97-4007
(Vol 1 of 2)

RGC Exploration

383001

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ANNUAL REPORT
MARCH 1996 - MARCH 1997

TASMANIAN BASE METALS PROJECT
EL 5/96

WHITE SPUR

MINERAL RESOURCES
1 2 MAY 1997
TASMANIA

Vol 1 of 2

Text and Appendices

MINERAL RESOURCES
ELS 5/96
12 MAY 1997
See folio 48

HELD BY: RENISON LIMITED

MANAGER & OPERATOR: RGC EXPLORATION PTY LTD

AUTHOR(s): Michael Vicary

MICROFILMED
FICHE No.014306-11

19 April, 1997

PROSPECTS: White Spur, Anneliese

MAP SHEETS:	**1:25,000: Dundas** **Oceana**	**1:100,000: Spohia**
GEOGRAPHIC COORDS	**Min East: 375 000 mE** **Min North: 5358 000 mN**	**Max East: 379 000 mE** **Max North: 5364 000 mN**

COMMODITY(s): Zn, Pb, Cu, Au, Ag

KEY WORDS: White Spur Formation, Central Volcanic Sequence, Sulphide clast bearing mass flow deposits, Rosebery -Hercules ore horizon.

Distribution:

- **RGC Exploration Information Centre Reference:**
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- **Department of Mines, Tasmania**

97-4007

SUMMARY

The White Spur EL 5/96 was obtained for its potential to host volcanic hosted massive sulphide mineralisation. It is located 2.5 kilometres south of the recently reopened deposit at Hercules and 10.5 kilometres south of the Rosebery deposit. Both these deposits are hosted in the upper parts of the Central Volcanic Sequence close to the contact with the overlying White Spur Formation, a sequence of interbedded massflows and black siltstones. Clasts of massive sulphide are present in the basal parts of the White Spur Formation and are considered to be eroded fragments of local sulphide accumulations carried down slope by mass flows. The contact between the Central Volcanic Sequence - White Spur Formation can be traced from the Hercules Mine south into the White Spur EL until it intersects the North Henty Fault, a major regional structure. The exploration to date has concentrated on mapping the Central Volcanics Sequence - White Spur Formation contact with the aim of locating significant alteration zones near the contact.

A small zone (~10m wide) of massive pyrite lenses within intensely sericite altered dacitic pumiceous volcaniclastic sandstones has been located near the top of the Central Volcanic Sequence close to the intersection of the Central Volcanics Sequence - White Spur Formation contact with the North Henty Fault. This area has been called the Anneliese Prospect and has been the focus for the first phase of detailed systematic exploration. A 7.1 line kilometre grid was established and a soil and rock chip sampling program completed. A variety of geophysical techniques have tested the along strike extensions of the mineralisation. These include:- Ground Magnetics, Self Potential, Induced Polarisation, and VLF-EM. A 307m diamond drill hole ANNE001 tested the down dip extension of the mineralisation and a DHEM survey performed. The results suggest that the mineralisation at the Anneliese Prospect is uneconomic and has limited strike extension.

The next phase of exploration will consist of a series of diamond drill holes targeting the Central Volcanics Sequence - White Spur Formation contact at about 500 to 800m intervals along strike. Each hole will test the contact between 300 to 400 metres down dip from the surface exposure of the contact. In this way it will be possible to test the contact at a depth previously untested by normal surface exploration methods.

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1. INTRODUCTION

EL 5/96 - White Spur is held by Renison Limited and is explored by RGC Exploration, both wholly owned subsidiaries of RGC Limited. The licence is located in western Tasmania approximately 20 kilometres north of Queenstown, and is situated on the south western flanks of Mount Read (fig. 1). It was granted on April 5, 1996 and has an area of 19 square kilometres.

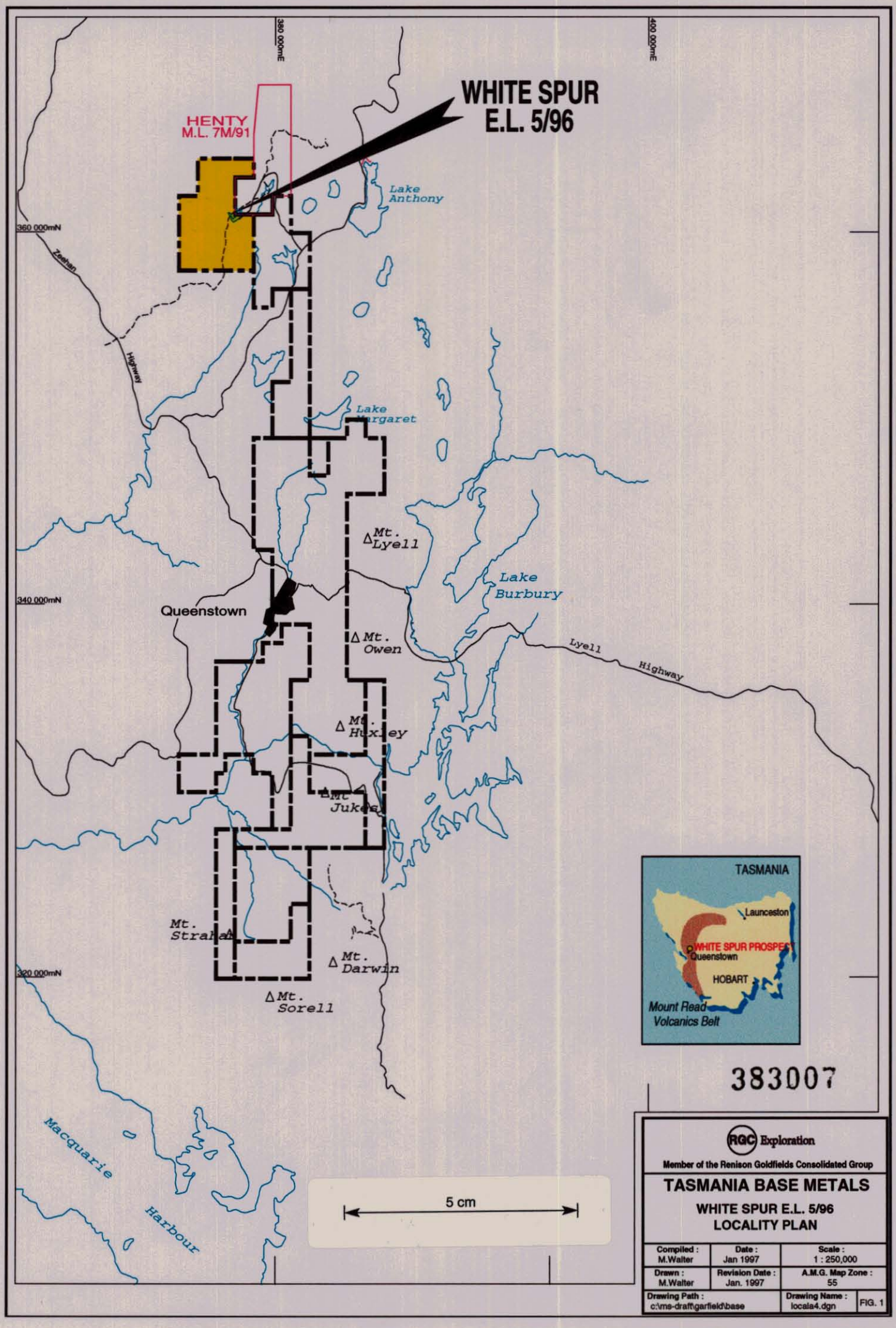
The major access to the EL is via Howards Road. Howards Road is accessed via the Anthony Road, approximately 14 kilometres east of the junction with the Zeehan Highway. Access within the EL is provided by a series of old logging tracks and the new HEC road which follows a major canal.

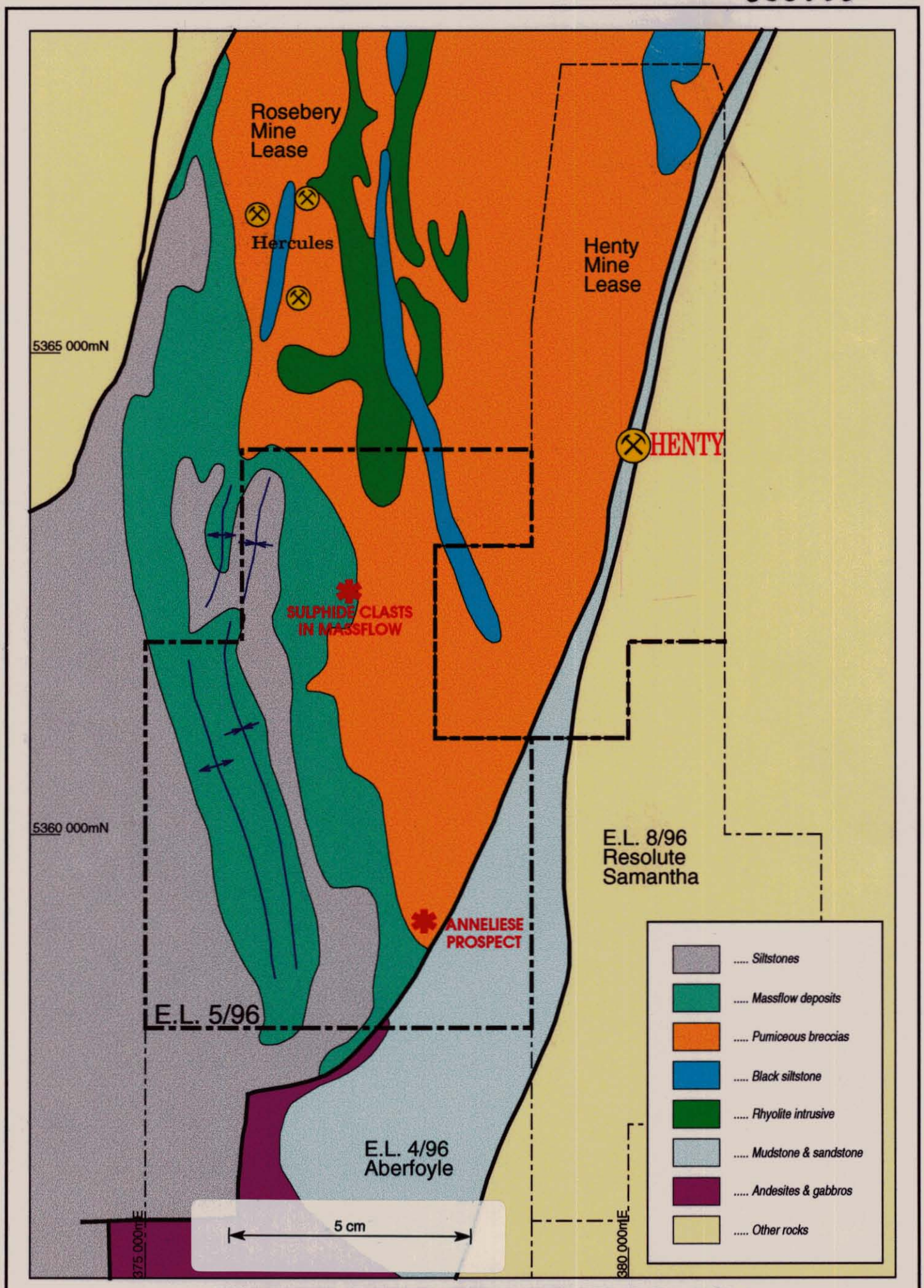
The vegetation of the EL is quite varied with Myrtle and King Billy Pine rainforest dominating in the higher elevated regions and also occurs in steep sided gullies. In areas covered by glacial deposits and frequently burnt out areas the rainforest has degenerated into Tea Tree and Button Grass scrub.

The White Spur EL 5/96 was obtained for its potential to host volcanic hosted massive sulphide mineralisation. It is located 2.5 kilometres south of the recently reopened deposit at Hercules and 10.5 kilometres south of the Rosebery deposit (Figure 2). Both these deposits are hosted in the upper parts of the Central Volcanic Sequence close to the contact with the overlying White Spur Formation, a sequence of interbedded massflows and black siltstones. Clasts of massive sulphide are present in the basal parts of the White Spur Formation and are considered to be eroded fragments of local sulphide accumulations carried down slope by mass flows. The contact between the Central Volcanic Sequence - White Spur Formation can be traced from the Hercules Mine south into the White Spur EL until it intersects the North Henty Fault, a major regional structure. The exploration to date has concentrated on mapping the Central Volcanics Sequence - White Spur Formation contact with the aim of locating significant alteration zones near the contact.

2. TENURE

The EL comprises:
Crown Land (Deferred Forest Land)
Land Vested in HEC (105 ha)
Mt Dundas RAP
Mt Read RAP


WHITE SPUR
E.L. 5/96
HENTY
M.L. 7M/91
380 000mE
400 000mE
360 000mN
340 000mN
320 000mN
Lake Anthony
Lake Margaret
Mt. Lyell
Lake Burbury
Queenstown
Mt. Owen
Lyell Highway
Mt. Huxley
Mt. Jukes
Mt. Strahan
Mt. Darwin
Mt. Sorell
Macquarie Harbour
Zeehan Highway
TASMANIA
Launceston
WHITE SPUR PROSPECT
Queenstown
HOBART
Mount Read Volcanics Belt
5 cm
383007
RGC Exploration
Member of the Renison Goldfields Consolidated Group
TASMANIA BASE METALS
WHITE SPUR E.L. 5/96
LOCALITY PLAN
Compiled : M.Walter
Date : Jan 1997
Scale : 1 : 250,000
Drawn : M.Walter
Revision Date : Jan. 1997
A.M.G. Map Zone : 55
Drawing Path : c:\ms-draft\garfield\base
Drawing Name : locala4.dgn
FIG. 1



RGC EXPLORATION

WHITE SPUR PROPECT E.L. 5/96
SIMPLIFIED GEOLOGY

Fig. 2

3. PREVIOUS EXPLORATION IN THE WHITE SPUR AREA

Previous Exploration in EL 9/66 by Mt Lyell Mining and Railway Co Ltd and Renison Ltd.

1) Newnham (1970). Annual Report 1969/70

The entire EL 5/95 - White Spur was enclosed within EL 9/66. A grid was cut in the upper parts of White Spur Creek.

2) McKibben (1972). Annual report 1971/72

A review was made of previous exploration in the White Spur area by Rio Tinto between 1957 and 1960. This was accompanied by remapping the old grid and creeks and roads, and rockchip sampling over anomalous black shale horizons. The results suggest that the stratigraphy and structural setting of the White Spur area is equivalent to that at Hercules and has the potential to host exhalative VMS deposits. The EM anomalies detected by Rio Tinto were related to graphitic and pyritic black shale horizons. Diamond drill hole White Spur No.1 (WSP103?) may have been too short to adequently test the black shale horizon, the source of the TURAM anomaly.

3) Stevens-Hoare (1975). Annual Report 1974/75

The work reported during this period consists of some geological mapping, soil and rock chip geochemistry and drill hole WSP103 was relogged. The Central Volcanic Sequence and the White Spur Formation to the north of the Henty Fault were collectively termed the Primrose Pyroclastics. Detailed mapping had determined a five-fold stratigraphy. At the contact between units Pvii and Pviii a change from subaerial to submarine conditions was recognised and was considered to be a favourable horizon for the development of massive sulphide mineralisation. The Dundas Group conformably overlies the Primrose Pyroclastics.

Since the White Spur area is largely covered by thin immature residual soils, a soil sampling program was designed to test two fractions of the C-Horizon:-

a) -10+85 mesh, consisting of small rock fragments and designed to test primary geochemical haloes, and

b) -85 mesh, designed to test secondary soil dispersion. This will detect the presence of basemetals within and absorbed on the clay fractions.

The samples were assayed for Cu, Pb, and Zn by AAS following digestion in perchloric, nitric and hydrochloric acid. Although individual assays are not tabulated there were many first and second order anomalies reported (see Appendix B and Fig. 18 in Stevens-Hoare's report).

Approximately 30 rock chip samples were collected from the White Spur area. They were assayed for Cu, Pb, Zn, Na2O, K2O, CaO, MgO and SiO2.

4) Stevens-Hoare (1976). Annual Report 1975/76

The work completed consisted of limited track cutting and a regional soil sampling program that was uncompleted at the time of reporting. A 2 ft by 2 ft boulder of massive pyrite was located on the White Spur - Mount Read track within an agglomerate sequence (PViii). It assayed 87 ppm Cu, 420 ppm Pb, 70 ppm Zn, 5 ppm Ni, 5 ppm Co, <0.1 ppm Au, 54 ppm Ag and 49.2 % S.

5) Walter and Brophy (1977). Annual report 1976/77

In late 1977 the grid was extended from Line 28N to 43N and infill lines were cut to give a 200m spacing between lines over the entire grid. A gradient array IP survey and ground magnetics survey were conducted over the new grid and 5 primary and 8 secondary anomalies identified. Soil samples were collected over the western part of the grid. It was found that black shale horizons tend to have elevated Pb and Zn abundances (up to 1500 ppm Pb and 300 ppm Zn) and usually correspond to IP anomalies.

6) Walter (1978). Annual Report 1977/78

In 1977-78 exploration in the White Spur area centred on two areas. They are:- a) Northeast area (Jones Creek) - the eastern 3000 ft of the grid north of L36N, and b) Western area - west of the White Spur track and north of L28N.

Northeast area:- Work completed within the northeast area consisted of:-

a) cutting of 300 ft infill lines,
b) a Gradient array IP and Resistivity survey on lines 37.5 to 41.5N,
c) a Dipole - Dipole survey on line 39N,
d) a Ground magnetic survey on new intermediate lines,
e) a costean was dug on line 39N, 4700 - 5200E over a resistivity low and chargeability high,
f) Rock chip sampling of the costean,
g) C horizon soil sampling over the entire grid, and
h) Mapping between lines 37N and 43N.

The new gradient array EIP and resistivity survey confirmed the earlier surveys although greater definition of the anomalies was achieved. the Dipole - Dipole survey on Line 39N was conducted from 4500 - 5700 mE. The source of the anomaly is considered to be at 150 ft depth with a westerly dip of about 70 degrees. The costean was designed to test the surface expression of this anomaly. Rock chip analyses from the costean returned only low levels of base metals. Several small coincident base metal anomalies were detected from the soil sampling program. Background levels are generally low (25 ppm Cu, 35 ppm Pb, 55 ppm Zn). Maximum values of up to 1850 ppm Pb and 1460 ppm Zn were reported and some dolerite sills had elevated Cu values. It was recommended that two drill holes should be drilled to test EIP anomalies on Lines 38.5N and 39.5N.

Western Area:- In 1977-78 exploration in the Western area focused on the definition of several previously recognised coincident EIP and geochemical anomalies. Intermediate lines were cut from L33N to L43N. A gradient array EIP and resistivity survey was performed and eight anomalies (W13, 15, 18S, 18N, 21, 23, 25 and 26) which warranted further testing were identified.

Two costeans were dug on Line 36N from 1440-1580W and 1630-1850W. These were designed to test the source of the EIP anomalies W15 and 16 together with a coincident magnetic high centred on Line 36N 1650W, and a soil anomaly on Line 35N 1350E of 151 ppm Cu, 1950 ppm Pb and 287 ppm Zn. Rockchip samples were collected from both costeans and were assayed for Cu, Pb, and Zn. The results were generally low with black siltstones in the costean from 1440-1580W returning the best values of 10 feet at 490 ppm Cu and 10 feet at 1270 ppm Cu. The source of the EIP anomalies was not readily explained, however it may be due to disseminated sulphides within fine grained tuff units. A soil sampling program was completed over areas with EIP anomalies. Background values of 10-20 ppm Cu, 20 ppm Pb and 30 ppm Zn were reported. Anomalous Cu, Pb, and Zn values were associated with three main rock types: pyritic black shales, fine to coarse grained lithic crystal tuffs and ignimbritic crystal tuffs.

7) Reid, Meares, Walter, Hutton and Drake (1979). Annual Report 1978-79

Northeast area:- Drill hole WSP1 was sited to test two chargeability/resistivity anomalies on Line 38.5N. These are coincident with a magnetic anomaly and a broad low order Cu-Pb-Zn soil anomaly. The hole was drilled through the Jones Creek Shale into the Central Volcanic Sequence consisting of fine to coarse feldspar phyric pumiceous rocks. The hole intersected only weakly mineralised and altered volcanics and returned best assays of 8m at 0.26% Zn including 2m at 0.62% Zn from 138-146m, 2m at 0.76% Zn from 239-241m and 2m at 0.63% Zn and 0.12% Zn from 252-254m. The chargeability anomalies were adequently explained by zones of up to 2% pyrite and pyrrhotite with minor sphalerite and galena. The presence of disseminated pyrrhotite in the core may explain the magnetic anomaly.

Western Area:- Exploration completed in the western area consisted of an additional EIP survey on intermediate lines 27.5 to 32.5N. A ground magnetic survey was conducted over Line 27.5 to 42.5N. Additional rockchip sampling and soil sampling was performed on the infill lines and further geological mapping was completed.

8) Meares, Walter and Hutton (1980). Annual Report 1979-80

Western Area:- Most of the work centred on the area near Line 37.5N where rock chips and soil sample were collected to further evaluate a possible drill target defined by an IP chargeability/resistivity anomaly on Line 37.5N 3200W. A pole-dipole IP survey was conducted over this anomaly and suggested that the target shale horizon dipped to the east. An additional dipole-dipole survey was conducted on Line 36N to evaluate anomaly W15 and the results suggested that this anomaly can be explained by the presence of pyritic shales exposed in a costean on Line 36N. Other geophysical surveys conducted include a ground magnetic survey between Lines 36.25N and 35N, a susceptibility survey of the costeans on Line 36N and a gravity survey was performed on Lines 34.5N and 36N.

DDH WSP2 Diamond drill hole WSP2 was drilled to test the above mentioned IP anomaly on Line 37.5N. Coincident with this anomaly are a TURAM and gravity anomaly defined by Rio Tinto in 1960 and a low order Pb (up to 410 ppm Pb) soil anomaly over black shales. The hole intersected interbedded fine to medium grained volcaniclastic sandstone, shale and coarse grained volcaniclastic sandstone from 17 to 104.3m, Black pyritic shale with commonly 3-4% pyrite (up to 20% in places) with minor chalcopyrite, pyrrhotite, galena and sphalerite from 104.3-129.2m, rhyolitic lava from 129.2-140.6m and interbedded medium to coarse grained feldspar-(quartz) phyric crystal lithic tuff from 140.6-203.3m. The best assays were returned from the pyritic black shale unit from 104.9-129.2m which assayed 24.9m at 123 ppm Cu, 68 ppm Pb, 272 ppm Zn, 2 ppm Ag, 0.1 ppm Au, 5 ppm Sn, 10 ppm As and 3.5% pyrite. It included 1.7m at 0.01% Cu, 0.04% Pb, 0.15% Zn and 4.0% pyrite from 104.3 to 106.0m. 2.0m at 0.01% Cu, 0.03% Pb and 0.11% Zn was also reported from 147 to 149m. The black shale unit was the source of the IP anomaly. The drill hole effectively brought the end of exploration in the western part of the White Spur area as no further anomalies warranted additional exploration.

9) Purvis, Jones, Fitzgerald and Poltock (1983). Review of EL 9/66

In 1983 a review of all the exploration performed within EL 9/66 was made and included the White Spur area. It was recommended that since most of the geophysical and geochemical targets had been tested in the Western and Central areas that these should be relinquished. The Eastern area was considered to have a favourable geological setting (ie. similar to Rosebery and Hercules), however as the results of past exploration were unencouraging no additional exploration was warranted.

10) Roberts and Cartwright (1984). Annual Report 1983/84

Exploration in the White Spur area in 1983-84 was undertaken by Getty Oil, joint venture partners in EL 9/66 since 1976. This consisted of a mapping program aimed at assessing the prospectivity of the area for mineralisation in terms of favourable lithologies, alteration and lithogeochemistry and concentrated in the eastern White Spur area. It was concluded that the drill hole WSP1 was not sufficient to adequently test this area and that further work is warranted.

11) Fitzgerald and McNaught (1984) Appendix 7. Annual Report 1983/84

The eastern White Spur area was retained by Mt Lyell to allow Getty Oil the chance to carry out additional exploration in 1983/84. Exploration completed consisted of geological mapping of all the major access roads, tracks and Jones and Dobson Creeks. 104 rock chip samples were collected , of which 53 were assayed for Cu, Pb, Zn and Ag by AAS and Au by fire assay. A 104 line kilometer DIGHEM survey was flown over the White Spur and the Henty Fault Zone areas in December 1983. The northeastern corner of EL 5/96 (north of line 5360000mN) was included in this survey.

Massive pyrite lenses 25 to 30 cm thick were mapped on the track at the Anneliese Prospect. Two rock chip samples were analysed.They assayed:-

Sample 3129 30 ppm Cu, 65 ppm Pb, 35 ppm Zn, 3.5 ppm Ag, <0.005 ppm Au
Sample 3130 39 ppm Cu, 90 ppm Pb, 45 ppm Zn, 2.0 ppm Ag, <0.005 ppm Au.

12) Roberts (1984) Retention Report and Work Program

In August 1984 EL 9/66 underwent compulsory relinquishment. The eastern White Spur area was retained while the western and central areas were relinquished. A 700m diamond drilling program was proposed for the 1984-85 season.

13) Fitzgerald (1987) Annual Report 1986/87

Prior to any additional drilling in the Jones Creek area, drill hole WSP1 (drilled in 1979) was reopened and a downhole SIROTEM Survey was performed by Solo Geophysics. The results were inconclusive and a down hole anomaly may have been associated with weak Pb-Zn mineralisation in the core at about 150m depth. There were no significant off hole conducters detected.

Drill hole WSP3 was drilled in October 1986. The target was to locate massive sulphide mineralisation within an equivalent to the Rosebery host horizon. No significant alteration and mineralisation was encountered and only minor pyrrhotite-pyrite-(galena)-(sphalerite) was observed. Limited sampling over the sulphide rich zones returned maximum values of 90 ppm Cu, 580 ppm Pb, 2400 ppm Zn and 1 ppm Ag. The hole was surveyed by down hole SIROTEM. No further exploration was planned in the Jones Creek area after this program was completed.

14) Wyatt (1990) Interpretation of Aeromagnetic Data

In March 1989 a 270 sq km Helimag Survey was flown by Geoterrex Pty Ltd over several RGC Leases in Western Tasmania (EL's 9/66 Henty, 42/87 Zeehan, 101/87 Dundas, 13/88 Moores Pimple and the Renison Mine Lease). Other area surveyed include the Pasminco Hercules Mine Lease and a belt of unheld ground extending to the west of EL 9/66 from Mt Read to the previously relinquished western White Spur area. The flight lines were oriented east to west and were 150m apart with a terrain clearance of 75m.

Several anomalies and lineaments were identified within the present White Spur EL 5/96 boundaries.

Previous Exploration in EL 11/85 by Pasminco Exploration

From 1985 to 1995 the White Spur area was held by Pasminco Exploration as part of EL 11/85. Prior to 1990 most of the exploration completed in this EL centred outside the current EL 5/96 boundaries. In 1988 a review was made of previous geophysical surveys in the White Spur area (Bishop, 1986). In 1990 an aeromagnetic and radiometric survey was conducted over the southern half of EL 5/96 (Jenkins, 1990). The northern portion was flown in a separate survey in 1991 (Poltock and Fitzgerald, 1991).

Reconnaissance mapping and rock chip geochemistry was undertaken in 1990-91 (Poltock and Fitzgerald, 1991). This led to the discovery of several new occurrences of sulphide clasts within variably silicified, sericitised and pyritic mass flow deposits. Assays of up to 0.87% Pb, 0.27% Zn, 102 ppm Ag and 1.75% Ba were reported. An alteration zone near the North Henty Fault from between 57800N and 58300N was sampled. A quartz pyrite vein assayed 0.12 g/t Au and a pyrite shear assayed 0.3% Pb and Zn although this was not repeated when resampled.

In 1991-92 additional geological mapping, limited lithogeochemical sampling, a gravity survey and gravity/magnetic modelling was performed (Poltock, 1992). Three marker horizons were recognised within the White Spur Formation:- a) basal mass flow horizon with sulphide clasts, b) micaceous wackes (overlying the basal unit) and c) a quartz bearing crystal rich grit. A sericite-pyrite alteration zone was located at the CVC/WSF contact in the Henty Canal. Five channel samples were collected

and were weakly anomalous in arsenic (maximum 450 ppm As). An alteration index (AI = 100*(K2O+MgO)/(Na2O+CaO+K2O+MgO)) of 96 was reported for sample 31584 and was considered to represented intense hydrothermal alteration. However, since the sample also has a high loss of ignition the calculated AI may not reflect a true representation of the degree of the original hydrothermal alteration. Recent weathering is a more likely cause of the high AI. Rod Allen in a private report to Pasminco on the Rosebery Mine is quoted as stating that this alteration zone is comparable to the alteration assemblages in siltstone adjacent to massive sulphide mineralisation at Hercules and Rosebery.

In June 1992 to June 1993 additional geological mapping and rockchip sampling was conducted in the White Spur area (Quayle, 1993). Further mapping in the canal alteration zone highlighted a set of parasitic folds to the west of the CVC/WSF contact. This is a structural setting similar to the position of the Hercules ore body. Quayle reports that the CVC rock to the east of the contact have high magnetic susceptibilities and similar lithogeochemical characteristics to the Mount Black Volcanics rather than the Rosebery Footwall Sequence.

In 1993-94 drillhole YWS1 was targeted to test the down dip extension of the canal alteration zone near a set of parasitic folds within the White Spur Formation close to the WSF/CVC contact. A summary log of the hole is given below:-

0 - 3m	Glacials and cover
3 - 134	Interbedded mass flow deposits, sandstones and siltstones
134 - 265	Siltstone
265 - 269	Sandstone
269 - 357	Siltstone
357 - 365	Sandstone
365	Fault
365 - 401	Dacite Lava (CVC)
401 - 430.5	Dacitic pumiceous mass flows (CVC)

Additional rock chip sampling was performed in the 1993-94 season (Quayle, 1994)

In 1994-95 exploration was concentrated near drill hole MR-1 where sulphide clasts had been identified in a mass flow horizon at the base of the White Spur Formation. Rockchip samples were collected from the area for lithogeochemical and alteration studies. Alteration indexes were highly variable and ranged from 7 to 98. Since the rocks were presumably collected from outcrops exposed to surfacial weathering some additional cause of alkali and magnesium depletion is likely and the AI may not reflect the primary signature of the hydrothermal alteration and should be viewed with caution. Pasminco relinquished EL 11/85 in late 1995 (Quayle, 1995).

Additional work within the White Spur area

Diamond drillhole MR1 (Corbett, 1985)

Diamond drillhole MR1 was drilled by the Mines Department in 1984 to provide better understanding about the nature between the White Spur Formation (Western Sequence) and the underlying Central Volcanic Sequence (Corbett, 1985). The lowest unit in the White Spur Formation is a coarse polymict mass flow deposit. Clast type include quartz feldspar porphyry, feldspar porphyry, fine-grained felsic volcanic rock, vitric tuff, shale, pumice and a significant component of clasts that suggests derivation from frrom a mineralised source. These include fragments of massive pyrite, pyritic chert, hematite, galena and pyritic calcic schistose rock. The contact between the White Spur Formation and the Central Volcanics is erosional. A change in dip from the drill hole intersection to a shallow costean 165m east of the collar suggests that the contact is folded.

Corbett and Lees (1987)

The term White Spur Formation was formally defined by Corbett and Lees (1987) as a west facing sequence of felsic tuff, siltstone, greywacke and slate that unconformably overlies the Central Volcanics Sequence between the North Henty Fault and Williamsford. It is conformably overlain by Dundas Group type conglomerates, quartzwacke, mudstone and lithicwacke on the western end of Howards Road.

The abundance of quartz phyric detritus in the White Spur Formation may suggest derivation from Tyndall Group rocks located to the east of the Henty Fault Zone.

Dugdale (1992) BSc(Hons) University of Tasmania

Dugdale studied the lithostratigraphy, mineralisation and structure of the White Spur Formation and Central Volcanics Sequence in the White Spur area. His main conclusions are summarised below.

The Central Volcanics Sequence consists of several feldspar phyric pumiceous subaqueous mass flow deposits. It is unconformably overlain by the White Spur Formation, a sequence of quartz - feldspar phyric crystal rich pumiceous lithic breccia with interbedded volcaniclastic sandstones and siltstones. The lithic breccias are considered to be subaqueously deposited high concentration turbidity currents and may represent the distal subaqueous volcaniclastic facies of subaerial (Tyndall Group?) volcanism.

The White Spur Formation - Central Volcanic Sequence contact is a disconformity and Dugdale believes it may not represent a large time break in deposition. There is evidence to suggest erosion of the Central Volcanics prior to White Spur Formation deposition in association with north - south syndepositional faulting that also may have produced a "channelised" predepositional surface. The palaeotopographic lows were later infilled by White Spur Formation mass flow deposits and may be prospective for VHMS mineralisation.

Palaeoflow structures in the basal White Spur Formation, which contains massive sulphide clasts, suggest a northerly flow and a southern provenance for the deposit. A pyrite clast from this unit has a δ34 S of 14.1‰, which is similar to isotope results from Rosebery and Hercules.

Allen (1994)

In a study of altered pumiceous mass flow deposits at Rosebery and Hercules, Allen has recognized a styolitic S1 foliation or diagenetic compaction foliation within altered pumice clasts that predates the regional cleavage. This foliation is parallel to bedding and can be used as an important tool during mapping to define structure in otherwise massive and featureless units. In the Hercules and White Spur areas, Allen states that the concordant nature of the compaction foliation and bedding in the Central Volcanic Sequence and White Spur Formation shows that the contact between these sequences is a subaqueous paraconformity or disconformity attributed to synvolcanic block faulting. An important feature arising from this work is that the White Spur Formation can be directly correlated with the Rosebery - Hercules hanging wall sequence, presently considered part of the Central Volcanic Sequence.

Detailed mapping of mass flow deposits in both the hanging and footwall at Hercules has shown that abrupt lateral changes in stratigraphy can be used to define both synvolcanic and later faults. Synvolcanic faults have been recognized both within the footwall and in the lower parts of the hanging wall and may be related to caldera subsidence and post caldera adjustments. The location of such faults is highly important as these faults may have direct control on any mineralisation.

To help distinguish individual mass flow horizons the following criteria were used:-

a) lithic clast types and relative abundance,
b) ratio of volcanic feldspar to quartz crystals, and
c) pumice rich versus crystal rich character.

Nunn (1995) BSc(Hons) University of Tasmania

In 1995 Nunn studied the newly exposed section across the Central Volcanic Sequence and White Spur Formation contact in the Henty or Halls Rivulet Canal. Four main lithofacies were recognised within the White Spur Formation. They are:-

a) bedded mudstone and siltstone - deposited by low density turbidity currents,
b) lithic rich sandstone/conglomerate - commonly with normal to reverse graded bases and normal graded tops, deposited by high density turbidity currents,
c) crystal rich sandstones with banded quartz-albite and chlorite alteration compositionally and texturally similar to Lower Tyndall Group rocks, and
d) volcaniclastic lithic breccia - massive to normally graded units with variable proportions of matrix, crystals and lithic components, deposited as mass flows.

Provenance studies of each of the above units has shown that both intrabasinal and extrabasinal sources are present. The majority of detritus has been derived from an eastern source of explosive subaerial to shallow submarine volcanism with an associated Tyennan (Precambrian quartzites and phyllites) input, while a western source of ultramafic (chromite bearing) detritus is also indicated. All sediments in the White Spur Formation were deposited in a deep water setting with local reworking of the ambient sedimentation by mass flows providing the intrabasinal sources.

Nunn comments on the similarities between the White Spur Formation and the Southwell Subgroup which occurs in the Que - Hellyer area. Tyndall Group correlates, the Mount Cripps Subgroup, overlie the Southwell subgroup and may imply an interfingering relationship between the Tyndall Group and White Spur Formation.

4. WORK COMPLETED

In the period March 1996 - March 1997 the work completed in EL 5/96 - White Spur includes the following:-

1) Geological mapping the EL at 1:5000,
2) Relogging of several old diamond drill holes,
3) 7.1 kilometres of grid cut at the Anneliese Prospect,
4) Geological Mapping of the Grid at 1:1000,
5) 128 Soil samples were analysed by ICP, XRF and NAA,
6) 38 Rock chip samples were analysed by ICP, XRF, NAA and/or AAS
7) 5 samples analysed for S and Pb isotopes
8) A 306.6m drill hole (ANNE001) was drilled at the Anneliese Prospect.
9) 34 split core samples from ANNE001 were analysed.
10) Ground Magnetics, VLF-EM, and IP Surveys at the Anneliese Prospect.
11) Down hole EM Survey of drill hole ANNE001.

5. RESULTS

5.1 GEOLOGICAL MAPPING

The White Spur EL has been mapped at 1:5000 scale. Fact geology is presented on Plans 1 and 2. Geological interpretation is given on Plans 3 and 4.

Nine sedimentary lithofacies have been recognised as mappable units in the White Spur area. They are:-

a) Coarse lithic rich volcaniclastic conglomerate,
b) Medium - fine grained volcaniclastic sandstones,
c) Ashy volcaniclastic siltstones,
d) Black pyritic siltstones,
e) Crystal rich volcaniclastic sandstones,
f) Micaceous rich volcaniclastic sediments (greywacke and lithicwacke), and
g) Felspar phyric dacitic pumiceous volcaniclastic sandstone.

The coarse lithic rich volcaniclastic conglomerates display sedimentary features which suggest deposition by mass flow processes. They commonly have lithic rich bases and grade upwards into the medium - fine grained volcaniclastic sandstone and ashy volcaniclastic siltstone lithofacies. The crystal rich volcaniclastic sandstone lithofacies is characterised by abundant broken and rounded quartz and feldspar crystals and possibly represent the reworked equivalent of a discrete volcanic eruption. It forms an important stratigraphic marker horizon in the White Spur Formation (WSF). Black pyritic siltstones and micaceous bearing sediments represent a change to quieter deposition conditions and mark an input of metamorphic detritus into the basin. Some of the lithicwacke and greywacke units possibly contained clasts from a mixed volcanic and metamorphic provenance.

Felspar phyric dacitic pumiceous volcaniclastic sandstone is confined to the Central Volcanic Sequence (CVS). This formation is also known as the Central Volcanics Complex (CVC).

Several coherent to brecciated rhyolite intrusive bodies have been identified. These occur at numerous stratigraphic horizons within both the Central Volcanic Sequence and White Spur Formation. A rhyolite body exposed in the canal and in drill hole YWS1 occurs close to the Central Volcanic Sequence - White Spur Formation contact. It displays upper and lower peperitic margins which suggest intrusion of the magma into soft unconsolidated sediment. A felspar phyric dacitic intrusive body has been identified in the north of the EL. This is commonly spherulitic and may be flow banded.

Thin mafic dykes/sills (generally <5m wide) are common within the Central Volcanic Sequence in the eastern part of the EL. When weathered they appear as fine grained limonitic clays. They are commonly chloritic when fresh.

Pleistocene glacial deposits, consisting predominantly of Cambrian volcanic and Owen derived clasts are common throughout the EL. Jurassic dolerite is a common clast type on the eastern slopes of Mt Dundas.

The internal stratigraphy of the White Spur Formation is quite complex. This is due to complex interfingering between lithofacies and the lensoidal nature of the individual units, especially the massflow units. There are pronounced along strike facies changes to the basal White Spur Formation from the north of the EL to the south. These changes are represented on Figure 3. To the north of 5362200mN the basal unit of the White Spur Formation consists of a lithic rich massflow which grades progressively upwards into an ashy volcaniclastic siltstone. The lensoidal nature of the unit probably reflects the influence of a channelled palaeosurface on to which the unit was deposited. In areas away from the channel the finer upper parts of the deposit conformably over the Central Volcanic Sequence.

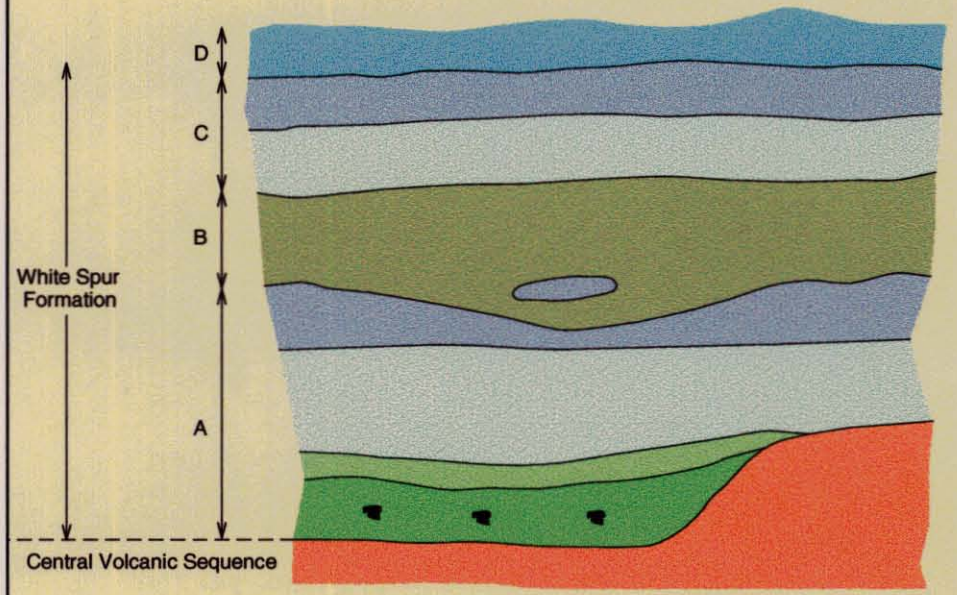
In the south of the EL (eg. 5360000mN), the nature of the basal White Spur Formation changes and unit A contains an increased proportion of black siltstone horizons and massflow deposits typically

RGC Exploration

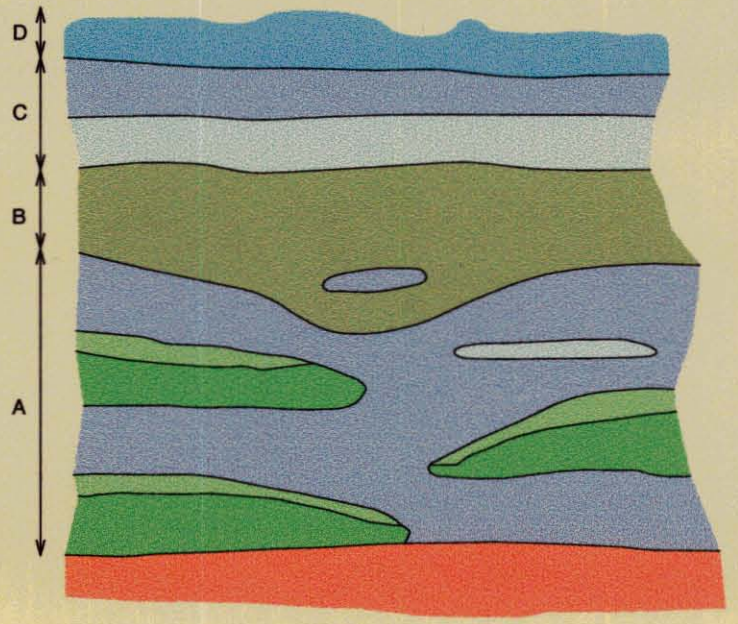
IDEALISED STRATIGRAPHIC SECTIONS



A - North of 5362 200mN



B - Approx 5360 000mN



- Lithicwacke + greywacke
- Black pyritic siltstone
- Ashy siltstone
- Quartz-feldspar crystal rich volcaniclastic sandstone
- Graded top to massflow deposit
- Lithic rich base to massflow deposit with massive sulphide clasts
- Feldspar phyric pumiceaus volcaniclastic sandstone

Fig. 3

2317v018.dgn

3830177

have a high proportion of black siltstone intraclasts and a high proportion of black siltstone in the matrix. The changes within the basal White Spur Formation from north to south are attributed changes in the environment of deposition. The lithofacies present to the north of 5362200mN reflect a more proximal volcanic setting with abundant juvenile volcanic detritus being shed from adjacent sources and transported down slope via mass flows. To the south of this northing the increased abundance of black siltstone reflects deposition in a quieter more distal environment with a mixed volcanic - metamorphic provenance. The coarse lithic rich units are also deposited as mass flows but in contrast to the proximal mass flows they contain abundant intrabasinal clasts.

Unit B consists of abundant volcanic derived quartz and feldspar crystals. It is a graded unit and commonly has a coarse lithic rich base with many rafts of black siltstone, the upper parts of unit A. Unlike the massflow deposits described above this unit shows little facies or lithological change along strike. It was formed by a discrete crystal rich pyroclastic eruption. The crystal fragments were rapidly transported into the basin via down slope movement of massflows and hence record a unique phase of volcanism. This unit is laterally extensive throughout the mapped area and forms a useful marker horizon. it is analogous to one of the key facies horizons identified by Macphie and Allen, 1992.

North of the White Spur EL two economic volcaniclastic hosted massive sulphide deposits, Rosebery and Hercules, are hosted in the upper parts of the Central Volcanic Sequence close to the contact with the overlying White Spur Formation. Recent studies (eg. Khin Zaw and Large, 1992) have shown that by subseafloor hydrothermal alteration/replacement of permeable pumiceous mass flow deposits. Clasts of sulphide have been identified in the basal mass flow deposits of the White Spur formation to the north of 5362200mN. These clasts are considered to have been derived from the erosion of the sulphide deposits by down slope mass flow movements.

Massive pyrite lenses have been located in the south of the EL at the Anneliese Prospect. The mineralisation is hosted in intensely sericite altered Central Volcanic Sequence close to the White Spur Formation contact. The deposit is close to the intersection of the contact with the North Henty Fault which may have acted as a fluid conduit during mineralisation. The Anneliese Grid was mapped at 1:2500 scale (Plans 5 and 6).

No other significant alteration zones within the Central Volcanic Sequence have been located during the mapping program.

5.2 OLD DRILL HOLE CORE RELOGGING

There have been seven previous drill holes in the White Spur area. They are:-

a) WSP103 - tested units within the White Spur Formation,
b) WSP1 - tested the Jones Creek shale - CVS contact,
c) WSP2 - tested units within the White Spur Formation,
d) WSP3 - tested the Jones Creek shale - CVS contact,
e) JC1 - tested units within the CVS
f) MR1 - tested the White Spur Formation - CVS contact, and
g) YWS1 - tested the White Spur Formation - CVS contact.

Details of these drill holes are summarised in Appendix 2. Drill holes YWS1, WSP2, JC1 and MR1 have been relogged and graph logs are also included.

The core for drill holes WSP103, WSP1 and WSP3 has not yet been located.

5.3 ROCKCHIP GEOCHEMISTRY

38 Rock chip samples were collected from the White Spur Formation during field mapping. They have been analysed for a range of elements as summarised in the table below:-

White Spur Rock Chips - Analytical Summary

METHOD	ELEMENTS
AAS	Cu, Pb, Zn, Ag, As, S
ICP	Cu, Pb, Zn, S, Al, Ca, V, Sr, P, Ni, Mn, Mg, Ti
NAA	Ag, As, Au, Sb, Ba, Br, Ce, Co, Cr, Cs, Eu, Fe, Hf, Ir, K, La, Lu, Mo, Na, Rb, Sc, Se, Sm, Ta, Te, Th, W, U, Yb, Zn, Zr
XRF	Ti, V
FIRE ASSAY	Au

The results and sample location coordinates are presented in Appendix 4.

Figure 4 shows a map of sample location for each rock chip sample collected from the White Spur Formation. Each sample has been assigned a colour and/or symbol to represent its lithogeochemical character as summarised in the legend.

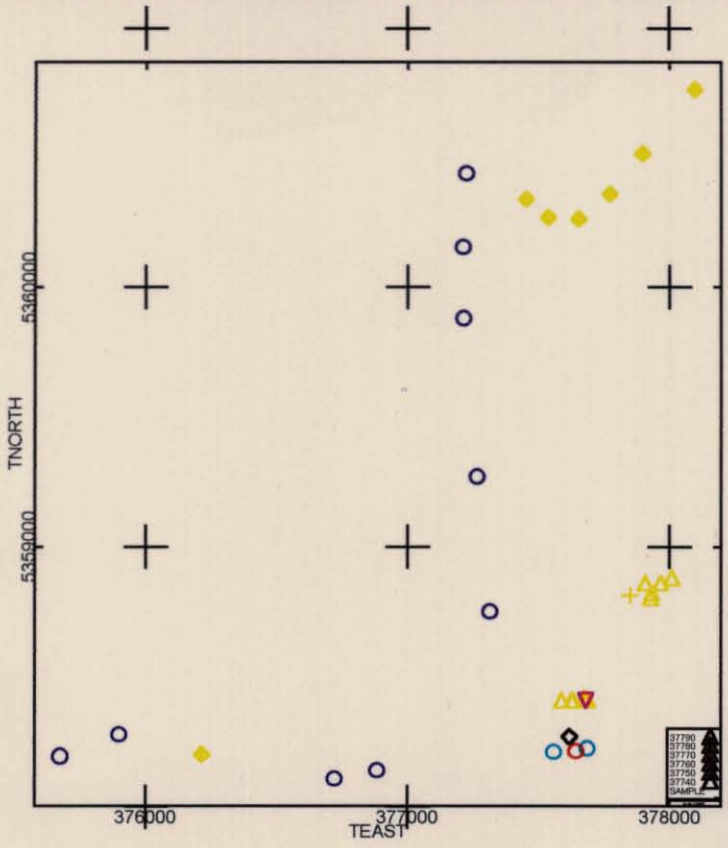
A series of XY plots plotting Ti verses a series of elements (Figure 5) shows how each lithogeochemical type and subtype has been determined on the basis of its characteristic geochemical signature. The black siltstones from the White Spur Formation have distinctly higher Ti, V, Sc, Ni, Co, Cr, and Mg than the samples from the Central Volcanic Sequence. This reflects a change in source provenance. The higher Ti/Hf contents suggest that they range in composition from andesite to dacite. The higher Cr values may be due to an input of detrital chromite from more distal sources. Some black siltstone samples have compositions which overlap with samples from the Central Volcanics Sequence and suggest a higher proportion of locally derived volcanic detritus.

The Central Volcanics Sequence has been subdivided into three lithogeochemical subtypes. As shown on Figure 4 there is a distinct spatial separation between the dacitic and rhyolitic subtypes. The rhyolitic subtype outcrops along the HEC Canal where it is intruded by synsedimentatary peperitic rhyolitic sill. Mixing of detritus from the fragmenting rhyolitic magma and the dacitic rich pumiceous rich sediment host may account for the lower Ti/Hf of these rocks. Two rock chip samples from the Anneliese Grid have unusual geochemistry. They have a distinctly higher Ti/Hf ratio and are probably andesitic in composition. They also display elevated V, Sc, Co, Cr, and Al contents. On Figure 6 it can be seen that they have elevated Cu, As, Sb, and Ba contents relative to the other Central Volcanic Sequence lithogeochemical subtypes. These elevated values may reflect local hydrothermal alteration.

Two mafic bodies have been identified. They have variable geochemistry and possibly represent two distinct magma types. The unit represented by the red circle has very high Ti contents. It can be correlated with a distinct suite of high Ti tholeiitic basalts (Suite IV) which are commonly intrusive into the Henty Fault Wedge Sequence and Central Volcanic Sequence close to the North Henty Fault (Crawford, Corbett and Everard, 1992). The unit represented by the purple triangle has very high Mg, Ni and Cr values and a low Ti content. These characteristics suggest a correlation with a suite of ultramafic rocks that are common within the Dundas Trough (Brown, 1986) and may occur as thin slivers juxtaposed along the North Henty Fault (Corbett, 1886).

Four samples of the massive pyrite from the Anneliese Prospect were assayed. They had only low levels of basemetals (Cu: 17-54ppm, Pb: 39-79ppm, and Zn: 37-66ppm) and below detection limit Au. Ag was variable and ranged from less than detection limit (-2 ppm) to 6ppm. The pyrite was relatively enriched in As (901-4097ppm), Sb (6.8-22.4ppm) and Mo (61.9-153ppm)(Figure 6). An XRD determination indicated that the main sulphide phase present is pyrite (R Botterill pers com).

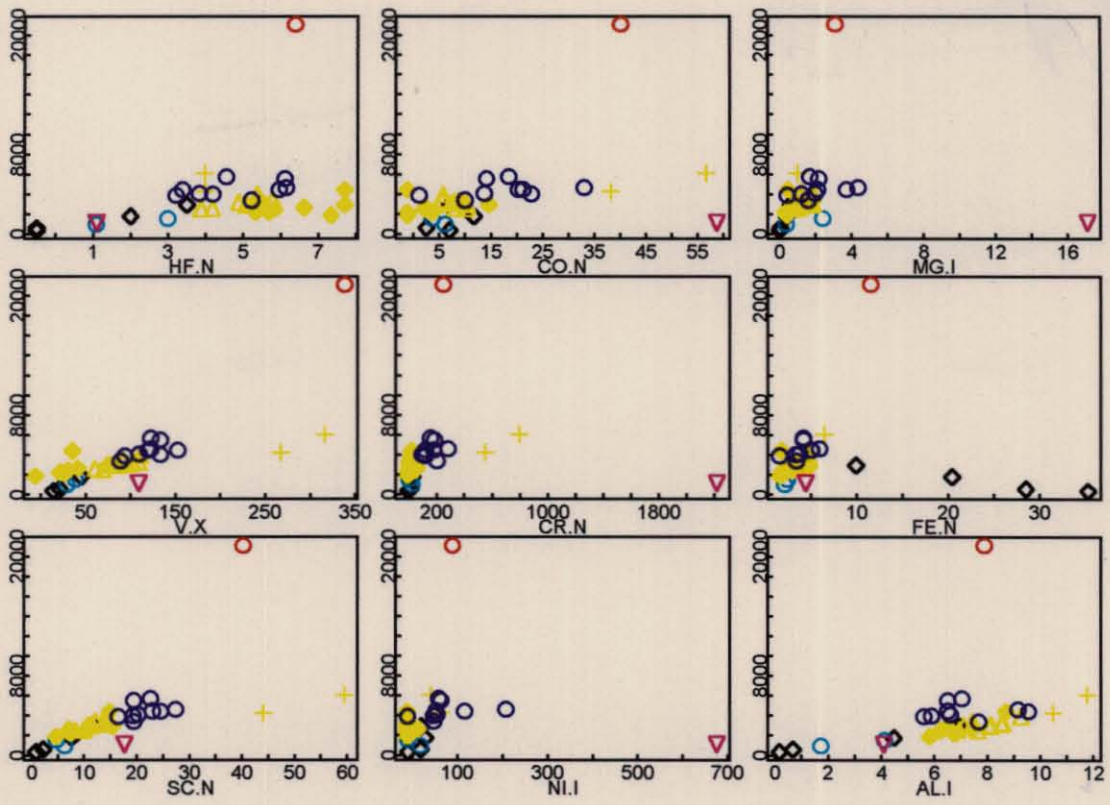
FIGURE 4
WHITE SPUR EL ROCK CHIPS - LITHOGEOCHEMICAL MAP



LEGEND:-

Blue Circle	**White Spur Formation - Black Siltstone**
Yellow Diamond	**Central Volcanic Sequence - Rhyolite**
Yellow Triangle	**Central Volcanic Sequence - Dacites**
Yellow Cross	**Central Volcanic Sequence - Altered Andesite(?)**
Purple Triangle	**Mafic Intrusive**
Red Circle	**Mafic Intrusive(?)**
Light Blue Circle	**Unassigned**
Black Diamond	**Anneliese Prospect - Massive Pyrite**

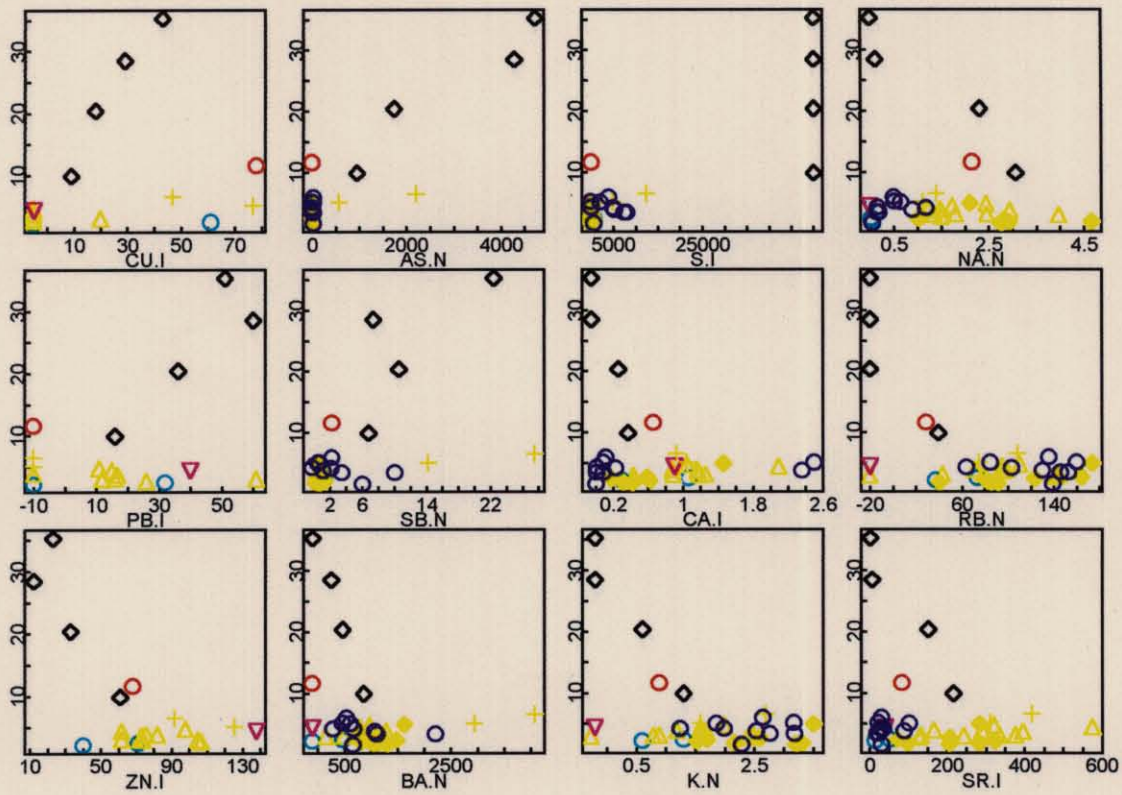
FIGURE 5
WHITE SPUR EL ROCK CHIPS - Ti.X verses selected elements



LEGEND:-

Blue Circle	**White Spur Formation - Black Siltstone**
Yellow Diamond	**Central Volcanic Sequence - Rhyolite**
Yellow Triangle	**Central Volcanic Sequence - Dacites**
Yellow Cross	**Central Volcanic Sequence - Altered Andesite(?)**
Purple Triangle	**Mafic Intrusive**
Red Circle	**Mafic Intrusive(?)**
Light Blue Circle	**Unassigned**
Black Diamond	**Anneliese Prospect - Massive Pyrite**

FIGURE 6
WHITE SPUR EL ROCK CHIPS - FE.N verses selected elements



LEGEND:-

Blue Circle	**White Spur Formation - Black Siltstone**
Yellow Diamond	**Central Volcanic Sequence - Rhyolite**
Yellow Triangle	**Central Volcanic Sequence - Dacites**
Yellow Cross	**Central Volcanic Sequence - Altered Andesite(?)**
Purple Triangle	**Mafic Intrusive**
Red Circle	**Mafic Intrusive(?)**
Light Blue Circle	**Unassigned**
Black Diamond	**Anneliese Prospect - Massive Pyrite**

5.4 ANNELIESE PROSPECT - ISOTOPES

5.4.1 Pb Isotopes

Sample T37747 was collected from the massive pyrite outcropping at the Anneliese Prospect and submitted for Pb isotope analysis by CSIRO Division of Exploration and Mining, North Ryde, Sydney. The sample was found to contain only a low level of Pb (68 ppm) and gave a $^{206}Pb/^{204}Pb$ ratio of 18.457. This value is higher than the Pb isotope signature from typical Tasmanian Cambrian VHMS mineralisation and overlaps with the lower limits of typical Tasmanian Devonian Mineralisation. Because the sample has a low Pb content it is possible that the sample has undergone addition of ^{206}Pb after formation, hence the measured $^{206}Pb/^{204}Pb$ ratio is not representative of the $^{206}Pb/^{204}Pb$ ratio during formation. Although the result is ambiguous a radiogenic shift is interpreted and a Cambrian origin for the pyrite is considered most likely. A report presented by Sirotope is reproduced in Appendix 6.

5.4.2 S isotopes

Five samples of massive pyrite from the Anneliese Prospect were analyses for $\delta^{34}S_{cdt}$ isotopes at the Central Science Laboratory, University of Tasmania. The results are tabulated below:-

S-isotope data for Pyrite from the Anneliese Prospect

Sample No.	Description	$\delta^{34}S$
T37445A	Coarse Pyrite	-15.8 ‰
T37445B	Fine Pyrite	-14.9
T37447	Massive Pyrite	-17.0
T37449	Massive Pyrite	-15.8
T43187	Massive Pyrite (ANNE001 - 263.1m)	-10.3

The range in $\delta^{34}S$ sulphur isotope values for Cambrian volcanic hosted massive sulphide deposits in western Tasmania is typically +5 to +20 ‰ (Solomon et al, 1988). Large (1989) has subdivided these deposits into two distinct isotopic populations:-

a) Ore grade massive sulphides $\delta^{34}S$ +5 to +20 ‰
b) Barren sulphide zones $\delta^{34}S$ <+5 ‰

Several barren pyrite zones has been identified and are summarised in the table below:-

Tasmanian Barren Sulphide Zones

Deposit	$\delta^{34}S$ Range	Reference
Chester	-3.9 to +0.4 ‰	Collins (1981)
Boco	-1.2 to +4.7	Green (1986)
Basin Lake	-4.6 to +2.4	Solomon et al.(1988)
Howards Anomaly	-8.3 to +16.8	Solomon et al.(1988)
Cattley Range	No Data	Green and Taheri (1992)
Specimen Creek	-2.92 to -0.12	Jackson (1996)

These deposits are considered to form from a sea water dominated fluid at relatively low temperatures (<200°C). This inhibits inorganic reduction of sea water sulphate and at these low temperatures the fluids cannot carry sufficient base metals and H_2S to form an ore body. Most of the sulphur is probably derived from the surrounding volcanics which are estimated to have a $\delta^{34}S$ value of approximately 0 ‰. Cambrian sea water sulphate has a value of about +30 ‰. Solomon et al, (1988) note that barren sulphide deposits probably form towards the end of a convective cycle when the sea water sulphate has been consumed and reduction ceases. Oxidation of the fluid then may occur as the system cools. Such fluids would have similar isotopic signatures to the host volcanics.

The pyrite from the Anneliese Prospect has $\delta^{34}S$ values that are isotopically lighter than those from barren sulphide zones. Such values are commonly reported in sediment hosted massive sulphide and

Mississippi Valley type deposits. Marine sediments commonly have very light $\delta^{34}S$ values which are attributed to low temperature bacterial reduction of sea water sulphate to sulphide (Rollinson, 1993).

Andrews (1979) and Alt (1994) have suggested that isotopically light $\delta^{34}S$ values may also be produced by disproportionation of igneous sulphide during low temperature oxidation. Under such conditions igneous sulphide ($\delta^{34}S$ =0 ‰) reacts to form unstable sulphite and thiosulphate compounds. These subsequently disproportionate into oxidised $\delta^{34}S$ enriched sulphate and reduced $\delta^{34}S$ depleted sulphide. The sulfate is readily removed from the system leaving the isotopically light sulphide to react with ferrous iron from the host rock to produce secondary low $\delta^{34}S$ pyrites.

Davidson and Kitto (1997) suggest that the barren VHMS systems in western Tasmania may form via a similar process and they note that the range in $\delta^{34}S$ values for barren deposits is within that established for the background sulphur isotope variation in unaltered Mount Read Volcanic rocks ($\delta^{34}S$ = -14.5 to +24.2 ‰). The isotopically light background values are considered to define regions of low temperature seawater circulation through oxidised porous aquifers. They suggest that the barren systems represent thermal anomalies within such aquifers during Cambrian alteration. In addition they note that isotopically light values are generally associated albitisation.

The sulphide isotope results from pyrite from the Anneliese Prospect are generally lighter than those reported from barren systems in the Mount Read Volcanics but are similar to the lightest values reported for background values. A model of disproportionation of igneous sulphide during low temperature oxidation is favoured for the generation of the isotopically light sulphides at the Anneliese Prospect.

