

585001

49-3022

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22. 9. '89	
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Resubmit to	Date

MT BISCHOFF TIN PROJECT

RETENTION LICENCE 8807

GEOLOGICAL REPORT

REPORT NO. 202008

1:250,000 Burnie SK55-3

1:100,000 Hellyer 8015-III

Distribution:

Department of Mines, Tasmania
Comstaff
Pressuag
Exploration - Perth
Exploration - Melbourne

S Carthew
Senior Geologist
September 1989
SC:sh1982

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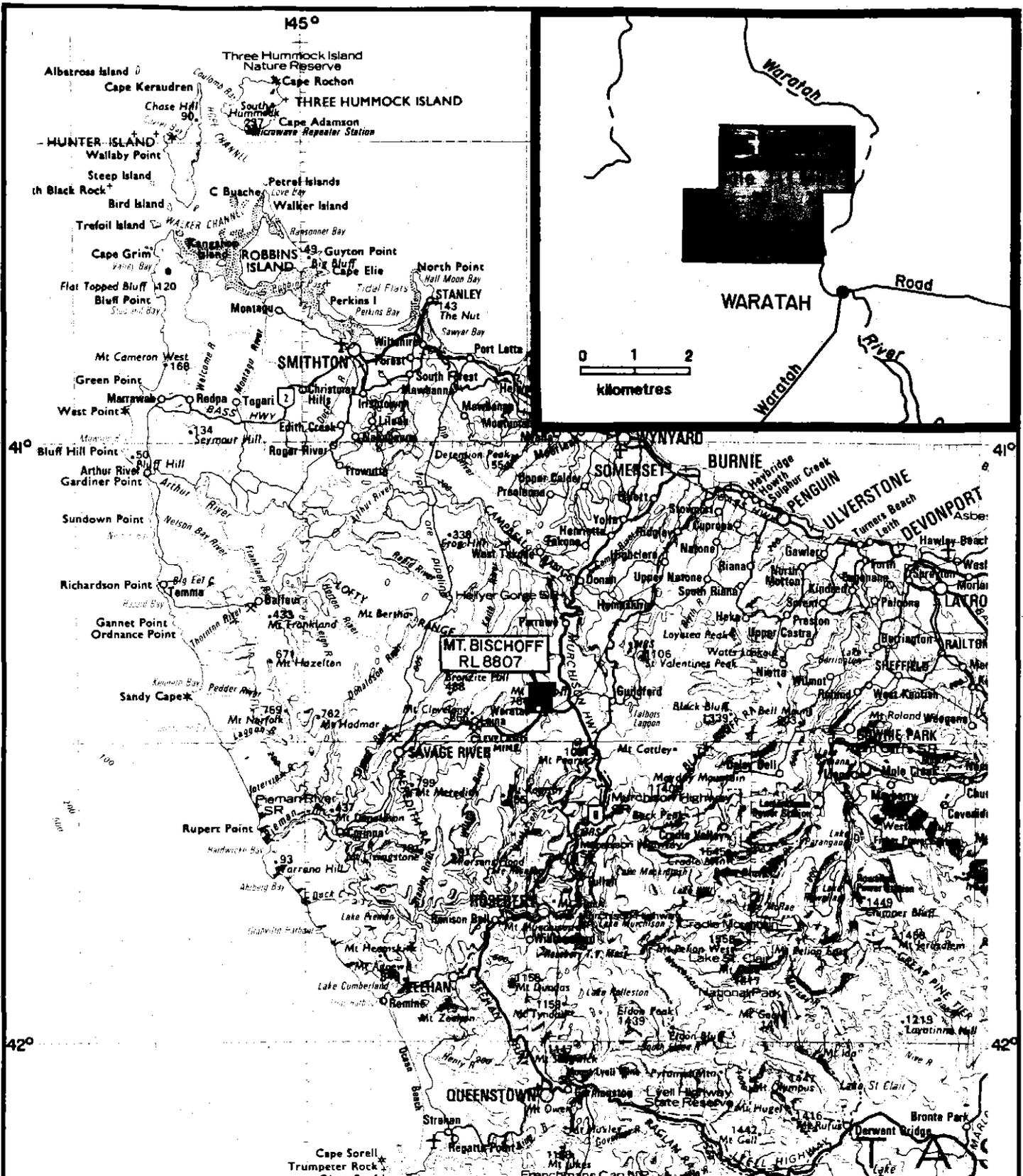
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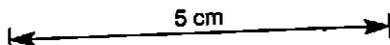
Figure 1 Location Map

