HALL, RELPH & ASSOCIATES PTY. LTD.
GEOLOGICAL & EXPLORATION CONSULTANTS

L. R. HALL. M.Sc., M.A.A.P.G., M.Aus.I.M.M.
R. E. RELPH. B.Sc., M.Aus.I.M.M.

9TH FLOOR
36-38 CLARENCE STREET,
SYDNEY, 2000, AUSTRALIA
TEL.: 29-5631

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SCAMANDER MINING CORPORATION N.L.

# REPORT ON MCLARM PROSPECTING SYNDICATE'S PERMIT TO ENTER AT HAMPSHIRE, NORTH-WEST TASMANIA

## I INTRODUCTION

### 1. Period and Scope of Examination

Field work consisted of one day examining some of the workings of the old Hampshire Silver Mine and an area in the vicinity of Limestone Creek. Information was collected from the records of the Department of Mines and from A. McCormick one of the members of the syndicate.

### 2. Location and Access

The area lies immediately south-east of Hampshire; 19 miles by sealed road south of Burnie. Accessibility within the permit is good.

### 3. Topography and Water

Maximum relief in the permit is 350 feet. The area is mainly cleared for reafforestation however some thick rain forest occurs along the Emu River. Permanent water is available.

### 4. Tenure

The area is held as a permit to enter of

approximately 3½ square miles however there is some doubt surrounding the tenure and this should be resolved before any options are negotiated.

## II GEOLOGY

The investigation was made to determine the advisability of negotiating an option to purchase over the above-mentioned area. The area has been mapped on a regional basis and a high level aeromagnetic survey carried out by the Bureau of Mineral Resources. A Department of Mines report has been compiled from the records of the V.D.L. Mineral Company and this will be quoted.

### 1. Regional Geology (See Figure 1)

#### Cambrian

The oldest formations in the area are of Cambrian age and consist of dolomites, shales, greywackes, tuffs, lime rich sediments and volcanics. These formations were deposited in the Dundas Trough which was a major sedimentary basin in north-west Tasmania during Cambrian time. The source of the volcanics and much of the sediment was a voleanic island arc system along the eastern margin of the trough. To the east of this chain of volcanics was the uplifted mass of folded Precambrian sediments - the Tyennan Geanticline. The western margin of the trough was formed by a similar land mass - the Rocky Cape Geanticline. Sedimentation into this basin ceased in Upper Cambrian time with the onset of the Jukesian Orogeny which produced moderate faulting, folding and uplift of the Cambrian sediments.

#### Ordovician

Following this uplift a shallow basin - the Owen Basin was formed further to the east and the deposition of the Owen Conglomerate marked the onset of Ordovician sedimentation. This conglomerate crops out in Loudwater Creek in the western part of the permit. Overlying the conglomerate a series of sandstones, shales and lime rich

sediments were deposited - these beds are the equivalent of the Caroline Creek Sandstone of the west coast district. The contact metamorphosed sediments in the vicinity of the Hampshire Silver Mine are believed to be part of this formation. Overlying this is the Gordon Limestone; a sequence of coral limestones and sandstones which were deposited over a wide area of north-west Tasmania. In the Hampshire area the limestone has been deposited in a narrow north-south trending syncline. This limestone crops out on the eastern margin of the permit where it has been contact metamorphosed to a wollastonite-diopside hornfels, There are no sediments younger than the Gordon Limestone outcropping in the area.

Devonian

In Lower Devonian time earth movements of the Tabberabberan Orogeny began forming long wavelength arcuate synclines and anticlines; one of the principal structures being the Dundas-Deloraine Anticline. By the Middle Devonian sedimentation had ceased. The latest stages of the Tabberabberan Orogeny involved the intrusion of granite stocks and batholiths during the last period of folding. The late stages of intrusion gave rise to widespread tin and tungsten mineralization together with minor molybdenum, gold, bismuth, copper, lead, zinc and silver. At Hampshire, a large granite mass - the Hampshire Hills Granite was intruded along the core of a broad anticlinal structure. The main mineralization associated with this granite is magnetite which occurs as replacement lodes to the south of the permit area. Minor tin and tungsten mineralization is recorded in this district.

