T A S M A N I A M I N E S L I M I T E D

E.L. 16/88 - HIGHWOOD HILL

N.W. TASMANIA

RELINQUISHMENT REPORT

SEPTEMBER 1990

TABLE OF CONTENTS

List of Figures

S U M M A R Y

Exploration Licence 16/88 was granted to Tasmania Mines Limited on 16th September, 1988.

The licence area covering 22sqkms was acquired primarily to investigate the possibility of wollastonite rich horizons occurring within calc-silicate units of the metamorphosed Gordon Limestone sequences and also to examine the potential for skarn zones within the Ordovician Transition Beds in the northern portion of the area.

A 18-24 month programme of exploration was proposed to evaluate the above areas of prospectivity and the main phases of study/investigations were designed to include photogeologic and aeromagnetic data interpretation, the completion of a regional geologic/geochemical programme, and dependent upon initial results, to undertake investigations of a more localised detailed nature.

Regional geochemical results acquired during Year 1 work (1988/89) were completely negative and together with geologic and aeromagnetic studies, the southern section of the licence area was severely downgraded with regard the potentail of skarn type horizons within the Ordovician Transition Bed sequences. Localised work within and around the Suttons's skarn magnetite revealed a negative Au/Ag association.

Year 2 work proposals were intended to investigate possible wollastonite rich lenses in calc-silicate rich sequences. However, due to a restriction of both Company exploration funds and personnel, efforts were made to concentrate on exploration within the confines of neighbouring Tasmania Mines E.L. 39/89 and E.L. 17/68. Consequently only a little of the proposed work was completed and eventually the decision was made to relinquish tenancy of E.L. 16/88.

The following briefly summarises the E.L. strategies and results of exploration work completed.

(03)

1. TENEMENT SITUATION

- Exploration Licence 16/88 was originally granted on 16th September, 1988.

- It was acquired by Tasmania Mines Ltd as a result of a "Tender Application" for E.T.A. 30 (29-01-1988). This "Tender" was to explore a portion of the partially relinquished E.L. 17/68, also previoulsy held by Tasmania Mines Limited (or Tasminex N.L.) during the period 1968-87.

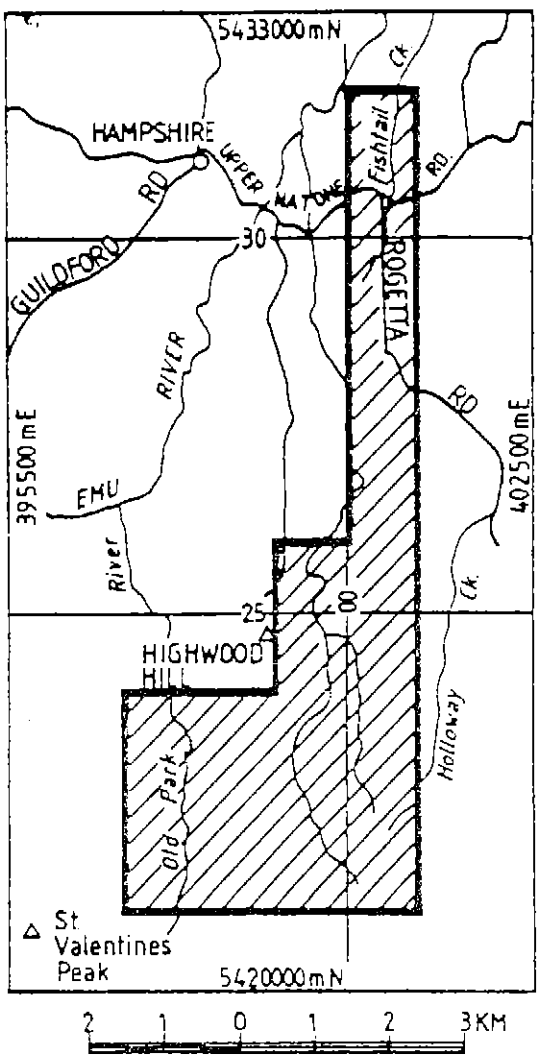
- The licence area is 22sqkms and is located some 30kms south of Burnie. It is readily accessible by sealed road from Burnie to Hampshire, and then by means of the Hampshire-Upper Natone Road which transgresses the northern part of the licence. The area is elongated in a N-S direction over a distance of 11kms, and in the south has an E-W distance of 4kms.

- The licence area is located 3kms to the east and south of the Kara tungsten mine, and is bordered by E.L. 17/68 and E.L. 39/89 (Tasmania Mines Limited) to the west and east respectively.

FIGURE Nº 1.

004

446005



5 cm

2. EXPLORATION OBJECTIVES/TYPE OF WORK

Tasmania Mines Limited acquired E.L. 16/88 to investigate the possible potential of both wollastonite and scheelite mineralisation in the licence area.

Main exploration objectives were to examine the following:-

- the possibility of wollastonite bearing units in the calc-silicate horizons of metamorphosed Gordon Limestone sequences;
- the possible presence of skarn type bodies within the Ordovician Transition Beds;
- an examination of possible mineralisation (tungsten, tin, cobalt and silver) in calcareous sequences on the western flank of Mt. Misery.