5.5 ANNELIESE PROSPECT - SOILS

128 soil samples were collected by hand auger at 25 metre intervals from the Anneliese Grid. Only the western portion of the grid covering the Central Volcanic Sequence and White Spur Formation was sampled. They have been analysed for a range of elements as summarised in the table below:-

Anneliese Grid Soil Survey - Analytical Summary

METHOD	ELEMENTS
ICP	Cu, Pb, Zn, S, Al, Ca, V, Sr, P, Ni, Mn, Mg, Ti
NAA	Ag, As, Au, Sb, Ba, Br, Ce, Co, Cr, Cs, Eu, Fe, Hf, Ir, K, La, Lu, Mo, Na, Rb, Sc, Se, Sm, Ta, Te, Th, W, U, Yb, Zn, Zr
XRF	Ti, V

The results and sample location coordinates are presented in Appendix 5.

Figure 7 shows the variation in Cu, Pb, Zn and Ba across the grid. Only back ground levels of these elements were recorded with Cu averaging 3.5ppm, Pb 23.0ppm and Zn 24.4ppm. The Ba distribution is erratic however the Central Volcanic Sequence has slightly higher Ba value than the Henty Fault Wedge Sequence.

The soil samples from the Anneliese Prospect can be divided into a number of distinct lithogeochemical types and subtypes. The distribution of these groups is shown on Figure 8.

Figures 9 and 10 shows how several of the lithogeochemical types can be defined. The Henty Fault Wedge Sequence is characterised by high Ti contents and forms a distinct group. It has relatively higher Ti/Hf ratio than the other lithogeochemical groupings and has a more andesitic composition. This unit is also well defined on plots of La verses Sm and La verses Eu.
The Central Volcanic Sequence has a higher Ti/Hf ratio than the overlying White Spur Formation. It has been subdivided into two subtypes on the basis of LREE contents. One subtype is characterised by extremely low levels of La, Sm and Eu and almost exclusively occurs on grid lie 5358800 mN.

The White Spur Formation has a highly variable chemical signature which reflects the wide range of individual lithologies present. It has been subdivided into four subtypes. In general it has lower Ti/Hf ratios than the Central Volcanic Sequence and is more felsic in composition. This is consistent with the presence of quartz phyric rhyolite clasts within the mass flow deposits. Subtypes have been defined by their range in La contents. The more LREE enriched subtypes, the purple crosses and triangles, form a distinct north - south striking unit on Figure 8. This approximately corresponds to the mapped distribution of a distinctive quartz - feldspar phyric crystal rich volcaniclastic sandstone, a major stratigraphic marker horizon within the White Spur Formation.

A few samples within the area mapped as White Spur Formation have chemical affinities similar to those of the Central Volcanic Sequence (see misplaced yellow markers on the western ends of lines 5358400 mN and 5358800 mN. These samples correspond to areas mapped as ashy siltstones.

The two red triangles located on line 5358400 mN have high Mg, Cr and Ni values. They are similar to rock chip sample T37761 (purple triangle on Figure 5) and are possibly an ultramafic body.

The eastern end of line 5359000 mN is covered by extensive slope deposits and there is very little outcrop. The samples from this area (black triangles) have a range in geochemistry that is transitional between the White Spur Formation and the Cental Volcanic Sequence.

FIGURE 7.
ANNELIESE GRID SOILS - CU, PB, ZN AND BA DISTRIBUTION MAPS.

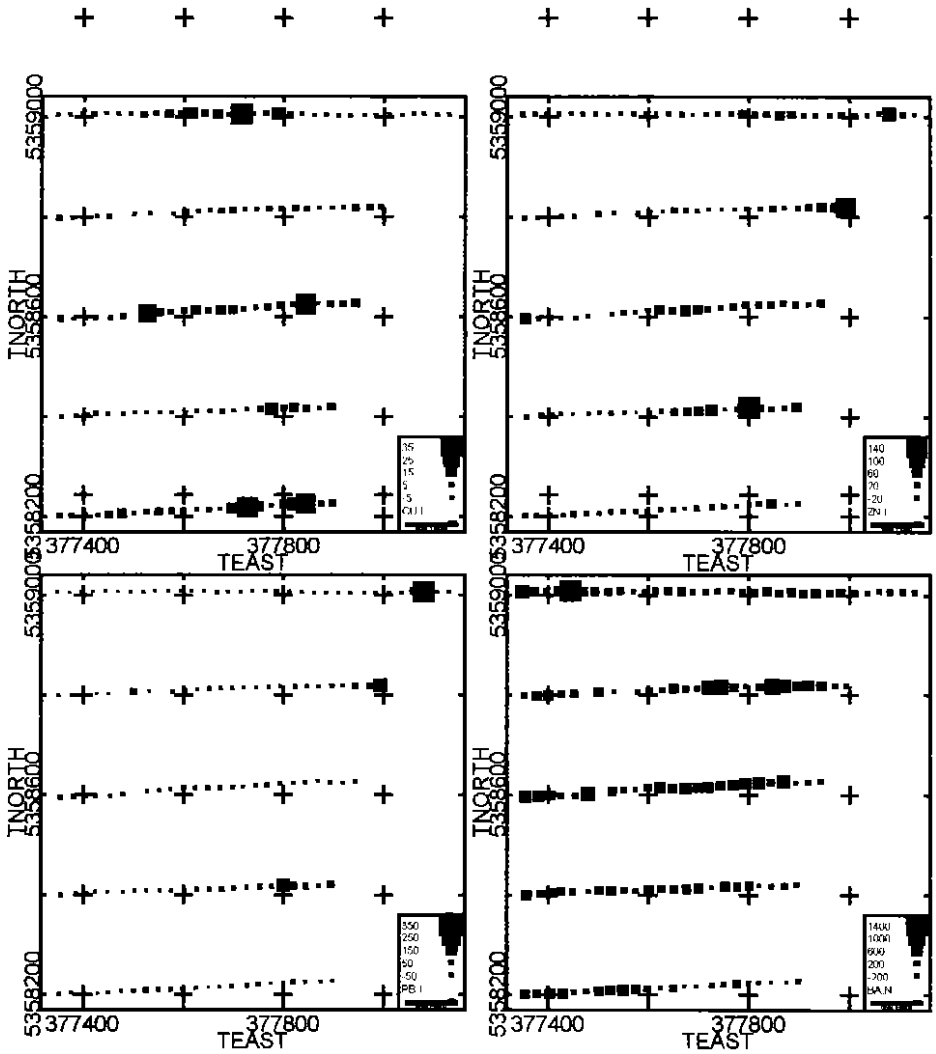
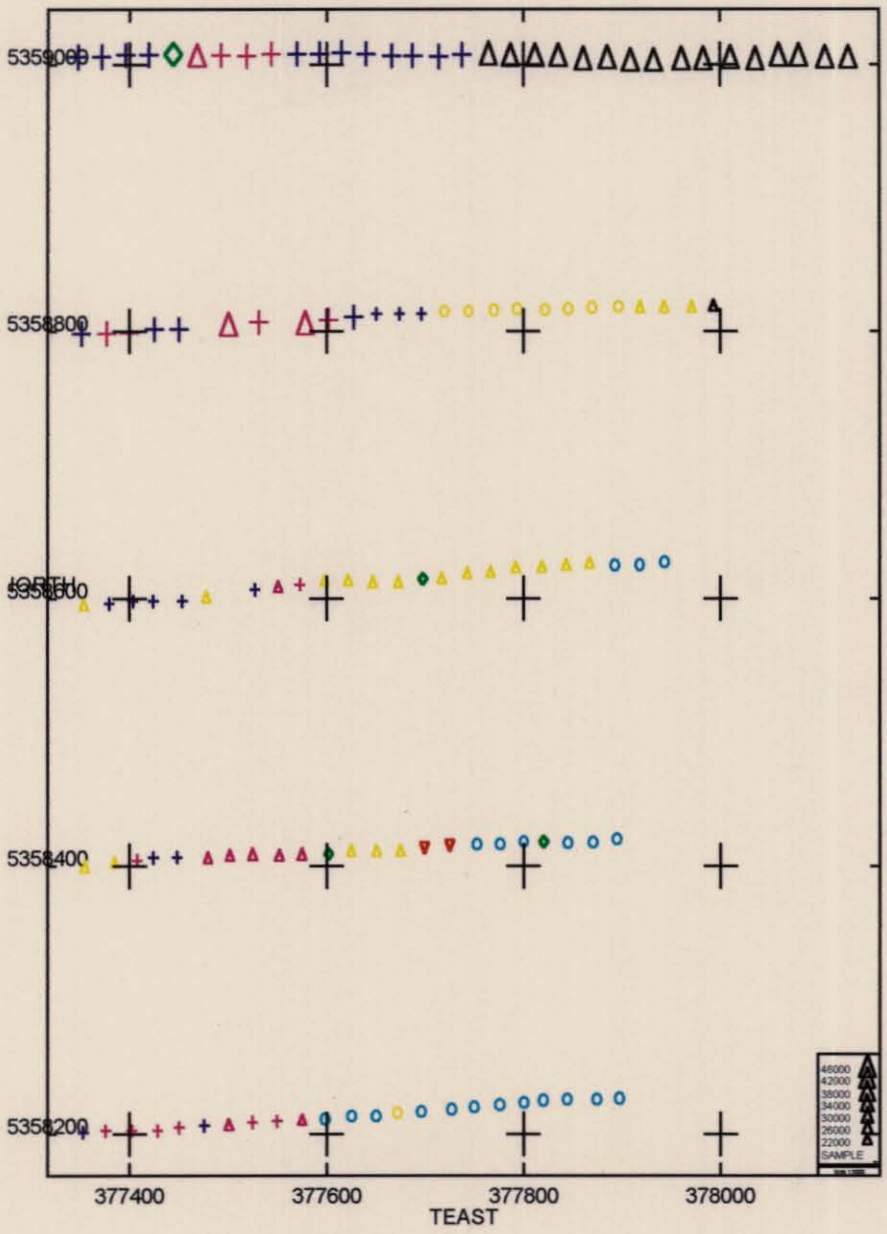


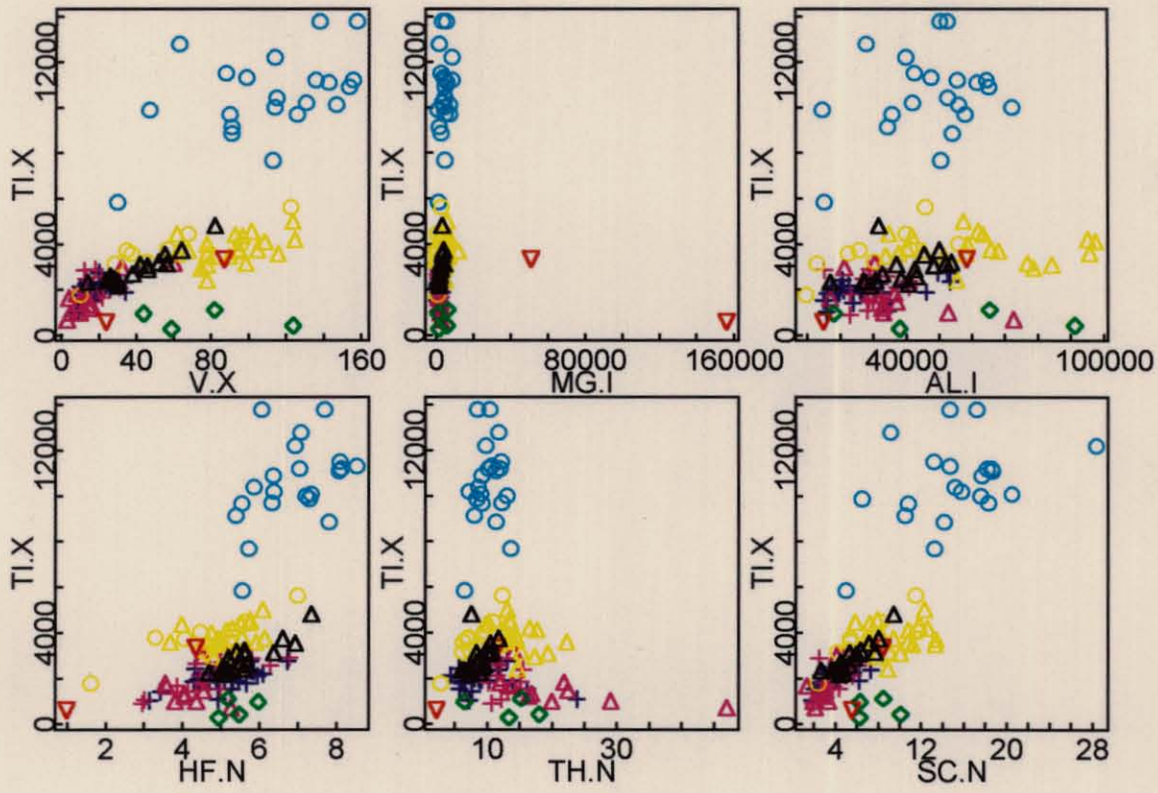
FIGURE 8
ANNELIESE GRID SOILS - LITHOGEOCHEMICAL MAP



LEGEND:-

Light Blue Circle	- Henty Fault Wedge Sequence
Yellow Triangle	- Central Volcanic Sequence - Dacites
Yellow Circle	- Central Volcanic Sequence - Dacites (Low LREE contents)
Dark Blue Cross	- White Spur Formation
Purple Cross	- White Spur Formation
Purple Triangle	- White Spur Formation (High LREE contents)
Green Triangle	- White Spur Formation (?) (Low Ti/Hf possibly rhyolite)
Red Triangle	- Mafic Intrusive
Black Triangle	- Undifferentiated WSF and CVC

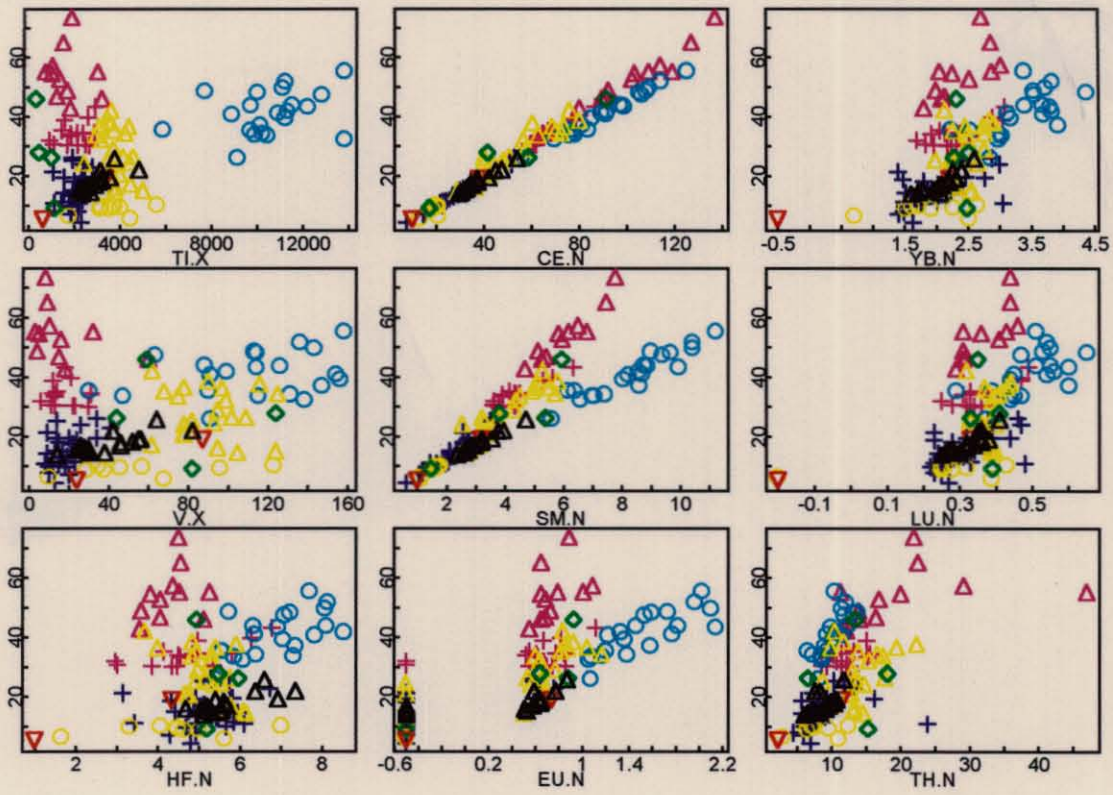
FIGURE 9
ANNELIESE GRID SOILS - TI.X VERSES SELECTED ELEMENTS



LEGEND:-

Light Blue Circle	- Henty Fault Wedge Sequence
Yellow Triangle	- Central Volcanic Sequence - Dacites
Yellow Circle	- Central Volcanic Sequence - Dacites (Low LREE contents)
Dark Blue Cross	- White Spur Formation
Purple Cross	- White Spur Formation
Purple Triangle	- White Spur Formation (High LREE contents)
Green Triangle	- White Spur Formation (?) (Low Ti/Hf possibly rhyolite)
Red Triangle	- Mafic Intrusive
Black Triangle	- Undifferentiated WSF and CVC

FIGURE 10
ANNELIESE GRID SOILS - LA.N VERSES SELECTED ELEMENTS



LEGEND:-

Light Blue Circle	- Henty Fault Wedge Sequence
Yellow Triangle	- Central Volcanic Sequence - Dacites
Yellow Circle	- Central Volcanic Sequence - Dacites (Low LREE contents)
Dark Blue Cross	- White Spur Formation
Purple Cross	- White Spur Formation
Purple Triangle	- White Spur Formation (High LREE contents)
Green Triangle	- White Spur Formation (?) (Low Ti/Hf possibly rhyolite)
Red Triangle	- Mafic Intrusive
Black Triangle	- Undifferentiated WSF and CVC

5.6 ANNELIESE PROSPECT - DIAMOND DRILLING

Drill hole ANNE001 was designed to test 200m down dip of the surface outcropping pyrite mineralisation at the Anneliese Prospect. The hole was collared in the White Spur Formation and intersected the Central Volcanics Sequence at 122.6m. The pyrite mineralisation and associated sericite alteration was intersected in a thin zone from 254.2 to 264.2m. A secondary sericite pyrite alteration zone was intersected at the White Spur Formation - Central Volcanics Sequence contact. The hole intersected the North Henty Fault at 296.3m and was terminated in the Henty Fault Sequence at 306.6m.

A summary log is:-

0 - 66m	Interbedded massflows and volcaniclastic sandstones
66 - 103	Predominantly black pyritic silstones with minor volcaniclastic sandstones
103 - 122.6	Interbedded massflows and fine - medium grained volcaniclastic sandstones
122.6 - 129.5	Feldspar phyric dacitic pumiceous volcaniclastic sandstone with moderate sericite - pyrite alteration (up to 3% disseminated pyrite)
129.5 - 254.2	Feldspar phyric dacitic pumiceous volcaniclastic sandstone with patchy - pervasive weak to moderate chlorite - albite - sericite - (carbonate) alteration
254.2 - 264.2	Feldspar phyric dacitic pumiceous volcaniclastic sandstone with moderate to intense sericite - pyrite alteration. Pyrite occurs as thin zones up to 0.5m wide of semi to massive pyrite strongly oriented parallel to strong schistosity.
264.2 - 296.3	Feldspar phyric dacitic pumiceous volcaniclastic sandstone with patchy - pervasive weak to moderate chlorite - albite - sericite - (carbonate) alteration
296.3 - 296.4	North Henty Fault
296.4 - 301.9	Matrix supported lithic and pumice rich rhyolitic volcaniclastic conglomerate
301.9 - 306.6 (EOH)	Fine to medium grained quartz - feldspar phyric rhyolitic volcaniclastic sandstone.

A detailed graphic log of the hole is presented in Appendix 3 and a geological cross section on Plan 7.

As shown on Plan 7 the White Spur Formation and the Central Volcanics Sequence dip to the east at about 80 degrees. Consistent uphole - westerly facings defined by graded mass flow tops within the White Spur Formation indicate that the sequence has been overturned. The North Henty Fault also dips to the east at about 85 degrees. This is similar to the dip of the fault established from drill hole MJ004 which was drilled about 4.3 kilometres north at about 5362200mN.

Surface mapping to the east of the North Henty Fault at the Anneliese Prospect indicated that the Henty Fault Wedge Sequence consists largely of greywackes, siltstones and fine to coarse grained volcaniclastic sandstones. The greywackes and siltstones have a metamorphic provenance and contain abundant mica and minor granular quartzite clasts in the coarser units. Feldspar and quartz crystals are common in the units with a more volcanic provenance. The rhyolitic volcaniclastic conglomerate and sandstones intersected at the end of ANNE001 were not observed during field mapping however similar units have been reported within the Henty Fault Wedge Sequence (Poltock 1992). A thin sliver of ultramafic rocks shown to occur to the south of the Anneliese Prospect on MRV Map 3 (Corbett, 1986) was not intersected in the drill hole. A small ultramafic unit was identified 150m northeast of the Anneliese Prospect during mapping and the soil sampling program.

5.7 ANNELIESE PROSPECT - DRILL CORE GEOCHEMISTRY

Diamond drill hole ANNE001 was assayed for Cu, Pb, Zn, Au, Ag, and As All the analyses were performed by Analabs in Burnie. Cu, Pb, Zn, Ag and As were analysed by AAS, and Au by fire assay. The results are tabulated in Appendix 3.

Drill hole ANNE001 was sampled over two continuous intervals. They are:-

a) 117 - 134m- this interval corresponds to a sericite - pyrite alteration zone developed at the White Spur Formation - Central Volcanic Sequence contact, and

b) 252.6 to 268.5m - this interval corresponds to the main zone of pyrite - sericite alteration. It is the down dip continuation of the outcropping pyrite at the Anneliese Prospect.

The assay results are summarised below:-

ANNE001 Assays Summary - Interval 117 to 134m

Element	Average (ppm)	Minimum (ppm)	Maximum (ppm)
Cu	22	6	94
Pb	61	13	208
Zn	244	37	947
Au	na	-0.008	0.146
Au	-2	-2	-2
As	32	14	146

ANNE001 Assays Summary - Interval 252.6 to 268.5m

Element	Average (ppm)	Minimum (ppm)	Maximum (ppm)
Cu	16	60	-4
Pb	86	311	-5
Zn	103	492	48
Au	-0.008	-0.008	-0.008
Au	-2	-2	-2
As	88	276	4

Assay results for Cu, Pb, Zn, and As are plotted as a function of depth down hole are presented on Figures 11 and 12.

FIGURE 11. ANNE001 - CVS-WSF Contact Alteration Zone

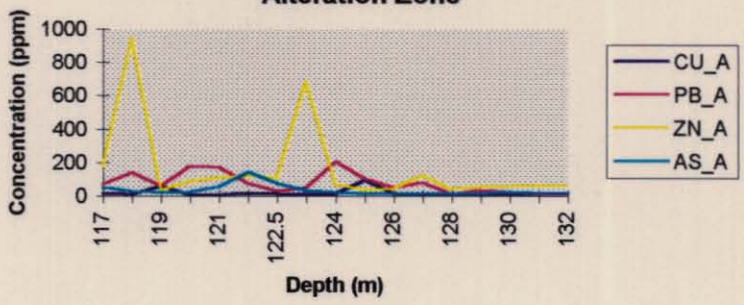
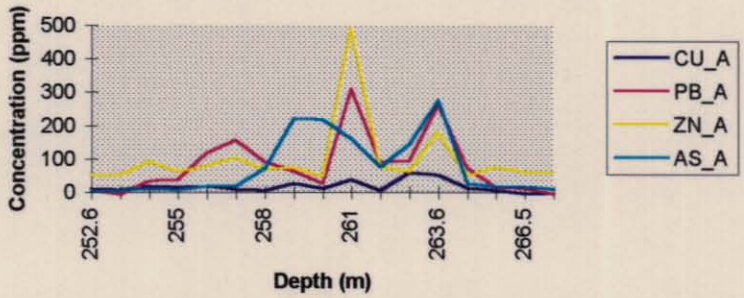


FIGURE12. ANNE001 - TARGET ZONE



In general, the two alteration zones assayed contain only low levels of basemetals. There are sporadic high Zn values of 947 and 687ppm detected at the Central Volcanic Sequence - White Spur

Formation contact. This zone commonly has above detection gold values with a maximum value of 0.146 ppm Au. The main zone of pyrite from 252.6 to 268.5m has low basemetal values and is characterised by relatively high arsenic values. Rockchip samples of pyrite outcropping at the Anneliese Prospect also had high arsenic values that ranged from 901 to 4996 ppm.

5.8 GEOPHYSICS

5.8.1 Reprocessing of Helimag Data

The White Spur EL has been covered by two Helimag Surveys completed in June 1990 and February 1991. The data for these surveys was purchased as open file data from the Department of Mines. Second horizontal derivative plots are given on Plans 8 and 9.

5.8.2 Geophysical Surveys at Anneliese Prospect

Induce polarisation/resistivity, VLF electromagnetic and ground magnetic surveys were conducted over the Anneliese Grid to determine the strike extent of the outcropping massive pyrite. The results show that the sulphide mineralisation did not produce anomalous IP, resistivity or VLF responses.

A report by Chris Dauth on IP, VLF-EM and Ground Magnetic Surveys at the Anneliese Prospect is presented in Appendix 7.

5.8.3 Drill hole ANNE001 Downhole EM Survey

A DHEM Survey was performed on drill hole ANNE001 to test the conductivity of a zone of sulphides identified at the Anneliese prospect. The results show that the sulphides form a very poor conductor and strike continuity. There were no off-hole conductors identified from the survey.

A report by Chris Dauth on the DHEM survey of drill hole ANNE001 is presented in Appendix 8.

5.8.3 ANNE001 Magnetic Susceptibility Survey

The magnetic susceptibility of the core from drill hole ANNE001 was measured at 1m intervals with a Geo Instruments GMS-2 Magnetic Susceptibility Meter. The results are presented on Plan 10 and are tabulated in Appendix 9.

On Plan 10 it can be seen that the Central Volcanic Sequence are generally more magnetic than the White Spur Formation. The sericite - pyrite alteration zone developed at the Central Volcanic Sequence - White Spur contact is marked by a zone of very low magnetiic susceptibility. A similar response is associated with the main target horizon at approximately 260 metres.

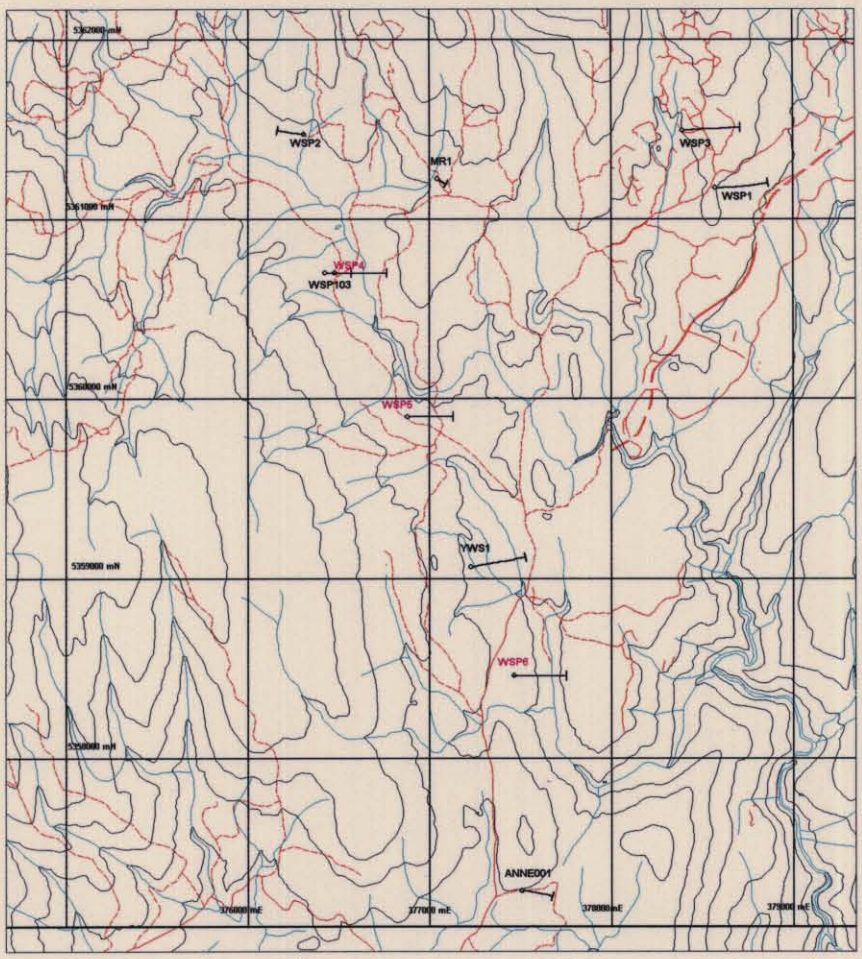
6. DISCUSSION AND RECOMMENDATIONS

The results for the first year of exploration in the White Spur EL have been encouraging. A significant barren alteration system (the Anneliese Prospect) has been found close to the Central Volcanics Sequence - White Spur Formation contact adjacent to the North Henty Fault. Detailed geological mapping, ground and down hole geophysical surveys and a soil sampling program has shown the zone has a limited strike extent. The mineralisation has been tested between 200 - 400m down dip from the surface exposure.

Pyrite from the Anneliese Prospect has a Cambrian lead isotope signature. However in contrast to western Tasmanian volcanic hosted massive sulphide deposits it has a very light $\delta^{34}S$ value of about -16‰. This is significantly lighter pyrite from barren systems in western Tasmania which have a $\delta^{34}S$ range from -8 to +5‰. This result does not lower the exploration potential of the area as similar values are common in areas which host ore grade volcanic hosted massive sulphide mineralisation (eg. Mount Windsor Volcanics (Duhig et al, 1992) and the Kuroko distirct (Ohmoto et al, 1983).

The next phase of exploration will consist of a series of diamond drill holes targeting the Central Volcanics Sequence - White Spur Formation contact at about 500 to 800m intervals along strike. Each hole will test the contact between 300 to 400 metres down dip from the surface exposure of the contact. In this way it will be possible to test the contact at a depth previously untested by normal surface exploration methods. Three diamond drill hole (WSP4, WSP5 and WSP6) have been planned to test the horizon south of 5361000 mN. Collar locations are shown on Figure 13.

FIGURE 13
Location diagram for proposed drill holes WSP4, WSP5 and WSP6



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383038

APPENDIX 1

Symbols and Codes used in drill logs

383039

TYPE

U - Volcanic (general)
V - Volcaniclastic
E - Epiclastic
L - Lava
I - Intrusive
P - Porphyry

COMPOSITION

R - Rhyolite
Y - Rhyodacite
D - Dacite
A - Andesite
B - Basaltic
F - Felsic
M - Mafic
U - Ultramafic

CRYSTAL TYPE

X - Crystal rich
A - Aphyric
F - Feldspar phyric
< - Feldspar - quartz phyric
> - Quartz - feldspar phyric
Q - Quartz phyric
H - Hornblende phyric
P - Pyroxene phyric
B - Biotite phyric
V - Vitric / glassy
L - Lithic rich
R - Reworked, commonly with Carbonate matrix

OTHERS

TILL - Glacial moraine
CLAY - Glacial clays
SILT - Black pyrite siltstone
FALT - Fault
CARB - Massive Carbonate
CBBX - Carbonate breccia

GRAINSIZE

B - Breccia
C - Coarse
M - Medium (Sandy)
F - Fine (Silty)
V - Very fine (Shaley)
A - Ashy
/ - Undifferentiated
X - Crystal Rich

ALTERATION

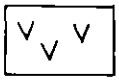
P - Pyrite
$ - Mineralised
Q - Quartz
O - Chlorite
C - Carbonate
H - Hematite
S - Sericite
K - K feldspar
A - Albite
E - Epidote
F - Fuchsite
M - Magnetite
L - Limonite

N - Scale

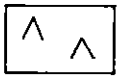
1 - Very Weak
3 - Weak
5 - Moderate
7 - Strong
9 - Intense

SYMBOLS FOR COHERENT TEXTURES

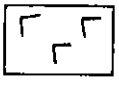
- single line symbols for low to moderate phenocryst abundance
- double line symbols for abundant phenocrysts
- smaller symbols for fine grained phenocrysts
- larger symbols for coarse grained phenocrysts
- additional "+" symbol for coarse, phenocryst-rich granitoid texture

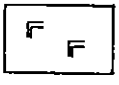

basalt, poorly to moderately porphyritic basalt

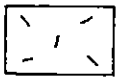

phenocryst-rich basalt

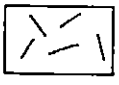

andesite, poorly to moderately porphyritic andesite

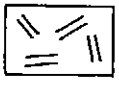

phenocryst-rich andesite

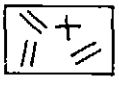

dacite, poorly to moderately porphyritic dacite

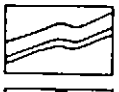

phenocryst-rich dacite

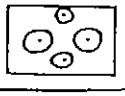

fine, poorly to moderately porphyritic rhyolite


coarse, poorly to moderately porphyritic rhyolite


coarse, phenocryst-rich rhyolite

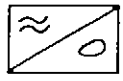

coarse rhyolitic porphyry


flow foliation

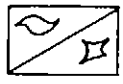

spherulites, lithophysae, alteration spots, nodular devitrification texture

SYMBOLS FOR VOLCANICLASTIC TEXTURES

- closer spaced symbols for dominant grain size and grain type


pumice or relict pumice


angular, juvenile lava clasts

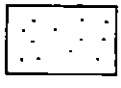

fiamme/
vitriclast or relict vitriclast

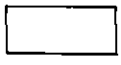

accretionary lapilli

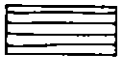

angular, polymict lithic clasts

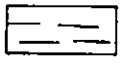

rounded, polymict lithic clasts


mudstone intraclast

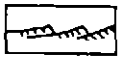

sand-size particles, granular texture


mud-size particles


distinct planar stratification


diffuse planar stratification


cross bedding


micro-cross lamination

e.g.


pumice clasts in sand matrix

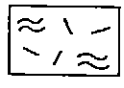

angular polymict lithic clasts and mudstone intraclasts in sand matrix

SYMBOLS FOR JUVENILE-CLAST-RICH DEPOSITS


jigsaw-fit texture of fine, moderately porphyritic rhyolite


jigsaw-fit texture of coarse, moderately porphyritic rhyolite


jigsaw-fit texture of coarse phenocryst-rich andesite


pumice-clast-rich deposit, coarse, moderately porphyritic rhyolitic composition


pumice-clast-rich deposit, coarse, phenocryst-rich rhyolitic composition

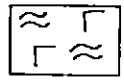

pumice-clast-rich deposit, coarse, moderately porphyritic dacitic composition

Fig. 9—Recommended composition and texture symbols for graphic logging of volcanic deposits.
(From:- McPhie, Doyle and Allen. CODES 1993)

383041

ROCK TYPES

ALTD	Altered Rock	GNSS	Gneiss	QUIT	Quartzite
ARKS	Arenite				
ARLS	Arenite, Labile	HORN	Hornfels	SAND	Sandstone
ARLT	Arenite, Lithic			SCHS	Schist
ARKS	Arkose	IRST	Ironstone	SMSU	Semi-Massive Sulphide
				SERP	Serpentinite
BREC	Breccia	LAMP	Lamprophyre	SHAL	Shale
BRPH	Polymict Breccia	LIMS	Limestone	SILT	Siltstone
		LMUD	Limemudstone	SISH	Siltstone with Shale
CARB	Carbonate			SPAR	Spar
CHRT	Chert	MSGR	Massive Graphite	SLAT	Slate
CLAY	Clay (unconsolidated)	MSPY	Massive Pyrite	STRE	Structural Measurement (alt. SH)
CONG	Conglomerate	MSSU	Massive Sulphide		
CGPH	Polymict Conglomerate	MELA	Melange	TILL	Glacial Till
CGSC	Siliciclastic Congl.	MUDS	Mudstone	TLIT	Tillite
CLOS	Core Loss	MYLO	Mylonite	TUFF	Tuffaceous
NOLR	No Logging Run	NORT	No core (precollar)	ULTR	Ultramafic
FALT	Fault	PBSS	Pebbly Sandstone	VEIN	Vein
FTBX	Fault Breccia				
FTSH	Fault/Shear Zone				

Volcanic Rocks

V	Epiclastic	)		Examples	
L	Lava	)			
P	Porphyry	) TYPE		VDFL	Undiff. Felsic Lavas & Volcaniclastics
VO	Volcanic (General)	)		VBX	Blocky Volcaniclastic
T	Volcaniclastic	)		VMAC	Coarse Mafic Volcaniclastic
				VBX	Sandy Basaltic Volcaniclastic
				VS	Silty Volcaniclastic
				VS	Shaley Volcaniclastic
A	Andesitic	)		VSF	Mafic fine-grained Volcaniclastics
B	Basaltic	)		VFFL	Felsic Volcaniclastics & Epiclastics
B	Basaltic	)		VABR	Andesitic Volcaniclastic Breccia
FL	Felsic	) COMPOSITION			
MA	Mafic	)		VQQP	Quartz-feldspar Phyric Volcanic
R	Rhyolitic	)		LFP	Feldspar-Phyric Rhyolitic Lava
U	Ultramafic	)		FQP	Quartz-Feldspar Phyric Porphyry
I	Crystal-rich			VI/	Undiff. IL-Rich Volcaniclastic
				VIQP	Quartz-feld. Phyric IL-Rich Volcaniclastic
F	Feldspar Phyric	)		CAIC	Coarse IL-Rich Andesitic Epiclastic
QF	Quartz-Feldspar Phyric	) CRYSTAL TYPE		IIX	Sandy IL-Rich Epiclastic
Q	Quartz Phyric	)		IIS	Silty IL-Rich Epiclastic
BK	Blocky	)			
BX	Breccia	)		EMX/	Undiff. Mafic Epiclastics
C	Coarse	)		EBX	Blocky Epiclastics
M	Medium (Sandy)	) GRAINSIZE		EC	Coarse Epiclastics
S	Fine (Silty)	)		EBX	Sandy Basaltic Epiclastics
S	Very fine (Shaley)	)		ES	Silty Epiclastics
				EBS	Shaley Basaltic Epiclastics
/	Undifferentiated				

383042

APPENDIX 2

Previous Diamond Drill Holes in EL 5/96

383043

RGC EXPLORATION DRILL HOLE RECORD

HOLE NUMBER	JC1	DRILLED BY	
PROJECT	Jones Creek	NORTHING	5363500
PROSPECT		EASTING	378200
DESIGNED BY		RL	665.0
LOGGED BY		INCLINATION	-56
COMMENCED		AZIMUTH	283.5
FINISHED		EOH	188.6

PURPOSE

This hole tested the Jones Creek shale horizon about 650m north of WSP3.

SURVEY DATA

DEPTH	INC.	AZ.	DEPTH	INC.	AZ.	DEPTH	INC.	AZ.
0	-56	283.5						
30	-55	281.5						
61.5	-54	278.0						
100	-48.5	277.0						
150	-41.5	276.0						
188.6	-37.0	276.5						

DRILLING DATA

HOLE SIZE	DEPTH	COMMENTS
HQ	0-41.7	
HQ	41.7-188.6	

SUMMARY

0 - 4.5m	Scree
4.5m - 54.3m	Massive dacite lava
54.3 - 66.9	Interbedded m gr dacitic pumiceous volcaniclastic sandstone and chloritic amygdaloidal dykes.
66.9 - 116.3	Massive feldspar phyric m gr volcaniclastic sandstone
116.3 - 118.5	Ashy siltstone, minor sphalerite microveins and 1% disseminated pyrite
118.5 - 188.6	M gr feldspar phyric volcaniclastic sandstone

RGC EXPLORATION PTY LTD

DRILL HOLE No JC 1

SHEET 1 OF 2

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR EL 5/96
PROSPECT	: JONES CREEK
DATE	: JULY 1996
LOGGED BY	: M VICARY.

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG (1/16, 1/4, 1, 4, 16, 32)	ALTERATION (SIL., SER., PY., Grb)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
				scree			Sure	
10					Leaching; Limonite	4.3m-54.3 Massive coherent fine gn unit possibly sparsely phyric - aphyric dacite lava. Phenocryst and sparse vesicles/amygdales more obvious at base		
20								
30							LDF	
40								
50								
60						54.3 - 66.9 Mg feld-pumiceous rich vlc sst c̄ numerous chl-amygdaloidal dykes	IDFA; VDFM	
70						66.9 - 116.3 massive - poorly bedded feldspar phyric m gr vlc sst. Variable proportions of pumice + ttl abundance.	VDFM	
80								
90								
100								

41.7 HQ / NQ

REMARKS

RGC EXPLORATION PTY LTD

DRILL HOLE No JC 1

SHEET 2 OF 2

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR EL 5/96
PROSPECT	: JONES CREEK
DATE	: JULY 1996
LOGGED BY	: M VICARY.

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG (1/16, 1/4, 1, 4, 16, 32)	ALTERATION (SIL., SER., PY.)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
100								
110							VDFM	
	T2102 Cu, Pb, Zn, Ag, Bi				1/m	116.3-118.5 ashy siltstone, minor sph. microveins + 1% diss pyr.	SILT	
120	T2106					118.5 - 188.6 M gr feld phyric vlc sst (<1% diss pyr in places)		
130								
140								
150	T2103 T2104 T2105							
160							VDFM	
170								
180								
				EOH = 188.6m				

REMARKS

383044

383045

RGC EXPLORATION DRILL HOLE RECORD

HOLE NUMBER	MR1	**DRILLED BY**	Mines Dept.
PROJECT		**NORTHING**	5362227
PROSPECT		**EASTING**	377043
DESIGNED BY	K.D.Corbett	**RL**	609.8
LOGGED BY	K.D.Corbett	**INCLINATION**	-60
COMMENCED	13/2/1984	**AZIMUTH**	122 AMG
FINISHED	16/3/1984	**EOH**	108.7m

PURPOSE

To determine the nature and attitude of the contact between the White Spur Formation and the Central Volcanic Sequence.

Reference:- Unpub. Rept. Dept.Mines Tasm. 1985/55

SURVEY DATA

DEPTH	INC.	AZ.	DEPTH	INC.	AZ.	DEPTH	INC.	AZ.
n/s								

DRILLING DATA

HOLE SIZE	DEPTH	COMMENTS
HQ	0 - 51.6	
NQ	51.6 - 108.7	

SUMMARY

0 - 30	Coarsening downwards vitric lithic tuff
30 - 56	Coarse lithic breccia with sulphide clasts
56 - 108.7	Massive feldspar phyric crystal-lithic tuff

RGC EXPLORATION PTY LTD

DRILL HOLE No [redacted]

SHEET 1 OF 6

PROJECT	: WHITE SPUR EL5/96
PROSPECT	:
DATE	: MARCH 1997
LOGGED BY	: M VICARY

Bedding · Cleavage · Foliation · Fault, Shear · Breccia · Broken core · Disseminated · Massive · Pervasive · Narrow vein · * Visible gold

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
1						0-5.5m F-mgr dacitic volcaniclastic sandstone	VDCM	
2								
3								
4								
5								
6						5.5-8.0 Graded top to massflow	VDCM-VDLC	
7								
8						8.0-55.8 Polymictic clast support massflow breccia Predominantly fine gr dacitic lava/sediment clasts and Qtz phyric rhyolite clasts. 10% black siltstone clasts with internal slumping 5% Sph-gal-pyr clasts up to 6cm. Weak chl-grey albite alteration - commonly forms a halo around clast. Matrix consists of f-m gr feld ± Qtz xtls and chloritic pumice	VDLC-VRLC	AOS5
9								
10								
11								
12								
13								
14				Sph-gal 2cm				
15								
16								
17								
18								
19								
20								

REMARKS

RGC EXPLORATION PTY LTD

DRILL HOLE No [redacted]

SHEET 2 OF 6

PROJECT	: WHITE SPUR EL5/96
PROSPECT	:
DATE	:
LOGGED BY	:

Bedding · Cleavage · Foliation · Fault, Shear · Breccia · Broken core · Disseminated · Massive · Pervasive · Narrow vein · * Visible gold

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
20							VDLC-VRLC	AOS5
22								
24								
26								
28								
30								
32								
34								
36								
38				6cm Py 2cm Sph-gal				
40								

REMARKS

383046

RGC EXPLORATION PTY LTD

DRILL HOLE No [redacted]R1

SHEET 3 OF 6

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR EL5/96
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
40								
42				sh-ccp				
44								
46								
48								
50								
52								
54				bleaching				
56			1cm Qtz			55.8 - EOH Mgr feldspar phyric xtl rich pumiceous ? dacitic volcaniclastic sandstone.	Cws	VDLC - VRLC AOS 5
58							Ccv	VDFM AOS 6
60								

HQ

NQ

REMARKS

RGC EXPLORATION PTY LTD

DRILL HOLE No M[redacted]

SHEET 4 OF 6

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR EL5/96
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
60			SB 80-90					
62								
64						Patchy cream-grey albite -chl-ser alteration.		
66								
68								
70							Ccv	VDFM AOS 6
72								
74								
76						Patchy Pink Alb-chl-ser		
78								AOS 6
80								

REMARKS

383047

[redacted] EXPLORATION PTY LTD

DRILL HOLE No [redacted] MR1 [redacted]

SHEET 5 OF 6

PROJECT	: WHITE SPUR EL 5196
PROSPECT	:
DATE	:
LOGGED BY	:

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
80							Cvl	AOS 6
82							VDFM	
84								
86								
88								
90								
92								
94								
96								
98								
100								

REMARKS

383048

[redacted] EXPLORATION [redacted] LTD

DRILL HOLE No [redacted] MR1 [redacted]

SHEET 6 OF 6

PROJECT	: WHITE SPUR EL 5196
PROSPECT	:
DATE	:
LOGGED BY	:

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
100							Cvl	AOS 6
102						Fine gr disseminated carbonate in matrix	VDFM	
104						Sparse f-gr acky dacite lava clasts upto 4cm		AOS 6
106								
108				EOH = 108.72m				

REMARKS

383049

RGC EXPLORATION DRILL HOLE RECORD

HOLE NUMBER	WSP1	**DRILLED BY**	Assoc.Diam.Drillers
PROJECT		**NORTHING**	5362175
PROSPECT		**EASTING**	378573
DESIGNED BY		**RL**	610
LOGGED BY		**INCLINATION**	-60
COMMENCED	8/3/1979	**AZIMUTH**	-77 Mag
FINISHED	20/3/1979	**EOH**	382.0m

PURPOSE

To test chargeability/resistivity and coincident magnetic anomaly associated witha broad low order Cu-Pb-Zn soil anomaly at the inferred Rosebery horizon.

Collar position :- 70 ' S of L38.5N 4750E

SURVEY DATA

DEPTH	INC.	AZ.	DEPTH	INC.	AZ.	DEPTH	INC.	AZ.
0	-60	089	150	-41	086	300	-27	081
50	-54	088	200	-38	086	350	-24	081
100	-47	087	250	-34	082			

DRILLING DATA

HOLE SIZE	DEPTH	COMMENTS

SUMMARY

No core available. The hole tested the southern continuation of the Jones Creek Shale horizon in the Howards Road area.

Summary log (from Reid et al., 1979) :-

0 - 41.1	Feldspar phyric lithic tuff
41.1 - 82.9	Laminated shales
82.9 - 104.3	Vitric tuffs
104.3 - 140.0	M - C gr feldspar phyric lithic tuffs
140.0 - 204.3	F gr vitric lithic tuffs
204.3 - 239.0	M gr feldspar phyric lithic tuffs
239.0 - 239.2	Fault
239.2 - 254.0	F gr vitric lithic tuffs
254.0 - 264.0	F - M gr altered tuff (ser + 2% pyrite)
264.0 - 321.3	F - M vitric crystal tuff
321.3 - 382.0	F - C feldspar phyric ash flow tuffs

The best assays were : 138 - 146m 8m at 0.26% Zn
239 - 241m 2m at 0.76% Zn
252 - 254m 2m at 0.63% Zn and 0.12% Pb

RGC EXPLORATION DRILL HOLE RECORD

HOLE NUMBER	WSP103	**DRILLED BY**	
PROJECT		**NORTHING**	5361700
PROSPECT		**EASTING**	376425
DESIGNED BY	RTZ (1962)	**RL**	577.3
LOGGED BY	Stevens Hoare 1975	**INCLINATION**	
COMMENCED		**AZIMUTH**	
FINISHED		**EOH**	241.1m (791 ft)

PURPOSE

To test SP and EM anomalies at White Spur. Collar location - Rio Tinto zinc grid coords 80S 3.03E, Mt Lyell Grid 34N, 1000W (see Walter and Brophy, 1977).

Reference:- EL 9/66 Annual report 1974/75 N.P. Stevens -Hoare 1975
See also Fig. 13 Meares, Walter and Hutton, 1980

SURVEY DATA

DEPTH	INC.	AZ.	DEPTH	INC.	AZ.	DEPTH	INC.	AZ.
0	-62	090 grid	91.44	-61	090 grid	182.88	-47	090 grid
30.48	-63	090 grid	121.92	-54	090 grid	213.36	-41	090 grid
60.96	-62.5	090 grid	152.4	-46	090 grid	240.79	-37	090 grid

DRILLING DATA

HOLE SIZE	DEPTH	COMMENTS

SUMMARY

This hole has not been relogged however the rocks tested by the hole are well exposed on road to the east of the collar. The hole was drilled entirely within the White Spur Formation. The geophysical anaomalies can be adequently explained by the presence of abundant pyritic black siltstones. No significant basemetal values were recorded although results were not tabulated.

RGC EXPLORATION DRILL HOLE RECORD

HOLE NUMBER	WSP2	**DRILLED BY**	
PROJECT		**NORTHING**	5362475
PROSPECT		**EASTING**	376308
DESIGNED BY		**RL**	595
LOGGED BY		**INCLINATION**	-50
COMMENCED	5/12/1979	**AZIMUTH**	276
FINISHED	12/12/1979	**EOH**	203.0

PURPOSE

To test IP chargeability/resistivity anomaly on Line 37.5N 3200E. Hole collared Line 37.5N 2650W - see Plan 7 and 8 in Meares, Walter and Hutton 1980.

SURVEY DATA

DEPTH	AZ.	INC.	DEPTH	AZ.	INC.
0	276	-50	100	278	-43
50	277	-46	150	280	-40

Measured from Plan 8 - Meares, Walter and Hutton (1980)

DRILLING DATA

HOLE SIZE	DEPTH	COMMENTS
HQ	0 - 6m	
NQ	6 - 63.5	
BQ	63.5 - 203 (EOH)	

SUMMARY

WSP2 was drilled entirely within the White Spur Formation. The source of IP Anomaly was found to be a black siltstone horizon intersected from 104.3 - 129.2m. This interval assayed 24.9m at 123ppm Cu, 68ppm Pb, 272ppm Zn, 2ppm Ag, 0.1ppm Au and 10ppm As. This included 1.7m at 0.04% Cu, 0.04% Pb and 0.15 % Zn from 104.3 to 106m. A zone of quartz - carbonate - sphalerite microveins was intersected from 144 to 155m and returned a best assay of 2.0m at 0.015 Cu, 0.03% Pb and 0.11% Zn from 147 to 149m.

RGC EXPLORATION PTY LTD

DRILL HOLE No WS[redacted]

SHEET 1 OF 11

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT :	WHITE SPUR EL 5/96
PROSPECT :	
DATE :	
LOGGED BY :	M VICARY MAY 1996

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY. LIM)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
1						0-6.0m broken, subangular to subrounded pebbles (Poor recovery - slope deposits?)		
2								
3								
4							QE	SCREE
5								
6			HQ / NQ					
7						6-18.0 highly broken core mainly limonitic silts + some grey ssts + interstitial clays.		
8								
9								
10								
11								
12								
13								
14							EWS	SILT/LWAC
15								
16								
17								
18						18.0 - 22.6 1/8 Lim - Light brown siltstone c̄ some f-m gr v/c ssts.		
19								
20								

REMARKS

RGC EXPLORATION PTY LTD

DRILL HOLE No [redacted]2

SHEET 2 OF 11

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT :	WHITE SPUR EL 5/96
PROSPECT :	
DATE :	
LOGGED BY :	

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY. CARB LIM)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
21								
22								
23			So 85-90			22.6 - 31.6 1/8 grey black siltstones thinly planar-wavy bedded (bed thickness 2mm - 10cm) and f gr graded v/c ssts. Uphole facing - load casts, flame structures, grading. Minor disrupted bedding due to soft sediment slumping		
24								
25								
26								
27			So 80					
28								
29								
30								
31							EWS	SILT/LWAC
32								
33								
34								
35								
36								
37								
38			30					
39								
40								

REMARKS

Leached veins

383052

RGC EXPLORATION PTY LTD

DRILL HOLE No WSP2

SHEET 3 OF 11

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: White Spur EL 5/96
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
41								
42								
43								
44								
45								
46								
47			55 So			31.6 - 91.3		
48						1/6 grey ashy siltstones		
49						+ f-m gr v/c ssts		
50								
51							Ems	SILT/LWAC
52								
53								
54								
55			So 80					
56								
57								
58								
59			So 90					
60								

REMARKS

RGC EXPLORATION PTY LTD

DRILL HOLE No WSP2

SHEET 4 OF 11

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: White Spur EL 5/96
PROSPECT	:
DATE	:
LOGGED BY	:

NQ / BQ

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
61								
62								
63			60 So					
64								
65								
66								
67								
68								
69								
70								
71								
72								
73			So 55				Ems	SILT/LWAC
74								
75								
76								
77								
78								
79								
80								

REMARKS

383053

RGC EXPLORATION PTY LTD

DRILL HOLE No [redacted]SP2

SHEET 5 OF 11

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR EL 5/96
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH | SAMPLE No PREFIX | ASSAY RESULTS | STRUCT. | GRAPHIC LOG | ALTERATION (SIL. SER. PY.) | GEOLOGY NOTES | SUMMARY (ROCK / ALTERATION)

81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

50 ±90 | 45 | 80 50

Transitional

91.3 - 104.3

Interbedded grey siltstone + f gr grey v/c sst

0-1% pyrite (disseminated + microveins)

upper part of blk sltst unit

EWS | SILT | LWAC | SILT | SAND

REMARKS

RGC EXPLORATION PTY LTD

DRILL HOLE No [redacted]

SHEET 6 OF 11

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR EL 5/96
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH | SAMPLE No PREFIX | ASSAY RESULTS | STRUCT. | GRAPHIC LOG | ALTERATION (SIL. SER. PY. Cr/6 Sidero.) | GEOLOGY NOTES | SUMMARY (ROCK / ALTERATION)

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120

80 50 | 80 50 | 70 50 | 70 50

Sec stumping

104.3 - 129

Thinly bedded black pyritic siltstone c̄ minor f-m gr v/c sst horizons

2-3%

diss + microveins

EWS | SILT | SAND | EWS | SILT

REMARKS

383054

— Bedding
⌴ Cleavage
—▲— Foliation
~~~ Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

PROJECT	: White Spur EL 5/96
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH | SAMPLE No PREFIX | ASSAY RESULTS | STRUCT. | GRAPHIC LOG | ALTERATION (SIL. SER. PY. CA.) | GEOLOGY NOTES | SUMMARY ROCK | SUMMARY ALTERATION

121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140

STRUCT.: 90 / 65 / 70

ALTERATION: PY. 201

GEOLOGY NOTES:

- micro vein stockwork
- thinly bedded black pyritic siltstone
- 129 – ≈139 grey ashy siltstone minor K/S+Qtz alts cont/ diss pyr. in places
- ≈139
- gradational

SUMMARY: Ems | SILT | Ems | VD<A | Ems | VD<F

REMARKS

— Bedding
⌴ Cleavage
—▲— Foliation
~~~ Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

PROJECT	: White Spur EL 5/96
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH | SAMPLE No PREFIX | ASSAY RESULTS | STRUCT. | GRAPHIC LOG | ALTERATION (SIL. SER. PY. CA.) | GEOLOGY NOTES | SUMMARY ROCK | SUMMARY ALTERATION

141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160

STRUCT.: 90 / 65 / 65

GEOLOGY NOTES:

- Zone of intense Qtz-carb-sph microveining
- weakly developed compartmental banding due to variable pyrite content within unit
- gradation
- shifts to grade into VP<M

SUMMARY: Ems | VP<F | Ems | VP<M

REMARKS

3830557

[redacted] EXPLORATION PTY LTD [redacted] DRILL HOLE No [redacted] WSP2 [redacted]

SHEET 9 OF 11

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR EL 5/96
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION SIL. SER. PY.	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
161								
162						m-c gr. feld. qtz.		
163						Alt. rich volcaniclastic sandstone VRCM		
164						grey colour & patchy dark grey -		
165						light grey alteration		
166						due to variable sil-chl-alb alteration		
167						Minor Qtz-Carb microdrains		
168						* Non Magnetic		
169						* massive		
170							EWS	VDCM
171								
172								
173								
174								
175								
176								
177								
178								
179								
180								

REMARKS

383056

[redacted] RGC EXPLORATION PTY LTD [redacted] DRILL HOLE No [redacted] WSP2 [redacted]

SHEET 10 OF 11

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR EL 5/96
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION SIL. SER. PY. Carb	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
181								
182								
183								
184								
185								
186								
187								
188								
189								
190							EWS	VDCM
191								
192								
193								
194								
195								
196								
197								
198								
199								
200								

REMARKS

RGC EXPLORATION PTY LTD

DRILL HOLE No WSP2

SHEET 11 OF 11

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT :	WHITE SPOR EL 5/96
PROSPECT :	
DATE :	
LOGGED BY :	

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION SIL.	SER.	PY.	GEOLOGY NOTES	SUMMARY ROCK	ALTERATION
201									ENS	VDCM
202										
203				EOH=203 m						

REMARKS

383057

383058

RGC EXPLORATION DRILL HOLE RECORD

HOLE NUMBER	WSP3	DRILLED BY	
PROJECT		NORTHING	5362496
PROSPECT		EASTING	378391
DESIGNED BY	F.G.Fitzgerald	RL	602.4
LOGGED BY	F.G.Fitzgerald	INCLINATION	-50
COMMENCED	10/10/1986	AZIMUTH	088
FINISHED	29/10/1986	EOH	360.3

PURPOSE

To test for massive sulphide mineralisation at the inferred Rosebery host horizon position 700m north of WSP1.

SURVEY DATA

DEPTH	INC.	AZ.	DEPTH	INC.	AZ.	DEPTH	INC.	AZ.
0	-50	088	320	-16	088			
50	-38	086	360	-15	088			
100	-29.5	084						
150	-27	-						
174	-26	088						
199	-25	092						
240	-21	086						
280	-18	087						

DRILLING DATA

HOLE SIZE	DEPTH	COMMENTS
NQ	0 - 33m	
BQ	33 - 360.3m	

SUMMARY

Only photos of core available. The hole intersected a mixed sequence of f - c gr crystal rich volcaniclastic sandstones, ashy siltstones and basaltic intrusives. Only rare sphalerite veinlets were observed.

RGC EXPLORATION DRILL HOLE RECORD 383059

HOLE NUMBER	YWS-1	**DRILLED BY**	
PROJECT		**NORTHING**	5360063.9
PROSPECT		**EASTING**	377226.5
DESIGNED BY	PASMINCO	**RL**	533.8
LOGGED BY		**INCLINATION**	-60
COMMENCED		**AZIMUTH**	074.5
FINISHED		**EOH**	430.5

PURPOSE

To test the down dip extension of the alteration zone developed within the White Spur formation at the contact with the Central Volcanic Sequence. A series of parasitic folds were developed within the basal White Spur formation and were considered to be a similar structural seetting to the mineralisation at Hercules.

SURVEY DATA

DEPTH	INC.	AZ.	DEPTH	INC.	AZ.	DEPTH	INC.	AZ.
0	-60	074.5	160	-45	081.0	322	-37	079.5
40	-56.2	078.5	199	-42.3	080.5	361	-35.5	078.5
80	-54	080.5	241	-42	079.5	418	-35.3	080.5
121	-51	080.5	280	-40	079.5			

DRILLING DATA

HOLE SIZE	DEPTH	COMMENTS

SUMMARY

0-3	Cover
3-134	Interbedded mass flow deposits, sandstone and siltstones.
134-265	Siltstone.
265-269	Sandstone.
269-357	Siltstone.
357-365	Sandstone.
365	Fault contact with CVC.
365-401	Peperitic rhyohite sill.
401-430.5	Feldspar phyric pumiceous mass flow deposits.

[redacted] No [redacted] NS [redacted]

SHEET 1 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT :	WHITE SPUR EL 5/96
PROSPECT :	
DATE :	
LOGGED BY :	

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY FORMATION	SUMMARY ROCK	SUMMARY ALTERATION
1–3						0-3.0 Recent fill - unconsolidated rubble	Qc	SCRE	
3–30						3.0-30.2 M-f gr feld-(qtz) phyric volcaniclastic sst. Cream to grey with limonitic stained joints common. Relatively massive with So defined by diffuse colour changes 1-2 mm wide often with stylolitic Si along So plane. 0.5% diss pyrite		VDCM	
10			So 35						
16			So 30		Limonitic joints common				
18			So 40						

NQ

REMARKS ← 0 = Gre Orientation

383060

[redacted] DRILL [redacted] E No [redacted] V [redacted]

SHEET 2 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT :	
PROSPECT :	
DATE :	
LOGGED BY :	

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY FORMATION	SUMMARY ROCK	SUMMARY ALTERATION
20–30			So 60		Limonitic joints common	weakly uphole grading. high proportion of black siltstone material at base suggests local scouring of underlying siltstone horizon.	MASS FLOW	VDCM	
30–34			Sc 60			30.2-34.0 Thinly bedded black pyritic siltstone with minor grey sandstone interbeds. 10cm of silicified ashy at base.	SILT	SILT	P-B
34–36			So 60			34.0-35.5 f-m gr Qtz-feld phyric vlc sst. f gr top to mass flow horizon. 35.9-36.2 large siltst clast		VR>M	
36–40			Sc 40			35.5-43.0 Qtz-feld phyric coarse gr - pebble conglomerate grade lithic rich pumiceous mass flow breccia. Abundant clasts of QF lava, F lava, ashy sediment black siltst + rare pyrite clasts. Two LR>. Clasts up to 10 cm (front flow banking) 2 cm massive pyrite clast	MASS FLOW	VRLC	

REMARKS Se = eutaxitic foliation

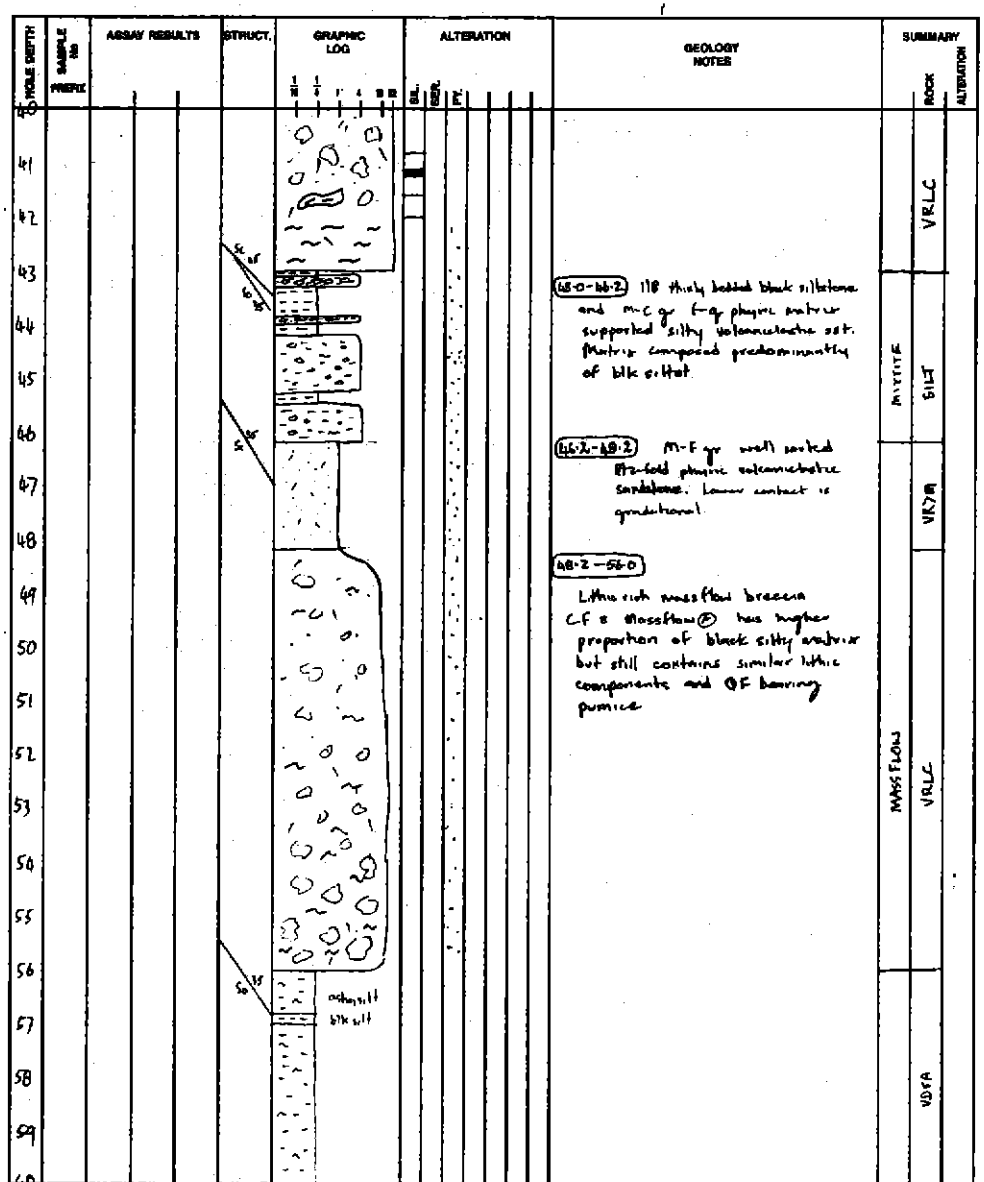
Sc = contact

RG[redacted] PTY LTD [redacted] DRILL HOLE No [redacted]

SHEET 3 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:



(48·0-46·2) 118 thinly bedded black siltstone and m-c gr f-g phyric matrix supported silty volcaniclastic sst. Matrix composed predominantly of blk siltst.

