly No. 1 area which gave a very low response. From this we conclude that the soil anomaly does not represent heavy mineralization and as it is physically small, no further work in this area is recommended.

I.P. and resistivity surveys were completed over the Mariposa grid. The I.P. survey picked up the Mariposa Mine as a well-defined elliptical anomaly about 200' long in the Gordon Limestone contacting Crotty Sandstone. About 1600' south, also in the limestone contacting sandstone, a much stronger anomaly began to take shape. Therefore the baseline was extended a further 2,800 feet to the south with crosslines (at 200' intervals) extending 1600 feet to the east and 900 feet to the west of this.

Bulldozing of an access road to the west of the I.P. anomaly and south of the Mariposa Mine area revealed sulphide mineralization (galena and pyrite) associated with calcite veining, at the Gordon-Limestone-Crotty Sandstone contact near the nose of the anomaly. Similar mineralization was observed in an old adit extending horizontally for a distance of approximately 50 feet from the bank of the creek near Mariposa Falls towards the I.P. anomaly. Present indications are that this adit has barely reached the Gordon Limestone-Crotty Sandstone contact and may have finished in the halo of mineralization surrounding a larger sulphide body at depth.

Pegging of the second grid was completed together with a second geophysical survey conducted by Compagnie Generale de Geophysique. Field results from this latest survey indicate an extension of the anomaly for a distance of approximately 1,200 feet further south with additional anomalous areas appearing on the south-west sector of the grid.

A total of \$A28,921.10 has been spent on the prospect this year until the end of last month.

Work completed this month

Preliminary assessment of the results of the second geophysical survey over the Mariposa area was carried out during the month. Final assessment from Compagnie Generale de Geophysique is not yet to hand and selection of drill sites will be attendant on their final report.

The provisional documents for apparent chargeability and apparent resistivity, together with a comprehensive map of the geophysical survey, are presently available. These show four main apparent chargeability anomalies :-

- |                   |  |
|-------------------|--|
| <u>Anomaly 1.</u> | Mariposa workings - proven silver-lead mineralization..      |
| <u>Anomaly 2.</u> | Mariposa south-galena mineralization revealed by bulldozing. |

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Zeehan Base Metal Prospect (Contd)

- Anomaly 3. Linked to the Mariposa south anomaly on the apparent chargeability map but considered a separate entity because of an inferred fault between profiles 380N and 382N.
- Anomaly 4. This runs from profile 376N to profile 364N and extends past the southern limit of the present grid. No evidence of mineralization has been revealed to date over this section of the grid.

STATEMENT OF EXPENDITURE FOR THE MONTH  
OF MARCH, 1971.

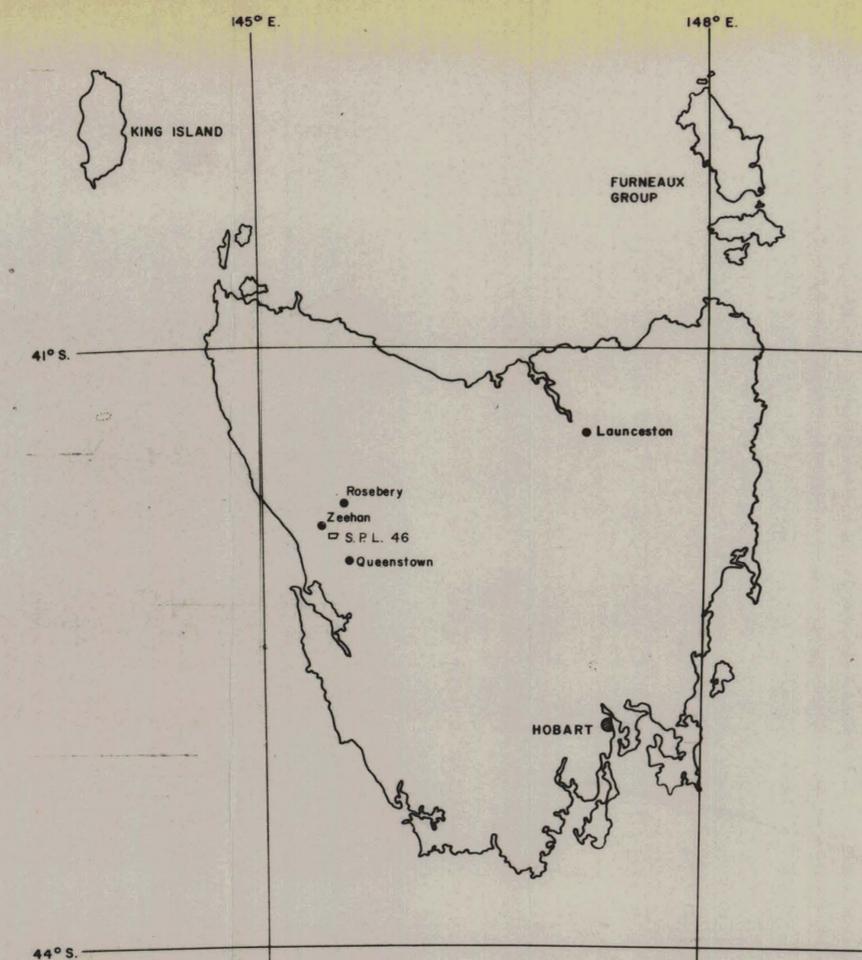
Research Geology	28.98
Induced Polarisation	1,683.00
Camp supplies and food	461.67
Geology	588.77
Transportation	596.40
Administration	559.50
Line cutting	351.00
Rent and services	<u>34.46</u>
	\$4,303.78
	<u><u>          </u></u>

