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OPEN FILE

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EXPLORATION LICENCE 59/88 - MOUNT RAMSAY

MICROFILMED

RELINQUISHMENT REPORT

89-3067

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V. HOFTO

K.C. MORRISON

December 1989

AMG REFERENCE POINTS ADDED

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INTRODUCTION & TENEMENT INFORMATION

Exploration Licence 59/88 is a 77km² tenement in the vicinity of Mt Ramsay, NW Tasmania (Figure 1 & Plan 1). The licence was granted on 21 April 1989 for a licence year covering the period 7 April 1989 to 6 April 1990.

The tenement is wholly comprised of Crown Land. One Prospecting Licence is enclosed by the EL (Figure 2).

The licence, which is owned 100% by Soloriens Mining Pty Ltd., is being submitted for relinquishment.

EXPLORATION PHILOSOPHY & OBJECTIVES

Tin and base metal mineralisation genetically related to Devonian granitoids is well established in western Tasmania. The primary objective was to explore a zone of the Mt Ramsay granite roof contact, primarily for Mt Bischoff or Luina style mineralisation.

Preliminary work on Open File magnetic data indicated that this area is prospective by comparison with trends of features in the granites underlying Mt Cleveland, Magnet and Mt Bischoff.

SUMMARY OF WORK COMPLETED

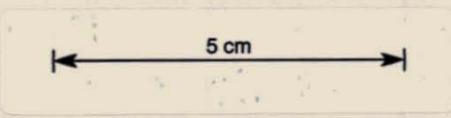
A fixed level compensation of existing aeromagnetic data for the area south of Luina and North of Mt Ramsay was conducted. Processing and preliminary interpretation of this data was carried out by Dr D.E. Leaman, Leaman Geophysics, and his report is enclosed as Appendix 1.



Figure 1. Location Map, EL 59/88 - Mt Ramsay.



Figure 2. Location of Prospecting Licence within EL 59/88 (1: 15,840).



006

REGIONAL SURVEYSPROCESSING & INTERPRETATION OF EXISTING AEROMAGNETIC DATA

As the exploration philosophy was to explore for Luina style mineralisation, determination of the location and attitude of any granite bodies present was a primary exploration objective.

Preliminary results have indicated that the Meredith Granite extends northward beneath the Whyte River, Three Falls Creek and Toward Luina; and also northward beneath the Ramsay River, and the South Bischoff Track toward the Waratah Road. The contact is marked by a 700-800m wide zone of thermal alteration and dips northward at between 40 and 60 degrees.

CONCLUSIONS

The magnetic survey suggests that magnetic methods based on fixed level survey compensations can be utilised to resolve issues of terrain and source ambiguity, attitude and relief of granite contacts, and define the altered portions of the rocks intruded.

However, due to current budget constraints, Soloriens Mining Pty. Ltd. is unable to persist with the exploration of EL 59/88. As a consequence, the entire 77 km² EL is submitted for relinquishment.

APPENDIX 1

007

543008

LEAMAN GEOPHYSICS

Survey Review, Specification, Reduction, Interpretation
Wide Experience Most Methods
Specialties:- Gravity, Magnetics, Seismic Methods

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PROCESSING OF AEROMAGNETIC DATA
EL 59/88 MT RAMSAY

for
SOLORIENS PTY LTD
by
D.E. Leaman

November 1989

RAMSAY

SUMMARY

This report presents a fixed level compensation of aeromagnetic data in the area south of Luina and north of Mt Ramsay in NW Tasmania. The area includes the northern margin of the Meredith Granite. No detailed geological mapping is available.

Introductory elements of interpretation had been prepared prior to a decision to relinquish this area, and this work is reported.

The work undertaken suggests that future exploration should utilise magnetic methods based on fixed level survey compensations. The data in this form can be used to resolve issues of terrain and source ambiguity, attitude and relief of granite contacts and define the altered portions of the rocks intruded.

INTRODUCTION

EL 59/88, Mt Ramsay, of 77 square km, lies SW of Waratah between Mt Ramsay and Mt Cleveland in NW Tasmania (see Figure 1).

Although no reliable mapping is available the northern margin of the Meredith Granite lies within this area and initial work was to be directed at location of this boundary. It was suspected that the roof of the granite dips irregularly north and that mineralisation at Luina is related to a spine or cupola from this roof. If this is indeed the case then it is possible that similar structures occur south of Luina. There was a presumption that mineralisation similar to that at Luina or Waratah might be present and the exploration was directed at such a target.

Since the critical component of such a concept is the attitude and location of the granite all primary exploration was directed at structural evaluation. Gravity and magnetic methods were proposed. The magnetic method was thought to offer an additional benefit; direct target location, since mineralisation of this type is often accompanied by much pyrrhotite.

Due to an early decision to relinquish the area little of this work was completed. No gravity data were inspected. The preliminary study undertaken is reported.

MAGNETIC DATA

The aeromagnetic data used for analysis was acquired by the Mines Department in 1981 (Corbett et al, 1982; Leaman, 1986). Nominal specifications include a sample spacing of 40 m, line spacing of 500 m and terrain clearance of 150 m. In practice the terrain clearance ranged from 100 to 350 m in the Mt Ramsay area; most clearances were of the order of 170 to 210 m.

This variation, and the general relief of the topography, has introduced unknown, and not simply evaluated, character into the magnetic field as presented (Figure 2).

In order to appraise the quality of the data set, its use for comparative detailing of anomalies and provision of a basis for structural modelling both upward and downward continuation procedures were tested. Instability in the downward continuations show that the contractor presentation (Figure 2) cannot be improved and it should be considered a mean drape of about 190 m in this area. There are, however, substantial portions which cannot be corrected to this clearance. The upward continuation operator is stable and any procedure dominated by it is also stable. It was found that the lowest general level above the highest point of the terrain, and consistent with limited but stable downward continuation locally required, could be calculated for 900 m ASL.

Figures 3, 4 and 5 present observed data which was used as the basis for the contour map given in Figure 2. Figures 6 and 7 provide an alternate rendering for most of the profiles as calculated at 900 m ASL. It is possible to directly compare nine profiles in these figures. The fixed level profiles are smoother, due to a general increase in terrain clearance, but they also reveal that several observed features incorporate significant terrain-source effects. This suggests that such corrections are advised or essential for reliable interpretation.

The much simpler contour map of the magnetic field at 900 m is shown in Figure 8.

INTERPRETATION

Interpretation was barely commenced at the time the decision was taken to relinquish the area.

It is, however, possible to use Figure 8 to suggest the outcrop limits of the Meredith Granite. The contact appears to lie

within the magnetic low which trends a little north of east across the area from about 361 000 mE, 5399 500 mN to 372 000, 5405 000 approximately. The anomaly at 368 500 mE, 5402 000 mN represents a retained roof pendant.

It is certain that granite extends northward beneath the Whyte River, Three Falls Creek and toward Luina; and also northward beneath Ramsay River, South Bischoff Track toward the Waratah Road (see Figure 1 for locations).

