RGC EXPLORATION PTY. LIMITED

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E.L. 42/87 ZEEHAN

PARTIAL RELINQUISHMENT REPORT

FOR THE PERIOD 1987 to 1992

92-3379

MICROFILMED
FICHE No.012765-77

VOLUME 1

OPEN FILE

MINES
File No.
Action Officer Initials
Covering letter on file folio 24
Resubmit to Date

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Report No. T/92/16
July, 1992

Distribution:
- Tasmania Mines Department (1)
- RGC Exploration (1)

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1. INTRODUCTION

EL 42/87 was acquired by Renison Ltd. in August 1987 as the result of a successful tender application. The EL encloses the Aberfoyle/Gippsland joint venture consolidated M.L.s over Queen Hill, and Renison's interest in the area was initially linked to negotiations with the joint partners over the possible acquisition of the MLs (Figures 1 and 2).

Initially, work on the EL was deferred while negotiations continued and in 1989, when acquisition of Queen Hill did not eventuate, RGC Exploration began its own exploration programme.

Work on the EL was initially targeted at locating economic concentrations of tin of the style typified by the Montana deposit (carbonate replacement), the Severn deposit (Fault stockwork) and Queen Hill (fault and carbonate replacement). The Upper Oonah Formation and the so-called Poverty Point Beds (also called Montana Beds) were considered the most prospective units because of the presence within them of significant carbonate beds capable of hosting replacement-style deposits.

As a result of detailed mapping, rock chip geochemistry and an aeromagnetic survey, conducted during 1988/89, two areas were chosen as warranting more detailed follow-up work. The Comstock and Parting Lake grids were established to cover these two areas, however the Comstock area was later renamed the Sylvester area to avoid confusion with the Comstock prospect near Queenstown. Both areas were perceived to have good potential because of the following observed and/or interpreted features:

1) The presence of carbonates (Upper Oonah Fm, Poverty Point beds etc).

2) The presence of major regional structures (Main Slide, Sylvester Ft, Balstrup Ft).

3) The gravity-interpreted presence at depth of a granitic ridge with possible culminations.

4) The presence at Comstock of alteration and geochemical anomalism in outcropping carbonates.

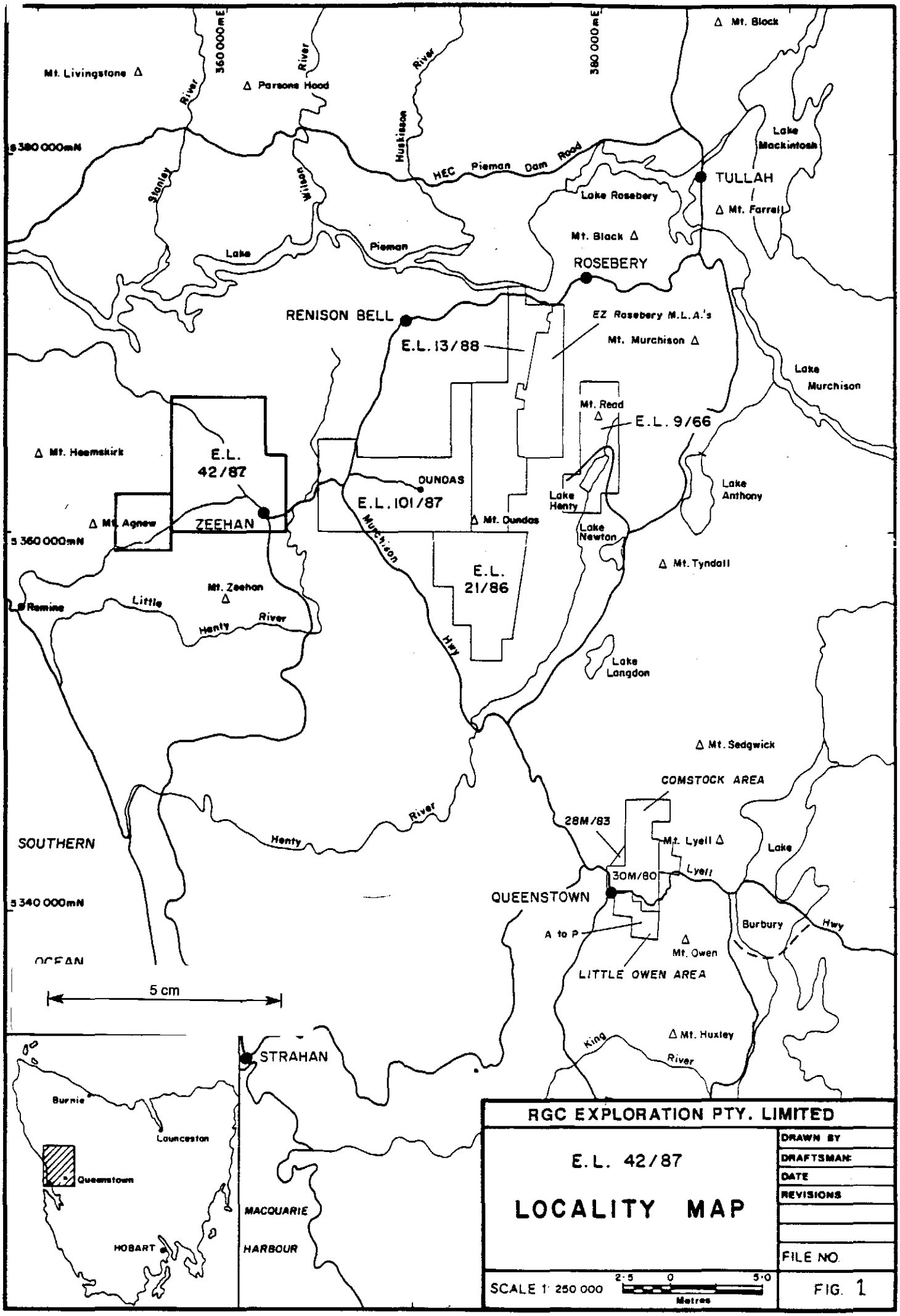
5) The presence at Comstock of a deep sourced magnetic anomaly.

Two MLs in the Comstock area, held by Oceania (Tas.) P/L., were considered to cover a portion of the prospective geology and as a result RGC signed an Option to Purchase agreement with the holders of the MLs to secure tenure of the area.

During 1990 former EL 95/87, which adjoined EL 42/87 to the west of the Sylvester area, became available as ETA 219. RGCE tendered for the area because it covered the westward extension of two major regional faults including the Balstrup Fault. The area was granted to RGCE and ultimately amalgamated into EL 42/87.

The expanded EL covers 40 square kilometres of countryside that varies from buttongrass and tea-tree swamp to partially forested hilly terrain. It covers Zeehan townsite and many of the old silver-lead mines of the now abandoned Zeehan field. Access is provided by a number of all-weather roads, as well as numerous 4WD tracks and old, partially overgrown tramways.

Since 1990/91 RGC has drastically reduced its tin exploration programme on the EL, and has concentrated on assessing the potential of the lease for base metal skarn/replacement deposits. This phase of exploration continued to be focussed on the Sylvester and Parting Lake Grids, and to date 16 drillholes have been completed.



RGC EXPLORATION PTY. LIMITED

E.L. 42/87

LOCALITY MAP

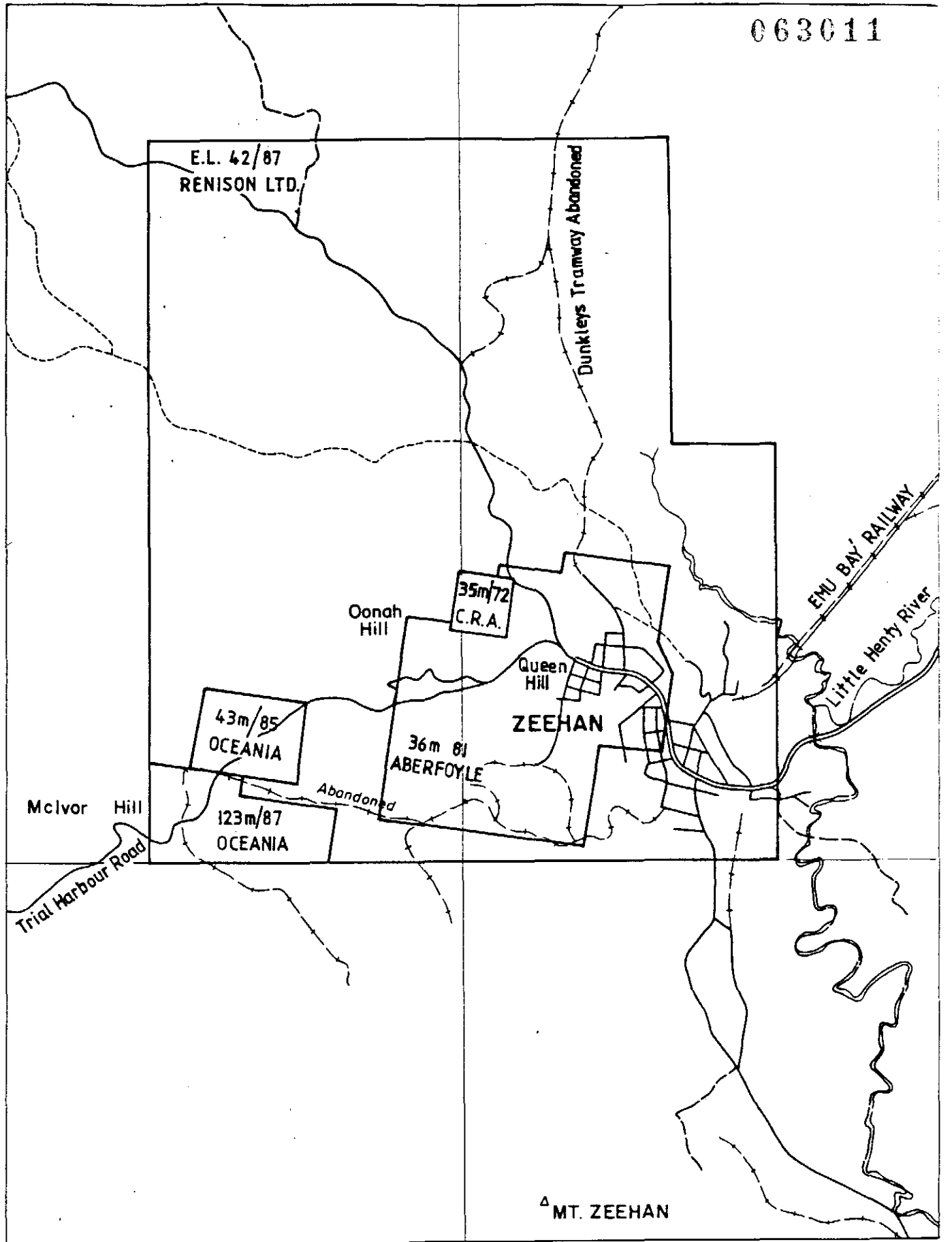
DRAWN BY	
DRAFTSMAN	
DATE	
REVISIONS	
FILE NO.	

SCALE 1: 250 000 (2·5 0 5·0 Metres)

FIG. 1

063010

063011



RGC EXPLORATION PTY. LIMITED

INCORPORATED IN NEW SOUTH WALES

COMPILED	D.J.C.
DRAWN	E.J.M.
DATE	
CHECKED	

ZEEHAN PROJECT

TENEMENT PLAN

BASE PLAN No

OVERLAY PLAN No

SCALE 1:50000 0 1500m

FIG 2

2. SUMMARY OF EXPLORATION BY RGC EXPLORATION

This section covers only those work programmes that occurred partly or wholly on the areas to be relinquished.

1988/89; Base plans were prepared at 1:5,000 and 1:10,000, and 1:20,000 colour aerial photography was purchased to cover the entire E.L. A literature review was also completed to determine what previous exploration had been undertaken.

About two-thirds of the E.L. was reconnaissance-mapped with the aid of colour photography and 1:10,000 base plans. Detailed geological mapping was undertaken along some roadways and tramways, and selected cross-country traverses were made where topography permitted. The mapping was supplemented by airphoto interpretation at 1:25,000 (Plan 5). Fifty five rock chip samples were collected during mapping and analysed for Sn, S, As, Cu, Pb, Zn, Wo, Ag, Bi, SSn (soluble tin) and Au. Results are included as Appendix 1, and sample locations are on Plan 19.

The E.L. was also covered by a regional aeromagnetic survey flown over all RGC's West Coast tenements. The survey was flown by helicopter, towing a Cesium vapour magnetometer with readings at 0.1 second intervals along flight lines 150m apart. The sensitivity of the survey was quoted as 0.05 nanoteslas. The helicopter was not permitted to overfly Zeehan, leaving a gap in the survey.

1989/90 An Option to Purchase was concluded with Oceania (Tas) P/L to cover ML's 43M/85 and 123M/47 near the old Comstock Mine. Grids were pegged at Comstock (the Sylvester Grid) and Parting Lake, but only the latter

extends onto the area to be relinquished. About 5 line-kilometres of the Parting Lake is on the area to be relinquished.

The Parting Lake grid was geologically mapped and surveyed, and regional mapping was completed (Plans 9-12, 14).

Additionally, a C-Horizon soil sampling programme was completed on the grid at 25m intervals and all samples were geologically logged and analysed for Cu, Pb, Zn, Sn, Sb, As, Ba, Br, Ce, Cs, Cr, Co, Eu, Au, Hf, Ir, Fe, La, Lu, Mo, W, Rb, Sm, Sc, Se and Zr. A number of gold standards were included with the samples. Results are included as Appendix 2, and Figures 7-19. Sample Locations are in Plans 15, 16.

The 1988/89 aeromagnetic data was interpreted by consultant geophysicist Bruce Wyatt (Appendix 4).

1990/91 ETA 219, which adjoined the SW corner of EL 42/87, was acquired and incorporated into the EL. A portion of this area is in the area to be relinquished. The Sylvester Grid was extended westward onto this part of the expanded EL, but the grid extension does not cover any part of the area to be relinquished. (Plan 8).

105 km of colour aerial photography at 1:10,000 scale was flown over the Zeehan area under contract by the Department of Environment and Planning. Some extra mapping was completed outside of gridded areas using these photos, and all structural data was plotted on stereonets and interpreted (Figures 20-26 and Plans 9-13).

Dr. David Leaman, consultant geophysicist, was contracted to complete a detailed interpretation of the form of the Heemskirk granite using existing gravity data in the Tasgrav database (DMMR). The results are in Appendix 6.

A number of additional rock chip samples were collected during regional mapping. These are located on Plans 15-18, and the analytical results included in Appendix 3.

3. CONSTRUCTION AND REHABILITATION

Apart from the portion of the Parting Lake Grid that extends onto the area to be relinquished, no construction was undertaken and no rehabilitation is required.

4. WORK COMPLETED 1991/92

Some reconnaissance mapping was completed to improve understanding of the complex structural history of the area. This included some mapping on the northern margin of the EL, which is in the area to be relinquished. This work is included in Plans 9, 10, and 31.

Density measurements were taken of rock chips and diamond drill core representing the principle lithologies of the area. Magnetic susceptibility measurements were also taken. These rock property measurements are included as Appendix 7.

Dr. David Leaman has been contracted to undertake a more detailed re-interpretation of existing gravity data in the Tasgrav database, utilising the rock property measurements and recent geological interpretation plans to constrain the gravity modelling. It is hoped that the re-interpretation will produce a more accurate Form of Granite map and outline areas of mass imbalance that could be due to large, concealed bodies of sulphide mineralisation. This re-interpretation has yet to be completed.

All other work conducted during 1991/92 was focussed on the Parting Lake and Sylvester grids, outside of the area to be relinquished. It consisted mainly of drilling and related activities.

5. CONCLUSIONS

Based on all the work completed to date, the areas to be relinquished are not considered to be the top priority areas for economic stanniferous and/or base metal replacement deposits, at forseeable metal prices. These areas are thus rated as having less immediate economic potential than the area retained.

The area north of 365,000mN is considered less interesting because:

1) Suitable host carbonates are not present.
2) Depth to granite is too great.
3) No granite cupolas have been defined by gravity interpretation.
4) Major faults are not a feature.

Despite the presence of Palaeozoic carbonates, the area east of 362,000 mE is considered less interesting because:

1) Depth to granite is too great.
2) No cupolas have been defined by gravity interpretation.
3) Vein mineralogy (sideritic gangue) suggests an extreme distal location within the mineral zonation pattern centred on the granite intrusions.

The area west of 355,000 mE and south of 360,000 mN is considered less interesting because it is too close to the granite and during the main phase of Pb-Zn-Ag mineralisation temperatures were too high to produce a Pb-Zn-Ag replacement deposit. Any potential tin mineralisation would most likely be in metallurgically difficult forms (e.g. substituting in silicate lattices). However, as the granite cooled, and the hydrothermal system contracted, it is possible that some lower temperature mineralisation overprinted the early high temperature assemblages, so the possibility of massive sulphide replacement

deposits is not excluded. Additionally, the Davern sphalerite-magnetite deposit (Plan 13, 360,000 mN/354,750 mE) is an example of a higher temperature style of base metal deposit that attains economic grades.

TABLE 1

STYLES OF TIN MINERALISATION

	FISSURE LODES	STOCKWORKS	REPLACEMENT
EXAMPLES	Stannite Lode Bradshaws Lode Pastkuchens Lode Clarkes*	Severn Queen Hill*	Montana Queen Hill*
MINERALOGY			
Cassiterite	XX	XXX	XXX
Stannite	XXX	X	X
Arsenopyrite	XX	X	X
Chalcopyrite	XX	X	X
Galena	XX	X	XXX
Sphalerite	XX	X	XXX
Pyrite	XXX	XXX	XXX
Pyrrhotite	X	XXX	X
Siderite	XX	X	XXX
Quartz	XXX	XXX	XX
Bismuth	X		X
Antimony	XX	?	?
Rubidium	?	X	X
HOST ROCKS	Graphitic Shales Spilites	Crimson Creek Fm Oonah Fm	Poverty Pt. Dolomite Oonah Limestone
MINERALISATION STYLE	Thin, impersistent fissure veins.	Stockworks and dissemination in shear zones.	Stratabound lenses.
HOST ROCK	Minor	Intense	Recrystallisation
ALTERATION	Graphite Pyrite	Silica Pyrite-Pyrrhotite Chlorite	Silica Pyrite Siderite

XXX Major constituent
XX Minor (<1%)
X Trace

* Complex, with more than one oretype

TABLE 2
GOLD STANDARDS

Sample No.	Standard Identifier	Mean Grade	Acceptable Range (95%)	Value obtained by analysis
T11870	B3	50	40-60	68
T11880	B4	250	180-330	260
T11890	B4	250	180-330	290
T23920	FMC4	370	330-410	390
T23940	MAG	540	460-620	748
T23960	B4	250	180-330	290
T24320	FMC1	236	150-320	340
T24340	FMC1	236	150-320	270
T24360	FMC1	236	150-320	240
T24380	FMC1	236	150-320	230
T24400	FMC1	236	150-320	250
T24420	FMC1	236	150-320	220
T24440	FMC1	236	150-320	220
T24460	FMC1	236	150-320	220
T24480	FMC1	236	150-320	210
T24500	FMC1	236	150-320	430
T24520	FMC1	236	150-320	220
T24540	FMC1	236	150-320	210
T24560	FMC1	236	150-320	420
T24580	FMC1	236	150-320	240
T24600	FMC1	236	150-320	220
T24620	B3	50	40-60	45
T24640	B3	50	40-60	56
T24660	FMC1	236	150-320	230
T24680	FCM1	236	150-320	230
T24700	B3	50	40-60	60
T24720	FMC1	236	150-320	210
T24740	B3	50	40-60	55
T24760	FMC1	236	150-320	240
T24780	B3	50	40-60	52
T24800	FMC1	236	150-320	250
T24820	B3	50	40-60	54
T24840	B3	50	40-60	56

all values are in ppb

TABLE 2 (Contd)

Sample No.	Standard Identifier	Mean Grade	Acceptable Range (95%)	Value obtained by analysis
T24860	B3	50	40-60	55
T24880	FMC1	236	150-320	240
T24900	B3	50	40-60	51
T24920	B3	50	40-60	54
T24940	FMC1	236	150-320	340
T24960	B3	50	40-60	220
T24980	B3	50	40-60	59
T25000	FMC1	236	150-320	200
T25120	B3	50	40-60	77
T25180	FMC1	236	150-320	240
T25200	FMC1	236	150-320	250
T25220	B3	50	40-60	79
T25240	B3	50	40-60	120
T25260	B3	50	40-60	53
T25280	FMC1	236	150-320	250
T25300	B3	50	40-60	54
T25320	FMC1	236	150-320	360
T25340	FMC1	236	150-320	240
T25360	FMC1	236	150-320	220
T25380	B3	50	40-60	52
T25400	FMC1	236	150-320	260
T25420	FMC1	236	150-320	250
T25440	FMC1	236	150-320	220
T25460	FMC1	236	150-320	240
T25480	B3	50	40-60	71
T25500	B3	50	40-60	57
T25520	B3	50	40-60	76
T25540	FMC1	236	150-320	370
T25580	FMC1	236	150-320	210
T25600	B3	50	40-60	63
T25620	FMC1	236	150-320	230
T25640	FMC1	236	150-320	240
T25660	B3	50	40-60	56

all values are in ppb

TABLE 2 (Contd)

Sample No.	Standard Identifier	Mean Grade	Acceptable Range (95%)	Value obtained by analysis
T25680	B3	50	40-60	57
T25700	FMC1	236	150-320	260
T25720	B3	50	40-60	71
T25740	B3	50	40-60	39
T25760	FMC1	236	150-320	160
T25780	B3	50	40-60	47
T25800	FMC1	236	150-320	170
T25820	B3	50	40-60	56
T25860	B3	50	40-60	130
T25860	FMC1	236	150-320	160
T25880	FMC1	236	150-320	200
T25900	B3	50	40-60	41
T25920	B3	50	40-60	69
T25940	FMC1	236	150-320	300
T25960	B3	50	40-60	84
T25980	FMC1	236	150-320	230
T26000	FMC1	236	150-320	400
T26020	B3	50	40-60	53
T28520	B3	50	40-60	58
T28540	B3	50	40-60	65
T28560	B4	250	180-330	260
T28580	B4	250	180-330	270
T28600	B3	50	40-60	65
T28620	B3	50	40-60	74
T28640	B4	250	180-330	260
T28680	B3	50	40-60	60
T28700	B4	250	180-330	270
T29220	B4	250	180-330	260
T29240	FMC1	230	150-320	250

TABLE 3 Comparison of Major Skarn Types

Type	Calcic Fe	Magnesian Fe	Calcic W	Calcic Cu	Calcic Zn-Pb	Calcic Mo	Calcic Sn	Magnesian Sn
Relative abundance (number of examples listed in text)	Abundant (20)	Abundant (8)	Abundant (54)	Abundant (43)	Abundant (51)	Very rare (14)	Rare (14)	Rare (14)
Size: largest known (million tons ore)	Sarbai, U.S.S.R., 725 m.t., 47% Fe	Sherogesh, U.S.S.R., 234 m.t. 35% Fe	MacMillan Pass, Canada, 63 m.t., 0.95% WO_3	Twin Buttes, Ariz., 500 m.t., 0.8% Cu	Naica, Mexico 10 m.t., 10% Zn, 13% Pb, 13 oz/ton Ag	Little Boulder Creek, Idaho, 0.15% MoS_2	Moina, Tasmania 30 m.t., 0.15% Sn	?
Typical size	5–200 m.t.	5–100 m.t.	0.1–2 m.t.	1–100 m.t.	0.2–3 m.t.	0.1–2 m.t.	0.1–3 m.t.	1 m.t.
Typical grade	40% Fe	40% Fe	0.7% WO_3	2% Cu u.g., 1% Cu o.p.	9% Zn, 6% Pb, 5 oz/ton Ag			
Metal association (minor metals)	Fe (Cu, Co, Au)	Fe (Cu, Zn)	W, Mo, Cu (Zn, Bi)	Cu, Mo (W, Zn)	Zn, Pb, Ag (Cu, W)	Mo, W (Cu, Bi, Zn)	Sn, F (Be, W)	Sn, F (Be, B)
Tectonic setting	Oceanic island arc; rifted continental margins	Continental margin; synorogenic	Continental margin; synorogenic to late orogenic	Continental margin; synorogenic to late orogenic	Continental margin; synorogenic to late orogenic	Continental margin; late orogenic	Continental margin; late orogenic to postorogenic	Continental margin; late orogenic to postorogenic
Associated igneous rocks								
Intrusive rock composition	Gabbro to syenite, mostly diorite, some with diabase	Granodiorite to granite	Quartz diorite to quartz monzonite; rarely alaskite	Granodiorite to quartz monzonite; rarely monzonite	Granodiorite to granite; diorite to syenite	Quartz monzonite to granite	Granite	Granite
Co-genetic volcanics	Common: basalt, andesite	Absent	Absent? (eroded)	Common: andesite	Absent?	Absent	Mostly absent	Mostly absent
Intrusive texture	Medium to fine grained; equigranular	Medium to fine grained; equigranular	Coarse to medium grained; porphyritic	Medium grained to aphanitic; porphyritic	Coarse grained to aphanitic; equigranular to porphyritic	Coarse to fine grained; equigranular to porphyritic	Coarse to fine grained; equigranular to porphyritic	Coarse to fine grained; equigranular to porphyritic
Intrusive morphology	Large to small stocks, dikes	Small stocks, dikes, sills	Large batholithic plutons	Stocks, dikes	Large stocks to dikes	Stocks	Stocks, batholiths	Stocks, batholiths
Intrusive alteration	Na-silicates, extensive endoskarn	Minor endoskarn; propylitic	Endoskarn; local mica calcite pyrite	K-silicate, sericitic, local endoskarn	Extensive endoskarn	Quartz veins; K-silicate	Greisen	Greisen
Mineralogy:								
Prograde	Grandite, salite, ferrosalite, epidote, magnetite	Forsterite, calcite, spinel, diopside, magnetite	Grandite/spessartine-almandine garnet, hedenbergitic pyroxene, idocrase, wollastonite	Andraditic garnet, salitic pyroxene, local wollastonite	Johannsenitic pyroxene, andraditic garnet, bustamite, local idocrase	Hedenbergitic pyroxene, grandite garnet, quartz	Malayaite, danburite, datolite, grandite, idocrase	Spinel, fassaite, forsterite, phlogopite, magnetite, humite, ludwigite, paigeite
Retrograde	Amphibole, chlorite (ilvaite)	Amphibole, humite serpentine, phlogopite	Hornblende, biotite, plagioclase, epidote	Actinolite, chlorite, montmorillonoids	Mn-actinolite, ilvaite, epidote, chlorite, danburite	Amphibole, chlorite	Amphibole, mica, chlorite, tourmaline, fluorite	Cassiterite, fluoborite, magnetite, micas, fluorite
Ore	Magnetite (chalcopyrite, cobaltite, pyrrhotite)	Magnetite (pyrite, chalcopyrite, sphalerite, pyrrhotite)	Scheelite, molybdenite, chalcopyrite, pyrrhotite, pyrite	Chalcopyrite, bornite, pyrite, hematite, magnetite	Sphalerite, galena, chalcopyrite, arsenopyrite	molybdenite, scheelite, bismuthinite, pyrite, chalcopyrite	Cassiterite, arsenopyrite, stannite, pyrrhotite	Cassiterite, minor arsenopyrite, pyrrhotite, stannite, sphalerite

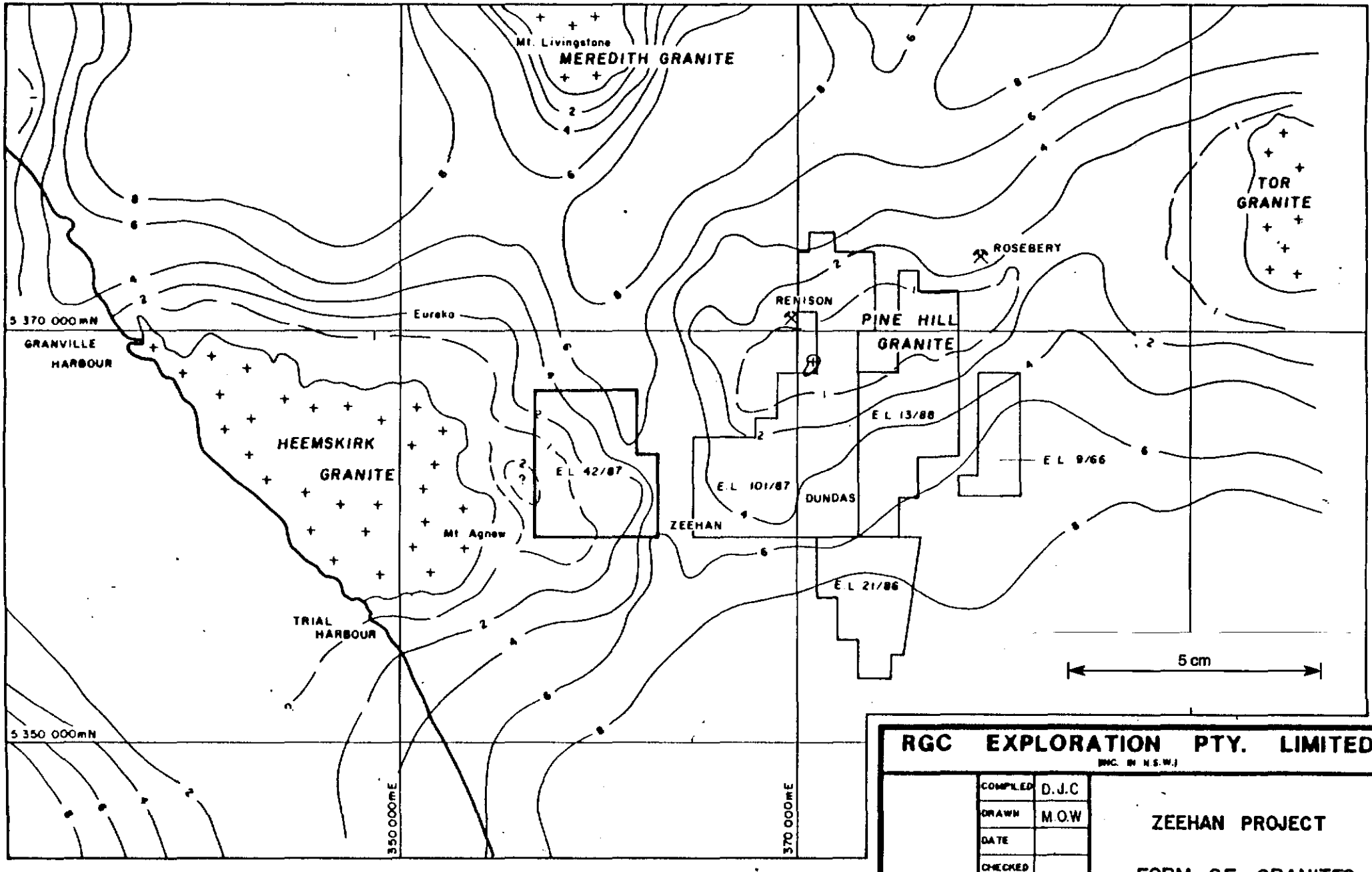
Abbreviations: m.t. = million tons, o.p. = open pit, u.g. = underground mining methods.

0 0 6 3 0 2 3

TABLE 4
COMPARISON OF BASE METAL SKARNS

LOCALITY	TONNES	METALS	OPAQUE. MIN.S	OTHER MIN.S	INTRUSIVES	HOST ROCKS	SKARN MORPHOLOGY
N Comstock Zeehan	?	3.2% Zn 3.2% Pb 12ppm Ag .2% Cu	Po, Sl, Gl, Py, Mt	Se, Cb, Br	Granite	Dolomite, Limestone	Replacement body adjacent to major fault contact and genetically related veins in recrystallised carbonates.
Darwin California	?	?	Gl, Sl, Py, Cp, Po, Mg, Ap	Cc, Fl, Dp, Gn Id	Quartz Monzonite Stock	Limestone	Replacement body adjacent to major fault contact and genetically related veins.
Uchucchacua Peru	> 3.9Mt	3% Zn 3% Pb 600ppm Ag .1% Cu	Sl, Gl, Cp, Po, Py, Al, Wu	Kneb, Px, Gn, Bu, Rh	Porphyry Dyke	Limestone, Shale	Replacement bodies parallel to faults near fault bends, and in genetically related veins in minor faults.
Santa Eulalia Mexico	32Mt	11% Zn 10% Pb 190ppm Ag	Sl, Gl, Py, Cp, Mg, Po, Ap	Ov, Hd, Px, Rh, Il, Am, Chl	Rhyolite dyke, Quartz Monzonite Stock	Limestone	Along fault contacts and dyke contacts, and in chimneys.
San Martin Mexico	21Mt	5.3% Zn .6% Pt 150ppm Ag 1.2% Cu	Sl, Cp, Gl, Po, Py, Tet, Ap	Hd, Tr, Wol, Ep, Chl	Quartz Monzonite Stock	Limestone	Replacement bodies in recrystallised fractured limestones beneath shales, and related veins.
Sarbai USSR (MAGNETITE-SKARN)	725Mt	45.6% Fe .04% Cu .05% Zn .02% Pb	Mg, Py, Po, Cp, Sl	Gn, Px, Chl, Cc, Ze	Diorite	Andesite, Tuff, Limestone, Argillite	Lensoid 185mx2km.

063024



Provisional Interpretation : contours showing top of granite below surface in km.

(Leaman, Jan 1988)

RGC EXPLORATION PTY. LIMITED

(INC. IN N.S.W.)

COMPILED	D.J.C
DRAWN	M.O.W
DATE	
CHECKED	
1:25,000 Reference	

ZEEHAN PROJECT

FORM OF GRANITES

BASE PLAN No

OVERLAY PLAN No

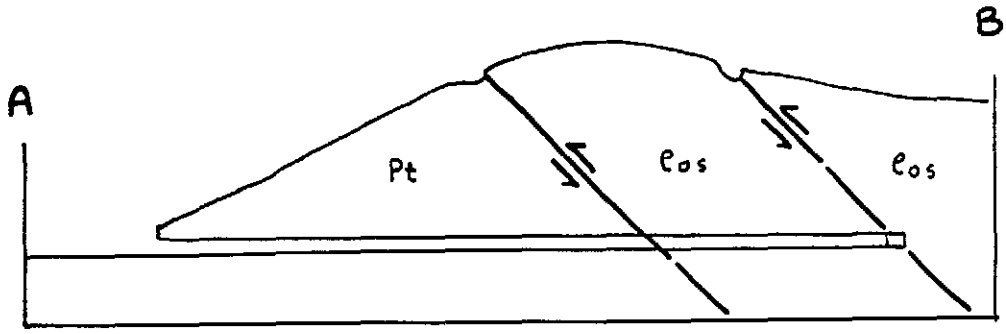
SCALE 1 : 250,000 (2.5 0 5.0 Kilometres)

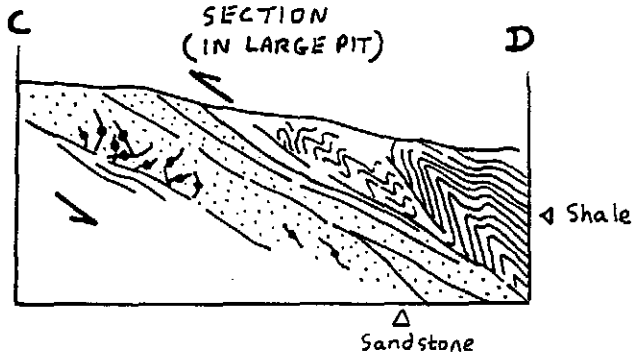
FIG. 3

063025

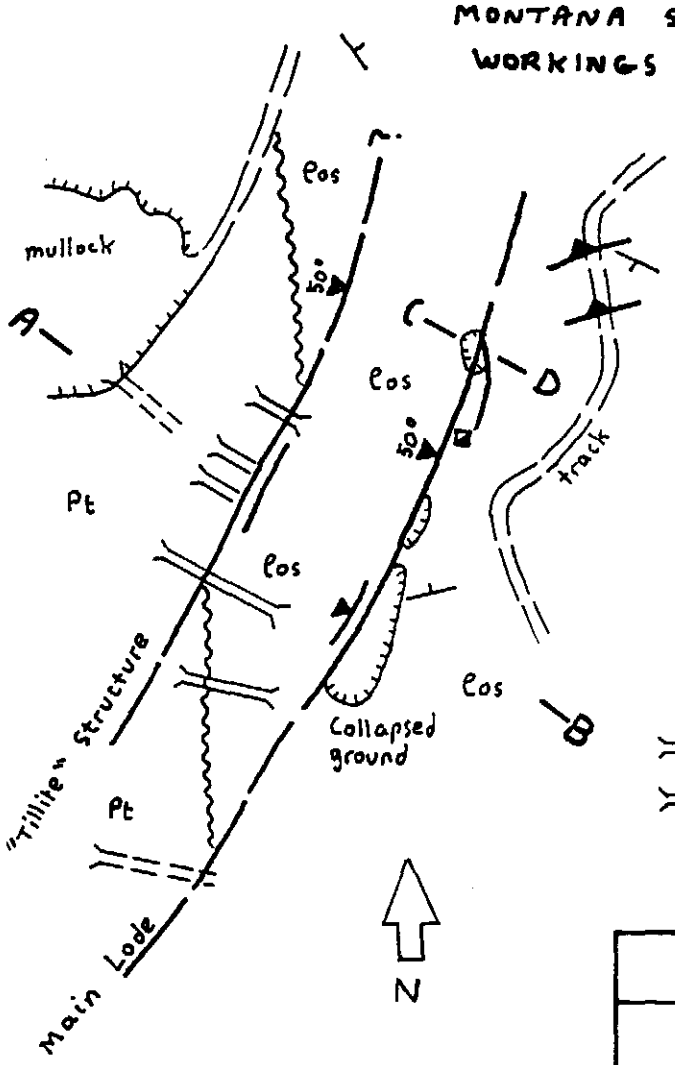
063026

SECTION





MONTANA S.L.
WORKINGS



Pits

Adits

5 cm

Pt Permian tillite

Cos Oonah sediments

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES		
	COMPILED DJC	MONTANA S.L.
	DRAWN DJC	GEOLOGICAL SKETCH
	DATE	(NOT TO SCALE)
	CHECKED	
	1:250 000 Reference	
BASE PLAN No 5521/009 OVERLAY PLAN No	SCALE	FIG 4

063027

35M/72

36M/81

MONTANA

QUEEN HILL

SEVERN

Stannite Lode(s)

Pastkuchen's

Bradshaw's

Clarke's

Stormsdown

Taylor's

Payne's

OONAH FAULT

WALLER FAULT

SYLVESTER FAULT

FAULT

QFP

Eos

Eosh

Eom

Eoss

Ep

Ec

Og

S

D

?D

S?

INDEX

D	Devonian Sediments
S	Silurian Sediments
O	Ordovician Gordon Limestone
Ec	Cambrian Crimson Ck. Fm.
Ep	Poverty Point Beds
Eos	Proterozoic Oonah sediments
Eosh	Oonah Shale
Eoss	Oonah Sandstone
Eom	Oonah Spilites

Sulphide - Cassiterite bodies :

- Uneconomic ; at surface
- Ore grade ; at surface
- ; at sea level
- ; 200m below sea level
- Sn - pyrite fissure lode
- Fault
- Fold
- Lithological boundary
- QFP Quartz Porphyry

5 cm

Geology in vicinity of Queen Hill is after Anderson, 1988

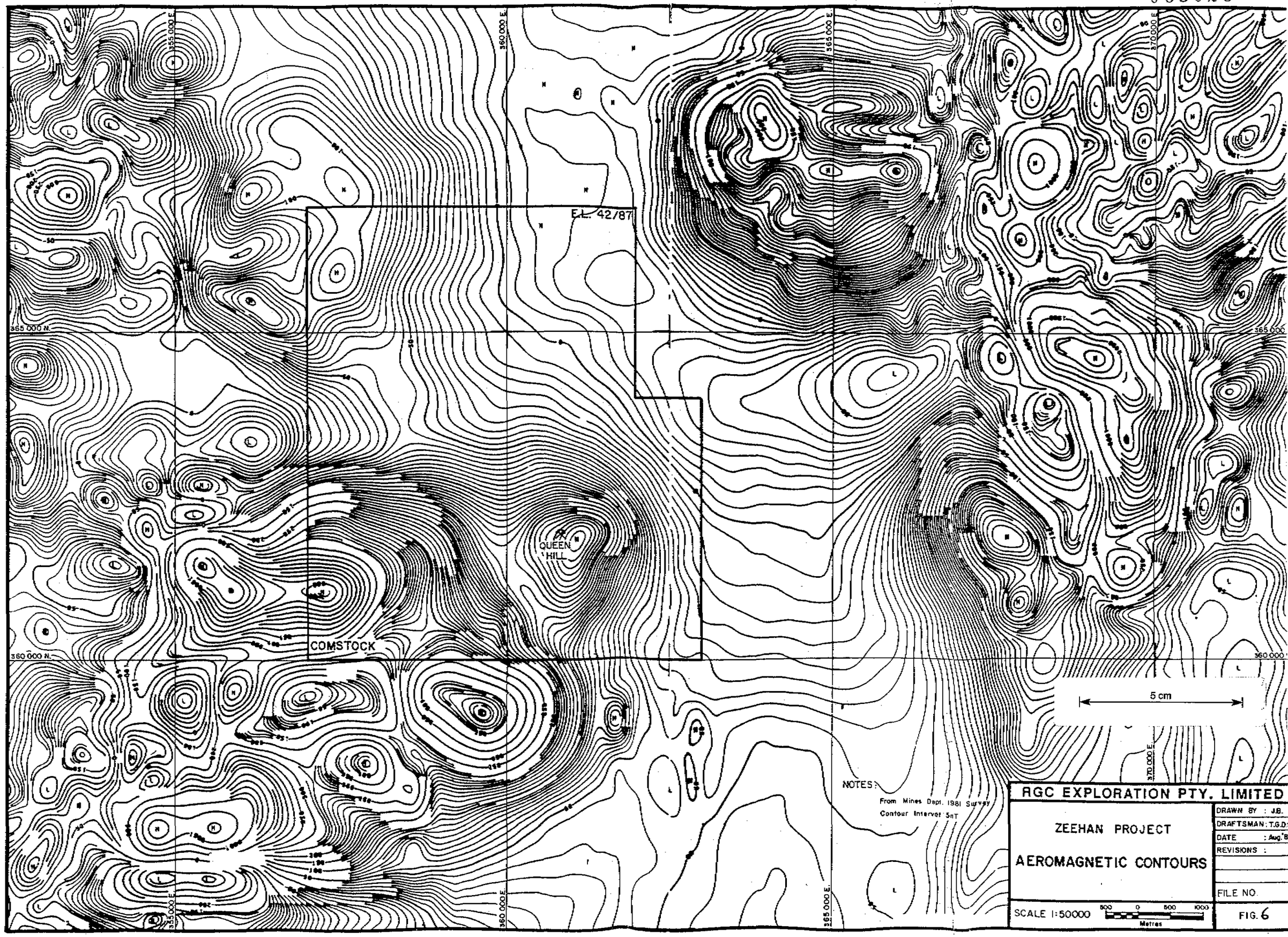
RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	DJL
DRAWN	DJL
DATE	Sep 89
CHECKED	
1:250 000 Reference	

TIN MINES OF THE ZEEHAN FIELD

BASE PLAN No. 5512/127 SCALE 1:10 000 0 100 200 300m FIG

063028


355 000 E.
360 000 E.
365 000 E.
370 000 E.
365 000 N.
360 000 N.
E.L. 42/87
QUEEN HILL
COMSTOCK
5 cm
NOTES:
From Mines Dept. 1981 Survey
Contour Interval 5nT
RGC EXPLORATION PTY. LIMITED
ZEEHAN PROJECT
AEROMAGNETIC CONTOURS
DRAWN BY : J.B.
DRAFTSMAN: T.G.D.
DATE : Aug.'8
REVISIONS :
FILE NO.
SCALE 1:50000
500 0 500 1000
Metres
FIG. 6

063029

356000 358000 360000 362000

366000 364000 362000 360000

5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Cu

UPPER LIMIT 250ppm
SCALE 1:25000
FIG. 7

063030

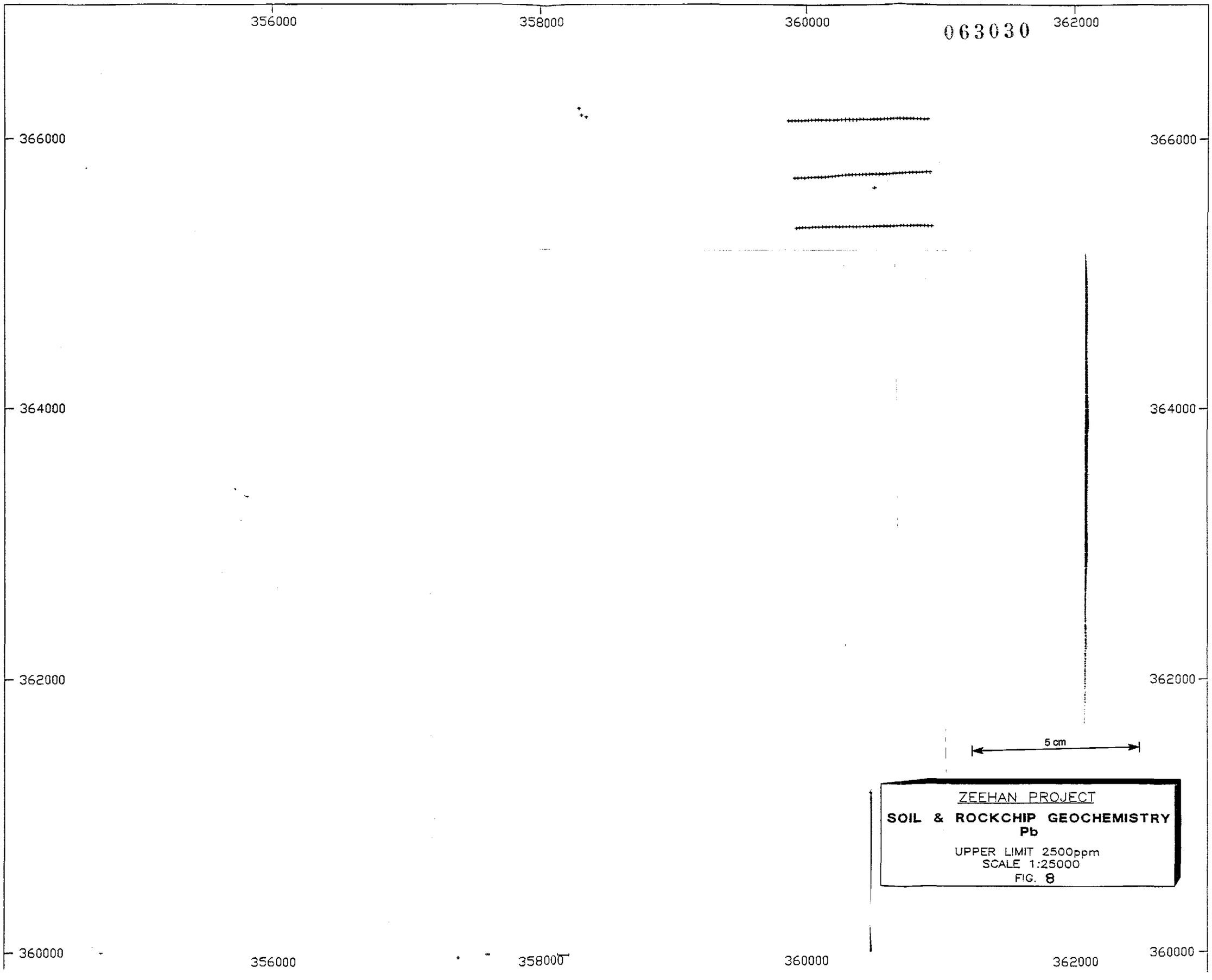
356000 358000 360000 362000

366000

364000

362000

360000



ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Pb

UPPER LIMIT 2500ppm
SCALE 1:25000
FIG. 8

356000 358000 360000 362000

063031

366000

364000

362000

360000

356000

358000

360000

362000

5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY

Zn

UPPER LIMIT 2500ppm
SCALE 1:25000
FIG. 9

063032

356000 358000 360000 362000

366000

364000

362000

360000

5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Sb

UPPER LIMIT 100ppm
SCALE 1:25000
FIG. 10

063033

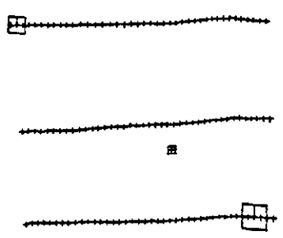
356000 358000 360000 362000

366000

364000

362000

360000



5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Au

UPPER LIMIT 0.1ppm
SCALE 1:25000
FIG. 11

063034

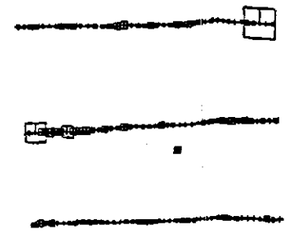
358000 360000 362000

366000

364000

362000

360000



5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Sn

UPPER LIMIT 50ppm
SCALE 1:25000
FIG. 12

356000 358000 360000 362000

063035

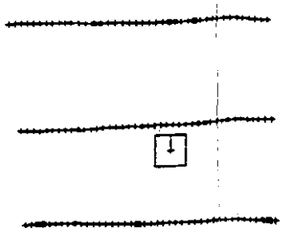
356000 358000 360000 362000

366000

364000

362000

360000



5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
W

UPPER LIMIT 20ppm
SCALE 1:25000
FIG. 13

063036

356000 358000 360000 362000

366000 366000

364000 364000

362000 362000

360000 360000

356000 358000 360000 362000

5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY

Cs

UPPER LIMIT 100ppm
SCALE 1:25000
FIG. 14

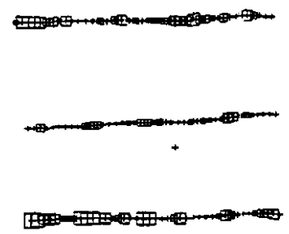
063037

356000 358000 360000 362000

366000 366000

364000 364000

362000 362000



5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Rb

UPPER LIMIT 500ppm
SCALE 1:25000
FIG. 15

360000 360000

356000 358000 360000 362000

063038

366000

364000

362000

360000

356000

358000

360000

362000

360000

5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Sc

UPPER LIMIT 50ppm
SCALE 1:25000
FIG. 16

063039

356000 358000 360000 362000

366000 366000

364000 364000

362000 362000

5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Cr

UPPER LIMIT 250ppm
SCALE 1:25000
FIG. 17

360000 360000

356000 358000 360000 362000

356000 358000 360000 362000

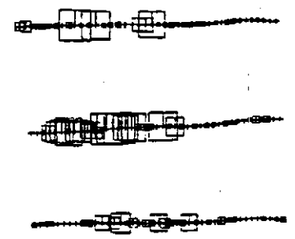
063040

366000

364000

362000

360000



5 cm

ZEEHAN PROJECT

ROCKCHIP GEOCHEMISTRY
Ta

UPPER LIMIT 10ppm
SCALE 1:25000
FIG. 18

356000 358000 360000 362000

063041

358000

360000

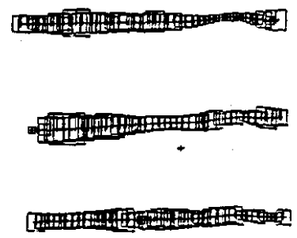
362000

366000

364000

362000

360000



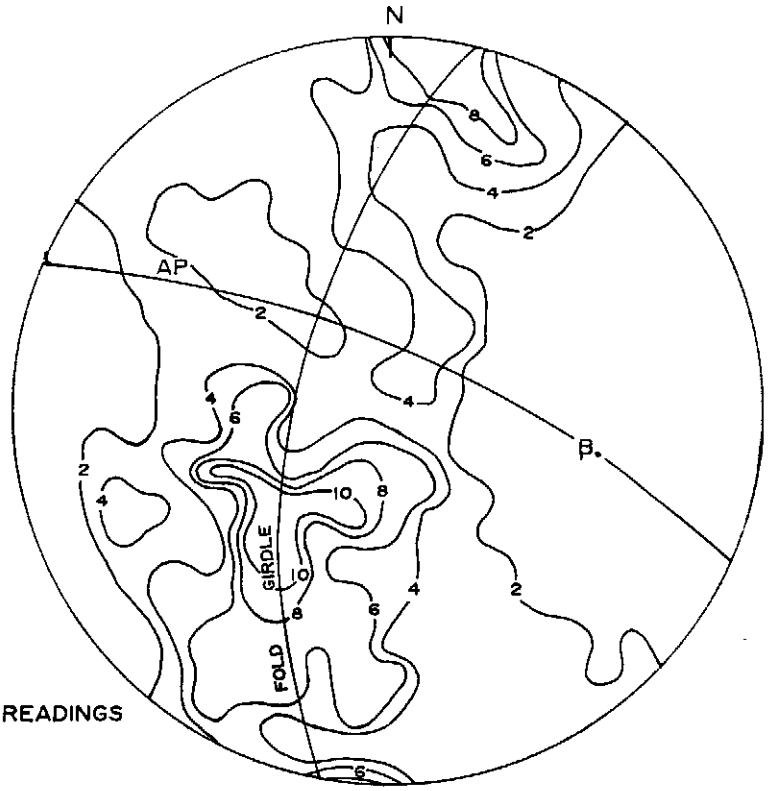
5 cm

ZEEHAN PROJECT

SOIL & ROCKCHIP GEOCHEMISTRY
Hf

UPPER LIMIT 15ppm
SCALE 1:25000
FIG. 19

063042

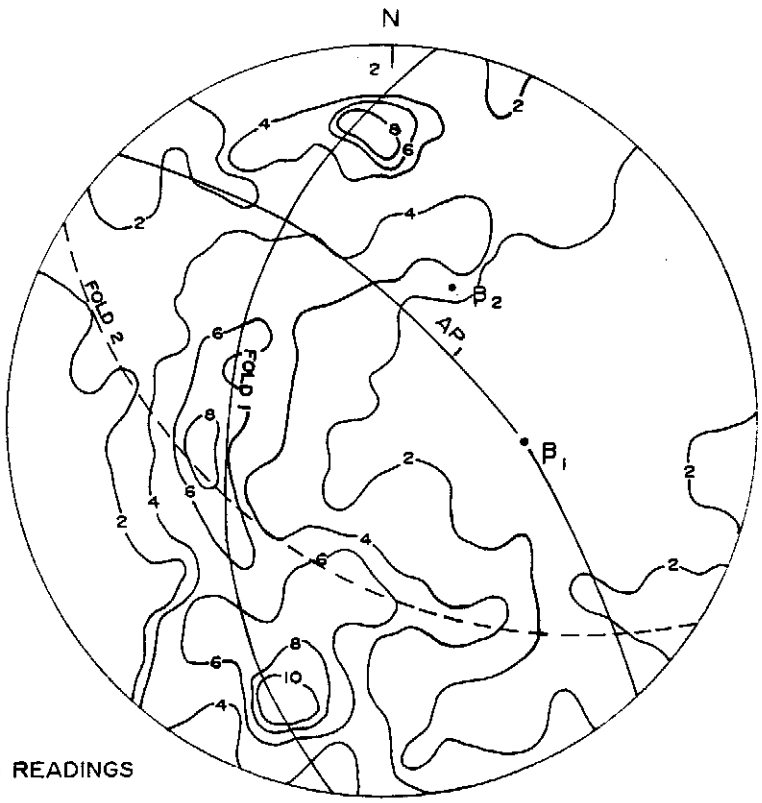


289 READINGS

LOWER OONAH FM. NORTH OF BALSTRUP FAULT

Average fold axis (β);
30→100° AMG
(Heemskirk Anticlinorium)

