

90-3125

MINES	
File Ref. EL 95/87	
10 MAY 1990	
Doc. Ref.	
Action Officer	Initials
FOLIO	51
REFERS	
Resubmit to	Date

ANNUAL REPORT
EXPLORATION LICENCE 95/87
ZEEHAN, TASMANIA

For the period
 1st May to 30th April, 1990

By

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24-4-1990

MICROFILMED

SAVAGE RESOURCES LIMITED
 (Incorporated in Tasmania)

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Introduction

Early in the reporting period, a suitable base line for the proposed tin oriented grid was flagged and an examination of the ground turned up evidence for calc-silicates of the prospective "basal Cambrian" carbonate bearing sequence, however further confusion over tenure of the Tenth Legion Leases followed which meant that the logical joint approach to the prospective area could not be arranged. As a result, no field work has been conducted on the Licence area this year, other than some incidental observations made along the Lease boundaries. Recently the dispute with Denehurst Limited was resolved, the leases have been surrendered and an integrated exploration approach can now be implemented.

Previous Work

An examination of the literature of both the long lasting Renison Goldfields activity in the area and that of the C.R.A. - I.M.I. joint venture in the actual Tenth Legion Leases led to targeting of the North West corner of the Licence area. This contains a segment of the Tenth Legion Fault. The fault in its revised position, as fixed by ground examination, runs through a lowland in which there are sporadic outcrops of calc silicates grading to carbonates. It has not been examined by modern ground geophysics except for a pole-dipole I.P. line which showed some anomaly. This was the northernmost line of Renison's East Heemskerk grid and it also contains the anomaly with the characteristics of conductivity with chargeability and moderate magnetics which it is hoped discriminate a tin-sulphide from magnetite. It is open to the North and supported by a (soluble) tin anomaly.

In common with the rest of the area, it is at risk of being too close to the granite to contain the metallurgically treatable forms of tin mineralisation and it appears that fault related tin ore can occur relatively close to the granite as for example at Renison Bell in the Federal-Bassett structure. Among strike there is also the non-treatable tin resource inside the Tenth Legion leased area, which is considered to relate to the fault as a channelway but which may also be affected by a high spot in the underlying granite. Although this hypothesis implies that the target area is "of the cupola" it is more likely to be the "right distance from the granite" with a chance for cassiterite mineralisation. At least the outcrops are not actually laced with minor dykes of granite as is the case at 546601 on the west boundary of the SW Tenth Legion lease. In this area shallow depth to granite was proven by 3 holes drilled by Renison Goldfields.

Programme Proposal

The proposed grid to cover the prospective zone along the Tenth Legion Fault in the NW corner of the Licence area is shown on the map. it is proposed to do soil sampling, magnetics and I.P. with the object of finding moderately magnetic but conductive and chargeable targets, ideally with cassiterite tin anomaly at the surface. This programme is the same as that proposed for last year.

References

G. Broadbent

Tenth Legion Prospect (I.M.I joint venture) interim report November 1980 - August 1981, 14th August 1981. C.R.A. Exploration Pty Limited unpublished report (1981).

G. Broadbent

(C.R.A. report 11732 describing continuation of work on the Tenth Legion Prospect into 1982 involving further drilling, title uncertain) C.R.A. Exploration Pty. Limited unpublished report (1982).

A.W. Howland-Rose

A report on gradient array E.I.P. surveys over the East Heemskerk grid near Zeehan, West Coast Tasmania, on behalf of Renison Ltd. March 1990. Scintrex Pty Ltd unpublished consultant's report on S.P.L. 129/ E.L. 11/76. (1980).

P. Roberts

Trial Harbour Area, S.P.L. 129 Annual Report 1979-1980, 8-9-1980, Renison Ltd unpublished report (1980).

A. Ross

Trial Harbour Area, Annual Report 1978-1979, August, 1979. Renison Ltd unpublished report (1979).

C.H.C. Shannon

Annual Report, exploration licence 95/87 Zeehan, Tasmania for the period 12th June to 30th April 1989, 18-4-1988. Savage Resources unpublished report (1988).

P. Stephenson

(With L.A. Newnham) Trial Harbour area, S.P.L. 129, Sept. 1978. Renison Ltd. unpublished report (1978).