Initial modelling at 365 500 mE to test these early hypotheses generally confirmed them. The contact is marked by a 700 to 800 m wide zone of thermal alteration with contrasts up to 0.003 cgs and dips northward at between 40 and 60 degrees overall. The model shown in Figure 9 is one of six tested but the general elements described were established by this test series. The work done is insufficient to define the consistency of dips or contact forms along strike.

The interpretation showed, even at this early stage, that the magnetic method would be able to produce results which would assist gravity interpretation and unambiguously resolve the form of the granite and its metamorphic halo. The work reported is not able to suggest whether any parts of that halo are anomalously magnetic but this would be possible upon integrating gravity and magnetic interpretations using 3D methods.

REFERENCES

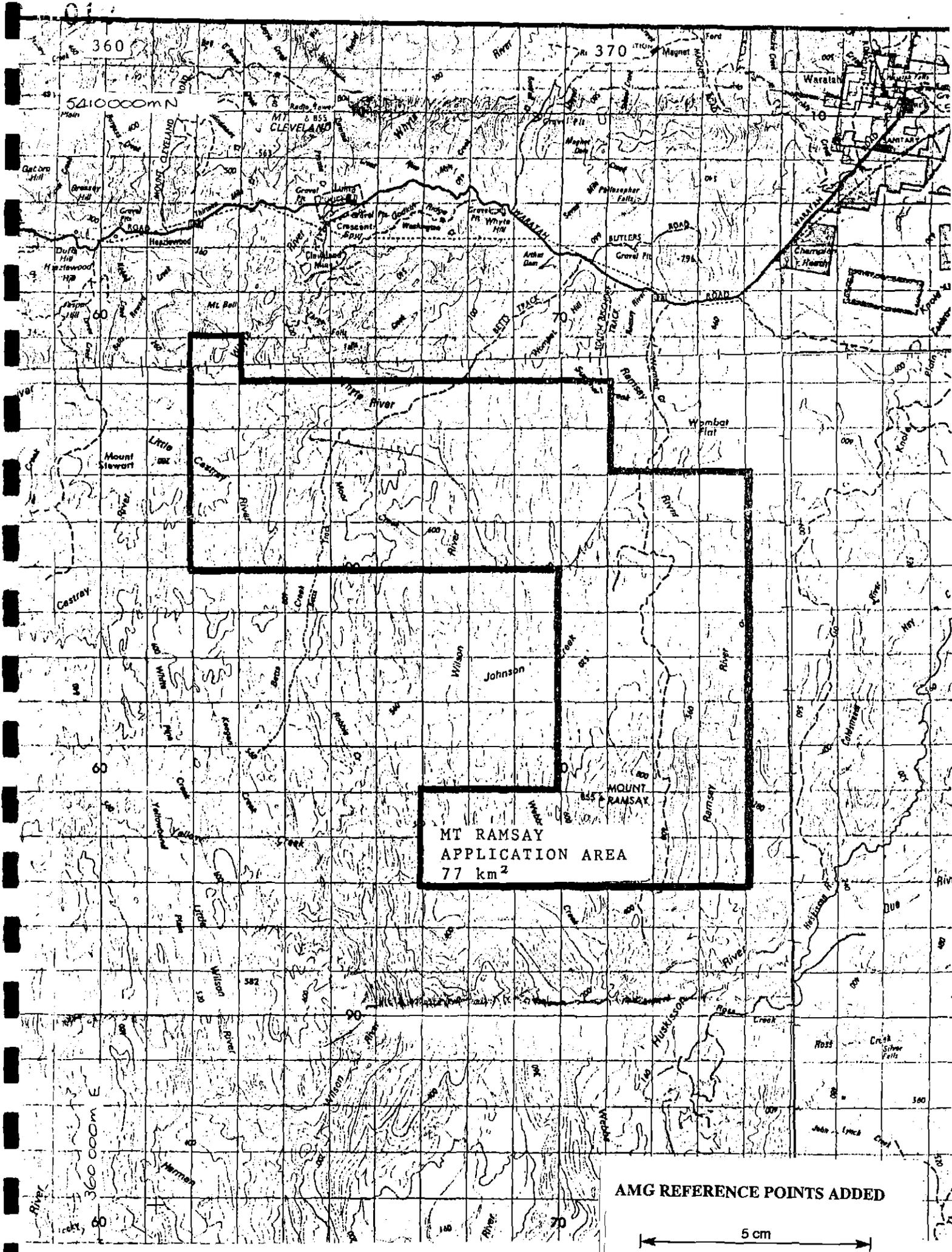
- Corbett, K.D., Richardson, R.G., Collins, P.L.F., Green, G.R., & Brown, A.V., 1982. The 1981 West Coast Aeromagnetic survey: summary of information and results. Unpub. Rep. Dep. Mines Tasm. 1982/39.
- Leaman, D.E., 1986. Interpretation and evaluation report: 1981 West Tasmania Aeromagnetic Survey. Mt Read Volcanics Project Report Dep. Mines Tasm.

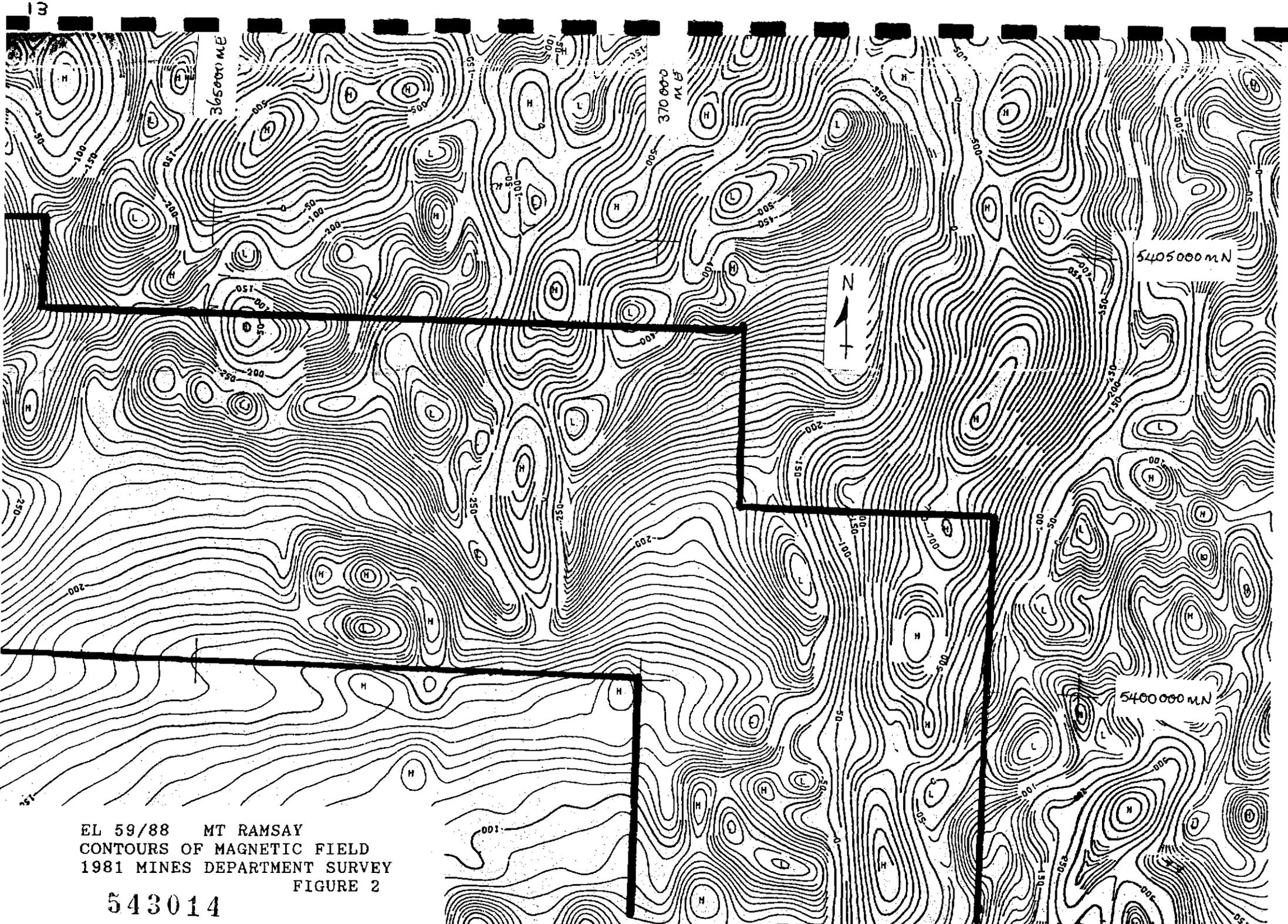
Report submitted on behalf of
Leaman Geophysics
by