ENCLOSURES

- | | |
|-------------|--|
| Enclosure 1 | Mt Bischoff, Retention Licence, area applied for, Drawing No. M1-004-1A, Scale 1:10,000 |
| Enclosure 2 | Mt Bischoff, Surface Plan of the known ore reserve area, January 1982 and 1987 trenches, Drawing No. 02/MB/2/01, Scale 1:2,000 |

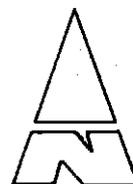


MOUNT BISCHOFF TENEMENT LOCATION



kilometres

585003



SUMMARY

585004

Geological investigations and mining engineering studies have shown that

- 1) no more preliminary geological work needs to be undertaken until the orebody is economically mined. At that stage infill grade drilling and sampling will be required to ensure correct feed is delivered to the concentrator plant.
- 2) treatment of ore from Mt. Bischoff deposit would be enhanced if the existing treatment plant at nearby Cleaveland was utilized.

Investigations are continuing.

The ore reserves at Mt. Bischoff for D.S.L. (Dolomite Sulphide Lode) and Q.P. (Quartz Porphyry) using the polygonal method are:-

D.S.L. (at 0.3% Sn cut off)

<u>%Sn</u>	<u>TONNES</u>	<u>CATEGORY</u>
1.12	53,800	Proven
1.05	1,053,800	Probable
0.76	221,260	Possible
<u>0.52</u>	<u>99,240</u>	<u>PP</u>
<u>0.87</u>	<u>1,428,100</u>	<u>TOTAL</u>

Q.P. (at 0.2% Sn cut off)

<u>%Sn</u>	<u>TONNES</u>	<u>CATEGORY</u>
0.47	3,325,500	Probable
0.50	76,300	Possible
<u>0.33</u>	<u>120,100</u>	<u>PP</u>
<u>0.47</u>	<u>3,521,900</u>	<u>TOTAL</u>
<u>0.58</u>	<u>4,950,000</u>	<u>GRAND TOTAL</u>

1.0 INTRODUCTION

The Bischoff Joint Venture comprising Metals Exploration Ltd. 85% and Comstaff and Preussag 15% were granted a Retention Licence (No. 8807) of 4 square kilometers, on 14/10/88 for a period of 12 months over the Mount Bischoff tin deposits (G.R. -8015-376554122). During this year a review of the mining feasibility for this deposit by Mr. G. Jones has been forwarded to the Tasmanian Department of Mines. ✓

2.0 GEOLOGY

The Mount Bischoff pyrrhotite - cassiterite replacement deposit is found at a structural focus in a Precambrian anticlinorial inlier overlain by a thick sequence of Cambro-Ordovician Dundas trough volcanics and marine sediments and repeatedly intruded by anorogenic, dominantly acid magmatism during Silurio-Devonian times. These in turn are overlain by Tertiary sediments and lavas.

It was during the Devonian Orogeny that tectonic movements produced broad NNE trending faults parallelling the NNE margin of the Tyennan geanticline and stress patterns caused the development of east and northeast folding producing the WSW trending Mt. Bischoff anticlinorium into which tin rich porphyries were intruded. At Mt. Bischoff it is postulated, a narrow granitic "cupola" with the porphyry dykes emanating from it, intruded the axis of the anticlinorium and stress fractures relating to this brittle deformation event. Pulsations of acid rich solutions, explosive brecciation, crystallization and successive replacement tin mineralization of dolomite rich horizons continually upgraded this deposit.