Axial Plane (AP); 70.113° AMG



278 READINGS

UPPER OONAH FM. NORTH OF BALSTRUP FAULT

Fold 1: Average fold axes (β_1)
46→097 (Heemskirk Anticlinorium)
Axial Plane (AP_1) 60.134

Fold 2: Average fold axes (β_2)
44→028
Not well developed

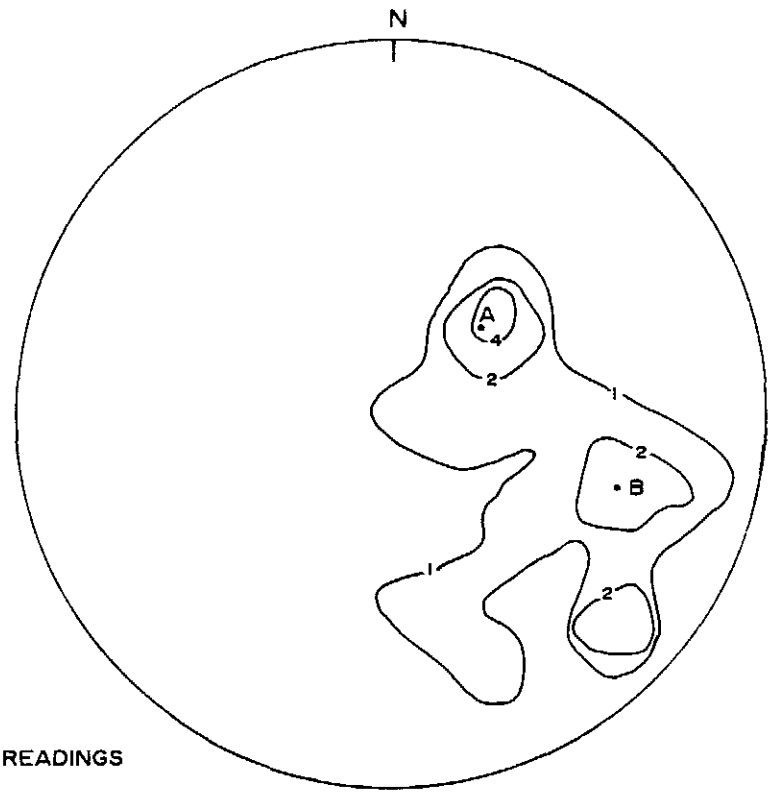
RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	
DRAWN	J.B.
DATE	
CHECKED	
1:250,000 Reference	

ZEEHAN AREA
POLES TO BEDDING

BASE PLAN No. 5521/092
OVERLAY PLAN No.
SCALE
FIG 20

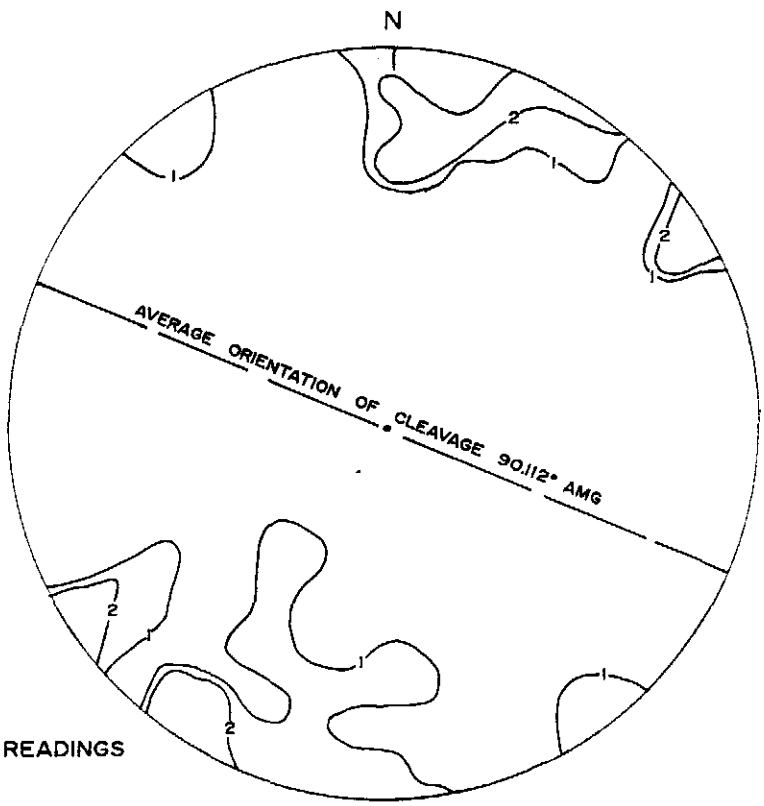
063043



27 READINGS

OONAH FM. NORTH
OF BALSTRUP FAULT
FOLD AXES

Average fold axes A : 54→041
B : 22→108



26 READINGS

POLES TO CLEAVAGE NORTH
OF BALSTRUP FAULT

RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

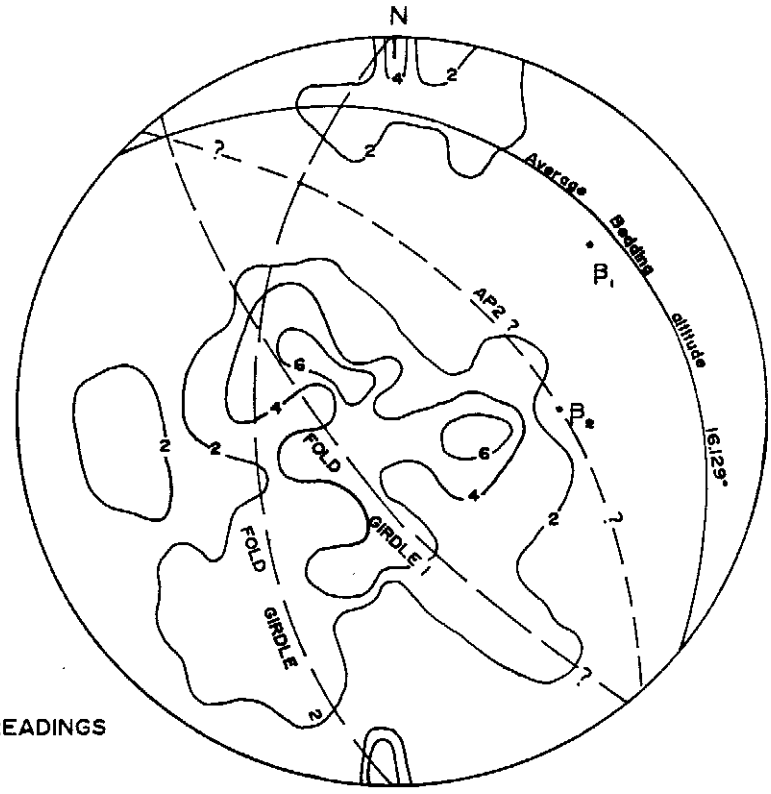
COMPILED	
DRAWN	J.B.
DATE	
CHECKED	
1:250,000 Reference	

ZEEHAN AREA

BASE PLAN No 5521/093
OVERLAY PLAN No
SCALE

FIG 21

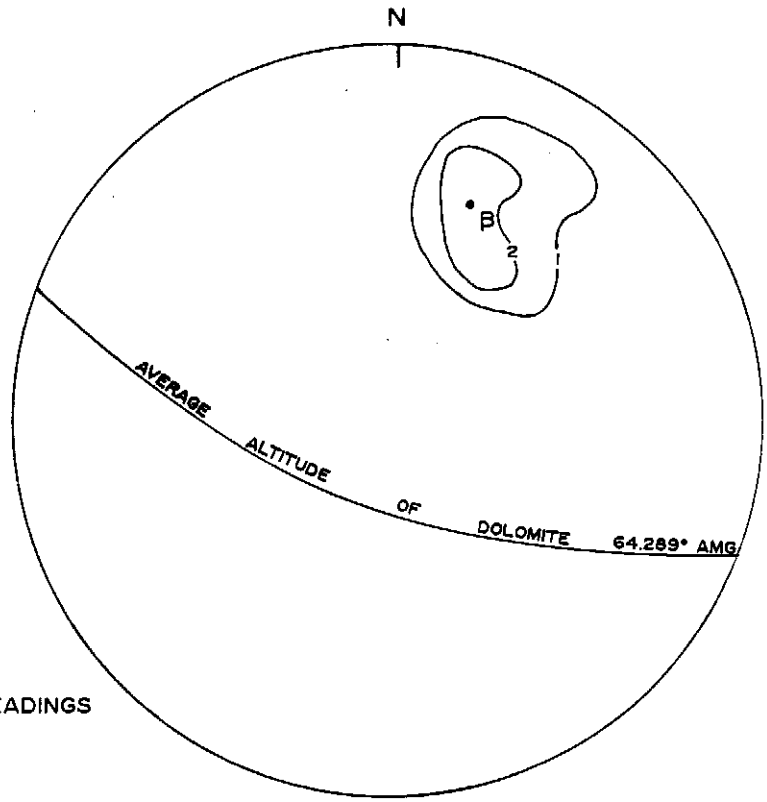
063044



157 READINGS

UPPER OONAH FM. SOUTH OF BALSTRUP FAULT

Average Bedding Altitude 16.129°
Poorly designed Open Folds ? –
β_1 20→050° ? AMG
β_2 40→090° ? AMG
AP_2 50.135 ?



8 READINGS

UPPER OONAH CARBONATES SOUTH OF BALSTRUP FAULT

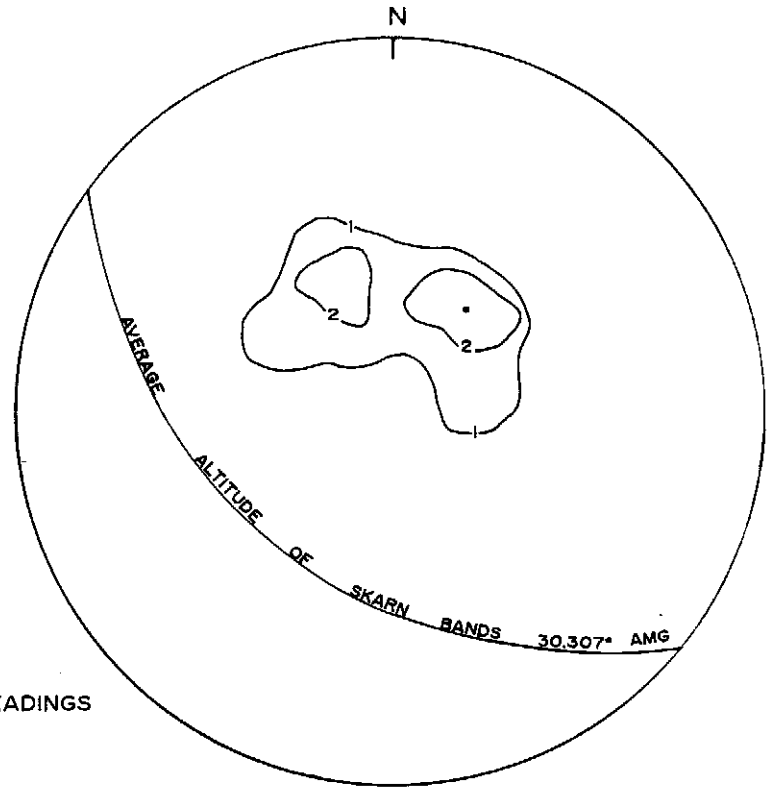
RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	
DRAWN	J.B.
DATE	
CHECKED	
1 250 000 Reference	

ZEEHAN AREA
POLES TO BEDDING

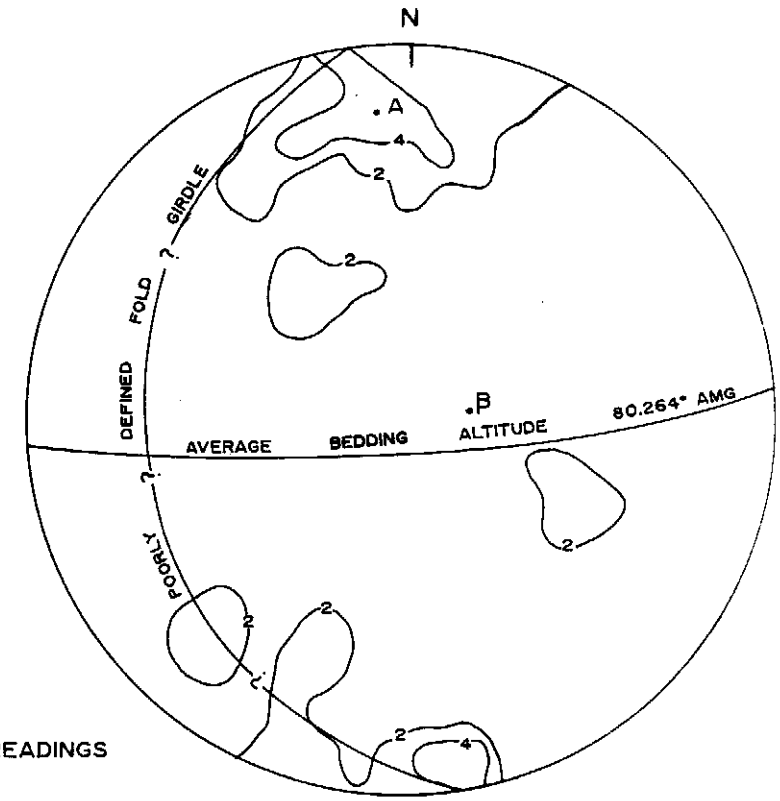
BASE PLAN No 5521/094
OVERLAY PLAN No
SCALE
FIG 22

063045



16 READINGS

SKARN BANDS IN UPPER OONAH
SOUTH OF BALSTRUP FAULT



75 READINGS

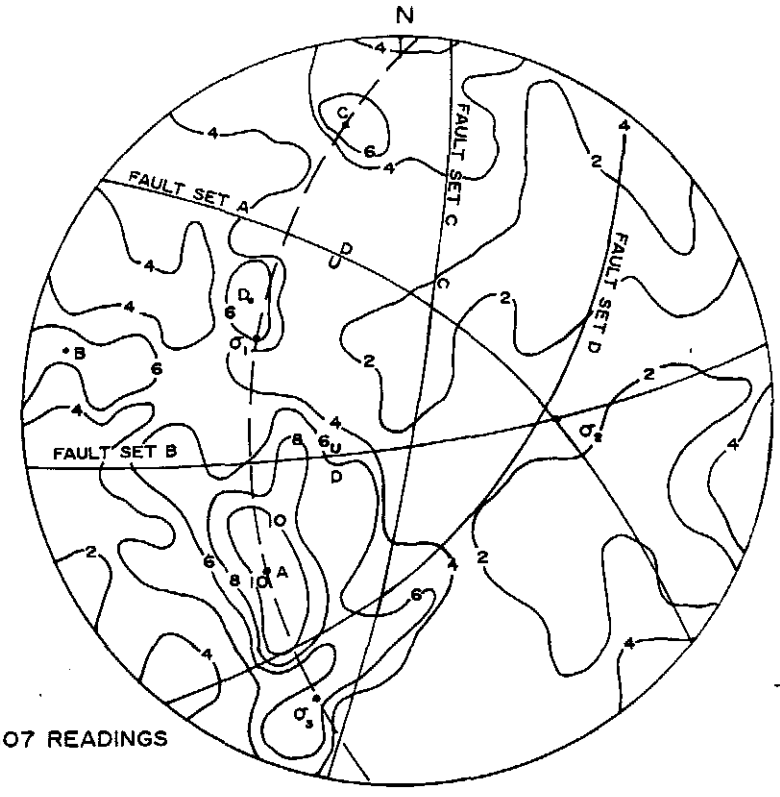
CAMBRIAN SEDIMENTS/TURBIDITES

Average Bedding Altitude 80.264° AMG
Poorly designed fold axis (β) —
80 → 080° AMG

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES		
	COMPILED	
	DRAWN	J.B.
	DATE	
	CHECKED	
	1:250,000 Reference	
BASE PLAN No. 5521/095	SCALE	FIG 23
OVERLAY PLAN No.		

ZEEHAN AREA
POLES TO BEDDING

063046

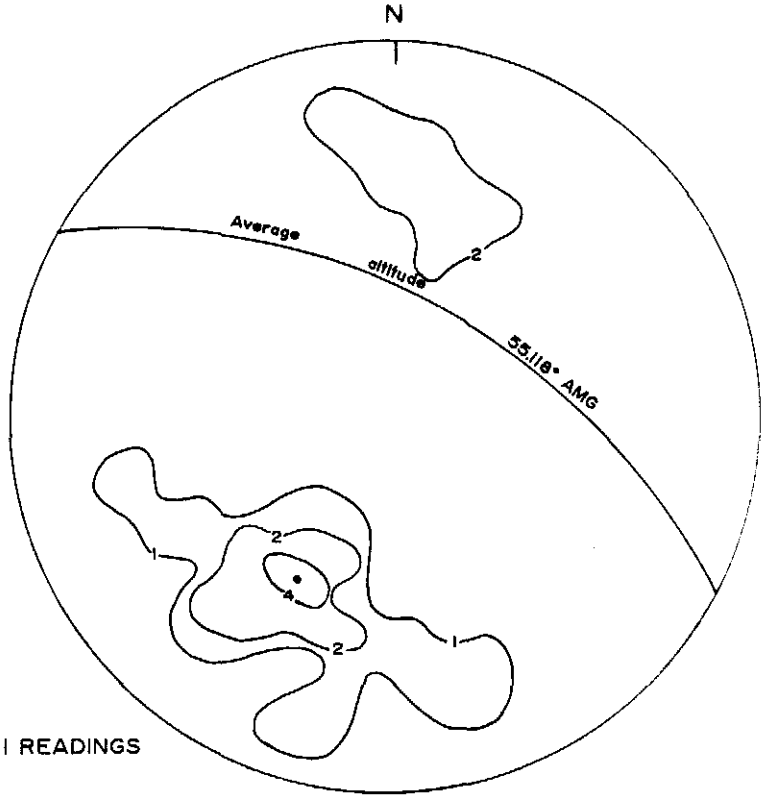


307 READINGS

POLES TO FAULTS / FRACTURES

Fault Set A 58.126° AMG (NE) } conj.
B 87.260° AMG (S) }
C 84.188° AMG (E)
D 52.217 AMG (SE)

σ_1 is principal stress direction for conjugates A & B



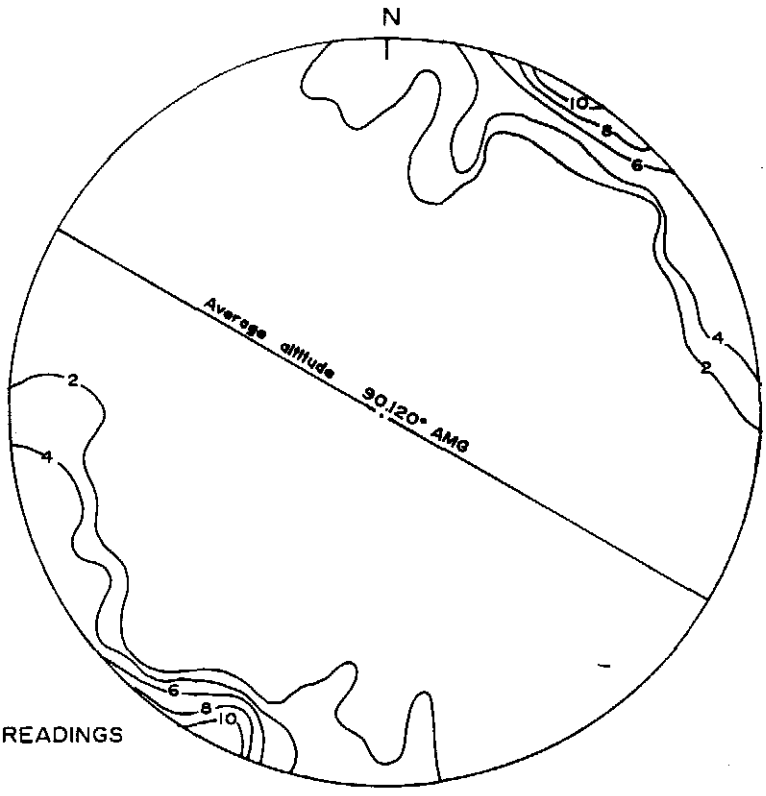
31 READINGS

POLES TO MAJOR FAULTS

Major fault altitude 55.118° NE

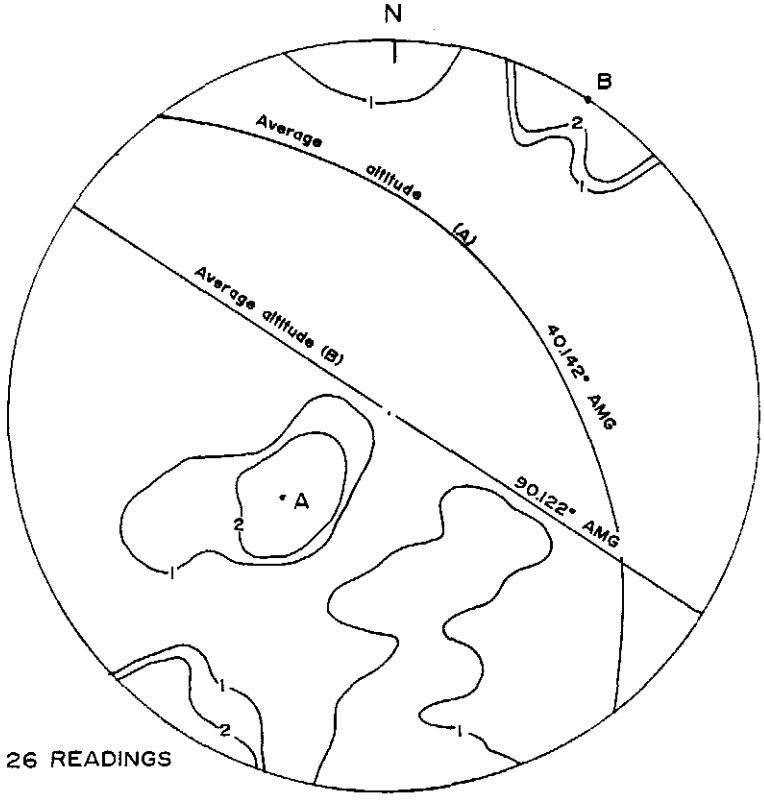
RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES			
	COMPILED		ZEEHAN AREA
	DRAWN	J.B.	
	DATE		
	CHECKED		
	1:250 000 Reference		
BASE PLAN No 5521/096 OVERLAY PLAN No	SCALE		FIG 24

663647



80 READINGS

POLES TO SHEAR FABRIC



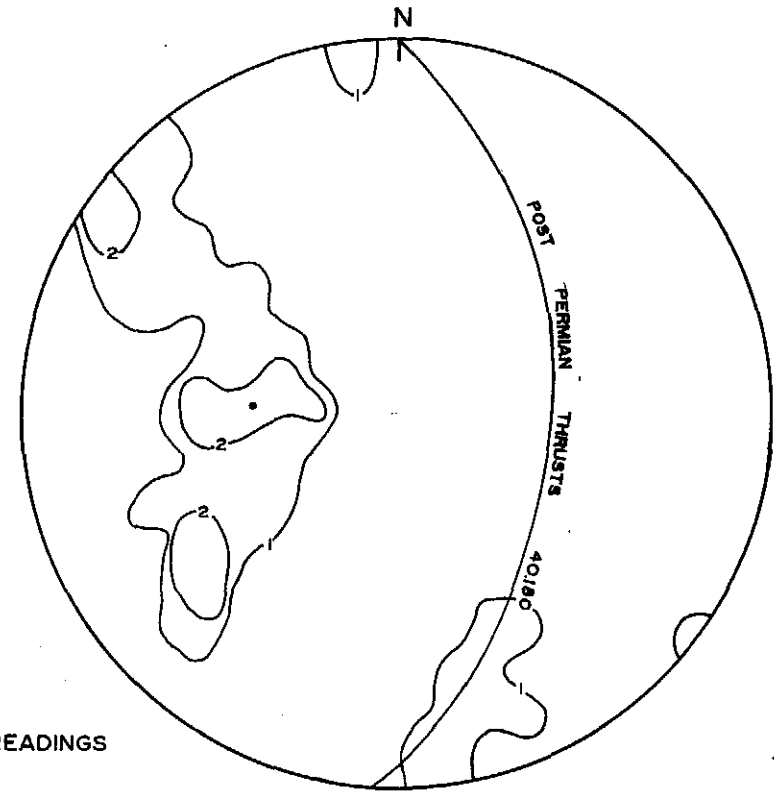
26 READINGS

POLES TO UPPER OONAH MELANGE FABRIC

NOTE: Insufficient data

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES			
	COMPILED		ZEEHAN AREA
	DRAWN	J.B.	
	DATE		
	CHECKED		
	1 250 000 Reference		
BASE PLAN No 5521/097 OVERLAY PLAN No	SCALE		FIG 25

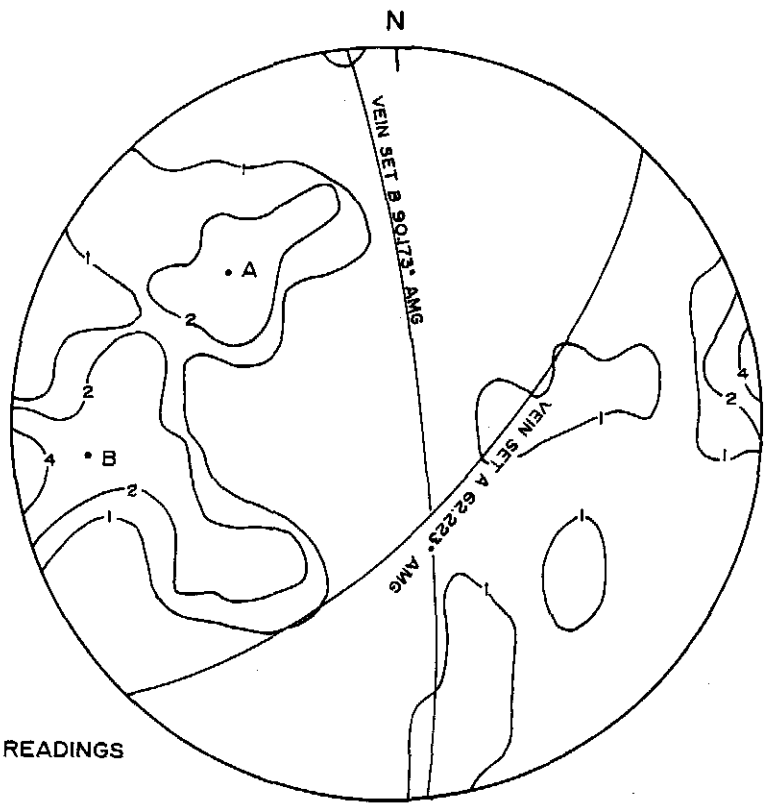
063048



31 READINGS

BARNETTS/MONTANA S.L.

POLES TO POST-PERMIAN THRUST FAULT



50 READINGS

ZEEHAN AREA

POLES TO VEINS/LODES

A: 62.223 SE
B: 90.173

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES			
	COMPILED		ZEEHAN AREA
	DRAWN	J.B.	
	DATE		
	CHECKED		
	1:250 000 Reference		
BASE PLAN No 5521/098 OVERLAY PLAN No	SCALE		FIG 26

APPENDIX 1

Rock Chip Sample Descriptions and Assays (1988/89)

GOLD FIELDS EXPLORATION PTY. LTD. **SAMPLE RECORD AND ANALYTICAL DATA SHEET** COLLECTED BY: DJFC

PROJECT: ZEGHAN | PROSPECT: RECONNAISSANCE | SAMPLE STORAGE REQ'D: | LABORATORY: RENISON LTD | DATE DISPATCHED:

1:250,000 SHEET: | TYPE OF SAMPLE: Rock CHIP | SAMPLE PREP. REQ'D: | ANALYSIS REQ'D: | DATE RECEIVED:

A1996

SAMPLE NUMBER	LOCATION		DESCRIPTION	ANALYSES									
				Sn (ppm)	S	As	Cu	Pb	Zn	WO_3 / Ag	Bi / SSN	Au (g/t)
T11801	360 760mN	357 300mE	Semi-massive pyrite in weathered Shale (Eosh)	75	11·0	0·14	<0·01	1·22	0·21	<·01 / 41	·001 / <·01	0·05
802	"	"	as above	25	7·3	0·11	<0·01	1·42	0·45	<·01 / 30	<·001 / <·01	0·10
803	"	"	as above	70	26·3	0·21	<0·01	3·21	9·75	<·01 / 63	·004 / <·01	0·14
804	360 720mN	357 350mE	Galena - sphalerite veining in Limestone (Eol)	410	17·8	0·16	0·04	3·55	23·7	<·01 / 185	<·001 / ·02	<0·05
805	361 225mN	358 915mE	Very weathered ferruginous clayey Rock (Ec?)	35	0·2	0·05	0·01	0·03	0·83	<·01 / 2	·003 / <·01	<0·05
806	360 970mN	358 840mE	as above	25	0·1	0·73	<0·01	0·04	0·27	<·01 / 2	·004 / <·01	0·14
807	360 700mN	357 745mE	Ironstone (Bidstrup Fault)	625	0·2	0·17	0·03	0·59	0·18	<·01 / 20	·004 / <·01	0·05
808	360 530mN	358 275mE	as above	155	0·5	0·37	0·02	0·08	0·09	<·01 / 4	·004 / ·01	0·05
809	360 645mN	357 590mE	Thin sphalerite - pyrite vein in clay (Eosh?)	100	42·9	0·19	0·01	2·49	4·11	<·01 / 53	·007 / ·01	0·06
810	362 860mN	360 810mE	Pyrite - Galena - Siderite - Qtz infilling breec. Shale	105	15·9	0·07	0·01	2·37	2·48	<·01 / 87	·005 / ·02	0·05
811	364 925mN	360 145mE	Sheared black shale ± disseminated Py (Eosh)	35	11·4	0·03	0·01	0·03	0·01	<·01 / 6	·004 / ·01	<0·0
812	365 635mN	360 505mE	Ferruginous Clay (Eom?)	10	0·1	0·02	<0·01	<0·01	0·04	0·01 / 2	·003 / <·01	<0·05
813	367 050mN	357 565mE	Qtz - Py infilled Shear zone in black shale (Eosh)	5	1·8	0·04	<0·01	<0·01	<0·01	<·01 / 1	·001 / <·01	<0·0
814	"	"	as above	10	4·0	0·03	<0·01	<0·01	0·01	<·01 / 1	·001 / <·01	<0·05
815	"	"	as above	5	0·3	0·03	<0·01	<0·01	0·01	<·01 / <1	<·001 / ·01	<0·05
816	"	"	as above	<5	0·7	0·02	0·01	<0·01	0·01	<·01 / <1	<·001 / ·01	<0·05
817	"	"	Qtz vein stockwork in grey sandstone (Eoss)	10	0·3	0·03	<0·01	<0·01	0·01	<·01 / <1	<·001 / ·01	<0·05
818	366 225mN	358 295mE	Qtz impregnated shear ± yellow (sulphide?) stain	<5	0·2	0·02	<0·01	0·02	0·04	<·01 / 2	·003 / ·01	<0·05
819	366 175mN	358 315mE	as above	<5	0·3	0·01	<0·01	<0·01	0·02	<·01 / 2	<·001 / <·01	<0·05
820	366 160mN	358 350mE	Qtz filled shear in disturb. black shale (Eosh)	10	0·7	0·02	<0·01	0·01	0·02	<·01 / 2	<·001 / ·01	<0·05
821	361 840mN	359 665mE	Weathered spillite ± disseminated Py (Eom)	10	3·4	0·03	0·01	0·01	0·04	<·01 / 3	·003 / <·01	<0·05

Results in ppm unless otherwise indicated Sn ppm Au g/t Ag ppm

063050

SSN = soluble tin

GOLD FIELDS EXPLORATION PTY. LTD. **SAMPLE RECORD AND ANALYTICAL DATA SHEET** COLLECTED BY: DJFC

PROJECT: ZEEHAN | PROSPECT: RECONNAISSANCE | SAMPLE STORAGE REQ'D: | LABORATORY: RENISON LTD | DATE DISPATCHED:

1:250.000 SHEET: | TYPE OF SAMPLE: ROCK CHIP | SAMPLE PREP. REQ'D: | ANALYSIS REQ'D: | DATE RECEIVED:

A19962

SAMPLE NUMBER	LOCATION		DESCRIPTION	ANALYSES								
				Sn(ppm)	S	As	Cu	Pb	Zn	W / Ag	Bi / SSN	Au(g/t)
T11822	361 790mN	354 690mE	Interfingered shales / spillite (Eosh/Eom) faulted	10	<0·1	0·02	<0·01	0·01	0·02	<·01 / 4	·002 / ·01	<0·05
T11827	361 300mN	358 120mE	Pyritic sheared shale (Eosh)	10	2·6	0·02	<0·01	0·01	0·11	·01 / 2	·001 / <·01	<0·05
828	361 285mN	358 040mE	Pyritic black shale (Eosh)	290	14·0	2·62	0·08	2·77	3·63	·01 / 34	·005 / ·01	0·06
829	"	"	Massive pyrite in black shale (Eosh)	10	20·3	0·02	0·01	0·03	0·05	·01 / 2	<·001 / <·01	<0·05
830	361 305mN	358 240mE	Qtz Py Gal Sphal mineralisation in bl. Shales	245	22·1	0·30	0·03	5·19	7 43	·05 / 64	·005 / <·01	0·11
831	360 675mN	357 130mE	Massive pyrite mineralisation in soft bl. matrix	25	35·8	0·22	<0 01	0·19	0·03	<·01 / 17	·005 / <·01	0·12
832	"	"	Faulted, weathered shales (Eosh)	15	0 4	0·05	0·01	0 11	0·19	<·01 / 2	·001 / <·01	<0·05
833	360 840mN	357 260mE	Sphal Py Qtz vein in Oonah seds (Eos)	260	36·6	0·05	0·02	11 3	16 9	<·01 / 163	·002 / <·01	<0·05
834	360 980mN	356 850mE	Sphalerite rich vein in Oonah seds (Eos)	360	28 1	0 15	0·07	10·0	28·5	<·01 / 250	·002 / <·01	0·32
835	3 "	"	Massive pyrite in Oonah seds (Eos)	525	23·0	0·14	0·08	14·5	19·7	<·01 / 380	·001 / ·05	0·30
836	360 930mN	356 810mE	Gossan c Sphalerite (?) in Oonah sed (Eos)	430	0·4	0·27	0·15	0·61	0·35	<·01 / 250	·005 / ·02	0·07
837	360 975mN	355 970mE	Pyritic shear in Oonah seds (Eos)	40	30·8	0·18	0·08	0·64	0·17	·01 / 24	·011 / ·01	0·09
T11840	361 345mN	356 460mE	Semi-mass. Py c Qtz Sphal in Oonah sed (Eos)	<5	313	0·12	0·10	172	12·2	<·01 / 380	·009 / <·01	0·30
841	360 535mN	357 375mE	Semi-mass Py c Qtz Sphal Gal in Limestone (Eol)	270	24·8	0·47	0·04	662	12·2	<·01 / 175	·005 / ·03	0·18
842	362 260mN	359 730mE	Brecciated shales c Qtz Py mineralisation (Eosh)	7850	12·3	0·17	0·04	0·13	0·22	<·01 / 20	·004 / ·05	<0·05
843	362 295mN	359 815mE	as above	4000	36	0·08	0·04	0 04	0·03	·01 / 36	·004 / ·05	0·17
844	362 335mN	359 805mE	as above	1790	20·0	2·30	0·48	0·01	0·01	<·01 / 82	·001 / ·02	0·36
T11847	362 560mN	361 340mE	Ironstone	10	<0·1	0·16	0·02	<0·01	0·04	·02 / 2	·007 / <·01	<0·05

Results in ppm unless otherwise indicated

Sn ppm Au g/t
Ag ppm

063051

SSN = Soluble tin

GOLD FIELDS EXPLORATION PTY. LTD. **SAMPLE RECORD AND ANALYTICAL DATA SHEET** COLLECTED: DJFC

PROJECT: ZEEHAN PROSPECT: RECONNAISSANCE SAMPLE STORAGE REQ'D: LABORATORY: RENISON LTD. DATE DISPATCHED:

1:250,000 SHEET: TYPE OF SAMPLE: ROCK CHIP SAMPLE PREP. REQ'D: ANALYSIS REQ'D: DATE RECEIVED:

A1906

SAMPLE NUMBER	LOCATION		DESCRIPTION	ANALYSES								
				Sn (ppm)	S	As	Cu	Pb	Zn	W / Ag	Bi / Sb	Au (g/t)
T11845	362 290N	361 450E	Ironstone	85	<0.1	0.03	<0.01	0.90	0.37	.01 / 7	.005 / .01	<0.05
849	363 060N	361 210E	Ironstone developed on Gordon Limestone	<5	<0.1	0.04	<0.01	0.01	0.02	<.01 / 3	.005 / .01	<0.05
850	363 060N	361 220E	" " " " "	<5	<0.1	0.02	<0.01	<0.01	0.02	.01 / 2	.006 / .02	<0.05
851	363 070N	361 220E	" " " " "	35	<0.1	0.04	<0.01	<0.01	0.04	.01 / 2	.003 / .01	<0.05
852	363 070N	361 215E	" " " " "	<5	0.1	0.02	<0.01	<0.01	0.04	.01 / 1	.007 / .02	<0.05
853	363 070N	361 210E	" " " " "	<5	0.2	0.04	<0.01	<0.01	0.03	.01 / <1	.006 / .01	<0.05
854	363 120N	361 210E	Manganiferous gossan in Gordon Limestone	30	0.2	0.04	<0.01	1.04	0.05	<.01 / 16	.004 / .01	<0.05
855	363 120N	361 210E	Altered, brecciated, mineralised Limestone	135	3.1	0.03	<0.01	0.38	6.41	.02 / 22	.003 / .02	<0.05
856	361 780N	359 610E	Thin clay, quartz filled fault in shales	5	0.1	<0.01	<0.01	0.03	0.02	<.01 / 1	<.001 / .01	
857	361 755N	359 580E	Faulted contact between shales and gritte	8	0.1	<0.01	<0.01	0.02	<0.01	<.01 / 1	.002 / <.01	
858	361 755N	359 575E	Ferruginous shear zone in weathered gritte	28	0.2	0.01	0.03	0.03	0.01	<.01 / 6	.003 / .01	
859			Ferruginous shear zone in siltstone / sandstone	11	0.1	0.01	0.01	0.04	0.01	<.01 / 3	.004 / .01	
860			STANDARD B20	19	0.2	0.01	0.09	0.04	0.01	<.01 / 5	.016 / .01	
861	360 400N	357 750E	Ferruginous, talcy, altered Limestone (?)	8	0.1	0.03	0.04	0.02	0.01	<.01 / 4	.001 / <.01	
862	361 130N	358 795E	Quartz - Pyrite stockwork in blocky grit	12	0.2	<0.01	<0.01	0.02	0.01	<.01 / 1	.005 / .01	

063052

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063053

ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC EXPLORATION - Samples T11801-11844 Date : 31-May-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Sn ppm XRF/B2	S XRF/B4	As XRF/B4	Cu XRF/B4	Pb XRF/B4	Zn XRF/B4	WO3 XRF/b4
T 11801	75	11.0	.14	<.01	1.22	.21	<.01
11802	25	7.3	.11	<.01	1.42	.45	<.01
11803	70	26.3	.21	<.01	3.21	9.75	<.01
11804	410	17.8	.16	.04	3.55	23.7	<.01
11805	35	0.2	.05	.01	.03	.83	<.01
11806	25	0.1	.73	<.01	.04	.27	<.01
11807	625	0.2	.17	.03	.59	.18	<.01
11808	155	0.5	.37	.02	.08	.09	<.01
11809	100	42.9	.19	.01	2.49	4.11	<.01
11810	105	15.9	.07	.01	2.37	2.48	<.01
11811	35	11.4	.03	.01	.03	.01	<.01
11812	10	0.1	.02	<.01	<.01	.04	.01
11813	5	1.8	.04	<.01	<.01	<.01	<.01
11814	10	4.0	.03	<.01	<.01	.01	<.01
11815	5	0.3	.03	<.01	<.01	.01	<.01

Chief Chemist

063054

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC EXPLORATION - Samples T11801-11844 Date : 31-May-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Ag ppm AAS/A1	Bi AAS/A1	SSn AAS/A1
T 11801	41	.001	<.01
11802	30	<.001	<.01
11803	63	.004	<.01
11804	185	<.001	.02
11805	2	.003	<.01
11806	2	.004	<.01
11807	20	.004	<.01
11808	4	.004	.01
11809	53	.007	.01
11810	87	.003	.02
11811	6	.004	.01
11812	2	.003	<.01
11813	1	.001	<.01
11814	1	.001	<.01
11815	<1	<.001	.01

.....
Chief Chemist

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC EXPLORATION - Samples T11801-11844 Date : 31-May-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Sn ppm XRF/B2	S XRF/B4	As XRF/B4	Cu XRF/B4	Pb XRF/B4	Zn XRF/B4	WO3 XRF/B4
T 11816	<5	0.7	.02	.01	<.01	.01	.01
11817	10	0.3	.03	<.01	<.01	.01	<.01
11818	<5	0.2	.02	<.01	.02	.04	<.01
11819	<5	0.3	.01	<.01	<.01	.02	<.01
11820	10	0.7	.02	<.01	.01	.02	<.01
11821	10	3.4	.03	.01	.01	.04	<.01
11822	10	<0.1	.02	<.01	.01	.02	<.01
~~11823~~	10	1.0	<.01	.02	.01	.04	<.01
~~11824~~	20	0.1	.05	<.01	<.01	.04	<.01
~~11825~~	15	0.1	.02	.02	.01	.02	<.01
~~11826~~	10	0.9	.05	.02	.05	.07	<.01
11827	10	2.6	.02	<.01	.01	.11	.01
11828	290	14.0	2.62	.08	2.77	3.63	.01
11829	10	20.3	.02	.01	.03	.05	.01
11830	245	22.1	.30	.03	5.19	7.43	.02

Chief Chemist

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC EXPLORATION - Samples T11801-11844 Date : 31-May-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Ag ppm AAS/A1	Bi AAS/A1	SSn AAS/A1
T 11816	<1	<.001	.01
11817	<1	<.001	.01
11818	2	.002	.01
11819	2	<.001	<.01
11820	2	<.001	.01
11821	3	.003	<.01
11822	4	.002	.01
~~11823~~	2	.001	<.01
~~11824~~	3	.002	<.01
~~11825~~	<1	.001	<.01
~~11826~~	1	<.001	<.01
11827	2	.001	<.01
11828	34	.003	.01
11829	2	<.001	<.01
11830	64	.005	<.01

Chief Chemist

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC EXPLORATION - Samples T11801-11844 Date : 31-May-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Sn ppm XRF/B2	S XRF/B4	As XRF/B4	Cu XRF/B4	Pb XRF/B4	Zn XRF/B4	WO3 XRF/B4
T 11831	25	35.8	.22	<.01	.19	.03	<.01
11832	15	0.4	.05	.01	.11	.19	<.01
11833	260	36.6	.05	.02	11.3	16.9	<.01
11834	360	28.1	.15	.07	10.0	28.5	<.01
11835	525	23.0	.14	.08	14.5	19.7	<.01
11836	430	0.4	.27	.15	.61	.35	<.01
11837	40	30.8	.18	.08	.64	.17	.01
~~11838~~	15	0.2	.04	<.01	.06	.16	<.01
~~11839~~	10	0.5	.04	<.01	.18	.33	<.01
11840	<5	31.3	.12	.10	17.2	12.2	<.01
11841	270	24.8	.47	.04	6.62	12.2	<.01
11842	7850	12.3	.17	.04	.13	.22	<.01
11843	4000	3.6	.08	.04	.04	.03	.01
11844	1790	20.0	2.30	.48	.01	.01	<.01

.....
Chief Chemist

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC EXPLORATION - Samples T11801-11844 Date : 31-May-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Ag ppm AAS/A1	Bi AAS/A1	SSn AAS/A1
T 11831	17	.005	<.01
11832	2	.001	<.01
11833	163	.002	<.01
11834	250	.002	<.01
11835	380	.001	.05
11836	250	.005	.02
11837	24	.011	.01
~~11838~~	2	<.001	<.01
~~11839~~	3	<.001	<.01
11840	380	.006	<.01
11841	175	.005	.03
11842	20	.004	.08
11843	36	.002	.05
11844	82	.021	.02

.....
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ANALYTICAL SERVICES

Our Ref : O/NO. 871 & 3055
Your Ref : RGCE - Samples T18001, T11845-T11855 Date : 13-Jun-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Sn ppm XRF/B2	As XRF/B4	S XRF/B4	Cu XRF/B4	Pb XRF/B4	Zn XRF/B4	WO3 XRF/B4
~~T18001~~	70	.16	<.1	.02	<.01	.04	.02
~~T11845~~	15	.01	<.1	<.01	<.01	.01	<.01
~~T11846~~	5	.02	<.1	<.01	.07	.10	<.01
T11847	10	.03	<.1	<.01	.67	.26	.02
T11848	85	.03	<.1	<.01	.90	.37	.01
T11849	<5	.04	<.1	<.01	.01	.02	<.01
T11850	<5	.02	<.1	<.01	<.01	.02	.01
T11851	35	.04	<.1	<.01	<.01	.04	.01
T11852	<5	.02	.1	<.01	<.01	.04	.01
T11853	<5	.04	.2	<.01	<.01	.03	.01
T11854	30	.04	.2	<.01	1.04	.05	<.01
T11855	135	.03	3.1	<.01	.38	6.91	.02

.....
Chief Chemist

063060

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ANALYTICAL SERVICES

Our Ref : O/No. 871 & 3055
Your Ref : RGCE -Samples T18001 & T11845-T11855 Date : 13-Jun-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Ag ppm AAS/A1	Bi AAS/A1	SSn AAS/A1
~~T18001~~	2	.007	<.01
~~T11845~~	<1	.001	<.01
~~T11846~~	1	<.001	.01
T11847	6	.004	<.01
T11848	7	.005	.01
T11849	3	.005	.01
T11850	2	.006	.02
T11851	2	.003	.01
T11852	1	.007	.02
T11853	<1	.006	.01
T11854	16	.004	.01
T11855	22	.003	.02

Chief Chemist

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ANALYTICAL SERVICES

Our Ref : T5523-0153
Your Ref : RGCE Order No. 5702

Date : 05-Sep-89

Attention : John Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample		Sn ppm XRF/B2	As ppm XRF/B2	WO3ppm XRF/B2	Cu XRF/B4	Pb XRF/B4	Zn XRF/B4	S XRF/B4
~~T10363~~		28	60	<10	<.01	.09	.02	1.6
11856		5	33	12	<.01	.03	.02	0.1
11857		8	28	<10	.01	.02	<.01	0.1
11858		28	68	<10	.03	.03	.01	0.2
11859		11	70	<10	.01	.04	.01	0.1
11860	STD	19	104	<10	.09	.04	.01	0.2
11861		8	324	<10	.04	.02	.01	0.1
11862		12	29	15	<.01	.02	.01	0.2

Chief Chemist

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Postal Address :
P.O. Box 20
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ANALYTICAL SERVICES

Our Ref : T5523-0153
Your Ref : RGCE Order No. 5702

Date : 05-Sep-89

Attention : John Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Ag ppm AAS/A1	Bi AAS/A1	SSn AAS/A1
~~T10863~~	1	.002	<.01
11856	1	<.001	.01
11857	1	.002	<.01
11858	6	.003	.01
11859	3	.004	.01
11860 STD	5	.016	.01
11861	4	.001	<.01
11862	1	.005	.01

Chief Chemist

21 JUN 1989

063063

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Postal Address :
P.O. Box 20
ZEEHAN TAS. 7469

ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC Exploration

Date : 19-Jun-89

Attention : J.D.F.Crossing

ANALYTICAL REPORT

Results in %

Sample	Au g/tonne
T11801	.05
T11802	.10
T11803	.14
T11804	<.05
T11805	<.05
T11806	.14
T11807	.05
T11808	.05
T11809	.06
T11810	.05
T11811	<.05
T11812	<.05
T11813	<.05
T11814	<.05
T11815	<.05
T11816	<.05
T11817	<.05

Method of Analysis : AAS/A15

.....
Chief Chemist

063064

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RENISON BELL, TASMANIA

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Postal Address :
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ZEEHAN TAS. 7469

ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC Exploration

Date : 19-Jun-89

Attention : J.D.F.Crossing

ANALYTICAL REPORT

Results in %

Sample	Au g/tonne
T11818	<.05
T11819	<.05
T11820	<.05
T11821	<.05
T11822	<.05
T11823	<.05
T11824	<.05
T11825	.45
T11826	<.05
T11827	<.05
T11828	.06
T11829	<.05
T11830	.11
T11831	.12
T11832	<.05
T11833	<.05
T11834	.32

Method of Analysis : AAS/A15

.....
Chief Chemist

063665

RENISON LTD.

RENISON BELL, TASMANIA

Telephone : (004) 731203
Telex : AA 59046
Fax : (004) 731333

Postal Address :
P.O. Box 20
ZEEHAN TAS. 7469

ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC Exploration

Date : 19-Jun-89

Attention : J.D.F.Crossing

ANALYTICAL REPORT

Results in %

Sample	Au g/tonne
T11835	.30
T11836	.07
T11837	.09
~~T11838~~	<.05
~~T11839~~	<.05
T11840	.30
T11841	.18
T11842	<.05
T11843	.17
T11844	.36

Method of Analysis : AAS/A15

Chief Chemist

063066

RENISON LTD.

RENISON BELL, TASMANIA

Telephone : (004) 731203
Telex : AA 59046
Fax : (004) 731333

Postal Address :
P.O. Box 20
ZEEHAN TAS. 7469

ANALYTICAL SERVICES

Our Ref : 871
Your Ref : RGC Exploration

Date : 19-Jun-89

Attention : J.D.F.Crossing

ANALYTICAL REPORT

Results in %

Sample	Au g/tonne
~~T11845~~	.18
~~T11846~~	<.05
T11847	<.05
T11848	<.05
T11849	<.05
T11850	<.05
T11851	<.05
T11852	<.05
T11853	<.05
T11854	<.05
T11855	<.05

Method of Analysis : AAS/A15

.....
Chief Chemist

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

063067

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	89.1.03.06441	31/08/89	0152	1 OF 2

TUBE No.	SAMPLE No.	Au	AuChk							
1	T11801	0.016	0.015							
2	T11802	0.020	–							
3	T11803	0.036	–							
4	T11804	0.034	–							
5	T11805	0.008	<0.008							
6	T11806	0.099	–							
7	T11807	0.021	–							
8	T11808	0.028	–							
9	T11809	0.044	–							
10	T11810	0.026	–							
11	T11811	0.014	–							
12	T11812	<0.008	–							
13	T11813	<0.008	–							
14	T11814	<0.008	–							
15	T11815	<0.008	–							
16	T11816	<0.008	<0.008							
17	T11817	<0.008	–							
18	T11818	<0.008	–							
19	T11819	<0.008	–							
20	T11820	<0.008	–							
21	T11821	<0.008	–							
22	T11822	<0.008								
23	T11823	0.010	–							
24	T11824	<0.008	–							
25	T11825	0.026	–							

Results in ppm unless otherwise specified
T = element present, but concentration too low to measure
X = element concentration is below detection limit
– = element not determined

AUTHORISED OFFICER

063068

ANALABS

A Division of Macdonald Hamilton & Co. Pty. Ltd.

ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	95.1.08.06441	31/08/89	0152	2 OF 2

TUBE No.	SAMPLE No.	Au	AuChk							
1	T11826	0.023	–							
2	T11827	<0.008	–							
3	T11828	0.038	0.048							
4	T11829	<0.008	–							
5	T11830	0.079	–							
6	T11831	0.122	–							
7	T11832	0.018	–							
8	T11833	0.010	–							
9	T11834	0.155	0.154							
10	T11835	0.124	–							
11	T11836	0.060	–							
12	T11837	0.084	–							
13	T11838	<0.008	–							
14	T11839	<0.008	–							
15	T11840	0.142	–							
16	T11841	0.088	–							
17	T11842	0.053	–							
18	T11843	0.106	–							
19	T11844	0.309	0.309							
20										
21										
22										
23	DETECTION	0.008	0.008							
24	UNITS	PPM	PPM							
25	METHOD	309	309							

Results in ppm unless otherwise specified
T = element present; but concentration too low to measure
X = element concentration is below detection limit
— = element not determined

AUTHORISED OFFICER

APPENDIX 2

Zeehan Project C-Horizon soil sampling programme analytical results

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN PROJECT. E.L. 42/87. SOIL AUGER PROGRAMME

SAMPLE NUMBER	FE %	LA PPM	MO PPM	RB PPM	SM PPM	SC PPM	TA PPM	TH PPM	W PPM	YB PPM	LU PPM	K %	U PPM	BI PPM
T 24635	0.30	33.0	-5	31	5.2	5.5	1	6.8	-2	2.3	0.4		-2	-10
T 24636	1.90	41.0	-5	160	6.0	17.5	1	12.0	3	3.0	0.6		2	-10
T 24637	1.40	38.0	-5	140	7.3	17.7	-1	11.0	2	2.4	0.5		-2	-10
T 24638	2.50	50.1	-28	120	8.1	8.4	1	12.0	-2	2.8	0.6		15	-10
T 24639	0.37	32.0	-5	84	4.8	5.9	-1	8.3	-2	2.4	0.5		-2	-10
T 24641	0.39	10.0	-5	-20	1.5	0.7	-1	1.9	-2	1.3	0.2		-2	-10
T 24642	0.30	21.0	-5	23	3.4	2.2	-1	3.9	-2	1.7	0.3		-2	-10
T 24643	0.45	14.0	-5	-20	1.9	0.6	-1	2.5	-2	1.0	0.2		-2	-10
T 24644	0.45	43.0	-5	110	7.5	9.0	1	13.0	-2	3.4	0.6		2	-10
T 24645	0.52	46.0	-5	170	8.4	11.5	1	14.0	-2	3.3	0.7		-2	-10
T 24646	0.38	45.0	-5	78	5.8	6.0	2	9.1	-2	2.0	0.4		-2	-10
T 24647	0.34	30.0	-5	46	5.4	3.9	-1	7.9	-2	2.4	0.5		-2	-10
T 24648	0.44	27.0	-5	57	5.2	4.5	1	7.6	-2	2.5	0.5		-2	-10
T 24649	0.31	13.0	-5	-20	2.2	1.0	-1	3.1	-2	1.5	0.3		-2	-10
T 24650	0.31	17.0	-5	-20	2.4	1.5	1	3.0	-2	1.1	0.2		-2	-10
T 24651	6.69	90.6	-5	21	8.3	12.4	5	10.0	-2	1.7	0.3		-2	-10
T 24652	0.56	47.0	-5	180	7.5	13.0	1	15.0	-2	3.3	0.6		4	-10
T 24653	0.55	40.0	-5	110	7.4	7.7	1	11.0	-2	3.3	0.6		-2	-10
T 24654	0.36	32.0	-5	-20	5.3	3.2	2	5.3	-2	2.2	0.4		-2	-10
T 24655	2.00	33.0	-5	-20	4.1	5.0	3	5.1	-2	1.7	0.3		-2	-10
T 24656	4.80	56.6	-5	-20	12.0	21.3	5	8.9	-2	2.6	0.5		-2	-10
T 24657	1.10	48.0	-5	200	8.1	12.6	1	14.0	-2	3.6	0.7		2	-10
T 24658	0.79	55.9	-5	210	9.2	14.1	2	16.0	3	4.0	0.8		2	-10
T 24659	0.50	28.0	-5	52	4.2	3.9	-1	5.6	-2	1.3	0.3		-2	-10
T 24661	0.67	34.0	-5	-20	5.3	5.1	2	4.7	-2	1.7	0.3		-2	-10
T 24662	0.65	46.0	-5	170	8.8	11.7	1	15.0	-2	3.3	0.6		-2	-10
T 24663	7.33	94.3	-5	100	13.0	38.3	6	25.0	-2	2.3	0.4		3	-10
T 24664	2.70	49.0	-5	65	8.7	26.5	3	14.0	-2	3.0	0.6		3	-10
T 24665	1.40	49.0	-5	170	8.1	15.8	-1	16.0	-2	3.5	0.7		2	-10
T 24666	6.50	66.9	-5	-20	16.0	24.5	4	7.7	-2	2.8	0.5		-2	-10
T 24667	1.10	49.0	-5	200	8.1	14.9	-1	15.0	-2	3.6	0.7		3	-10
T 24668	1.00	51.5	-5	200	10.0	13.7	2	17.0	-2	4.0	0.8		2	-10
T 24669	0.63	54.2	-5	220	10.0	14.8	1	18.0	2	3.9	0.8		-2	-10
T 24670	0.52	30.0	-5	91	6.2	7.3	-1	9.0	-2	3.2	0.6		-2	-10
T 24671	0.56	41.0	-5	100	8.2	7.6	-1	11.0	-2	4.2	0.8		-2	10

Laboratory	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	ANALAB
Method	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	101
Det. Limi	0.050	0.500	5.000	20.000	0.100	0.100	1.000	0.500	2.000	0.500	0.200	0.200	2.000	10.000

063070

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	FE %	LA PPM	MO PPM	RB PPM	SM PPM	SC PPM	TA PPM	TH PPM	W PPM	YB PPM	LU PPM	K %	U PPM	BI PPM
T 24672	0.36	37.0	-5	78	7.1	5.3	-1	10.0	-2	2.8	0.6		-2	20
T 24673	0.73	39.0	-5	150	7.6	10.5	-1	11.0	-2	4.1	0.8		2	20
T 24674	0.51	49.0	-5	190	10.0	14.6	1	15.0	3	4.7	0.9		2	-10
T 24675	0.61	33.0	-5	150	6.6	10.0	1	10.0	2	3.2	0.6		-2	-10
T 24676	0.54	53.8	-5	230	10.0	16.5	1	18.0	-2	4.3	0.8		3	-10
T 24677	0.69	52.9	-5	240	10.0	15.2	1	19.0	-2	4.4	0.9		2	-10
T 24678	0.34	39.0	-5	-20	2.4	0.6	-1	2.8	-2	1.1	0.3		-2	-10
T 24679	0.32	18.0	-5	-20	1.0	0.3	-1	1.9	-2	0.6	-0.2		-2	
T 24681	0.31	12.0	-5	-20	1.3	0.6	1	2.1	-2	0.9	-0.2		-2	
T 24682	1.00	40.0	-5	110	4.7	6.7	1	9.0	-2	1.8	0.4		-2	
T 24683	1.70	41.0	-5	170	7.9	14.3	1	12.0	-2	2.4	0.4		-2	
T 24684	0.73	12.0	-5	20	2.2	2.9	-1	3.0	-2	1.0	0.2		-2	
T 24685	0.65	17.0	-5	30	2.7	4.5	1	3.9	-2	1.2	0.2		-2	
T 24686	2.40	19.0	-5	27	5.2	41.5	1	7.1	-2	2.8	0.5		-2	
T 24687	1.10	34.0	-5	130	5.7	14.3	1	13.0	-2	2.0	0.4		-2	
T 24688	0.55	18.0	-5	34	2.7	4.3	-1	4.4	-2	1.1	0.2		-2	
T 24689	0.79	26.0	-5	90	4.0	11.4	1	11.0	-2	1.5	0.3		-2	
T 24690	1.50	18.0	-5	130	2.6	27.2	1	9.3	-2	1.7	0.4		-2	
T 24691	4.80	35.0	-5	120	5.0	18.5	1	14.0	3	1.8	0.3		-2	
T 24692	4.50	44.0	5	200	6.8	18.2	1	16.0	-2	3.3	0.7		4	
T 24693	1.30	41.0	-5	150	5.9	14.8	1	12.0	-2	3.1	0.6		2	
T 24694	0.57	46.0	-5	150	6.8	14.3	1	13.0	2	3.2	0.6		3	
T 24695	0.61	49.0	-5	160	6.4	14.3	1	15.0	2	3.0	0.6		2	
T 24696	0.58	39.0	-5	110	6.8	8.7	1	12.0	-2	3.3	0.6		-2	
T 24697	0.45	38.0	6	100	6.5	8.1	1	11.0	-2	3.0	0.6		-2	
T 24698	0.45	33.0	-5	88	5.7	6.8	1	10.0	-2	2.6	0.6		2	
T 24699	6.53	103.0	-5	74	11.0	37.2	8	18.0	-2	2.2	0.5		-2	
T 24788	0.34	20.0	-5	-20	3.2	2.9	-1	4.5	-2	1.6	0.3	0.3	-2	
T 24789	0.44	21.0	-5	27	3.6	4.0	-1	4.8	-2	1.8	0.4	0.4	-2	
T 24790	0.67	42.0	-5	43	6.9	6.9	2	9.3	-2	3.0	0.6	0.4	2	
T 24791	0.30	30.0	-5	28	4.7	4.7	1	6.5	-2	2.2	0.4	0.6	-2	
T 24792	0.52	38.0	-5	58	5.9	7.6	2	8.5	-2	2.2	0.4	1.1	-2	
T 24793	1.10	27.0	-5	96	2.0	5.5	1	7.5	-2	1.0	0.2	2.3	2	
T 24794	1.00	14.0	-5	58	1.7	3.6	-1	5.5	-2	0.9	-0.2	1.2	-2	
T 24795	1.10	24.0	-5	140	3.1	7.1	1	16.0	2	1.2	0.3	3.1	2	

Laboratory	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	ANALAB
Method	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	101
Det. Limi	0.050	0.500	5.000	20.000	0.100	0.100	1.000	0.500	2.000	0.500	0.200	0.200	2.000	10.000

063071

PROJECT: ZEEHAN PROJECT. E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	FE %	LA PPM	MO PPM	RB PPM	SM PPM	SC PPM	TA PPM	TH PPM	W PPM	YB PPM	LU PPM	K %	U PPM	BI PPM
T 24796	0.54	57.7	-5	160	8.5	17.9	1	13.0	-2	4.0	0.8	3.5	5	
T 24797	0.61	34.0	-5	83	5.3	6.8	1	8.5	-2	2.6	0.5	1.9	-2	
T 24798	0.47	19.0	-5	-20	2.9	1.8	-1	4.4	-2	1.7	0.3	0.3	-2	
T 24799	0.55	37.0	-5	64	5.6	6.2	1	10.0	2	2.5	0.6	1.5	-2	
T 24801	3.30	61.4	-5	26	6.8	13.2	4	12.0	-2	1.9	0.4	0.7	-2	
T 24802	2.50	69.4	-5	94	13.0	17.4	4	15.0	-2	2.8	0.6	2.0	-2	
T 24803	1.40	26.0	-5	52	4.6	4.3	-1	6.9	-2	2.2	0.4	0.9	-2	
T 24804	0.77	45.0	-5	160	8.0	12.2	-1	16.0	-2	3.9	0.8	3.3	3	
T 24805	0.62	41.0	-5	120	7.2	8.7	1	12.0	-2	3.5	0.7	2.4	-2	
T 24806	0.39	24.0	-5	27	4.1	2.9	1	5.9	2	2.0	0.4	0.3	-2	
T 24807	1.30	45.0	-5	100	7.2	10.0	1	14.0	2	3.3	0.7	2.1	-2	
T 24808	0.80	106.0	-5	48	12.0	25.9	9	16.0	-2	2.3	0.5	1.2	-2	
T 24809	0.42	23.0	-5	33	4.4	3.1	1	6.4	-2	2.5	0.5	0.7	-2	
T 24810	0.47	26.0	-5	24	4.7	2.8	1	5.9	-2	2.4	0.5	0.6	-2	
T 24811	9.07	190.0	-5	41	31.1	71.9	12	33.0	-2	3.2	0.7	0.7	3	
T 24812	1.00	49.0	-5	160	8.2	11.8	1	15.0	-2	3.9	0.8	3.4	-2	
T 24813	0.56	23.0	-5	61	3.9	4.5	-1	6.7	-2	2.1	0.4	1.2	-2	
T 24814	0.58	49.0	-5	140	9.1	10.7	1	14.0	-2	4.1	0.8	2.5	-2	
T 24815	0.58	44.0	-5	120	7.8	10.0	1	13.0	-2	3.2	0.7	2.3	-2	
T 24816	0.71	56.3	-5	180	10.0	14.5	1	19.0	-2	4.0	0.8	3.9	2	
T 24817	3.60	62.9	-5	180	5.9	11.6	1	17.0	-2	3.0	0.6	3.3	-2	
T 24818	0.33	25.0	-5	-20	3.1	2.1	1	3.7	-2	1.3	0.2	-0.2	-2	
T 24819	4.20	35.0	-5	190	7.2	11.4	3	14.0	-2	2.1	0.4	2.0	3	
T 24821	14.00	32.0	-5	76	8.5	36.9	2	6.6	-2	3.4	0.6	1.3	-2	
T 24901	0.40	37.0	-5	86	6.5	7.2	1	10.0	2	2.9	0.6	2.0	-2	
T 24902	0.34	16.0	-5	-20	2.8	1.1	-1	3.8	-2	1.6	0.3	-0.2	-2	
T 24903	0.37	33.0	-5	81	5.7	6.1	1	8.6	-2	2.7	0.5	1.7	-2	
T 24904	0.26	21.0	-5	-20	3.6	2.0	-1	5.5	-2	2.1	0.4	0.3	-2	
T 24905	0.26	25.0	-5	23	3.7	2.6	1	5.1	-2	1.8	0.4	0.5	-2	
T 24906	10.20	63.7	-5	52	6.7	17.1	5	12.0	-2	1.8	0.4	0.9	-2	
T 24907	0.40	18.0	-5	-20	2.2	1.3	1	3.1	-2	1.1	0.2	-0.2	-2	
T 24908	4.90	32.0	-5	100	4.8	20.4	9	13.0	-2	1.5	0.3	2.4	-2	
T 24909	0.53	31.0	-5	71	5.2	5.8	-1	8.6	-2	2.5	0.5	1.4	-2	
T 24910	0.68	38.0	-5	110	6.5	8.0	1	12.0	2	3.0	0.6	2.2	-2	
T 24911	0.75	34.0	-5	120	4.8	12.0	2	11.0	-2	3.2	0.7	2.3	4	
Laboratory	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	ANALAB
Method	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	101
Det. Limi	0.050	0.500	5.000	20.000	0.100	0.100	1.000	0.500	2.000	0.500	0.200	0.200	2.000	10.000

063072

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	FE %	LA PPM	MO PPM	RB PPM	SM PPM	SC PPM	TA PPM	TH PPM	W PPM	YB PPM	LU PPM	K %	U PPM	BI PPM
T 24912	0.49	35.0	-5	55	5.6	4.6	1	7.1	-2	2.4	0.5	1.0	-2	
T 24913	8.33	101.0	-5	75	10.0	26.9	9	16.0	-2	2.1	0.4	1.7	-2	
T 24914	9.52	86.9	-5	56	9.4	25.2	8	20.0	-2	1.9	0.4	1.0	-2	
T 24915	11.60	117.0	-5	38	16.0	30.9	11	20.0	-2	2.3	0.5	0.6	-2	
T 24916	5.66	127.0	-5	21	15.0	20.2	12	16.0	-2	2.6	0.5	-0.2	-2	
T 24917	5.12	110.0	-5	-20	14.0	16.6	10	15.0	-2	2.8	0.6	0.4	-2	
T 24918	3.00	66.8	-5	120	11.0	13.8	2	13.0	-2	3.3	0.6	2.2	-2	
T 24919	6.97	77.7	-5	120	13.0	16.1	5	15.0	-2	3.6	0.7	1.7	3	
T 24921	7.09	77.3	-5	100	13.0	21.0	4	16.0	2	3.4	0.7	1.7	-2	
T 24922	10.20	98.3	-5	-20	20.0	30.1	7	11.0	-2	2.7	0.6	-0.2	-2	
T 24923	9.25	86.7	-5	21	15.0	28.8	6	10.0	-2	2.6	0.6	0.5	-2	
T 24924	10.30	71.4	-5	-20	10.0	47.1	8	14.0	-2	3.3	0.6	-0.2	-2	
T 24925	13.30	92.8	-5	34	16.0	26.6	7	16.0	-2	3.6	0.7	0.2	-2	
T 24926	11.60	73.0	-5	25	15.0	28.8	6	12.0	-2	3.2	0.6	0.5	-2	
T 24927	10.40	77.2	-5	41	11.0	20.9	5	14.0	-2	3.3	0.6	0.7	-2	
T 24928	0.72	34.0	-5	130	6.3	8.7	1	11.0	-2	2.8	0.6	2.3	2	
T 24929	1.10	3.8	-5	-20	0.7	0.6	-1	1.1	-2	-0.5	-0.2	-0.2	-2	
T 24930	0.53	10.0	-5	-20	2.0	1.2	-1	2.6	-2	1.5	0.3	-0.2	-2	
T 25198	0.69	1.7	-5	-20	0.4	0.5	-1	0.9	-2	0.5	-0.2	-0.2	-2	
T 26028	0.55	16.0	-5	99	2.1	8.0	-1	3.7	-2	2.2	0.4	2.0	2	
T 32545	0.53	34.0	-5	200	5.5	14.8	1	9.2	-2	3.1	0.6	4.1	2	
T 32608	0.20	1.8	-5	-20	0.5	0.5	-1	1.2	-2	1.1	-0.2	-0.2	-2	

Laboratory	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	ANALAB
Method	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	101
Det. Limi	0.050	0.500	5.000	20.000	0.100	0.100	1.000	0.500	2.000	0.500	0.200	0.200	2.000	10.000

09303

RGC EXPLORATION PTY.LTD. DATA SHEET

3/ 8/92

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	CU PPM	PB PPM	ZN PPM	SN PPM	SB PPM	AS PPM	BA PPM	BR PPM	CE PPM	CS PPM	CR PPM	CO PPM	EU PPM	AU PPM	HF PPM
T 24635	365355	360934	15	10	10	-3	1.0	-2	150	14	61	5	98	-1	0.8	-0.005	7
T 24636	365355	360909	45	30	140	5	4.5	17	530	2	79	14	97	19	0.9	-0.005	4
T 24637	365356	360883	60	15	735	9	3.4	14	350	3	73	13	110	14	1.1	-0.005	3
T 24638	365355	360855	35	40	50	4	8.8	21	210	13	76	4	120	1	1.1	0.080	4
T 24639	365355	360831	5	5	-5	-3	1.3	-2	200	4	57	3	60	-1	0.6	-0.005	6
T 24641	365354	360806	5	-5	-5	-3	0.8	-2	-100	2	18	-1	22	-1	-0.5	-0.005	5
T 24642	365354	360782	10	-5	5	-3	0.9	-2	-100	3	40	2	52	-1	-0.5	-0.005	5
T 24643	365352	360757	5	-5	-5	7	0.7	-2	-100	4	25	-1	13	-1	-0.5	-0.005	4
T 24644	365352	360730	5	20	5	5	1.9	-2	330	4	81	5	70	-1	0.9	-0.005	8
T 24645	365352	360707	5	35	5	9	2.4	-2	340	2	88	10	81	-1	1.1	-0.005	6
T 24646	365351	360679	5	10	-5	7	1.4	2	220	2	80	5	110	-1	0.9	-0.005	7
T 24647	365350	360653	10	-5	-5	5	1.0	-2	140	3	56	2	25	-1	0.7	-0.005	8
T 24648	365350	360626	10	10	-5	6	0.8	-2	200	4	52	2	69	-1	0.7	-0.005	8
T 24649	365350	360601	10	-5	-5	-3	0.5	-2	-100	2	24	-1	16	-1	-0.5	-0.005	6
T 24650	365350	360577	10	-5	-5	6	0.5	-2	-100	2	30	-1	92	-1	-0.5	-0.005	5
T 24651	365350	360548	15	20	20	7	0.9	12	130	49	130	4	260	-1	2.0	-0.005	7
T 24652	365350	360523	15	40	5	8	2.7	-2	540	3	87	8	140	-1	1.1	-0.005	6
T 24653	365351	360498	10	10	5	5	2.7	-2	300	3	77	6	49	-1	1.0	-0.005	9
T 24654	365350	360472	10	5	5	4	1.2	-2	-100	4	59	1	37	-1	0.9	-0.005	8
T 24655	365349	360450	5	5	5	3	1.3	3	-100	20	56	1	76	-1	0.6	-0.005	6
T 24656	365351	360424	90	85	1600	7	2.7	12	230	12	100	2	230	92	2.9	-0.005	10
T 24657	365350	360398	5	-5	10	7	0.9	-2	660	6	89	8	67	1	1.0	-0.005	6
T 24658	365349	360373	5	5	5	8	1.6	-2	670	3	110	10	78	-1	1.2	-0.005	8
T 24659	365350	360346	10	15	15	8	0.9	-2	230	2	51	2	74	-1	0.5	-0.005	3
T 24661	365351	360321	5	10	-5	5	0.7	-2	-100	12	62	1	53	-1	1.3	-0.005	7
T 24662	365350	360295	-5	15	5	6	1.1	-2	740	3	87	6	84	-1	1.5	-0.005	6
T 24663	365350	360272	130	65	95	-3	15.0	30	330	46	160	7	784	1	3.0	-0.005	11
T 24664	365349	360246	80	70	110	5	5.4	3	150	5	87	7	200	1	1.7	0.006	10
T 24665	365349	360220	20	-5	1300	5	1.0	5	380	4	85	13	86	17	1.7	-0.005	7
T 24666	365350	360197	60	25	620	6	2.1	23	-100	7	120	2	310	122	3.9	-0.005	8
T 24667	365350	360170	45	90	90	7	1.7	4	560	4	89	13	84	3	1.2	-0.005	6
T 24668	365348	360146	20	15	5	8	10.0	23	530	3	98	10	82	-1	1.1	-0.005	7
T 24669	365349	360121	10	10	5	7	1.7	-2	620	4	100	13	73	-1	1.5	-0.005	6
T 24670	365347	360093	10	5	5	8	1.8	-2	300	5	58	4	41	-1	0.9	-0.005	6
T 24671	365347	360069	10	15	10	5	2.1	-2	270	3	82	5	99	-1	1.1	-0.005	7
Laboratory:			ANALAB	ANALAB	ANALAB	ANALAB	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ
Method :			101	101	101	401	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30
Det. Limit:			5.000	5.000	5.000	3.000	0.200	2.000	50.000	2.000	2.000	1.000	5.000	1.000	0.500	0.005	1.000

063024

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	CU PPM	PB PPM	ZN PPM	SN PPM	SB PPM	AS PPM	BA PPM	BR PPM	CE PPM	CS PPM	CR PPM	CO PPM	EU PPM	AU PPM	HF PPM
T 24672	365347	360045	5	25	5	3	1.3	-2	280	2	72	3	29	-1	1.0	-0.005	6
T 24673	365345	360020	10	15	5	3	11.0	6	490	2	75	8	70	-1	1.1	0.005	6
T 24674	365345	359995	5	20	5	10	4.8	-2	810	-2	93	12	72	-1	1.5	0.010	7
T 24675	365344	359972	5	20	10	6	3.5	-2	400	2	64	7	69	-1	1.1	-0.005	6
T 24676	365343	359949	5	20	5	11	5.5	-2	670	3	99	12	89	-1	1.6	-0.005	6
T 24677	365339	359925	5	30	10	7	0.8	-2	740	4	97	11	98	-1	1.7	-0.005	8
T 24678	366149	360905	10	-5	15	4	0.6	-2	-100	4	70	-1	822	1	-0.5	-0.005	10
T 24679	366147	360880	-5	5	10	-3	0.4	-2	-100	2	33	-1	32	-1	-0.5	-0.005	4
T 24681	366148	360854	5	-5	10	52	0.5	-2	-100	3	23	-1	150	-1	-0.5	-0.005	8
T 24682	366148	360831	10	20	15	6	0.9	-2	340	5	76	6	140	1	0.8	-0.005	4
T 24683	366148	360804	5	10	20	7	3.6	5	470	6	79	11	110	4	1.5	-0.005	5
T 24684	366149	360781	10	10	90	4	0.6	-2	130	6	26	1	85	1	-0.5	-0.005	4
T 24685	366148	360753	15	35	40	-3	1.4	2	160	24	34	4	100	-1	-0.5	-0.005	3
T 24686	366149	360727	130	10	470	5	2.0	17	210	4	44	5	340	93	1.1	-0.005	4
T 24687	366147	360701	10	-5	260	5	1.1	4	1300	10	74	8	100	6	0.9	-0.005	3
T 24688	366149	360678	5	10	20	5	0.9	-2	420	17	36	2	54	-1	-0.5	-0.005	3
T 24689	366148	360653	5	15	20	8	1.4	-2	800	7	55	5	77	1	0.7	-0.005	3
T 24690	366147	360627	20	5	32	3	1.7	-2	1300	8	33	10	240	4	0.5	-0.005	4
T 24691	366147	360603	15	20	35	9	1.6	6	980	2	72	6	91	11	0.7	-0.005	4
T 24692	366148	360578	30	60	20	8	5.7	31	1100	13	85	10	130	-1	1.1	-0.005	4
T 24693	366146	360550	15	35	15	11	2.9	5	590	5	82	7	98	-1	0.9	-0.005	5
T 24694	366146	360525	5	15	18	6	4.2	3	550	7	96	10	89	-1	0.9	-0.005	6
T 24695	366147	360501	-5	25	10	10	1.2	-2	380	6	100	7	87	-1	1.0	-0.005	5
T 24696	366146	360475	5	10	10	6	1.3	3	320	5	83	6	86	-1	1.0	-0.005	8
T 24697	366146	360449	-5	10	15	5	0.7	-2	340	-2	80	5	63	-1	1.0	-0.005	7
T 24698	366148	360422	5	5	10	6	0.8	-2	250	3	68	4	77	-1	0.9	-0.005	7
T 24699	366148	360396	50	20	140	10	1.8	24	410	12	170	7	310	15	2.8	-0.005	10
T 24788	365757	360920	5	10	5	7	0.7	-2	-100	8	40	2	170	-1	0.5	-0.005	7
T 24789	365756	360894	5	5	5	5	0.8	-2	-100	7	45	3	110	-1	0.6	-0.005	8
T 24790	365754	360867	5	15	10	7	1.1	3	190	8	88	5	140	1	1.1	-0.005	10
T 24791	365752	360845	10	20	60	4	1.1	4	140	32	61	4	87	-1	0.7	-0.005	6
T 24792	365749	360821	50	45	20	7	1.8	7	280	19	74	11	110	1	1.1	-0.005	6
T 24793	365750	360795	30	60	30	10	1.9	8	300	13	53	6	110	12	-0.5	-0.005	5
T 24794	365748	360772	40	-5	-5	8	1.1	6	150	4	29	4	63	-1	-0.5	-0.005	4
T 24795	365745	360741	15	35	530	11	2.4	23	420	3	47	10	120	18	-0.5	-0.005	6
Laboratory:			ANALAB	ANALAB	ANALAB	ANALAB	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ
Method :			101	101	101	401	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30
Det. Limit:			5.000	5.000	5.000	3.000	0.200	2.000	50.000	2.000	2.000	1.000	5.000	1.000	0.500	0.005	1.000

063075

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	CU PPM	PB PPM	ZN PPM	SN PPM	SB PPM	AS PPM	BA PPM	BR PPM	CE PPM	CS PPM	CR PPM	CO PPM	EU PPM	AU PPM	HF PPM
T 24796	365743	360717	5	15	5	9	1.0	2	760	6	110	10	150	-1	1.1	-0.005	5
T 24797	365742	360694	5	5	-5	9	1.3	-2	380	4	71	4	98	-1	0.7	-0.005	6
T 24798	365741	360667	-5	5	-5	8	1.5	5	-100	5	38	-1	20	-1	-0.5	-0.005	5
T 24799	365739	360644	35	20	-5	7	2.2	-2	230	5	78	3	73	-1	0.7	-0.005	9
T 24801	366147	360371	20	15	40	6	0.9	5	190	21	100	3	310	6	1.7	-0.005	7
T 24802	366147	360344	15	5	30	7	0.9	2	700	11	130	11	130	3	3.2	-0.005	8
T 24803	366148	360318	10	5	50	5	1.2	5	190	3	56	7	53	14	0.5	-0.005	6
T 24804	366148	360287	45	25	10	12	5.7	-2	420	3	94	11	82	-1	1.2	-0.005	7
T 24805	366147	360260	10	25	5	11	1.4	-2	400	3	87	7	65	-1	1.2	-0.005	9
T 24806	366144	360229	5	5	10	8	0.5	-2	-100	4	51	2	21	-1	0.6	-0.005	6
T 24807	366143	360202	10	40	10	6	3.1	15	450	10	95	8	83	-1	0.9	0.005	8
T 24808	366143	360170	15	15	10	7	1.1	2	350	16	190	7	250	1	3.2	-0.005	10
T 24809	366143	360143	20	10	35	5	1.7	-2	-100	2	50	1	24	-1	0.7	-0.005	10
T 24810	366142	360111	10	10	10	5	0.8	-2	-100	2	56	1	36	-1	0.7	-0.005	9
T 24811	366142	360087	85	35	60	8	3.9	22	310	100	383	10	783	-1	8.2	-0.011	13
T 24812	366142	360064	45	20	30	7	5.4	27	700	7	100	11	72	-1	1.0	-0.005	10
T 24813	366141	360036	10	40	10	9	1.0	-2	190	4	48	2	54	-1	0.6	-0.005	6
T 24814	366140	360014	5	10	10	5	2.3	-2	500	7	100	8	66	-1	1.2	-0.005	10
T 24815	366139	359987	5	20	10	4	1.5	-2	360	5	91	6	42	-1	1.2	-0.005	8
T 24816	366138	359962	5	25	5	5	1.8	-2	770	7	120	10	72	-1	1.3	-0.005	8
T 24817	366138	359938	5	15	5	7	9.2	20	610	25	110	9	87	-1	0.9	-0.005	6
T 24818	366137	359914	15	25	10	8	0.5	-2	-100	3	46	1	54	-1	-0.5	-0.005	5
T 24819	366137	359889	5	10	-5	5	0.3	-2	470	-2	72	17	440	22	0.9	0.054	8
T 24821	366136	359864	10	35	10	6	3.0	43	240	21	66	6	360	13	1.8	-0.005	8
T 24901	365738	360618	5	20	10	8	2.3	-2	390	4	79	4	55	-1	0.8	-0.005	8
T 24902	365737	360593	-5	5	10	4	1.0	-2	-100	2	34	-1	59	-1	-0.5	-0.005	6
T 24903	365737	360568	5	10	10	4	1.4	-2	280	3	70	3	36	-1	0.9	-0.005	7
T 24904	365737	360540	-5	-5	15	3	1.3	-2	-100	4	45	-1	44	-1	-0.5	-0.005	7
T 24905	365738	360516	-5	5	10	3	0.6	-2	110	2	50	1	24	-1	0.6	-0.005	6
T 24906	365738	360488	55	30	105	6	2.6	18	270	55	100	6	250	4	1.5	-0.005	6
T 24907	365740	360466	5	-5	5	5	1.3	-2	-100	2	35	-1	65	-1	-0.5	-0.005	5
T 24908	365739	360441	165	60	585	10	2.1	10	1200	4	62	15	320	75	1.3	-0.005	6
T 24909	365738	360415	10	-5	15	5	0.8	-2	350	2	65	3	77	-1	0.8	-0.005	6
T 24910	365737	360391	5	-5	20	6	0.6	-2	470	4	79	5	49	-1	0.8	-0.005	7
T 24911	365736	360364	35	5	15	6	1.0	-2	390	3	68	5	47	-1	0.6	-0.005	7
Laboratory:			ANALAB	ANALAB	ANALAB	ANALAB	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ
Method :			101	101	101	401	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30
Det. Limit:			5.000	5.000	5.000	3.000	0.200	2.000	50.000	2.000	2.000	1.000	5.000	1.000	0.500	0.005	1.000

090376

PROJECT: ZEEHAN PROJECT, E.L. 42/87, SOIL AUGER PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	CU PPM	PB PPM	ZN PPM	SN PPM	SB PPM	AS PPM	BA PPM	BR PPM	CE PPM	CS PPM	CR PPM	CO PPM	EU PPM	AU PPM	HF PPM
T 24912	365737	360338	-5	-5	10	5	0.6	-2	210	3	73	4	55	-1	0.7	-0.005	6
T 24913	365735	360314	80	20	140	6	0.9	8	2600	50	170	5	360	54	2.5	-0.005	7
T 24914	365735	360289	60	30	85	11	1.0	9	2700	150	160	6	380	12	2.2	-0.005	8
T 24915	365733	360264	55	40	95	7	0.9	9	1000	140	208	5	390	9	3.8	-0.005	8
T 24916	365731	360236	35	40	50	5	1.1	6	580	110	225	3	230	1	3.6	-0.005	11
T 24917	365728	360211	20	45	50	10	0.7	7	290	94	202	4	210	-1	2.8	-0.005	12
T 24918	365725	360189	25	25	35	5	1.7	8	630	38	140	5	100	1	1.7	-0.005	9
T 24919	365723	360161	25	35	85	8	1.6	13	480	42	150	6	200	4	2.5	-0.005	11
T 24921	365720	360137	55	30	80	11	2.0	11	370	61	150	5	230	6	2.6	-0.005	10
T 24922	365719	360110	40	20	275	11	0.5	11	210	140	200	1	350	48	4.6	-0.005	12
T 24923	365718	360086	30	10	215	11	-0.2	7	550	71	180	1	310	71	3.4	-0.005	11
T 24924	365717	360060	40	45	115	19	0.5	5	-100	71	170	1	370	26	2.8	-0.005	15
T 24925	365716	360034	40	105	95	10	2.6	15	-100	84	170	3	330	7	4.1	-0.005	16
T 24926	365716	360011	35	60	155	12	3.2	13	160	99	140	3	290	18	4.0	-0.005	12
T 24927	365711	359984	50	45	45	14	2.7	12	140	170	120	6	240	4	2.6	-0.005	12
T 24928	365714	359961	10	10	-5	12	0.8	-2	480	5	70	5	53	-1	0.9	-0.005	5
T 24929	365712	359934	10	-5	-5	32	0.8	2	-100	3	8	-1	12	-1	-0.5	-0.005	1
T 24930	365711	359910	60	-5	-5	5	1.4	-2	-100	4	22	-1	34	-1	-0.5	-0.005	3
T 25198	359993	359227	5	-5	10	6	0.8	-2	-100	2	3	-1	50	-1	-0.5	-0.005	1
T 26028	359993	357608	-5	540	15	6	2.9	2	300	4	18	7	45	-1	-0.5	-0.005	5
T 32545	359998	358667	-5	25	5	-3	1.3	-2	460	4	56	14	82	-1	1.0	-0.005	5
T 32608	359996	358471	-5	20	5	-3	1.3	-2	-100	-2	3	-1	15	-1	-0.5	-0.005	4

Laboratory:	ANALAB	ANALAB	ANALAB	ANALAB	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	
Method :	101	101	101	401	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	
Det. Limit:	5.000	5.000	5.000	3.000	0.200	2.000	50.000	2.000	2.000	1.000	5.000	1.000	0.500	0.005	1.000	

06302

RGC EXPLORATION PTY.LTD. DATA SHEET

3/ 8/92

PROJECT: ZEEHAN (E.L. 42\87) - ROCK CHIP SAMPLING PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	SN PPM	AS PPM	CU PPM	PB PPM	ZN PPM	AG PPM	AU PPM	SB PPM	BA PPM	BR PPM	CE PPM	CS PPM	CR PPM	CO PPM	EU PPM
T 11812	365635	360505	10	200	-100	-100	400	2	-0.050								

Laboratory:	ANALAB	BECQ	ANALAB	ANALAB	ANALAB	REN	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ
Method :	401	INAA30	101	101	101	AAS	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30
Det. Limit:	3.000	2.000	5.000	5.000	5.000	1.000	0.005	1.000		2.000	2.000	1.000	5.000	1.000	0.500

06B078

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN (E.L. 42\87) - ROCK CHIP SAMPLING PROGRAMME

SAMPLE NUMBER	HF PPM	FE %	LA PPM	MO PPM	K %	RB PPM	SM PPM	SC PPM	TH PPM	W PPM	YB PPM	AU(R) PPM	AU(S) PPM
T 11812										79			

Laboratory	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	ANALAB	ANALAB
Method	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	GG309	GG309
Det. Limi	1.000	0.050	0.500	5.000	0.200	20.000	0.200	1.000	0.500	2.000	0.500	0.008	0.008

063079

APPENDIX 3

Zeehan Project Rock Chip Sampling analytical results

RGC EXPLORATION PTY.LTD. DATA SHEET
3/ 8/92

PROJECT: ZEEHAN (E.L. 42\87) - ROCK CHIP SAMPLING PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	SN PPM	AS PPM	CU PPM	PB PPM	ZN PPM	AG PPM	AU PPM	SB PPM	BA PPM	BR PPM	CE PPM	CS PPM	CR PPM	CO PPM	EU PPM
T 11813	367050	357565	5	400	-100	-100	-100	1	-0.050								
T 11814	367050	357565	10	300	-100	-100	100	1	-0.050								
T 11815	367050	357565	5	300	-100	-100	100	-1	-0.050								
T 11816	367050	357565	-5	200	100	-100	100	-1	-0.050								
T 11817	367050	357565	10	300	-100	-100	100	-1	-0.050								
T 11818	366225	358295	-5	200	-100	200	400	2	-0.050								
T 11819	366175	358315	-5	100	-100	-100	200	2	-0.050								
T 11820	366160	358350	10	200	-100	100	200	2	-0.050								
T 26401	359960	357388	-3	17	15	20	280	-5	-0.005	8	2800	-2	64	8	62	31	0.9
T 26487	360000	354725	23	63	230	15	93300	-13	-0.005	3	-100	-2	6	6	13	104	-0.5
T 26488	360025	354700	497	30	80	15	4250	-5	-0.005	2	600	-2	-2	130	-5	13	-0.5
T 26489	360040	354675	324	14	225	-5	22500	-5	-0.005	1	308	-2	3	168	-5	20	-0.5
T 26490	360043	354672	111	12	310	5	195	-5	-0.005	1	3350	-2	5	39	39	28	-0.5

Laboratory:	ANALAB	BECQ	ANALAB	ANALAB	ANALAB	REN	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ
Method :	401	INAA30	101	101	101	AAS	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30
Det. Limit:	3.000	2.000	5.000	5.000	5.000	1.000	0.005	1.000		2.000	2.000	1.000	5.000	1.000	0.500

06308 81

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN (E.L. 42\87) - ROCK CHIP SAMPLING PROGRAMME

SAMPLE NUMBER	HF PPM	FE %	LA PPM	MO PPM	K %	RB PPM	SM PPM	SC PPM	TH PPM	W PPM	YB PPM	AU(R) PPB	AU(S) PPB
T 11813										-79			
T 11814										-79			
T 11815										-79			
T 11816										-79			
T 11817										-79			
T 11818										-79			
T 11819										-79			
T 11820										-79			
T 26401	4	6.50	33.0	-5	2.8	140	6.5	14	11.0	-2	2.7		
T 26487	-1	22.20	4.7	-5	-0.2	65	1.2	2	1.8	13	-0.5		
T 26488	-1	16.90	1.4	-5	0.7	691	0.3	1	2.5	18	-0.5		
T 26489	-1	9.53	3.1	-5	0.8	1010	0.4	1	5.0	27	-0.5		
T 26490	3	5.22	2.5	-5	2.3	363	2.3	11	4.5	-2	1.3		

Laboratory	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	ANALAB	ANALAB
Method	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	GG309	GG309
Det. Limi	1.000	0.050	0.500	5.000	0.200	20.000	0.200	1.000	0.500	2.000	0.500	0.008	0.008

06308 2

RGC EXPLORATION PTY.LTD. DATA SHEET
31/ 7/92

PROJECT: ZEEHAN (E.L. 42\87) - ROCK CHIP SAMPLING PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	SN PPM	AS PPM	CU PPM	PB PPM	ZN PPM	AG PPM	AU PPM	SB PPM	BA PPM	BR PPM	CE PPM	CS PPM	CR PPM	CO PPM	EU PPM
T 34701	360600	362300															
T 34702	360850	362100															
T 34707	360350	362300															
T 34708	359900	362500															
T 34709	359900	362500															
T 34710	360050	362550															
T 34711	360150	362550															
T 34712	358850	362550															
T 34713	357400	362200															
T 34714	354400	364400															
T 34715	354700	364650															
T 34716	355000	364900															
T 34717	359950	362450															
T 34720	359600	355150															
T 34724	367250	368000															
T 34725	367350	368050															
T 34726	367750	368100															
Laboratory:			ANALAB	BECQ	ANALAB	ANALAB	ANALAB	REN	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ
Method :			401	INAA30	101	101	101	AAS	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30
Det. Limit:			3.000	2.000	5.000	5.000	5.000	1.000	0.005	1.000		2.000	2.000	1.000	5.000	1.000	0.500

0630083

RGC EXPLORATION PTY.LTD. DATA SHEET

31/ 7/92

PROJECT: ZEEHAN (E.L. 42\87) - ROCK CHIP SAMPLING PROGRAMME

SAMPLE NUMBER	HF PPM	FE %	LA PPM	MO PPM	K %	RB PPM	SM PPM	SC PPM	TH PPM	W PPM	YB PPM	AU(R) PPM	AU(S) PPM
T 34701													
T 34702													
T 34707													
T 34708													
T 34709													
T 34710													
T 34711													
T 34712													
T 34713													
T 34714													
T 34715													
T 34716													
T 34717													
T 34720													
T 34724													
T 34725													
T 34726													
Laboratory	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	BECQ	ANALAB	ANALAB
Method	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	INAA30	GG309	GG309
Det. Limi	1.000	0.050	0.500	5.000	0.200	1.000	0.200	1.000	0.500	2.000	0.500	0.008	0.008

0603084

APPENDIX 4

Interpretation of Aeromagnetic data from E.L. 42/87 (Zeehan)

063086

Interpretation of Aeromagnetic data from EL 42/87 (Zeehan)

QUEENSTOWN SK 55-5

for

RGC Exploration Pty. Limited

Bruce Wyatt

April 1990

Wyatt & Associates
21 Custance St, FARRER
PO Box 705 MAWSON ACT 2607
Phone 06 2863519

Summary

A helicopter magnetic survey was flown for RGC Exploration Pty Limited by Geoterrex Pty Limited in March 1989. It covered approximately 270 square kilometres and was flown at 75 metres terrain clearance along east-west lines spaced 150 metres apart. The survey was designed to assist both geological mapping and identification of structures and exploration target areas as part of an exploration program being conducted by RGC Exploration in this area.

Eighteen magnetic anomalies have been delineated in EL 42/87 (Zeehan), as well as another thirteen anomalies just outside the boundary of the lease. All of the anomalies have been classified according to their size, shape, amplitude, location, and environment. The more highly rated ones are recommended for follow up by investigation of previous work, ground checking and magnetics, and drilling. The number of anomalies to be followed up is dependent on the success achieved with higher priority ones and with anomalies of similar characteristics and in a similar environment. In all cases, high resolution ground magnetics and detailed computer modelling is necessary to define targets for testing by drilling.

The magnetic data presentations and interpretation plates should be used to assist future mapping, geological interpretation, and exploration work. Any unexplained anomalies should be computer modelling in detail, to define possible targets.

It is recommended that ground electromagnetic techniques be considered as a means to differentiate near surface conductors from other magnetic sources, and that downhole geophysical techniques be considered in drillholes where anomalies have been targeted but have not been satisfactorily explained by core logging.

A complete list of anomalies and their characteristics is given as Appendix B.

Table of Contents

List of Tables

List of Plates

List of Plates (continued)

Note: The following maps have been generated but are *not* necessarily included with this report.

by Geoterrex

Residual magnetic contours, 10 nT interval, 1:10000 scale (9 sheets)

Flight path, 1:10000 scale (9 sheets)

by Pitt Research

Flight path, 1:25000 scale

Residual magnetic intensity contours, 10 nT interval, 1:25000 scale

Residual magnetic intensity contours, 2 nT interval, 1:25000 scale

Residual magnetic intensity profiles, 500 nT/cm, 1:25000 scale

Residual magnetic intensity profiles, 100 nT/cm, 1:25000 scale

Residual magnetic intensity grid profiles, 100 nT/cm, 1:25000 scale

Laminated D-scan prints of images at 1:50000 scale:
- Residual magnetic intensity
- Magnetic intensity downward continued 50 metres
- Magnetic gradient (black and white)
- Magnetic gradient
- Magnetic gradient (artificial sun azimuth 0 degrees)
- Magnetic gradient (artificial sun azimuth 45 degrees)
- Magnetic gradient (artificial sun azimuth 90 degrees)
- Magnetic gradient (artificial sun azimuth 135 degrees)
- Magnetic variation

35 mm slides (total 48)

by RGC Exploration

Laminated stacked profile plots at 1:25000 scale:
- 9-point filter then first horizontal difference bipole
- 5-point filter then second horizontal difference bipole
- 5-point filter then second horizontal difference bipole
- low pass filter (0.05 cycles/data interval cutoff, 21 point) then second horizontal difference bipole
- low pass filter (0.02 cycles/data interval cutoff, 31 point) then second horizontal difference bipole

1 Introduction

A helicopter magnetic survey was flown for RGC Exploration Pty Limited by Geoterrex Pty Limited (Geoterrex) in March of 1989. The survey covered a total of approximately 270 square kilometres over the Renison Mine Lease and exploration leases EL 42/87 (Zeehan), EL 101/87 (Dundas), EL 13/88 (Moores Pimple), and EL 9/66 (Henty). The survey area extends between longitudes 145° 16' 30" and 145° 34' East and latitudes 41° 45' 30" and 41° 54' 15" South (356700 and 381000 metres East and 5359500 and 5375500 metres North). The survey covers part of the QUEENSTOWN 1:250,000 sheet area and parts of the Pieman and Sophia 1:100,000 sheet areas. The area lies to the southwest of Rosebery and includes the town of Zeehan and the Renison Bell tin mine. This report describes the interpretation of the Zeehan area (EL 42/87). Seperate reports cover the whole survey area and the other leases (Wyatt, 1990a-d).

The lowest parts of the survey area are immediately east of Zeehan (150 metres above mean sea level) in the southwest of the area and around Lake Pieman (120 metres above mean sea level) on the northern edge. Topography is rugged over all but the western side of the area. The highest peaks are Mount Read (1100 metres) and Mount Dundas (1143 metres).

1.1 Survey Specifications

The survey was flown at a nominal height of 75 metres above the tree canopy. The actual aircraft height averaged about 110 metres above the ground surface which is equivalent to a sensor height of 85 metres. The east-west lines were 150 metres apart and the north-south ties were 1,500 metres apart. Approximately 2,100 line kilometres of data were acquired along the 103 flight lines and 17 ties using Squirrel AS350B helicopter VH-HQO.

The magnetic data were acquired with a Scintrex caesium vapour optical absorption magnetometer with resolution of 0.01 nanoTeslas (nT). The magnetic field strength was sampled and recorded every 0.1 seconds (approximately 4 metres).

Navigation and flight path recovery were achieved using new medium level aerial photography enlarged to 1:15,000 scale and a 35 mm continuous strip tracking camera.

All plates produced for this survey use the Australian Map Grid (AMG) as reference. The magnetic anomalies are tabulated in Appendix B with AMG coordinates. Numerous local grids have been used for detailed exploration in the area of the survey.

2 Geology

Stratigraphic table - after Crossing (1989)

Permian	Zeehan Glacial Formation	tillite
Devonian	Bell Shale	
	Florence Quartzite	fossiliferous sandstone
Silurian	Undifferentiated	
	Crotty Quartzite	
Ordovician	Gordon Limestone	limestone, calcarenite
	Moina Sandstone	sandstone, grit,conglomerate
Cambrian	Mt. Zeehan Conglomerate	
	Dundas group	interbedded siltstone, sandstone, grit, greywacke, conglomerate, volcanics
	Crimson Creek Form	interbedded red-purple siltstone, greywacke, tuff
U. Proterozoic	Oonah Form	interbedded sandstone, siltstone, shale, limestone, spilite
Cambrian		(intrusive) gabbro

Most of the western two thirds of this area is Upper Proterozoic Oonah Formation, folded about northeast to southeast trending axes. Crimson Creek Formation crops out in the northern part of the area (around 360600E, 536680N) and also in a zone trending south-southwest from Zeehan, and in a zone trending west-northwest near the southern edge of the survey area. Cambrian gabbro crops out at (and to the southwest of) the southwest corner of the survey area.

The eastern third of this area (east of 361000E) is a broad syncline containing Ordovician, Silurian and Devonian sediments. The syncline plunges to the south-southeast and dips are generally between 30 and 60 degrees. Extensive Permian tillite covers some of the Oonah Formation, mainly in the northwest.

The most significant faults in the area strike north (Despatch Fault), north-northeast (Walkers Fault, Brickfield's Fault) or west-northwest (Balstrup, Sylvester, Tenth Legion, Oonah Faults). Other faults strike north-northeast and west-northwest (in Oonah Formation) and between east-northeast and east-southeast in the syncline.

3 Previous Geophysical Surveys

Extensive parts of the area have been subjected to numerous surveys using various geophysical techniques. Most of the work has been carried out by exploration companies and some by government agencies. Additional test surveys have been carried out by contracting companies.

3.1 Previous Airborne Magnetic Surveys

A DIGHEM survey to the southwest of Zeehan defined several targets in the Stonehenge area. Most of these lie in a large conductive zone which lies along the northern flank of a prominent magnetic feature (Peters & Dvorak, 1982; Bishop, 1982a).

Aberfoyle had an aeromagnetic survey flown over the Waratah to Zeehan area in 1965. The flight line spacing was 400 metres.

A fixed wing aeromagnetic survey was flown by Geoex Pty Limited for the Tasmanian Mines Department in 1981 with east-west lines 500 metres apart and nominal sensor height of 135 metres above ground level. The results were contoured with a 5 nT interval. The latter survey provided data of similar quality to the earlier Turair one. Although the lines were more widely spaced and the sensor height was greater, the better instrumentation employed allowed a finer contour interval to be used.

4 Magnetic Interpretation

4.1 Data Processing and Presentation

The magnetic data are shown as Plates 1 to 7 and 9. Additional displays of images exist as 35 mm photographic slides and as laminated D-scan paper prints. The contour maps are most useful for indicating the smallest anomalies, and for accurate positioning of all anomalies and other interpreted features. The stacked profiles provide the best display of the relative amplitudes of anomalies and anomaly shape for matching computer generated models. The other images have been filtered to enhance various trends and spectral characteristics, particularly short wavelength features which may be related to faulting.

Geoterrex levelled the data and presented it as 10 nT contours and flight path maps at 1:10000 scale. Some small problems are apparent from 'herring boning' in some areas of the contour maps.

Further levelling and adjustment was applied by Pitt Research. A two dimensional filter was also applied to the grid to remove residual levelling problems which may be due to any of: variations in flying height; variations in bird position relative to the aircraft; non vertical attitude of camera; high frequency diurnal changes; and flight path plotting errors.

The two-dimensional filter was designed to attenuate features with wavelengths less than 300 metres in the north-south direction, and having long wavelengths in other directions (flight line sausages). This filter also slightly reduced the amplitude of some other high frequency features, as can be seen from a comparison of the grid profiles and the stacked profiles. The application of this filter was considered necessary to allow acceptable contouring at a finer interval, and also to allow high pass filtering necessary to accentuate linear features due to faulting.

Pitt Research Pty Limited produced the following products:
- 10 nT and 2 nT contour maps at 1:25000 scale
- 100 nT/cm and 500 nT/cm stacked profiles
- 100 nT/cm grid profiles
- flight path map
- image prints at 1:50,000 scale
- 35 mm slides of images

First and second horizontal difference bipole maps were produced by RGC Exploration in the Canberra office using various amplitudes and scales and after various low pass filters. The products were presented as stacked profiles at 1:25,000 scale.

The distribution of total magnetic intensity, residual magnetic intensity, and altitude readings are summarised as tables in Appendices A.1, A.2, and A.3 respectively.

4.2 Physical Properties

Howland-Rose (1972) measured magnetic and electrical properties of drill core samples of Renison ore and host rocks. The results are summarised in Table 1 below. These tests indicated the Renison orebodies to be some of the most conductive recorded, and were used to justify the use of extensive Turair surveying in the area in 1972.

Table 1 Physical Properties of Rocks and Ores (after Howland-Rose, 1972)

Rock unit name	No. of samples	Conductivity (mhos/m)	Susceptibility (cgs*10^6)
Argillite	12	108	2261
Argillite (or Red Rock)	1	55	1000
Basic Dyke	1	0	500
Bassett ore	11	8289	1573
Crimson Creek Argillite	14	44	2355
Dalcoath Quartzite	15	63	1552
Dolomite	2	0	26
Federal ore	5	11537	3326
gabbroic intrusion	2	0	43
Howard (No 3)	1	7692	15000
No 2 Horizon	7	4038	753
No 2 Horizon - Murchison	4	1002	685
No 2 Horizon Ore	4	36571	1005
No 3 Horizon	3	2384	6150
North Stebbins (No 2)	3	31881	1063
N. Bassett orezone	8	2925	12393
Penzance No 3	1	48718	4500
Penzance O. B. (No 2)	1	53846	2300
Red Rock	14	231	1497
Renison Bell Shale	17	1128	4213
Renison Bell Shale/Dalcoath Q'zite	4	9	70
shear 'L'	3	3990	5933
shear 'P'	1	84102	1100
siltstones, N. Bassett structure	1	0	40
South Stebbins (No 2)	2	4914	790
S. Bassett orezone	2	3469	2800
talc and dolomite	1	0	22

Clark (1984) has measured the magnetic properties of 56 rock and ore samples collected from the surface and sub-surface within the area of the Renison mining lease. The results are summarised in Table 2. The quartz-porphyry, spilites, and unhornfelsed sediments are very weakly magnetic and should have little expression in magnetic surveys. The hornfels sample has an intense remanence in spite of its relatively low susceptibility and suggests that quite small porphyry and granite intrusions may be detectable in local magnetic surveys due to the strong response of their baked contact zones. Although there was considerable scatter in the directions of natural remanent magnetisation (NRM), directions with steep negative inclinations predominate. The average susceptibility of fourteen samples collected from massive ore zones is about 7000 * 10^{-6} cgs units. The effective remanent magnetisation is in the same general sense as the induced magnetisation and about twice as strong.

Table 2 Magnetic Properties of Rocks and Ores (after Clarke, 1984)

Rocktype	Number of samples	Susceptibility cgs emu * 10^6	NRM intensity microgauss (=0.1 nT)
Quartz porphyry	2	2	1
Hornfels	1	240	7450
Gabbro	4	155	2887
Crimson Creek Formation	1	37	1
Dundas sediment	2	20	<1
Spilite	6	50	8
Ultramafic	3	6527	22850
Serpentinised ultramafic	10	3574	7169
Weathered Ultramafic	1	36	3
No 2 dolomite	4	138	85
No 2 ore	2	3555	3820
Dalcoath Member	1	1800	7340
No 3 ore	6	5673	4058
Federal ore	3	11583	51380
Melba ore	2	7885	12195
Mineralised Renison Bell Member	1	2640	2520
Mineralised Red Rock Member	1	7120	8300
Dolerite	2	165	1475
Red Rock Member	4	46	25
All ore samples	14	7034	15630

4.3 Magnetic Sources

Magnetic anomalies over triaxial ellipsoid models have been computed to indicate the characteristics of anomalies over targets in the Renison mine area. The target size varies in size from 50 * 25 * 10 metres to 250 * 100 * 20 metres. The targets may have dips of 20 to 30 degrees, corresponding to replacement ore bodies, or they may have dips of 70 to 80 degrees corresponding to fault ore bodies. The targets are massive or semi-massive sulphides with at least 20 percent pyrrhotite and having significant susceptibility and density contrasts.