D. Leaman

Dr. D.E. Leaman, B.Sc., Ph.D
M.Aus.I.M.M., M.M.I.C.A

6/11/89





EL 59/88 MT RAMSAY
CONTOURS OF MAGNETIC FIELD
1981 MINES DEPARTMENT SURVEY
FIGURE 2

543014

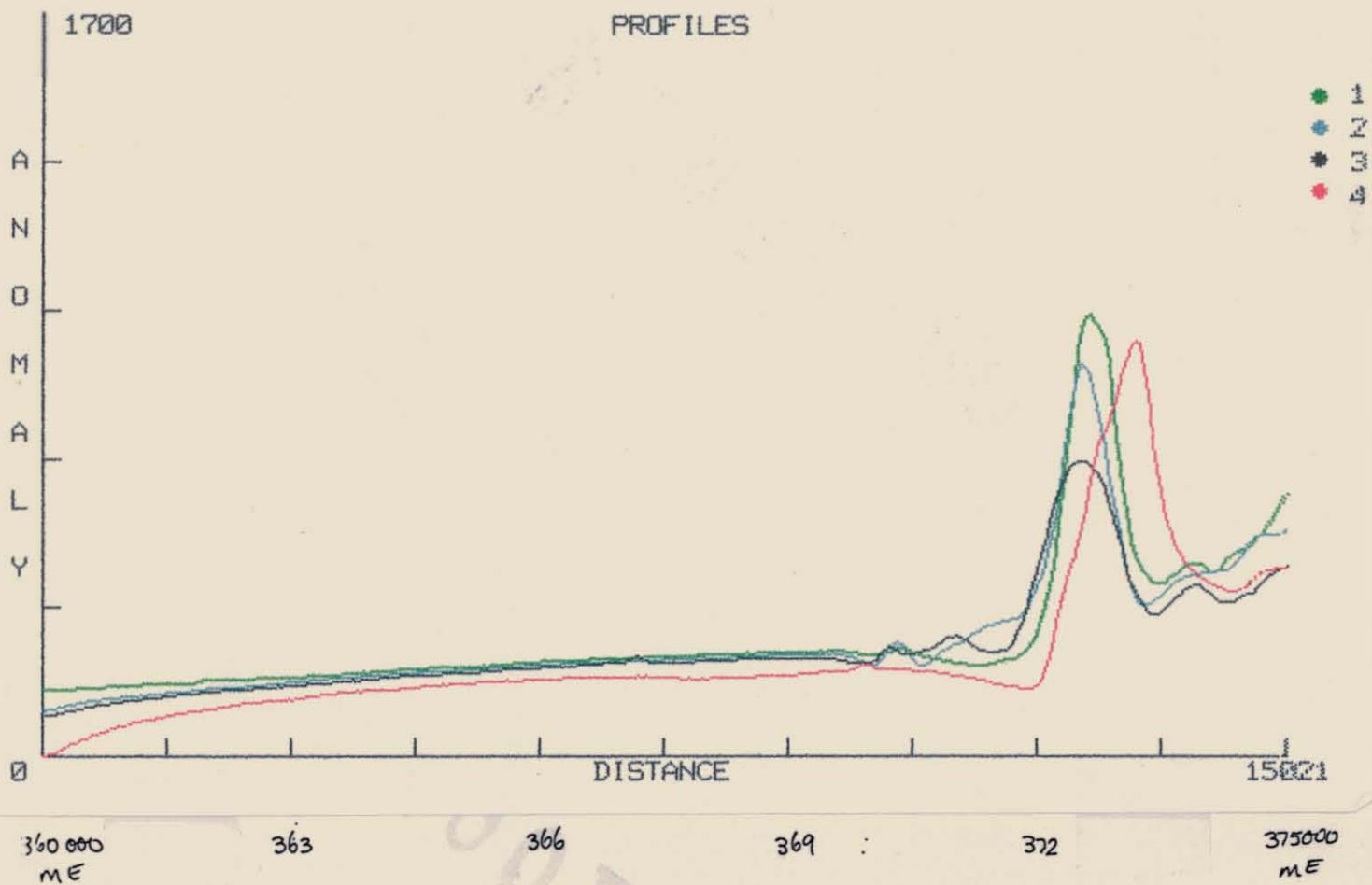
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543015

B> 1	B:M1990	MT RAMSAY PROJECT LINE 1990
2	B:M2000	MT RAMSAY PROJECT LINE 2000
3	B:M2010	MT RAMSAY PROJECT LINE 2010
4	B:M2030	MT RAMSAY PROJECT LINE 2030

