RGC EXPLORATION PTY. LTD.

E.L. 42/87

ZEEHAN AREA

ANNUAL REPORT 1988/89

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1. INTRODUCTION

E.L. 42/87 was acquired by Renison Ltd. in August 1987 as the result of a successful tender for a block of ground surrounding the Zeehan townsite. (Figure 1).

The E.L. covers 31 square kilometres of countryside that varies from swampy buttongrass and tea-tree flats to rugged, partially forested mountainous terrain. It includes the Zeehan townsite and many of the old silver-lead mines of the Zeehan field. Access is provided by a number of all-weather roads as well as numerous old, partially overgrown tramways and tracks.

Renison's interest in the area was initially linked to negotiations with the Aberfoyle/Gippsland Joint Venture partners to purchase the Queen Hill Consolidated Mining Lease, which is entirely enclosed by the E.L. Work on EL 42/87 was subsequently delayed in the anticipation that once the Queen Hill leases were under Renison's control, a combined exploration programme would be conducted over both the Queen Hill leases and the surrounding E.L. However the protracted negotiations eventually fell through, and in 1989 RGC Exploration began an exploration programme on E.L. 42/87 without having gained control of Queen Hill.

The main lithologies of interest to RGC on the E.L. are strongly folded and faulted sediments and volcanics of the Proterozoic Oonah Formation and Cambrian Crimson Creek Formation. These are considered prospective for fracture controlled and/or replacement style tin deposits.

Known economic mineralisation in the area includes the Queen Hill, Montana and Severn deposits at Queen Hill, which together comprise a geological resource of 7.3 million tonnes at 0.7% Sn. In addition, numerous small silver-lead mines of the historic Zeehan Field produced over 190,000 tons of lead and 26,000,000 oz of silver between 1982 and 1920.

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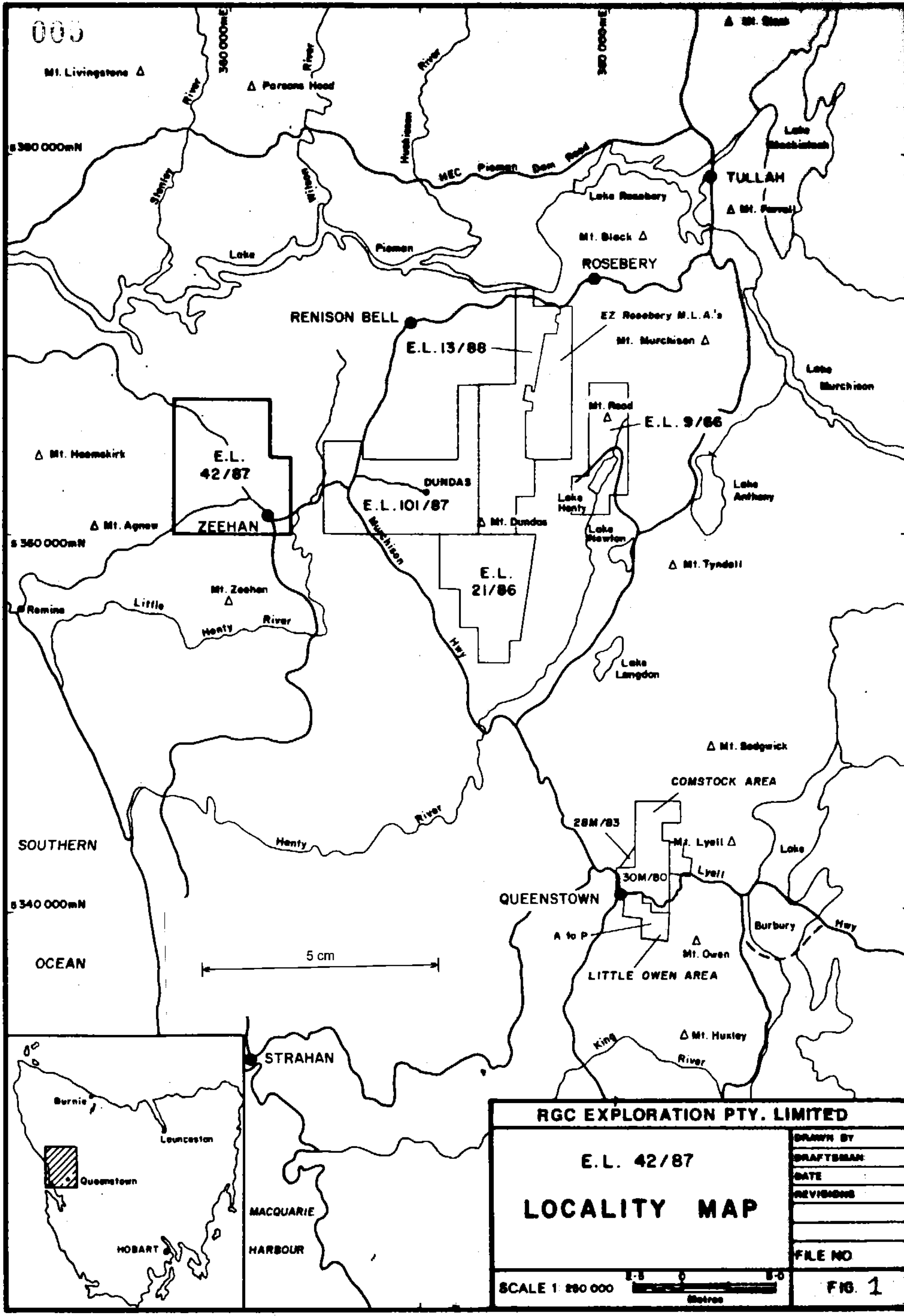

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E.L. 42/87

LOCALITY MAP

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DRAFTSMAN	
DATE	
REVISIONS	
FILE NO	

SCALE 1:250 000 — Metres

FIG. 1

This report summarises past exploration work in the area, and details 1988/89 exploration. This so far has been limited to geological mapping and rock chip sampling, aimed at locating areas worthy of detailed follow-up work.

2. LAND TENURE

E.L. 42/87 is held solely by Renison Ltd., and explored by RGC Exploration. It covers 31 square kilometres, most of which is Crown Land. The following mining leases are excluded from the area (Figure 2):

36M/81	Aberfoyle Expl. P/L & Gippsland Oil & Minerals NL
43M/85	Oceania Tas. P/L (Sylvester mine area)
123M/47	Oceania Tas. P/L (Comstock mine area)

Mining lease 36M/81 covers the Queen Hill deposits, and the other two leases in the name of Oceania cover small open-cut mines from which small tonnages of Silver-Lead-Zinc ore are sold to Pasminco at Rosebery. By the time of writing of this report, Oceania's mining operations appeared to have ceased.

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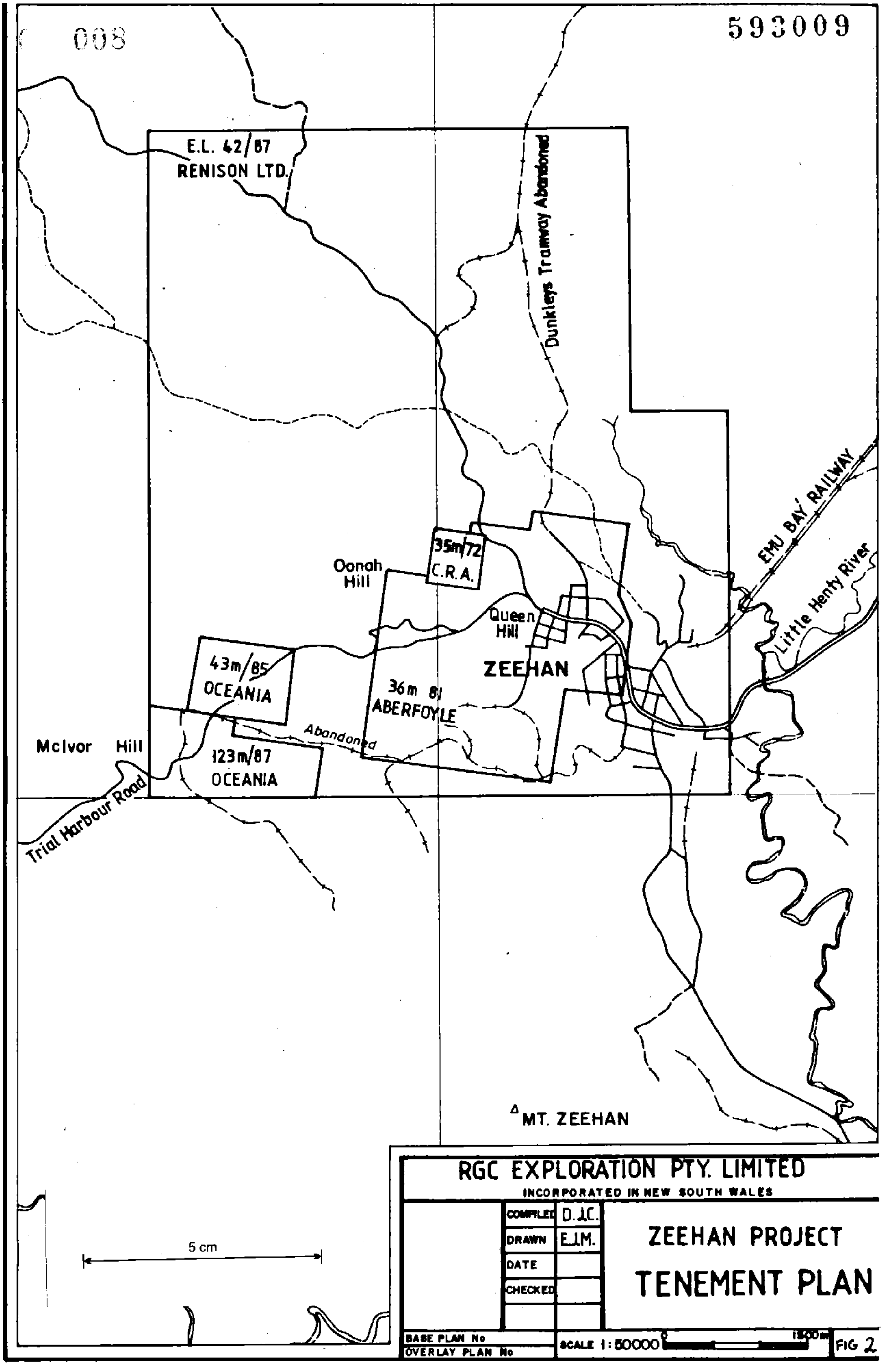

E.L. 42/87
RENISON LTD.
Dunkleys Tramway Abandoned
EMU BAY RAILWAY
Little Henty River
35m/72
C.R.A.
Oonah Hill
Queen Hill
ZEEHAN
43m/85
OCEANIA
36m 81
ABERFOYLE
Abandoned
123m/87
OCEANIA
McIvor Hill
Trial Harbour Road
MT. ZEEHAN
5 cm
RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES
COMPILED D.J.C.
DRAWN E.J.M.
DATE
CHECKED
ZEEHAN PROJECT
TENEMENT PLAN
BASE PLAN No
OVERLAY PLAN No
SCALE 1:50000
FIG 2

3. HISTORY OF ZEEHAN AREA

Alluvial tin was first discovered in 1876 at South Heemskirk, and the subsequent rapid discovery of small alluvial and quartz-tourmaline hosted tin deposits led to the development of the Heemskirk tin field. Prospecting of the surrounding countryside ultimately led to the discovery of silver-lead mineralisation in 1882, at what is now Zeehan townsite.

The Zeehan silver-lead field flourished until 1914, by which time most major mines had closed. Subsequently, the Tasmanian Government carried out 4000 foot of trenching in the Brittania, T.L.E., north Zeehan, north Comstock, Queen and Oonah mine areas and assisted many tributing parties, but no new discoveries were made. There is very little information available on the period of small-scale prospecting and mining that followed.

The presence of tin in the Zeehan field had been recognized early (Waller, 1904). Both the Clarke Lode (Silver Queen mine) and the Stannite Lode (Oonah mine) were mined for stannite, and assays from the Oonah mine records indicate 0.3% Sn in ore from both Bradshaws and Pastkuchens Lodes. A small smelter was erected at Zeehan to treat the ore, but metallurgical problems forced its closure.

In 1937 cassiterite was discovered on the northwest slope of Queen Hill and was worked for a while by Zeehan Tin Development NL (Blissett 1961). This area was mined again in the 1960's as the Stormsdown mine. No tin mining has been recorded since.

A brief resurgence of silver-lead mining occurred during the period 1947 to 1960, during which time the newly discovered Montana SL and the re-developed Oceana lodes were mined. By the time of their closure, the Zeehan Field had produced, 194,816 tons of lead, 26,586,000 oz of silver and 5.3 tons of tin.

4. PREVIOUS WORK

4.1 Department of Mines

During the 1920's and 30's, the Mines Department drilled an unsuccessful 930 foot hole into the Spray No. 1 lode, and provided assistance at the Swansea and North Tasmania mine areas. Three diamond holes were drilled at the latter during 1937. An attempt to drill the T.L.E. mine area was abandoned before reaching target depth. The Tasmanian Government also assisted with the prospecting that ultimately led to the discovery and exploitation of silver-lead mineralisation on the Corinna road by the Montana Silver-Lead Co. NL (Figure 3).

In 1962-63 the Mines Department drilled two holes into Manganese Hill to test Balstrups lode, but no mineralisation was intersected.

4.2 Zeehan Explorations NL

During the period 1946-47 Zeehan Explorations (a joint venture between North Broken Hill & Broken Hill South) drilled five holes in the Oceana mine area, four in the Despatch area, three at the Austral flux quarry and ten along the King-Bell line of lodes. The target was replacement-style galena mineralisation within the Gordon Limestone. Exploration also included geophysical surveys undertaken by the Bureau of Mineral Resources, and included gravity, EM, SP and magnetics. Exploration was only successful at the Oceana, and Zeehan Exploration went on to become the operators of the re-opened Oceana mine (Figure 3).

During the same period, they explored the Spray-Nubeena shear zone by drilling two holes at the Nike mine and by dewatering and drilling at the Spray. Ground surveys were also conducted over the shear zone.

4.3 Electrolytic Zinc Company of Australasia Ltd. (M.L. 123M/47)

In 1948 the EZ Company drilled a number of shallow holes in the Comstock mine area, and carried out small scale mining on the Silver-Lead-Zinc lodes there. Recently their mining lease (123M/47) was taken over by Oceania Tas. P/L who have carried out limited exploration and small scale mining both at the old Comstock mine and at the Sylvester mine on neighbouring lease 43M/85. (Figure 2). There are no EZ reports on open file.