The type of work proposed over an 18-24 month period was:-

- Regional Exploration:-
  - photogeologic interpretation, base map compilation;
  - aeromagnetic data interpretation (data acquired by Anzeco 1974 and Mc Intyre Mines 1977);
  - regional geological mapping;

006

- geochemical sampling, namely pan concentrate stream sediments (analysis for WO_3, Sn, Zn, Co, Pb, As, Au) to be supplemented by general rock chip and bulk stream sediment cyanide leach sampling.

- Localised Exploration:-

  - detailed examinations of delineated calc-silicate horizons;

  - ground magnetic surveys along the North section of the area and east of Mt. Misery;

  - geologic mapping/geochemical surveys west of Mt. Misery.

3. SUMMARY OF PREVIOUS EXPLORATION WORK

- Although the area covered by E.L. 16/88 was originally held under E.L. tenancy by Tasmania Mines Limited during the period 1968-87 (as E.L. 17/68), it had in the past only received scant attention, work being restricted to geologic traverses of a reconnaissance nature and regional geochemical investigations.

- Exploration work carried out in the area by previous Tasminex N.L. joint venture partners, namely Anzeco 1971-74 and McIntyre Mines (Australia) Pty Ltd (1977-85) was primarily orientated towards an assessment of its tungsten potential.

- The area was covered by geological traverses completed by the Tasmanian Geological Survey Department in its completion of the "St. Valentines" Geological Map Sheet (Scale 1:25,000).

4. SUMMARY OF EXPLORATION, 1988-90

Specific details of results are documented in E.L. 16/88, Year 1, Annual Report.

Salient points of exploration results are as follows:-

A. Regional Geology

- Area consists of N-S trending broadly folded metamorphosed arenaceous and calcareous sequences of Moina Sandstone and lower sections of the Ordovician Transition Series.

- The latter have been extensively metamorphosed to a diopside, garnet, magnetite skarn at the Suttons Skarn location, otherwise the calcareous sediments are represented by calc-silicate horizons.

- None showed any strong wollastonite development.

B. Regional Geochemistry

Regional pan concentrate sampling of drainage in the south central section of E.L. (Limestone Creek and Old Park River drainage - 500m intervals) was completed.

- Samples were analysed for Sn, WO_3, As, Cu, Zn, Pb, Ag and Au. (Results Appendix 1 - Annual Report Year 1.)

- Results were negative, except for anomalous WO_3 (920ppm) and Au (0.74ppm) values collected from a creek draining a skarn zone in neighbouring E.L. 17/68.

C. Localised Exploration

- Geochemical rock chip sampling of the Suttons magnetite skarn and contact zone with the neighbouring Housetop Granite intrusion was completed. Assays for Au and Ag proved negative. Previous Anzeco (1974) work (power auger drilling) at this area of skarn development had assessed its possible tungsten potential.

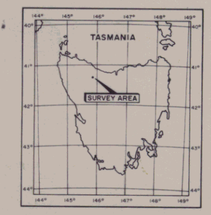
5. BIBLIOGRAPHY

A. E.L. 16/88 - Highwood Hill
Annual Report, Year 1
16/09/1988 - 15/09/1989

B. E.L. 17/68 - Relinqishment Report
November 1987

32000mN
31000mN
30000mN
29000mN
28000mN
27000mN
26000mN

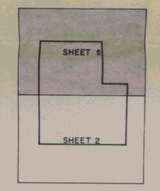
LOCATION



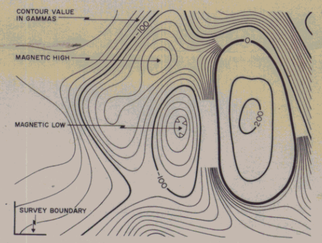
SURVEY SPECIFICATIONS

AIRCRAFT	BELL 206B HELICOPTER
MAGNETOMETER	VARIAN 4937A PROTON PRECESSION USING TOWED BIRD CONFIGURATION WITH 30m CABLE
DIURNAL RECORDER	GEOMETRICS G806 PROTON PRECESSION MAGNETOMETER WITH CHESSEL RECORDER AND CRYSTAL CLOCK
ALTIMETER	BONZER Mk 4G
ANCILLIARY EQUIPMENT	GEOEX INTERVALOMETER GEDEX FILM DIGITAL RECORDER CENTURY 444 6 CHANNEL ANALOGUE LIGHT BEAM RECORDER VINTEN 16mm GROUND TRACKING CAMERA
READING INTERVAL	1·0 SECONDS
NOMINAL AIRCRAFT SPEED	65 KNOTS
NOMINAL AIRCRAFT SURVEY ALTITUDE	90 metres SENSOR CLEARANCE 75 metres

SHEET INDEX



REFERENCE



CONTOUR INTERVAL : 10 GAMMAS

SCALE 1:20,000

METRES

THE DATA HAS BEEN ADJUSTED FOR DIURNAL VARIATION WITH AN ADOPTED VALUE OF 62338 GAMMAS AT THE DIURNAL BASE STATION SITUATED AT WYNYARD AERODROME, 40°59'51" S AND 145°43'34" E. THE SENSOR HEIGHT WAS 3m. THE DATUM FOR THE TOTAL MAGNETIC INTENSITY CONTOURS IS THE INTERNATIONAL GRID REFERENCE FIELD 1978·1.