ZERO SHIFT : 329

Nominal northings:	M1990	5398150
	M2000	5398750
	M2010	5399100
	M2030	5399400



1 015

B:M2050

MT RAMSAY PROJECT LINE 2050

543016

2

B:M2060

MT RAMSAY PROJECT LINE 2060

3

B:M2071

MT RAMSAY PROJECT LINE 2071

4

B:M2081

MT RAMSAY PROJECT LINE 2081

5

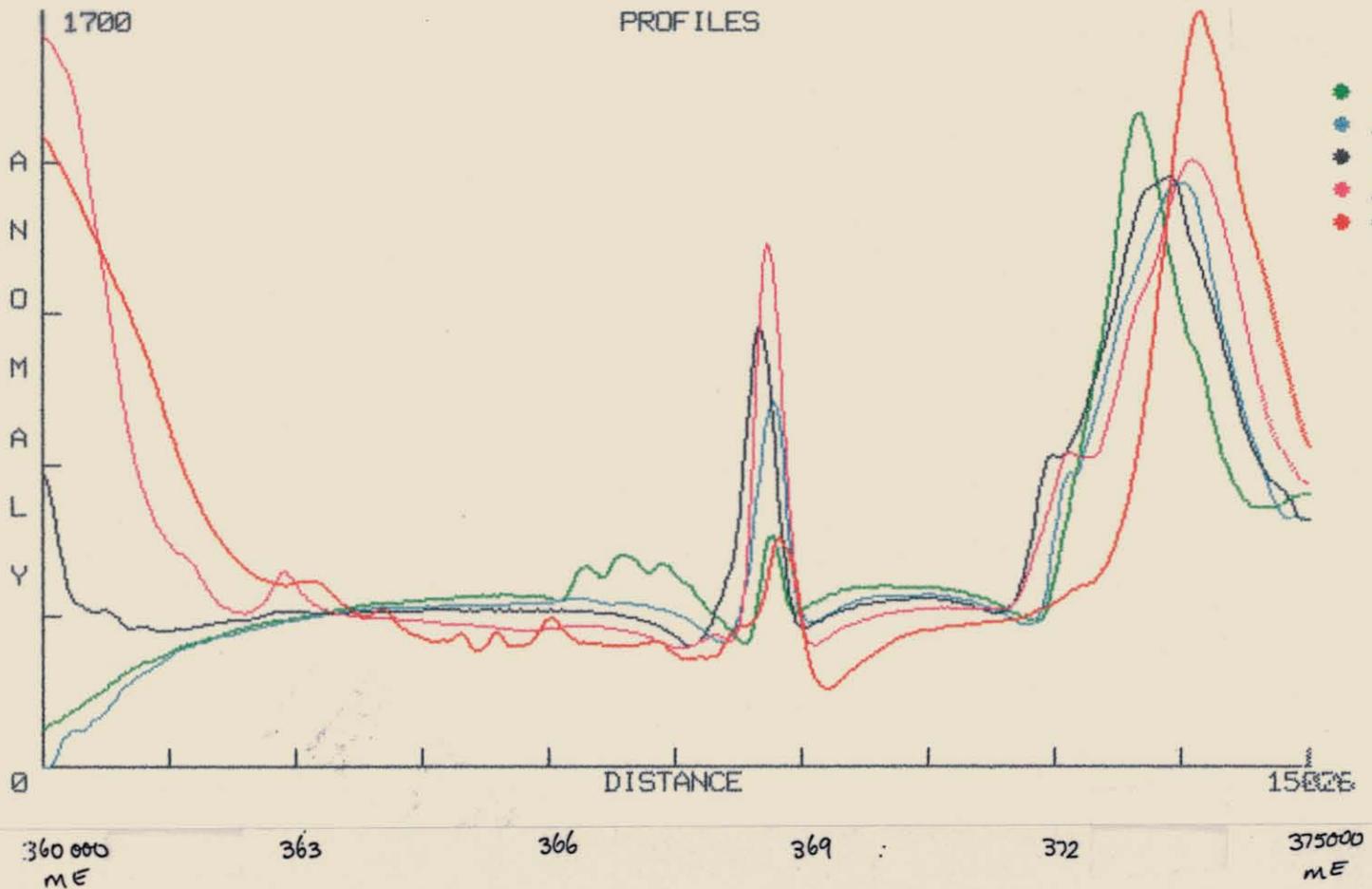
B:M2090

MT RAMSAY PROJECT LINE 2090

ZERO SHIFT : 577.3

Nominal northings:	M2050	5401000
	M2060	5401600
	M2071	5402000
	M2081	5402600
	M2090	5403000