EZ also drilled three unsuccessful diamond drillholes at the Big Ben lode (on lease 17M/45) but failed to locate ore.

4.4 Bureau of Mineral Resources

In 1954 the BMR conducted geophysical surveys for Montana Silver-Lead NL around the Montana SL mine and the old Tas. Crown mine. The survey involved SP, EM (Slingram), ground magnetics and limited Pb geochemistry. Montana SL did some follow-up work in the Barnett-Quigley's mine area including drilling and trenching, but found that the geophysical anomalies were mostly due to graphite, with only minor Pb mineralisation. They also drilled at Tas. Crown, and sub-economic Pb mineralisation was confirmed.

During 1963-64 the BMR conducted follow-up geophysical surveys. The 1963 surveys were conducted on behalf of the Department of Mines over Oonah and Queen Hill to test for extensions of known silver-lead and stannite mineralisation. The survey included Turam, SP, IP and ground magnetics. The 1964 surveys were conducted for Clutha, and were designed to extend and complete the 1963 surveys. Strong co-incident IP/EM/SP anomalies were located along the Bradshaw-Stannite (Oonah mine) line of lodes, and between Oonah Hill and Queen Hill (Figure 3).

4.5 Placer Prospecting P/L (S.P.L.'s 12, 13. 404)

During the period 1963-66 Placer, operating as Clutha Development P/L, drilled 10 diamond holes under option on S.P.L.'s 404, held by C. Loftus-Hill. This included three holes drilled near Bradshaws Lode, four near Oonah mine and three at Queen Hill. All holes were drilled as a follow-up to BMR surveys in the area, and all intersected graphite with some sulphides. The Stannite Lode was intersected at depth. Placer also geologically mapped the area and sampled the old mines, and at Queen Hill they cleared and extended some of the old adits.

Placer also explored under option on Loftus-Hill's S.P.L.'s 12 and 13, on the Spray-Nubeena shear system. Work included Ag-Pb soil geochemical traverses, mapping, and a Turam survey, to determine if the numerous lodes formed part of a single shear system. The options were allowed to lapse and all three S.P.L.'s became part of Minop's E.L. 44/70.

4.6 Minops P/L (E.L. 6/69, 44/70)

During 1969-70 Minops, a subsidiary of Paringa Mining & Exploration P/L., drilled ten diamond holes in the Oonah mine area, to test the Stannite Lode at depth. As a result of this work they reported an indicated reserve of 674,000 tonnes grading 1.10% Sn, 1.25% Cu and 3.7 g/t Ag.

They also drilled a diamond hole, M1, into the Spray No. 1 lode and began dewatering the spray mine. This work was done (under option?) on E.L. 6/69, held by A.R. Dobson. Dobson repegged part of 6/69 as E.L. 44/70 and during 1970 Tenneco took over as operators under option to purchase.

4.7 *Tenneco P/L* (E.L. 44/70)

During 1971 Tenneco completed de-watering of the Spray mine, carried out underground sampling and mapping, and drilled four underground holes. Stannite was identified in a lode (0.12%). Tenneco also assessed the Oonah and Oceana mine areas.

Tenneco then widened their interest to include the Gordon Limestone, and conducted SP, EM, IP, gravity and airborne EM (Turair) aimed at locating replacement-style base metal mineralisation. No evidence of economic mineralisation was found and the option was allowed to lapse in 1972.

4.8 Gippsland-Aberfoyle JV, Queen *Hill* (C.M.L. 43M/73, E.L. 47/71)

In 1970 Gippsland Minerals acquired options on leases held by D. Dunkley, and in 1971 a joint venture agreement was signed with Cominco Exploration P/L (later to become Abminco, then Aberfoyle). In December 1971 the leases were expanded to their current size, then amalgamated in 1973 into the Consolidated lease CML 43M/73. Also in 1971, an area surrounding the C.M.L.'s and stretching NW to St. Diziers was taken up as E.L. 47/71.

During 1970-73 Gippsland drilled 18 holes, relogged all the old Queen Hill holes, completed some geological mapping and conducted a Turair/magnetic survey. Interestingly the airborne survey only located weak anomalies and failed to detect any of the Queen *Hill* lodes. *The drilling* however was able to define an inferred ore reserve of 600,000 tons at 1.64% Sn. In addition, two unsuccessful diamond drillholes were aimed at quartz-pyrite-siderite mineralisation as reported by Twelvetrees and Ward (1910) at the Montana No. 2 mine.

During 1974-77 Cominco drilled an unsuccessful hole aimed at Bradshaw's Lode, and a hole aimed at the Stormsdown Lode. Metallurgical testwork was carried out on Queen Hill ore, and a pilot geophysical study (IP/mag.) was conducted. An aeromagnetic survey was completed in 1977. IP was found to be capable of discriminating between Queen Hill lodes and barren graphites.

During 1978-79 Abminco gridded the west side of Queen Hill and conducted a ground magnetic and dipole-dipole IP survey. Later UTEM and Sn geochemistry was extended over the grids, and additional grids were constructed at Manganese Hill and the tramway to the south, followed by some magnetics and soil geochemistry. D.D.H.'s G1-G22 were re-assayed.

In 1980 a major drilling programme was commenced at Queen Hill, targetted at the Severn, Montana and Golf Course lodes. This was supplemented by more detailed geological mapping, petrology and a DIGHEM test survey. In 1981 Queen Hill was bulk-sampled for matte fuming trials, and DIGHEM anomalies were followed up with ground geophysics and geochemical programs. By 1982, Aberfoyle had completed ore characterisation studies and a Geological Resource Assessment that reported 7.3Mt and 0.69% Sn, including 3.6Mt at 1.21% Sn.

In 1984 E.L. 47/71 was sub-divided and the western area taken up by Gippsland. Exploration on the eastern area, retained as E.L. 47/71, focussed exclusively on assessing the potential of the Gordon Limestone for hosting significant syngenetic Pb-Zn-Ag mineralisation. Exploration consisted of a Wacker bedrock drilling programme for geochemical and geological information over poorly outcropping areas of Gordon Limestone. Anomalous zones were encountered, but lead isotope analyses suggested a Devonian vein-style source rather than a syngenetic (Oceana-style) source. In 1987 the E.L. was relinquished. The Joint-Venture partners held onto the C.M.L. over Queen Hill but have done very little work since 1983.

4.9 C.R.A. - Minops Joint Venture, Oonah (M.L. 35M/72)

Details of work conducted on this M.L., now held in the name of C.R.A. Exploration Pty. Ltd., are not known as no reports are yet on open-file. However, it is reported from other sources that during the period 1979-81, at least 13 holes were drilled in the vicinity of the Stannite lode.

4.10 R.G.C. Group of Companies (E.L. 11/76)

In 1967, the R.G.C. Group began to show interest in the area. In that year New Consolidated Gold Fields (N.C.G.F.) did a brief assessment of Loftus-Hills' S.P.L. 404 around the Oonah Mine, and S.P.L. 28 was pegged by Renison Ltd. to cover former S.P.L. 13, which stretched from Zeehan townsite to the Little Henty River. The tenement was dropped again the same year.

Then in 1974, S.P.L. 129 was pegged by Mt. Lyell (another member of the RGC Group) to cover an area to the south and southwest of, and abutting the southern boundary of, current E.L. 42/87. The S.P.L. was converted to E.L. 11/76, and explored by Gold Fields Exploration Pty. Ltd., (now re-named RGC Exploration). Exploration in E.L. 11/76 concentrated on two areas:

a) East Heemskirk - explored for skarn and carbonate - replacement Sn.
b) Stonehenge - explored for Queen-Hill style replacement Sn.

The East Heemskirk area is remote from E.L. 11/76 and will not be detailed.

The Stonehenge area covers part of current E.L. 42/87, near Comstock. During 1974-75, a limited airborne INPUT-EM survey was flown, and two NE lines (which crossed the Comstock area) were followed up with ground magnetics and Cu-Pb-Zn-Ag-Sn soil geochemistry between the north Tasmanian and T.L.E. mines. In 1981 the area was mapped in detail

and in 1982 an airborne DIGHEM survey was flown. In 1982 the Stonehenge grid was pegged over a strong aeromagnetic anomaly, and bedrock geochemistry, ground magnetics, VLF-EM and gradient-array IP surveys were carried out over the entire grid.

During 1982-85, six diamond holes (TH12-TH17) were drilled at interesting anomalies, and a review was made of old workings in the area. The drill holes intersected a thick sequence of faulted, locally altered dolomites. Fault and breccia zones contained moderate to high levels of Pb and Zn, sometimes accompanied by Sb, but low levels of tin.

The drilling was followed by Ground EM surveys, and limited gridding, ground magnetics and bedrock geochemistry. In 1986 E.L. 11/76 was reduced from 79 sq. km. to only 3 sq. km., retained in the Stonehenge area. In March, 1988, the retained area was relinquished without further work having been undertaken.

5. STRATIGRAPHY (Figure 4).

5.1 Oonah Formation

The oldest rocks in the area are the interbedded sandstones, siltstones and shales of the Proterozoic Oonah Formation. This thick monotonous sequence of rocks forms the core of the Heemskirk anticlinorium, situated northwest of Zeehan townsite. The more weathering resistant sandstones dominates outcrop, forming low tussocky hills over a large area.

The sandstones are grey at depth, weathering to light grey/white quartzites with a distinctive saccharoidal texture. Grainsize varies from coarse to very fine, thereby grading into silstones. Individual beds vary from thin laminae to massive textured beds a few metres in thickness. The thicker beds sometimes exhibit cross-bedding, and typically contain a network of white, tensional quartz veins. They locally grade into kaolinitic grit.

Siltstones are light grey, varying from massive, poorly bedded to laminated and fissile. Shales are typically dark grey to black. The shales, siltstones and sandstones are sometimes finely interbedded as rythmic bands and laminae. The competency contrast between the brittle sandstones and more ductile finer sediments results in the latter becoming contorted and drag folded in areas of fold closure.

The Upper Oonah Formation is dominated by interbedded shales and siltstones, with lesser amounts of sandstone, dolomitic limestone, dolomite and other dolomitic sediments. Irregularly interbedded with the sediments are deeply weathered spillites of the Montana Melaphyre Volcanics. As a consequence of the competency contrast between these rocks and the more competent rocks of the lower Oonah, the Upper Oonah Formation is thickest in the nose of the regional anticlinorium and has been structurally thinned out along the limbs.

The shales are typically dark grey to black, carbonaceous, often with a slatey cleavage. By contrast the siltstones are bleached light grey to white, often massive, poorly bedded. Shales, siltstone and sandstone are sometimes finely interbedded as rythmic bands a few millimetres thick, sometimes exhibiting graded bedding. Such outcrops resemble laminates of the Renison Bell Member-Middle. Small scale cross-bedding, ripple marks and sole-markings can be observed in cuttings on the Granville and Trial Harbour roads.

The shales and siltstones are often strongly deformed, with the development of small-scale parasitic folds and microfaulting. In areas of more intense deformation in the nose of the anticlinorium these sediments are sometimes so deformed that more competent sandstones/siltstones occur as lenticular blocks ("fish") aligned with strongly developed schistosity in the surrounding deformed shales. Where strongly deformed, the shales typically become graphitic, and sometimes contain disseminated pyrite.

The spilites are grey-green at depth, but at the surface weather to orange-brown, massive, clayey rocks typically with a characteristic vesicular texture. Weathering generally extends to a depth of at least 2-3 metres. In fresh exposure, the vesicles are observed to be filled primarily with quartz and chlorite, and the matrix reportedly consists of quartz, chlorite, sericite and carbonate. When weathered, the vesicles contain dark brown iron-oxides which makes the vesicular texture stand out. Occasionally the spilites are so vesicular they resemble a pumice. In some localities between the Oonah and Western Mines, the spilite is a coarse lithic tuff, with angular fragments of vesicular lava (up to 40cm wide) and off-white chert in an ash matrix.

In the case of the lithic tuffs, the spilite is clearly interbedded with, and therefore contemporaneous with the surrounding sediments. However at well exposed localities along the Trial Harbour road some evidence of intrusive relationships between the vesicular lavas and the fine sediments can be observed. It should be pointed out, however, that most of the non-conformable contacts between spilities and sediments observed in the Trial Harbour road cuttings are in fact faulted.

The dolomitic limestones and other carbonates do not outcrop well, and are mainly known from drilling, and exposure in mines and road cuttings. The best exposure is north of Comstock, where a grey, generally massive textured limestone occurs in a creek bed. This limestone extends southward into Oceania's open-cut, where it hosts Zinc-Lead-Silver mineralisation in a pyritic gangue. At this location, the limestone is extensively altered to talc.

Elsewhere, siliceous dolomite was observed at the Sylvester mine, and dolomites have been recorded in holes drilled on the Stonehenge grid (Komyshan et. al, 1984) and at Queen Hill (Young, 1980). Additionally, King (1968) reported massive black dolomite in the Queen No. 4 and Montana No. 1 mines, and thin beds of grey dolomite interbedded with sandstone and slate in the Zeehan Western mine. Sideritic psuedomorphs after gypsum have been reported in the dolomites at Queen Hill (Anderson, 1986), suggesting they are of exhalative origin.

nb Mt Cameron artefact!

5.2 Crimson Creek Formation

This consists of a poorly outcropping sequence of deeply weathered mudstone, shale, siltstone and greywacke, with variable quantities of interbedded tuff. These lithologies usually occur in areas of low relief with little outcrop, and good exposures are limited to a few roadway/tramway cuttings and old mines. By correlating the Crimson Creek Formation turbidites with the overlying fossiliferous

Dundas Group, a lower-mid Cambrian age has been assigned (Blissett, 1962). However, correlation between the two groups has always posed problems, as the Crimson Creek Formation is unfossiliferous, and lithologically resembles unfossiliferous portions of the Dundas Group.

On the Argent Flat, the sequence includes mudstones, siltstones, grits, grey wackes and tuffs, with tuffaceous beds reportedly becoming dominant toward Manganese Hill (Lutley, 1975). Petrographic analysis of fresh tuff from mine dumps has revealed that lithic fragments are of vesicular lava identical to that of the Montana Melaphyres (King, 1968). King also records the presence of dolomitic rocks from mine dumps at the State mine, No. 2 Spray and Long Tunnel (Manganese Hill). A 45m thick sequence of massive dolomites interbedded with shales and interlaminated sandstone/siltstone (the Poverty Point Beds) occurs in two locations near the base of the Crimson Creek Formation. It only outcrops at one location, south of Montana Hill, but is now well documented as a result of Aberfoyle's drilling. Aberfoyle geologists correlate the sequence with the Success Creek Group at Renison Bell because it is conformably overlain by Crimson Creek shales and volcaniclastics (Anderson, 1986). The contact between the Crimson Creek Formation and the older Oonah Formation is faulted in the area, and this can be observed in the road cutting where Main road cuts the end of Queen Hill. At this latter location, the so-called Poverty Point Beds are faulted out, and the Oonah and Crimson Creek sediments are brought into psuedo-conformable contact.