Maps:

1. Location Map

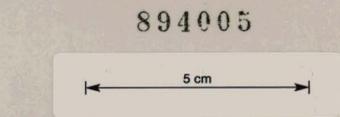
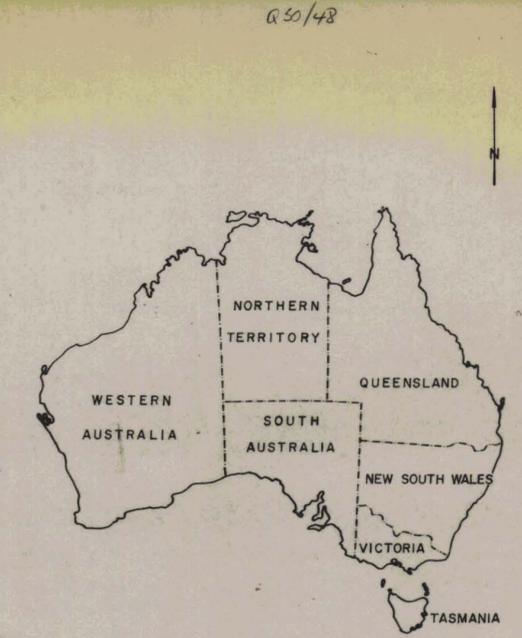
Plates

2. Apparent Resistivity  
4. Apparent Chargeability  
6. Comprehensive Map



**TASMANIA**

SCALE: 1 inch = 40 miles



**MCINTYRE MINES (AUSTRALIA) PTY. LTD.**

71-746.

ZEEHAN BASE METAL PROSPECT

LOCATION MAP

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GEOLOGIST:	SCALE: AS SHOWN
DRAFTED BY: S. SUMMERGREENE	DATE: NOV. 1970
JOB NO: 118	REVISION: JAN. 1971

1141

# GEOPHYSICAL SURVEY AT MARIPOSA (TASMANIA)

PROVISIONAL DOCUMENT

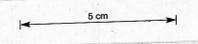
## APPARENT RESISTIVITY

SCALE 1" = 100'

Current Line AB = 6560 ft.

Potential Dipole MN = 100 ft.

