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REPORT ON
E.L. 15/68
Near Derby,
NE. Tasmania

Report on Exp. L. 5/68, Derby Area

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REPORT ON EXPLORATION LICENCE

15/68 NEAR DERBY, NORTH EAST TASMANIA

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(Written for inclusion in this Report)

RECEIVED	18 JUN 1970	REGISTRAR
ANSWERED	DEPT. OF MINES	E & IL
REF. NO.	4109/70	

INTRODUCTION

This licence, currently held by the Ringarooma Prospecting Company, is renewable on 23/4/1970 and thereafter at six monthly intervals. It covers an area of 28 sq. miles south of Branxholm and Derby in north east Tasmania (Fig. 1). The same company also holds mining leases which be within the exploration licence. These leases cover the Mt. Paris Mine (two leases of 80 acres and two leases of 40 acres), the Bell Hill Mine (two leases of 50 acres and one of 20 acres), the Tinpot Creek Mine (one lease of 80 acres) and the Mammoth Mine area (one lease of 20 acres and one lease of 25 acres). In addition the company holds an option over the Cambria Mine which lies 6 miles east of the Paris Dam, outside EL 5/68.

Access is provided by Forestry Commission roads and bulldozed tracks from Branxholm, Ringarooma and Derby.

GEOLOGY

The licence covers the south-western extension of the Blue Tier granite batholith which intrudes Devonian-Silurian sandstones and mudstone. The eastern part of the licence covers part of the Ringarooma River which runs over Tertiary basalt and alluvial sands and gravels. The distribution

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of the main rock types is shown in Fig. 1. Recent mapping by officers of the Department of Mines and the University of Tasmania indicates that the granite within the licence is largely a type known locally as "tin-granite" and it probably represents the near-roof section of the granite body. In parts of the area (e.g. near Mt. Paris) ~~is~~ a thin skin of sediments still overlies the granite.

Most of the granite is barren but there are a large number of bodies of greisen and several of these bear cassiterite (e.g. Tinpot Creek Mine) or cassiterite plus sulphides (e.g. Mammoth Mine); these bodies vary in size and shape and may be steeply dipping or shallowly dipping.

In addition the granite is cut by veins of quartz, highly kaolinized quartz porphyry, pegmatite and aphte, some of which bear cassiterite and/or wolframite. Mineralization appears to be concentrated within the granite close to the contact of the granite and the sediments, and as this contact is close to the surface over much of the licence, the prospects for ore occurrences are particularly favourable.

Because much of the tin-bearing rock has been exposed to weathering over a long period, there has been extensive concentration of cassiterite in soils, creeks and river valleys.

THE MAMMOTH MINE

INTRODUCTION

The workings lie within mining lease 24M70, of 20 acres. They consist of two shafts (one possibly 100 ft deep) an adit and bulldozed costeans (See Figure 3).

GEOLOGY

Lenticular and rather irregular greisen bodies occur within kaolinized granite. The greisens tend to E-W or N-S strike and are relatively small. They consist largely of quartz and secondary mica and carry cassiterite, sphalerite and chalcopyrite; similar greisens have been found in the Mammoth Mine area.

ECONOMIC CONSIDERATIONS

Samples taken from one of the shaft dumps by Mr. W. Keid of the Department of Mines in 1944 contained 0.28% Sn, together with sphalerite and chalcopyrite. Samples from the face at the end of the adit also taken by Mr. Keid, yielded 0.0% Sn and 0.1% Cu over a 6 inch band and 0.55 % Sn, and 5.3% Cu over the remainder of the face (probably about five feet). A grab sample of greisen from the dump at the adit mouth contained 0.15% Sn and 1.3% Cu.

Channel samples over 14 feet at the end of the adit (see Figure 3) taken recently by the Ringarooma Prospecting Company gave the following results:

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Six feet:

Four feet:

Four feet:

A sample over the "whole width" of another greisen body just south of the adit portal, taken by Mr. Keid, contained 1.34%Sn.

The combination of useful tin and copper assays and the presence of sphalerite suggest the area is worthy of further investigation, though prospecting to date has indicated only a relatively small tonnage.

ECONOMIC CONSIDERATIONS

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A large number of vein, greisen and alluvial occurrences were worked on or about the turn of the century and yielded several hundred tons of tin oxide. As economic considerations limited these activities to the higher grades ores, it is possible that modern mining methods and the higher price of tin allow re-working of old mines and the opening of new deposits. The present company has carried out a programme of clearing and bulldozing to more fully expose the previously worked areas and to allow investigation of new deposits, and this programme should be continued in conjunction with controlled sampling.

Particular attention has been given to the hard rock prospects at the Bell Hill, Mt. Paris, Mammoth and Tinpot Creek Mines (Fig. 1) and these are described in some detail in the following sections, along with the Cambria Mine.