Using a susceptibility contrast of 0.007 cgs units (0.088 SI units) and assuming the remanent component to be twice the amplitude of the induced component and in the same direction, the smaller of the ore bodies described above would produce an anomaly with peak amplitude of 0.1 nT at a depth of 500 metres below the ground surface, and about 30 nT if close to the surface. The larger body would produce anomalies of amplitude 3 and 500 nT at depths of 500 and 0 metres respectively. These amplitudes correspond to a flying height of 80 metres above ground level. Maximum amplitudes are shown for various tonnages of ore and burial depth in Table 3. Varying the dip of a body buried 100 metres has negligible effect on the anomaly amplitude.

Table 3 Magnetic Anomaly Amplitudes over Ellipsoids

Depth to centre (m)	Maximum anomaly amplitude (nT) over various size bodies 50*25*10 m 25000 t	 150*50*15 m 445000 t	 250*100*20 m 1000000 t
0	27.5	180.5	492.2
50	7.0	53.88	181.2
100	2.7	22.01	82.2
200	0.72	6.21	25.52
300	0.29	2.53	10.75
400	0.14	1.27	5.48
500	0.08	0.73	3.15

4.4 Magnetic Anomalies

All anomalies are located on Plate 10 and their characteristics are listed in Appendix B. Those anomalies which are recommended for further attention are marked with an asterisk in Appendix B. Any special characteristics or other information about anomalies is described in the following section. Anomalies are tabulated and described in roughly the same order - numerically within each major grouping. The positions of some anomalies have checked on navigation photos (November 84) to define any possible cultural sources. The flight path recovery film could be used for a more up-to-date check.

In Appendix B, the length and width dimensions correspond to points at half amplitude or maximum slope points on the major and minor axes. The interpreted depths in Appendix B are based on rule-of-thumb methods and should not be given too much emphasis. Ground magnetic data and modelling are necessary to determine accurate depths.

4.5 EL 42/87 Zeehan

4.5.1 Anomalies

Most anomalies are very low amplitude, except for those in the southwest corner [redacted]

Many of the small anomalies to the east and northeast of Zeehan town have a cultural origin.

Anomalies 363, 364, and 365 are close to the Brickfield's Fault.

Anomaly 364 is over a cleared area and is probably of cultural origin.

Anomaly 365 corresponds to tanks on the southern end of King Hill.

Anomalies [redacted], and 370 are all close to intersections of the Despatch Fault with other mapped faults. Anomaly 370 occurs over Crimson Creek Form and is recommended for further investigation.

[redacted]

[redacted]

Anomaly 373 is a very small but persistent linear anomaly. The southern half is coincident with a mapped fault, and so indicates that the mapped fault extends further to the north-northwest to the northern edge of, and beyond, the edge of EL 42/78.

Anomaly 375 in not in EL 42/87. It occurs over an equivalent of the Crimson Creek Formation at Queen Hill and is possibly associated with the Severn ore body.

[redacted]

Anomaly 382 is a broad anomaly of similar amplitude and depth to 380.

The following anomalies are outside of EL 42/87 (Zeehan).

Anomaly 354 is on the Zeehan Highway and coincides with a power transmission line pylon.

Anomaly 353, 355, and 356 probably have cultural origins. Anomaly 356 is on the Zeehan Highway.

Anomalies 357, 358, 359, and 360 are all along the old Emu Bay railway line.

Anomaly 363 is close to the Brickfield's Fault.

Anomaly 374 (in Aberfoyle's ground) occurs over a fault with pyrite replacing pyrrhotite.

4.5.2 Lineaments

Anomaly 373 defines a very low amplitude but very persistent north-northwest lineament.

[redacted]

5 Recommendations

1 Specific anomalies which are recommended for further investigation are listed below, along with their coordinates. A complete list of anomalies and their characteristics is given as Appendix B.

Ref no.	AMG coords East	North
370	360710	5366650
[redacted]		

2 In all cases, high resolution ground magnetics and detailed computer modelling is necessary to define targets for testing by drilling. The ground magnetic surveys should be designed with lines perpendicular to strike (if practicable) and extending beyond the anomaly far enough to allow accurate definition of the background field, and with sufficient lines to define the strike and anomaly maximum. It is recommended that ground magnetic surveys be conducted along lines spaced 50 metres apart with readings spaced no more than 10 metres apart.

3 Previous detailed geophysics, geology, and drilling should be taken into account before further work is undertaken on any magnetic anomalies.

4 The magnetic data presentations and interpretation plates should be used to assist future mapping, geological interpretation, and exploration work. The routine use of susceptibility meters to assist field mapping is suggested.

5 Ground electromagnetic techniques should be considered as a means to differentiate near surface conductors from other magnetic sources.

6 Downhole geophysical techniques should be considered in drillholes where anomalies have been targeted but have not been satisfactorily explained by core logging.

6 References

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Wyatt, B.W., 1990c, Interpretation of Aeromagnetic data from EL's 101/87 (Dundas), 13/88 (Moores Pimple). Unpublished Report by Wyatt & Associates for RGC Exploration Pty Limited.

Wyatt, B.W., 1990d, Interpretation of Aeromagnetic data from Renison Mine Lease. Unpublished Report by Wyatt & Associates for RGC Exploration Pty Limited.

Zeletic, 1985, Geological Report on EL 5/63. Unpublished Report for Comstaff Pty Limited.

In addition to the above references, information has also been obtained from various maps, sections, and drill logs produced by various Renison Bell mine geologists, and from communications with Jonathan Lea (Renison Mine) and Stephen Mudge, John Crossing, and Mark Fleming (all RGC Exploration).

APPENDIX A Frequency Distribution of Data

A.1 Frequency Distribution - Total Magnetic Intensity

Class interval (nT)	Frequency distribution Relative	Cumulative
61122 to 61245	86	86
61245 to 61368	133	219
61368 to 61490	487	706
61490 to 61613	641	1347
61613 to 61736	1129	2476
61736 to 61859	2677	5153
61859 to 61981	8752	13905
61981 to 62104	19872	33777
62104 to 62227	41840	75617
62227 to 62350	152180	227797
62350 to 62472	148455	376252
62472 to 62595	38582	414834
62595 to 62718	11382	426216
62718 to 62841	4874	431090
62841 to 62963	2696	433786
62963 to 63086	1859	435645
63086 to 63209	1207	436852
63209 to 63332	1005	437857
63332 to 63454	897	438754
63454 to 63577	797	439551
63577 to 63700	605	440156
63700 to 63823	499	440655
63823 to 63945	381	441036
63945 to 64068	334	441370
64068 to 64191	303	441673
64191 to 64314	500	442173
64314 to 64436	511	442684
64436 to 64559	500	443184
64559 to 64682	366	443550
64682 to 64805	309	443859
64805 to 64927	320	444179
64927 to 65050	333	444512
65050 to 65173	353	444865
65173 to 65296	296	445161
65296 to 65418	279	445440
65418 to 65541	232	445672
65541 to 65664	171	445843
65664 to 65787	128	445971
65787 to 65909	228	446199
65909 to 66032	143	446342
66032 to 66155	112	446454
66155 to 66277	81	446535
66277 to 66400	41	446576
66400 to 66523	12	446588
66523 to 66646	19	446607
66646 to 66768	8	446615
66768 to 66891	14	446629
66891 to 67014	15	446644
67014 to 67137	20	446664
67137 to 67259	20	446684

A.2 Frequency Distribution - Residual Magnetic Intensity

Class interval (nT)	Frequency distribution Relative	Cumulative
883 to 1006	99	99
1006 to 1129	168	267
1129 to 1251	534	801
1251 to 1374	716	1517
1374 to 1497	1346	2863
1497 to 1620	3384	6247
1620 to 1742	11791	18038
1742 to 1865	21873	39911
1865 to 1988	104881	144792
1988 to 2111	187319	332111
2111 to 2233	71969	404080
2233 to 2356	17607	421687
2356 to 2479	7321	429008
2479 to 2602	3476	432484
2602 to 2724	2147	434631
2724 to 2847	1639	436270
2847 to 2970	1135	437405
2970 to 3093	905	438310
3093 to 3215	851	439161
3215 to 3338	674	439835
3338 to 3461	563	440398
3461 to 3584	430	440828
3584 to 3706	360	441188
3706 to 3829	342	441530
3829 to 3952	337	441867
3952 to 4075	551	442418
4075 to 4197	522	442940
4197 to 4320	436	443376
4320 to 4443	324	443700
4443 to 4566	307	444007
4566 to 4688	336	444343
4688 to 4811	331	444674
4811 to 4934	334	445008
4934 to 5057	268	445276
5057 to 5179	236	445512
5179 to 5302	198	445710
5302 to 5425	159	445869
5425 to 5548	176	446045
5548 to 5670	218	446263
5670 to 5793	125	446388
5793 to 5916	98	446486
5916 to 6039	65	446551
6039 to 6161	25	446576
6161 to 6284	12	446588
6284 to 6407	19	446607
6407 to 6530	8	446615
6530 to 6652	14	446629
6652 to 6775	16	446645
6775 to 6898	20	446665
6898 to 7021	19	446684

A.3 Frequency Distribution - Radar Altimeter

Class interval (metres)	Frequency distribution Relative	Cumulative
52 to 57	70	70
57 to 63	110	180
63 to 68	460	640
68 to 73	950	1590
73 to 78	2352	3942
78 to 83	5471	9413
83 to 88	11678	21091
88 to 94	22509	43600
94 to 99	35242	78842
99 to 104	43435	122277
104 to 109	49636	171913
109 to 114	51139	223052
114 to 120	47639	270691
120 to 125	40375	311066
125 to 130	32037	343103
130 to 135	25956	369059
135 to 140	20020	389079
140 to 146	14959	404038
146 to 151	13687	417725
151 to 156	19164	436889
156 to 161	6981	443870
161 to 166	2071	445941
166 to 172	542	446483
172 to 177	110	446593
177 to 182	0	446593
182 to 187	30	446623
187 to 192	10	446633
192 to 198	10	446643
198 to 203	0	446643
203 to 208	0	446643
208 to 213	0	446643
213 to 218	0	446643
218 to 224	0	446643
224 to 229	0	446643
229 to 234	0	446643
234 to 239	0	446643
239 to 244	0	446643
244 to 249	0	446643
249 to 255	0	446643
255 to 260	0	446643
260 to 265	10	446653
265 to 270	0	446653
270 to 275	0	446653
275 to 281	0	446653
281 to 286	0	446653
286 to 291	0	446653
291 to 296	10	446663
296 to 301	10	446673
301 to 307	0	446673
307 to 312	11	446684

Appendix B Magnetic Anomaly Coordinates

Anomalies which are considered to have the highest priority for further investigation are indicated by an asterisk (*) next to the coordinates.

Ref no.	AMG coords East	North	Ampl. (nT)	Dimensions length, width		Depth (metres)	
364	362640	5362130	5	150	100	0	Cultural?
365	362270	5361840	30	150	100	25	Cultural?
[redacted]							
370	360710	5366650*	10	500	200	0	
[redacted]							
381	356950	5365280	12	250	150	-	
382	357600	5366300	15	1200	400	300	
383	360200	5365700	1	100	100	-	

The following anomalies lie outside of the boundary of EL 42/87 Zeehan

Ref no.	AMG coords East	North	Ampl. (nT)	Dimensions length, width		Depth (metres)	
352	363970	5360870	1	150	100	-	Cultural?
353	363300	5360750	1	200	100	0	Cultural?
354	363440	5361200	10	250	100	0	Cultural?
355	363820	5361270	1	100	100	-	Cultural?
356	364000	5361600	2	150	150	-	Cultural?
357	363190	5361920	1	400	100	-	Cultural?
358	363500	5362300	1	400	100	-	Cultural?
359	363760	5362500	0.5	150	100	-	Cultural?
360	364040	5362580	0.5	300	100	-	Cultural?
361	363890	5362800	0.5	200	100	-	Cultural?
363	363280	5363120	0.5	1100	100	-	Cultural?
366	362050	5364540	1	300	100	-	
374	360620	5361840	40	300	300	0	Queen Hill

063107

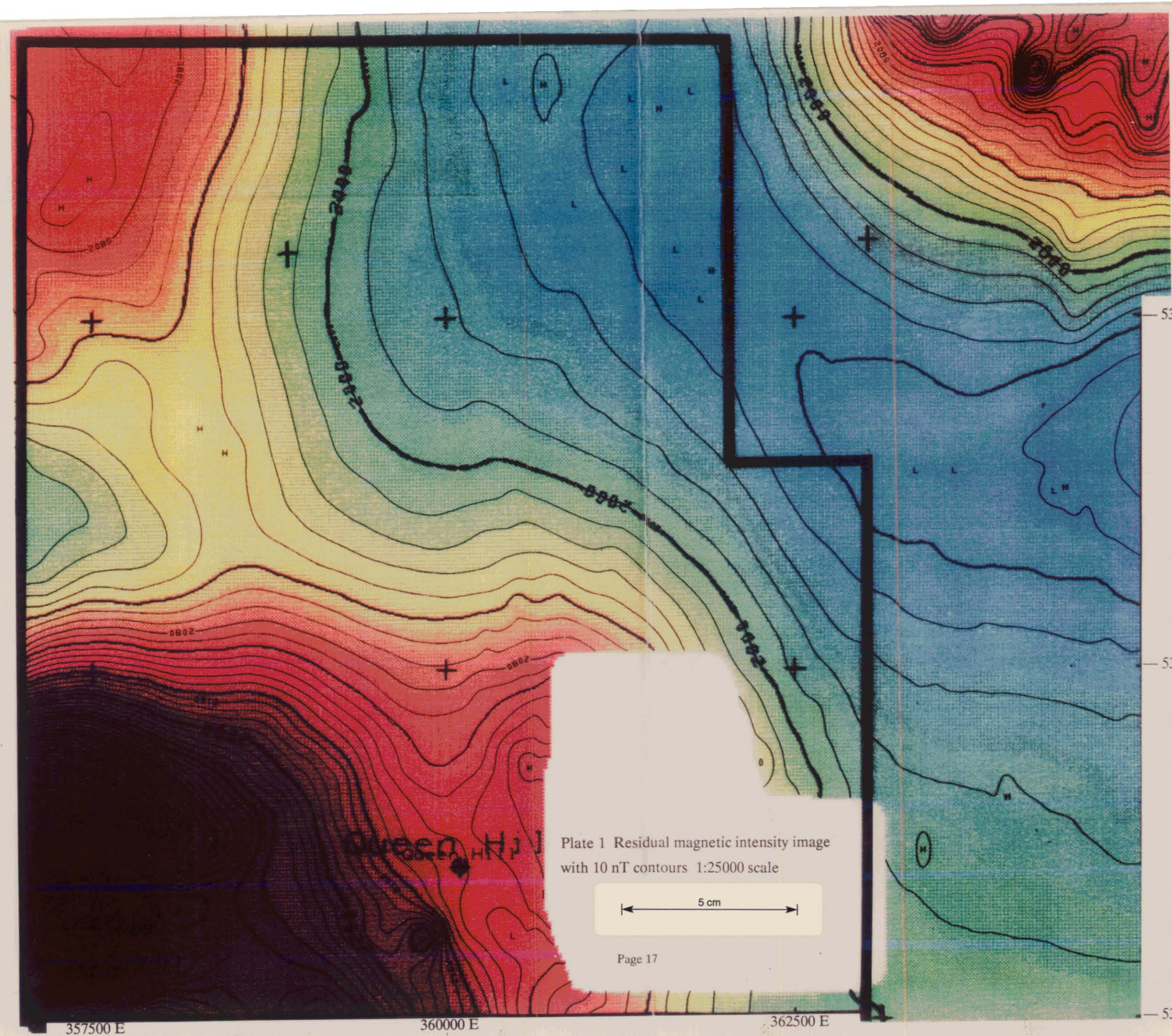


Plate 1 Residual magnetic intensity image with 10 nT contours 1:25000 scale

5 cm

063108

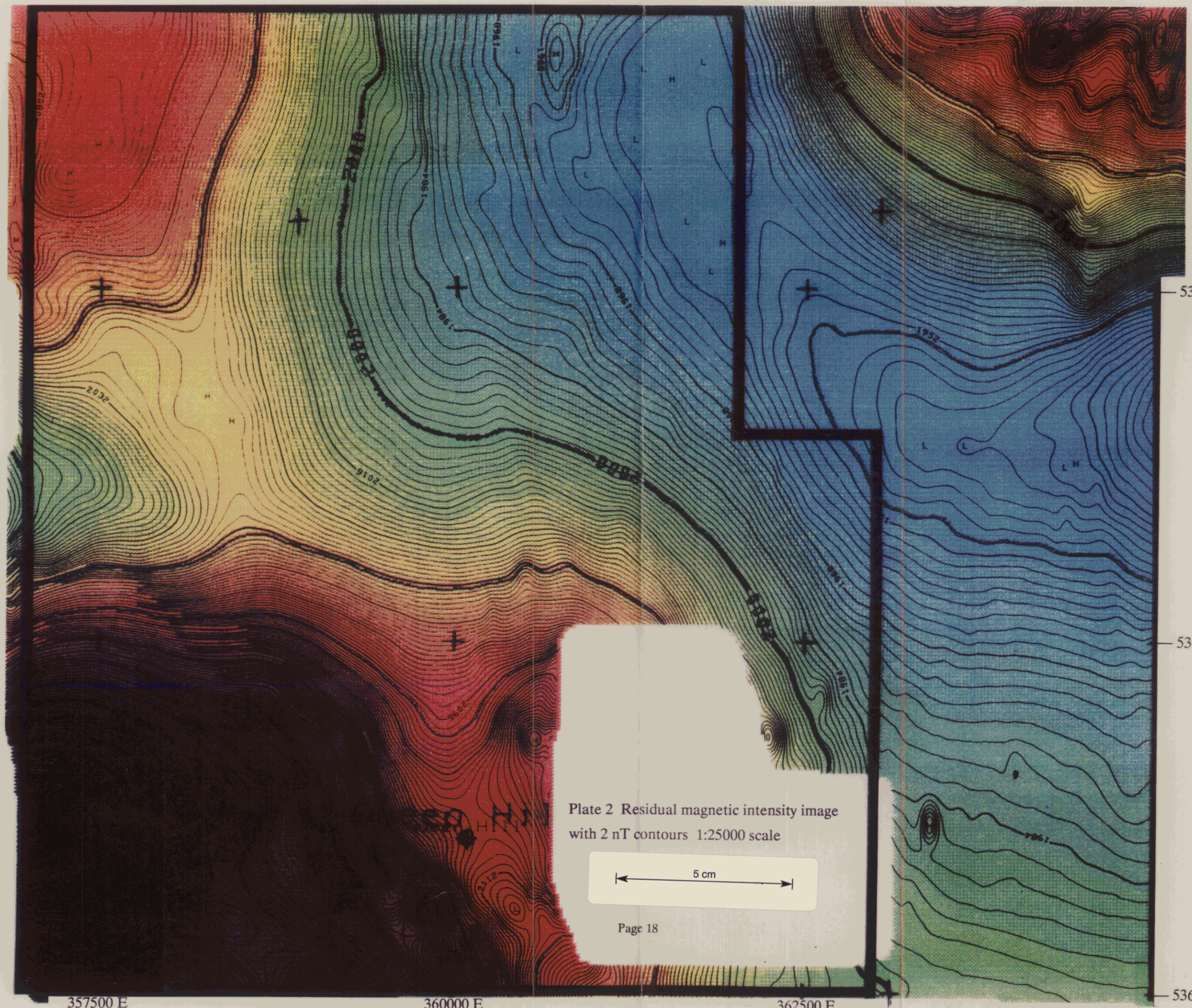


Plate 2 Residual magnetic intensity image with 2 nT contours 1:25000 scale

5 cm

063109

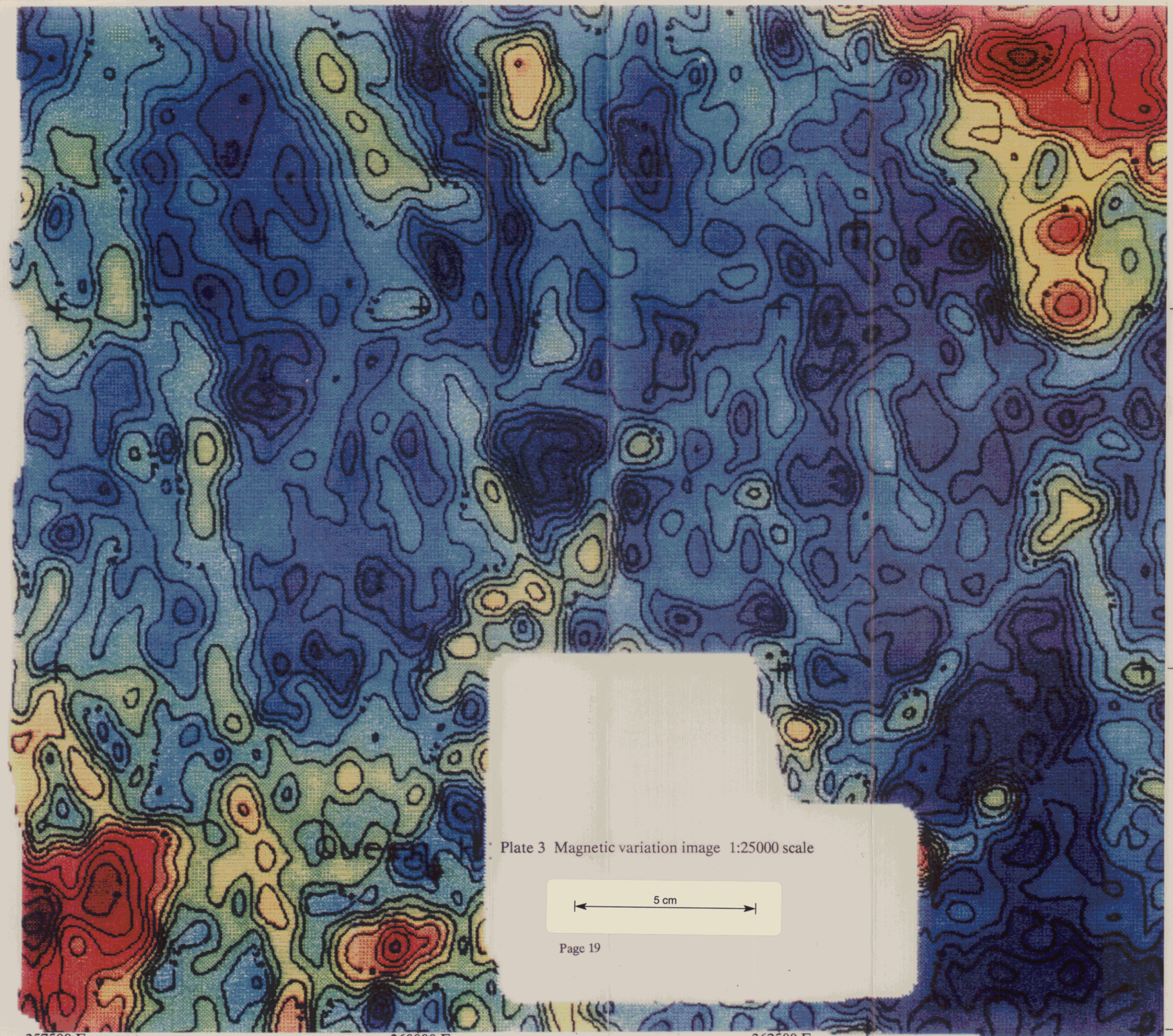


Plate 3 Magnetic variation image 1:25000 scale

5 cm

063110

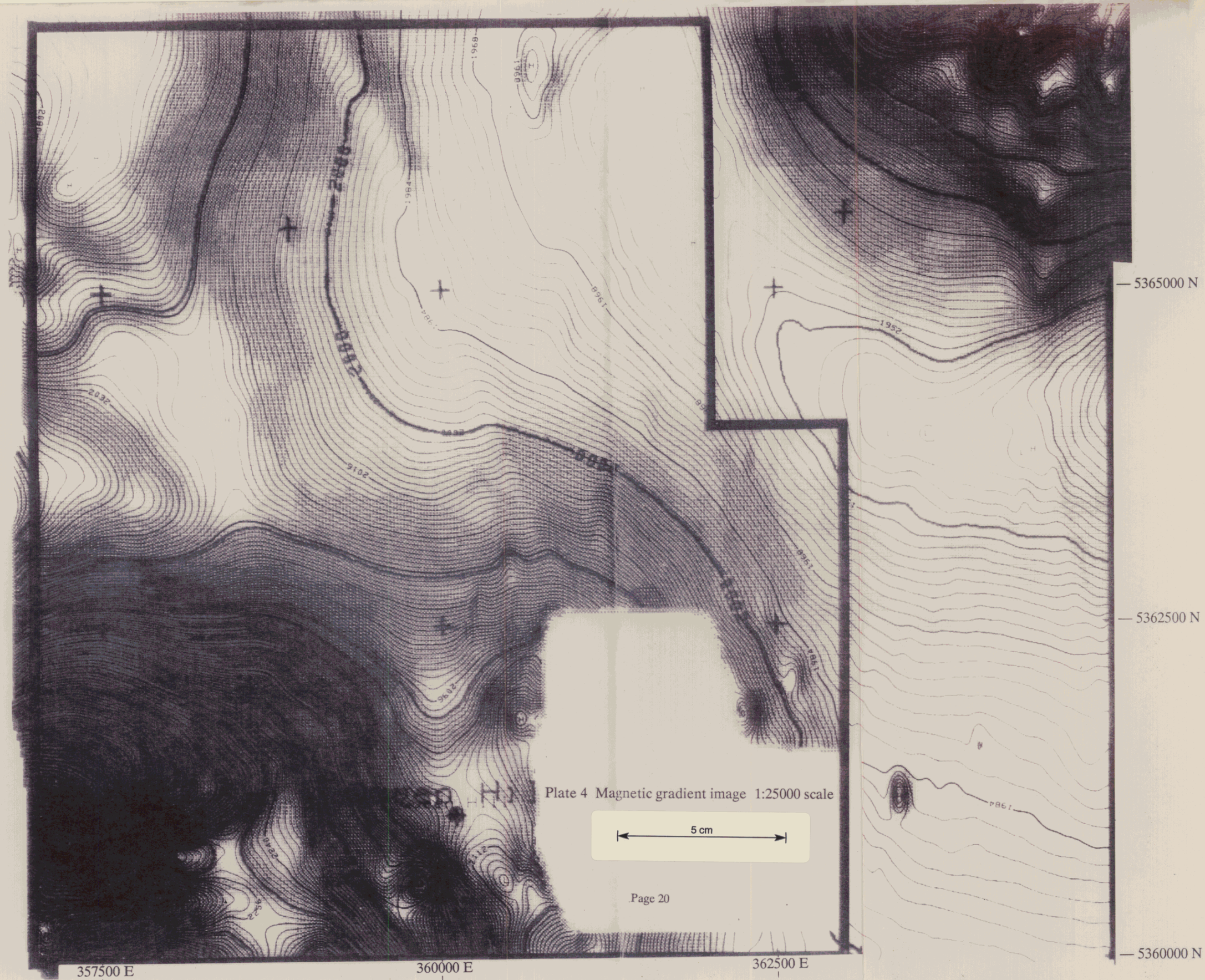


Plate 4 Magnetic gradient image 1:25000 scale

5 cm

063111

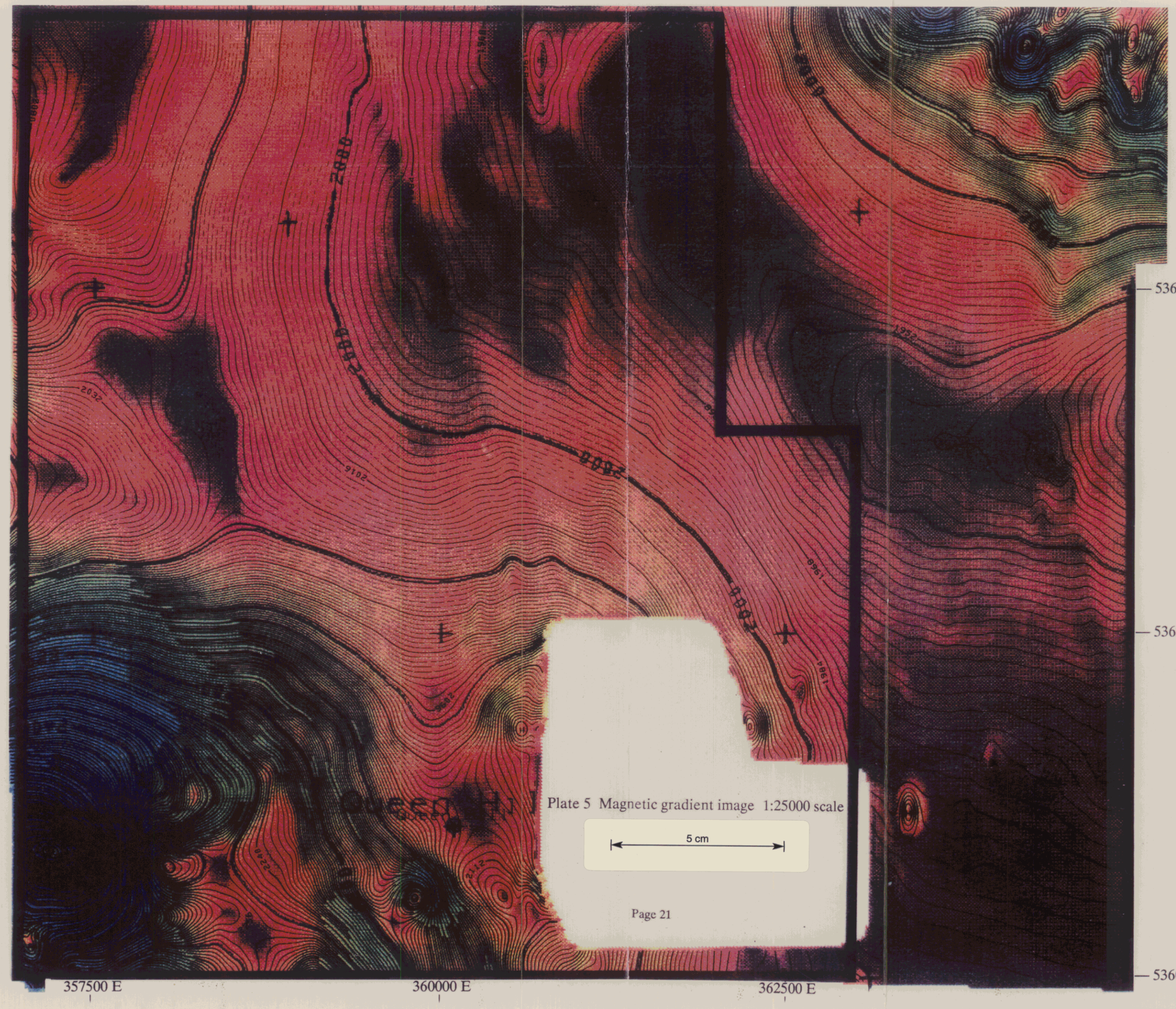
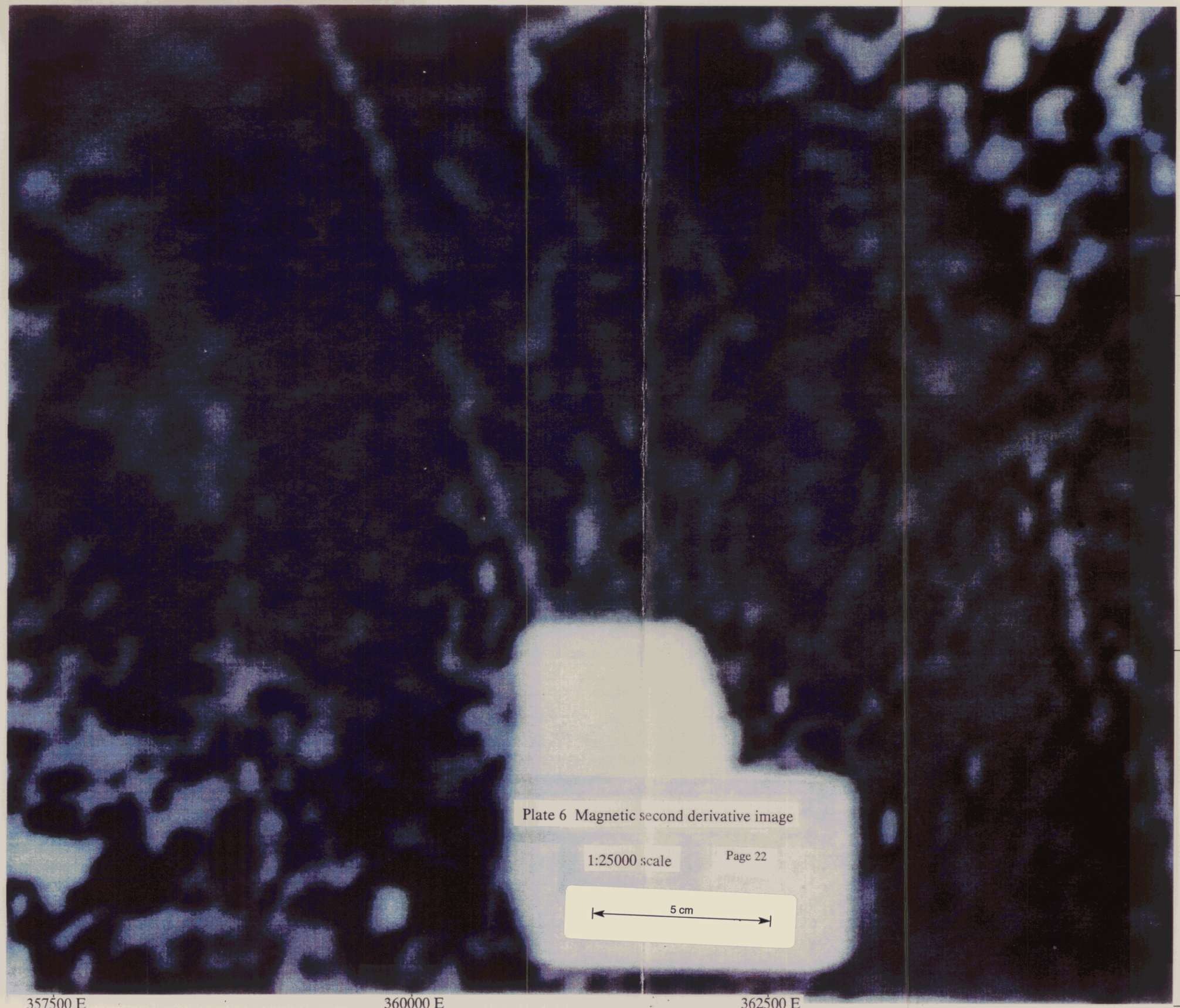


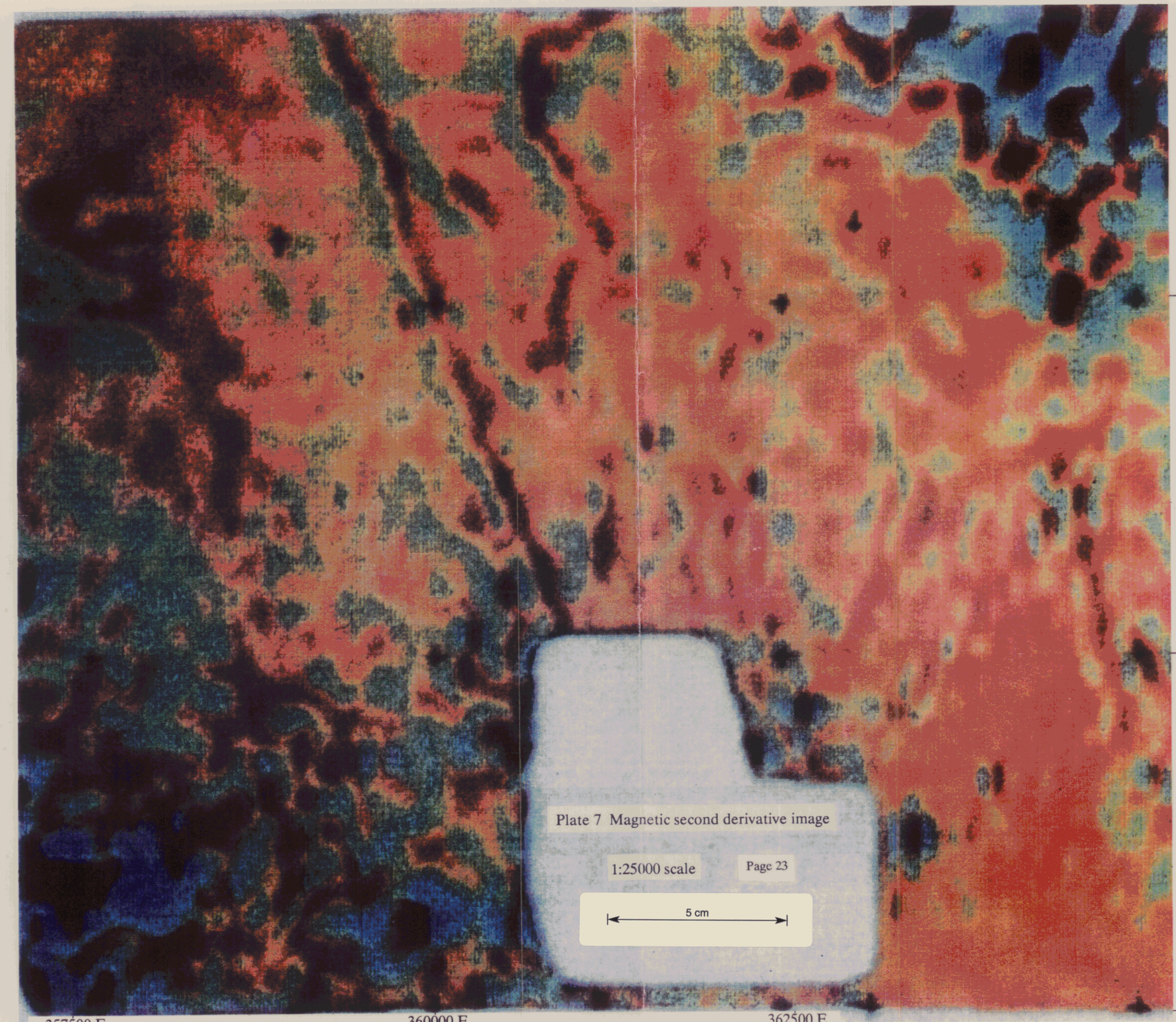
Plate 5 Magnetic gradient image 1:25000 scale

5 cm

063112


5365000 N
5362500 N
5360000 N
357500 E
360000 E
362500 E
Plate 6 Magnetic second derivative image
1:25000 scale
Page 22
5 cm

063113


5365000 N
5362500 N
5360000 N
357500 E
360000 E
362500 E
Plate 7 Magnetic second derivative image
1:25000 scale
Page 23
5 cm

SURVEY BOUNDARY

RENISON MINE LEASE

EL 101/87

EL 13/88

EL 9/66

EL 42/87

PASMINCO LEASES

ABERFOYLE LEASE

OCEANIA LEASE

CRA LEASE

CROWN LAND

STATE FOREST

MINE OR PROSPECT

92-2376.

C63114

RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

DRAWN	B.W.W.
CHECKED	L.D.K.
DATE	MAR., 1990

ZEEHAN / RENISON MINE LEASE

LOCATION PLAN

5 cm

SCALE 1:25,000

357 500mE
145°18'E
360 000mE
145°20'E
362 500mE
145°22'E
5370 000mN
5367 500mN
41°50'S
5365 000mN
41°52'S
5362 500mN
41°54'S
5360 000mN

RENISON MINE LEASE

SURVEY BOUNDARY

EL 42/87 ZEEHAN

SURVEY BOUNDARY

EL 42/87 ZEEHAN

5521/051B

5521/051

SURVEY BOUNDARY

SURVEY BOUNDARY

063115

5 cm

AIRBORNE SURVEY SPECIFICATIONS

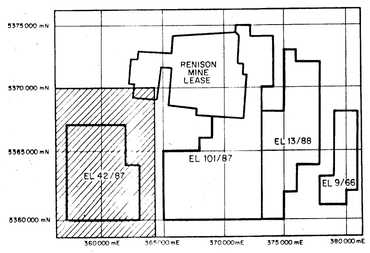
MAGNETOMETER	Cesium Vapour optical absorption. Sensitivity 0.05 nT
RECORDING INTERVAL	0.1 sec (approx 5m sampling) @ mean ground speed of 180 km/hour
DATA RECORDING	Geoterrex MADACS acquisition system. Digital to magnetic tape
NOMINAL TERRAIN CLEARANCE	Sensor in towed bird below helicopter at 75 m.
NOMINAL LINE SPACING	Traverse Lines 150 m. Tie Lines 1.5 km.
FLIGHT PATH NAVIGATION	Visual using 1:15,000 black and white enlargements of high level photography
FLIGHT PATH RECORD	Automatic 35mm continuous tracking camera

RESIDUAL MAGNETIC CONTOURS

Grid notation refers to Australian Map Grid Zone 55
Magnetics : Tieline levelled
IGRF (1985) : Removed, datum 2000 nT added
Grid mesh size : 25 x 25 metres
Contour Interval : 10,100,1000 nT

TN MN 12.7°

SHEET INDEX



RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	B.W.W.	EL 42/87 ZEEHAN
DRAWN	L.D.K.	
DATE	APRIL, 1990	RESIDUAL MAGNETIC CONTOURS
CHECKED	B.W.W.	92-3379.

SCALE 1:10,000 m 0 100 200 300 400 600 PLATE 9

357500mE 145°18'E 360000mE 145°20'E 362500mE 145°22'E

5370000mN

RENISON MINE LEASE

5367500mN 41°50'S

SURVEY BOUNDARY

EL 42/87 ZEEHAN

382 (300)

382

373

370 (0)

383 (0)

381

5365000mN

366

EL 42/87 ZEEHAN

SURVEY BOUNDARY

41°52'S

363

363

361

359

360

358

364 (0)

357

365 (25)

356

5362500mN

354 (0)

355

352

353 (0)

5521/051

5521/051B

BOUNDARY

5360000mN 41°54'S

SURVEY BOUNDARY

357500mE 145°18'E 360000mE 145°20'E 362500mE

063116

5 cm

LINEAR ANOMALIES

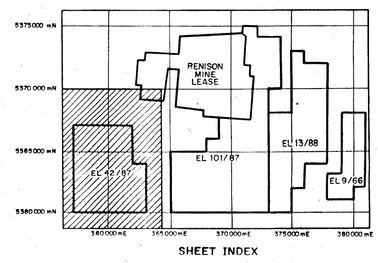
DISCRETE SOURCES

COMPLEX ZONE

(120) INTERPRETED DEPTH

32 ANOMALY REFERENCE NUMBER

LINEAMENT



SHEET INDEX

RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

DRAWN	B.W.W.
TRACED	L.D.K.
DATE	APRIL, 1990
CHECKED	B.W.W.
APPROVED	
Reference	

EL 42/87 ZEEHAN

MAGNETIC INTERPRETATION

92-3379.1

BASE PLAN No.

OVERLAY PLAN

SCALE 1:10,000 m 0 100 200 300 400 600m

PLATE 10

APPENDIX 5

Geological notes on Sylvester and Parting Lake grids (D.S. Simpson).

Appendix

Rock-type descriptions

for

Zeehan E.L. mapping

covering Sylvester and Parting Lake Grids

Oonah Quartzite and Slate (The Cambrian)

Quartzite

This is generally an equigranular rock fine-grained with quartz usually about 0.5mm diameter. Variations occur from a saccharoidal massive rock to micaceous, the most common being a slightly micaceous quartzite. Weathers to a whitish exterior suggesting feldspar or clay contact.

Slate

Generally light to dark grey micaceous rock - low state of metamorphism. Shows a well developed schistosity. Grades upwards to phyllite.

Phyllite

Highly cleaved equivalent of the siltstone or slate seen elsewhere. Well developed in the Comstock area where lustrous cleavage planes are developed. Intensity of cleavage development appears to increase towards the south.

Siltstone

Usually dark grey to black fine-grained massive to thinly-bedded rocks which alter-pale with quartzite beds. Often tough but also strongly weathered in some locations to a silty clay.

In this weathered state small samples can be confused with some Crimson Creek rocks.

Spilite

These rocks are a darker greenish-grey when fresh, usually displaying a distinct vesicular texture with vesicles up to 2 or 3 mm diameter. Groundmass is generally fine with textures invisible to the naked eye.

In the weathered state this rock is predominantly a yellow-brown clay but often displaying dark vesicular fillings.

Where no vesicular textures are developed the weathered rock is difficult to distinguish in the field from some of the weathered Cambrian Crimson Creek sequence. Both form an orange-yellow clay.

The rock is occasionally pyritic for example near the workings between the Tasmanian Tram and the Comstock tailings dam.

Limestone/Dolomite

This is light grey, generally massive rock which is locally re-crystallised in the Comstock area. In the North Comstock area the rock is strongly talc altered. Sulphide mineralisation consisting of pyrite, sphalerite and galena is locally abundant in the carbonates.

Shale

Dark grey to black sometimes graphitic - developing a weak cleavage. Trace syngenetic pyrite locally developed.

When weathered these shale often appear to be a buff or off-white colour.

With higher metamorphic grades to slate.

Cambrian Rocks

Crimson Creek - Cc.

In the fresh state these rocks are predominantly dark grey or dark brown tuffaccous sandstones and siltstones. In the weathered state they form a yellowish-brown to pinkish brown stiff clay. When partly weathered the rocks display few visible bedding features.

Cg - Gabbro

This is predominantly a coarse-grained crystalline rock composed largely of plagioclase and hornblende - the rock is occasionally chloritised - Occasional hand specimens are magnetic.

Fine grained textures are developed close to the contact with the Oonah Quartzite.

Permian Rocks

Tillite

This is a fine-grained light grey silty rock with a minor clay component. Generally massive. Dropstones are predominantly quartz.

APPENDIX 6

An Interpretation Form of Heemskirk Granite, Zeehan E.L. 42/87

063122

LEAMAN GEOPHYSICS
Survey Review, Specification, Reduction, Interpretation
Gravity, Magnetic and Seismic Methods
Structure and Prospect Evaluation

Registered office:
3 MALUKA STREET, BELLERIVE, TAS. 7018
All correspondence to:
GPO BOX 320 D, HOBART, TAS. 7001
Telephone: (002) 44 1233
Fax: (002) 44 6674

AN INTERPRETATION FORM OF HEEMSKIRK GRANITE

ZEEHAN EL 42/87

for
RGC Exploration Pty Limited

by
Dr. D.E. Leaman

October 1990

ZEEHAN

N.B. MAP 1 = PLAN 20
MAP 2 = PLAN 21
MAP 3 = PLAN 22

063123

CONTENTS

FIGURES

All figures follow the text

MAPS

Maps are included in separate pockets.

063124

SUMMARY

Review of extant gravity data in the Zeehan area has enabled some refinement of previous models and concepts of the form of the Heemskirk Granite in the region between its exposure at Mt Agnew and the township of Zeehan.

This interpretation, although limited by assumptions concerning the bulk properties of the Oonah Formation and the scale and nature of the syncline of Lower Palaeozoic rocks east of Zeehan, has defined several definite elements of the granite form.

There is a clear correlation between granite form and many observed fault and fold patterns across the licence area. It may be inferred that the granite has been affected by, and modified high level manifestations of, pre-existing fractures.

There is also a positive association with known mineralisation, particular forms of the granite and those structures which presented primary controls on intrusion. Some of these are not obvious in surface mapping which may not distinguish them due to existence of other faults, or due to their modification upon intrusion or deformation.

The granite within the area is ribbed; two sub E-W features extend from exposure to the west, and one N-S rise forms a shelf beneath the Zeehan mineralised field. The location of this rise and the Zeehan Syncline may have been controlled by a pre-existing N-S structure. In general, however, the granite is relatively smoothly formed and few cupola or wall abnormality sites or fractures can be inferred. Those which have been identified should be matched with known distributions of carbonates.

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INTRODUCTION

EL 42/87, Zeehan, is located immediately west of Zeehan township in western Tasmania. It includes the town (see Figure 1).

This important mineralised area contains an array of deposits which have been previously worked. It also includes some tin deposits, such as that at Queen Hill, which have been defined but which are undeveloped.

In order to understand the relationships between these deposits and the Devonian Heemskirk Granite, exposed a few kilometres to the west, gravity data have been reviewed and interpreted.

Previous interpretations of more regional and indicative nature have been reported which demonstrate the efficacy of this approach. These were summarised in Chapter 14 of Leaman & Richardson (1989a). Figure 2 presents the net conclusion of this previous work which shows that the granite was inferred to shelve eastward toward Zeehan at depths less than 2 to 4 km. This diagram suggests the general relationship between mineralisation and granite shelf but does not provide any specific guidance for prospect or EL evaluation.

This report examines the gravity data within this area in order to provide a more refined and specific description.

The gravity data used were obtained from the state gravity data base (TASGRAV) maintained by the Department of Mineral Resources and Energy. Map 1 presents a compilation of this data for the area centred on the licence. All Bouguer reductions include a 22 km terrain correction and use of crustal density 2.67 gm/cc. The nominal station spacing is about 400-500 m and stations are shown in Map 2.
Map 2 presents the residual gravity field after removal of the deep crustal and oceanic components as defined by Leaman & Richardson (1989b). This presentation provides a normal relativity of response patterns free of regional gradient distortions and forms the basis for the present interpretation.

INTERPETATION

ROCKS AND ROCK PROPERTIES

No specific study of rock properties has been undertaken in order to provide the present interpretation. All work has been referenced against the geological maps of Blissett & Gulline (1962) and the recent compilation by RGC Exploration (presented as a base to some figures).

Late Precambrian rocks of the Oonah Formation are exposed across much of the area. These include carbonates and various other sediments but are intensely deformed and faulted. A gross anticlinorium extends E-W across the area. Oonah structures and distribution is truncated in the east by extensive faulting and a large syncline with a N-S axis. The core of this structure includes Devonian units and the oldest parts of the limbs include Cambrian rocks. The association between structures and these rock suites is more complex along the southern margin of the EL.
Leaman (1986), and Berry and Crawford (1988), have suggested major thrusts within this association of structures. Eastward translation of the Oonah Formation across a large part of the Lower Palaeozoic sections was implied by Leaman (1986).

Nominal rock properties based on general experience of the exposed materials have been employed but tested against the controls afforded by the magnitude of anomalies across the granite boundary exposed west of the EL.
Line 5362 (Figure 14) provides an example of these tests to suggest that the appropriate bulk contrast between granite and Oonah Formation - as a package - is of the order of 0.12 gm/cc.
Since the bulk density of the granite is of the order of 2.61 to 2.63 gm/cc then the implied bulk density of the Oonah suite is about 2.75 gm/cc. This is consistent with sample determinations obtained during the Mt Read Volcanics Project.
The Cambrian rocks are more variable but have not been distinguished for this interpretation.
Ordovician, Silurian and Devonian rocks are also variable but generally much less dense. Siliceous rocks may have densities of 2.5-2.55 gm/cc while carbonates may be 2.74-2.84 gm/cc. Examination of Maps 1 and 2, however, shows that the bulk effect is strongly negative showing that the bulk contrast for these rocks as a group is much less than both the density of reduction and the density of either the granite or the Oonah Precambrian and Cambrian rocks.

There is considerable scope for re-assessment of the bulk density chosen for these rocks and of review of particular portions of the disrupted syncline. Bulk densities assumed lay in the range 2.55-2.60 depending upon the exposed proportion of Gordon Limestone.

FEATURES OF GRAVITY FIELD

Map 2 displays all the salient features of the gravity field. Figures 3 and 4 present this map with and without a geological basemap.

The gravity field is approximately two dimensional west of 361 000 mE although becoming increasingly negative as the granite exposure is approached. The anomalies become positive to both north and south but the effect is most pronounced to the south.

Several small perturbations may be recognised in the field but the significance of these is not immediately obvious. The most marked occurs near Queen Hill and Sylvester.

. The gravity response to north and south of this structure shows that the Bell Shale is much denser than all other rocks, except perhaps the Gordon Limestone, since it only occurs to the south and there is a marked reduction in anomaly.

Apart from the E-W and N-S trends noted above a number of other trends may be recognised.
These trends, defined by marked gradients or distortions of the field, can be seen to correlate closely with intensely deformed portions of the area, or known fault systems (Figures 4 and 5).
It will be noted that many gravity features are slightly rotated and often only approximate mapped structure positions, or stress a particular structure. Review of these relationships shows which faults are significant regionally.

. Some minor faults have been mapped within the syncline and there is some concentration of folding and fold axis rotation west of Queen Hill but the gravity field is definitive. All of the minor structures indicated are impressions controlled by a more fundamental feature which has also shaped the intrusion from the west.
Several other examples of this type are evident and largely explain some of the convolutions in folding and shapes of many faults.
All the surface structures can be seen in this context to be related to a small group of very large structures whose position is only defined with any certainty using the gravity data.

METHODS

An array of observed profiles was established based on Map 2. These profiles were designed to provide a representative sampling of semi-regional anomaly forms. The nominal line spacing was about 1 km and may be contrasted with the nominal station spacing of 0.5 km. This report represents a preliminary interpretation which is also an order of magnitude upgrade of previous interpretations. It is not an overinterpretation of the data available.

The N-S and certain axial E-W profiles were then modelled using simple two dimensional methods in order to scale the general relief of the granite and estimate the order of the density contrast between Oonah Formation and granite. This was achieved by extending some lines westward to Mt Agnew (e.g., line 5362, Figure 14). These simple methods were also used to test whether the density contrast applied over considerable depths, say greater than 3 km, and whether it was possible to model viably using the granite density alone as a bulk reference.
The initial tests showed that a bulk contrast of about +0.12 gm/cc should be used between granite and Oonah rocks - although some minor variations are permissible and likely. It was also found that rocks with comparable densities extend to considerable depth around the granite.