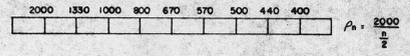
894006



### LEGEND

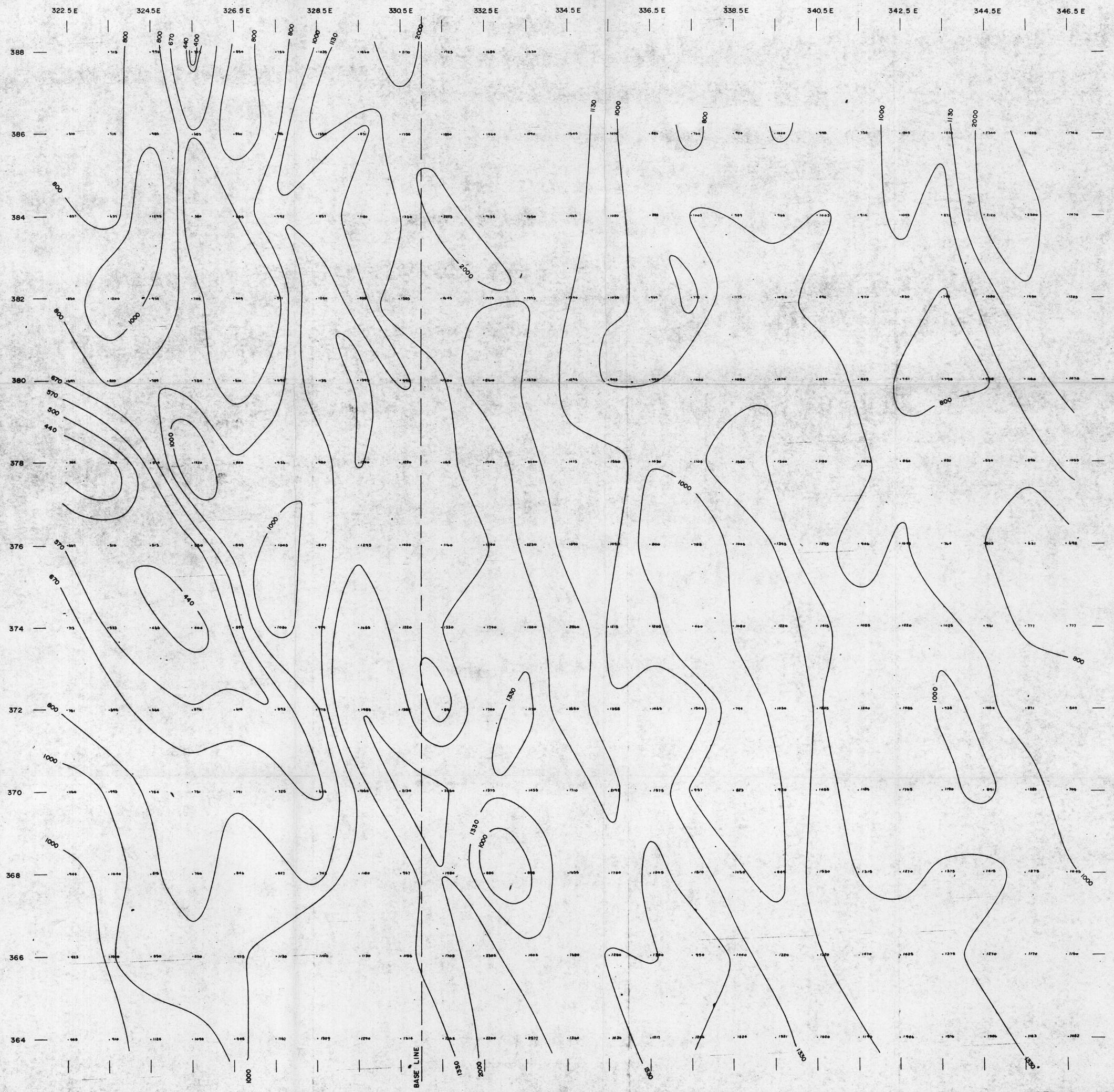
Apparent resistivity in ohm m

Apparent resistivity scale



C.G.G.  
26-28 Manning Street, South BRISBANE

T.N.