East of the Sylvester mine, the Crimson Creek Formation turbidites occur in the core of a tight, WNW-ESE trending synclinal structure. The base of the sequence appears to be conformable with the underlying Oonah Formation in the vicinity of the Sylvester open-cut, where typical Upper Oonah sediments gradually pass upward into interbedded grey/black shales, siltstones, grey-green tuffaceous grey wackes and tuffs. The contact appears to be gradational and is difficult to precisely define. Toward the centre of the

syncline, these lithologies pass upward into mudstones, siltstones, grey wackes and tuffs. These sediments and volcaniclastics are poorly exposed, and deeply weathered to form reddish-brown to mauve, massive, often textureless rocks with indistinct bedding features.

On the Dunkley tramway, north of Parting Lake, Blissett (1962) mapped several outcrops of red and green mudstone, siltstone and grey wacke which he interpreted as an outlier of Crimson Creek Formation occupying a down fold in Oonah Formation sediments. However when I visited the area I could only find scattered outcrops of well bedded buff to dark grey siltstone, mudstone and shale, and some massive light grey mudstone. In general these rocks were well bedded and undeformed, compared to Crimson Creek sediments seen elsewhere. Hence I regard Blissetts interpretation as suspect, and these rocks could indeed belong to the Dundas Group.

5.3 Dundas Group

The core of the syncline east of Sylvester mine includes shales and grey wackes containing fossils (Diplagnostus sp.) which have been correlated with the Hodge Slate (Upper Cambrian Dundas Group). The Hodge Slate occurs low in the Dundas Group and on this basis Blissett (1962) assigned the bulk of the underlying sediments/volcaniclastics to the Crimson Creek Formation. Thus only a small area of Dundas Group is defined.

Just south of the E.L., there is a large area of poorly exposed Cambrian rocks bordered to the north by the Tenth Legion Fault, which separates them from Oonah sediments. Blissett (1962) assigned a portion of them to the Dundas Group on the basis of fossil evidence, and Poltock (1981) suggested that the remaining non-fossiliferous rocks also belonged to the Dundas Group because of the absence of the deeply weathered grey wackes, tuffs etc. that characterise the Crimson Creek Formation to the north. However, it should be re-iterated that correlation between the Crimson Creek Formation and non-fossiliferous components of Dundas Group sediments is often virtually impossible, and much of the sequenceof basic volcanics, grits and siltstones that occurs in the area could belong to the Crimson Creek Formation.

5.4 Younger sediments

Toward the eastern boundary of the E.L. is the large Zeehan Syncline which contains sediments ranging from Ordovician to Devonian in age. With the possible exception of the Gordon Limestone, neither the structural setting nor the lithologies of these sediments are considered very prospective for economic mineralisation of the scale that would interest RGC. For that reason only the Gordon Limestone will be mentioned.

The Ordovician Gordon Limestone occupies a button-grass flat north of Zeehan townsite, and it is so poorly exposed that its lithology can only be described on the basis of old mine dumps (e.g. Tas. Crown) and a bedrock geochemistry programme undertaken by Aberfoyle (Sise, 1986). In this area it varies from a massive, grey limestone to a black, arenaceous limestone. It contains silty bands, and generally decomposes to dark clay and soft shale at the surface. It is faulted against Oonah sediments along its western margin, NNW of Zeehan townsite.

Within the Heemskirk Anticlinorium, the Oonah sediments are overlain in places unconformably by Permian tillites of the Zeehan Glacial Formation. The angular unconformity is well exposed on the Corinna road opposite the old Montana SL mine. Some contacts are however reverse-faulted. The tillite consists of poorly sorted, sub-angular erratics of quartzite, quartz and shale in a grey, clayey matrix. It was deposited on an undulating surface in the Montana SL area, and subsequent weathering has produced a meandering contact.

5.5 Intrusives

Twelvetrees and Ward (1910) reported several occurrences of quartz-porphyry and aplite dykes in the Zeehan area, and a number of occurrences are reported along the Oonah fault between Oonah Hill and Barnett's workings. The author was able to confirm the presence of a very thin Quartz Porphyry near Queen Hill and a weathered (? Aplite) dyke north of Oonah Hill.

The only other mappable outcrop of intrusives occurs southwest of the E.L., where gabbro's outcrop adjacent to the Tenth Legion Fault. However dolerite and ultramafic dykes are reported from drill holes and tramway cuttings in the Manganese Hill - Comstock Tramway area.

A granite spine is interpreted to extend beneath the Zeehan area, linking the Heemskirk and Pine Hill granites. (Leaman, 1989).

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6. STRUCTURE

6.1 Regional Tectonic Setting

Within the Zeehan area, the effects of two major deformations have been identified. According to Marjoribanks (1989), the earlier (D1) deformation produced a series of E to SE-dipping thrust sheets, often marked by belts of sheared/disrupted mafic and ultramafic rocks (e.g. Serpentine Hill Complex). Marjoribanks interprets these thrusts as forming a near continuous zone traceable from near Rosebery to Trial Harbour. Although an exact age for D1 cannot be given, Berry (1988) deduces a mid-Cambrian age from various stratigraphic and tectonic arguments.

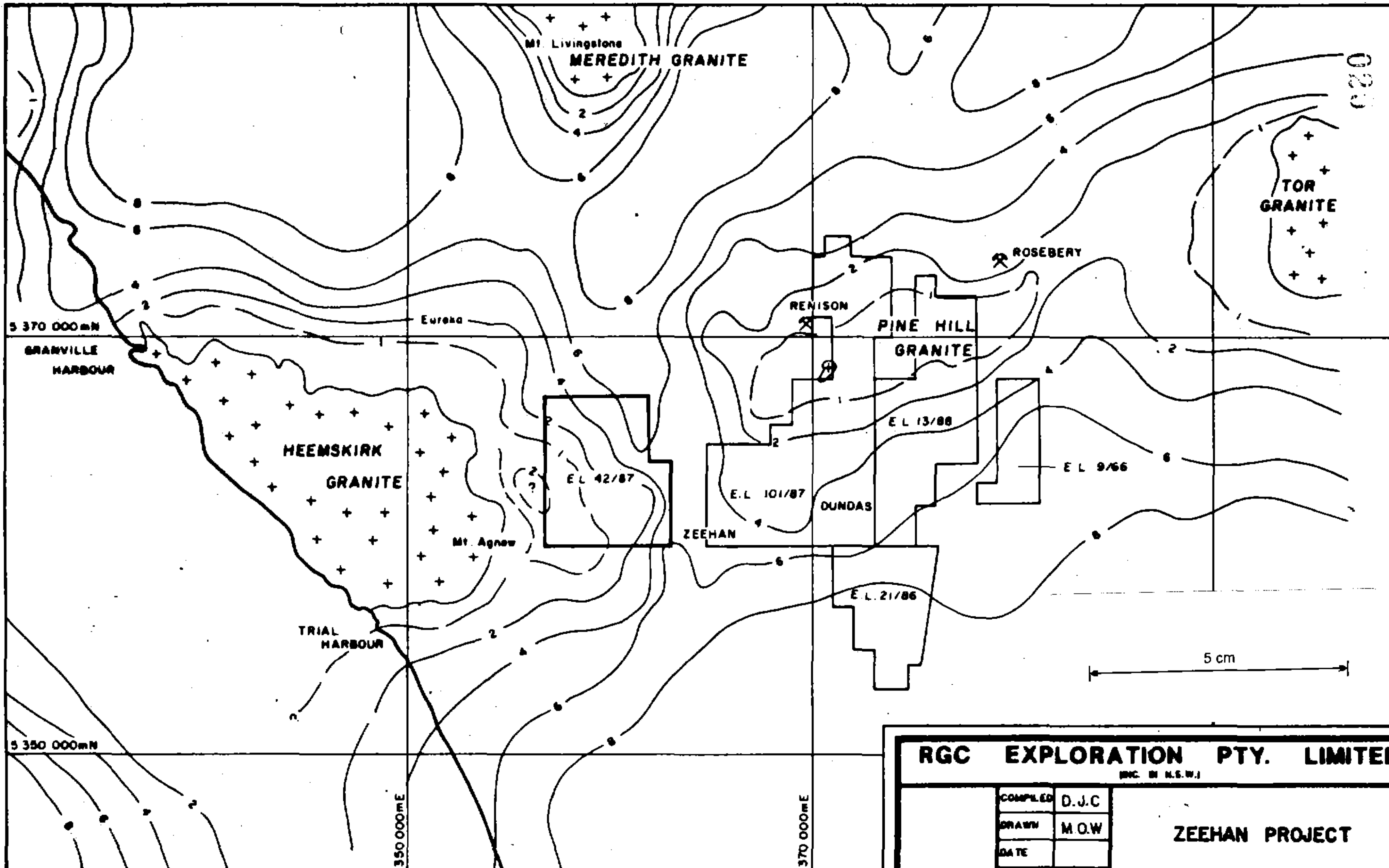
The D2 deformation of the mid-Devonian Tabberabberan orogeny was the most significant period of deformation in the Zeehan area and was recognized by Carey, 1953, Solomon, 1962 and others. Two main phases are recognised:

1) Broad NE trending folds that parallel the Tyennan nucleus.

2) Later, more intense NW trending folds.

The D2 deformation involved compression from the SW, which produced the major NW trending folds and a strong NW regional axial planar cleavage. It also produced steep NW trending reverse faults and ENE striking normal faults according to Marjoribanks.

The Heemskirk batholith was intruded during the Devonian, and gravity modelling data published by Leaman (1989) shows the Heemskirk and Pine Hill granites to be connected by an ENE trending granite spine which passes beneath Zeehan (Figure 5). The form of the intrusion suggests it was controlled by D1 thrust zones and D2 anticlinal structures, according to Marjoribanks.



Provisional interpretation : contours showing top of granite below surface in km.
(Leaman, Jan. 1988)

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

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

ZEEHAN PROJECT

FORM OF GRANITES

BASE PLAN No.
OVERLAY PLAN No.

SCALE 1:250,000 — 2.5 0 5.0 Kilometres

FIG. 5

Tabberabberan orogeny also produced a series of NW trending transcurrent faults with generally oblique-slip displacement. These probably developed later than the D2 folds. The numerous NW and NNE trending fissure veins of the Zeehan silver-lead field developed around the same time.

Finally, there is abundant evidence in the Zeehan area that some Post-Permian thrusting occurred. These faults mostly trend NW or NE, and generally involved re-mobilisation of old Devonian structures (Blissett, 1962).

6.2 Folding

The two dominant fold structures on the EL are the plunging Heemskirk anticlinorium, located northwest of Zeehan, and the SSE trending Zeehan syncline to the east of the townsite. Both are D2 features, related to the second phase of D2 deformation. The first phase is not discernible at the scale of mapping on the EL, however it can be deduced on the basis of regional scale interference patterns in folded sediments to the E and SE of the EL.

Over most of the EL, the structure is exceedingly complex and difficult to interpret with the amount of outcrop available. However the following general observations can be made on the basis of the authors mapping:

a) The trends of the axial traces of major D2 folds vary systematically from NNW in the north of the EL (e.g. Zeehan Syncline) to WNW in the south (e.g. folds south of Balstrup Fault).

b) A dominant NW trending cleavage/schistosity is observeable throughout the EL. This penetrative fabric is axial planar to D2 folds, and is strongly developed in the more ductile fine-grained sediments. It is particularly strongly developed in the closure of the Heemskirk anticlinorium, near the Trial Harbour turnoff.

c) The Heemskirk anticlinorium, which contains rocks of Cambrian age and older, is far more structurally complex than the Zeehan Syncline, which only contains rocks younger than Cambrian. This can be seen from colour photography over the area as well as from reconnaissance mapping.

d) Small scale parasitic folds within the anticlinorium exhibit a wide range of orientation. This suggests multiple phases of folding.

e) Near the nose of the anticlinorium, the fine grained sediments of the Upper Oonah are typically very disturbed, strongly cleaved, locally sheared and often tightly folded with failed fold limbs. These ductile sediments appear to have been structurally thickened in the nose of the anticlinorium and thinned out on the limbs.

f) Observations of sedimentary structures along new road cuttings in the nose of the anticlinorium revealed some facing reversals and overturned bedding. This, combined with outcrop mapping, suggests structural repetition within the Upper Oonah in this highly disturbed area.

g) Mapping of new road-cuttings along the Trial Harbour road revealed evidence of small thrust faults, some of which appear to have been subsequently folded and displaced.

6.3 Faulting

Numerous significant NW trending faults were mapped in the area. As with the regional folds, the trend of these faults generally varies systematically from NNW in the north of the EL to WNW in the south. This gives the appearance of convergence toward a point a couple of kilometres SE of the EL.

The NW trending faults vary in magnitude from thin, discrete structures of minor displacement to major regional structures, such as the Balstrup Fault, that stand out as topographic features and involve apparent displacements in the order of kilometres. Such faults are usually readily visible on airphotos, especially where well bedded Ordovician and Silurian sediments are involved, and with the extra input of reconnaissance mapping it was possible to determine their positions fairly accurately. However the larger faults are also generally deeply weathered, and therefore it is difficult to determine the dip and morphology of such structures. Mine records are of little use, as fissure lodes rarely occupied major structures. Smaller faults are known from exposure in road cuttings and mine workings, but are difficult to correlate between exposures.

Smaller faults are typically thin, discrete, planar, slickensided structures representing brittle failure. Within the less competent fine grained sediments of the Upper Oonah, the structures are often represented by more ductile behaviour. Incompetent shales take up the displacement and become highly contorted, graphitic and increasingly schistose. Sometimes disseminated pyrite is present. Such structures are often difficult to pinpoint because they are sub-parallel to axial-planar cleavage of D2 deformation. Often such structures split or "feather" out to form a number of anastomosing structures, making correlation between exposures especially difficult.

Most of the observed faults are steeply dipping, apparently oblique-slip structures with dips generally in the range 60-90 degrees. According to King and Blissett (1968), major faults trending about WNW (e.g. Sylvester, Balstrup) are steeply dipping transcurrent structures (wrench faults).

