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CRA EXPLORATION PTY. LIMITED
ACN 000 057 125

Fourth Annual Report
For The Period Ending 15 March 1997
EL 43/92 Melba Flats, Tasmania

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Date: February 1997

Licence Holder: CRA Exploration Pty. Limited

Submitted to: Chief Geologist, SE District

Copies to: Mineral Resources Tasmania
CRAE - SE District
CRAE - Zeehan
CRAE - ETIG

Submitted by: J Fredricks (for SJ Tear)

Accepted by:

97-3994

ANNUAL REPORT - EL 43/92
MELBA FLATS - CRA - SJ TEAR

CRAE Report No. 22435

Abstract

No field exploration work has been completed on EL 43/92 Melba Flats. Data processing and an initial interpretation has been made on the heliborne magnetic data.

Results to data are not considered encouraging for an RTZ-CRA sized nickel orebody. Therefore it is recommended that the licence be offered for joint venture.

All drillsites have been checked and signed off.

Expenditure for the current reporting period is $4,946 making a total of $377,520.

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1. Conclusions and Recommendations

No further field exploration has been completed on the Melba Flats licence.

Initial processing and interpretation of the heliborne magnetic survey (flown 1995) has been made. There is very limited potential for an RTZ-CRA sized nickel orebody. As a result it is recommended that the licence be offered for joint venture.

2. Introduction

CRA Exploration Pty Limited (CRAE) was granted EL 43/92 on the 16 April 1993 for an initial tenure of one year over an area of 16 km^2. The target was bulk tonnage disseminated Ni-Cu (PGE and Au) sulphide resources.

EL 43/92 is located on the Pieman 7914 1:100,000 map sheet (Plan Tv 675). Its geographic centre is approximately 9 km north of Zeehan. For geology see previous reports.

A number of high-grade massive Ni-Cu (-PGE-Au) sulphide lenses are known within the Melba Flats Licence area. Massive sulphide lenses identified to date are up to 75m long, 60m wide, 1m thick and commonly exceed 15% combined Ni+Cu. Mineralisation is generally hosted by dolerite sills within steeply E dipping uncorrelated Cuni stratigraphy - interbedded mudstone, siltstone, volcaniclastic lithicwacke and quartzwacke (Plan Tv 680).

The aim of this report is to describe work undertaken during the fourth twelve month period to 15 March 1997.

3. Review of Previous Work

See Appendix 1.

4. Exploration Completed in the 12 Month Period to 15 March 1997

No field exploration work was carried out.

Processing of the helimag data began and an initial interpretation completed (Plans Tv 1149 and 1150). No further work has been done.

5. Environment and Rehabilitation

Field checks to drill sites and cut lines has shown no lasting impact on exploration activities.

6. References

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7. Location

Queenstown	SK55-5	1:250,000
Pieman	7914	1:100,000
Dundas	3636	1:25,000

8. Keywords

Cambrian, Copper, Nickel, PGE, Gold, Aerial Magnetic Survey, Disseminated, Massive, Dolerite.

REFERENCE

STRATIGRAPHY

Cainozoic	Qra	Marsh and swamp deposits; alluvium; river gravels; talus.
Devonian	Db	Bell Shale (Siltstone).
	Df	Florence Quartzite (Sandstone).
Silurian	Sac	Austral Creek Siltstone (Siltstone).
	Sk	Keel Quartzite (Sandstone).
	Sa	Amber Slate (Siltstone).
	Sc	Crotty Quartzite (Dominantly sandstone with minor siltstone).
Middle Cambrian	€db	Brewery Junction Formation (Interbedded siltstone, sandstone and conglomerate).
	€dra	Razorback Conglomerate (Dominantly chert deriver, interbedded conglomerate, pebbly sandstone and sandstone).
	€dh	Hodge Slate (Interbedded siltstone and mudstone with minor sandstone).
	€dre	Red Lead Conglomerate (Poorly-sorted, volcaniclastic, polymic conglomerate).
Cambrian (?)	€vs	Interbedded black mudstone, red siltstone, grey Volcaniclastic (andesitic) lithicwacke and quartz wacke.
Eocambrian	€cc	Crimson Creek Formation (Volcaniclastic [basaltic] lithicwacke, siltstone and mudstone with intercalated tholeiitic basalt flows).
	€sru	Success Creek group (Dominantly Siltstone).
	€sd	Success Creek group (Dominantly Sandstone).