(46·2-48·2) M-F gr well sorted ftz-fold phyric volcaniclastic sandstone. Lower contact is gradational.

(48·2-56·0) Lithic rich massflow breccia CF & Massflow (F) has higher proportion of black silty matrix but still contains similar lithic components and OF bearing pumice

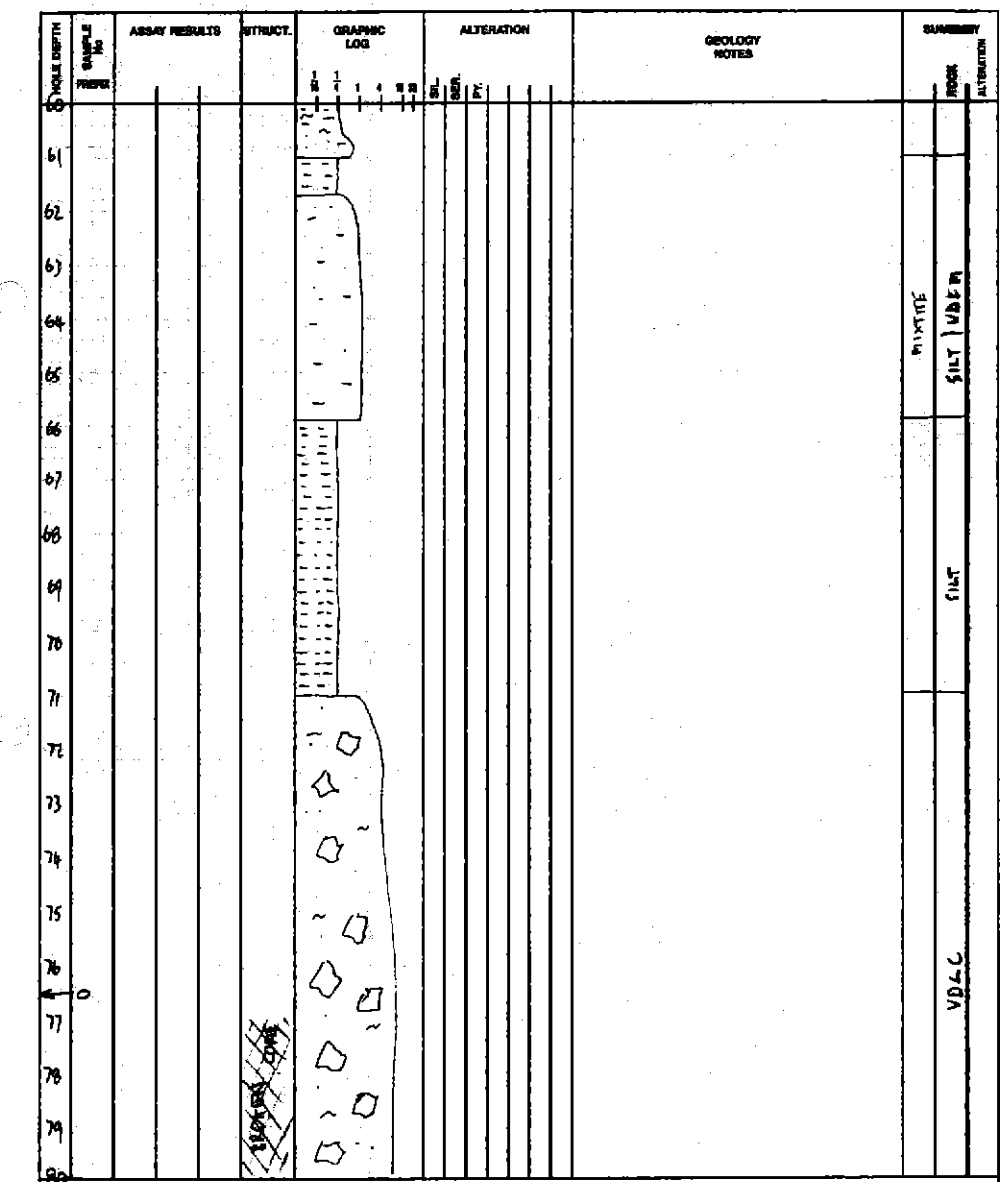
REMARKS

RG[redacted] LT[redacted] [redacted] HO[redacted] S1 [redacted]

SHEET 4 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:



REMARKS

383061

[redacted] LOCATION PTY LTD

DRILL HOLE No [redacted] WS 1

SHEET 5 OF 22

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH | SAMPLE No PREFIX | ASSAY RESULTS | STRUCT. | GRAPHIC LOG | ALTERATION | GEOLOGY NOTES | SUMMARY ROCK | ALTERATION

80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

VOLC

SILT

VOLC

REMARKS

383062

[redacted] EXPLORATION PTY LTD

DRILL HOLE No [redacted] 1

SHEET 6 OF 22

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH | SAMPLE No PREFIX | ASSAY RESULTS | STRUCT. | GRAPHIC LOG | ALTERATION | GEOLOGY NOTES | SUMMARY ROCK | ALTERATION

100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120

VOLC

SILT

SILT/VOLC

VOLC

REMARKS

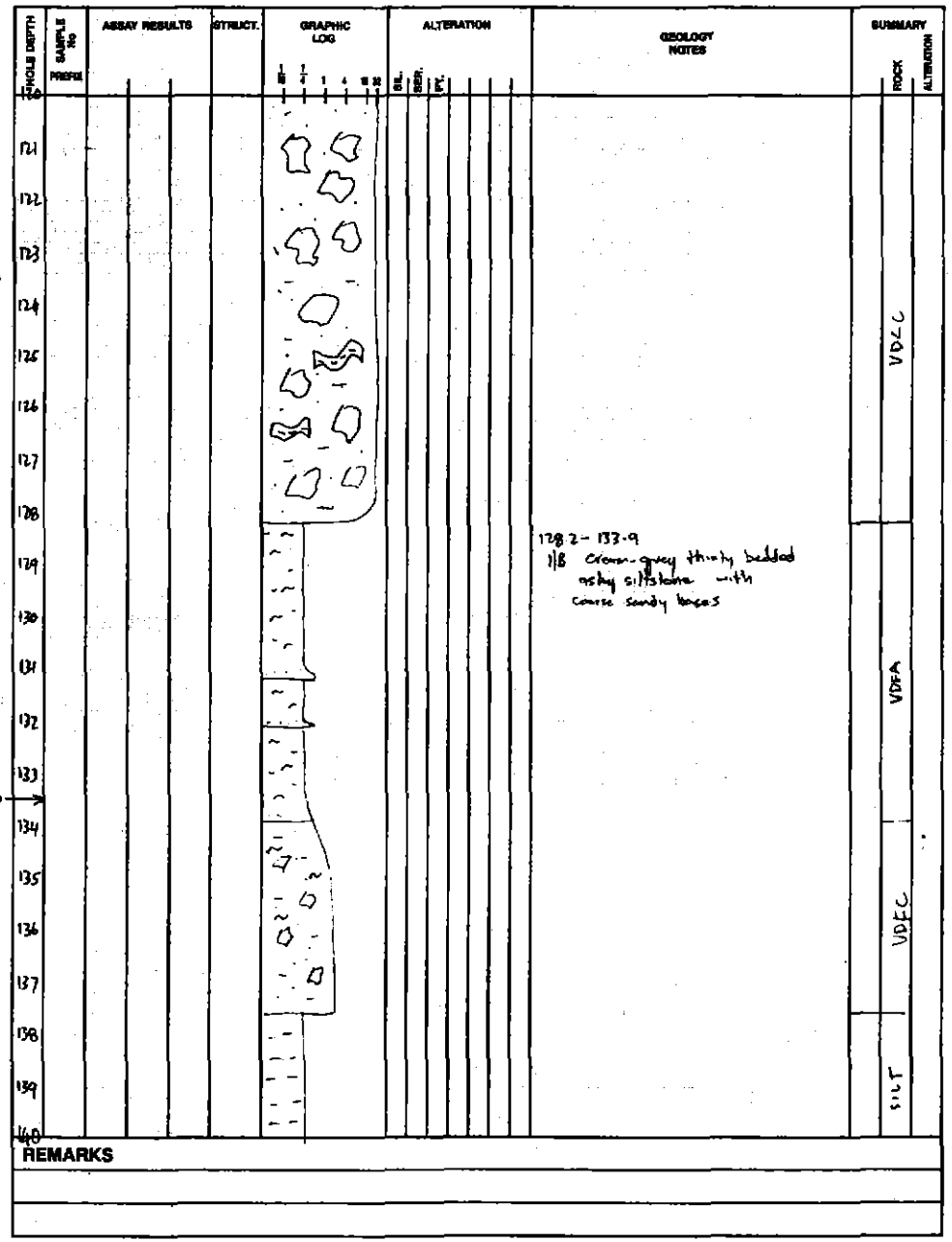
[redacted] EXPLORATION PTY LTD

DRILL HOLE No [redacted] VW [redacted]

SHEET 7 OF 22

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
Visible gold



128.2 – 133.9
1/8 Green-grey thinly bedded ashy siltstone with coarse sandy beds

REMARKS

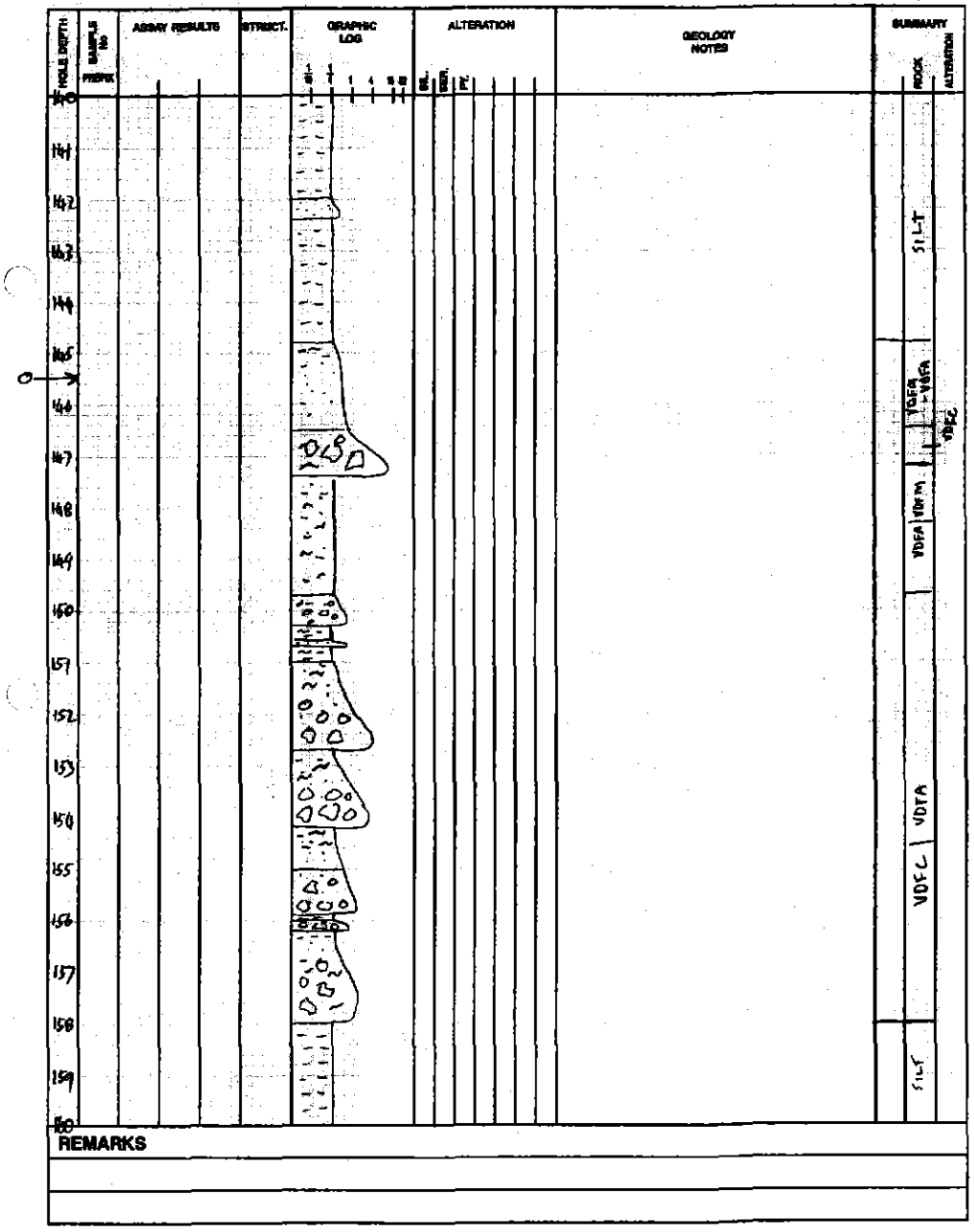
[redacted] EXPLORATION PTY LTD

DRILL HOLE No [redacted] VW [redacted]

SHEET 8 OF 22

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
Visible gold



REMARKS

383063

[redacted] EXPLORATION PTY LTD

DRILL HOLE No [redacted]/W5

SHEET 9 OF 27

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No / PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY.)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
160								
161							SILT	
162								
163								
164							VDFP	
165								
166								
167								
168								
169								
170								
171								
172								
173							SILT	
174								
175								
176								
177								
178								
179								
180								

REMARKS

[redacted] EXPLORATION PTY LTD

DRILL HOLE No [redacted]

SHEET 10 OF 27

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No / PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY.)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
180								
181								
182								
183								
184								
185								
186								
187								
188								
189								
190								
191								
192								
193								
194								
195								
196								
197								
198								
199								
200							SILT	

REMARKS

383064

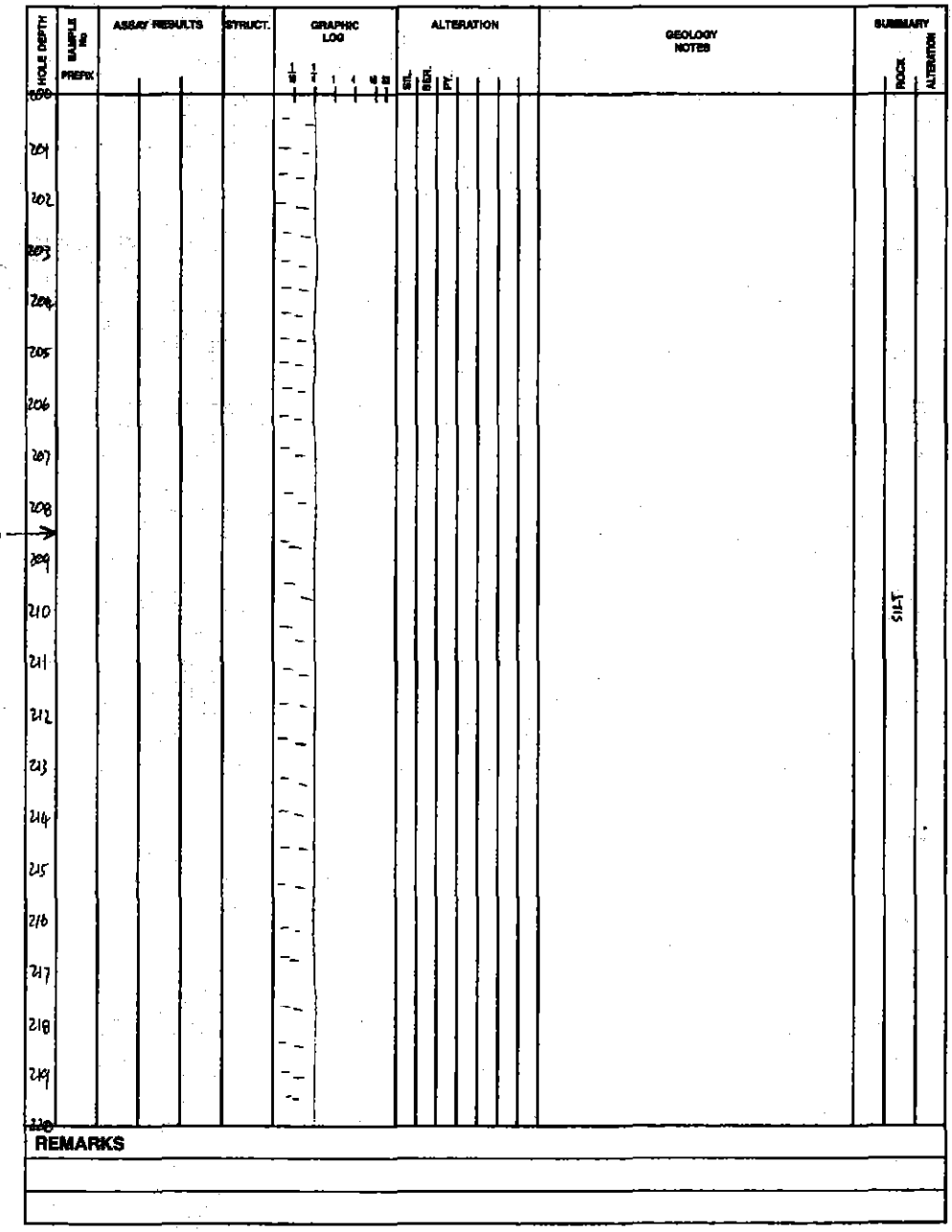
[redacted] [redacted] [redacted] [redacted]

DRILL HOLE No [redacted] YW[redacted]

SHEET 11 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:



HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY.)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
200								
201								
202								
203								
204								
205								
206								
207								
208								
209								
210							SILT	
211								
212								
213								
214								
215								
216								
217								
218								
219								
220								

REMARKS

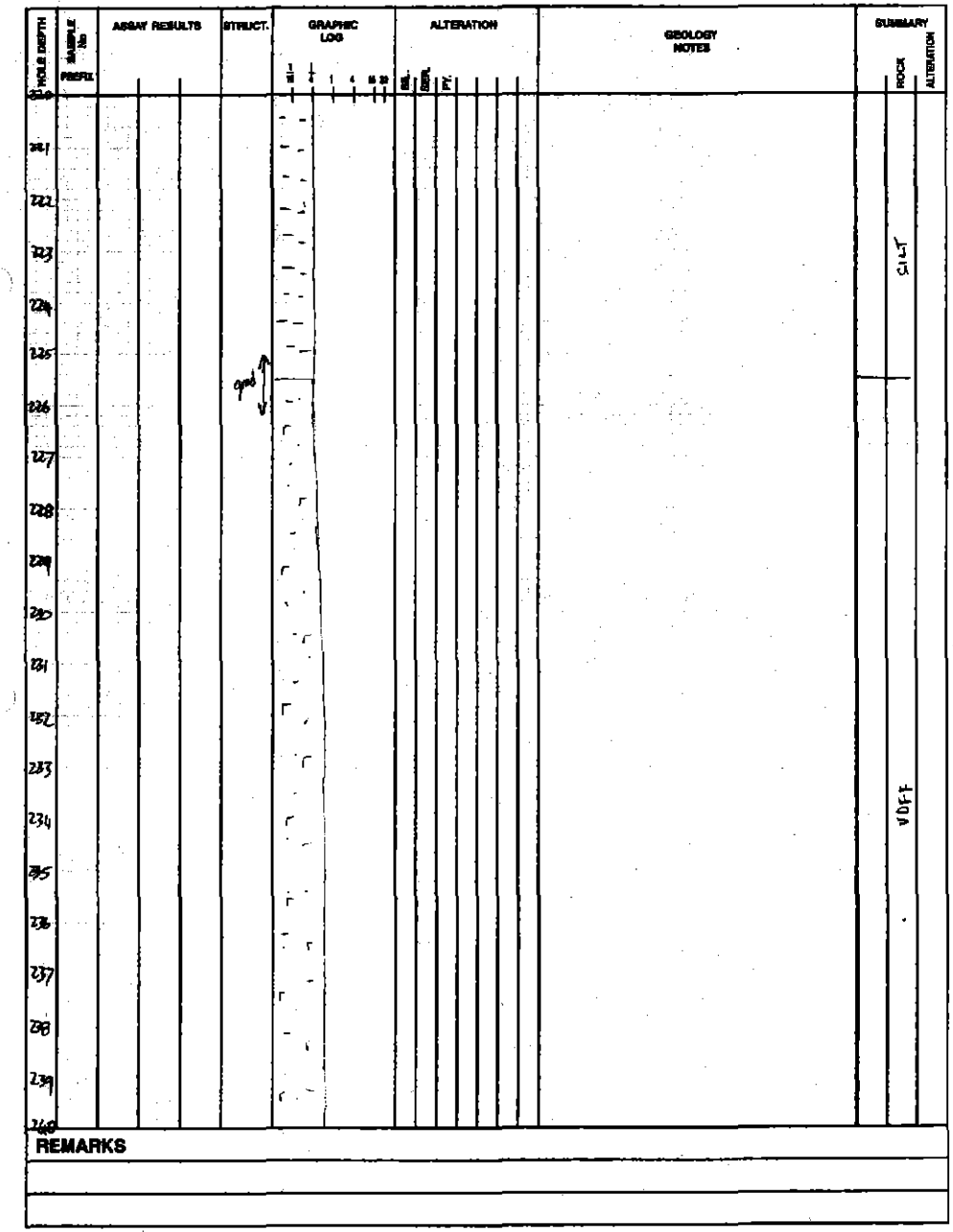
[redacted] [redacted] [redacted] [redacted]

DRILL HOLE No [redacted] Y[redacted]

SHEET 12 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:



HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY.)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
220								
221								
222								
223							SILT	
224								
225								
226								
227								
228								
229								
230								
231								
232								
233								
234							VDFF	
235								
236								
237								
238								
239								
240								

REMARKS

383065

[redacted]C [redacted]LO[redacted]ION[redacted]Y [redacted] [redacted]L H[redacted]o [redacted]/W[redacted]

SHEET 13 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY.)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
240								
241								
242								
243						VDFM-F		
244								
245								
246							VDFM-VDFF	
247								
248								
249								
250								
251								
252								
253								
254								
255						VDFM		
256							VDFM	
257								
258								
259								
260						SILT	SILT	

REMARKS

[redacted]RG[redacted]XP[redacted]AT[redacted]PT[redacted]D [redacted]DRIL[redacted]LE N[redacted] Y[redacted]

SHEET 14 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY.)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
260								
261								
262							SILT	
263								
264								
265								
266			85/50					
267							VDFM	
268								
269								
270								
271								
272							SILT	
273								
274								
275								
276								
277							VDFM	
278								
279								
280								

REMARKS

383066

[redacted]GC [redacted]PLO[redacted]TIO[redacted]TY [redacted] [redacted]ILL H[redacted]E No [redacted]YW[redacted] [redacted]

SHEET 15 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
280								
281							Ass. UDFM	
282								
283								
284						Abundant open folds 0.3-0.5m wavelength hinges (folding extends to about 315m).		
285								
286								
287								
288								
289								
290								
291							SILT	
292								
293								
294								
295								
296								
297								
298								
299								
300								

REMARKS

[redacted]RG[redacted]EXP[redacted]RATI[redacted]PT[redacted]TD [redacted]DRI[redacted]LE N[redacted] Y[redacted]

SHEET 16 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
300								
301								
302								
303								
304								
305								
306								
307								
308								
309								
310								
311							SILT	
312								
313								
314								
315								
316								
317								
318								
319								
320								

REMARKS

383067

[redacted] EXPLORATION PTY LTD

DRILL HOLE No 4WS1

SHEET 17 OF 22

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

HOLE DEPTH	SAMPLE No / PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL, SER, PY)	GEOLOGY NOTES	SUMMARY: ROCK	SUMMARY: ALTERATION
320								
321								
322								
323								
324								
325								
326								
327								
328								
329								
330							SLST	
331								
332								
333								
334								
335								
336								
337								
338								
339								
340								

REMARKS

383068

[redacted] EXPLORATION PTY LTD

DRILL HOLE No 4WS1

SHEET 18 OF 22

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

HOLE DEPTH	SAMPLE No / PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL, SER, PY)	GEOLOGY NOTES	SUMMARY: ROCK	SUMMARY: ALTERATION
340								
341								
342								
343								
344								
345								
346								
347								
348								
349								
350								
351								
352								
353								
354								
355								
356								
357								
358								
359								
360								

REMARKS

[redacted]GC [redacted]TION[redacted]TY [redacted] [redacted]LL H[redacted] No [redacted] WS [redacted]

SHEET 19 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY.)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
360								
361								
362								
363							VDFM	
364								
365						364.6 - 372.4 Peperite Margin to Rhyolite dill.		
366								
367								
368								
369							IRCB	
370								
371								
372								
373								
374								
375								
376								
377							IRC	
378								
379								
380								

REMARKS

[redacted]RG[redacted]XP[redacted]AT[redacted]PT[redacted]D [redacted]DRI[redacted]LE N[redacted] 4U[redacted]

SHEET 20 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY.)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
380								
381								
382								
383								
384								
385								
386								
387								
388								
389							IRC	
390								
391								
392								
393								
394								
395								
396								
397								
398								
399								
400								

REMARKS

383069

[redacted]GC [redacted]TIO[redacted]TY [redacted] [redacted]LL H[redacted]No [redacted]WS[redacted]

SHEET 21 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
400							IRC	
401								
402								
403							IRCB/VDFF	
404								
405								
406								
407							VDFM	
408								
409								
410								
411								
412								
413								
414								
415						414.8 - 421.5		
416						F-M gr relatively ∀tl poor		
417						pumiceous bearing volcaniclastic sandstone		
418								
419								
420							VDFF - VDFM	

REMARKS

[redacted]RG[redacted]EXP[redacted]ATI[redacted]PT[redacted]D [redacted]DRI[redacted]LE N[redacted]

SHEET 22 OF 22

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	:
PROSPECT	:
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
420							VDFM	
421								
422						421.5 - 430.5		
423						∀tl rich felds pur phyric		
424						pumiceous bearing volcaniclastic		
425						sandstone. Relatively massive.		
426						Patchy to banded chl-pink		
427						albite alteration. Becomes		
428						more albitic downhole.		
429						Moderately silicified		
430								
440				EOH = 430.5				

REMARKS

383070

APPENDIX 3

ANNE001 Drill log and Assays

383072

RGC EXPLORATION DRILL HOLE RECORD

HOLE NUMBER	ANNE001	**DRILLED BY**	DDT
PROJECT	White Spur EL 5/96	**NORTHING**	5358264
PROSPECT	Anneliese	**EASTING**	377508
DESIGNED BY	Michael Vicary	**RL**	545
LOGGED BY	Michael Vicary	**INCLINATION**	-60
COMMENCED	28/11/1996	**AZIMUTH**	084 AMG
FINISHED	15/12/1996	**EOH**	306.6

PURPOSE

To test 200m downdip of surface outcropping pyrite mineralisation at the Anneliese Prospect. The pyrite mineralisation occurs as pods and disseminations within sericitic feldspar phyric volcaniclastic sediments of the Central Volcanic Sequence. The mineralisaton is close to the North Henty Fault, a posssible fluid conduit.

SURVEY DATA

DEPTH	INC.	AZ.	DEPTH	INC.	AZ.	DEPTH	INC.	AZ.
0	-60	084	126	-58	100	244	-54	103
30			151	-58	101	276	-52.5	106
60	-59	102	183	-56	101	306	-51	107
91	-58	098	216	-54.5	101			

DRILLING DATA

HOLE SIZE	DEPTH	COMMENTS
Precollar	0 - 1m	
HQ	1 - 20.8m	
NQ	20.8 - 306.6	

SUMMARY

Summary Log:-		
0 - 20.6	WSF	- F-m gr. dacitic volcaniclastic sandstone
20.6 - 66.0	WSF	- Graded rhyoliticmassflow breccia
66.0 - 103.0	WSF	- Black siltstone
103.0 - 117.0	WSF	- Graded rhyolitic massflow breccia
117.0 - 122.6	WSF	- Dacitic volcaniclastic sediments. Strongly broken
122.6 - 129.5	CVC	- Sericite - pyrite altered dacitic volcaniclastic sandstone
129.5 - 254.2	CVC	- Dacitic volcaniclastic sandstone (Pumice Breccia)
254.2 - 265.2	CVC	- Zone of intense pyrite - sericite alteration
265.2 - 296.3	CVC	- Dacitic volcaniclastic sandstone (Pumice Breccia)
296.3 - 296.4	North Henty Fault	
296.4 - 306.6	HFS	- Rhyolitic massflows and volcaniclastic sediments
DHEM survey performed. Magnetic susceptibility measured.		

SAMPLE	HOLE	DEPTH FROM	DEPTH TO	CU_A	PB_A	ZN_A	AU_G	AG_A	AS_A	TNORTH	TEAST	RL	
43701	ANNE001	117	118	18	73	177	0.101	-2	54	5358259	377563	444.40	
43702	ANNE001	118	119	10	141	947	0.043	-2	30	5358259	377564	443.55	
43703	ANNE001	119	120	60	60	37	0.034	-2	24	5358259	377564	442.70	
43704	ANNE001	120	121	7	179	89	-0.008	-2	26	5358259	377565	441.85	
43705	ANNE001	121	122	6	172	111	0.01	-2	58	5358259	377565	441.01	
43706	ANNE001	122	122.5	18	77	124	0.056	-2	146	5358258	377566	440.16	
43707	ANNE001	122.5	123	15	31	107	0.146	-2	75	5358258	377566	439.31	
43708	ANNE001	123	124	11	50	687	0.02	-2	34	5358258	377567	438.46	
43709	ANNE001	124	125	14	208	70	-0.008	-2	23	5358258	377567	437.61	
43710	ANNE001	125	126	94	105	38	-0.008	-2	14	5358258	377568	436.77	
43711	ANNE001	126	127	15	48	47	0.033	-2	16	5358258	377568	435.92	
43712	ANNE001	127	128	13	80	123	0.052	-2	17	5358258	377569	435.07	
43713	ANNE001	128	129	12	13	44	-0.008	-2	18	5358258	377569	434.22	
43714	ANNE001	129	130	10	34	57	-0.008	-2	16	5358258	377570	433.37	
43715	ANNE001	130	131	10	24	63	-0.008	-2	25	5358258	377570	432.53	
43716	ANNE001	131	132	16	13	65	-0.008	-2	18	5358257	377571	431.68	
43717	ANNE001	132	133	14	13	60	-0.008	-2	18	5358257	377571	430.83	
43718	ANNE001	252.6	253.25	11	6	51	-0.008	-2	4	5358246	377637	332.02	
43719	ANNE001	253.25	254.25	7	-5	51	-0.008	-2	5	5358246	377638	331.35	
43721	ANNE001	254.25	255	19	34	91	-0.008	-2	11	5358246	377638	330.64	
43722	ANNE001	255	256	16	38	64	0.009	-2	8	5358246	377639	329.93	
43723	ANNE001	256	257	19	118	78	-0.008	-2	19	5358246	377640	329.12	
43724	ANNE001	257	258	10	158	104	-0.008	-2	19	5358246	377640	328.31	
43725	ANNE001	258	258.85	5	92	89	-0.008	-2	72	5358246	377641	327.55	
43726	ANNE001	258.85	260	27	64	75	-0.008	-2	222	5358246	377641	326.74	
43727	ANNE001	260	261	11	27	48	-0.008	-2	218	5358246	377642	325.87	
43728	ANNE001	261	262	38	311	492	-0.008	-2	160	5358246	377642	325.06	
43729	ANNE001	262	263	6	90	78	-0.008	-2	77	5358246	377643	324.25	
43730	ANNE001	263	263.55	60	95	62	-0.008	-2	145	5358246	377644	323.62	
43731	ANNE001	263.55	264.45	52	262	181	-0.008	-2	276	5358246	377644	323.03	
43732	ANNE001	264.45	265.5	14	73	50	-0.008	-2	27	5358246	377645	322.24	
43733	ANNE001	265.5	266.5	5	16	74	-0.008	-2	18	5358246	377645	321.41	
43734	ANNE001	266.5	267.8	-4	12	61	-0.008	-2	18	5358246	377646	320.48	
43735	ANNE001	267.8	268.5	-4	-5	59	-0.008	-2	10	5358246	377646	319.66	
		Detection Limit (ppm)		4	5	4	0.008	2	1, 100				
		Assay Method		GA101	GA101	GA101	GG309	GA101	HA101, GA101				
		Laboratory		Analabs	Analabs	Analabs	Analabs	Analabs	Analabs				

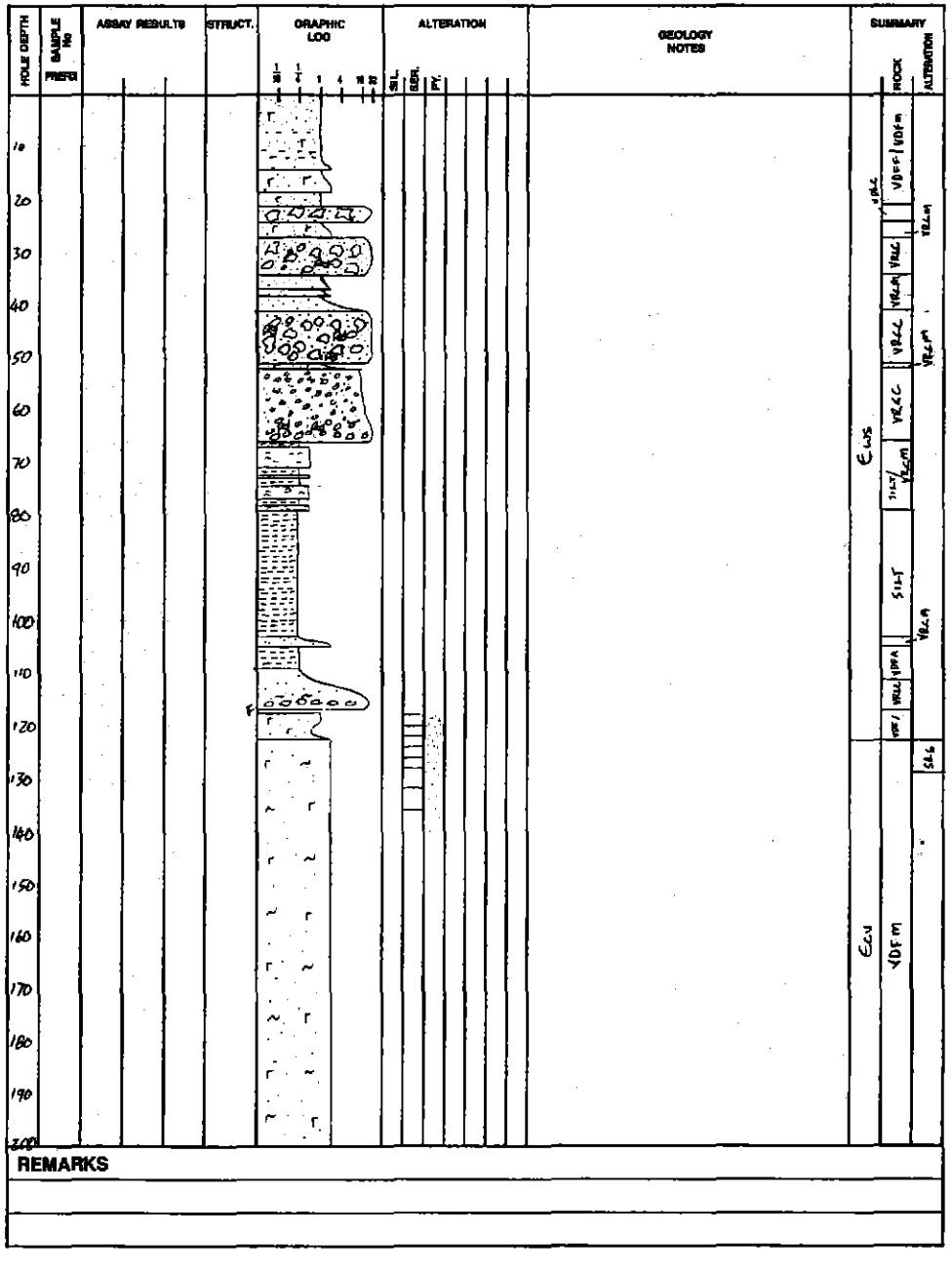
383073

[redacted] DRILL HOLE No [redacted] ANN[redacted] (SUMMARY)

SHEET 1 OF 2

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT :	WHITE SPUR
PROSPECT :	ANNELIESE
DATE :	
LOGGED BY :	



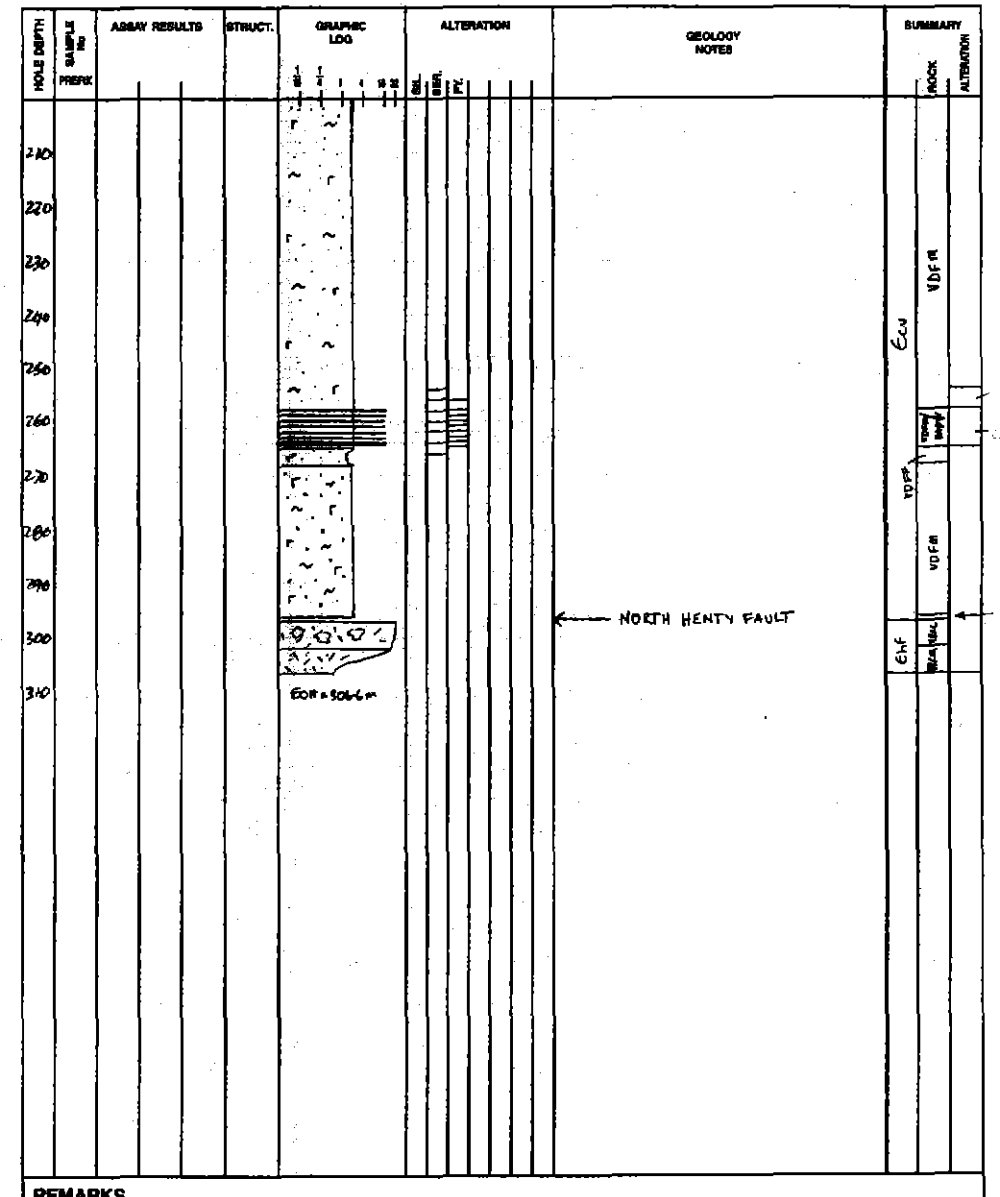
REMARKS

[redacted] DRILL HOLE No [redacted] ANN[redacted] (SU[redacted]

SHEET 2 OF 2

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT :	WHITE SPUR
PROSPECT :	ANNELIESE
DATE :	
LOGGED BY :	



REMARKS

383074

[redacted] EXPLORATION PTY LTD

DRILL HOLE No ANN[redacted]1

SHEET 1 OF 16

Bedding | Cleavage | Foliation | Fault, Shear | Breccia | Broken core

Disseminated | Massive | Pervasive | Narrow vein | * Visible gold

PROJECT	WHITE SPUR
PROSPECT	ANNBLIESE
DATE	December 1996
LOGGED BY	M Veary

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
Precollar								
HQ 1						1-3.5m Cream strongly broken f-m gr dacitic v/c sst. Limonite joint planes common		
2								
3								
4						3.5-5.0m Cream weakly broken f-m gr dacitic v/c sst. Limonitic joints common		
5			Sc/30					
6						5.0-8.5m Cream-pale grey (fresh) diffusely bedded f-m gr dacitic v/c sst.		
7								
8						7.0-8.5m Cream-grey f-m dacitic v/c sst ± 1/8 thinly bedded grey siltst		
9						8.5-9.8 as above (5.0-8.5m)		
10			Sc/20			9.8-12.0 (as 7.0-8.5m)		
11								
12						12.0-13.1m f-m gr dacitic v/c sst. basal unit slightly coarser grained with an increased component of black wisps in matrix	VDFF VDFM	
13				blk matrix				
14						13.1-18.3 as above (12.0-13.1m)		
15								
16								
17								
18								
19						18.3-20.6 (as 5.0-8.5m)		
20								

REMARKS

3830775

[redacted] EXPLORATION PTY LTD

DRILL HOLE No AN[redacted]1

SHEET 2 OF 16

Bedding | Cleavage | Foliation | Fault, Shear | Breccia | Broken core

Disseminated | Massive | Pervasive | Narrow vein | * Visible gold

PROJECT	WHITE SPUR
PROSPECT	Anneliese
DATE	
LOGGED BY	

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
HQ NQ 20								
21			Sc/05			21.0-21.2 Peggy shear		
22						20.6-24.0 Lithic rich mass flow Distinctive pale yellow-grey rhyolite clasts in pale grey matrix. Zones with black silty rich matrix indicated ///		
23								
24			Sc/05			24.0-27.1 1/8 rhyolitic v/c sst and minor lithic conglomerate		
25								
26							VRLC	
27			Sc/20			27.1-34.15 Lithic rich mass flow Distinctive pale yellow qtz-fold phyric rhyolite clasts in pale grey matrix. Very similar to mass flow at 20.6-24.0	VRLC	VRCM
28								
29								
30								
31								
32								
33								
34								
35			Sc/20			34.15-40.8 1/8 m-c gr rhyolitic v/c sst. Graded top to underlying lithic rich mass flow	VRCM	
36								
37								
38								
39								
40								

REMARKS

[redacted]GC [redacted]PLO[redacted]TIO[redacted]TY [redacted] [redacted]LL H[redacted]No [redacted]NE[redacted]

SHEET 3 OF 16

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR
PROSPECT	: Anneliese
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
40							VRLM	
41						40.8-50.8 Granule-pebble lithic rich mass flow. Abundant pale yellow to grey feld±qtz phyric rhyolite lava clasts in grey matrix. black siltstone rafts up to 20cm present. Also 10% chlorite rich feld±qtz phyric pumic clasts.		
42								
43								
44								
45								
46							VRLC	
47								
48								
49								
50								
51							VRLM	
52								
53						51.7-66.0 Predominantly granule grade rhyolitic v/c conglomerate (massflow) slightly [illegible] base with black [illegible] ripups		
54								
55							VRCC	
56								
57								
58								
59								
60								

REMARKS

[redacted]RG[redacted]EXP[redacted]AT[redacted]PT[redacted]D [redacted]DRIL[redacted]LE N[redacted]ANN[redacted]1

SHEET 4 OF 16

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR
PROSPECT	: Anneliese
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
60								
61								
62								
63						matrix becomes progressively enriched in black siltstone in matrix.	VRCC	
64								
65								
66			So/35	slumping		66.0-78.7 interbedded black siltstone and grey f-m grained feld-qtz bearing v/c ssts (pumiceous) with a high % of black siltstone in matrix.	SILT	
67							VRLM	
68								
69							SILT	
70							VRLM	
71			So/40				SILT	
72							VRLM	
73							SILT	
74								
75							VRLM	
76								
77							SILT	
78							VRLM	
79			So/80				SILT	
80								

REMARKS

383076

[redacted] EXPLORATION PTY [redacted]

DRILL HOLE No [redacted]NE[redacted]

SHEET 5 OF 16

— Bedding
⌴ Cleavage
—^— Foliation
~~ Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

PROJECT :	WHITE SPUR
PROSPECT :	Anneliese
DATE :	
LOGGED BY :	

HOLE DEPTH	SAMPLE No	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY
80						78.7–103.0	
81						Fine grained poorly bedded black pyritic siltstone	
82						Carbonate microveins common.	
83						Pyrite may be	
84						1) disseminated	
85						2) framboidal	
86						3) associated with carbonate microveins	
87							
88							
89							
90							SILT
91							
92			S/0.5°				
93							
94							
95							
96			S/15				
97							
98							
99							
100							

REMARKS

[redacted] EXPLORATION PTY LTD

DRILL HOLE No Anneliese

SHEET 6 OF 16

— Bedding
⌴ Cleavage
—^— Foliation
~~ Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold

PROJECT :	WHITE SPUR
PROSPECT :	ANNELIESE
DATE :	
LOGGED BY :	

HOLE DEPTH	SAMPLE No	ASSAY RESULTS Cu	Pb	Zn	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY
100									
101					S/10			103.0–105.5 fine–med gr khaki-grey dacitic vlc sst. 104.9–105.5 granule grade lithic rich mass flow base.	SILT
102									
103									
104					S/35			105.5–106.7 Predominantly black ashy siltstone + 1m khaki ashy silty Moderately bedded	VOCM/FLM
105									
106									VDFA
107								106.7–109.5 Thinly bedded khaki-grey ashy siltstone with minor graded f dacitic vlc sst units Well bedded	
108					S/80				VDFA
109									
110						diffuse bedding		109.5–117.0 Well graded mass flow with silt rich diffusely bedded sst grade top and lithic rich base. Lithics are predominantly silicified cream dacitic lava clasts and pale green sericitic pumice in pale grey matrix with rare qtz phenos	VRLCM
111									
112									
113									
114									
115									VRLC
116									
117						strongly broken			
118	01	18	73	177		strongly broken		117.0–122.6 Strongly broken mixed sequence of dacitic vlc ests and minor black silt. (tuff?)	VDF/ OS-5
119	02	10	141	947		silicified		Unsure if part of cvc or Wsp fm - favour the latter.	
120	03	60	60	37					

REMARKS

383077

[redacted] LL H[redacted] No [redacted]

SHEET 7 OF 16

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR
PROSPECT	: ANNELIESE
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No	ASSAY RESULTS Cu	Pb	Zn	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	ALTERATION
120	04	7	179	89					VDFI	SO-6
121	05	6	172	111						
122	06	18	77	124						
123	07	15	31	107	S1 30					
124	08	11	50	687				122.6 - 129.5 Cream coloured m gr feldspar phyric dacitic volcaniclastic sst. Possibly pumice breccia, although pumice textures hard to determine. Well developed stylolitic cleavage. 2-3% disseminated pyrite.		
125	09	14	208	70						
126	10	94	105	38			2-3%			
127	11	15	48	47						
128	12	13	80	123						SP-6
129	13	12	13	44						
130	14	10	34	57	S1 30	grad.		129.5 - 157.1 Dark grey coloured chloritic m gr feldspar phyric dacitic volcaniclastic sst. Cream-yellow sericite veinlets become more abundant >140m	EW VDFM	
131	15	10	24	63						
132	16	16	13	65						
133	17	14	13	60						
134										
135					S1 20 wk		1%			OS-6
136										
137										
138										
139										
140										

REMARKS

383078

[redacted] EXPLORATION PTY LTD

DRILL HOLE No ANNE[redacted]

SHEET 8 OF 16

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR
PROSPECT	: ANNELIESE
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION	GEOLOGY NOTES	SUMMARY ROCK	ALTERATION
140								
141								
142								
143								
144								
145								
146								
147								
148								
149							EW VDFM	OS-6
150			S1 40					
151								
152								
153								
154								
155								
156								
157						157.1 - 174.2 Feldspar phyric dacitic vlc sst. Patchy chl-alb alteration with common sev microveins. Feld ftls more abundant than in overlying chl unit.		
158								
159								OAS6
160								

REMARKS

[redacted] EXPLORATION PTY LTD [redacted] DRILL HOLE No [redacted]

SHEET 9 OF 16

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR
PROSPECT	: ANNELIESE
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (Qtz-albite, SIL., SER., PY., CARB)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
160								
161								
162								
163								
164								
165								
166								OA56
167								
168								
169								
170							ECV VDFM	
171								
172								
173								
174						174.2 increase in pink albite		
175								
176								
177								AO56
178								
179						Qtz carb-chl vein		
180								

REMARKS

[redacted] EXPLORATION PTY LTD [redacted] DRILL HOLE No [redacted]

SHEET 10 OF 16

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR
PROSPECT	: ANNELIESE
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL., SER., PY., CARB)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
180								
181								
182								
183								AO56
184						(F)- pink feldspar phyric dacite lava clast commonly intensely albite altered.		
185								
186								OA56
187								
188						5cm Qtz-carb-chl vein		
189						Qtz-carb-chl vein		
190						Qtz-carb chl-brown vein	ECV VDFM	
191								
192						Qtz-carb-chl-brown vein		
193								AO57
194								
195								
196								
197						Qtz-carb-chl vein		
198								
199								
200								

REMARKS

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RGC EXPLORATION PTY LTD

DRILL HOLE No ANNE[illegible]

SHEET 11 OF 16

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR
PROSPECT	: ANNELIESE
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY. CHLG)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
200								AOS1
201						Qtz-carb chl vein		
202								
203								
204								
205								OASb
206						(r) - albitic feldspar phyric dacite lava clast		
207								
208								
209								
210							ECW	VDFM
211								
212								
213								
214								
215								AOSb
216								
217								
218						Qtz-carb-chl vein		
219								
220								

REMARKS

RGC EXPLORATION PTY LTD

DRILL HOLE No ANN[illegible]01

SHEET 12 OF 16

Bedding	Disseminated
Cleavage	Massive
Foliation	Pervasive
Fault, Shear	Narrow vein
Breccia	* Visible gold
Broken core	

PROJECT	: WHITE SPUR
PROSPECT	: ANNELIESE
DATE	:
LOGGED BY	:

HOLE DEPTH	SAMPLE No PREFIX	ASSAY RESULTS	STRUCT.	GRAPHIC LOG	ALTERATION (SIL. SER. PY. CHLG)	GEOLOGY NOTES	SUMMARY ROCK	SUMMARY ALTERATION
220								
221						Qtz-carb-chl veins		
222						Qtz-carb-chl vein 3cm		
223						(r) albitic feldspar phyric lava clast		AOSb
224						Qtz-carb chl vein		
225						Qtz-carb chl vein.		
226						Qtz-carb-chl vein 2cm		
227						226-239 abundant tension gash like carbonate veins & cutting alb-chl		
228								
229							ECW	VDFM
230								AOCL
231								
232								
233								
234								
235								
236								
237								
238								
239								
240								OACL

REMARKS

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RGC EXPLORATION PTY LTD — DRILL HOLE No [redacted]

SHEET 13 OF 16

PROJECT :	WHITE SPUR
PROSPECT :	ANNELIESE
DATE :	
LOGGED BY :	

Legend: Bedding; Cleavage; Foliation; Fault, Shear; Breccia; Broken core; Disseminated; Massive; Pervasive; Narrow vein; * Visible gold

Hole Depth	Sample No (Prefix 7452)	Cu	Pb	Zn	Struct.	Graphic Log	Alteration	Geology Notes	Summary Rock	Summary Alteration
240										
241										
242										OAC6
243										
244										
245										
246									VDFM	
247										
248					S1/50				ECV	OCS6
249										
250										
251										
252										
253 .15	18	11	6	51						
254 .15	19	7	-5	51	S1/15					
255	21	19	34	91						
	22	16	38	64						
256	23	19	118	78	S1/10, S1/15					
257	24	10	158	104					VDFM	SAO6
258	25	5	92	69	S1/10, S1/20		20			
259 .25	26	27	64	75	S1/10		40, 80			
260										

REMARKS

RGC EXPLORATION PTY LTD — DRILL HOLE No [redacted]

SHEET 14 OF 16

PROJECT :	WHITE SPUR
PROSPECT :	ANNELIESE
DATE :	
LOGGED BY :	

Legend: Bedding; Cleavage; Foliation; Fault, Shear; Breccia; Broken core; Disseminated; Massive; Pervasive; Narrow vein; * Visible gold

Hole Depth	Sample No (Prefix)	Cu	Pb	Zn	Struct.	Graphic Log	Alteration	Geology Notes	Summary Rock	Summary Alteration
260					S1/30					
261	27	11	27	48	S1/40					
262	28	38	311	492	S1/5					
263 .15	29	6	90	78	S1/30				VDFM	PS_8
264 .15	30	60	95	62						
265	31	52	262	181	S1/30		50			
266	32	14	73	50	S1/25			265.2 - 267.8 f-m gr dacitic alc sst.		
267	33	5	16	74					VDFF	OSA6
268	34	-4	12	61						
269	35	-4	-5	59				267.8 - 295.7 Relatively feldspar xtl rich pumiceous mass flow. Surface tube pumice textures developed in large albitic pumice clasts.	ECV	OAS6
270										
271										
272										
273										
274									VDFM	
275										
276										PS56
277										
278										
279										
280										

REMARKS

383081

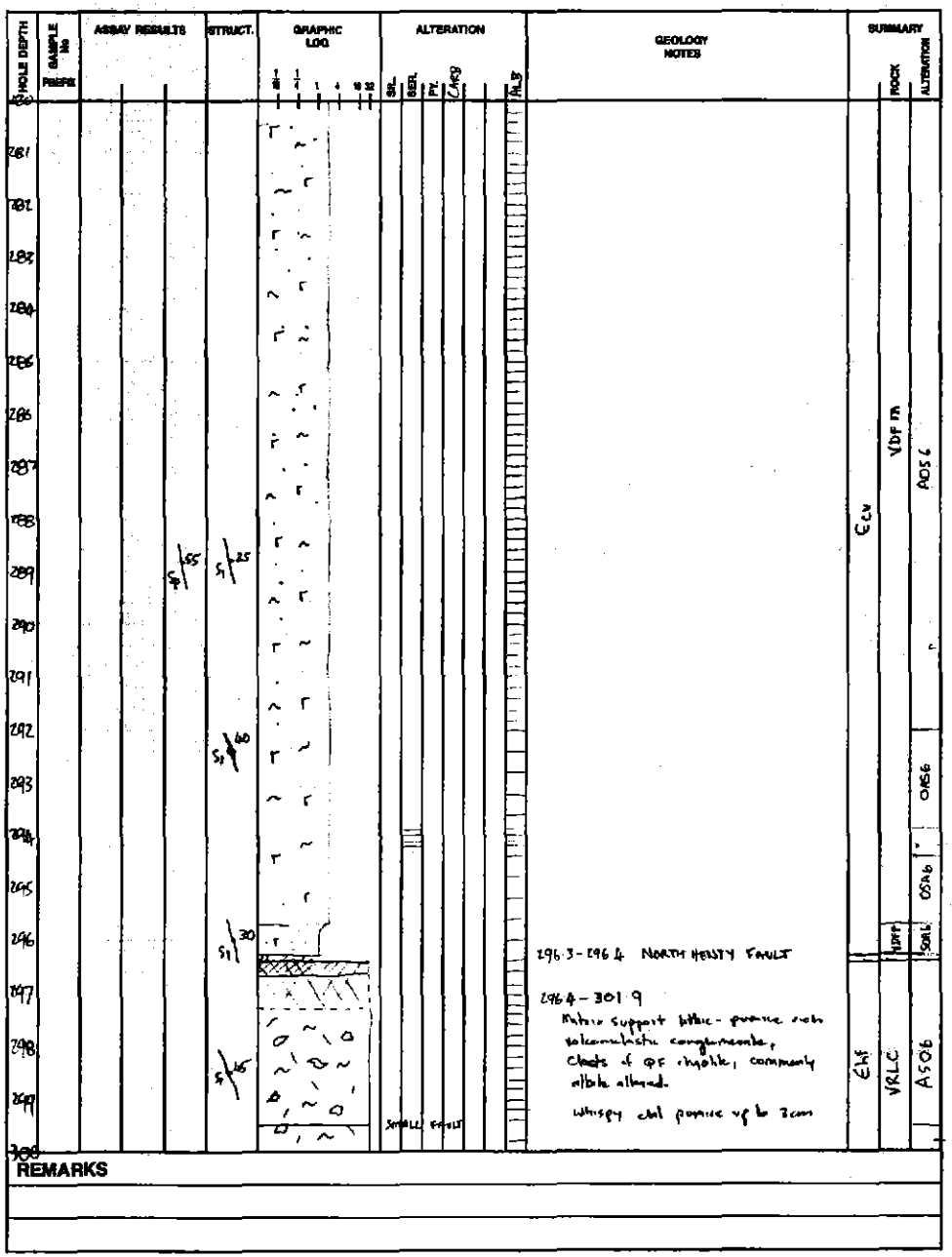
[redacted] EXPLORATION PTY LTD

DRILL HOLE No [redacted]

SHEET 15 OF 16

PROJECT :	WHITE SPUR
PROSPECT :	ANNERLEY
DATE :	
LOGGED BY :	

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold



REMARKS

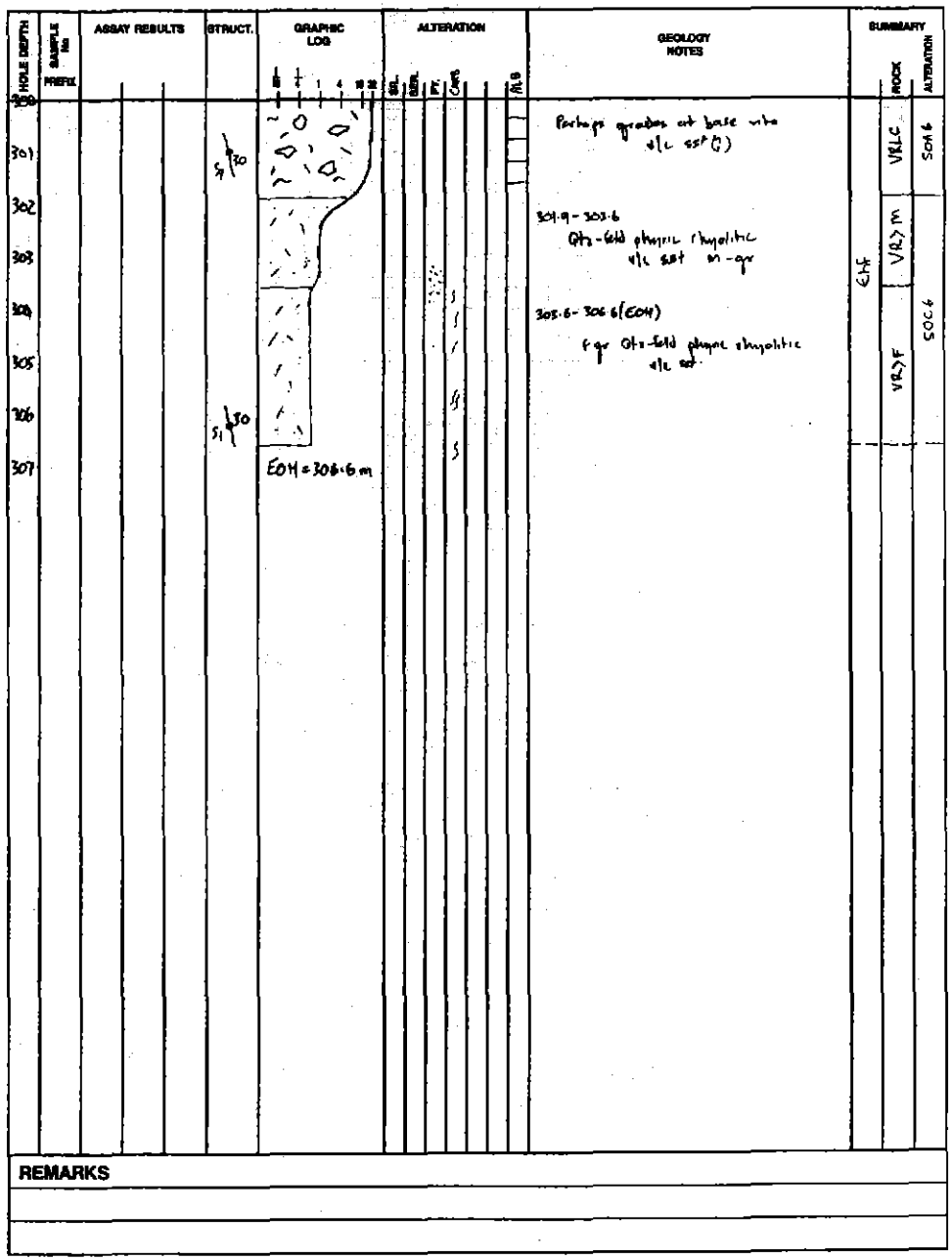
[redacted] EXPLORATION PTY LTD

DRILL HOLE No [redacted]01

SHEET 16 OF 16

PROJECT :	WHITE SPUR
PROSPECT :	ANNERLEY
DATE :	
LOGGED BY :	

Bedding
Cleavage
Foliation
Fault, Shear
Breccia
Broken core
Disseminated
Massive
Pervasive
Narrow vein
* Visible gold



REMARKS

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APPENDIX 4

Rock Chip Assays

White Spur Rock Chip Analyses

2317rc

SAMPLE	GEAST	GNORTH	TEAST	TNORTH	ROCK	FORMATION	CU_A	CU_I	PB_A	PB_I	ZN_A	ZN_I	ZN_N	AG_A	AG_N	AS_A	AS_N	AU_G
37744	7618	8272	377618	5358272	M PY	CVC	37	2.9	79	60	37	12	-100	2	-5	3857	4280	-0.008
37745	7618	8272	377618	5358272	M PY	CVC	30	18	55	36	45	33	-100	-2	-5	1798	1730	-0.008
37746	7618	8272	377618	5358272	M PY	CVC	17	9	39	16	66	61	138	-2	-5	901	949	-0.008
37747	7618	8272	377618	5358272	M PY	CVC	54	43	60	51	40	23	-100	6	-5	4097	4720	-0.008
37749	7618	8272	377618	5358272	M PY	CVC												
37756	7560	8200	377558	5358212	VDFM	CVC?		61		32		71	-100		-5		16.8	
37757	7650	8200	377646	5358215	SILT	HFW		78		-10		68	182		-5		4	
37758	7685	8210	377686	5358226	SILT	HFW		-5		-10		40	-100		-5		2.6	
37759	7690	8400	377690	5358414	VDFM	CVC		-5		61		105	160		-5		9	
37761	7685	8400	377681	5358412	SILT	CVC?		-5		40		138	152		-5		3.1	
37762	7680	8400	377678	5358419	VDFM	CVC		-5		26		107	172		-5		3.7	
37763	7640	8400	377634	5358412	VDFM	CVC		-5		11		98	151		-5		3.6	
37764	7630	8400	377629	5358412	VDFM	CVC		-5		15		62	148		-5		7.6	
37765	7590	8400	377591	5358411	VDFM	CVC		-5		17		73	109		-5		1.9	
37766	7618	8272	377618	5358272	M PY	CVC	58		74		24			3		4996		0.015
37767	7940	8805	377935	5358821	VDFM	CVC		-5		12		74	158		-5		10.3	
37768	7940	8785	377931	5358804	VDFM	CVC		20		16		72	137		-5		6.6	
37769	7880	8800	377853	5358814	VDFM	CVC		77		-10		126	171		-5		580	
37770	7880	8800	377853	5358814	VDFM	CVC		47		-10		92	198		-5		2210	
37771			378012	5358881	VDFM	CVC		-5		-10		76	121		-5		7	
37772			377969	5358860	VDFM	CVC		-5		12		62	113		-5		7.1	
37773			377910	5358862	VDFM	CVC		-5		-10		82	132		-5		3.6	
37774			378100	5360764	VDFM	CVC							111		-5		5.3	
37775			377900	5360515	VDFM	CVC							237		-5		5.8	
37776			377775	5360380	VDFM	CVC							142		-5		1.81	
37777			377655	5360265	VDFM	CVC							123		-5		1.87	
37778			377540	5360270	IR>	WSI							131		-5		1.28	
37779			377455	5360340	VDFA	WSP							108		-5		9.09	
37781			377225	5360437	SILT	WSP							-100		-5		25.4	
37782			377212	5360155	SILT	WSP							-100		-5		21	
37783			377214	5359880	SILT	WSP							-100		-5		15.6	
37784			377265	5359270	SILT	WSP							221		-5		22	
37785			377315	5358752	LWAC	WSP							139		-5		1.62	
37786			376885	5358142	SILT	WSP							193		-5		12.4	
37787			376722	5358110	SILT	WSP							269		-5		7.36	
37788			376217	5358205	VDFX	WSP							228		-5		1.38	
37789			375900	5358280	SILT	WSP							168		-5		1.61	
37790			375675	5358195	SILT	WSP							201		-5		21.4	
				Detection Limit			-4	-5	-5	-10	-4	-5	-100	-2	-5	-100	-1	-0.008
				Units			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
				Method			GA101	GI201	GA101	GI201	GA101	GI201	NAA	GA101	NAA	GA101	NAA	GG309
				Laboratory			Analabs	Analabs	Analabs	Analabs	Analabs	Analabs	Bequerel	Analabs	Bequerel	Analabs	Bequerel	Analabs

