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ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

WEST COAST MINES

REPORT ON ORE POTENTIAL

OF THE

MURCHISON MINE

MICROFILMED

GEOLOGICAL DEPARTMENT

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REPORT 127

Project Geologist

MARCH 1976

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DISTRIBUTION

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AMG REFERENCE POINTS ADDED

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1. SUMMARY AND CONCLUSIONS

An approximate ore reserve of 650 tons of unbroken ore at between 15% and 20% Zinc, ammenable to opencutting was established. As well as this up to 500 tons of stope fill at an average grade of 4.3% Zinc could be recovered from the open pit.

The small tonnage potential would indicate that no further work needs to be undertaken to establish the sub - economic nature of the ore remaining (even for a small scale open cut).

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2. SCOPE OF REPORT:

To investigate potential for opencutting ore remaining in the Murchison Mine.

3. GENERAL:

3.1 Background

The mine is situated at the foot of the "South Western Corner" of the Farrell Range (see fig.1). Today the mine site is easily accessed by the H.E.C. road to the Murchison Dam site.

Information upon the mine and its production has either not been well documented or is not readily available.

The mine was worked at the beginning of this century for lead and silver. Since then it has apparently been re-investigated on a number of occasions. In the recent past E.Z. has reclaimed the dumps and tailings but did not consider mining in situ ore in any great detail.

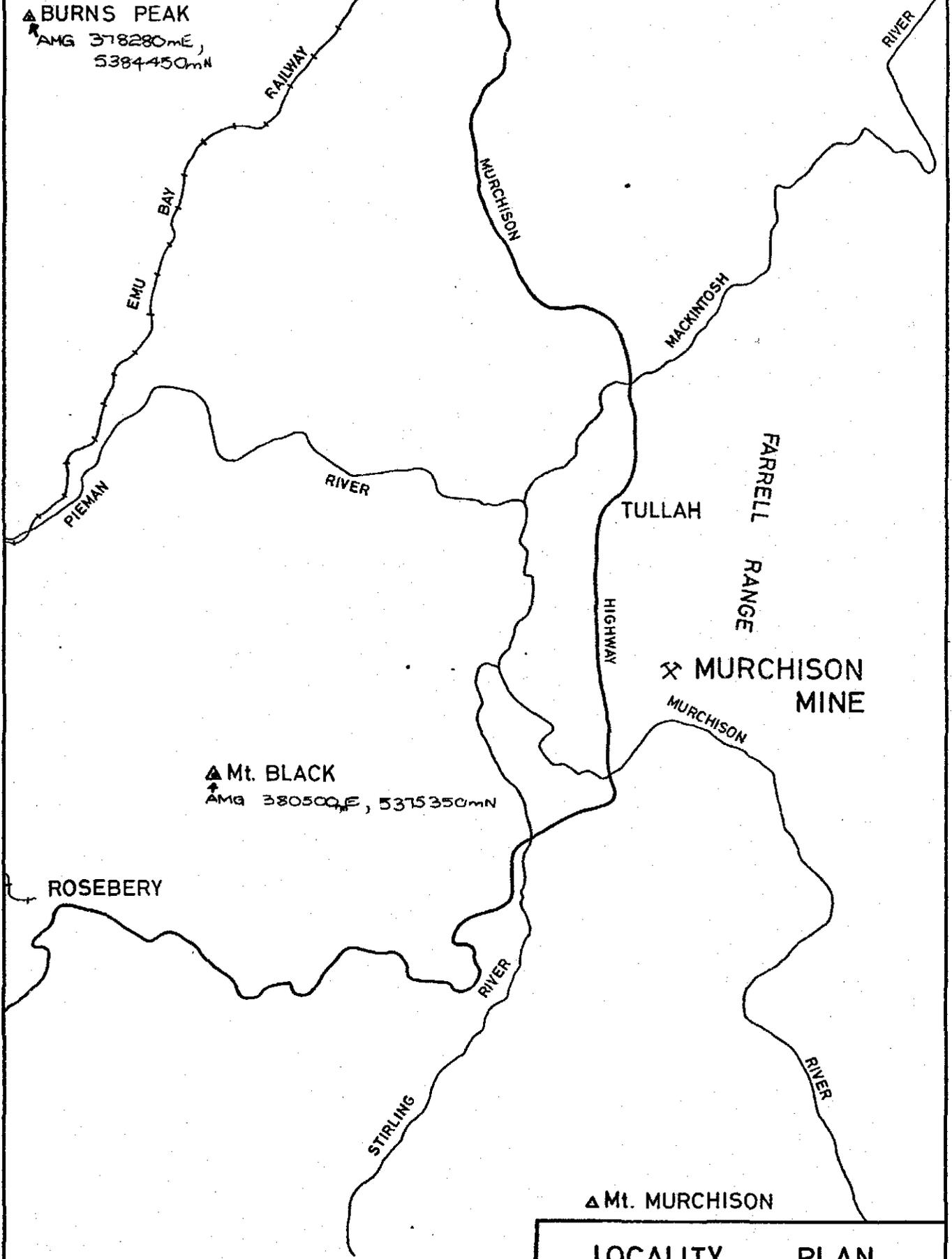
3.2 Geology

The mineralization is typical of fracture infilled (vein type) deposits. The lode was of limited size. (Whitten in 1947 estimated approximate original dimensions in plan view to be 135 feet long with average width of 11 feet (see fig.2). The main ore minerals are galena, sphalerite, chalcopyrite and apparently some tetrahedrite and related minerals, in a gangue of quartz and a carbonate (probable very close to siderite in composition), with occasional patches of pyrite and some chlorite. The sphalerite was usually distributed along the footwall, so that only the galena rich hangingwall portion were stoped.