IGNEOUS ROCKS

Devonian (?)	Dgq	Red and white massive quartz bodies.
Cambrian (?)	€g	Subophitic textured gabbroic rocks.
Cambrian	€sb	Basalt, commonly with pillows and individual flows graded from coarse-grained bases to fine-grained tops.
	€sg	Massive and multiply-intrusive two-pyroxene, granular textured gabbro.
	€spg	Serpentinised peridotite with intrusive gabbro.
	€sp	Serpentinised, orthopyroxene-rich, peridotite.
	€so	Serpentinised, olivine-rich, peridotite.
	€ss	Undifferentiated, massive and foliated, serpentinite.

Geological boundary, approximate.

Faulted Boundary, approximate.

Bedding, facing known, unknown.

Foliation, undifferentiated, vertical.

Blowfly Abandoned mine or working.

Geology after Brown 1991 and ZEEHAN 1:50,000 Geological Map (unpublished).

Genet's Winze
North Cuni
South Cuni
Blowfly
Mosquito
Vaudeau
Nickel Reward
Deveraux
Lead Blocks
Serpentine Hill
McKimmie
Melba Siding
MELBA FLATS
MELBA CREEK
HENTY RIVER
LITTLE HENTY
EMU BAY
MURCHISON HIGHWAY
NEVADA CREEK
Railway

5 370 000mN
5 369 000mN
5 368 000mN
5 367 000mN
5 366 000mN
5 365 000mN
364 000mE
365 000mE
366 000mE
367 000mE
368 000mE
369 000mE

AMG North / Mag. North 12.1°

5 cm

0 200 400 600 800 metres

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MELBA FLATS EL 43/92
GEOLOGICAL MAP 377009

Ref.: SK 55-05	File: Melba\680
Scale: 1 : 10,000	Date: April 1994
Author: T. Aravanis	Report No.: 22435
Drawn: R. Travierso	Plan No.: Tv 680

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3770111

Plot Coordinate System: AMG
Grid Angle: 0.0 deg.
True North Angle: 358.8 deg.
Magnetic North Angle: 11.8 deg.

5 cm

250 0 250 500 750
(metres)

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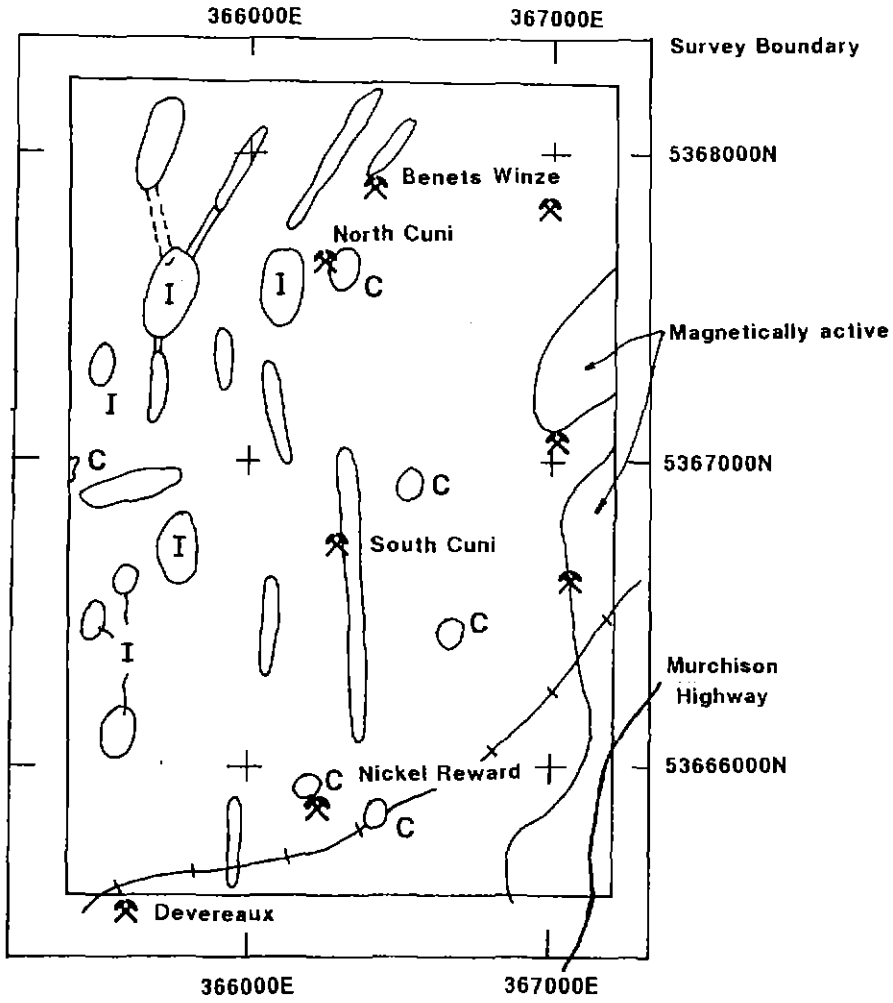
Zeehan Helimag Survey