3.0 TIN MINERALIZATION

At Mt. Bischoff, the stanniferous mineralized environ is 1.7km x 2.7km and consists of interconnecting parallel and radiating quartz porphyry dykes, that cut unmetamorphosed Precambrian sediments of the Mt. Bischoff inlier. Potential economic tin mineralization is found within the most intense network of porphyry dykes, especially where the dykes are in contact with dolomite rich horizons; the dolomite is replaced by assemblages containing quartz, sellaite, topaz, pyrrhotite, tourmaline, fluorite, and cassiterite. High tin values are found in veins, topaz and quartz endogreisens and in topaz and tourmaline exogreisens.

4.0 ORE RESERVES

The geological ore reserves at Mt. Bischoff are so far restricted to 600m radius, and are split into two categories based on their occurrence (DSL - Dolomite Sulphide Lode - and QP - Quartz Porphyry). The density for each ore type as determined by AMDEL is 3.5g/cc and 3.0g/cc respectively. Using the polygonal cross-section method, the ore reserves are

DSL (at 0.3% Sn cut off)

<u>%Sn</u>	<u>TONNES</u>	<u>CATEGORY</u>
1.12	53,800	Proven
1.05	1,053,800	Probable
0.76	221,260	Possible
<u>0.52</u>	<u>99,240</u>	<u>PP</u>
<u>0.87</u>	<u>1,428,100</u>	<u>TOTAL</u>

Q.P. (at 0.2% Sn cut off)

<u>%Sn</u>	<u>TONNES</u>	<u>CATEGORY</u>
0.47	3,325,500	Probable
0.50	76,300	Possible
<u>0.33</u>	<u>120,100</u>	<u>PP</u>
<u>0.47</u>	<u>3,521,900</u>	<u>TOTAL</u>
<u>0.58</u>	<u>4,950,000</u>	<u>GRAND TOTAL</u>

5.0 MINING ENGINEERING AND METALLURGICAL STUDIES

585007

A review of mining feasibility for this deposit by Mr. G. Jones has been forwarded to the Tasmanian Mines Department. It has been considered that treatment of Mt. Bischoff ore at the Cleaveland Mill and processing plant would enhance the economic viability of the project.

Investigations are continuing.