88-30007

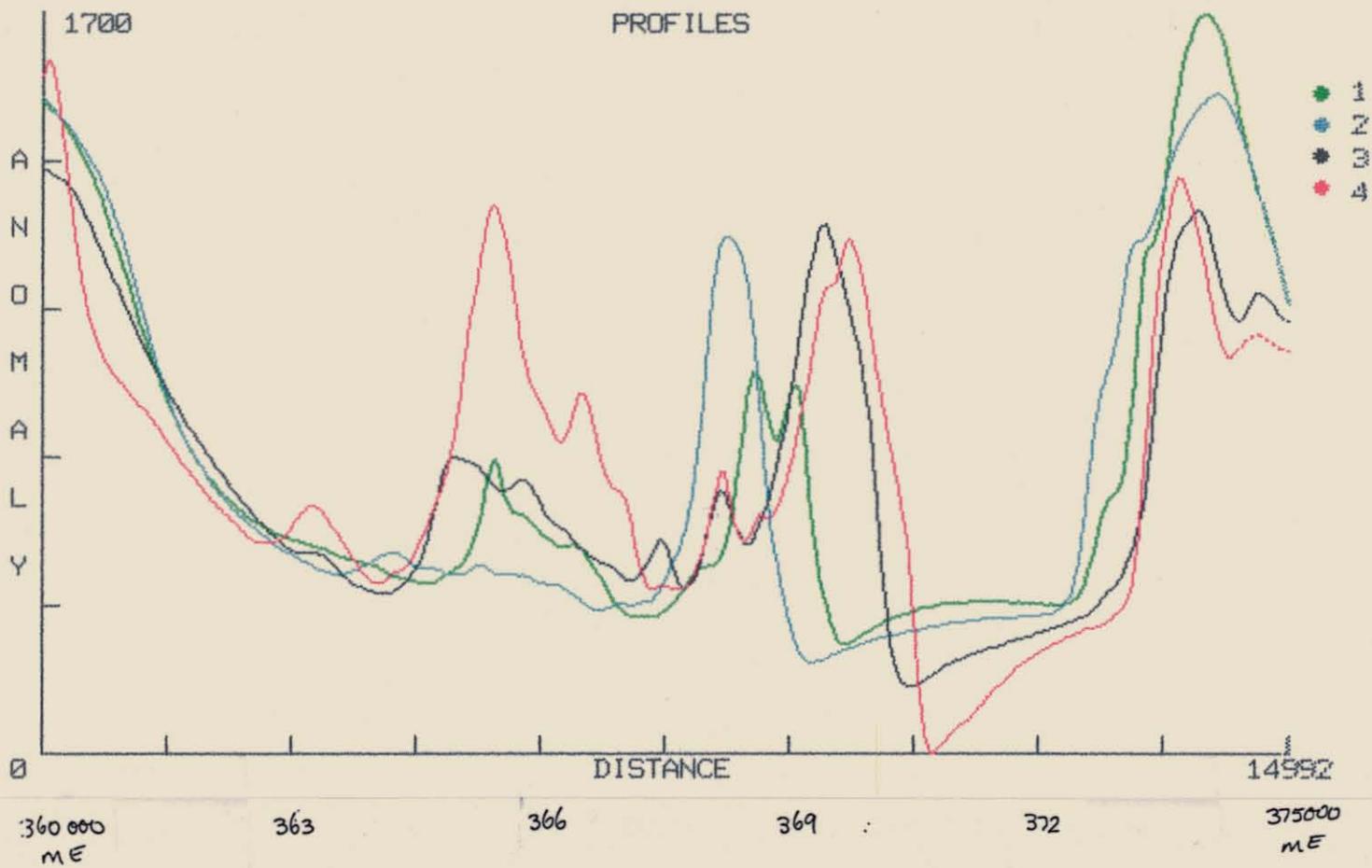


1 016 B:M2100
 2 B:M2110
 3 B:M2120
 4 B:M2130
 ZERO SHIFT : 630.5

MT RAMSAY PROJECT LINE 2100
 MT RAMSAY PROJECT LINE 2110
 MT RAMSAY PROJECT LINE 2120
 MT RAMSAY PROJECT LINE 2130

543017

Nominal northings: M2100 5403800
 M2110 5404400
 M2120 5405150
 M2130 5405600

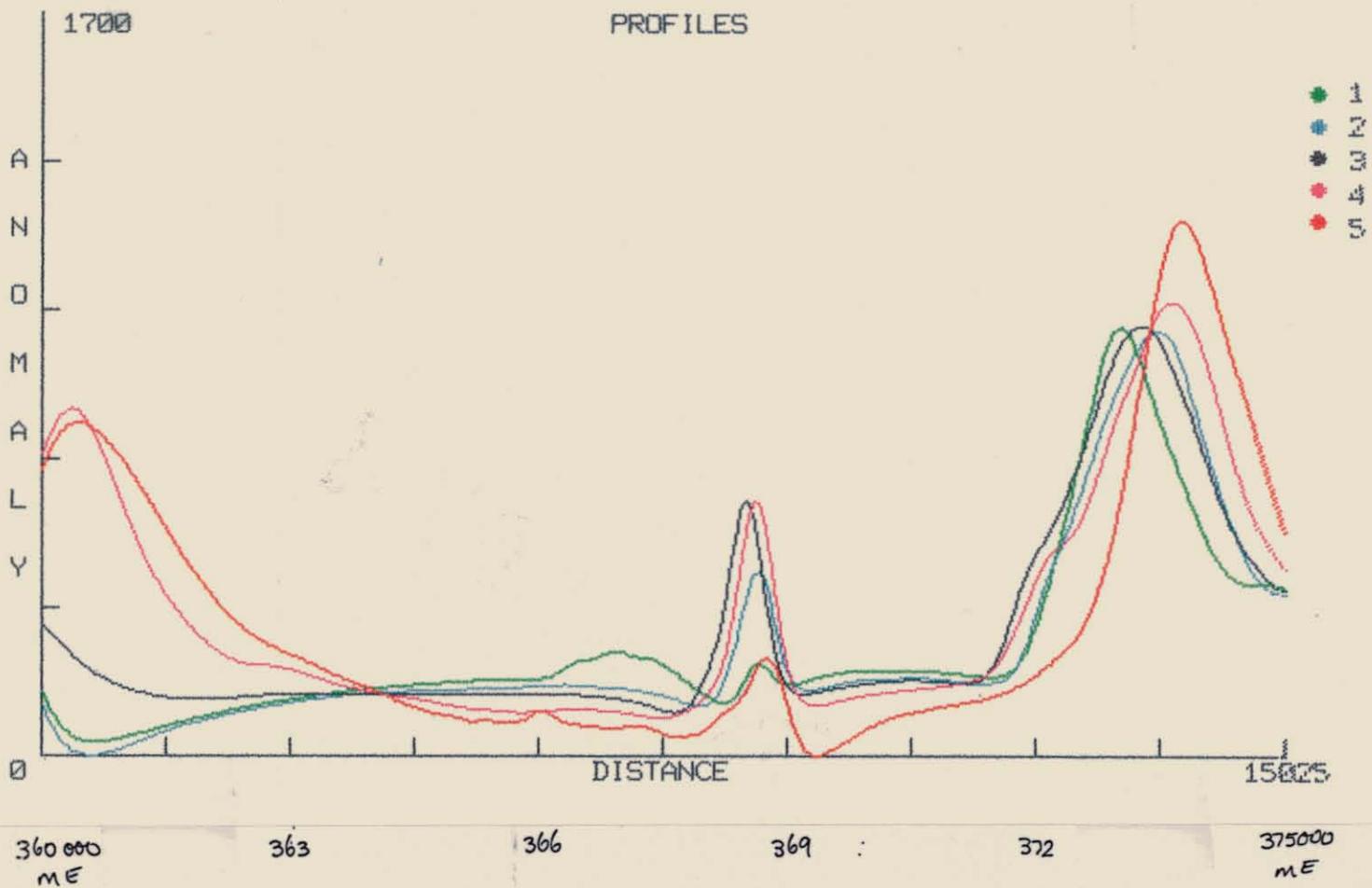


1 017 B:MH2050
 2 B:MH2060
 3 B:MH2071
 4 B:MH2081
 5 B:MH2090
 ZERO SHIFT : 362.8532

MAGNETIC FIELD AT 900M 2050
 MAGNETIC FIELD AT 900 M 2060
 MAGNETIC FIELD AT 900M 2071
 MAGNETIC FIELD AT 900M 2081
 MAGNETIC FIELD AT 900M 2090