EL43/93 Melba Flats - Cuni Prospect

Contoured Total Field on Shaded Relief Image

Author: John Tesselaar	Reference: SK55-05
Drawn: John Tesselaar	File Name:
Date: July 1996	Report No: 22435
Scale: 1:10,000	Plan No: Tv1149

25000



5 cm

LEGEND

Prospect & name

C Culture

I Intrusive

Magnetic linears

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0 500 1000m

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EL 43/92 MELBA FLATS

1995 ZEEHAN HELIMAG SURVEY
CUNI BLOCK
PRELIMINARY INTERPRETATION
SEPTEMBER 1995

Author: T. DOE	Reference:
Drawn: A.JELEN	File Name:
Date: JULY 1996	Report No: 22435
Scale: 1 : 25000	Plan No: Tv 1150

372010

Appendix 1

Previous Competitor and CRAE Work

Prior to Current Tenement

Cu and Ni mineralisation was discovered in the Melba Creek area in 1893. A detailed history of the exploration within the Melba Flats EL area is detailed in Taylor & Burger (1952) and Ellis (1987). A summary of mining lease activity up to 1961 is given in Brown (1992). A review of drilling within the Melba Flats area is included as Appendix I in Maher S (1995).

During Current Tenement

1. General Pre 1995

Fixed Wing Airborne TEM (QUESTEM) Survey

Data collected over the Melba Flats licence area was of poor quality given very high background resistivities and higher than normal flying height due to topography. The most prominent response was a 2 km strike length anomaly to the east of the Cu-Ni workings corresponding to a 50 m wide carbonaceous black shale unit. Poor conductors are associated with the known massive sulphide pods at the abandoned Nickel Reward, Vaudeau and North Cuni mines. A 300 m moderate conductor was interpreted to extend SE of the abandoned Nickel Reward mine.

Review of Tasmanian Mines Department Gravity Data - 1988

Data indicated a 0.6 mgal anomaly coincident with untested mineralised dolerite (identified by wacker sampling) west of the North Cuni mine.

Mineralogy

Petrology of 14 rock chip samples and 21 drill core samples indicated:

- chalcopyrite-pentlandite-pyrrhotite-millerite are the main relicts of the primary massive sulphide assemblage
- violerite and pyrite are supergene
- preserved sulphide textures are consistent with an epigenetic origin for mineralisation
- dolerite mineralogy is consistent with hydrous parental magmas which are incompatible with significant magmatic sulphide formation.

Dolerite Whole Rock Geochemistry

Whole rock analysis of 6 "host dolerite" samples indicated the "host dolerite" suite is probably correlatable with the mafic rocks of the Henty Dyke Swarm and the Henty Fault Wedge. These rocks are associated with extension related to tholeiitic magnetism late in the history of the Mount Read Volcanics magmatic event.

Rock Chip Geochemistry

104 rock chip samples were collected within the Melba Flats licence area for geochemical analysis. Samples weighing 1-2 kg were sent to Analabs where they were dried, crushed, pulverised (GPO33) and analysed for Cu Pb Zn Ag Ni Co Fe Cr As ±Mn by GA140 (0.3 g aqua regia/perchloric acid digest - AAS). Samples with greater than 0.3(0.5)% Ni were additionally analysed for Au Pt Pd by GG316 (50 g fire assay - AAS). All sample locations are shown on Plans Tv 950 & 951. Geochemical sample ledgers and laboratory reports are included in Appendix II.