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5 cm

△ Mt. MURCHISON

LOCALITY	PLAN
SHOWING	THE
MURCHISON	MINE

FIGURE 1

The mineralized fracture is described as a shatter zone by Whitten. It strikes N 15°E and dips between 70°W and vertical.

Mineralization is confined to a "favourable band" of sheared pyroclastics between shale units. An en-echelon pattern of mineralization in fractures within the pyroclastics has been noted. Small subsidiary fractures on the F/W are mineralized but only for a short distance from the main fracture.

Apparently extensive surface prospecting and trenching failed to uncover any additional economic mineralization in the past.

4. ASSESSMENT OF POTENTIAL ORE AVAILABLE:

An initial inspection and review of relevant reports showed that the amount of ore remaining close to the surface is very small. Consequently a detailed survey and sampling programme were considered unnecessary.

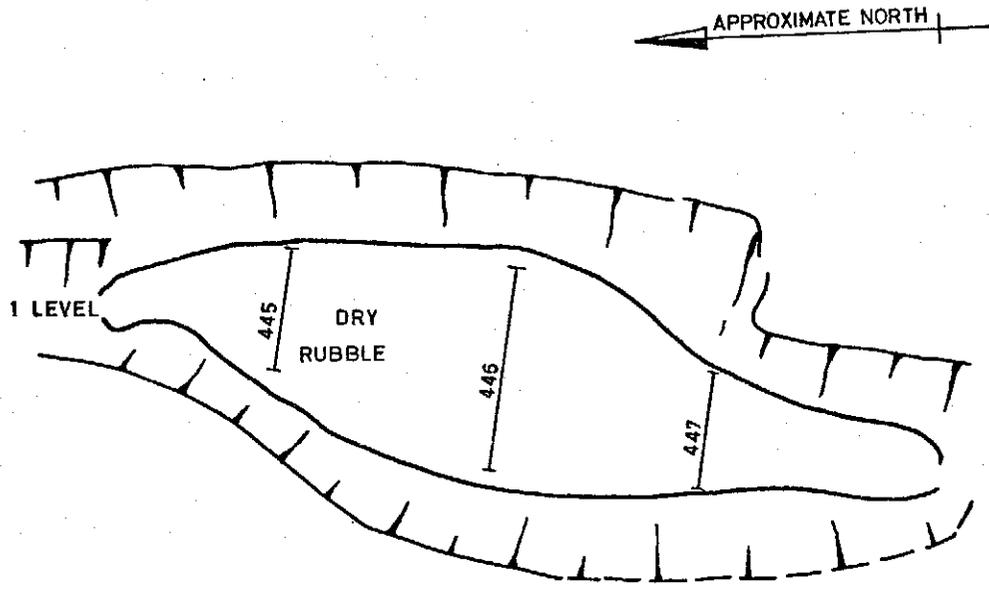
4.1 Ore Amenable to Open Cutting.

A skin of sphalerite rich mineralization is visible on the eastern wall at the northern end of the open pit. Visual assessment indicates a grade of this material to be between 15% and 20% Zinc. Technical difficulties in sampling would make it difficult to gain an accurate measurement.

About 50 feet north of this a thin gossan and some floaters of weathered sulphides were observed. Further north of this there were several pits and apparently overgrown rises and trenches. To the south of the open pit there was no evidence of the extension of mineralization.

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NOT TO SCALE

SAMPLE N°	Pb.	Zn.	Fe.	Cu.	Ag.	Au.
445	1.1	5.2	5.3	0.11	84	<0.01
446	3.0	5.1	8.5	0.08	150	0.5
447	1.2	2.5	5.2	0.03	77	<0.01
AVERAGE	1.8	4.3	6.3	0.07	76	-

SKETCH PLAN OF
OPENPIT SHOWING
SAMPLING

FIGURE 2

A longitudinal section from Whitten's report is reproduced in this report (see plan included) on this is cross-hatched the ore available for open cutting. A ore reserve of approximately 650 tons was calculated.