543018

88-3001



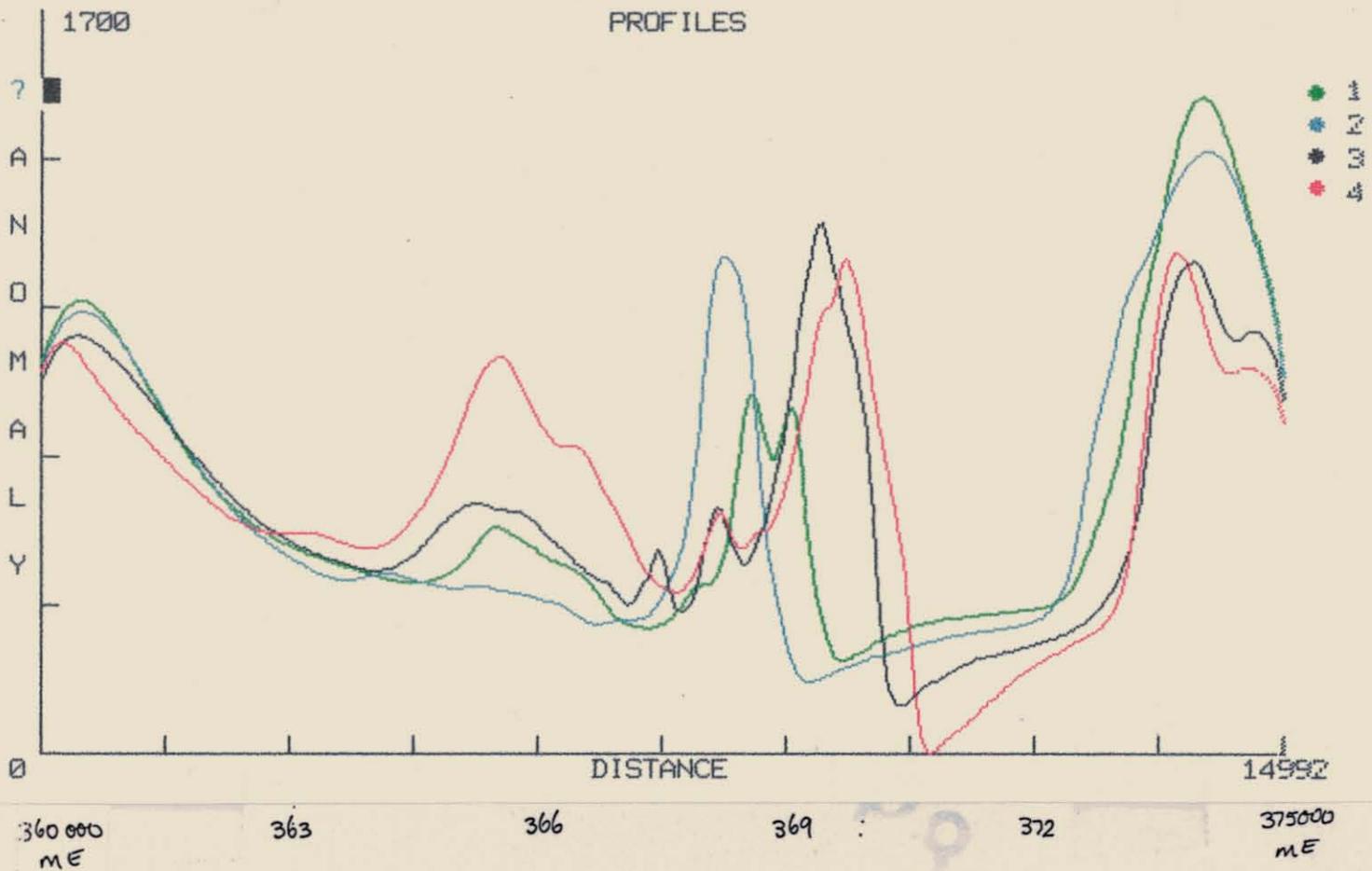
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 G.P.O. Box 320 D,
 Hobart, Tasmania 7001

018

1	B:MH2100	MAGNETIC FIELD AT 900M	2100
2	B:MH2110	MAGNETIC FIELD AT 900M	2110
3	B:MH2120	MAGNETIC FIELD AT 900M	2120
4	B:MH2130	MAGNETIC FIELD AT 900M	2130

ZERO SHIFT : 585.2944

543019



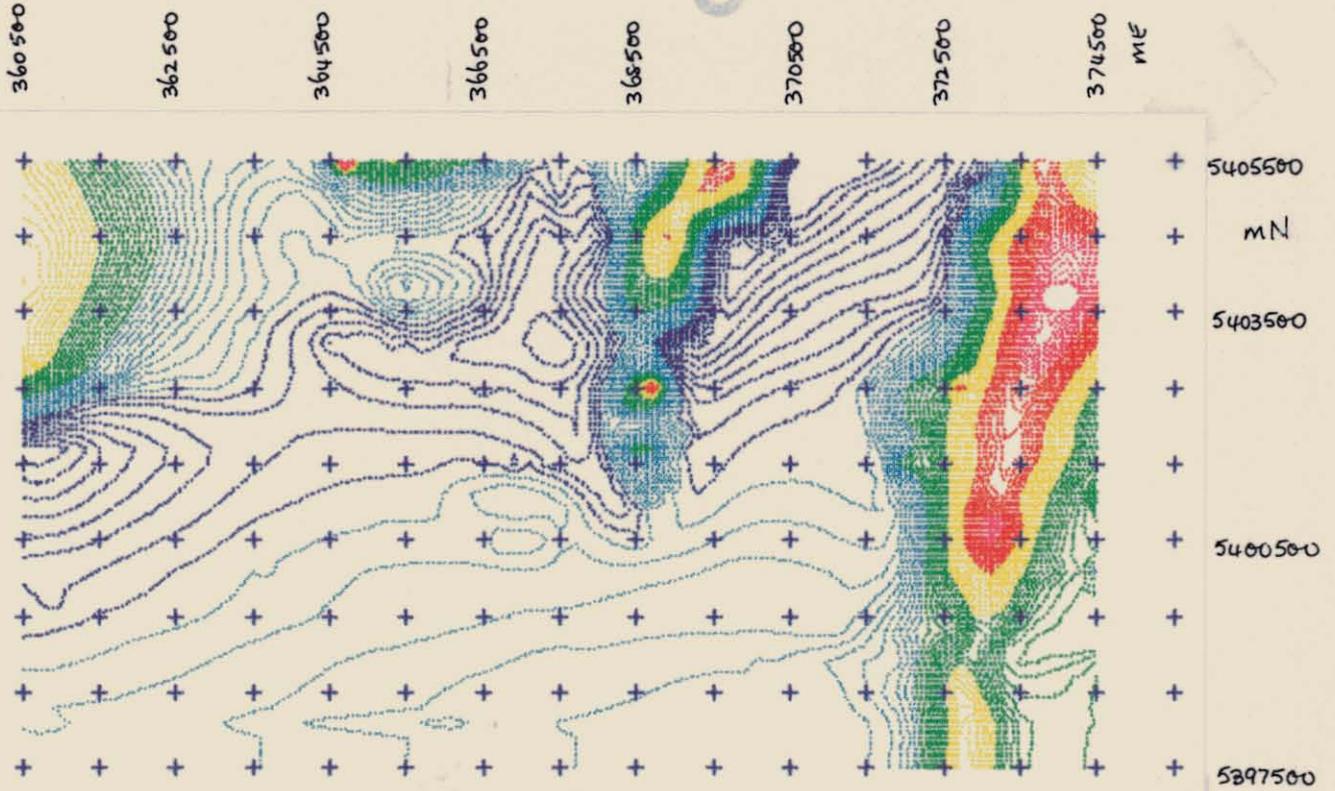
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 Hobart, Tasmania 7001

019

MT RAMSAY 200 GRID 900M MAGNETIC DATA
GRID ORIGIN 360500/5397500 1981 MINES DEPARTMENT DATA 543020
SCALE 100000
SAMPLE SPACING 200

A

7000-88



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EL 59/88

CONTOURS OF MAGNETIC FIELD AT 900 M ELEVATION

- 700-900 nT pink
- 480-700 nT red
- 260-460 nT yellow
- 40-240 nT green
- 180-20 nT blue
- 400--200nT cyan