However a number of the structures are wide, shallow structures with evidence of reverse movement. Twelvetrees and Ward (1910) describe the "Main Slide" of the Zeehan-Montana mine as a 1 1/2 - 2 foot wide crush zone with a 45 degree NE dip, containing numerous slickensides and subsidiary structures. The footwall boundary is well defined but the hangingwall is diffuse. Blissett interpreted this structure as connecting to a similar structure 3 km NW on the old Corinna road, where Oonah sediments are thrust over Permian tillites. Unfortunately, this road has since been built-up and sealed, and the fault is no longer observeable. Other similar NW trending structures have been reported at the Montana SL, Zeehan-Montana and Oonah mines. At the latter two, movement was interpreted as north block up and west. Fissure lodes terminate against such structures, and characteristically bend toward the direction of displacement as they near the slides. The thrusting at Montana SL is clearly Post-Permian, but this is not necessarily the case at the other locations, where thrusting could be D2.

The main slide of the Oonah mine corresponds to the Oonah fault, and the Zeehan-Montana main slide is the Montana fault, as shown on Figure 4. A reverse fault that can be seen in a cutting on the Granville road about 100m NW of the Trial Harbour turnoff may be part of the Montana Structure.

The position of the major WNW trending Sylvester Fault is known with certainty on Aberfoyle's CML, but to the west it is obscured beneath flat, buttongrass terraine and its exact position cannot be determined. It has not been seen in outcrop on the EL.

Balstrups fault is another major WNW trending fault, and is a significant topographic feature. East of Comstock it is deeply weathered, and outcrops as a low ironstone ridge along the contact between the Crimson Creek Formation and Oonah sediments. It dips northerly at 75 degrees near the spray mine (Tenneco data). Its exact location is not known north of Comstock.

The Tenth Legion fault also trends WNW, and is mappable in the Comstock area where it forms the contact between gabbros and Oonah sediments. Just south of the Comstock mine it has been exposed in a very recent road cutting, where it occurs as a wide shear with a shallow NE dip. Within the shear, blocks of undeformed Oonah sediments occur as lenses aligned with the foliation. The structure forms the contact between ? Dundas Group and Oonah sediments at this location, with Oonah sediments possibly thrust over the Dundas Group. Previous RGC mapping on the Stonehenge grid suggests the fault peters out to the SE, however faults were mentioned in mine records for all the old mines scattered along the Dundas Group-Oonah contact (e.g. T.L.E., Tasmanian, Swansea), and Poltock (1981) suggests a northerly dipping thrust contact between Oonah and Dundas Group rocks at Swansea. These may represent extensions of the Tenth Legion fault.

The NW faults displace earlier formed, generally NE trending structures. These earlier structures include the major structures at Queen Hill that host the Stormsdown, Clarke and Severn ore zones. The Queen Hill structures, where exposed, are typically broad zones of ductile deformation, accompanied by significant amounts of pyrite. These structures dip easterly at about 60-70 degrees, and in outcrop appear to be gently folded and roughly conformable to Upper Oonah Formation sediments.

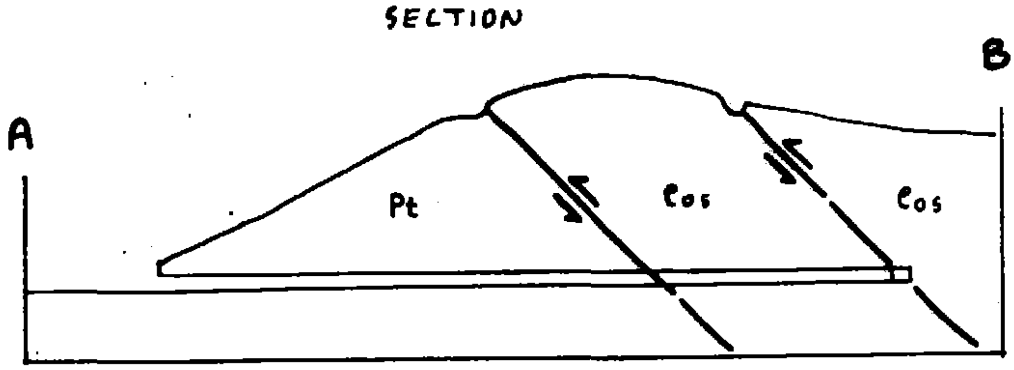
The Clarke Structure parallels a conformable contact between spilites and shales within the Upper Oonah, and shales in the hangingwall are strongly deformed. The Severn structure forms the faulted contact between Oonah sediments and Crimson Creek sediments and volcaniclastics. It is conformable to Oonah sediments, but rocks of the Crimson Creek Formation intersect it at a shallow angle. These structures have been interpreted as early (D1) thrusts on the basis of a strong down-dip extension lineation, and the folding and displacing of the structures by later Devonian (D2) deformation.

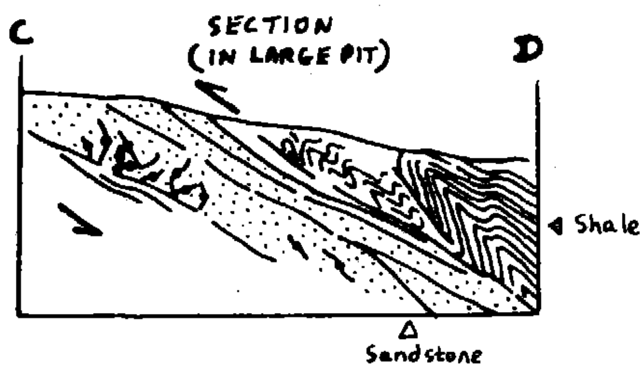
The Waller fault is another major NE structure, forming the faulted contact between the Crimson Creek Formation and Devonian/Silurian sediments on the east side of Argent flat. From old mine records, it is known to be a large, cavernous structure containing fragments of country rock, siderite and galena (Waller, 1904). Fissure vein lodes truncate against it. The Waller fault truncates against the North-South Despatch fault, but may continue again as the Brickfield Fault.

Other NE structures include Pastkuchens Lode and Bradshaws Lode south of Oonah Hill. These are thinner structures, also with a SE dip, and with significant pyrite.
The only other NE structures worth mentioning occur at Montana SL where they host the so-called "Tillite Lode" and "Main Lode" respectively. The latter structure is a wide, shallow dipping shear trending NNE and dipping easterly at 40-60 degrees. It contains sheared, brecciated host rock, and hanging-wall shales are tightly drag-folded against the fault where it was inspected at the surface (Figure 6), suggesting thrusting. The other structure, the so-called Tillite Lode, is parallel to the Main Lode structure and has resulted from the thrusting of Oonah sediments over Permian Tillites. The tillite is slightly sheared over about 1 metre in the footwall of this structure. These structures are clearly Post-Permian.

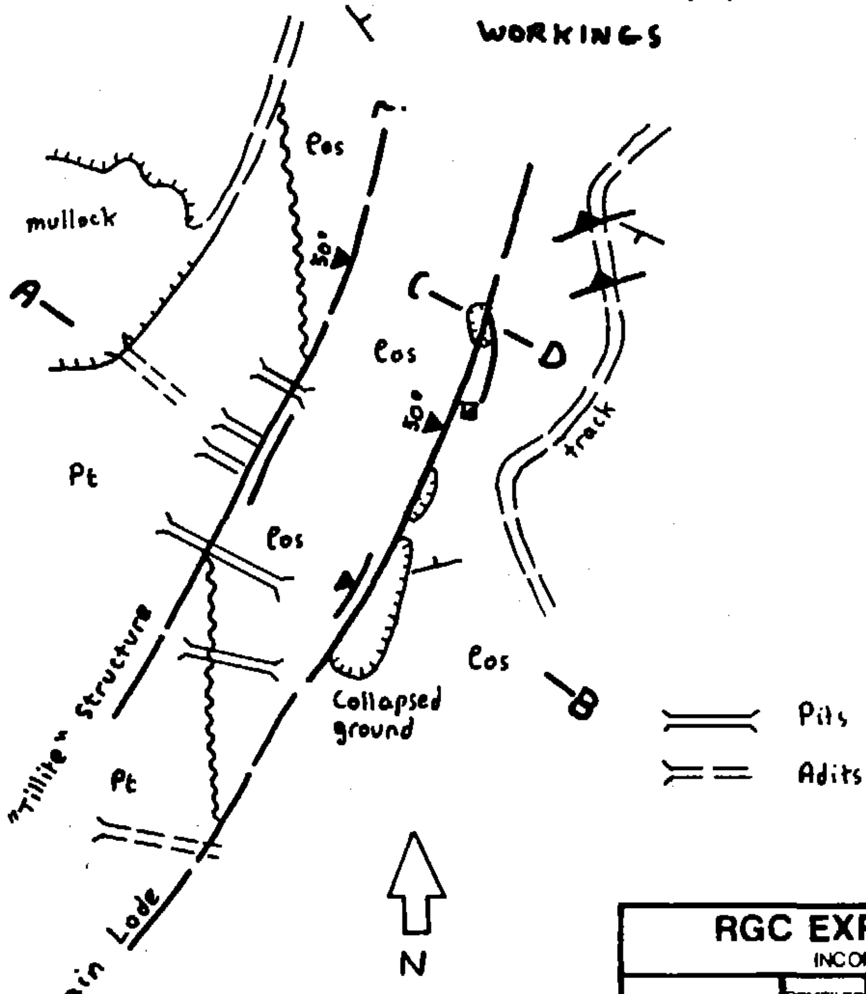
Based on old mine records, the Main Lode thrust appears to have displaced along a pre-existing structure, and this is probably also time of the "slides" at Zeehan-Montana and Oonah mines, mentioned previously.

The only other fault worth mentioning is the N-S Despatch fault, which forms the contact between Oonah sediments and Gordon Limestone where the Heemskirk Anticlinorium and Zeehan Syncline "join". The fault doesn't outcrop, but its location is known as a result of an Aberfoyle bedrock sampling programme (Sise, 1986). The dip of the fault is not known, but is inferred to dip shallow westerly based on Blissett's description of the workings.





MONTANA S.L.
WORKINGS



5 cm

Pt Permian tillite
Єos Oonah sediments

RGC EXPLORATION PTY. LIMITED INCORPORATED IN NEW SOUTH WALES		
COMPILED	DJC	MONTANA S.L. GEOLOGICAL SKETCH (NOT TO SCALE)
DRAWN	DJC	
DATE		
CHECKED		
1:250 000 Reference		
BASE PLAN No	SCALE	FIG 6
OVERLAY PLAN No		

Faults in the Zeehan syncline are mostly WNW and ENE orientated, and may be conjugate sets resulting from the SW-NE compression that produced the fold. The area is structurally simpler than the rest of the EL because pre-Ordovician structural components are missing.

6.4 Structural Summary

In summarising the complex structure of the area, the following structural history is proposed.

1) Major thrusting occurred in the mid-Cambrian, resulting in roughly NE trending SE dipping thrust sheets (e.g. Severn, Clarke). The deformation is generally ductile, and country rocks are locally tightly to isoclinally folded.

2) Tabberabberan Orogeny in the Devonian occurred in two phases, the first produced broad, open folds trending roughly NE, the second superimposed tight, NW trending folds (Heemskirk Anticlinorium, Zeehan syncline). The D2 deformation caused folding of D1 structures. The structurally controlled Heemskirk-Pine Hill granite spine intruded at this stage.

3) Most of the NW and some of the NE trending faulting was initiated during D2 deformation, and possibly continued beyond the development of the major regional folds. These faults further dislocated D1 structures, and dislocated the D2 fold axes. Displacement was mainly oblique-slip, but some thrusting probably also occurred. The mainly NW and NNE trending fissure veins of the Zeehan Field developed at the same time.

4) Post Permian thrusting remobilised some of the pre-existing faults. Limited reverse and strike slip displacement occurred along structures trending NW and NE (e.g. "Tillite Lode").

7. MINERALISATION

7.1 Silver-Lead-Zinc

Virtually all economic production from the Zeehan Field was Silver-Lead, and most of the major mines were located within the boundaries of the EL. The ore occurred in numerous impersistent fissure lodes, most of which trended either NW or NNE. The lodes rarely occupy major faults, however these structures must have played a role in hydrothermal fluid movement as the most productive lodes tend to be located adjacent to them. The fissures developed during D2 deformation.

Host rock lithology has little effect on mineralisation, however there is a distinct regional zonation apparent based on distance from the Heemskirk granite mass. Beyond the limits of the contact-metamorphic zone, two zones are recognized:

a) Pyritic Belt; Veins contain Pyrite-Galena-Sphalerite, and occasionally Pyrite-Stannite-Chalcopyrite.

b) Sideritic Belt; Veins contain Siderite-Galena.

The Pyritic Belt is located closer to the granite, with the anomalous exception of Queen Hill, where pyritic vein types predominate despite its location within the Siderite Belt. Queen Hill is also characterised by the presence of Pyrite-Stannite-Chalcopyrite veins. Geophysical evidence suggests that Queen Hill is situated over a granite cupola, which would explain the aromalous veining. This has tremendous significance for tin exploration, in that the presence of pyritic veins may give a clue to the location of other granite cupolas that could produce tin mineralisation.

7.2 Tin

Economic tin deposits located so far are all concentrated in the Oonah-Queen Hill area. Published reserves for these deposits are:

Severn	; 5.1Mt x 0.60% Sn	
Queen Hill	; 1.8Mt x 0.82% Sn,	0.8% Pb, 0.5% Zn, 33g/t Ag
Montana	; 0.4Mt x 1.22% Sn,	1.4% Pb, 2.0% Zn, 51g/t Ag
Stannite	; 0.7Mt x 1.10% Sn,	1.3% Cu, 4g/t Ag
TOTAL	; 8.0Mt x 0.72% Sn	(Indicated & Inferred)

Despite the marginal economic feasibility of these deposits in the current depressed tin market, they represent a major tin accumulation by world standards, and the potential for locating additional reserves is good. Table 1 summarises the characteristics of these deposits.

The best examples of fissure-lode type tin deposits occur in the Oonah mine area, where a network of sub-parallel fissure veins occur adjacent to the cross-cutting Oonah Fault. The mineral assemablages within the veins are complex, but can be subdivided roughly as follows (Blissett, 1962):

a) Galena Lodes; Pb Zn Ag in a sideritic gangue - most veins.
b) Stannite Lodes; Sn Cu Ag Bi Sb in a quartz gangue - Stannite Lode.
c) Cassiterite Lode; Sn in quartz-pyrite gangue - minor.
d) Pyrite Lode; Cu Sn in pyrite lense - Bradshaws/Pastkuchens.

