82-1698
Vol 1.

001

832001

MT BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

MONTHLY REPORTS FOR JANUARY TO DECEMBER 1981

VOL. 1

TCR 82-1698 I

002

832002

METALS EXPLORATION LTD.
20 LITTLE COLLINS STREET MELBOURNE, AUSTRALIA 3000. TELEPHONE 654 4200. TELEX AA32051. TELEGRAM ROCKDOC.

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR JANUARY, 1981

Distribution:

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D. Campi

G.M. Motteram
23rd February 1981

MT. BISCHOFF TIN PROSPECT

REPORT FOR JANUARY, 1981

General

Field work in the Stage 3A Programme recommenced on January 5, 1981, and diamond drilling on January 8, 1981. Diamond drilling progress was slow mainly due to rig breakdowns and partly due to drilling in difficult ground. Progress metreage to the end of January was 463.6 metres whereas budgeted progress was 2,100 metres. As a result it has been decided to employ a rig starting in March, 1981.

Two contract geologists were employed for 2 months from January 20, 1981. The geologists will assist in core logging ("old" and "new") until a more permanent junior geologist is obtained for the programme.

A contract geophysical crew was employed to conduct Electromagnetic surveys on three grids within the Exploration Licence. The crew completed their surveys on January 31, 1981. It was agreed with the contractor, Geoterrex Pty. Ltd., that they may conduct some trial "Maxmin" E.M., free of charge, on some of the grid lines during February.

Re-boxing and re-logging of "old" core commenced during the month.

Metallurgical investigations on Stage 2B samples began in Launceston. A Project Metallurgist was appointed and will begin work in Launceston at the end of February.

Diamond Drilling:

Three holes (MBD 50 to MBD 52) were completed, and one hole was in progress (MBD 53) for 290.2 metres. Cumulative progress for the programme is 6 ½ holes for 463.6 metres. All the holes were in HQ core size - parts will be selected for metallurgical testing - and one was extended to test a porphyry target in NQ core size. Summary logs for MBD 50 to MBD 52 are appended. The following significant results were obtained:

Hole No.	From	To	Width	%Sn	Rock Type
MBD 50	22.4	36.4	14.0	0.74*	DSL
MBD 51	15.0	26.1	11.1	0.70*	DSL
	65.5	77.8	12.3	0.32	Porphyry

The following interval assays reported previously have been updated following receipt of check assays on the Amdel B2 method for +1% Sn.

MBD 47	34.0	40.9	6.9	1.06	DSL & dol
MBD 48	44.9	55.9	11.0	1.11*	DSL
MBD 49	22.3	33.9	11.6	1.52	DSL

* Denotes assays over 1.00% Sn to be checked by XRF B2 method.

...2

Core Grinding

Core grinding was continued, mainly on holes in the vicinity of the "buried dolomite". The following holes were completed.

MBD 42	MBD 46
MBD 45	B 49

Assay results have been received for holes MBD 42, MBD 44, MBD 45, and MBD 46 (0 - 47 metres). Significant results are as follows:

Hole No.	From	To	Width	%Sn	Rock Type
MBD 42	7.0	9.0	2.0	0.44	Sediments & vein
	105.6	107.6	2.0	1.16	Sediments & dol vein
MBD 45	234.5	237.2	2.7	0.21	Sediments

Old Core

The following holes were re-logged during the month:

B 49	B 55
B 50	B 57

Regional Exploration

Plotting and contouring of the ground magnetic survey results on the "buried dolomite" and Housego grid areas were completed. Copies of these results have been forwarded to CRAE's geophysicists for interpretation.

In the "buried dolomite" area, very little magnetic variation was obtained. In the Housego grid area, it appears that 4 anomalous zones have been delineated. Two of the zones occur over Tertiary baslat cover. The stronger one being about 400 metres long and 40 metres wide, the lesser one 300 metres long. A major anomaly exists for 100 metres across the basalt/sediment contact in the north-eastern portion of the grid, and the fourth anomaly, about 30 metres wide, lies about 100 metres further north.

Results from the Crone Pulse Input Electromagnetic survey will be interpreted by Geoterrex's geophysicist during February. It appears that some electromagnetic response was obtained from most of the areas where ground magnetic anomalies occur. It is expected that the drill will move to the Housego grid area in the late February to drill selected anomolies.

Metallurgy

Testwork on Stage 2B samples at the Tasmanian Mines Department, Launceston, began during January, with the following results being obtained.

...3

Metallurgy (Contd.)

Heavy Liquids Testing:

Dolomite Sulphide Lode material, showed poor response at each sizing.

Porphyry material showed progressive improvements in response from minus 12 mm to 0.5 mm sizing, although tin recoveries to the sink products were fair only. Further work on the potential for upgrading of porphyry ore will be performed on Stage 3 porphyry composites.

Talc Depression/Sulphide Flotation:

Use of Daicel 1120 (talc depression) in sulphide flotation for composite SC2 has been shownto be effective in froth control.

Resultant rougher sulphide flotation, following activation with CuSO4 gave excellent sulphur removal with an average 40% weight rejection and 7% tin loss only.

Work in February will progress to grind/liberation tests on composites SC1, SC2, and Porphyry sample.

Aberfoyle have agreed to perform check testing and assessment of Mt. Bischoff Stage 3 samples with respect to matte fumer feed.

Intercepts gained from the metallurgical drilling HQ core indicate that the required DSL samples will be obtained.

Mining

Close spaced drilling results in the Greisen Face area will be assessed during February.

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

	JANUARY, 1981		FOUR MONTHS TO 31.1.81	
	ACTUAL	BUDGET	ACTUAL	BUDGET
	$	$	$	$
Technical Services	16,417	24,900	55,399	77,500
Travel & Accommodation	439	700	3,032	2,800
Labour	1,326	1,500	4,859	5,650
Camp & Messing	1,042	1,400	2,142	4,400
Vehicles	906	1,000	2,685	3,100
Equipment Rental	50	550	150	1,450
Consumables & General	9,022	11,110	25,480	24,910
Tenement Expenses				500
Track Cutting			875	4,000
Geophysical Surveys				4,000
Diamond Drilling	22,259	66,000	24,126	135,000
Site Preparation		4,000		8,000
Assays	391	2,800	532	5,600
Mining Studies	-	780	-	780
Metallurgical	3,097	8,600	8,538	17,800
Capital Items	6,911	6,000	42,233	38,500
	61,860	129,340	170,051	333,990

SUMMARY OF EXPENDITURE TO 31 JANUARY 1981

Stage 1	270,000
Stage 2A - Early Start	29,020
Stage 2A	198,818
Overruns: Stage 1 - M.E.L.	11,308
Metallurgical - CRAE	23,500
Stage 2B	482,354
Stage 2B - 3A Holding Costs Offset - A.I.R. & D. Grant	40,000
Stage 3A	170,051
CUMULATIVE EXPENDITURE TO DATE	1,225,051

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

EL13.79

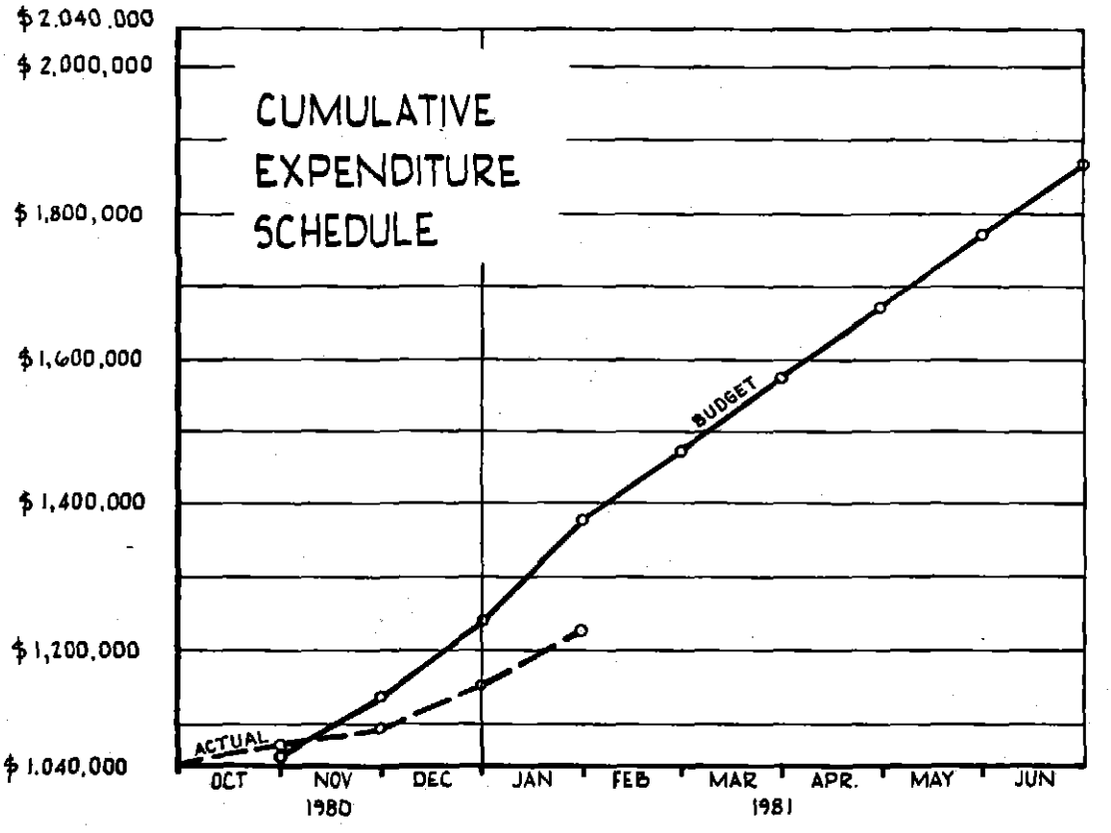
	JANUARY 1981	FOUR MONTHS TO 31.1.81
Technical Services	$ 13,693	$ 50,385
Travel & Accommodation	293	2,453
Labour	1,259	4,340
Camp & Messing	916	2,016
Vehicles	906	2,685
Equipment Rental	50	150
General Expenses & Consumables	9,022	22,055
Track Cutting		875
Diamond Drilling	22,259	24,126
Metallurgical	3,097	8,538
Assays	391	532
Capital Items	6,911	42,233
	58,797	160,388

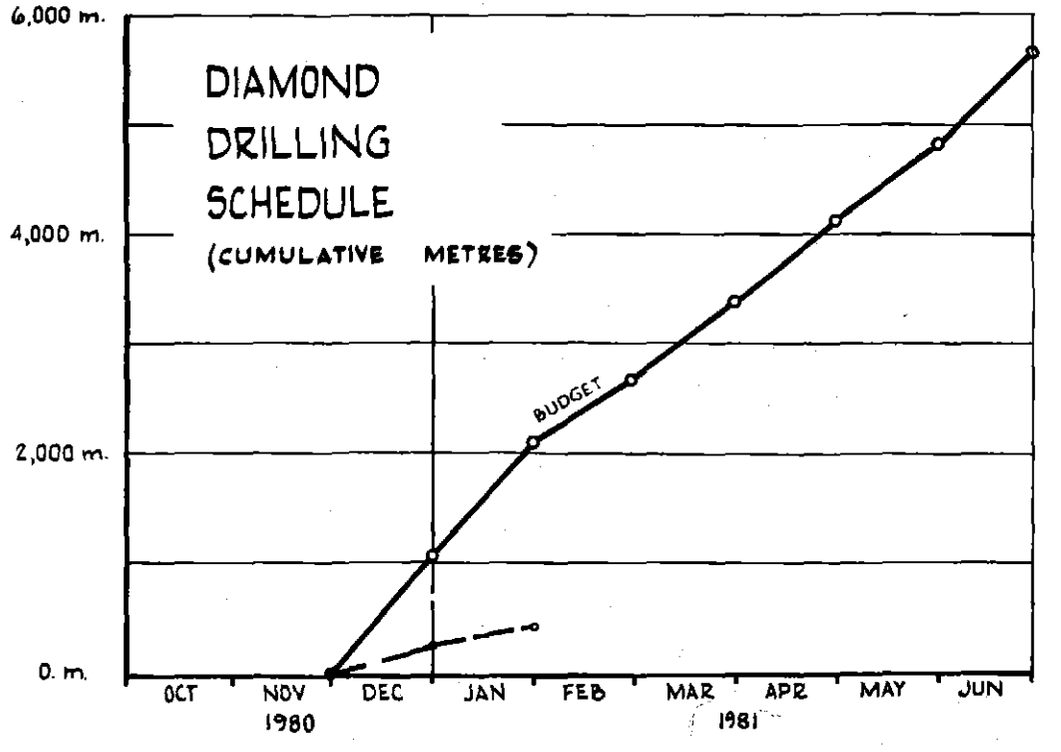
MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

AP5.80

	JANUARY, 1981	FOUR MONTHS TO 31.1.81
Technical Services	$ 2,724	$ 5,014
Travel & Accommodation	146	579
Labour	67	519
Camp & Messing	126	126
General Expenses & Consumables	-	3,425
	$ 3,063	$ 9,663





MT. BISCHOFF

STAGE. 3A SUMMARY
as at 31·1·80

Rev. 23·2·81 Dra Nº. 80-449r

INITIAL PHASE METALLURGICAL PROGRAMME

SECTION B. TALC CONTROL

GENERAL CONDITIONS:

Sample:	SC2 - 1000g
Grind:	Stage grind minus 250 micron
Collector:	Sod Eth. Xan. (300 g/t)
Frother:	MIBC
Depressant:	Daicel 1120
Activator:	$CuSO_4$ (100 g/t)
Pulp Density:	30% Solids

TEST B1:

pH = 5.0
Stage Additions Daicel, Initial 200 g/t
5 min 100 g/t
10 min 100 g/t

Result

	% wt.	Grade			Recovery		
		% Sn	% S	% Mg	% Sn	% S	% Mg
Rougher/Scav.Conc.	39.7	0.20	30.2	4.31	7.2	97.2	19.4
Rougher/Scav.Tail	60.3	1.69	0.57	11.8	92.8	2.8	80.6
Calc. Head	100	1.10	12.3	8.8			

TEST B2:

pH = 5.0
Overkill Daicel addition, Initial 700 g/t

Result

	% wt.	Grade			Recovery		
		% Sn	% S	% Mg	% Sn	% S	% Mg
Rougher/Scav.Conc.	40.7	0.22	30.8	4.07	7.9	97.2	18.9
Rougher Scav.Tail	59.3	1.77	0.61	12.0	92.1	2.8	81.1
Calc. Head	100	1.14	12.9	8.8			

Comment: Additional Xanthate and MIBC required to maintain froth.

MT. BISCHOFF JOINT VENTURE

DIAMOND DRILL LOG

Hole Number	:	MBD 50
Location	:	1960.16N 990.18E
Elevation	:	644.06
Dip	:	50°
Azimuth	:	360° grid
Total Depth	:	42.3 m
Surveys	:	Eastman every 20 m
Commenced	:	9.1.81 Completed: 10.1.81
Logged by	:	A. Jannink
Drilling Contractor	:	Longyear Australia Pty. Ltd.

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth - Description and notes, veins over 50mm, INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets	ASSAYS AVAILABLE	BULKED ASSAYS Sn.
	0-1.0	TRICONE - No Core						
	1.0-9.25 (8.25)	DOLOMITE Pale grey unaltered with 20-30% Recrystallised Dolomite DSL patches at: 7.3-7.4, 7.5-7.7, 7.8-7.9, 8.2-8.3, 9.0-9.1		2		2-3% po>py, disseminated and blebs in DSL's 6.2:80mm shear/fault zone		
10	9.25-10.6	DOLOMITE SULPHIDE LODE Serp/Talc/Carbonate		7/6/8		5% po disseminated		
	10.6-11.6	DOLOMITE with 25% patches of DSL		2		<1% po in DSL blebs		
	11.6-13.4	SILTSTONE minor QUARTZITE Contact 55° Contact 65°		10		2-5% disseminated, along bedding		
	13.4-23.4 (10.0)	DOLOMITE Pale grey, fairly massive, bedded in places DSL patches at: 13.4-13.45, 13.5-13.8, 14.2-14.3, 15.1-15.2, 21.8-22.2 Bedding 60°		2		2-5% po in DSL patches 16.0-16.1 shear zone 23.1-23.4 Shear zone		
20	23.4-38.0 (14.6)	DOLOMITE SULPHIDE LODE 23.4-31.7: 70% talc 30% pyrrhotite, slightly banded 31.7-38.0: 60% talc 40% pyrrhotite, less banded Banding 50° Rare patches of carbonate present		6/4		30% po banded, blotchy and coarsely disseminated 40% po with <1% py trace cp blotchy and coarsely disseminated		
40	38.0-42.3 (4.3)	SILTSTONE minor QUARTZITE Pale to medium grey, poorly bedded, disrupted 38.0-38.7 Transition zone with 20% serpentinite 20% carbonate		10/11		<1% py>po in stringers and veins Bedding 45°		
		END OF HOLE 42.3						

5 cm

832012

012

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 50

LOG SHEET OF

832013

013

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98400		1.0	2.0	1.0	440									
01		2.0	3.0	"	95									
2		3.0	4.0	"	85									
3		4.0	5.0	"	36									
4		5.0	6.0	"	220									
5		6.0	7.0	"	65									
6		7.0	8.0	"	26									
7		8.0	9.25	1.25	<4									
8		9.25	10.6	1.35	28									
9		10.6	11.6	1.0	210									
410		11.6	12.6	"	140									
11		12.6	13.4	0.8	90									
12		13.4	14.4	1.0	16									
13		14.4	15.4	"	38									
14		15.4	16.4	"	400									
15		16.4	17.4	"	10									
16		17.4	18.4	"	32									
17		18.4	19.4	"	10									
18		19.4	20.4	"	4									
19		20.4	21.4	"	540									
420		21.4	22.4	"	130									
21		22.4	23.4	"	5400									
22		23.4	24.4	"	1.19%	Yet to	re-confirmed.							
23		24.4	25.4	"	210									
24		25.4	26.4	"	740									
25		26.4	27.4	"	4850									
26		27.4	28.4	"	1.76%	Yet to	re confirmed							
27		28.4	29.4	"	1.12%	"	"							
28		29.4	30.4	"	1800									
98429		30.4	31.4	"	1.25%	"	"							

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 50

SAMPLE TYPE : DRILL CORE FROM 1.0 TO 31.4

832014 014

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98430		31.4	32.4	1.0	8500									
31		32.4	33.4	"	1.16%	Yet to be re-confirmed								
32		33.4	34.4	"	2700									
33		34.4	35.4	"	2300									
34		35.4	36.4	"	1.21%	"	"	"						
35		36.4	38.0	1.6	600									
36		38.0	39.0	1.0	280.									

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 50

SAMPLE TYPE : DRILL CORE FROM 31.4 TO 39.0

REPORT No. 832015

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF

HOLE No. MBD 50

COLLAR LOCATION

	Grid name	PLANAR CO-ORDINATES		ELEVATION
(1)	MBJV	1960.16 N	990.18 E	644.06
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	mA.H.D.

1:250 000 Sheet No. BURNIE SK 55-3 | 1:100 000 Sheet No. HELLYER 8015 | State TASMANIA

Mineral Tenement EL 13/79 | Holder METALS EXPLORATION LTD

Cadastral location and details
CROWN LAND / PRIVATE

W.C. Bearing from collar

330°	magnetic
360°	grid (1)
	grid (2)
	grid (3)
342°26'	true

Inclination at collar 50°

Total length 42.3

Commenced: 9 / 1 / 81

Completed: 10 / 1 / 81

Drilling contractor
LONGYEAR AUST. PTY LTD

Rig type
HC 150

Core size and non-coring (NC)

TRICONE	0	TO	1.0
HQ	1.0	TO	42.3
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
Eastman every 20m

Purpose of drilling and anticipated lengths to targets.
To obtain DSL core for metallurgical testing and to test continuity of rock types and tin grades between closely spaced holes
DSL target : 20-35

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type Magnetic	DIP
20.8	327° 30'	50°
41.8	330° 30'	50°

Comments on drilling.

Legend for graphic log column (see drill log for Hole No. _____)
'DERWENT' PENCIL No. | FIELD ROCK NAME, ETC

Symbols and abbreviations for drilling notes column.

LOGGED BY	LOGGED BY	LOGGED BY
A. JANNINK		
FROM 0 TO 42.3	FROM ____ TO ____	FROM ____ TO ____
DATE 11.1.81	DATE ____	DATE ____

Company managing exploration programme.
METALS EXPLORATION LTD

HOLE No. MBD 50
Log sheet 1 of 2

MT. BISCHOFF JOINT VENTURE

DIAMOND DRILL LOG

Hole Number	:	MBD 51
Location	:	1877.70N 1000.03E
Elevation	:	631.30
Dip	:	Vertical
Azimuth	:	-
Total Depth	:	110.0 m
Surveys	:	Eastman every 40 m
Commenced	:	12.1.81 Completed: 20.1.81
Logged by	:	A. Jannink
Drilling Contractor	:	Longyear Australia Pty. Ltd.

DEPTH (length from collar)	INTERVAL	DEPTH from - to · ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth · Description and notes, veins over 50mm, INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets.	ASSAYS AVAILABLE	BULKED ASSAYS Sn

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

INTERVAL	Depth · Description and notes, veins over 50mm, INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets.
0-0.5	Tricone - No core			
0.5 - 13.0 (12.5)	DOLOMITE Recrystallised in part Pale to medium grey, cream carbonate Mottled and brecciated Very broken, sheared, porous, and leached-faulted Clayey fault pug 11.4 →		2/F	Trace py in occasional stringers and specs
13.0 - 26.1 (13.1)	DOLOMITE SULPHIDE LODE Dark green ? fluorite rich carbonate/quartz with lesser talc/serpentinite and sulphides Generally irregularly banded		8/5/4/6	20-30% py trace sp irregularly banded, occasionally massive 20% py and po minor sp mostly irregularly banded
26.1 - 40.1 (14.0)	DOLOMITE Pale grey, fairly massive, slightly brecciated. Aggregate of 0.69m of DSL in 9 patches mostly composed of quartz/carbonate, minor pyrite, sphalerite 27.0-28.7 : Cavity - old workings		2	Trace po, py, sp as small specs Also 1-10% py in DSL patches
40.1-41.7	DOLOMITE SULPHIDE LODE mainly fluorite/carbonate		8/5	20% py, lesser sp, weak trace cp
41.7 - 48.8 (7.1)	DOLOMITE Pale grey, fairly massive, slightly brecciated. Aggregate of 0.73m of DSL in 3 patches mainly talc rich		2	<1% py > po, sp as small specs Also 5-30% py in DSL patches
48.8 - 54.1 (5.3)	RECRYSTALLISED DOLOMITE LESSER DOLOMITE White to pale grey, frequently brecciated Aggregate of 0.91m of DSL in 4 patches		3	1-2% py > sp > po disseminated Also 10-70% py > sp in DSL patches
54.1-56.0	DOLOMITE SULPHIDE LODE quartz/carbonate/talc		8/6/5	20% py ≫ po minor sp in blebs
56.0 - 59.9 (3.9)	SILTSTONE Poorly bedded partly disrupted 56.0-56.2 Transition zone with 40% serpentinite		10	Contact 60° 1-2% po and py Contact 40° disseminated 5% po and py in blebs
59.9-61.6	RECRYSTALLISED DOLOMITE massive, brecciated		3	Contact 70° 1% py ≫ po
61.6-62.5	SILTSTONE/QUARTZITE Transition zone type		10/11	5% py ≫ po in stringers
62.5 - 77.8 (15.3)	QUARTZ PORPHYRY 62.5-68.4: Milky white matrix with 10% quartz and 5% feldspar phenocrysts 68.4-74.1: Glassy white matrix, quartz and feldspar as above 74.1-76.6: Milky and glassy white matrix 76.6-77.8: Only milky white matrix		1	Contact ~80° 10-15% py > po coarsely disseminated 15% py rare po coarsely disseminated Trace cassiterite 10% py minor marcasite, disseminated
77.8 - 88.2 (10.4)	SILTSTONE AND QUARTZITE Bedding 60° → Medium grey, poorly bedded, much disrupted 82.0-82.6: massive Quartzite Bedding 50° → Gradual change to		10/11	Contact irregular approx 55° 2% py and po, finely disseminated, in veins and stringers
88.2 - 97.6 (9.4)	SILTSTONE AND SILTY SHALE Lesser Quartzite Medium to dark greenish grey, poorly bedded, much disrupted 96.9-97.6: Transition zone, slightly serpentinous Bedding 55° →		10/9	Trace py > po in stringers and disseminated 1% po > py disseminated and in stringers 10% py > po disseminated
97.6-99.7	DOLOMITE SULPHIDE LODE Pyrrhotite, carbonate, pyrite		4/8/5	60% po > py with 0.5% cp
99.7 - 104.2 (4.5)	DOLOMITIC SILTSTONE Mostly transition zone type but with dolomitic content Bedding 40° →		10/2	5-10% py and po in stringers, disseminated and in DSL patches
104.2-106.2	DOLOMITE Slightly impure with some siltstone		2	2% py and po in fractures, veins
106.2 - 110.0 (3.8)	SILTSTONE Minor Quartzite Moderately bedded, much disrupted Bedding 45° →		10	1-2% po and py in blebs and disseminated
	END OF HOLE 110.0m			

5 cm

832017

FOR LEGEND SEE DRAWING NO.

017

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 51

LOG SHEET 1 OF 1

832018 018

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98437		0.5	1.5	1.0	1400									
38		1.5	2.5	"	75									
39		2.5	3.5	"	14									
440		3.5	4.5	"	4									
41		4.5	5.5	"	<4									
42		5.5	6.5	"	12									
43		6.5	7.5	"	1800									
44		7.5	8.5	"	90									
45		8.5	9.5	"	46									
46		9.5	10.5	"	10									
47		10.5	11.5	"	260									
48		11.5	13.0	1.5	80									
49		13.0	14.0	1.0	3650									
450		14.0	15.0	"	1500									
51		15.0	16.0	"	4000									
52		16.0	17.0	"	4550									
53		17.0	18.0	"	4250									
54		18.0	19.0	"	1.17%	To be	confirmed.							
55		19.0	20.0	"	8700									
56		20.0	21.0	"	5100									
57		21.0	22.0	"	6100									
58		22.0	23.0		1.58%	To be	confirmed							
59		23.0	24.0	"	4700									
460		24.0	25.0	"	6400									
61		25.0	26.1	1.1	6200									
62		26.1	26.5	0.4	85									
63		26.5	27.0	0.5	1350									
64		28.7	29.1	0.4	30									
65		29.1	30.1	1.0	28									

Notes:— Sn by XRF Bi method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 51

SAMPLE TYPE : DRILL CORE FROM 0.5 TO 30.1

832019 019

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98466		30.1	31.1	1.0	130									
67		31.1	32.1	"	50									
68		32.1	33.1	"	10									
69		33.1	34.1	"	<4									
470		34.1	35.1	"	22									
71		35.1	36.1	"	360									
72		36.1	37.1	"	210									
73		37.1	38.1	"	30									
74		38.1	39.1	"	4									
75		39.1	40.1	"	8									
76		40.1	41.1	"	360									
77		41.1	42.1	"	2600									
78		42.1	43.1	"	65									
79		43.1	44.1	"	16									
480		44.1	45.1	"	380									
81		45.1	46.1	"	360									
82		46.1	47.1	"	560									
83		47.1	48.1	"	1100									
84		48.1	49.1	"	1600									
85		49.1	50.1	"	290									
86		50.1	51.1	"	300									
87		51.1	52.1	"	370									
88		52.1	53.1	"	2400									
89		53.1	54.1	"	820									
490		54.1	55.1	"	2350									
91		55.1	56.1	"	1500									
92		56.1	57.1	"	75									
93		57.1	58.1	"	80									
94		58.1	59.6	1.5	70									
48495		59.6	60.6	1.0	900									

Notes :— Sn by XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 51

SAMPLE TYPE : DRILL CORE FROM 30.1 TO 50.6

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98496		60.6	61.6	1.0	620									
97		61.6	62.5	0.9	620									
98		62.5	63.5	1.0	900									
99		63.5	64.5	"	500									
98700		64.5	65.5	"	120									
01		65.5	66.5	"	3450									
2		66.5	67.5	"	2700									
3		67.5	68.5	"	2550									
4		68.5	69.5	"	2050									
5		69.5	70.5	"	3800									
6		70.5	71.5	"	1850									
7		71.5	72.5	"	7600									
8		72.5	73.5	"	2850									
9		73.5	74.5	"	1150									
710		74.5	75.5	"	4300									
11		75.5	76.5	"	2000									
12		76.5	77.8	1.3	3850									
13		77.8	78.8	1.0	360									
98733		96.7	97.7	1.0	170									
34		97.7	98.7	"	130									
35		98.7	99.5	0.8	44									
36		99.5	100.5	1.0	230									
37		100.5	101.5	"	560									
38		101.5	102.5	"	230									
39		102.5	103.5	"	660									
740		10 .5	104.5	"	440									
41		104.5	105.5	"	55									
42		105.5	106.8	1.3	430									

Notes :— Sn by XRF Bi method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 51

SAMPLE TYPE : DRILL CORE FROM 60.6 TO 106.8

832021 021

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98743		106.8	107.8	1.0	110									

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 51

SAMPLE TYPE : DRILL CORE FROM 106.8 TO 107.8.

832022 022

REPORT No.

PAGE 1

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF

HOLE No. MBD 51

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	MBJV	1877.7o N	1000.03 E	631.3o
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

1:250 000 Sheet No. BURNIE SK 55-3

1:100 000 Sheet No. HELLYER 8015

State TASMANIA

Mineral Tenement E.L. 13/79

Holder METALS EXPLORATION LTD

Cadastral location and details

CROWN LAND / PRIVATE

W.C. Bearing from collar

_____ magnetic

_____ grid (1)

_____ grid (2)

_____ grid (3)

_____ true

Inclination at collar Vertical

Total length 110.0 m

Commenced: 12 / 1 / 81

Completed: 24 / 1 / 81

Drilling contractor LONGYEAR AUST PTY LTD

Rig type LONGYEAR H.C. 150

Core size and non-coring (NC)

Tricone	0	TO	0.5
HQ	0.5	TO	59.6
NQ	59.6	TO	110.0
		TO	
		TO	
		TO	

Details of down hole location-survey methods.

EASTMAN

Single Shot Photo

Purpose of drilling and anticipated lengths to targets.

To obtain core for metallurgical purposes in the D3L horizon 20-40m, and to test White Face Porphyry Dyke between 70-90m.

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type magnetic	DIP
40.0	146°	87°
81.0	206°	87°
109.6	186°	83°

Comments on drilling. HQ rod string was stuck at 33.0m. The hole was reamed in HW to 33.0m over the HQ rod string. Problems were encountered at 9.0m, and a cavity (old workings) was struck 27.0-28.7m.

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL NO		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY A. JANNINK	LOGGED BY	LOGGED BY
FROM 0 TO 110.0	FROM TO	FROM TO
DATE 24.1.81	DATE	DATE

Company managing exploration programme.

METALS EXPLORATION LTD

HOLE No. MBD 51

Log sheet 1 of 2

Preliminary Design for Form Aug. 76

MT. BISCHOFF JOINT VENTURE

DIAMOND DRILL LOG

Hole Number	:	MBD 52
Location	:	1810.17N 1040.03E
Elevation	:	628.52
Dip	:	Vertical
Azimuth	:	-
Total Depth	:	95.2 m
Surveys	:	Eastman every 95 m
Commenced	:	21.1.81 Completed: 28.1.81
Logged by	:	A. Jannink
Drilling Contractor	:	Longyear Australia Pty. Ltd.

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth: Description and notes, veins over 50mm, INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets	ASSAYS AVAILABLE	BULKED ASSAYS 5m

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R RYALL (ED.), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

0 - 12.0 (12.0)	Reaming Casing - No Core		NC	
12.0 - 31.3 (19.3)	DOLOMITE PARTLY RECRYSTALLISED Fault zone Pale grey and cream coloured, fractured and brecciated, some irregular banding DSL patches at: 12.0 - 12.3, 13.0 - 13.6, 20.3, 20.5 - 20.8, 22.3 - 22.4, 22.6 - 22.7, 23.6 - 23.7, 24.1, 24.6, 29.4 - 29.7, 30.2 - 30.6 Fault Zone	→	2/3	Weak trace py, sp, po as specs in carbonate altered rock and minor py in DSL patches
31.3-32.2	TRANSITION ZONE DSL/PORPHYRY gradual change		8/7/1	5% py and fluorite
32.2 - 51.7 (19.5)	QUARTZ PORPHYRY 32.2 - 39.2 Pale grey/green matrix with many feldspar phenocrysts (15%) and 10% quartz 39.2 - 47.5 Milky white minor glassy white matrix with 10% quartz, 10% feldspar, 10-15% sulphides 47.5 - 50.0 Pale grey, slightly green matrix, pitted, with 10% feldspar, < 5% quartz 50.1 - 51.7 Grey/green matrix, 10% quartz, 10% feldspar, 5% soft green talc spots		1	32.2 - 39.2: rare specs of py 39.2 - 47.5: 10-15% marcasite, py, minor sp, fluorite, coarsely disseminated ← ? Fault Zone 47.5 - 50.0: rare specs of py 50.0 - 51.7: 2% sp disseminated ← Contact 45°
51.7 - 58.0 (6.3)	RECRYSTALLISED DOLOMITE Minor Dolomite cream/light brown, blotchy, brecciated, sheared and broken. DSL at 57.3 - 57.6		3	← Fault Zone
58.0 - 90.4 (32.4)	DOLOMITE LESSER RECRYSTALLISED DOLOMITE Pale grey, blotchy and brecciated, some darker infilling of breccia cracks. Occasional small patches of DSL, larger ones at:- 60.3, 68.1 - 68.5, 79.5 - 79.9, 84.4, 86.0 - 86.3		2/3	1-2% py trace sp in blebs in Recrystallised Dolomite and DSL
90.4-91.7	DOLOMITE SULPHIDE LODE Serpentinite/Carbonate		7/8/5	← Fault Zone 15% py weak trace po
91.7-95.2 (3.5)	SILTSTONE/QUARTZITE Medium grey, much disrupted and folded		10/11	← Contact 70° 2-3% py disseminated
	END OF HOLE 95.2m			

832024

5 cm

024

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 52

LOG SHEET 1 OF 1

REPORT No. 832025 PAGE 025

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF

HOLE No. MBD 52

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1) MBJV — 1810.17 N — 1040.03 E — 628.52

(2) — N — E —

(3) Aust. Map Grid (PRECISE / APPROX.) — mE — mN — m A.H.D.