Tertiary

Following uplift and erosion the area was subjected to gentle uplift activity during Tertiary time. Much of the area was covered with basaltic lavas erupting from pipes and fissures. These flows cover large areas in north-west Tasmania and occur as remnants up to 250 feet thick over 80% of the permit.

Quaternary

Post Tertiary erosion has incised through this basalt along the rivers and major creeks and exposed the underlying granites and sediments.

2. Detailed Geology (See Figure 2 and 3)

a) Rock Types

The permit area consists dominantly of Tertiary olivine basalts. Where this sheet has been eroded away along Limestone and Loudwater Creeks and the Emu River the Devonian granite and older sediments have been exposed. The Hampshire Silver Mine workings are along one of the granite sediment contacts. Where exposed the sediments have undergone contact metamorphism with lime rich beds showing development of grossularite magnetite hornfelses and calc-silicate hornfelses. Along Limestone Creek sulphide bearing wollastonite-diopside hornfelses have developed from limestones due to metamorphism by a subjacent granite. Skarn rocks are reported to occur in exposures along Loudwater Creek. The granite where observed is a biotite-poor medium grained variety showing some marginal alteration.

b) Structure

Mineralization at the Hampshire Mine appears to be localised partly along a granite contact and partly fault controlled. At Limestone Creek the hornfelses dip west at 10-15 degrees and strike 175-190 degrees. The rock exposures of sediments along the creeks represent roof pendants which are underlain by the granite at shallow depth.

c) Mineralization

(i) Hampshire Silver Mine

The main mineral occurrence in the area is at the Hampshire Silver Mine. This mine was owned by

the V.D.L. Mineral Company and was worked along a contact magnetite lode carrying occasional pods of high grade silver. Access is by foot track about ½ mile from the nearest vehicle approach. Very little information is available on the type, size and mineralogy of this mine with only brief mentions of assay or probable assays in the records. The lode occurs partly in granite and partly in hornfels. In the granite the lode was 18 inches wide and consists of native silver, galena, magnetite and arsenopyrite in a gangue of hornblende, garnet and quartz. The lode became narrow and poor in the hornfels. Some assays of ore parcels yielded up to 300 ounces per ton silver, but these values appear to have been restricted to pods. Other recorded minerals include molybdenite, erythrite, sphalerite, pyrite, bismuthinite and bismutite. Other rarer minerals are recorded but not verified. The mineralization observed in the workings is uneconomic, however subsurface investigation may be worthwhile.

Mine Development (See Figures 2 and 3)

The accompanying figures indicate portions of the mine workings. The No.1 and 2 adits were inspected; these were driven in hornfels and are subject to caving. Adits 3, 4 and 5 were driven in granite but were not inspected. Only part of the workings of the No.2 adit were accessible, due to caving.

2. General

The mineralization occurs in association with calc-silicate rocks and skarns indicating the potential for a skarn scheelite deposit.

Pyrrhotite occurring in the metamorphosed limestones along Limestone Creek indicates the presence of excess sulphur and the possibility of replacement type sulphide deposits.

Limestone-granite contacts are well known for economic mineralization and a preliminary investigation into the possibility of scheelite and/or sulphides is warranted.

3. Geophysics (See Figure 4)

The area has been flown by the Bureau of Mineral Resources with a high level aeromagnetic survey. Strongly anomalous highs occur to the south of the permit in the vicinity of some known magnetite deposits. An area of anomalously low aeromagnetic intensity occurs in the south-western portion near Limestone Creek, and may indicate alteration associated with mineralization. In general aeromagnetic contours fail to indicate any definite features.

III SUMMARY

1. General Summary

The area has a suitable geological environment and indications of mineralization, associated with mineralized granites, garnet-magnetite hornfelses, limestones, and skarn rocks to suggest the possibility of skarn scheelite and replacement sulphides. However the areas of outcrop of possible mineralized rocks are severely limited by the cover of Tertiary basalt (see Figure 2). Unless suitable indications are found in the areas of outcrop the basalt cover would render the cost of exploratory drilling prohibitive.