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# GEOPHYSICAL SURVEY AT MARIPOSA (TASMANIA)

## APPARENT CHARGEABILITY

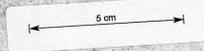
894007

SCALE 1" = 100'

Current Line AB = 6560 ft.  
Potential Dipole MN = 100 ft.  
Integration from 450 to 1150m after cut off

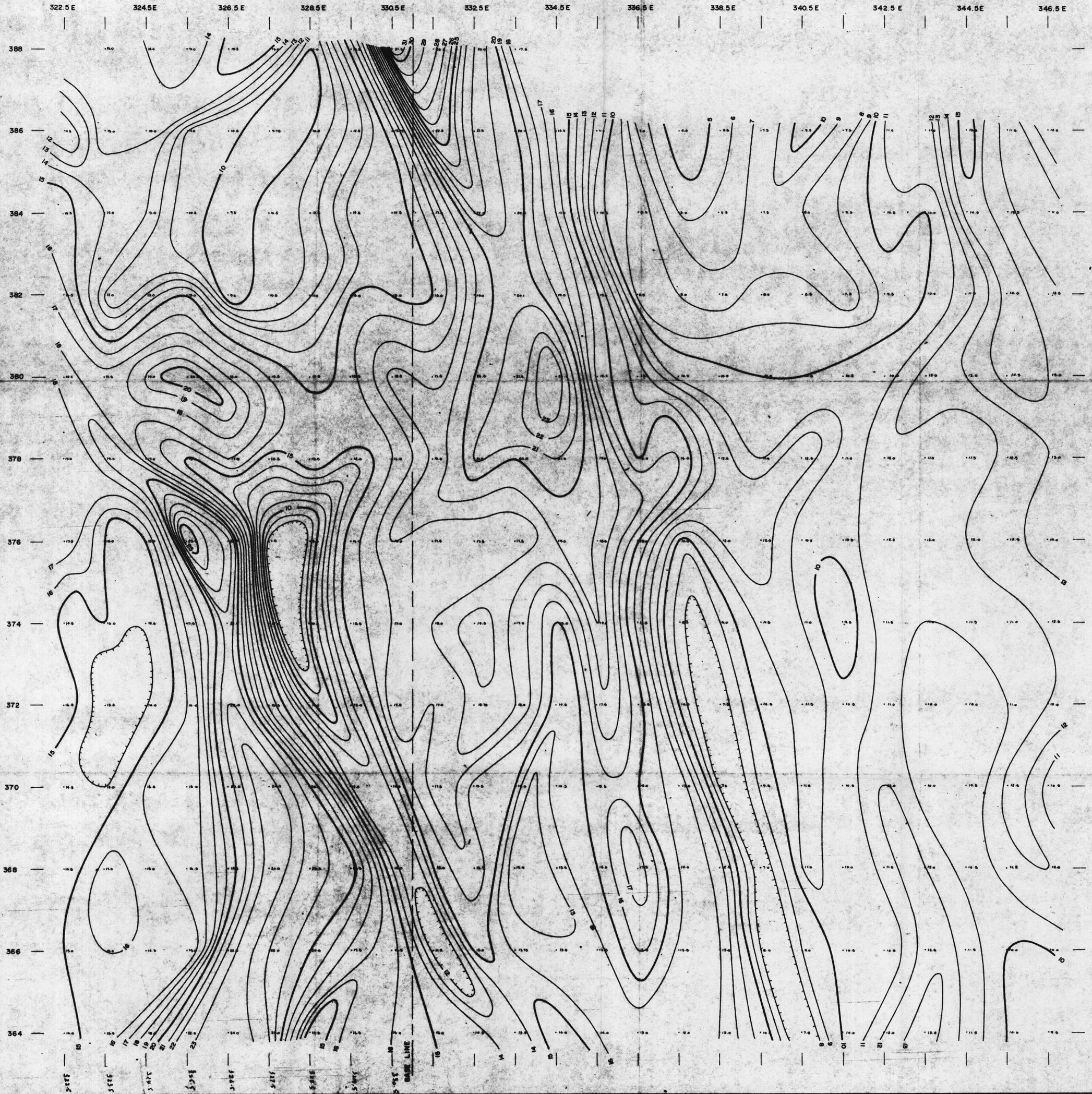
### LEGEND

Apparent chargeability in ms



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T.N.



8/9/43

# 1145 GEOPHYSICAL SURVEY AT MARIPOSA (TASMANIA)

894008

5 cm

## COMPREHENSIVE MAP

SCALE 1" = 100'

### LEGEND

-  Conductive axis
-  Resistant axis
-  Apparent resistivity gradient
-  Positive IP axis
-  Negative IP axis
-  Conductive zone
-  Polarizable body
-  Dip
-  Electrical discontinuity

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