1:250 000 Sheet No. BURNIE SK55-3 | 1:100 000 Sheet No. HELLYER 8015 | State TASMANIA

Mineral Tenement E.L. 13/79 | Holder METALS EXPLORATION LTD

Cadastral location and details (CROWN LAND / PRIVATE)

W.C. Bearing from collar
- ____ magnetic
- ____ grid (1)
- ____ grid (2)
- ____ grid (3)
- ____ true

Inclination at collar Vertical

Total length 95.2m

Commenced: 21 / 1 / 81

Completed: 28 / 1 / 81

Drilling contractor LONGYEAR AUST PTY LTD

Rig type LONGYEAR H.C. 150

Core size and non-coring (NC)

		TO
Triom	0	0.5
HW (NC)	0.5	12.0
HQ	12.0	95.2
		TO
		TO
		TO

Details of down hole location-survey methods.

EASTMAN

Single Shot Photo

Purpose of drilling and anticipated lengths to targets.

To obtain core for metallurgical purposes as follows:

DSL: ~~30-50~~ 26-30, 50-56, 78-80

Porphyry: 30-50

Comments on drilling. HW was reamed to 12.0m through loose mine rubble and fill.

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type Mag	DIP
95	300°	88° 30'

Legend for graphic log column (see drill log for Hole No. ____)

'DERWENT' PENCIL NO		FIELD ROCK NAME, ETC

Symbols and abbreviations for drilling notes column.

LOGGED BY A. JANNINK	LOGGED BY	LOGGED BY
FROM 0 TO 95.2	FROM TO	FROM TO
DATE 29.1.81	DATE	DATE

Company managing exploration programme: METALS EXPLORATION LTD

HOLE No. MBD 52
Log sheet 1 of 2

Preliminary Design for Form Aug 7

832026 026

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118409.	3.0	5.0	2.0		44								
	10	5.0	7.0	"		65								
	11	7.0	9.0	"		4350								
	12	9.0	11.0	"		85								
	13	11.0	13.0	"		55								
	14	13.0	15.0	"		80								
	15	15.0	17.0	"		60								
	16	17.0	19.0	"		30								
	17	19.0	21.0	"		28								
	18	21.0	23.0	"		22								
	19	23.0	25.0	"		24								
	420	25.0	27.0	"		14								
	21	27.0	29.0	"		12								
	22	29.0	31.0	"		10								
	23	31.0	33.0	"		12								
	24	33.0	35.0	"		12								
	25	35.0	37.0	"		12								
	26	37.0	39.0	"		10								
	27	39.0	41.0	"		12								
	28	41.0	43.0	"		14								
	29	43.0	45.0	"		16								
	430	45.0	47.0	"		24								
	31	47.0	49.0	"		55								
97946		49.0	51.7	2.7	2600									
	32	51.7	53.7	2.0		65								
	33	53.7	55.7	"		18								
	34	55.7	57.7	"		36								
	35	57.7	59.7	"		14								
	36	59.7	61.7	"		12								
	37	61.7	63.7	"		16								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 42

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 63.7.

832027 027

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118438	63.7	65.7	2.0		14								
	39	65.7	67.7	"		18								
	440	67.7	69.7	"		540								
	41.	69.7	72.7	"		50								
97948		72.7	74.7	1.8	500									
	118442	74.7	76.5	1.8		160								
	43	76.5	78.5	2.0		80								
	44	78.5	80.5	"		90								
	45	80.5	82.5	"		36								
	46	82.5	84.5	"		70								
	47	84.5	86.1	"		220								
97949		86.1	87.6	1.5	450									
	118448	87.6	89.6	2.0		660								
	49	89.6	91.6	"		80								
	50	91.6	93.6	"		60								
	51	93.6	95.6	"		65								
	52	95.6	97.6	"		620								
	53	97.6	99.6	"		140								
	54	99.6	101.6	"		65								
	55	101.6	103.6	"		80								
	56	103.6	105.6	"		65	-							
	57	105.6	107.6	"		1.16%	re-confirmed To be							
	58	107.6	109.6	"		260								
	59	109.6	111.6	"		150								
	460	111.6	113.6	"		140								
	61	113.6	115.6	"		55								
	62	115.6	117.6	"		55								
	63	117.6	119.6	"		42								
	64	119.6	121.6	"		40								
	65	121.6	123.6	"		350								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 42

SAMPLE TYPE : DRILL CORE FROM 63.7 TO 123.6

832028 028

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118466	123.6	125.6	2.0		44								
	67	125.6	127.6	"		95								
	68	127.6	129.6	"		85								
	69	129.6	131.6	"		32								
	470	131.6	133.6	"		42								
	71	133.6	135.6	"		65								
	72	135.6	137.6	"		36								
	73	137.6	139.6	"		28								
	74	139.6	141.6	"		34								
	75	141.6	143.6	"		75								
	76	143.6	145.6	"		34								
	77	145.6	147.6	"		44								
	78	147.6	149.6	"		46								
	79	149.6	151.6	"		46								
	480	151.6	153.6	"		24								
	81	153.6	155.6	"		22								
	82	155.6	157.6	"		90								
	83	157.6	159.6	"		24								
	84	159.6	161.6	"		22								
	85	161.6	163.6	"		18								
	86	163.6	165.6	"		14								
	87	165.6	167.6	"		24								
	88	167.6	169.6	"		60								
	89	169.6	171.6	"		46								
	490	171.6	173.6	"		180								
	91	173.6	175.6	"		42								
	92	175.6	177.6	"		26								
	93	177.6	179.6	"		28								
	94	179.6	181.6	"		36								
	118495	181.6	183.6	"		180								

Notes :— Sn by XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 42

SAMPLE TYPE : DRILL CORE FROM 123.6 TO 183.6

832029 029

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118496	183.6	185.6	2.0		260								
	97	185.6	187.5	1.9		250								
97995		187.5	189.5	2.0	250									
96		189.5	191.5	"	1550									
97		191.5	193.5	"	1250									
98		193.5	195.5	"	380									
99		195.5	197.5	"	1850									
98000		197.5	199.5	"	1750									
1		199.5	201.5	"	1850									
2		201.5	203.5	"	1800									
3		203.5	205.5	"	1150									
4		205.5	207.5	"	2400									
5		207.5	209.5	"	540									
6		209.5	211.5	"	1200									
7		211.5	213.5	"	920									
8		213.5	215.0	1.5	1750									
9		215.0	217.0	2.0	3950									
	118498	217.0	219.0	"		440								
	99	219.0	221.0	"		38								
	500	221.0	223.0	"		24								
	1	223.0	225.0	"		16								
	2	225.0	226.5	"		14								

Notes :— Sn by XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 42

SAMPLE TYPE : DRILL CORE FROM 183.6 TO

832030 030

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118200	3.0	5.0	2.0		48								
	01	5.0	7.0	"		22								
	2	7.0	8.0	1.0		36								
92093		8.0	10.0	2.0	840									
94		10.0	12.0	"	310									
95		12.0	14.0	"	80									
96		14.0	16.0	"	140									
97		16.0	18.0	"	16									
98		18.0	20.0	"	26									
99		20.0	22.0	"	44									
98100		22.0	24.0	"	120									
	118203	24.0	26.0	"		150								
	4	26.0	28.0	"		18								
	5	28.0	30.0	"		16								
	6	30.0	32.0	"		18								
	7	32.0	34.0	"		20								
	8	34.0	36.0	"		14								
	9	36.0	38.0	"		12								
	210	38.0	40.0	"		12								
	11	40.0	42.0	"		30								
	12	42.0	44.0	"		30								
	13	44.0	46.0	"		48								
	14	46.0	48.0	"		150								
	15	48.0	50.0	"		130								
	16	50.0	52.0	"		38								
	17	52.0	54.0	"		24								
	18	54.0	56.0	"		26								
	19	56.0	58.0	"		34								
	220	58.0	60.0	"		60								
	21	60.0	62.0	"		44								

Notes :— Sn by XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 44

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 62.0

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118222	62.0	64.0	2.0		32								
	23	64.0	66.0	"		20								
	24	66.0	68.0	"		14								
	25	68.0	70.0	"		14								
	26	70.0	72.7	2.7		8								
98042		72.7	74.7	2.0	48									
43		74.7	76.7	"	2200									
44		76.7	78.7	"	720									
45		78.7	80.7	"	2750									
46		80.7	82.7	"	3400									
47		82.7	84.9	2.2	1900									
48		84.9	86.9	2.0	85									
	118227	86.9	88.9	2.0		95								
	28	88.9	90.9	"		200								
	29	90.9	92.8	1.9		110								
98049		93.8	94.5	0.7	3450									
	118230	94.6	96.6	2.0		100								
	31	96.6	98.6	"		50								
	32	98.6	100.6	"		42								
	33	100.6	102.6	"		32								
	34	102.6	104.6	"		24								
	35	104.6	106.6	"		28								
	36	106.6	108.6	"		34								
	37	108.6	110.6	"		44								
	38	110.6	112.6	"		60								
	39	112.6	114.6	"		34								
	240	114.6	116.6	"		18								
	41	116.6	118.6	"		30								

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 44

SAMPLE TYPE : DRILL CORE FROM 62.0 TO 116.6.

832032 032

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118242	118.6	120.6	2.0		46								
	43	120.6	122.6	"		42								
	44	122.6	124.6	"		44								
	45	124.6	126.6	"		230								
	46	126.6	128.6	"		120								
	47	128.6	130.6	"		130								
	48	130.6	132.6	"		36								
	49	132.6	134.6	"		26								
	250	134.6	136.6	"		18								
	51	136.6	138.6	"		16								
	52	138.6	140.6	"		10								
	53	140.6	142.6	"		12								
	54	142.6	144.6	"		18								
	55	146.6	146.6	"		20								
	56	146.6	148.6	"		30								
	57	148.6	150.6	"		34								
	58	150.6	152.6	"		14								
	59	152.6	154.6	"		26								
	260	154.6	156.6	"		18								
	61	156.6	158.6	"		18								
	62	158.6	160.6	"		14								
	63	160.6	162.6	"		20								
	64	162.6	164.6	"		16								
	65	164.6	166.6	"		14								
	66	166.6	168.6	"		16								
	67	168.6	170.6	"		14								
	68	170.6	172.6	"		24								
	69	172.6	174.6	"		16								
	270	174.6	176.6	"		10								
	118271	176.6	178.6	"		16								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD44

SAMPLE TYPE : DRILL CORE FROM 118.6 TO

832033 033

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118272	178.6	180.6	2.0		28								
	73	180.6	182.6	"		14								
	74	182.6	184.6	"		20								
	75	184.6	186.6	"		16								
	76	186.6	188.6	"		18								
	77	188.6	190.6	"		10								
	78	190.6	192.6	"		12								
	79	192.6	194.6	"		18								
	280	194.6	196.6	"		14								
	81	196.6	198.6	"		10								
	82	198.6	200.6	"		14								
	83	200.6	202.6	"		14								
	84	202.6	204.6	"		16								
	85	204.6	206.6	"		18								
	86	206.6	208.6	"		30								
	87	208.6	210.6	"		26								
	88	210.6	212.6	"		18								
	89	212.6	214.6	"		22								
	118290	214.6	216.6	"		16								
	91	216.6	218.6	"		14								
	92	218.6	220.6	"		8								
	93	220.6	222.6	"		18								
	94	222.6	224.6	"		16								
	95	224.6	226.6	"		16								
	96	226.6	228.6	"		32								
	97	228.6	230.6	"		26								
	98	230.6	232.6	"		28								
	99	232.6	234.6	"		12								
	118300	234.6	236.6	"		4								
	01	236.6	238.6	"		10								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 44

SAMPLE TYPE : DRILL CORE FROM 178.6 TO 216.6

832034 034

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	119302	238.6	240.6	2.0		10								
	3	240.6	242.6	"		20								
	4	242.6	244.6	"		30								
	5	244.6	246.6	"		12								
	6	246.6	248.6	"		8								
	7	248.6	251.0	1.4		14								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD44

SAMPLE TYPE : DRILL CORE FROM 238.6 TO 251.0

832035 035

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118308	3.0	5.0	2.0		150								
	9	5.0	7.0	"		55								
	310	7.0	9.1	2.1		18								
	11	17.0	19.0	2.0		16								
	12	19.0	21.0	"		12								
	13	21.0	23.0	"		14								
	14	23.0	25.4	2.4		14.								
98051		25.4	27.4	2.0	18									
52		27.4	29.5	"	200									
53		29.5	31.5	"	140									
54		31.5	33.5	"	60									
55		33.5	35.5	"	46									
56.		35.7	37.5	2.0	80									
57		37.5	39.5	"	110									
58		39.5	41.5	"	75									
59		41.5	43.5	"	70									
060		43.5	45.5	"	80								210	check Assay
61		45.5	47.5	"	75									
62		47.5	49.5	"	85									
63		49.5	51.5	"	160									
64		51.5	53.0	1.5	250									
65		53.0	55.0	2.0	85									
	118315	55.0	57.0	"		330								
	16	57.0	59.0	"		170								
	17	59.0	61.0	"		65								
	18	61.0	63.0	"		44								
	19	63.0	65.0	"		55								
	320	65.0	67.0	"		18								

Notes:— Sn by XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 45

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 67.0

832036 036

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118321	67.0	69.0	2.0		16								
	22	69.0	71.0	"		24								
	23	71.0	73.0	"		80								
	24	73.0	75.0	"		14								
	25	75.0	77.0	"		20								
	26	77.0	79.0	"		8								
	27	79.0	81.0	"		28								
	28	81.0	83.0	"		565								
	29	83.0	85.0	"		18								
	330	85.0	87.0	"		14								
	31	87.0	89.0	"		10								
	32	89.0	91.0	"		12								
	33	91.0	93.0	"		14								
	34	93.0	95.0	"		18								
	35	95.0	97.0	"		20								
	36	97.0	99.0	"		18								
	37	99.0	101	"		18								
	38	101.0	103.0	"		12								
	39	103.0	105.0	"		6								
	340	105.0	107.0	"		8								
	41	107.0	109.0	"		12								
	42	109.0	111.0	"		12								
	43	111.0	113.0	"		14								
	44	113.0	115.0	"		8								
	45	115.0	117.0	"		310								
	46	117.0	119.0	"		80								
	47	119.0	121.0	"		340								
	48	121.0	123.0	"		32								
	49	123.0	125.0	"		36								
	118350	125.0	127.0	"		46								

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 45

SAMPLE TYPE : DRILL CORE FROM 67.0 TO 127.0

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118351	127.0	129.0	2.0		28								
	52	129.0	131.0	"		32								
	53	131.0	133.0	"		50								
	54	133.0	135.0	"		160								
	55	135.0	137.0	"		26								
	56	137.0	139.0	"		22								
	57	139.0	141.0	"		150								
	58	141.0	143.0	"		44								
	59	143.0	145.0	"		340								
	360	145.0	147.0	"		270								
	61	147.0	149.9	"		85								
98066		149.9	151.0	1.1	4600									
	62	151.0	153.0	2.0		880								
	63	153.0	154.0	1.0		50								
98067		154.0	156.0	2.0	130	130								
68		156.0	156.5	0.5	6.38%									
69		156.5	158.5	2.0	340									
	64	158.5	160.5	"		36								
	65	160.5	162.5	"		18								
	66	162.5	164.5	"		8								
	67	164.5	166.5	"		30								
	68	166.5	168.5	"		85								
	69	168.5	170.5	"		230								
	370	170.5	172.5	"		28								
	71	172.5	174.5	"		8								
	72	174.5	176.5	"		16								
	73	176.5	178.5	"		22								
	74	178.5	180.5	"		16								
	75	180.5	182.5	"		22								
	118376	182.5	184.5	"		60								

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 45

SAMPLE TYPE : DRILL CORE FROM 127.0 TO 184.5

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118377	184.5	186.5	2.0		20								
	78	186.5	188.5	"		14								
	79	188.5	190.5	"		8								
	380	190.5	192.5	"		<4								
	81	192.5	194.5	"		4								
	82	194.5	196.5	"		8								
	83	196.5	198.5	"		<4								
	84	198.5	200.5	"		6								
	85	200.5	202.5	"		<4								
	86	202.5	204.5	"		<4								
	87	204.5	206.5	"		4								
	88	206.5	208.5	"		<4								
	89	208.5	210.5	"		6								
	390	210.5	212.5	"		8								
	91	212.5	214.5	"		<4								
	92	214.5	216.5	"		<4								
	93	216.5	218.5	"		4								
	94	218.5	220.5	"		<4								
	95	220.5	222.5	"		4								
	96	222.5	224.5	"		26								
	97	224.5	226.5	"		6								
	98	226.5	228.5	"		18								
	99	228.5	230.5	"		4								
	400	230.5	232.5	"		6								
	1	232.5	234.5	"		16								
	2	234.5	237.2	2.7		2100								
98070		237.2	237.6	0.4	1.44%									
	3	237.6	239.6	2.0		360								
	4	239.6	241.6	2.0		36								
	118405	241.6	243.6	"		14								

Notes :— Sn by XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 45

SAMPLE TYPE : DRILL CORE FROM 184.5 TO 243.6

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118406	243.6	245.6	2.0		10								
	7	245.6	247.6	"		9								
	8	247.6	249.0	1.4		8								

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 45

SAMPLE TYPE : DRILL CORE FROM 243.6 TO 249.0

832040 040

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118503	3.0	5.0	2.0		22								
	4	5.0	7.0	"		48								
	5	7.0	9.0	"		60								
	6	9.0	11.0	"		16								
	7	11.0	13.0	"		12								
	8	13.0	15.0	"		10								
	9	15.0	17.0	"		8								
	510	17.0	19.0	"		6								
	11	19.0	21.0	"		8								
	12	21.0	23.0	"		8								
	13	23.0	25.0	"		10								
	14	25.0	27.0	"		8								
	15	27.0	29.0	"		14								
	16	29.0	31.0	"		14								
	17	31.0	33.0	"		28								
	18	33.0	35.0	"		50								
	19	35.0	37.0	"		30								
	520	37.0	39.0	"		48								
	21	39.0	41.0	"		38								
	22	41.0	43.0	"		38								
	23	43.0	45.0	"		12								
	24	45.0	47.0	"		16								
	25	47.0	49.0	"										
	26	49.0	51.0	"										
	27	51.0	53.0	"										
	28	53.0	55.0	"										
	29	55.0	57.0	"										
	530	57.0	59.0	"										
	31	59.0	61.0	"										
	32	61.0	63.0	"										

Notes :— XRF Bi method for Sn.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 46

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 63.0

832041 041

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118533	63.0	65.0	2.0										
	34	65.0	67.0	"										
	35	67.0	69.0	"										
	36	69.0	71.0	"										
	37	71.0	73.0	"										
	38	73.0	75.0	"										
	39	75.0	77.0	"										
	540	77.0	79.0	"										
	41	79.0	81.0	"										
	42	81.0	83.0	"										
	43	83.0	85.0	"										
	44	85.0	87.0	"										
	45	87.0	89.0	"										
	46	89.0	91.0	"										
	47	91.0	93.0	"										
	48	93.0	95.0	"										
	49	95.0	97.0	"										
	550	97.0	99.0	"										
	51	99.0	101.0	"										
	52	101.0	103.0	"										
	53	103.0	105.0	"										
	54	105.0	107.0	"										
	55	107.0	109.0	"										
	56	109.0	110.0	"										
	57	111.0	113.0	"										
	58	113.0	115.0	"										
	59	115.0	117.0	"										
	560	117.0	119.0	"										
	61	119.0	121.0	"										
	62	121.0	123.0	"										

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD46

SAMPLE TYPE : DRILL CORE FROM 63.0 TO 123.0

832042 042

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118563	123.0	125.0	2.0										
	64	125.0	127.0	"										
	65	127.0	129.0	"										
	66	129.0	131.0	"										
	67	131.0	133.0	"										
	68	133.0	135.0	"										
	69	135.0	137.0	"										
	570	137.0	139.0	"										
	71	139.0	141.0	"										
	72	141.0	143.0	"										
	73	143.0	145.0	"										
	74	145.0	147.0	"										
	75	147.0	149.0	"										
	76	149.0	151.0	"										
	77	151.0	153.0	"										
	78	153.0	155.0	"										
	79	155.0	157.0	"										
	580	157.0	159.0	"										
	81	159.0	161.0	"										
	82	161.0	163.0	"										
	83	163.0	165.0	"										
	84	165.0	167.0	"										
	85	167.0	169.0	"										
	86	169.0	171.0	"										
	87	171.0	173.0	"										
	88	173.0	175.0	"										
	89	175.0	177.0	"										
	590	177.0	179.0	"										
	91	179.0	181.0	"										
	118592	181.0	183.0	"										

Notes :— Sn by XRF Bi method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 46

SAMPLE TYPE : DRILL CORE FROM 123.0 TO 183.0

SAMPLE NO. SPLIT CORE	SAMPLE NO GROUND CORE	FROM m	TO m	INTER-VAL m	Sn SPLIT	Sn GROUND	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
	118593	183.0	185.0	2.0										
	94	185.0	186.4	"										
98071		186.4	187.1	0.7	6100								6100	check Assay
	118595	187.1	189.1	2.0										
	96	189.1	191.1	"										
	97	191.1	193.1	"										
	98	193.1	195.1	"										
	99	195.1	197.1	"										
	600	197.1	199.1	"										
	01	199.1	201.1	"										
	2	201.1	203.1	"										
	3	203.1	205.1	"										
	4	205.1	207.1	"										
	5	207.1	209.1	"										
	6	209.1	211.1	"										
	7	211.1	213.1	"										
	8	213.1	215.1	"										
	9	215.1	217.1	"										
	610	217.1	219.1	"										
	11	219.1	221.1	"										
	12	221.1	223.1	"										
	13	223.1	225.1	"										
	14	225.1	227.1	"										
	15	227.1	229.1	"										
	16	229.1	231.1	"										
	17	231.1	233.1	"										
	18	233.1	235.1	"										
	19	235.1	237.1	"										
	620	237.1	239.1	"										
	118621	239.1	241.1	"										

Notes :— Sn by XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 46

SAMPLE TYPE : DRILL CORE FROM 183.0 TO 241.1

832044 044

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118622	241.1	243.1	2.0										
	23	243.1	245.1	"										
	24	245.1	247.1	"										
	25	247.1	249.1	"										
	26	249.1	250.0	"										

Notes :— Sn by XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 46

SAMPLE TYPE : DRILL CORE FROM 241.1 TO 250.0

832045

045

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98200		1·5	2·5	1·0	8									
1		2·5	3·5	1·0	12									
2		3·5	4·5	1·0	34									
3		4·5	5·5	1·0	16									
4		5·5	6·5	1·0	30									
5		6·5	7·5	1·0	50									
6		7·5	8·5	1·0	4									
7		8·5	9·5	1·0	4									
8		9·5	10·5	1·0	8									
9		10·5	11·5	1·0	<4									
10		11·5	12·9	1·4	1350									
11		12·9	13·9	1·0	6400									
12		13·9	14·9	1·0	6000									
13		14·9	15·9	1·0	2950									
14		15·9	16·3	0·4	2050									
15		16·3	17·3	1·0	390									
16		17·3	18·0	0·7	270									
17		18·0	19·4	1·4	4400									
18		19·4	20·1	0·7	490									
19		20·4	21·4	1·0	420									
20		21·4	22·4	1·0	4700									
21		22·4	23·4	1·0	5400									
22		23·4	24·5	1·1	4500									
23		24·5	25·5	1·0	580									
24		25·5	26·4	0·9	780									
25		26·4	27·4	1·0	7000									
26		27·4	28·4	1·0	1.12%									
27		28·4	29·4	1·0	3550									
28		29·4	30·4	1·0	4750									
29		30·4	30·9	0·5	5400									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 47

SAMPLE TYPE : DRILL CORE FROM 1·5 TO 30·9

832046 046

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98230		30.9	31.9	1.0	1250									
31		31.9	32.9	1.0	85									
32		32.9	34.0	1.1	32									
33		34.0	35.0	1.0	2750									
34		35.0	36.0	1.0	3000									
35		36.0	37.0	1.0	2500									
36		37.0	37.5	0.5	4250									
37		37.5	39.0	1.5	2.94%									
38		39.0	40.0	1.0	1.59%									
39		40.0	40.9	0.9	3350									
240		40.9	42.1	1.2	2750									
41		42.1	43.1	1.0	1600									
42		43.1	44.1	1.0	8000									
43		44.1	45.1	1.0	2550									
44		45.1	46.1	1.0	X									
45		46.1	47.1	1.0	4									
46		47.1	48.1	1.0	X									
47		48.1	49.1	1.0	6									
48		49.1	50.1	1.0	44									
49		50.1	51.1	1.0	30									
250		51.1	52.1	1.0	720									
51		52.1	53.1	1.0	6									
52		53.1	54.1	1.0	18									
53		54.1	55.1	1.0	12									
54		55.1	56.1	1.0	8									
55		56.1	57.1	1.0	X									
56		57.1	58.1	1.0	10									
57		58.1	59.1	1.0	6									
58		59.1	60.1	1.0	4									
59		60.1	61.1	1.0	X									

Notes :— X — implies less than detectable limit

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD47

SAMPLE TYPE : DRILL CORE FROM 30.9 TO 61.1

832047 047

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98260		61.1	62.4	1.3	18									
61		62.4	63.4	1.0	290									
62		63.4	64.4	1.0	150									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD47

SAMPLE TYPE : DRILL CORE FROM 61.1 TO 64.4

832048 048

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98263		1.5	2.5	1.0	380									
64		2.5	3.5	"	30									
65		3.5	4.5	"	160									
66		4.5	5.5	"	220									
67		5.5	6.5	"	46									
68		6.5	7.5	"	18									
69		7.5	8.5	"	28									
270		8.5	9.5	"	85									
71		9.5	10.5	"	26									
72		10.5	11.0	0.5	40									
73		11.0	11.6	0.6	75									
74		11.6	12.6	1.0	48									
75		12.6	13.7	1.1	36									
76		13.7	14.4	0.7	100									
77		14.4	15.4	1.0	65									
78		15.4	16.05	0.65	65									
98376		16.05	16.40	0.35	6									
98279		16.40	17.4	1.0	80									
80		17.4	18.4	"	65									
81		18.4	19.0	0.6	260									
82		19.0	20.0	1.0	65									
83		20.0	21.0	"	210									
84		21.0	22.0	"	75									
85		22.0	23.0	"	640									
86		23.0	24.0	"	400									
87		24.0	24.7	0.7	60									
88		24.7	25.7	1.0	120									
89		25.7	26.7	1.0	110									
290		26.7	27.7	1.1	250									
91		27.7	28.8	1.0	34									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 48

SAMPLE TYPE : DRILL CORE FROM 1.5 TO 28.8.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98292		28.8	29.9	1.1	26									832049
93		29.9	30.9	1.0	840									
94		30.9	32.0	1.1	280									
95		32.0	32.9	0.9	12									
96		32.9	33.9	1.0	4									
97		33.9	34.9	"	10									
98		34.9	35.9	"	14									
99		35.9	36.9	"	4									
98307		36.9	37.9	"	X									
8		37.9	38.7	0.8	X									
9		38.7	39.7	1.0	150									
310		39.7	40.9	1.2	2350									
11		40.9	41.9	1.0	28									
12		41.9	42.9	"	X									
13		42.9	43.9	"	110									
14		43.9	44.9	"	110									
15		44.9	45.9	"	2550									
16		45.9	46.9	"	9300									
17		46.9	47.9	"	1.40%									
18		47.9	48.9	"	1.52%									
19		48.9	49.9	"	2100									
320		49.9	50.9	"	8500									
21		50.9	51.9	"	1900									
22		51.9	52.9	"	28									
23		52.9	53.9	"	7.48%									
24		53.9	54.9	"	2.96%									
25		54.9	55.9	"	1.37%									
26		55.9	57.3	1.4	460									
27		57.3	58.3	1.0	8500									
28		58.3	59.3	"	2300									

Notes:— X implies less than detection limit

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 48

SAMPLE TYPE : DRILL CORE FROM 28.8 TO 59.3

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
96329		59.3	60.3	1.0	2100									832050
30		60.3	61.3	1.0	1500									
31		61.3	61.8	0.5	1550									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 48

SAMPLE TYPE : DRILL CORE FROM 59.3 TO 61.8

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
99332		1·8	2·8	1·0	240									832051
33		2·8	3·8	"	940									
34		3·8	4·8	"	170									
35		4·8	5·8	"	80									
36		5·8	6·8	"	180									
37		6·8	8·1	1·3	210									
38		8·1	9·1	1·0	60									
39		9·1	10·4	1·3	150									
340		10·4	11·7	1·3	170									
41		11·7	12·8	1·1	100									
42		12·8	13·5	0·7	44									
43		13·5	14·3	0·8	2600									
44		14·3	15·3	1·0	10									
45		15·3	16·3	"	<4									
46		16·3	17·3	"	<4									
47		17·3	18·3	"	<4									
48		18·3	19·3	"	8									
49		19·3	20·3	"	<4									
350		20·3	21·3	"	4									
51		21·3	22·3	"	4									
52		22·3	23·2	0·9	2·83%									
53		23·2	23·9	0·6	2·87%									
54		23·9	24·9	1·0	2·74%									
55		24·9	25·9	"	4·26%									
56		25·9	26·9	"	3·17%									
57		26·9	27·9	"	3350									
58		27·9	28·9	"	3050									
59		28·9	29·9	"	520									
360		29·9	30·9	"	3050									
983 61		30·9	31·9	"	42									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 49

SAMPLE TYPE : DRILL CORE FROM 1·8 TO 31·9

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98362		31.9	32.9	1.0	2100									832052
63		32.9	33.9	"	1.97%									
64		33.9	34.9	"	70									
65		34.9	35.9	"	700									
66		35.9	36.9	"	44									
67		36.9	37.9	"	210									
68		37.9	38.8	0.9	1350									
69		38.8	39.8	1.0	230									
370		39.8	41.0	1.2	560									
71		41.0	42.4	1.4	2200									
72		42.4	43.2	0.8	1500									
73		43.2	44.2	1.0	250									
74		44.2	45.2	"	2700									
75		45.2	46.3	1.1	440									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 49

SAMPLE TYPE : DRILL CORE FROM 31.9 TO 46.3

1900 N

1950 N

2000 N

650 m

600 m

550 m

2/3

4-8

1

?

MBD49

0.2 g

2/3

1.3 g

3.2 g

2400

6.4

2200

2300

2600

2700

10.1 g

1.5 g

DEVONIAN

qv Quartz vein.

I Porphyry.

PRE-CAMBRIAN

2 Dolomite

3 Recrystallised dolomite

Dolomite sulphide lode

4 pyrrhotite rich.

5 pyrite rich.

6 talc rich.

7 serpentinite rich.

8 quartz/carbonate rich.

9/c Shale / carbonaceous.

10 Siltstone.

11/s Quartzite / sandstone.

12 Tuff.

Fault - interpreted.

Interpreted geological contact.

D.D.H.

ASSAYED FOR Sn

≤ 1000 ppm Sn

2150 ppm Sn

1.8% Sn

≤ 1000 ppm Sn

5 cm

832053

METALS EXPLORATION LTD.

MT. BISCHOFF TIN PROJECT

GREISEN FACE AREA
INTERPRETED GEOLOGY

SECTION 970 E

Stage 3A Drilling Programme

Scale 1:500

Date Jan.81 Drg. No. 81-002

053

1900 N

1950 N

2000 N

650 m

600 m

550 m

B46

MBD 20

MBD 47

MBD 49

MBD 21

D4

D5

DEVONIAN

- qv — Quartz vein.
- 1 — Porphyry.

PRE-CAMBRIAN

- 2 — Dolomite
- 3 — Recrystallised dolomite

Dolomite sulphide lode

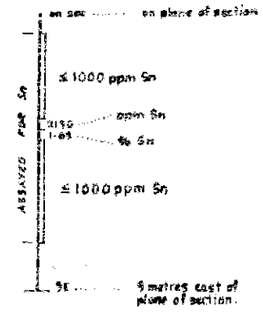
- 4 — pyrrhotite rich.
- 5 — pyrite rich.
- 6 — talc rich.
- 7 — serpentinite rich.
- 8 — quartz/carbonate rich

- 9 / c — Shale / carbonaceous.
- 10 — Siltstone.
- 11 / s — Quartzite / sandstone.
- 12 — Tuff

F—— Fault - interpreted

------ Interpreted geological contact.

D.D.H.



832054

METALS EXPLORATION LTD.

MT. BISCHOFF TIN PROJECT

GREISEN FACE AREA

INTERPRETED GEOLOGY

SECTION 980 E

Stage 3A Drilling Programme

Scale 1:500

5 cm

Date Jan.81 Drg. No. 81-003

1900N

1950N

2000N

650m

600m

550m

2-3

6-4

4-8

1

MBD 50

?

DEVONIAN

qv Quartz vein.

1 Porphyry.

PRE-CAMBRIAN

2 Dolomite

3 Recrystallised dolomite

Dolomite sulphide lode

4 pyrrhotite rich.

5 pyrite rich.

6 talc rich.

7 serpentinite rich.

8 quartz/carbonate rich.

9/c Shale / carbonaceous.

10 Siltstone.

11/s Quartzite / sandstone.

12 Tuff.

F—— Fault - interpreted.

------ Interpreted geological contact.

D.D.H.

on axis ..... on plane of section

≤ 1000 ppm Sn

ppm Sn

% Sn

≤ 1000 ppm Sn

ASSAYED FOR Sn

5 metres east of plane of section

5 cm

832055

METALS EXPLORATION LTD.

MT. BISCHOFF TIN PROJECT

GREISEN FACE AREA
INTERPRETED GEOLOGY

SECTION 990 E

Stage 3A Drilling Programme

Scale 1:500

Date Jan.81 Drg.No. 81-004

055

1850N

600m.

650m.