5 cm

= E.L. 16/88

N

446012

TASMANIA MINES LTD.
E.L. 16/88
FIGURE 2(A)

GEOEX PTY.LTD.

M.SINTYRE MINES AUST. PTY. LTD.

RIDGLEY AREA TAS.

AEROMAGNETIC TOTAL INTENSITY CONTOURS

SCALE 1:20,000

SURVEYED: JAN.'78			APPROVED: J.E.HAIGH
DRAWN: R.G.	PROJECT No: 21081	MAP No 1 AC	

011

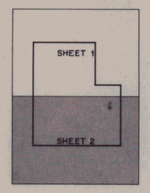
25000mN
24000mN
23000mN
22000mN
95000mE
96000mE
97000mE
100000mE
102000mE
103000mE

5 cm

= E.L. 16/88

N

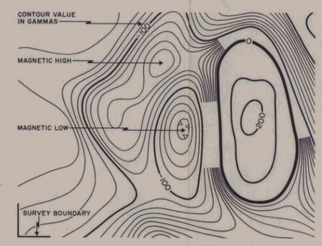
SHEET INDEX



SURVEY SPECIFICATIONS

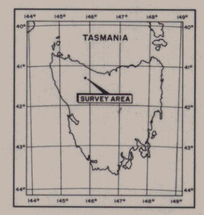
AIRCRAFT	BELL 206B HELICOPTER
MAGNETOMETER	VARIAN 4937A PROTON PRECESSION USING TOWED BIRD CONFIGURATION WITH 30m CABLE
DIURNAL RECORDER	GEOMETRICS G806 PROTON PRECESSION MAGNETOMETER WITH CHESSEL RECORDER AND CRYSTAL CLOCK
ALTIMETER	BONZER Mk 10
ANCILLIARY EQUIPMENT	GEOEX INTERVALOMETER GEOEX FILM DIGITAL RECORDER
	CENTURY 444 6 CHANNEL ANALOGUE LIGHT BEAM RECORDER
	VINTEN 16mm GROUND TRACKING CAMERA
READING INTERVAL	1·0 SECONDS
NOMINAL AIRCRAFT SPEED	65 KNOTS
NOMINAL AIRCRAFT SURVEY ALTITUDE	90 metres SENSOR CLEARANCE 75 metres

REFERENCE



CONTOUR INTERVAL : 10 GAMMAS

LOCATION



SCALE 1:20,000

200 0 200 400 600 800 1000
METRES

THE DATA HAS BEEN ADJUSTED FOR DIURNAL VARIATION WITH AN ADOPTED VALUE OF 52350 GAMMAS AT THE DIURNAL BASE STATION SITUATED AT WYNYARD AERODROME, 40°59'51" S AND 145°43'34" E. THE SENSOR HEIGHT WAS 3m. THE DATUM FOR THE TOTAL MAGNETIC INTENSITY CONTOURS IS THE INTERNATIONAL GRID REFERENCE FIELD 1978·1

TASMANIA MINES LTD.

E.L. 16/88 - FIGURE 2(B)

446013

90-3174.

GEOEX PTY. LTD.

McINTYRE MINES (AUST.) PTY. LTD.

RIDGLEY AREA - TAS.

AEROMAGNETIC TOTAL INTENSITY CONTOURS

SCALE 1:20,000

SURVEYED: JAN.'78			APPROVED: J.E.HAIGH
DRAWN: R.G.	PROJECT No: 21081		MAP No. 2 AC

01

E.L 17/68

1269 P/M

1270A/M

1267 P/M

1265 P/M

7M/86

7211/86

CL 105/77

LOUDWATER RIVER

EMU RIVER

KARA TUNGSTEN MINE

HIGHWOOD HILL

RIVER

EMU

RUGELTA ROAD

SUTTONS SKARN

LIMESTONE CREEK

OLD PARK RIVER

E.L 16/68

A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15

B7 B8 B11 B12 B13 B14 B15 B16 B17

C1 C2 C3 C4 C5 A6 C16 C17

= SEALED ROAD

= TRACK

A5 = PANCONCENTRATE SAMPLE LOCATION

= E.L 16/88

= E.L 17/68

= MINING LEASES

TASMANIA MINES TENEMENTS.

5 cm

TASMANIA MINES LIMITED.

EXPLORATION LICENCE 16/88

HIGHWOOD HILL AREA.

REGIONAL DRAINAGE SAMPLE LOCATION

446014

FIGURE 3

DRAWN - CHW	SCALE 1 : 25,000	PLAN No. ~~H/16/88~~
	DATE JUNE 89	