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SAMPLE	AU_N	S_A	S_I	AL_I	CA_I	V_I	V_X	SR_I	P_I	NI_I	MN_I	MG_I	TI_I	TI_X	SB_N	BA_N	BR_N	CE_N
37744	-5	31.1	>50000	0.66	-0.05	17	21	7	-100	18	44	0.05	611	610	7.4	250	-2	4
37745	-5	20.4	>50000	4.48	0.26	52	45	151	250	28	84	0.41	2150	1810	10.6	483	-2	34.3
37746	-5	8.9	>50000	6.94	0.37	89	83	216	500	19	93	0.62	3310	2960	6.8	864	3	19.4
37747	-5	41.1	>50000	0.18	-0.05	4	14	2	-100	-10	24	0.02	302	380	22.4	-100	14.7	-2
37749																		
37756	-5		650	4.15	1.06	25	39	52	200	-10	128	2.43	1480	1535	1.3	471	-2	82.4
37757	-5		100	7.9	0.66	291	339	85	1000	90	598	3.15	17600	21100	2.3	-100	3.2	72.9
37758	-5		100	1.74	0.3	15	29	15	150	18	77	0.39	1000	995	0.7	-100	-2	30.7
37759	-5		850	7.13	1.19	69	83	135	550	-10	633	1.91	3030	3125	1.2	1250	-2	73.5
37761	-5		100	4.11	0.9	88	109	41	150	676	337	17.12	328	1160	0.4	-100	-2	16.8
37762	-5		-50	8.16	0.43	76	79	130	500	-10	517	1.62	3430	3050	0.8	962	-2	87.5
37763	-5		50	9.3	1.05	89	111	322	750	-10	688	1.95	3900	3975	1.1	984	-2	81.4
37764	-5		50	7.49	2.1	77	92	577	500	-10	671	0.98	3600	3480	1.3	797	3	91.5
37765	-5		100	8.57	1.18	85	103	397	700	-10	851	1.33	3910	3210	0.6	794	-2	90.7
37766																		
37767	-5		-50	7.68	0.44	55	70	245	500	-10	736	0.64	2840	2525	0.9	160	-2	43.6
37768	-5		-50	6.94	0.69	55	61	337	500	-10	480	0.99	2820	2615	0.7	497	-2	75.4
37769	-5		4950	10.52	1.05	251	268	312	1200	65	857	1.27	5350	4275	14.3	2950	-2	69.5
37770	-5		12500	11.81	0.93	296	317	421	650	42	453	1.06	6700	6105	27.6	4090	-2	79
37771	-5		-50	8.14	0.68	75	86	168	550	-10	574	1.82	3370	2950	0.7	800	2.2	89.9
37772	-5		-50	8.63	1.26	82	110	378	750	-10	702	0.79	3450	3275	1	1140	-2	112
37773	-5		100	8.18	1.17	83	98	293	650	-10	790	0.95	2940	3110	0.6	1300	-2	83.2
37774	-5		50	6.83	0.625	30	28	326	300	-10	410	0.561	2245	2180	1.47	826	3.38	78.8
37775	-5		400	6.49	1.47	88	75	286	700	-10	794	1.48	2985	3760	0.69	1640	-2	123
37776	-5		-50	5.86	0.42	12	-5	207	200	-10	254	0.441	1930	2030	0.65	1310	-2	124
37777	-5		-50	6.25	0.6	33	31	209	450	-10	260	0.585	2525	2770	0.46	975	-2	142
37778	6.8		-50	6.78	0.43	36	22	101	400	-10	256	0.377	2265	2310	0.25	1040	-2	66.8
37779	-5		-50	7.46	0.185	52	42	74	350	12	306	1.5	2695	2760	0.8	1490	-2	74.6
37781	6.6		7450	7.7	0.065	105	89	25	300	48	79	1.62	3385	3100	10.1	1110	-2	96.1
37782	6.1		550	5.63	0.01	109	94	31	150	-10	38	0.449	3885	3820	6.07	666	-2	47.2
37783	-5		8100	5.91	0.015	179	133	20	100	48	541	1.23	4010	2780	3.53	2220	-2	84
37784	-5		2000	6.53	2.5	166	153	102	850	53	751	2.13	4455	4520	0.52	618	-2	64.1
37785	-5		100	6.53	0.015	125	133	28	150	63	159	2.22	5540	4080	-0.2	287	-2	93.3
37786	-5		4950	7.05	0.225	152	123	37	850	59	79	1.7	5705	4940	2.13	674	-2	76.4
37787	-5		5250	6.62	2.36	134	110	90	650	55	440	1.97	4085	3360	1.15	1070	-2	67.9
37788	-5		150	8.74	0.315	43	36	284	550	-10	489	0.525	4460	4410	0.58	1120	-2	75
37789	-5		-50	9.57	0.085	145	120	23	400	117	250	3.74	4440	3360	0.66	483	-2	83.6
37790	-5		3950	9.17	0.115	150	123	31	550	208	471	4.39	4620	3370	2.24	538	-2	93.8
	-5	-0.09	-50	-0.01	-0.05	-2	-5	-1	-100	-10	-10	-0.01	-50	-50	-0.2	-100	-2	-2
	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	NAA	OM613	GI201	GI201	GI201	GI201	GX401	GI201	GI201	GI201	GI201	GI201	GI201	GX401	NAA	NAA	NAA	NAA
	Bequerel	Analabs	Analabs	Analabs	Analabs	Analabs	Analabs	Analabs	Analabs	Analabs	Analabs	Analabs	Analabs	Analabs	Bequerel	Bequerel	Bequerel	Bequerel

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SAMPLE	CO_N	CR_N	CS_N	EU_N	FE_N	HF_N	IR_N	K_N	LA_N	LU_N	MO_N	NA_N	RB_N	SC_N	SE_N	SM_N	TA_N	TE_N
37744	2.5	12.3	2.4	-0.5	28.5	-0.5	-20	-0.2	2.9	-0.2	94.6	0.1	-20	2.3	-5	0.5	-1	
37745	11.7	24.8	2.8	0.6	20.4	2	-20	0.6	18.6	-0.2	61.9	2.3	-20	7.6	-5	3.4	-1	
37746	7	37.3	1.3	-0.5	9.92	3.5	-20	1.3	11	0.3	38.7	3.06	39.5	11.6	-5	2.2	-1	
37747	7	-5	-1	-0.5	35.3	-0.5	-20	-0.2	0.6	-0.2	153	-0.01	-20	0.9	-5	-0.2	-1	
37749																		
37756	3.7	7.5	1.9	0.5	2.46	3	-20	1.3	38.9	20	-5	0.02	73.4	4.8	-5	5.9	-1	
37757	40.2	252	-1	1.7	11.6	6.4	-20	0.9	32.2	0.6	-5	2.15	29	40.3	-5	8.4	3.5	
37758	6.2	22.8	-1	-0.5	2.17	1.1	-20	0.6	7	-0.2	-5	0.02	37.1	6.4	-5	1.3	-1	
37759	10.4	11.2	5.5	0.9	3.06	5.4	-20	2.5	31.1	0.5	-5	1.35	145	10.9	-5	6.3	-1	
37761	58.8	2220	1.3	-0.5	4.44	1.1	-20	-0.2	7.4	-0.2	-5	-0.01	-20	17.7	-5	1.3	-1	
37762	7.2	6.8	4.5	1.4	2.75	5.6	-20	2.4	37.9	-0.2	-5	1.51	142	10.9	-5	6.4	1.7	
37763	5.9	8.6	4.9	1.3	4.81	5.4	-20	2	38.5	0.4	-5	2.46	111	14.6	-5	6.6	2.3	
37764	5.7	11.7	3	1.2	4.46	5.8	-20	1.6	41.8	0.4	-5	1.74	95.6	12.3	-5	7.1	-1	
37765	7.9	11.4	1.8	1.2	3.7	4.9	-20	1.7	42.1	-0.2	-5	2.95	96.4	13.6	-5	7.5	1.7	
37766																		
37767	10.4	9.3	1.1	-0.5	3	3.9	-20	1.68	17.8	0.3	-5	3.98	-20	8.5	-5	3.8	3.7	
37768	8.2	10.6	1.7	1	3.11	4.2	-20	0.8	31.1	0.3	-5	2.47	79.3	10.1	-5	4.9	1.3	
37769	38.4	555	4.6	1.4	5.12	4	-20	1.6	27.3	0.6	-5	1.12	75.5	44.2	-5	7.5	1.2	
37770	56.9	801	8.5	1.2	6.55	4	-20	2.7	34.7	0.4	18.7	1.4	109	59.6	-5	6.9	1.4	
37771	10.5	8.9	4.2	1.3	3.93	5.1	-20	1.6	39.8	0.4	-5	1.24	98.7	11.1	-5	6.7	-1	
37772	8.7	10.8	3	1.4	3.13	5.5	-20	0.9	52	0.5	-5	1.81	43.8	13.6	-5	8.7	2.4	
37773	9.5	10	2.6	1.4	3.9	5.1	-20	1.2	38.9	0.4	-5	1.49	71.8	11.5	-5	6.8	-1	
37774	-1	-5	6.3	1.17	2.19	5.71	-20	1.53	39.3	0.41	-5	2.62	81.4	7.38	-5	6.32	2.86	-5
37775	14.8	25.4	8.4	2.24	4.98	7.73	-20	3.52	59.4	0.67	-5	2.12	174	15.5	-5	11.2	4.41	-5
37776	-1	-5	2.09	1.67	1.69	7.36	-20	3.22	61	0.61	-5	2.76	91.4	4.73	-5	10.6	3.35	-5
37777	2.32	19.4	8.21	2.5	2.71	5.86	-20	2.61	67.8	0.56	-5	1.11	165	10.7	-5	12.1	2.76	-5
37778	3.88	19.4	1.39	0.96	1.85	5.36	-20	3.33	30.7	0.39	-5	2.94	85.1	7.43	-5	5.86	1.84	-5
37779	2.43	62.4	4.17	0.6	2.46	6.65	-20	1.71	31.8	0.37	-15	1.03	124	7.32	-5	4.46	3.03	-5
37781	10.1	204	8.49	1.47	3.43	5.23	-20	3.18	43.4	0.52	-5	0.184	153	19.5	-5	8.23	1.72	-5
37782	1.14	121	6.09	-0.5	1.59	3.22	-20	2.29	22.4	0.3	-5	0.057	139	16.5	-5	3.7	1.09	-5
37783	22.9	97.8	7.92	1.1	3.38	4.21	-20	2.77	40.6	0.45	-10	0.147	146	19.4	-5	6.76	1.55	-5
37784	21.3	121	5.73	1.45	5.05	3.39	-20	1.86	28.5	0.45	-5	0.653	85	23.1	-5	6.52	1.54	-5
37785	14.2	187	3.38	1.86	4.21	6.13	-20	1.25	42.7	0.48	-5	0.163	63.7	19.5	-5	9.85	1.18	-5
37786	16.5	160	6.28	1.74	4.18	4.56	-20	1.99	34.1	0.49	-5	1.18	103	22.6	-5	7.83	2.25	-5
37787	13.8	113	6.65	1.27	3.79	3.85	-20	2.54	31.6	0.43	-5	0.883	130	20.3	-5	6.28	1.09	-5
37788	-1	24.6	1.14	1.83	1.88	7.73	-20	2.18	37.8	0.47	-5	4.67	40.7	14.9	-5	7.24	2.59	-5
37789	20.4	183	8.55	1.18	5.16	5.97	-20	3.17	39	0.53	-5	0.512	160	24.6	-5	7.71	1.5	-5
37790	33.1	285	8.39	1.26	5.96	6.16	-20	2.64	44.2	0.61	-5	0.492	136	27.5	-5	8.63	2.2	-5
	-1	-5	-1	-0.5	-0.05	-0.5	-20	-0.2	-0.5	-0.2	-5	-0.01	-20	-0.1	-5	-0.2	-1	-5
	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA
	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel

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SAMPLE	TH_N	W_N	U_N	YB_N	ZR_N
37744	2	-2	-2	-0.5	
37745	6.2	-2	2.8	1.2	
37746	12.5	-2	5.2	2.2	
37747	1.6	-2	-2	-0.5	
37749					
37756	9.5	-2	-2	1.9	
37757	5.9	-2	-2	4.2	
37758	4.8	-2	-2	0.6	
37759	18.1	-2	3.6	3.5	
37761	2.3	-2	-2	0.8	
37762	19.1	-2	4	3.3	
37763	18.9	-2	4.1	2.9	
37764	18.7	-2	4.3	3.5	
37765	16.6	-2	2.6	3.5	
37766					
37767	13.8	-2	3	2.4	
37768	14.5	-2	4.3	2.3	
37769	16.6	-2	3.9	3.8	
37770	17.2	-2	2.4	3	
37771	17.9	-2	4.2	3.2	
37772	18.1	-2	2.5	3.6	
37773	15.4	-2	2.7	3.2	
37774	19.2	-2	3.07	2.84	-500
37775	24.6	-2	3.96	4.37	-500
37776	21.5	-2	-2	4.11	-500
37777	17.2	-2	2.4	3.88	-500
37778	19.1	-2	2.46	2.6	-500
37779	33.3	-2	9.52	2.33	-500
37781	16	-2	2.25	3.35	-500
37782	9.81	-2	4.47	2.04	-500
37783	14.1	-2	6.89	3.03	-500
37784	9.79	-2	-2	3	-500
37785	9.89	-2	-2	3.03	-500
37786	10	-2	-2	3.27	-500
37787	11	-2	3.49	2.99	-500
37788	14.7	-2	-2	3.09	-500
37789	11.9	-2	2.66	3.55	-500
37790	13.7	-2	-2	3.9	-500
	-0.5	-2	-2	-0.5	-500
	ppm	ppm	ppm	ppm	ppm
	NAA	NAA	NAA	NAA	NAA
	Bequerel	Bequerel	Bequerel	Bequerel	Bequerel

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APPENDIX 5

Anneliese Grid Soil Assays

APPENDIX 5 - ANNELIESE PROSPECT SOIL ANALYSES

128 soil samples were collected from the Anneliese grid at approximately 25 metre intervals. 42 different elelments were analysed for by three separate methods by Analabs in Burnie, Tasmania (ICP and XRF analysis) and Bequerel (Lucas Heights, New South Wales).

METHOD	ELEMENT	DETECTION LIMIT
ICP	Cu	5 ppm
	Pb	10 ppm
	Zn	5ppm
	Al	100ppm
	Ca	50ppm
	V	2ppm
	Sr	1ppm
	P	50ppm
	Ni	10ppm
	Mn	10ppm
	Mg	20ppm
	S	50ppm
XRF	Ti	50ppm
	V	5ppm
NAA	Sb	0.2ppm
	As	1ppm
	Ba	100ppm
	Br	2ppm
	Ce	2ppm
	Co	1ppm
	Cr	5ppm
	Cs	1ppm
	Eu	0.5ppm
	Au	5ppb
	Fe	0.05%
	Hf	0.5ppm
	Ir	20ppb
	K	0.2%
	La	0.5ppm
	Lu	0.2ppm
	Mo	5ppm
	Rb	20ppm
	Sc	0.1ppm
	Se	5ppm
	Sm	0.2ppm
	Ag	5ppm
	Na	0.01%
	Ta	1ppm
	Th	0.5ppm
	W	2ppm
	Yb	0.5ppm
	Zn	100ppm

ANNELIESE PROSPECT SOILS

SAMPLE	TEAST	TNORTH	GEAST	GNORT	CU_I	PB_I	ZN_I	AL_I	CA_I	V_I	SR_I	P_I	NI_I	MN_I	MG_I	S_I	TI_X	V_X	SB_N	AS_N	BA_N	BR_N	CE_N
22310	377352.91	5358201.29	7350	8200	6	25	25	52600	2000	41	44	100	-10	132	3270	100	2775	41	1.39	3.02	502	21.90	46.70
22311	377376.04	5358203.17	7375	8200	6	10	17	28500	350	12	17	50	-10	48	1760	700	1560	14	0.63	1.03	423	50.10	77.80
22312	377402.32	5358203.2	7400	8200	6	-10	15	40900	500	23	24	100	-10	53	1800	750	2130	50	0.89	-1.00	603	59.90	60.80
22313	377428.59	5358203.22	7425	8200	-5	-10	10	37400	300	31	7	50	-10	97	3440	800	2115	35	0.87	-1.00	597	46.80	69.00
22314	377450.47	5358205.1	7450	8200	10	16	31	15200	500	12	16	100	-10	50	1290	500	2875	16	0.84	1.68	234	42.80	67.70
22315	377476.11	5358206.37	7475	8200	13	11	16	15900	250	9	10	50	-10	81	1250	250	1045	8	0.69	-1.00	284	15.60	41.10
22316	377501.12	5358207.63	7500	8200	-5	21	11	33300	350	16	49	100	-10	44	1990	50	1330	15	0.71	1.12	496	6.20	102.00
22317	377524.88	5358208.9	7525	8200	6	54	16	32600	450	22	23	100	-10	70	2370	550	1675	31	0.78	2.19	545	29.40	59.40
22318	377549.9	5358210.16	7550	8200	9	23	18	28800	550	30	18	100	-10	43	2000	300	2660	31	0.66	-1.00	664	23.70	59.70
22319	377575.54	5358210.8	7575	8200	6	31	18	32700	400	15	43	100	102	60	2510	300	1215	20	0.85	6.92	464	13.40	91.10
22320	377598.68	5358211.45	7600	8200	6	19	16	35700	550	90	38	150	57	92	7150	300	9680	87	1.59	7.65	312	31.10	75.90
22321	377625.56	5358213.95	7625	8200	-5	16	12	15200	450	30	32	150	-10	58	1150	350	5850	27	0.78	1.12	106	23.20	83.30
22322	377650.58	5358213.98	7650	8200	6	-10	18	40100	200	114	12	150	38	129	8340	150	12200	153	1.99	3.44	388	32.60	98.50
22323	377672.46	5358215.86	7675	8200	-5	-10	8	9850	200	10	13	100	12	54	950	250	1760	13	0.37	-1.00	-100	30.30	21.10
22324	377696.23	5358217.12	7700	8200	16	22	27	50500	250	158	29	200	16	66	5440	150	13800	40	1.64	19.40	102	28.10	125.00
22326	377726.86	5358219.01	7725	8200	33	31	27	65300	400	154	43	350	22	72	4790	400	10900	166	1.64	24.90	210	47.10	89.10
22327	377750	5358220.28	7750	8200	16	36	24	61700	400	143	28	250	23	93	5820	300	11100	77	1.35	7.34	233	37.30	109.00
22328	377775.63	5358222.16	7775	8200	-5	-10	10	50600	200	113	10	100	14	91	4800	100	7675	105	1.81	2.60	425	8.33	108.00
22329	377800.02	5358224.05	7800	8200	11	13	13	42600	250	88	12	100	-10	86	2600	200	11500	71	0.94	8.07	177	10.30	96.90
22330	377820.02	5358225.31	7825	8200	19	37	27	52700	500	138	22	400	19	76	3330	750	13800	167	1.33	12.00	131	192.00	69.40
22331	377844.42	5358225.95	7850	8200	32	19	53	34500	300	91	14	600	14	372	1640	750	9130	124	1.38	73.80	-100	41.40	55.50
22332	377874.44	5358225.98	7875	8200	7	14	8	28000	300	63	12	150	-10	94	1670	200	12800	42	0.90	4.67	-100	34.10	106.00
22333	377897.58	5358227.24	7900	8200	8	13	15	55700	250	136	12	150	14	120	4550	150	11200	44	1.35	3.31	226	25.30	114.00
22334	377355.17	5358400.05	7350	8400	-5	24	25	51600	400	90	37	100	-10	114	6750	250	3485	99	0.74	7.48	632	36.30	80.00
22335	377385.18	5358403.18	7375	8400	-5	15	26	42000	450	97	24	150	13	140	6980	300	4375	109	0.86	13.70	427	45.20	73.40
22336	377407.69	5358404.44	7400	8400	-5	-10	9	29000	600	18	48	50	-10	79	1340	100	2900	20	0.75	-1.00	537	6.70	86.60
22337	377424.3	5358406.34	7425	8400	5	14	10	28900	450	22	37	50	-10	85	1470	200	2280	44	0.70	1.10	477	18.80	34.40
22338	377448.33	5358406.99	7450	8400	-5	-10	-5	19700	350	20	22	-50	-10	88	1330	150	1865	24	0.70	1.50	335	10.10	14.50
22339	377479.61	5358406.39	7475	8400	-5	-10	9	16900	300	4	14	100	-10	31	1070	900	1655	-5	0.43	-1.00	134	74.90	92.10
22340	377502.13	5358408.27	7500	8400	-5	18	12	33200	400	5	27	100	-10	50	2220	350	995	8	0.75	1.69	412	28.20	103.00
22341	377525.26	5358408.92	7525	8400	-5	12	14	37300	300	9	25	100	-10	35	2270	150	1475	16	1.15	4.00	499	13.60	127.00
22342	377552.16	5358408.32	7550	8400	-5	15	12	30500	300	60	20	100	-10	81	2710	100	3190	29	0.89	5.38	329	12.50	89.30
22343	377575.3	5358408.94	7575	8400	-5	10	-5	21200	300	32	28	100	-10	40	860	50	2995	35	0.84	2.69	292	3.57	109.00
22344	377602.2	5358409.58	7600	8400	-5	10	7	38100	550	59	52	100	-10	71	1720	100	308	27	0.80	2.83	484	6.76	91.30
22346	377625.95	5358412.09	7625	8400	-5	21	20	45400	4350	68	125	100	-10	131	2590	150	3740	79	0.81	7.60	390	22.10	70.00
22347	377651.6	5358411.49	7650	8400	-5	29	38	58400	5650	78	150	150	-10	215	4760	300	3595	85	0.96	8.05	391	41.80	42.60
22348	377676	5358411.51	7675	8400	5	33	44	58900	3600	78	115	150	-10	150	3980	250	4000	91	0.80	6.98	446	42.20	40.40
22349	377699.76	5358413.4	7700	8400	-5	32	58	58500	1350	87	47	100	383	228	51000	150	3350	83	1.07	9.10	528	50.70	38.00
22350	377725.39	5358415.28	7725	8400	-5	16	71	14900	1750	24	28	100	1930	456	156400	550	620	31	4.49	22.50	108	13.70	9.91
22351	377752.28	5358416.55	7750	8400	7	36	8	72300	800	114	61	150	22	44	4340	150	10000	89	4.88	8.82	512	8.90	105.00
22352	377776.05	5358416.57	7775	8400	19	25	21	42000	600	131	17	200	21	47	3280	300	10200	103	1.98	3.29	350	15.50	76.70
22354	377799.81	5358418.46	7800	8400	8	167	145	54100	650	91	18	150	15	74	2680	350	8860	81	1.32	1.31	416	9.12	91.00
22355	377820.45	5358418.47	7825	8400	14	75	41	18200	550	44	17	200	-10	64	1080	650	989	80	1.14	3.04	-100	44.20	58.50
22356	377844.86	5358417.25	7850	8400	8	52	23	14500	350	47	18	150	13	64	910	250	9875	38	1.16	2.07	133	18.90	77.70
22357	377870.5	5358417.9	7875	8400	-5	27	26	58000	1350	126	21	100	14	159	4610	150	9695	11	2.03	2.21	326	7.66	98.20

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ANNELIESE PROSPECT SOILS

SAMPLE	TEAST	TNORTH	GEAST	GNORT	CU_I	PB_I	ZN_I	AL_I	CA_I	V_I	SR_I	P_I	NI_I	MN_I	MG_I	S_I	TI_X		SB_N	AS_N	BA_N	BR_N	CE_N
22358	377894.25	5358420.4	7900	8400	10	75	57	56100	500	147	19	150	38	193	7150	200	10100	141	1.31	2.60	260	14.90	81.00
22359	377354.12	5358595.86	7350	8600	7	37	67	68400	1700	95	38	100	28	237	12200	300	3705	93	1.06	1.61	688	4.39	57.30
22360	377379.79	5358596.63	7375	8600	-5	32	17	46100	600	34	47	100	-10	79	2940	350	1910	28	0.68	2.12	641	16.60	52.60
22361	377403.6	5358598.68	7400	8600	-5	20	16	35100	500	14	42	50	-10	74	1800	100	1535	11	0.76	2.59	489	7.82	39.50
22362	377424.25	5358598.3	7425	8600	-5	28	11	26500	450	14	36	100	-10	78	1150	250	1915	10	0.53	-1.00	291	19.00	50.50
22363	377453.66	5358598.37	7450	8600	5	15	16	30500	450	17	27	100	-10	74	1480	200	1950	14	0.76	1.73	332	21.80	29.80
22364	377478.75	5358601.65	7475	8600	7	26	14	55600	450	78	22	100	-10	100	5080	150	2420	69	2.31	11.10	824	7.25	44.00
22366	377527.67	5358606.98	7525	8600	28	11	13	34500	450	8	30	-50	-10	61	1640	250	1105	6	0.50	1.06	446	24.60	21.70
22368	377550.87	5358609.67	7550	8600	9	19	26	72700	600	3	15	100	11	56	2520	150	710	-5	0.68	4.99	275	13.30	119.00
22369	377573.41	5358610.5	7575	8600	6	13	10	23100	150	6	8	50	-10	52	1440	100	910	11	0.49	-1.00	209	7.04	61.50
22370	377599.13	5358613.77	7600	8600	7	46	16	37900	250	62	23	200	-10	39	2860	250	3600	67	0.73	3.00	393	22.20	76.00
22371	377622.92	5358613.95	7625	8600	13	26	56	95500	1300	125	26	750	21	96	5990	250	4210	125	0.79	11.20	668	20.30	72.40
22372	377647.93	5358612.85	7650	8600	7	33	38	97800	900	109	20	200	16	63	4130	250	4125	107	0.95	15.80	561	34.00	50.70
22373	377673.59	5358613	7675	8600	11	30	62	96000	3300	116	67	350	16	228	7310	250	3610	134	1.00	14.80	659	82.10	60.50
22374	377698.03	5358615.04	7700	8600	12	26	51	91400	2250	124	46	300	-10	179	5680	250	449	135	1.00	11.60	609	72.80	41.50
22375	377718.06	5358615.29	7725	8600	6	18	28	62200	1600	102	57	100	-10	87	2650	100	4585	78	0.88	6.07	635	22.80	40.10
22376	377743.79	5358619.18	7750	8600	5	20	26	63600	1800	93	50	150	-10	85	2850	200	4425	79	0.89	5.00	501	83.60	40.10
22377	377767.58	5358619.98	7775	8600	7	36	36	79000	1000	75	46	200	13	79	3860	200	2950	39	1.02	11.40	627	33.30	62.70
22378	377793.3	5358623.25	7800	8600	10	30	39	84500	1100	78	45	200	14	93	4780	300	3105	73	0.89	4.31	678	8.50	68.50
22379	377819.6	5358624.01	7825	8600	6	29	33	77100	2700	99	71	150	12	115	5410	150	3170	88	0.91	5.36	736	12.40	56.60
22380	377844.03	5358625.42	7850	8600	33	20	37	40600	2100	95	68	150	-10	169	5290	150	3810	91	0.69	3.29	383	16.80	36.50
22381	377867.84	5358626.85	7875	8600	-5	19	32	66000	1200	105	36	150	-10	152	6200	150	3770	98	0.72	5.41	749	26.40	30.00
22382	377892.84	5358625.13	7900	8600	8	20	29	52700	550	115	18	250	20	98	4530	400	10400	138	1.48	7.09	186	78.70	75.40
22383	377917.87	5358625.29	7925	8600	8	14	19	47600	350	99	15	100	17	124	3970	150	11300	100	1.22	1.43	249	13.50	91.50
22384	377942.94	5358627.32	7950	8600	12	24	38	64500	1600	156	36	150	32	172	8480	150	11200	161	2.12	16.40	306	33.70	85.10
22386	377992.85	5358618.88	8000	8800	6	189	132	31600	550	82	17	100	14	141	3050	250	4820	72	1.32	3.08	193	17.10	47.30
22387	377971.56	5358818.66	7975	8800	8	60	53	35000	1450	62	30	200	20	105	2460	200	4475	73	1.30	28.70	240	27.80	36.50
22388	377944.03	5358818.55	7950	8800	9	63	57	34100	1600	82	96	250	26	232	6600	150	3485	75	1.10	3.93	515	10.20	48.30
22389	377918.99	5358818.39	7925	8800	-5	23	33	57700	1450	124	51	100	14	183	6140	150	5020	138	0.76	5.70	609	23.80	28.90
22390	377897.09	5358818.18	7900	8800	-5	26	23	46200	350	123	73	50	-10	106	2920	150	5630	126	1.05	5.96	516	20.90	19.80
22391	377870.16	5358817.43	7875	8800	-5	13	13	40300	350	68	128	-50	-10	35	980	100	4460	65	1.40	5.83	838	12.90	13.00
22392	377846.37	5358816.63	7850	8800	6	18	33	56300	1450	96	177	200	11	187	3140	250	4020	120	1.25	16.00	932	33.10	19.80
22393	377822.57	5358815.83	7825	8800	8	23	19	30600	2100	46	53	150	17	84	1540	300	3215	58	0.92	5.44	381	35.80	20.10
22394	377794.42	5358816.35	7800	8800	6	17	11	13300	650	29	21	50	-10	77	620	100	3135	48	0.87	2.22	159	5.77	18.50
22395	377770.63	5358815.55	7775	8800	6	11	9	26100	350	35	29	50	-10	39	730	150	3720	27	0.66	1.99	406	7.73	20.90
22396	377744.96	5358814.78	7750	8800	-5	-10	7	41500	300	57	35	-50	-10	40	910	100	3770	70	0.37	1.36	893	4.09	19.70
22397	377720.56	5358815.24	7725	8800	-5	10	7	22700	250	38	23	-50	-10	39	540	100	3580	38	0.55	-1.00	752	5.77	17.70
22398	377696.74	5358813.19	7700	8800	8	17	12	16100	400	18	14	50	-10	74	950	100	1855	22	0.76	-1.00	246	6.49	19.50
22399	377674.21	5358812.98	7675	8800	6	19	14	26200	700	21	25	50	-10	67	1380	150	1995	22	1.00	1.79	325	12.30	29.20
22400	377651.05	5358812.79	7650	8800	-5	21	28	40900	1500	34	46	50	-10	130	2810	150	2340	35	1.19	2.00	506	9.80	38.70
46351	377627.86	5358810.73	7625	8800	-5	15	9	20900	400	15	25	50	-10	68	1080	100	1995	18	1.03	1.44	262	9.92	34.40
46352	377602.17	5358808.71	7600	8800	8	24	18	40900	650	31	26	100	-10	74	2610	150	2370	33	1.02	2.34	349	10.10	64.40
46353	377578.97	5358806.64	7575	8800	-5	23	14	28900	250	18	13	150	-10	50	1820	300	1805	23	0.92	1.38	224	22.50	80.00
46354	377531.42	5358806.91	7550	8800	-5	-10	10	28300	150	11	6	50	-10	68	1810	150	1080	24	0.69	2.01	189	11.60	59.50
46356	377500.73	5358805.61	7500	8800	-5	72	25	52800	500	10	10	100	-10	68	2280	350	1010	8	1.80	10.60	600	64.90	114.00

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ANNELIESE PROSPECT SOILS

SAMPLE	TEAST	TNORTH	GEAST	GNORT	CU_I	PB_I	ZN_I	AL_I	CA_I	V_I	SR_I	P_I	NI_I	MN_I	MG_I	S_I	TI_X		SB_N	AS_N	BA_N	BR_N	CE_N
46358	377450.59	5358801.55	7450	8800	6	-10	11	23900	500	12	27	50	-10	111	1170	700	1425	15	0.98	2.07	412	44.50	22.70
46359	377425.56	5358801.4	7425	8800	-5	-10	11	17300	800	10	59	50	-10	98	410	200	2145	12	0.68	1.63	369	24.80	15.90
46360	377399.85	5358798.75	7400	8800	-5	-10	9	34100	650	21	69	50	-10	69	1230	100	2585	16	0.72	3.84	584	14.90	78.60
46361	377376.69	5358798.56	7375	8800	-5	15	9	27100	550	13	49	100	-10	66	1210	200	2480	17	0.58	1.10	523	19.40	61.80
46362	377351.03	5358798.42	7350	8800	7	11	15	20700	350	24	27	100	-10	109	2190	400	2435	22	0.65	1.93	287	30.20	37.40
46363	378129.97	5359006.11	8150	9000	-5	10	11	27400	1600	30	35	100	-10	73	1330	200	2360	32	0.96	1.87	231	13.50	30.30
46364	378106.79	5359006	8125	9000	-5	18	27	42600	2300	46	40	100	-10	96	2210	250	2900	50	0.98	3.31	273	44.00	35.10
46366	378079.89	5359007.22	8100	9000	-5	314	86	29000	1600	30	30	50	-10	70	1440	200	2180	37	0.88	1.69	283	15.00	31.70
46367	378059.23	5359007.68	8075	9000	-5	71	21	27100	1800	26	37	50	-10	68	1210	150	2385	28	1.04	1.97	260	12.60	32.20
46368	378035.37	5359004.47	8050	9000	-5	24	13	16900	550	14	17	50	-10	53	720	100	2345	6	1.00	1.43	166	7.87	29.50
46369	378010.34	5359005.65	8025	9000	-5	18	15	30600	1700	24	46	100	-10	70	1060	200	2400	25	1.01	1.95	304	12.60	32.40
46370	377982.75	5359004.39	8000	9000	-5	22	32	48400	3350	46	61	100	-10	115	2350	150	3065	47	1.30	2.60	407	8.54	37.40
46371	377960.83	5359004.26	7975	9000	-5	17	18	38400	1600	28	44	50	-10	84	1570	100	2480	32	1.24	1.72	353	8.92	32.90
46372	377932.64	5359003.63	7950	9000	-5	16	17	43100	1900	26	51	100	-10	83	1560	150	2605	42	1.30	2.64	496	16.90	34.00
46373	377908.83	5359003.54	7925	9000	-5	16	17	40600	2300	30	57	100	-10	87	1580	150	2250	33	1.45	3.55	433	18.30	32.90
46374	377885.07	5359005.31	7900	9000	-5	15	44	52000	4250	56	94	100	-10	209	4060	200	3155	63	1.13	3.41	474	22.00	37.10
46375	377860.63	5359004.61	7875	9000	-5	12	51	32800	2750	38	58	50	-10	91	1660	150	2710	43	1.02	2.81	355	14.50	30.60
46376	377835.62	5359007.03	7850	9000	-5	17	36	53700	3450	52	66	100	-10	159	3580	150	3220	61	1.18	5.52	476	11.20	36.60
46377	377811.82	5359006.93	7825	9000	7	17	24	45400	1600	55	49	100	-10	104	3130	50	3545	67	1.45	8.07	317	26.40	41.90
46378	377786.77	5359006.86	7800	9000	18	31	43	50000	800	64	31	150	11	118	3660	200	3750	70	1.61	12.30	256	48.40	53.80
46379	377764.25	5359008.61	7775	9000	6	22	19	37000	1250	42	32	100	-10	77	1790	100	3120	48	1.13	5.84	279	28.30	44.80
46380	377737.92	5359007.32	7750	9000	5	12	14	26400	350	26	20	50	-10	66	1360	50	2120	33	1.09	2.89	271	7.45	31.30
46381	377714.1	5359005.98	7725	9000	35	13	14	28600	1550	23	49	50	-10	93	1590	100	2325	30	0.89	2.08	304	7.38	23.90
46382	377687.81	5359006.56	7700	9000	-5	10	8	22600	750	15	34	50	-10	54	940	100	2195	17	0.86	1.08	242	9.22	22.60
46383	377666.51	5359006.41	7675	9000	15	25	27	32000	1650	21	66	100	-10	81	1370	200	2360	20	0.86	1.48	421	17.20	27.00
46384	377640.24	5359008.24	7650	9000	8	11	21	32800	1250	19	56	50	-10	120	1730	150	1900	19	0.94	1.45	385	11.20	27.00
46386	377615.2	5359008.79	7625	9000	16	-10	9	19000	450	10	28	-50	-10	51	770	100	1785	12	0.80	-1.00	239	7.64	22.10
46387	377593.26	5359008.03	7600	9000	7	-10	9	15000	300	9	16	50	-10	76	750	100	1535	10	0.95	1.45	171	7.35	28.90
46388	377570.09	5359007.92	7575	9000	12	12	14	19900	550	16	27	50	-10	57	890	150	2145	18	1.01	1.65	210	9.16	27.20
46389	377543.78	5359007.88	7550	9000	6	-10	10	23100	350	13	22	50	-10	69	1140	150	1820	10	0.87	1.18	356	11.90	65.00
46390	377519.33	5359006.56	7525	9000	8	10	11	30100	250	14	21	50	-10	49	1380	150	1435	14	0.95	2.09	367	16.50	67.10
46391	377493.04	5359007.14	7500	9000	-5	11	10	32300	300	13	27	50	-10	68	1690	200	1835	12	1.13	1.47	414	18.50	63.10
46392	377468.61	5359007.06	7475	9000	-5	-10	10	36500	300	8	30	100	-10	34	1280	200	1835	11	0.80	1.52	504	21.30	137.00
46393	377444.2	5359008.22	7450	9000	-5	13	13	65400	350	82	16	50	-10	114	6190	200	1135	84	1.27	1.15	1400	20.80	17.10
46394	377419.77	5359007.52	7425	9000	6	-10	12	32000	1050	13	58	50	-10	59	830	850	2290	10	0.88	1.06	561	65.20	7.64
46395	377395.95	5359006.8	7400	9000	-5	-10	16	40000	650	13	54	50	-10	64	1120	500	2255	25	1.05	6.92	342	49.00	32.50
46396	377371.51	5359006.09	7375	9000	-5	-10	17	49700	650	20	66	50	-10	45	1430	450	2770	26	0.74	4.10	459	30.00	40.90
46397	377347.71	5359006	7350	9000	-5	14	23	53400	800	26	69	50	-10	73	2380	150	2380	20	0.92	4.70	752	12.10	51.50
	Detection Limit				-5	-10	-5	-0.01	-0.05	-2	-1	-100	-10	-10	-0.01	-50	-50	-5	-0.2	-1	-100	-2	-2
	Units				ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	Method				GI201	GI201	GI201	GI201	GI201	GI201	GI201	GI201	GI201	GI201	GI201	GI201	GX401	GX401	NAA	NAA	NAA	NAA	NAA
	Laboratory				Analab	Analab	Analab	Anala	Analab	Analab	Analab	Analab	Analab	Analab	Analab	Annala	Analab	Analab	Beque	Beque	Beque	Bequere	Bequer

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ANNELIESE PROSPECT SOILS

SAMPLE	CO_N	CR_N	CS_N	EU_N	AU_N	FE_N	HF_N	IR_N	K_N	LA_N	LU_N	MO_N	RB_N	SC_N	SE_N	SM_N	AG_N	NA_N	TA_N	TH_N	W_N	YB_N	ZN_N
22310	1.54	28.60	2.20	0.76	-5.00	1.07	6.73	-20	1.22	22.90	0.35	-5	69.30	6.22	-5.00	3.67	-5	0.34	1.13	13.10	-2.00	2.25	-100
22311	-1.00	8.00	1.83	0.67	-5.00	0.59	4.97	-20	1.61	38.90	0.47	-5	65.30	4.39	-5.00	5.30	-5	0.22	1.16	15.10	-2.00	3.04	-100
22312	-1.00	14.20	2.89	0.86	-5.00	0.76	4.46	-20	1.69	30.40	0.34	-5	54.50	5.61	-5.00	4.33	-5	0.30	-1.00	9.24	-2.00	2.23	-100
22313	-1.00	25.10	3.90	0.85	-5.00	0.82	4.96	-20	1.49	34.60	0.38	-5	102.00	4.98	-5.00	4.50	-5	0.07	-1.00	11.50	-2.00	2.32	-100
22314	-1.00	24.30	1.30	0.78	-5.00	0.49	5.80	-20	0.43	34.60	0.33	-5	29.50	2.50	-5.00	4.32	-5	0.12	1.14	10.00	-2.00	2.13	-100
22315	-1.00	16.80	1.53	-0.50	-5.00	0.72	3.14	-20	0.56	21.40	0.23	-5	42.00	1.85	-5.00	2.55	-5	0.09	-1.00	7.33	-2.00	1.39	-100
22316	-1.00	12.50	2.34	0.69	-5.00	0.47	4.05	-20	1.41	52.80	0.41	-5	81.70	3.06	-5.00	5.95	-5	0.39	1.45	16.90	-2.00	2.52	-100
22317	-1.00	12.00	2.69	0.55	-5.00	0.69	3.85	-20	1.25	30.40	0.32	-5	81.60	3.75	-5.00	3.62	-5	0.20	1.23	12.60	-2.00	1.96	-100
22318	-1.00	10.40	2.20	0.70	-5.00	0.45	4.35	-20	1.44	30.20	0.33	-5	68.20	5.31	-5.00	3.79	-5	0.20	1.06	11.40	-2.00	2.17	-100
22319	9.51	26.60	2.84	0.69	-5.00	0.76	4.05	-20	0.94	46.90	0.32	-10	76.90	2.87	-5.00	5.40	-5	0.46	-1.00	16.40	-2.00	2.13	-100
22320	3.91	141.00	2.35	1.20	-5.00	2.01	5.54	-20	0.94	35.50	0.39	-5	57.00	10.80	-5.00	6.38	-5	0.16	1.66	9.24	-2.00	2.53	-100
22321	-1.00	63.30	1.31	1.20	-5.00	0.59	5.56	-20	0.56	35.60	0.29	-5	32.50	5.04	-5.00	6.14	-5	0.14	1.53	6.51	-2.00	2.22	-100
22322	24.10	127.00	3.67	2.14	-5.00	6.23	6.92	-20	1.69	43.50	0.60	-5	89.90	28.40	-5.00	9.93	-5	0.24	2.54	9.79	-2.00	3.79	110
22323	-1.00	16.80	-1.00	-0.50	-5.00	0.55	1.64	-20	-0.20	6.57	-0.20	-5	-20.00	2.43	-5.00	1.11	-5	0.04	-1.00	2.93	-2.00	0.71	-100
22324	2.54	102.00	2.65	2.02	-5.00	3.89	7.69	-20	1.01	55.50	0.51	-5	58.90	17.20	-5.00	11.20	-5	0.08	2.93	10.40	-2.00	3.38	-100
22326	2.14	113.00	4.22	1.77	-5.00	4.13	6.36	-20	1.56	41.20	0.45	-5	76.30	17.70	-5.00	8.66	-5	0.07	2.23	9.25	-2.00	3.12	-100
22327	2.30	106.00	4.51	2.10	-5.00	2.12	8.07	-20	1.23	49.80	0.55	-5	90.70	18.70	-5.00	10.40	-5	0.07	2.61	11.40	-2.00	3.71	-100
22328	2.72	61.70	4.06	1.73	-5.00	2.27	5.72	-20	1.83	48.70	0.53	-5	114.00	13.30	-5.00	8.98	-5	0.04	1.45	13.70	-2.00	3.53	-100
22329	1.63	59.90	4.14	1.46	-5.00	1.21	8.10	-20	1.04	44.00	0.55	-5	82.30	13.20	-5.00	8.74	-5	0.08	2.11	12.20	3.94	3.67	-100
22330	1.32	77.70	4.09	1.06	-5.00	3.39	6.06	-20	0.79	32.50	0.44	-5	64.30	14.70	-5.00	6.56	-5	0.13	1.65	8.51	-2.00	2.97	-100
22331	14.90	80.70	3.25	1.07	-5.00	12.60	5.40	-20	0.89	26.10	0.37	-5	65.50	10.50	-5.00	5.57	-5	0.08	1.80	8.05	-2.00	2.84	-100
22332	-1.00	51.00	2.53	1.53	-5.00	1.30	7.08	-20	0.71	47.50	0.47	-5	50.10	9.18	-5.00	9.37	-5	0.08	2.80	11.80	3.90	3.54	-100
22333	1.15	92.00	5.27	1.96	-5.00	3.10	8.13	-20	1.26	51.90	0.54	-5	111.00	18.60	-5.00	10.40	-5	0.08	2.64	12.00	-2.00	3.82	-100
22334	1.00	46.00	4.22	0.93	-5.00	2.05	4.84	-20	1.44	38.70	0.44	-5	77.10	11.30	-5.00	5.80	-5	0.58	1.02	11.70	-2.00	2.84	-100
22335	1.79	53.70	4.02	0.88	-5.00	2.49	3.99	-20	1.16	36.60	0.37	-5	66.50	11.90	-5.00	5.52	-5	0.32	1.06	9.80	-2.00	2.46	-100
22336	-1.00	11.70	2.09	1.12	-5.00	0.74	6.78	-20	1.25	43.30	0.49	-5	42.00	6.04	-5.00	6.33	-5	0.74	1.19	11.20	-2.00	3.08	-100
22337	-1.00	13.80	1.92	0.65	-5.00	0.77	5.13	-20	1.21	17.60	0.34	-5	42.60	5.67	-5.00	2.58	-5	0.58	-1.00	8.85	-2.00	2.16	-100
22338	-1.00	11.00	2.15	-0.50	-5.00	0.74	4.29	-20	1.07	7.27	0.25	-5	45.80	4.07	-5.00	1.04	-5	0.26	1.08	5.91	-2.00	1.40	-100
22339	-1.00	13.30	1.34	0.73	-5.00	0.35	3.59	-20	0.68	48.90	0.31	-5	27.60	1.35	-5.00	5.13	-5	0.14	1.51	13.90	-2.00	1.99	-100
22340	-1.00	8.00	2.81	0.65	-5.00	0.67	3.81	-20	1.51	54.70	0.36	-10	95.50	1.98	-5.00	5.82	-5	0.26	1.03	20.00	-2.00	2.25	-100
22341	-1.00	9.40	2.81	0.65	-5.00	0.62	4.55	-20	1.87	65.20	0.44	-5	108.00	3.13	-5.00	7.46	-5	0.20	2.06	22.50	-2.00	2.86	-100
22342	-1.00	11.60	2.56	0.65	-5.00	1.48	5.12	-20	1.04	46.10	0.31	-5	55.70	5.10	-5.00	5.26	-5	0.21	1.65	14.10	-2.00	2.08	-100
22343	-1.00	11.30	1.49	1.01	-5.00	0.64	4.52	-20	0.77	55.30	0.31	-5	42.10	4.11	-5.00	6.79	-5	0.30	2.52	11.30	-2.00	2.05	-100
22344	-1.00	9.40	2.02	0.93	-5.00	0.93	4.94	-20	1.23	46.10	0.35	-5	60.40	6.29	-5.00	5.93	-5	0.57	1.15	13.40	-2.00	2.32	-100
22346	1.47	11.80	3.94	0.82	-5.00	1.57	4.92	-20	1.25	35.40	0.38	-5	78.40	7.30	-5.00	4.95	-5	0.68	1.06	13.90	-2.00	2.26	-100
22347	2.35	31.20	4.60	-0.50	-5.00	2.11	4.68	-20	1.11	21.20	0.36	-5	82.60	8.52	-5.00	3.33	-5	0.49	-1.00	13.00	-2.00	2.24	-100
22348	2.62	33.00	4.62	0.69	-5.00	2.01	4.76	-20	1.17	20.70	0.36	-5	75.30	8.28	-5.00	3.22	-5	0.64	1.34	12.50	-2.00	2.27	-100
22349	10.90	625.00	4.29	0.74	-5.00	3.01	4.34	-20	0.98	19.10	0.33	-5	66.30	8.46	-5.00	3.18	-5	0.27	1.13	11.50	-2.00	2.20	111
22350	159.00	2970.00	1.13	-0.50	-5.00	4.78	0.99	-20	0.24	5.55	-0.20	-5	-20.00	5.59	-5.00	0.98	-5	0.16	-1.00	2.25	-2.00	-0.50	142
22351	1.71	117.00	4.75	1.59	-5.00	0.83	7.22	-20	2.80	48.40	0.65	-5	133.00	17.60	-5.00	9.65	-5	0.06	2.40	13.10	-2.00	4.36	-100
22352	1.56	128.00	2.35	1.38	-5.00	0.94	6.38	-20	1.58	34.30	0.44	-5	75.40	15.80	-5.00	7.39	-5	0.05	2.66	7.23	-2.00	2.98	-100
22354	-1.00	85.10	3.06	1.22	-5.00	0.88	7.81	-20	2.00	40.80	0.54	-5	111.00	14.20	-5.00	8.20	-5	0.07	2.26	11.40	-2.00	3.68	-100
22355	-1.00	60.90	1.20	0.88	-5.00	0.88	5.97	-20	0.42	26.40	0.33	-5	27.60	6.32	-5.00	5.39	-5	0.09	1.47	6.57	-2.00	2.27	-100
22356	-1.00	38.50	1.57	1.17	-5.00	0.86	7.30	-20	0.59	33.90	0.47	-5	29.20	6.51	-5.00	6.98	-5	0.12	1.69	8.47	2.41	2.97	-100
22357	1.62	80.30	5.01	1.82	-5.00	3.38	6.32	-20	2.20	43.90	0.51	-5	130.00	18.30	-5.00	8.86	-5	0.07	2.50	12.30	-2.00	3.39	-100

383093

SAMPLE	CO_N	CR_N	CS_N	EU_N	AU_N	FE_N	HF_N	IR_N	K_N	LA_N	LU_N	MO_N	RB_N	SC_N	SE_N	SM_N	AG_N	NA_N	TA_N	TH_N	W_N	YB_N	ZN_N
22358	6.16	83.90	3.74	1.58	-5.00	3.95	7.35	-20	1.50	37.20	0.60	-5	87.60	20.50	-5.00	8.58	-5	0.38	2.66	9.03	-2.00	3.92	-100
22359	3.28	71.50	4.98	0.77	-5.00	2.40	4.98	-20	2.16	29.10	0.41	-5	93.70	13.50	-5.00	4.34	-5	0.18	-1.00	13.10	-2.00	2.76	-100
22360	-1.00	14.70	3.09	0.59	-5.00	0.78	5.29	-20	1.80	26.10	0.46	-5	84.80	6.21	-5.00	3.69	-5	0.68	-1.00	13.90	-2.00	2.87	-100
22361	-1.00	10.10	1.67	-0.50	-5.00	0.66	4.93	-20	1.31	19.50	0.44	-5	80.50	3.66	-5.00	2.75	-5	0.60	1.32	16.20	-2.00	2.76	-100
22362	-1.00	8.00	2.16	0.59	-5.00	0.67	5.10	-20	0.91	25.40	0.38	-5	44.40	4.34	-5.00	3.49	-5	0.58	1.39	10.30	-2.00	2.40	-100
22363	-1.00	15.70	2.49	-0.50	-5.00	0.68	4.41	-20	1.18	15.20	0.31	-5	53.20	4.20	-5.00	2.10	-5	0.38	1.43	9.10	-2.00	1.86	-100
22364	-1.00	34.00	4.87	0.57	-5.00	1.39	5.37	-20	2.78	24.30	0.40	-10	158.00	8.97	-5.00	2.54	-5	0.12	1.52	14.80	-2.00	2.66	-100
22366	-1.00	10.00	1.86	-0.50	-5.00	0.55	4.92	-20	1.83	10.90	0.48	-10	97.40	2.62	-5.00	1.65	-5	0.50	2.05	23.90	-2.00	3.05	-100
22368	-1.00	-5.00	3.02	0.79	-5.00	1.07	5.26	-20	1.30	55.30	0.43	-10	95.10	2.13	-5.00	6.17	-5	0.04	1.33	47.00	-2.00	2.87	-100
22369	-1.00	8.90	1.74	-0.50	-5.00	0.51	2.95	-20	0.93	32.00	0.25	-5	58.30	1.95	-5.00	3.63	-5	0.05	1.22	10.70	-2.00	1.69	-100
22370	-1.00	37.30	3.72	0.84	-5.00	0.46	3.69	-20	1.34	42.30	0.32	-5	89.50	6.78	-5.00	5.28	-5	0.04	1.08	10.40	-2.00	2.13	-100
22371	3.50	13.80	4.45	1.17	-5.00	2.68	5.31	-20	1.64	34.50	0.41	-10	105.00	12.70	-5.00	5.73	-5	0.08	1.52	16.70	-2.00	2.77	-100
22372	1.92	17.60	5.15	0.66	-5.00	2.28	5.16	-20	1.65	26.50	0.39	-5	111.00	10.90	-5.00	3.78	-5	0.06	1.04	17.80	-2.00	2.59	-100
22373	4.48	19.70	4.58	0.86	-5.00	4.80	5.92	-20	1.40	37.80	0.44	-10	99.10	10.80	-5.00	5.12	-5	0.13	1.37	22.40	-2.00	2.91	-100
22374	3.72	22.30	3.77	0.64	-5.00	4.72	5.48	-20	1.06	28.00	0.41	-10	79.10	10.10	-5.00	3.80	-5	0.09	1.15	18.10	-2.00	2.51	-100
22375	1.15	20.40	3.79	0.54	-5.00	2.14	5.76	-20	1.41	26.50	0.33	-5	75.60	7.99	-5.00	3.23	-5	0.08	1.17	13.50	-2.00	2.25	-100
22376	-1.00	19.30	4.72	-0.50	-5.00	2.55	5.54	-20	1.10	24.70	0.36	-5	85.00	7.30	-5.00	3.29	-5	0.06	1.03	13.70	-2.00	2.25	-100
22377	1.71	20.60	4.97	0.60	-5.00	2.11	4.82	-20	1.68	33.80	0.40	-5	115.00	7.89	-5.00	4.52	-5	0.13	1.49	17.50	-2.00	2.48	-100
22378	2.43	27.50	5.15	1.05	-5.00	1.23	5.41	-20	2.22	36.70	0.43	-10	129.00	10.10	-5.00	5.02	-5	0.16	1.03	19.50	-2.00	2.74	-100
22379	1.78	24.00	4.53	0.64	-5.00	1.82	5.30	-20	2.06	32.30	0.39	-5	114.00	9.10	-5.00	4.37	-5	0.25	1.12	15.40	-2.00	2.51	-100
22380	2.49	9.20	3.48	-0.50	-5.00	3.51	5.56	-20	1.09	16.30	0.39	-5	70.20	7.04	-5.00	2.86	-5	0.58	1.14	13.50	-2.00	2.31	-100
22381	2.74	14.10	4.63	0.51	-5.00	3.55	6.15	-20	1.55	14.70	0.39	-5	116.00	9.51	-5.00	2.71	-5	0.24	1.18	14.60	-2.00	2.55	-100
22382	1.88	86.00	3.93	1.08	-5.00	3.35	5.85	-20	1.30	33.70	0.45	-5	85.10	15.20	-5.00	7.04	-5	0.09	1.95	8.68	-2.00	3.03	-100
22383	1.80	78.20	4.52	1.33	-5.00	1.97	8.53	-20	1.19	41.90	0.56	-5	86.50	14.70	-5.00	8.55	-5	0.15	2.18	10.70	-2.00	3.81	-100
22384	4.65	156.00	3.64	1.36	-5.00	4.46	7.04	-20	1.07	39.40	0.44	-5	93.80	18.20	-5.00	8.03	-5	0.15	1.59	10.20	-2.00	3.17	-100
22386	2.21	85.60	2.89	0.77	-5.00	2.19	7.35	-20	0.79	22.00	0.36	-5	47.90	9.44	-5.00	3.94	-5	0.17	1.67	7.55	-2.00	2.39	-100
22387	2.04	51.90	2.48	-0.50	-5.00	3.80	5.77	-20	0.77	17.30	0.34	-5	34.90	5.95	-5.00	3.15	-5	0.33	1.21	10.30	-2.00	2.32	-100
22388	7.86	181.00	2.35	0.66	-5.00	1.41	4.94	-20	0.49	25.40	0.33	-5	57.70	13.40	-5.00	3.67	-5	0.34	-1.00	8.79	-2.00	1.99	-100
22389	2.71	49.90	5.57	0.53	-5.00	2.62	6.10	-20	1.38	15.20	0.40	-5	110.00	12.40	-5.00	2.55	-5	0.25	1.55	13.20	-2.00	2.56	-100
22390	1.55	43.10	3.53	-0.50	-5.00	2.70	7.01	-20	1.09	10.30	0.43	-10	66.20	11.60	-5.00	1.78	-5	0.24	1.56	12.50	-2.00	2.65	-100
22391	-1.00	9.30	2.62	-0.50	-5.00	0.75	5.63	-20	0.87	5.87	0.39	-5	47.60	8.38	-5.00	1.13	-5	0.44	1.52	11.00	-2.00	2.52	-100
22392	2.13	52.30	3.47	-0.50	-5.00	1.81	4.48	-20	0.72	9.45	0.32	-5	52.10	11.80	-5.00	1.66	-5	0.94	-1.00	9.70	-2.00	2.27	-100
22393	-1.00	35.50	2.68	-0.50	-5.00	1.02	4.48	-20	0.63	9.76	0.25	-5	45.90	5.25	-5.00	1.67	-5	0.39	-1.00	7.52	-2.00	1.60	-100
22394	-1.00	30.70	1.21	-0.50	-5.00	0.73	4.64	-20	0.48	8.88	0.25	-5	25.50	4.32	-5.00	1.49	-5	0.14	-1.00	6.34	-2.00	1.51	-100
22395	-1.00	20.50	2.37	-0.50	-5.00	0.57	4.07	-20	0.70	10.20	0.25	-5	37.50	5.51	-5.00	1.69	-5	0.31	1.42	7.02	-2.00	1.72	-100
22396	-1.00	23.90	3.35	-0.50	-5.00	0.78	3.31	-20	1.61	9.93	0.26	-5	62.00	7.64	-5.00	1.55	-5	0.38	1.37	7.25	-2.00	1.70	-100
22397	-1.00	21.40	2.34	-0.50	-5.00	0.59	5.01	-20	1.08	8.95	0.28	-5	36.70	5.56	-5.00	1.49	-5	0.17	-1.00	6.45	-2.00	1.92	-100
22398	-1.00	18.50	1.41	-0.50	-5.00	0.73	4.69	-20	0.66	9.79	0.22	-5	43.50	3.00	-5.00	1.58	-5	0.15	-1.00	6.62	-2.00	1.50	-100
22399	-1.00	16.50	1.98	-0.50	-5.00	0.71	5.31	-20	0.98	13.80	0.30	-5	55.20	3.76	-5.00	2.31	-5	0.33	-1.00	8.72	-2.00	1.84	-100
22400	1.78	27.50	2.37	0.59	-5.00	1.11	5.82	-20	1.18	19.60	0.32	-5	74.80	5.45	-5.00	3.15	-5	0.50	-1.00	10.30	-2.00	2.14	-100
46351	-1.00	26.00	1.27	-0.50	-5.00	0.64	4.87	-20	0.81	18.30	0.28	-5	43.30	3.20	-5.00	2.56	-5	0.34	-1.00	8.06	-2.00	1.80	-100
46352	-1.00	27.80	2.71	0.61	-5.00	0.79	4.85	-20	1.41	34.40	0.36	-5	77.40	4.79	-5.00	4.37	-5	0.21	1.57	15.60	-2.00	2.38	-100
46353	-1.00	14.70	2.81	0.55	-5.00	0.44	3.55	-20	0.91	42.90	0.29	-5	61.70	3.14	-5.00	4.67	-5	0.06	1.33	12.00	-2.00	1.80	-100
46354	-1.00	14.90	2.34	-0.50	-5.00	0.64	3.01	-20	1.01	30.70	0.28	-5	72.90	2.39	-5.00	3.60	-5	0.02	1.00	12.20	-2.00	1.83	-100
46356	-1.00	9.60	4.10	1.09	-5.00	0.72	4.36	-20	1.98	57.40	0.46	-10	110.00	3.36	-5.00	6.50	-5	0.07	1.30	29.10	-2.00	3.02	-100

3830094

ANNELIESE PROSPECT SOILS

SAMPLE	CO_N	CR_N	CS_N	EU_N	AU_N	FE_N	HF_N	IR_N	K_N	LA_N	LU_N	MO_N	RB_N	SC_N	SE_N	SM_N	AG_N	NA_N	TA_N	TH_N	W_N	YB_N	ZN_N
46358	-1.00	18.00	1.74	-0.50	-5.00	1.08	3.43	-20	0.95	11.30	0.23	-5	44.10	2.79	-5.00	1.43	-5	0.26	-1.00	7.68	-2.00	1.49	-100
46359	-1.00	10.40	1.05	-0.50	-5.00	0.63	4.92	-20	0.71	7.97	0.23	-5	-20.00	3.05	-5.00	1.17	-5	0.57	-1.00	4.38	-2.00	1.48	-100
46360	-1.00	15.20	1.81	0.82	-5.00	0.75	6.28	-20	1.21	39.80	0.47	-5	39.00	6.08	-5.00	5.64	-5	0.88	1.60	12.10	-2.00	2.88	-100
46361	-1.00	9.70	2.19	0.75	-5.00	0.65	5.35	-20	0.91	30.50	0.36	-5	48.20	4.56	-5.00	4.34	-5	0.65	1.99	8.59	-2.00	2.32	-100
46362	1.59	39.00	1.48	-0.50	-5.00	1.20	4.33	-20	0.43	18.90	0.23	-5	20.20	5.01	-5.00	2.71	-5	0.32	-1.00	5.69	-2.00	1.47	-100
46363	-1.00	42.70	2.05	-0.50	-5.00	0.99	5.32	-20	0.79	14.60	0.26	-5	47.40	4.27	-5.00	2.61	-5	0.34	-1.00	6.47	-2.00	1.70	-100
46364	1.26	35.60	2.72	0.58	-5.00	2.25	5.19	-20	0.86	16.90	0.32	-5	57.60	5.77	-5.00	2.97	-5	0.31	1.01	9.07	-2.00	2.08	-100
46366	-1.00	29.10	2.62	0.53	-5.00	1.05	5.13	-20	0.92	15.30	0.28	-5	53.20	4.37	-5.00	2.73	-5	0.26	-1.00	7.12	-2.00	1.78	-100
46367	-1.00	27.70	2.33	-0.50	-5.00	0.81	5.16	-20	1.01	15.50	0.27	-5	52.40	3.99	-5.00	2.63	-5	0.45	1.19	7.14	-2.00	1.95	-100
46368	-1.00	21.60	1.51	-0.50	-5.00	0.48	5.11	-20	0.58	13.90	0.25	-5	29.40	2.65	-5.00	2.36	-5	0.26	-1.00	5.99	-2.00	1.59	-100
46369	-1.00	24.20	1.65	-0.50	-5.00	0.68	5.57	-20	0.85	15.50	0.28	-5	53.20	3.64	-5.00	2.64	-5	0.63	1.45	7.40	-2.00	1.77	-100
46370	1.27	24.20	2.60	0.64	-5.00	1.05	5.62	-20	1.49	17.90	0.32	-5	70.10	5.98	-5.00	3.12	-5	0.57	-1.00	10.30	-2.00	2.18	-100
46371	-1.00	20.80	2.65	-0.50	-5.00	0.92	5.05	-20	1.07	15.90	0.28	-5	65.60	4.67	-5.00	2.66	-5	0.55	1.16	9.16	-2.00	2.01	-100
46372	-1.00	17.60	3.38	-0.50	-5.00	0.90	5.68	-20	1.32	17.00	0.34	-5	71.60	5.26	-5.00	2.84	-5	0.74	1.26	9.56	-2.00	2.05	-100
46373	-1.00	15.80	2.87	0.51	-5.00	1.03	4.68	-20	1.16	16.00	0.32	-5	65.30	4.74	-5.00	2.70	-5	0.76	1.02	8.86	-2.00	2.03	-100
46374	3.35	20.60	3.29	0.64	-5.00	1.54	5.40	-20	1.63	19.10	0.38	-5	84.30	7.67	-5.00	3.19	-5	1.00	1.11	10.70	-2.00	2.30	-100
46375	-1.00	22.50	2.58	-0.50	-5.00	0.89	5.51	-20	0.96	14.60	0.30	-5	48.60	4.52	-5.00	2.55	-5	0.59	1.06	8.30	-2.00	2.06	-100
46376	1.99	34.50	3.43	0.65	-5.00	1.73	5.61	-20	1.32	18.30	0.36	-5	83.10	6.35	-5.00	3.21	-5	0.51	1.17	9.88	-2.00	2.20	-100
46377	2.01	62.70	2.99	0.63	-5.00	2.42	6.92	-20	1.05	19.30	0.36	-5	58.50	7.14	-5.00	3.54	-5	0.51	1.34	10.50	-2.00	2.31	-100
46378	2.89	56.30	3.61	0.87	6.10	3.18	6.60	-20	0.90	25.80	0.41	-5	54.40	8.02	-5.00	4.70	-5	0.33	-1.00	11.70	-2.00	2.59	-100
46379	-1.00	38.90	3.07	0.59	-5.00	1.49	6.37	-20	1.00	21.80	0.35	-5	51.40	5.35	-5.00	3.76	-5	0.26	1.33	8.32	-2.00	2.25	-100
46380	-1.00	28.70	2.75	-0.50	-5.00	0.73	5.95	-20	1.01	14.60	0.31	-5	53.90	4.20	-5.00	2.59	-5	0.23	1.11	7.74	-2.00	2.02	-100
46381	-1.00	15.10	2.24	-0.50	-5.00	0.74	5.85	-20	1.34	11.60	0.33	-5	50.90	4.02	-5.00	2.05	-5	0.62	1.15	8.58	-2.00	2.02	-100
46382	-1.00	19.60	1.80	-0.50	-5.00	0.43	6.10	-20	0.97	10.90	0.27	-5	41.80	3.05	-5.00	1.93	-5	0.55	1.80	7.03	-2.00	1.76	-100
46383	-1.00	16.00	2.07	-0.50	-5.00	0.66	5.47	-20	1.17	13.60	0.31	-5	51.60	3.70	-5.00	2.27	-5	0.81	1.30	8.49	-2.00	1.96	-100
46384	-1.00	16.50	1.97	-0.50	-5.00	0.89	5.46	-20	1.27	13.40	0.31	-5	58.90	3.75	-5.00	2.27	-5	0.71	-1.00	8.98	-2.00	1.91	-100
46386	-1.00	19.10	1.39	-0.50	-5.00	0.43	5.66	-20	0.91	10.10	0.26	-5	34.00	2.41	-5.00	1.76	-5	0.40	1.04	6.13	-2.00	1.62	-100
46387	-1.00	23.60	1.31	-0.50	-5.00	0.65	5.28	-20	0.51	14.40	0.24	-5	36.80	2.11	-5.00	2.12	-5	0.23	1.22	5.72	-2.00	1.51	-100
46388	-1.00	20.70	1.81	-0.50	-5.00	0.45	5.42	-20	0.60	13.20	0.25	-5	35.90	2.70	-5.00	2.08	-5	0.32	1.04	6.22	-2.00	1.65	-100
46389	-1.00	13.00	2.00	0.52	-5.00	0.61	4.49	-20	1.13	34.10	0.31	-5	48.40	2.90	-5.00	3.91	-5	0.28	1.44	10.20	-2.00	1.92	-100
46390	-1.00	12.30	2.25	0.55	-5.00	0.46	4.14	-20	1.10	35.30	0.33	-5	68.50	2.87	-5.00	4.14	-5	0.25	1.30	13.20	-2.00	2.05	-100
46391	-1.00	9.40	2.44	0.62	-5.00	0.59	4.55	-20	1.31	33.40	0.39	-5	76.40	3.54	-5.00	3.92	-5	0.31	1.64	15.20	-2.00	2.52	-100
46392	-1.00	6.30	1.68	0.89	-5.00	0.46	4.50	-20	1.44	73.70	0.44	-5	80.50	3.18	-5.00	7.77	-5	0.39	1.75	21.90	-2.00	2.71	-100
46393	-1.00	35.40	5.80	-0.50	-5.00	0.88	5.19	-20	3.35	9.37	0.39	-10	186.00	8.49	-5.00	1.45	-5	0.07	1.55	15.30	-2.00	2.48	-100
46394	-1.00	7.20	1.81	-0.50	-5.00	0.40	4.80	-20	1.36	4.40	0.27	-5	43.00	3.63	-5.00	0.62	-5	0.56	-1.00	6.99	-2.00	1.63	-100
46395	-1.00	8.80	2.23	-0.50	-5.00	0.78	4.74	-20	0.80	15.30	0.34	-5	28.90	4.53	-5.00	2.36	-5	0.77	1.20	6.94	-2.00	2.22	-100
46396	-1.00	9.60	3.35	0.61	-5.00	0.49	5.77	-20	1.34	19.60	0.39	-5	44.70	5.93	-5.00	3.14	-5	0.79	1.29	9.34	-2.00	2.46	-100
46397	-1.00	10.60	3.40	0.64	-5.00	0.80	5.74	-20	1.49	24.00	0.47	-5	68.90	7.31	-5.00	3.70	-5	0.94	1.83	11.80	-2.00	2.99	-100
	-1	-5	-1	-0.5	-5	-0.05	-0.5	-20	-0.2	-0.5	-0.2	-5	-20	-0.1	-5	-0.2	-5	-0.01	-1	-0.5	-2	-0.5	-100
	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA	NAA
	Bequer	Bequerel	Beque	Beque	Beque	Beque	Beque	Beque	Beque	Beque	Beque	Beque	Bequere	Beque	Beque	Beque	Beque	Beque	Beque	Beque	Beque	Beque	Bequerel

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APPENDIX 6

Pb Isotope Study

383097

CSIRO
AUSTRALIA

DIVISION OF EXPLORATION AND MINING

EXPLORATION AND MINING REPORT 288C

Pb ISOTOPIC ASSESSMENT OF A SAMPLE FROM THE HENTY REGION, TASMANIA

G.J. Denton, G.R. Carr, M.J. Korsch, and B.L. Gardner

Sirotope

Prepared for
Michael Vicary, RGC Exploration Pty Ltd

August 1996

CONFIDENTIAL REPORT

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CSIRO Division of Exploration and Mining
51 Delhi Road NORTH RYDE 2113

AIM

To measure the Pb isotopic composition of a whole rock sample from near the North Henty Fault, western Tasmania. The data are to be compared with the Pb isotopic composition reference signatures already established for major mineralisation in this region, which will aid in establishing the metallogenic significance of this sample.