The possibility of scheelite deposits in the area and the projected prices of tungsten indicate the need for further investigation.

2. Recommendations

A careful check should be made as to the area actually held by the syndicate.

The area is considered to be worth further investigation and an option should be negotiated for a period of 3 months with a further 12 month option before purchase. An option price for the initial 3 month period should be about $500. For the 12 month period an option price of up to $4,000 seems reasonable.

Examination of the areas over the 3 month option would involve prospecting for scheelite with the ultra violet lamp, geological mapping and sampling of areas of outcrop. Total cost for this examination will be approximately $700 and should indicate the advisability of exercising the further 12 month option. Further work in this period would entail detailed mapping, sampling and exploratory diamond drilling.

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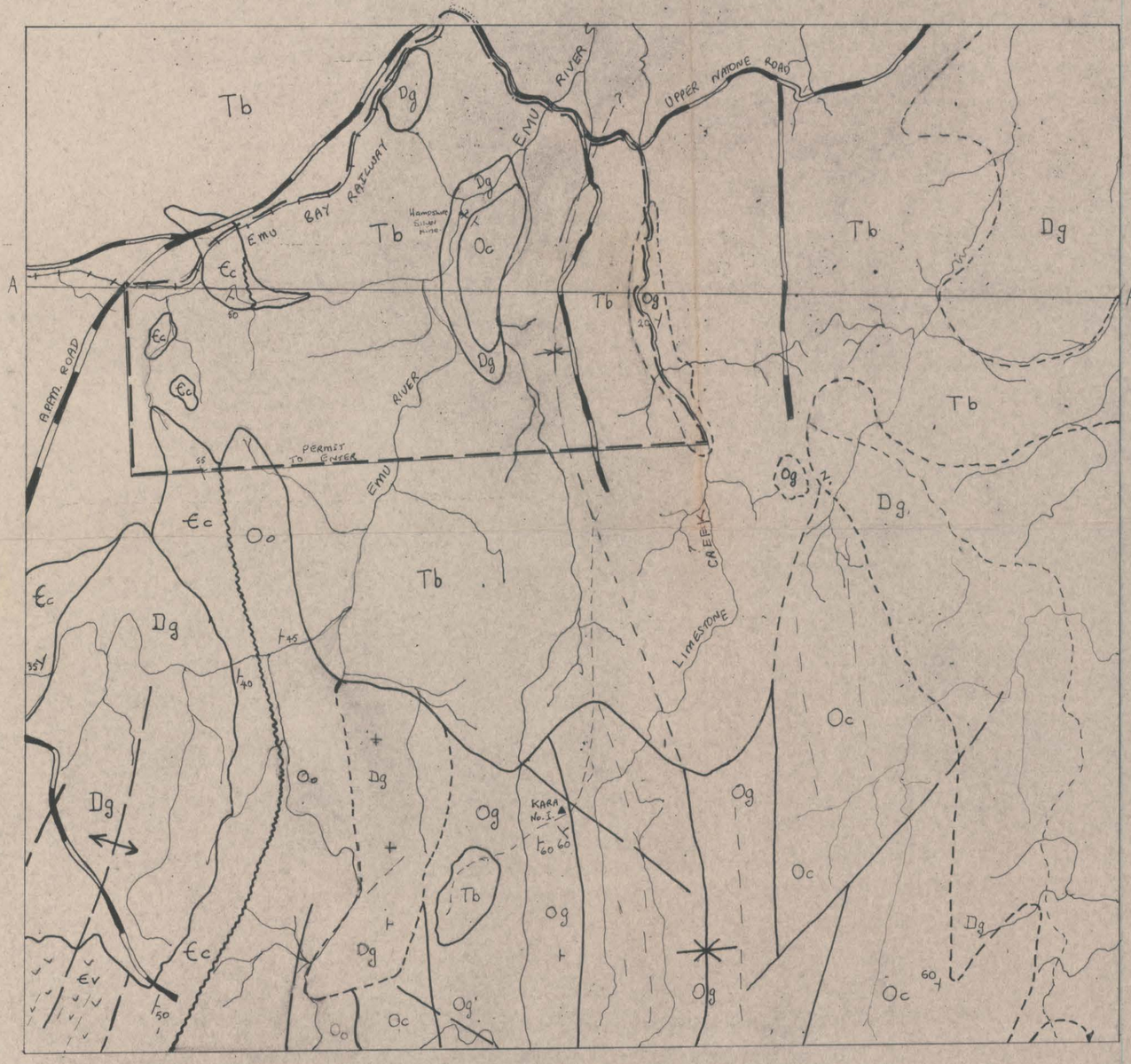
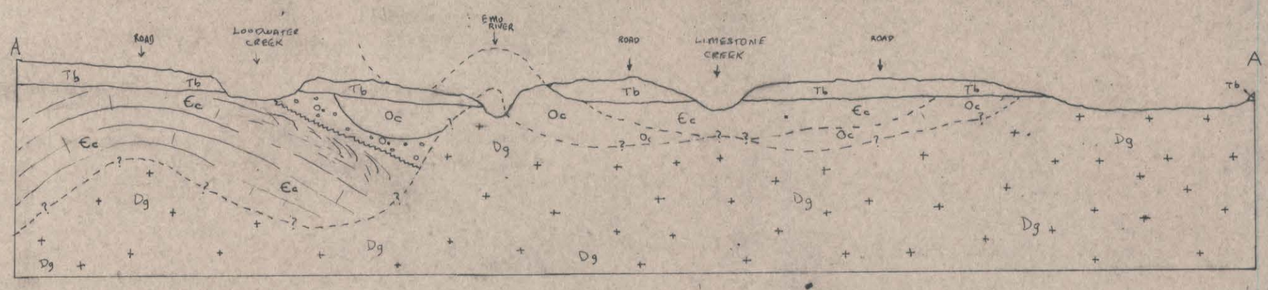
Fig. 1.