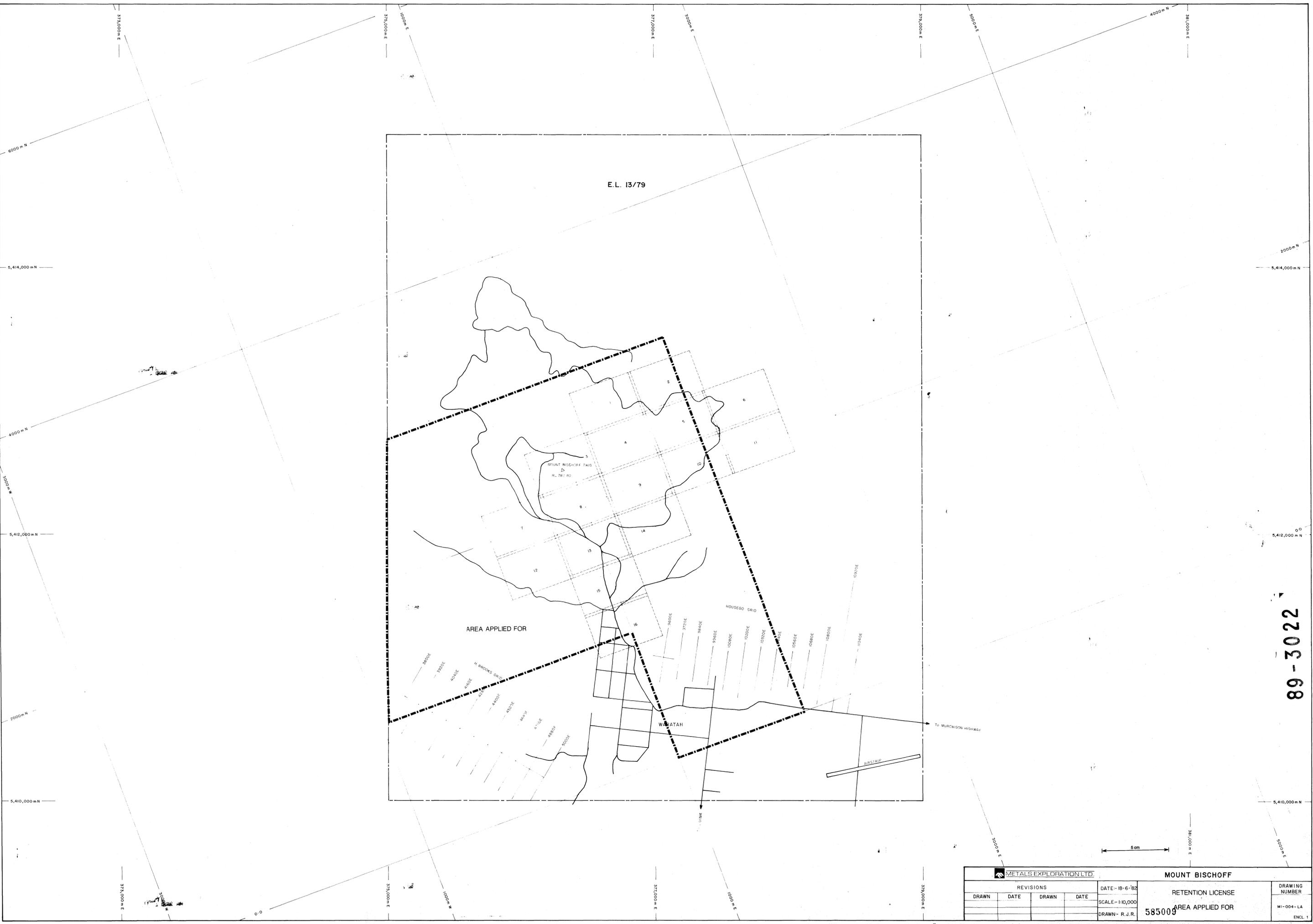
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6.0 EXPENDITURE STATEMENT