4.2 Stope Fill

The open pit was filled with rubble (possibly stope fill) that contained numerous fragments and blocks of sphalerite rich mineralization. Samples of the rubble were taken from the pit bottom (see fig.2). The average grade was as follows:-

Pb.	Zn.	Fe.	Cu.	Ag.	Au.
<u>1.8</u>	<u>4.3</u>	<u>6.3</u>	<u>0.07</u>	<u>76</u>	-

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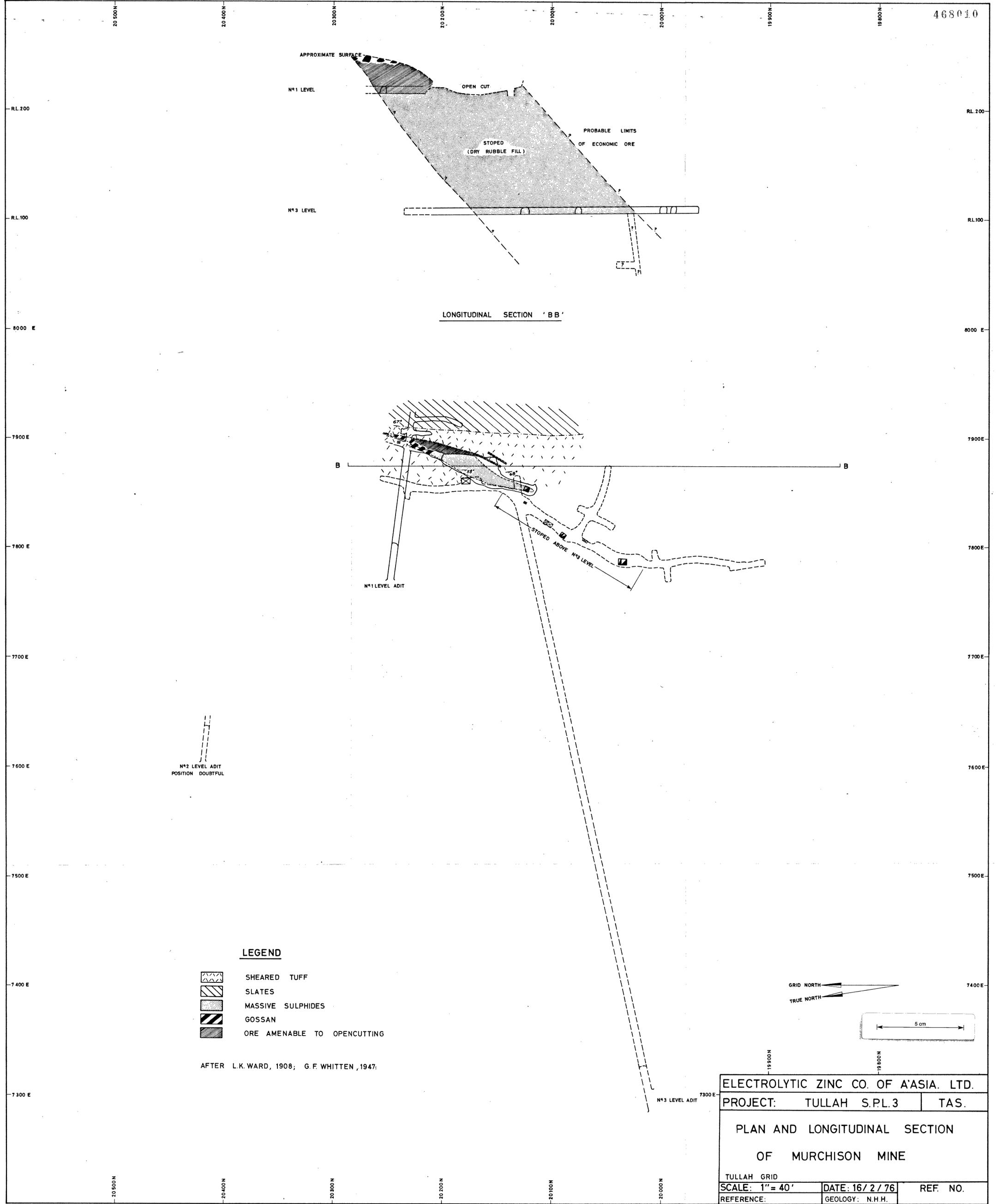
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L.K. Ward "The Mount Farrell Mining Field" 1908, Tasmanian Department of Mines, Geological Survey Bulletin No. 3.

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G.F. Whitten "Second Report on the Murchison Mine, Silver-Lead-Zinc, Mount Farrell", 1947 E.Z. Geology Department Report.



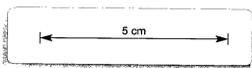
N°2 LEVEL ADIT
POSITION DOUBTFUL

LEGEND

- SHEARED TUFF
- SLATES
- MASSIVE SULPHIDES
- GOSSAN
- ORE AMENABLE TO OPENCUTTING

AFTER L.K. WARD, 1908; G.F. WHITTEN, 1947.

GRID NORTH
TRUE NORTH



ELECTROLYTIC ZINC CO. OF A'ASIA. LTD.		
PROJECT:	TULLAH S.P.L.3	TAS.
PLAN AND LONGITUDINAL SECTION OF MURCHISON MINE		
TULLAH GRID		
SCALE: 1" = 40'	DATE: 16/2/76	REF. NO.
REFERENCE:	GEOLOGY: N.H.H.	