FIGURE 8

020

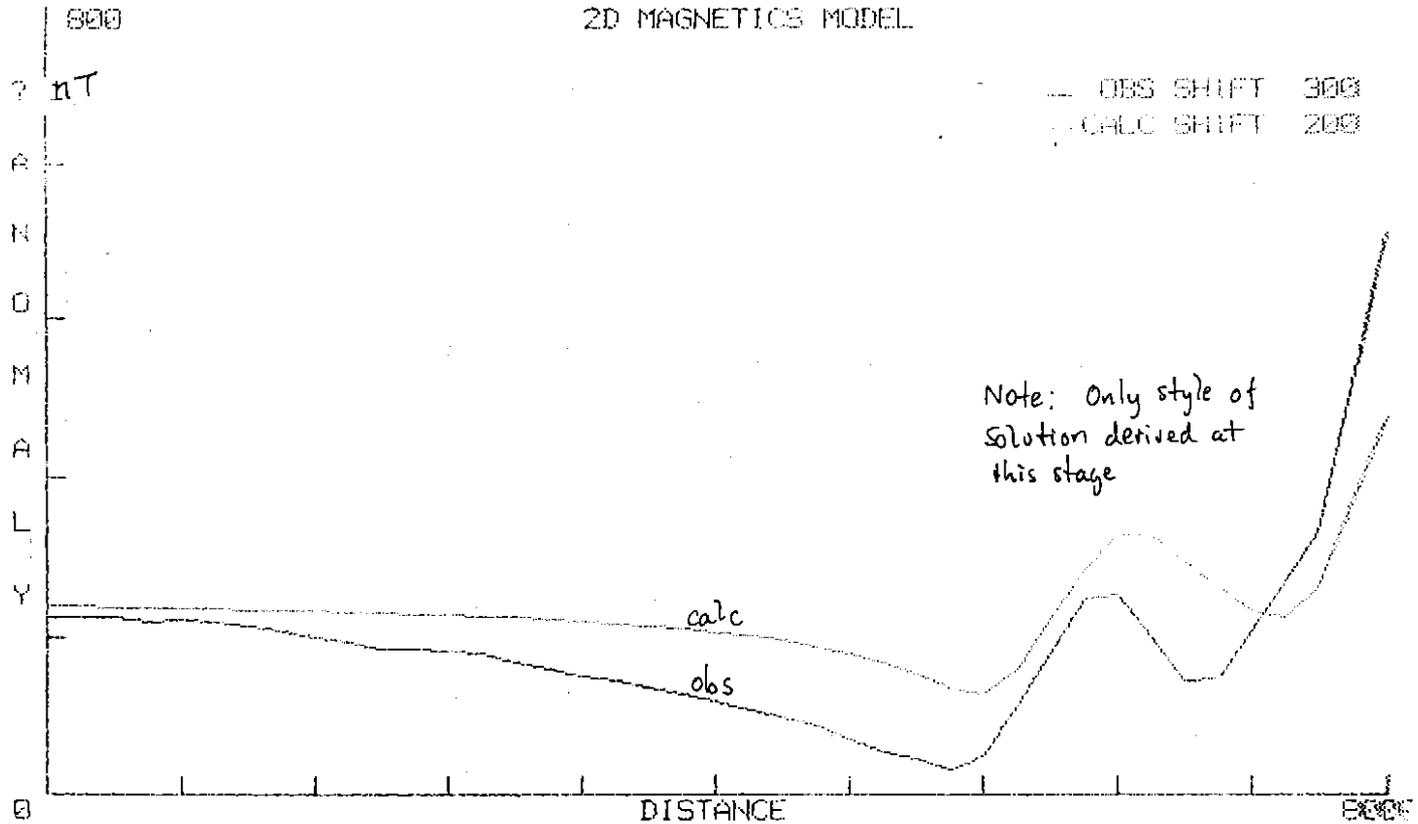
FIELD DATA

INTENSITY	INCLINATION	DECLINATION	OBS LEVEL	LINE DIRECTION
62000.0	-72.0	13.0	0.0	0.0

543021

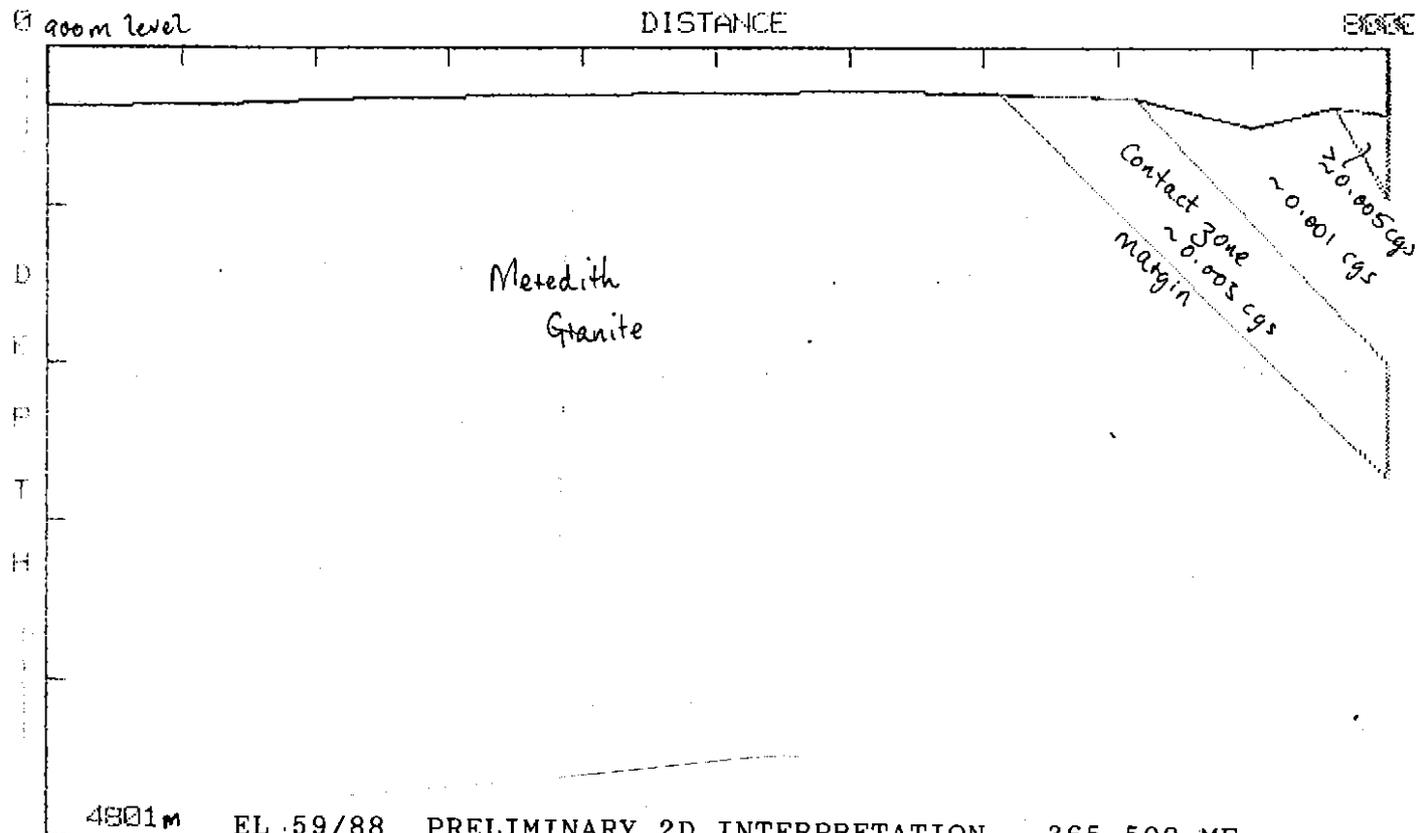
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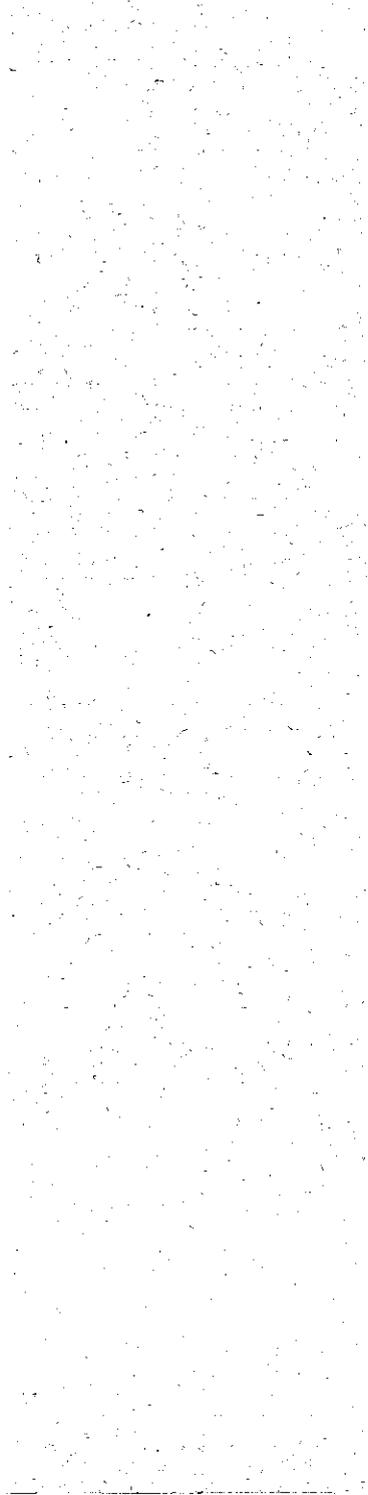