Line Cutting and Griding

34 line km of line cutting and griding was undertaken. Gridlines (plus other culture) is shown on Plan Tv 954.

2. North Cuni-Genet's Winze Prospect

Ground PROTEM Survey

Protem data collected on the North Cuni-Genet's Winze grid indicates several conductors (Plan Tv 952). The most prominent conductor corresponds to the position of the "eastern dolerite" massive Cu-Ni sulphide lode. Parallel conductors to the west have not been tested by drilling.

Ground Magnetic Survey
10.5 line km of data collected on the North Cuni-Genet's Winze grid indicate some known massive sulphide mineralisation is weakly magnetic (Plan Tv 679). West of known mineralisation at the North Cuni mine, weak-discontinuous magnetic anomalies correspond to an untested dolerite sill (identified by wacker sampling).

Diamond Drilling 5 holes - 455m Figures 1-5
Massive sulphide was intersected in four holes.

Bhole	width m	Ni %	Cu %	Pd ppm	Pt ppm	Au ppm	From m
MF01	0.70	9.3	4.5	1.4	0.9	0.8	48.50
MF03	0.50	7.7	2.9	1.1	1.1	1.1	24.60
MF04	0.80	7.8	10.3	1.6	1.2	1.9	37.75
MF05	1.95	0.4	0.6	0.3	0.2	0.2	73.65

MF05 intersected disseminated pentlandite-chalcopyrite in a previously untested dolerite sill.

3. Nickel Reward-Vaudeau Prospect

Ground PROTEM Survey

Data from the survey covering the Nickel Reward-Vaudeau Grid is significantly affected by culture - making geological interpretation impossible.

Ground Magnetic Survey

9.0 line km of data collected on the Nickel Reward-Vaudeau grid indicate that the massive sulphide lodes at the abandoned Nickel Reward and Vaudeau mines are non magnetic (Plan Tv 678).

Diamond Drilling 2 holes - 38 m Figure 6-7

Holes failed to intersect the targeted massive sulphide sheet intersected in previous drilling. Review of drilling data indicates this sheet probably dips very steeply to the NW.

4. 1995

Results from a review of all drilling within the Melba Flats licence area. The review indicated potential for extensions to known mineralisation in the North Cuni, the Deveraux, and the Nickel Reward mine areas.

2 additional holes were drilled DD95MF06 and DD95MF07 for 37.65m.

Soil Geochemistry

1180 samples entered into CRAE database (inc competitor and CRAE work). Most significant result is an 850m long Cu-Ni anomaly open to the north. Target not drill tested.

IP Survey

Orientation IP 2.8 line km over 3 lines. Background too noisy.