SAMPLES

One whole rock sample was supplied for analysis numbered *T37747*. It was located close to the North Henty Fault hosted in the central volcanics, and characterised by the presence of massive pyrite.

RESULTS

The results of the analysis are tabulated and plotted below.

Table 1. Results of Pb isotopic dilution analysis giving both Pb content and isotopic composition of the sample.

Client No.	$^{206}Pb/^{204}Pb$	$^{207}Pb/^{204}Pb$	$^{208}Pb/^{204}Pb$	Pb Conc. (ppm)	Date of Analysis	Quality of Analysis
T37747	18.457	15.622	38.268	68	29-5-96	1

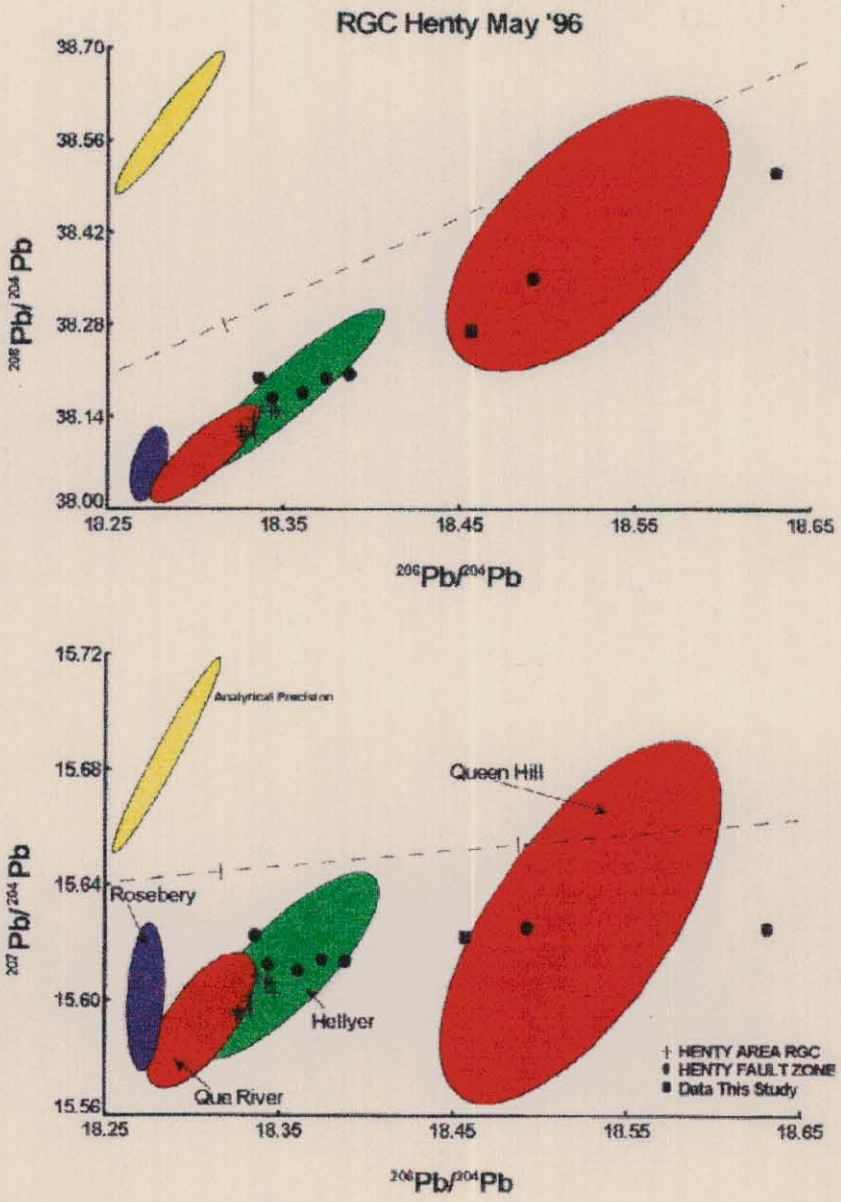

Figure 1. $^{208}Pb/^{204}Pb$ vs. $^{206}Pb/^{204}Pb$ and $^{207}Pb/^{204}Pb$ vs. $^{206}Pb/^{204}Pb$ plots showing the Pb isotopic composition of the sample and comparing it to major mineralisation in the Henty Region. The crustal Pb growth curves shown are from Cumming and Richards (1975).

INTERPRETATION

The interpretation of Pb isotopic composition using our model is terrane specific. Each terrane falls into one of three categories which are explained in detail in Appendix 1. The Cambrian Mt Read Volcanics and Devonian plutonic rocks of western Tasmania fall into Category 2 under this classification. There are several known signatures in the province, but there is not total understanding of their relationship to the metallogenesis in the area.

The sample *T37747* plots on the edge of the ellipse for Queen Hill on both the $^{208}Pb/^{204}Pb$ vs. $^{206}Pb/^{204}Pb$ and the $^{207}Pb/^{204}Pb$ vs. $^{206}Pb/^{204}Pb$ charts. Figure 1 shows this data plotting in a quite different location to most other samples from the Henty area. If this sample represented initial ratios, then the source of lead would be similar to the Devonian Queen Hill mineralisation. However, because of the low-lead nature of the sample, it is reasonable to suggest that there has been a measurable addition of radiogenic ^{206}Pb during the Paleozoic. Therefore it is equally possible that the sample represents Cambrian Pb. The result is ambiguous, although a Cambrian origin is, on balance, more likely.

REFERENCES

Cumming G.L. and Richards J.R. (1975) Ore lead isotope ratios in a continuously changing Earth. *E.P.S.L.* **28,** 155-171.

Appendix 1 Level of Confidence of Interpretations

Interpretations of the economic significance of exploration samples using Pb isotopes are based on comparisons with a Pb isotope database of other mineralisation within the relevant geological province. The level of confidence of such interpretations is related to the amount and quality of data available and the level of understanding of the relationship between these "signatures" and the nature and timing of mineralisation in the context of the overall tectonic evolution of the province. A threefold classification has been developed to signify the confidence level for interpretations in all Australian geological provinces. Only the Lachlan Fold Belt falls into Category 1. The majority of prospective Australian geological provinces fall into Category 2 and it is the aim of research within the Division of Exploration and Mining to upgrade these to Category 1.

Category 1 Information
Lead isotopic signatures of each hydrothermal event represented in a geological province can be discretely defined (there are at least 10 examples of each event). There is a very good understanding of the metallogenic history of the prospect region, including the ages of different hydrothermal events and the style of mineralisation that is likely to be associated with each event. Interpretations based on Category 1 information can discriminate between mineralisation or anomalous surface geochemistry that has derived from either;

1. the main mineralisation window of a major mineralising epoch , or
2. minor mineralisation from waxing or waning stages of a major epoch or where only small hydrothermal cells were developed, or
3. minor mineralisation from an overprinted (epigenetic) hydrothermal event, or
4. near surface concentration due to weathering processes (false anomalies)

Category 2 Information
There are a number of known Pb isotopic signatures in a geological province, however, there is an incomplete understanding of the relationship of these signatures to metallogenesis and the timing of hydrothermal activity. Although discrimination of events can be made based on these signatures it is with a significantly reduced degree of confidence. Interpretations based on Category 2 information can discriminate between mineralisation or anomalous surface geochemistry that has derived from either;

1. a major mineralising epoch, or
2. minor mineralisation from an overprinted (epigenetic) hydrothermal event, or
3. near surface concentration due to weathering processes (false anomalies)

Category 3 Information
Lead isotopic signatures, and/or the metallogenic framework are only poorly understood in the prospect region. Discrimination can be made in some cases based on general principles and on comparisons with other similar, better understood provinces. Interpretations based on Category 3 information can discriminate between mineralisation or anomalous surface geochemistry that has derived from either;

1. small scale hydrothermal cells, or
2. near surface concentration due to weathering processes (false anomalies)

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APPENDIX 7

Interpretation of Induced Polarisation, VLF-EM and Ground Magnetic Geophysical Data, White Spur, Tasmania.

Chris Dauth

383102

RGC Exploration

ACN 001 426 946

INTERNAL REPORT

WHITE SPUR

EL 5/95

INTERPRETATION OF INDUCED POLARISATION, VLF-EM, AND GROUND MAGNETIC GEOPHYSICAL DATA, WHITE SPUR, TASMANIA.

Vol 1 of 1

HELD BY: Renison Limited

MANAGER & OPERATOR: RGC Exploration

AUTHOR: Chris Dauth

19 November, 1996

PROSPECTS: Annelese

MAP SHEETS:	**1:100,000: Sophia**	**1:250,000: Queenstown**
GEOGRAPHIC COORDS	**Min East: 377 080mE** **Min North: 5 358 200mN**	**Max East: 378 300mE** **Max North: 5 359 000mN**

COMMODITY(s): Cu, Pb, Zn, and Ag

KEY WORDS: base-metals, conductivity, EM, IP, mineralisation, polarisable, resistivity, VLF

Distribution:

- **RGC Exploration Information Centre Reference:**
- **RGC Zeehan**

383103

SUMMARY AND CONCLUSIONS

Induced polarisation/resistivity, VLF electromagnetic, and ground magnetic geophysical surveys were conducted at the White Spur tenement (EL 5/96), western Tasmania in mid-1996. The area is currently being explored by RGC Exploration for Rosebury style Cu-Pb-Zn-Ag mineralisation. Exploration activities conducted by RGC Exploration to date has included establishing an east-west grid of 5x200m spaced lines and subsequent field mapping of the grid. Early field mapping results delineated sulphide mineralisation (py) at the surface in a road cutting within the Central Volcanic Complex. The main aim of the geophysical surveys were to determine whether this zone produced an anomalous response, and delineate its strike and depth extent. The surveys were also intended to generate further targets for exploration, and to assist with geological mapping.

Results from the geophysical surveys showed the zone of surface sulphide mineralisation did not produce anomalous IP, resistivity, or VLF response. It was therefore concluded that either:

a) The sulphides do not have vertical or strike extent, and that they form a discrete zone of pods that may have been transported as clasts within a massflow or volcaniclastic

or

b) The sulphides are extensive to depth and do not contistute an IP/resistivity target as they are encased by an electrical insulator that has not allowed current to flow through the mineralised zone.

or

c) The sulphides form part of a regional alteration associated with a VHMS deposit that is deeper than the depth of investigation of the surface IP technique (likely to be 200m for this survey).

There is no evidence in the surface outcrop to directly support the second case, hence it was concluded from the geophysical data that the surface sulphides were either transported in clasts and are a discrete occurrence, or that they are part of an alteration associated with mineralisation deeper than the detection level of the surface IP.

Several zones of anomalous apparent chargeability were delineated elsewhere in the survey that have been recommended for further investigation. It is not known whether these anomalies are due to sulphide mineralisation or conductive geological units (black siltstones), hence the first stage of further investigation should involve ground checking. The western extent of the survey region showed highly anomalous chargeability, resistivity, and VLF associated with mapped black siltstones. The abundance of black siltstones in the White Spur region make electrical prospecting difficult due to the presence of "false anomalies" and potential masking of mineralisation. The survey has outlined the need for good geological control for the use of electrical techniques to be effective.

Extending the grid to the north, and over a VLF anomaly and demagnetised zone in the north-east of the grid has been recommended.

The VLF technique proved effective in mapping conductive bodies and in delineating the North Henty Fault. Further application of this technique in Tasmania has been recommended.

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1. INTRODUCTION

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White Spur (EL 5/96), located approximately 14km south of Rosebury, Western Tasmania, is currently being explored by RGC Exploration for volcanic hosted massive sulphide (VHMS) deposits. This report presents the results of induced polarisation (IP), VLF electromagnetic (VLF-EM), and ground magnetic geophysical surveys conducted as part of ongoing exploration activities.

White Spur is currently being explored by RGC Exploration for its potential to host Rosebery style Cu-Pb-Zn-Ag mineralisation. The North Henty Fault transects the tenement, and cross-cuts the N-S striking western White Spur Formation and the eastern Central Volcanic Complex of the Mt Read Volcanics. Field mapping has been conducted, and a zone of outcropping sulphide mineralisation (predominantly pyrite) was identified within dacitic volcaniclastic sediments of the Central Volcanic Complex. The presence of sulphides suggested the use of IP and electromagnetic techniques would be useful in determining whether the identified sulphides had lateral and/or vertical extent. A grid was established, and ground magnetic, IP and VLF surveys designed to test the region.

The IP and VLF surveys were conducted by SCINTREX Pty Ltd and RGC personnel during October 1996. The aim of the geophysical surveys were primarily, to delineate sulphide mineralisation as a direct ore detection technique, and secondly, to assist with geological mapping. It is often observed that the metallic sulphide mineral content of VHMS deposits exhibit anomalous polarisability and/or conductivity, thus providing an excellent target for electrical geophysical techniques.

2. GEOLOGY

The White Spur tenement is transected by the North Henty Fault, striking NNE-SSW. The fault cross-cuts the White Spur Formation in the west, and the Central Volcanic Complex in the east. The White Spur Formation comprises black siltstones, ashy volcaniclastic siltstones, quartz-feldspar volcaniclastic sandstones, and mass flows. The black siltstones are quite extensive on the western margin of the survey region and are observed in outcrop along road and water channel cuttings. The Central Volcanic Complex is not seen in outcrop as extensively as the White Spur Formation, and that which has been mapped predominantly comprises dacitic volcaniclastic sediments with some siltstones and shales.

Geological strike is approximately N-S, with units generally dipping to the east. Surface mineralisation has been observed at 377610mE and 5358275mN, as large sulphide pods (up to 40cm diameter) of predominantly fine pyrite. The mineralisation occurs on the western side of the North Henty Fault. The zone of mineralisation is observed for approximately 20-40m along a road cutting perpendicular to geological strike. The down-dip, or along strike extension of this mineralisation (if it exists) has not been identified.

3. THEORETICAL CONSIDERATIONS

Following is a brief summary on the theoretical factors that must be considered with regard to IP and VLF EM survey techniques.

INDUCED POLARISATION

The IP survey utilised a gradient array configuration whereby current electrodes separated by 1.27km directly introduced electrical current into the ground. Potential voltages are then measured in between these current electrodes via contact with the ground using non polarisable electrode pots. For the technique to be effective, it requires current to be able to flow through the mineralised zone. This may not be possible where the conductive and/or polarisable body is perfectly shielded by an electrical insulator (such as silicification). In this case, an economic VHMS deposit could potentially go unidentified by an IP survey.

It is assumed in gradient array IP, that the current density is equal at all measurement points for a survey in a homogenous ground. This is not the case closer to the current electrodes where erroneous and often misleading IP data may be recorded. As a rule of thumb, it is generally regarded that a square grid the central third of the current electrode separation be measured to avoid problems associated with non uniform current density near the electrodes.

Topographic features will have an effect on IP readings. Topographic highs result in a dispersion of equipotential lines and therefore result in resistivity lows and visa-versa for valleys. Slopes of less than 10° are not considered to provide significant apparent resistivity anomalies. Apparent chargeability readings are less effected by topographic features than apparent resistivities. Topography was not a considered significant problem at White Spur for the majority of the grid. Those areas where there was significant topographical expression did not produce anomalous response.

The White Spur grid lies in a region that has an abundance of highly chargeable, and low resistivity black siltstone units. These are a significant obstacle to electrical measurements, and act to produce "false" anomalies, and potentially mask the anomalous response of an ore zone. The most valid means of differentiating black siltstone responses from those due to sulphide mineralisation is through geological control.

VLF

VLF (Very Low Frequency) electromagnetics is an inductive exploration method which is based on measuring variations in components of EM fields set up by communications stations operating in the frequency range 15 to 25 kHz. The North West Cape communications antennae in Western Australia (operating at 19.8 kHz) was used for this survey.

The survey is relatively inexpensive (similar to ground magnetics acquisition) and provides a response that is dependent on the conductivity and thickness of subsurface conductors (such as a VHMS deposit containing conductive sulphides), the host rock resistivity, and overburden thickness. The response will also depend on the geometry of the subsurface conductor with respect to the location of the communications transmitter. Ideally for maximum response (best coupling of the conductor with the primary magnetic field), the geological strike should be directed towards the transmitter.

The SCINTREX VLF receiver used for the survey measured two parameters, the in-phase and out of phase vertical components of the magnetic field oscillating at the frequency of the transmitter. The receiver also measured the total horizontal field, however variations in the strength of the total field make these measurements unreliable. Interpretation is rather qualitative due to the complex nature of the anomaly shape in regions with a variable overburden cover. VLF anomalies result from a wider range of conductivities than for other

lower frequency EM survey techniques. Targets such as shear zones and disseminated sulphides do produce a VLF anomaly. The depth of investigation with the VLF technique depends on the ground conductivity. The higher the conductivity, the lower the depth of investigation. Assuming a host rock resistivity of 3000 ohm.m, the effective depth of investigation will be approximately 75m.

4. SURVEY PARAMETERS

The IP survey was conducted using the SCINTREX TSQ-3 3kW time domain transmitter and the IPR-12 time domain receiver.

Data were recorded on one gradient array spread. The gradient array data utilised 1.27km current electrode separation. Current electrodes comprised three adjacent pits lined with aluminium foil. A current of 1.5 Amps was utilised. Locations of the current electrodes are given below:

Array 1.	C1	7080mE	8600mN
	C2	8350mE	8600mN

IP and resistivity data were acquired with 25m dipoles at 25m station interval from line 8200N to 9000N. Non-polarisable porous porcelain pots were used for the potential electrodes. Data were acquired as follows:

Line 8200N 7337mE-7987mE
Line 8250N (road cutting) 7337mE-7667mE
Line 8400N 7337mE-8062mE
Line 8600N 7337mE-8137mE
Line 8800N 7337mE-8062mE
Line 9000N 7337mE-8062mE

A total of 3.955km of gradient array data were acquired. Lines are spaced at 200m intervals except Line 8250N, located approximately 50m to the north of Line 8200N. Line 8250N is actually a road cutting, and had not been surveyed for the survey. Errors in station locations are expected to be as high as 50m for this line. Elsewhere in the survey, pegs were placed every 25m (slope corrected).

VLF data were acquired over all six lines as far as the grid extended, for a total of 5.437km. A data interval of 12.5m was utilised for all lines.

5. RESULTS

Survey data have been compiled and gridded to produce contoured colour images of apparent chargeability, apparent resistivity, self potential, Frazer filtered VLF in-phase and Frazer filtered VLF quadrature; Plans 1-5 respectively. A contoured image of total magnetic intensity from ground magnetic data is displayed in Plan 6. Data have also been produced as stacked profile plots in Figures 2-7. An interpretation of the geophysical data is presented in Plan 7.

The most significant result of the IP and VLF surveys was the failure to produce an anomalous response over the mapped zone of sulphides at 377610mE and 5358275mN. The surface outcrop of sulphide pods is 70m to the east of anomalous chargeability (21 msec), 35m to the east of a VLF conductor, and 60m to the west of a VLF lineament interpreted to be the North

Henty Fault. An interpreted fault (possibly a Reidel structure associated with the North Henty Fault) strikes WSW-ENE and passes 30m to the south of the surface mineralisation. As described above, the mineralisation is within a zone of structural interest, and of local anomalism, however there are no geophysical anomalies that could be directly associated with the sulphides. The chargeability anomaly directly to the west of the sulphides (the southern strike extension of Anomaly 2 on Plan 7) has a geometry that would suggest an easterly dipping body to be its cause. Therefore it is not feasible to suggest that the surface outcrop of sulphides at 377610mE, 5358275mN is the up-dip expression of this anomaly. Surface investigation of Anomaly 2 on Line 8250N showed black siltstones outcropping on the road cutting. These black siltstones are thought to be the source of Anomaly 2. Similarly, the NNW-SSE striking VLF conductor delineated 35m to the west of the sulphides is thought to be caused by the conductive black siltstones.

Three zones of anomalous apparent chargeability were delineated by the IP survey. These are described as Anomaly 1-3 on Plan 7.

Anomaly 1 strikes N-S extending from 7350mE, 9000mN to 7350mE, 8200mN. This anomaly has a coincident resistivity low, and VLF conductive axis. Apparent chargeabilities up to 35 msec, and apparent resistivities as low as 225 ohm.m were recorded. The anomaly lies along and parallel to the main access road on which black siltstones of the White Spur Formation outcrop extensively. Anomaly 1 is the geophysical response due to the conductive and chargeable response of these black siltstones.

Anomaly 2 lies parallel to Anomaly 1, and extends from 7550mE, 8850mN to 7540mE, 8225mN. This anomaly has a coincident VLF conductive axis, but does not have anomalously low apparent resistivity. Apparent chargeabilities up to 22 msec were recorded for this zone. The apparent resistivity of this chargeable zone is actually quite variable (1200-4800ohm.m) which suggests a relatively poor and irregular connection between discrete conductive zones. This would be typical of a disseminated mineralisation zone, or a black siltstone that had been mixed into volcanic rock as part of a volcaniclastic sequence. The surface expression of Anomaly 2 has been observed on Line 8250N as black siltstones. It is therefore most likely that these are the cause of this anomaly.

The apparent chargeability zone of Anomaly 3 was traversed by Line 8400N and 8600N and therefore has a strike extent of less than 600m (it is closed off to the north and south by Line 8800N and 8200N respectively). The observed apparent chargeability zone extends from 8040mE, 8600mN to 8040mE, 8400mN. Although the zone of anomalous chargeability (up to 20 msec) has a limited strike extent, the zone lies coincident with a N-S striking VLF conductor that extends from 8050mE, 9000mN to 8080mE, 8200mN (the N-S extent of the survey), and an apparent resistivity low (as low as 640 ohm.m) that extends from 8025mE, 8600mN to 8025mE, 8800mN. This anomaly lies within the Central Volcanic Complex where there were no mapped outcrops, hence it has not been directly correlated with a geological unit. Ground follow-up of the anomaly to determine whether the source is geological (black siltstone contained within a mass flow, or volcaniclastic could explain this anomaly) is recommended.

Two additional geophysical anomalies considered significant were delineated by the ground geophysical surveys. These are labelled Anomaly 4 and Anomaly 5 on Plan 7.

Anomaly 4 is a NNW-SSE VLF lineament extending from 8180mE, 9200mN to 8225mE, 8800mN. It is on the eastern side of the North Henty Fault within of the Central Volcanic Complex. This anomaly was the most significant of the VLF anomalies delineated in the survey. It defines the western boundary of a zone of demagnetisation in the north-east of the grid. IP

data were not acquired over this region because it was too close to the eastern current electrode. Rocks described as cream ashy siltstone, and an Owen Conglomerate boulder have been mapped in this region, however there is no obvious geological explanation for the anomaly. Further investigation is recommended.

Anomaly 5 is a high amplitude magnetic anomaly (3200nT) observed only on Line 8400N at 7700mE. It is less than 100m in wavelength which would suggest a relatively shallow source (<50m). The high amplitude would indicate a highly magnetic source such as an ultramafic wedge. The magnetic anomaly lies within 50m to the west of the interpreted North Henty Fault, and is bound to the north by an interpreted WSW-ENE striking fault (possibly a Reidel structure associate with the North Henty Fault).

6. RECOMMENDATIONS

The following recommendations are made from the results of the geophysical surveys:

- Ground investigation of Anomaly 2 should be conducted on Line 8400N at 7550mE, Line 8600N at 7562mE, and Line 8800N at 7562mE. The aim of ground investigation is to determine whether the IP anomaly is being caused by a black siltstone unit. Use of a hand auger to penetrate below the soil and vegetation growth may provide this information at these points. Results from Line 8250N show the response was coincident with a black siltstone unit, however along strike confirmation should be attained before this anomaly is totally discounted as a potential zone of mineralisation.

- A similar ground investigation program to that described above should be undertaken for Anomaly 3 in order to see if the anomaly is the result of a black siltstone unit, or clasts within a massflow/volcaniclastic. Sites for investigation are as follows; Line 8400N, 8035mE; Line 8600N, 8035mE; and 8800N, 8012mE.

- The next stage of gridding and IP surveying at White Spur should include extending a grid over the region described by Anomaly 4 (VLF lineament and demagnetised zone). Induced polarisation over this zone should determine whether the source of the anomalism is a conductive and chargeable zone. It then remains to be determined whether these anomalies are due to a black siltstone unit.

- The sulphide mineralisation observed at the surface on the road cutting at White Spur (Line 8250N) did not produce a geophysical response from either IP or VLF techniques. It is therefore suggested from the geophysical data that the zone does not extend to depth or along strike, and that the observed sulphides are a discrete occurrence. It must also be considered that the sulphides simply did not present a chargeable or VLF target. This would be the case if it was not possible to galvanically inject current into the mineralised zone (if it is encased in an electrical insulator, or highly conductive geological units/structures are channelling the electrical current away from the mineralised zone). These are not considered to be highly likely scenarios at White Spur, hence the zone can not be recommended as a drill target based on the geophysical results. It must however, be kept in mind that the depth of investigation for the IP survey would be of the order of 200m, and it is possible that the surface mineralisation forms part of a regional alteration (or remobilised replacement sulphides?) for a deeper orebody (below the detection level of the surface IP technique). It would therefore be recommended to drill a deep hole beneath this zone and test with down-hole EM and/or IP. Structural analysis of the geophysical data gives evidence of a Reidel structure associated with the North Henty Fault. The surface mineralisation lies within a well

situated basement depression as a result of this structure, thus providing an excellent site for deposition of a VHMS deposit. This structural setting should further upgrade the significance of the surface mineralisation. If a drillhole is designed to test the surface mineralisation zone, then the location of the hole with respect to the interpreted Reidel structure should be taken into account.

7. REFERENCES

Vicary, M. J., 1996, EL 5/96 White Spur geological mapping for RGC Exploration; Field results not yet published.

383111

RGC Exploration

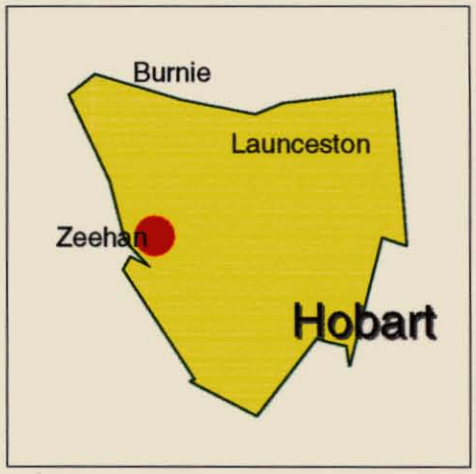


FIGURE 1. Location Plan

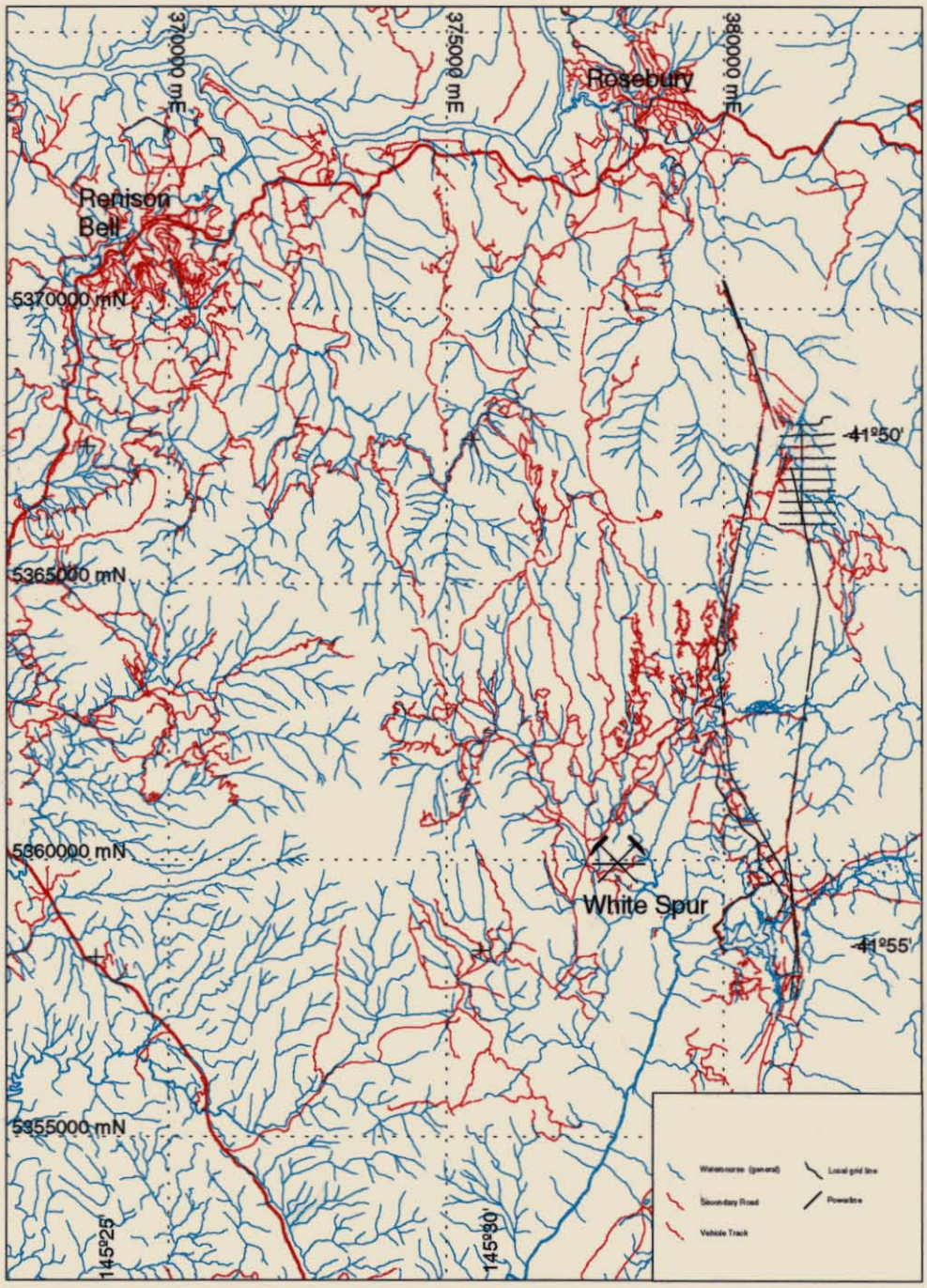
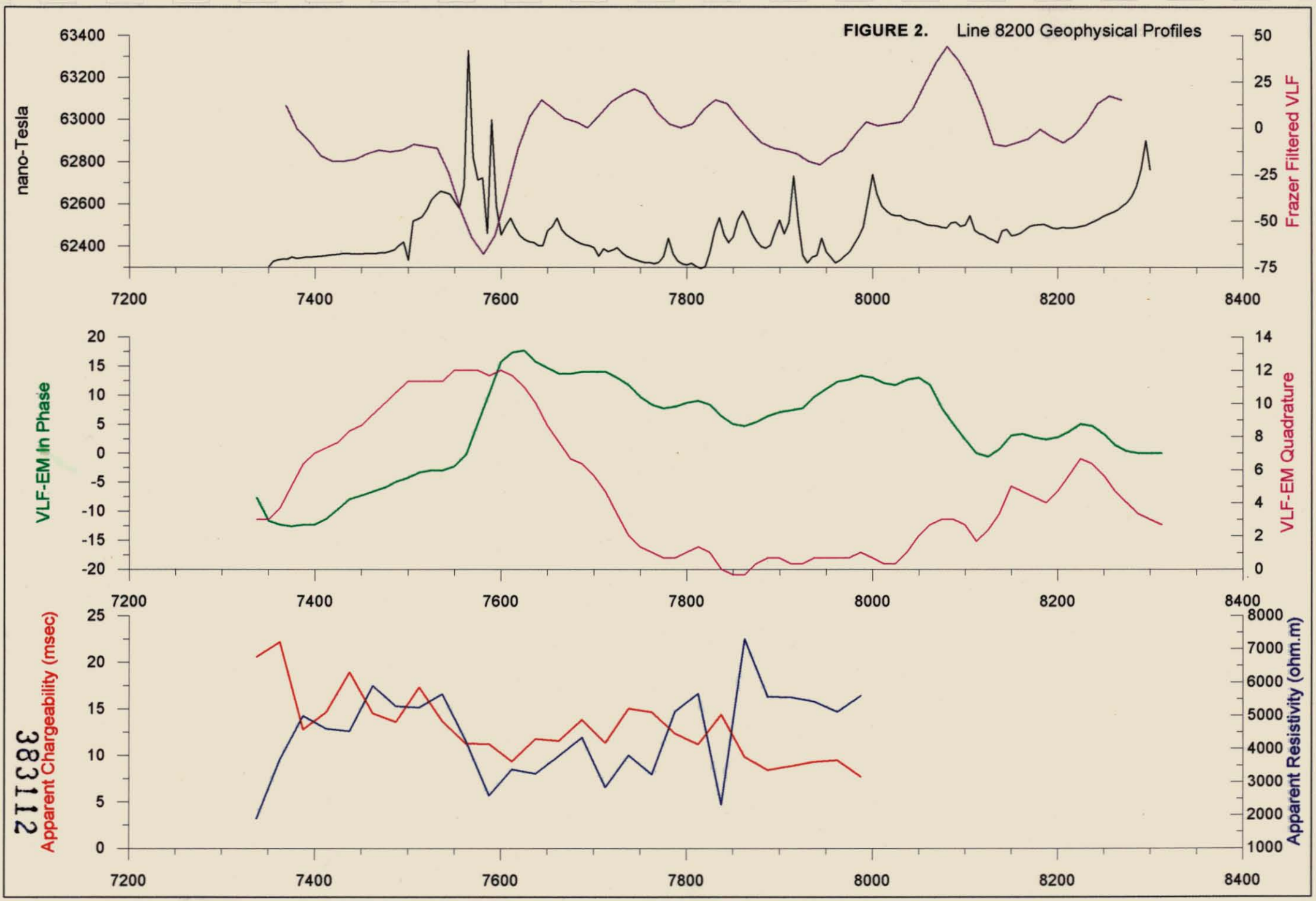
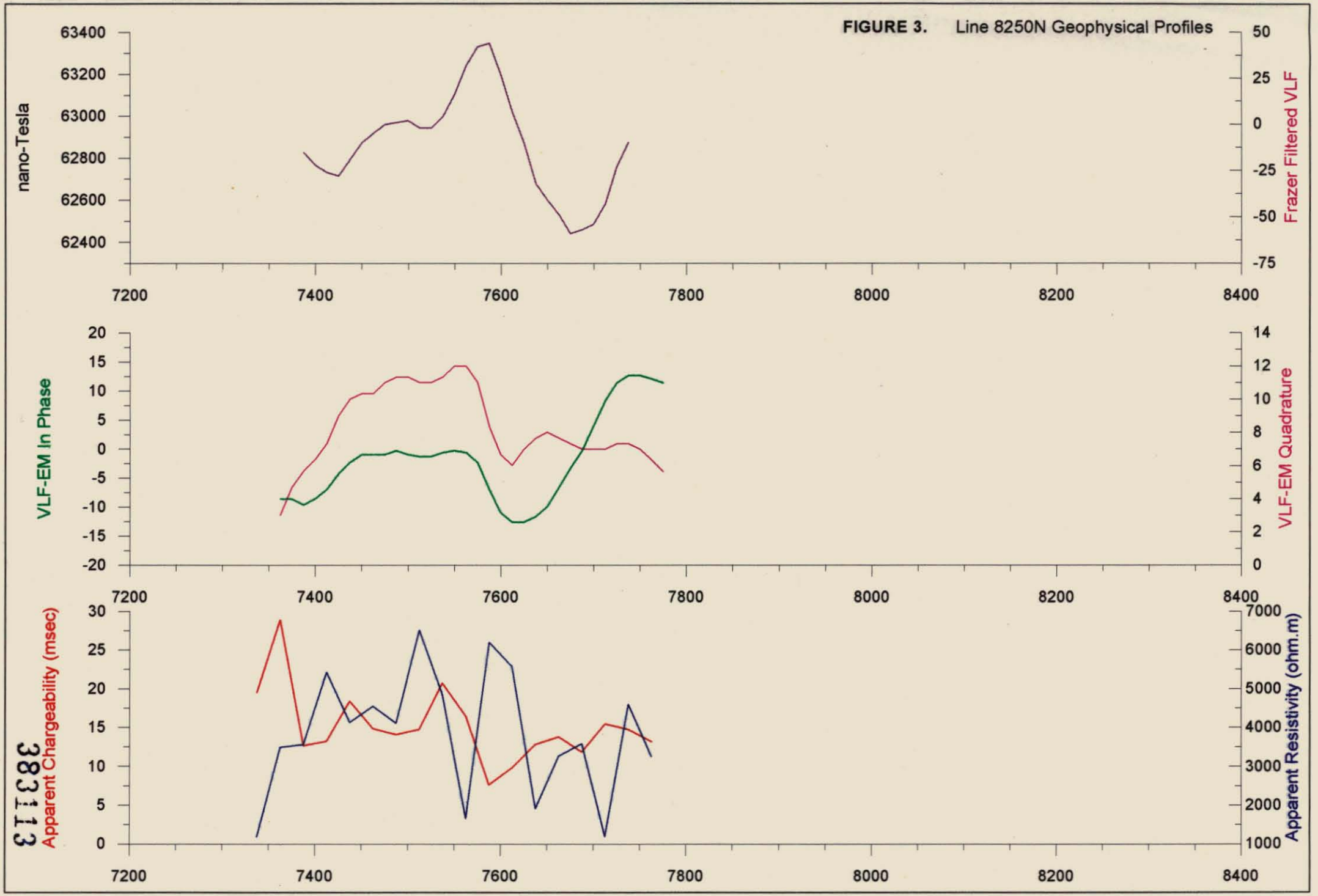


FIGURE 2. Line 8200 Geophysical Profiles



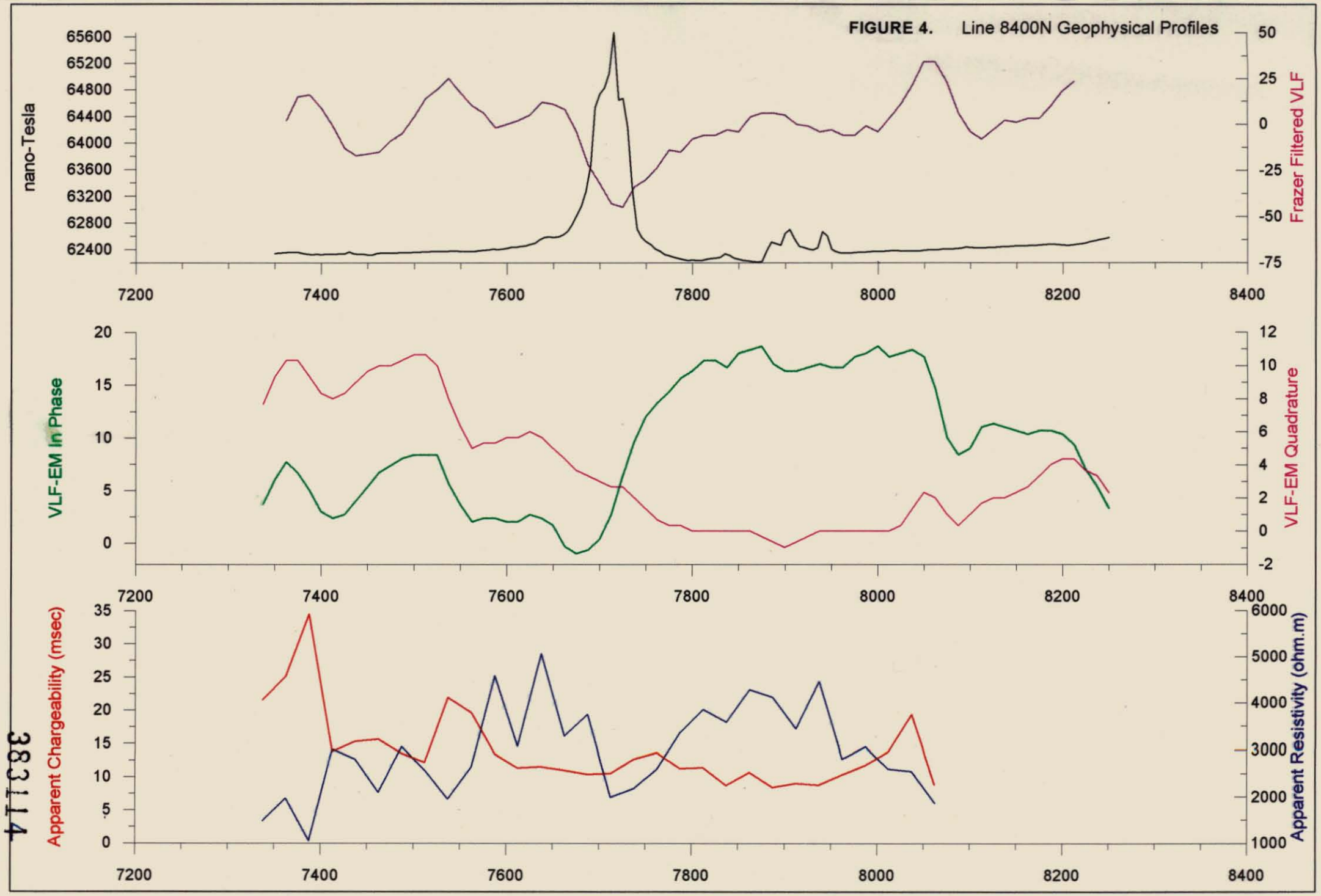
3831I2

FIGURE 3. Line 8250N Geophysical Profiles



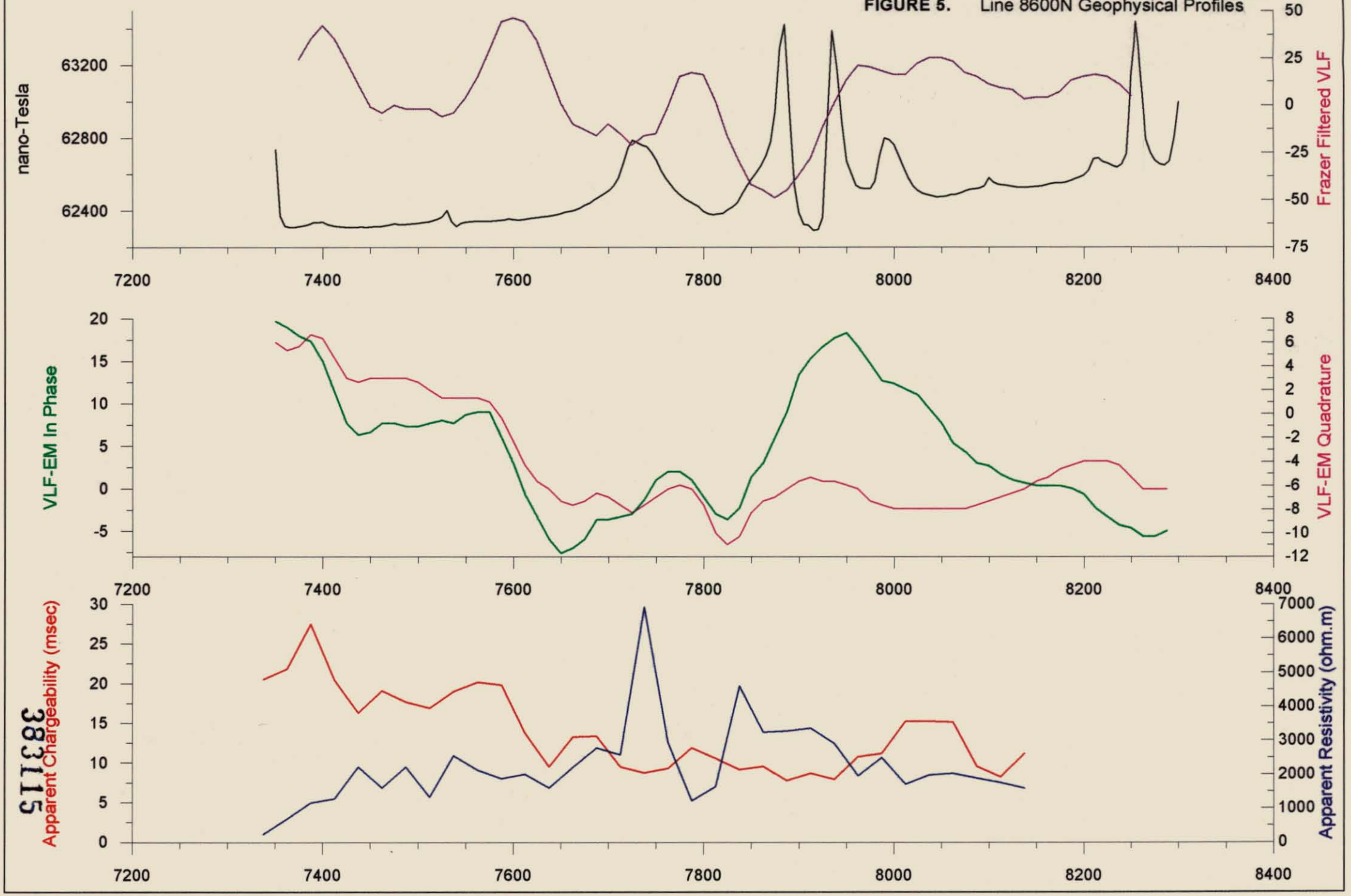
38313

FIGURE 4. Line 8400N Geophysical Profiles



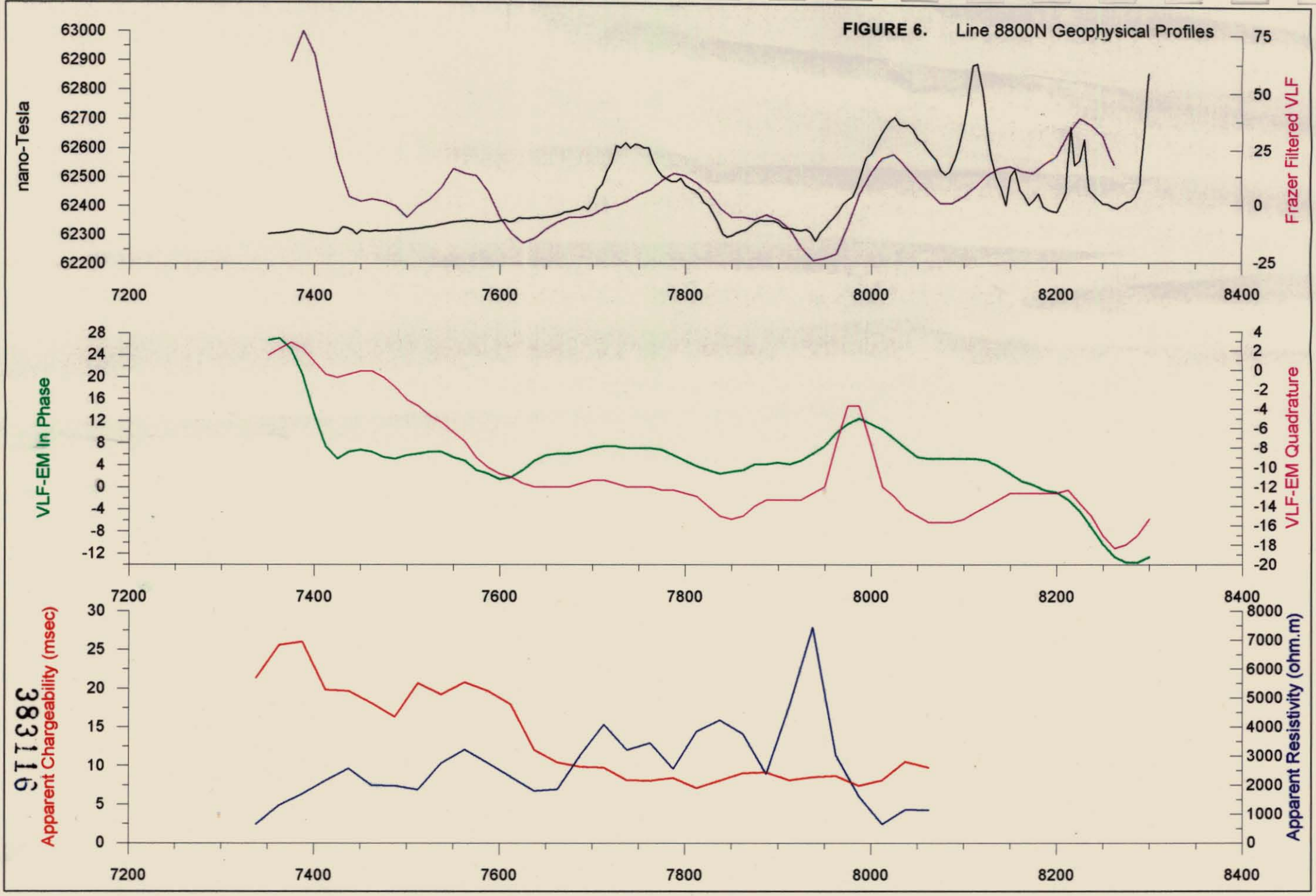
38114

FIGURE 5. Line 8600N Geophysical Profiles



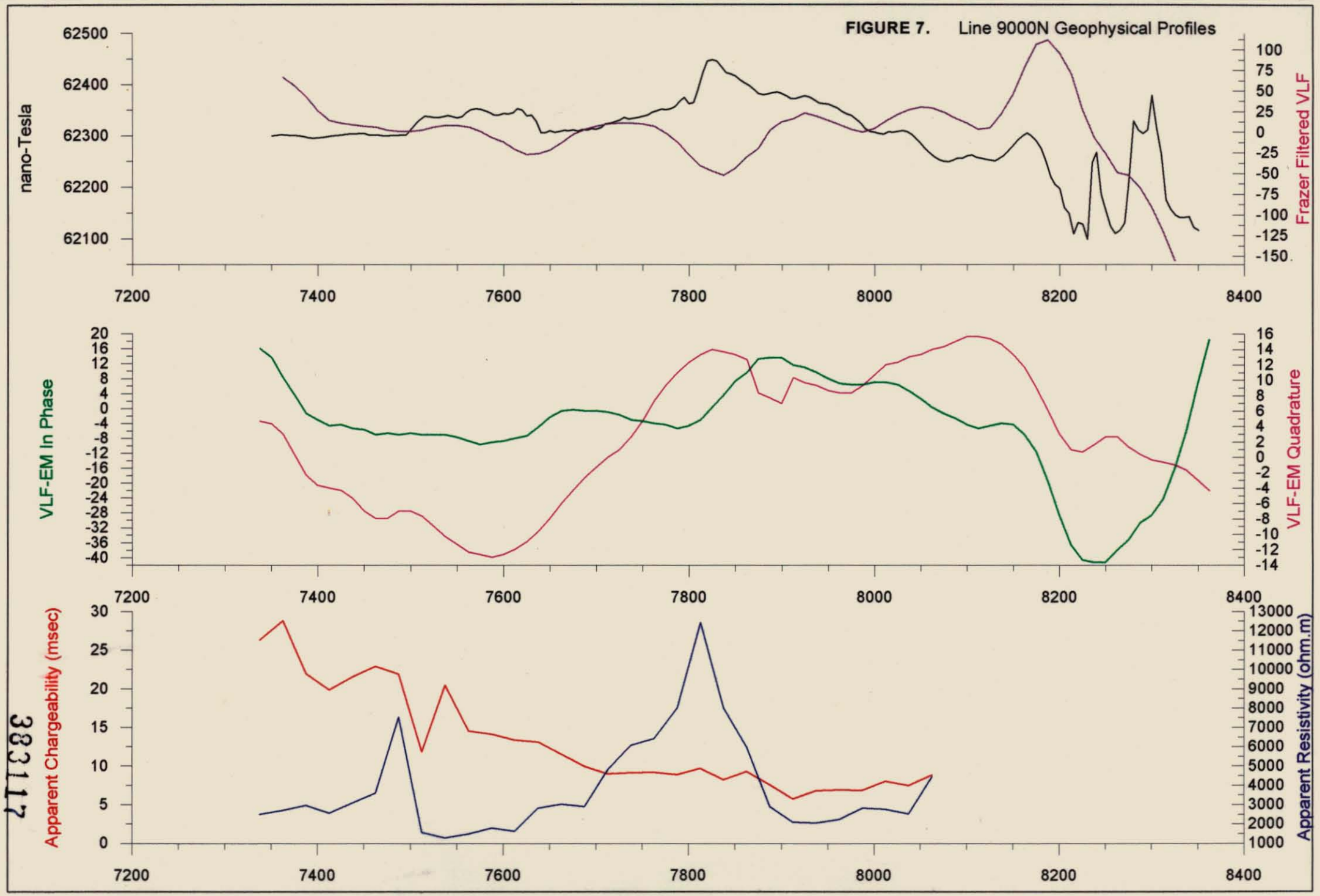
38315

FIGURE 6. Line 8800N Geophysical Profiles



3831116

FIGURE 7. Line 9000N Geophysical Profiles



383117

Northing

Easting

Apparent Chargeability (msec)

30 25 20 15 10 5 0

5 cm

SCALE 1:2500

0 25 50 75 100 125 150 175 200

Projection: UTM
Grid: Australian Map Grid
Zone: 55
Datum: AGD66
Spheroid: ANS66

97-4007

ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 1 0F 2** -
WHITE SPUR - M VICARY

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Plan 1

WHITE SPUR PROSPECT EL 5/96
TASMANIA BASE METALS

383118

IP SURVEY
Contours and Image of
APPARENT CHARGEABILITY (msec)

Drawn By: Chris Dauth

Date: October 1996

Northing

Easting

Apparent Resisitivity
(ohm.m)

12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000

5 cm

SCALE 1:2500

0 25 50 75 100 125 150 175 200

Projection: UTM
Grid: Australian Map Grid
Zone: 55
Datum: AGD66
Spheroid: ANS66

97-4007

ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 1 0F 2 -**
WHITE SPUR - M VICARY

RGC EXPLORATION PTY LTD

Plan 2

WHITE SPUR PROSPECT EL 5/96
TASMANIA BASE METALS

383119

IP SURVEY
Contours and Image of
APPARENT RESISTIVITY (ohm.m)

Drawn By: Chris Dauth

Date: October 1996

Northing

Easting

Self Potential
(mVolts)

140
120
100
80
60
40
20
0
-20
-40
-60
-80
-100
-120

5 cm

SCALE 1:2500

0 25 50 75 100 125 150 175 200

Projection: UTM
Grid: Australian Map Grid
Zone: 55
Datum: AGD66
Spheroid: ANS66

97-4007

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WHITE SPUR - M VICARY

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Plan 3

WHITE SPUR PROSPECT EL 5/96
TASMANIA BASE METALS

IP SURVEY
Contours and Image of
Self Potential (mV)

383120

Drawn By: Chris Dauth

Date: October 1996

Northing

Easting

SCALE 1:2500

0 25 50 75 100 125 150 175 200

Projection: UTM
Grid: Australian Map Grid
Zone: 55
Datum: AGD66
Spheroid: ANS66

5 cm

97-4007

ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 1 0F 2 -**
WHITE SPUR - M VICARY

RGC EXPLORATION PTY LTD

Plan 4

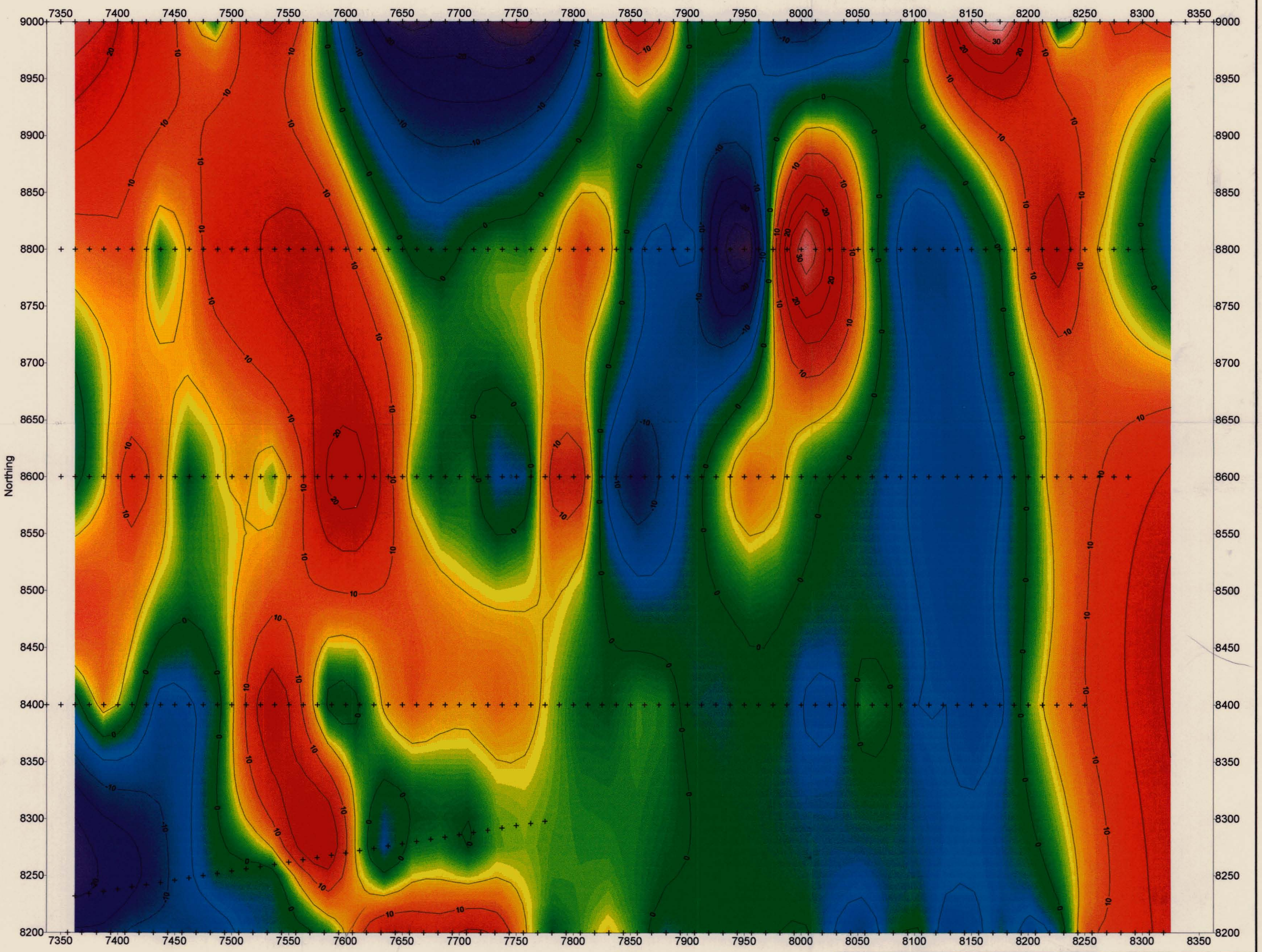
WHITE SPUR PROSPECT EL 5/96
TASMANIA BASE METALS

383121

VFL-EM SURVEY
Contours and Image of
FRAZER FILTERED VERTICAL IN PHASE COMPONENT

Drawn By: Chris Dauth

Date: October 1996



SCALE 1:2500

0 25 50 75 100 125 150 175 200

Projection: UTM
Grid: Australian Map Grid
Zone: 55
Datum: AGD66
Spheroid: ANS66

5 cm

97-4007

ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 1 0F 2** -
WHITE SPUR - M VICARY

RGC EXPLORATION PTY LTD

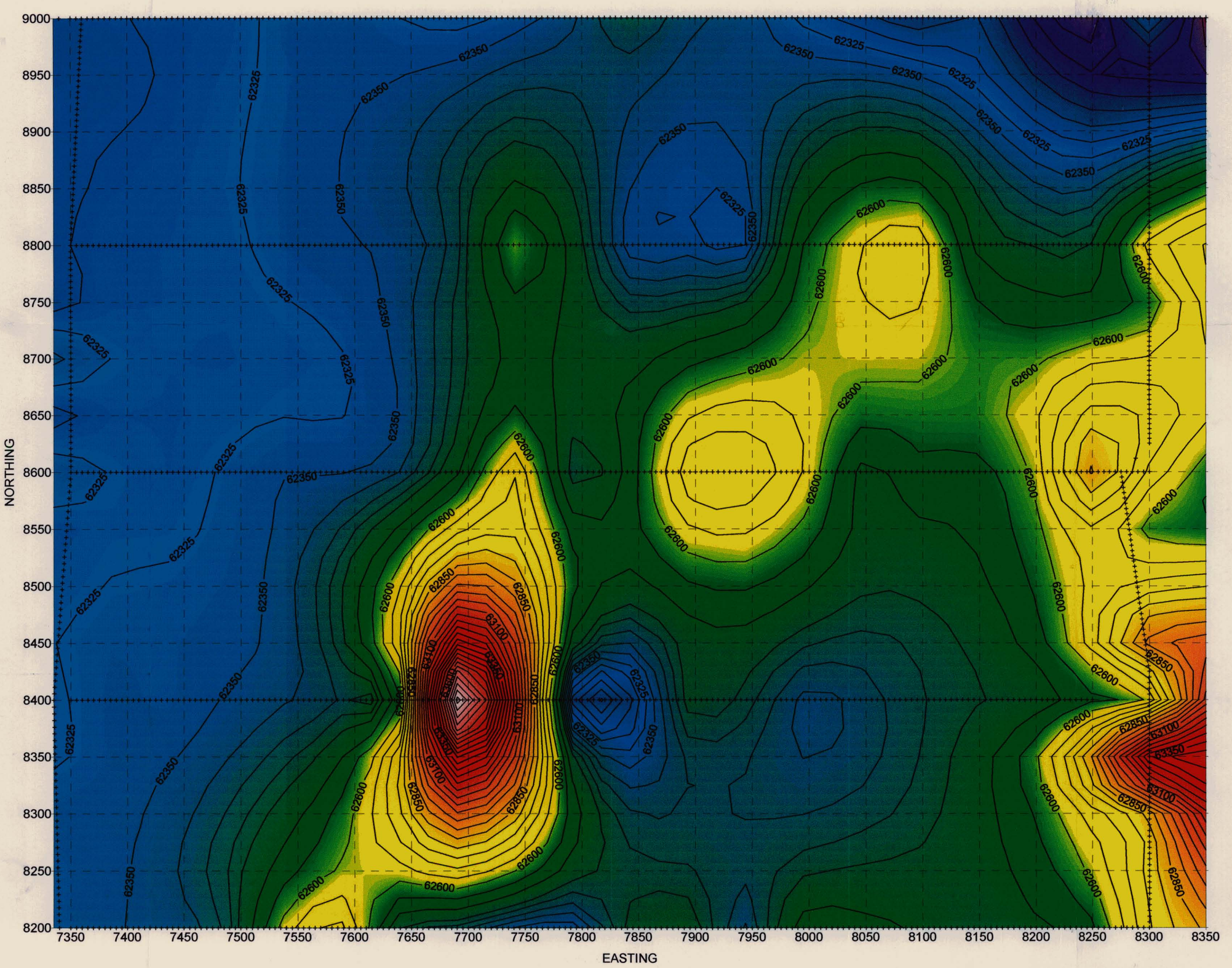
Plan 5

WHITE SPUR PROSPECT EL 5/96
TASMANIA BASE METALS

383122

VFL-EM SURVEY
Contours and Image of
FRAZER FILTERED VERTICAL OUT OF PHASE COMPONENT

Drawn By: Chris Dauth *Date: October 1996*



Colour Scale (nT)

- 63900
- 63800
- 63700
- 63600
- 63500
- 63400
- 63300
- 63200
- 63100
- 63000
- 62900
- 62800
- 62700
- 62600
- 62500
- 62400
- 62300
- 62200

Acquisition Parameters

Magnetometer: Proton Precession 856
Sensor Height: approx. 1.8m
Line Spacing: 200m
Sample Interval: 5m
Base Stn: 7360mE, 8200mN

5 cm

97-4007

ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 1 0F 2 -**
WHITE SPUR - M VICARY

SCALE 1:2500

0 50 100 150 200

RGC Exploration

Tasmania SK/55-SW 1:250,000

Plan 6
WHITE SPUR PROJECT
EL 5/96 383123

Colour Filled Contours of
TOTAL MAGNETIC INTENSITY

Drawn by: C Dauth *Date: 11 Sept 1996*

ANOMALY 1

ANOMALY 2

ANOMALY 3

ANOMALY 4

ANOMALY 5

NORTH HENTY FAULT

NORTH HENTY FAULT

NORTH HENTY FAULT

ZONE OF DEMAGNETISATION

Northing

Easting

LEGEND

- Zone of High Chargeability
- Zone of Low Resistivity
- VLF Lineament (High Conductivity)
- High Amplitude Magnetic Lineament
- Moderate Amplitude Magnetic Lineament
- Fault Interpreted from VLF Data
- Fault Interpreted from Displaced Lineaments

SCALE 1:2500

0 25 50 75 100 125 150 175 200

Projection: UTM
Grid: Australian Map Grid
Zone: 55
Datum: AGD66
Spheroid: ANS66

5 cm

RGC EXPLORATION PTY LTD

Plan 7

WHITE SPUR PROSPECT EL 5/96
TASMANIA BASE METALS

383124

INTERPRETATION OF
GROUND GEOPHYSICAL DATA

97-4007

Drawn By: Chris Dauth

Date: October 1996

383127

APPENDIX 8

ANNE001 DHEM Survey Results

Chris Dauth

383123

RGC Exploration

ACN 001 426 946

INTERNAL REPORT

WHITE SPUR

EL 5/96

ANNE001 DOWN HOLE ELECTROMAGNETIC SURVEY RESULTS

Vol 1 of 1

HELD BY: Chris Dauth

MANAGER & OPERATOR: RGC Exploration Pty Ltd

AUTHOR(s): Chris Dauth

11 March, 1997

PROSPECTS: Anneliese

MAP SHEETS:	**1:100,000: Sophia**	**1:250,000: Queenstown**
GEOGRAPHIC COORDS	**Min East: 377 080mE** **Min North: 5 358 200mN**	**Max East: 378 300mE** **Max North: 5 359 000mN**

COMMODITY(s): Cu, Pb, Zn, and Ag

KEY WORDS: base-metals, conductivity, down-hole, EM, IP, mineralisation, polarisable, resistivity, three-component, VLF

Distribution:

- **RGC Exploration Information Centre Reference:**
- **RGC Zeehan**

SUMMARY

383129

A three-component down-hole electromagnetic survey using the CRONE system was conducted on a 306.6m hole, ANNE001, at the Anneliese Prospect in the White Spur Project EL 5/96. The surveys were conducted by Outer-Rim Exploration services for RGC Exploration.