Since the form of the granite is irregular and generally elliptical in two directions three dimensional methods must be employed to generate reliable proportions for the form of the granitic mass. Two dimensional methods are quite unreliable for many E-W profiles. The information derived from 2D tests and previous work was used to produce an initial 3D model which was passed through six iterations to produce the solution offered in this report.
Each profile was examined after each iteration and tested for consistency in both body geometry and curve fit parameters. The latter provide a crucial test of model and assumptions and must be consistent for all lines of the array. The difference between the zero shift and the observed and calculated difference is a measure of this and has been found to be about 14.5 mGal for this data set. The deviation for best fits is about 0.3 mGal which is close to the noise level in the data.
Note that a residual data set should yield a near zero difference, not 14.5 mGal, and would if the density contrasts were referred to the Bouguer density; viz -.06 gm/cc for granite and +0.07 mGal for Oonah Formation. Modelling has been simplified by using a single contrast.

Basic review of the profile set soon revealed the impact of the syncline. This anomalous source generates large responses which are not simply defined due to the presence of many distinct units. Since this study emphasizes the granite no more effort was directed toward resolution of the sources within the syncline than necessary to generate an approximate "equivalent" source for the effect. This is clearly a crude model which

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generally satisfies the anomalies observed but is not geologically valid or true to all unit exposures. No structure contour model of this source is included in this report since it is a geophysical compromise and should not be used to control geological sections. Some approximate indications of the scale of the structure are indicated in Map 3 where the nominal base of the Ordovician rocks is shown as a depth with respect to the surface.

There is clearly scope for considerable refinement of this part of the analysis but this would only be justified if the far eastern edge of the licence area is found to contain important or mineralised structures.

DISCUSSION

Eleven profiles of the profile array established to evaluate the gravity field and define the form of the Heemskirk Granite in this area are shown in Figures 6 to 16. All granite profiles shown represent the current status of the 3D model. Further refinement of this model (Map 3) is not justified until some control is established within the study area, or the contrast assumptions can be significantly revised.
As noted above there is scope for review in the vicinity of the syncline since the responses of both granite and syncline may locally overlap and these may not have been properly separated. This may be achieved by fuller modelling of the syncline and contrasting various elements of this structure with the granite response. This cannot be justified in a preliminary study since this process would require more time than allocated to the present work. Most of the conflict and ambiguity lies east of the EL in any event.

(Any evaluation of the granite form between the Murchison Highway and Renison, and Zeehan, is not possible without considering and resolving these issues)

Each profile has been discussed separately in order to indicate the nature of the conflicts, issues and targets implied in different parts of the structure.

Line 357 000 mE (Figure 6).

[redacted]

The more positive deviation at the southern end of the profile reflects the mafic rocks exposed. The anomaly due to these sources is small suggesting that the bodies are thin and probably part of thrust structures as implied by Berry & Crawford (1988).

Line 358 000 mE (Figure 7)

[redacted]

The positive anomaly at 5365 000 mN is very localised and no mapped unit can explain it. A local dolomite or mafic unit would be required and the locality should be reviewed magnetically. It is possible that this represents a skarn around the edge of the intrusion.

Line 359 000 mE (Figure 8)

This section covers the flat roof of the granite at about 2 km depth. [redacted] (see Map 3, Figure 17).

Line 360 000 mE (Figure 9)

This section is a more extreme version of line 359E. The granite is narrower and more abrupt but lacking in protrusions. [redacted]

No satisfactory solution could be found for the gravity field at the northern end of this profile. The field appears more negative than can be explained by granite alone unless it is more extensive than the profile array suggests. Part of the problem may relate to the coverage of stations - or the syncline and its contents may extend into this region as an overthrust block (see Leaman, 1986). This option has not been considered further here but may be important prospectively since the Ordovician carbonates may be present.

Line 361 000 mE (Figure 10)

The model generally satisfies the straightforward condition for all rocks and the granite south of the influence of the syncline rocks. The rocks of the syncline affect the section in a peripheral manner but this has not been resolved. [redacted]

[redacted]

Line 362 000 mE (Figure 11)
The issues posed by this section are an extreme version of those discussed for line 361E. The section samples the syncline and a general outline is suggested. Note that the scale of the structure and any biasses introduced by different rock types have not been fully assessed or modelled and small changes in density balance can satisfy the various levels of the observed data between 5363 and 5367 000 mN.

Zeehan and the nearby mineralised field, however, lie within the fracture fan defined by the southern margin of the granite. This zone includes a positive anomaly which may be associated with rocks of the Crimson Creek Formation.

Line 5360 000 mN (Figure 12)
This section samples the southern wall of the granite and provides a good representation of the N-S rib which extends south from Zeehan. The relief of this feature can be established independently of the effects of the overlying synclinal rocks due to information provided by the N-S profiles. The synclinal model requires some local, high frequency modifications only.

Line 5361 000 mN (Figure 13)
[redacted]. The effect of the syncline is satisfactorily separated and not a problem.

Line 5362 000 mN (Figure 14)
[redacted]

Line 5364 000 mN (Figure 15)
[redacted]

[redacted]

The effect of the syncline is satisfactorily fitted using a contrast of -0.2 gm/cc (implied density 2.54) in a zone lacking Bell Shale. This suggests that the Silurian rocks dominate the effective contrast of the syncline.

Line 5366 000 mN (Figure 16)
This profile along the northern wall of the granite mass complements that along the southern wall (Figure 12). The hammer head style ribs which extend N-S beneath Zeehan are elongated north and south of the main nearly E-W axis of the intrusion. This is a primary feature and the syncline is intimately associated with it. Structures controlling the location and disposition of the syncline have also controlled intrusion of the granite.

The syncline effect is generally fitted although denser units are implied toward the eastern side of the structure.

The interpretation of granite form has been summarised in Map 3 and Figure 17. [redacted]

The association between granite form and surface geology is shown in Figure 18, and between model and structural trends in Figure 19.

Possible target zones based on fracture and cupola form projections are suggested in Figure 21. The concepts used to develop this zonation are indicated schematically in Figure 20.

CONCLUSIONS AND RECOMMENDATIONS

The present interpretation of gravity data in the Zeehan area has established that a fat spine of Heemskirk Granite extends eastward from exposures at Mt Agnew to Zeehan at depths little more than 2 km below surface. The granite roof and walls are irregular [redacted]

The form of the granite east of Zeehan is uncertain due to the cover of low density rocks in a large syncline with a relief of at least 3 km. It is possible that the granite shelves gently eastweard to depths of the order of 6 km.

Some relatively minor anomalous effects have been recognised in the data set. Some, negative, may be due to incomplete correction but their association with critical granite shape changes does suggest the possibility of localised alteration. These sites, [redacted], are clearly worthy of inspection and perhaps some minor infill to establish whether the effect is real.
Other, positive, effects may also be important if mafic rocks can be eliminated as sources. Comparative review of magnetic data and matching of the granite forms with magnetic source depths is recommended for this purpose and it may also identify skarns.

It is likely that part, possibly a large part, of the Oonah Formation has been overthrust upon the Lower Palaeozoic rocks now exposed only in the syncline. [redacted] If this concept is correct then the distribution of surface rocks of the Oonah Formation and their particular content of dolomites may present only part of the prospectivity equation in this area since other carbonates may be present beneath them. Any magnetic analysis must consider this possibility since these concealed rocks will be much closer to the granite and well inside its aureole.

Refinement of the present interpretation is not generally justified unless the model can be tested and densities confirmed. Improvement is possible at the easting of Zeehan but requires a comprehensive review of the effects and contents of the syncline.
Isolated anomalies, [redacted], may repay more detailed survey in case these are due to fortuitous location of the stations in materials which are not mafic but mineralised. Some ground checking is also advised.

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Oct 24, 1990

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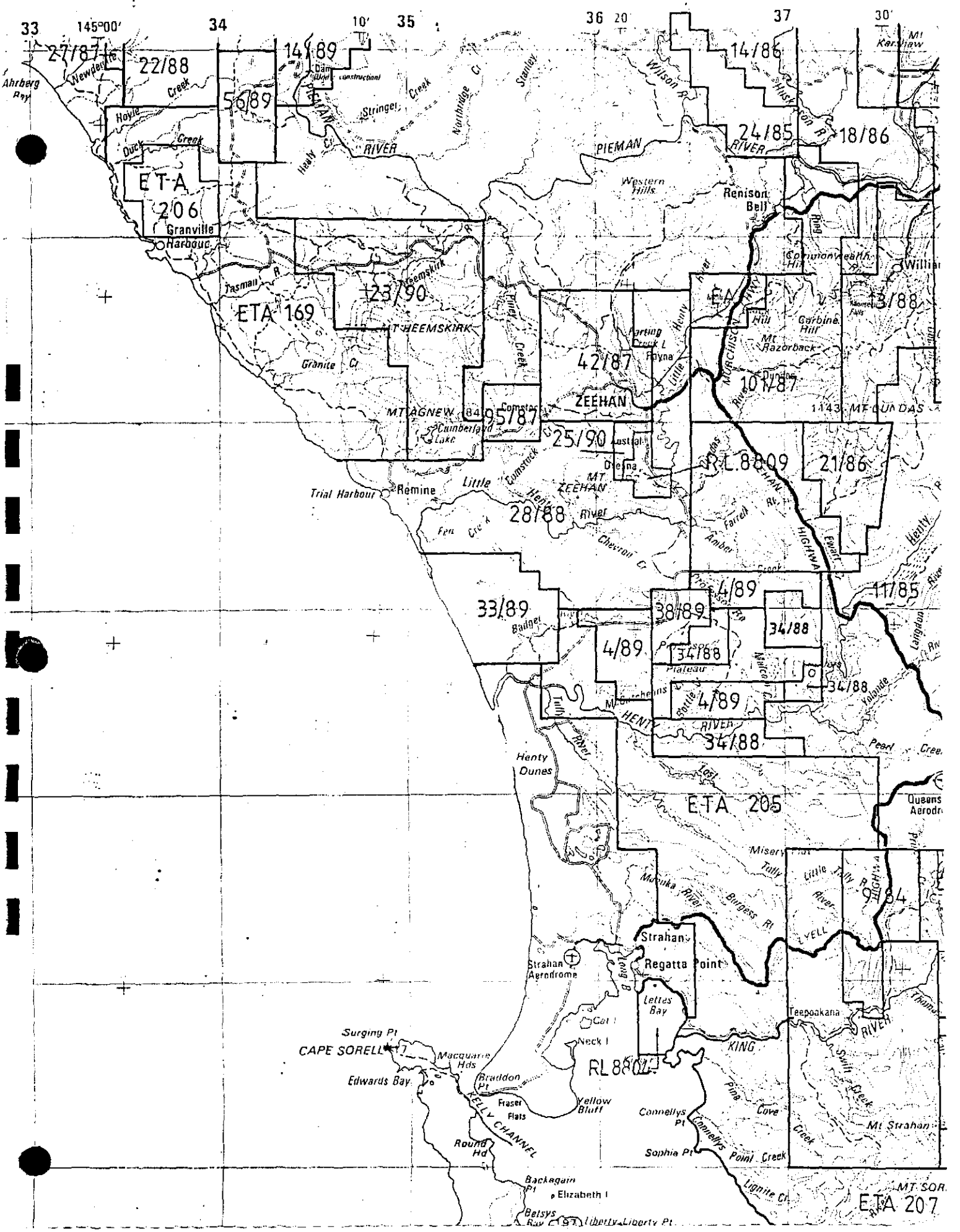

LOCATION MAP ZEEHAN EL 42/87 FIGURE 1

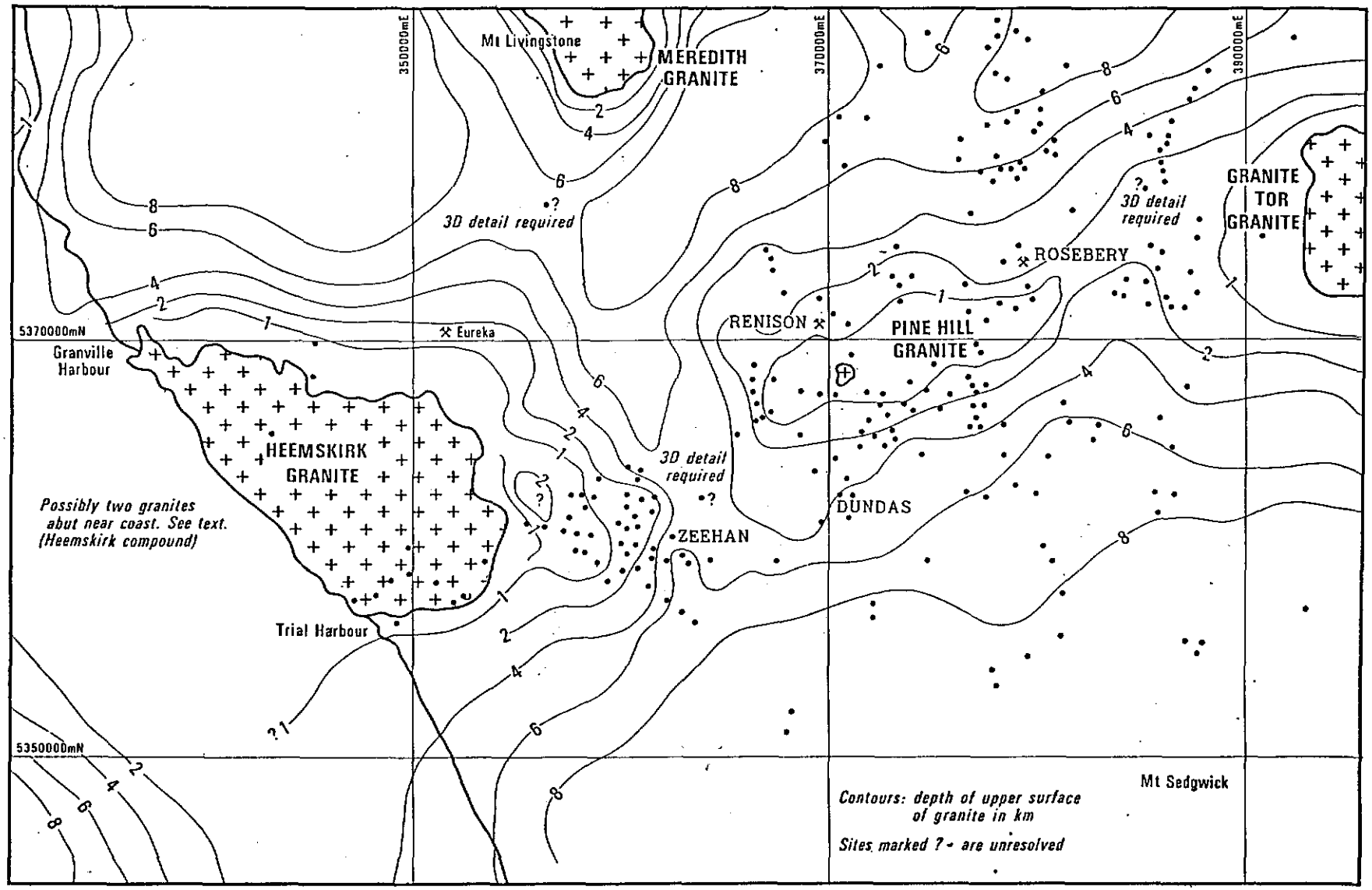

Figure 90. *Provisional interpretation of the form of the Heemskirk and Pine Hill granites. Mineralised sites (indicated •) from Leaman (1986a) and Bamford and Green (1986).*

PREVIOUS INTERPRETATION OF 'HEEMSKIRK GRANITE AND ASSOCIATION WITH MINERALISED SITES (from Leaman & Richardson, 1989a)
FIGURE 2

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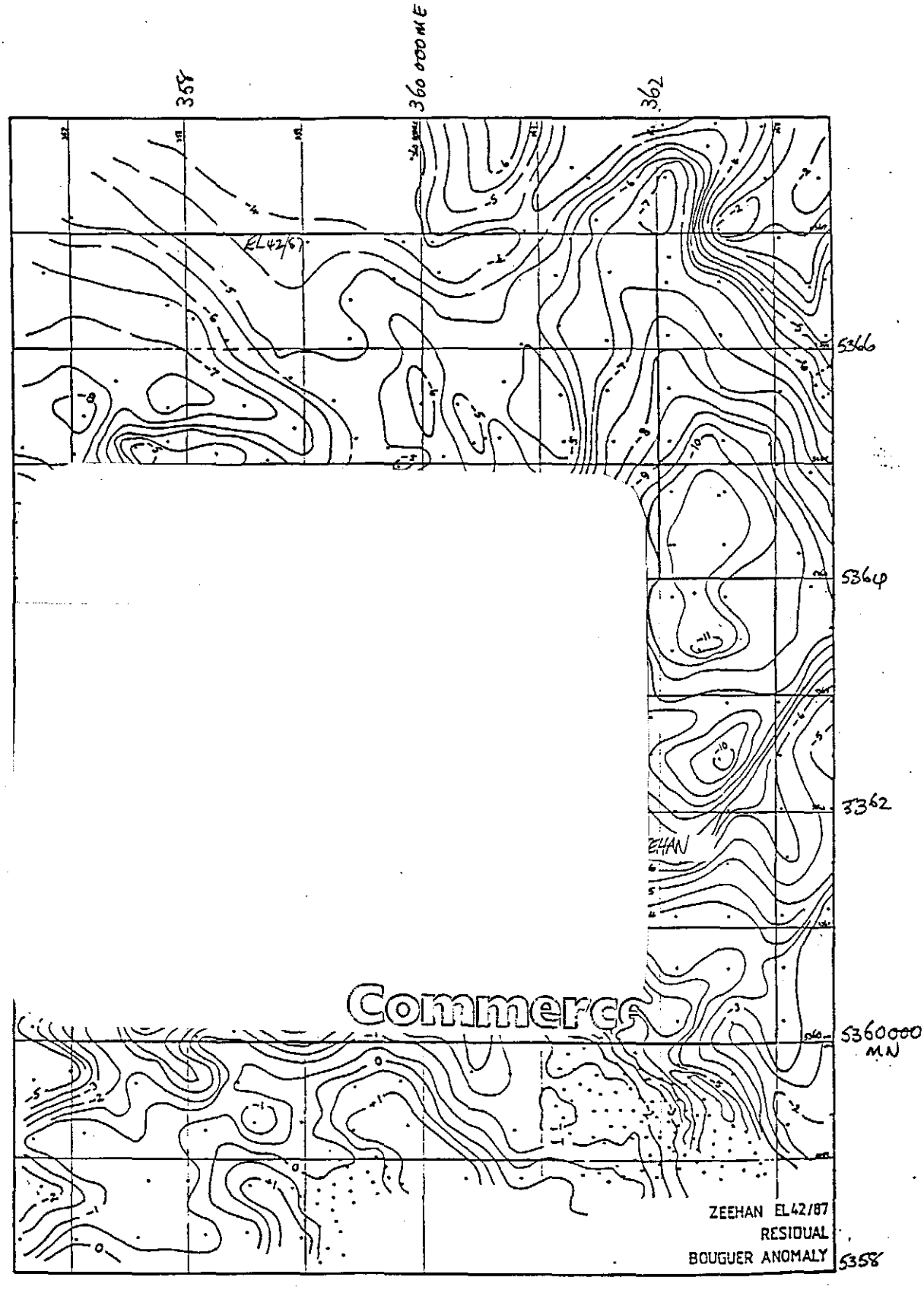

RESIDUAL BOUGUER ANOMALY ZEEHAN EL 42/87
Regional separation by method of Leaman & Richardson (1989b)

FIGURE 3

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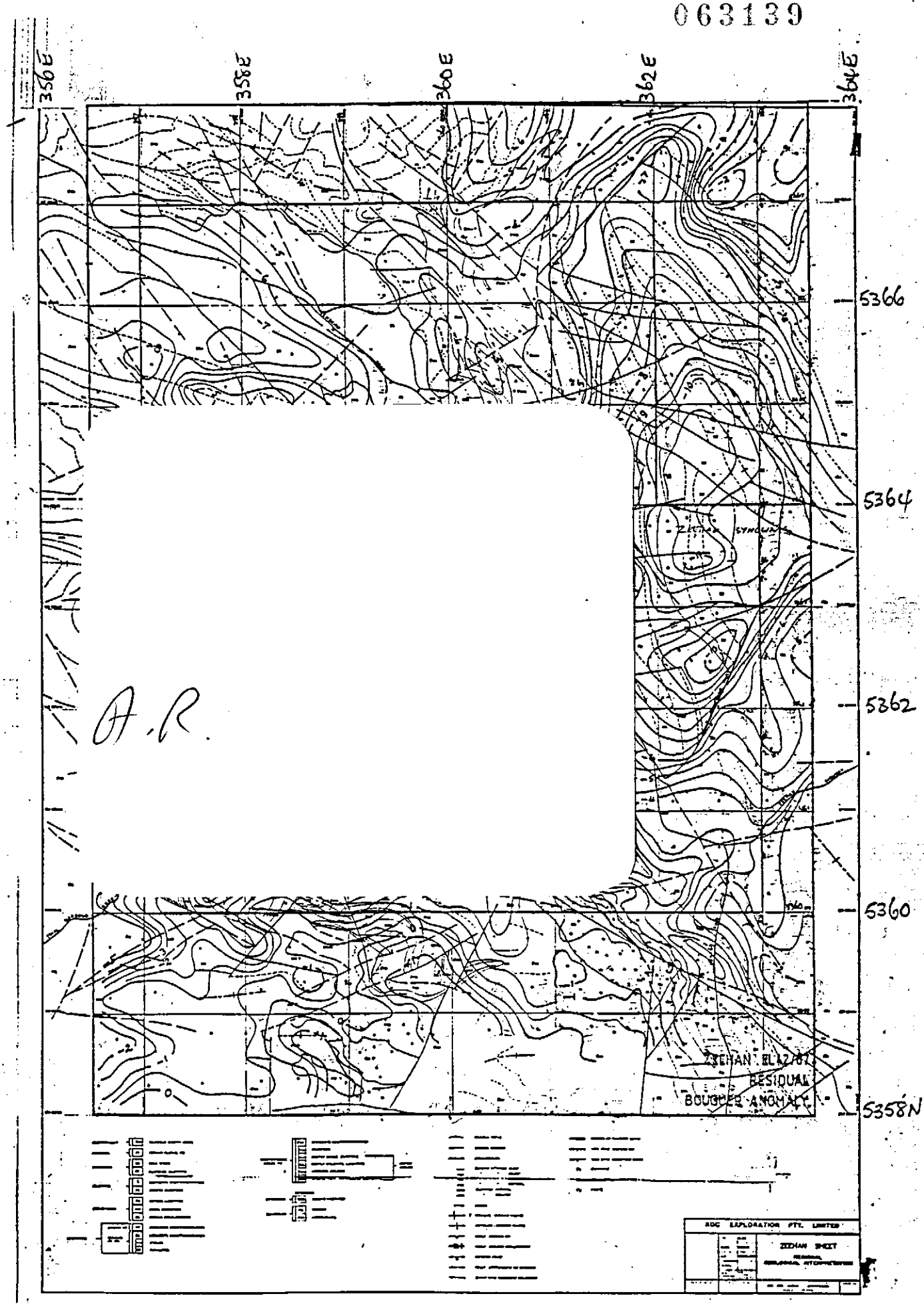
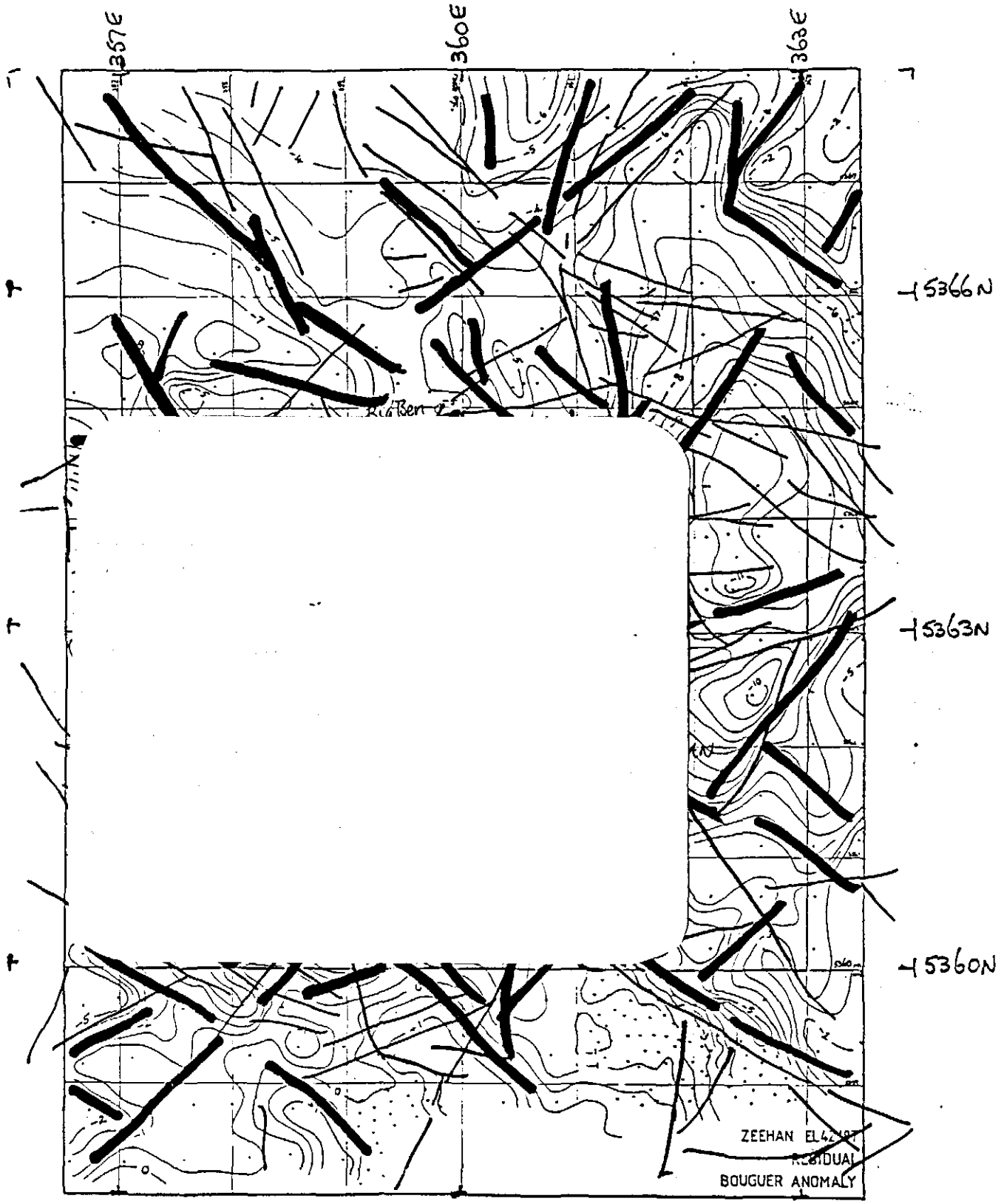


RESIDUAL BOUGUER ANOMALY AND GEOLOGICAL BASE MAP EL 42/87
Basemap by RGC Exploration FIGURE 4



TRENDS ZEEHAN EL 42/87
Light lines from geological base map (RGC source)
Heavy lines from gravity field map

FIGURE 5

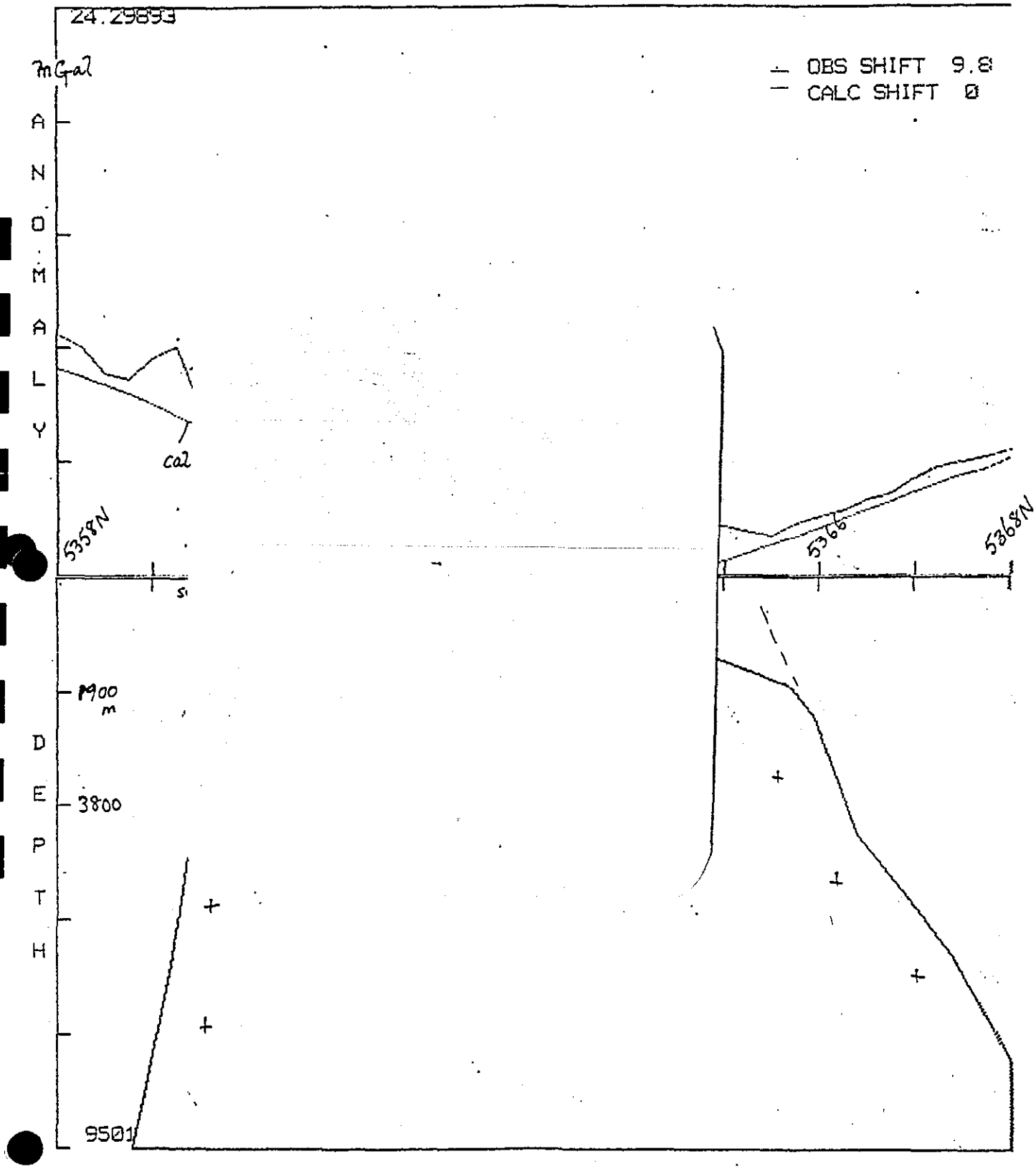
PROFILE EVALUATION
LEAMAN GEOPHYSICS

063141

357 000 mE

6 1.00 B:ZEEG7
1 1.00 B:G5AML7
2 1.00 B:G0BL7
3 2.00 B:SYN3L7

ERO SHIFT : 24.29893



ZEEHAN EL 42/87 3D MODEL LINE 357 000 mE FIGURE 6

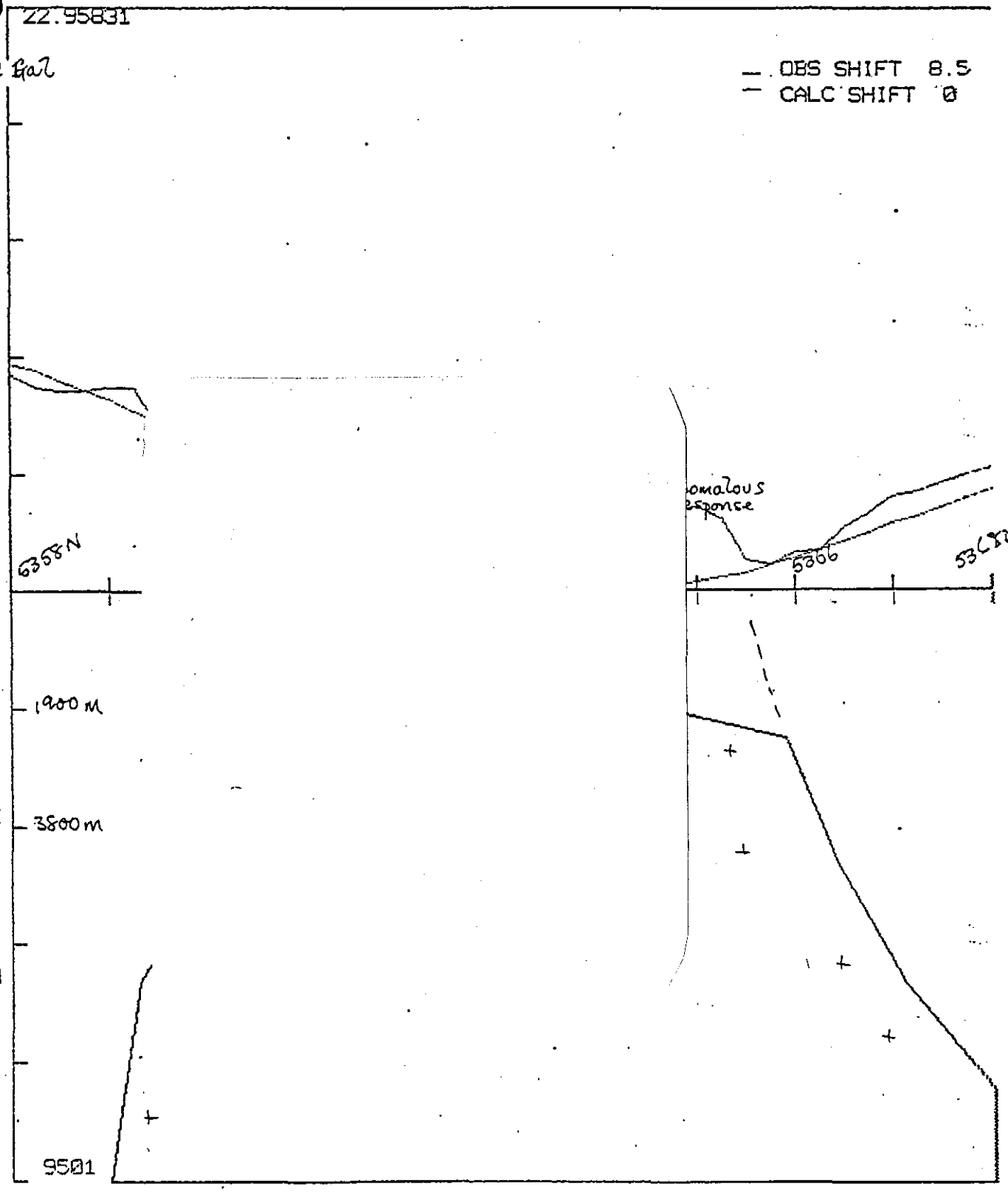
PROFILE EVALUATION
LEAMAN GEOPHYSICS

063142

358 000 mE

0 1.00 B:ZEEG8
1 1.00 B:G5ALL8
2 1.00 B:G0BL8
3 2.00 B:SYN3L8

ZERO SHIFT : 22.95831



ZEEHAN EL 42/87 3D MODEL LINE 358 000 mE FIGURE 7

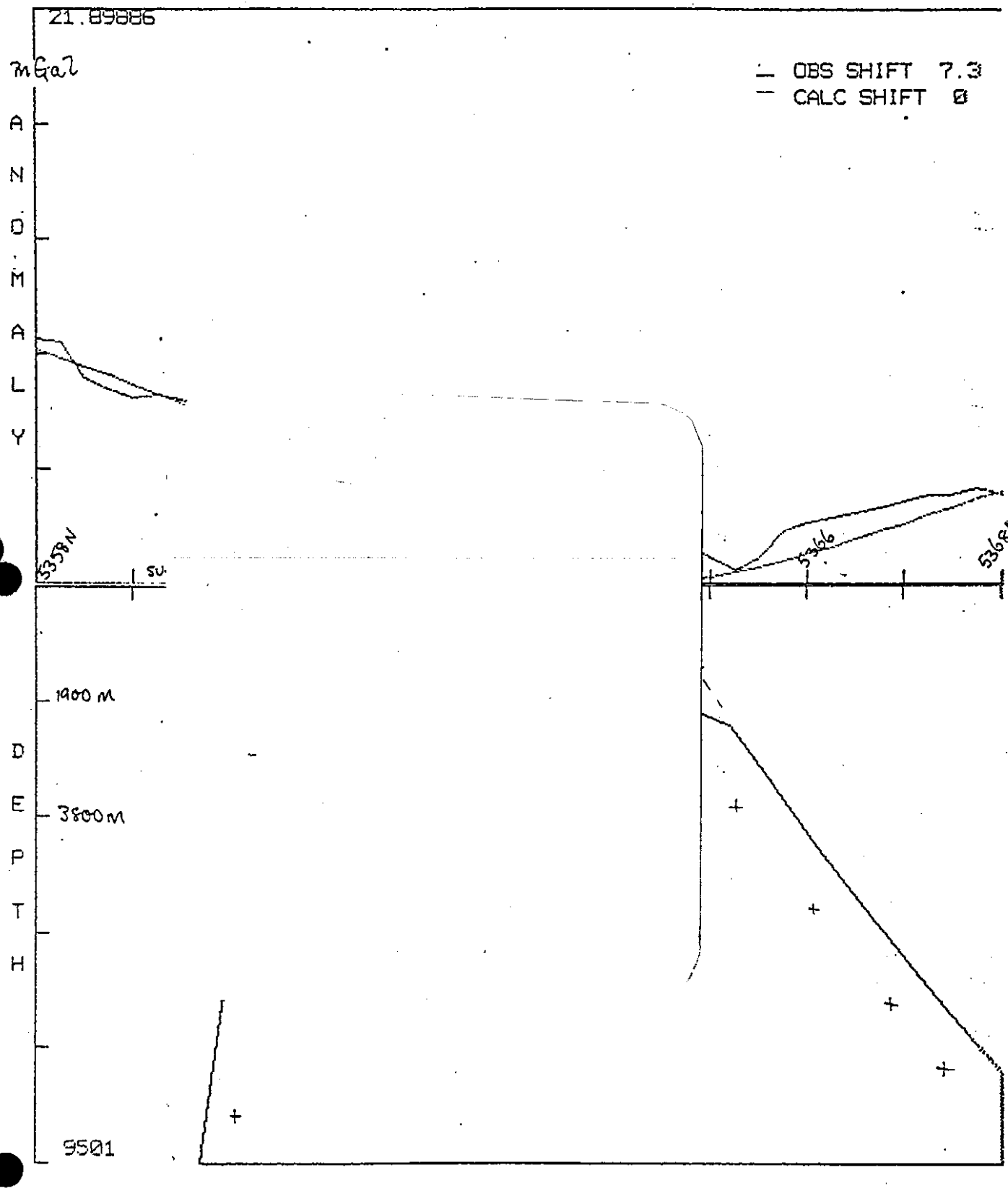
PROFILE EVALUATION
LEAMAN GEOPHYSICS

063143

0 1.00 B:ZEEG9
1 1.00 B:G5ALL9
2 1.00 B:G0BL9
3 2.00 B:SYN3L9

359 000 mE

ERO SHIFT : 21.89886



ZEEHAN EL 42/87 3D MODEL LINE 359 000 mE FIGURE 8

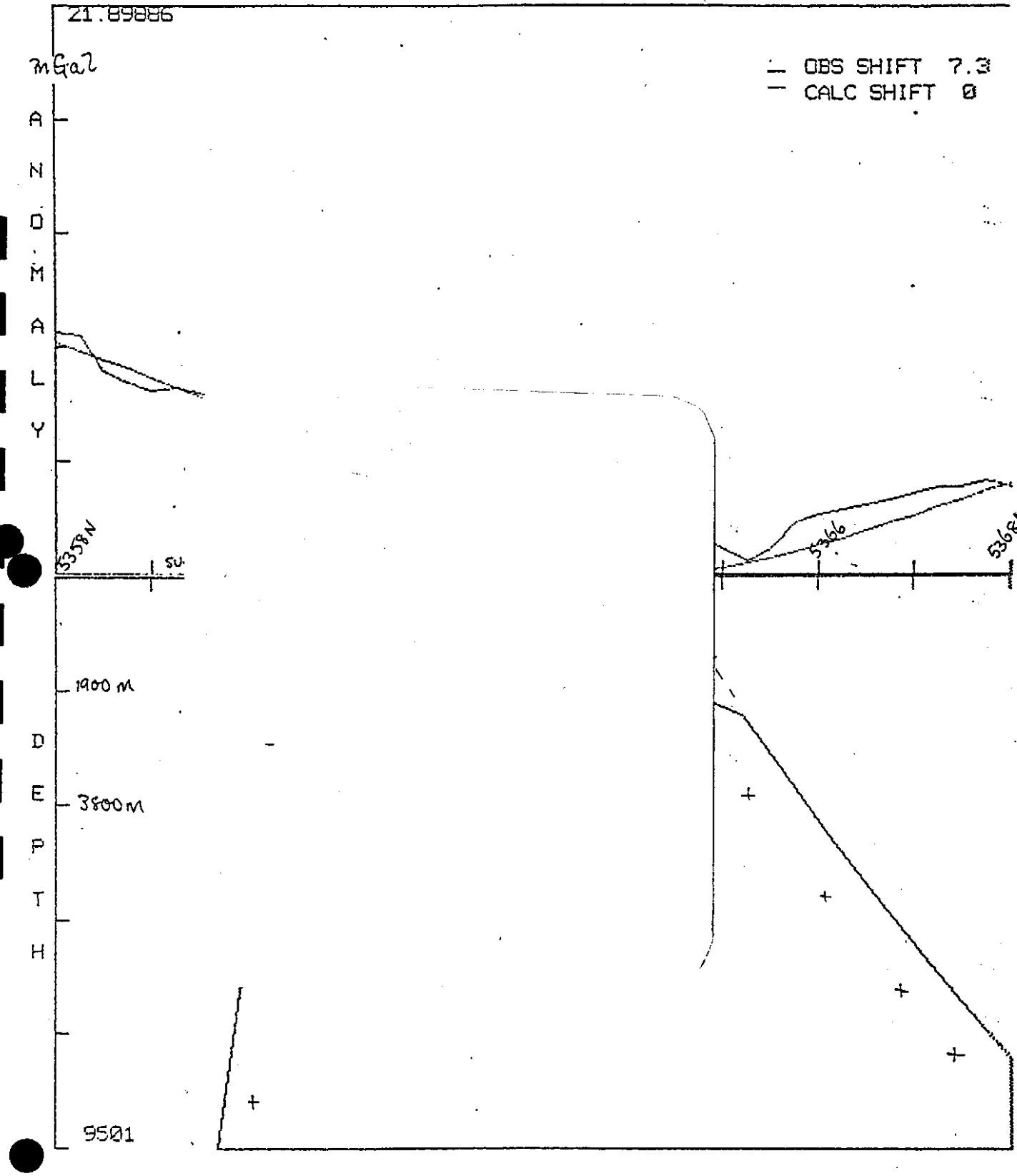
PROFILE EVALUATION
LEAMAN GEOPHYSICS

063143

0 1.00 B:ZEEG9
1 1.00 B:G5ALL9
2 1.00 B:G0BL9
3 2.00 B:SYN3L9

359 000 mE

ERO SHIFT : 21.89886



ZEEHAN EL 42/87 3D MODEL LINE 359 000 mE FIGURE 8

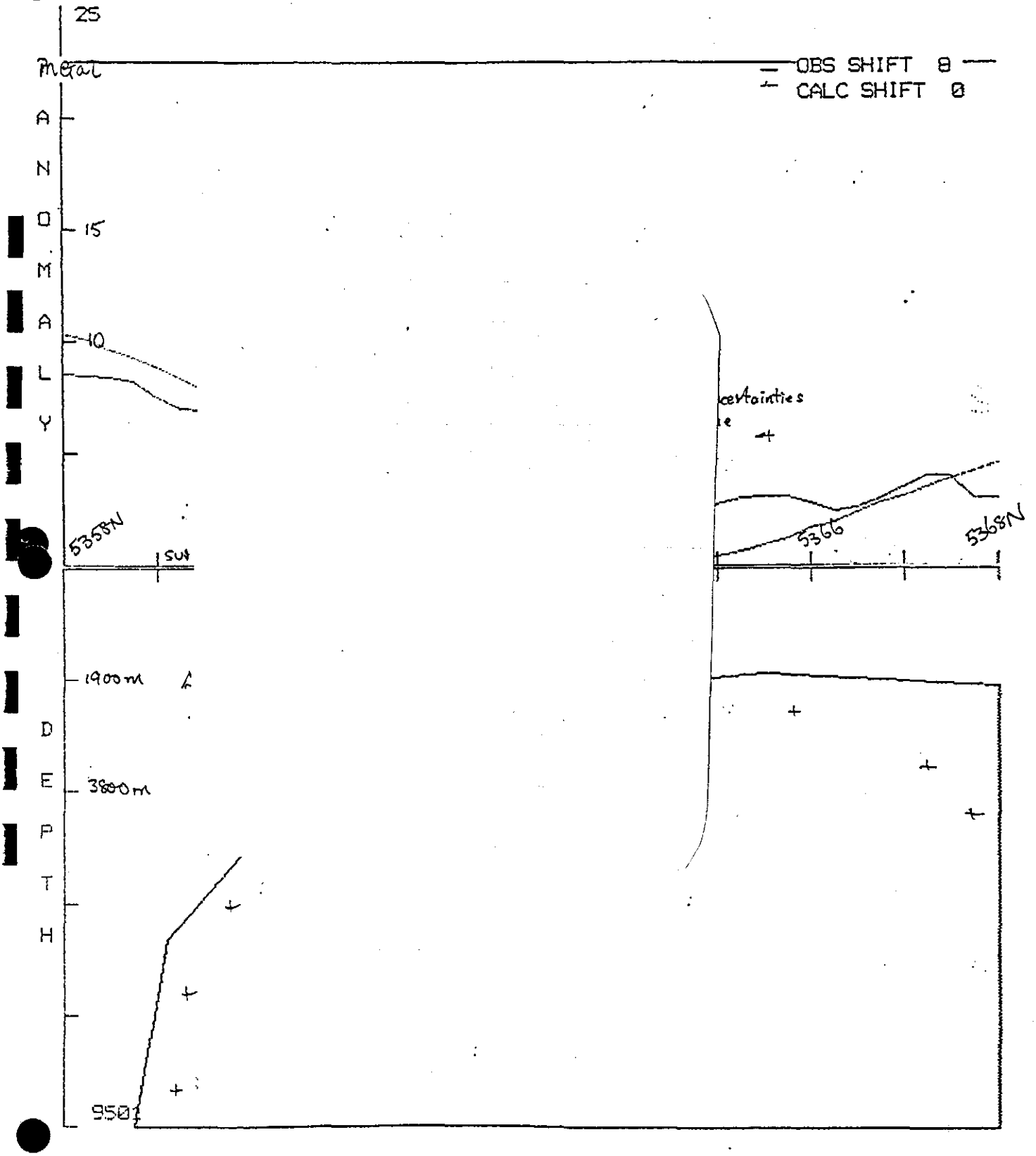
PROFILE EVALUATION
LEAMAN GEOPHYSICS

063145

0 1.00 B:ZEEG11
1 1.00 B:G5ANL11
2 1.00 B:G0BL11
3 2.00 B:SYN5L11

361 000 mE

RO SHIFT : 22.48271



ZEEHAN EL 42/87 3D MODEL LINE 361 000 mE FIGURE 10

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LEAMAN GEOPHYSICS

Survey Review, Specification, Reduction, Interpretation
Gravity, Magnetic and Seismic Methods
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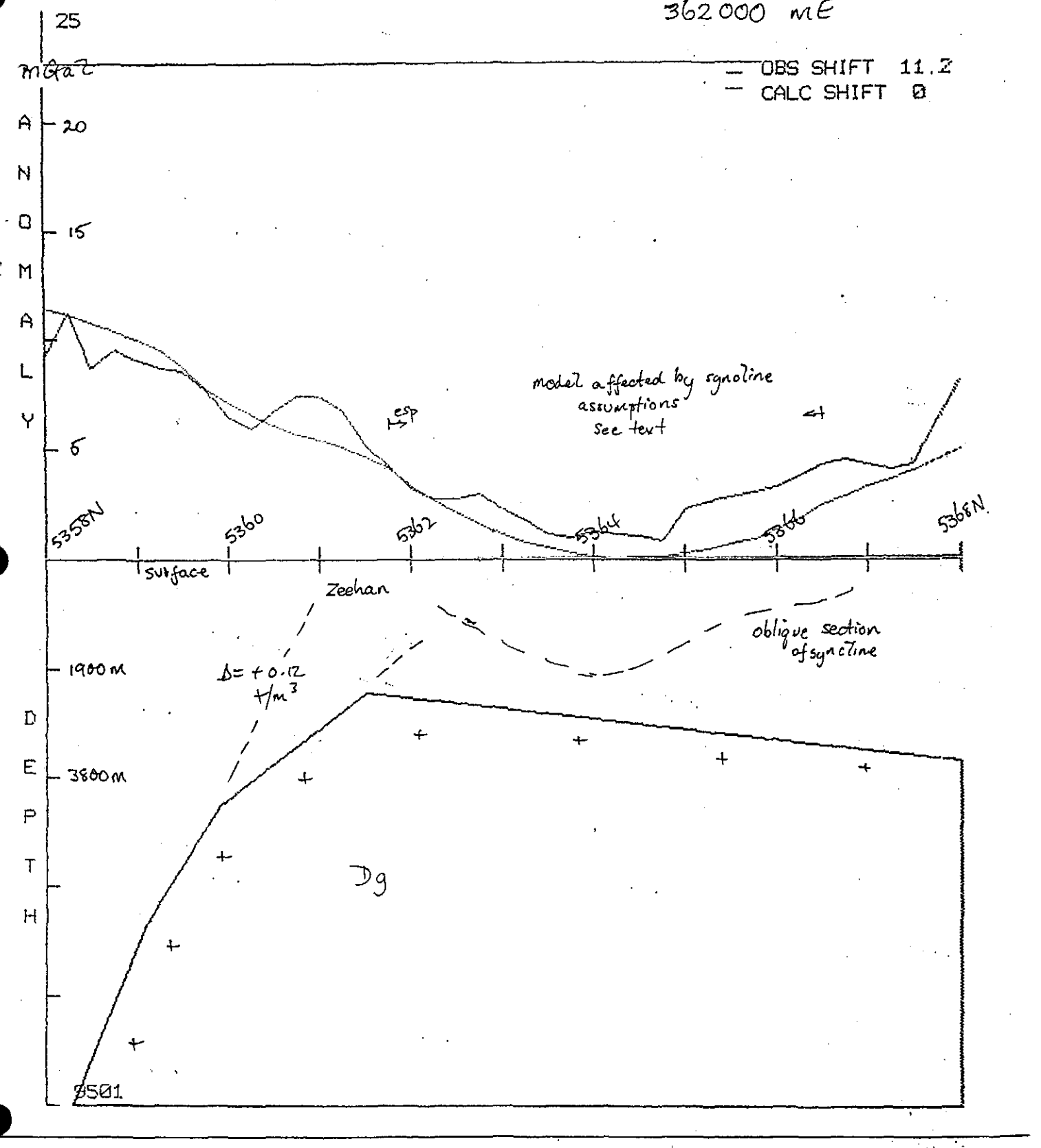