The STANNITE LODE was the only one mined for tin. Bradshaws lode was worked for pyrite for sulphuric acid production, and also yielded copper. All remaining lodes were mined for Lead-Zinc, and apparently contained almost no tin. Mineral zonation was noted in some lodes, notably the so-called "Silver-Lode", which changed from a galena-siderite to a tetrahedrite-chalcopyrite-siderite lode with high Ag content at depth. There is no record of tin assays.

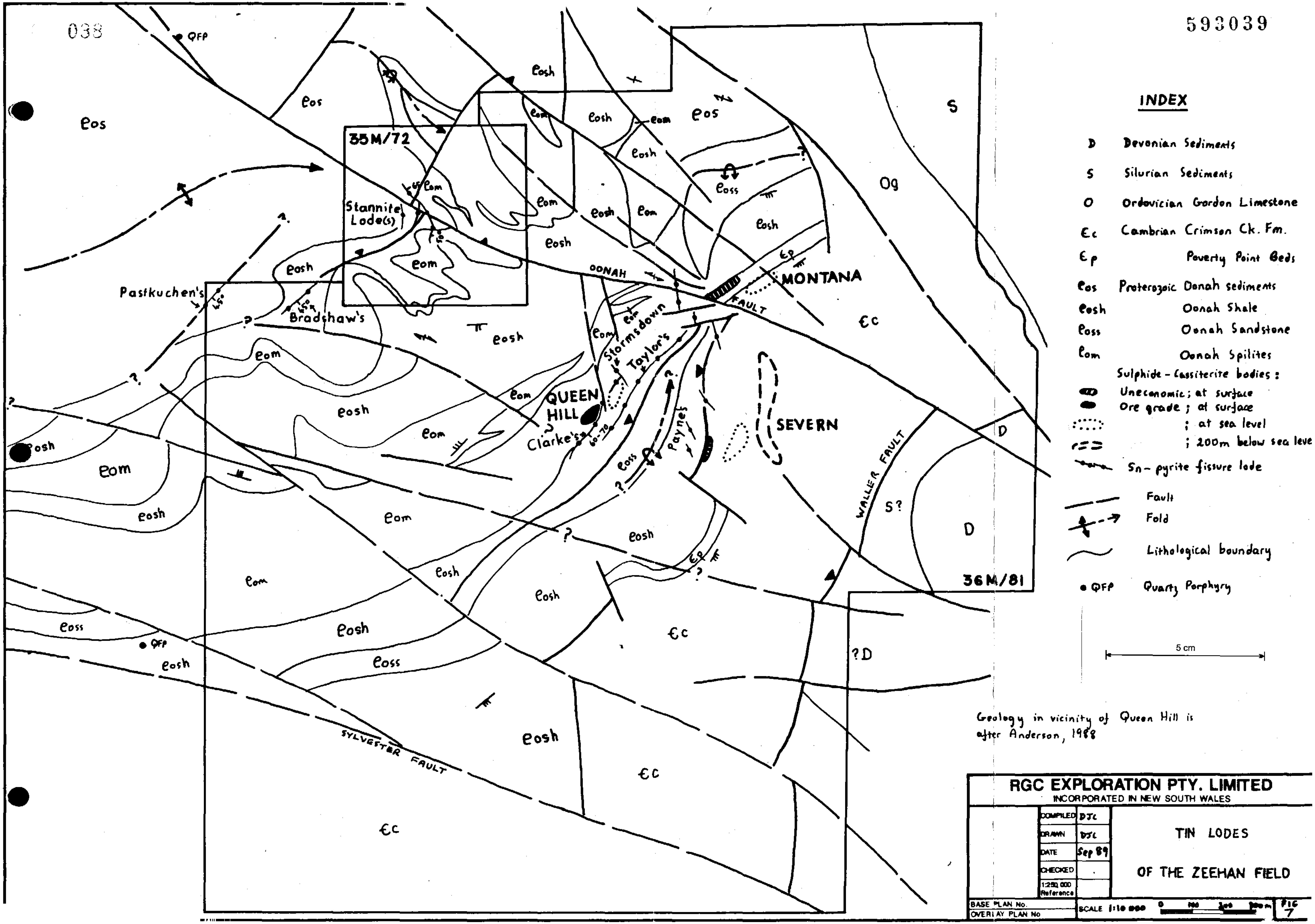
TABLE 1

STYLES OF TIN MINERALISATION

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

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

* Complex, with more than one oretype


INDEX
D Devonian Sediments
S Silurian Sediments
O Ordovician Gordon Limestone
Єc Cambrian Crimson Ck. Fm.
Єp Poverty Point Beds
Ꞓos Proterozoic Oonah sediments
Ꞓosh Oonah Shale
Ꞓoss Oonah Sandstone
Ꞓom Oonah Spilites
Sulphide - Cassiterite bodies :
Uneconomic; at surface
Ore grade ; at surface
; at sea level
; 200m below sea level
Sn - pyrite fissure lode
Fault
Fold
Lithological boundary
QFP Quartz Porphyry
5 cm
35M/72
36M/81
Stannite Lode(s)
Pastkuchen's
Bradshaw's
Stormsdown
Taylor's
QUEEN HILL
Clarke's
Paynes
MONTANA
SEVERN
OONAH FAULT
WALLER FAULT
SYLVESTER FAULT
Geology in vicinity of Queen Hill is after Anderson, 1988
RGC EXPLORATION PTY. LIMITED
INCORPORATED IN NEW SOUTH WALES
COMPILED DJC
DRAWN DJC
DATE Sep 89
CHECKED
1:250 000 Reference
TIN LODES
OF THE ZEEHAN FIELD
BASE PLAN No.
OVERLAY PLAN No
SCALE 1:10 000
FIG 7

Geophysical evidence from the 1963-64 BMR surveys suggests that the STANNITE LODE and BRADSHAWS LODE occupy the same structure. This structure trends NE and dips SE at 45-50 degrees, and at its northern end bends around to the NW to join the Oonah fault. It is located within Oonah Formation shales and consists of up to 10m of contorted and locally brecciated graphitic shales. The structure is probably a D1 thrust. PASTKUCHENS LODE has a similar tin content to Bradshaws Lode and has similar shape and orientation, suggesting that:

a) It occupies a branch of the structure.
b) It occupies the same structure, which has been faulted across to the NW by an as yet unidentified NW trending cross-fault.

The major metal content of these fissure lodes (from mine records) is as follows:

Stannite Lode	Bradshaws Lode	Pastkuchens Lode
Cu 5.5%	Cu 1.0%	Cu (?)
Sn 4.5%	Sn 0.3-0.4%	Sn 0.3-0.4%
Ag 22 oz/t		Pb
Bi 0.4%		Zn
Sb 0.45%		

In all cases the tin is in the form of stannite and cassiterite, and in the stannite lode, 85% of the tin occurs as stannite. Other minerals recorded in the Stannite Lode include Chalcopyrite, Arsenopyrite, Pyrite, Tetrahedrite, Proustite, Bismuthinite, Galena, Wolfram, Quartz, Siderite, Flourite and Gold.

The anomalous mineralogy of the stannite lode compared to the other fissure lodes at Oonah can possibly be explained by its location on a relatively persistent structure, which dips toward Queen Hill. This may have allowed access by tin-bearing fluids ultimately derived from the same source as similar mineralisation associated with the complex Clarke orebody at Queen Hill. Cross-structures at depth (such as the Oonah Fault) may also play a role in this regard.

The SEVERN DEPOSIT is an example of a stockwork-type deposit, and is the largest tin deposit so far located. It occurs as a semi-conformable, tabular, NE-plunging body hosted by Crimson Creek volcaniclastics in the hanging wall of a major fault that brings the Oonah sediments and Crimson Creek Formation into psuedo-conformable contact. The orebody morphology results from the intersection of this steep easterly dipping NNE trending feeder structure with NE-striking host lithologies. At depth the ore is entirely within the Crimson Creek Formation (?). The orebody is still open at depth.

Mineralisation consists of fine-grained cassiterite occurring in stockworks and disseminations of pyrite, pyrrhotite within a broad, diffuse zone of alteration consisting of chalcedonic quartz, carbonate, chlorite and minor sericite, clays, phlogopite, tourmaline, etc. The orebody has a high grade core of semi-massive to massive sulphides located between the centre and the footwall. Away from this core, tin grades decline and sulphides average about 15-30%. Only minor stannite is present, and unlike other deposits there is only minor Cu, Pb, Zn and Ag.

Host rocks include dolomitic argillite (?), andesitic breccias and fine tuffs, and mineralisation seems to be only slightly lithology dependent. As a result, ore boundaries are diffuse and grade defined. Alteration has destroyed tectonic and sedimentary fabrics, however ductile deformation textures are discernible toward the margins. The feeder structure is probably a broad shear zone representing a Cambrian (D1) thrust. It is displaced by cross-cutting NW trending D2 faults.

The MONTANA DEPOSIT is a stratabound, semi-massive pyrite lens replacing carbonates of the so-called Poverty Point beds. The orebody is small, irregular in grade and thickness, with relatively sharp boundaries and a plunging tabular morphology located along the contact of the mineralising structure and the NE trending southerly dipping carbonate. Tin is present as fine cassiterite, presumably disseminated through the replacement lense which is dominantly coarsely crystalline pyrite and quartz near the centre, with increasing quantities of siderite toward the peripheries. Talc alteration is absent, suggesting a lower temperature of formation than similar areas at Renison. The host carbonate is a massive, siliceous, weakly stylolitic dolomite interbedded with psammo-pelites. Only a portion of the carbonate is replaced, where it abuts the feeder structure. The feeder structure is not stated, but is probably related to the Severn structure and the Oonah Fault.

The various lodes that occur on the NW flank of Queen Hill represent all three mineralisation styles. The original Clarke orebody, which was mined for Galena and some Stannite, was typical fissure-lode type deposit and consisted of banded galena and stannite in pyritic gangue. It was mineralogically very similar to the Stannite Lode. The orebody occurs associated with a NE trending and steep SE dipping shear located in contorted Oonah shales adjacent to a shale-spilite contact. This nearly conformable structure is affected by D2 folding and NW cross-faults, and is interpreted to be a D1 thrust fault. Where it outcrops in the Queen Hill opencut, pyritisation extends into the hangingwall shales, as disseminations and stockwork.

The Stormsdown Lode is exposed in an opencut, where it has a mixed morphology, but probably is best described as a stockwork-type orebody. Tin occurs mostly as cassiterite occurring associated with pyrite and some quartz in the form of irregular masses, disseminations and veins. The pyrite masses resemble boudins aligned with strong foliation, which appears to be axial planar to northerly trending isoclinal folds. Pyrite mineralisation seems to split around such folds. The mineralisation is apparently associated at depth with a steep SE dipping fault. At the northern end of the opencut it is truncated by a steep NW trending fault with folded tensional quartz veins that identify it as a reverse fault. It is reported to carry tin as well.

Finally, the Queen Hill orebody itself is reported as a composite orebody with a major replacement component. It is a tabular, plunging body, controlled by the intersection of the Clarke structure and Dunkleys Fault. Apparently the mineralised lenses terminate abruptly and are not well understood. Tin occurs mainly as cassiterite, and the main gangue minerals are pyrite, pyrrhotite and siderite. The percentage of tin as stannite decreases from 20-30% near the top to <10% near the bottom, and cassiterite grainsize increases.

In the three main orebodies (Queen Hill, Severn, Montana) tin occurs as fine cassiterite in the range 20-70 microns, and despite the different ore morphologies, it is reported that all three exhibit upward and outward zonation from sellaite tourmaline pyrrhotite arsenopyrite (minor pyrite marcasite topaz) to siderite flourite pyrite (minor pyrrhotite) to siderite pyrite galena sphalerite, reflecting the general paragenetic sequence (Anderson 1986). Pyrite is the dominant sulphide as a result of the retrogressive alteration of pyrrhotite.

There is little doubt that the various tin deposits at Zeehan are related to a single source, and there is compelling evidence that the source is a granite cupola located beneath Queen Hill. The evidence put forward includes:

a) The dominance of pyrite as a gangue mineral in the area is anomalous in terms of the regional zonation of the Zeehan Field, as it is located in the "Siderite Belt".

b) The reported presence of quartz-porphyries at a few locations surrounding Queen Hill. However the significance of these is doubtful.

c) A large magnetic anomaly beneath the area, which has been modelled as a 200m thick horizontal body interpreted to be the contact metamorphic aureole of a granite cupola at a depth of 900m.

d) The mineralogy of the orebodies themselves. The presence of anomalous concentrations of elements such as Rb, W, B, etc. (and of course Sn) is indicative of a magmatic fluid derived from a granite.

The postulated cupola would be capable of producing the observed pattern of mineralisation, and the following paragenetic sequence is suggested:

a) Intrusion of the Heemskirk-Pine Hill-Granite Tor spine during the Devonian, with structural control provided by zones of weakness associated with Cambrian thrusts. Granite highs (cupolas) would be expected to develop where the spine intruded beneath anticlinal axes.

b) Magnetic skarns developed within suitable lithologies within the contact metamorphic aureole of the spine and the Queen Hill cupola.

c) The crystallising cupola was the source for magmatic derived fluids that moved up suitably permeable structures. Pre-existent D1 thrust structures provided the main conduits (e.g. Severn structure). Not all structures were permeable.

d) Suitable carbonate beds were replaced where they abutted the mineralising structures (Queen Hill, Montana), and the structures themselves became altered and mineralised (Severn, Clarke). Subsidiary and cross-cutting small faults and fissures became mineralised where they communicate with major conduits. (Stannite Lode? Stormsdown?)

e) The granite spine and cupola acted as a heat engine, resulting in the heating of ground water and the development of convective circulation centred along the spine, with a localised convective cell centred on the cupola. These fluids produced the Pb-Zn-Ag mineralisation, and limited mixing of magmatic and meteoric fluids produced intermediate types.

f) Retrograde alteration converted much of the pyrrhotite to pyrite.

This process resulted in the "telescoping" of magmatic-derived tin mineralisation and the broader meteoric-derived, lower temperature base metal mineralisation. The mineralogical zonation recognised within tin lodes is a function of distance from granite and temperature of formation, and is characterised by a change from cassiterite to stannite as the dominant form of tin.

8. WORK COMPLETED 1988/89

8.1 Preparatory

Base plans were prepared at 1:10,000 and 1:5,000 by Tasmanian Geological Drafting Services, and 1:20,000 colour aerial photography (1984) was purchased.

A major literature review spanning about 2-3 weeks was completed to determine what exploration has already been undertaken on the area covered by the E.L., and to aid in planning the field programme.