The aim of the survey was to test the conductivity of a zone of sulphides (predominantly pyrite) identified at the surface, and intersected down-dip in ANNE001, and also to determine if any off-hole conductors were present. Results of the survey showed that the Anneliese sulphides form a very poor conductor, giving a response only recognisable as a series of alternating polarity noise spikes. These are interpreted as due to telluric or cultural induced currents channelled down the poor conductor. The geological implication of this interpretation is that he sulphides zones do have strike continuity.

There were no off-hole responses identified in the data, and therefore no further drill targets have been recommended as a result of the survey.

Continued application of three-component down-hole EM surveys on all exploration drill-holes at White Spur is recommended as an exploration strategy.

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383130

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4. SURVEY PARAMETERS	2
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FIGURE 5. Anne001 West Loop Z-component Channels 24-31
FIGURE 6. Anne001 West Loop X-component Channels 1-7

FIGURE 8. Anne001 West Loop X-component Channels 16-23
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PLAN 1. Location Diagram 1:2500

1. INTRODUCTION

383131

White Spur (EL 5/96), located approximately 14km south of Rosebury, Western Tasmania, is currently being explored by RGC Exploration for volcanic hosted massive sulphide (VHMS) deposits. This report presents the results of a three-component down-hole electromagnetic (DHEM) geophysical survey conducted as part of ongoing exploration activities.

White Spur is currently being explored by RGC Exploration for its potential to host Rosebery style Cu-Pb-Zn-Ag mineralisation. The North Henty Fault transects the tenement, and cross-cuts the N-S striking western White Spur Formation and the eastern Central Volcanic Complex of the Mt Read Volcanics. Field mapping has been conducted, and a zone of outcropping sulphide mineralisation (predominantly pyrite) was identified within dacitic volcaniclastic sediments of the Central Volcanic Complex.

IP and VLF surveys were conducted during October 1996, but failed to produce anomalous response over the sulphides. Results of these surveys are presented in a separate report (Dauth 1996). A single diamond drill-hole, ANNE001, was drilled to a depth of 306.6m below the surface sulphides, and intersected the down-dip extension of semi-massive pyrite (pods and disseminations) over an interval of about 10m. DHEM was conducted on this hole to determine firstly whether the sulphides were conductive, and secondly whether there were any off-hole conductors in the vicinity of the hole.

2. GEOLOGY

The White Spur tenement is transected by the North Henty Fault, striking NNE-SSW. The fault cross-cuts the White Spur Formation in the west, and the Central Volcanic Complex in the east. The White Spur Formation comprises black siltstones, ashy volcaniclastic siltstones, quartz-feldspar volcaniclastic sandstones, and mass flows. The black siltstones are quite extensive on the western margin of the survey region and are observed in outcrop along road and water channel cuttings. The Central Volcanic Complex is not seen in outcrop as extensively as the White Spur Formation, and that which has been mapped predominantly comprises dacitic volcaniclastic sediments with some siltstones and shales.

Geological strike is approximately N-S, with units generally dipping to the east. Surface mineralisation has been observed at 377610mE and 5358275mN, as large sulphide pods (up to 40cm diameter) of predominantly fine pyrite. The mineralisation occurs on the western side of the North Henty Fault. The zone of mineralisation is observed for approximately 20-40m along a road cutting perpendicular to geological strike. The down-dip extension of this mineralisation has been identified in the hole ANNE001 drilled below the surface sulphides. This hole intersected a zone of intense pyrite-sericite alteration at a depth of approximately 260m. This suggested a dip of approximately 80° to the west.

3. THEORETICAL CONSIDERATIONS

Following is a brief summary on the theoretical factors that must be considered with regard to DHEM survey techniques.

A time domain electromagnetic system was used for the survey in a fixed transmitter and roving receiver configuration. The nature of the response can be rather complex, and is dependent on a number of factors. These can be both geological and system configuration in origin. Firstly, the position of the transmitter loop with respect to the drill-hole and the geological target is critical,

and different loop positions will generate different responses. The causes, and signature of different responses from different loop-hole-geology orientations are too numerous and complex for even brief summary in this report. Different responses are expected from different transmitter loop positions, and anomalous response may simply be due to loop-hole position rather than geology. Interrogation of data using modelling software, case examples, and simple electromagnetic theory is a requirement for interpretation to avoid identification of false anomalies.

It should be kept in mind, that for a geological target to provide an electromagnetic response, it must have a connection of conductive minerals. Therefore, disseminated sulphides are not expected to provide a good EM response. Also, the sulphides must be highly conductive. In areas where zinc mineralisation is being sought it must be understood that sphalerite is not a particularly good conductor.

The survey was conducted using the CRONE three-component receiver. Sign conventions are that the Z component is the axial component, positive polarity up-hole; the X component is in the plane of the hole azimuth axis at 90° from the hole dip, positive polarity upwards; and the Y component is at 90° perpendicular to the hole azimuth, positive polarity to the right hand side of the down-dip facing hole azimuth.

4. SURVEY PARAMETERS

The diamond hole (ANNE001) was drilled in late 1996 and is collared at 377508mE, 5358264mN and approximately 547mRL. The hole was drilled to a depth of 306.6m at a dip and azimuth of approximately 55° and 100° respectively.

The three component DHEM survey was conducted using the CRONE system, by OUTER-RIM Exploration Services in February 1997. Data were collected on a 20 msec time-base over 31 channels at 10 m and 5 m station interval (5 m station interval from 240-280 m). Ramp-time was set at 0.5 msec, and receiver-transmitter synchronisation achieved through cable connection. Primary fields were measured during the turn-off ramp.

Two loop positions were used in the survey. These are described as the West and East loops, and are shown on Plan 1. The West loop was designed to test the steeply dipping westerly zone of sericite-pyrite alteration. The East loop was designed to couple best with a flat lying body extending from the alteration zone (possible stringer style mineralisation), or a more easterly located vertical conductive zone.

The West loop was of dimension 300 x 200 m, and the East loop was of dimension 125 x 200 m. Single turns of wire were used for both the West and East transmitter loops. Currents were 10 Amps, and 14 Amps respectively. All three-components (Z, X, and Y) were recorded for both loop positions. The time rate of change of the secondary magnetic field is measured in the receiver coil (area 6500 m^2) in units of nT/sec. These are measured over 31 time gates listed below:

Time (msec)	Lenth (msec)	Time (msec)	Lenth (msec)	Time (msec)	Lenth (msec)
0.054	0.008	0.439	0.086	2.92	0.549
0.065	0.014	0.531	0.098	3.528	0.666
0.079	0.014	0.641	0.122	4.264	0.805
0.094	0.018	0.776	0.148	5.15	0.968
0.115	0.022	0.938	0.176	6.221	1.174
0.14	0.027	1.134	0.216	7.514	1.413
0.169	0.032	1.37	0.256	9.078	1.715
0.205	0.04	1.656	0.315	10.968	2.064
0.248	0.045	2	0.374	13.245	2.49
0.299	0.058	2.416	0.459	16	3.02
0.362	0.068				

5. RESULTS

Survey data have been compiled and plotted on linear scales for each component for the West and East loops. Results are presented in Figure 2 to Figure 21.

The West loop was designed to provide maximum coupling with a steeply westerly dipping conductor extending down-dip from the surface sulphide occurrence to the sulphide intersection in ANNE001 at approximately 255m. Results from all three components do not indicate the presence of any off-hole conductors. Similarly, the DHEM results suggest the intersected sulphide zone is a very poor conductor. This would indicate a discontinuity of sulphide grains (ie predominantly disseminated sulphides). The East loop was designed to couple best with a flat lying conductor to the east of the Anneliese sulphides (such as a stringer zone), or an alternative more eastern VMS horizon location. The East loop DHEM responses also did not show any indication of off-hole or quality in-hole conductors.

The North Henty Fault was intersected in ANNE001 at a depth of 296m. The DHEM results do not indicate that this fault is a conductor.

There is evidence in early times (58 to 185 micro-seconds, Figure 2), that a zone of very poor conductance was intersected from 120-135m, and 240-265m. The response is that of both positive and negative polarity peaks throughout the early time channels. This irregular response is interpreted to be due to noise spikes as a result of telluric currents (or similar) being channelled down the poor conductor (such as a weakly connected disseminated sulphide zone). These responses are evident in both loop positions. The geological implications of these noise spikes are that they suggest that the sulphides have a strike continuity in order for these currents to be channelled down. Other than this simple qualitative interpretation, no further information was obtained from the DHEM results from ANNE001.

6. RECOMMENDATIONS

The following recommendations are made from the results of the three-component down-hole electromagnetic survey:

- No off-hole conductors were identified in the ANNE001 DHEM results. Therefore no drill-targets have been recommended.
- The sulphide zones intersected in ANNE001 at 125m and 255m appear to provide a similar DHEM response indicative of very poor conductors. The response did however give

evidence of strike continuity (qualitative only). These sulphide zones have been shown to produce little or no geophysical response using IP, EM, and magnetics, and therefore, if their extent is to be mapped, alternative methods will have to be employed.

7. REFERENCES

Dauth, C. 1996, EL 5/96 Interpretation of induced polarisation, VLF-EM, and ground magnetic data, White Spur, Tasmania; RGC Exploration Internal Company Report.

Vicary, M. J., 1996, EL 5/96 White Spur geological mapping for RGC Exploration; Field results not yet published.

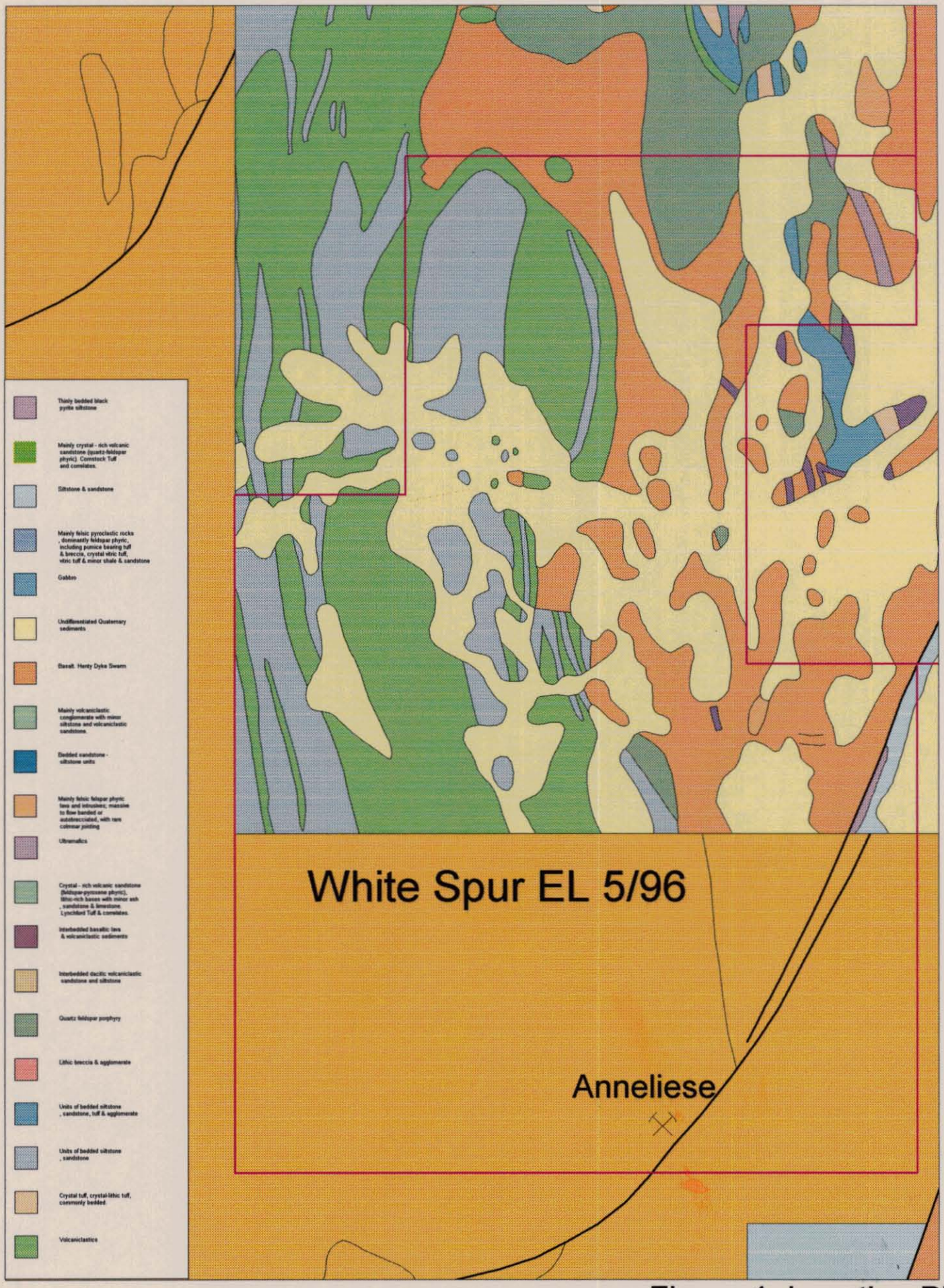
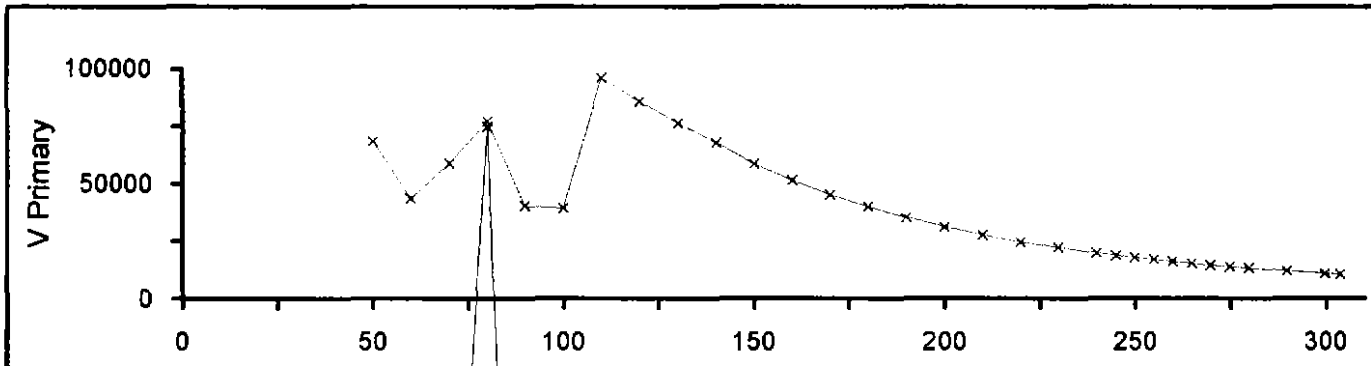
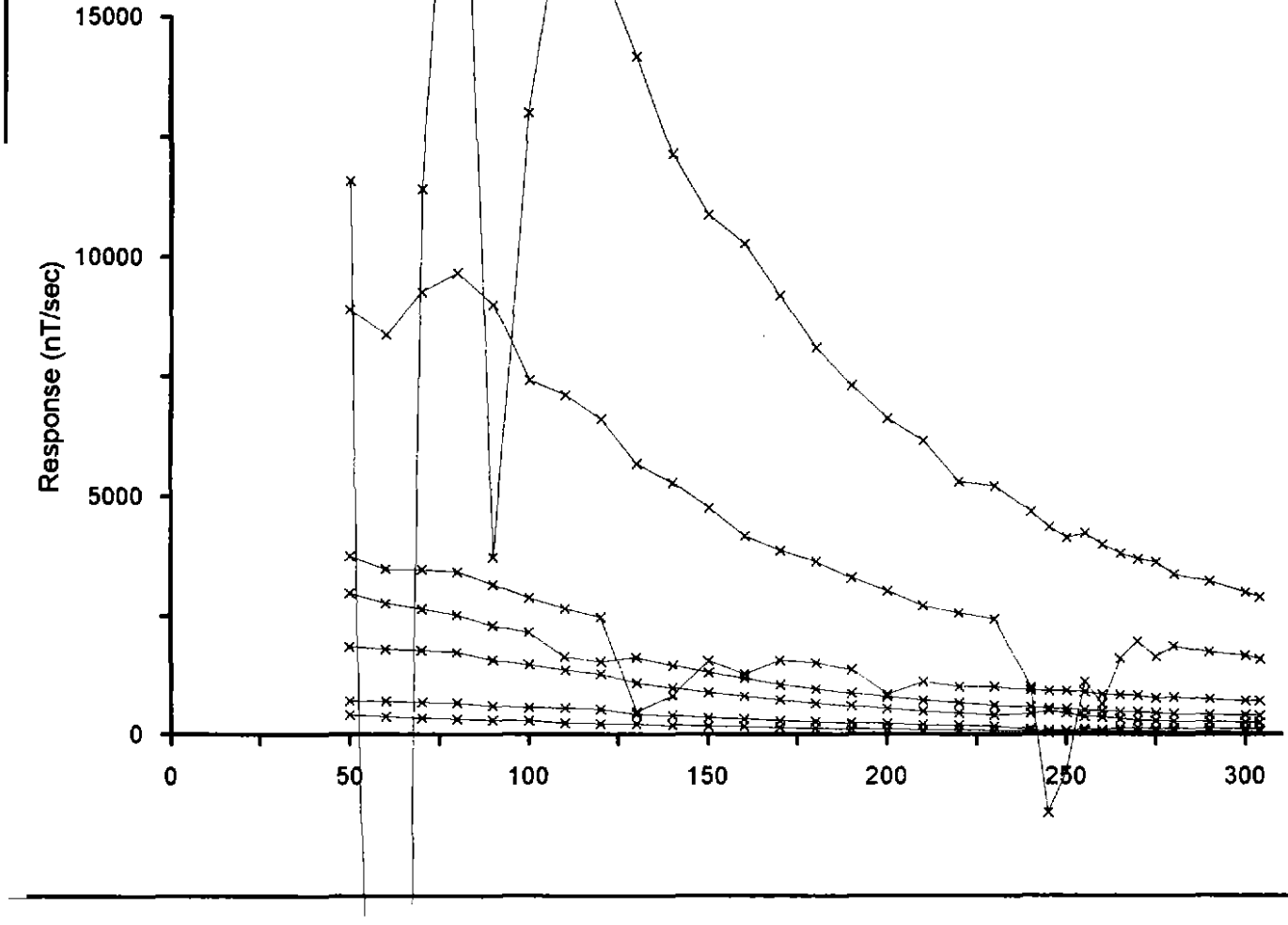


Figure 1. Location Plan



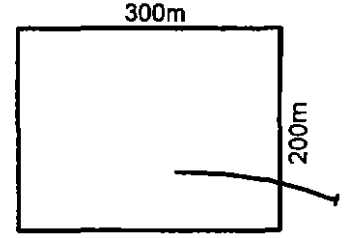


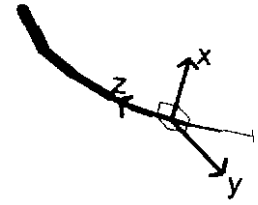
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 2

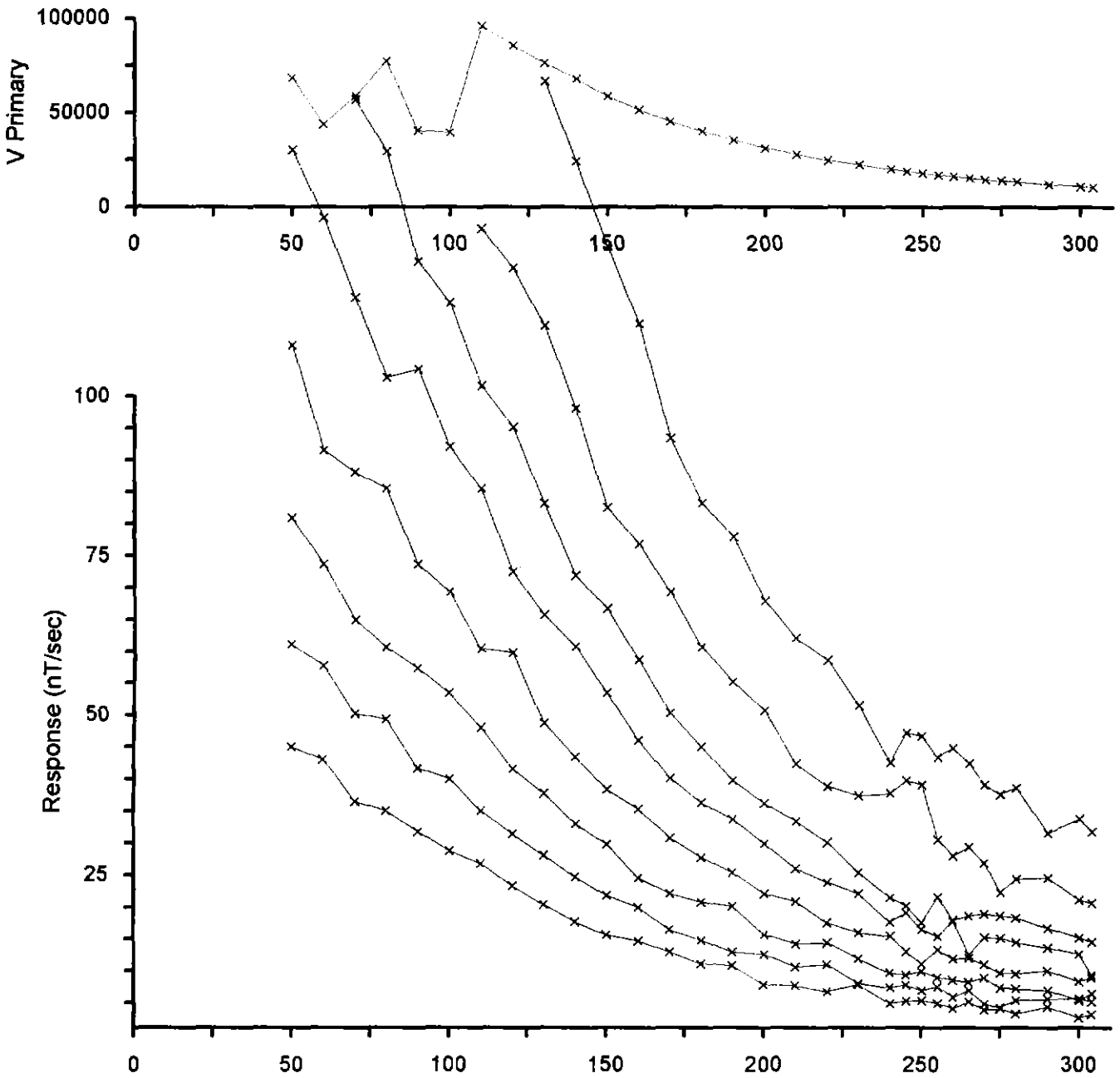
Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 1-7
Times: 58-185 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997





Drawn By: Chris Dauth *Date : March 1997*

363136

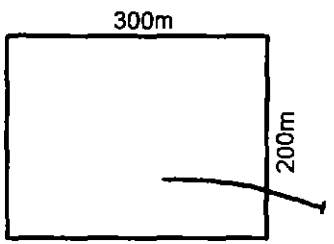


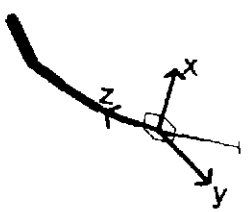
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 3

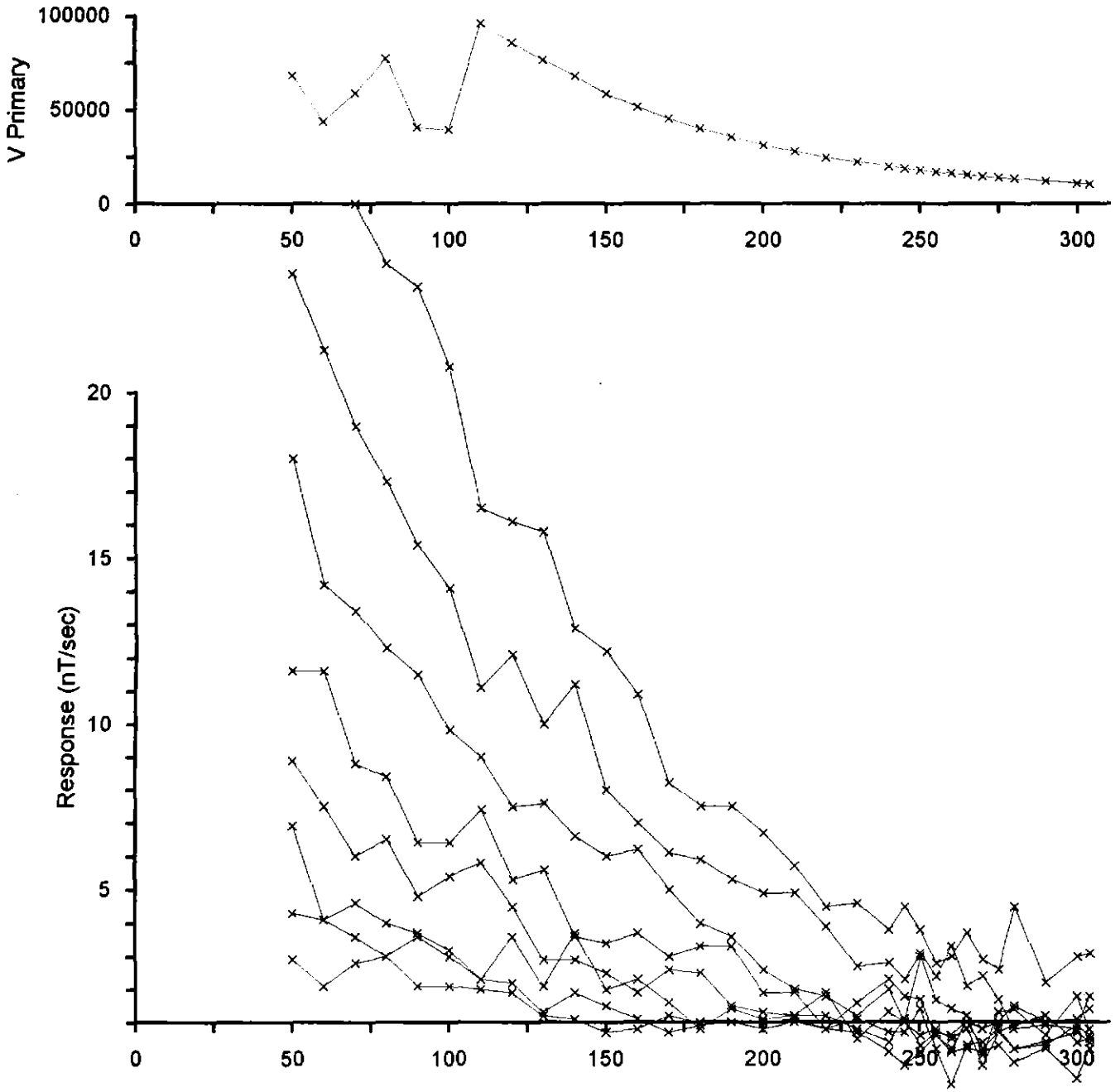
Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 8-15
Times: 225-850 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997





33133-1

Drawn By: Chris Dauth *Date : March 1997*

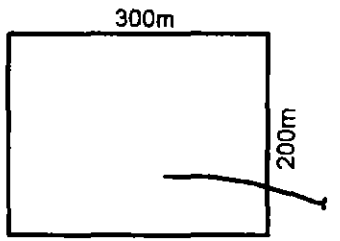


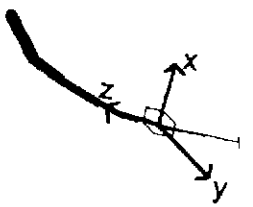
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 4

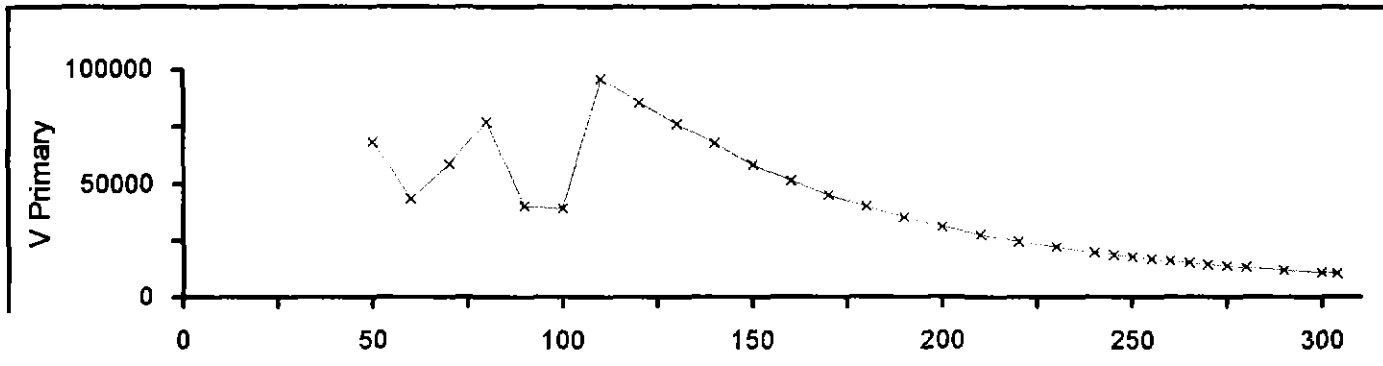
Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 16-23
Times: 1026-3861 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997

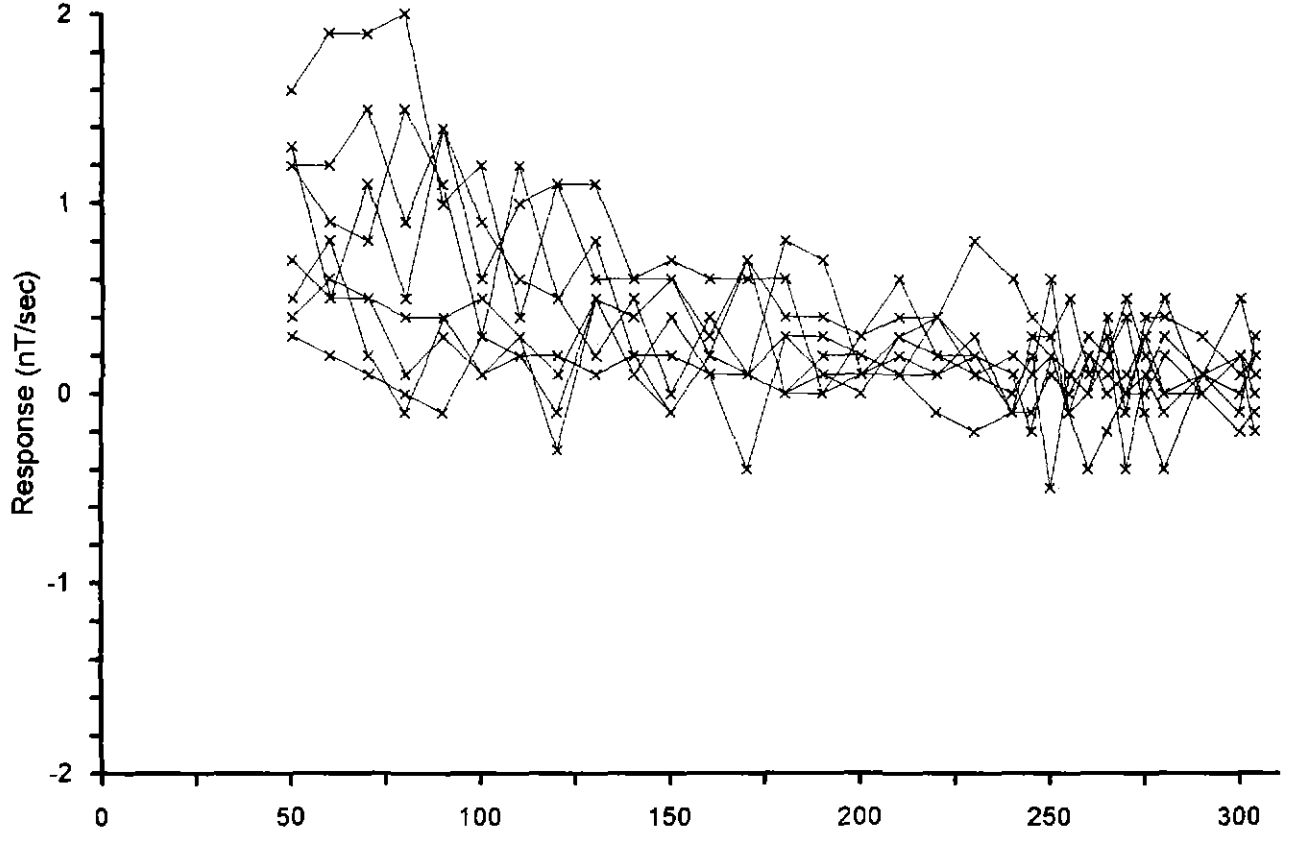




383136

Drawn By: Chris Dauth *Date : March 1997*



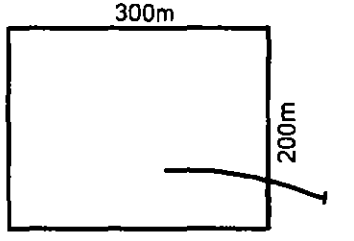


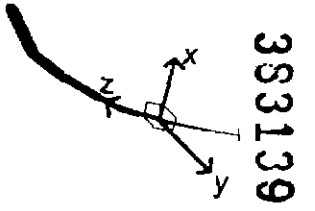
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 5

Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 24-31
Times: 4666-17510 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997





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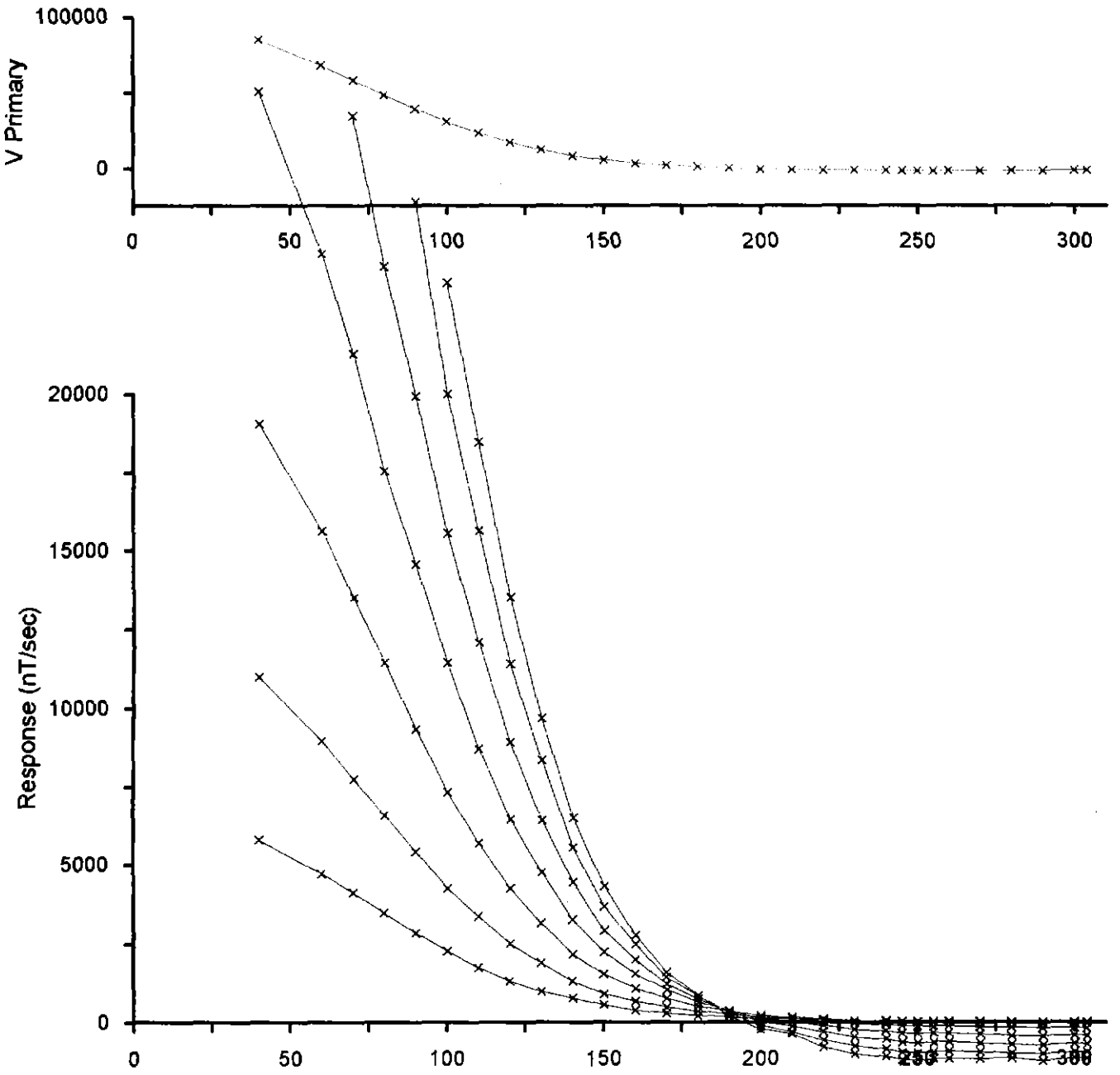
Drawn By: Chris Dauth *Date : March 1997*

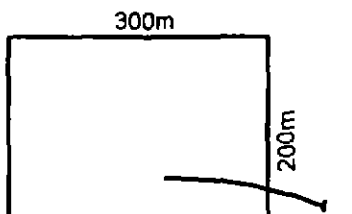


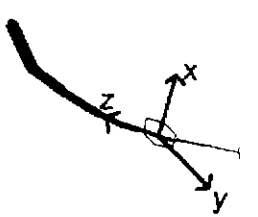
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 6

Equipment: CRONE
DHEM Component: X
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 1-7
Times: 58-185 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997





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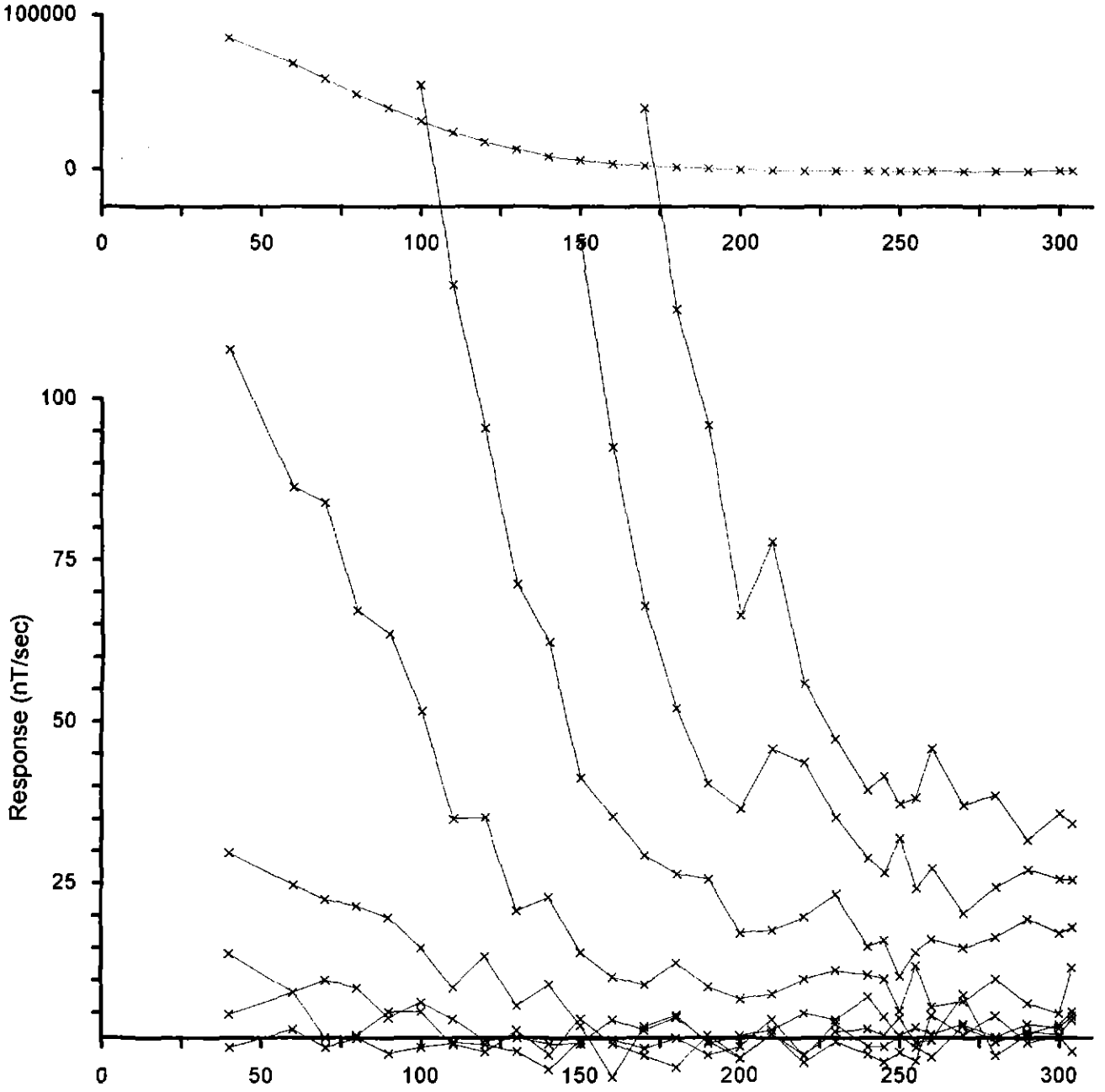
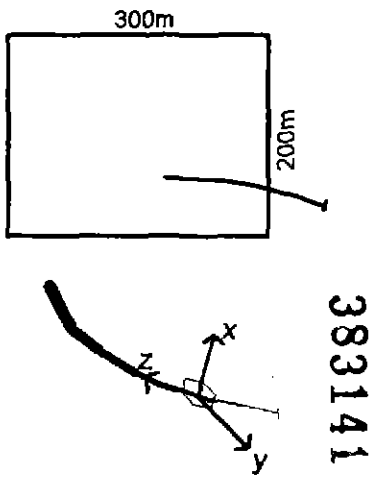


RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

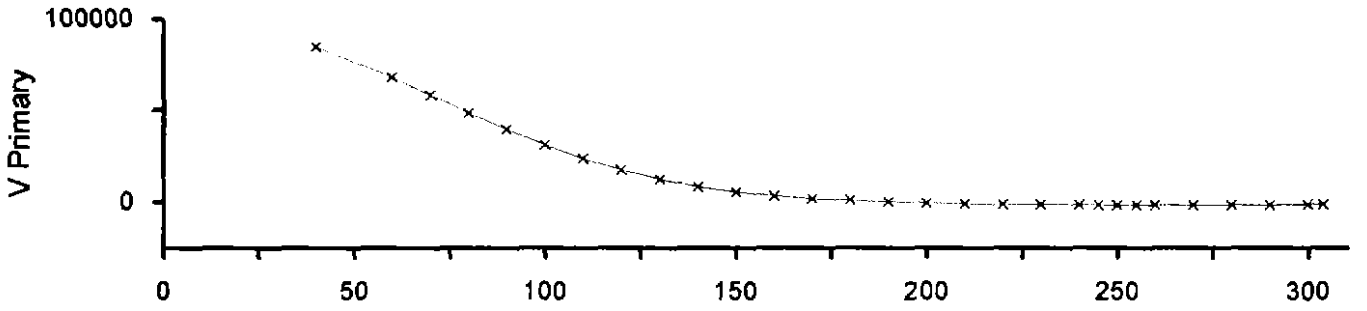
Figure 7

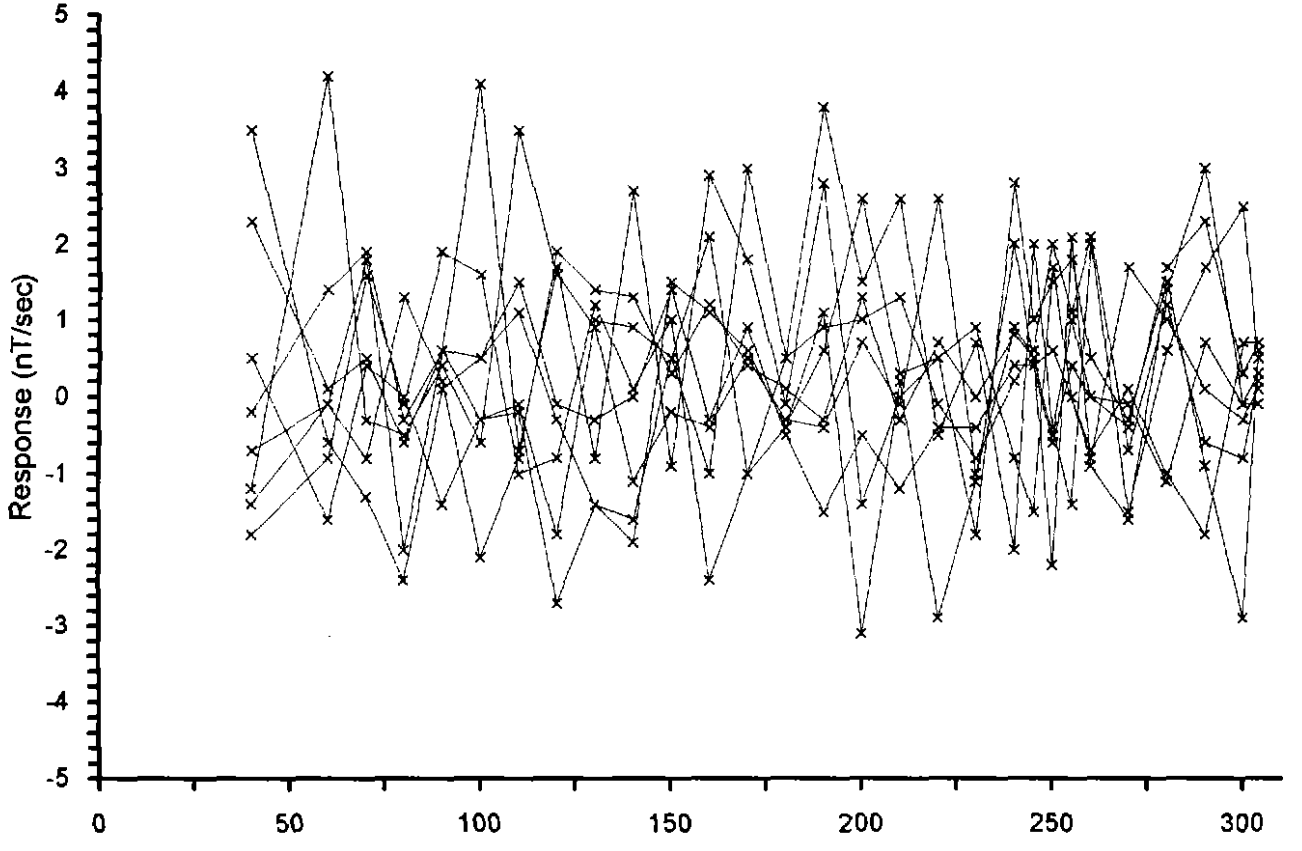
Equipment: CRONE
DHEM Component: X
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 8-15
Times: 225-850 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997



383141

Drawn By: Chris Dauth Date : March 1997



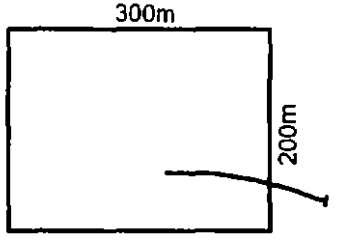


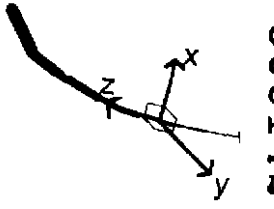
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 8

Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 16-23
Times: 1026-3861 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997





3831457

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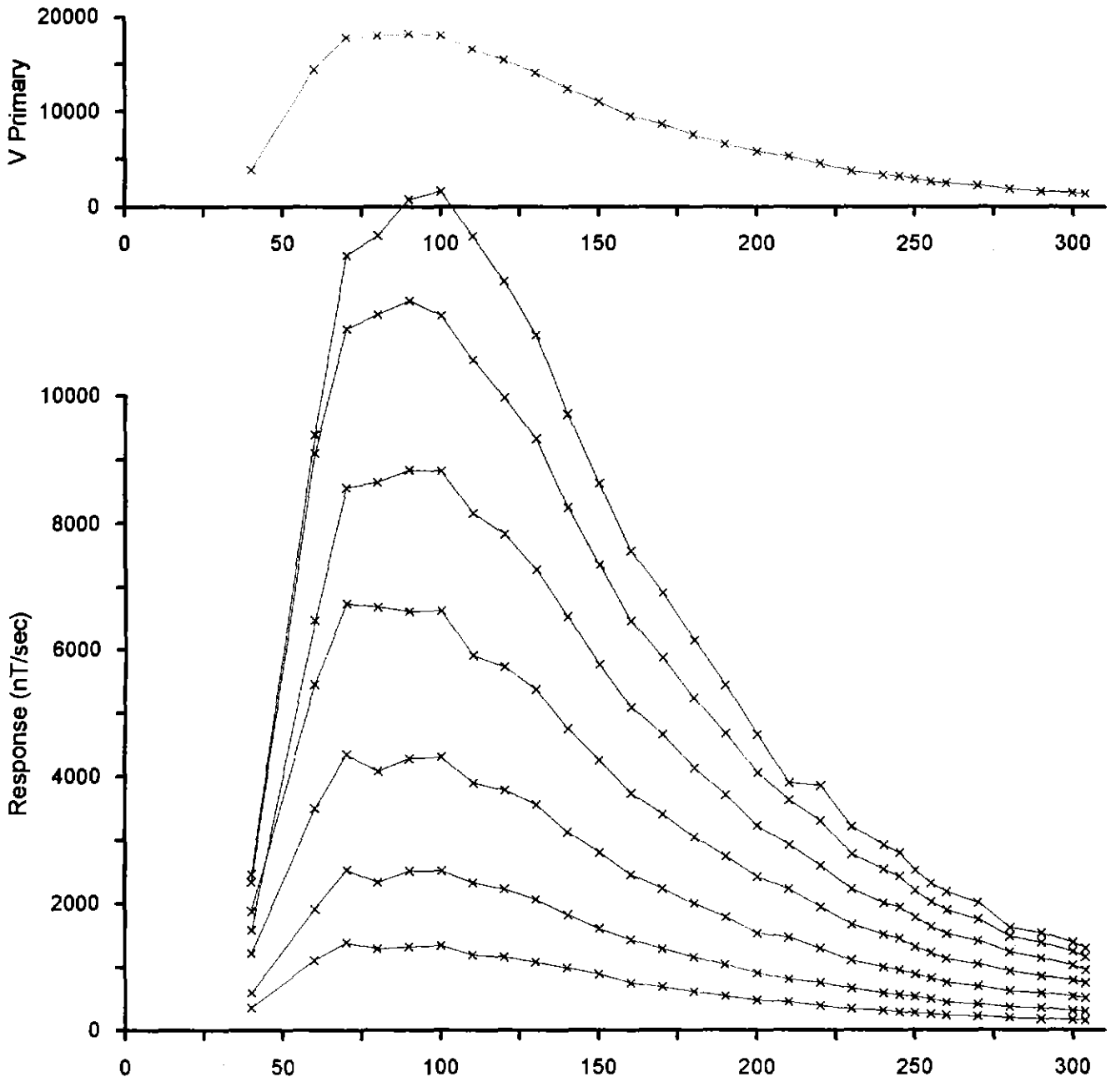
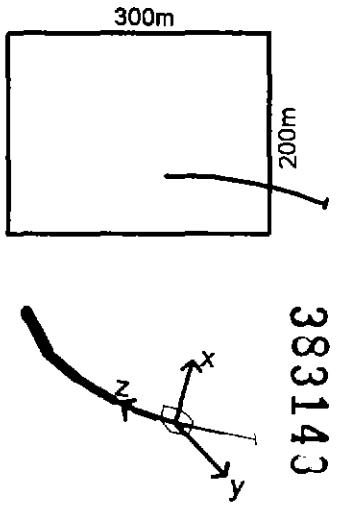


RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 9

Equipment: CRONE
DHEM Component: Y
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 1-7
Times: 58-185 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997



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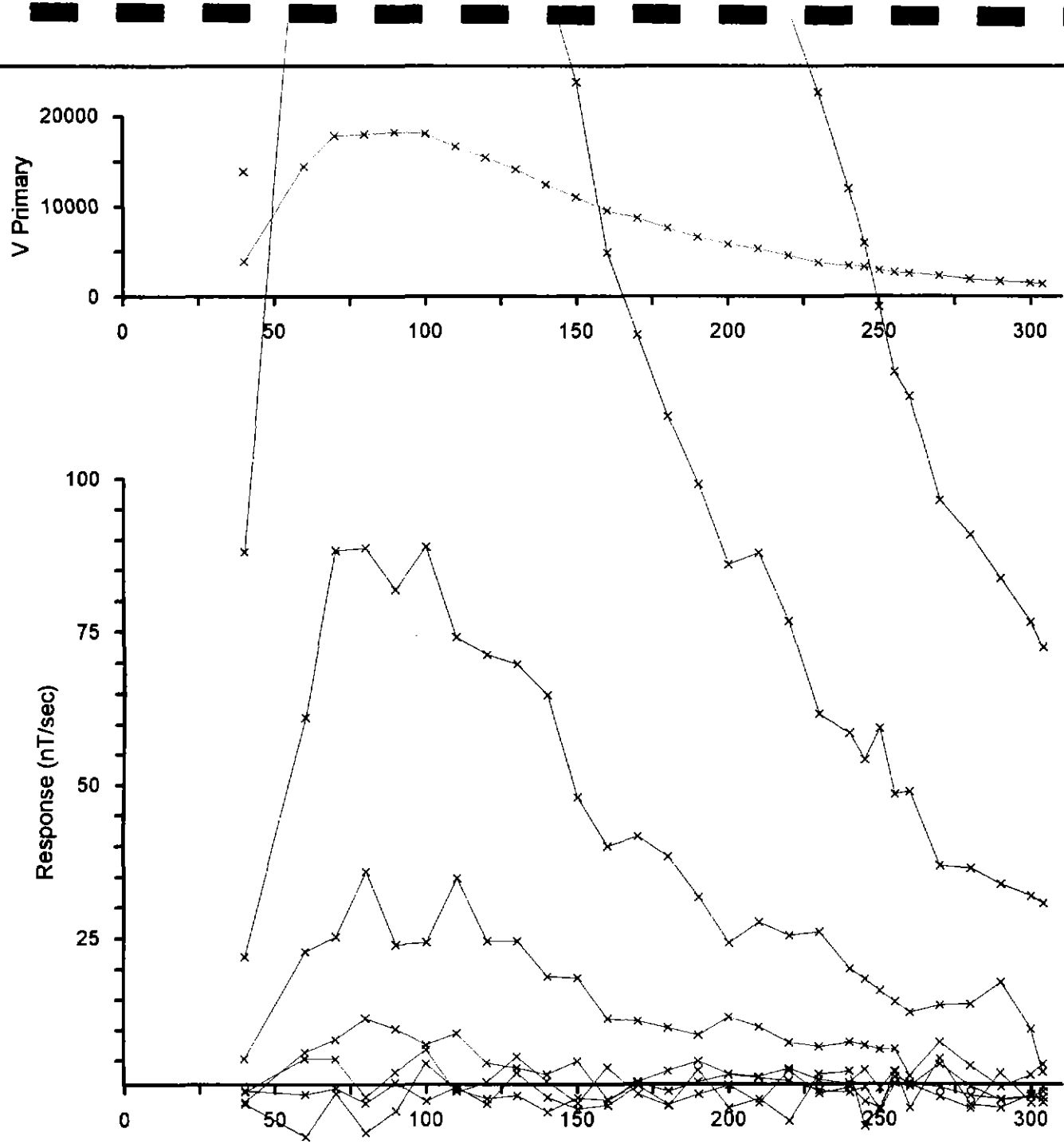
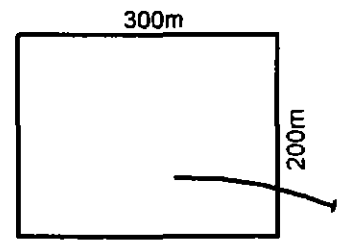