ZEEHAN EL 42/87 3D MODEL LINE 362 000 mE FIGURE 11

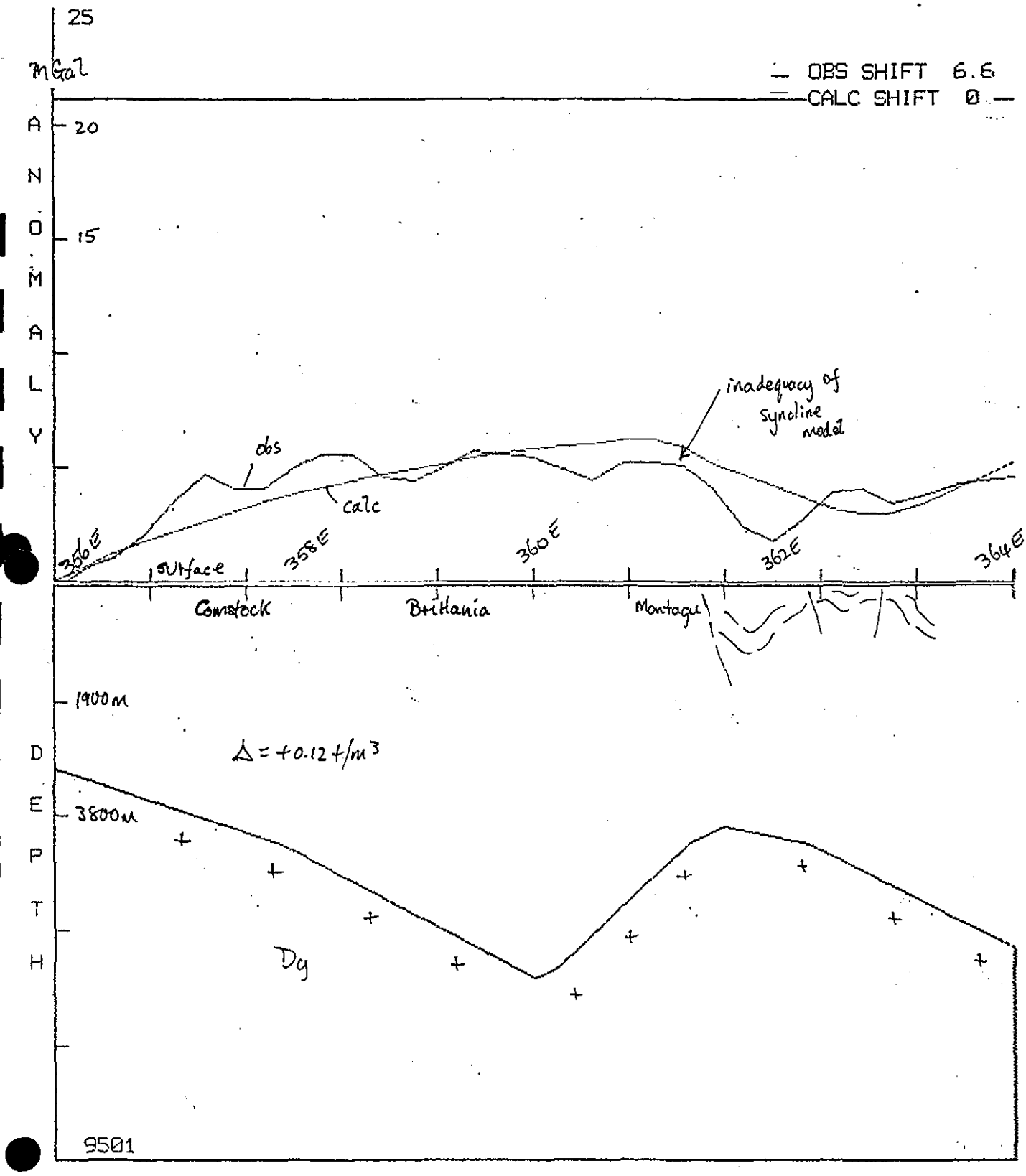
PROFILE EVALUATION
LEAMAN GEOPHYSICS

063147

0 1.00 B:ZEEG60
1 1.00 B:G5ANL60
2 1.00 B:G0BL60
3 2.00 B:SYN4L60

5360 000 mN

ERO SHIFT : 21.15616



ZEEHAN EL 42/87 3D MODEL LINE 5360 000 mN FIGURE 12

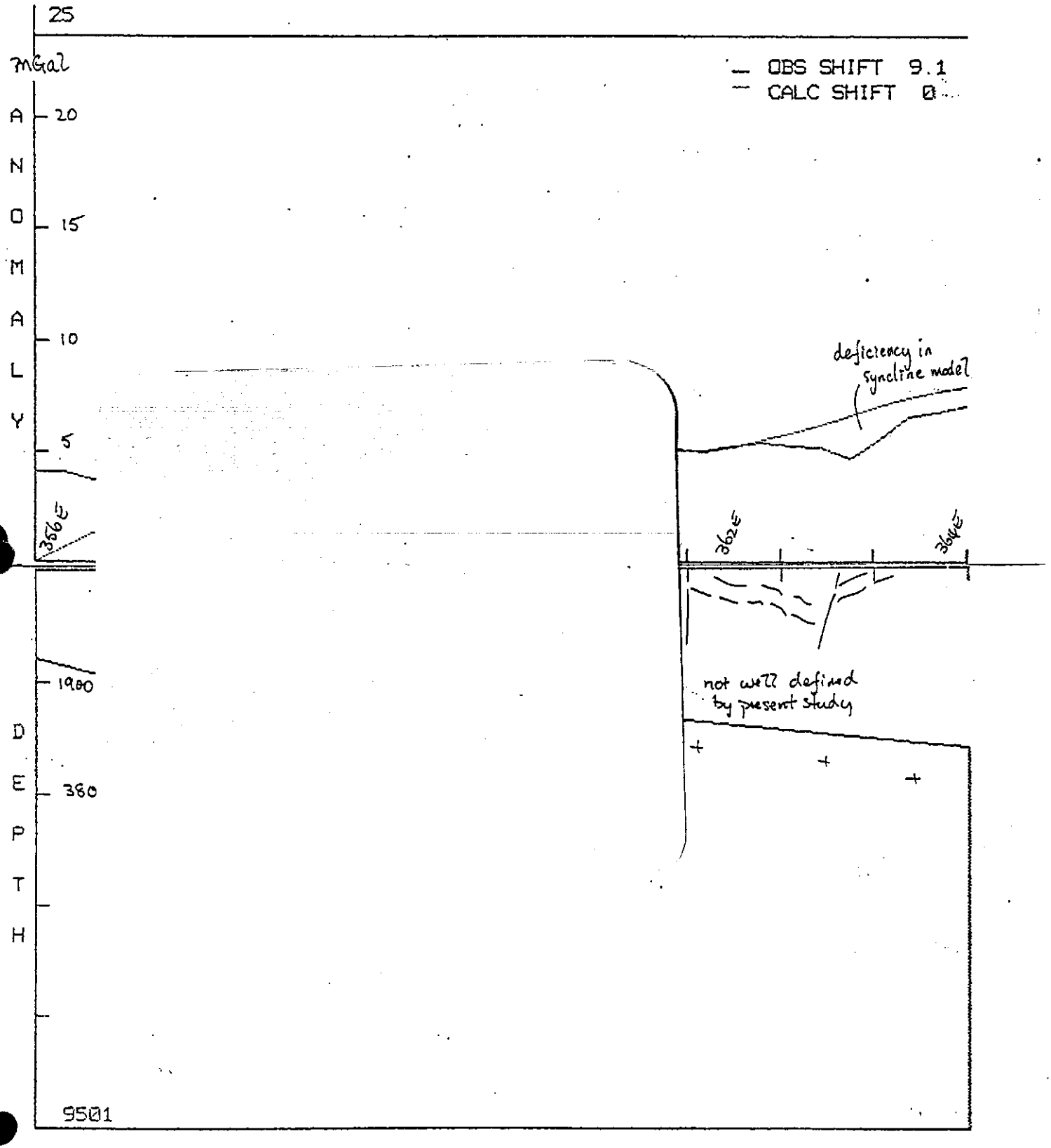
PROFILE EVALUATION
LEAHAN GEOPHYSICS

063148

5361 000 mN

0 1.00 B:ZEEG61
1 1.00 B:G5AML61
2 1.00 B:G0BL61
3 2.00 B:SYN4L61

ZERO SHIFT : 23.72811



ZEEHAN EL 42/87 3D MODEL LINE 5361 000 mN FIGURE 13

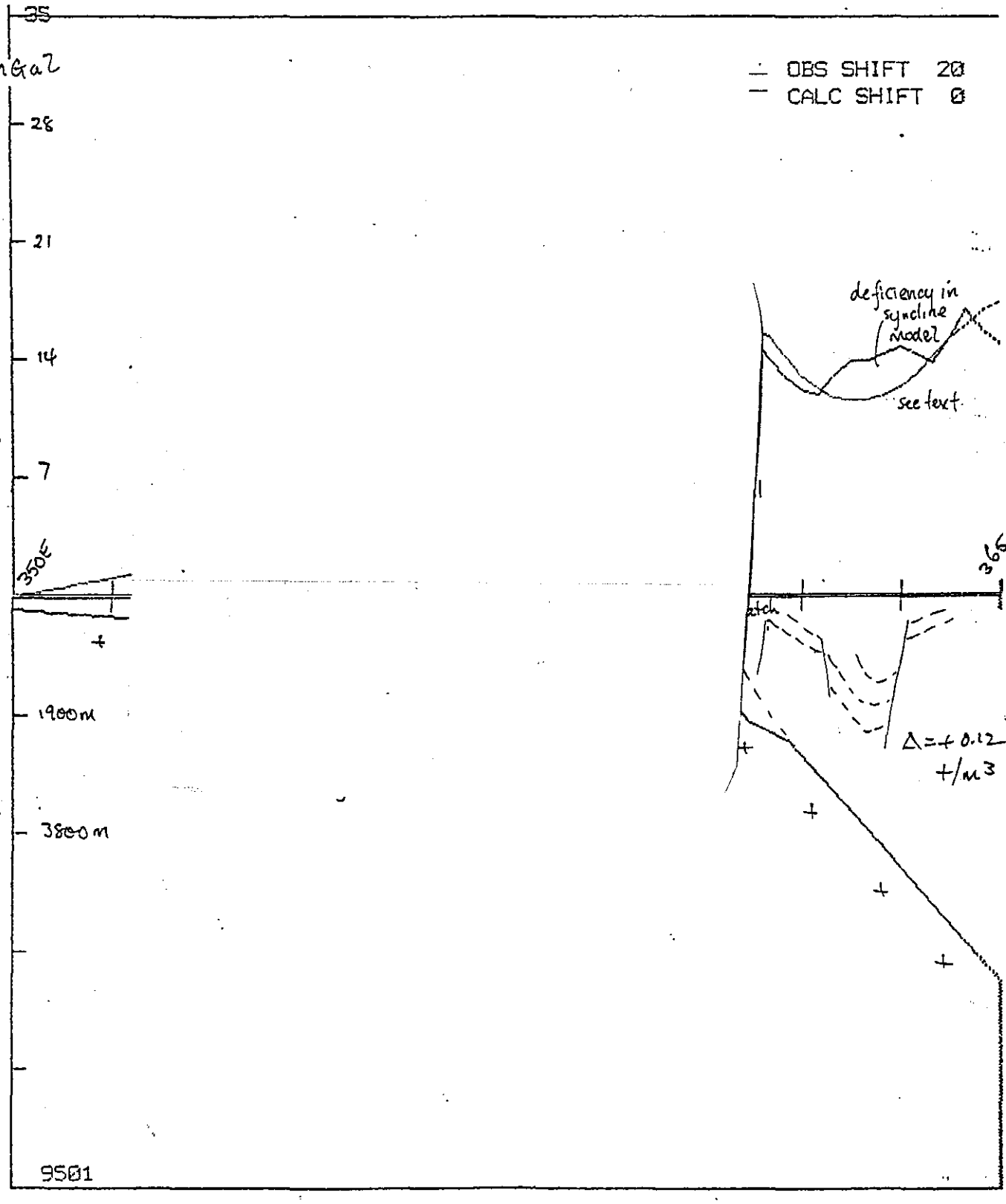
PROFILE EVALUATION
LEAMAN GEOPHYSICS

063149

5362 000 mN

0 1.00 B:ZEEG62
1 1.00 B:G5AML62
2 1.00 B:G6BL62
3 2.00 B:SYN4L62

ERO SHİFT : 34.43169



ZEEHAN EL 42/87 3D MODEL LINE 5362 000 mN FIGURE 14

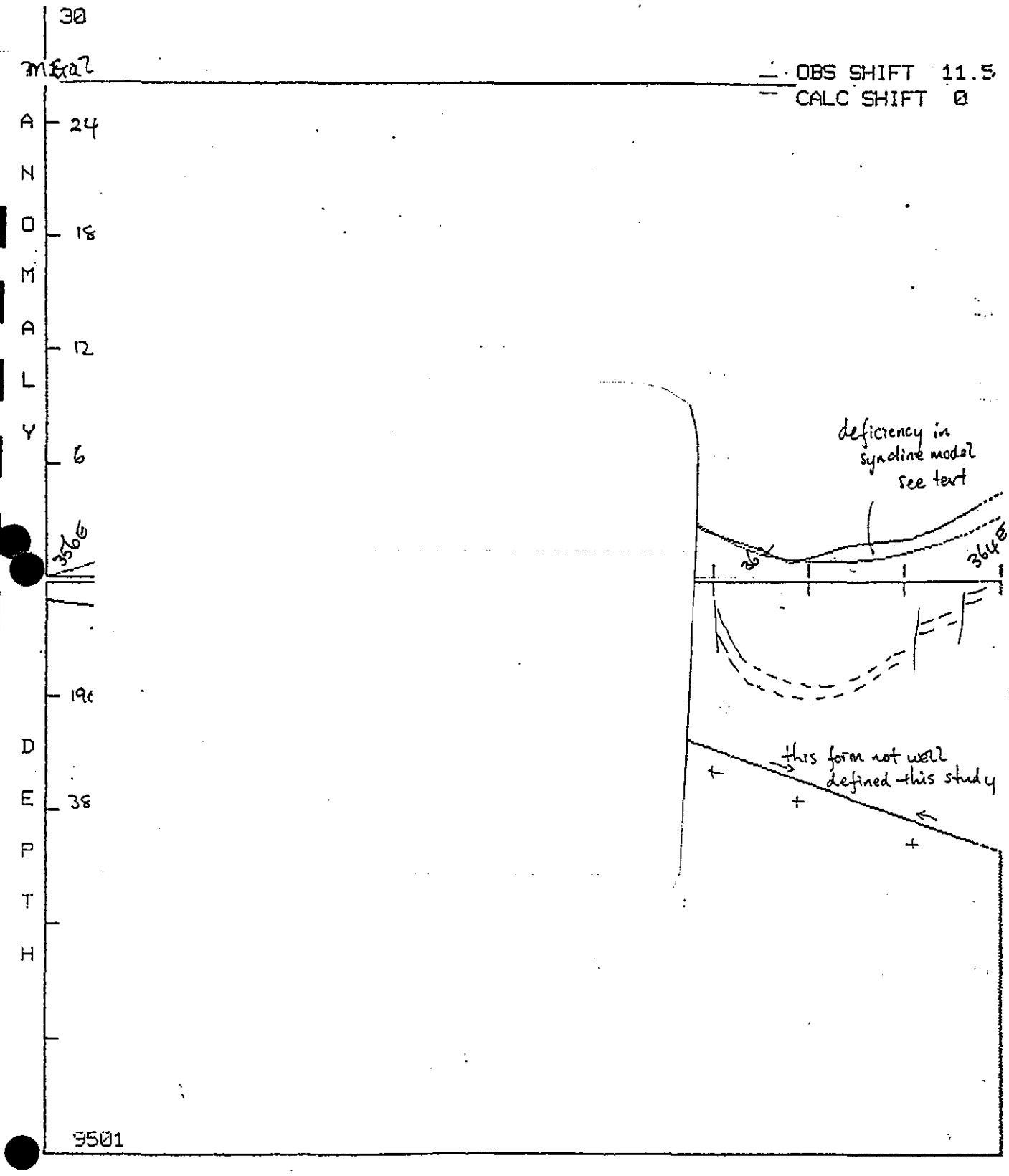
PROFILE EVALUATION
LEAHAN GEOPHYSICS

063150

0 1.00 B:ZEEG64
1 1.00 B:G5ANL64
2 1.00 B:G0BL64
3 1.00 B:SYN4L64

RO SHIFT : 26.1341

5364 000 mN



ZEEHAN EL 42/87 3D MODEL LINE 5364 000 mN FIGURE 15

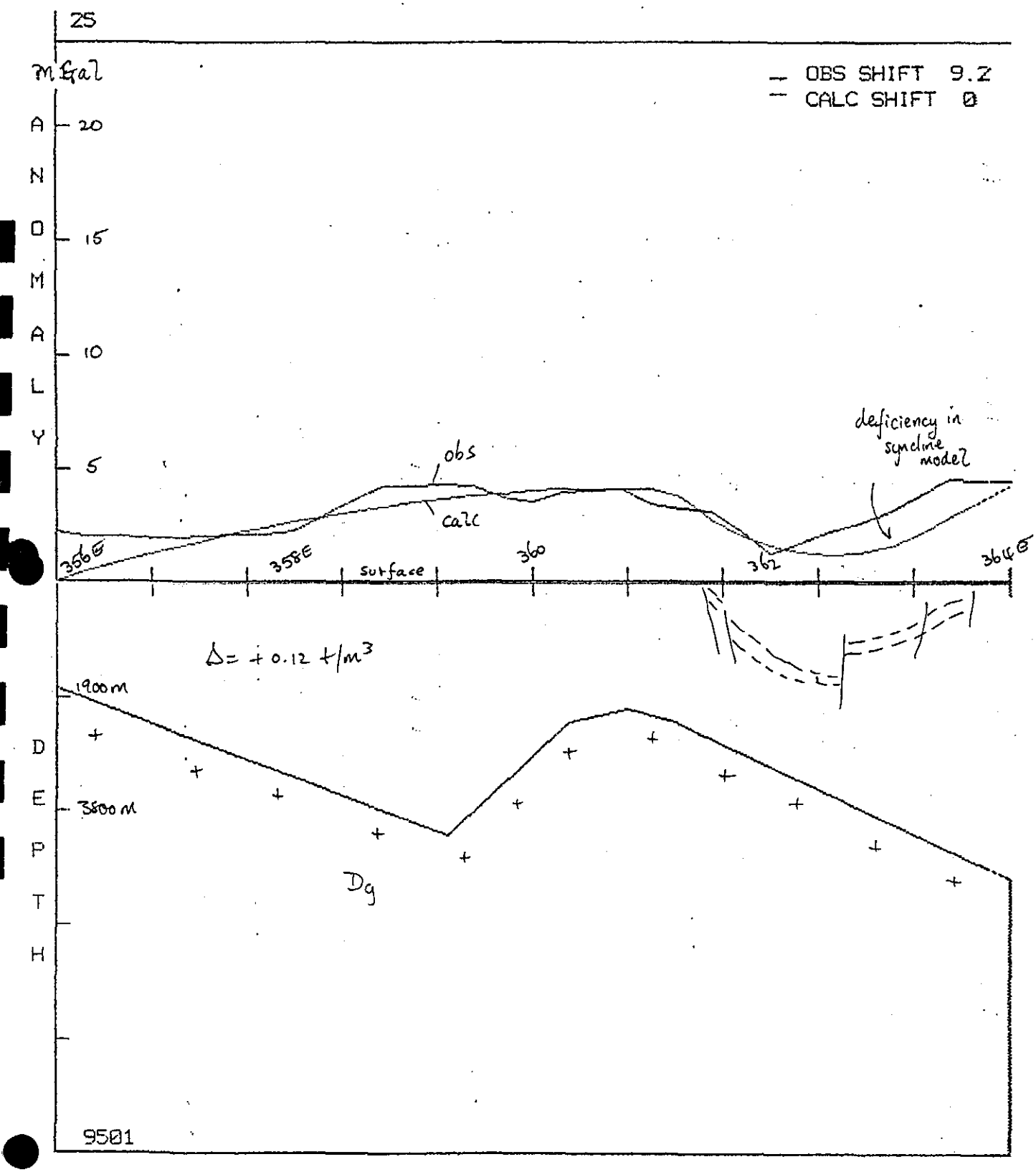
PROFILE EVALUATION
LEAMAN GEOPHYSICS

063151

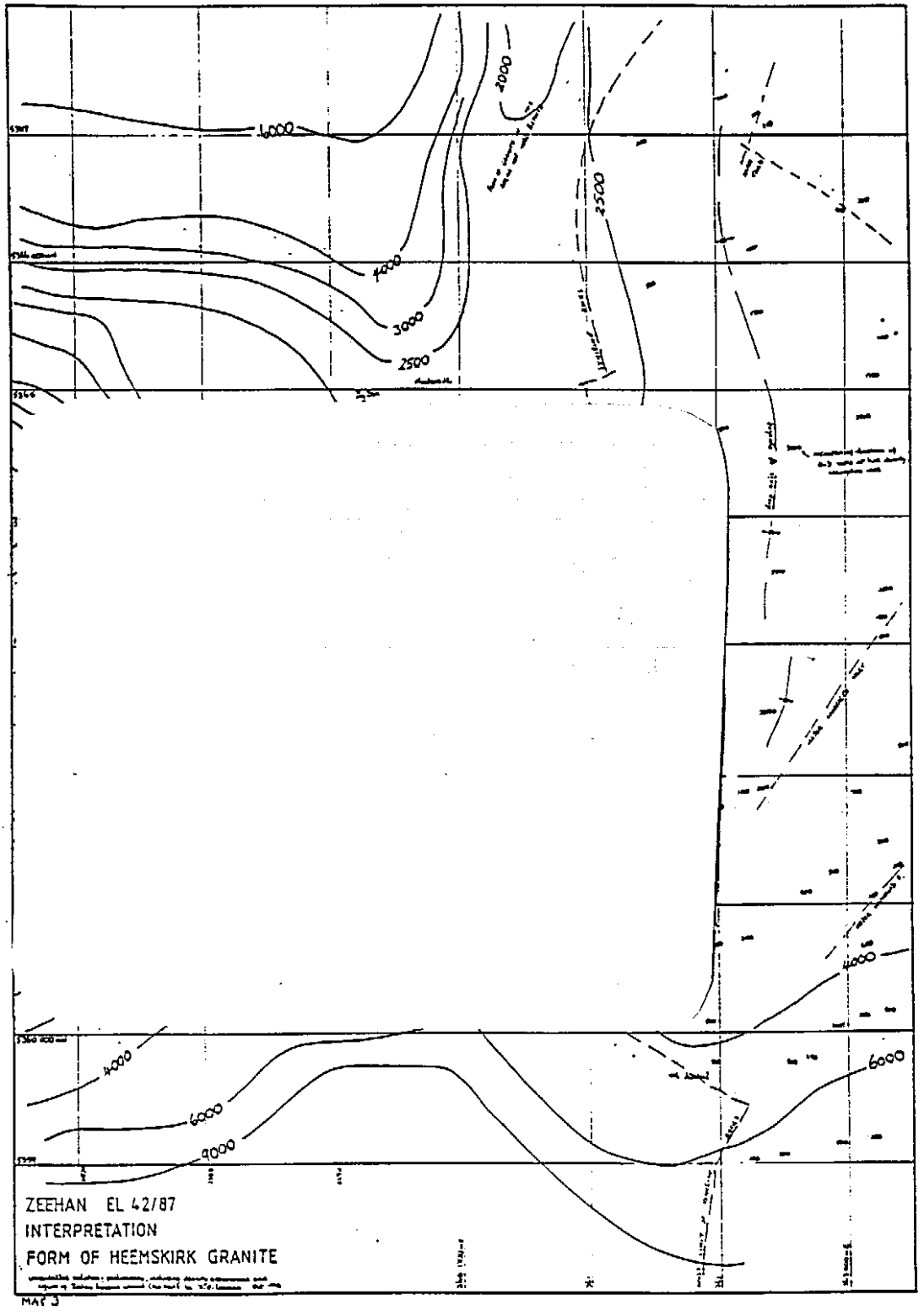
5366 000mN

0	1.00	B:ZEEG66
1	1.00	B:G5AML66
2	1.00	B:G0BL66
3	1.50	B:SYN4L66

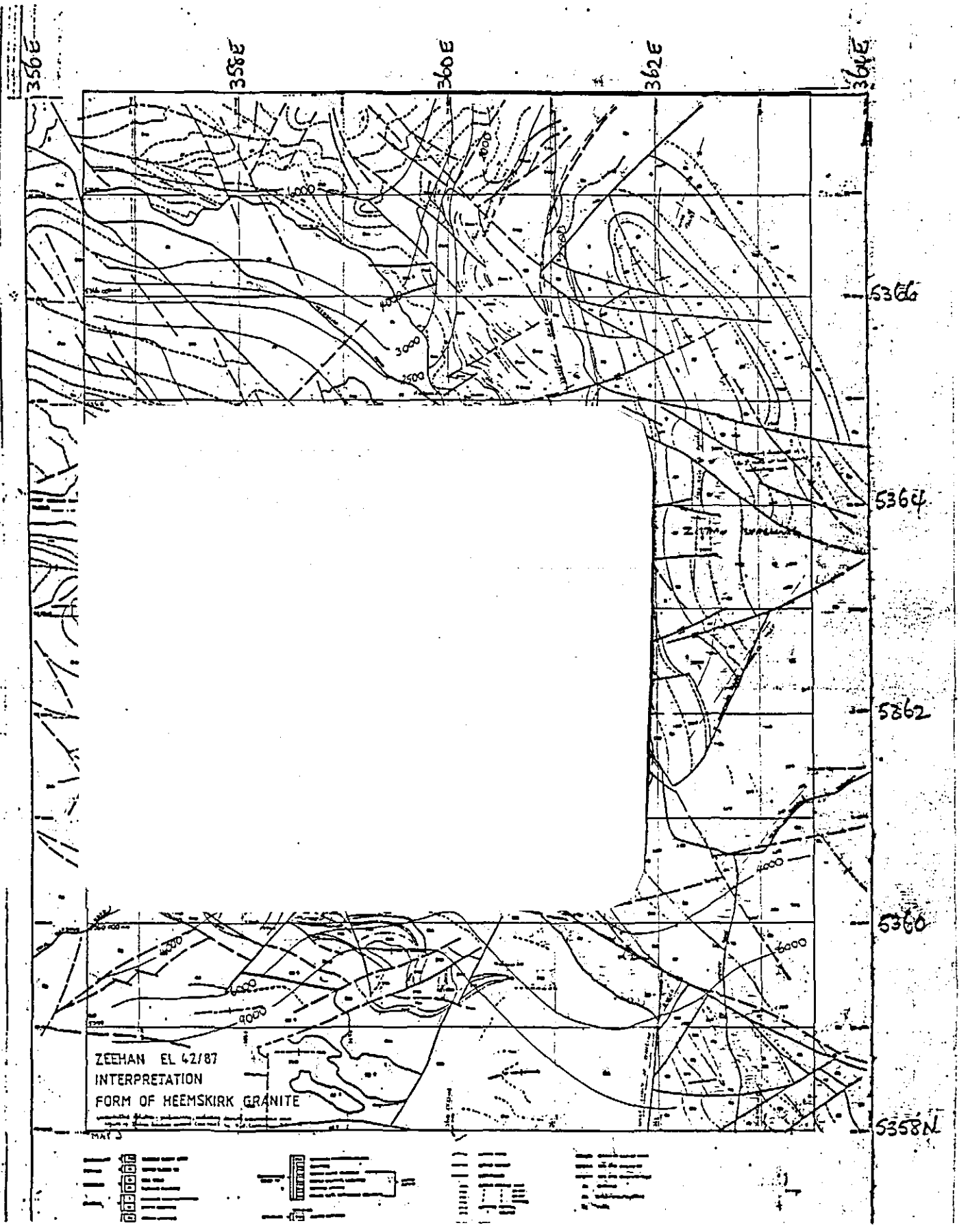
RO SHIFT : 23.70566



ZEEHAN EL 42/87 3D MODEL LINE 5366 000 mN FIGURE 16

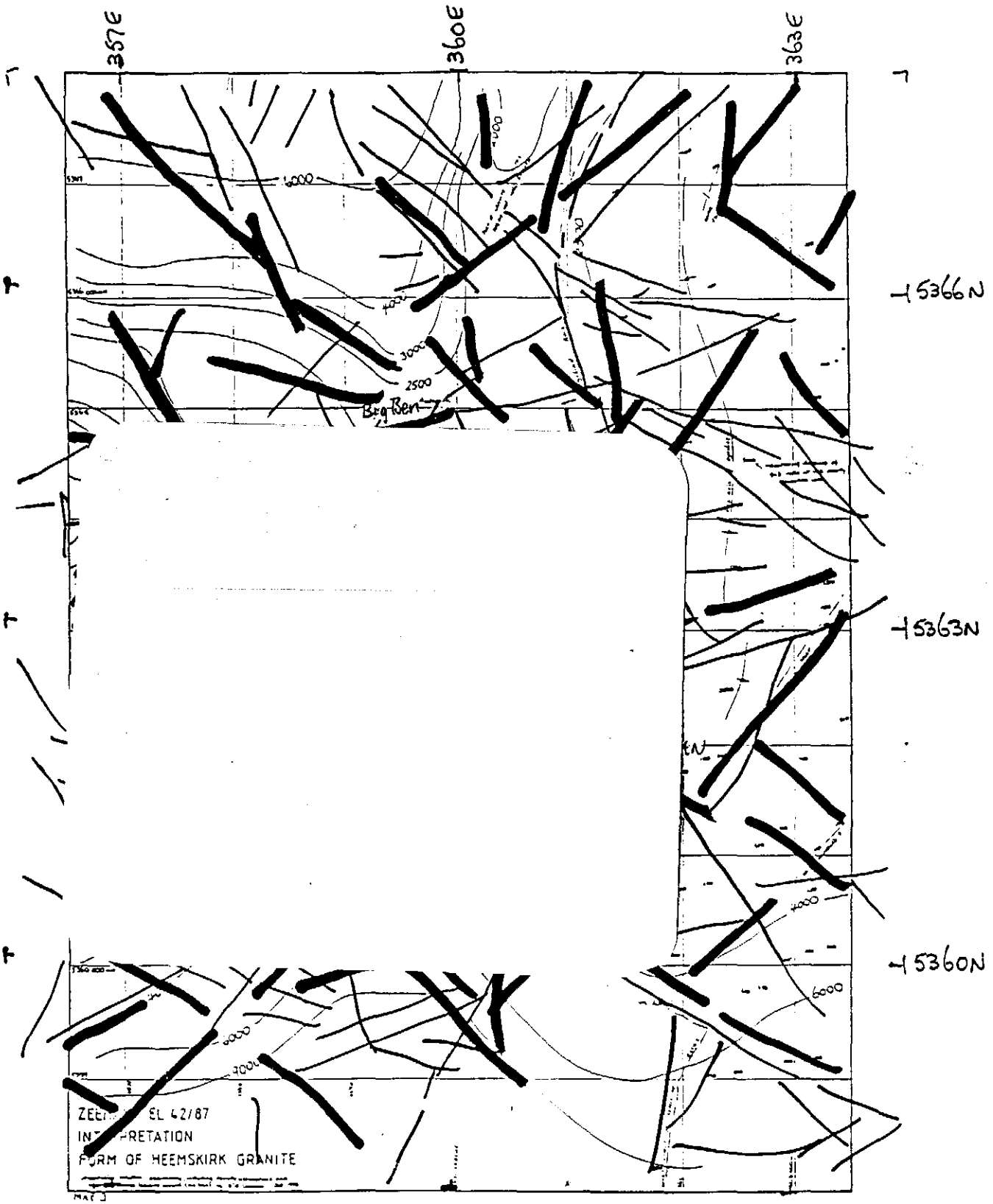


ZEEHAN EL 42/87 CURRENT MODEL OF HEEMSKIRK GRANITE
INTERPRETATION STATUS FIGURE 17



ZEEHAN EL 42/87 CURRENT GRANITE MODEL AND GEOLOGICAL BASEMAP
Basemap by RGC Exploration

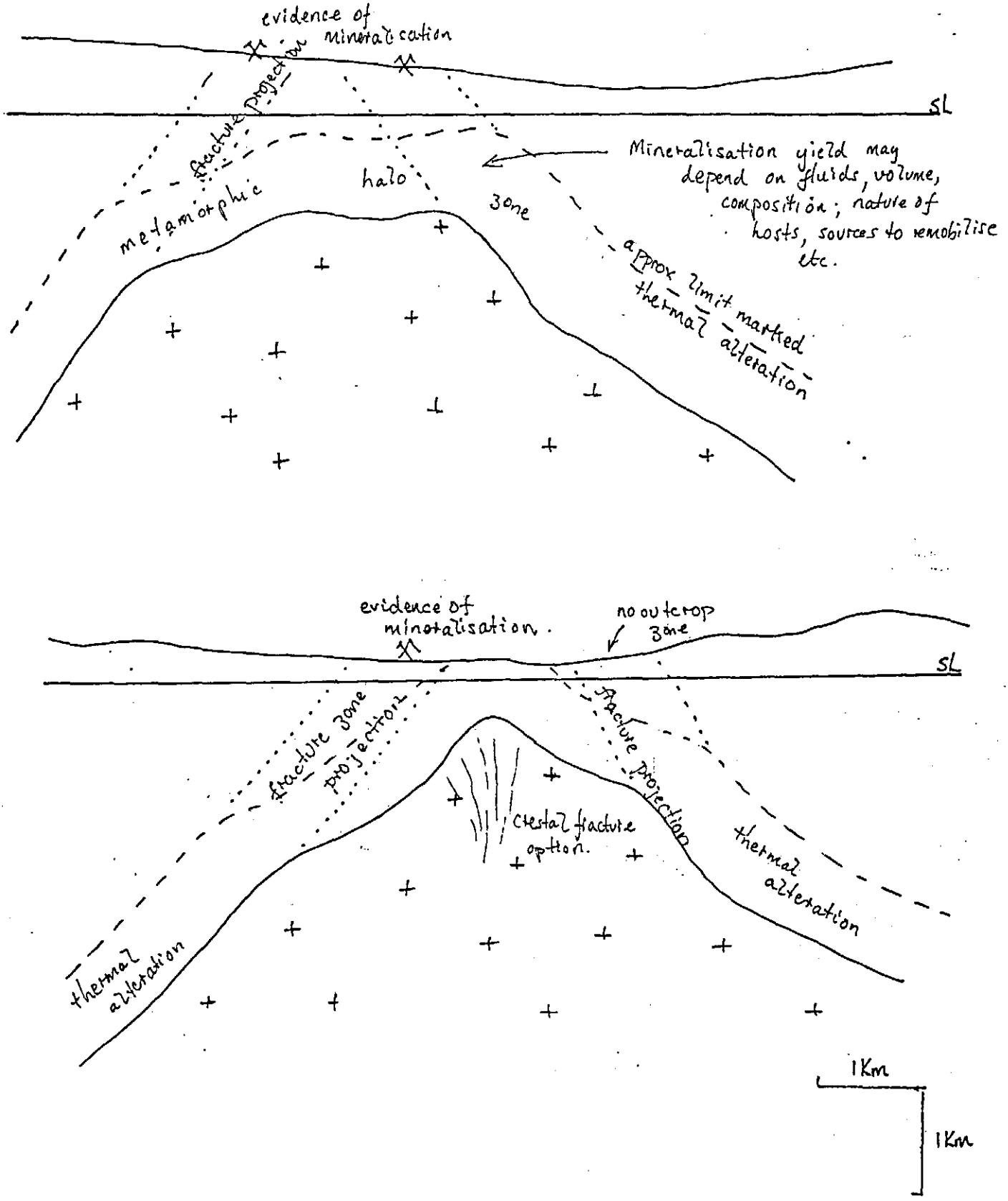
FIGURE 18



ZEEHAN EL 42/87 CURRENT GRANITE MODEL AND TRENDS

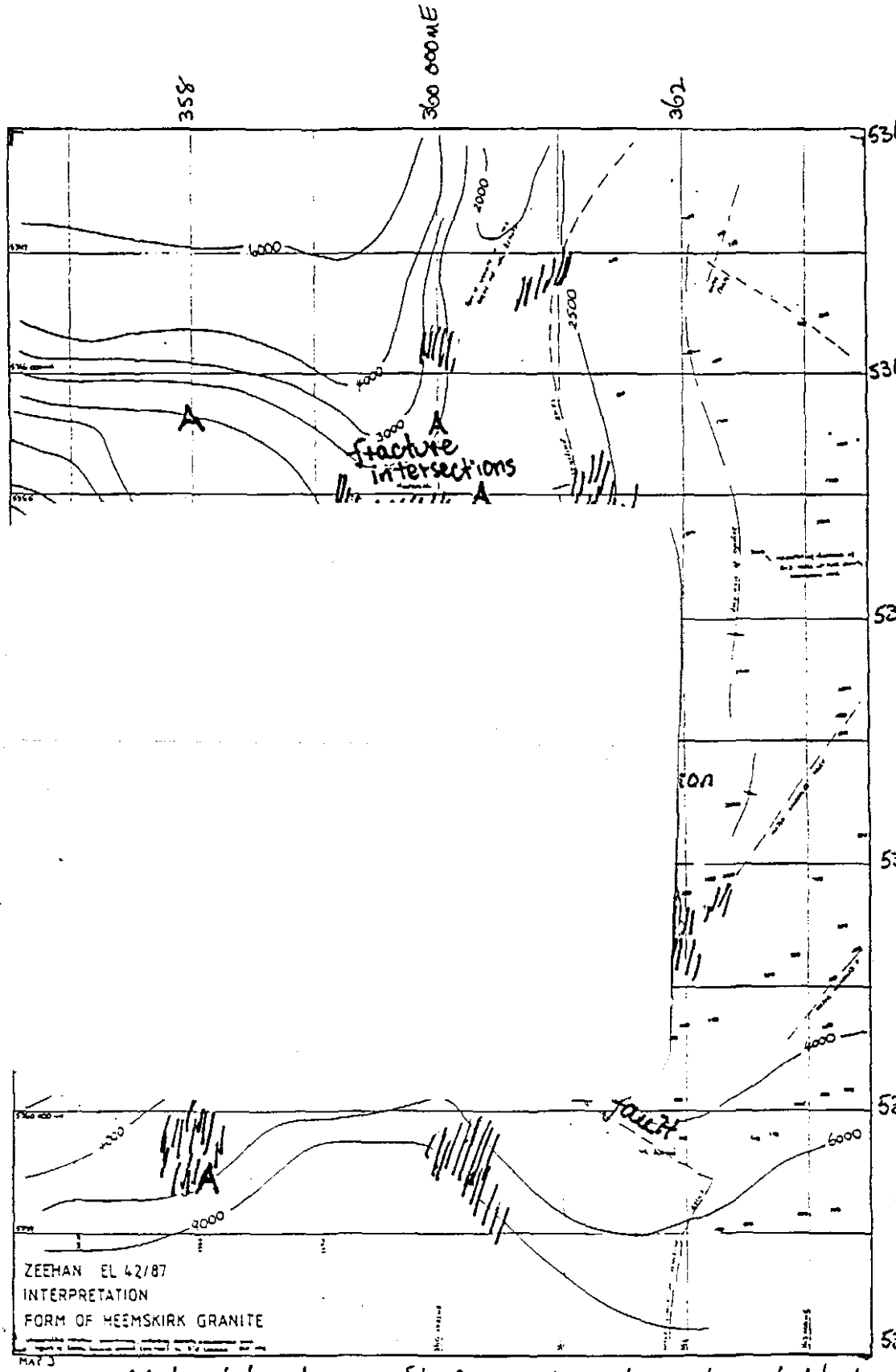
FIGURE 19

063155



SUGGESTED RELATIONSHIPS BETWEEN GRANITE FORM AND MINERALISATION
Diagram suggests patterns of fractures and aureole effects

FIGURE 20



Zones of interest based on granite form and fractures shown hatched.
A = locally anomalous gravity value (site to be checked for alteration) but may be spurious observations (check by infill)

ZEEHAN EL 42/87 CURRENT GRANITE MODEL AND POSSIBLE TARGETS
FIGURE 21

APPENDIX 7

Rock Property Measurements

PROJECT: ZEEHAN (E.L. 42\87) - ROCK CHIP SAMPLING PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	CODE	SAMPLR	DATE	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS
T 34718	363100	361200	5521	JC	MAY.92	AMG	RC	LIMS	Og			
	Remark:Gordon Limestone from Tasmanian Crown mineshaft. Density : 2.82											
T 34719	363800	361300	5521	JC	MAY.92	AMG	RC	SAND	Sc			
	Remark:Coarse sst and grit from Parting lake Rd,at Parting Lake.Density:2.20											
T 34720	359600	356150	5521	JC	MAY.92	AMG	RC	GABR	Cg			
	Remark:McIvor Hill gabbro from Daverns/Kynance Rd,Near Trial.H.Rd.Den: 2.76											
T 34721	360270	357400	5521	JC	MAY.92	AMG	RC	SHAL	Po			
	Remark:Graphitic shale from Comstock opencut(Zeehan) Sth ? , middle bench?											
T 34722	361770	360120	5521	JC	MAY.92	AMG	RC	BASL	Po			
	Remark:Montana Spilite from Trial Harbour Road near Cemetery? Density: 2.44											
T 34723	361850	359660	5521	JC	MAY.92	AMG	RC	BASL	Po			
	Remark:Montana Spilite from Trial Harbour Road. Density : 2.29											
T 34724	367250	368000	5521	JC	MAY.92	AMG	RC	GABR	Cg			
	Remark:From Murchison Hwy, Tunnel Hill. Density : 2.86											
T 34725	367350	368050	5521	JC	MAY.92	AMG	RC	SERP	Cv			
	Remark:Density : 2.55, from Stychtite quarry. Tunnel Hill.											
T 34726	367750	368100	5521	JC	MAY.92	AMG	RC	SERP	Cv			
	Remark:From stichitic quarry. Density : 2.49											

Laboratory:
Method :
Det. Limit:

06315

RGC EXPLORATION PTY.LTD. DATA SHEET

PROJECT: ZEEHAN (E.L. 42\87) - ROCK CHIP SAMPLING PROGRAMME

SAMPLE NUMBER	TNORTH metres	TEAST metres	CODE	SAMPLR	DATE	GRID	KIND	ROCK	UNIT	ALTER	OREMIN	VEINS
T 34701	360600	362300	5521	JC	MAY.92	AMG	RC	SILT	Db			
Remark:SISN from King st, between Blackwood & Leventhorpe st. Density: 2.36												
T 34702	360850	362100	5521	JC	MAY.92	AMG	RC	SILT	Db			
Remark:SNSI from Main st, about 50m east of Gellibrand st. Density : 2.42												
T 34703	360500	361500	5521	JC	MAY.92	AMG	RC	SAND	Of			
Remark:Florence "Quartzite" from Cst tramway. 200m W of Zeehan. Density:2.40												
T 34704	360200	361200	5521	JC	MAY.92	AMG	RC	SAND	Sc			
Remark:SNST&pebbly grit of Crotty "Qtzite",Cst tramway quarry. Density: 2.25												
T 34705	360150	361300	5521	JC	MAY.92	AMG	RC	SAND	Sa			
Remark:Amber slate (strongly cleaved shale), from Cst tramway. Density: 2.37												
T 34706	360150	361425	5521	JC	MAY.92	AMG	RC	SAND	Sk			
Remark:Keel Quartzite from Comstock Tramway. Density: 2.63												
T 34707	360350	362300	5521	JC	MAY.92	AMG	RC	SILT	Db			
Remark:From Bell Shale, on King St, east of Pillinger St. Density: 2.39												
T 34708	359900	362500	5521	JC	MAY.92	AMG	RC	Sand	Of			
Remark:Florence qtzite from quarry,W of Strahan Hwy. Density : 2.58												
T 34709	359900	362500	5521	JC	MAY.92	AMG	RC	SAND	Of			
Remark:Density: 2.33. Same quarry as T34708,Sth side of pit,fossiliferous.												
T 34710	360050	362550	5521	JC	MAY.92	AMG	RC	SILT	Db			
Remark:Siltstone & silty sandstone from cutting on Strahan Hwy.Density: 2.31												
T 34711	360150	362550	5521	JC	MAY.92	AMG	RC	SILT	Db			
Remark:As for T34710. Density: 2.38.												
T 34712	358850	362550	5521	JC	MAY.92	AMG	RC	SILT	Sc			
Remark:SISN ?Crotty qtzite,from road to Tasmanian smelter site.Density:2.30												
T 34713	357400	362200	5521	JC	MAY.92	AMG	RC	LIMS	Og			
Remark:Sample taken from Oceana minesite. Density: 2.71												
T 34714	354400	364400	5521	JC	MAY.92	AMG	RC	SHAL	Db			
Remark:Str.cleaved shale from Strahan Hwy.near little Henty bdg.Density:2.44												
T 34715	354700	364650	5521	JC	MAY.92	AMG	RC	SHAL	Db			
Remark:Of T34714 from North of Little Henty bridge. Density: 2.43												
T 34716	355000	364900	5521	JC	MAY.92	AMG	RC	SAND	Om			
Remark:Qtzite of Moina sst,from Strahan Hwy,Nth little Henty Rv.Density:2.48												
T 34717	359950	362450	5521	JC	MAY.92	AMG	RC	SAND	Of			
Remark:Fossiliferous sandstone from quarry west of Strahan Hwy.Density: 2.36												

Laboratory:
Method :
Det. Limit:

03469

ZEEHAN MAGNETIC SUSCEPTIBILITY

063160

(1)

RESULTS TABULATED BY ROCK UNIT

LOCATION			SUSCEPTIBILITY MEASUREMENT				COMMENTS
NAME	mN	mE	MEAN	SD	n	Fm	
King St			4.2		4	Db	near Pillinger St. Mod. weath
"			6		8	"	Quarry " "
			8.6		10	"	near Blackwood St " "
Main St			8.4	4.0	14	"	near Gellibrand St " "
Strahan Rd			6.0	3.1	47	"	near King St Quarry " "
"			12.8	3.6	35	"	near Little Henty br Slightly Weath
"			2		13	? Db	Sth of " " Mod. Weath
WEIGHTED	AVE		8.5		131		Excluding last (dubious) traverse
Austral			3.0		4	Df	Quarry Slightly Weath
Comstock Tr.			1.3	0.5	6	"	
King St			6.0	3.1	8	"	Quarry Slight/mod Weath
Strahan Rd.			1.5		4	" ?	Sth of Little Henty br.
WEIGHTED	AVE		3.8		22		Excluding last (dubious) traverse
Comstock Tr			4.0		6	Sac	Mod. weath
Strahan Rd			2.0		7	" ?	Sth of Little Henty br Highly weath
Comstock Tr			1.5		4	Sh	Mod Weath
Comstock Tr			3.0		4	Sa	Mod Weath
Strahan Rd			3.1	1.3	14	Sa ?	Highly Weath
Comstock Tr			2.5	3.9	13	Sc	Mod Weath
Smelters Rd			2.6	15.0	14	"	" "
Strahan Rd			0.2		4	" ?	Extr. "
WEIGHTED	AVE		2.6		31		Excluding last traverse
Strahan Rd			0.5		6	Om	Slightly Weath
"			0.0		2	Om	" "

ZEEMAN MAGNETIC SUSCEPTIBILITY

RESULTS TABULATED BY ROCK UNIT

063161 (2)

LOCATION			SUSCEPTIBILITY MEASUREMENT				COMMENTS		
NAME	mN	mE	MEAN	SD	n	Fm			
Oleana Rd			7.0		3	Og	Fresh		
Tas. Crown Rd			10.0		3	"	"		
Main St			3.7	1.5	19	"	Extr. Weath.		
WEIGHTED AVE.			8.5		25	Excluding	weathered Main St traverse		
Kyancare Rd			472.5	902.5	31	Eg	Fresh. Includes very high values		
a/a			34.8	12.8	19	"	EXCLUDES VERY HIGH	VALUES	
Murchison Hwy			26.9	6.1	12	"	Slightly weath		
WEIGHTED AVE			31.7		62		Excluding very high values		
Murchison Hwy			2660		30	Eus	Fresh Serpentine Hill		
Murchison Hwy			38.8		13	Ec	Highly weath.		
Main St			10.5		4	"	"	"	
SY003			45.6	6.55	30	"	Fresh		
SY004			63.7	55.7	159	"	"		
SY009			30.3	47.7	17	"	"		
WEIGHTED AVE			56.3		223				
Trial Harbour Rd			18.6	4.7	16	Ecm	Mod. weathered		
SY003	476	486.2	17903	14523.4	10	Eou	SKARN		
SY00?	429.1	507.4	53720.5	61878.7	39	Eou	"		
	386.6	527.0	51105.8	39349.2	41	Eou	"		
W...	...	AVE	53353.2		90				
SY003	148.7	158.2	147.1	182.9	10	Eou	MASSIVE	SULPHIDES	
SY00?	507.4	561.2	26187.5	30904.0	27	"	"	"	
SY009	378.7	384.6	51000.6	69296.5	2		"	"	
WEIGHTED AVE			20779.1		39				

ZEEHAN MAGNETIC SUSCEPTIBILITY

063162

3

RESULTS TABULATED BY ROCK UNIT

LOCATION			SUSCEPTIBILITY MEASUREMENT				COMMENTS		
NAME	mN	mE	MEAN	SD	n				
Trial Pit RJ			4.1		7	e_{ou}	Psammo-Pelite	slight	Weath
Zeehan Western			3.2		12	"	"	"	"
Granville Hwy			1.7		10	"	"	"	"
WEIGHTED AVE			2.9		29				
SY003	265	322	12.4	16.0	28	e_{ou}	Psammo-Pelite		
"	405.2	418.6	11.2	7.4	9	"	"	"	
	486.2	505	119.0	190.6	12	"	"	"	
SY005	68	89.2	4.9	2.9	11	"	"	"	
"	189.1	237.8	105.0	188.5	24	"	"	"	
"	586.1	645.6	436.8	638.[illegible]	32	"	"	"	
SY008	160	221	215.7	283.6	66	"	"	"	
	166.3	376.9	210.7	362.8	52				
	582.6	597.9	14.0	8.9	5				
WEIGHTED AVE			190.1		246				
SY003	138	147	4.8	0.5	4	e_{ou}	MELANGE		
"	505	526.5	145.7	188.2	10	"	"		
SY005	579.9	586.6	325.3	386.8	4	"	"		
SY008	160.3	164.3	0	0	2	"	"		
"	547	567.3	12460	26,582	5	"	"		
WEIGHTED AVE			2599.1		25				
SY003	166.8	265	966.1	3181.3	67	e_{ou}	CARBONATE	± m Po	
	322	405.2	10.6	11.5	69	"	"		
	418.6	476	224.5	718.8	30	"	"	± m Po	
SY005	89.9	189.1	5.6	6.4	50	"	"		
	238.9	259.8	2989.0	3142.6	11	"	"	± mr	
	296.5	429.1	4166.8	9507.1	67	"	"	± mr	
WEIGHTED AVE			1402.1		274				
UNMINERALISED AVE			8.1		76				

ROCK DENSITY MEASUREMENTS

063163

SAMPLE NO.	FORMAT. SiO2	ROCK TYPE	WEIGHT g	VOLUME	DENSITY
34727	Eo	Melange	922.60	350ml	2.63
"			611.5	210	2.91
34728	Ec	Turbidite	377.9	135	2.80
"			409.6	160	2.55
34729	Ec	"	373.9	130	2.88
"			314.75	110	2.86
34730	Ec	"	509.9	170	2.83
"			320.5	110	2.91
	SiO3				
34731	Eo	Rx Carb	636.3	175	3.66
"			573.15	220	2.70
34732	Eo	"	352.40	140	2.52
"			602.4	230	2.62
34733	Eo	Dolm	517.9	170	3.05
"			434.0	160	2.71
34734	Eo	"	373.7	140	2.70
"			432.5	160	2.70
34735	Eo	Melange	331.8	120	2.77
"			406.8	150	2.71
34736	Ec SiO2	Turbidite	717.9	250	2.87
"			802.5	280	2.87
34737	Ec	"	914.5	320	2.86
"			474.8	170	2.79
34738	Ec	"	569.6	210	2.71
"			509.7	190	2.68
34739	Ec SiO2	Dolm	566.5	200	2.83
"			727.5	270	2.69
34740	Eo	Breccia	811.3	300	2.70
"			784.5	300	2.61
34741	Eo	Mafic Schist	493.6	160	3.08
"			337.5	80	4.22
34742	Eo	Pelite	719.7	260	2.77
"			869.5	310	2.80
34743	Eo SiO2	"	822.2	300	2.74
"			665.0	250	2.66
34744	Eo	"	779.7	270	2.70

SAMPLE NO.	FORMAT.	ROCK TYPE	WEIGHT	VOLUME	DENSIT
34744	Eo	Pelite	591.2	220	2.69
34745	Ec SiO2	Turbidite	781.1	260	3.00
"			514.5	180	2.86
34746	Eo	Sandst	681.2	260	2.62
"			665.3	250	2.66
34747	Eo	"	681.1	250	2.72
"			427.5	150	2.85
34748	Eo	Mafic Schist	720.1	240	3.00
"			370.8	130	2.85
34749	Eo	Melange	625.3	280	2.23
"			567.1	200	2.83
34750	SiO2 Eo	Pelite	493.5	180	2.74
"			700.9	260	2.70
34751	Eo	Hornfels	552.3	200	2.76
"			492.5	180	2.74
34752	SiO2 Eo	Pelite	502.2	180	2.79
"			523.6	190	2.76
34753	SiO2 Eo	Rx Carb	506.0	175	2.89
"			577.3	200	2.89
34754	SiO2 Eo	Pelite	841.0	275	3.06
"			729.3	250	2.92
34755	Eo	Sandst	405.5	150	2.70
"			543.4	230	2.36
34756	Eo	Pelite	965.2	375	2.57
"			449.5	180	2.50
34757	Eo	Hornf.	659.5	200	3.29
"			449.4	150	2.99
34758	SiO3 Ec	Turb	302.0	290	1.04
"			552.6	200	2.76
34759	Eo	Pelite	661.2	230	2.87
"			447.0	160	2.79

ZEEHAN FIELD SAMPLES.

ROCK DENSITY MEASUREMENTS.

063164

SAMPLE NO.	FORMAT.	ROCK TYPE	WEIGHT grams	VOLUME ml	DENSITY	SAMPLE NO.	FORMAT.	ROCK TYPE	WEIGHT	VOLUME	DENSIT.
[illegible]	Db	St	777.5	330 ml	2.36						
[illegible]	Db	St	918.0	375	2.42						
[illegible]	Df	Ss	1055.3	440	2.40						
[illegible]	Sc	Ss	1058.2	470	2.25						
[illegible]	Sa	Slate	865.9	365	2.37						
[illegible]	Sk	Ss	827.54	315	2.63						
[illegible]	Db	St	1147.7	480	2.39						
[illegible]	Df.	Ss	1173.5	455	2.58						
709	Df	Ss	1039.2	445	2.33						
710	Db	St	1144.55	495	2.31						
711	Db	Ss	1070.3	450	2.38						
712	Sc	St	978.53	425	2.30						
713	Og	Lst	974.54	360	2.71						
714	Db	Sh	1108.54	455	2.44						
715	Db	Sh	850.4	350	2.43						
716	Om	Ss	1114.53	450	2.48						
717	Df	Ss	921.03	390	2.36						
718	Og	Lst	918.01	325	2.82						
719	Sc	Ss	1079.04	490	2.20						
720	Gg	gabbro	1078.0	390	2.76						
	eo	Sh									
722	eo	Spilite	953.03	390	2.44						
723	eo	"	984.5	430	2.29						
724	Gg	Gabbro	1002.01	350	2.86						
725	Gu	Serp.	1046.04	410	2.55						
T34 726	"	"	1193.50	480	2.49						

MOUNT HEEMSKIRK

TIMBER RESERVE

CROWN LAND

E.L. 42/87

PARTING CREEK LAKE

TIMBER RESERVE

Melba Siding

PROCLAIMED TOWN

Dundas

CROWN LAND

STATE FOREST

PROCLAIMED TOWN OF ZEEHAN

ZEEHAN

MOUNT AGNEW

Cumberland Lake

CROWN LAND

STATE FOREST

Stonehenge

CROWN LAND

TIMBER RESERVE

MOUNT ZEEHAN

Remine

TRIAL HARBOUR

LITTLE HENTY RIVER

HENTY RIVER

STATE FOREST

TIMBER

5 cm

RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	
DRAWN	M.O.W.
DATE	7/92
CHECKED	
1:250,000 REFERENCE	

063165
ZEEHAN PROJECT E.L.42/87

AREA TO BE RELINQUISHED

92-3379.