MBD51

DEVONIAN

qv	Quartz vein
1	Porphyry

PRE-CAMBRIAN

2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode — pyrrhotite rich
5	Dolomite sulphide lode — pyrite rich
6	Dolomite sulphide lode — talc rich
7	Dolomite sulphide lode — serpentinite rich
8	Dolomite sulphide lode — quartz/carbonate rich
9 / c	Shale / carbonaceous
10	Siltstone
11 / s	Quartzite / sandstone
12	Tuff

Fault - interpreted

Interpreted geological contact

D D H

5 cm

832056

METALS EXPLORATION LTD.

MT. BISCHOFF TIN PROJECT

GREISEN FACE AREA

INTERPRETED GEOLOGY

SECTION 1000 E

Stage 3A Drilling Programme

Scale 1:500

Date Jan.81 Drg. No. 81-042

1850N

MBP 44

MBP 43

MBD 52

43

42

600m.

550m.

DEVONIAN

- QV — Quartz vein
- 1 — Porphyry.

PRE-CAMBRIAN

- 2 — Dolomite
- 3 — Recrystallised dolomite
- Dolomite sulphide lode:
  - 4 — pyrrhotite rich
  - 5 — pyrite rich
  - 6 — talc rich
  - 7 — serpentinite rich
  - 8 — quartz/carbonate rich
- 9 / c — Shale / carbonaceous
- 10 — Siltstone
- 11 / 6 — Quartzite / sandstone.
- 12 — Tuff.

F —— Fault - interpreted

- - - - - Interpreted geological contact.

D.D.H

5 cm

832057

METALS EXPLORATION LTD.

MT. BISCHOFF TIN PROJECT

GREISEN FACE AREA

INTERPRETED GEOLOGY

SECTION 1040 E

Stage 3A Drilling Programme

Scale 1:500

Date Jan.81 Drg. No. S1-043

THE FOLLOWING PLANS ARE ALSO ON MICROFICHE NUMBERS 14 TO 16.

DRG 81-005B

80-320A

81-044

81-008

81-005C

81-005D

81-005E

81-005F (MAY)

81-005F (JUNE)

81-005F (SEPT)

81-005F (OCT)

81-005F (NOV)

81-005F (DEC)

832059

82-1698 Vol 1. Cover 81-005B.

METALS EXPLORATION LIMITED

MT BISCHOFF TIN PROSPECT

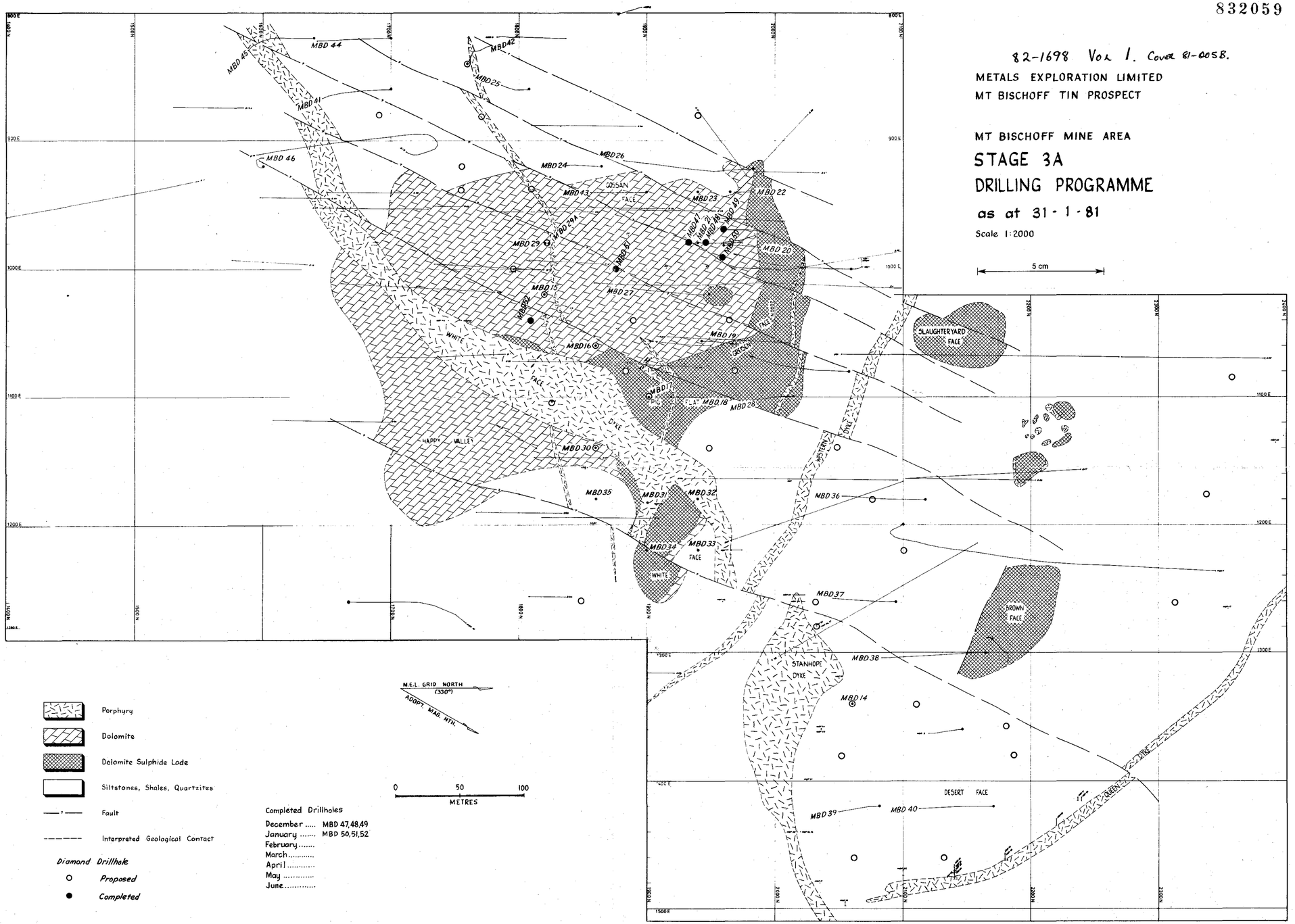
MT BISCHOFF MINE AREA

STAGE 3A
DRILLING PROGRAMME

as at 31 - 1 - 81

Scale 1:2000

5 cm



Completed Drillholes

December ..... MBD 47,48,49
January ..... MBD 50,51,52
February .....
March .....
April .....
May .....
June .....

Rev. 16-2-81

Drg. No. 81 - 005 B

82-1698 Vol 1. COVER 80-320A.

METALS EXPLORATION LIMITED

MT. BISCHOFF TIN PROSPECT

HOUSEGO GRID - MAGNETIC ANOMALIES 7 - 10

GROUND MAGNETIC SURVEY

TOPOGRAPHY AND GEOLOGY

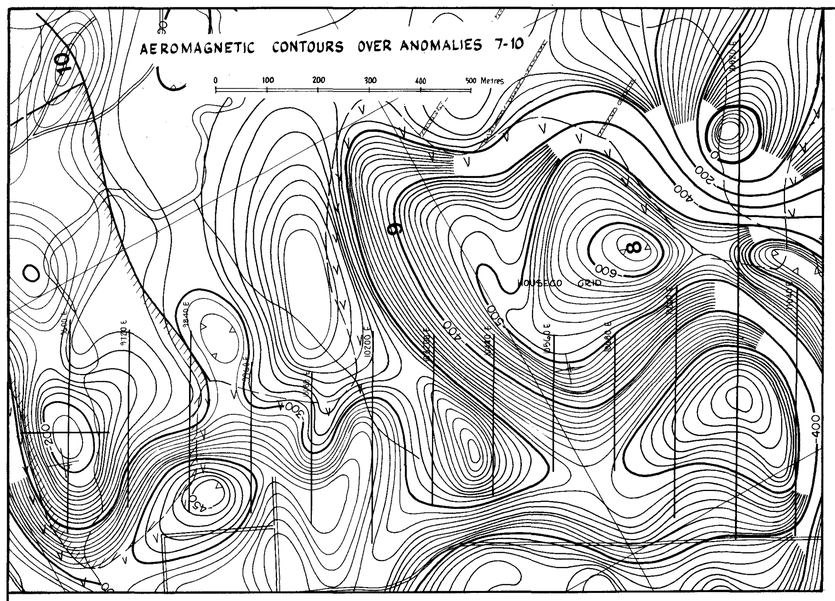
SHOWING HAND AUGER SAMPLING

Scale 1: 2000

5 cm

Metres 100 80 60 40 20 0 100 200 Metres

Feet 200 100 0 200 400 600 800 Feet



Hand Auger Sampling Results
Line 10920 E

X denotes below limit of detection
I.S. Insufficient sample

14 70 21 3 7 ● Sample location and Assays for Sn, Cu, Pb, Zn, Ni

O FL 3 Fooks Lode Mines Dept. Drill Holes.

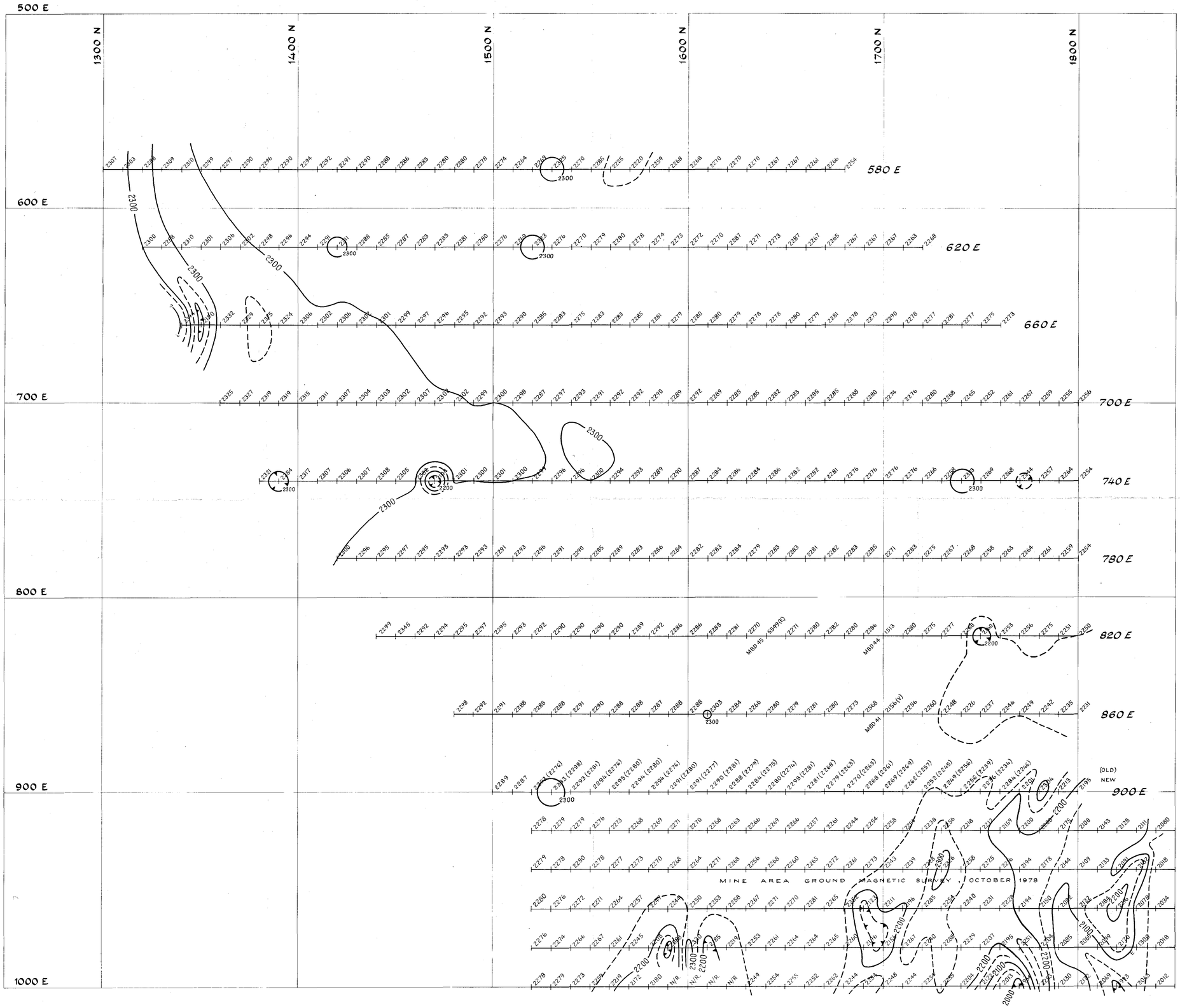
V V V V V V Basalt

Cambrian

Sn	Cu	Pb	Zn	Ni
X	48	<5	140	130
I.S.	40	15	100	95
X	50	15	140	120
10	52	20	150	130
16	35	5	75	90
I.S.	30	10	70	75
8	48	5	95	110
10	50	<5	100	120
16	42	10	75	85
32	35	100	110	55
10	30	<5	80	85
18	25	<5	90	70
140	22	5	200	85
I.S.	22	<5	90	55
14	22	<5	90	70
X	20	<5	120	65
8	22	10	80	45
44	40	5	100	90

832060

Drg. No. 80-320 A



Add 60,000 gammas to all values to obtain total magnetic intensity

100 gamma contour (labelled)

50 gamma contour (not labelled)

82-1698 Vol 1. Cover 81-044.

METALS EXPLORATION LTD

MT BISCHOFF TIN PROJECT

BURIED DOLOMITE AREA
GROUND MAGNETIC SURVEY

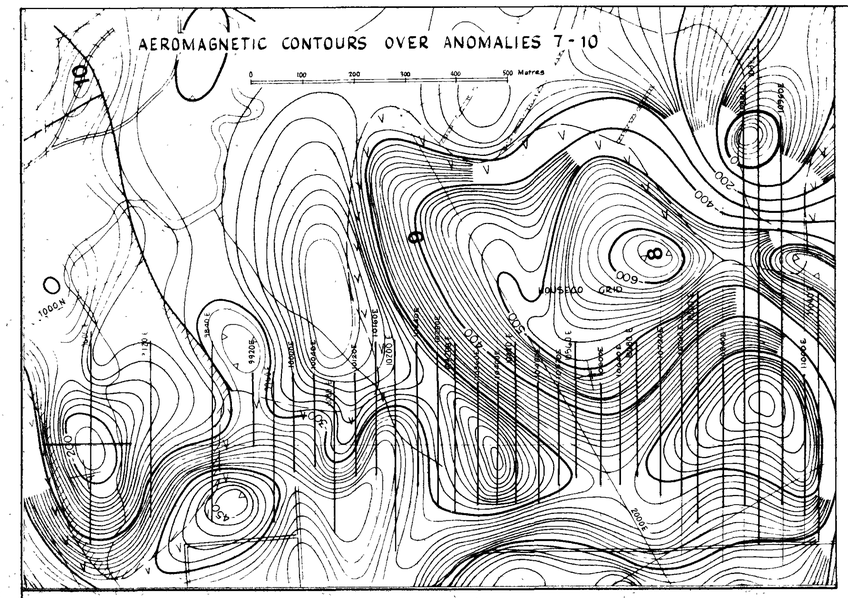
832061

TOTAL MAGNETIC INTENSITY CONTOURS

Scale 1:1000 — 5 cm

Date: Feb. 81

Drg. No. 81-044



Survey by R. de Cesare using G-816 Magnetometer SN 6264
Readings every 10m on 120m spaced lines.

V - Variable - not repeatable within 20-30γ so readings averaged.
NR - no reading, dangerous ground, or steep slopes, or near scrap iron

To all values add 60 000γ.

Fill in lines - Dec '80
for previous results see drg no 80-321

METALS EXPLORATION LIMITED
MT. BISCHOFF TIN PROSPECT
HOUSEGO GRID - MAGNETIC ANOMALIES 7, 8 & 9
GROUND MAGNETIC SURVEY
TOTAL MAGNETIC INTENSITY READINGS

5 cm

Scale 1 2000

Metres 100 80 60 40 20 0 100 200 Metres
Feet 200 100 0 200 400 600 800 Feet

MN
MEL GN

9600 E 9720 E 9840 E 9960 E 10000 E 10040 E 10080 E 10120 E 10160 E 10200 E 10240 E 10280 E 10320 E 10360 E 10400 E 10440 E 10480 E 10520 E 10560 E 10600 E 10640 E 10680 E 10720 E 10760 E 10800 E 10840 E 10880 E 10920 E 10960 E 11000 E 11040 E

10800 N 10700 N 10600 N 10500 N 10400 N 9800 N

Power Lines Fence

832062

82-1698 Vol 1. COVER 81-008

Date Feb '81 Drg. No. 81 - 008

82-1698
Vol 2.

832063 059

MT BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

MONTHLY REPORTS FOR JANUARY TO DECEMBER 1981

VOL. 2

TCR 81-1545

Rec. 3-4-81

060

METALS EXPLORATION LTD.
80 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

832064

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR FEBRUARY, 1981

Distribution: Copy No. 1 : Department of Mines, Tasmania

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D. Campi
File

G.M. Motteram
27th. March, 1981.

MT. BISCHOFF TIN PROSPECT

REPORT FOR FEBRUARY, 1981

General

Diamond drilling constituted the largest part of activity at Mt. Bischoff during February, with an increase over the previous month to 632.5 metres. A second drill rig, originally due to commence in early March, is held up by delivery problems and is unlikely to commence drilling before late March.

'Max Min' E.M. was carried out on selected grid lines by Geoterrex Pty. Ltd. A report on a P.E.M. survey conducted in January was received and results appraised by C.R.A.E. geophysiscist, Mr. Marcus Flis.

Re-logging and re-boxing of 'old' drill core continued during the period.

Logging and re-boxing of 'old' drill core continued during the period.

During the month a visit was made to Hobart to meet the Acting Director of Mines and Director of Industrial Development.

Mr. D. Simpson joined the project on 2 February as Project Geologist on site. Mr. K. O'Keefe joined the project on 23 February as Project Metallurgist.

Testwork in Launceston continued to indicate improved metallurgy to that demonstrated in Stage 2B. Drilling of H core metallurgical sample holes was completed.

Diamond Drilling:

Six holes, MBD 53 to MBD 58, were completed during the period for a total of 632.5 metres giving an aggregate metrage for Stage 3A to end February of 1096.10 m. compared with budget of 2700 m.

Metrage drilled per available shift was 11.29 which is low for the ground conditions. Twenty metres per shift should be readily achievable with a more suitable drill rig.

Holes MBD 53 to 56 completed the required HQ core drilling for metallurgical sampling and close spaced drilling evaluation.

Significant intercepts achieved are listed below, including those not previously reported from January.

.../2

Diamond Drilling (Contd.)

Hole No.	From	To	Width	%Sn	Rock Type
MBD 51	15.0	26.1	11.1	0.70	DSL
	65.5	77.8	12.3	0.32	Porphyry
MBD 52		N I L			DSL + Porphyry
MBD 53	0.0	4.0	4.0	0.38	DSL
	8.9	12.9	4.0	0.32	DSL
	12.9	17.0	4.1	0.72	Porphyry
	27.0	34.0	7.0	0.61	Porphyry
	65.8	72.8	7.0	1.22	DSL
	83.8	88.8	5.0	2.56	DSL
MBD 54	3.0	14.7	11.7	0.91	DSL
	23.0	28.0	5.0	0.41	Porphyry
	32.0	40.0	8.0	0.33	Porphyry
	42.1	48.3	6.2	0.52	Fault Pug/DSL
	65.8	73.7	8.1	0.78	DSL
	86.7	92.5	5.8	0.58	DSL + Qtz/Silt St.

NOTE: MBD 53 and MBD 54 spaced 5 metres apart.

Holes MBD 53 and 54 on X-Section 1080E demonstrated the DSL below the porphyry to be thicker than expected, i.e. 24 and 35 metres respectively compared with 5 and 10 metres expected.

Infill holes will be considered on 106E and 1100E to delineate the DSL geometry in this area.

MBD 55 and 56 whose targets were Porphyry ore on X-Section 1260E achieved intersections in porphyry 10 metres earlier in the hole than expected. Good structural correlation was achieved between the holes, however assays are not yet available.

MBD 57 and 58 with planned collar co-ordinates 1760N, 840E and 1690N, 880E were drilled to test the White Face Porphyry and the Buried Dolomite. MBD 57 achieved a prophyry intersection some 40 metres up hole from where expected. Two dolomite intersections were obtained, one from 115 to 140.5 m and the second from 153.6 to 162.25 m, with a 2.8 m section of DSL from 150.8 to 153.6 m. in MBD 57. Dolomite was also intersected in MBD 58.

Old Core:

The following holes were re-logged during the month :

B 37 B 38
B 31 B 18

Regional Exploration:

Tasmanian Mines Department drilling on Fooks Lode, in the Housego Grid area, was re-logged by G. Broadbent (Holes FL 3 to 9).

In the Housego area interpretation of magnetic and E.M. results led to definition of drill targets in the control area.

The two drill targets defined are as follows:

10 120E	10 130N	Depth 70 m.
10 320E	9970N	Depth 70 m.

Those holes are due to be drilled in the coming period.

A further drill target is thought to exist on line 10920E at 10,360N. and Max Min E.M. surveys will be run on lines 10980E and 10,880E to better define the E.M. anomoly.

Metallurgy:

Additional tests were run on talc depression, investigating the effect of pH and Daicel 1120 addition levels. In all cases good talc depression and sulphide flotation results were obtained for composite SC2.

Liberation tests were conducted on the Porphyry ore and SC1 sample from Stage 2B at grind sizes of 100% passing 250 and 150 micron. Good sulphide and arsenic rejection was indicated at the coarser grind size in both cases. Results from heavy liquids concentration on sulphide flotation tails are not yet available (as an indicator of cassiterite liberation.)

Composites from Stage 3A drilling are being identified and will be made up during March.

Mining:

Mining and underground sampling records from the 1940s were obtained by Mr. R. Spratt (CRAE) from the Mines Department in Hobart.

Correlation of assays from close spaced drilling in holes MBD 47 to 50 and MBD 53 and 54 indicates that the DSL ore may be more inconsistent than previously thought. As a result, studies will take place during March to assess reserves and minable grade on the basis of taking all DSL seen in areas of grade mineralisation.

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

832068

	FEBRUARY, 1981		FIVE MONTHS TO 28.2.81	
	ACTUAL	BUDGET	ACTUAL	BUDGET
	$	$	$	$
Technical Services	26,940	23,710	82,339	101,210
Travel & Accommodation	3,304	700	6,336	3,500
Labour	798	1,550	5,657	7,200
Camp & Messing	158	1,400	2,300	5,800
Vehicles	828	1,000	3,513	4,100
Equipment Rental	50	450	200	1,900
Consumables & General	2,333	1,700	27,813	26,610
Tenement Expenses				500
Track Cutting			875	4,000
Geophysical Surveys	7,959		7,959	4,000
Diamond Drilling	33,879	41,000	58,005	176,000
Site Preparation				8,000
Assays	30	2,800	562	8,400
Mining Studies	-	1,480	-	2,260
Metallurgical	1,910	14,900	10,448	32,700
Capital Items	1,040		43,273	38,500
	79,229	90,690	249,280	424,680

SUMMARY OF EXPENDITURE TO 28 FEBRUARY 1981

Stage 1	270,000
Stage 2A - Early Start	29,020
Stage 2A	198,818
Overruns: Stage 1 - M.E.L.	11,308
Metallurgical - C.R.A.E.	23,500
Stage 2B	482,354
Stage 2B - 3A Holding Costs Offset - A.I.R. & D. Grant	40,000
Stage 3A	249,280
CUMULATIVE EXPENDITURE TO DATE	1,304,280

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

EL13.79

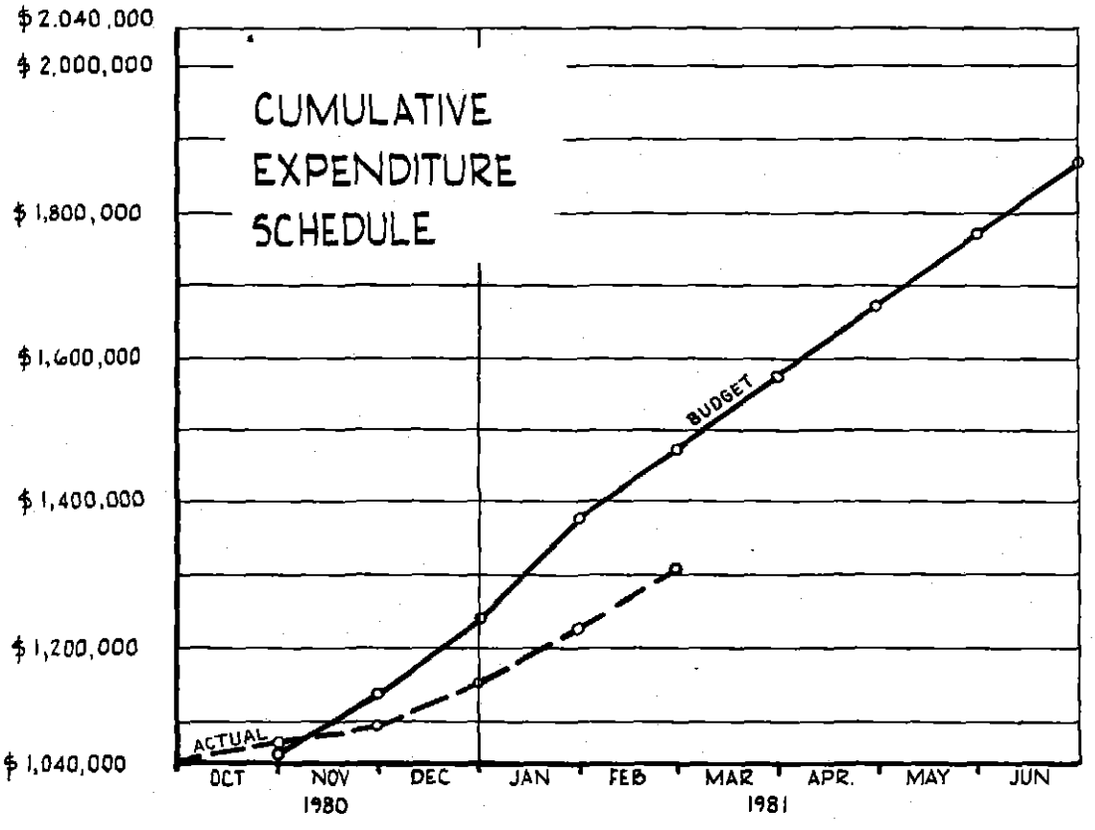
	FEBRUARY 1981	FIVE MONTHS TO 28.2.81
Technical Services	17,834	68,219
Travel & Accommodation	2,780	5,233
Labour	797	5,137
Camp & Messing	158	2,174
Vehicles	828	3,513
Equipment Rental	50	200
General Expenses & Consumables	2,333	24,388
Track Cutting		875
Diamond Drilling	33,879	58,005
Metallurgical	1,910	10,448
Assays	30	562
Capital Items	780	43,013
Geophysical Surveys	3,979	3,979
	65,358	225,746

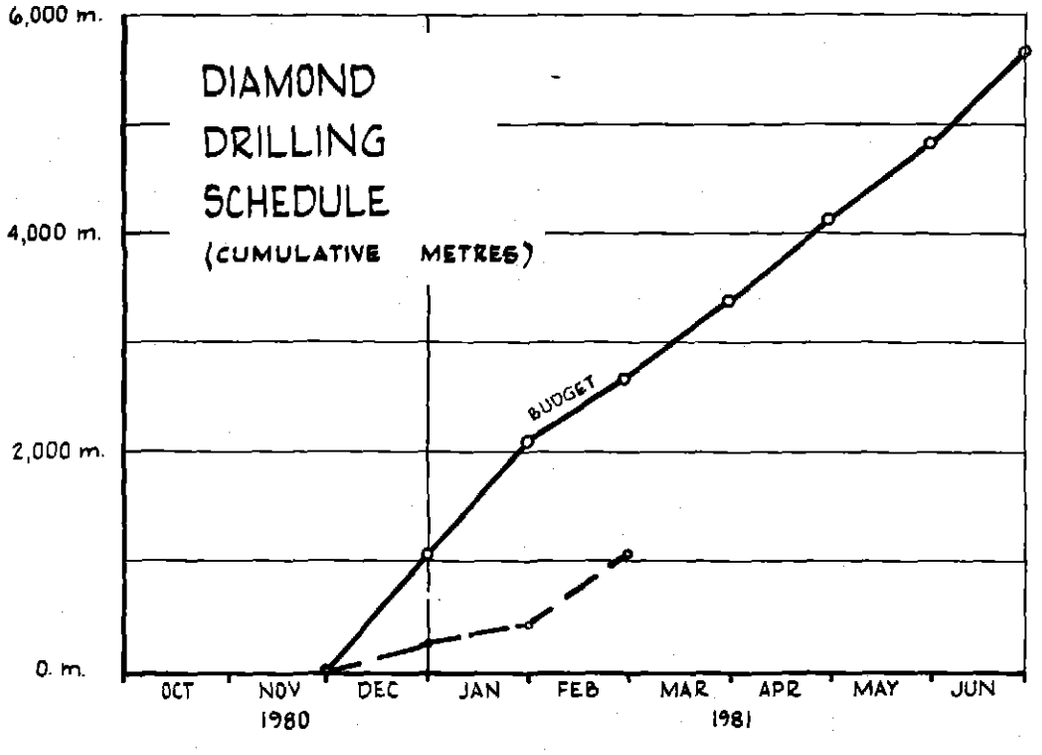
MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

AP5.80

	FEBRUARY	FIVE MONTHS TO 28.2.81
Technical Services	9,106	14,120
Travel & Accommodation	524	1,103
Labour		
Camp & Messing		
General Expenses & Consumables		
Geophysical Surveys	3,979	3,979
Capital items	260	260
	13,869	19,462





MT. BISCHOFF

STAGE 3A SUMMARY
as at 31·1·80

Rev. 23.2.81

INITIAL PHASE METALLURGICAL PROGRAMME

SECTION D. HEAVY LIQUIDS TESTING

GENERAL CONDITIONS:

Sample:	Approx. 4000g. Porphyry SC1
Crushing:	Nominal minus 12 mm (½")
SG Tested:	2.75 and 2.95

TEST D.1 (80 29 29) Porphyry

Results

Size Fraction (mm)	Product	% Total Wt.	Grade % Sn	Grade %S	Distribution %Sn	Distribution %S
+ 6.35	2.75 Float	1.61	0.30	1.4	1.4	0.4
	2.95 "	23.25	0.42	3.7	28.3	17.0
	2.95 Sink	6.48	0.45	8.1	8.5	10.4
		31.34	(0.42)	(4.5)		
- 6.35+2.8	2.75 Float	2.32	0.16	0.85	1.1	0.4
	2.95 "	15.28	0.21	2.50	9.3	7.6
	2.95 Sink	7.26	0.24	8.60	5.0	12.4
		24.86	(0.21)	(4.1)		
- 2.8+0.50	2.75 Float	5.00	0.04	0.38	0.6	0.4
	2.95 "	7.93	0.14	1.20	3.2	1.9
	2.95 Sink	9.18	0.48	11.30	12.8	21.4
		22.11	(0.26)	(5.4)		
- 0.50	2.75 Float	6.85	0.14	0.38	2.8	0.5
	2.95 "	4.30	0.11	1.30	1.4	1.1
	2.95 Sink	10.35	0.84	12.70	25.7	26.5
		21.69	(0.47)	(6.5)		
Calculated Head			0.34	5.1		

TEST D.2 (80 29 30) SC1

Results

Size Fraction (mm)	Product	% Total Wt.	Grade % Sn	Grade %S	Distribution %Sn	Distribution %S
+ 6.35	2.95 Float	2.49	0.07	0.64	0.1	0.1
	2.95 Sink	43.50	1.42	17.0	46.9	43.1
		45.99	(1.35)	(16.1)		
- 6.35+2.8	2.95 Float	1.34	0.14	1.2	0.1	0.1
	2.95 Sink	20.48	1.42	19.2	22.1	22.9
		21.82	(1.34)	(18.1)		

Results Test D.2 (contd.)

Size Fraction (mm)	Product	% Total Wt.	Grade % Sn	Grade %S	Distribution %Sn	Distribution %S
- 2.8+0.5	2.95 Float	1.65	0.29	1.3	0.4	0.1
	2.95 Sink	16.98	1.41	19.4	18.2	19.2
		18.62	(1.31)	(17.8)		
- 0.5	2.95 Float	1.37	0.50	1.2	0.5	0.1
	2.95 Sink	12.20	1.26	20.3	11.7	14.4
		13.57	(1.18)	(18.3)		
Calculated Head			1.32	17.2		

Comment:

TEST D.1 - Sample, Porphyry.

Crushing to nominal minus 12 mm followed by heavy media preconcentration of plus 0.50 mm indicates -

	SG=3.0	SG=2.75
Weight rejection	55%	8.9%
Tin loss	44%	3.1%
Upgraded Plant Feed	0.43% Sn	0.36% Sn
From Head Grade	0.34% Sn	0.34% Sn

Hence, major upgrading of low grade porphyry material does not appear possible at coarse sizes.

TEST D.2 - Sample, SCl.

Crushing to nominal minus 12 mm followed by heavy media preconcentration of plus 0.50 mm @ SG = 3.0 indicates -

Weight rejection	5.5%
Tin metal loss	0.6%
Upgraded Plant Feed	1.38% Sn
From Head Grade	1.32% Sn

Hence, minor upgrading of DSL may be possible via a heavy media plant at low tin losses.

This sample contained DSL and minor altered dolomite only - no footwall sediments.

SECTION A PRIMARY GRIND - LIBERATION TESTS

GENERAL CONDITIONS:

Sample:	1000g Porphyry SC1 SC2
Grind:	Stage Grind (i) - 250 micron (ii) - 150 "
Collector:	SEX
Frother:	MIBC
Talc Depressant:	Daicel 1120
Activator:	$CuSO_4$
Pulp Density:	Roughing 30% Solids Cleaning Best Possible
Flotation Time:	Roughing 10 min. (approx.) Cleaning As required Re Cleaning As required

TESTS A1 + A2 (N7 + N8) - Porphyry.