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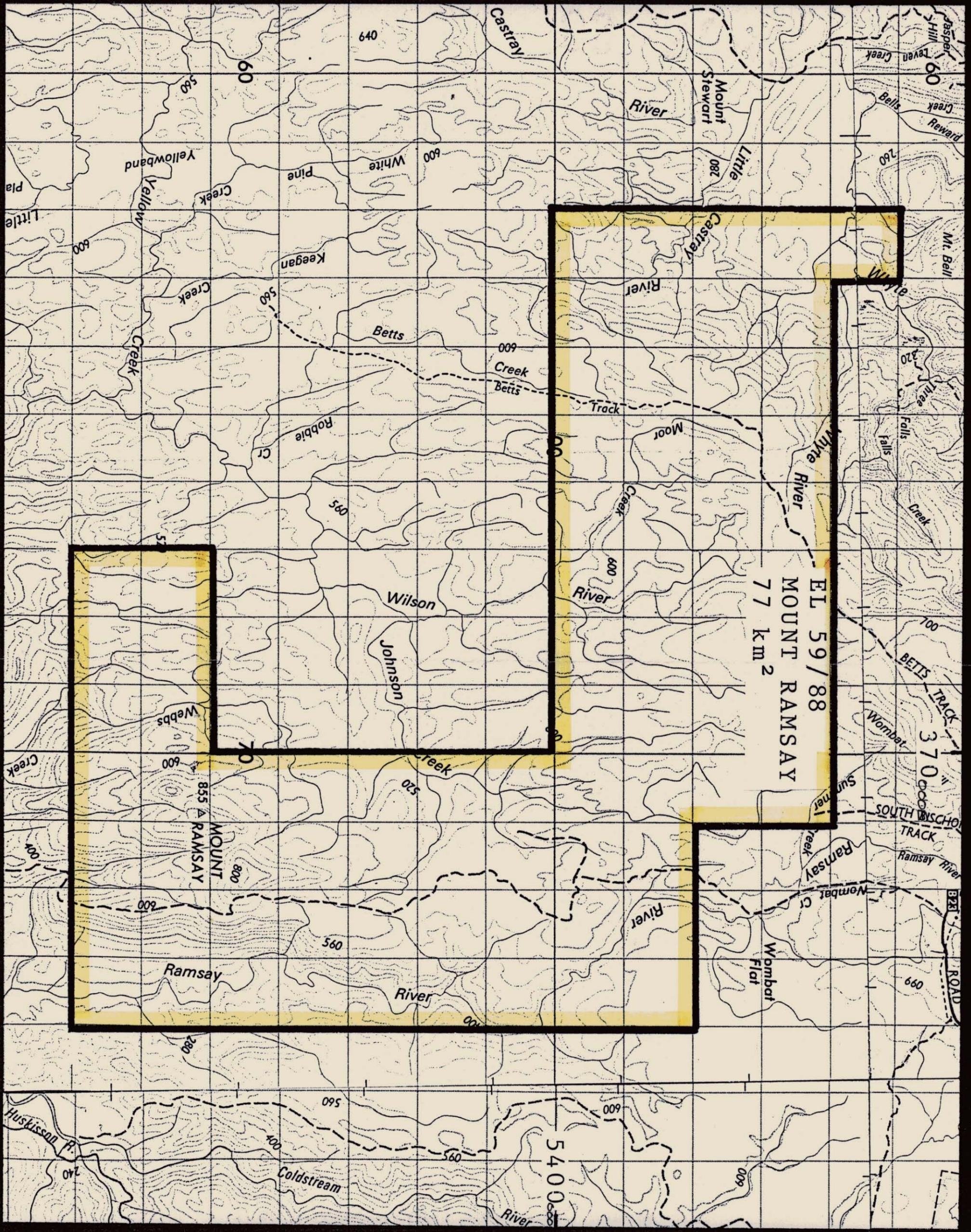


5397500
S
MT RAMSAY 365500E 5397500-5405500N

8000 M
5405500 MN
N







PLAN 1. LOCATION MAP - EL 59/88 (1:50,000).

5 cm

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