## LEGEND

| | | |
|---|---|---|
| TERTIARY | Tb | Predominantly Olivine Rich Basalts |
| DEVONIAN | + Dg | Housetop Granite - Generally coarse grained biotite rich granite |
| ORDOVICIAN | Og | Gordon Limestone - Limestones with Quartzite bands. |
| | Oc | Moina Sandstone - Sandstones, Skarns and Limestone bands |
| | Oo | Owen Conglomerate. Basal Conglomerate |
| CAMBRIAN | Ec | Quartzites, cherts, tuffaceous sandstones. Shales, lime sediments, dolomite. |
| | Ev | Volcanics. |

MN

0 15 30 45
CHAINS (APPROX)

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McLARM PROSPECTING SYNDICATE
PERMIT TO ENTER

REGIONAL GEOLOGY OF
HAMPSHIRE DISTRICT WITH
PERMIT TO ENTER OUTLINED

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HAMPSHIRE RAILWAY STATION

Patsena Road

Boundary of Permit Area

Emu Bay Railway

Boundary of Permit Area

Silver Mine Creek

Dg

Tb

Cc

Oo

Oc

Tf?

HAMPSHIRE SILVER MINE

Loudwater Creek

EASTERN BOUNDARY

Limestone Creek

Emu River

Approx. Southern Boundary

TRUE NORTH.

LEGEND

See legend for Figure 1.

0 7.5 15 22.5
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McLARM PROSPECTING SYNDICATE
PERMIT TO ENTER

DETAIL GEOLOGY OF PERMIT &
LOCATION OF HAMPSHIRE SILVER MINE.