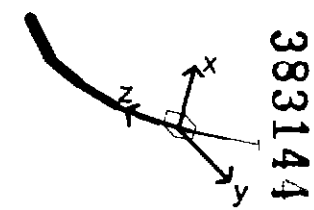
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 10

Equipment: CRONE
DHEM Component: Y
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 8-15
Times: 225-850 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997





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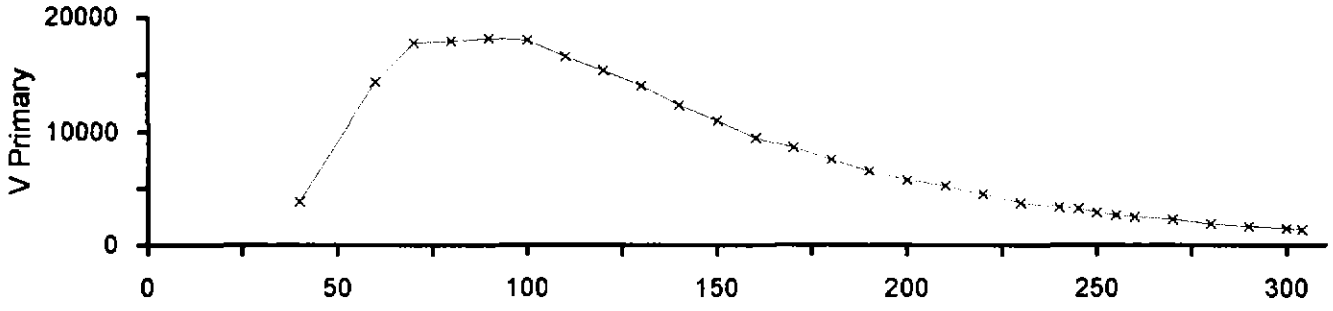
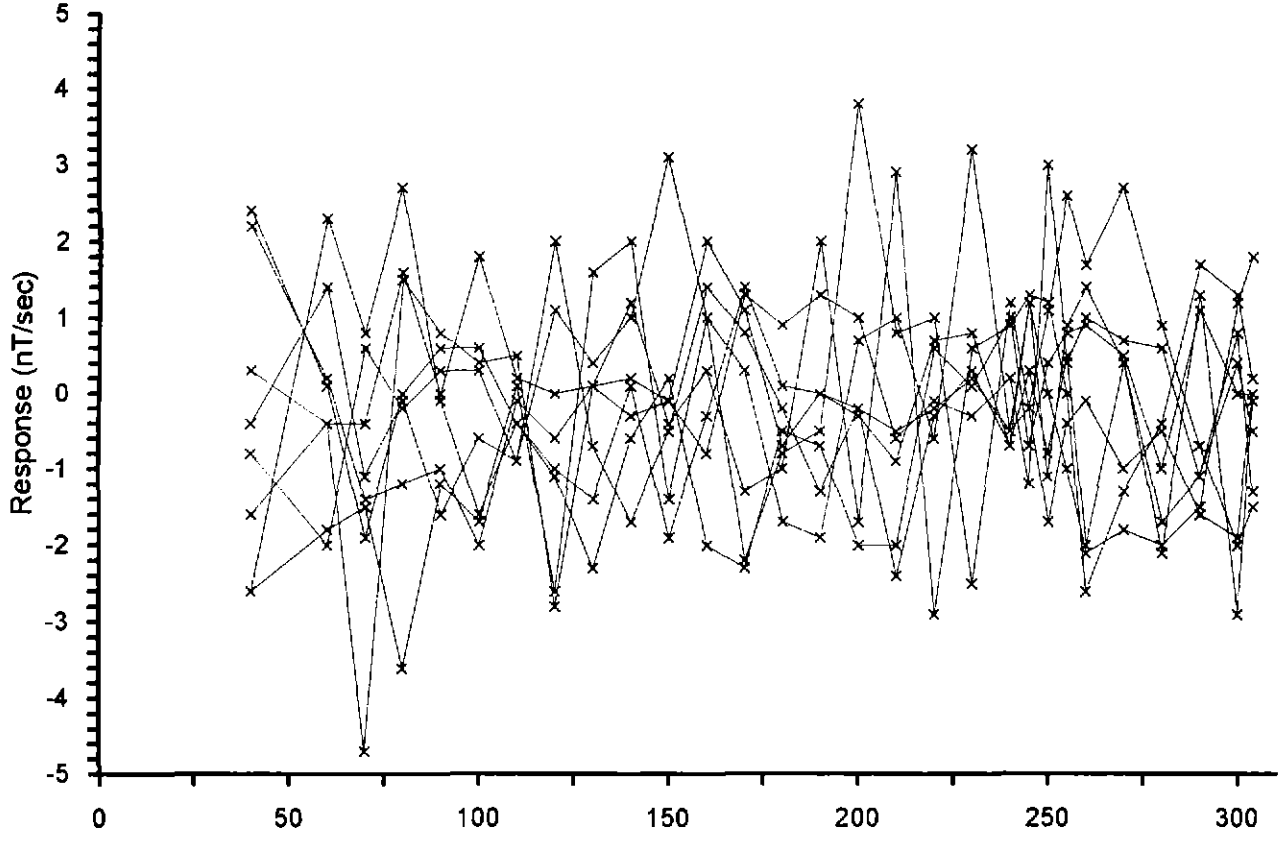


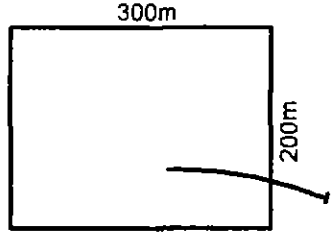


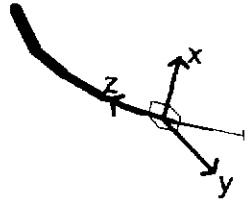
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 11

Equipment: CRONE
DHEM Component: Y
Hole: ANNE001
Loop: West
Units: nT/sec
Channels: 16-23
Times: 1026-3861 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 10 A
Survey Date: 2 Feb 1997





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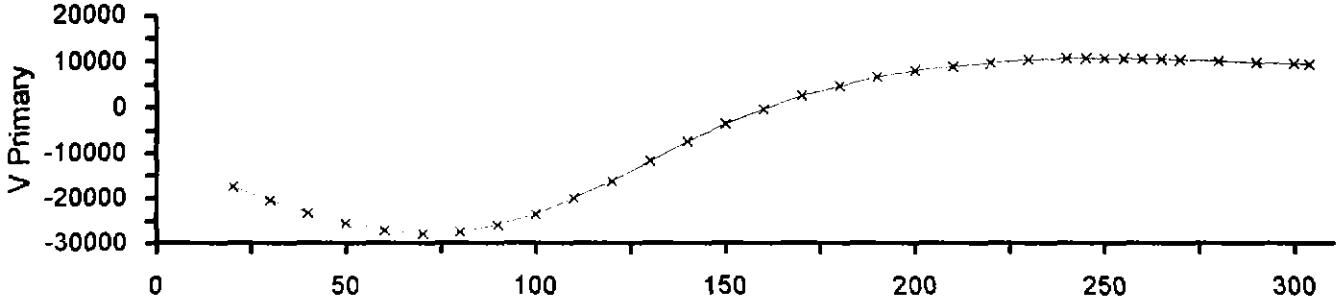
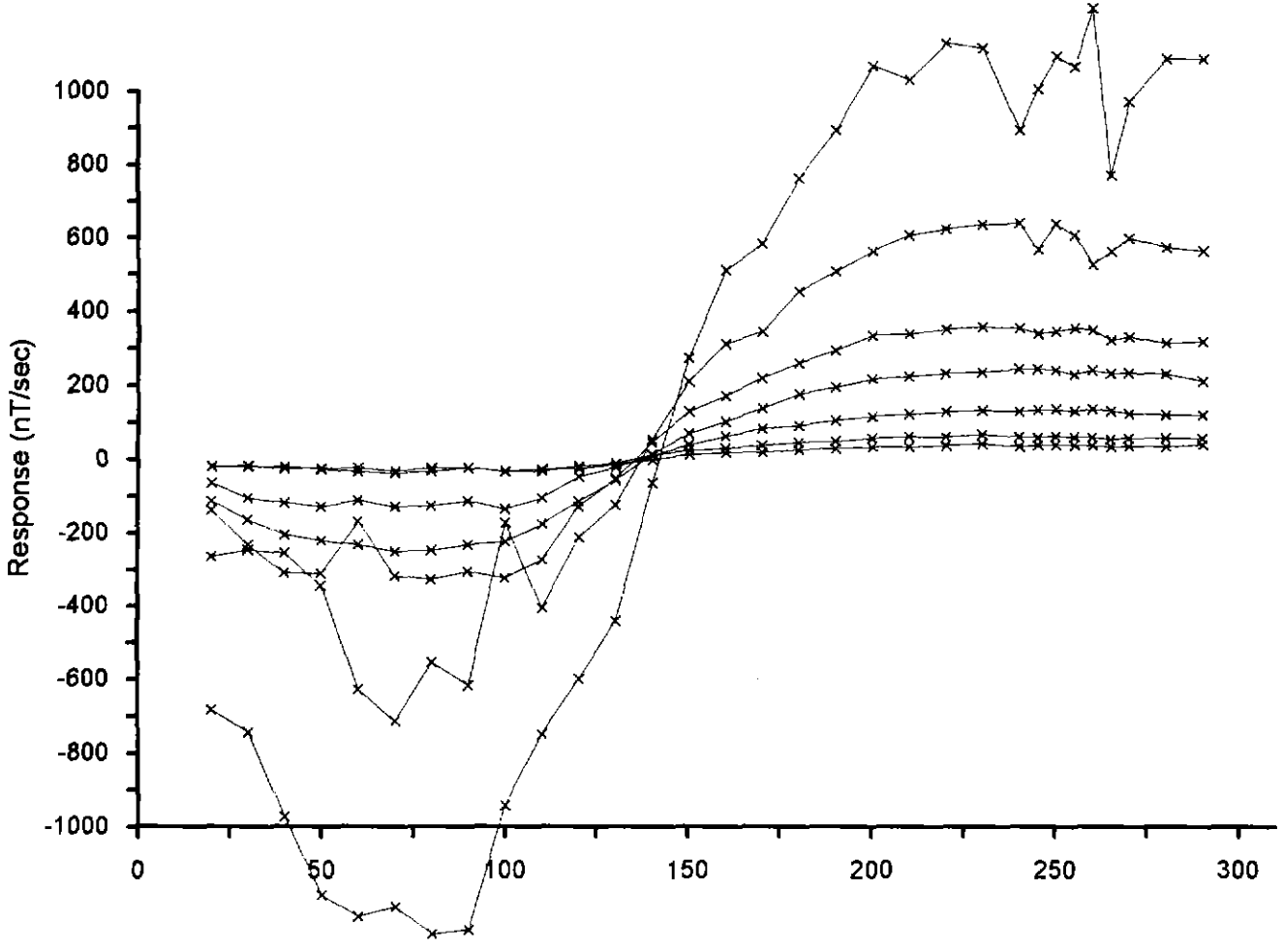


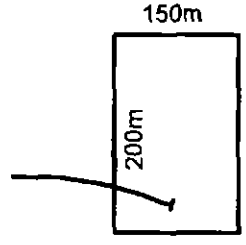


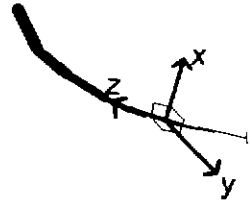
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 12

Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 1-7
Times: 58-185 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997





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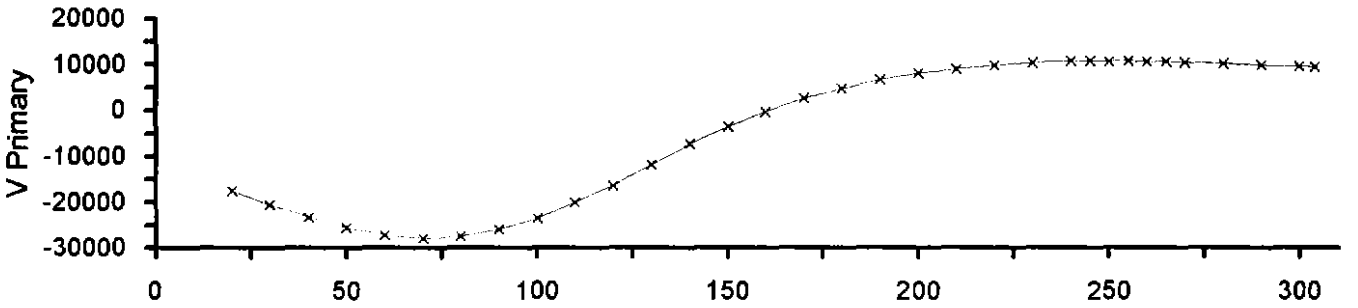
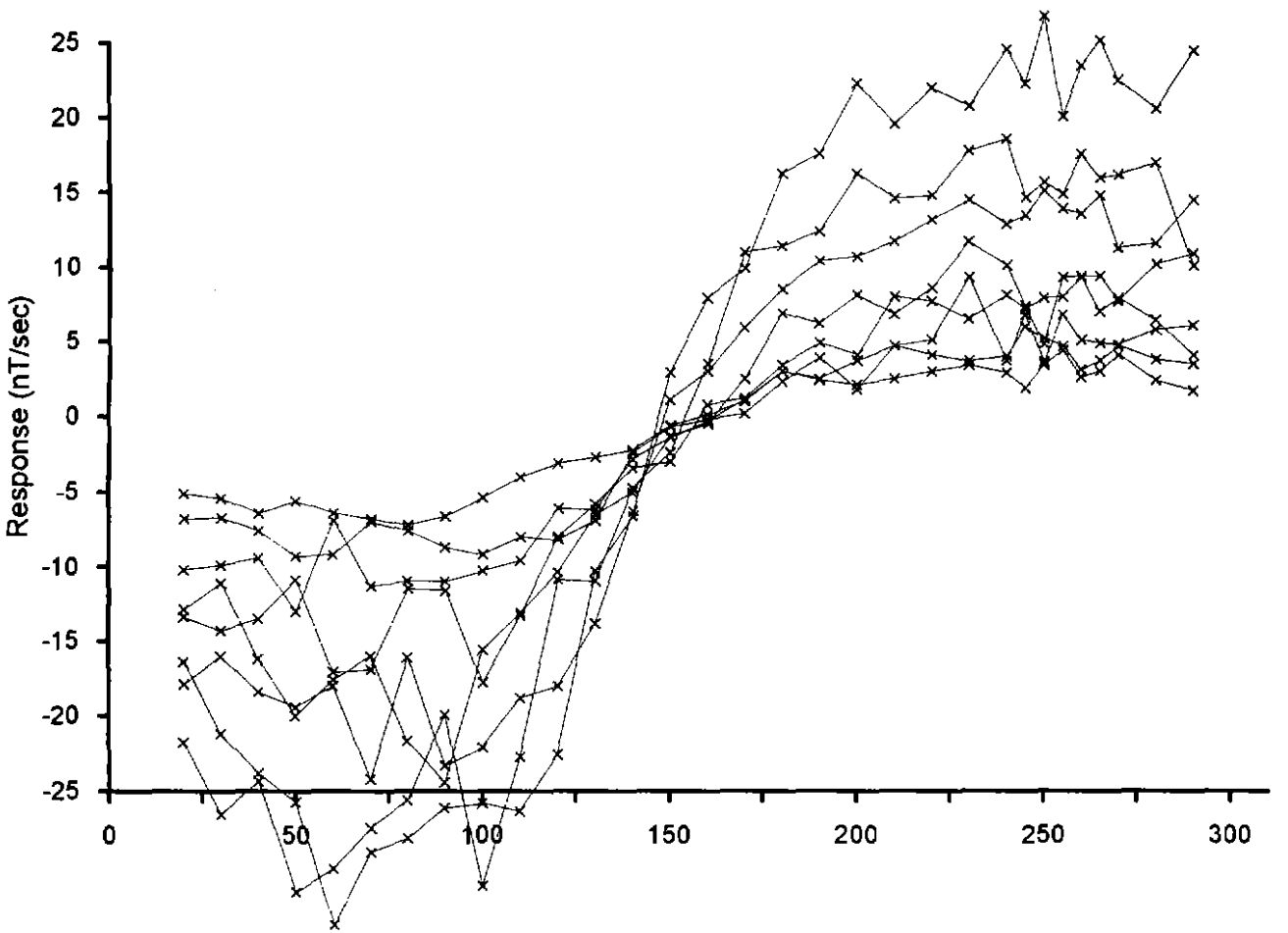
Drawn By: Chris Dauth *Date : March 1997*



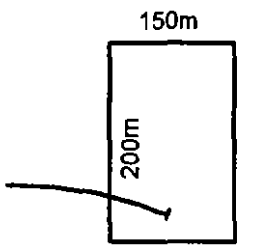


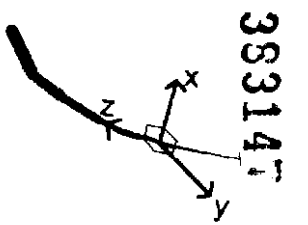
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 13

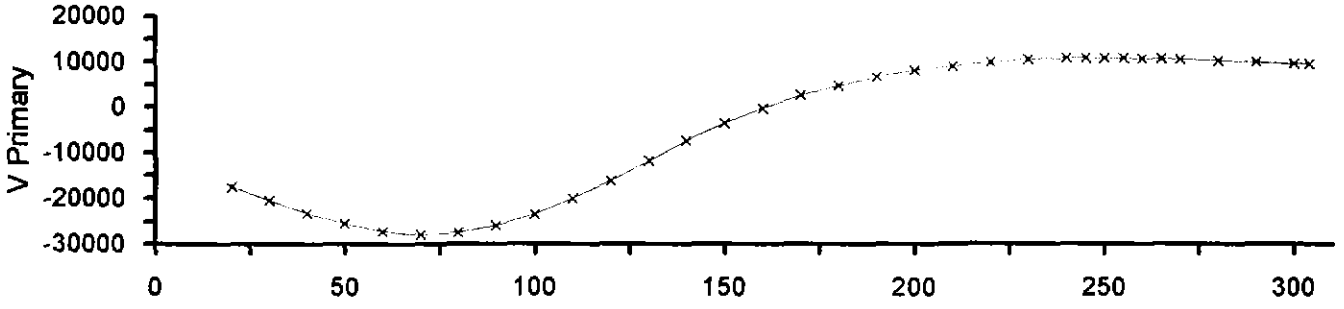
Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 8-15
Times: 225-850 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997

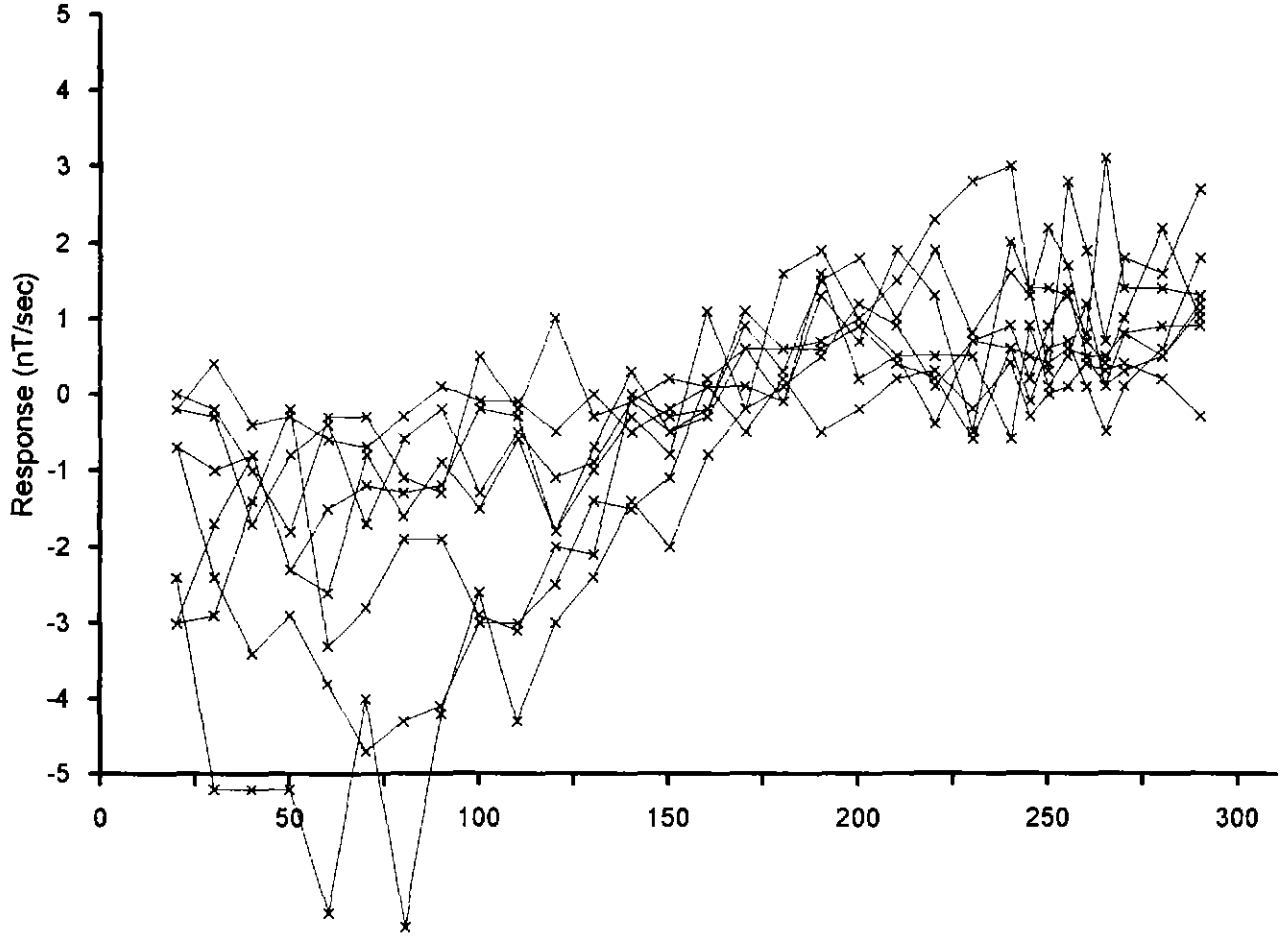




353141

Drawn By: Chris Dauth *Date : March 1997*



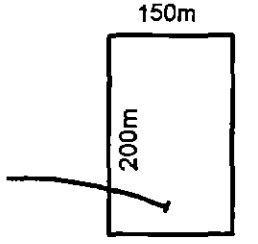


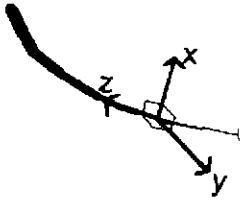
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 14

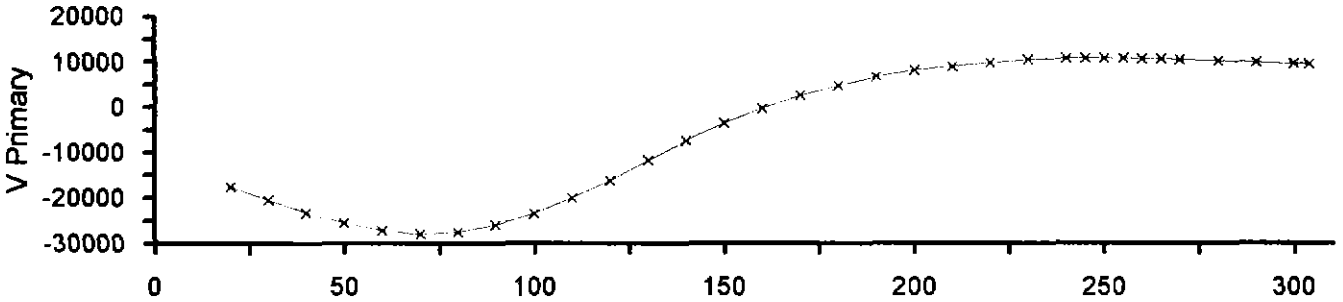
Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 16-23
Times: 1026-3861 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997

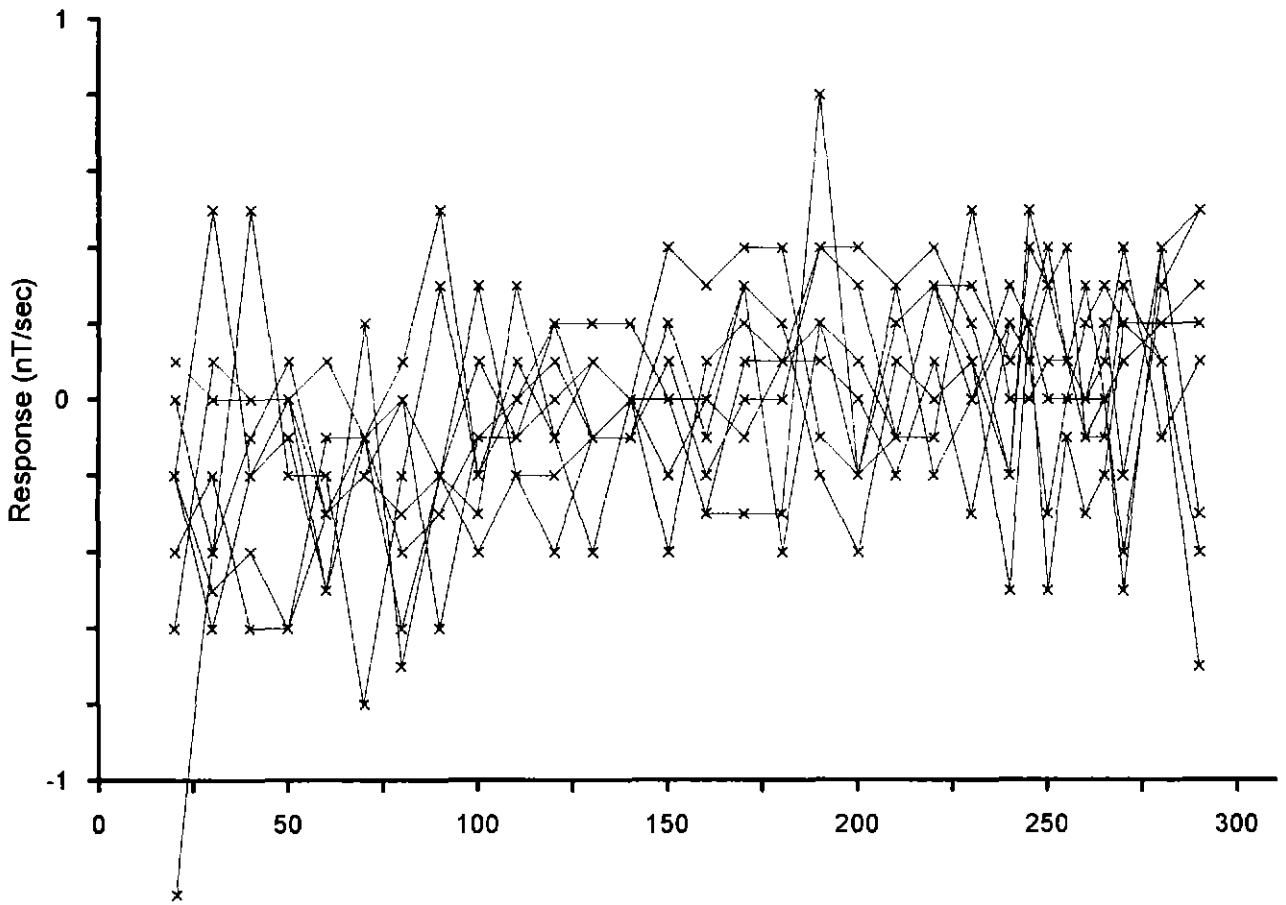




383148

Drawn By: Chris Deuth *Date : March 1997*



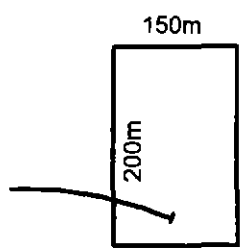


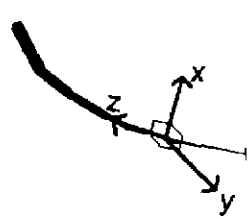
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 15

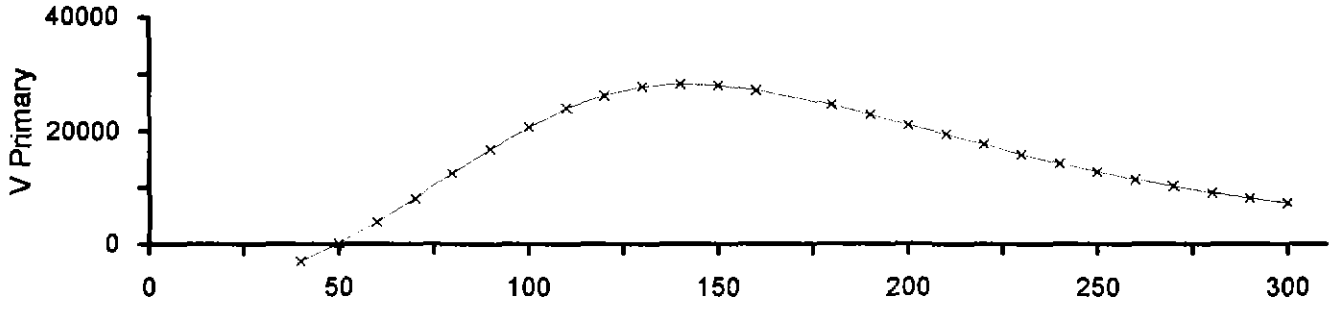
Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 24-31
Times: 4666-17510 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997

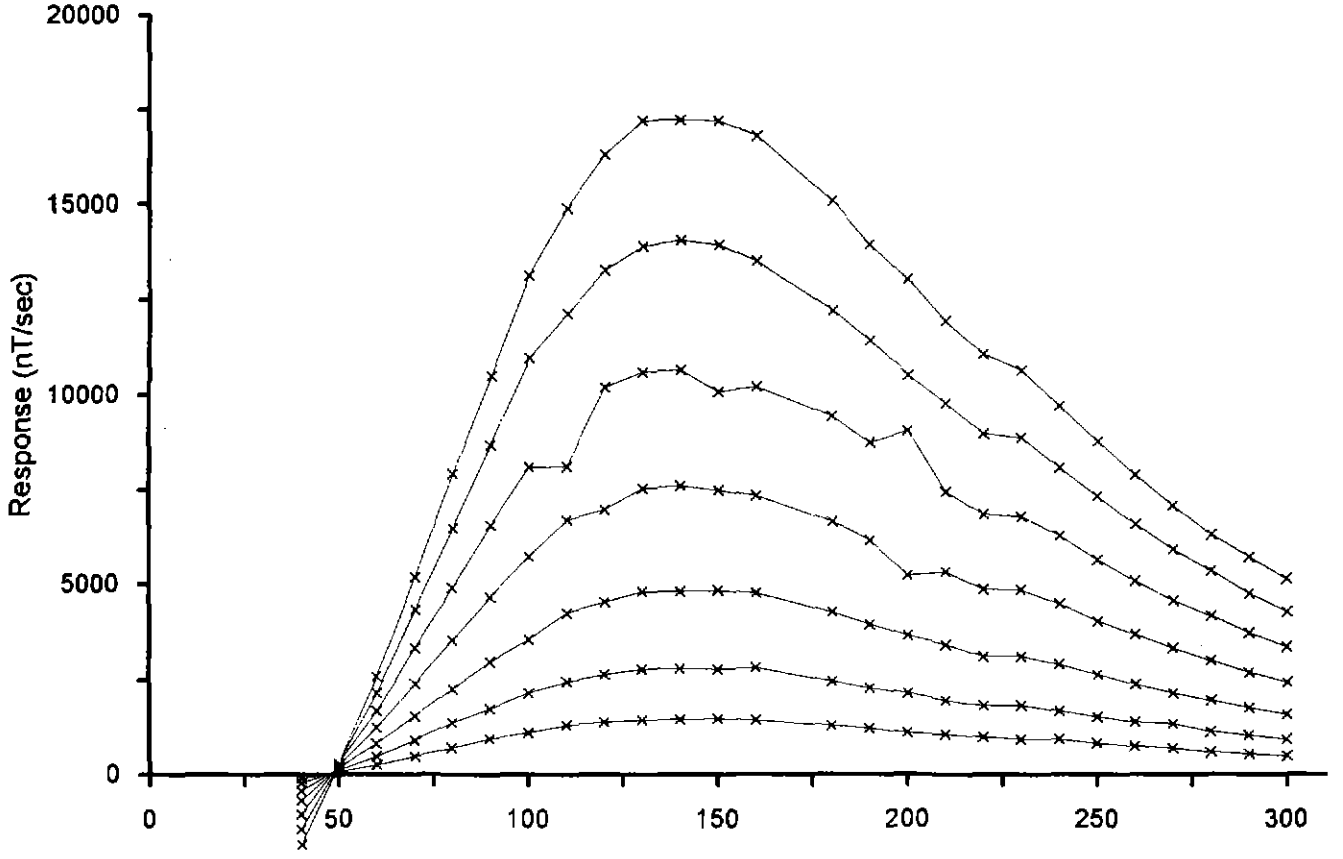




3831146

Drawn By: Chris Dauth *Date : March 1997*



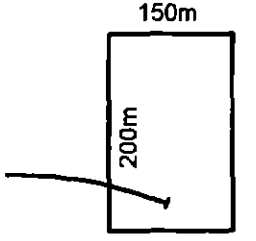


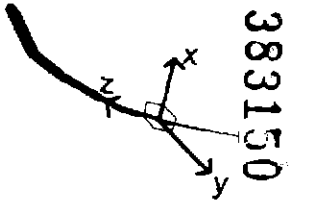
RGC Exploration
Tasmania Base Metals

White Spur EL 5/96
DHEM Survey

Figure 16

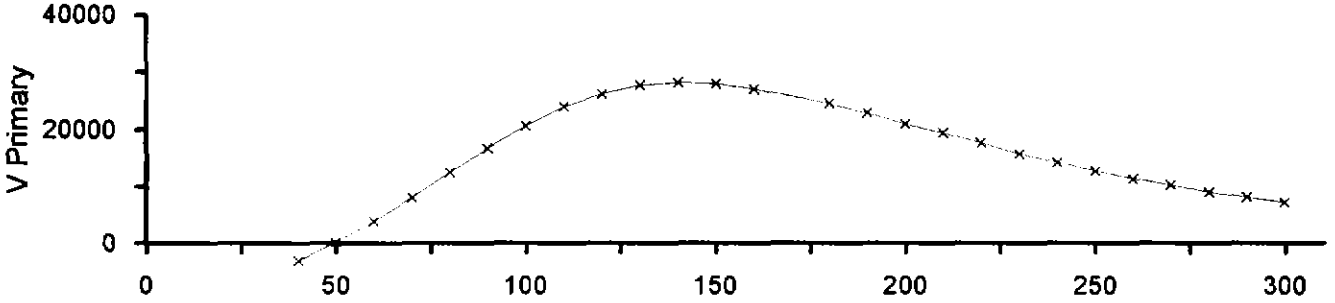
Equipment: CRONE
DHEM Component: X
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 1-7
Times: 58-185 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997

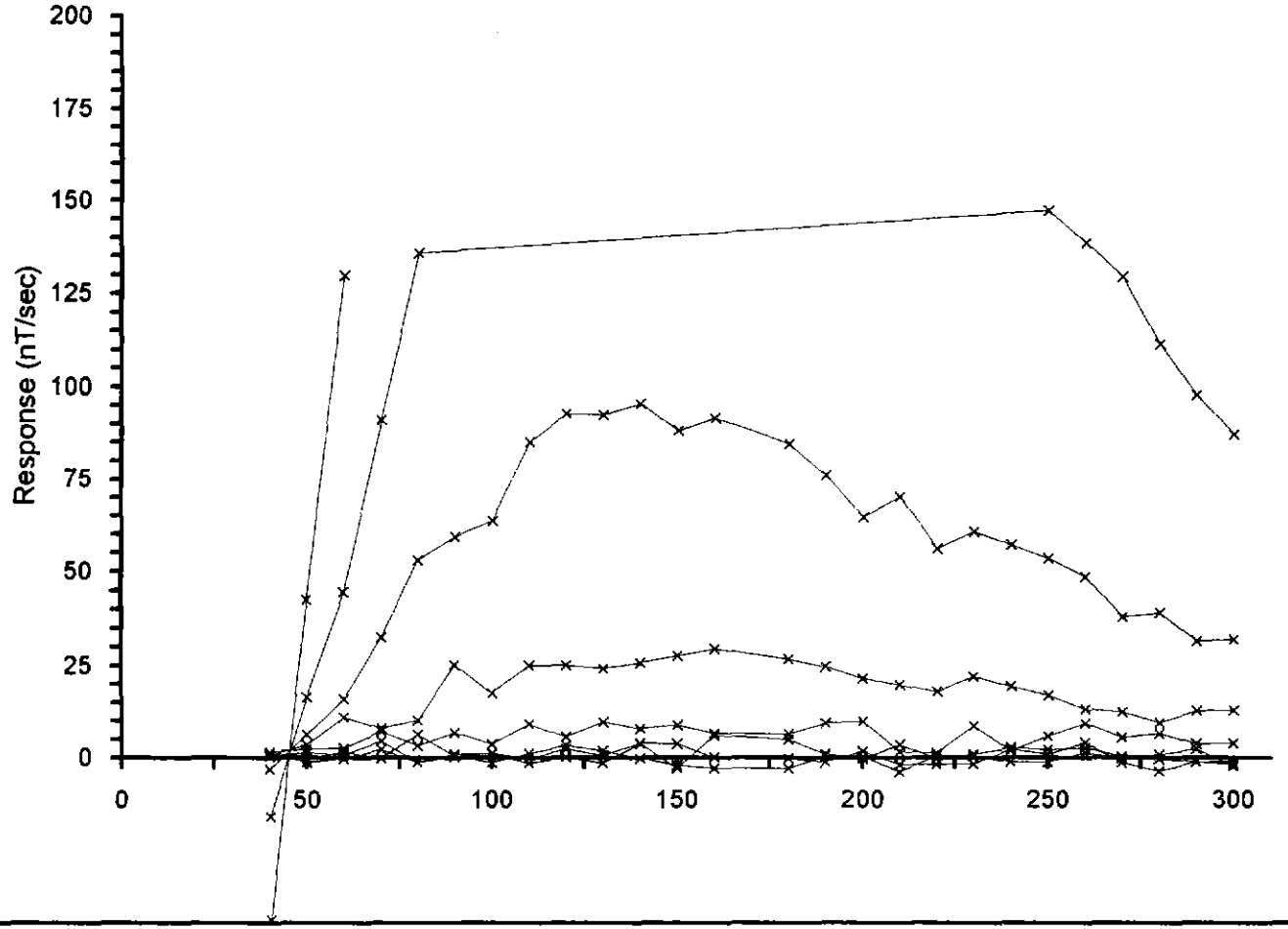




383150

Drawn By: Chris Dauth *Date: March 1997*



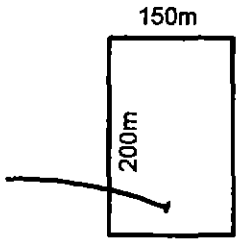


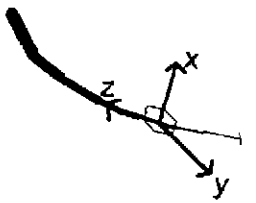
RGC Exploration
Tasmania Base Metals

White Spur EL 5/96
DHEM Survey

Figure 17

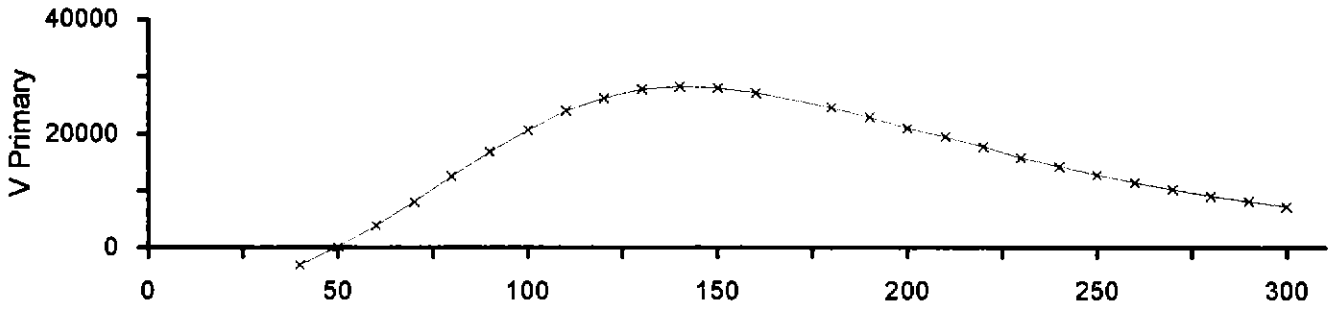
Equipment: CRONE
DHEM Component: X
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 8-15
Times: 225-850 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997

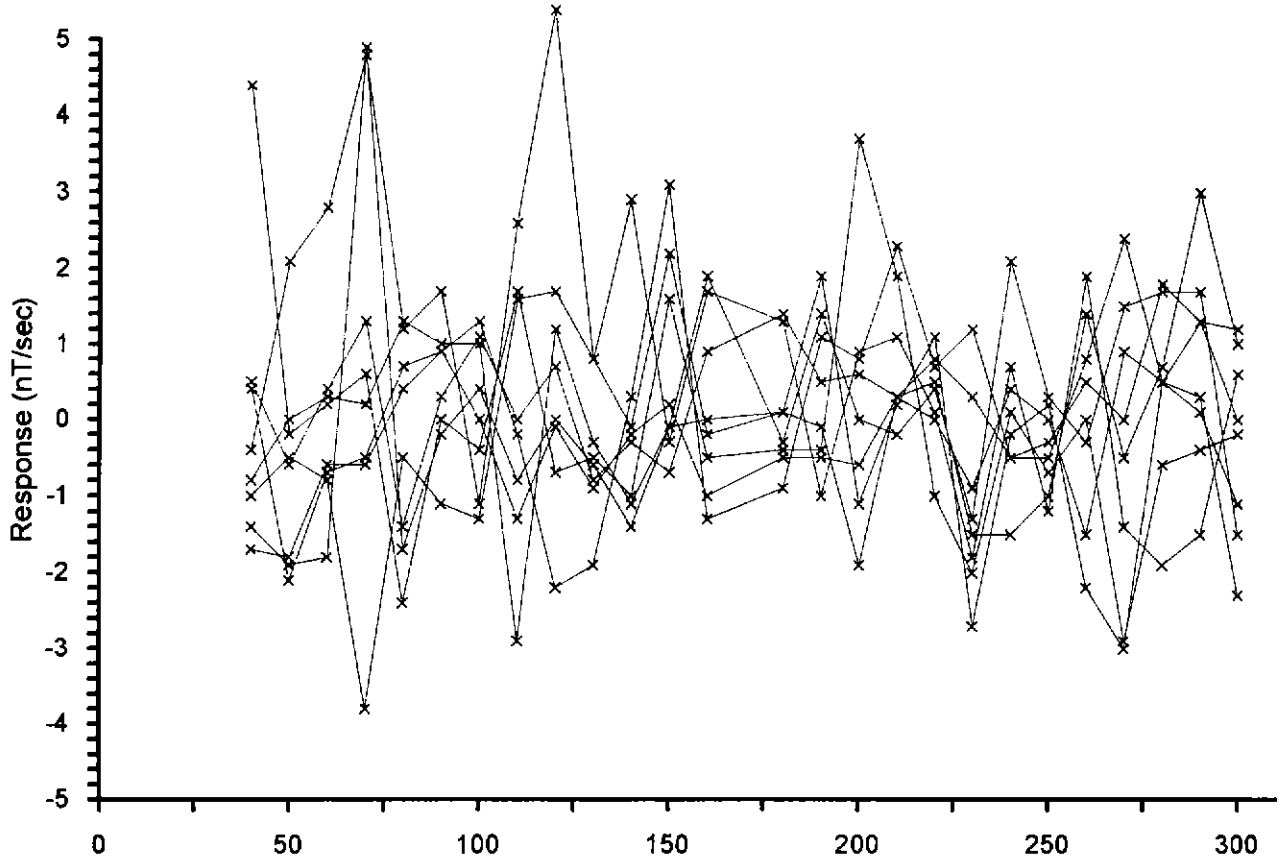




383151

Drawn By: Chris Dauth *Date : March 1997*



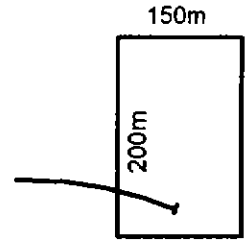


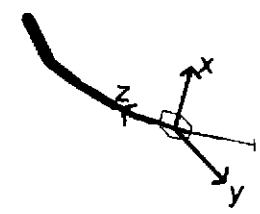
RGC Exploration
Tasmania Base Metals

White Spur EL 5/86
DHEM Survey

Figure 18

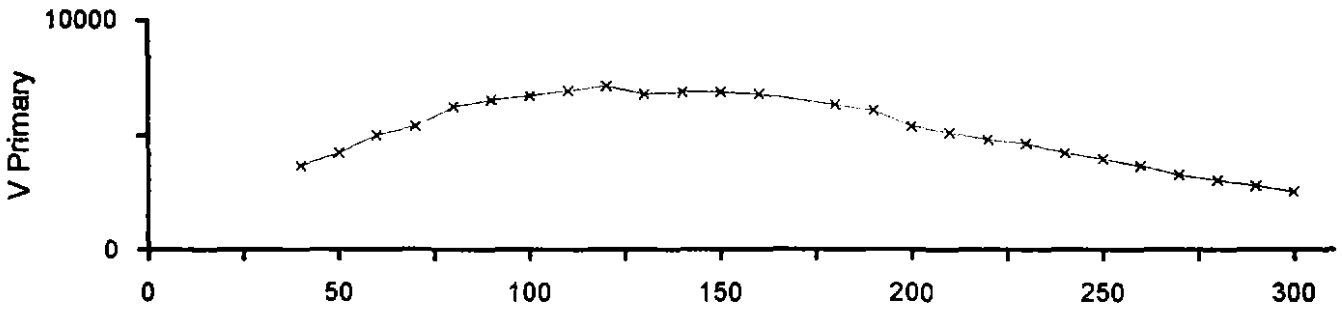
Equipment: CRONE
DHEM Component: Z
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 16-23
Times: 1026-3861 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997

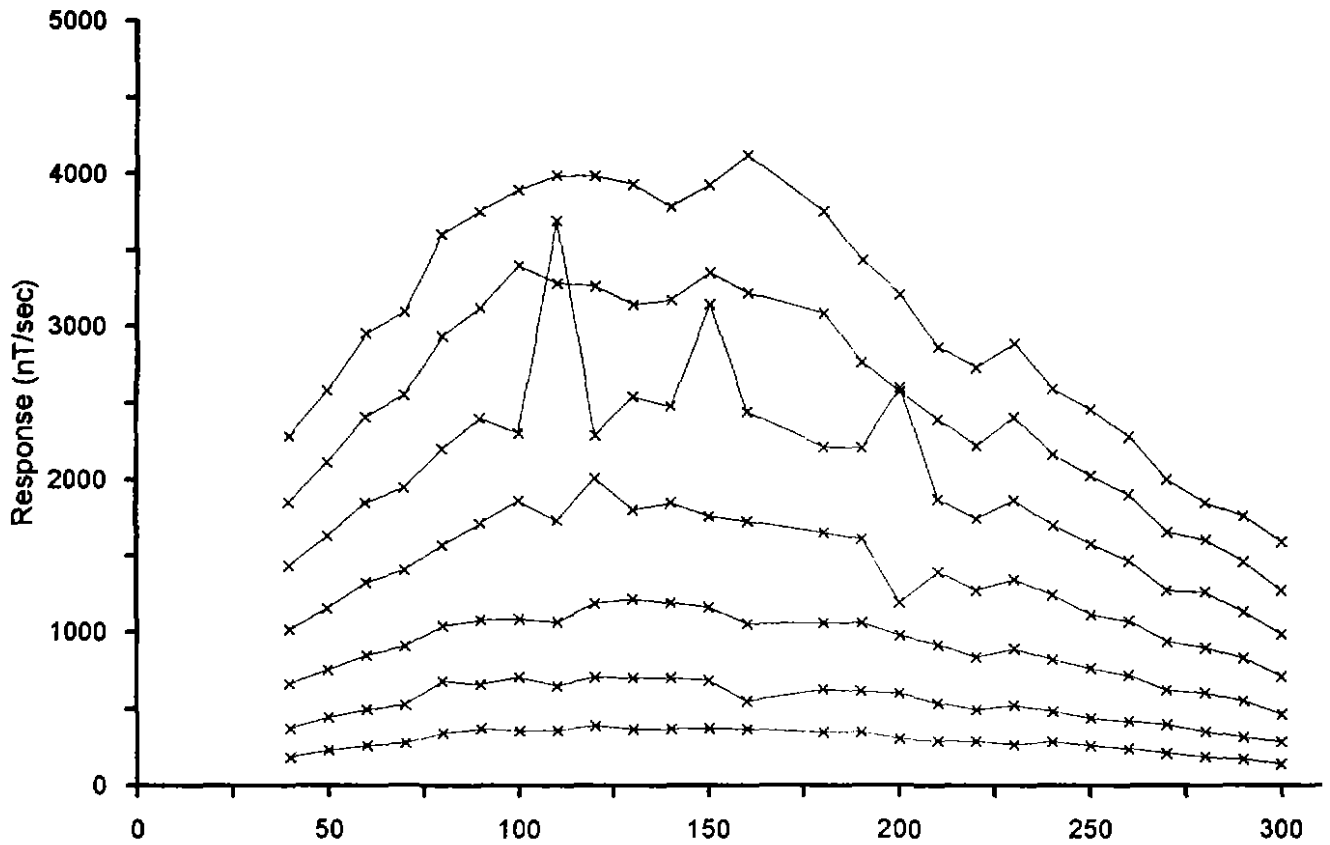




383152

Drawn By: Chris Dauth *Date : March 1997*



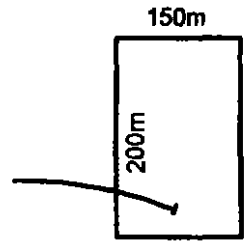


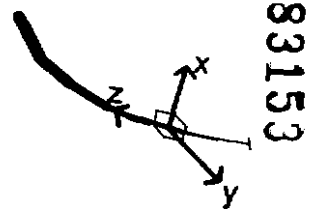
RGC Exploration
Tasmania Base Metals

White Spur EL 5/96
DHEM Survey

Figure 19

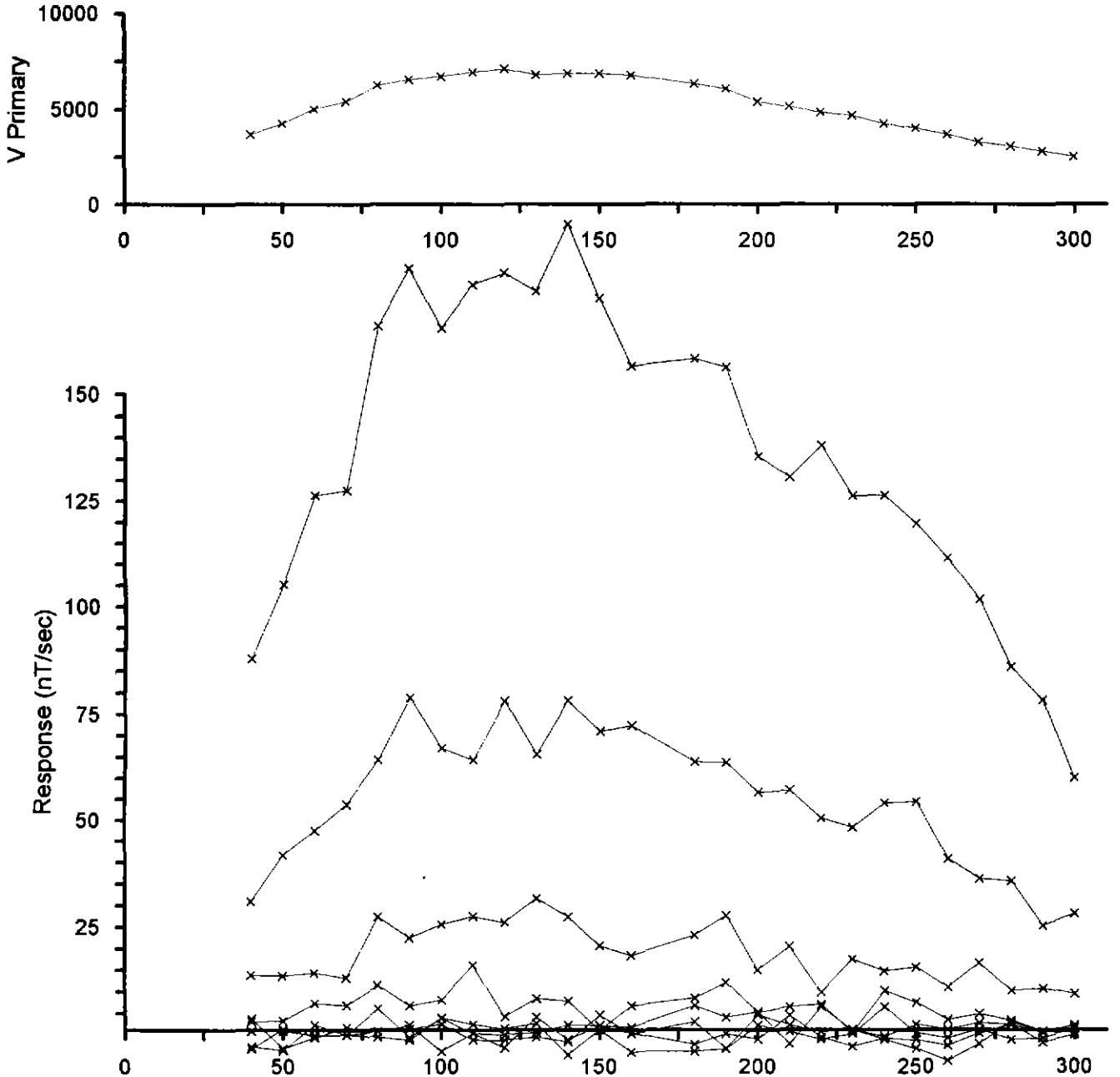
Equipment: CRONE
DHEM Component: Y
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 1-7
Times: 58-185 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997





383153

Drawn By: Chris Dauth *Date : March 1997*

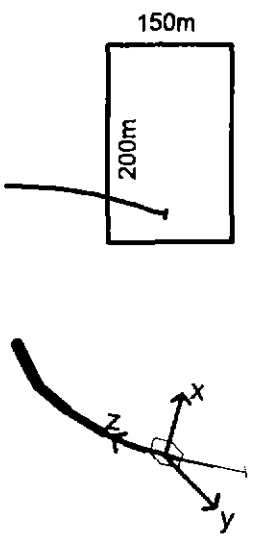


RGC Exploration
Tasmania Base Metals

White Spur EL 5/96
DHEM Survey

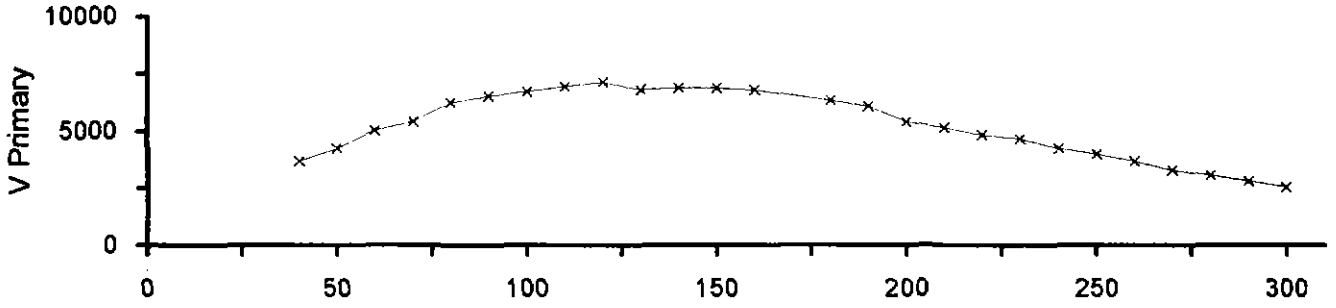
Figure 20

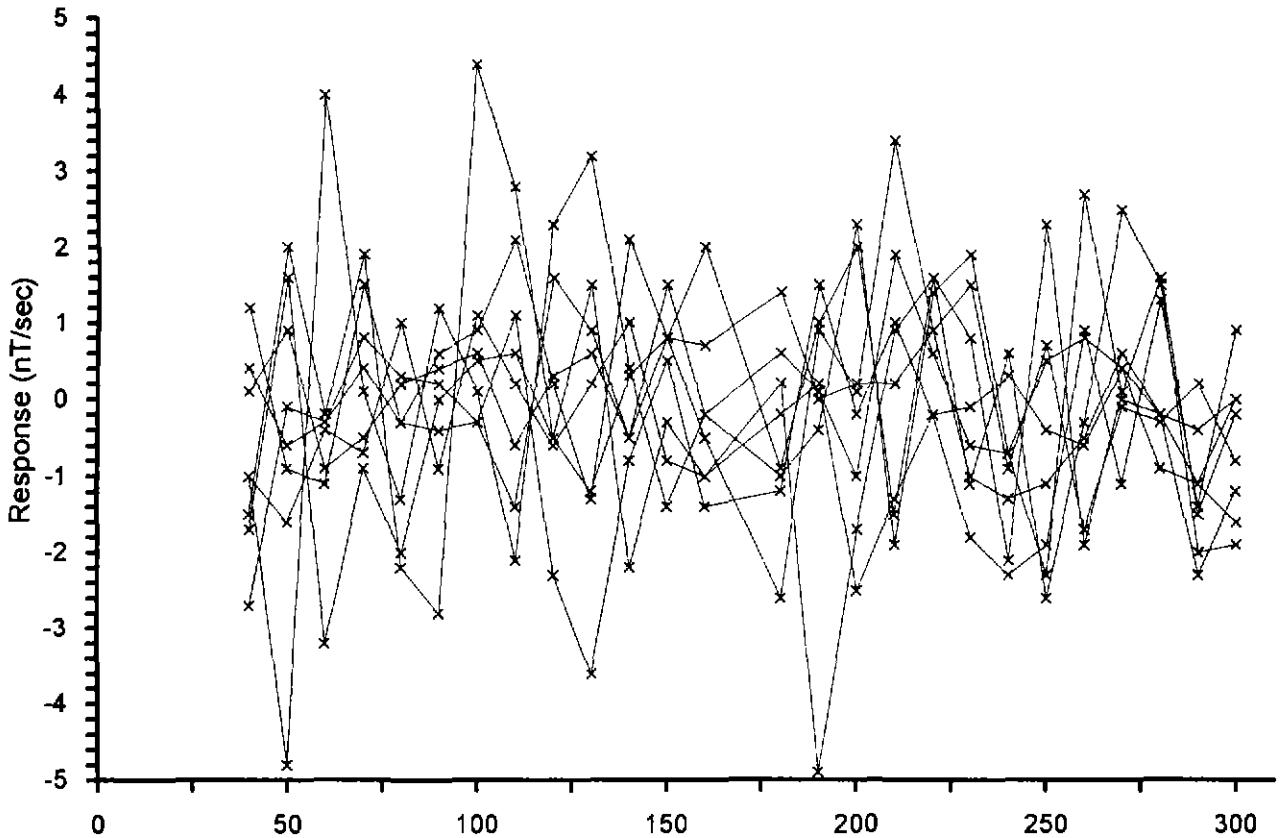
Equipment: CRONE
DHEM Component: Y
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 8-15
Times: 225-850 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997



3831154

Drawn By: Chris Dauth *Date : March 1997*



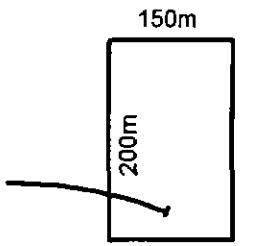


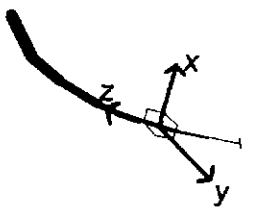
RGC Exploration
Tasmania Base Metals

White Spur EL 5/96
DHEM Survey

Figure 21

Equipment: CRONE
DHEM Component: Y
Hole: ANNE001
Loop: East
Units: nT/sec
Channels: 16-23
Times: 1026-3861 usec
Time Base: 20 msec
Ramp: 0.5 msec
Current: 14 A
Survey Date: 2 Feb 1997





3831155

Drawn By: Chris Dauth *Date : March 1997*

ANOMALY 1

ANOMALY 2

NORTH HENTY FAULT

NORTH HENTY FAULT

ZONE OF DEMAGNETISATION

ANOMALY 4

ANOMALY 3

ANOMALY 5

NORTH HENTY FAULT

Tx 1 (West)

Tx 2 (East)

Sulphides at surface

Anne001

Northing

Easting

97-4007

ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 1 0F 2 -**
WHITE SPUR - M VICARY

LEGEND

- Zone of High Chargeability
- Zone of Low Resistivity
- VLF Lineament (High Conductivity)
- High Amplitude Magnetic Lineament
- Moderate Amplitude Magnetic Lineament
- Fault Interpreted from VLF Data
- Fault Interpreted from Displaced Lineaments
- DHEM transmitter loop

SCALE 1:2500

0 25 50 75 100 125 150 175 200

Projection: UTM
Grid: Australian Map Grid
Zone: 55
Datum: AGD66
Spheroid: ANS66

5 cm

RGC EXPLORATION PTY LTD

Plan 1

WHITE SPUR PROSPECT EL 5/96
TASMANIA BASE METALS

CRONE DHEM SURVEY 383156
LOOP LAYOUT ANNE001

Drawn By: Chris Dauth *Date: March 1997*

383157

APPENDIX 9

ANNE001 Magnetic Susceptibility Results

383158

MAGNETIC SUSCEPTIBILITY LOG

RGC Exploration Pty Ltd

Prospect:	WHITESPUR			Date:	12.12.96
Hole:	ANNE001	Sheet 1 of 8	Operator:	MARTIN KUBE	
Instrument:	MAG SUSCEPTIBILITY METER		Units (SI or CGS):	CGS 1-46 then SI	

* see column H to see correction for CGS units

Sample # or Depth	Core Size	Sensor Location	Reading	Reading Range Min	Reading Range Max	Correction Factor	Corrected Reading (SI)	Log Scale Plotting Column
1	HQ	2	0			1.44	0	0.0001
2	HQ	2	2			1.44	0.003619008	0.00371901
3	HQ	2	0			1.44	0	0.0001
4	HQ	2	0			1.44	0	0.0001
5	HQ	2	0			1.44	0	0.0001
6	HQ	2	0			1.44	0	0.0001
7	HQ	2	0			1.44	0	0.0001
8	HQ	2	0			1.44	0	0.0001
9	HQ	2	0			1.44	0	0.0001
10	HQ	2	0			1.44	0	0.0001
11	HQ	2	0			1.44	0	0.0001
12	HQ	2	0			1.44	0	0.0001
13	HQ	2	0			1.44	0	0.0001
14	HQ	2	0			1.44	0	0.0001
15	HQ	2	0			1.44	0	0.0001
16	HQ	2	0			1.44	0	0.0001
17	HQ	2	0			1.44	0	0.0001
18	HQ	2	0			1.44	0	0.0001
19	HQ	2	0			1.44	0	0.0001
20	HQ	2	0			1.44	0	0.0001
21	HQ	2	0			1.44	0	0.0001
22	NQ	2	0			1.51	0	0.0001
23	NQ	2	0			1.51	0	0.0001
24	NQ	2	0			1.51	0	0.0001
25	NQ	2	0			1.51	0	0.0001
26	NQ	2	0			1.51	0	0.0001
27	NQ	2	0			1.51	0	0.0001
28	NQ	2	0			1.51	0	0.0001
29	NQ	2	0			1.51	0	0.0001
30	NQ	2	0			1.51	0	0.0001
31	NQ	2	0			1.51	0	0.0001
32	NQ	2	0			1.51	0	0.0001
33	NQ	2	0			1.51	0	0.0001
34	NQ	2	0			1.51	0	0.0001
35	NQ	2	0			1.51	0	0.0001
36	NQ	2	0			1.51	0	0.0001
37	NQ	2	0			1.51	0	0.0001