Prospects identified from literature search in EL 95/87 and the Tenth Legion Leases, Zeehan District.

Introduction

The critical exploration work done by the previous explorers, Goldfields Exploration, a subsidiary of Renison, was their East Heemskirk Grid. This grid covered a large portion of the I.M.I. leases because they were originally under the impression that they held the tin rights. The real situation was not clarified until after they had conducted soil sampling, magnetics and induced polarisation/resistivity surveys over the grid. It so happened that the star geophysical anomaly found was on the I.M.I. ground.

Once this disaster was revealed, they put three holes down to test a different set of anomalies located further out from the Leases with disappointing results, since granite was reached before the hoped for target. They ignored another good prospect area along the Tenth Legion Fault. In frustration they left for an area without tenure problems well east of the East heemskerk grid. Their last hope was doubtless that our lot would not spot the target. A drillhole, D.D.SIT.L.C.5 was put down in the vicinity by C.R.A., although apparently north of the anomaly.

Geology

The surface rocks comprise an area of Oonah Formation quartzite and slate NE of the Tenth Legion fault, gabbro to the SE, granite to the west. The gap is occupied by a complex including radically metasomatized rocks which has been interpreted as originally Crimson Creek Formation by the Renison crew, as a sequence spanning the Precambrian/Cambrian boundary by the C.R.A. team and as part of the gabbro complex by the older Mines Department mapping. This early interpretation was prompted by the serpentinite and magnetite outcrop, but these rocks are better explained as metamorphic replacements of original limestones. Although not spelt out in the C.R.A. interpretation, it is more than likely that the carbonates belong to the Success Creek Group/"top Oonah" sequence below the Crimson Creek and above the typical Oonah, which is the classic tin interval represented at Renison.

There is an apparent contact zone of harder rock next to the granite which the old Departmental mapping shows as Oonah, but which the Renison crew considered Crimson Creeks.

A broadly similar high adjacent to the gabbro may mean that it is a hot intrusion and responsible for much of the skarn formation, it is perhaps related to the Devonian granites rather than the intrusive serpentinites.

In the subsurface the granite extends out towards Zeehan, indicated by a host of small mines and the Queen Hill tin deposit. In the area just west of the I.M.I. leases there is direct indication of granite at shallow depth in 3 drillholes put in by Goldfields Exploration (Renison) in their last functional season on the East Heemskerk grid. It may be that the granite is rather too close under the whole area, and that tin deposits generally will be skarn type with difficult minerals instead of the cassiterite/sulphide style. But there are substantial subcrop areas of carbonate rocks and there is a belt of swamps margining the "hornfels" zone that would be likely to have carbonates below them.

There is another substantial tin deposit marginal to the Heemskerk Granite at St. Dizier plus tin deposits inside the granite itself.

The East Heemskerk Grid runs E-W and the C.R.A. Tenth Legion Grid runs N-S so it is possible for a small enough feature to be picked up on one but not the other. Also, the C.R.A. geophysics was based on a Cronee pulse E-M plus magnetics whereas the Renison exploration included two forms of IP, a pole-dipole coverage on broad spacing followed by gradient array on a closer spacing, supplemented by magnetics. The features of greatest interest show a combination of low resistivity and high chargeability with moderate magnetics and these contrast with magnetite outcrops which are more strongly magnetic but not so conductive or chargeable.

A feature near the Tenth Legion Fault was noted as a magnetite feature despite having the signature of a sulphide body and this area was not followed up. A grid perpendicular to the fault would cover it better. In this area an extension of the known skarn type deposit could occur and perhaps become a cassiterite/sulphide type. Certainly the fault in combination with the carbonates in the sequence would seem a good bet for a Renison Style deposit. The E-W grid is inappropriate and the area was not covered by C.R.A. The strong response so frustrating to the Renison geologists may have been unconvincing on the C.R.A. coverage or been drilled but a good compilation of the data is a must. There would also seem to be some interesting responses in soil geochemistry and some ground where poor results can be attributed to the difficulty of ground conditions.

Relevant reports cover Gold Fields Exploration P/L Annual Reports for the Trial Harbour S.P.L. 129 for the period 1977-1980 (the ground being later the E.L. 11/76) and their geophysical consultants Reports and C.R.A. Exploration P/L reports on Exploration at the Tenth Legion Prospect for 1980-1982.