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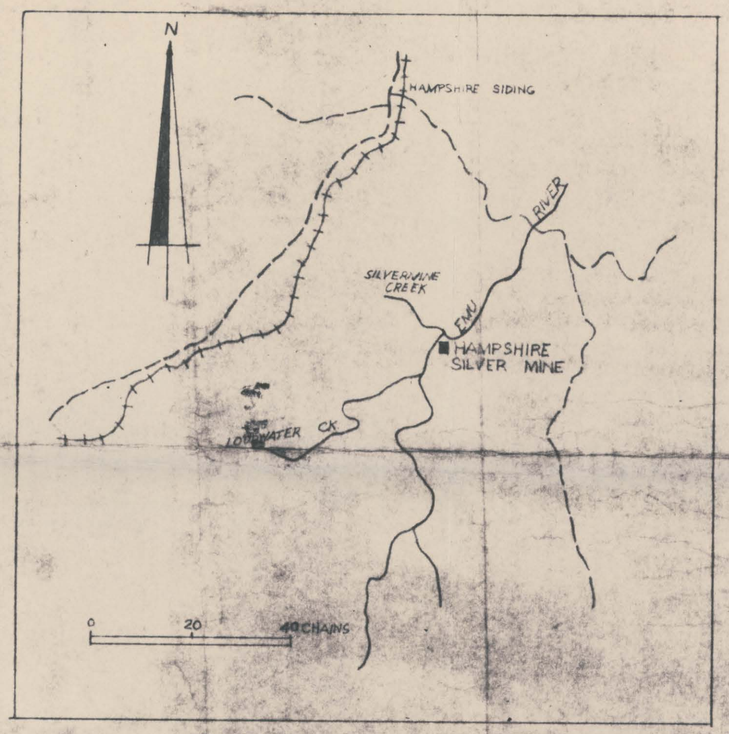