8.2 Geology

During April-May 1989, about two-thirds of the E.L. was reconnaissance mapped with the aid of the colour photography and 1:10,000 base plans. Detailed geological mapping was undertaken along roads and tramways, and selected cross-country traverses were made where topography allowed. The authors mapping was supplemented by limited structural mapping by Roger Marjoribanks. The aim of the reconnaissance mapping was to determine what areas, if any, warranted more detailed follow-up work.

The mapping was also supplemented by airphoto interpretation of the colour photos, using a stereoscope.

Limited mapping was also extended over M.L.'s 43M/85 and 123M/47 with Oceania's permission, and Aberfoyle kindly arranged a geological tour of Queen Hill and some relevant drill core.

The results of this mapping are discussed in Sections 5, 6 and 7, and presented as a provisional Geological Interpretation Plan (Figure 4).

8.3 Geochemistry

A total of 55 rock chip samples were collected from selected outcrops and mine dumps during reconnaissance mapping. These were analysed at the Renison Ltd. laboratory for Sn, S, As, Cu, Pb, Zn, WO , Ag, Bi, SSn and Au. SSn designates "soluble tin" and provides a measure of the stannite content.

Sample sizes averaged about 2-3kg, and these were crushed to a maximum grainsize of 2-3mm then riffle-split to 150gm and analysed as follows:

Sn	- B2 Method (XRF)
S, As, Cu, Pb, Zn, WO	- B4 Method (XRF)
Ag, Bi, SSn	- A1 Method (AAS)
Au	- A15 Method (AAS with pre-roast)

Sample pulps of the first batch (Sample Nos. T11801-11855) were re-submitted to Analabs and analysed for gold using Method 309 (Fire Assay Fusion/AAS). Gold standards were included. The results suggest that the Renison analyses are generally too high, though some of the difference seems to be due to nugget effect.

The results are included as Appendix 2, and summarised as Figure 7.

8.4 Geophysics

Airborne magnetics were flown under contract by Geoterrex, using a Scintrex optically pumped Cesium vapour magnetometer sensor mounted in a helicopter-towed bird. Readings of the magnetic field were recorded at 0.1 second reading intervals at a sensitivity of 0.05 nanoteslas. Flight lines were a nominal 150 m. apart, at a nominal height of 75m. above the tree canopy. Flight lines were east-west, using visual navigation methods with colour photo strips. A base station magnetometer was used to record diurnal drift and tie-lines were flown for additional control. Flight path recovery utilised 35mm tracking film, and a radio altimeter recorded terrain clearance.

The survey was flown as part of a regional survey over all West Coast tenements. Processing by Geoterrex had not been completed at the time of writing of this report, and so far only preliminary contour plans have been received. The delay is due to difficulties with flight path recovery, caused by photographic distortion resulting from the mountainous topography. The final version of the contour plans and enhanced colour slides should be received in early October, 1989.

The helicopter was not allowed to overfly Zeehan townsite towing a bird, so the townsite area was not recorded and appears as a gap on the contour plans.

9. RESULTS

ROCK CHIP sampling produced the significant anomalies summarised below. Details of analyses are included as Appendix 2, and sample locations are shown on Figure 8:

a) North Comstock pyritic lodes; T11801-03

Anomalous Au and base metals from a diffuse, pyritic shear in Oonah Shales, near the Balstrup Fault. Up to 0.14g/t Au, 3.2% Pb, 9.8% Zn. Analabs re-assays confirm a subdued gold anomaly.

b) Comstock fissure veins; T11804, 09, 31, 33-36, 41

Anomalous Sn and Au associated with Pb-Zn-Ag fissure veins. The veins are Zn-rich, with dominantly pyritic gangue. Also characterised by elevated As and Bi. Hosted by Oonah psammo-pelites and limestones located between the Balstrup Fault and Tenth Legion Fault. Gold averages 0.13 g/t Au (Analabs 0.09 g/t Au) and ranges up to 0.32 g/t Au.

c) Balstrup Fault; T11807-08

Anomalous Sn and As associated with ironstones located along the Balstrup Fault. Also weakly anomalous for gold.

d) "Horse Paddock" anomaly; T11806

Repeatable Au and As anomaly in deeply weathered, ferriginous Crimson Creek volcaniclastics. 0.099 ppm Au

e) North Montana fissure veins; T11810, 55

Pb-Zn veins weakly anomalous for tin, hosted by Oonah shales and Gordon Limestone.

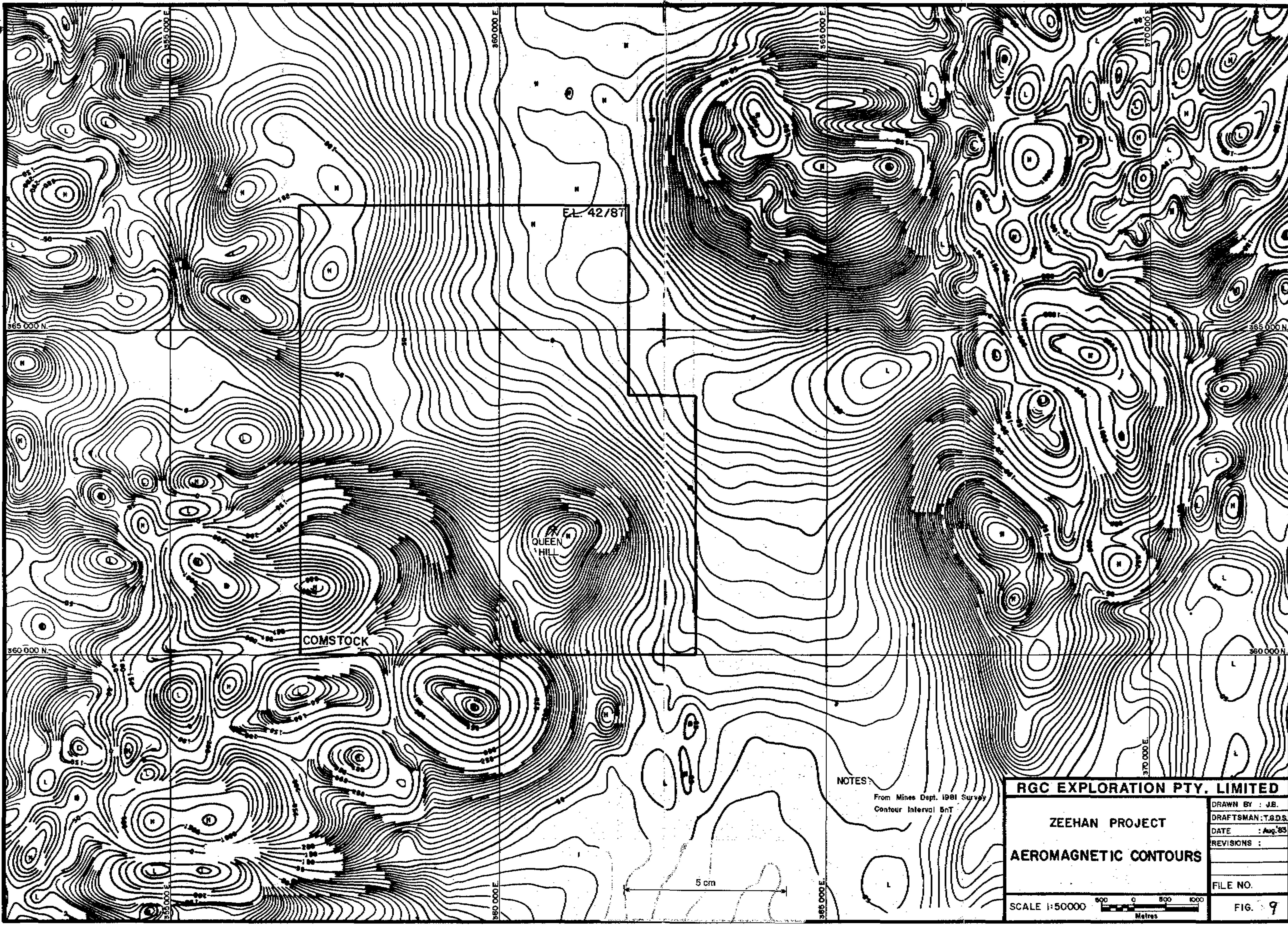
f) Sylvester fissure veins; T11828,30

Pb-Zn fissure veins anomalous for tin and gold, with pyritic gangue. Gold is patchy, to 0.11 g/t Au. Hosted by Oonah shales adjacent to Sylvester Fault.

g) Bradshaws Lode; T11842-44

Strong combined tin (up to 0.78% Sn) and gold (up to 0.36g/t Au) values associated with the pyritic lode, hosted by Oonah graphitic shales. Also high As, Cu. The average value for Sn (0.45% Sn) agrees with reported values of 0.3-0.4% (Loftus Hill, 1963).

The AEROMAGNETIC survey preliminary contour plans exhibit a strong magnetic anomaly in the vicinity of North Comstock, and this is linked by a broad magnetic zone with a roughly circular 50 nanotesla anomaly centred on Queen Hill. Final contour plane are not yet available, but aeromagnetic contour data from the Mines Department 1981 survey is included (Figure 9) as it illustrates the main magnetic features. Apart from a small, circular, 50 nanotesla anomaly in Crimson Creek volcaniclastics adjacent to the Sylvester SW of the Golf Course, the rest of the area within the E.L. boundaries is magnetically quiet. The anomaly SW of the Golf Course does not show up on the Mines Department data.


E.L. 42/87
QUEEN HILL
COMSTOCK
365 000 N.
360 000 N.
360 000 E.
365 000 E.
370 000 E.
NOTES:
From Mines Dept. 1981 Survey
Contour Interval 5nT
5 cm
RGC EXPLORATION PTY. LIMITED
ZEEHAN PROJECT
AEROMAGNETIC CONTOURS
DRAWN BY : J.B.
DRAFTSMAN: T.G.D.S.
DATE : Aug. 83
REVISIONS :
FILE NO.
SCALE 1:50000
Metres
FIG. 9

10. CONCLUSIONS AND RECOMMENDATIONS

Outside of Aberfoyle's CML, the area with the best potential for the discovery of additional tin reserves is the SW corner of the EL, and along the southern boundary. This is because the area exhibits the following features:

a) In the regional sense, the area lies above the Heemskirk-Pine-Hill-Granite Tor spine as interpreted from regional gravity data.

b) Aeromagnetic data shows a strong, broad, linear magnetic feature trending ENE across the area and terminating at the Severn magnetic anomaly. From the Mines Department aeromagnetics, it can be seen that this feature reaches greatest intensity to the west of the E.L. in the vicinity of the Tenth Legion mine, where magnetite skarns were intersected in the workings (Waller, 1903). This suggests that the magnetic feature is caused by a line of magnetic skarns possibly centred over a granitic spine that deepens to the ENE. Local magnetic highs at Severn, and North Comstock may represent skarns over small cupolas.

c) Faults and fissure veins in the area are anomalous for tin and gold. The tin-anomalous Balstrup Fault is a major structure.

d) Suitable host rocks for replacement have been mapped in the area. These are limestones and dolomitic pelites of the Upper Oonah Formation. At Comstock these Limestones exhibit talcose alteration.

e) The area has a complex structural history, and suitable host lithologies could reasonably be expected to be affected by the degree of structural preparation necessary to allow access of hydrothermal fluids to large volumes of such rocks.

f) As far as the author is aware, routine exploration for tin has never been undertaken in the area, and no holes have been drilled at tin (or gold) targets.

Potential also exists north of Montana Hill where the same host lithologies are present in an area of great structural complexity. However only a couple of tin-anomalous samples were collected from the area, and tin was not recorded in any of the old workings, nor were pyritic lodes found. These features, and the lack of magnetic anomalies, downgrades the area in comparison to the SW corner. Possible tin mineralisation in the area is expected to be deep.

Elsewhere on the E.L., Siluro-Devonian sediments in the core of the Zeehan Syncline are considered to have no potential for tin mineralisation, and the Ordovician sediments have only limited potential where the Gordon Limestone abuts the Despatch Fault. The monotonous sandstones, siltstones and shales of the Lower Oonah Formation that form the core of the Heemskirk Anticlinorium in the north and northwest of the E.L. do not contain suitable host rocks.

Based on these observations, the following exploration programme is proposed:

a) Extend a 25m x 200m AMG grid over the SW corner to cover the combined geochemical, geophysical and geological anomalies. Extend a second 25m x 400m AMG grid over the less prospective area north of Montana Hill. About 46 line-km of gridding is involved. The two areas are mostly open, and gridding should not present a problem.

b) C-Horizon soil auger sampling should be extended over both grids at 25m centres.

c) Follow-up Wacker sampling at 12.5m centres over defined anomalies to pin point the source and eliminate cultural effects (contamination from old workings, buildings etc.)

d) All samples to be assayed for Sn, S, As, Cu, Pb, Zn, WO ,Ag, Bi, SSn and Au. Consideration needs to be given to supplementing these elements with a range of trace elements suitable for detecting a wider halo than is represented by the economic metals themselves, and for distinguishing alteration/mineralisation related to magmatic derived fluids from mineralisation related to other non-tin bearing fluids. For example, the blind Severn deposit, which terminates 100 m below the surface, is represented at the surface by a broad Rb anomaly which is not accompanied by elevated tin values.

By using suitable trace elements, it is hoped that it might be possible to recognise structures that might host geochemically blind tin mineralisation. Scott Halley has begun a study to determine the best selection. Neutron activation will have to be combined with other methods to provide the required elements at acceptable detection limits and a reasonable price.

e) Geophysical survey to include gradient array IP and ground magnetics. Aberfoyle's geophysical trials suggested IP was capable of distinguishing the Queen Hill orebodies from the ubiquitous graphitic black shales that have caused problems with interpretation in previous surveys. Ground magnetics will be used to more precisely define the aeromagnetic anomalies. Gradient array IP might be followed up by limited dipole-dipole IP over interesting anomalies to enable modelling of drilling targets. The terraine is suitable for gradient array IP, and to a lesser extent dipole-dipole.

f) Drill anomalies outlined by a) - e) if the combined results warrant it. This could be carried out over winter if necessary, as access will pose few problems.

Before commencing work in the SW corner, Oceania should be contacted to discuss terms whereby we could extend the proposed exploration over their M.L.'s.

Exploration on the remainder of the E.L. should be restricted to ongoing reconnaissance of areas that hav'nt been adequately covered. The NW corner of the E.L. has already been mapped enough to conclude that it does not warrant further work, and could be excised from the E.L.