Results

A1 (N7) Porphyry minus 250 micron

	% wt.	Grade %Sn	%S	%As	Recovery %Sn	%S	%As
Recleaner Conc.	8.1	.34	-	1.58	8.9	-	83.4
Recleaner Tail	0.4	.57	-	.78	.8	-	2.2
Cleaner Tail	1.5	.29	-	.24	1.4		2.4
Rougher Tail	90.0	.30	-	.02	88.9		12.0
Calculated Head		.31	-	.15			

Sizing, Rougher Tail P_{80} = 106 micron

A2 (N8) Porphyry minus 150 micron

	% wt.	Grade %Sn	%S	%As	Recovery %Sn	%S	%As
Recleaner Conc 1	2.5	.19	-	1.25	1.5	-	26.6
Recleaner Conc 2	4.7	.35	-	1.45	5.4	-	46.0
Recleaner Tail	1.3	.38	-	1.78	1.6	-	15.6
Cleaner Tail	2.8	.29	-	.26	2.6	-	4.8
Rougher Tail	88.8	.31	-	.02	88.9	-	13.0
Calculated Head		.31	-	.15			

Sizing, Rougher Tail P_{80} = 90 micron.

Comment:

Sulphur assays not to hand, however indicated sulphide liberation and flotation is good in both cores.

Coarser grind gives satisfactory rougher tin recovery.

TESTS A3 + A4 (N9 + N10) - SC1

Results

A3 (N9) SC1 - 250 micron

		Grade			Recovery		
	% wt.	%Sn	%S	%As	%Sn	%S	%As
Recleaner Conc 1	7.0	.28	-	1.48	1.6	-	20.4
Recleaner Conc 2	4.8	.31	-	2.58	1.2	-	23.7
Recleaner Conc 3	6.9	.29	-	1.08	1.6	-	14.7
Recleaner Conc 4	8.3	.27	-	1.03	1.8	-	16.8
Recleaner Conc 5	6.1	.20	-	.47	1.0	-	5.7
(Calc. Recl. Conc	33.1	.27	-	1.25	7.2	-	81.3)
Recleaner Tail	9.9	1.20	-	.52	9.5	-	10.1
(Calc. Cleaner Conc	43.0	.4	-	1.08	16.7	-	91.4)
Cleaner Tail	3.2	1.45	-	.35	3.7	-	2.2
(Calc. Rougher Conc	46.2	.55	-	1.03	20.4	-	93.6)
Rougher Tail	53.8	1.85	-	.06	79.6	-	6.4
Calculated Head		1.25	-	.51			

Sizing, Rougher Tail P_{80} = 110 micron

A4 (N 10) SC1 - 150 micron

		Grade				Recovery		
	% wt.	%Sn	%A.Sol Sn	%S	%As	%Sn	%S	%As
Recleaner Con 1	8.1	.38	.22	-	2.2	2.6	-	35.0
Recleaner Con 2	4.4	.33	.20	-	1.4	1.2	-	12.0
Recleaner Con 3	5.0	.30	.12	-	1.2	1.2	-	11.8
Recleaner Con 4	8.4	.24	.06	-	.70	1.7	-	11.8

A4 (N 10) (contd.)

	% wt.	Grade %Sn	%A.Sol Sn	%S	%As	Recovery %Sn	%S	%As
Recleaner Con 5	8.1	.21	.06	-	.47	1.4	-	7.7
Recleaner Con 6	7.4	.29	.02	-	.47	1.8	-	7.0
(Calc ReCl. Conc	41.2	.29	.12	-	1.03	9.9	-	86.2)
Recleaner Tail	3.0	2.77	-	-	1.19	6.8	-	7.2
(Calc Cleaner Conc	44.2	.45	-	-	1.04	16.7	-	93.4)
Cleaner Tail	3.7	1.42	-	-	.32	4.4	-	2.4
(Calc. Rougher Conc	47.9	.53	-	-	.99	21.1	-	95.8)
Rougher Tail	52.0	1.82	-	-	.04	78.9	-	4.2
Calculated Head		1.20	-	-	.49			

Sizing, Rougher Tail P_{80} = 84 micron.

Comment:

Sulphur assays not to hand, however indicated sulphide liberation and flotation is acceptable.

Rougher concentrate tin grade is similar at both grinds, hence the coarser grind is preferred.

Although still high, the rougher concentrate tin grade is vastly improved on Stage 2B results and, after allowing for soluble tin, efficient cleaning is indicated.

HOLE MBD 52

The following Assay Summary Sheet is relating to Hole MBD 52 from January.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98745		12.0	13.0	1.0	1250									
46		13.0	14.0	"	1500									
47		14.0	15.0	"	180									
49		15.0	16.0	"	80									
49		16.0	17.0	"	8									
750		17.0	18.0	"	<4									
51		18.0	19.0	"	12									
52		19.0	20.0	"	12									
53		20.0	21.0	"	16									
54		21.0	22.0	"	55									
55		22.0	23.0	"	1000									
56		23.0	24.0	"	30									
57		24.0	25.0	"	36									
58		25.0	26.0	"	40									
59		26.0	27.0	"	140									
760		27.0	28.0	"	100									
61		28.0	29.0	"	42									
62		29.0	30.0	"	210									
63		30.0	31.3	1.3	370									
64		31.3	32.2	0.9	1550									
65		32.2	33.2	1.0	350									
66		33.2	34.2	"	110									
67		34.2	35.2	"	44									
68		35.2	36.2	"	120									
69		36.2	37.2	"	110									
770		37.2	38.2	"	290									
71		38.2	39.2	"	100									
72		39.2	40.2	"	2550									
73		40.2	41.2	"	580									
98774		41.2	42.2	"	1000									

Notes:— Sn by XRF Bi Method

Detection limit 4.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 52

SAMPLE TYPE : DRILL CORE FROM 12.0 TO 42.2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98775		42.2	43.2	1.0	3300									
76		43.2	44.2	"	7200									
77		44.2	45.2	"	1700									
78		45.2	46.2	"	1600									
79		46.2	47.2	"	1650									
780		47.2	48.2	"	640									
81		48.2	49.2	"	210									
82		49.2	50.2	"	240									
83		50.2	51.7	1.5	360									
84		51.7	52.7	1.0	42									
85		52.7	53.7	"	22									
86		53.7	54.7	"	48									
87		54.7	55.7	"	8									
88		55.7	56.7	"	95									
89		56.7	57.7	"	1000									
790		57.7	58.7	"	150									
91		58.7	59.7	"	170									
92		59.7	60.7	"	180									
93		60.7	61.7	"	140									
94		61.7	62.7	"	85									
95		62.7	63.7	"	210									
96		63.7	64.7	"	75									
97		64.7	65.7	"	290									
98		65.7	66.7	"	480									
99		66.7	67.7	"	100									
800		67.7	68.7	"	560									
01		68.7	69.7	"	1550									
2		69.7	70.7	"	80									
3		70.7	71.7	"	75									
98804		71.7	72.7	"	190									

Notes :— Sn by XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 52

SAMPLE TYPE : DRILL CORE FROM 42.2 TO 72.7

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98805		72.7	73.7	1.0	70									
6		73.7	74.7	"	230									
7		74.7	75.7	"	X									
8		75.7	76.7	"	6									
9		76.7	77.7	"	120									
810		77.7	78.7	"	24									
11		78.7	79.7	"	12									
12		79.7	80.7	"	470									
13		80.7	81.5	0.8	120									
14		81.5	82.5	1.0	20									
15		82.5	83.6	1.1	36									
16		83.6	84.6	1.0	150									
17		84.6	85.6	"	130									
18		85.6	86.6	"	410									
19		86.6	87.6	"	2200									
820		87.6	88.6	"	780									
21		88.6	89.6	"	1500									
22		89.6	90.4	0.8	600									
23		90.4	91.7	1.3	75									

Notes :— Sn by XRF Bi Method
X means less than detection limit

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 52

SAMPLE TYPE : DRILL CORE FROM 72.7 TO 91.7

832081073

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF

HOLE No. MBD 53

COLLAR LOCATION

Grid name — Rectangular space co-ordinates

	PLANAR CO-ORDINATES				ELEVATION
(1) MBJV	1882.84	N	1080.06	E	626.06
(2)		N		E	
(3) Aust. Map Grid (PRECISE / APPROX.)		mE		mN	m A.H.D.

W.C. Bearing from collar
- _____ magnetic
- _____ grid (1)
- _____ grid (2)
- _____ grid (3)
- _____ true

Inclination at collar: Vertical

Total length: 93.2m

Commenced: 29 / 1 / 81

Completed: 2 / 2 / 81

1:250 000 Sheet No.	1:100 000 Sheet No.	State
BURNIE SK 55-3	HELLYER 8015	TASMANIA

Mineral Tenement: EL 13/79 — Holder: METALS EXPLORATION LTD.

Cadastral location and details (CROWN LAND / PRIVATE):

Drilling contractor: LONGYEAR AUST. PTY. LTD.

Rig type: H.C. 150

Details of down hole location-survey methods.
Eastman single shot every 30 metres

Purpose of drilling and anticipated lengths to targets.
To obtain DSL and Porphyry core for metallurgical testing and to test continuity of rock types and tin grades between closely spaced holes.

Core size and non-coring (NC)

TRICONE	0	TO	4.0
HQ	4.0	TO	93.2
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type Magnetic	DIP
30	22°	88°30'
60	234°	88°50'
90	300°	88°40'

Comments on drilling. HW casing was reamed to 16.0 m

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL NO.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY K. CAMUTI	LOGGED BY	LOGGED BY
FROM 0 TO 93.2	FROM TO	FROM TO
DATE 4.2.81	DATE	DATE

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 53

Log sheet 1 of 2

832082 074

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (capital letters, underlined) Depth Description and notes, veins over 50mm indented about 10mm	GRAPHIC LOG	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets	BULKED ASSAYS SA
0	0 - 4.0 (4m)	0 - 4.0 PYRITIC SAND Dark brown sandy material containing sulphides and trace of cassiterite.	S	Pyrite, sphalerite, trace of cassiterite 5 - 10%	
	4.0-13.0 (9m)	4.0 - 13.0 DOLOMITE SULPHIDE LODE FAULT PUG Soft, black, weathered fault pug containing sulphides, rotted sulphides, dolomite and porphyry	F/B/S	Mainly py and sp, with some cp and marcasite 10%	
20	13.0-40.0 (27m)	13.0 - 40.0 QUARTZ PORPHYRY Badly weathered and pitted cream to ligtbrown to pale grey medium grained porphyry grading into less weathered glassy pale grey prophyry. Very few feldspar phenocrysts 10% quartz phenocrysts	1	Mainly py, some marcasite, sp and cp. Trace arsenopy and fluorite 10%	
40	40-53.0 (13m)	40.0 - 53.0 DOLOMITE SULPHIDE LODE FAULT PUG Dark brown puggy and sandy material containing broken fragments of dolomite and porphyry, quartz, some pyrite, trace of cp and cassiterite	F/B/S	Mainly py, trace cp and cassiterite 10%	
	53.0-58.4 (5.4m)	53.0 - 58.4 NO CORE Probably consisted of previous fault pug	NC		
60	58.4-60.3 (1.9m)	58.4 - 60.3 DOLOMITE Badly weathered and broken cream coloured dolomite	2	Py and sp. Trace of talc <1%	
	60.3-65.8 (5.5m)	65.3 - 65.8 RECRYSTALLIZED Pale blue massive recrystallized dolomite with some talc. Quartz carbonate patches ~ 10%	3	Mainly py and sp, some marc, and po, trace arsenopy <1%	
80	65.8-89.8 (24m)	65.8 - 89.8 DOLOMITE SULPHIDE LODE PYPRHOTITE/CARBONATE RICH D.S.L. overall po - rich but containing 2 py - rich lengths at beginning of the interval. Areas of fine wriggly banding, small amounts of serpentine and talc. Major quartz/carbonate. Locally massive po - rich lodes - up to 90% sulphides	4/8	Mainly po, major py, some marc, trace of arsenopy, cp and sp. Minor fluorite 50%	
				Contact 50°	
	89.8-93.2 (3.4m)	89.8 - 93.2 QUARTZITE/MINOR SILTSTONE Fine grained mid-grey, massive quartzite with minor pale grey coarse siltstone, moderate disruption	11/10	Mainly py, some po, marc and arsenopy. Trace fluorite. 10%	
100		93.2m END OF HOLE			

FOR LEGEND SEE DRAWING NO

5 cm

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD53

LOG SHEET 1 OF 1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98824		0.0	4.0	4.0	3800									
25		4.0	6.9	2.9	280									
26		6.9	7.9	1.0	1800									
27		7.9	8.9	"	2100									
28		8.9	9.9	"	1600									
29		9.9	10.9	"	3050									
830		10.9	11.9	"	2450									
31		11.9	12.9	"	4100									
32		12.9	14.0	1.9	1.14%									
33		14.0	15.0	1.0	2950									
34		15.0	16.0	"	580									
35		16.0	17.0	"	1.03%									
36		17.0	18.0	"	1050									
37		18.0	19.0	"	560									
38		19.0	20.0	"	1650									
39		20.0	21.0	"	1600									
840		21.0	22.0	"	1150									
41		22.0	23.0	"	1350									
42		23.0	24.0	"	3900									
43		24.0	25.0	"	1100									
44		25.0	26.0	"	1050									
45		26.0	27.0	"	820									
46		27.0	28.0	"	5400									
47		28.0	29.0	"	1.16%									
48		29.0	30.0	"	8000									
49		30.0	31.0	"	5600									
850		31.0	32.0	"	5500									
51		32.0	33.0	"	2700									
52		33.0	34.0	"	3800									
53		34.0	37.7	3.7	1150									

Notes :— Sn by XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 53

SAMPLE TYPE : DRILL CORE FROM 0.0 TO 37.7

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98854.		37.7	38.7	1.0	2350									
55		38.7	40.0	1.3	940									
56		40.0	41.0	1.0	620									
57		41.0	42.0	"	160									
58		42.0	43.0	"	640									
59		43.0	44.0	"	1100									
860		44.0	45.0	"	920									
61		45.0	46.0	"	780									
62		46.0	47.0	"	6500									
63		47.0	48.0	"	400									
64		48.0	49.0	"	430									
65		49.0	52.0	2.0	2200									
66		52.0	58.4	6.4	1800									
67		58.4	59.4	1.0	30									
68		59.4	60.4	"	170									
69		60.4	61.4	"	300									
870		61.4	62.4	"	10									
71		62.4	63.4	"	8									
72		63.4	64.4	"	X									
73		64.4	65.3	0.9	X									
74		65.3	65.8	0.5	X									
75		65.8	66.8	1.0	5500									
76		66.8	67.8	"	6600									
77		67.8	68.8	"	9200									
78		68.8	69.8	"	3350									
79		69.8	70.8	"	1.55%									
880.		70.8	71.8	"	2.48%									
81		71.8	72.8	"	2.04%									
82		72.8	73.8	"	1800									
83		73.8	74.8	"	1350									

Notes:— Sn by XRF Bi Method.

X means less than detection limit

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 53

SAMPLE TYPE : DRILL CORE FROM 37.7 TO 74.8

SAMPLE NO. SPLIT CORE	SAMPLE NO GROUND CORE	FROM m	TO m	INTER-VAL m	Sn SPLIT	Sn GROUND	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
98884		74.8	75.8	1.0	520									
85		75.8	76.8	"	60									
86		76.8	77.8	"	12									
87		77.8	78.8	"	46									
88		78.8	79.8	"	24									
89		79.8	80.8	"	85									
890		80.8	81.8	"	260									
91		81.8	82.8	"	85									
92		82.8	83.8	"	65									
93		83.8	84.8	"	3.08%									
94		84.8	85.8	"	4.80%									
95		85.8	86.8	"	3.88%									
96		86.8	87.8	"	4050									
97		87.8	88.8	"	6100									
98		88.8	89.7	0.9	55									
99		89.7	90.7	1.0	580									

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 53

SAMPLE TYPE : DRILL CORE FROM 74.8 TO 90.7

832086

REPORT No. 078

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MOUNT BISCHOFF

HOLE No. MBD 54

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES				ELEVATION
(1)	MBJV	1887.11	N	1079.92	E	626.12
(2)			N		E	
(3) Aust. Map Grid PRECISE / APPROX.			mE		mN	m A.H.D.

W.C. Bearing from collar
- ____ magnetic
- ____ grid (1)
- ____ grid (2)
- ____ grid (3)
- ____ true

1:250 000 Sheet No.	1:100 000 Sheet No.	State
BURNIE SK 55-3	HELLYER 8015	TASMANIA

Mineral Tenement: E.L. 13/79 — Holder: METALS EXPLORATION LTD.

Cadastral location and details (CROWN LAND / PRIVATE):

Inclination at collar: Vertical

Total length: 97.0m

Commenced: 4 / 2 / 81

Completed: 9 / 2 / 81

Drilling contractor: LONGYEAR AUSTRALIA P.L.

Rig type: HC 150

Details of down hole location-survey methods:
Eastman single shot camera every 30 metres

Purpose of drilling and anticipated lengths to targets:
To obtain DSL and Porphyry core for metallurgical testing and to test continuity of rock types and tin grades between closely spaced holes.

Core size and non-coring (NC)

HW	0	TO	3.0
HQ	3.0	TO	97.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type: Magnetic	DIP
30	4°	88°40'
60	283°	88°
96	339°	88°20'

Comments on drilling.

Legend for graphic log column (see drill log for Hole No. ____)

'DERWENT' PENCIL NO.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY	FROM	TO	DATE
I.J. MORRISON	0	97.0	11.2.81

Company managing exploration programme:
METALS EXPLORATION LTD.

HOLE No. MBD 54

Log sheet 1 of 2

832087
079

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes, veins over 50mm MOUNTED ABOUT 10mm	GEOL. LOG	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets	BULKED ASSAYS Sn
0	0-3.0 (3.0m)	TRICONE - NO CORE	NC		
	3.0-15.0 (12.0m)	FAULT PUG - DOLOMITE SULPHIDE LODE Creamy grey to green-grey to black clayey pug. Granular feel due to presence of sand and pebble size fragments of Qtz, Py, Carbonate and lesser Serpentinite	1/5/8/7 ?	3.0 - 13.0 - 10-20% Py - as fine constituent in pug and as fragments. Trace SnO_2 and Sp 13.0 - 15.0 - 40-50% Py - occurrence as for 3.0 - 13.0	
10					
	15.0-42.1 (27.1m)	QUARTZ PORPHYRY Pale to mid grey, med to coarse grained. Matrix fine grained opaque to coarsely crystalline and clear. Generally weathered, pitted and leached, becoming less towards end of interval. 20-25% Qtz. phenocrysts. Feldspars absent to 32.3m - thereafter 5-10%. Numerous zones pale to dark grey to black clayey granular pug	1	15.0-25.7 - 5-10% Py - as pitted crystalline blebs and as fine particles and fragments in pug. 22.0-23.2 (?) Fault zone Fault zone 25.7-42.1 - 10-20% Py - Trace only Sp, Arsenopyrite , Fluorite. Occurrence as for 15.0-25.7. (?) Fault zone 36.4-38.5 (?) Fault zone
20					
30					
40		(?) Fault zone Bottom Contact 75°			
	1.4m	42.1 - 43.5 FAULT PUG - clayey multi-coloured	F	20-30% Py	
	43.5-58.6 (15.1m)	FAULT PUG - DOLOMITE SULPHIDE LODE Multi-coloured pale to black. Clayey texture, to sandy and granular due to presence of rock fragments	F/5/8/7 ?	5-10% Py. Trace only Sp. As fragments, within fragments and as fine particles in pug	
50					
60	58.6-65.8 (7.2m)	DOLOMITE - WEAKLY RE-CRYSTALLIZED Pale mid grey, massive to weakly banded, mildly to moderately brecciated. Qtz/Carbonate D.S.L. patches at 61.1-61.4, 61.8-62.1	2	3-5° Py > Sp - Disseminated in thin irregular veins and irregular crystalline masses - mainly in D.S.L. patches	
	65.8-91.5 (25.7m)	DOLOMITE SULPHIDE LODE Wriggly banded Serpentinite rich with lesser Qtz/Carbonate grading to Qtz/Carbonate rich with lesser Po rich and minor talc 70.1-81.9m Mottled appearance Po rich ≅ 60%, Qtz/Carbonate ≅ 40%. Major Qtz - minor Carbonate. Occassional Talc	?/8/4 8/4/6 4/8	65.8-70.1m - 30% Po > Py coarsely disseminated. Trace only Sp and Fluorite ?Fault zone ?Fault zone 70.1-81.9m - 60% Po >> Py - massive to coarsely disseminated. Minor Py and marcasite. Trace only Cp, arsenopyrite, Fluorite	
70					
80		(?) Fault zone 81.9-91.5m Mottled to weakly to moderately contorted banding. Rare veins. Qtz/Carbonate rich grading to Po rich grading to Qtz/Carbonate rich. Talc increasing to ≅ 10% at end of interval. Carbonate increasing to ≅ 20% at end of interval.	8/4 4/8 8/4/6	81.9-91.5m - 40% Po >> Py. Trace only Cp, arsenopyrite, Fluorite, Tourmaline. Weakly banded, coarsely disseminated to massive. Py content increases to 10% at end of interval	
90					
	91.5-97.0 (5.5m)	QUARTZITE/MINOR SILTSTONE Medium grey, fine to medium grained quartzite with minor coarse siltstone. Moderately to mildly brecciated.	11/10	3-5% Py >> Po - occure in veins and stringers. Trace Sp and Fluorite. Banding (bedding?) 30°	
		END OF HOLE 97.0m			
100					

FOR LEGEND SEE DRAWING NO.

5 cm

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD54

LOG SHEET 1 OF 1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98380		3.0	3.9	0.9	6000									
81		3.9	4.9	1.0	6200									
82		4.9	5.9	1.0	4350									
83		5.9	6.4	0.5	1.35%									
84		7.4	8.4	1.0	1.17%									
85		8.4	9.4	"	1.43%									
86		9.4	10.4	"	1.69%									
87		10.4	11.4	"	6500									
88		11.4	12.4	"	2950									
89		12.4	13.7	"	1.29%									
390		13.7	14.7	1.3	5500.									
91		14.7	15.7	1.0	5800									
92		15.7	16.7	"	1900									
93		16.7	17.7	"	1650									
94		17.7	18.7	"	2050									
95		18.7	19.7	"	1700									
96		19.7	22.0	2.3	1250									
97		22.0	23.0	1.0	1700									
98		23.0	24.0	"	3500									
99		24.0	25.0	"	4450									
900		25.0	26.0	"	5700									
01		26.0	27.0	"	3250									
2		27.0	28.0	"	3650									
3		28.0	29.0	"	1500									
4		29.0	30.0	"	1650									
5		30.0	31.0	"	1950									
6		31.0	32.0	"	1050									
7		32.0	33.0	"	3050									
98408		33.0	34.0	"	2150									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 54

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 34.0

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98909		34.0	35.0	"	4200									
910		35.0	36.0	"	2050									
11		36.0	37.0	"	3200									
12		37.0	38.0	"	3650									
13		38.0	39.0	"	3800									
14		39.0	40.0	"	4500									
15		40.0	41.0	"	2400									
16		41.0	42.1	1.1	1550									
17		42.1	43.1	1.0	1.20%									
18		43.1	44.1	"	5100									
19		44.1	45.1	"	5500									
920		45.1	46.1	"	3300									
21		46.1	48.3	2.2	2950									
22		48.3	49.3	1.0	1300									
23		49.3	50.3	"	190									
24		50.3	51.3	"	140 ?									
25		51.3	52.3	"	370									
26		52.3	53.3	"	250									
27		53.3	54.3	"	44									
28		54.3	55.3	"	380									
29		55.3	56.3	"	250									
930		56.3	57.3	"	520									
31		57.3	58.6	1.3	190									
32		58.6	59.6	1.0	4									
33		59.6	60.6	"	14									
34		60.6	61.6	"	540									
35		61.6	62.6	"	1300									
36		62.6	63.6	"	80									
37		63.6	64.6	"	95									
98938		64.6	65.8	1.2	660									

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 54

SAMPLE TYPE : DRILL CORE FROM 34.0 TO 65.8

98909 98938

SAMPLE NO. SPLIT CORE	SAMPLE NO GROUND CORE	FROM m	TO m	INTER-VAL m	Sn SPLIT	Sn GROUND	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
98939		65.8	66.8	1.0	4350									
940		66.8	67.8	"	4800									
41		67.8	68.6	0.8	1200									
42		68.7	69.7	1.0	1150									
43		69.7	70.7	"	7900									
44		70.7	71.7	"	1.40%									
45		71.7	72.7	"	1.76%									
46		72.7	73.7	"	1.13%									
47		73.7	74.7	"	1450									
48		74.7	75.7	"	920									
49		75.7	76.7	"	420									
950		76.7	77.7	"	580									
51		77.7	78.7	"	1050									
52		78.7	79.7	"	1150									
53		79.7	80.7	"	1900									
54		80.7	81.7	"	620									
55		81.7	82.7	"	1200									
56		82.7	83.7	"	1000									
57		83.7	84.7	"	940									
58		84.7	85.7	"	660									
59		85.7	86.7	"	580									
960		86.7	87.7	"	1.06%									
61		87.7	88.7	"	6000									
62		88.7	89.7	"	200									
63		89.7	90.7	"	20									
64		90.7	91.5	0.8	110									
65		91.5	92.5	1.0	1.65%									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 54

SAMPLE TYPE : DRILL CORE FROM 65.8 TO 92.5

832091083

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 55

COLLAR LOCATION

Grid name | Rectangular space co-ordinates

		PLANAR CO-ORDINATES		ELEVATION
(1)	MBJV	2034.98 N	1259.95 E	688.21
(2)		N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)		mE	mN	m A.H.D.

1:250 000 Sheet No. BURNIE SK 55-3 | 1:100 000 Sheet No. HELLYER 8015 | State TASMANIA

Mineral Tenement EL 13/79 | Holder METALS EXPLORATION LTD.

Cadastral location and details (CROWN LAND/ PRIVATE)

W.C. Bearing from collar
_____ magnetic
_____ grid (1)
_____ grid (2)
_____ grid (3)
_____ true

Inclination at collar 58°

Total length 80.0m

Commenced: 11 / 2 / 81
Completed: 14 / 2 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.

Rig type: LONGYEAR H.C. 150

Core size and non-coring (NC)

TRICONE	0	TO	2.5
HQ	2.5	TO	80.0
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.

EASTMAN
Single Shot Photo

Purpose of drilling and anticipated lengths to targets.

To obtain core for metallurgical purposes and to check location of white Face Dyke (60-75m) and presence of Western Dyke.

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type.....	DIP
20m	150°30'	57°
50m	150°30'	58°30'
79m	149°	59°

Comments on drilling.

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL NO.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY	LOGGED BY	LOGGED BY
K. CAMUTI		
FROM 0 TO 80.0	FROM TO	FROM TO
DATE 15/2/81	DATE	DATE

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 55
Log sheet 1 of 2

832092 084

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes, veins over 50mm. (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets.	ASSAYS AVAILABLE	BULKED ASSAYS Sn
0	0-2.5 (2.5)	TRICONE - NO CORE		NC				
	2.5-9.9 (7.4)	SILTSTONE/MINOR CARBONACEOUS SHALE Mid-grey, moderately disrupted medium grained siltstone with minor carbonaceous shale.		10/9/C		1% mainly pyrite and marcasite, trace of arsenopyrite and sphalerite. Occurring in stringers, small veins and patches. Contact = 55°		
10	9.9-15.3 (5.4)	QUARTZ PORPHRY - Light brown, fine grained slightly weathered porphry with occasional bleached bands. 5-7% quartz phenocrysts 3-5% feldspars		1		15% mainly marcasite and pyrite, mainly coarsely disseminated, sometimes in veins and stringers. Trace of cassiterite on joint planes.		
	15.3-41.7 (26.4)	SILTSTONE/LESSER SHALE/MINOR QUARTZITE Well bedded, weakly to strongly disrupted pale to mid-grey siltstone with lesser mid-grey shale and occasional fine carbonaceous shale laminations. Minor browney-grey to mid-grey quartzite interbedded with the siltstone and shale or as clasts in brecciated zones.		10/9/11		1-3% mainly pyrite, some marcasite, trace of arsenopyrite. Occuring in veins and stringers, patches, and coarsely and finely disseminated.		
20		Bedding 45° - 70° →						
30								
40						Contact = 50°		
	41.7-45.9 (4.2)	QUARTZITE/LESSER SILTSTONE/LESSER SHALE - Fairly massive mid-grey quartzite with lesser mid-grey siltstone and slightly lesser dark-grey shale. Occasional carbonaceous shale.		11/10/9		Trace pyrite and arsenopyrite in veins, patches, coarsely disseminated and associated with quartz/carbonate veins.		
	45.9-51.0	SILTSTONE/LESSER SILTY SHALE/LESSER QUARTZITE - Medium grained mid-grey siltstone with lesser dark grey shale and slightly lesser medium grained well bedded to disrupted to brecciated.		10/9/11		Gradational contact. <1% marcasite, pyrite, trace arsenopyrite; in veins, patches and stringers.		
50	51.0-68.2 (17.2)	QUARTZ PORPHYRY Slightly weathered, pale grey to extensively weathered bleached cream coloured porphyry numerous joints. 51-51.6 pale green porphyry with 3-5% talc. No quartz pheocrysts, 1-3% feldspars, 15% sulphides. Extensively weathered material - 10% quartz phenocrysts no feldspars, generally no sulphides.		1		Irregular contact. 10% mainly marcasite and pyrite, trace arsenopyrite. 51.6-63.7 pyrite > marcasite 63.7-68.2 marcasite > pyrite Sulphides occur mainly coarsely disseminated, very rarely in fine veins. 3 major joint directions: 15° - 25°, 30° - 40° and subparallel to core.		
60								
	68.2-71.4 (3.2)	SILTSTONE/LESSER SHALE/VERY MINOR QUARTZITE - medium to coarse grained siltstone with lesser fine-medium grained greeny-gray shale and very minor mid-dark grey quartzite.		10/9/11		Irregular contact 1%. Pyrite and marcasite in small veins, stringers and finely disseminated.		
70	71.4-80.0 (8.6)	QUARTZITE/MINOR SHALE - Generally massive, occasionally disrupted and brecciated mid-grey shale quartzite with occasional to rare greeny-grey shale. Rare thin quartz veins. Numerous fine carbonate veins in shale. 74.7-74.9 mid brown sand with trace of pyrite		11/9		Broken Contact. Trace of pyrite and marcasite, lesser arsenopyrite; occurring in veins, patches, stringers and very sparsely disseminated.		
80		END OF HOLE 80.0m						
90								
100								
110								
120		5 cm						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 AUSTRALAS. INST MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 55

LOG SHEET 1 OF 1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98966		8.9	9.9	1.0	350									
67		9.9	10.9	"	1200									
68		10.9	11.9	"	3400									
69		11.9	12.9	"	1750									
970		12.9	13.9	"	1350									
71		13.9	14.9	"	1150									
72		14.9	15.4	0.5	540									
73		15.4	16.4	1.0	1350									

Notes:— Sn by XRF Bi method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 55

SAMPLE TYPE : DRILL CORE FROM 8.9 TO 16.4

832094 086

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF

HOLE No. MBD 56

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1)	MBJV	2030 N	1260 E	688
(2)		N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)		mE	mN	m A.H.D.

1:250 000 Sheet No. BURNIE SK 55-3

1:100 000 Sheet No. HELLYER 8015

State TASMANIA

Mineral Tenement E.L. 13/79

Holder METALS EXPLORATION LTD.

Cadastral location and details

CROWN LAND/ PRIVATE

W.C. Bearing from collar

- magnetic
- grid (1)
- grid (2)
- grid (3)
- true

Inclination at collar 58°

Total length 80m

Commenced: / /

Completed: / /

Drilling contractor LONGYEAR AUST.

Rig type HC 150

Core size and non-coring (NC)

TRICONE	0	TO	3.0
HQ	3.0	TO	80.0
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.

EASTMAN
Single Shot Photo

Purpose of drilling and anticipated lengths to targets.

To obtain core sample for metallurgical purposes - White Face Dyke

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type	DIP

Comments on drilling.

Legend for graphic log column (see drill log for Hole No. ____)

'DERWENT' PENCIL NO. | FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY I. MORRISON	LOGGED BY	LOGGED BY
FROM 0 TO 80.0	FROM TO	FROM TO
DATE 20/2/81	DATE	DATE

Company managing exploration programme.

METALS EXPLORATION LTD.

HOLE No. 56

Log sheet 1 of 2

832095 087

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes, veins over 50mm, INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets.	ASSAYS AVAILABLE	BULKED ASSAYS Sn
	0-3.0 (3.0)	TRICONE - NO CORE		NC				
	3.0-6.0 (3.0)	SILTSTONE/SHALE/MINOR CARBONACEOUS SHALE Thinly interbedded, partly deformed to disrupted.		10/9/C		2-3% Py and Marcasite as laminations, stringers, disseminated along joints.		
	6.0-8.8 (2.8)	QUARTZ PORPHYRY - Alternating, joint influenced bleached and non-bleached zones.		1		10% Py and Marcasite non bleached zones only. Qtz. 10-15%, Feldspar-trace only.		
10	8.8-11.3 (2.5)	CAVITY - NO CORE		NC				
	11.3-43.9 (32.6)	SILTSTONE/SHALE Mid-dark grey banded to mottley banded. Thinly interbedded to laminated fine to medium grained siltstone and shale (carbonaceous in parts). Well bedded to deformed to disrupted in parts. 11.3-12.3m Interbedded shale and course grained sediment - possibly fine grained Tuff(?) or 'dirty' sandstone? Numerous stringers and rare, thin Qtz. and/or sulphide veins - often with limonitic (?) material.		10/9		1-2% Py and Marcasite as interbedded laminations, in numerous stringers and rare thin veins and disseminated along some joint planes. 19.4-21.4m - Core badly broken and puggy in parts (F?)		
20								
						Bedding 60°		
30						Bedding 60°		
						Bedding 70°		
						Bedding 70°		
40		42.9-43.9 Introduction of fine Quartzite.				Contact - irregular and distinct.		
	(0.9)	43.9-44.8 QUARTZ PORPHYRY		1		(F?) - 35° - 5% Sp > Py..		
	(0.8)	44.8-45.6 SILTSTONE/SHALE/QUARTZITE - thinly bedded		10/9/11		(F?) - 15° - Py - Trace.		
	45.6-62.3 (16.7)	QUARTZ PORPHYRY Alternating, joint influenced, broad irregular bands of whitish to dark brownish bleached zones and pale grey non-bleached zones. Pitted and leached - bleach zones more so. Qtz. phenocrysts - 20%. Feldspars - minor amounts weathered.		1		10% - Py and Marcasite - Trace only Arsenopyrite. Sulphides restricted to non-bleached zones. Joints generally coated in limonitic material - 60% of joints - 40-50° attitude.		
50								
60						Contact-irregular, distinct, Py vein.		
	62.3-71.2 (8.9)	SILTSTONE/SHALE/LESSER CARBONACEOUS SHALE/MINOR QUARTZITE Pale-mid-dark grey, undeformed to disrupted. Thinly interbedded to laminated.		10/9/C/11		Moderate trace Py as interbedded laminations, stringers, thin veins and along joint planes.		
						Bedding 70°		
70						Bedding 55° - Graded, suggests overturned (?)		
	71.2-80.0 (8.8)	QUARTZITE/SILTSTONE/SHALE Pale-mid grey massive to occassionally thinly bedded undeformed to disrupted to brecciated in parts. Siltstone/Shale very minor.		11/10/9		Moderate trace Py - as interbedded laminations, stringers and veins, along joint planes and irregularly disseminated in Quartzite.		
80						Bedding 55°		
		END OF HOLE 80.0m						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
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5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 56

LOG SHEET 1 OF 1

REPORT No. 832096 088

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 57

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1) MBJV	1759.97 N	840.05 E	606.96
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

1:250 000 Sheet No. | 1:100 000 Sheet No. | State

Mineral Tenement E.L. 13/79 Holder METALS EXPLORATION LTD.