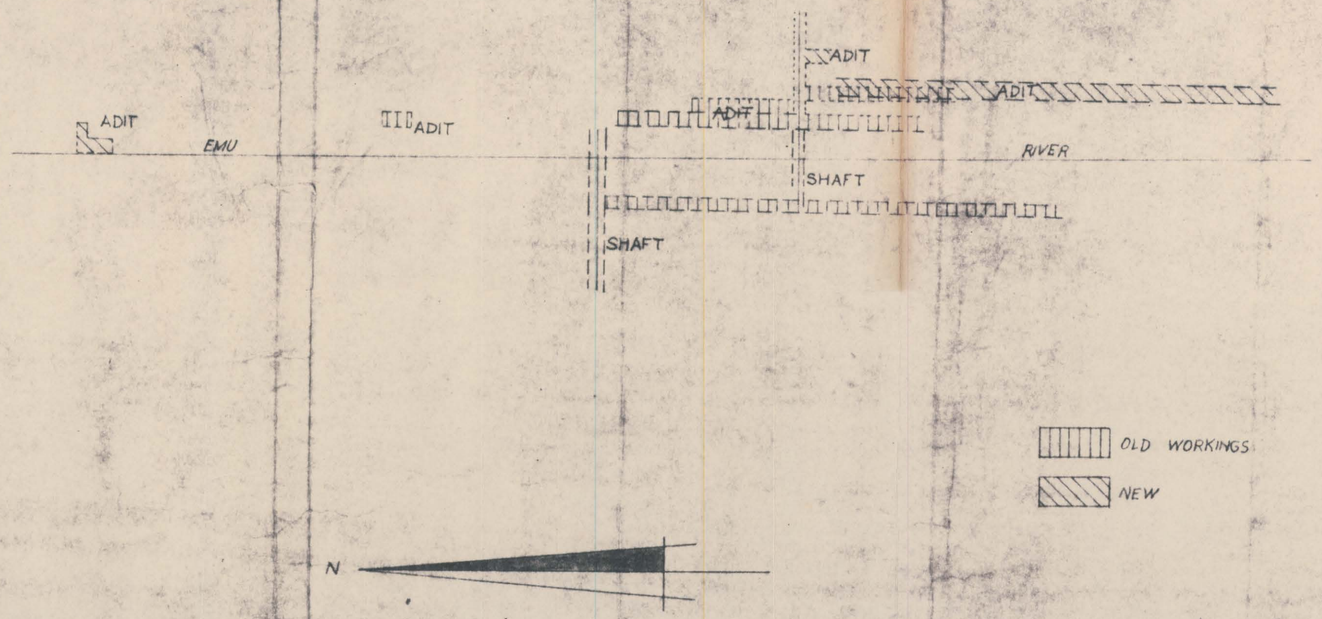
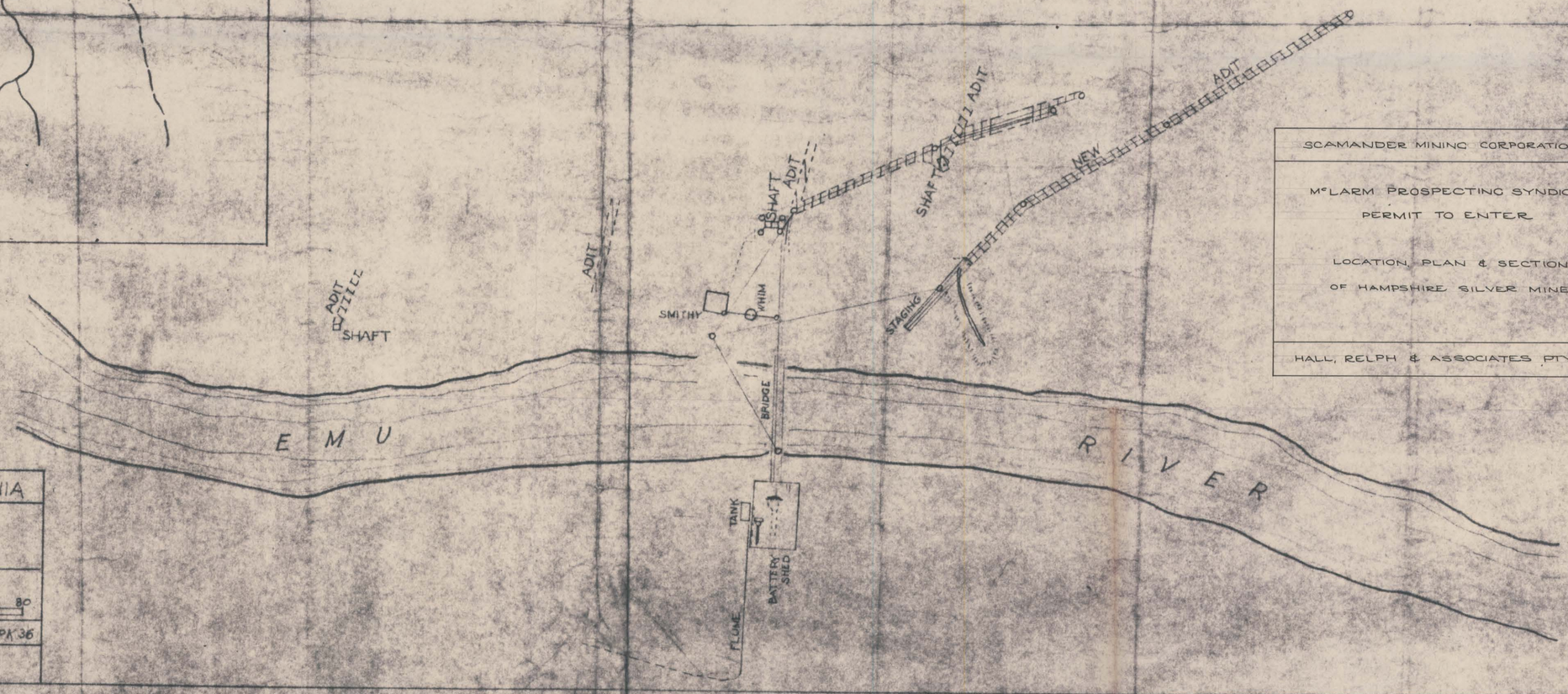
Fig 3.