BASE PLAN No. 5521/051
OVERLAY PLAN No.
SCALE 1:25,000
PLAN 1

MINES OF THE ZEEHAN FIELD

E.L. 42/87

To Corinna

Big Ben
Montana Silver-Lead
Quigleys
Barnett's Lode
Beauty
Tasmanian Crown
Zeehan Western
Boundary
Montana
Doric
Oonah
Junction
Bradshaws
Poverty Point
Despatch
N°2 Montana
Stormsdown
N°2 Queen
Clarke's Lode
N°4 Queen
Payne's
Faheys Lode
Zeehan
Tenth Legion
Silver Stream
Sylvester
Featherstones Lode
N°3 Argent
N°1 Argent
Florence
Kynance
Nike
N°2 Argent
Balstrup N°1
N°6 Argent
Comstock
Boss
South Comstock
Susannite
Britannia
New Spray
Old Spray
Central Balstrup
Montague
Silver King
T.L.E.
Victoria Zeehan
Colonel North
Maxim
South King
Zeehan Bell
Stonehenge
North Tasmanian
Sunshine
Nubeena
Austral
Sunrise
Tasmanian
Grubb's
Swansea
Oceana
To Trial Harbour
To Queenstown

OONAH HILL
MONTANA HILL
QUEEN HILL
MANGANESE HILL
ZEEHAN

Pt Puo Om Og Sc Oz Sa Sk S Df Db €g €c

LEGEND

PERMIAN	Pt	Tillite
DEVONIAN	Db	Bell Shale
	Df	Florence Quartzite
SILURIAN	S	Austral Creek Siltstone
	Sk	Keel Quartzite
	Sa	Amber Shale
	Sc	Crotty Quartzite
ORDOVICIAN	Og	Gordon Limestone
	Om	Moina Sandstone
	Oz	Mt. Zeehan conglomerate
CAMBRIAN	€g	McIvor Hill Gabbro
	€c	Crimson Creek Argillite
PROTEROZOIC - CAMBRIAN	Puo	Success Creek phase, Oonah Quartzite and Slate

Swansea Mine location
Road
Tram or railway
Fault
Conformable boundary
Unconformity

≤ 360 000 m N

A.M.G. NORTH
MAGNETIC NORTH

063166

5 cm

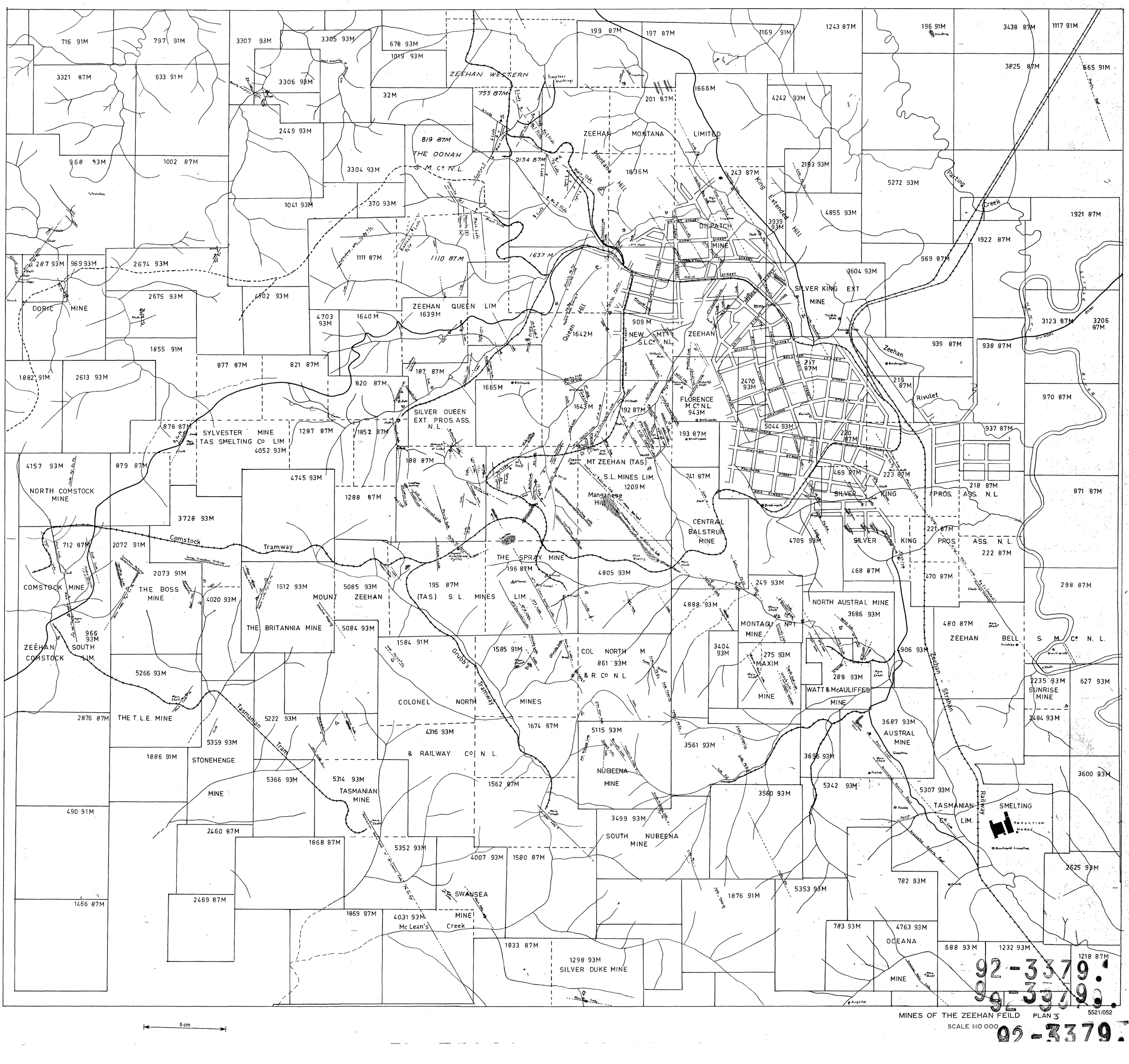
Mine locations, names and Geology after Both and Williams 1972.

PLAN 1

RENISON LIMITED

GEOLOGIST : P.A.R.	SCALE: 1:20,000 METRES (200 0 200 400 600)
DRAUGHTSMAN : T.G.D.S.	
DATE : October 1980	
REVISION D.J.C. August 1989.	DRAWING No. 5512/112 PLAN 2

92-3379.


ZEEHAN WESTERN
ZEEHAN MONTANA LIMITED
THE DONAH
S. M. Co N. L.
Montana Hill
King Extended Hill
DISPATCH MINE
SILVER KING EXT MINE
ZEEHAN QUEEN LIM 1639M
Queen Hill
NEW S.L.Co MT N.L.
ZEEHAN
FLORENCE M.C° N.L. 943M
SILVER QUEEN EXT. PROS. ASS. N.L.
SYLVESTER MINE
TAS SMELTING Co LIM 4052 93M
MT ZEEHAN (TAS) S.L. MINES LIM. 1209M
Manganese Hill
CENTRAL BALSTRUP MINE
SILVER KING PROS. ASS. N.L.
DORIC MINE
NORTH COMSTOCK MINE
COMSTOCK MINE
THE BOSS MINE
THE BRITANNIA MINE
MOUNT ZEEHAN
THE SPRAY MINE
(TAS) S. L. MINES LIM.
ZEEHAN COMSTOCK SOUTH LIM.
THE T.L.E. MINE
STONEHENGE MINE
COLONEL NORTH MINES & RAILWAY Co N. L.
NUBEENA MINE
SOUTH NUBEENA MINE
TASMANIAN MINE
SWANSEA MINE
Mc Lean's Creek
SILVER DUKE MINE
NORTH AUSTRAL MINE
MONTAGU NOT MINE
MAXIM MINE
WATT & McAULIFFES MINE
AUSTRAL MINE
OCEANA MINE
ZEEHAN BELL S. M. Co N. L.
SUNRISE MINE
TASMANIAN SMELTING Co LIM.
REDUCTION WORKS
Comstock Tramway
Tasmanian Tram
Grubb's Tramway
Zeehan Strahan Railway
Parking Creek
Zeehan Rivulet
HENTY RIVER
Brachiopods
Limestone
Fossils
716 91M
797 91M
3307 93M
3305 93M
678 93M
1019 93M
199 87M
197 87M
1169 91M
1243 87M
196 91M
3438 87M
1117 91M
3321 87M
633 91M
3306 93M
32M
755 87M
201 87M
1666M
4242 93M
3825 87M
665 91M
2449 93M
819 87M
2154 87M
1836M
243 87M
2183 93M
968 93M
1002 87M
3304 93M
5272 93M
1041 93M
370 93M
4855 93M
1921 87M
3939 93M
1922 87M
1637 M
1111 87M
1110 87M
969 87M
287 93M
969 93M
2674 93M
3604 93M
2675 93M
4702 93M
4703 93M
1640 M
909 M
1642M
3123 87M
3206 87M
1855 91M
939 87M
938 87M
877 87M
821 87M
217 87M
1882 91M
2613 93M
187 87M
820 87M
1665M
2470 93M
219 87M
970 87M
1643M
192 87M
878 87M
1287 87M
1852 87M
5044 93M
220 87M
937 87M
193 87M
4157 93M
879 87M
4745 93M
188 87M
741 87M
469 87M
223 87M
218 87M
871 87M
1288 87M
3728 93M
4705 93M
221 87M
222 87M
712 87M
2072 91M
2073 91M
1512 93M
5085 93M
196 87M
4805 93M
249 93M
468 87M
470 87M
298 87M
4020 93M
195 87M
4888 93M
480 87M
966 93M
5084 93M
1584 91M
1585 91M
3404 93M
906 93M
2235 93M
627 93M
5266 93M
861 93M
275 93M
288 93M
2484 93M
2876 87M
5222 93M
4316 93M
1674 87M
5115 93M
3561 93M
3687 93M
5359 93M
1886 91M
5366 93M
5314 93M
1562 87M
3696 93M
5342 93M
3600 93M
5307 93M
490 91M
2460 87M
1868 87M
5352 93M
4007 93M
1580 87M
3499 93M
3560 93M
2625 93M
1466 87M
2469 87M
1869 87M
4031 93M
1876 91M
5353 93M
782 93M
783 93M
4763 93M
1833 87M
1298 93M
688 93M
1232 93M
1218 87M
5 cm
MINES OF THE ZEEHAN FEILD PLAN 3
SCALE 1:10 000
5521/052
063167
92-3379
92-3379
92-3379

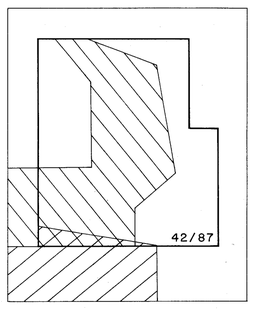
STRATIGRAPHY

PERMIAN	Pt	ZEEHAN GLACIAL FORMATION ; TILLITE
DEVONIAN	Db	BELL SHALE
	Df	FLORANCE QUARTZITE ; FOSSILIFEROUS SANDSTONE
SILVRIAN	S	UNASSIGNED SEDIMENTS
	Sc	CROTTY QUARTZITE
ORDOVICIAN	Og	GORDON LIMESTONE : LIMESTONE, CALCARENITE
	Om	MOINA SANDSTONE : SANDSTONE, GRIT, CONGLOMERATE
	Oz	MOUNT ZEEHAN CONGLOMERATE
CAMBRIAN	€d	DUNDAS GROUP : INTERBEDDED SILTSTONE, SANDSTONE, GRIT, GREYWACKE, CONGLOMERATE, VOLCANICS.
	€c	CRIMSON CREEK FORMATION : INTERBEDDED RED-PURPLE SILTSTONE, GREYWACKE, TUFF.
UPPER PROTEROZOIC	Pos	OONAH FORMATION : INTERBEDDED SANDSTONE, SILTSTONE, SHALE.
	Pol	UPPER OONAH FORMATION : LIMESTONE, SILTSTONE
	Posh	: SILTSTONE, SHALE
	Pom	: MONTANA SPILLITES
	Poss	: SANDSTONE
CAMBRIAN INTRUSIVES	€g	GABBRO
		IRONSTONES

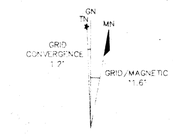
KEY

- GEOLOGICAL BOUNDARY
- ANGULAR UNCONFORMITY
- BEDDING TREND LINES
- STRIKE AND DIP OF BEDS 0° – 30°
- 31° – 60°
- 61° – 90°
- STRIKE AND DIP OF SCHISTOSITY
- VERTICAL SCHISTOSITY
- STRIKE AND DIP OF CLEAVAGE
- VERTICAL CLEAVAGE
- PLUNGE OF MINOR FOLDS
- ANTICLINE, SHOWING PLUNGE
- OVERTURNED ANTICLINE
- SYNCLINE, SHOWING PLUNGE
- OVERTURNED SYNCLINE
- FAULT, ACCURATE, SHOWING DISPLACEMENT (D / U)
- FAULT, APPROXIMATE
- NORMAL / TRANSVERSE FAULT, SHOWING DIP
- REVERSE FAULT, SHOWING DIP
- ZONE OF DUCTILE DEFORMATION / SHEAR
- DYKE
- DIRECTION OF 'YOUNGING'
- SIGNIFICANT MINE
- MINOR WORKINGS / PROSPECTS
- Sn ANOMALOUS TIN OCCURRENCE
- Py MASSIVE PYRITE OCCURRENCE
- Qp PORPHYRY OCCURRENCE (REPORTED)

ACCOUNTABILITY DIAGRAM



- DETAILED MAPPING BY AUTHOR
- BASED ON KOMYSHAN & POLTOCK (1986, STONEHENGE GRID)
- AIRPHOTO INTERPRETATION, WITH OCCASIONAL TRAVERSES

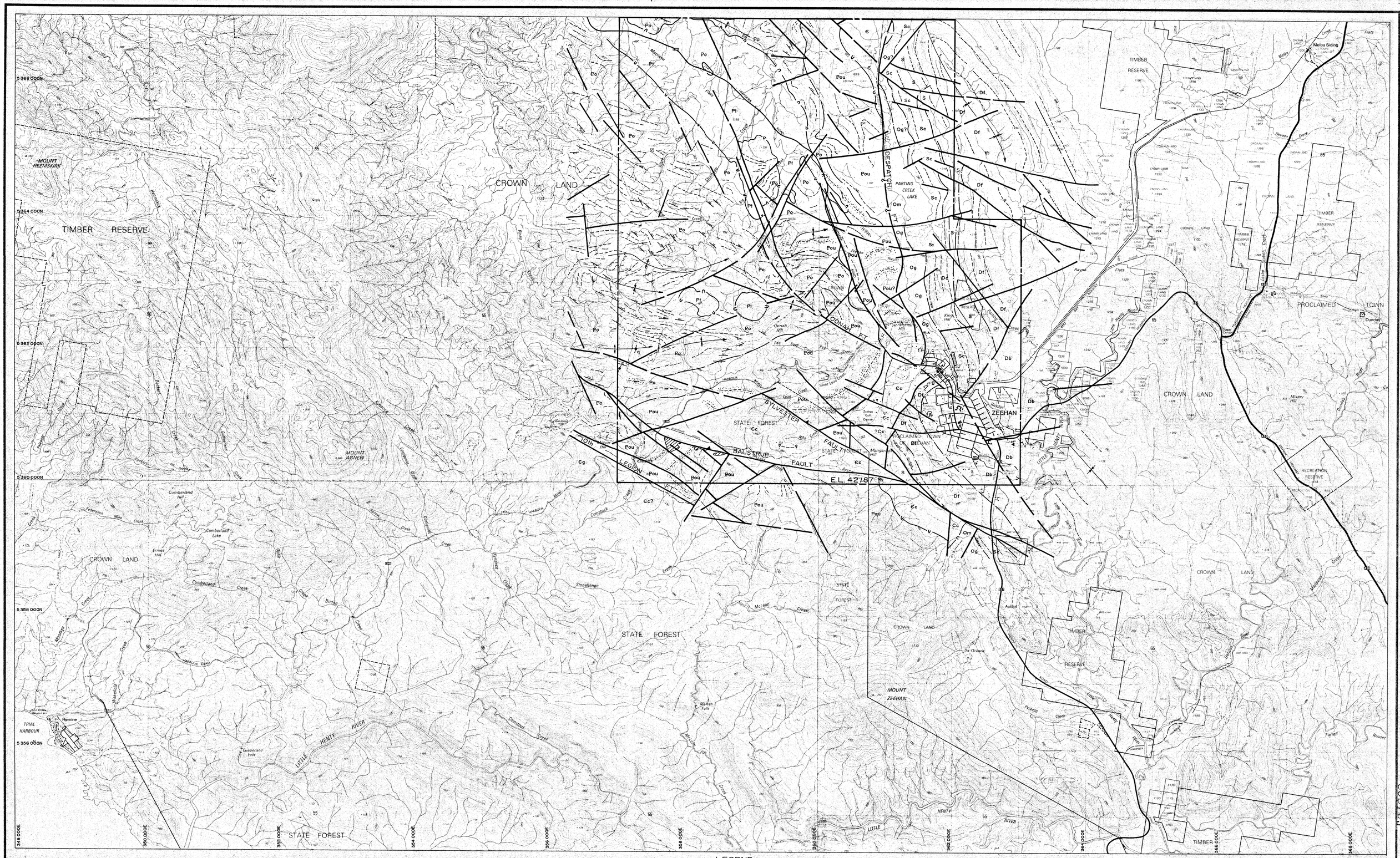


063168

5 cm

RGC EXPLORATION PTY. LIMITED (INCORP. N.S.W.)			
	COMPILED: D.J.F.C.	92-3379.	
	DRAWN: T. GIBBS.	ZEEHAN SHEET	
	DATE: August '89	GEOLOGICAL INTERPRETATION	
	CHECKED:	(PROVISIONAL)	
	1:25,000 REFERENCE: DUNDAS OCEANA HEEMSKIRK		
BASE PLAN No. ID-5612/126	OVERLAY PLAN No.	100 0 100 200 500 SCALE: 1 : 10,000	FIGURE No. 4

N.W. Coast Computer Aided Drafting Centre Phone (004) 354351



LEGEND

PERMIAN	Pl	ZEEHAN GLACIAL FORMATION
DEVONIAN	Db	BELL SHALE
	Df	FLORENCE QUARTZITE
SILURIAN	S	SEDIMENTS; UNASSIGNED
	Sc	CROTTY QUARTZITE
ORDOVICIAN	Og	GORDON LIMESTONE
	Om	MOINA SANDSTONE
CAMBRIAN	Є	SEDIMENTS; UNASSIGNED
	Єc	CRIMSON CREEK FORMATION
PROTEROZOIC	Po	OONAH FORMATION
	Pou	UPPER OONAH, INCLUDES Montana Spillite Carbonates, Shale, Siltstone, Sandstone.
INTRUSIVES CAMBRIAN	Єg	GABBRO

- IRONSTONE
- QUARTZ VEIN
- SANDSTONE BED IN Pou
- BEDDING TRACE
- FAULT
- BEDDING ATTITUDE; 0-29°
- " " 30-59°
- " " 60-89°
- " " Vertical.
- ANTCLINE
- SYNCLINE
- LITHOLOGICAL CONTACT
- UNCONFORMITY

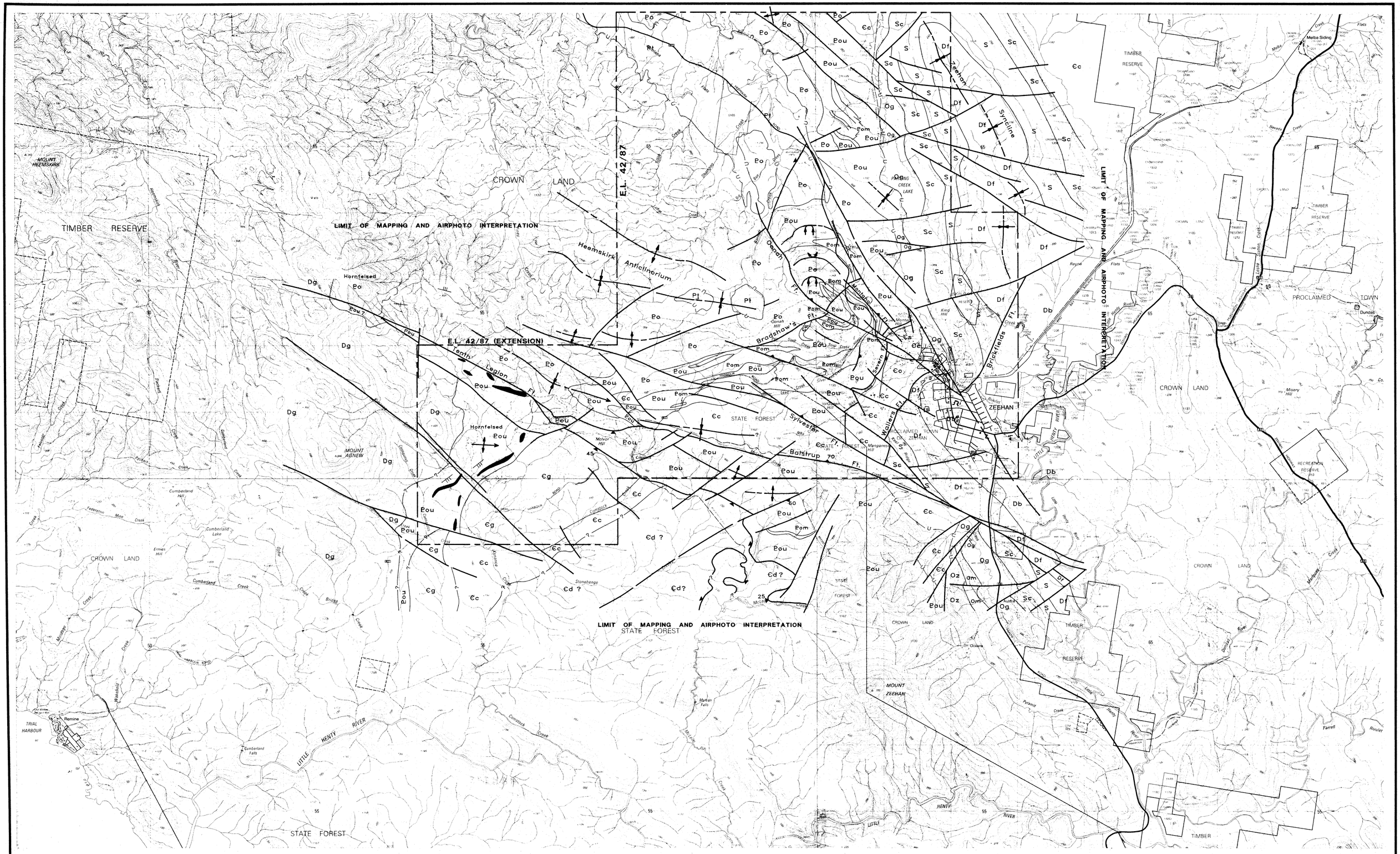
5 cm

RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	D.J.C.	ZEEHAN PROJECT
DRAWN	M.O.W.	E.L. 42/87
DATE	AUG. 1990	AIRPHOTO INTERPRETATION
CHECKED		92-3379.
1:250,000 REFERENCE		

BASE PLAN No. 5521/039 — SCALE 1: 25 000 — PLAN 5
OVERLAY PLAN No.

063169



PERMIAN	Pt	ZEEHAN GLACIAL FM.
DEVONIAN	Db	BELL SHALE
	Df	FLORENCE QUARTZITE
SILURIAN	S	UNDIFFERENTIATED SEDIMENTS
	Sc	CROTTY QUARTZITE
ORDOVICIAN	Og	GORDON LIMESTONE
	Om	MOINA SANDSTONE
	Oz	MT. ZEEHAN CONGLOMERATE
CAMBRIAN	Cd	DUNDAS GP. SEDIMENTS
	Cc	CRIMSON CK. FM. TURBIDITES
	Cs	SUCCESS CK. GP. SEDIMENTS
PROTEROZOIC	Pou	UPPER OONAH FM. SEDIMENTS
	Pom	MONTANA SPILITE
	Po	(LOWER) OONAH FM. SEDIMENTS
INTRUSIVES	Dg	DEVONIAN GRANITE
	Cg	CAMBRIAN GABBRO

GEOLOGICAL CONTACT
U UNCONFORMITY
LIMIT OF HORNFELSING
BEDDING 0–30°
" 31–60°
" 61–90°
MAGNETIC SKARNS

ANTICLINE
ANTICLINE, RECLINED
SYNCLINE
SYNCLINE, RECLINED
FAULT, NORMAL
FAULT, REVERSE

5 cm

063170 **RGC EXPLORATION PTY. LIMITED**
INCORPORATED IN NEW SOUTH WALES

COMPILED	J.C.	
DRAWN	M.O.W.	
DATE	7/92	
CHECKED		
1:250,000 REFERENCE		

ZEEHAN PROJECT E.L. 42/87

REGIONAL GEOLOGICAL INTERPRETATION

92-3379.

BASE PLAN No. 5521/051
OVERLAY PLAN No. P
SCALE 1:25 000
PLAN 6

EXPLORATION TARGETS :

TRIAL HARBOUR	~ Ni deposits in ultramafics (Єum)	STONEHENGE	~ Renison style Sn deposits
AGNEW, FEDERATION	~ large tonnage, low grade Sn deposits in granite (Dg) ~ "Sweeneys" style Sn, Zn, Ag sulphide deposits in Dg	SYLVESTER / DORIC MONTANA S.L.	~ Pb ~ Zn ~ Ag veins
AREA D, E. HEEMSKIRK	~ Renison style Sn deposits replacing Oonah Fm carbonates ~ Sn skarns	OONAH	~ Polymetallic veins (Cu, Pb, Zn, Ag, Sn)
TENTH LEGION	~ Iron deposits in magnetite skarns ~ Base metal skarns	QUEEN HILL	~ Renison style Sn deposits ~ Fault related Sn (Severn deposit)
		CUNI	~ Cu~Ni deposits in gabbro sill

BLACK JACKS, MARIPOSA, BANNOCKBURN, PYRAMID, OCEANA, AUSTRAL, NUBEENA — "Irish" style Pb~Zn~Ag deposits replacing Gordon Limestone (Og)

5 cm

RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

063171

COMPILED	DJC
DRAWN	JB
DATE	9/91
CHECKED	
1:250,000 REFERENCE	

ZEEHAN EL 42/87

PREVIOUS WORK LOCALITY PLAN

92-3379.

BASE PLAN No. 5521/090
OVERLAY PLAN No.
SCALE 1:25000 — 0 500 1000m
PLAN 7

E.L. 42/87

E.L. 42/87 (EXTENSION)

PARTING LAKE GRID

SYLVESTER GRID

35M/72

36M/81

43M/85

123M/87

SY 1 SY 2 SY 3 SY 4 SY 5 SY 6 SY 7 SY 8

CROWN LAND

TIMBER RESERVE

STATE FOREST

PROCLAIMED TOWN

ZEEHAN

DUNDAS

RECREATION RESERVE

MOUNT HEEMSKIRK

MOUNT AGNEW

MOUNT ZEEHAN

PARTING CREEK LAKE

Melba Siding

Riblet

Dundas

Remine

TRIAL HARBOUR

LITTLE HENTY RIVER

5 366 000N

5 364 000N

5 362 000N

5 360 000N

5 358 000N

5 356 000N

348 000E

350 000E

352 000E

354 000E

356 000E

358 000E

360 000E

362 000E

364 000E

366 000E

368 000E

EXCLUSIONS

123M/87 - OCEANIA TASMANIA P/L.
43M/85 - OCEANIA TASMANIA P/L.
35M/72 - CRA EXPLORATION P/L.
36M/81 - GIPPSLAND OIL & MINERALS N/L
& ABERFOYLE EXPLORATION P/L.

5 cm

RGC EXPLORATION PTY. LIMITED

063172 INCORPORATED IN NEW SOUTH WALES

COMPILED	M.O.W.
DRAWN	M.O.W.
DATE	Aug. 1990
CHECKED	
1:250,000 REFERENCE	

ZEEHAN PROJECT
E.L. 42/87.

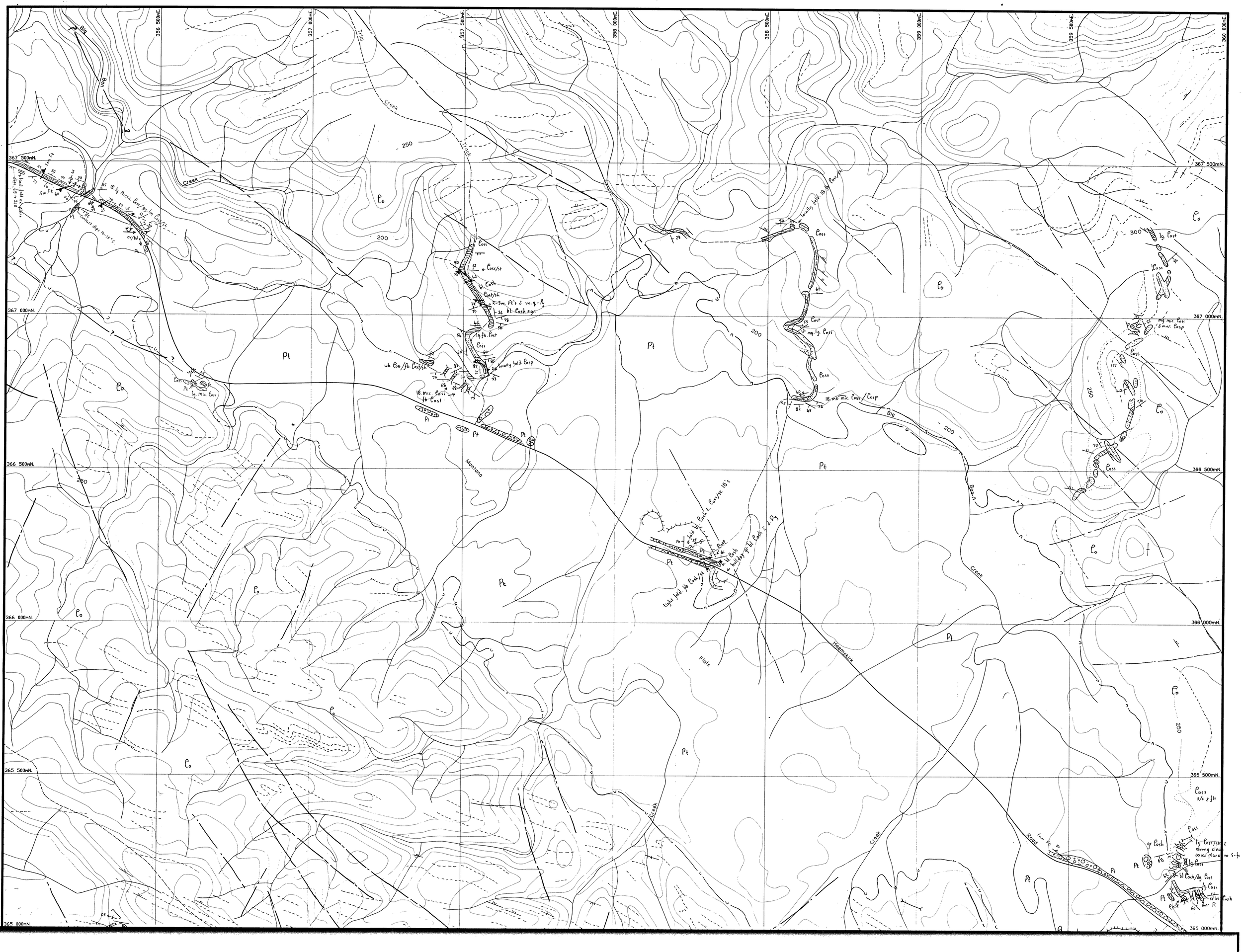
DRILLHOLE & GRID LOCATION PLAN

92-3379.

BASE PLAN No. 5521/038
OVERLAY PLAN No.

SCALE 1:25 000

PLAN 8



PERMIAN — Pt — tillite

PROTEROZOIC — DONAH FM. — Cos — sediments, undiff.
Cosh — shale
Cost — siltstone
Coss — sandstone
Cogw — greywacke
Col — limestone / carbonate
Com — Montana spilite
Comm — Melange
Coch — Chert

Bedding trend
Bedding attitude; measured
0 - 29°
30 - 59°
60 - 89°
Vertical
Joint ; Vertical
Inclined
Shear ; Vertical
Inclined
Cleavage ; Vertical
Inclined
Fault ; Vertical
Inclined
Small anticline / antiform
syncline / synform
Plunge of minor fold
Vein, inclined
Outcrop
Float / Scree

Trench
Pit
Shaft
Adit
Airphoto Lineament
Unconformity

agglom	agglomerate	graph	graphitic	Rx	rock		
bd	band	Gt	grit	sacch	saccharoidal		
bl	black	gy	grey	s/c	sub-crop		
boxw	boxwork	IB	interbedded	silic	siliceous		
br	brown	lam	laminated	Sl	sphalerite		
brecc.	breccia (ted)	lg	light grey	sm	semi - massive		
carb/cc	carbonated / calcareous	larenite/la	lithic - arenite	Ss	sandstone		
cg	coarse grained	lwacke/lw	lithic - wacke	St	siltstone		
d	disseminated	m, mx	massive	stockw	stockwork		
dg	dark grey	mic	micaceous	Tf	tuff		
fb	fine bedded	mg	medium grained	Tst	tuffaceous siltstone		
Fe	iron, ferruginous	mudst/md	mudstone	txt	texture		
Fest	ironstone	mv	mafic volcanic	v	very		
fg	fine grained	mx	massive	vesic	vesicular		
flt	float	or	orange	vfg	very fine grained		
Ft	fault	Py	pyrite	vn	vein		
Gn	galena	Qt/q	quartz	wd	weathered		
gn	green	remn	remnant	wh	white		

SHEET LOCATION

SHEET A	SHEET B
SHEET C	SHEET D

GN TN MN
GRID CONVERGENCE 1.2°
GRID/MAGNETIC 11.6°

063173

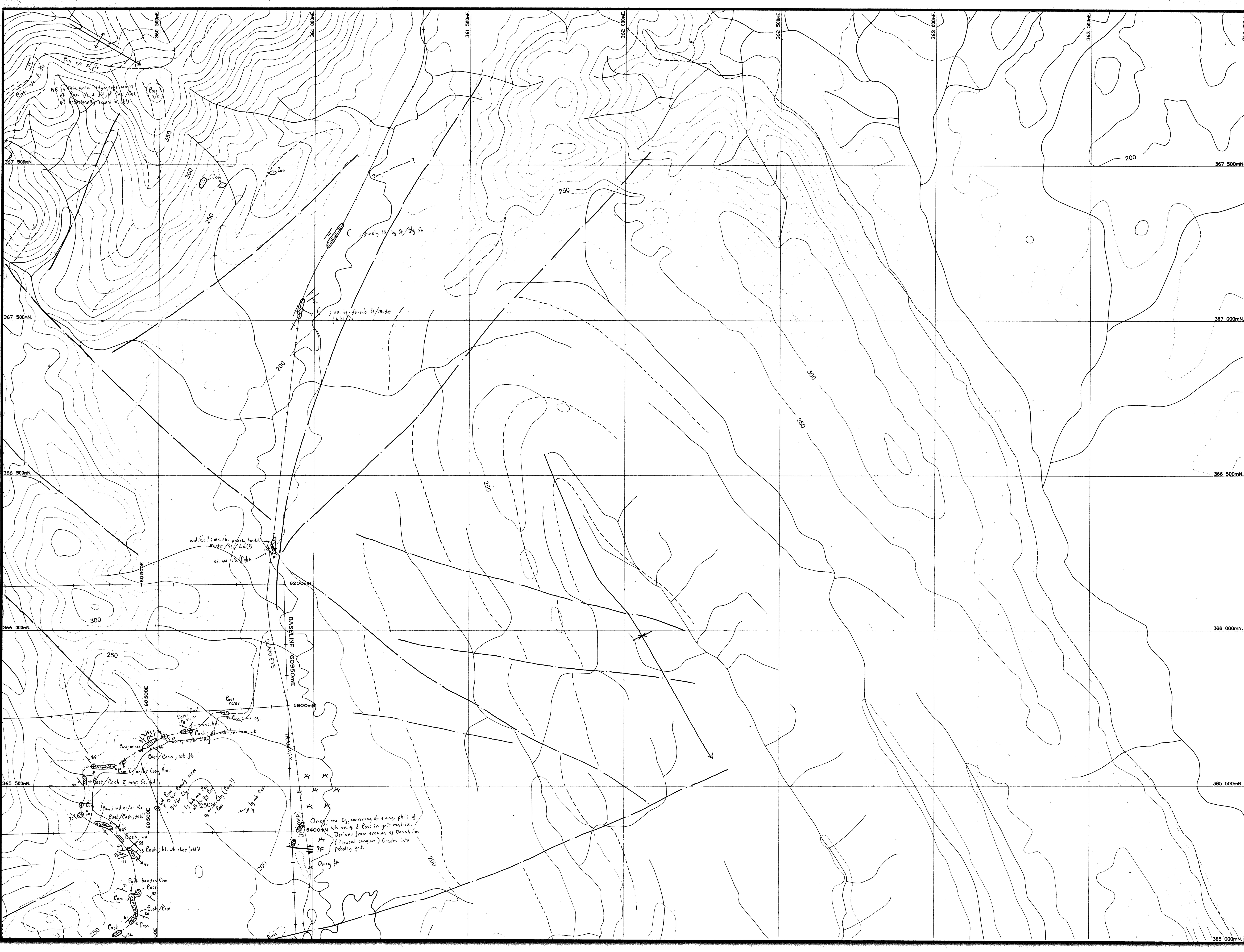
5 cm

RGC EXPLORATION PTY. LIMITED
(INC. IN N.S.W.)

COMPILED:	D.J.C.
DRAWN:	D.J.C.
DATE:	Feb. '91
CHECKED:	
1:25,000 REFERENCE:	DUNDAS OCEANA HEEMSKIRK

ZEEHAN AREA
SHEET A
GEOLOGICAL FACT MAP
92-3379.1

BASE PLAN No. 5521/056
OVERLAY PLAN No.
200 0 200 400 1000
SCALE: 1 : 5,000
FIGURE No. PLAN 9



SILURIAN	ELDON GP.	Sc	Crotty quartzite
ORDOVICIAN	JUNEE GP.	Og	Gordon limestone
		Om	Moina sandstone
CAMBRIAN		Ꞓ	Unassigned sediments
PROTEROZOIC	OONAH FM.	Ꞓos	Unassigned sediments
		Ꞓosh	Shales
		Ꞓost	Siltstone
		Ꞓoss	Sandstone (quartzite)
		Ꞓosp	Finely interbedded Ꞓosh / Ꞓost / Ꞓoss
		Ꞓom	Montana spilite
		Ꞓomt	Montana tuff (spilitic)

Bedding trend
Bedding attitude; measured
0 - 29°
30 - 59°
60 - 89°
vertical
Joint ; vertical
inclined
Shear ; vertical
inclined
Cleavage ; vertical
inclined
Fault ; vertical
inclined
Small anticline
syncline
Plunge of minor fold
Vein / fissure lode, inclined
Outcrop
Float / scree

Trench
Pit
Shaft
Adit
Mullock heap (or escarpment)
Old workings
Ironstone

Airphoto lineaments (probably fault traces)

bd	band	gy	grey
bedd	bedding / bedded	IB	interbedded
bl	black	lam	laminated
br	brown	lg	light grey
brecc	brecciated	Lst	limestone
cb	coarse bedded	mb	medium bedded
cg	coarse grained	micac	micaceous
ck	creek	mnr	minor
Clayst	Claystone	Mudst	mudstone
Cp	chalcopyrite	mx	massive
d	disseminated	v	very
dg	dark grey	vn	vein
fb	fine bedded	wb	well bedded
flt	float	wd	weathered
Ft	fault	wh	white
Gt	grit	X-bedd	cross-bedded
Gn	galena		

SHEET LOCATION

SHEET A	SHEET B
SHEET C	SHEET D

Mapping was conducted along roads, tramways, creeks and ridge tops mostly prior to construction of the grids. The geology was then plotted against topography, and may be in error by up to 50 metres with respect to the grid.

GN TN MN
GRID CONVERGENCE 1·2°
GRID/MAGNETIC 11·6°

063174

5 cm

92-3379.

RGC EXPLORATION PTY. LIMITED
(INC. IN N.S.W.)

COMPILED :	D.J.C.
DRAWN :	D.J.C.
DATE :	July '90
CHECKED:	
1:25,000 REFERENCE :	DUNDAS OCEANA HEEM.&TRIAL

ZEEHAN AREA
SHEET B
GEOLOGICAL FACT MAP

BASE PLAN No. 5521/034

OVERLAY PLAN No.

200 0 200 400 1000
SCALE: 1: 5,000

PLAN 10

STRATIGRAPHY

CAMBRIAN CRIMSON CK. FM.	Ꞓc	undiff.
	Ꞓct	turbidite
	Ꞓcg	greywacke
	Ꞓcla	lithic arenite (volc. ss)
	Ꞓcmd	mudstone
PROTEROZOIC OONAH FM.	Ꞓos	sediments, undiff
	Ꞓosh	shale
	Ꞓost	siltstone
	Ꞓoss	sandstone
	Ꞓogw	greywacke
	Ꞓol	limestone / carbonate
	Ꞓom	Montana spilite
	Ꞓomn	melange
	Ꞓoch	chert
INTRUSIVE	Ꞓus	serpentinite
	Ꞓg	gabbro

Bedding trend
Bedding attitude, measured
, 0 - 29°
30 - 59°
60 - 89°
vertical
Joint, vertical
inclined
Shear, vertical
inclined
Cleavage, vertical
inclined
Fault, vertical
inclined
Small anticline
syncline
Plunge of minor fold
Vein, inclined
Outcrop
Float / Scree

Trench
Pit
Shaft
Adit
Ironstone
Massive sulphides
Airphoto lineaments (?Faults)
Auger hole / cuttings

agglom	agglomerate	graph	graphitic	Rx	rock
bd	band	Gt	grit	sacch	saccharoidal
bl	black	gy	grey	s/c	sub - crop
boxw	boxwork	IB	interbedded	silic	siliceous
br	brown	lam	laminated	Sl	sphalerite
brecc.	breccia (ted)	lg	light grey	sm	semi - massive
Carb/cc	carbonated / calcareous	l arenite	lithic - arenite	Ss	sandstone
cg	coarse grained	lwacke	lithic - wacke	St	siltstone
d	disseminated	m, mass	massive	stockw	stockwork
dg	dark grey	micac	micaceous	Tf	tuff
fb	fine bedded	mg	medium grained	Tst	tuffaceous siltstone
Fe	iron, ferruginous	mudst	mudstone	txt	texture
Fe - st	ironstone	mv	mafic volcanic	v	very
fg	fine grained	mx	massive texture	vesic.	vesicular
flt	float	or	orange	vfg	very fine grained
Ft	fault	Py	pyrite	vn	vein
Gn	galena	Qt, q	quartz	wd	weathered
gn	green	remn	remnant	wh	white

N.B. Mapping was by traverses along roads, tramways, creeks and ridge tops, and around old workings. The geology was then plotted against topography, and the position of any point could err by up to 50 m with respect to the local grid.

ADDITIONS

sp	spongy
tc	talcose
tf	tuffaceous
vg	vuggy

SHEET LOCATION

SHEET A	SHEET B
SHEET C	SHEET D

ADDITIONS

Bm	base metal
dolm	dolomitic
dp	dipping
fs	fissile
pr	porous
sch	schistose

GN TN MN
GRID CONVERGENCE 1.2°
GRID/MAGNETIC 11.6°

063175

5 cm

92-3379.

RGC EXPLORATION PTY. LIMITED
(INC. IN N.S.W.)

ZEEHAN AREA
SHEET C
GEOLOGICAL FACT MAP

COMPILED:	D.J.C.
DRAWN:	D.J.C.
DATE:	July 90
CHECKED:	
1:25,000 REFERENCE:	DUNDAS OCEANA HEEM.&TRIAL

BASE PLAN No. 5521/033
OVERLAY PLAN No.
100 0 100 200 500
SCALE: 1 : 5,000
PLAN 11

Each/Pass; dip Pass/Fold

ZEEHAN

SUNSHINE
10 dg ch. Pcsh/lg Pcss, disturb

GRUBBS

Creek

HIGHWAY

RAILWAY

Mapping was along roads, tramways, creeks and ridge tops mostly prior to construction of grids.
Geology was plotted against topography, and may be in error by up to 50 m. with respect to grids.

GN
TN
MN
GRID CONVERGENCE 1.2°
GRID/MAGNETIC 11.6°
5 cm

063176

SHEET LOCATION

SHEET A	SHEET B
SHEET C	SHEET D

STRATIGRAPHY

DEVONIAN	Db	Bell Shale	PROTEROZOIC OONAH Fm.
	Dj	Florence Quartzite	
	Sk	Keel Quartzite	
SILURIAN	Sa	Amber Slate	
	Sc	Crotty Quartzite	
ORDOVICIAN JUNEE GP	Og	Gordon Limestone	
	Om	Moina Sandstone	
	Ꞓ	Unassigned Cambrian	
CAMBRIAN CRIMSON CK. Fm.	Ꞓc	Unassigned sediments/turbidites	
SUCCESS CK. GP.	Ꞓss	sandstone	
	Ꞓsd	dolomite	
DEVONIAN INTRUSIVE	Dp	Porphyry	

Pos	sediments; unassigned
Posh	shales
Post	siltstone
Poss	sandstone
Posp	finely IB. Ss/St/Sh
Pom	Montana spilite; unassigned
Pomt	tuff

Trench
Pit
Shaft
Adit
Mullock or escarpment
Old workings, misc.
Ironstone
Airphoto lineament (Ft. trace ?)

Bedding trend
Bedding attitude; measured
0 – 29°
30 – 59°
60 – 89°
vertical
Joint; vertical
inclined
Shear; vertical
inclined
Cleavage; vertical
inclined
Fault; vertical
inclined
Small anticline
syncline
Plunge of minor fold
Vein / fissure lode, inclined
Outcrop
Float / scree

agg	agglomerate	mic	micaceous
bed	bedded	mk	mark
bd	band	mnr	minor
bl	black	mull	mullock
br	brown	mx	massive
cf	with	o/c	outcrop
cg	coarse grained	o/(cut)	open cut
Cl	Clay(ey)	or	orange
dg	dark grey	Py	pyrite
dst	disturbed	q	quartz
fb	fine bedded	Rx	rock
Fe	Ferruginous	s/c	sub-crop
fg	fine grained	schist	schestose
fish	undeformed lenses (in shear)	sd	sheared
flt	float	Sh	shale
fold	folded	Ss	sandstone
Ft	fault	St	siltstone
gr	graphitic	text	texture
lg	light grey	v	very
vn	veined		
ves	vesicular		
wd	weathered		

BASE PLAN No.	5521/035
OVERLAY PLAN No.	

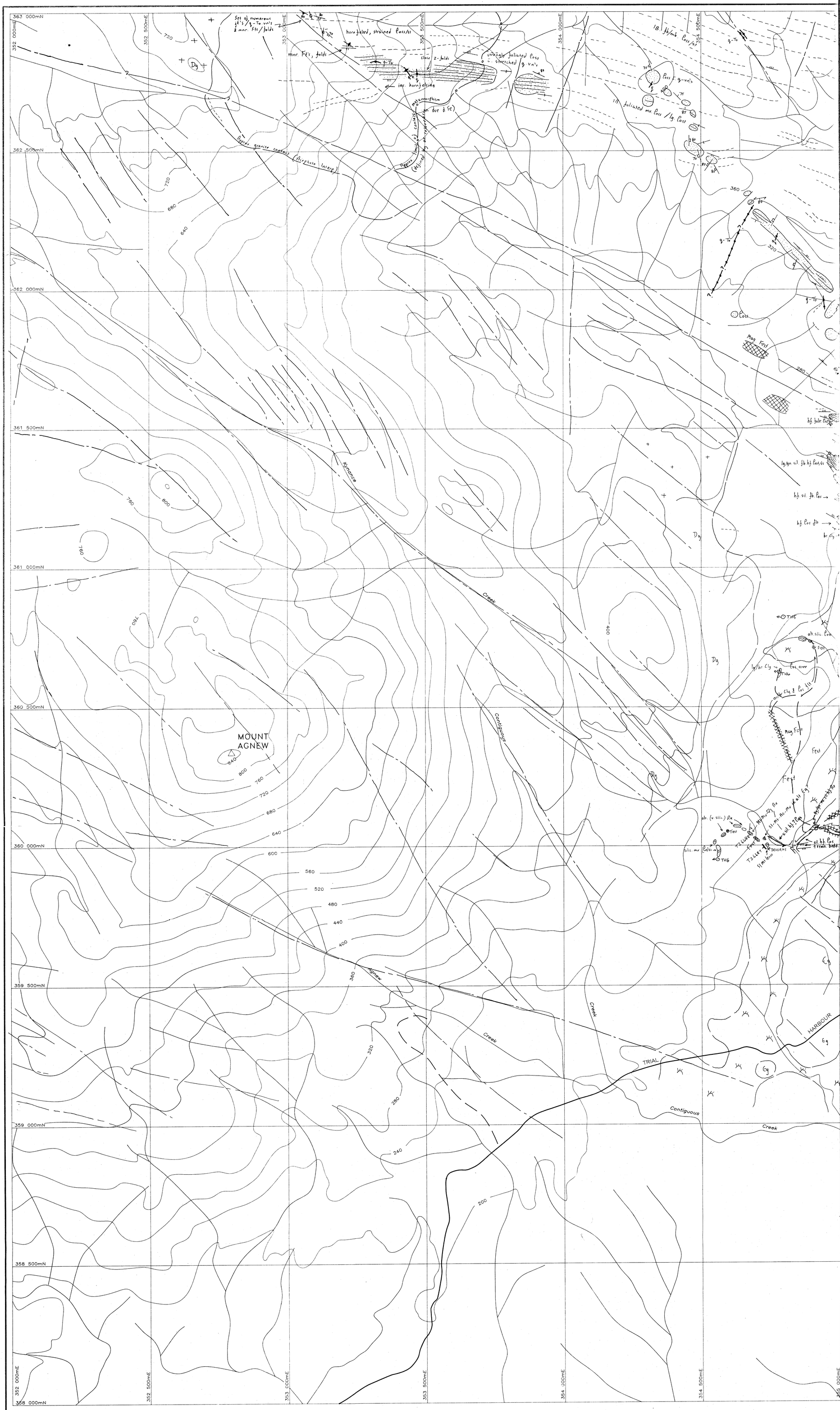
RGC EXPLORATION PTY. LIMITED
(INC. IN N.S.W.)

COMPILED:	D.J.C.
DRAWN:	D.J.C.
DATE:	July '90
CHECKED:	
1:25,000 REFERENCE:	DUNDAS OCEANA HEEM. & TRIAL

ZEEHAN AREA
SHEET D
GEOLOGICAL FACT MAP
92-3379

100 0 100 200 500
SCALE: 1 : 5,000

PLAN 12



DEVONIAN	Dg	granite
CAMBRIAN	Eg	gabbro
	Qss	sediments, undiff.
	Qsh	shale
PROTEROZOIC OONAH FM.	Qst	siltstone
	Qss	sandstone

Bedding trend
Bedding attitude ; measured
; 0 - 29° estimated
30 - 59°
60 - 89°
Vertical
Joint ; vertical
inclined
Shear ; vertical
inclined
Cleavage ; vertical
inclined
Fault ; vertical
inclined
Airphoto Lineament
Vein

alt	altered	gn	green	q	quartz
br	brown	gy	grey	Rx	rock (undiff.)
brx	brecciated	hf	hornfelsed	Sd	Sheared
cb	coarse bedded	lB	interbedded	Sil	siliceous
Cly	clay	jt	jointed	To	Tourmaline
d.	disseminated	lg	light grey	v	very
dg	dark grey	lm	laminated	Vn	Vein
fb	fine bedded	mag	magnetic	wh	white
Fe	Ferruginous	mb	medium bedded	wd	weathered
Fest	Ironstone	Mt	Magnetite		
fiss	fissile	mv.			
fr	fresh	mx	massive		
Ft	fault	or	orange		

063177
5 cm

RGC EXPLORATION PTY.LTD.

COMPILED	
DRAWN	D.J.C.
DATE	March 1991
CHECKED	
1:25000 REF.	

ZEEHAN AREA E.L. 42/86
SHEET E

GEOLOGICAL FACT MAP

92-3379

DRAWING ID. 5521/081

SCALE 1:5000

PLAN 13

LEGEND.

OONAH Qtzt & SLATE	Eo sh	SHALE
	Eo sl	SLATE
	Eo slts	SILTSTONES
	Eo qtzt	QUARTZITE
	Eo phyll	PHYLLITE
	Eov	SPILITE
	€c	CRIMSON CK FORMATION
	€c slts	SILTSTONES
	€c ss	SANDSTONE
	Dss	DEVONIAN SANDSTONE
	Pt	PERMIAN TILLITE
	(mic)	MICACEOUS

SHEET LOCATION

SHEET A	SHEET B
SHEET C	SHEET D

5 cm

GN
TN MN
GRID CONVERGENCE 1·2°
GRID/MAGNETIC 11·6°

063178

92-3379.

RGC EXPLORATION PTY. LIMITED
(INC. IN N.S.W.)

COMPILED :	D.C.S
DRAWN :	T.G.D.S.
DATE :	
CHECKED :	
1:25,000 REFERENCE :	DUNDAS OCEANA HEEM. & TRIAL

ZEEHAN AREA
SHEET B
GEOLOGICAL FACT. MAP
(GRID BASED)

BASE PLAN No. 5521/047

OVERLAY PLAN No.