A number of other known hard rock prospects await investigation (e.g. the Star of Peace Mine and Cox's Wolfram lode), and there are several other areas in which greisens have been mapped and in which sulphides are known to be concentrated. There is also the possibility that alluvial shed has been concentrated in the Ringarooma River on the western portion of the licence, and this also requires investigation.

The licence area is regarded as having considerable potential, particularly for tin, wolfram and possible copper, and fully warrants an expanded exploration programme.

THE TINPOT CREEK MINE

INTRODUCTION

The mine workings are largely within mining lease 28M70, of 80 acres. Once one of the principal mines of the licence area, it has produced at least 55 tons of cassiterite to 1907. The known workings are shown in Figure 2.

GEOLOGY

Production from this mine came from several kaolinized porphyry and greisen bodies lying within kaolinized granite. As can be seen from Figure 2, the greisen bodies are irregular or tend to an east-west strike. The greisen bodies appear to be steeply dipping but have not been worked below about 100 ft from the surface.

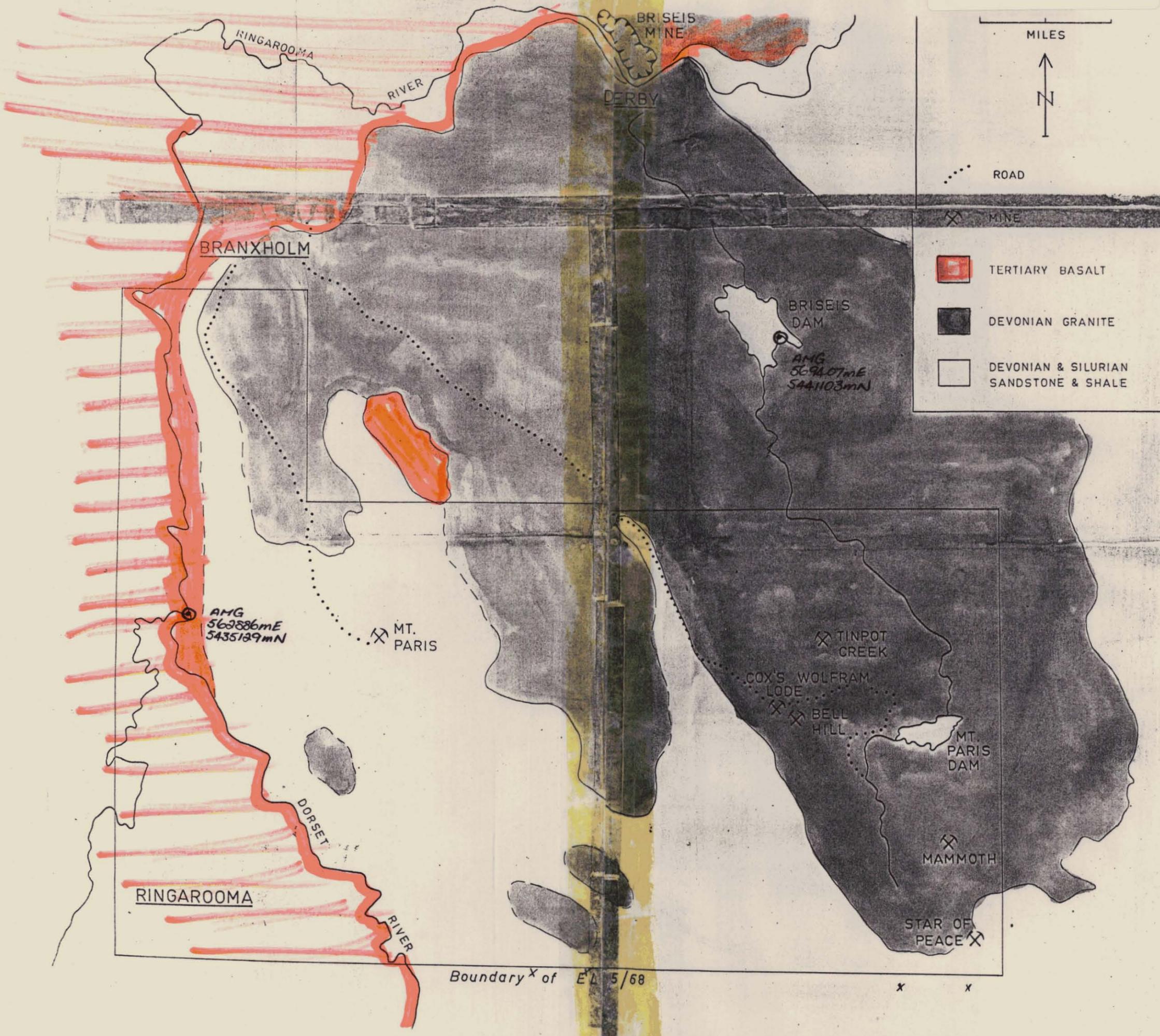
ECONOMIC CONSIDERATIONS

Most of the production appears to have come from the eastern open-cut in which is exposed a vertical zone, thirty feet wide, of highly kaolinized quartz porphyry containing a few quartz veins. Cassiterite is visible in places but no systematic sampling has been carried out to test the grade. Bulldozing indicates the lode extends to the east but the possible extensions to the west have not yet been tested. The greisen and clayey porphyry bodies could yield a million or more tons to 500 ft below the surface but the grade is unknown.

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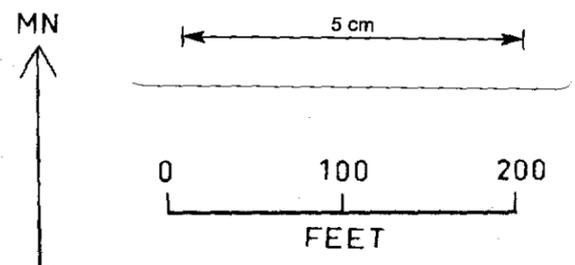
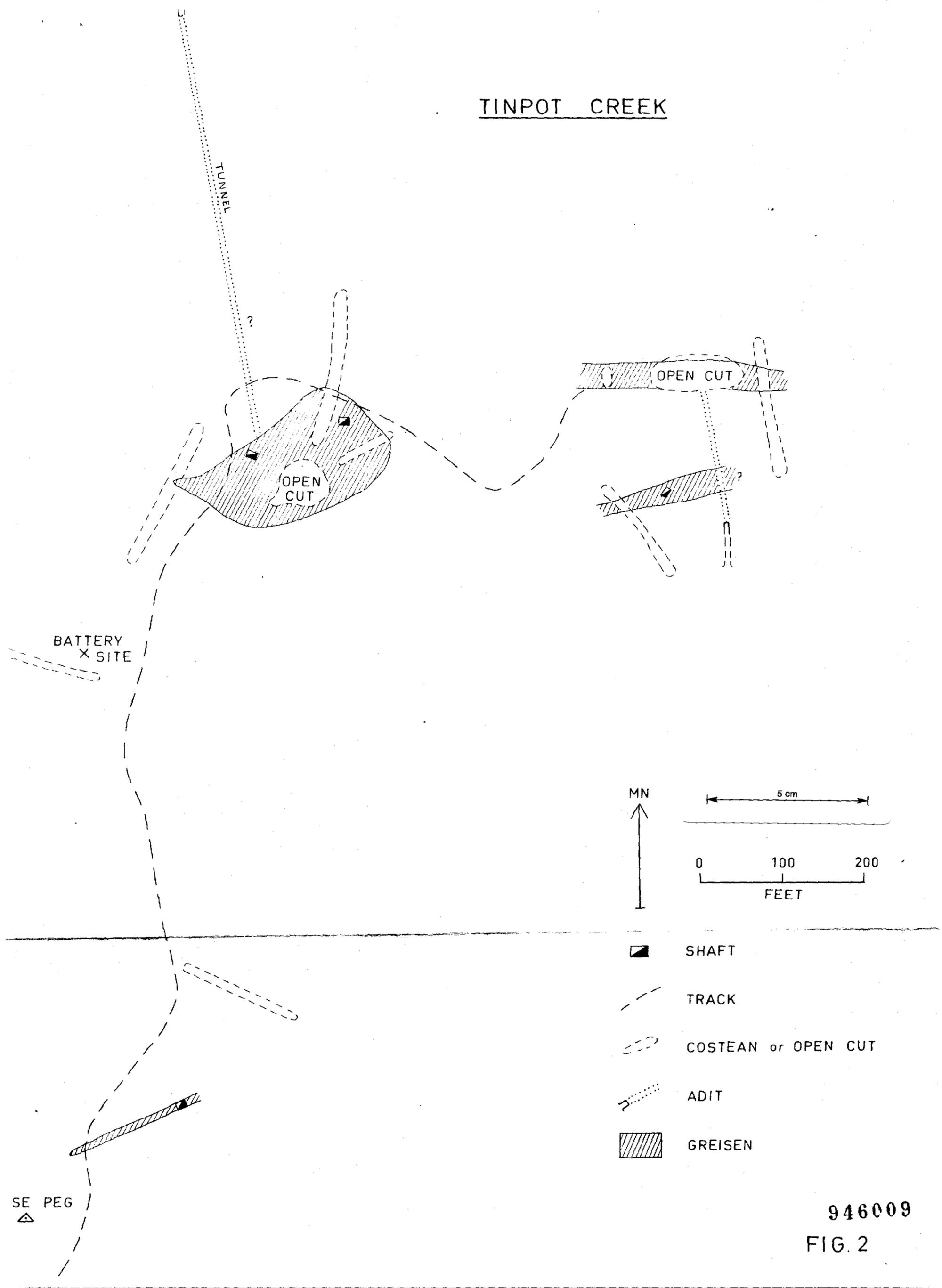