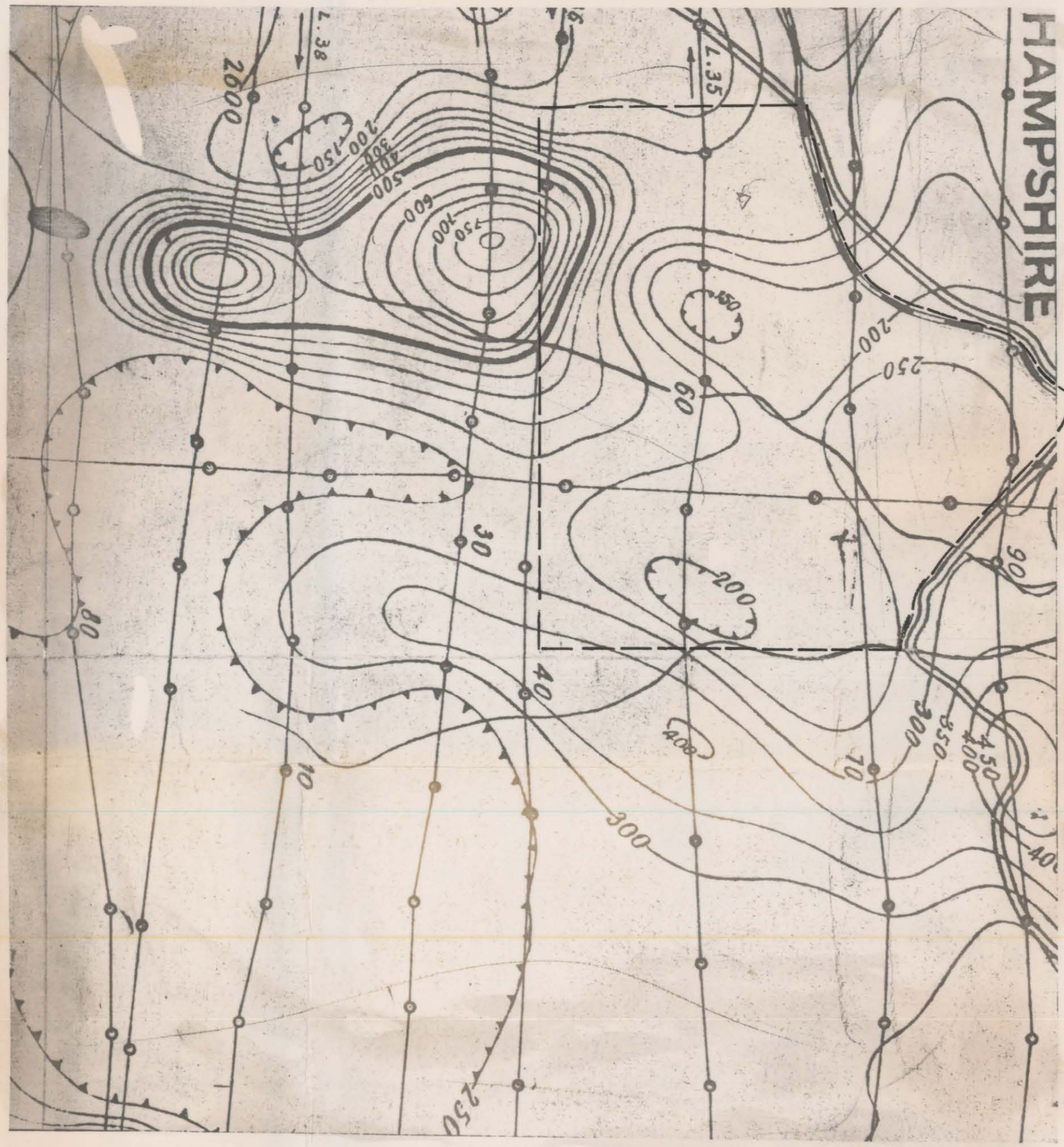



| DEPARTMENT OF MINES — TASMANIA | |
|---|---|
| SILVER MINE HAMPSHIRE HILLS | |
| DATE DECEMBER 1968 | SCALE OF FEET 0 40 80 |
| GEOLOGIST VDL COMPANY | |
| DRAUGHTSMAN T.R. BELLIS | MAPSHEET & No VAL PK 36 |
| REVISIONS A J NOLDART 1969 | FILE No 3207 |

| SCAMANDER MINING CORPORATION N.L. |
|---|
| McLARM PROSPECTING SYNDICATE PERMIT TO ENTER |
| LOCATION, PLAN & SECTION OF HAMPSHIRE SILVER MINE |
| HALL, RELPH & ASSOCIATES PTY. LTD. |

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McLARM PROSPECTING SYNDICATE

PERMIT TO ENTER

AEROMAGNETIC CONTOUR MAP

HAMPSHIRE AREA

TOTAL MAGNETIC INTENSITY

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