50 0 50 100 250
SCALE: 1 : 1000

PLAN 14

RGC EXPLORATION PTY. LIMITED 063179

OPEN FILE

E.L. 42/87 ZEEHAN

PARTIAL RELINQUISHMENT REPORT

FOR THE PERIOD 1987 to 1992

VOLUME 2 - 92-3379

MICROFILMED
FICHE No.012765-77

MINES
File Ref.
19 AUG 1992
Doc. Ref.
Action Officer Initials
Covering Letter
on File Folio 24
Resubmit to Date

Compiled by: D.J.F. Crossing
Senior Geologist

Endorsed by: M.J. Fleming
Senior Exploration Geologist

Report No. T/92/16
July, 1992

Distribution:
- o Tasmania Mines Department (1)
- o RGC Exploration (1)

356500 357000 357500 358000 358500 359000 359500

367500 367000 366500 366000 365500 365000 364500 364000 363500

063180

5 cm

RGC EXPLORATION PTY.LTD

ZEEHAN AREA - SHEET A
SAMPLE LOCATION PLAN

COMPILED BY: J.CROSSING & S.TRACEY

SCALE 1: 5000

0 100 200 300 400 500 M

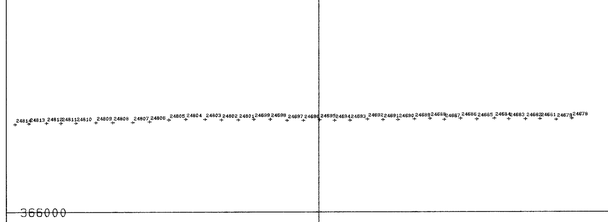
DATE: 31/ 7/92

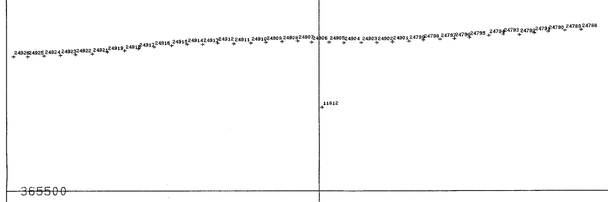
PLAN 15

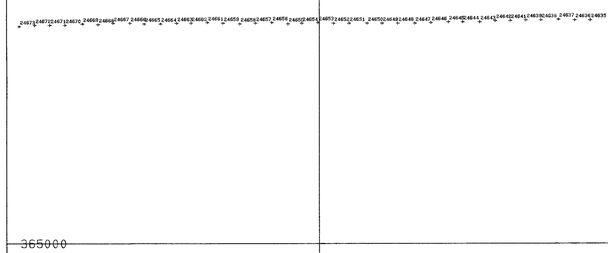
RENISON GOLD FIELDS CONSOLIDATED

360500 361000 361500 362000 362500 363000 363500

367500 367000 366500 366000 365500 365000 364500 364000 363500







063181

5 cm

RGC EXPLORATION PTY.LTD

ZEEHAN AREA - SHEET B
SAMPLE LOCATION PLAN

COMPILED BY: J.CROSSING & S.TRACEY

SCALE 1: 5000

0 100 200 300 400 500 M

DATE: 31/ 7/92 | PLAN 16

RENISON GOLD FIELDS CONSOLIDATED

92-3379

360500 361000 361500 362000 362500 363000 363500

362500 362000 361500 361000 360500 360000 359500 359000 358500

34722 34721 34727 34711 34710 34717 34709 34712

063182

5 cm

RGC EXPLORATION PTY.LTD

ZEEHAN AREA - SHEET D
SAMPLE LOCATION PLAN

COMPILED BY: J.CROSSING & S.TRACEY

SCALE 1: 5000

0 100 200 300 400 500 M

DATE: 31/ 7/92 | PLAN 17

RENISON GOLD FIELDS CONSOLIDATED

92-3379.

352500 353000 353500 354000 354500 355000 355500

362500 362000 361500 361000 360500 360000 359500 359000 358500

063183

5 cm

RGC EXPLORATION PTY.LTD

ZEEHAN AREA - SHEET E
SAMPLE LOCATION PLAN

COMPILED BY: J.CROSSING & S.TRACEY

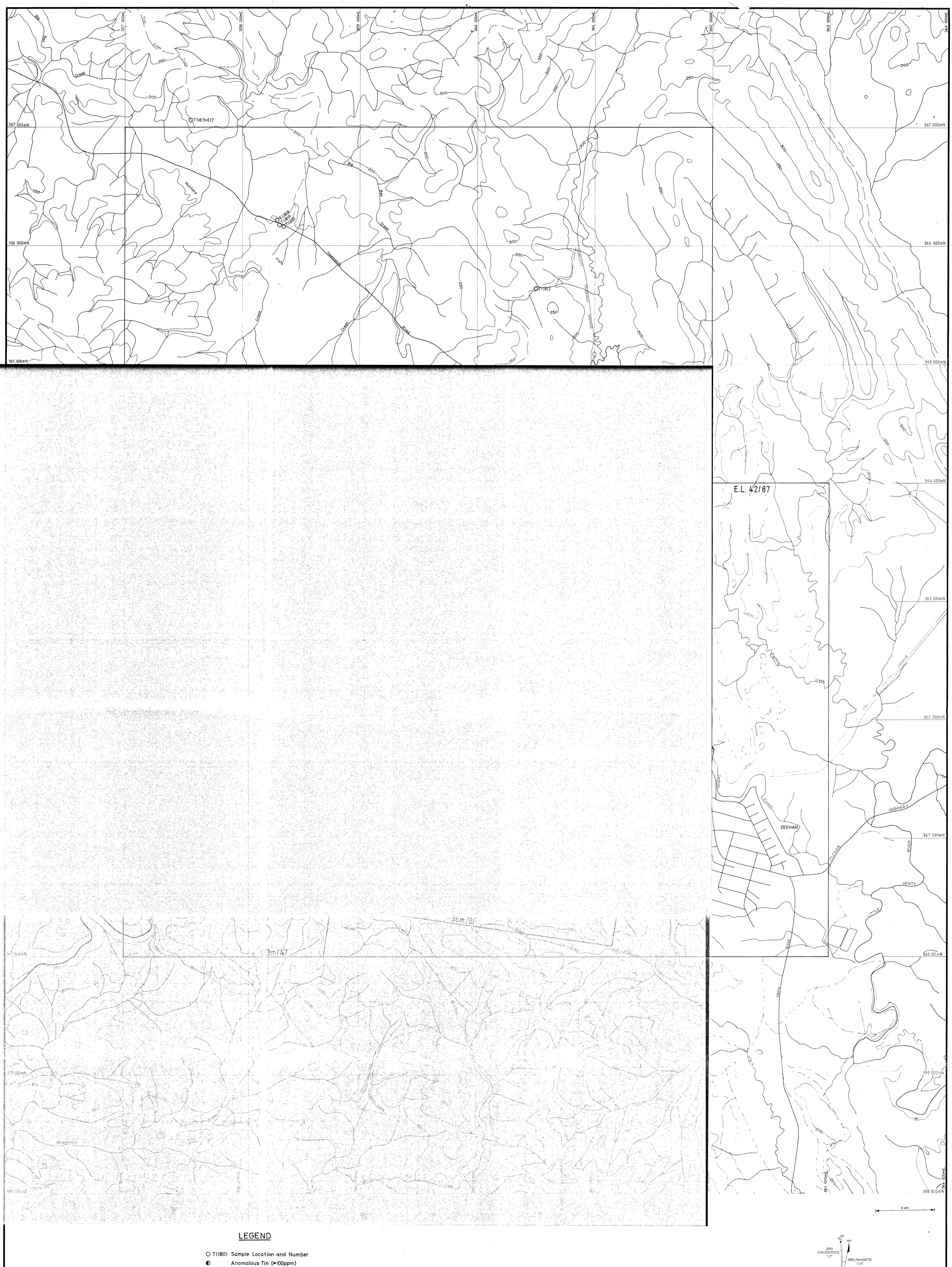
SCALE 1: 5000

0 100 200 300 400 500 M

DATE: 31/ 7/92

PLAN 18

RENISON GOLD FIELDS CONSOLIDATED



LEGEND

- ○ T11801 Sample Location and Number
- ◐ Anomalous Tin (>100ppm)
- ◑ Anomalous Gold (> 0·1 g/t)
- Cu Anomalous Copper (> 0·1%)
- Pb Anomalous Lead (> 0·1%)
- Zn Anomalous Zinc (> 0·1%)
- As Anomalous Arsenic (> 0·1%)
- Bi Anomalous Bismuth (> 0·5%)
- W Anomalous Tungsten (> 0·5%)
- Ag Anomalous Silver (> 50ppm)
- SSn Anomalous Soluble Tin ie Stannite (> 0·1%)

92-3379

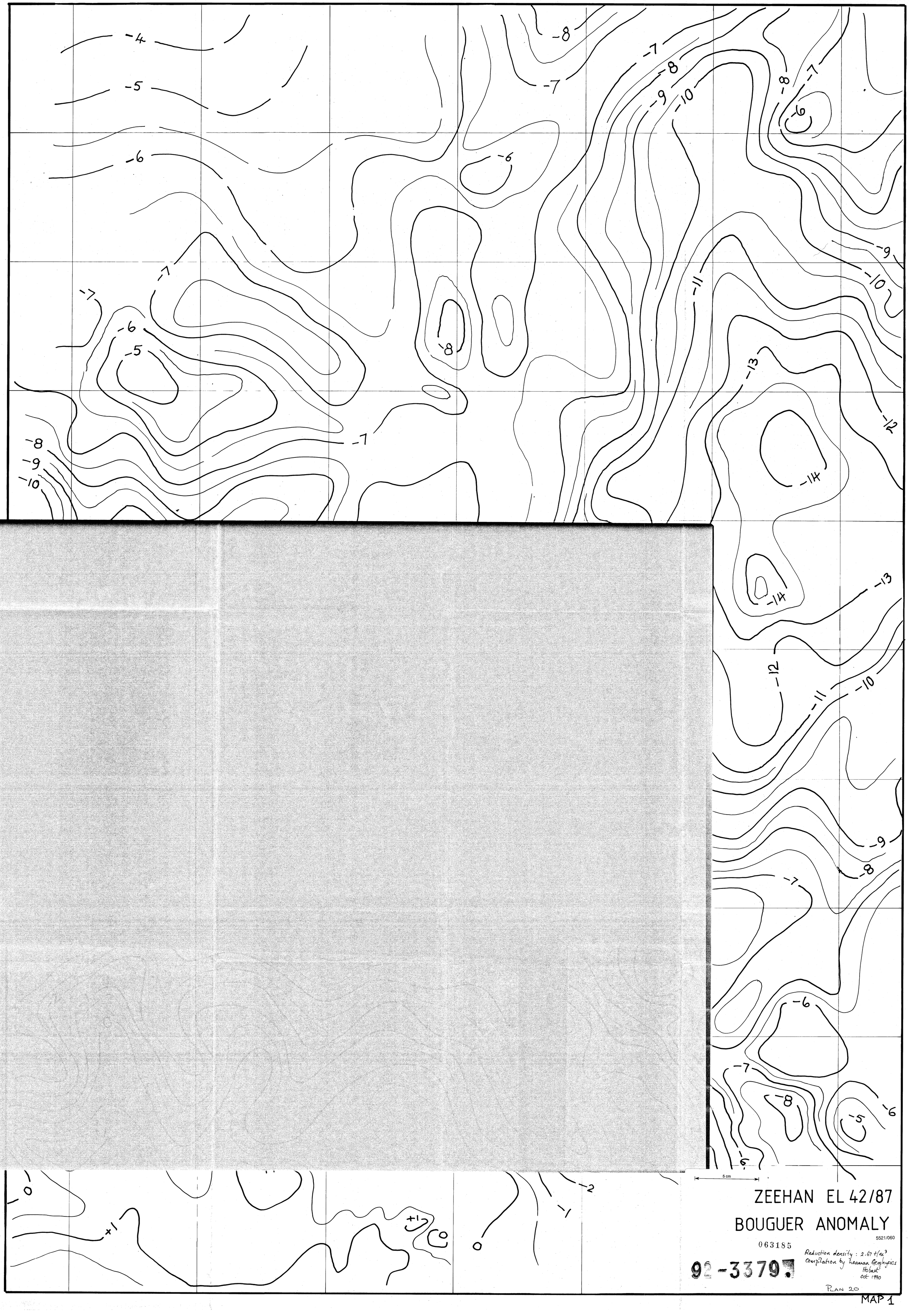
063184

RGC EXPLORATION PTY. LIMITED
(INC. IN N.S.W.)

COMPILED:	
DRAWN	T.G.D.S.
DATE:	MARCH '89
CHECKED:	
1:25,000 REFERENCE:	DUNDAS OCEANA HEEM. & TRIAL

ZEEHAN SHEET
ZEEHAN PROJECT
ROCK CHIP GEOCHEMISTRY

BASE PLAN No 5512/039
OVERLAY PLAN No.
100 0 100 200 500
SCALE: 1 : 10,000
FIGURE No. PLAN 19


-4
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-13
-12
-11
-10
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-7
-6
-5
-6
-7
-8
-5
-6
5 cm
ZEEHAN EL 42/87
BOUGUER ANOMALY
5521/060
063185
92-3379
Reduction density : 2.67 t/m³
compilation by Heaman Geophysics
Hobart
Oct 1990
PLAN 20
MAP 1

EL 42/87

357 358 359 360 361 362 363

5367 5366 5365 5364 5363 5362 5361 5360 000 MN

Separation process using "MANTLE88" model of Leaman & Richardson (1989b).
Compilation: Leaman Geophysics, Hobart; oct 1990

ZEEHAN EL42/87

92-3379. RESIDUAL BOUGUER ANOMALY

PLAN 21 5521/061

MAP 2

063186

5 cm

92-3379.

ZEEHAN EL 42/87

063187

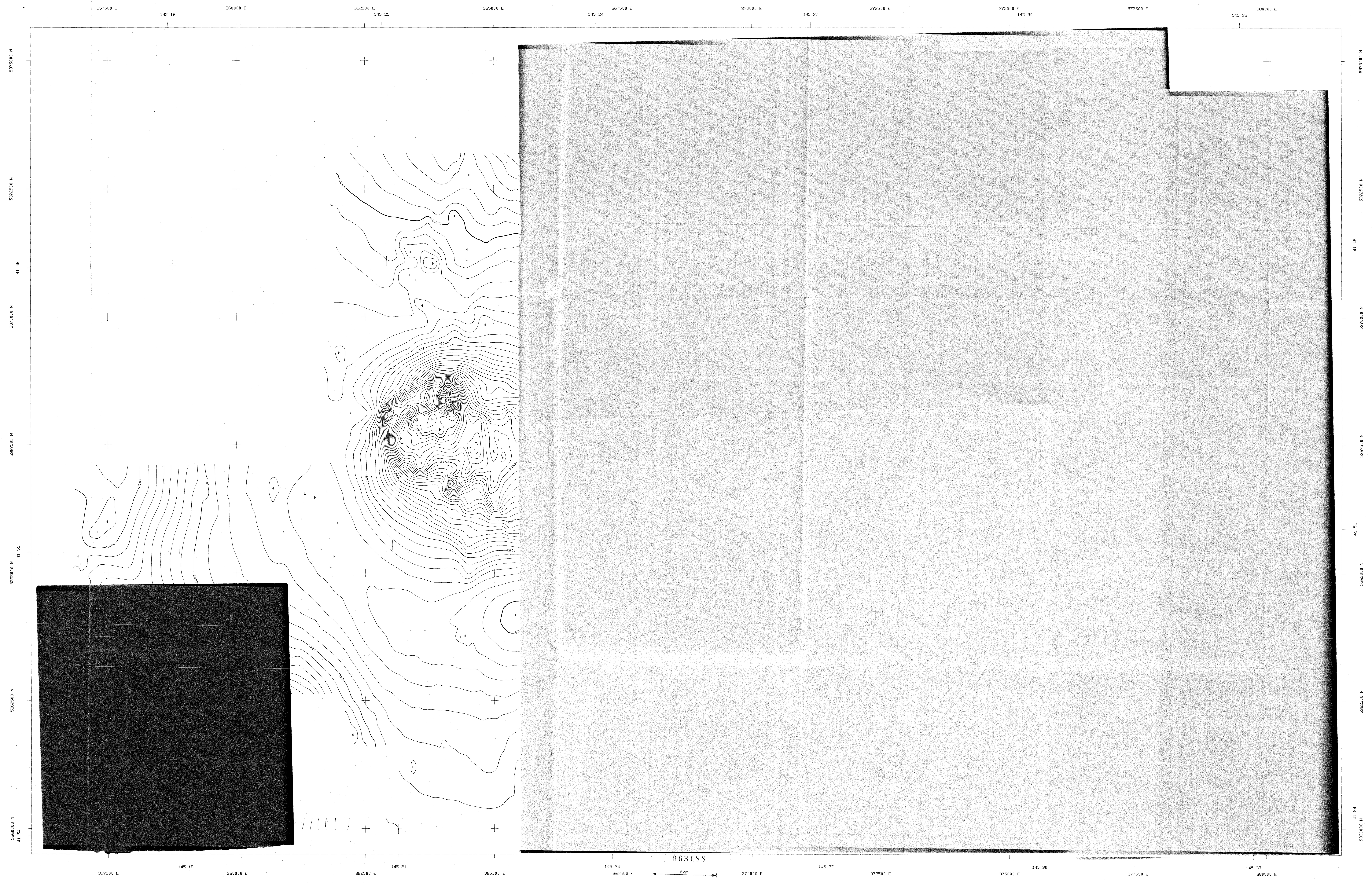
5 cm

INTERPRETATION

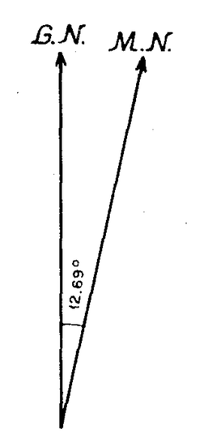
FORM OF HEEMSKIRK GRANITE

Uncontrolled solution; preliminary, including density assumptions and effects of Zeehan Syncline concept (see text) by D.E. Leaman Oct 1990

MAP 3 5521/062 PLAN 22



063188



500 0 500 1000 1500 2000 2500 Metres

Scale 1:25,000

RGC EXPLORATION PTY. LTD.

ZEEHAN - TASMANIA

RESIDUAL MAGNETIC INTENSITY CONTOURS

by Pitt Research Pty Limited, Sydney, Australia

October 1989

92-3379.

PLAN 23

DATA ACQUISITION:

This survey was flown in March 1989 by Geoterrex Pty. Ltd.

Data Recording: Geoterrex Madacs acquisition ststem.
Flight Path Record: Automax 35mm continuous tracking camera.
Navigation: Visual using 1:15 000 scale black and white enlargements of high level photography.

Magnetometer: Caesium Vapour optical absorption
Sensitivity: 0.05 nT.
Recording Interval: 0.1 sec. (approx 5m sampling).
Nominal Spacing: Traverses 150 metres east/west.
Tielines 1 500 metres north/south.
Terrain Clearance: Sensor in towed bird below helicopter at nominal 75 metres.
Ground Speed: Approximately 180 km/hr.

DATA PROCESSING:

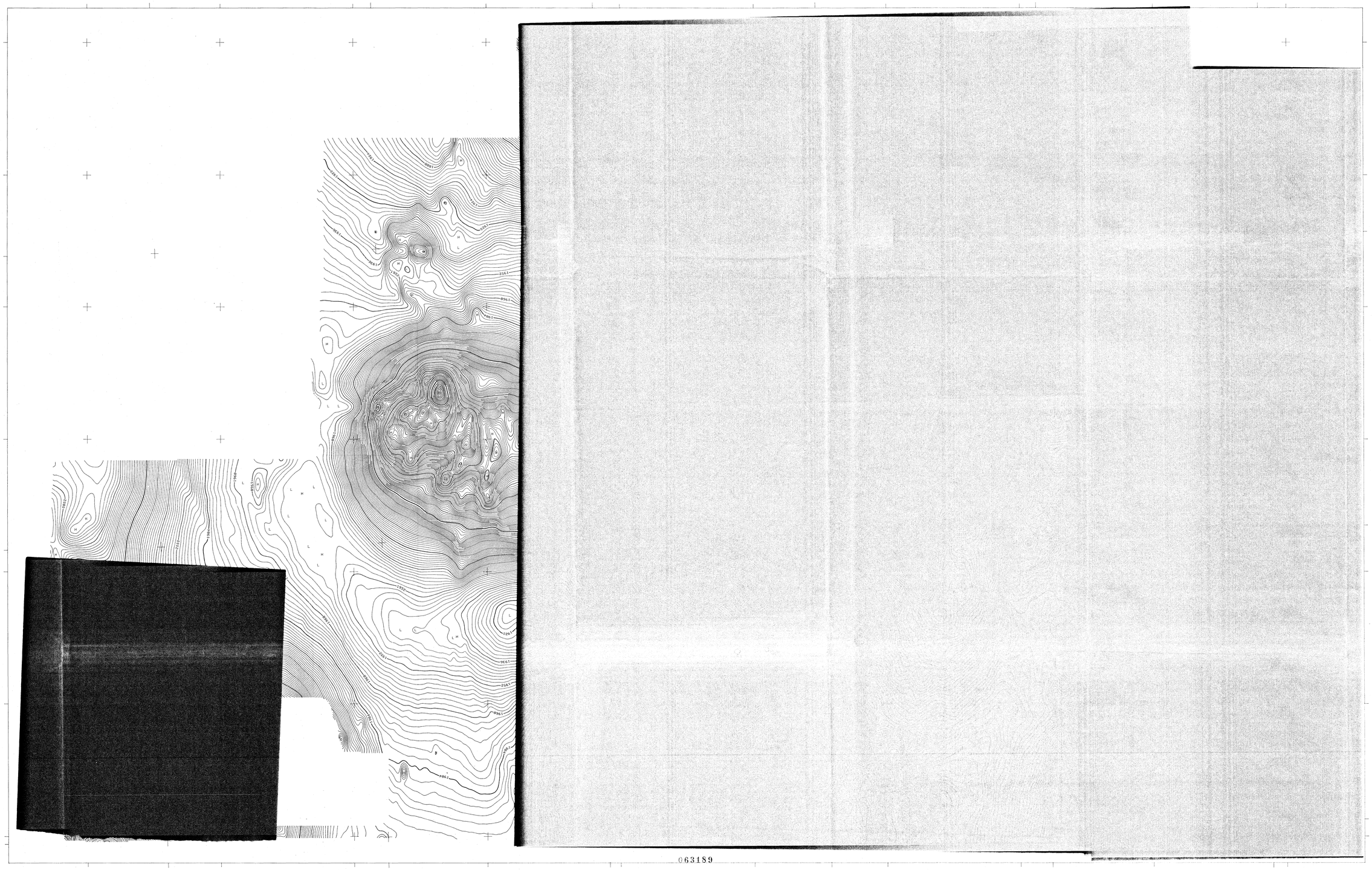
Final magnetic levelling, corrections and mapping performed by Pitt Research Pty Ltd., Sydney, Australia.

Grid Mesh Size: 25m x 25m
Contour Interval: 10.0 nT

IGRF (1985): Removed and datum of 2000 nT added.
Total field: 62,371 nT
Inclination: -72.45 degrees down
Declination: 12.69 degrees East

Australian Map Grid Zone 55.

5512/004



DATA ACQUISITION:

This survey was flown in March 1989 by Geoterrex Pty. Ltd.

Data Recording:	Geoterrex Madacs acquisition system.
Flight Path Record:	Automax 35mm continuous tracking camera.
Navigation:	Visual using 1:15 000 scale black and white enlargements of high level photography.
Magnetometer:	Caesium Vapour optical absorption
	Sensitivity: 0.05 nT.
Recording Interval:	0.1 sec. (approx 5m sampling).
Nominal Spacing:	Traverses 150 metres east/west.
	Tielines 1 500 metres north/south.
Terrain Clearance:	Sensor in towed bird below helicopter at nominal 75 metres.
Ground Speed:	Approximately 180 km/hr.

5 cm

500 0 500 1000 1500 2000 2500 Metres

Scale 1:25,000

RGC EXPLORATION PTY. LTD.

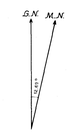
ZEEHAN - TASMANIA

RESIDUAL MAGNETIC INTENSITY CONTOURS

by Pitt Research Pty Limited, Sydney, Australia

92-5879.

PLAN 24



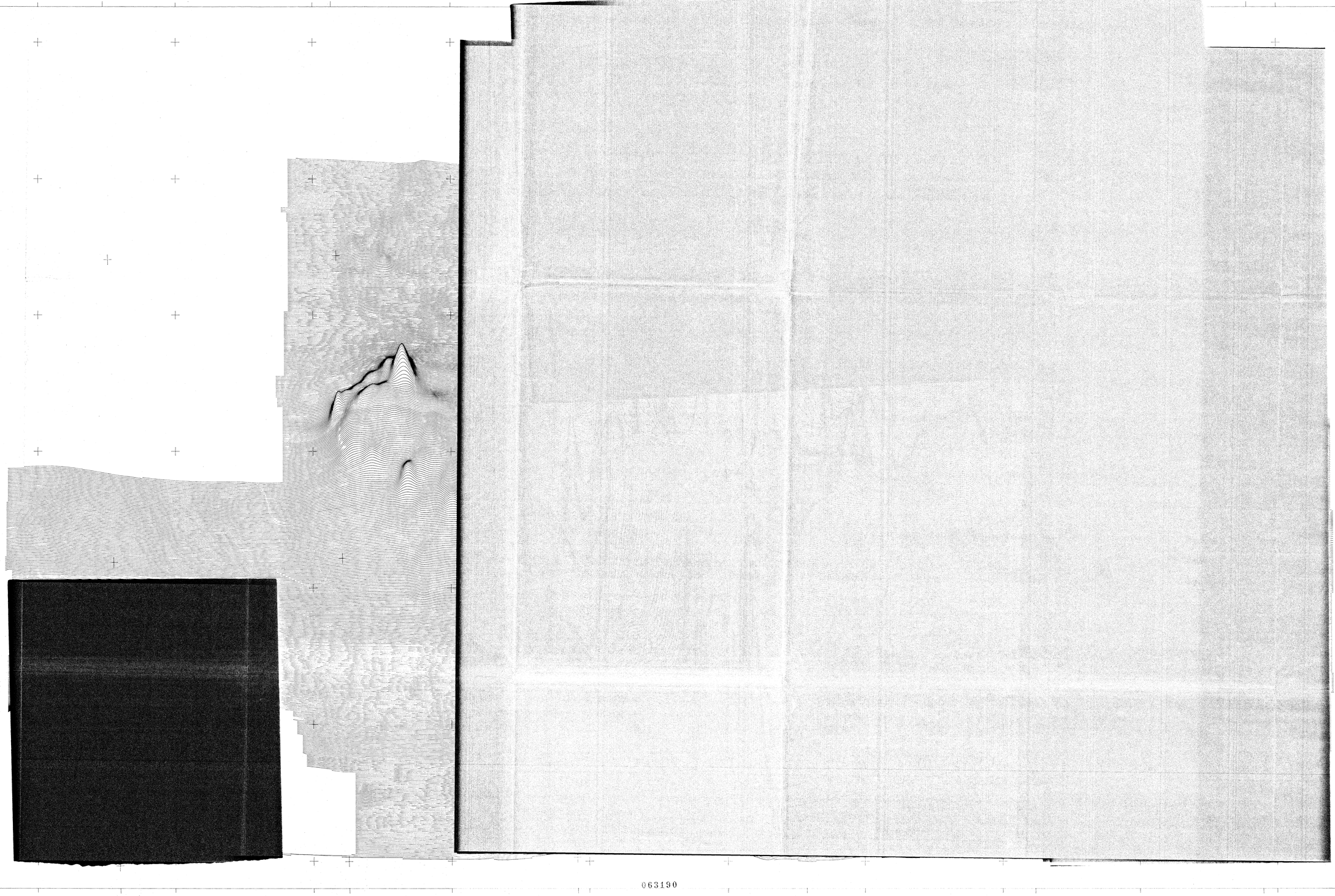
DATA PROCESSING:

Final magnetic levelling, corrections and mapping performed by Pitt Research Pty Ltd., Sydney, Australia.

Grid Mesh Size:	25m x 25m
Contour Interval:	02.0 nT
IGRF (1985):	Removed and datum of 2000 nT added.
Total field:	62,371 nT
Inclination:	-72.45 degrees down
Declination:	12.69 degrees East

Australian Map Grid Zone 55.

5512/005



063190

5cm

500 0 500 1000 1500 2000 2500 Metres

Scale 1:25,000

DATA ACQUISITION:

This survey was flown in March 1989 by Geoterrex Pty. Ltd.

Data Recording:	Geoterrex Madacs acquisition system.
Flight Path Record:	Automax 35mm continuous tracking camera.
Navigation:	Visual using 1:15 000 scale black and white enlargements of high level photography.
Magnetometer:	Caesium Vapour optical absorption Sensitivity: 0.05 nT.
Recording Interval:	0.1 sec. (approx 5m sampling).
Nominal Spacing:	Traverses 150 metres east/west. Tielines 1 500 metres north/south.
Terrain Clearance:	Sensor in towed bird below helicopter at nominal 75 metres.
Ground Speed:	Approximately 180 km/hr.

RGC EXPLORATION PTY. LTD.
ZEEHAN - TASMANIA
RESIDUAL MAGNETIC INTENSITY GRID PROFILES

by Pitt Research Pty Limited, Sydney, Australia

October 1989

92-3379.1

PLAN 25

G.N. M.N. 12.69°

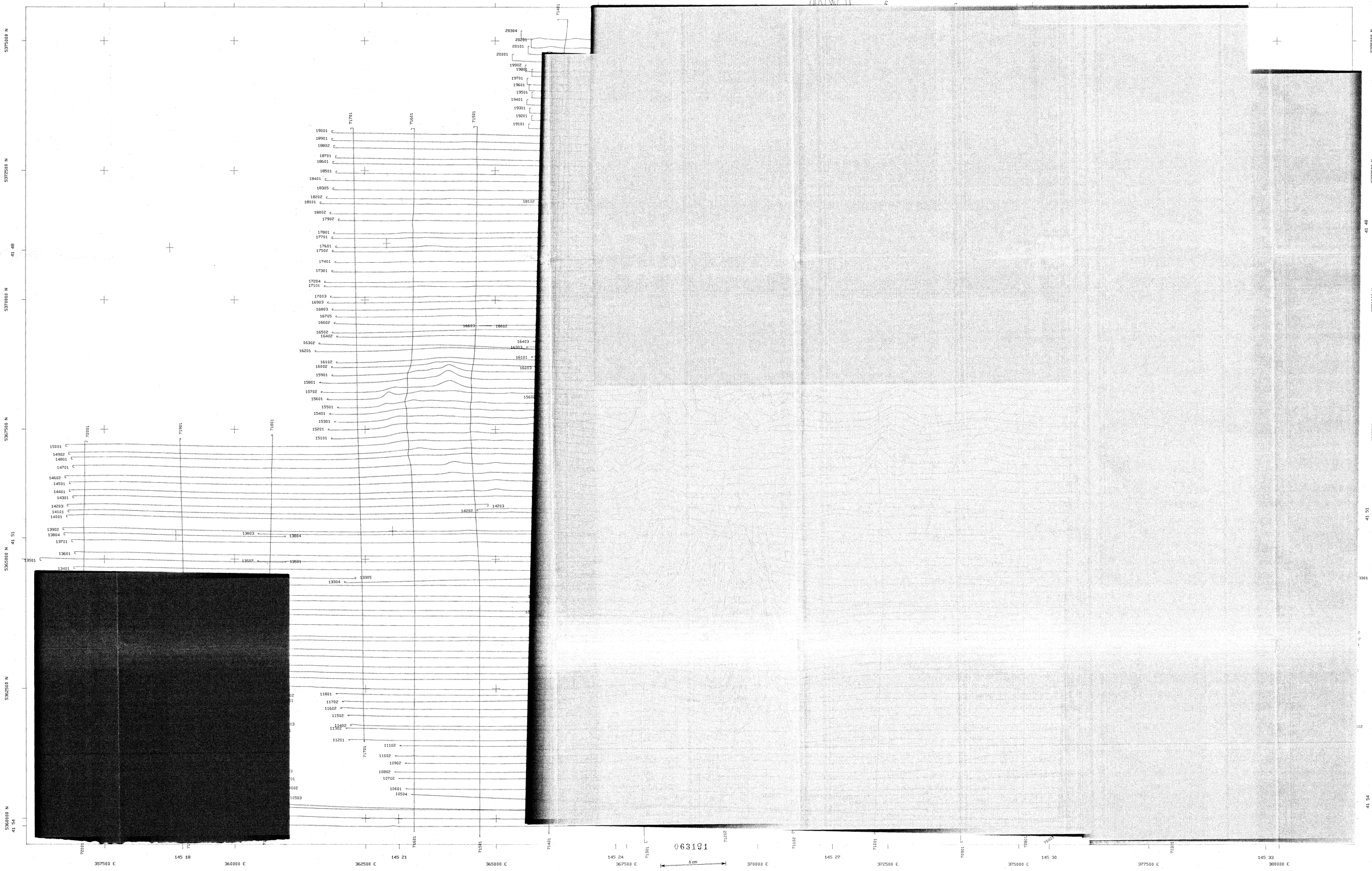
DATA PROCESSING:

Final magnetic levelling, corrections and mapping performed by Pitt Research Pty Ltd., Sydney, Australia.

Grid Mesh Size:	25m x 25m
Profile scale:	100.0 nT/cm
IGRF (1985):	Removed and datum of 20000 nT added.
Total Field:	62,371 nT
Inclination:	-72.45 degrees down
Declination:	12.69 degrees East

Australian Map Grid Zone 55.

5512/006



500 0 500 1000 1500 2000 2500 Metres

Scale 1:25,000

B.N M.N

6.4°

DATA ACQUISITION:

This survey was flown in March 1989 by Geoterrex Pty. Ltd.

Data Recording:	Geoterrex Madacs acquisition system.
Flight Path Record:	Automax 35mm continuous tracking camera.
Navigation:	Visual using 1:15 000 scale black and white enlargements of high level photography.
Magnetometer:	Caesium Vapour optical absorption
	Sensitivity: 0.05 nT.
Recording Interval:	0.1 sec. (approx 5m sampling).
Nominal Spacing:	Traverses 150 metres east/west.
	Tielines 1 500 metres north/south.
Terrain Clearance:	Sensor in towed bird below helicopter at nominal 75 metres.
Ground Speed:	Approximately 180 km/hr.

RGC EXPLORATION PTY. LTD.
ZEEHAN - TASMANIA
RESIDUAL MAGNETIC INTENSITY PROFILES

by Pitt Research Pty Limited, Sydney, Australia

October 1989

92-3379.

PLAN 26

DATA PROCESSING:

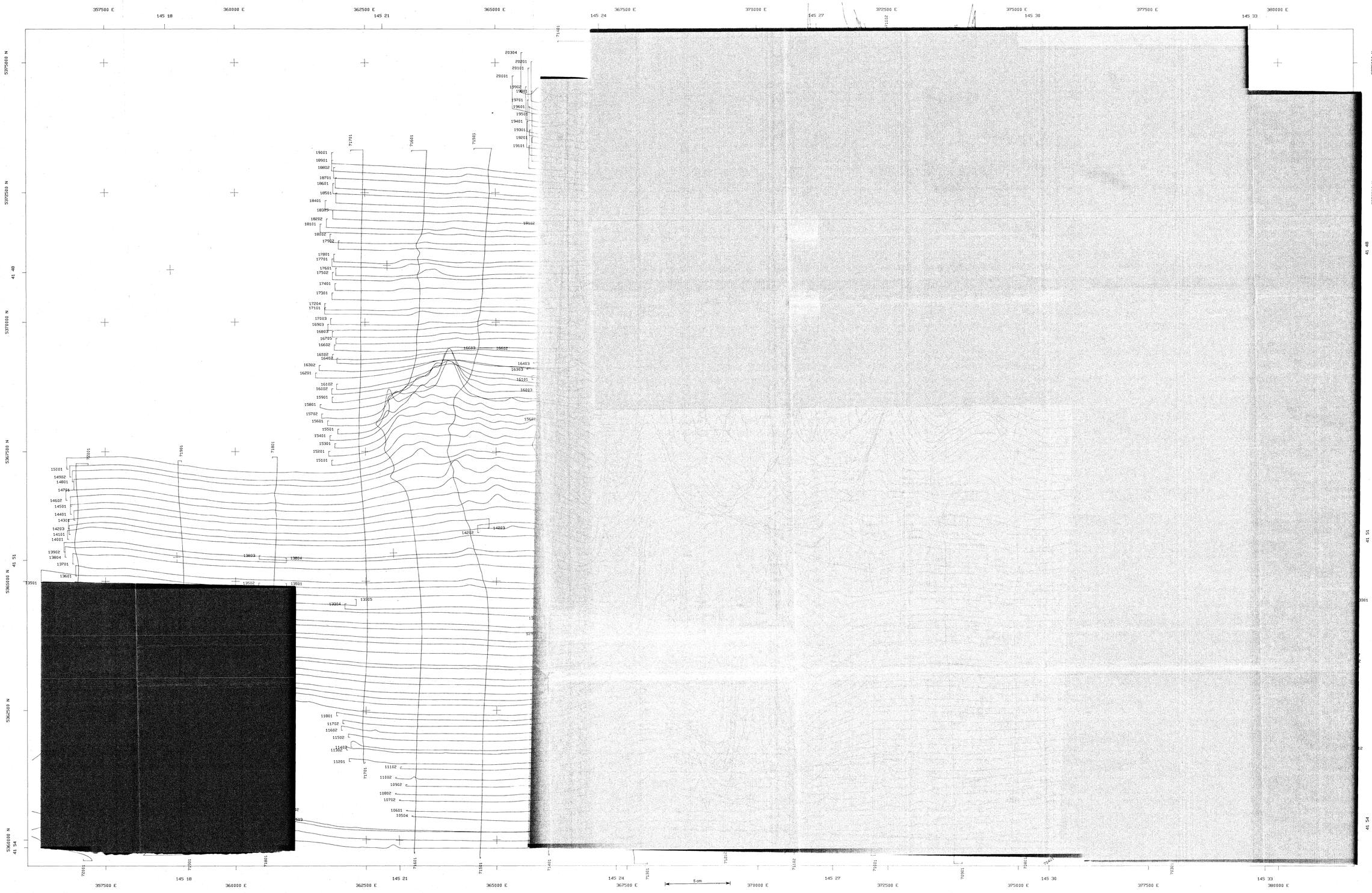
Final magnetic levelling, corrections and mapping performed by Pitt Research Pty Ltd., Sydney, Australia.

Profile base value: 2000.0 nT
Nanoteslas per cm: 500 nT

IGRF (1985):
Total field: 62,371 nT
Inclination: -72.45 degrees down
Declination: 12.69 degrees East

Australian Map Grid Zone 55.

5512/007



DATA ACQUISITION:

This survey was flown in March 1989 by Geoterrex Pty. Ltd.

Data Recording:	Geoterrex Madacs acquisition system.
Flight Path Record:	Automax 35mm continuous tracking camera.
Navigation:	Visual using 1:15 000 scale black and white enlargements of high level photography.
Magnetometer:	Caesium Vapour optical absorption
	Sensitivity: 0.05 nT.
Recording Interval:	0.1 sec. (approx 5m sampling).
Nominal Spacing:	Traverses 150 metres east/west.
	Tielines 1 500 metres north/south.
Terrain Clearance:	Sensor in towed bird below helicopter at nominal 75 metres.
Ground Speed:	Approximately 180 km/hr.

500 0 500 1000 1500 2000 2500 Metres

Scale 1:25,000

RGC EXPLORATION PTY. LTD.
ZEEHAN - TASMANIA
RESIDUAL MAGNETIC INTENSITY PROFILES

by Pitt Research Pty Limited, Sydney, Australia

October 1989

92-3379. PLAN 27

063192

G.N. M.N. 12.69°

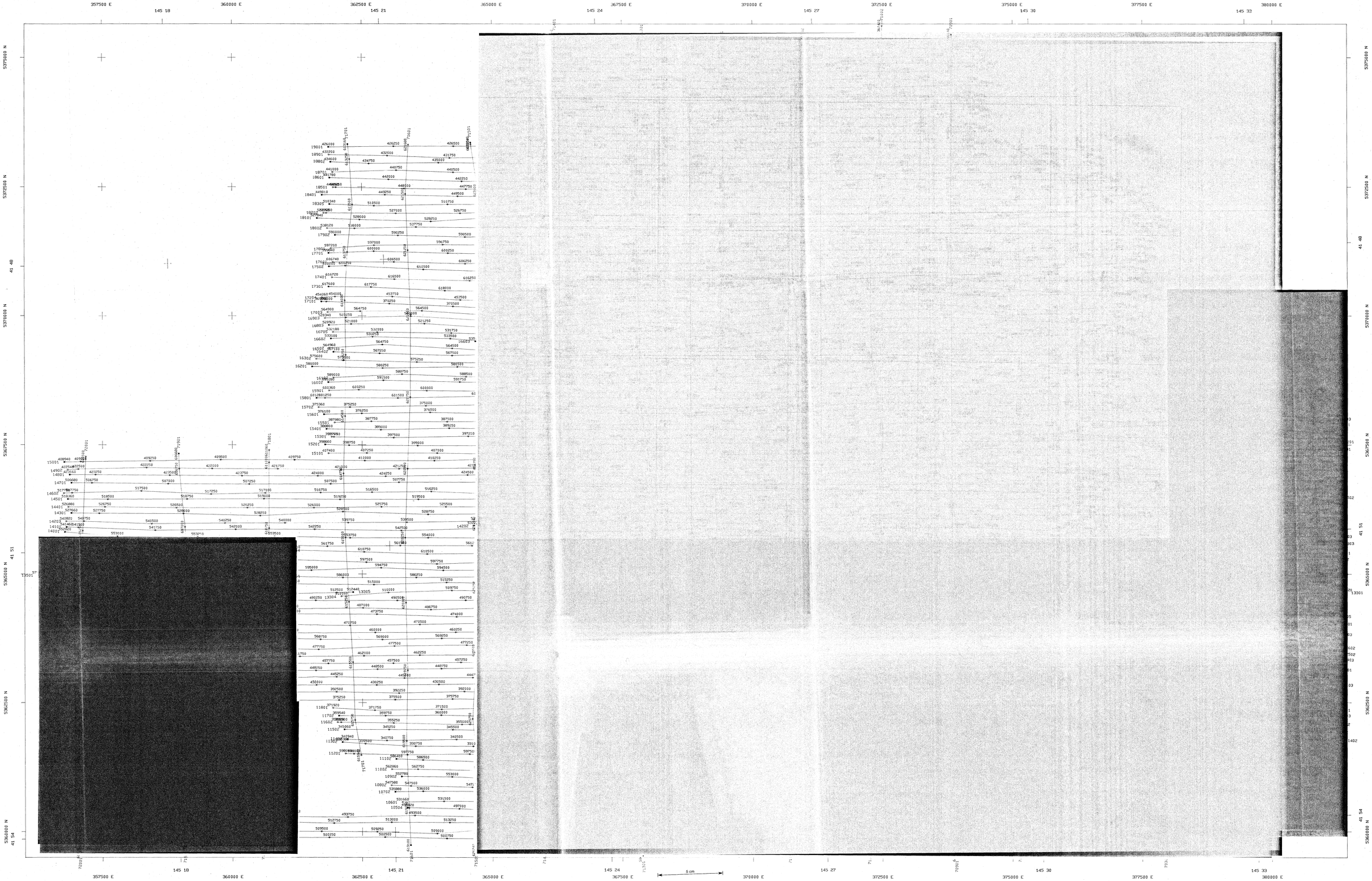
DATA PROCESSING:

Final magnetic levelling, corrections and mapping performed by Pitt Research Pty Ltd., Sydney, Australia.

Profile base value:	2000.0 nT
Nanoteslas per cm:	100 nT
Data range:	1600 to 2400 nT
IGRF (1985):	Removed and datum of 2000 nT added.
Total field:	60,375 nT
Inclination:	-72.45 degrees down
Declination:	12.69 degrees East

Australian Map Grid Zone 55.

5512/008



DATA ACQUISITION:

This survey was flown in March 1989 by Geoterrex Pty. Ltd.

Data Recording:	Geoterrex Madacs acquisition system.
Flight Path Record:	Automax 35mm continuous tracking camera.
Navigation:	Visual using 1:15 000 scale black and white enlargements of high level photography.
Magnetometer:	Caesium Vapour optical absorption Sensitivity: 0.15 nT.
Recording Interval:	0.1 sec. (approx 5m sampling).
Nominal Spacing:	Traverses 150 metres east/west. Tielines 1 500 metres north/south.
Terrain Clearance:	Sensor in towed bird below helicopter at nominal 75 metres.
Ground Speed:	Approximately 180 km/hr.

500 0 500 1000 1500 2000 2500 Metres

Scale 1:25,000

063193

RGC EXPLORATION PTY. LTD.
ZEEHAN - TASMANIA
FLIGHT PATH MAP

by Pitt Research Pty Limited, Sydney, Australia

October 1989

G.N. M.N. 14.4°

DATA PROCESSING:

Final magnetic levelling, corrections and mapping performed by Pitt Research Pty Ltd., Sydney, Australia.

Inclination: -72.45 degrees down
Declination: 12.69 degrees East

Australian Map Grid Zone 55.

PLAN 28

92-3370

5512/009

356000 357000 358000 359000 360000 361000 362000 363000 364000 365000

5369000
5368000
5367000
5366000
5365000
5364000
5363000
5362000

145°22'30"

AIRBORNE SURVEY SPECIFICATIONS

MAGNETOMETER :	Cesium Vapour optical absorption. Sensitivity : 0.05 nT
RECORDING INTERVAL :	0.1 sec (approx. 5m sampling) at mean ground speed of 180 km/hour
DATA RECORDING :	Geoterrex MADACS acquisition system. Digital to magnetic tape.
NOMINAL TERRAION CLEARANCE :	Sensor in towed bird below helicopter at 75 m.
NOMINAL LINE SPACING :	Traverse lines 150 m. Tie Lines 1.5 km.
FLIGHT PATH NAVIGATION :	Visual using 1:15,000 black and white enlargements of high level photography.
FLIGHT PATH RECORD :	Automax 35mm continuous tracking camera

RESIDUAL MAGNETIC CONTOURS

Grid notation refers to Australian Map Grid Zone 55

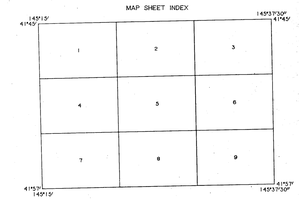
Magnetics (IGRF 1985)	Teline levelled -Removed datum 2000 nT added
Grid mesh size	=25 x 25 metres
Contour interval	=10, 100, 1000 nT

MN = 013°

SCALE 1:10000

200 0 200 400 600 800 Metres

MAP SHEET INDEX



063194

5cm

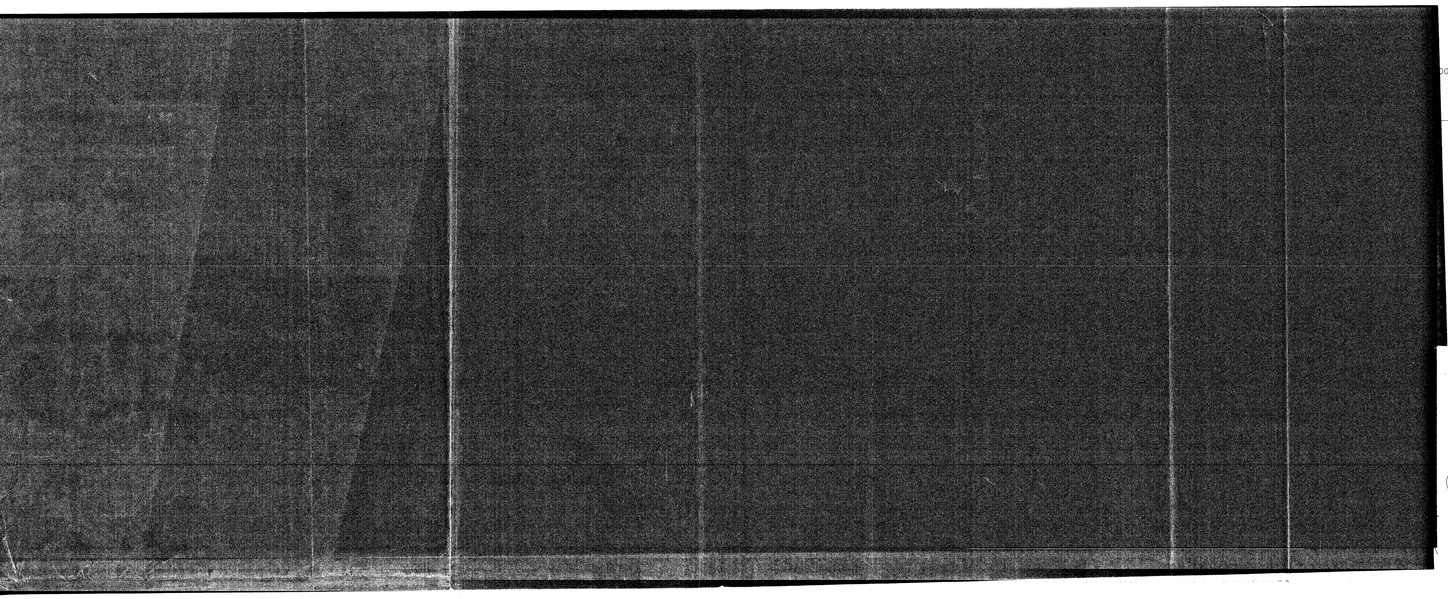
JOB NO : 3-401
Flown by GEOTERREX PTY LTD : Mar 1989
Compiled by GEOTERREX PTY LTD, SYDNEY
Processed by GEOTERREX PTY LTD, SYDNEY

RGC EXPLORATION PTY LIMITED

92-3379. ZEEHAN TAS
SHEET 4 OF 9
RESIDUAL MAGNETIC CONTOURS
QUEENSTOWN SK55-5

PLAN 29

DRAWING NO: 5512/013 | DATE : 28-SEP-1989



363000

364000

365000

5361000

5360000

5359000

5358000

5357000

5356000

5355000

145°22'30"

AIRBORNE SURVEY SPECIFICATIONS

MAGNETOMETER :	Cesium Vapour optical absorption. Sensitivity : 0.01 nT.
RECORDING INTERVAL :	0.1 sec. (i.e. 5m sampling) At mean ground speed of 180 km/hour
DATA RECORDING :	Geoterrex MADACS acquisition system, Digital to magnetic tape
NOMINAL TERRAIN CLEARANCE :	Sensor in towed bird below helicopter at 75 m.
NOMINAL LINE SPACING :	Traverse lines 150 m. Tie Lines 1.5 km.
FLIGHT PATH NAVIGATION :	Visual using 1:15,000 black and white enlargements of high level photography.
FLIGHT PATH RECORD :	Automax 35mm continuous tracking camera

RESIDUAL MAGNETIC CONTOURS

Grid notation refers to Australian Map Grid Zone 55

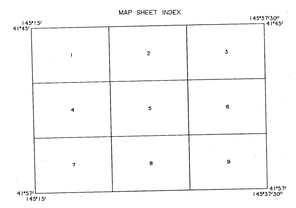
Magnetics	-Tieline levelled
IGRF (1985)	-Removed, datum 2000 nT added
Grid mesh size	-25 x 25 metres
Contour interval	-10,100,1000 nT

MN = 013°

SCALE 1 : 10000

200 0 200 400 600 800 Metres

MAP SHEET INDEX



063195

5cm

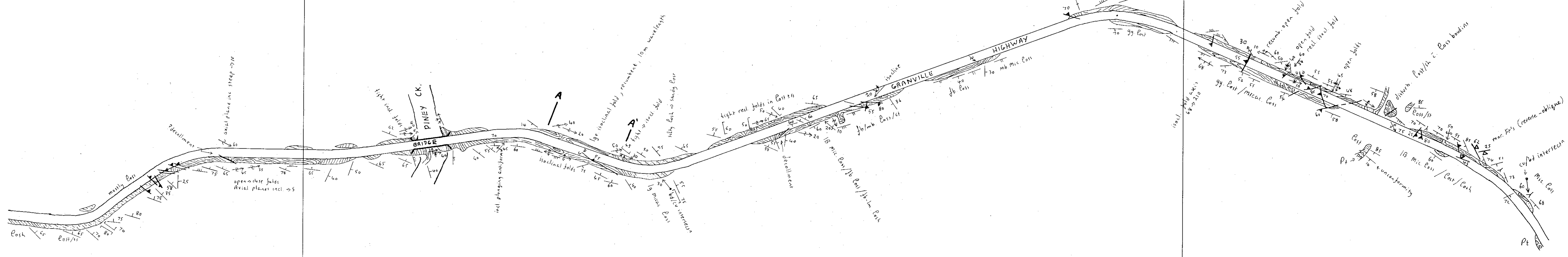
JOB NO : 3-401
Flown by GEOTERREX PTY LTD : Mar 1989
Compiled by GEOTERREX PTY LTD, SYDNEY
Processed by GEOTERREX PTY LTD, SYDNEY

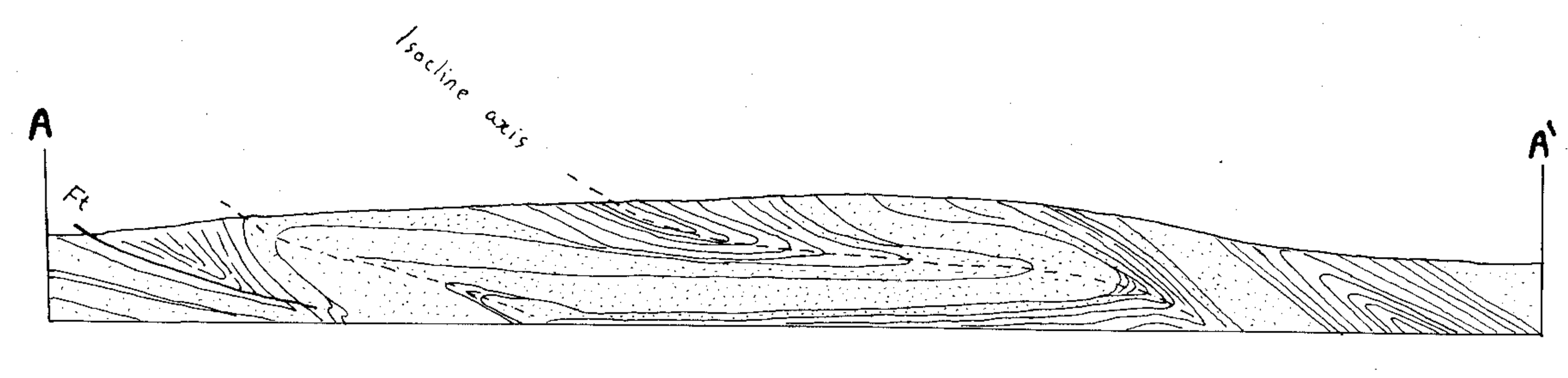
RGC EXPLORATION PTY LIMITED

92-3379.1 ZEEHAN TAS
SHEET 7 OF 9
RESIDUAL MAGNETIC CONTOURS
QUEENSTOWN SK55-5

DRAWING NO : 5512/016 | DATE : 28-SEP-1989

PLAN 30





1:500 Sketch of embankment looking North

063196

5 cm

92-3379.

RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES

COMPILED	D.J.C.	ZEEHAN PROJECT
DRAWN	D.J.C.	
DATE	July 1992	FACTUAL GEOLOGY
CHECKED		
1:250,000 REFERENCE		PINEY CREEK

BASE PLAN No. 3521-126 | SCALE 1:2500 | 0 50 100m | PLAN 31
OVERLAY PLAN No.