Cadastral location and details
CROWN LAND / PRIVATE

W.C. Bearing from collar

150°	magnetic
180°	grid (1)
	grid (2)
	grid (3)
	true

Inclination at collar 60°

Total length 170.0

Commenced: 19 / 2 / 81
Completed: 25 / 2 / 81

Drilling contractor
LONGYEAR AUST. PTY. LTD.

Rig type
LONGYEAR HC 150.

Core size and non-coring (NC)

Tricone	0	TO	3.0
NQ	3.0	TO	72.4
BQ	72.4	TO	170.0
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
EASTMAN
Single-shot photo

Purpose of drilling and anticipated lengths to targets.
To intersect white face porphyry at 110-130m
and Buried Dolomite at 130-150m.

Comments on drilling.

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type.....	DIP
30m	150°	60°30'
60m	151°	61°
90m	151°	61°
110m	152°30'	61°30'
140m	153°	61°20'
169m	151°	61°40'

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL No. | FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY K. Camuti
FROM 0 TO 170.0
DATE 25/2/81

LOGGED BY _____
FROM _____ TO _____
DATE _____

LOGGED BY _____
FROM _____ TO _____
DATE _____

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 57
Log sheet 1 of 3

832097089

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes, veins over 50mm. INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets.	ASSAYS AVAILABLE	BULKED ASSAYS Sn
	0-3.0 (3.0)	TRICONE - NO CORE		NC				
	3-69.9 (66.9)	SILTSTONE/lesser CARBONACEOUS SHALE/minor QUARTZITE Moderately to stongly disrupted and brecciated dark grey, fine to medium grained siltstone with lesser fine carbonaceous shale lamincitions and minor dark grey, fine grained sericitized quartzite thinly and moderately interbedded or as clasts in brecciated zones. Large quartz / carbonate sulphide veins. Occasional to numerous joints, dominant direction = 45-50°		10/9c/11		<1% Mainly py in veins, stingers, coarsely and finely disseminated. Marcasite and sp and py associated with quartz/carbonate veins. Trace of arsenopyrite. minor Flourite. 13.3 ? Fault zone 16.9 ? Fault zone Trace of cassiterite in vein at 27.2m. 64.2 ? Fault zone.		
	69.9-91.1 (21.2)	QUARTZ PORPHYRY Medium to coarse grained white quartz porphyry 5-10% quartz phenocysts, 3% feldspars. Moderately weathered and pitted in places. Occasional joints : 30-35° and 40-50°. 78.65-79.6 Matrix becomes glassy 85.8-87.8 Pale brown to green pitted porphyry. Increase in feldspars 7-10%. Decrease in quartz phenocrysts 1-2%.		1		10% Mainly pyrite and marcasite coarsely disseminated. Marcasite pyrite 74.75 ? Fault 84.1-85 Decrease in sulphides - 1% 85.8-87.8 Sulphides - 3-5%. After 85.8 Moderate to strong trace of coarsely disseminated sphalerite		
	91.1-114.6 (23.5)	SILTSTONE/lesser CARBONACEOUS SHALE/minor QUARTZITE Generally strongly disrupted and brecciated, occasionally well bedded, fine grained siltstone with lesser carbonaceous shale, and minor dark grey, fine grained sericitized quartzite. Similar to 0-69.9. Weakly dolomitic towards end of interval. 107.8-112.5 Brecciated and broken with small white dolomite clasts.		10/9 c/11		Trace pyrite and marcasite (py > marcasite) occurring associated with quartz/carbonate veins, in stringers, patches and finely disseminated. 99.5 Bedding = 50° 99.85 Bedding = 45°		
	114.6-114.9	SILTSTONE AND SHALE				40% Bedded Pyrite		
	114.9-140.5 (25.6)	DOLOMITE/minor CARBONACEOUS SHALE Massive pale to mid-grey, brecciated and disrupted dolomite with minor carbonaceous shale.		2/9c		1-3% Mainly pyrite, weak marcasite, in patches, coarsely and finely disseminated, thin veins and stringers		

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FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 57

LOG SHEET 1 OF 2

832098090

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No.9 AUSTRALAS. INST. MIN. METALL. - 1976
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		Continued from previous page		
130		Material becomes darker and more weakly dolomitic towards end of interval as carbonaceous shale content increases. Rare to occasional joints at 45-50° and at 60°.		130.0 ? Fault zone 130.5 ? Falut zone
140				← Gradational contact
	140.5 - 150.8	CARBONACEOUS SHALE/lesser SILTSTONE/very minor DOLOMITE Mainly black, carbonaceous shale with lesser dark grey siltstone and minor dolomite as clasts in brecciated zones. Strongly disrupted and brecciated.	9c/10/2	Trace. Mainly py, trace of cp and sp. Py in veins, stringers and small patches. Sp, cp, and py associated with quartz/ carbonate veins. Trace of galena and minor flourite in quartz/ carbonate veins.
150	150.8-153.6 (2.8)	DOLOMITE SULPHIDE LODE 50% talc, 30% pyrite, 20% quartz/carbonate	6/5/8	30% Mainly pyrite in patches, strong trace of disseminated sp + marcasite. ← Irregular contact
	153.6-162.25 (8.65)	DOLOMITE Generally disrupted and brecciated pale grey massive dolomite. 156.8-157.7 Cream coloured recrystallized dolomite with minor flourite	2	Trace Sp in thin veins and finely disseminated. Weak galena, pyrite 157.5 Fault zone Irregular contact
160	162.25-170.0 (7.75)	SILTSTONE/lesser CARBONACEOUS SHALE/minor QUARTZITE Strongly disrupted and brecciated. Weakly dolomitic.	10/9c/11	Trace. Pyrite and marcasite in patches, thin veins, and associated with quartz/carbonate veins.
170				

5 cm

240m (1:1000), 120m (1:500), 60m (1:250) AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

FIELD COPY
METALS EXPLORATION LTD.
EXPLORATION DEPARTMENT

TO BE SENT TO MELBOURNE FOR TYPING

SUMMARY DRILL LOG
Scale 1:1000, 1:500, 1:250 (when reduced to A4)

Prepared by:
Date:

HOLE No. MBD 57
Sheet 2 of 2

832099 091

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF

HOLE No. MBD 58

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1) MBJV	1690.12 N	879.99 E	612.02
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	m E	m N	m A.H.D.

W.C. Bearing from collar
- magnetic
- grid (1)
- grid (2)
- grid (3)
- true

1:250 000 Sheet No. BURNIE SK 55-3	1:100 000 Sheet No. HELLYER 8015	State TASMANIA

Mineral Tenement E.L. 13/79 — Holder METALS EXPLORATION LTD.

Cadastral location and details
CROWN LAND / PRIVATE

Inclination at collar VERTICAL

Total length 150.0 m

Commenced: 25 / 2 / 81
Completed: 28 / 2 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.

Rig type: LONGYEAR HC 150

Core size and non-coring (NC)

TRICONE	0 TO	3.0
NQ	3.0 TO	80.6
BQ	80.6 TO	150.0
	TO	
	TO	
	TO	

Details of down hole location-survey methods.
EASTMAN - SINGLE SHOT PHOTO

Purpose of drilling and anticipated lengths to targets.
To intersect white Face Porphyry - anticipated 50-80m.
To test the South-West "Buried Dolomite" - anticipated 115-130m.

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type	DIP
30.0m	331°	88°40'
60.0m	170°	88°
90.0m	228°	88°
120.0m	207°	87°
150.0m	244°	88°40'

Comments on drilling.

Legend for graphic log column (see drill log for Hole No. ____)
'DERWENT' PENCIL No. | FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY I. MORRISON — FROM 0 TO 150.00 — DATE 7/3/81
LOGGED BY ____ — FROM ____ TO ____ — DATE ____
LOGGED BY ____ — FROM ____ TO ____ — DATE ____

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 58
Log sheet 1 of 3

832100 092

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) / Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No.9 AUSTRALAS. INST. MIN. METALL. - 1976
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0-3.0m (3.0m)	TRICONE - NO CORE	N/C		
(3.0-11.5) (8.5m)	WEAKLY TO MODERATELY DOLOMITIC SILTSTONE/MINOR CARBONACEOUS SHALE Mid-dark grey, thinly interbedded, disrupted. Dolomite present as component of sediments. Numerous stringers and veins with Qtz, Carb, Flourite, Sulphides	109c/2		Py>Sp≫Stibnite(?) Jameisonite(?) as stringers and associated with veins - 2-3%. 5.9-6.3m Vein-Carbonate, Stibnite(?)/ Jameisonite(?), Py, Minor Sp, Qtz, Flourite + Talc.
11.5-44.1 (32.6m)	THINLY INTERBEDDED SILTSTONE/QUARTZITE/CARBONACEOUS SHALE Pale-mid-dark grey, disrupted to brecciated. Minor parts foliated appearance. Thinly interbedded to rare thickly bedded Quartzite. All members weakly Dolomitic. Numerous stringers - some Py. Numerous thin veins - <10mm. - Qtz/Carbonate, minor talc, rare Flourite + Sulphides. 26.3-27.8m - carbonaceous shale dominant member - foliated appearance. 28.6-34.0m - Bedding generally less disrupted	10/11/9c		2-3% Py Sp and Stibnite (?)/ Jameisonite(?). Py As stringers and thin veins and finely disseminated through sediments in parts. Py, Sp and Stibnite(?)/Jameisonite(?) associated with Qtz/Carbonate veins 28.6-31.4m - Bedding - 60°-70° 33.8m - Bedding - 60° 37.0m - Bedding - 50° 41.1m -50mm thick vein, sub-banded Carbonate, Sp, Py, Jameisonite(?) - 65°
44.1-75.1 (31.0m)	QUARTZ PORPHYRY Pale to creamy grey matrix - fine grained opaque becoming re-crystallized and glassy with depth. Slightly pitted-minor weathering of Feldspars. Med. grained Qtz. phenocrysts - 20-25%. Fine to medium grained Feldspar phenocrysts - 10-15% Moderately jointed. 55.2m-15mm vein, Sp=Py > Carbonate, Flourite and Qtz — 20°. 65.4m - broken vein - 20° Py > Sp, Lesser Carbonate, Flourite, minor Qtz.	1		Contact approx. 35° 10-15% Py > Sp - as irregular crystal aggregates; in veins and rare pods; disseminated along joint planes. Alternating zones Sp rich (up to 5.0m) and Py rich (up to 5.0m). Total sulphides in Sp rich zones < in Py rich zones. Possible trace S_nO_2 along joint planes. 1% Flourite - in veins, along some joints and as disseminated blebs. 70.4m- 30mm vein - 25° - Py> Qtz and Carbonate. Trace Flourite, Sp.
75.1-97.4 (22.3m)	SILTSTONE/LESSER CARBONACEOUS SHALE Mid-dark grey, thinly interbedded, moderately to severely disrupted to brecciated. Both members weakly Dolomitic. 75.1-89.0m - Numerous stringers and thin veins. 89.0-97.4 - Moderate stringers and thin veins 92.7-97.4 - less disrupted.	10/9c		Contact - approx. 35° 75.6-75.8 - Qtz Porphyry - very fine grained - Top contact approx. 15°; Bottom approx. 55° 1-2% Py>> Sp - Py as stringers and as finely disseminated in some coarser sediments. Py and Sp in thin veins and associated with Qtz and/or Carbonate ± Flourite veins. 88.2m - 15mm vein - 45° - Flourite, lesser Carbonate and Py. 93.5m - Bedding - 50° 96.0m - Bedding - 45°
97.4-115.4 (18.0m)	SILTSTONE/CARBONACEOUS SHALE/MINOR QUARTZITE Mid-dark grey, thinly interbedded, moderately to severely disrupted to brecciated - foliated appearance in parts. Carbonaceous Shale proportion equal to Siltstone. Occasional moderately bedded Quartzite units. 97.4-102.0m - rare to moderate stringers and veins 102.0-115.4m - Moderate stringers, numerous veins of Qtz/Carbonate, Sulphides, ± Flourite, ± Talc	10/9c/11		2-3% Py > Po, trace Sp, Marcasite. Py and Po disseminated in sediments in parts and as stringers. Sulphides generally associated with veins. 107.1m - 250mm vein - 70° top contact; 55° bottom contact. Py, Po, Sp, Qtz, Carbonate, Flourite, Talc. 113.5-250mm fine irregular vein network, Py Po + Carbonate + Talcose Sediments.
715.4-122.4 (7.0m)	DOLOMITE - PARTLY RE-CRYSTALLIZED Pale grey - brecciated(?) in parts. Minor zones Qtz/ Carbonate alteration(?). Minor talc throughout.	2/3		Contact 85° - defined by 100mm zone banded talcose sediments, Py, Po.

240m (1:1000), 120m (1:500), 60m (1:250) AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

FIELD COPY
METALS EXPLORATION LTD.
EXPLORATION DEPARTMENT

TO BE SENT TO MELBOURNE FOR TYPING
SUMMARY DRILL LOG
Scale 1:1000, 1:500, 1:250 (when reduced to A4)
Prepared by:
Date:

HOLE No. MBD 58
Sheet 1 of 2

5 cm

832101 093

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH No.9 AUSTRALAS. INST. MIN. METALL. – 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

115.4–122.4 (7.0)	CONT'D. FROM PREVIOUS SHEET 121.8–122.4 – Contorted banded appearance (D.S.L. 8(?)		2/3 8(?)	115.4–120.7 – NO SULPHIDES 120.7–122.4 – 2–3%–Py>> Po
122.4 137.9 (15.5m)	SILTSTONE/LESSER CARBONACEOUS SHALE AND QUARTZITE Mid-dark grey, minor light grey patches and pods. Thinly interbedded – moderately to severely disrupted to brecciated. Numerous veins and stringers. Veins to 80mm thick – contain Qtz and/or Carbonate ± trace Flourite with light to heavy Sulphide mineralization.		10/9c/11	Contact – 30mm zone of contorted Talc and Talcose sediments. 1–3% – Py > Po – disseminated in sediments in parts; as stringers and associated with veins. Trace Sp, Flourite, Cp and Graphite. 130.0m– 80mm vein – 75° – Py + minor Qtz, Carbonate and Talc; trace Graphite.
137.9–144.6 (6.7m)	QUARTZITE/MINOR SILTSTONE AND CARBONACEOUS SHALE Pale to mid grey, darker mottley to banded zones. Quartzite weakly re-crystallized and micaceous. Massive to weakly banded to thinly interbedded.		11/10/9c	1–2% Py and Po + Trace Sp – disseminated through coarser sediments, as stringers and associated with veins. 140.1m – Bedding 35° ~~140.7m – 20mm Vein – 65° Qtz/Carbonate~~
144.6–150.0 (5.4m)	SILTSTONE/LESSER QUARTZITE/MINOR CARBONACEOUS SHALE Mid-dark grey, thinly interbedded, disrupted. Moderate veins and stringers.		10/11/9c	1–2% Py > Po)> Sp – minor disseminated amounts as discrete pods. Also as stringers and in Qtz/Carbonate veins
	END OF HOLE 150.0m			

5 cm

240 m (1:1000), 120 m (1:500), 60 m (1:250)
AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

FIELD COPY
METALS EXPLORATION LTD.
EXPLORATION DEPARTMENT

TO BE SENT TO MELBOURNE FOR TYPING
SUMMARY DRILL LOG
Scale 1:1000, 1:500, 1:250 (when reduced to A4)

Prepared by: I. MORRISON
Date: 12/3/81

HOLE No. MBD 58
Sheet 2 of 2

832102 098

SOUTH

1650 N | 1750 N | 1850 N | 1950 N | 2050 N

NORTH

700 m

650 m

2000 Ft (609.6 m A.S.L.)

600 m

550 m

500 m

450 m

MBD 57

MBD 42

DEVONIAN
- Dv — Quartz vein
- 1 — Porphyry

PRE-CAMBRIAN
- 2 — Dolomite
- 3 — Recrystallised dolomite

PRE-CAMBRIAN
- 4 — Dolomite sulphide lode - pyrrhotite rich
- 5 — Dolomite sulphide lode - pyrite rich
- 6 — Dolomite sulphide lode - talc rich
- 7 — Dolomite sulphide lode - serpentinite rich
- 8 — Dolomite sulphide lode - quartz / carbonate rich
- 9 / c — Shale / carbonaceous

PRE-CAMBRIAN
- 10 — Siltstone
- 11 / s — Quartzite / sandstone
- 12 — Tuff

F —— Fault - interpreted

------ Interpreted geological contact

D.D.H.

5 cm

10 0 10 20 30 40 50
METRES

50 0 50 100 150
FEET

METALS EXPLORATION LIMITED
MOUNT BISCHOFF TIN PROSPECT

MOUNT BISCHOFF MINE AREA
INTERPRETED SECTION

LINE 840 mE

1610 - 2090 N

INTERPRETATION BY D. SIMPSON

SCALE LOOKING TO GRID WEST (240°M)

DATE : MARCH REVISED DRG. NO. 81-096

832103 099

SOUTH

1650 N

1750 N

1850 N

1950 N

2050 N

NORTH

700 m

650 m

2000 ft (609.6 m A.S.L)

600 m

550 m

500 m

450 m

2000 ft

B.S. B.S.C.

5 cm

DEVONIAN
- Qv — Quartz vein
- 1 — Porphyry

PRE-CAMBRIAN
- 2 — Dolomite
- 3 — Recrystallised dolomite

PRE-CAMBRIAN
- 4 — Dolomite sulphide lode - pyrrhotite rich
- 5 — Dolomite sulphide lode - pyrite rich
- 6 — Dolomite sulphide lode - talc rich
- 7 — Dolomite sulphide lode - serpentinite rich
- 8 — Dolomite sulphide lode - quartz/carbonate rich
- 9/c — Shale / carbonaceous

PRE-CAMBRIAN
- 10 — Siltstone
- 11/s — Quartzite / sandstone
- 12 — Tuff

F —— Fault - interpreted

------ Interpreted geological contact

D.D.H.

10 0 10 20 30 40 50
METRES

50 0 50 100 150
FEET

METALS EXPLORATION LIMITED
MOUNT BISCHOFF TIN PROSPECT

MOUNT BISCHOFF MINE AREA
INTERPRETED SECTION

LINE 880 mE

1610 - 2090 N

INTERPRETATION BY D SIMPSON

SCALE LOOKING TO GRID WEST (240°M)

DATE MARCH REVISED DRG NO 81-097

832104

82-1698 Vol 2. Cover C.

METALS EXPLORATION LIMITED

MT BISCHOFF TIN PROSPECT

MT BISCHOFF MINE AREA

STAGE 3A
DRILLING PROGRAMME

as at - -81

Scale 1:2000

5 cm

MBD 44 MBD 45 MBD 42 MBD 57 MBD 25 MBD 41 MBD 58 MBD 46 MBD 24 MBD 26 MBD 43 GOSSAN FACE MBD 23 MBD 22 MBD 29A MBD 29 MBD 51 MBD 41 MBD 21 MBD 48 MBD 49 MBD 50 MBD 20 MBD 15 MBD 27 MBD 52 WHITE FACE MBD 19 GREEN FACE MBD 16 MBD 53 MBD 54 MBD 17 MBD 18 MBD 28 DYKE HAPPY VALLEY MBD 30 MBD 35 MBD 31 MBD 32 MBD 34 MBD 33 FACE WHITE FACE MBD 36 WESTERN DYKE SLAUGHTERYARD FACE MBD 37 MBD 56 MBD 55 BROWN FACE MBD 38 STANHOPE DYKE MBD 14 DESERT FACE MBD 39 MBD 40 QUEEN DYKE

MEL GRID NORTH (330°)

ADOPT MAG. NTH.

0 50 100

METRES

- Porphyry
- Dolomite
- Dolomite Sulphide Lode
- Siltstones, Shales, Quartzites
- Fault
- Interpreted Geological Contact

Diamond Drillhole

- *Proposed*
- *Completed*

Completed Drillholes

December.	MBD 47,48,49
January.	MBD 50,51,52
February.	MBD 53, 54, 55, 56, 57, 58
March.	
April. .. .	
May .. .	
June . . .	

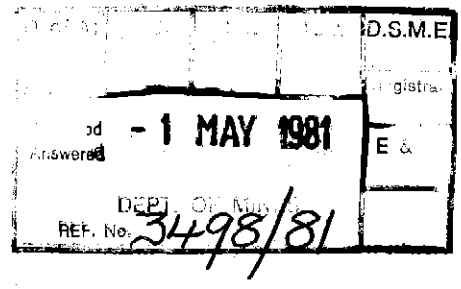
Rev 27 3 81

Drg. No. 81 - 005 C

TCR 81-1549

METALS EXPLORATION LTD.
80 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

100
832105



MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR MARCH, 1981.

Distribution:
Copy No. 1: Department of Mines, Tasmania.
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Copy No. 11: Circulation - K.E. Fletcher
D. Campi
File

G.M. Motteram
24th. April, 1981.

MT. BISCHOFF TIN PROSPECT.

REPORT FOR MARCH, 1981.

General:

Diamond drilling during the period was again less than programmed and amounted to 602.6 metres, taking Stage 3A meterage to date to 1698.7m versus budget of 3500m. Lack of drilling performance was again attributed to the HC 150 rig and notice was received of its replacement. A further rig, belonging to Mr. K. Parry, was delayed in arrival due to shipping strikes but is now in Australia and due on site by mid April.

Drilling in the Housego area on three co-incident ground magnetic and electro magnetic anomalies failed to intersect tin mineralisation.

Analysis of ore variability from the close spaced drilling programme indicated a general lack of grade consistency within the DSL and Porphyry.

Metallurgical investigations continued to demonstrate the ability to handle talc problems and to float off clean sulphides at high sulphur recoveries.

During the period the two contract geologists (Mr. I. Morrison and Miss K. Camuti) successfully completed their 2 month contracts and Mr. D. Compston (CRAE) joined the project on 3rd. March, 1981 as Site Geologist.

The first quarter Operating Committee Meeting was held on 13th. March, 1981. At this meeting it was agreed that a draftsman/surveyor was required on site and suitable advertisements were placed locally. Other business included a review of progress for the three months from September and allocation of drill targets in the Buried Dolomite area.

Diamond Drilling:

During the period 5 holes were completed for a total of 602.6 metres (i.e. MBD 59 to MBD 63). Meterage drilled per available shift was 9.72 versus 11.29 metres/shift during February. The continued shortfall against programmed meterage is attributed to Longyears hydraulic rig (HC 150) and to difficult ground encountered in 3 of the regional exploration holes completed in the Housego area.

Following concerted representations to Longyear we have managed to convince them that the rig must be replaced and received notice at the end of the month that it would be replaced by a Longyear 44. (Actually replaced on 3rd. April).

.../2

Diamond Drilling (Contd.)

MBD 59 to MBD 62 inclusive were drilled on geophysical targets on the Housego grid. No significant mineralisation was encountered in these holes.

MBD 59 and 60 were angle holes drilled from opposite directions on the same anomaly in the Central Housego area. Both passed through basalt into sediments (black shales) containing minor pyrite and traces of galina and stibnite in some sections. MBD 59 encountered an altered dolerite over several metres, confirmed by consulting mineralogists.

MBD 61, on a separate geophysical anomaly in the Central Housego area, also passed through basalt into shales. MBD 62 at the north-eastern end of the Housego grid remained in basalt for over 100 metres, passing the target zone while still in basalt.

MBD 63 was targeted to intersect a proposed South West Buried Dolomite extension in a position above the White Face Porphyry. No dolomite was intersected.

Drilling Statistics:

Aggregate meterage in the Stage 3A programme to date is 1698.7 metres, compared with budget at 3500 metres.

Details of individual holes are:

Hole No.	Collar Co-ords.	Dip.	Azimuth.	Final Depth.
MBD 59	9956N 10302E*	-70	045	121.5
MBD 60	9990N 10381E*	-60	225	116.6
MBD 61	10103N 10183E*	-60	225	95.0
MBD 62	10310N 10920E*	-50	360	120.0
MBD 63	1730N 800E#	-90	-	149.5

* Housego Grid Holes - collars not surveyed.
\# S.W. Dolomite area - collars not surveyed.

Old Core:

During the period the following "old core" was re-boxed and re-logged:

B 19, 28, 29, 30, 34, 35, 36, 46, 48, 51, 56, 58, 59, 60.

AB 1.

.../3

Analysis Results:

Results were received for assays of porphyry material from the two close spaced holes MBD 55 and MBD 56 (5 metres spacing), drilled to obtain metallurgical sample of "underground" porphyry on Section 1260E. These results are presented below to show correlation at approximately similar RL's.

HOLE.	FROM.	TO.	WIDTH.	%Sn.
MBD 55	50.0m	58.0m	8.0m	0.13
MBD 56	43.8	51.6	7.8	0.13
MBD 55	58.0	69.2	11.2	0.49
MBD 56	51.2	63.3	11.7	0.12

Assays were received for the 2.8m section of DSL intersected during February in the Buried Dolomite hole MBD 57 (i.e. from 150.8 to 153.6m). This interval averaged 0.20 %Sn.

MBD 58 also drilled to intersect the Buried Dolomite during February showed no tin in ground core covering 3.0 to 43.1 and 76.8 to 96.8m. The section 43.1 to 76.8 was predominantly porphyry and averaged only 660 ppm Sn.

Several significant tin values were obtained in core grinding of B 49 between 28.2 and 89.2 metres. These sections be split for assay during April.

Regional Exploration:

Drilling performed on the Housego grid is reported under Diamond Drilling above. Pitting was carried out on line 10920E at approximately 10570N in the region of a geophysical anomaly off the basalt plateau. This revealed a magnetite bearing basalt which was also found to outcrop nearby.

No further work is required in this North Eastern section of the Housego grid. A re-interpretation of the Fooks Lode area, with its associated Cambrian Dolomites, will be performed.

Metallurgy:

Liberation tests were carried out on the SC2 sample from Stage 2B at grind sizes of 100% passing 250 and 150 micron. Excellent depression of talc was again achieved and sulphides were observed to float readily to concentrates for both grinds.

.../4

Metallurgy (Contd.)

Assay reports support AMDEL mineralogical findings that there is not a significant cassiterite-sulphide association in this sample, consequently cassiterite sulphide separation was good and regrinding of sulphide concentrates gave only marginal improvement.

All sulphur assays on testwork conducted in February have still not been completed but those available indicate that sulphur removal for the SC1 sample (Stage 2B problem sample) was in excess of 95%. Similar results are expected for flotation tests conducted on porphyry and SC2 samples.

Preparation of bulk Porphyry and SC1 sample for Tin flotation testwork was commenced. Completion of this testwork is expected towards the end of April. This will then mean the successful completion of the Initial Phase Metallurgical Testwork.

Preparation of the talcore DSL composite from Stage 3A testwork is underway. The remaining four Stage 3A composites will be identified and sampled during April.

Mining:

Following review of the close spaced drilling results in the DSL (and Porphyry), plus review of data on Renison grade distribution, it has been recognised that the tin grade may be inconsistent over small distances. This can occur with no visual change to sulphide percentages etc.

In view of this it was determined to:

(i) Have Mr. W. Fander (mineralogist) sample the ore to attempt to explain the inconsistency in tin distribution.

(ii) Investigate a programme to block out and sample an ore zone, via the current adit system, within DSL.

(iii) Propose two additional close spaced holes within DSL at Greisen Face.

(iv) Re-estimate ore reserves on the basis of taking all DSL in tin bearing areas.

This work will be performed during April, 1981.

M.E.L.
C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

	MARCH 1981		SIX MONTHS TO 31.3.81	
	ACTUAL $	BUDGET $	ACTUAL $	BUDGET $
Technical Services	26,977	25,090	109,316	126,300
Travel & Accommodation	2,545	700	8,881	4,200
Labour	4,582	1,900	10,239	9,100
Camp & Messing	862	1,400	3,162	7,200
Vehicles	963	1,000	4,476	5,100
Equipment Rental	50	550	250	2,450
Consumables & General	2,944	9,710	30,757	36,320
Tenement Expenses				500
Track Cutting	-		875	4,000
Geophysical Surveys			7,959	4,000
Diamond Drilling	40,473	41,000	98,478	217,000
Site Preparation	540		540	8,000
Assays	3,566	2,800	4,128	11,200
Mining Studies	-	2,670	-	4,930
Metallurgical	8,436	16,200	18,884	48,900
Capital Items		-	43,273	38,500
Engineering Studies		2,100		2,100
	91,938	105,120	341,218	529,800

SUMMARY OF EXPENDITURE TO 28 FEBRUARY 1981

		FINANCIAL YEAR TO DATE
Stage 1	270,000	
Stage 2A - Early Start	29,020	
Stage 2A	198,818	
Overruns: Stage 1 - M.E.L.	11,308	
Metallurgical - C.R.A.E.	23,500	
Stage 2B	482,354	18,121
Stage 2B - 3A Holding Costs Offset - A.I.R. & D. Grant	40,000	40,000
Stage 3A	341,218	341,218
CUMULATIVE EXPENDITURE TO DATE	1,396,218	399,339

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

EL 13/79

	MARCH 1981	SIX MONTHS TO 31.3.81
	$	$
Technical Services	17,233	85,451
Travel & Accommodation	2,545	7,779
Labour	4,582	9,719
Camp & Messing	862	3,035
Vehicles	963	4,476
Equipment Rental	50	250
General Expenses & Consumables	2,451	26,839
Track Cutting	-	875
Diamond Drilling	22,878	80,884
Metallurgical	8,421	18,869
Assays	3,566	4,128
Capital Items	-	43,013
Geophysical Surveys	-	3,979
	63,551	289,297

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

AP5/80

	MARCH 1981	SIX MONTHS TO 31.3.81
	$	$
Technical Services	9,744	23,864
Travel & Accommodation		1,103
Labour		519
Camp & Messing		
General Expenses & Consumables	493	4,044
Geophysical Surveys		3,979
Diamond Drilling	17,595	17,595
Site Preparation	540	540
Assays	15	15
Capital Items		260
	28,387	51,919

MEL
CRA

MT. BISCHOFF PROJECT

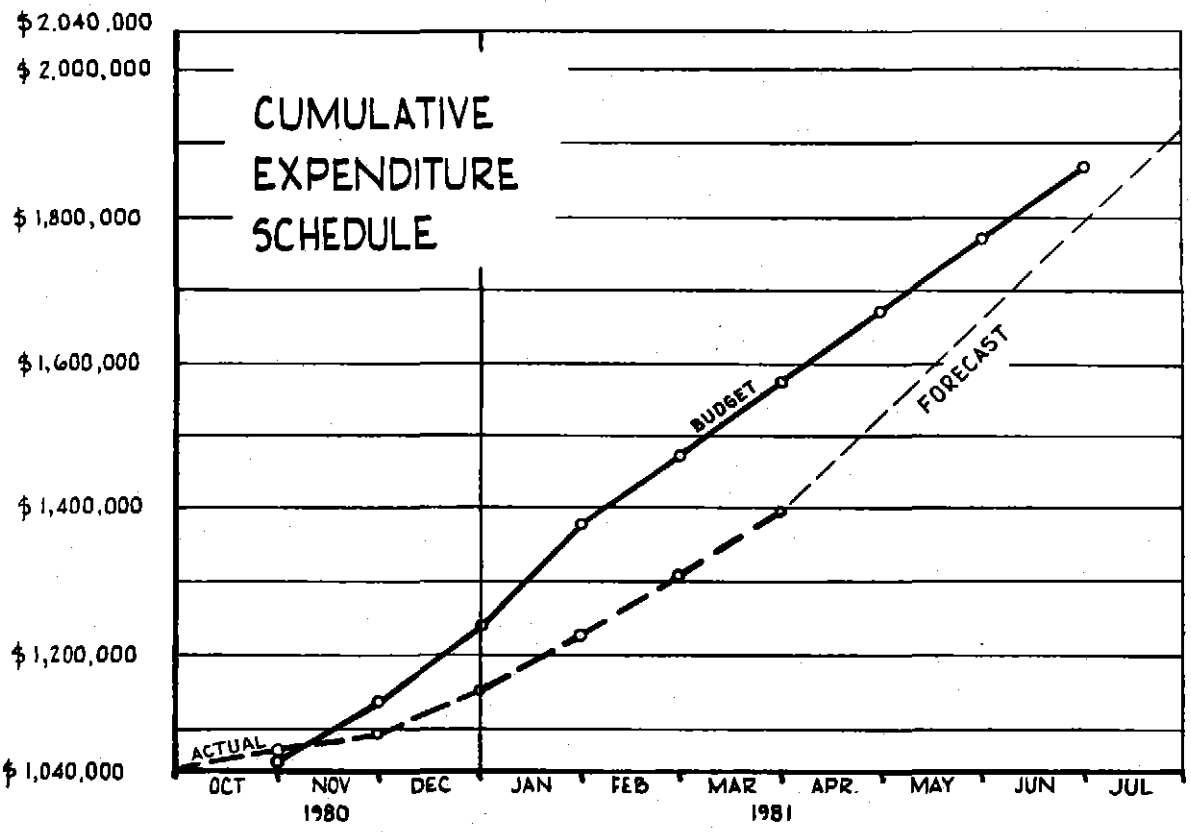
CUMULATIVE CAPITAL EXPENDITURE

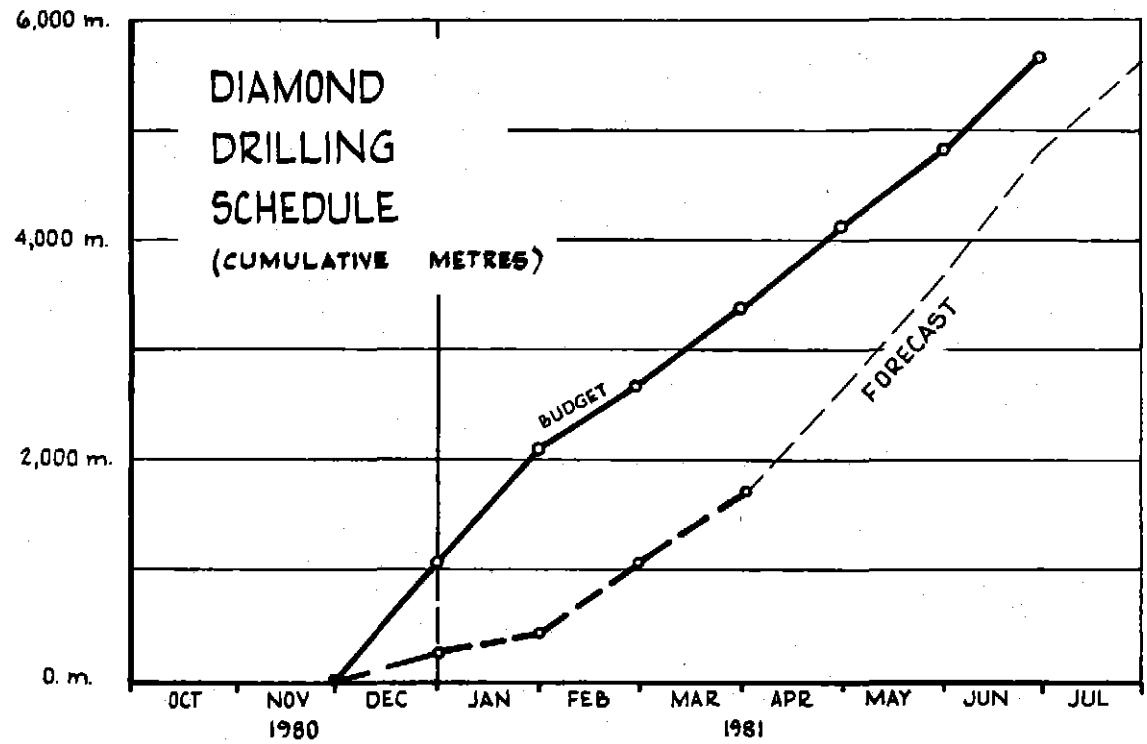
STAGE 1 & 2	Core Shed	$15,295	
	Concrete Foundations	2,100	
			$17,395
STAGE 3A	Core Shed	$ 8,660	
	Accommodation Unit	32,500	
			$41,160
	TOTAL		$58,555

Beneficial Ownership. - As at 30th. March, 1981.