AMG REFERENCE POINTS ADDED

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FIG. 1

TINPOT CREEK



- SHAFT
- - - TRACK
- COSTEAN or OPEN CUT
- ⋯ ADIT
- ▨ GREISEN

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FIG. 2

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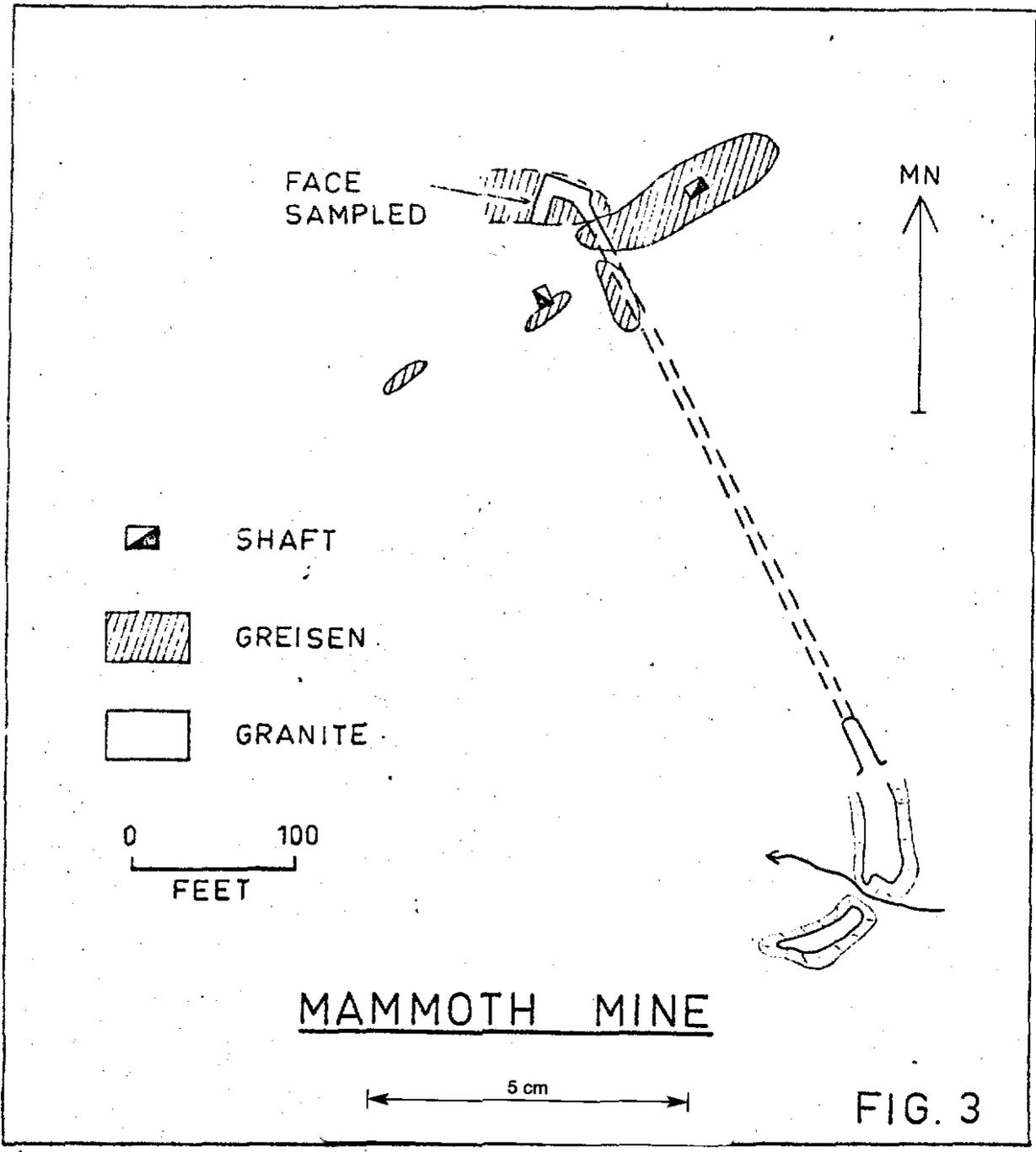


FIG. 3