Heliborne Magnetic Survey

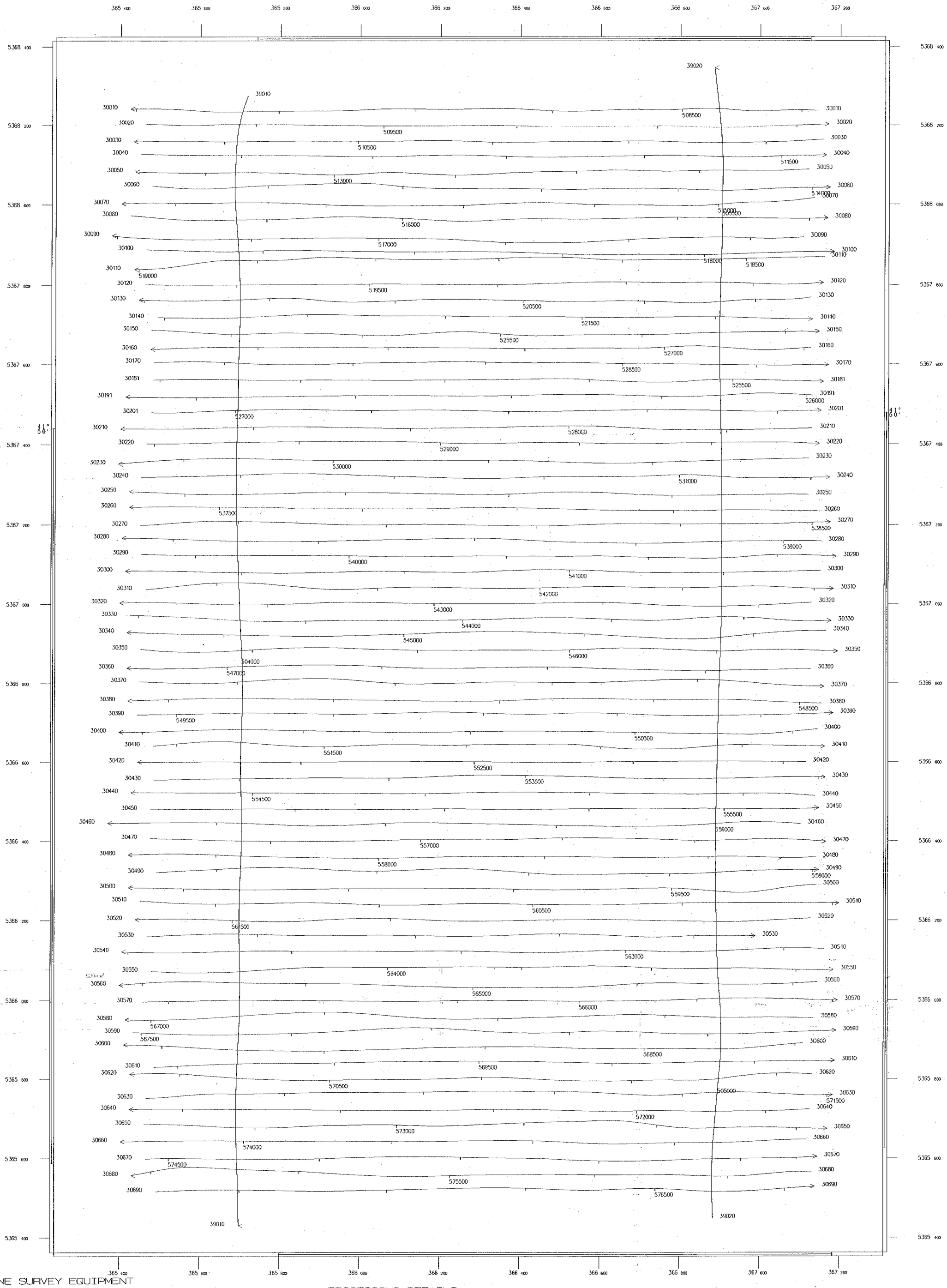
Area flown but results not processed. 110 line km of data at a nominal flight height of 30m and line spacing of 40m.

Research Project

Completed honours project on the "Geological Setting and Mineralisation of the Cuni Cu-Ni Deposits" by Philip Greenhill.

Appendix II

Heliborne Magnetic Survey - Flight Line Map



AIRBORNE SURVEY EQUIPMENT

Aircraft:	AS350B Helicopter
Magnetometer:	Geometrics G-833 Helium
Resolution:	0.001 nT
Sensitivity:	0.001 nT
Recording Interval:	0.10 Hz
Compensation:	RMS AADC II Compensator

PROCESSING DETAILS

Diurnal Corrections Applied.
Tie Line Levelling Applied.

1st contour interval	1nT
2nd contour interval	10nT
3rd contour interval	100nT
4th contour interval	1000nT

AIRBORNE SURVEY SPECIFICATIONS

Flight Line Direction:	CRA Digitised
Flight Line Separation:	CRA Digitised
Tie Line Direction:	CRA Digitised
Tie Line Separation:	CRA Digitised
Mean Terrain Clearance:	30 metres
Sample Interval:	3-4 metres
Navigation:	Differential GPS
Survey Flown:	March 1995

Grid North

0 100 200 300 400 500 600 700

Scale 1: 5000

5 cm

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CUNI/MELBA FLATS

UTS GEOPHYSICS PTY LTD

CRA EXPLORATION PTY LTD

377017

TASMANIA SURVEY

DETAILED HELI-MAG SURVEY

FLIGHT PATH MAP

DRAWN: UTS GEOPHYSICS	SCALE: 1: 5000
DATE: 25 APRIL 1995	JOB: A05703

Appendix III

Photos of Previous Years Drill Sites

377019

MF1
Nov 1996.

MF2
Nov 1996

MF3
Nov 1996.

377020

MF 4+5
Nov 1996.

MF 6+7
Nov 1996.