Henry Shannon, c. November? 1987

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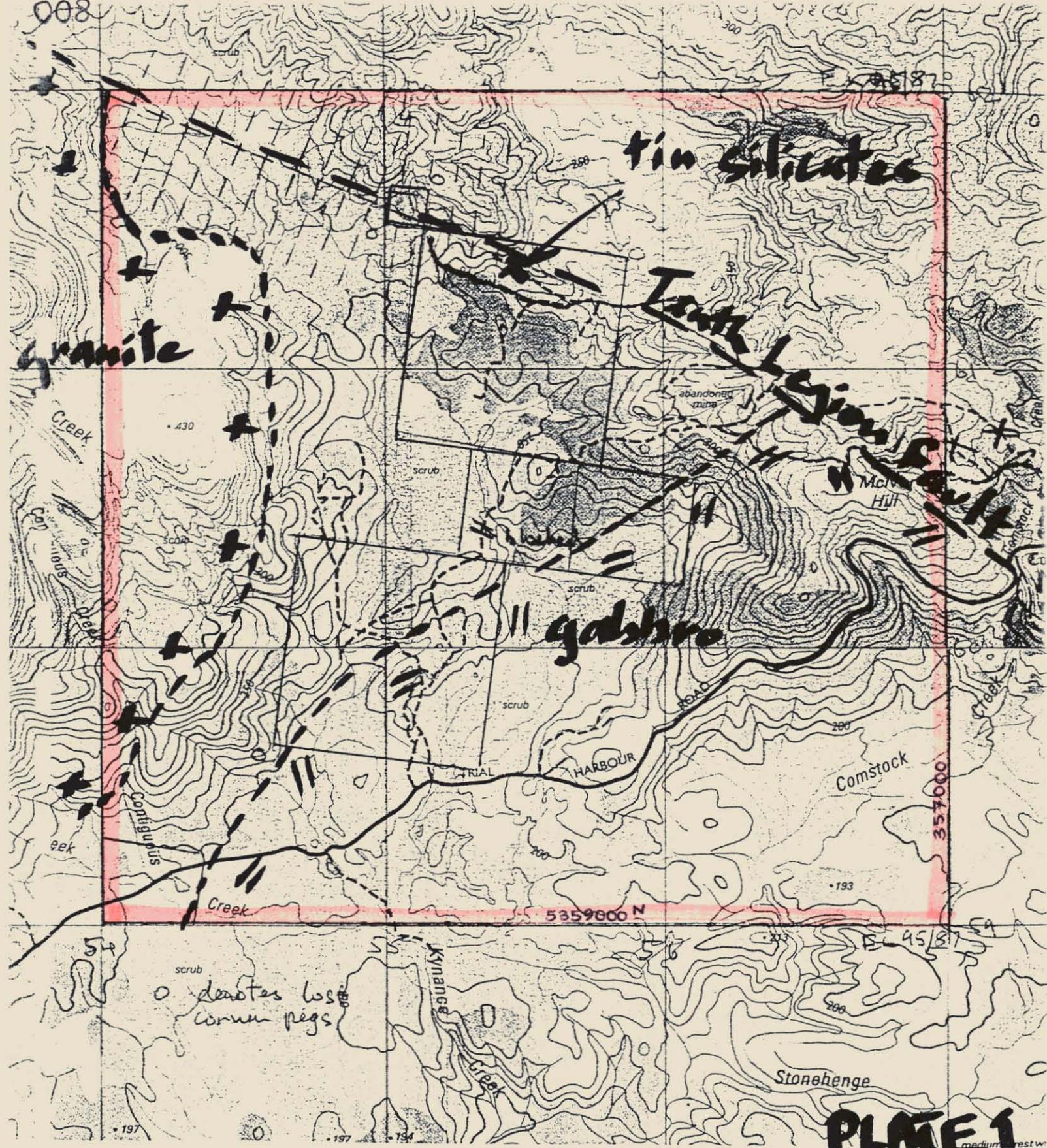


PLATE 1

**E.L. 95/87 Location Plan,
Geology, proposed grid**

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