CRA $25 \times \frac{100}{85} = 29.4\%$

MEL $60 \times \frac{100}{85} = 70.6\%$





MT. BISCHOFF

STAGE 3A SUMMARY
as at 31·3·81

Rev. 23·4·81 Drg No. 80 - 449 d

INITIAL PHASE METALLURGICAL PROGRAMME

SECTION A PRIMARY GRIND - LIBERATION TESTS

General Conditions - described in February report.

Tests A5 and A6 (N11 and N12) - SC2

Results.

A5 (N11) SC2 - minus 250 microns

		GRADE			RECOVERY		
	%wt.	%Sn	%S	%As	%Sn	%S	%As*
Recleaner Conc 1	4.0	0.15	-	0.10	0.6	-	-
Conc 2	4.4	0.09	-	0.06	0.4	-	-
Conc 3	6.9	0.04	-	0.03	0.2	-	-
Conc 4	5.6	0.02	-	0.01	0.1	-	-
(Calc. Recleaner Conc)	(20.9)	(0.07)	-		(1.3)	-	-
Recleaner Tail	1.3	0.35	-	0.06	0.4	-	-
(Calc. Cleaner Conc)	(22.2)	(0.08)	-		(1.7)	-	-
Cleaner Tail	10.7	0.31	-	0.02	3.0	-	-
(Calc. Rougher Conc)	(32.9)	(0.16)	-		(4.7)	-	-
Rougher Tail	67.1	1.56	-	<0.01	95.3	-	-
Calculated Feed	100.0	1.10	-		100.0	-	-

Sizing of Rougher Tail P_{80} = 123 microns

* Arsenic distribution not calculated because of low levels present.

A6 (N12) SC2 - minus 150 microns

		GRADE			RECOVERY		
	%wt.	%Sn	%S	%As	%Sn	%S	%As
Recleaner Conc 1	2.7	0.29	-	0.10	0.7	-	-
Conc 2	3.0	0.16	-	0.07	0.4	-	-
Conc 3	3.9	0.07	-	0.03	0.3	-	-
Conc 4	4.4	0.05	-	0.01	0.2	-	-
Conc 5	9.0	0.03	-	<0.01	0.3	-	-
(Calc. Recleaner Conc)	(23.0)	(0.09)	-		(1.9)	-	-
Recleaner Tail	2.3	0.29	-	0.03	0.7	-	-
(Calc. Cleaner Conc)	(25.3)	(0.11)	-		(2.6)	-	-
Cleaner Tail	11.8	0.45	-	<0.01	5.0	-	-
(Calc. Rougher Conc)	(37.1)	(0.22)	-		(7.6)	-	-
Rougher Tail	62.9	1.55	-	<0.01	92.4	-	-
Calculated Feed	100.0	1.05	-		100.0	-	-

Sizing of Rougher Tail 80%P - 90 microns

Comments:

Observations during tests indicate depression of talc to be extremely effective and that sulphides float readily to concentrate. Sulphur assays are not yet available.

Tin losses to sulphide concentrates were lower at the coarser grind. Weight recovery is also lower and may be indicative of lower sulphide recovery.

The decrease in tin assay from Recleaner Conc 1 to Conc 4 suggests a significant portion of the tin loss is attributable to "flotable" soluble tin. Nevertheless total tin loss to recleaner concentrate is less than 2%.

112
832117

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine _____

HOLE No MBD 59

COLLAR LOCATION

Grid name

Rectangular space co-ordinates

	PLANAR CO-ORDINATES		ELEVATION
(1) _____	_____ N	_____ E	_____
(2) _____	_____ N	_____ E	_____
(3) Aust. Map Grid PRECISE / APPROX.	_____ mE	_____ mN	_____ mAHD

1:250 000 Sheet No.	1:100 000 Sheet No.	State

Mineral Tenement _____ Holder _____

Cadastral location and details _____

CROWN LAND / PRIVATE _____

W C Bearing from collar

_____ magnetic

_____ grid (1)

_____ grid (2)

_____ grid (3)

_____ true

Inclination at collar 70°

Total length 121.5m

Commenced: 1 / 3 / 81

Completed: 10 / 3 / 81

Drilling contractor
LONGYEAR AUST. PTY. LTD.

Rig type
LONGYEAR HC 150

Details of down hole location-survey methods.
EASTMAN Single Shot Photo

Purpose of drilling and anticipated lengths to targets.
To investigate EM and magnetic anomalies.

Core size and non-coring (NC)

TRICONE	0	TO	4.5
HQ	4.5	TO	15.0
NQ	15.0	TO	121.5
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type	DIP
30.0m	IN CASING	69°
60.0m	47°	69° 30'
90.0m	46°	70°
120.0	44°	71°

Comments on drilling
Hole caved in - was cemented from 35m - 105.1m. NQ rods became stuck at 111.0m.

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL NO		FIELD ROCK NAME, ETC

Symbols and abbreviations for drilling notes column.

LOGGED BY K. CAMUTI	LOGGED BY	LOGGED BY
FROM 0 TO 121.50	FROM TO	FROM TO
DATE 14/3/81	DATE	DATE

Company managing exploration programme
METALS EXPLORATION LTD.

HOLE No. MBD 59
Log sheet 1 of 3

832118 113

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes, veins over 50mm, INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets	ASSAYS SAMPLE No.	BULKED ASSAYS Sn

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDS), MONOGRAPH NO 8 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

0.45 (4.5)	TRICONE - NO CORE	NC		
4.5-11.7 (7.2)	BASALT Mid-grey vesicular basalt. Up to 10% olivine phenocrysts. Prehnite occurring in larger vesiculars.		No sulphides	
11.7-12.7 (1.0)	SOIL HORIZON		Broken Contact Broken Contact	
12.7-22.15 (9.45)	BASALT Mid-grey, vesicular, basalt. Prehnite occurring in most larger vesicles 3-5% dark phenocrysts 0 some are magnetite, others dark pyroxene.		No sulphides 17.1 Fault at 20-25° 19.1 Fault at 30-35°	
22.15-23.4 (1.25)	TRANSITION ZONE - Pieces of sediment and basalt		Contact = 50° Broken Contact	
23.4-35.3 (11.9)	SILTSTONE/lesser CARBONACEOUS SHALE/minor QUARTZITE Mid-grey strongly micaceous siltstone with lesser carbonaceous shale and minor fine-ground quartzite, thinly bedded and as small clasts. Occasionally brecciated, rarely. Well beded. Rare thin carbonate veins.	10/ 9c/ 11	Weak trace of pyrite. Generally very broken core.	
35.3-54.05 (18.75)	SILTSTONE/lesser QUARTZITE/minor CARBONACEOUS SHALE Generally massive, occasionally disrupted, rarely brecciated, carbonaceous and strongly micaceous siltstone, lesser dark-grey quartzite, minor carbonaceous shale. Occasional thin carbonate veins and stringers.	10/ 11/ 9c	Broken Contact Weak trace 35.3-49.3 - Pyrite - finely disseminated and in carbonate veins. Trace of galena and cp in carbonate veins. 1% 49.3-52.0 Pyrite-in veins stringers, patches and blebs Strong trace 52.0-54.05. Pyrite finely disseminated and in patches	
54.05-61.2 (7.15)	QUARTZITE/minor CARBONACEOUS SHALE/minor SILTY SHALE Thickly bedded, dark grey quartzite, with minor carbonaceous shale and minor silty shale in batches.	11/ 9c	Contact = 25° Weak trace 54.05-56.4 Pyrite - finely disseminated. 1% 56.4-57.4 Pyrite - in patches Weak trace 57.4-61.2 Pyrite-finely disseminated.	
61.2-64.8 (3.6)	SILTSTONE/lesser CARBONACEOUS SHALE/minor QUARTZITE Strongly disrupted and brecciated.	10/ 9c/11	1% Pyrite - finely disseminated in patches and associated with carbonate veins.	
64.8-70.9 (6.1)	QUARTZITE/lesser SILTSTONE/minor CARBONACEOUS SHALE Generally weakly disrupted. Siltstone is micaceous and carbonaceous.	11/ 10/ 9c	1% Pyrite and galena - in thin veins and associated with quartz/carbonate veins Irregular contact.	
70.9-94.3 (23.4)	SILTSTONE/lesser CARBONACEOUS SHALE/minor QUARTZITE Strongly disrupted and brecciated micaceous and carbonaceous siltstone, lesser carbonaceous shale, minor mid-grey quartzite. Weakly to moderately dolomitic. Occasional thin quartz/carbonate veins.	10/ 9c/ 11	Moderate trace - Pyrite in thin veins, patches and finely disseminated. Galena - finely disseminated.	
94.3-97.9 (3.4)	DOLERITE Pale green, very weathered Dolerite. ~10% disseminated fine black mineral.		No sulphides	
97.9-121.5 (23.6)	SILTSTONE/lesser CARBONACEOUS SHALE/lesser QUARTZITE Strongly disrupted and brecciated. Carbonaceous and micaceous siltstone, with lesser carbonaceous shale and lesser dark-grey quartzite. Occasional to numerous fine quartz/carbonate veins and stringers 99.6 - 100.4 Lost Core Weakly Dolomitic to 116.0m		2% Pyrite - finely disseminated, in veins, stringers and patches. Sp - in veins with pyrite and galena. Galena and ? stibnite in quartz/carbonate veins. 109.8 30mm vein with strong ? stibnite at 15° 3% 113.1-114.9 Massive patches of pyrite Strong trace 114.9-121.5 - Pyrite in patches, veins, disseminated in quartzite and with quartz/carbonate veins.	

5 cm

CONTINUED NEXT PAGE

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project: MT RISCHOFF TIN

HOLE No. MBD 59

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth: Description and notes, veins over 50mm, INDENTED ABOUT 10mm	POINTER % CORE	GRAPHIC LOG	POINTER % CORE	MINERALISATION Excluding veins over 50mm Visual estimate of % mineralisation in brackets	ASSAYS AVAILABLE	BULKED ASSAYS Sn

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

120

119.75-121.5 Quartz/carbonate veins larger and more numerous.

END OF HOLE 121.5m

130

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 59

LOG SHEET 2 OF 2

CTT

SAMPLE NO. SPLIT CORE	SAMPLE NO GROUND CORE	FROM m	TO m	INTERVAL m	Sn SPLIT	Sn GROUND	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
		23.4	25.4	2.0										
		25.4	27.4	"										
		27.4	29.4	"										
		29.4	31.4	"										
		31.4	33.4	"										
	118985	33.4	35.4	"										
	86	35.4	37.4	"										
	87	37.4	39.4	"										
	88	39.4	41.4	"										
	89	41.4	43.4	"										
	990	43.4	45.4	"										
	91	45.4	47.4	"										
	92	47.4	49.4	"										
	93	49.4	51.4	"										
	94	51.4	53.4	"										
	95	53.4	55.4	"										
	96	55.4	57.4	"										
	97	57.4	59.4	"										
	98	59.4	61.4	"										
	99	61.4	63.4	"										
	120400	63.4	65.4	"										
	01	65.4	67.4	"										
	2	67.4	69.4	"										
	3	69.4	71.4	"										
	4	71.4	73.4	"										
	5	73.4	75.4	"										
	6	75.4	77.4	"										
	7	77.4	79.4	"										
	8	79.4	81.4	"										
	120409	81.4	83.4	"										

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 59

SAMPLE TYPE : DRILL CORE FROM TO 83.4

8321120

116

SAMPLE NO. SPLIT CORE	SAMPLE NO GROUND CORE	FROM m	TO m	INTERVAL m	Sn SPLIT	Sn GROUND	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
	120410	83.4	85.4	2.0										
	11	85.4	87.4	"										
	12	87.4	89.4	"										
	13	89.4	91.4	"		16								
	14	91.4	93.2	1.8		42								
119811		93.2	94.2	1.0	11									
12		94.2	95.2	1.0										
13		95.2	96.2	"										
14		96.2	97.6	1.4										
15		97.6	98.6	1.0										
16		98.6	99.6	"										
17		99.6	100.6	"										
18		100.6	101.4	0.8										
	15	101.5	103.5	2.0		20								
	16	103.5	105.5	"		14								
	17	105.5	107.5	"		12								
	18	107.5	109.5	"		12								
	19	109.5	111.5	"		4								
	420	111.5	113.5	"		12								
	21	113.5	115.5	"		16								
	22	115.5	117.5	"		10								
	23	117.5	119.5	"		12								
	24	119.5	121.5	"		14								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 59

SAMPLE TYPE : DRILL CORE FROM 83.4 TO 121.5

83221121

832122 117

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. _____

HOLE No. MBD. 60

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1) _____	_____ N	_____ E	_____
(2) _____	_____ N	_____ E	_____
(3) Aust. Map Grid PRECISE / APPROX.	_____ mE	_____ mN	_____ m A.H.D.

1:250 000 Sheet No. | 1:100 000 Sheet No. | State TASMANIA

Mineral Tenement _____ Holder _____

Cadastral location and details CROWN LAND / PRIVATE _____

W.C. Bearing from collar

_____ magnetic
_____ grid (1)
_____ grid (2)
_____ grid (3)
_____ true

Inclination at collar 60°

Total length 116.6m

Commenced: 11 / 3 / 81
Completed: 18 / 3 / 81

Drilling contractor
LONGYEAR AUST. PTY. LTD.

Rig type
LONGYEAR HC 150

Core size and non-coring (NC)

TRICONE	0	TO	7.0
HQ	7.0	TO	18.0
NQ	18.0	TO	116.0
		TO	
		TO	
		TO	

Details of down hole location-survey methods.

EASTMAN Single Shot Photo

Purpose of drilling and anticipated lengths to targets.

To investigate EM and magnetic anomalies and to attempt to determine stratigraphy.

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type	DIP
30.0m	IN CASING	62°
60.0m	225°	61° 30'
90.0m	224°	61° 30'
116.0m	223°	61° 45'

Comments on drilling. Rod broken at 44.0m. Attempts to recover rods and bit unsuccessful. Casing pushed past lost equipment, and coring recommenced at 35.7m.

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL No. | FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. COMPSTON FROM 0 TO 116.6m DATE 19/3/81
LOGGED BY _____ FROM _____ TO _____ DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 60
Log sheet 1 of 2

832123 118

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes, veins over 50mm, INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER No.	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets	ASSAYS AVAILABLE	BULKED ASSAYS Sn
0	0-7.0 (7.0)	TRICONE DRILLED - NO CORE						
	7.0-28.8	7.0-28.8 BASALT Fine grained grey basalt. Common dippyroxene phenocrysts in matrix of fine plagioclase and cpx. Abundant vesicles, in parts, lined with zeolites.				No apparent sulphides		
20						py - common py-carb veins, locally up to 70% py. average 5%		
	28.8-35.7 (6.9m)	28.8-35.7 SHALE, SILTSTONE, SANDSTONE Strongly disrupted and brecciated, very soft greenish white shale, with off-white sandstones. Very high proportion of talc.		9/11/S		No apparent sulphides		
40	35.5-58.7 (23.0m)	35.5-58.7 CARBONACEOUS SHALE, SILTSTONE, minor QUARTZITE Strongly disrupted black, slightly carbonaceous shale, with lesser siltstone and minor quartzite. Quartzite is usually as disrupted thin beds. Carbonate veins and stringers occur occasionally.		9/c/10/11		Py - trace disseminated through siltstone, and occasionally in carbonate veins.		
60	58.7-65.5 (6.8m)	58.7-65.5 SHALE Strongly disrupted whitish green mudrock. Very soft, talc-or clay-rich. Abundant stringers of black shale in fractures.		9		No apparent sulphides		
	65.5-72.9 (7.4m)	65.5-72.9 CARBONACEOUS SHALE, minor SILTSTONE & QUARTZITE Strongly disrupted, brecciated in parts, black carbonaceous shale, with lesser siltstone and quartzite. Occasional thin carbonate veins and stringers.		9/c/10/11		Py - trace disseminated through shales and silstone		
80	72.9-107.9 (35.0m)	72.9-107.9 TUFFACEOUS QUARTZITE, minor CARBONACEOUS SHALE Light grey quartzite, strongly disrupted, and brecciated in parts. Black carbonaceous shale occurs in fractures and breccia zones. Rare thin quartz and carbonate veins and stringers occur. Common vughs or open veins - where fractures have not filled. 5 cm		11/12/9/c		No apparent sulphides		
100	107.9-116.6 (8.7m)	107.9-116.6 CARBONACEOUS SHALE, lesser SILTSTONE minor QUARTZITE Strongly disrupted, brecciated in parts. Dominated by black carbonaceous shale, with lesser siltstone. Quartzite is rare and occurs as strongly disrupted beds.		9/c/10/11		Py-trace disseminated through siltstone, and in occasional carbonate veins Py-disseminated in siltstone, up to 10% locally.		

NOTES: 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R RYALL (EDS), MONOGRAPH NO. 9 AUSTRALAS INST MIN. METALL. - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 60

119

SAMPLE NO. SPLIT CORE	SAMPLE NO GROUND CORE	FROM m	TO m	INTERVAL m	Sn SPLIT	Sn GROUND	Check Sn	Bulked Assays
	120425	28.8	30.8	2.0		12		
	26	30.8	32.8	"		24		
	27	32.8	34.8	"		10		
	28	34.8	36.8	"		8		
	29	36.8	38.8	"		16		
120430		38.8	40.8	"				
31		40.8	42.8	"				
32		42.8	44.0	1.2				
	120437	44.0	46.0	2.0		8		
	38	46.0	48.0	"		8		
	39	48.0	50.0	"		8		
	440	50.0	52.0	"		8		
	41	52.0	54.0	"		X		
	42	54.0	56.0	"		X		
	43	56.0	58.0	"		10		
	44	58.0	60.0	"		10		
	45	60.0	62.0	"		10		
	46	62.0	64.0	"		18		
	47	64.0	66.0	"		8		
	48	66.0	68.0	"		8		
	49	68.0	70.0	"		6		
	450	70.0	72.0	"		12		
	51	72.0	74.0	"		12		
	52	74.0	76.0	"		10		
	53	76.0	78.0	"		8		
	54	78.0	80.0	"		6		
	55	80.0	82.0	"		4		
	56	82.0	84.0	"		6		
	57	84.0	86.0	"		6		
	120458	86.0	88.0	"		6		

Ground Core

SAMPLE No.	From	To	interval.	ground. Sn.
120433	36.0	38.0	2.0	12
34	38.0	40.0	"	16
35	40.0	42.0	"	8
36	42.0	44.0	"	4

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 60

SAMPLE TYPE : DRILL CORE FROM 28.8 TO 88.0

∞321124

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	120459	88.0	90.0	2.0		10								
	60	90.0	92.0	"		6								
	61	92.0	94.0	"		6								
	62	94.0	96.0	"		8								
	63	96.0	98.0	"		10								
	64	98.0	100.0	"		14								
	65	100.0	102.0	"		8								
	66	102.0	104.0	"		8								
	67	104.0	106.0	"		10								
	68	106.0	108.0	"		10								
	69	108.0	110.0	"		12								
	470	110.0	112.0	"		6								
	71	112.0	114.0	"		12								
	72	114.0	116.6	"		6								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 68

SAMPLE TYPE : DRILL CORE FROM 88.0 TO 116.6

8321251

832126121

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. _____

HOLE No. MBD 61

COLLAR LOCATION

Grid name — Rectangular space co-ordinates

	PLANAR CO-ORDINATES		ELEVATION
(1) HOUSEGO	_____ N	_____ E	_____
(2) _____	_____ N	_____ E	_____
(3) Aust. Map Grid (PRECISE / APPROX.)	_____ mE	_____ mN	_____ mA.H.D.

1:250 000 Sheet No. | 1:100 000 Sheet No. | State

Mineral Tenement: EL 13/79 — Holder: METALS EXPLORATION LTD.

Cadastral location and details (CROWN LAND / PRIVATE): _____

W.C. Bearing from collar
_____ magnetic
_____ grid (1)
_____ grid (2)
_____ grid (3)
_____ true

Inclination at collar: 60°

Total length: 95m

Commenced: / /

Completed: 22 / 3 / 81

Drilling contractor: LONGYEAR AUST PTY. LTD.

Rig type: LONGYEAR HC 150

Core size and non-coring (NC)

TRICONE		TO _____
NC	0.0	TO 1.0
NQ	1.0	TO 95.0
		TO
		TO
		TO

Details of down hole location-survey methods.
EASTMAN Single Shot Camera

Purpose of drilling and anticipated lengths to targets.
Investigation of EM and magnetic anomalies.
Anticipated depth of target ~70m vertically.

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type	DIP
30m	227°	60° 15'
60m	226°	61°
90m	225°	61° 15'

Comments on drilling.

Legend for graphic log column (see drill log for Hole No. _____)
'DERWENT' PENCIL NO. — FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. COMPSTON — FROM _____ TO _____ — DATE 23/3/81
LOGGED BY _____ — FROM _____ TO _____ — DATE _____
LOGGED BY _____ — FROM _____ TO _____ — DATE _____

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 61
Log sheet 1 of 2

8321 122

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT CAPITAL LETTERS, UNDERLINED Depth Description and notes, veins over 50mm. INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets.	ASSAYS AVAILABLE	BULKED ASSAYS Sn

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R RYALL (ED.), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

0

0-1.0m | 0-1.0m TRICONE - NO CORE

1.0-29.5 (28.5m) | 1.0-29.5 BASALT
Fine grained dark basalt, with occasional clino-pyroxene (augite?) phenocrysts, in matrix of feldspar and cpx. Weakly magnetic in parts. Common small vesicles, rimmed or filled with zeolites and prehnite. These occur as zones, probably reflecting original flows of lava. Zone of altered and leached basalt occur at 17.0-21.1.

No apparent sulphides

20

29.5 - 95.0 (65.5m) | 29.5-95.0 CARBONACEOUS SHALE, lesser SILTSTONE, minor QUARTZITE
Dominantly black slightly carbonaceous shale and siltstone with minor thin quartzite beds. Moderately to strongly disrupted for the most part.
Top 7.5m (29.5-37.0) weathered to grey clay-rich material.
Occasional thin carbonate veins and stringers occur throughout.
Thin pyrite beds occur occasionally (see opposite). These are usually disrupted into irregular fragments ~1cm diameter.

9/c/10/11

← 29.5 pyrite
trace as rare veins and stringers and disseminated through siltstone

40

← 40.9 pyrite-as occasional disrupted py-rich beds, and rare veins and stringers. 1-2%

← 45.1-pyrite-trace disseminated in silt stone and quartzite.

← 48.8-95.0 pyrite-1-2% disseminated through siltstone and as beds of py-rich siltstone (50%) up to 1.5cm, commonly disrupted into irregular blebs.

60

80

HOLE COMPLETED 95.0m

100

5 cm

120

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project MT. BISCUIT TIN

HOLE No. MBD 61

123

SAMPLE NO. SPLIT CORE	SAMPLE NO GROUND CORE	FROM m	TO m	INTERVAL m	Sn SPLIT	Sn GROUND	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
120473		29.5	31.5	2.0										
74		31.5	33.5	"										
75		33.5	35.5	"										
76		35.5	37.5	"										
	120477	37.5	39.5	"		10								
	78	39.5	41.5	"		6								
	79	41.5	43.5	"		10								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 61

SAMPLE TYPE : DRILL CORE FROM 29.5 TO

8321128

832129124

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD.62

COLLAR LOCATION

Grid name — Rectangular space co-ordinates

	PLANAR CO-ORDINATES		ELEVATION
(1)	N	E	
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	mA.H.D.

1:250 000 Sheet No. BURNIE SK55-3

1:100 000 Sheet No. HELLYER 8015

State TASMANIA

Mineral Tenement EL 13/79

Holder METALS EXPLORATION LTD.

Cadastral location and details

CROWN LAND / PRIVATE

W.C. Bearing from collar

- magnetic
- grid (1)
- grid (2)
- grid (3)
- true

Inclination at collar 50°

Total length 120.0m

Commenced: 24 / 3 / 81

Completed: 27 / 3 / 81

Drilling contractor: LONGYEAR AUST PTY. LTD.

Rig type: LONGYEAR HC 150

Core size and non-coring (NC)

TRICONE	0 TO	3.5m
NQ	3.5 TO	120.0m
	TO	
	TO	
	TO	
	TO	

Details of down hole location-survey methods.

EASTMAN Single shot camera

Purpose of drilling and anticipated lengths to targets.

Investigation of magnetic and EM anomalies.

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type.....	DIP
30m	354°	51°
60m	002°	51°
90m	358	51° 30'
120m	357	52°

Comments on drilling.

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL No.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. COMPSTON	LOGGED BY	LOGGED BY
FROM 0 TO 120.0m	FROM TO	FROM TO
DATE 29/3/81	DATE	DATE

Company managing exploration programme.

METALS EXPLORATION LTD.

HOLE No. MBD-62

Log sheet 1 of 2

832130 125

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT CAPITAL LETTERS, UNDERLINED Depth Description and notes, veins over 50mm. INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets	ASSAYS AVAILABLE	BULKED ASSAYS Sn

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

0

(3.5m) 0–3.5m TRICONE DRILLING - NO CORE

(104.9m) 3.5-108.4m BASALT

3.5-26.7: Fine grained, dark grey basalt, vesicular in parts. Weakly magnetic. Vesicles filled with zeolites and prehnite. Common clino-pyroxene (?augito) phenocrysts to 1mm in matrix of plag-cpx.

No apparent sulphides

20

26.7-31.1: Fine grained, pinkish maroon basalt, vesicular in parts. Cpx phenocrysts

31.1-42.9: Fine grained, dark grey vasalt, vesicular in parts. Occasional cpx phenocrysts.

40

42.9-49.5: Maroon basalt, fine-grained and vesicular in parts. Common cpx phenocrysts.

49.5-72.8: Coarse grained basalt - plag lathes up to 3mm, cpx phenocrysts rare. Vesicular in parts.

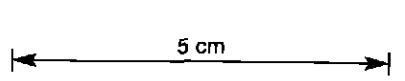
60

72.8-94.8: Fine grained, dark grey basalt, vesicular in parts. No apparent phenocrysts.

80

94.8-108.4: Fine grained dark grey basalt, vesicular in parts. Very abundant (10%) clino-pyroxene phenocrysts.

110



(11.6m) 108.4-120.0m TUFFACEOUS QUARTZITE, SILTSTONE and CARBONACEOUS SHALE

Strongly disrupted and sheared-fragments of silt-stone, quartzite and soft greenish white clay in matrix of foliated black, carbonaceous shale. Common carbonate veins and stringers parallel to the foliation (~45° to core axis)

12/ 11/ 10/9/ c

No apparent sulphides

120

END OF HOLE 120.0m

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project: MT RISCHOFF TIN

HOLE No. MBD 62

832131 126

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF

HOLE No. MBD 63

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1) _____ _____ N _____ E _____

(2) _____ _____ N _____ E _____

(3) Aust. Map Grid (PRECISE / APPROX.) _____ mE _____ mN _____ m A.H.D.

1:250 000 Sheet No. BURNIE SK55-3

1:100 000 Sheet No. HELLYER 8015

State TASMANIA

Mineral Tenement EL 13/79

Holder METALS EXPLORATION LTD.

Cadastral location and details (CROWN LAND / PRIVATE)

W.C. Bearing from collar
_____ magnetic
_____ grid (1)
_____ grid (2)
_____ grid (3)
_____ true

Inclination at collar 90°

Total length 149.50m

Commenced: 27 / 3 / 81

Completed: 31 / 3 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.

Rig type: LONGYEAR H.C. 150

Details of down hole location-survey methods.
EASTMAN Single Shot Camera

Purpose of drilling and anticipated lengths to targets.
Exploration hole to investigate "buried dolomite" to south-west of Mount Bischoff. Anticipated depth of target at about Rh 500m.

Core size and non-coring (NC)

TRICONE	0	TO	1.7
NQ	1.7	TO	71.5
BQ	71.5	TO	149.5
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type	DIP
30m	in casing	87°30'
60m	"	87°
90m	280°	88°
120m	263°	88°
149.5m	291°	86°

Comments on drilling. Hydraulic pump broke down on 29/3/81. Two shifts lost.

Legend for graphic log column (see drill log for Hole No. _____)
'DERWENT' PENCIL No. | FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. COMPSTON FROM 0 TO 149.5m DATE 3/4/81

LOGGED BY _____ FROM _____ TO _____ DATE _____

LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 63
Log sheet 1 of 1

832132 127

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) / Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	PULVERED ASSAYS

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No.9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT / Depth : Description and notes	GRAPHIC LOG	MINERALISATION
0	1.7m	0-1.7 Tricone Bit-No core		
	27.8m	1.7-29.5 SILTSTONE, lesser CARBONACEOUS SHALE, lesser QUARTZITE 1.7-11.4 Weathered siltstone, and carbonaceous shale strongly disrupted in parts. 11.4-29.5 Strongly disrupted sandy siltstone and black shale, with rare quartzite fragments. Common carbonate and/or quartz veins and stringers. Rare fluorite veins.		py trace in carbonate veins and stringers.
20				
	45.6m	29.5-75.1 CARBONACEOUS SHALE, lesser SILTSTONE, minor QUARZITE Strongly disrupted and slump brecciated. Irregular siltstone and quartzite fragments in "matrix" of carbonaceous shale. Common carbonate veins and stringers, rare qtz veins.		py trace disseminated through qtzite fragments, also in thin carbonate veins and stringers.
40				
60		5 cm 74.7-75.1 silicified contact m/mism		
	2.1m	75.1-77.2 PORPHYRY-medium grained, glassy matrix.		py-coarsely disseminated 15%
80	21.0m	77.2-98.2 CARBONACEOUS SHALE, SILTSTONE, minor QUARTZITE Strongly disrupted and slump brecciated. Mainly black carbonaceous shale and siltstone with minor qtzite fragments. Common carbonate and/or quartz veins and stringers. Rare fluorite vein. 77.2-81.6 silicified contact.		py, sph py-in carbonate veins and stringers and disseminated through siltstone. sph-occasionally in py-carb veins py>>sph
100	8.9m	98.2-107.1 Sandy SILTSTONE, minor CARBONACEOUS SHALE Mainly massive black sandy siltstone, with common white mica. Black shale increase toward 107.1		py, po, cpy py-trace in thin carbonate veins po-in vein with py-carb-cpy. cpy-trace with po py>> po>> cpy
	12.1m	107.1-119.2 CARBONACEOUS SHALE, lesser SILTSTONE minor QUARTZITE Strongly disrupted slump brecciated. Common siltstone and quartzite fragments in black shale. Common carbonate stringers.	q	py-trace as pyritic silstone fragments, and as occasional veins.
120		Continued next page.		

AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

FIELD COPY
METALS EXPLORATION LTD.
EXPLORATION DEPARTMENT

TO BE SENT TO MELBOURNE FOR TYPING
SUMMARY DRILL LOG
Scale 1:1000, 1:500, 1:250 (when reduced to A4)
Prepared by: D. COMPSTON
Date: 3/4/81
HOLE No. MBD 63
Sheet 1 of 2

832133128

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) / Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

120

21.7m	119.2-140.9 QUARTZITE, SILTSTONE, lesser CARBONACEOUS SHALE Thinly bedded light-grey quartzite, siltstone and lesser carbonaceous shale, moderately disrupted in parts. Occasional silstone and quartzite beds contain up to 50% pyrite. Occasional qtz and/or carbonate veins and stringers.	py 1-2% disseminated in siltstone and quartzite beds up to 1.5 cm thick. Also in thin veins and stringers.

140

1.4m	140.9-142.3 QUARTZITE-massive, light grey, common qtz carb. veins.	no apparent sulphides
	142.3-148.2 CARBONACEOUS SHALE, SILTSTONE, lesser QUARTZITE Strongly disrupted and slump brec. Main carb. shale with siltstone and qtzite fragments.	py trace disseminated in thin carb veins and stringers. Also dissem. in siltstone.
1.0m	148.2-149.2 QUARTZITE, lesser SILTSTONE minor CARBON.	py-trace in carbonate veins and stringers
0.3m	149.2-149.5 CARBONACEOUS SHALE, lesser SILTSTONE, minor QUARTZITE.	py-trace in veins

END OF HOLE 149.50m

160

180

5 cm

AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE (1:1000, 120mm (1:500), 60mm (1:250)

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METALS EXPLORATION LTD.
EXPLORATION DEPARTMENT

TO BE SENT TO MELBOURNE FOR TYPING
SUMMARY DRILL LOG Prepared by:
Scale 1:1000 1:500 1:250

HOLE No. MBD 63

92-1698 Vol 2. Cover 81-005 D.

METALS EXPLORATION LIMITED

MT BISCHOFF TIN PROSPECT

MT BISCHOFF MINE AREA

STAGE 3A
DRILLING PROGRAMME

as at - - 81

Scale 1 2000

5 cm

832134

MBD 63
MBD 44
MBD 45
MBD 57
MBD 42
MBD 25
MBD 41
MBD 58
MBD 46
MBD 24
MBD 26
MBD 43
MBD 23
MBD 22
MBD 47
MBD 21
MBD 48
MBD 49
MBD 50
MBD 29A
MBD 29
MBD 51
MBD 20
MBD 15
MBD 27
MBD 52
MBD 19
MBD 16
MBD 53
MBD 54
MBD 17
MBD 18
MBD 28
MBD 30
MBD 35
MBD 31
MBD 32
MBD 34
MBD 33
MBD 36
MBD 37
MBD 56
MBD 55
MBD 38
MBD 14
MBD 39
MBD 40

WHITE FACE
HADDY LA...
DYKE
SLAUGHTERYARD FACE
FACE A HORIZ
WESTERN DYKE
BROWN FACE
STANHOPE DYKE
DESERT FACE
QUEEN DYKE

MEL GRID NORTH (330°)
ADOPT MAG NTH

0 50 100
METRES

Porphyry
Dolomite
Dolomite Sulphide Lode
Siltstones, Shales, Quartzites
Fault
Interpreted Geological Contact

Diamond Drillhole
Proposed
Completed

Completed Drillholes

December	MBD 47,48,49
January	MBD 50,51,52
February	MBD 53, 54, 55, 56, 57, 58
March	MBD 63
April	
May	
June	

Rev 23 4 81

Drg. No 81 - 005 D

METALS EXPLORATION LTD.
80 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR APRIL, 1981.

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29th. May, 1981.
G.M. Motteram.

MT. BISCHOFF TIN PROSPECT.

REPORT FOR APRIL, 1981.

General:

Diamond drilling rates improved significantly during April as a result of Longyear's replacement of the HC 150 rig with a Longyear 44 rig and the arrival of the second contractors rig on site. Total drilling amounted to 955.5 metres, taking Stage 3A meterage to date to 2654.2 metres versus budget of 4150 metres.

One further hole was drilled to investigate potential southerly extensions of the South West "Buried Dolomite", without success.

Eight positions were drilled with the major aim of infilling or extending the Dolomite Sulphide Lode reserves and with subsidiary porphyry ore targets. Results were encouraging in the western sections achieving significant unexpected DSL intercepts and intersecting a separate dolomite sequence below the main dolomite horizon. Drilling on the eastern extensions of the DSL ore horizon was not successful.

Drilling of the Queen Dyke Porphyry was commenced during the month.

Metallurgical work at Launceston continued to be encouraging with initial cassiterite flotation tests on DSL and Porphyry ore being satisfactory.

Visits were made to site by Mr. W. Fander (Mineralogist), to collect ore type samples, and Mr. M. Pitt, to investigate potential for underground access to DSL ore. In both cases the objective being to gain more information on the ore variability problem.

Mr. R. Reid joined the project from Aberfoyle Cleveland during the month as Surveyor/Draftsman on site. A student was also employed on a part-time basis at Launceston to assist in sample preparation etc.

Geology:

(i) Diamond Drilling:

During the period 10 holes were commenced and 8 were completed for a total of 955.5 metres.

A major part of the drilling for the month was directed at the dolomite reserves with subsidiary porphyry targets. One hole was targeted solely for porphyry, investigating the Queen Dyke formation.

.../2

Diamond Drilling (Contd.)

Holes drilled are discussed below:

MBD 64.

This hole was drilled to 150 m to test for the "Buried Dolomite" on Section 700E. It did not achieve a dolomite intersection but intersected porphyry at two positions between 84.8 to 93.3 m and 114.67 to 124.3 m.

Assays indicate that both porphyries were low grade with the best results being from 84.9 to 86.9 m averaging 1825 ppm. Incomplete assay results for grinding of this hole indicate no significant tin values in the surrounding shales.

An unusual acid tuff encountered in the interval 65.0 to 73.0 m was sent for thin section identification. No results are available to date.

MBD 65.

This hole was drilled on Section 1040E to infill the DSL and Porphyry, achieving intersections close to the interpreted positions. However, length of DSL at grade was significantly more than expected. Assay results were as follows:

FROM (m)	TO (m)	LENGTH (m)	GRADE %Sn	ROCK TYPE
34.5	52.8	18.3	0.98 *	DSL
53.5	58.5	5.0	1.44	QUARTZ VEIN
58.5	64.5	4.0	0.42	PORPHYRY
66.8	72.8	6.0	0.49	PORPHYRY

* Includes 1.3 m reduced from 9.0% Sn to 4.0% Sn.

Sediments were encountered below the porphyry from 75.9 to 95.0 metres.

MBD 66 & 66A.

These holes were both drilled to intersect possible DSL extensions to Section 1260E. Both holes were abandoned at about 30 metres due to extreme drilling difficulties.

MBD 67.

Drilled on Section 1140E also testing the easterly extent of the main pit DSL failed to achieve a significant sulphide intersection. The hole was drilled almost entirely in weathered dolomite with poor core recovery (approximately 30%). Despite the poor core recovery, assay results indicate no significant tin content.

.../3

Diamond Drilling (Contd.)

MBD 68, 69 & 70.

These three holes were drilled on Section 940E.

MBD 68 showed that the base of the dolomite is substantially higher than interpreted i.e. at 620 metres RL with no development of sulphide lode. Assays indicate no tin content within the dolomite.

MBD 69 and 70 were interesting in that they showed the existence of significant DSL within the upper dolomite sequence. Because of very low recoveries to approximately 30 metres, assay results should be treated with caution. Assay results gave the following:

FROM (m)	TO (m)	LENGTH (m)	GRADE %Sn	ROCK TYPE
MBD 69				
3.0	4.5	1.5	3.30	DSL
30.0	31.5	1.5	0.50	DSL
MBD 70				
7.0	31.0	24	0.083	DSL
31.0	34.5	3.5	0.49	DSL
40.1	42.0	1.9	0.52	DSL
44.7	47.0	2.3	0.26	DSL
53.1	55.7	2.5	0.23	DSL
57.0	71.0	14.0	0.44	PORPHYRY
98.0	99.1	1.1	0.34	DSL
105.5	107.7	2.2	0.67	DSL

In MBD 70 DSL and dolomite banding occured to RL575 with tin contained in the DSL bands. Below this sequence is porphyry and shales. Further intersections of DSL and dolomite were then achieved within the shales and contained significant tin. This raises the possibility of a lower DSL unit at around 530 metres RL which will be investigated in the current drilling programme.

MBD 71 & 72.

MBD 71 was drilled on Section 1040E targeted to test for DSL and porphyry on the southern edge of the basin. Half a metre of DSL and 2.0 metres of highly mineralised dolomite was intersected above the porphyry and 7.5 metres of good grade DSL below the porphyry. DSL was not interpreted in either of these positions previously.

.../4

Diamond Drilling (Contd.)

MBD 71 & 72.

Interpretation in this area now suggests a thin DSL unit above the porphyry. The DSL below the porphyry appears to only develop in the south around 1770N as hole MBD 52 on Section 1040E did not intersect it.

Also drilled on this section was MBD 72, designed to infill the DSL and Porphyry to the north. The hole achieved a 42 metre intersection of DSL and a porphyry intersection of 21 metres. Assay results gave the following.

FROM (m)	TO (m)	LENGTH (m)	GRADE %Sn		ROCK TYPE
MBD 71					
34.9	37.4	2.5	1.77	*	DSL/DOLOMITE
46.4	51.4	5.0	0.36		PORPHYRY
55.8	60.8	5.0	0.43		PORPHYRY
61.9	69.4	7.5	1.06		DSL

* Includes 0.5 m reduced from 6.85% Sn to 4.0% Sn.

MBD 72				
8.0	10.0	2.0	0.53	DSL
12.1	50.7	38.6	<50 ppm	DSL
102.5	115.5	13.0	0.49	PORPHYRY

The DSL intercept from 12.1 to 50.7 m was previously interpreted to be carrying grade tin.

MBD 75.

MBD 75 is the first hole in the current programme to investigate the Queen Dyke porphyry. At period end it was at 108 metres in shale, siltstones and sandstone approximately 13 metres above target for the hanging wall contact of the dyke.

Drilling Statistics:

Details of holes completed during April are as follows:

Hole No.	Collar Co-ordinates North	East	Dip	Azimuth	Final Depth
MBD 64	1630.40	697.96	-90	-	150.0
MBD 65	1889.75	1039.72	-90	-	95.0

.../5

Drilling Statistics (Contd.)

Hole No.	Collar Co-ordinates North	East	Dip	Azimuth	Final Depth
MBD 66 *	1853	1260	-65	360	33.0
MBD 66A *	1853	1262	-65	360	30.3
MBD 67	1860.16	1140.03	-60	360	64.1
MBD 68	1843.30	940.70	-90	-	40.0
MBD 69	1738.0	939.9	-60	360	47.6
MBD 70	1803.0	940.0	-69	180	117.5
MBD 71	1809.2	1039.9	-50	180	120.0
MBD 72	1960.79	1040.18	-80	180	150
MBD 75 **	2313	1261	-90	-	108.0

* Collars have not been surveyed yet.
** Incomplete at period end.

(ii) Sample for Petrological Investigation:

Mr. W. Fander, Consultant Mineralogist from Adelaide was requested to investigate various ore types from Mt. Bischoff in an attempt to explain the inconsistency in tin distribution. He collected approximately 30 samples from the following drill holes:-

MBD 47, 48, 52, 53, 54, 55 and 56.

In a verbal communication he stated that very little correlation of tin grade with other mineral presences could be identified. His report is due in May.

(iii) "Old Core."

All old core has been reboxed and wrapped, however due to the increase in current drilling activity, no old core was relogged during the period.

(iv) Regional Exploration.

Line cutting contractors completed 9 of the 10 lines over the Stanhope extended area. A total of 6730 metres were cut. Pegging of the lines at 20 metre intervals was in progress at period end. Weather permitting a magnetometer survey will be carried out over the grid during May.

.../6

(v) Assaying:

Assaying is currently being carried out at Analabs at Burnie, Tasmania, who are giving a turn around time of 3 weeks on core samples.

It is hoped that this will reduce to 2 weeks. Some delays will occur on samples submitted during April as part of a batch of samples was involved in a fire at their laboratory.

Metallurgy:

(i) Primary Grind:

A further series of sulphide flotation tests were carried out on the SC1, SC2 and porphyry ore samples ground to minus 355 microns after results from earlier work suggested coarser grinds than already tested may be applicable. Analyses of products have not been completed, but flotation of sulphides appeared to be satisfactory.

Sized samples of sulphide flotation tailings from grinds of minus 250 microns and minus 355 microns were sent to AMDEL for heavy liquid testwork to determine cassiterite liberation.

(ii) Cassiterite Flotation:

Samples of sulphide flotation tailings for SC1 and porphyry material were prepared for tin flotation testwork by grinding to minus 53 microns and desliming in a 30 mm cyclone. In preliminary tests on the SC1 ore type using styrene phosphonic acid as collector, satisfactory flotation of tin was achieved.

Effective rougher flotation conditions appear to be a collector dosage of 500 g/t and flotation time of about 8 minutes, giving a tin rougher recovery of 80% at an upgrade ratio of 5 to 1 i.e.

Prod.	wt%	%Sn	Dist.	Cum %Sn	Cum %Sn Recovery.
Sulph. Conc.	3.9	1.36	2.5		
C1	8.1	17.8	67.7	17.8	67.7
C2	2.2	8.4	8.7	15.8	76.4
C3	10.5	2.5	12.3	9.1	88.7
C4	2.1	0.72	0.7	8.3	89.4
C5	1.9	0.41	0.4	7.7	89.8
Tail	71.3	0.23	7.7		
Calc. Feed	100.0	2.13	100.0		
Assay Feed		2.07			

Full assay results are not yet to hand for the PC1 test, however, tailing grades indicate equally good recovery. Cleaner testwork is underway.

.../7

Mining:

Mr. M. Pitt visited site to determine the potential for re-entry to the Greisen Face workings, followed by a programme of driving and pattern drilling within the DSL in that position. Entry to the main tunnel is blocked by a fall some 20 metres beyond the portal. The length of this blockage could not be determined.

An attempt was also made to enter the workings via a glory hole in Greisen Face, however, foul air prevented the party reaching the tunnel level.

An estimate of cost to clean out the old workings was made, however, cost is excessive due to the lack of knowledge of possible problems and the need to obtain significant equipment for the job. Alternate methods of assessing ore continuity will be required.

Stage 3A Programme:

It is anticipated that the Stage 3A drilling and metallurgical programmes will over run the planned completion date of end June, 1981. Drilling is expected to be complete by end July, 1981 and metallurgical work on all the Stage 3A composites should be completed during August.

A cost over run for the total Stage 3A programme of approximately $12,000 is anticipated.

These factors result from the lack of performance of the Longyear HC150 drilling rig early in the programme which delayed the planned drilling and collection of metallurgical sample, plus longer than anticipated time to recruit suitable project staff.

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

	APRIL 1981		SEVEN MONTHS TO 30.4.8	
	ACTUAL	BUDGET	ACTUAL	BUDGET
Technical Services	22,330	23,680	131,646	149,980
Travel & Accommodation	(466)	700	8,415	4,900
Labour	1,856	1,550	12,095	10,650
Camp & Messing	1,085	1,300	4,247	8,500
Vehicles	1,374	1,000	5,850	6,100
Equipment Rental	50	450	300	2,900
Consumables & General	7,309	1,700	38,066	38,020
Tenement Expenses				500
Track Cutting			875	4,000
Geophysical Surveys	986		8,945	4,000
Diamond Drilling	30,812	41,000	129,290	258,000
Site Preparation			540	8,000
Assays	1,973	2,800	6,101	14,000
Mining Studies		3,050		7,980
Metallurgical	12,874	11,000	31,758	59,900
Capital Items	510		43,783	38,500
Engineering Studies		480		2,580
	80,693	88,710	421,911	618,510

SUMMARY OF EXPENDITURE TO 30 APRIL 1981

		FINANCIAL YEAR TO DATE
Stage 1	270,000	
Stage 2A - Early Start	29,020	
Stage 2A	198,818	
Overruns: Stage 1 - M.E.L.	11,308	
Metallurgical - CRAE	23,500	
Stage 2B	482,354	18,121
Stage 2B - 3A Holding Costs Offset - A.I.R. & D. Grant	40,000	40,000
Stage 3A	421,911	421,911
CUMULATIVE EXPENDITURE TO DATE	1,476,911	480,032

M.E.L.
C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

	7 MONTHS TO 30.4.81 ACTUAL	FORECAST FOR 2 MONTHS TO 30.6.81	FORECAST FOR 9 MONTHS TO 30.6.81	BUDGET FOR 9 MONTHS TO 30.6.81
	$	$	$	$
Technical Services	131,646	61,000	192,646	200,660
Travel & Accommodation	8,415	4,000	12,415	6,300
Labour	12,095	4,000	16,095	14,100
Camp & Messing	4,247	2,000	6,247	11,100
Vehicles	5,850	2,000	7,850	8,100
Equipment Rental	300	100	400	3,900
Consumables & General	38,066	6,000	44,066	41,620
Tenement Expenses		500	500	1,000
Track Cutting	875	1,000	1,875	4,000
Geophysical Surveys	8,945		8,945	4,000
Diamond Drilling	129,290	180,000	309,290	340,000
Site Preparation	540	1,000	1,540	4,000
Assays	6,101	4,000	10,101	19,600
Mining Studies				14,600
Metallurgical	31,758	20,000	51,758	93,400
Capital Items	43,783		43,783	38,500
Engineering Studies				11,620
	421,911	285,600	707,511	816,500

Stage 3A Summary:

Expenditure	7 months to 30.4.81	$421,911
Forecast	2 months to 30.6.81	$285,600
Forecast	over run to 31.7.81	$120,600
Forecast	Stage 3A Expenditure	$828,111
	Stage 3A Budget	$816,500
Forecast	Stage 3A Over Expenditure	$ 11,611

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

EL 13/79

	APRIL 1981	SEVEN MONTHS TO 30.4.81
Technical Services	22060	107511
Travel & Accommodation	(507)	7272
Labour	1856	11575
Camp & Messing	1085	4120
Vehicles	1300	5776
Equipment Rental	50	300
General Expenses & Consumables	7188	34027
Track Cutting		875
Diamond Drilling	11267	92151
Metallurgical	12874	31743
Assays	1973	6101
Capital Items *	510	43523
Geophysical Surveys		3979
	59656	348953

* Core Shed

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

AP 5/80

	APRIL 1981	SEVEN MONTHS TO 30.4.81
Technical Services	270	24134
Travel & Accommodation	41	1144
Labour		519
Camp & Messing		
General Expenses & Consumables	195	4239
Geophysical Surveys	986	4965
Diamond Drilling	19545	37140
Site Preparation		540
Assays		15
Capital Items		260
	21037	72956

M.E.L.
C.R.A.

MT. BISCHOFF PROJECT

CUMULATIVE CAPITAL EXPENDITURE

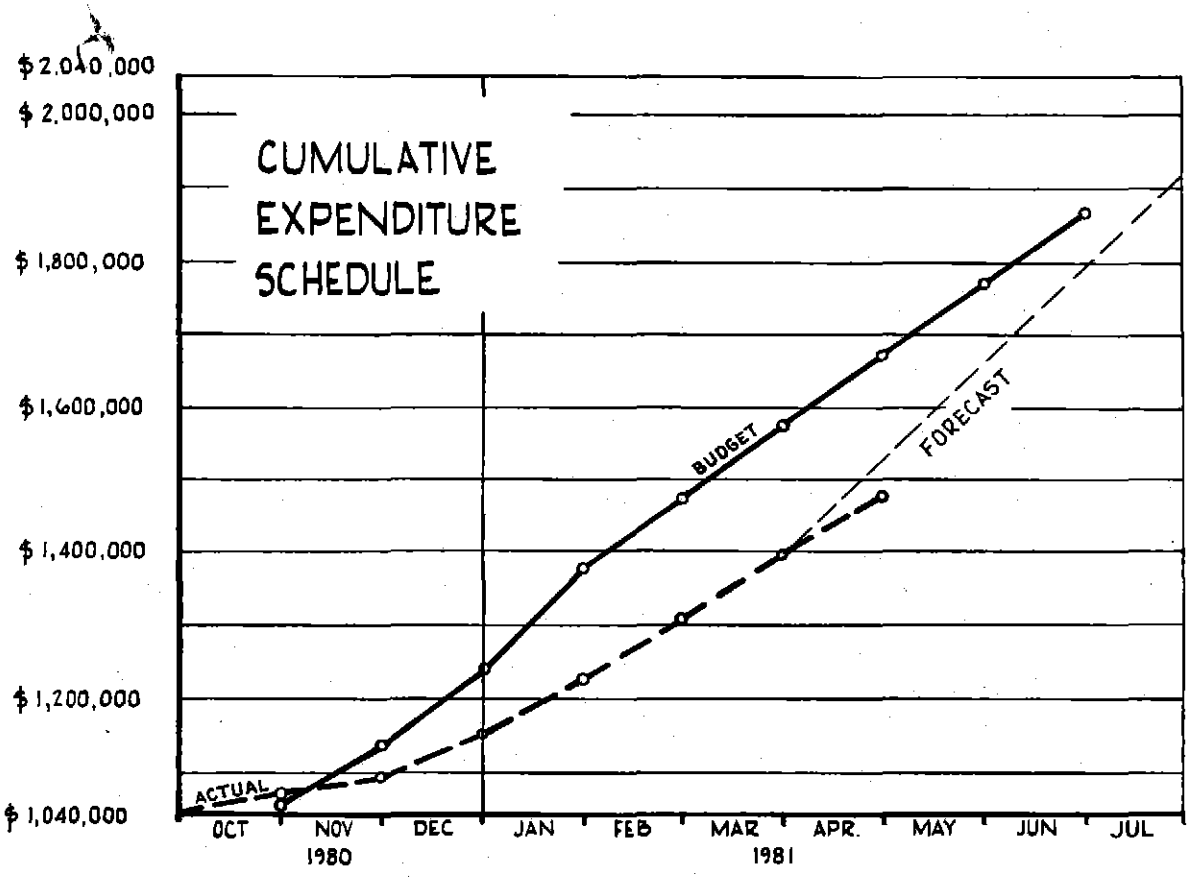
		AS AT 31.3.81	MAY 1981 EXPENDITURE	AS AT 30.4.81
STAGE 1 & 2	Core Shed	$15,295	-	$15,295
	Concrete Foundations	$ 2,100	-	$ 2,100
		$17,395		$17,395
STAGE 3A	Core Shed	$ 8,660	$510	$ 9,170
	Accommodation Unit	$32,500	-	$32,500
		$41,160		$41,670
	TOTAL	$58,555	$510	$59,065

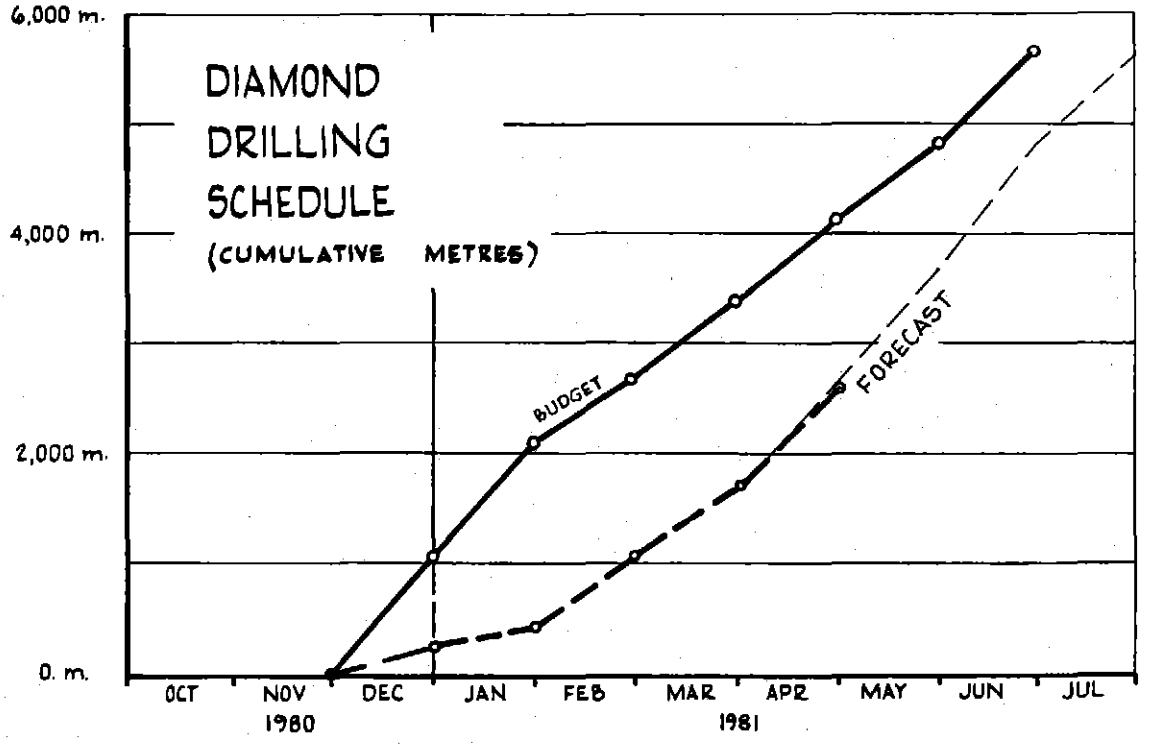
Beneficial Ownership. - As at 30th. April, 1981.

C.R.A. $25 \times \frac{100}{85} = 29.4\%$

M.E.L. $60 \times \frac{100}{85} = 70.6\%$

832148 142





MT. BISCHOFF

STAGE 3A SUMMARY
as at 30·4·81

Rev. 30·5·81 Drg. N°. 80 - 449 c

832149 143

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 64

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	N	E	
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	mA.H.D.

1:250 000 Sheet No.

1:100 000 Sheet No.

State

Mineral Tenement EL 13/79

Holder METALS EXPLORATION LTD.

Cadastral location and details
CROWN LAND / PRIVATE

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) ____ mag

G.N.(2) ____ mag

G.N.(3) ____ mag

T.N. ____ mag

Inclination at collar 90°

Total length 150.0 m

Commenced: 1 / 4 /81

Completed: 5 / 4 /81

Drilling contractor
LONGYEAR AUST. PTY. LTD.

Rig type
LONGYEAR HC 150
LONGYEAR 44

Core size and non-coring (NC)

TRICONE	0	TO	4.5
NQ	4.5	TO	62.5
BQ	62.5	TO	150.0
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
EASTMAN Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
Exploration drilling to investigage "buried dolomite" to south-west of Mt. Bischoff.
Anticipated depth of target (dolomite) at about RL 475 m.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
30 m	in casing	89°
60 m	-	90°
90 m	280°	88° 30'
120 m	237°	88°
150 m	273°	85° 20'

Comments on drilling.
HC 150 broke down (mud pump) at 62.50. Exchange for Longyear 44 on 3/4/81. 2 shifts last.

Legend for graphic log column (see drill log for Hole No. ____)

'DERWENT' PENCIL No.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. COMPSTON
FROM 0 TO 150 m
DATE 7/6/81

LOGGED BY
FROM TO
DATE

LOGGED BY
FROM TO
DATE

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 64
Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes, veins over 50mm, INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets.	ASSAYS AVAILABLE	BULKED ASSAYS Sn

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A. BERKMAN & W. R RYALL (EDS), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

0	4.5	0 - 4.5 Tricone drilling - no core				
	10.8	4.5 - 15.3 SILTSTONE, lesser CARBONACEOUS SHALE. Mainly mid-grey siltstone with lesser black carbonaceous shale. Strongly disrupted and slumped. Common carbonate veins and stringers.		10/9/C		py trace in thin veins and stringers.
20	18.0	15.3 - 33.3 CARBONACEOUS SHALE, lesser SILTSTONE. Moderately to strongly disrupted in parts. Occasional pyritic siltstone layers. Occasional carbonate veins and stringers. Rare quartz veins.		9/C/10		py - 1% disseminated in pyritic siltstone beds (1 - 10 mm thick). Also in carbonate veins and stringers.
40	18.0	33.3 - 51.3 SILTSTONE, lesser CARBONACEOUS SHALE. Strongly disrupted slump brecciated in most parts. Common quartz and carbonate stringers, rare veins.		10/9/C		py trace in veins and stringers. Rare disrupted beds of pyritic siltstone.
60	10.6	51.3 - 61.9 CARBONACEOUS SHALE, SILTSTONE, minor QUARTZITE. Strongly disrupted (slumped) for most part. Occasional pyritic siltstones. Occasional carbonate veins and stringers.		9/C/10/11		py - trace occasional siltstone beds with disseminated py. Also in thin carbonate veins.
	11.5	61.9 - 73.4 TUFF, tuffaceous SILTSTONE. 61.9 - 67.7: Tuff - coarse grained at top to fine grained 20% feldspars, 20% rock fragments up to 25 mm 67.7 - 69.0: Tuffaceous siltstone interbedded with siltstone. 69.0 - 73.4: Tuff - medium grained.		12/10		py - trace disseminate throughout, generally associated with sedimentary rock fragments.
80	11.4	73.4 - 84.8 SILTSTONE, CARBONACEOUS SHALE, lesser QUARTZITE. Strongly disrupted and slumped for most part. Occasional thin carbonate veins, rare fluorite veins.		10/9/C/11		py - trace trace in thin siltstones and qtzite beds. Also in carbonate veins and stringers.
	8.5	84.8 - 93.3 PORPHYRY. Slightly glassy white matrix, 10% qtz phenocrysts 15% feldspars. Py replacing feldspar in parts. Minor disseminated sphalerite.		1		py > sph ∽10% py: replacing feldspar and as occasional veins. sph: disseminated through porphyry.
100	11.4	93.3 - 114.7 SILTSTONE, minor CARBONACEOUS SHALE QUARTZITE. Moderately to strongly disrupted in most parts. Occasional brecciated zones. Mainly thin siltstone beds (1 - 5 cm) with minor shale and quartzite. Occasional carbonate veins and stringers. Rare fluorite veins. Rare quartz stringers. 5 cm		10/9/C/11		py - trace trace in carbonate veins and stringers.
120	9.6	114.7 - 124.3 PORPHYRY. Altered, semi-transluscent matrix - off-white to pale greenish grey. 7% qtz phenocrysts.		1		py, sph - 10% py - occasional veins, and replacing feldspars.

CONTINUED NEXT PAGE.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 64

LOG SHEET 1 OF 2

832151145

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No.9 AUSTRALAS INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

120

114.7 - 124.3 Porphyry (Cont).
10% feldspars, replaced in part by pyrite. Sphalerite dissem. through rock. Fluorite-trace dissem. & veins.

sph - disseminated through porphyry
sph ≥ py

124.3 - 150.0 CARBONACEOUS SHALE, SILTSTONE QUARTZITE.
Weakly to strongly disrupted in parts. 2.4 m of quartzite (massive) from 125.5 - 127.9. Mainly well-bedded, thin quartzite, siltstone and carbonaceous shale.
Occasional carbonate veins and stringers.

py - trace
disseminated through siltstone layers. Also trace in carbonate veins and stringers.

140

160

5 cm

FOR LEGEND SEE DRAWING NO.

AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project
MT BISCHOFF TIN

HOLE No. MBD 64

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
119828		83.9	84.9	1.0	180									
29		84.9	85.9	"	2600									
30		85.9	86.9	"	1050									
31		86.9	87.9	"	370									
32		87.9	88.9	"	200									
33		88.9	89.9	"	180									
34		89.9	90.9	"	280									
35		90.9	91.9	"	390									
36		91.9	93.0	1.1	420									
37		93.0	94.0	1.0	180									
38		113.7	114.7	1.0	240									
39		114.7	115.7	"	120									
840		115.7	116.7	"	150									
41		116.7	117.7	"	180									
42		117.7	118.7	"	170									
43		118.7	119.7	"	190									
44		119.7	120.7	"	130									
45		120.7	121.7	"	150									
46		121.7	122.7	"	150									
47		122.7	123.7	"	160									
48		123.7	124.3	0.6	130									
49		124.3	125.3	1.0	35									

Notes :— XRF Bi Method for Sn.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 64

SAMPLE TYPE : DRILL CORE FROM 83.9 TO 94.0
113.7 125.3

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	1207 48	4.5	6.5	2.0	15									
	49	6.5	8.5	"	X									
	50	8.5	10.5	"	X									
	51	10.5	12.5	"	10									
	52	12.5	14.5	"	20									
	53	14.5	16.5	"	30									
	54	16.5	18.5	"	20									
	55	18.5	20.5	"	15									
	56	20.5	22.5	"	15									
	57	22.5	24.5	"	10									
	58	24.5	26.5	"	20									
	59	26.5	28.5	"	20									
	760	28.5	30.5	"										
	61	30.5	32.5	"										
	62	32.5	34.5	"										
	63	34.5	36.5	"										
	64	36.5	38.5	"										
	65	38.5	40.5	"										
	66	40.5	42.5	"										
	67	42.5	44.5	"										
	68	44.5	46.5	"										
	69	46.5	48.5	"										
	770	48.5	50.5	"										
	71	50.5	52.5	"										
	72	52.5	54.5	"										
	73	54.5	56.5	"										
	74	56.5	58.5	"										
	75	58.5	60.0	"										

Notes:— XRF by A14 Method for Sn.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 64

SAMPLE TYPE : GROUND DRILL CORE FROM 4.5 TO 28.5 60.0

832154 148

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 65

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	N	E	
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

1:250 000 Sheet No. BURNIE SK 55-3 | 1:100 000 Sheet No. HELLYER 8015 | State TASMANIA

Mineral Tenement EL 13/79 | Holder METALS EXPLORATION LTD.

Cadastral location and details
CROWN LAND / PRIVATE

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

Inclination at collar -90°

Total length 95.0 m

Commenced: / /
Completed: 11 / 4 / 81

Drilling contractor

Rig type

Details of down hole location-survey methods.
EASTMAN Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test DSL between 35 and 55 m and White Face Porphyry between 55 m and 70 m. Also to investigate possible occurence of DSL below the porphyry.

Core size and non-coring (NC)

TRICONE	0	TO	13.0
NQ	13.0	TO	63.4
BQ	63.4	TO	95.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
30 m	in casing	86°
60 m	in casing	86°
90 m	247°	86°

Comments on drilling. Numerous cavities between 52.0 and 63.0. Caused reduction from NQ to BQ. after unsuccessful cementing attempts.