MT BISCHOFF RETENTION LICENCE 8807

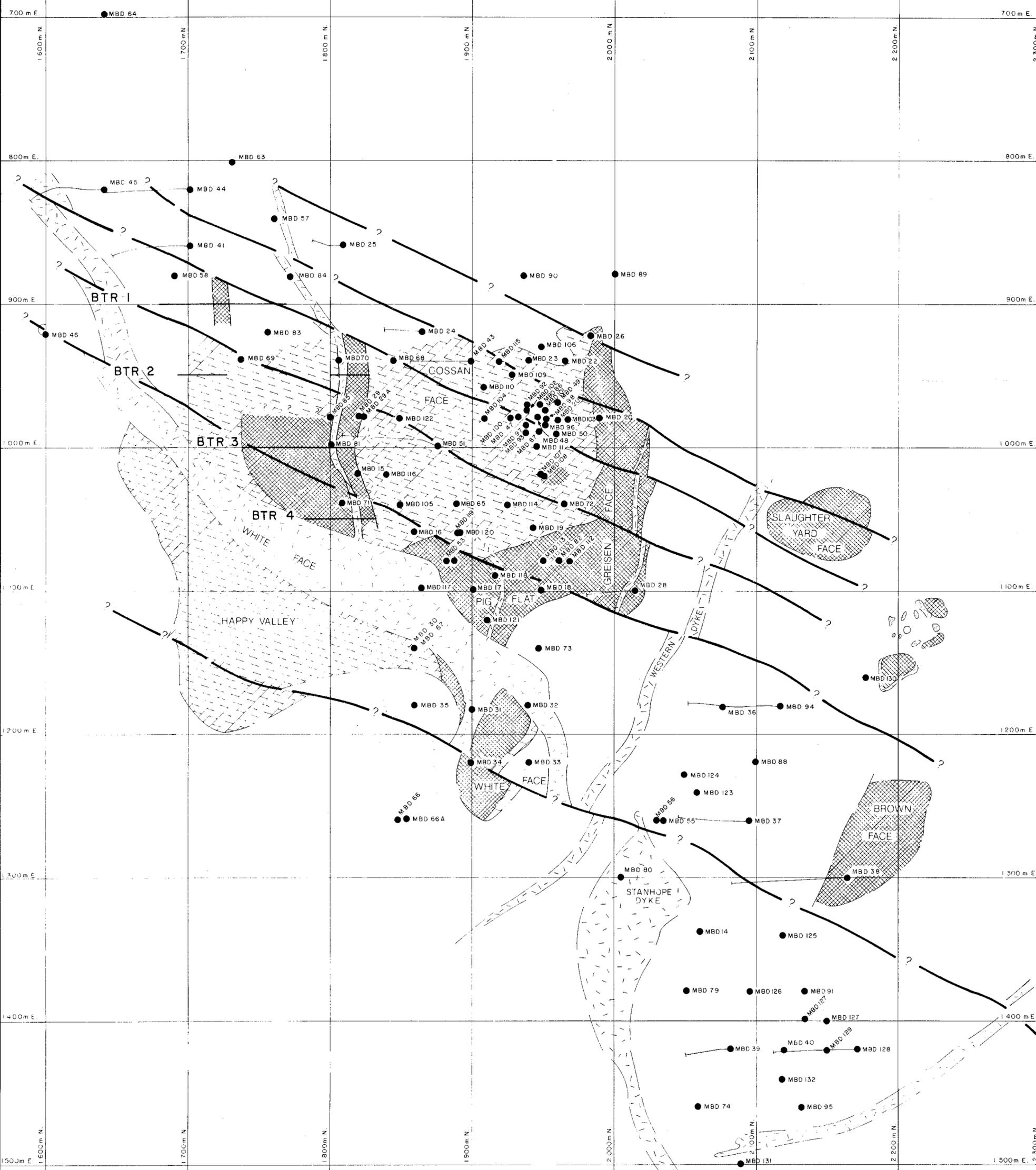
	\$
Consulting Fees	304.80
Contractors	3,139.20
Contractors - Drafting	777.25
Drafting Supplies	132.16
Field Expenses	180.60
General Expenses	561.75
Indirect Reimbursables	4,239.50
Technical Services	13,227.73
Motor Vehicle Costs	442.78
Rent - Offices and Premises	742.22
Tenement - Administration	3,604.00
Travel and Accommodation	472.20

	\$27,824.19
	=====



89-3022

				MOUNT BISCHOFF		DRAWING NUMBER MI-004-LA	
REVISIONS		DATE - 18-6-82		RETENTION LICENSE		AREA APPLIED FOR 585009	
DRAWN	DATE	DRAWN	DATE	SCALE - 1:10,000		ENCL 1	
_____	_____	_____	_____	DRAWN - R.J.R.		_____	



- Porphyry
- Dolomite
- Dolomite Sulphide Lode
- Siltstones, Shales, Quartzites
- Fault
- Interpreted Geological Contact
- Collar of Diamond Drillhole, Stage 3 Programme
- Plan view of prestage 3 D.D.H.
- BTP-2 Trench

M.E.L. GRID NORTH
(530°)
ADOPT. MAG. NTH

5 cm

METALS EXPLORATION LIMITED	
MT. BISCHOFF TIN PROSPECT MT. BISCHOFF MINE AREA.	
SURFACE PLAN OF THE KNOWN ORE RESERVE AREA JANUARY 1982 AND 1987 TRENCHES	
DRAWN BY : D.S.	DRAFTSMAN : T.G.D.S.
DATE : Oct '87	REVISIONS :
Drg No 02/MB 2 01	
SCALE 1:2 000	
ENCL. 2	

89-3022

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