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APPENDIX 1

EXPENDITURE 1988/89 TO 30/6/89

Description	Amount
Personnel Costs	20,810
Travel & Accommodation	3,156
Consultants & Contractors	27,054
Sample Prep/Analysis	2,819
Drilling	0
Stores, Supplies	2,613
Vehicles, Plant, Equipment	4,041
Land Acquisition	510
Computing	0
Office Costs	2,953
	63,956

RGC EXPLORATION PTY. LIMITED

PROPOSED BUDGET 1989/90

Description	Amount
Personnel Costs	31,000
Travel & Accommodation	3,000
Consultants & Contractors	45,000
Sample Prep/Analysis	26,500
Drilling *	0
Stores & Supplies	3,000
Vehicles, Plant, Equipment	5,000
Land Acquisition	500
Computing	2,000
Office Costs	4,000
	120,000

* A drilling budget will be assigned if early results of other work is encouraging.

APPENDIX 11

593064

GOLD FIELDS EXPLORATION PTY. LTD.

SAMPLE RECORD AND ANALYTICAL DATA SHEET

COLLECTED BY: DJFC

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

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

A19962

SAMPLE NUMBER	LOCATION		DESCRIPTION	ANALYSES								
				Sn (ppm)	S	As	Cu	Pb	Zn	WO_3 / Ag	Bi / SSN	Au (g/t)
T11801	360 760 mN	357 300 mE	Semi-massive pyrite in weathered Shale (Eosh)	75	11.0	0.14	<0.01	1.22	0.21	<.01 / 41	.001 / <.01	0.05
802	"	"	as above	25	7.3	0.11	<0.01	1.42	0.45	<.01 / 30	<.001 / <.01	0.10
803	"	"	as above	70	26.3	0.21	<0.01	3.21	9.75	<.01 / 63	.004 / <.01	0.14
804	360 720 mN	357 350 mE	Galena - sphalerite veining in Limestone (Eol)	410	17.8	0.16	0.04	3.55	23.7	<.01 / 185	<.001 / .02	<0.05
805	361 225 mN	358 915 mE	Very weathered ferruginous Clayey Rock (Ec?)	35	0.2	0.05	0.01	0.03	0.83	<.01 / 2	.003 / <.01	<0.05
806	360 970 mN	358 840 mE	as above	25	0.1	0.73	<0.01	0.04	0.27	<.01 / 2	.004 / <.01	0.14
807	360 700 mN	357 745 mE	Ironstone (Bulstrup Fault)	625	0.2	0.17	0.03	0.59	0.18	<.01 / 20	.004 / <.01	0.05
808	360 530 mN	358 275 mE	as above	155	0.5	0.37	0.02	0.08	0.09	<.01 / 4	.004 / .01	0.05
809	360 645 mN	357 590 mE	Thin sphalerite - pyrite vein in Clay (Eosh?)	100	42.9	0.19	0.01	2.49	4.11	<.01 / 53	.007 / .01	0.06
810	362 860 mN	360 810 mE	Pyrite - Galena - Siderite - Qtz infilling brecc. Shale	105	15.9	0.07	0.01	2.37	2.48	<.01 / 87	.005 / .02	0.05
811	364 925 mN	360 145 mE	Sheared black shale c̄ disseminated Py (Eosh)	35	11.4	0.03	0.01	0.03	0.01	<.01 / 6	.004 / .01	<0.05
812	365 635 mN	360 505 mE	Ferruginous Clay (Eom?)	10	0.1	0.02	<0.01	<0.01	0.04	0.01 / 2	.003 / <.01	<0.05
813	367 050 mN	357 565 mE	Qtz - Py infilled Shear zone in black shale (Eosh)	5	1.8	0.04	<0.01	<0.01	<0.01	<.01 / 1	.001 / <.01	<0.05
814	"	"	as above	10	4.0	0.03	<0.01	<0.01	0.01	<.01 / 1	.001 / <.01	<0.05
815	"	"	as above	5	0.3	0.03	<0.01	<0.01	0.01	<.01 / <1	<.001 / .01	<0.05
816	"	"	as above	<5	0.7	0.02	0.01	<0.01	0.01	<.01 / <1	<.001 / .01	<0.05
817	"	"	Qtz vein stockwork in grey sandstone (Eoss)	10	0.3	0.03	<0.01	<0.01	0.01	<.01 / <1	<.001 / .01	<0.05
818	366 225 mN	358 295 mE	Qtz impregnated Shear c̄ yellow (sulphide?) stain	<5	0.2	0.02	<0.01	0.02	0.04	<.01 / 2	.003 / .01	<0.05
819	366 175 mN	358 315 mE	as above	<5	0.3	0.01	<0.01	<0.01	0.02	<.01 / 2	<.001 / <.01	<0.05
820	366 160 mN	358 350 mE	Qtz filled shear in disturb. black shale (Eosh)	10	0.7	0.02	<0.01	0.01	0.02	<.01 / 2	<.001 / .01	<0.05
821	361 840 mN	359 665 mE	Weathered spilite c̄ disseminated Py (Eom)	10	3.4	0.03	0.01	0.01	0.04	<.01 / 3	.003 / <.01	<0.05

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

SSN = Soluble tin

593065

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

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

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

A19962

SAMPLE NUMBER	LOCATION		DESCRIPTION	ANALYSES								
				Sn (ppm)	S	As	Cu	Pb	Zn	WO_3 / Ag	Bi / SSn	Au (g/t)
T11822	361 790mN	354 690mE	Interfingered shales/spillite (Cosh/Com) faulted	10	<0.1	0.02	<0.01	0.01	0.02	<.01 / 4	.002 / .01	<0.05
T11827	361 300mN	358 120mE	Pyritic sheared shale (Cosh)	10	2.6	0.02	<0.01	0.01	0.11	.01 / 2	.001 / <.01	<0.05
828	361 285mN	358 040mE	Pyritic black shale (Cosh)	290	14.0	2.62	0.08	2.77	3.63	.01 / 34	.005 / .01	0.06
829	~	~	Massive pyrite in black shale (Cosh)	10	20.3	0.02	0.01	0.03	0.05	.01 / 2	<.001 / <.01	<0.05
830	361 305mN	358 240mE	Qtz Py Gal Sphal mineralisation in bl. Shales	245	22.1	0.30	0.03	5.19	7.43	.02 / 64	.005 / <.01	0.11
831	360 615mN	357 130mE	Massive pyrite mineralisation in soft bl. matrix	25	35.8	0.22	<0.01	0.19	0.03	<.01 / 17	.005 / <.01	0.12
832	~	~	Faulted, weathered shales (Cosh)	15	0.4	0.05	0.01	0.11	0.19	<.01 / 2	.001 / <.01	<0.05
833	360 890mN	357 260mE	Sphal Py Qtz vein in Oonah seds (Cos)	260	36.6	0.05	0.02	11.3	16.9	<.01 / 163	.002 / <.01	<0.05
834	360 980mN	356 850mE	Sphalerite rich vein in Oonah seds (Cos)	360	28.1	0.15	0.07	10.0	28.5	<.01 / 250	.002 / <.01	0.32
835	3 ~	~	Massive pyrite in Oonah seds (Cos)	525	23.0	0.14	0.08	14.5	19.7	<.01 / 380	.001 / .05	0.30
836	360 930mN	356 810mE	Gossan c̄ Sphalerite (?) in Oonah sed (Cos)	430	0.4	0.27	0.15	0.61	0.35	<.01 / 250	.005 / .02	0.07
837	360 975mN	355 970mE	Pyritic shear in Oonah seds (Cos)	40	30.8	0.18	0.08	0.64	0.17	.01 / 24	.011 / .01	0.09
T11840	361 345mN	356 460mE	Semi-mass. Py c̄ Qtz Sphal in Oonah sed (Cos)	<5	31.3	0.12	0.10	17.2	12.2	<.01 / 380	.006 / <.01	0.30
841	360 535mN	357 375mE	Semi-mass Py c̄ Qtz Sphal Gal in Limestone (Col)	270	24.8	0.47	0.04	6.62	12.2	<.01 / 175	.005 / .03	0.18
842	362 260mN	359 730mE	Brecciated shales c̄ Qtz Py mineralisation (Cosh)	7850	12.3	0.17	0.04	0.13	0.22	<.01 / 20	.004 / .08	<0.05
843	362 295mN	359 815mE	as above	4000	3.6	0.08	0.04	0.04	0.03	.01 / 36	.002 / .05	0.17
844	362 335mN	359 805mE	as above	1790	20.0	2.30	0.48	0.01	0.01	<.01 / 82	.021 / .02	0.36
T11847	362 560mN	361 390mE	Ironstone	10	<0.1	0.16	0.02	<0.01	0.04	.02 / 2	.007 / <.01	<0.05

Results in ppm unless otherwise indicated

Sn ppm Au g/t

Ag ppm

SSn = Soluble tin

593066

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

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

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

A19962

SAMPLE NUMBER	LOCATION		DESCRIPTION	ANALYSES								
				Sn (ppm)	S	As	Cu	Pb	Zn	WO3 / Ag	Bi / Sn	Au (g/t)
T11848	362 290N	361 450E	Ironstone	85	<0.1	0.03	<0.01	0.90	0.37	.01 / 7	.005 / .01	<0.05
849	363 060N	361 210E	Ironstone developed on Gordon Limestone	<5	<0.1	0.04	<0.01	0.01	0.02	<.01 / 3	.005 / .01	<0.05
850	363 060N	361 220E	" " " " "	<5	<0.1	0.02	<0.01	<0.01	0.02	.01 / 2	.006 / .02	<0.05
851	363 070N	361 220E	" " " " "	35	<0.1	0.04	<0.01	<0.01	0.04	.01 / 2	.003 / .01	<0.05
852	363 070N	361 215E	" " " " "	<5	0.1	0.02	<0.01	<0.01	0.04	.01 / 1	.007 / .02	<0.05
853	363 070N	361 210E	" " " " "	<5	0.2	0.04	<0.01	<0.01	0.03	.01 / <1	.006 / .01	<0.05
854	363 120N	361 210E	Manganiferous gossan in Gordon Limestone	30	0.2	0.04	<0.01	1.04	0.05	<.01 / 16	.004 / .01	<0.05
855	363 120N	361 210E	Altered, brecciated, mineralised Limestone	135	3.1	0.03	<0.01	0.38	6.41	.02 / 22	.003 / .02	<0.05
856	361 780N	359 630E	Thin clay, quartz filled fault in shales	5	0.1	<0.01	<0.01	0.03	0.02	<.01 / 1	<.001 / .01	
857	361 755N	359 550E	Faulted contact between shales and spilite	8	0.1	<0.01	<0.01	0.02	<0.01	<.01 / 1	.002 / <.01	
858	361 755N	359 575E	Ferruginous shear zone in weathered spilite	25	0.2	0.01	0.03	0.03	0.01	<.01 / 6	.003 / .01	
859			Ferruginous shear zone in siltstone / sandstone	11	0.1	0.01	0.01	0.04	0.01	<.01 / 3	.004 / .01	
860			STANDARD B20	19	0.2	0.01	0.09	0.04	0.01	<.01 / 5	.016 / .01	
861	360 400N	357 750E	Ferruginous, talcy, altered Limestone (?)	8	0.1	0.03	0.04	0.02	0.01	<.01 / 4	.001 / <.01	
862	361 130N	358 795E	Quartz - Pyrite stockwork in black grit	12	0.2	<0.01	<0.01	0.02	0.01	<.01 / 1	.005 / .01	

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ANALYTICAL SERVICES

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

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

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

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC EXPLORATION - Samples T11801-11844

Date : 31-May-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

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

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ANALYTICAL SERVICES

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

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

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

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Chief Chemist

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC EXPLORATION - Samples T11801-11844

Date : 31-May-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

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

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ANALYTICAL SERVICES

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

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

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

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC EXPLORATION - Samples T11801-11844

Date : 31-May-89

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

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

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ANALYTICAL SERVICES

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

Attention : D.J.F.Crosssing

ANALYTICAL REPORT

Results in % unless otherwise indicated

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

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Chief Chemist

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ANALYTICAL SERVICES

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

Attention : D.J.F.Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

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

Chief Chemist

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ANALYTICAL SERVICES

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

Date : 05-Sep-89

Attention : John Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

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

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ANALYTICAL SERVICES

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

Date : 05-Sep-89

Attention : John Crossing

ANALYTICAL REPORT

Results in % unless otherwise indicated

Sample	Ag ppm AAS/A1	Bi AAS/A1	SSn AAS/A1
~~T10363~~	1	.002	<.01
11856	1	<.001	.01
11857	1	.002	<.01
11858	6	.003	.01
11859	3	.004	.01
11860 STD	5	.016	.01
11861	4	.001	<.01
11862	1	.005	.01

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC Exploration

Date : 19-Jun-89

Attention : J.D.F.Crossing

ANALYTICAL REPORT

Results in ~~%~~

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

Method of Analysis : AAS/A15

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC Exploration
Date : 19-Jun-89

Attention : J.D.F.Crossing

ANALYTICAL REPORT

Results in ~~%~~

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

Method of Analysis : AAS/A15

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Chief Chemist

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ANALYTICAL SERVICES

Our Ref : 3337
Your Ref : RGC Exploration

Date : 19-Jun-89

Attention : J.D.F.Crossing

ANALYTICAL REPORT

Results in ~~%~~

Sample	Au g/tonne
T11835	.30
T11836	.07
T11837	~~.07~~ .09
~~T11838~~	<.05
T~~11839~~	<.05
T11840	.30
T11841	.18
T11842	<.05
T11843	.17
T11844	.36