Sample # or Depth	Core Size	Sensor Location	Reading	Reading Range Min	Reading Range Max	Correction Factor	Corrected Reading (SI)	Log Scale Plotting Column
38	NQ	2	0			1.51	0	0.0001
39	NQ	2	0			1.51	0	0.0001
40	NQ	2	0			1.51	0	0.0001
41	NQ	2	0			1.51	0	0.0001
42	NQ	2	0			1.51	0	0.0001
43	NQ	2	4			1.51	0.007589864	0.00768986
44	NQ	2	14			1.51	0.026564524	0.02666452
45	NQ	2	29			1.51	0.055026514	0.05512651
46	NQ	2	14			1.51	0.026564524	0.02666452
47	NQ	2	8			1.51	0.001208	0.001308
48	NQ	2	3	3	14	1.51	0.000453	0.000553
49	NQ	2	1	0	6	1.51	0.000151	0.000251
50	NQ	2	0	1	8	1.51	0	0.0001
51	NQ	2	0	0	0	1.51	0	0.0001
52	NQ	2	0	1	1	1.51	0	0.0001
53	NQ	2	144	90	301	1.51	0.021744	0.021844
54	NQ	2	89	83	140	1.51	0.013439	0.013539
55	NQ	2	54	39	69	1.51	0.008154	0.008254
56	NQ	2	46	22	84	1.51	0.006946	0.007046
57	NQ	2	64	3	164	1.51	0.009664	0.009764
58	NQ	2	78	47	174	1.51	0.011778	0.011878
59	NQ	2	37	9	49	1.51	0.005587	0.005687
60	NQ	2	24	18	58	1.51	0.003624	0.003724
61	NQ	2	54	14	112	1.51	0.008154	0.008254
62	NQ	2	51	9	158	1.51	0.007701	0.007801
63	NQ	2	44	34	81	1.51	0.006644	0.006744
64	NQ	2	9	4	51	1.51	0.001359	0.001459
65	NQ	2	39	12	117	1.51	0.005889	0.005989
66	NQ	2	28	6	71	1.51	0.004228	0.004328
67	NQ	2	21	2	31	1.51	0.003171	0.003271
68	NQ	2	0	0	0	1.51	0	0.0001
69	NQ	2	0	0	0	1.51	0	0.0001
70	NQ	2	0	0	0	1.51	0	0.0001
71	HQ	2	20	0	20	1.51	0.00302	0.00312
72	HQ	2	0	0	0	1.51	0	0.0001
73	HQ	2	0	0	0	1.51	0	0.0001
74	HQ	2	0	0	0	1.51	0	0.0001
75	HQ	2	0	0	0	1.51	0	0.0001
76	HQ	2	0	0	0	1.51	0	0.0001
77	HQ	2	0	0	0	1.51	0	0.0001

383159

Sample # or Depth	Core Size	Sensor Location	Reading	Reading Range Min	Reading Range Max	Correction Factor	Corrected Reading (SI)	Log Scale Plotting Column
78	HQ	2	0	0	0	1.51	0	0.0001
79	HQ	2	0	0	0	1.51	0	0.0001
80	HQ	2	0	0	0	1.51	0	0.0001
81	HQ	2	0	0	0	1.51	0	0.0001
82	HQ	2	0	0	0	1.51	0	0.0001
83	HQ	2	0	0	6	1.51	0	0.0001
84	HQ	2	0	0	0	1.51	0	0.0001
85	HQ	2	0	0	410	1.51	0	0.0001
86	HQ	2	0	0	0	1.51	0	0.0001
87	HQ	2	0	0	0	1.51	0	0.0001
88	HQ	2	0	0	0	1.51	0	0.0001
89	HQ	2	0	0	38	1.51	0	0.0001
90	HQ	2	12	2	722	1.51	0.001812	0.001912
91	HQ	2	39	9	112	1.51	0.005889	0.005989
92	NQ	2	18	0	308	1.51	0.002718	0.002818
93	NQ	2	18	12	253	1.51	0.002718	0.002818
94	NQ	2	16	9	74	1.51	0.002416	0.002516
95	NQ	2	0	0	0	1.51	0	0.0001
96	NQ	2	0	0	271	1.51	0	0.0001
97	NQ	2	0	0	309	1.51	0	0.0001
98	NQ	2	156	16	430	1.51	0.023556	0.023656
99	NQ	2	42	14	140	1.51	0.006342	0.006442
100	NQ	2	17	6	430	1.51	0.002567	0.002667
101	NQ	2	6	1	9	1.51	0.000906	0.001006
102	NQ	2	12	6	39	1.51	0.001812	0.001912
103	NQ	2	29	1	67	1.51	0.004379	0.004479
104	NQ	2	6	1	8	1.51	0.000906	0.001006
105	NQ	2	6	6	12	1.51	0.000906	0.001006
106	NQ	2	7	1	9	1.51	0.001057	0.001157
107	NQ	2	16	1	19	1.51	0.002416	0.002516
108	NQ	2	9	1	16	1.51	0.001359	0.001459
109	NQ	2	2	0	12	1.51	0.000302	0.000402
110	NQ	2	0	0	0	1.51	0	0.0001
111	NQ	2	0	0	0	1.51	0	0.0001
112	NQ	2	0	0	0	1.51	0	0.0001
113	NQ	2	0	0	0	1.51	0	0.0001
114	NQ	2	0	0	0	1.51	0	0.0001
115	NQ	2	0	0	0	1.51	0	0.0001
116	NQ	2	2	0	9	1.51	0.000302	0.000402
117	NQ	2	6	0	9	1.51	0.000906	0.001006

383160

Sample # or Depth	Core Size	Sensor Location	Reading	Reading Range Min	Reading Range Max	Correction Factor	Corrected Reading (SI)	Log Scale Plotting Column
118	NQ	2	1	1	2	1.51	0.000151	0.000251
119	NQ	2	2	1	6	1.51	0.000302	0.000402
120	NQ	2	0	0	0	1.51	0	0.0001
121	NQ	2	0	0	0	1.51	0	0.0001
122	NQ	2	0	0	0	1.51	0	0.0001
122	NQ	2	0	0	0	1.51	0	0.0001
123	NQ	2	0	0	0	1.51	0	0.0001
124	NQ	2	0	0	0	1.51	0	0.0001
125	NQ	2	0	0	0	1.51	0	0.0001
126	NQ	2	0	0	0	1.51	0	0.0001
127	NQ	2	0	0	0	1.51	0	0.0001
128	NQ	2	0	0	0	1.51	0	0.0001
129	NQ	2	0	0	0	1.51	0	0.0001
130	NQ	2	0	0	0	1.51	0	0.0001
131	NQ	2	0	0	0	1.51	0	0.0001
132	NQ	2	0	0	0	1.51	0	0.0001
133	NQ	2	0	0	0	1.51	0	0.0001
134	NQ	2	0	0	0	1.51	0	0.0001
135	NQ	2	0	0	0	1.51	0	0.0001
136	NQ	2	0	0	0	1.51	0	0.0001
137	NQ	2	0	0	0	1.51	0	0.0001
138	NQ	2	0	0	3	1.51	0	0.0001
139	NQ	2	0	0	0	1.51	0	0.0001
140	NQ	2	38			1.51	0.005738	0.005838
141	NQ	2	8			1.51	0.001208	0.001308
142	NQ	2	1			1.51	0.000151	0.000251
143	NQ	2	4			1.51	0.000604	0.000704
144	NQ	2	0			1.51	0	0.0001
145	NQ	2	0			1.51	0	0.0001
146	NQ	2	0			1.51	0	0.0001
147	NQ	2	0			1.51	0	0.0001
148	NQ	2	0			1.51	0	0.0001
149	NQ	2	0			1.51	0	0.0001
150	NQ	2	0			1.51	0	0.0001
151	NQ	2	0			1.51	0	0.0001
152	NQ	2	0			1.51	0	0.0001
153	NQ	2	0			1.51	0	0.0001
154	NQ	2	0			1.51	0	0.0001
155	NQ	2	0			1.51	0	0.0001
156	NQ	2	0			1.51	0	0.0001

383161

Sample # or Depth	Core Size	Sensor Location	Reading	Reading Range Min	Reading Range Max	Correction Factor	Corrected Reading (SI)	Log Scale Plotting Column
157	NQ	2	0			1.51	0	0.0001
158	NQ	2	0			1.51	0	0.0001
159	NQ	2	0			1.51	0	0.0001
160	NQ	2	0			1.51	0	0.0001
161	NQ	2	0			1.51	0	0.0001
162	NQ	2	0			1.51	0	0.0001
163	NQ	2	0			1.51	0	0.0001
164	NQ	2	0	0	38	1.51	0	0.0001
165	NQ	2	150	38	684	1.51	0.02265	0.02275
166	NQ	2	0			1.51	0	0.0001
167	NQ	2	0			1.51	0	0.0001
168	NQ	2	764	486	970	1.51	0.115364	0.115464
169	NQ	2	551	8	904	1.51	0.083201	0.083301
170	NQ	2	12	8	29	1.51	0.001812	0.001912
171	NQ	2	187	160	251	1.51	0.028237	0.028337
172	NQ	2	431	369	541	1.51	0.065081	0.065181
173	NQ	2	400	250	723	1.51	0.0604	0.0605
174	NQ	2	202	22	305	1.51	0.030502	0.030602
175	NQ	2	809	533	1190	1.51	0.122159	0.122259
176	NQ	2	480	4	1170	1.51	0.07248	0.07258
177	NQ	2	411	2	553	1.51	0.062061	0.062161
178	NQ	2	1000	71	1595	1.51	0.151	0.1511
179	NQ	2	921	76	1252	1.51	0.139071	0.139171
180	NQ	2	1230	1100	1718	1.51	0.18573	0.18583
181	NQ	2	1423	1125	1867	1.51	0.214873	0.214973
182	NQ	2	1551	538	2140	1.51	0.234201	0.234301
183	NQ	2	1770	1692	1818	1.51	0.26727	0.26737
184	NQ	2	1703	1326	2290	1.51	0.257153	0.257253
185	NQ	2	848	455	1321	1.51	0.128048	0.128148
186	NQ	2	751	555	784	1.51	0.113401	0.113501
187	NQ	2	1287	12	1725	1.51	0.194337	0.194437
188	NQ	2	0	0	0	1.51	0	0.0001
189	NQ	2	871	308	2201	1.51	0.131521	0.131621
190	NQ	2	611	154	1032	1.51	0.092261	0.092361
191	NQ	2	0	0	0	1.51	0	0.0001
192	NQ	2	4	0	4	1.51	0.000604	0.000704
193	NQ	2	1803	1239	2111	1.51	0.272253	0.272353
194	NQ	2	793	280	1032	1.51	0.119743	0.119843
195	NQ	2	1644	1313	2138	1.51	0.248244	0.248344
196	NQ	2	758	391	873	1.51	0.114458	0.114558

383162

Sample # or Depth	Core Size	Sensor Location	Reading	Reading Range Min	Reading Range Max	Correction Factor	Corrected Reading (SI)	Log Scale Plotting Column
197	NQ	2	57	11	372	1.51	0.008607	0.008707
198	NQ	2	532	27	1105	1.51	0.080332	0.080432
199	NQ	2	845	6	1059	1.51	0.127595	0.127695
200	NQ	2	851	385	1115	1.51	0.128501	0.128601
201	NQ	2	2	0	0	1.51	0.000302	0.000402
202	NQ	2	274	123	392	1.51	0.041374	0.041474
203	NQ	2	4			1.51	0.000604	0.000704
204	NQ	2	3			1.51	0.000453	0.000553
205	NQ	2	668	595	819	1.51	0.100868	0.100968
206	NQ	2	185	32	291	1.51	0.027935	0.028035
207	NQ	2	12			1.51	0.001812	0.001912
208	NQ	2	716	17	769	1.51	0.108116	0.108216
209	NQ	2	689	14	1025	1.51	0.104039	0.104139
210	NQ	2	64	22	319	1.51	0.009664	0.009764
211	NQ	2	590	88	1211	1.51	0.08909	0.08919
212	NQ	2	1692	1353	2355	1.51	0.255492	0.255592
213	NQ	2	1335	546	2725	1.51	0.201585	0.201685
214	NQ	2	2255	1175	2605	1.51	0.340505	0.340605
215	NQ	2	1933	1106	2522	1.51	0.291883	0.291983
216	NQ	2	2415	1631	2602	1.51	0.364665	0.364765
217	NQ	2	16	3	23	1.51	0.002416	0.002516
218	NQ	2	140	0	334	1.51	0.02114	0.02124
219	NQ	2	165	101	804	1.51	0.024915	0.025015
220	NQ	2	1405	1203	1827	1.51	0.212155	0.212255
221	NQ	2	1081	268	1362	1.51	0.163231	0.163331
222	NQ	2	167	72	433	1.51	0.025217	0.025317
223	NQ	2	997	678	1160	1.51	0.150547	0.150647
224	NQ	2	783	581	909	1.51	0.118233	0.118333
225	NQ	2	2337	2101	2831	1.51	0.352887	0.352987
226	NQ	2	2111	1856	2642	1.51	0.318761	0.318861
227	NQ	2	1278	613	1802	1.51	0.192978	0.193078
228	NQ	2	311	158	919	1.51	0.046961	0.047061
229	NQ	2	474	49	1332	1.51	0.071574	0.071674
230	NQ	2	0			1.51	0	0.0001
231	NQ	2	6	0	227	1.51	0.000906	0.001006
232	NQ	2	1155	713	1716	1.51	0.174405	0.174505
233	NQ	2	238	29	976	1.51	0.035938	0.036038
234	NQ	2	1192	945	2079	1.51	0.179992	0.180092
235	NQ	2	1293	644	1725	1.51	0.195243	0.195343
236	NQ	2	908	175	1118	1.51	0.137108	0.137208

383163

Sample # or Depth	Core Size	Sensor Location	Reading	Reading Range Min	Reading Range Max	Correction Factor	Corrected Reading (SI)	Log Scale Plotting Column
237	NQ	2	56	0	321	1.51	0.008456	0.008556
238	NQ	2	461	137	683	1.51	0.069611	0.069711
239	NQ	2	48	0	289	1.51	0.007248	0.007348
240	NQ	2	305	179	636	1.51	0.046055	0.046155
241	NQ	2	0	0	119	1.51	0	0.0001
242	NQ	2	0	0	0	1.51	0	0.0001
243	NQ	2	0	0	101	1.51	0	0.0001
244	NQ	2	0	0	783	1.51	0	0.0001
245	NQ	2	0	0	0	1.51	0	0.0001
246	NQ	2	0	0	0	1.51	0	0.0001
247	NQ	2	0			1.51	0	0.0001
248	NQ	2	0			1.51	0	0.0001
249	NQ	2	0			1.51	0	0.0001
250	NQ	2	0			1.51	0	0.0001
251	NQ	2	0			1.51	0	0.0001
252	NQ	2	0			1.51	0	0.0001
253	NQ	2	0			1.51	0	0.0001
254	NQ	2	0			1.51	0	0.0001
255	NQ	2	0			1.51	0	0.0001
256	NQ	2	0			1.51	0	0.0001
257	NQ	2	0			1.51	0	0.0001
258	NQ	2	0			1.51	0	0.0001
259	NQ	2	0			1.51	0	0.0001
260	NQ	2	0			1.51	0	0.0001
261	NQ	2	0			1.51	0	0.0001
262	NQ	2	0			1.51	0	0.0001
263	NQ	2	0			1.51	0	0.0001
264	NQ	2	0			1.51	0	0.0001
265	NQ	2	0			1.51	0	0.0001
266	NQ	2	0			1.51	0	0.0001
267	NQ	2	0			1.51	0	0.0001
268	NQ	2	0			1.51	0	0.0001
269	NQ	2	0			1.51	0	0.0001
270	NQ	2	0			1.51	0	0.0001
271	NQ	2	0			1.51	0	0.0001
272	NQ	2	0			1.51	0	0.0001
273	NQ	2	104	0	193	1.51	0.015704	0.015804
274	NQ	2	0	0	21	1.51	0	0.0001
275	NQ	2	0	0	0	1.51	0	0.0001
276	NQ	2	0	0	0	1.51	0	0.0001

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Sample # or Depth	Core Size	Sensor Location	Reading	Reading Range Min	Reading Range Max	Correction Factor	Corrected Reading (SI)	Log Scale Plotting Column
277	NQ	2	28	0	132	1.51	0.004228	0.004328
278	NQ	2	0			1.51	0	0.0001
279	NQ	2	0			1.51	0	0.0001
280	NQ	2	0	0	18	1.51	0	0.0001
281	NQ	2	0	0	56	1.51	0	0.0001
282	NQ	2	0			1.51	0	0.0001
283	NQ	2	0			1.51	0	0.0001
284	NQ	2	311	81	658	1.51	0.046961	0.047061
285	NQ	2	0	0	803	1.51	0	0.0001
286	NQ	2	238	203	293	1.51	0.035938	0.036038
287	NQ	2	278	112	614	1.51	0.041978	0.042078
288	NQ	2	77	0	163	1.51	0.011627	0.011727
289	NQ	2	101	37	232	1.51	0.015251	0.015351
290	NQ	2	1	1	9	1.51	0.000151	0.000251
291	NQ	2	2			1.51	0.000302	0.000402
292	NQ	2	0			1.51	0	0.0001
293	NQ	2	0			1.51	0	0.0001
294	NQ	2	0	0		1.51	0	0.0001
295	NQ	2	0			1.51	0	0.0001
296	NQ	2	0			1.51	0	0.0001
297	NQ	2	0			1.51	0	0.0001
298	NQ	2	0			1.51	0	0.0001
299	NQ	2	0			1.51	0	0.0001
300	NQ	2	0			1.51	0	0.0001
301	NQ	2	0			1.51	0	0.0001
302	NQ	2	0			1.51	0	0.0001
303	NQ	2	0			1.51	0	0.0001
304	NQ	2	0			1.51	0	0.0001
305	NQ	2	0			1.51	0	0.0001
306	NQ	2	0			1.51	0	0.0001

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SENSOR LOCATION refers to how the sensor is oriented with respect to the rock sample or core. Use the number scheme below:

1. = Flush (sensor placed flat against cut core, or rock face)

2. = Core perpendicular (sensor placed at right angles to the axis of a core sample)

3. = Core parallel (sensor placed along the axis of a core sample)

4. = Irregular (sensor placed on broken rock chips or irregular shaped rock specimen)

READING RANGE should be filled in when susceptibility measurements vary for a particular rock specimen or sample interval.

CORRECTION FACTOR and CORRECTED READING need not be filled in until computer data entry. These values will depend on the CORE SIZE, SENSOR LOCATION, and INSTRUMENT.

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RGC Exploration

383166

ACN 001 426 946

ANNUAL REPORT
MARCH 1996 - MARCH 1997

TASMANIAN BASE METALS PROJECT
EL 5/96

WHITE SPUR

Vol 2 of 2

Plans

HELD BY: RENISON LIMITED

MANAGER & OPERATOR: RGC EXPLORATION PTY LTD

MICROFILMED
FICHE No. 014306-11

AUTHOR(s): Michael Vicary

19 April, 1997

PROSPECTS: White Spur, Anneliese

MAP SHEETS:	**1:25,000: Dundas** **Oceana**	**1:100,000: Spohia**
GEOGRAPHIC COORDS	**Min East: 375 000 mE** **Min North: 5358 000 mN**	**Max East: 379 000 mE** **Max North: 5364 000 mN**

COMMODITY(s): Zn, Pb, Cu, Au, Ag

KEY WORDS: White Spur Formation, Central Volcanic Sequence, Sulphide clast bearing mass flow deposits, Rosebery -Hercules ore horizon.

Distribution:

- **RGC Exploration Information Centre Ref**
- **RGC Exploration - Zeehan**
- **Department of Mines, Tasmania**

97-4007

ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 2 0F 2**
WHITE SPUR - M VICARY

97-4007

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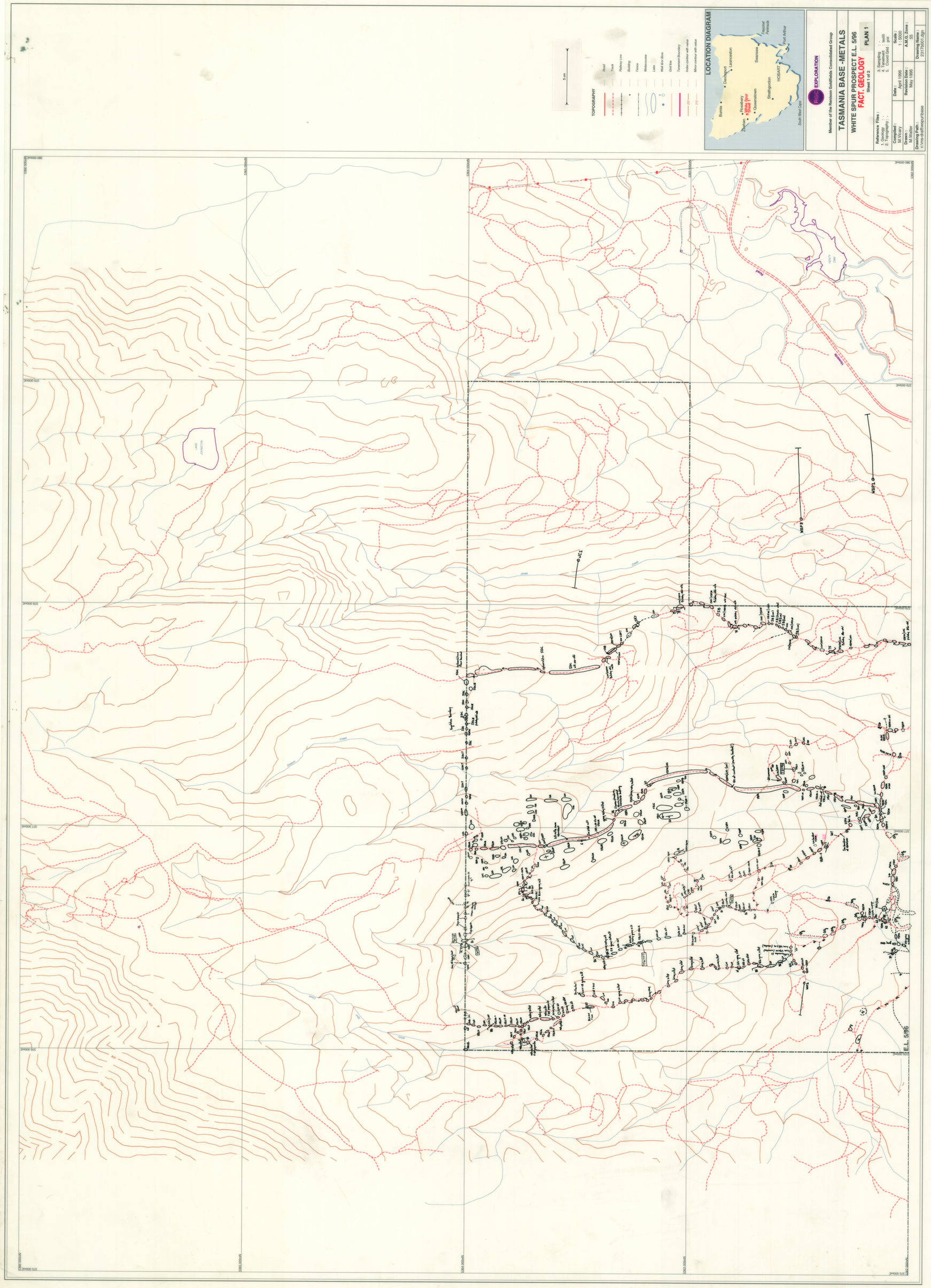
PLANS

383168

LIST OF PLANS

		Drg. ID	Scale
PLAN 1	Fact Geology Sheet 1	2317b001.dgn	1:5000
PLAN 2	Fact Geology Sheet 2	2317b002.dgn	1:5000
PLAN 3	Geological Interpretation Sheet 1	2317b001.dgn	1:5000
PLAN 4	Geological Interpretation Sheet 2	2317b002.dgn	1:5000
PLAN 5	Fact Geology - Anneliese Prospect	2317/008	1:2500
PLAN 6	Geological Interpretation - Anneliese Prospect	2317b008.dgn	1:2500
PLAN 7	ANNE001 Cross section and Plan	2317/016	1:1000
PLAN 8	2nd horizontal derivative of the Total Magnetic Intensity, bipole plot. (Survey date - Feb. 1991)	2317/013	1:10 000
PLAN 9	2nd horizontal derivative of the Total Magnetic Intensity, bipole plot. (Survey date - Jun. 1990)	2317/014	1:25 000
PLAN 10	ANNE001 Magnetic Susceptibility Log	2317/015	1:1000

2317b001.dg



LOCATION DIAGRAM
Burnie
Devonport
Launceston
Rosebery
White Spur
Queenstown
Zeehan
Strathgordon
Swansea
Freycinet Peninsula
Port Arthur
HOBART
South West Cape
TOPOGRAPHY
Road
Track
Railway Line
Building
Fence
Watercourse
Lake
Well &/or Bore
Grid line
Tenement Boundary
Index contour with value
Minor contour with value
5 cm
EXPLORATION
Member of the Renison Goldfields Consolidated Group
TASMANIA BASE -METALS
WHITE SPUR PROSPECT E.L. 5/96
FACT. GEOLOGY
PLAN 1
Sheet 1 of 2
Reference Files :
1. Geology : -
2. Topography : -
3. Sampling : -
4. Tenement : tas55
5. Coord Grid : grid
Compiled : M.Vicary
Drawn : M.Walter
Date : April 1996
Revision Date : May 1996
Scale : 1 : 5000
A.M.G. Zone : 55
Drawing Path : c:\rms-draft\wspur\base
Drawing Name : 2317b001.dgn
E.L. 5/96

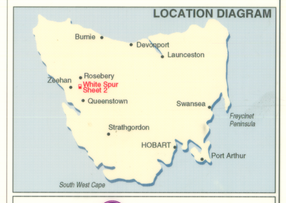
E.L. 5/96

5 cm

TOPOGRAPHY

- Road
- Track
- Railway Line
- Building
- Fence
- Watercourse
- Lake
- Well &/or Bore
- Grid line
- Canal
- Tenement Boundary
- Index contour with value
- Minor contour with value

LOCATION DIAGRAM



RGC EXPLORATION

Member of the Renison Goldfields Consolidated Group

TASMANIA BASE -METALS

WHITE SPUR PROSPECT E.L. 5/96

FACT. GEOLOGY

PLAN 2

Sheet 2 of 2

Reference Files :	
1. Geology : -	3. Sampling : -
2. Topography : con-all, drain, access	4. Tenament : tas55
	5. Coord Grid : grid

Compiled : M.Vicary	Date : April 1996	Scale : 1 : 5000
Drawn : M.Walter	Revision Date : -	A.M.G. Zone : 55
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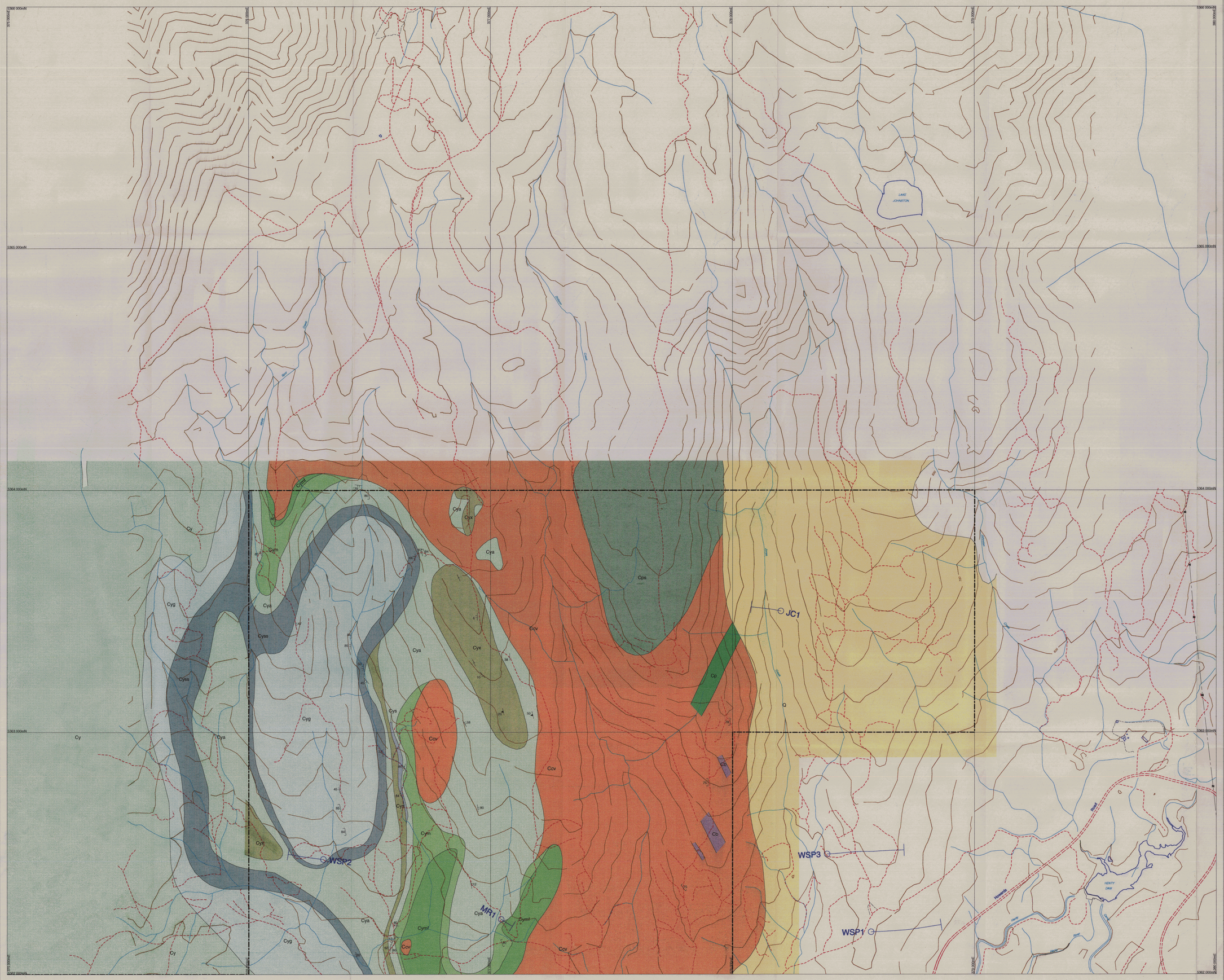
2317b002.dgn



5 cm

GEOLOGICAL LEGEND

Q	Quaternary

CAMBRIAN
Yolande River Sequence, Western Sequence, White Spur Formation

Cyl	Rhyolitic intrusive
Cys	Units of bedded siltstone, sandstone
Cyss	Black siltstone
Cya	Ashy siltstone
Cymf	Rhyolitic-dacitic massflows, commonly graded
Cym	Rhyolitic-dacitic volcaniclastic sandstone
Cyx	Crystal-rich volcaniclastic sandstone
Cyg	Interbedded lithicwacke and greywacke
Cy	Undifferentiated massflows, sandstones and black siltstones
Cyb	Undifferentiated Lower White Spur Formation

HENTY FAULT WEDGE

Chs	Siltstone and sandstone
Cum	Ultramafic
Cb	Henty Dyke swarm

CENTRAL VOLCANIC COMPLEX

Ccv	Mainly felsic pyroclastic rocks, dominantly feldspar phyric, including pumice bearing tuff and breccia, crystal vitric tuff, vitric tuff and minor shale and sandstone
Ccl	Feldspar phyric dacitic lava
Cp	Quartz-feldspar porphyry
Cps	Spherulitic dacitic intrusive
Ccs	Siltstone

TOPOGRAPHY

- Road
- Track
- Railway Line
- Building
- Fence
- Watercourse
- Lake
- Well &/or Bore
- Grid line
- Tenement Boundary
- 200 Index contour with value
- 210 Minor contour with value

LOCATION DIAGRAM



RGC EXPLORATION

Member of the Renison Goldfields Consolidated Group

TASMANIA BASE -METALS

WHITE SPUR PROSPECT E.L. 5/96
GEOLOGICAL INTERPRETATION

Sheet 1 of 2

Reference Files :
1. Geology : geol5
2. Topography : con-all,drainage,access
3. Sampling : -
4. Tenement : tas55
5. Coord Grid : grid5

Compiled : M.Vicary	**Date :** April 1997	**Scale** 1 : 5000
Drawn : M.Walter	**Revision Date :**	**A.M.G. Zone :** 55
Drawing Path : c:\ms-draft\wspur\base 383169	**Drawing Name :** 2317b001.dgn	PLAN 3

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ANNUAL REPORT - EL 5/96
RENISON LTD - VOL 2 OF 2
WHITE SPUR - M VICARY

WSP103

YWS1

ANNE001

WHITE SPUR DAM

Ccv
Cyrnf
Cyg
Cyx
Cya
Cy
Cyb
Cyss
Cyl
Ccl
Ccs
Cqz
Cps
Cb
Q

Dotson Creek
Yolanda
Cleary
Henty
Queen
Linda
Comet
Rapid
Ring
Quill
Newton
Creek

5362 000mN
5361 000mN
5360 000mN
5359 000mN
5358 000mN
376 000mE
377 000mE
378 000mE
527 000mE
528 000mE
529 000mE
530 000mE

5 cm

GEOLOGICAL LEGEND

Q ..... Quaternary

CAMBRIAN
Yolanda River Sequence, Western Sequence, White Spur Formation

- Cyl ..... Rhyolitic intrusive
- Cys ..... Units of bedded siltstone, sandstone
- Cyss ..... Black siltstone
- Cya ..... Ashy siltstone
- Cyrnf ..... Rhyolitic-dacitic massflows, commonly graded
- Cyrn ..... Rhyolitic-dacitic volcaniclastic sandstone
- Cyx ..... Crystal-rich volcaniclastic sandstone
- Cyg ..... Interbedded lithicwacke and greywacke
- Cy ..... Undifferentiated massflows, sandstones and black siltstones
- Cyb ..... Undifferentiated Lower White Spur Formation

HENTY FAULT WEDGE

- Chs ..... Siltstone and sandstone
- Cum ..... Ultramafic
- Cb ..... Henty Dyke swarm

CENTRAL VOLCANIC COMPLEX

- Ccv ..... Mainly felsic pyroclastic rocks, dominantly feldspar phyric, including pumice bearing tuff and breccia, crystal vitric tuff, vitric tuff and minor shale and sandstone
- Ccl ..... Feldspar phyric dacitic lava
- Cqz ..... Quartz-feldspar porphyry
- Cps ..... Spherulitic dacitic intrusive
- Ccs ..... Siltstone
- ..... Pyrite mineralisation

TOPOGRAPHY

- Road
- Track
- Railway Line
- Building
- Fence
- Watercourse
- Lake
- Well &/or Bore
- Grid line
- Canal
- Tenement Boundary
- 200 Index contour with value
- 210 Minor contour with value

97-4007

ANNUAL REPORT - EL 5/96
RENISON LTD - VOL 2 OF 2
WHITE SPUR - M VICARY

LOCATION DIAGRAM

Burnie, Devonport, Launceston, Rosebery, White Spur Sheet 2, Queenstown, Swansea, Freycinet Peninsula, Strathgordon, HOBART, Port Arthur, South West Cape, LAKE NEWTON, HENTY RIVER

RGC EXPLORATION

Member of the Renison Goldfields Consolidated Group

TASMANIA BASE -METALS

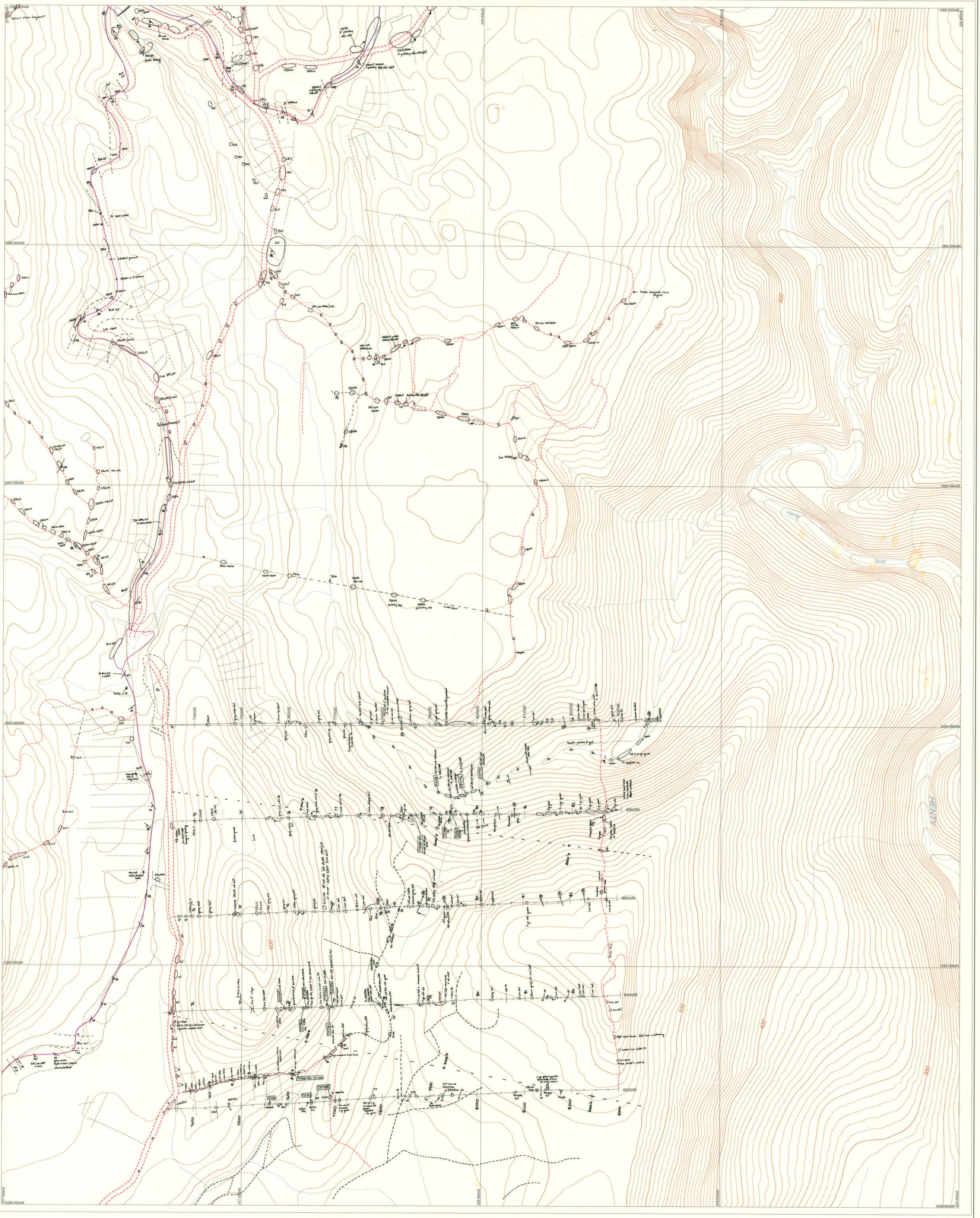
WHITE SPUR PROSPECT E.L. 5/96

GEOLOGICAL INTERPRETATION

Sheet 2 of 2

Reference Files :
1. Geology : geol5
2. Topography : con-all, drain, access
3. Sampling : -
4. Tenement : tas55
5. Coord Grid : grid5

Compiled :	Date :	Scale :
M.Vicary	April 1997	1 : 5000
Drawn :	**Revision Date :**	**A.M.G. Zone :**
M.Walter	-	55
Drawing Path :		**Drawing Name :**
c:\ms-draft\wspur\base	383170	2317b002.dgn PLAN 4



TOPOGRAPHY

- Road
- Track
- Railway Line
- Building
- Fence
- Watercourse
- Lake
- Well &/or Bore
- Grid line
- Tenement Boundary
- 200 — Index contour with value
- 210 — Minor contour with value

5 cm

LOCATION DIAGRAM

RGC EXPLORATION

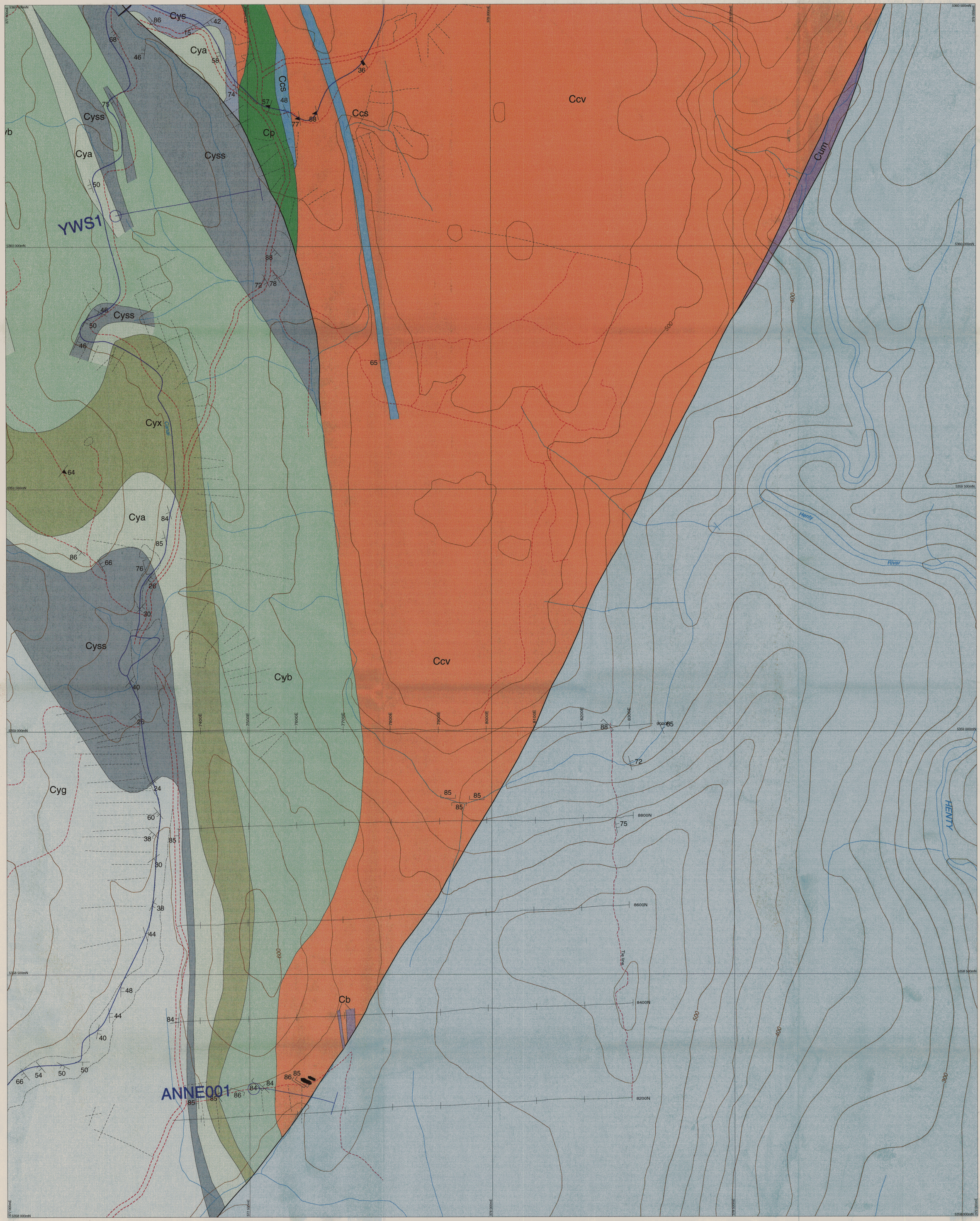
Member of the Renison Goldfields Consolidated Group

TASMANIA BASE METALS

WHITE SPUR PROSPECT E.L. 5/96
FACT. GEOLOGY MAP

PLAN 5

Geology :-	Geologist : M.Vicary	Date : June 1996	Scale : 1 : 2500
Topography :-			
Aeromag :-			
Soils samples :-	Drawn : M.Walter	Revision Date :	1:25,000 Ref. Map
Drilling :-			
Tenement :-	Drawing Path : g:\ms-draft\wspur\base		Drawing Name : 2317b008.dgn
Amg Grid :-			



GEOLOGICAL LEGEND

Q ..... *Quaternary*

CAMBRIAN
Yolande River Sequence, Western Sequence, White Spur Formation

Cyl ..... *Rhyolitic intrusive*
Cys ..... *Units of bedded siltstone, sandstone*
Cyss ..... *Black siltstone*
Cya ..... *Ashy siltstone*
Cymf ..... *Rhyolitic-dacitic massflows, commonly graded*
Cym ..... *Rhyolitic-dacitic volcaniclastic sandstone*
Cyx ..... *Crystal-rich volcaniclastic sandstone*
Cyg ..... *Interbedded lithicwacke and greywacke*
Cy ..... *Undifferentiated massflows, sandstones and black siltstones*
Cyb ..... *Undifferentiated Lower White Spur Formation*

HENTY FAULT WEDGE

Chs ..... *Siltstone and sandstone*
Cum ..... *Ultramafic*
Cb ..... *Henty Dyke swarm*

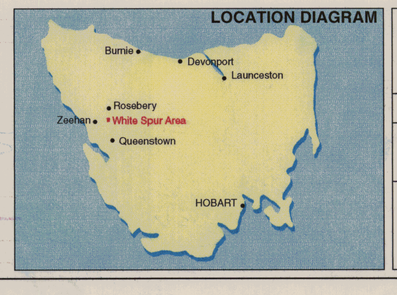
CENTRAL VOLCANIC COMPLEX

Ccv ..... *Mainly felsic pyroclastic rocks, dominantly feldspar phyric, including pumice bearing tuff and breccia, crystal vitric tuff, vitric tuff and minor shale and sandstone*
Ccl ..... *Feldspar phyric dacitic lava*
Cp ..... *Quartz-feldspar porphyry*
Cps ..... *Spherulitic dacitic intrusive*
Ccs ..... *Siltstone*
..... *Pyrite mineralisation*

TOPOGRAPHY

..... *Road*
..... *Track*
..... *Railway Line*
..... *Building*
..... *Fence*
..... *Watercourse*
..... *Lake*
..... *Well &/or Bore*
..... *Grid line*
..... *Tenement Boundary*
200 ..... *Index contour with value*
210 ..... *Minor contour with value*

LOCATION DIAGRAM



5 cm

97-4007

ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 2 OF 2**
WHITE SPUR - M VICARY

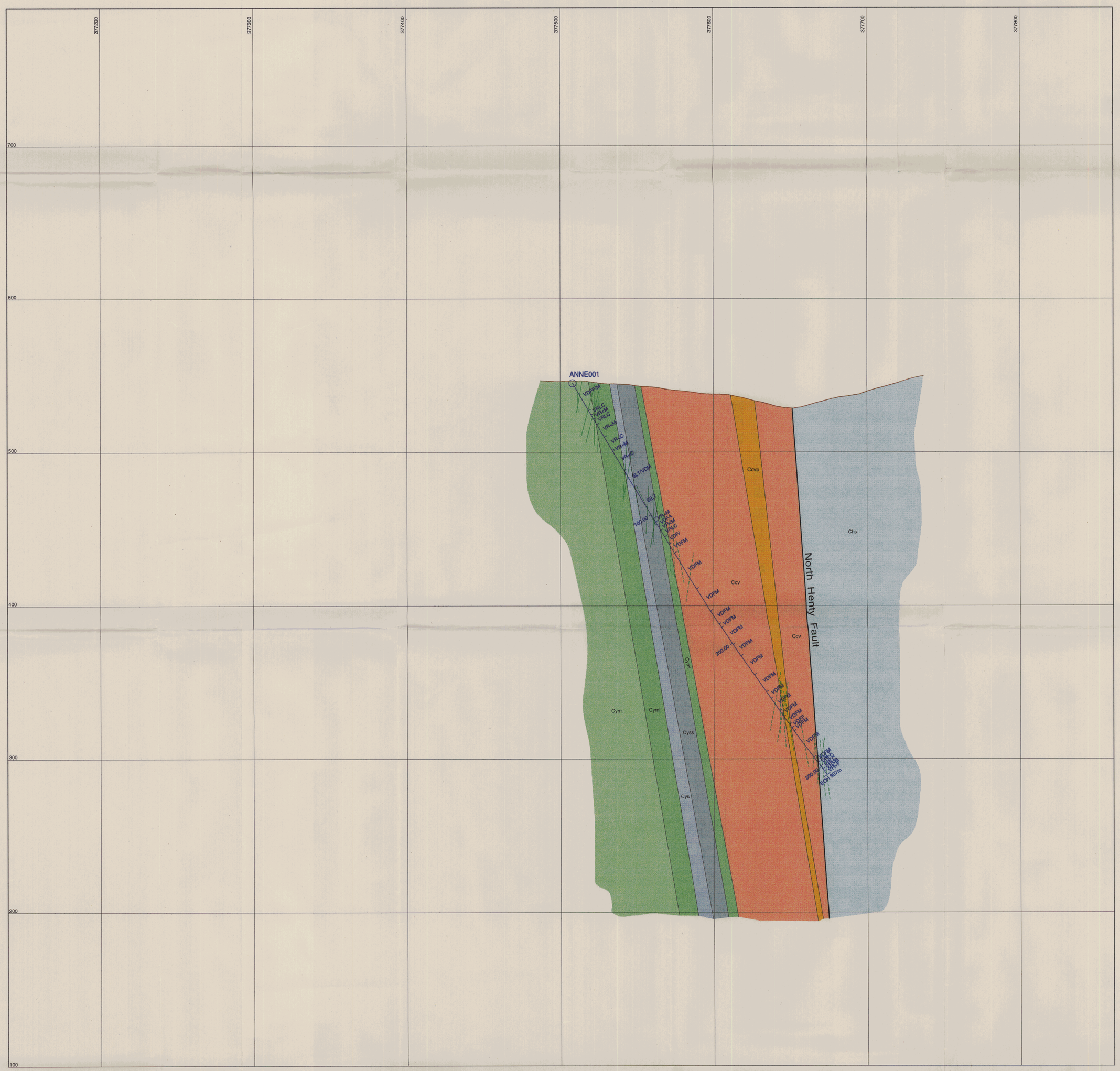
RGC EXPLORATION
Member of the Renison Goldfields Consolidated Group

TASMANIA BASE METALS

ANNELIESE PROSPECT E.L. 5/96
GEOLOGICAL INTERPRETATION

383172

Geology :-	Geologist : M.Vicary	Date : April 1997	Scale : 1 : 2500
Topography :-			
Aeromag :-			
Soils samples :-			
Drilling :-	Drawn : M.Walter	Revision Date :	1:25,000 Ref. Map
Tenement :-			
Amg Grid :-	Drawing Path : g:\ms-draft\wspur\base	Drawing Name : 2317b008.dgn	PLAN 6



GEOLOGICAL REFERENCE

CAMBRIAN
Yolande River Sequence, Western Sequence, White Spur Formation

- Cys ..... *Units of bedded siltstone, sandstone*
- Cyss ..... *Black siltstone*
- Cym ..... *Rhyolitic-dacitic volcaniclastic sandstone*
- Cymf ..... *Rhyolitic-dacitic massflows, commonly graded*

HENTY FAULT WEDGE

- Chs ..... *Siltstone and sandstone*

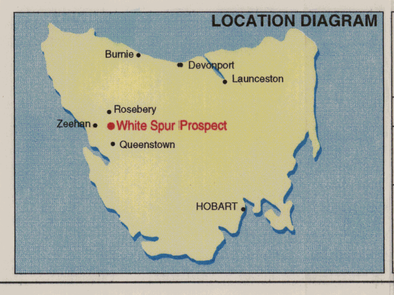
CENTRAL VOLCANIC COMPLEX

- Ccv ..... *Mainly felsic pyroclastic rocks, dominantly feldspar phyric, including pumice bearing tuff and breccia, crystal vitric tuff, vitric tuff and minor shale and sandstone*
- Ccvp ..... *Intense-sericite pyrite alteration*

- ——— ..... *Fault*
- ——— — ..... *Geological Boundary*
- ——— ..... *Structural measurement, bedding*
- - - - ..... *Structural measurement, cleavage*

5 cm

LOCATION DIAGRAM



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WHITE SPUR - M VICARY

RGC Exploration 383173

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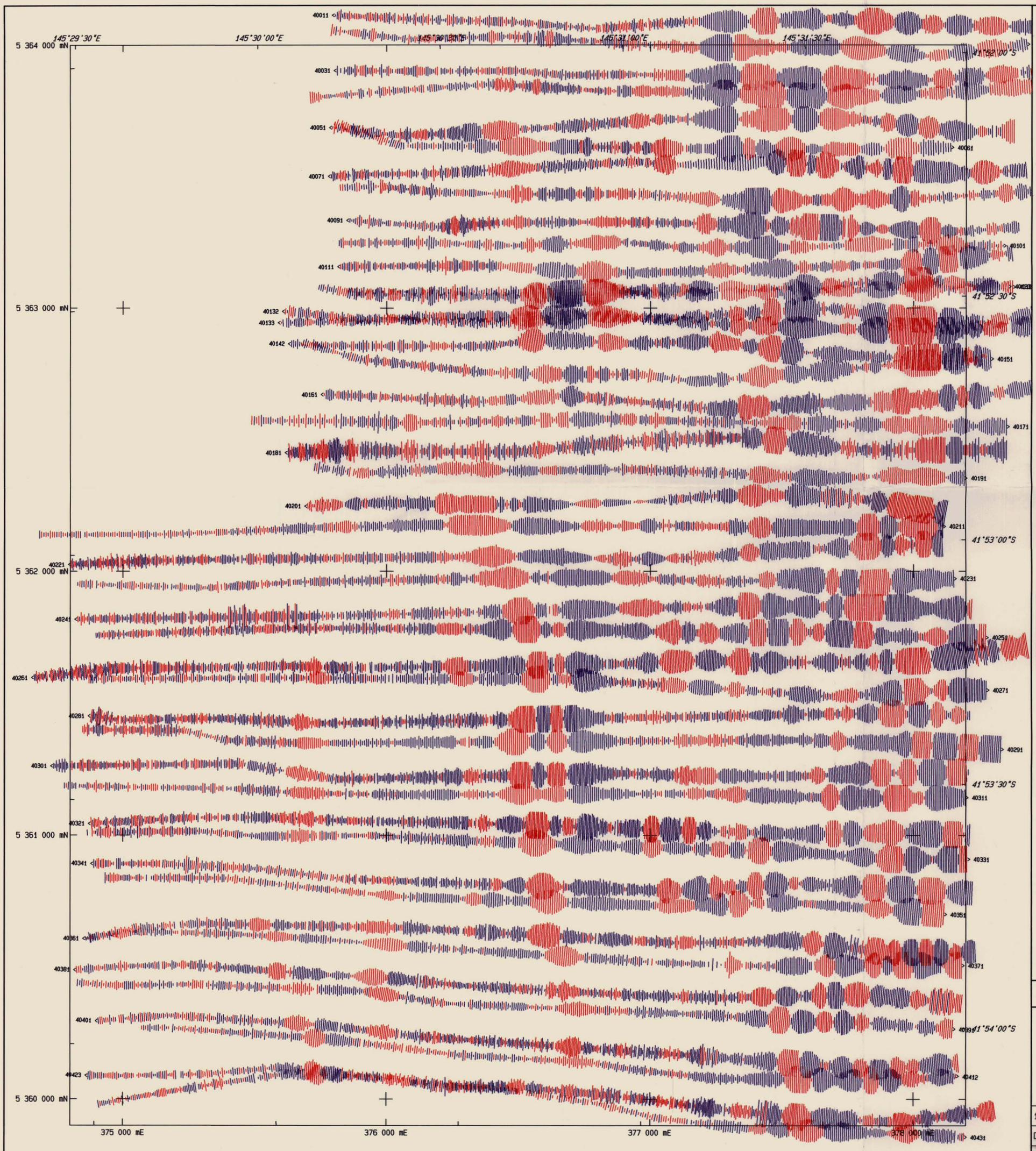
TASMANIA BASE METALS

WHITE SPUR E.L. 5/96
DRILLHOLE ANNE001 GEOLOGY CROSS SECTION

Geology :-	Geologist : M.Vicary	Date : March 1997	Scale : 1 : 1000
Topography :-			
Aeromag :-			
Soils samples :-	Drawn : M.Walter	Revision Date :	1:25,000 Ref. Map
Drilling :-			
Tenement :-	Drawing Path : c:\ms-draft\wspur\sect		Drawing Name : 2317b016.dgn PLAN 7
Amg Grid :-			



5 cm

SURVEY PARAMETERS:

Line spacing:	100 metres
Line direction:	090-270 degrees
Tie spacing:	2000 metres
Tie direction:	000-180 degrees
Data interval:	7 metres
Terrain clear:	60 +/-20 metres
Positioning:	Visual
Survey date:	Feb 1991
Surveyed by:	GEOINSTRUMENTS JOB No. 9101
Processed by:	KEVRON
Surveyed for:	

PROCESSING PARAMETERS:

DERIVATIVE = 2nd horiz
NWTS: AVE. FILTER = 5
NWTS: AGIC = 0
EXPN: AGIC = 0.5000
SIGN CHAINGED = yes

PLOTTING PARAMETERS:

> = Plotting direction
PENWIDTH = 0.30mm
ZUNITS = metres
ZSCALE = 1000.000
ZLIMIT = 100.000
POSITIVE = red
NEGATIVE = blue

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ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 2 0F 2**
WHITE SPUR - M VICARY

GN
MN
TN

Magnetic Declination (MN) = +12.9°
Grid Convergence (TN) = -0.99°
Magnetic Inclination = -72.4°

Projection: Universal Transverse Mercator (UTM)
Grid: Australian Map Grid (AMG)
UTM Zone: 55
Spheroid: Australian National (ANS66)

MAP SCALE 1: 10 000
0 100 200 300 400 500 metres

SmudgeWare

RGC EXPLORATION PTY LTD

383174

WESTERN TASMANIA
WHITE SPUR EL 5/96
Airborne Geophysical Survey
2nd HORIZONTAL DERIVATIVE OF
TOTAL MAGNETIC INTENSITY, BIPOLE PLOT

1: 250K:	Tasmania SK/55-SW
Date: February 1997	Sheet: 1 PLAN 8
Compiled: C. Dauth	Plan: 2317/013

145°28'00"E 145°29'00"E 145°30'00"E 145°31'00"E 145°32'00"E 145°33'00"E

41°54'00"S 41°55'00"S 41°56'00"S 41°57'00"S 41°58'00"S 41°59'00"S

5 360 000 mN
5 357 500 mN
5 355 000 mN
5 352 500 mN
5 350 000 mN

372 500 mE 375 000 mE 377 500 mE 380 000 mE

5 cm

SURVEY PARAMETERS:

Line spacing:	100 metres
Line direction:	090-270 degrees
Tie spacing:	1000 metres
Tie direction:	000-180 degrees
Data interval:	7 metres
Terrain clear:	80 +/-20 metres
Positioning:	Visual
Survey date:	February 1990
Surveyed by:	GEOINSTRUMENTS
Processed by:	PITT RESEARCH
Surveyed for:	

PROCESSING PARAMETERS:

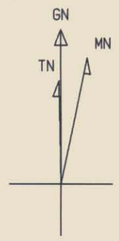
DERIVATIVE = 2nd horiz
NWTS: AVE. FILTER = 5
NWTS: AGC = 0
EXPN: AGC = 0.5000
SIGN CHANGED = yes

PLOTTING PARAMETERS:

> = Plotting direction
PENWIDTH = 0.30mm
ZUNITS = metres
ZSCALE = 1000.000
ZLIMIT = 100.000
POSITIVE = red
NEGATIVE = blue

97-4007

ANNUAL REPORT- EL 5/96
RENISON LTD - **VOL 2 0F 2**
WHITE SPUR - M VICARY



Magnetic Declination (MN) = +12.8°
Grid Convergence (TN) = -1.00°
Magnetic Inclination = -72.2°

Projection: Universal Transverse Mercator (UTM)
Grid: Australian Map Grid (AMG)
UTM Zone: 55
Spheroid: Australian National (ANS66)

MAP SCALE 1: 25 000

0 250 500 750 1000 1250 metres

SmudgeWare

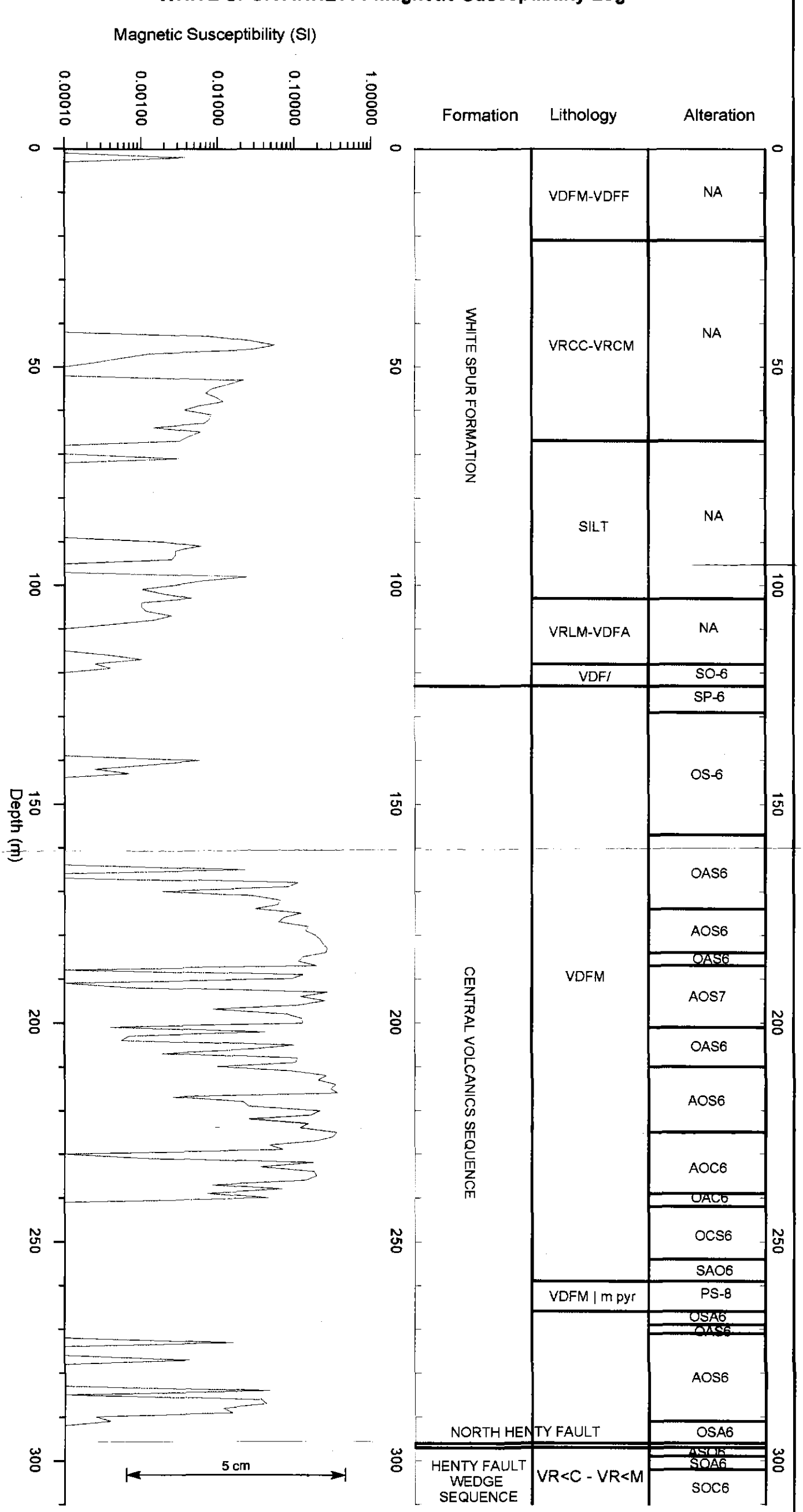
RGC EXPLORATION PTY LTD

383175

WESTERN TASMANIA
WHITE SPUR EL 5/96
Airborne Geophysical Survey
2nd HORIZONTAL DERIVATIVE OF
TOTAL MAGNETIC INTENSITY, BIPOLE PLOT

1: 250K:	Tasmania SK/55-SW
Date: February 1997	Sheet: 1 PLAN 9
Compiled: C. Dauth	Plan: 2317/014

WHITE SPUR ANNE001 Magnetic Susceptibility Log



Scale 1:1000

97-4007 - Vol 2 of 2 - EL 5/96

RGC EXPLORATION PTY LTD

Tasmania Base Metals
White Spur Project
Magnetic Susceptibility Log
January 1997

RGC Zeehan
Plan No. 2317/015

3831796

Hole: ANNE001
Collar: 377508mE AMG
5358264mN AMG
Azimuth: 1071 degrees at EOH
Dip: -51 degrees at EOH
Depth: 306.6m
Date Completed: 15/12/1996

PLAN 10