Method of Analysis : AAS/A15

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Chief Chemist

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ANALYTICAL SERVICES

Our Ref : 871
Your Ref : RGC Exploration

Date : 19-Jun-89

Attention : J.D.F.Crossing

ANALYTICAL REPORT

Results in ~~%~~

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

Method of Analysis : AAS/A15

....
Chief Chemist

593081

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ANALABS

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ANALYTICAL DATA

SAMPLE PREFIX	REPORT NUMBER	REPORT DATE	CLIENT ORDER No.	PAGE
	95.1.08.06441	31/08/89	0152	1 OF 2

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

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

AUTHORISED OFFICER

ANALABS

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ANALYTICAL DATA

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

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

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

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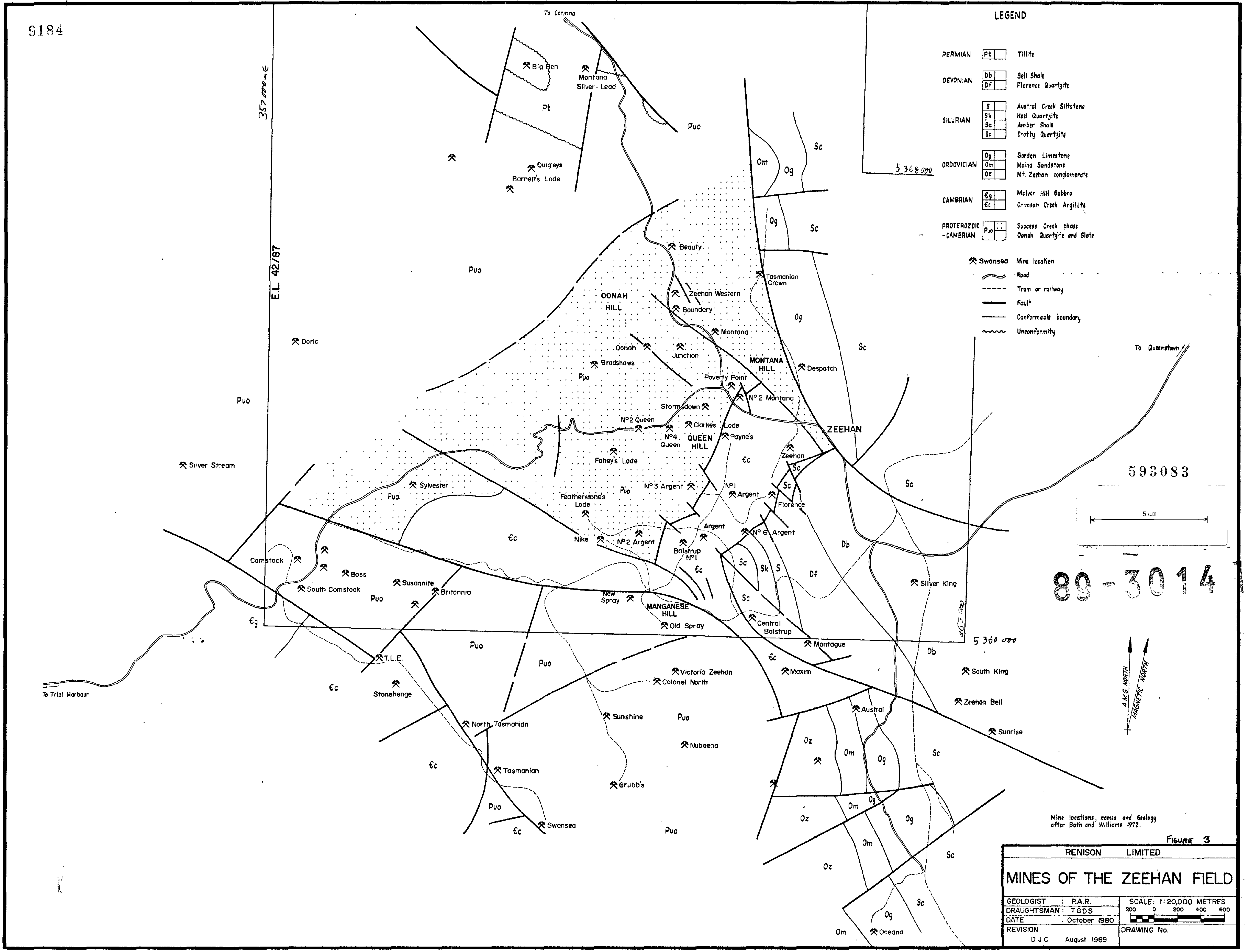
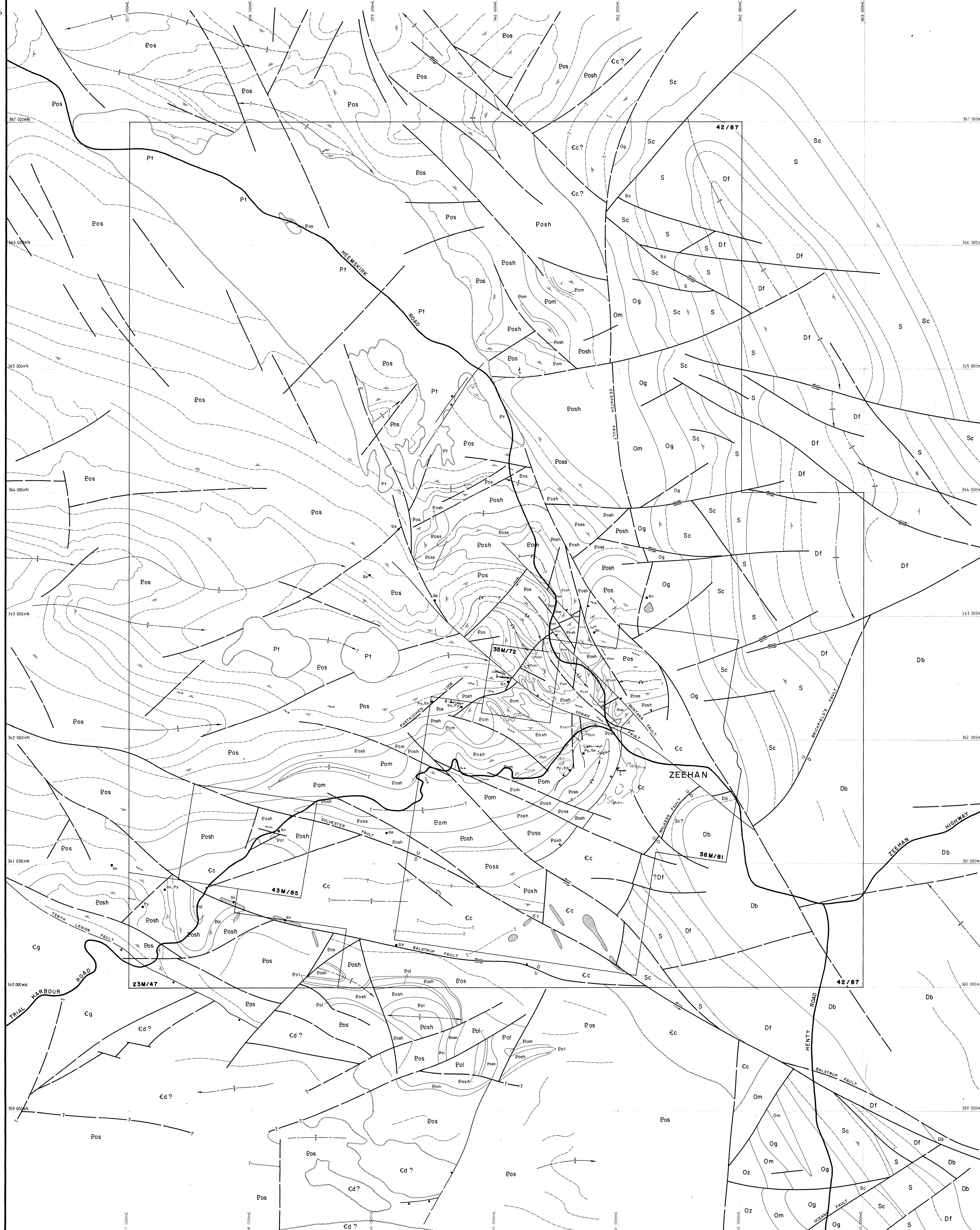


9184
5 367 000 mN
357 000 mE
E.L. 42/87
To Corinna
LEGEND
PERMIAN
Pt
Tillite
DEVONIAN
Db
Df
Bell Shale
Florence Quartzite
SILURIAN
S
Sk
Sa
Sc
Austral Creek Siltstone
Keel Quartzite
Amber Shale
Crotty Quartzite
ORDOVICIAN
Og
Om
Oz
Gordon Limestone
Moina Sandstone
Mt. Zeehan conglomerate
CAMBRIAN
€g
€c
McIvor Hill Gabbro
Crimson Creek Argillite
PROTEROZOIC - CAMBRIAN
Puo
Success Creek phase
Oonah Quartzite and Slate
Swansea Mine location
Road
Tram or railway
Fault
Conformable boundary
Unconformity
5 364 000
Big Ben
Montana Silver-Lead
Quigleys
Barnett's Lode
Beauty
Tasmanian Crown
Zeehan Western
Boundary
OONAH HILL
Montana
Oonah
Junction
Bradshaws
MONTANA HILL
Despatch
Poverty Point
No 2 Montana
Stormsdown
No 2 Queen
Clarkes Lode
No 4 Queen
QUEEN HILL
Payne's
ZEEHAN
Zeehan
Fahey's Lode
Doric
Silver Stream
Sylvester
No 3 Argent
No 1 Argent
Florence
Featherstone's Lode
Nike
No 2 Argent
Argent
No 6 Argent
Balstrup No 1
Comstock
Boss
South Comstock
Susannite
Britannia
New Spray
MANGANESE HILL
Old Spray
Central Balstrup
Silver King
Montague
To Queenstown
To Trial Harbour
T.L.E.
Stonehenge
Victoria Zeehan
Colonel North
Maxim
South King
Zeehan Bell
Austral
Sunshine
North Tasmanian
Sunrise
Nubeena
Tasmanian
Grubb's
Swansea
Oceana
5 360 000
363 000
593083
5 cm
89-3014
A.M.G. NORTH
MAGNETIC NORTH
Mine locations, names and Geology after Both and Williams 1972.
FIGURE 3
RENISON LIMITED
MINES OF THE ZEEHAN FIELD
GEOLOGIST : P.A.R.
DRAUGHTSMAN : TGDS
DATE October 1980
REVISION D J C August 1989
SCALE: 1:20,000 METRES
200 0 200 400 600
DRAWING No.



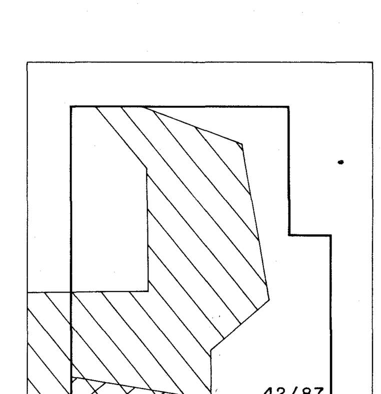
STRATIGRAPHY

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

KEY

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

ACCOUNTABILITY DIAGRAM



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

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

593084

5 cm

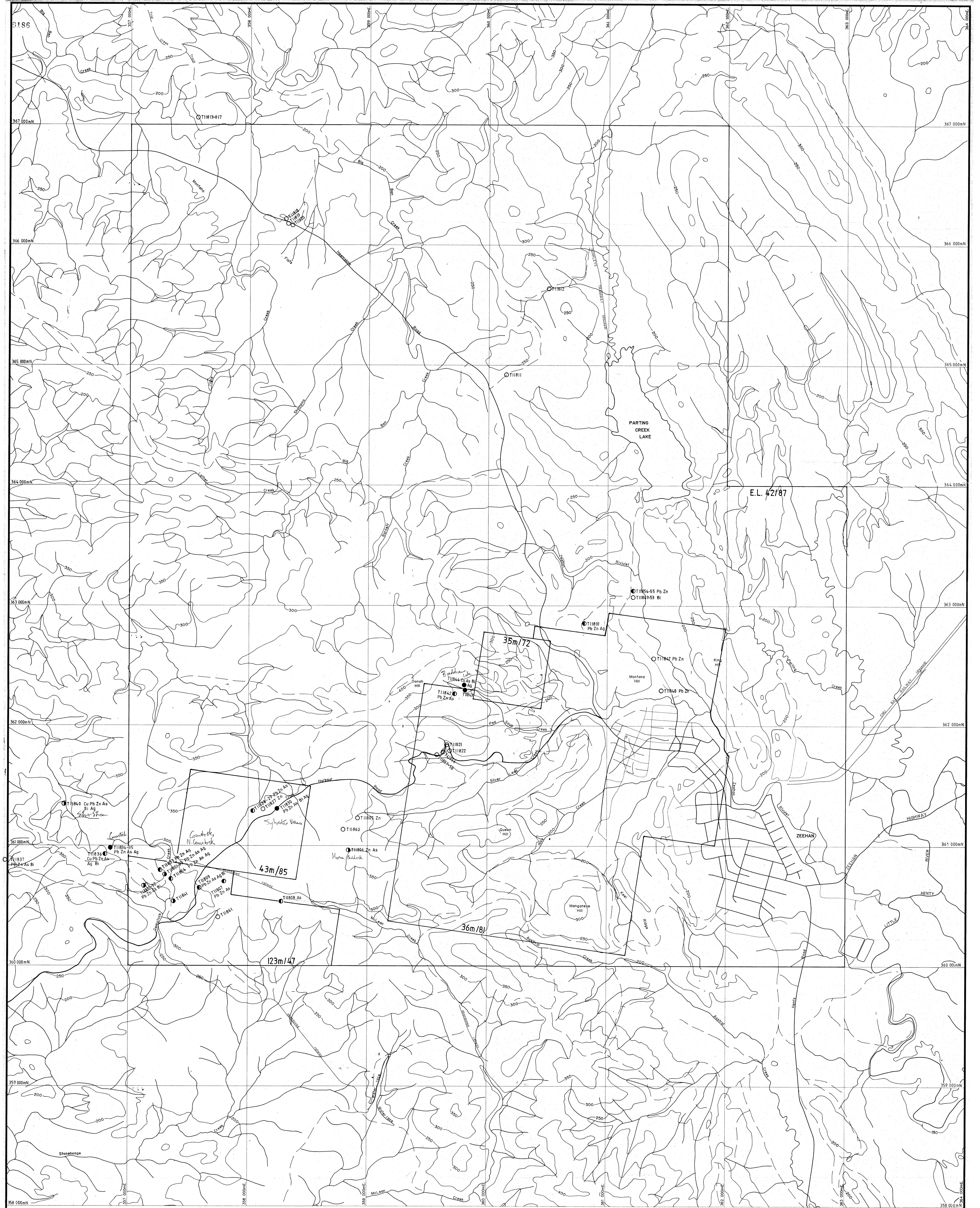
89-3014

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

COMPILED :	D.J.F.C.	ZEEHAN SHEET
DRAWN :	T.G.D.S. J.M.S.	GEOLOGICAL INTERPRETATION
DATE :	MARCH '89 August '89	(PROVISIONAL)
CHECKED :		
1:25,000 REFERENCE :	DUNDAS OCEANA HEEMSKIRK TRIAL	

BASE PLAN No.	OVERLAY PLAN No.	SCALE : 1 : 10,000	FIGURE No. 4.

N.W. Coast Computer Aided Drafting Centre. Phone (004 354315) Fax. (004 354495)



LEGEND

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

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

89-3014

593085

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

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

ZEEHAN SHEET
ZEEHAN PROJECT
ROCK CHIP GEOCHEMISTRY

BASE PLAN No. | OVERLAY PLAN No.

SCALE: 1 : 10,000

FIGURE No. 8