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL No.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. COMPSTON. FROM 0 TO 95.0 DATE 11/4/81

LOGGED BY _____ FROM _____ TO _____ DATE _____

LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 65
Log sheet 1 of 2

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS
0	13.5	0 - 13.5 TRICONE - no core						
	9.0	13.5 - 22.5 MINE FILL - no core Occasional fragments of dolomite and altered DSL.						
20	12.21	22.5 - 34.7 DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Pale to medium grey dolomite, silicified. Cream recrystallized dolomite in occasional veins and breccia zones.		2/3		sph > py > po - total sulphides 2-3% sph as disseminated grains in veins and breccias. py and po occur in veins and stringers.		
	17.8	34.7 - 52.5 DOLOMITE SULPHIDE LODE. 34.7 - 44.5: 50% mid to dark green serpentine 40% bronze pyrrhotite, 10% qtz-carbonate. 44.5 - 52.5: 65% bronze pyrrhotite, 35% qtz-carbonate.		6/4/8		po>>py 40% pyrrhotite - slightly bended and as disseminated blebs. py - in rare veins and disseminated through po.		
40				4/8		po>>py 65% bronze pyrrhotite - disseminated blebs to massive in parts, minor py in veins and disseminated through po.		
	23.4	52.5 - 75.9 PORPHYRY. 53.5 - 58.5: qtz-py-jamesonite vein. 58.5 - 63.4: milky white opaque matrix, 15% qtz phenocrysts up to 4 mm. Coarsely disseminated sulphides. 63.4 - 75.9: Altered, translucent matrix. 5-25% qtz phenocrysts up to 10 mm. Coarsely disseminated sulphides. Occasional sulphide bearing veins of qtz and carbonate.				10% disseminated pq > py		
				1		60% py and jamesonite as massive aggregates in vein. Minor arsenopy, marcasite and sph.		
60						py, marcasite - 15% as coarsely disseminated sulphide.		
						py, marcasite - coarsely disseminated through rock. 5-25%. jamesonite, arsenopy, sphalerite minor minerals occurring in veins with carbonate and qtz (and py).		
	19.1	75.9 - 95.0 QUARTZITE, SILTSTONE, minor SHALE Moderately to strongly disrupted in most parts. Occasional breccia zones. Main mid grey quartzite and siltstone, in beds up to 25 cm, with minor interlayered shale.		11/10/9		py trace disseminated through quartzite and siltstone. Rare stringers, with carbonate.		
80								
100		HOLE COMPLETED 95.0 m.						

NOTES:
1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 65

SHEET 1 OF 1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTE-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
118850		15.0	22.5	7.5	2100									
51		22.5	23.5	1.0	140									
52		23.5	24.5	"	110									
53		24.5	25.5	"	200									
54		25.5	26.5	"	400									
55		26.5	27.5	"	110									
56		27.5	28.5	"	100									
57		28.5	29.5	"	170									
58		29.5	30.5	"	260									
59		30.5	31.5	"	20									
860		31.5	32.5	"	90									
61		32.5	33.5	"	190									
62		33.5	34.5	"	630									
63		34.5	35.5	"	3000									
64		35.5	36.5	"	2400									
65		36.5	37.5	"	5350									
66		37.5	38.5	"	6850									
67		38.5	39.5	"	7300									
68		39.5	40.5	"	1.10%									
69		40.5	41.5	"	6550									
870		41.5	42.5	"	3150									
71		42.5	43.5	"	3850									
72		43.5	44.5		5200									
73		44.5	45.5	"	5500									
74		45.5	46.5	"	3250									
75		46.5	47.5	"	5650									
76		47.5	48.5	"	9700									
77		48.5	49.5	"	1.08%									
78		49.5	50.5	"	1.97%									
79		50.5	51.5	"	1.08%									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 65

SAMPLE TYPE : DRILL CORE FROM 15.0 TO 51.5

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
118680		51.5	52.8	1.3	9.00%									
81		52.8	53.5	.3	9130									
82		53.5	54.5	1.0	1.28%									
83		54.5	55.5	1.0	1.10%									
84		55.5	56.5	1.0	1.10%									
85		56.5	57.5	"	1.50%									
86		57.5	58.5	"	1.20%									
87		58.5	61.5	3.0	4000									
88		61.5	62.5	1.0	3200									
89		62.5	63.5	"	2800									
90		63.5	64.5	"	2150									
91		66.8	67.8	"	5000									
92		67.8	68.8	"	6500									
93		68.8	69.8	"	9200									
94		69.8	70.8	"	1600									
95		70.8	71.8	"	4500									
96		71.8	72.8	"	2800									
97		72.8	73.8	"	1600									
98		73.8	74.8	"	1050									
99		74.8	75.9	1.1	850									
120200		75.9	76.9	1.0	270									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 65

SAMPLE TYPE : DRILL CORE FROM 51.5 TO 76.9

8321/151

832158152

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 66

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	MT. BISCHOFF	1853 N	1260 E	651
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) 330° mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -65°
Total length 33.0
Commenced: 12 / 4 / 81
Completed: 15 / 4 / 81
Drilling contractor: LONGYEAR
Rig type: LY 44

Details of down hole location-survey methods.
No down hole surveys - ground very broken.

Purpose of drilling and anticipated lengths to targets.
To test possible dolomite/DSL extension to Section 1260E.
Target 40 to 60 m.

Core size and non-coring (NC)

NW	2	TO	1.5
NQ	1.5	TO	33.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		

Comments on drilling. Extremely broken ground. Poor core recovery and jammed rods. Hole abandoned.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. SIMPSON FROM 0 TO 33.0 DATE
LOGGED BY FROM TO DATE
LOGGED BY FROM TO DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 66
Log sheet 1 of 2

832159

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.5	0-1.5 Not cored. NW Casing run.		N/C				
	31.5	1.5 - 33.0 BROKEN SHALES. Heavily leached shales. Very poor core recovery.		9				
10								
20								
30								
		HOLE ABANDONED AT 33.0 m.						
40								

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976.
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 66.

LOG SHEET 2 OF 2

832160153

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 66a

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1) MT. BISCHOFF — 1853 N — 1262 E — 651

(2) _____ N _____ E _____

(3) Aust. Map Grid (PRECISE / APPROX.) _____ mE _____ mN _____ m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) 330° mag

G.N.(2) _____ mag

G.N.(3) _____ mag

T.N. _____ mag

1:250 000 Sheet No. SK55-3

1:100 000 Sheet No. 8015

State Tasmania

Mineral Tenement E.L. 13/79

Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -65°

Total length 30.3

Commenced: 16 / 4 / 81

Completed: 17 / 4 / 81

Drilling contractor: LONGYEAR

Rig type: LY 44

Details of down hole location-survey methods.

No down hole surveys - ground very broken.

Purpose of drilling and anticipated lengths to targets.

To test possible dolomite/DSL extension to Section 1260E. Target 40 to 60 m. as for abandoned MBD 66.

Core size and non-coring (NC)

HW	0	TO	1.5
HQ	1.5	TO	24.0
NQ	24.0	TO	30.3
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		

Comments on drilling. Extremely broken ground. Poor core recovery and jammed rods. Holes abandoned.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. SIMPSON FROM 0 TO 30.3 DATE _____

LOGGED BY _____ FROM _____ TO _____ DATE _____

LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 66a

Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
	1.5	0-1.5 Not Cored. HW Casing run.		N/C				
	28.8	1.5 - 30.3 BROKEN SHALES. Heavily leached shales. Very poor core recovery.		9				
		HOLE ABANDONED AT 30.3 m.						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (EDS.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

0
10
20
30

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 66a

LOG SHEET 2 OF 2

832162 155

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 67

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1) MT. BISCHOFF	1860.16 N	1140.03 E	626.68
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	mA.H.D.

1:250 000 Sheet No. BURNIE SK 55-3

1:100 000 Sheet No. HELLYER 8015

State TASMANIA

Mineral Tenement EL 13/79

Holder METALS EXPLORATION LTD.

Cadastral location and details
CROWN LAND / PRIVATE

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag

G.N.(2) _____ mag

G.N.(3) _____ mag

T.N. _____ mag

Inclination at collar -60°

Total length 64.1 m

Commenced: 18 / 4 / 81

Completed: 20 / 4 / 81

Drilling contractor LONGYEAR

Rig type LY 44

Core size and non-coring (NC)

NC	0	TO 6.0
NQ	6	TO 64.1
		TO
		TO
		TO
		TO

Details of down hole location-survey methods.

No down-hole surveys - ground very broken.

Purpose of drilling and anticipated lengths to targets.

To test D.S.L. grade and geometry on 1140E Section.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP

Comments on drilling. Extremely broken ground with very low recoveries.

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL No. | FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. SIMPSON
FROM 0 TO 64.1
DATE

LOGGED BY
FROM TO
DATE

LOGGED BY
FROM TO
DATE

Company managing exploration programme.

METALS EXPLORATION LTD.

HOLE No. MBD 67

Log sheet 1 of 1

832163 156

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) / Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH NO.9 AUSTRALAS INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

6.0	0 - 6.0 NOT CORED. NW Casing run to 6.0 m		N/C	
	6.0 - 7.3 QUARTZ PORPHYRY A few fragments.		I	Trace pyrite
55.6	7.3 - 62.9 DOLOMITE. White to creamish white where fresh, otherwise grey to brownish decomposed dolomite, fine grained and massive. Recoveries for whole section are very low (average less than 10%).			Minor dolomite alteration 41.0 - 41.4
	62.9 - 64.1 SILTSTONE-QUARTZITE-Pale grey thin bedded sequence.		10/11	
	END OF HOLE 64.1 m			

5 cm

AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project: MT. BISCHOFF TIN

HOLE No. MBD 67

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1BDB01		6.0	7.0	1.0	770									
02		7.0	10.5	3.5	630									
03		10.5	13.5	3.0	50									
04		13.5	22.5	9.0	2450									
05		22.5	28.5	6.0	320									
06		28.5	29.5	1.0	90									
07		29.5	31.5	"	160									
08		34.5	37.5	3.0	80									
09		37.5	39.5	2.0	35									
10		39.5	40.5	1.0	20									
11		40.5	42.0	2.0	10									
12		42.0	43.5	1.5	X									
13		43.5	44.5	1.0	30									
14		44.5	45.5	"	X									
15		45.5	46.5	"	85									
16		46.5	49.0	2.5	25									
17		49.0	50.5	1.5	40									
18		50.5	51.5	1.0	150									
19		51.5	54.0	2.5	30									
20		54.0	55.5	1.5	X									
21		55.5	56.5	1.0	X									
22		56.5	57.5	"	X									
23		57.5	58.5	"	X									
24		58.5	59.5	"	20									
25		59.5	60.5	"	X									
26		60.5	61.5	"	15									
27		61.5	62.9	1.4	15									
28		62.9	63.9	1.0	110									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 67

SAMPLE TYPE : DRILL CORE FROM 6.0 TO 63.9

832165 158

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 68

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1) MT. BISCHOFF	18433 N	940.7 E	
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

1:250 000 Sheet No. BURNIE SK 55-3 | 1:100 000 Sheet No. HELLYER 8015 | State TASMANIA

Mineral Tenement EL 13/79 Holder METALS EXPLORATION LTD.

Cadastral location and details
CROWN LAND / PRIVATE

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) 360° mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

Inclination at collar -60°

Total length 40.0 m

Commenced: 20 / 4 / 81
Completed: 21 / 4 / 81

Drilling contractor

Rig type

Core size and non-coring (NC)

NC	0	TO	5.0
NQ	5	TO	40.0
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
No downhole surveys due to badly caving ground

Purpose of drilling and anticipated lengths to targets.
To test dolomite and porphyry on 940 E Section.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP

Comments on drilling. Extremely broken ground with poor recoveries.

Legend for graphic log column (see drill log for Hole No.)

'DERWENT' PENCIL NO.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. SIMPSON FROM 0 TO 40.0 DATE
LOGGED BY FROM TO DATE
LOGGED BY FROM TO DATE

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 68
Log sheet 1 of 1

832166 159

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) / Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No.9 AUSTRALAS INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

2.0	0 - 2.0 NOT CORED.	
9.5	2.0 - 11.5 DOLOMITE. Buff to pale grey blotchily altered dolomite with local silicification patches.	2
4.5	11.5 - 16.0 SILTSTONE-SHALE. Dark grey to black massive siltstone and locally disrupted shale, minor thin bands of sandstone.	10/9
8.2	16.0 - 24.2 SANDSTONE-SILTSTONE. Fine grained mid to dark grey massive sandstone locally micaceous with bands of siltstone.	5/10
15.8	24.2 - 40.0 SHALE - SILTSTONE. Mid grey disrupted shale sequence locally slumped with minor carbonate veining. Core broken with minor shearing 20-30° to core axis. Sequence becoming slump brecciated from 32.0 onward.	← Quartz-pyrite veining.
	40.0 m END OF HOLE	

5 cm

FOR LEGEND SEE DRAWING NO.

AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project: MT. BISCHOFF TIN

HOLE No. MBD 68

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1202829		20	50	10	100									
230		50	60	"	X									
31		60	70	"	10									
32		70	80	"	15									
33		80	90	"	10									
34		90	100	"	X									
35		100	115	15	75									
36		115	125	10	35									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 68-1

SAMPLE TYPE : DRILL CORE FROM 20 TO 125

160

832168161

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 69

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1) MT. BISCHOFF	1738.0 N	939.9 E	620.56
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.

1:250 000 Sheet No. BURNIE SK 55-3 | 1:100 000 Sheet No. HELLYER 8015 | State TASMANIA

Mineral Tenement EL 13/79 | Holder METALS EXPLORATION LTD.

Cadastral location and details (CROWN LAND/ PRIVATE)

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) ____ mag
G.N.(2) 360 mag
G.N.(3) ____ mag
T.N. ____ mag

Inclination at collar -60°

Total length 47.6 m

Commenced: / /
Completed: / /

Drilling contractor LONGYEAR (AUST)

Rig type LY 44

Details of down hole location-survey methods.

No surveys due to ground conditions.

Purpose of drilling and anticipated lengths to targets.

To investigate the dolomite sequence south of the main DSL. Expected intersections 0-40 m

Core size and non-coring (NC)

TRICONE	0 TO	3.0
NQ	3.0 TO	47.0
	TO	
	TO	
	TO	
	TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP

Comments on drilling.

Legend for graphic log column (see drill log for Hole No. ____)

'DERWENT' PENCIL NO.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. SIMPSON	LOGGED BY	LOGGED BY
FROM 0 TO 47.0	FROM TO	FROM TO
DATE 18/5/81	DATE	DATE

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 69
Log sheet 1 of 1

8321691 62

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) / Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS
0		0 - 3.0 NOT CORED.						
		3.0 - 25.0 DOLOMITE SULPHIDE LODE. Quartz - carbonate to pyrite rich with local tourmaline rich zones. Some patches sphalerite rich. NB Because of very low recovery in this section assays should be treated carefully.		5/8				
20		25.0 - 29.8 DOLOMITE. Cream to grey dolomite Minor carbonate veining.		2				
		29.8-31.5 DSL Serp-carb-pyrite-sph lode.		4		py 5% sph 4%		
		31.5-32.6 DOLOMITE Similar to above.		2				
		32.6-33.2 DSL Quartz-carbonate-pyrite-serpentinite.						
40		33.2 - 42.4 DOLOMITE. Fine grained massive to brecciated and slumped - locally silicified.		2		rare sphalerite		
		42.4 - 47.0 SHALE. Dark grey to black shale with local pyritic beds.		9c		trace po		
		END OF HOLE 47.0 m						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No.9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE
240m (1:1000), 120m (1:500), 60m (1:250)

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project MT. BISCHOFF TIN

HOLE No. MBD 69

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
120237		3·0	4·5	1·5	3.3%									
38		4·5	7·5	3·0	180									
39		7·5	9·1	1·6	530									
240		9·1	10·5	1·4	510									
41		10·5	13·5	3·0	400									
42		13·5	15·6	2·1	300									
43		15·6	17·0	1·4	130									
44		17·0	19·1	2·1	130									
45		19·1	22·5	3·4	210									
46		22·5	24·5	2·0	15									
47		24·5	25·0	·5	200									
48		25·0	27·0	2·0	900									
49		27·0	28·0	1·0	10									
250		28·0	29·0	"	X									
51		29·0	30·0	"	60									
52		30·0	31·5	1·5	5000									
53		31·5	32·5	1·0	110									
54		32·5	33·5	"	530									
55		33·5	34·5	"	10									
56		34·5	35·5	"	X									
57		35·5	36·5	"	10									
58		36·5	37·5	"	X									
59		37·5	38·5	"	X									
260		38·5	39·5	"	15									
61		39·5	40·5	"	X									
62		40·5	41·5	"	110									
63		41·5	42·5	"										
64		42·5	43·5	"	100									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 69

SAMPLE TYPE : DRILL CORE FROM 3·0 TO 43·5

8321/0 163

832171

REPORT No. 164

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 70

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES				ELEVATION
(1) M.E.L.	1803.0	N	940.0	E	625.66 m
(2)		N		E	
(3) Aust. Map Grid PRECISE / APPROX.		mE		mN	m A.H.D.

1:250 000 Sheet No. BURNIE SK 55-3 | 1:100 000 Sheet No. HELLYER 8015 | State TASMANIA

Mineral Tenement EL 13/79 Holder METALS EXPLORATION LTD.

Cadastral location and details
CROWN LAND / PRIVATE

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) 330° mag
G.N.(3) _____ mag
T.N. _____ mag

Inclination at collar - 69°

Total length 117.5

Commenced: 23 / 4 / 81
Completed: 25 / 4 / 81

Drilling contractor: LONGYEAR (AUST)

Rig type: LY 44

Core size and non-coring (NC)

(NC) NW	0	TO	21.0
NQ	21.0	TO	117.5
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
Eastman down-hole Camera.

Purpose of drilling and anticipated lengths to targets.
To test the extent of DSL within the dolomite sequence plus the porphyry on 940E Section.

Comments on drilling. No coring attempted from 0 - 21 m as this is mine fill.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
0	150°	70°
60.0 m	157°	70°
90.0 m	158°	70°
117.5 m	158°	70°

Legend for graphic log column (see drill log for Hole No. _____)

'DERWENT' PENCIL No.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. SIMPSON FROM 0 TO 117.5 DATE 19/5/81

LOGGED BY _____ FROM _____ TO _____ DATE _____

LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 70
Log sheet 1 of 1

832172 165

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) / Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS
0		0 - 3.0 NOT CORED.						
		3.0 - 4.5 Rubble and clay						
		4.5 - 6.8 DOLERITE. Completely weathered fine grained equigranular dolomite.						
		6.8 - 34.5 DOLOMITE SULPHIDE LODE. Very broken low recovery section. Fragments are very variable in mineralogy but predominantly pyrite rich with carbonate rich sections.		5		pyrite 20% from 6.8 - 32.7		
20								
		34.5 - 40.1 DOLOMITE. Pale grey to cream dolomite locally altered and bleached.		2				
40		40.1-42.0 DOLOMITE SULPHIDE LODE. Pyrite to carb. rich.		5/8				
		42.0 - 44.7 DOLOMITE. Mid grey to cream brecciated dolomite.		2		trace pyrite locally		
		44.7 - 47.4 DOLOMITE SULPHIDE LODE. Quartz-carb to serpentine carbonate rich.		8/7		(8) pyrite 15-20% (7) pyrite 10-12%		
		47.4 - 53.1 DOLOMITE. Pale grey to cream brecciated dolomite. Minor recrystallisation locally.		2				
		53.1 - 55.6 DOLOMITE SULPHIDE LODE. Serpentine rich with irregular patches of sph, py, carb.		7		pyrite averages 15%		
60		55.6 - 74.0 QUARTZ PORPHYRY. Medium grained to coarse grained pyritic quartz porphyry.		1		pyrite averages 5-7% pyrite locally forms as aggregate.		
		74.0 - 92.75 SHALE. Light to mid grey shale locally slumped, disrupted and brecciated.		9		rare thin quartz-carb veins.		
80		5 cm						
		92.75-95.1 DOLOMITE. Buff to light grey brecciated dolomite.		2				
		95.1-96.4 DOLOMITE SULPHIDE LODE. Quartz carb. pyrite.		8		py 5%, pyrrhotite < 1% sph 1%		
		96.4-98.0 DOLOMITE. Pale grey brecciated dolomite.		2				
100		98.0-99.1 DOLOMITE SULPHIDE LODE. Serpentine-carb-quartz.		7		py 10-15% rare sph		
		99.1-101.5 DOLOMITE		2				
		101.5-105.85 SHALE-SILTSTONE. Dark grey slumped shales with minor siltstone component.		9/10				
		105.85-108.9 DOLOMITE SULPHIDE LODE. Talc-quartz-py lode with minor carb. and sphalerite		6/7		pyrite 10% sphalerite 2%		
		108.9-117.5 SHALE-SILTSTONE. Mid to dark grey slumped and disrupted shale with minor siltstone. Occasional sandstone beds.						
120		117.5 m END OF HOLE.						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No.9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project: MT BISCHOFF TIN

HOLE No. MBD 70

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
12065		7.0	10.1	3.1	1800									
66		10.1	13.5	3.4	150									
67		19.5	24.5	5.0	1500									
68		24.5	26.8	2.3	1050									
69		26.8	28.5	1.7	110									
12070		28.5	29.5	1.0	1050									
71		29.5	31.0	1.5	1800									
72		31.0	31.5	.5	5200									
73		31.5	32.2	.7	3700									
74		32.2	33.7	1.5	4050									
75		33.7	34.5	.8	7500									
76		34.5	35.5	1.0	150									
77		35.5	36.5	"	210									
78		36.5	37.5	"	670									
79		37.5	38.5	"	110									
12080		38.5	39.5	"	130									
81		39.5	40.5	"	320									
82		40.5	41.5	"	5400									
83		41.5	42.5	"	5050									
84		42.5	43.5	"	75									
85		43.5	44.7	1.2	190									
86		44.7	46.0	1.3	3100									
87		46.0	47.0	1.0	12050									
88		47.0	48.0	"	1400									
89		48.0	49.0	"	110									
12090		49.0	50.0	"	50									
91		50.0	51.0	"	15									
92		51.0	52.0	"	X									
93		52.0	53.0	"	30									
94		53.0	54.1	1.1	12200									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 70

SAMPLE TYPE : DRILL CORE FROM 7.0 TO 54.1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1R0895		54·1	55·0	·9	2500									
96		55·0	55·7	·7	2100									
97		55·7	57·0	1·3	1500									
98		57·0	58·0	1·0	5050									
99		58·0	59·0	"	1476									
1R1000		59·0	60·0	"	8900									
01		60·0	61·0	"	2400									
02		61·0	62·0	"	145C									
03		62·0	63·0	"	1250									
04		63·0	64·0	"	5100									
05		64·0	65·0	"	425C									
06		65·0	66·0	"	3150									
07		66·0	67·0	"	705C									
08		67·0	68·0	"	535C									
09		68·0	69·0	"	1850									
10		69·0	70·0	"	1200									
11		70·0	71·0	"	375C									
12		71·0	72·0	"	1650									
13		72·0	73·0	"	1550									
14		73·0	74·0	"	390									
15		74·0	75·0	"	55									
16		91·7	92·7	"	75									
17		92·7	93·7	"	590									
18		93·7	94·7	"	25									
19		94·7	95·2	·5	20									
20		95·2	96·4	1·2	260									
21		96·4	97·4	1·0	60									
22		97·4	98·0	·6	95									
23		98·0	99·1	1·1	345C									
24		99·1	100·1	1·0	45									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 70

SAMPLE TYPE : DRILL CORE FROM 54·1 TO 100·1

0371/4167

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
12125		100·1	101·5	1·4	7									
26		101·5	102·5	1·0	90									
27		105·5	106·5	"	8100									
28		106·5	107·7	1·2	5300									
29		107·7	108·7	1·0	1400									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 705

SAMPLE TYPE : DRILL CORE FROM 100·1 TO 108·7

T2348

168

832176 169

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF.

HOLE No. MBD 71

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	N	E	
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

1:250 000 Sheet No. BURNIE SK 55-3 | 1:100 000 Sheet No. HELLYER 8015 | State TASMANIA.

Mineral Tenement EL 13/79 Holder METALS EXPLORATION LTD.

Cadastral location and details
CROWN LAND/ ~~PRIVATE~~

Magnetic bearing of true and grid norths at collar (* = observed)
G.N.(1) mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

Inclination at collar 50°

Total length 121.0 m

Commenced: 26 / 4 / 81
Completed: 28 / 4 / 81

Drilling contractor
LONGYEAR AUST. PTY. LTD.
Rig type
LONGYEAR 44

Details of down hole location-survey methods.
EASTMAN Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test dolomite and porphyry intersections
Targets: Dolomite: 0 - 30 m
Porphyry: 30 - 50 m

Core size and non-coring (NC)

TRICONE	0	TO	18.5
NQ	18.5	TO	72.0
BQ	72.0	TO	121.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
30 m	in casing	50°
60 m	in case	50°
90 m	154	50°
120 m	149	50°

Comments on drilling

Legend for graphic log column (see drill log for Hole No.)
'DERWENT' PENCIL NO. | FIELD ROCK NAME, ETC

Symbols and abbreviations for drilling notes column.

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 121.0	FROM TO	FROM TO
DATE 30/4/81	DATE	DATE

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 71
Log sheet 1 of 2

832177 170

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT (capital letters, underlined) / Depth : Description and notes (indented about 10mm)	POINTER	GRAPHIC LOG	POINTER	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH No.9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

DEPTH	INTERVAL	DEPTH from-to : ROCK UNIT / Depth : Description and notes	GRAPHIC LOG	MINERALISATION
0	18.5	0 - 18.5 TRICONE - no core Mine rubble.		
20	16.4	18.5 - 34.9 DOLOMITE, minor RECRYSTALLIZED DOLOMITE Pale to mid grey dolomite, brecciated in most parts. Common veins of recrystallized dolomite. Occasional fluorite veins.	2/3	py > sph TRACE py & sph occur in thin veins and stringers. Trace disseminated cassiterite in veins and stringers.
	0.6	34.9 - 35.5 DOLOMITE SULPHIDE LODE	8/6/5	py - coarsely disseminated 10%
	1.9	35.5 - 37.4 DOLOMITE Heavily altered, abundant fluorite.	2	15% py as coarse aggregates & veins
40	24.6	37.4 - 62.0 PORPHYRY Fine - medium grained altered qtz porphyry. Up to 20% qtz phenocrysts, 15% altered feldspar phenocrysts. Grey (greenish) matrix. 43.3 - 52.9: "unaltered" milky white matrix. Rare fluorite and toumaline.	1	py, marc; sphalerite py, marc coarsely disseminated and as veins. Generally replacing feldspars. Minor sph disseminated. 10% - 15%
60	7.5	62.0 - 69.4 DOLOMITE SULPHIDE LODE Mainly qtz-carbonate/pyrite rich DSL, minor serpentine.	8/5	py >> sph 35% py as irregular veins and aggregates up to 70% locally minor sph disseminated.
	19.0	69.4 - 88.4 DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Light to mid grey brecciated dolomite. Occasional veins and thin zones of recrystallized dolomite. Rare py veins, usually with carbonate and/or fluorite.	2/3	py > sph >> po trace py in veins and stringers trace sph disseminated through dolomite. po - trace in thin veins, with py trace cassiterite (fine grained) 2-3%
80		88.4 - 121.0 SILTSTONE, minor SHALE, QUARTZITE. Weakly to moderately disrupted in parts. Mainly dark grey siltstone, with minor black, slightly carbonaceous shale, and rare thin quartzite beds. Occasional carbonate veins and stringers. Rare fluorite in carbonate veins.	10/9/11	trace py in veins and stringers
100		5 cm		
120		HOLE COMPLETED 121.0		

FOR LEGEND SEE DRAWING NO.

AFTER TYPING THIS SIZED FORM WILL BE PHOTO-REDUCED TO A4 SIZE

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project: MT. DISCOVERY TIN

HOLE No. MBD 71

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121230		18.5	19.5	1.0	110									
31		19.5	20.5	"	50									
32		20.5	21.5	"	15									
33		21.5	22.5	"	25									
34		22.5	23.5	"	420									
35		23.5	24.5	"	780									
36		24.5	25.5	"	620									
37		25.5	26.5	"	350									
38		26.5	27.5	"	160									
39		27.5	28.5	"	1000									
240		28.5	29.5	"	280									
41		29.5	30.5	"	210									
42		30.5	31.5	"	150									
43		31.5	32.5	"	150									
44		32.5	33.5	"	360									
45		33.5	34.9	1.4	1250									
46		34.9	35.9	1.0	1.27%									
47		35.9	36.9	"	1.15%									
48		36.9	37.4	0.5	6.85%									
49		37.4	38.4	1.0	490									
250		38.4	39.4	"	310									
51		39.4	40.4	"	890									
52		40.4	41.4	"	560									
53		41.4	42.4	"	330									
54		42.4	43.4	"	270									
55		43.4	44.4	"	220									
56		44.4	45.4	"	1750									
57		45.4	46.4	"	730									
58		46.4	47.4	"	3800									
121259		47.4	48.4	"	3800									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 71

SAMPLE TYPE : DRILL CORE FROM 18.5 TO 48.4

832178 171

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121260		48.4	49.4	1.0	4000									
61		49.4	50.4	"	2900									
62		50.4	51.4	"	3700									
63		51.4	52.4	"	730									
64		52.4	53.4	"	990									
65		53.4	54.2	0.8	210									
66		54.2	54.8	0.6	250									
67		54.8	55.8	1.0	220									
68		55.8	56.8	"	3700									
69		56.8	57.8	"	5800									
270		57.8	58.8	"	2500									
71		58.8	59.8	"	2700									
72		59.8	60.8	"	6800									
73		60.8	61.9	1.1	890									
74		61.9	62.9	1.0	2.85%									
75		62.9	63.9	"	1.47%									
76		63.4	64.9	"	5800									
77		64.9	65.9	"	4600									
78		65.9	66.9	"	6500									
79		66.9	67.9	"	5700									
280		67.9	68.9	"	1.12%									
81		68.9	69.4	0.5	4200									
82		69.4	70.4	1.0	110									
83		70.4	71.4	"	25									
84		71.4	72.4	"	45									
85		72.4	73.4	"	15									
86		73.4	74.4	"	75									
87		74.4	75.4	"	150									
88		75.4	76.4	"	95									
121289		76.4	77.4	"	1150									

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 71

SAMPLE TYPE : DRILL CORE FROM 48.4 TO 77.4

8321179 172

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121290		77.4	78.4	1.0	440									
91		78.4	79.4	"	120									
92		79.4	80.4	"	35									
93		80.4	81.4	"	15									
94		81.4	82.4	"	80									
95		82.4	83.4	"	2000									
96		83.4	84.4	"	310									
97		84.4	85.4	"	1800									
98		85.4	86.4	"	350									
99		86.4	87.4	"	250									
121300		87.4	88.7	1.3	70									
01.		88.7	89.7	1.0	110									

Notes :— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 71

SAMPLE TYPE : DRILL CORE FROM 77.4 TO 89.7

8921180 173

832181 174

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 72

COLLAR LOCATION

Grid name — Rectangular space co-ordinates

	PLANAR CO-ORDINATES		ELEVATION
(1)	N	E	
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	mAHD

1:250 000 Sheet No. BURNIE SK 55 - 3

1:100 000 Sheet No. HELLYER 8015

State TASMANIA

Mineral Tenement EL 13/79

Holder METALS EXPLORATION LTD.

Cadastral location and details (CROWN LAND / PRIVATE)

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) ____ mag

G.N.(2) ____ mag

G.N.(3) ____ mag

T.N. ____ mag

Inclination at collar 80°

Total length 150 m

Commenced: 28 / 4 / 81

Completed: 30 / 4 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.

Rig type: Longyear 44

Details of down hole location-survey methods.

EASTMAN Single Shot Survey Camera.

Purpose of drilling and anticipated lengths to targets.

To test intersections of dolomite (0 - 35 m) and white face porphyry (110 - 135)

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	60.0
BQ	60.0	TO	150.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
30 m	in casing	80°
57 m	161.5°	80.5°
90 m	152°	81°
120 m	158°	81.5°
150 m	159°	82°

Comments on drilling.

Legend for graphic log column (see drill log for Hole No. ____)

'DERWENT' PENCIL No.		FIELD ROCK NAME, ETC.

Symbols and abbreviations for drilling notes column.

LOGGED BY D. COMPSTON. FROM 0 TO 150.0 DATE 5/5/81

LOGGED BY ____ FROM ____ TO ____ DATE ____

LOGGED BY ____ FROM ____ TO ____ DATE ____

Company managing exploration programme.

METALS EXPLORATION LTD.

HOLE No. MBD 72

Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT — CAPITAL LETTERS, UNDERLINED. Depth Description and notes, veins over 50mm. INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets	ASSAYS AVAILABLE	BULKED ASSAYS Sn

NOTES * 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", G. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

0	3.0	0 - 3.0 TRICONE - no core				
	5.0	3.0 - 8.0 NO CORE Mine rubble				
	3.0	8.0 - 11.0 DOLOMITE SULPHIDE LODE Predominantly talc, minor carbonate.		6		trace pyrite in veins and stringers trace cassiterite-irregular aggregates
	1.1	11.0 - 12.1 DOLOMITE		2		trace py in veins
	38.6	12.1 - 50.7 DOLOMITE SULPHIDE LODE 60% bronze po, as irregular bands and aggregates. 35% siliceous mid to dark green serpentine. Variable amounts of qtz - carbonate, talc - up to 60% qtz - carbonate over short (1 m) intervals.		4/7/8		60% po - as coarse aggregates and irregular bands. trace cpy disseminated through po
20						
40						
	47.8	50.7 - 98.5 SILTSTONE, QUARTZITE, minor SHALE Moderately disrupted in parts. Mainly siliceous grey siltstone and quartzite, with occasional thin shale beds. Occasional qtz veins and stringers. Rare carbonate veins, occasionally with fluorite.		10/11/9		po - trace as occasional vein and thin po - rich beds.
60						
						po, py~ 1-2% po - trace as irregular veins and occasional thin po beds. py - trace as common veinlets.
80						
100	20.6	98.5 - 119.1 PORPHYRY Altered, translucent matrix (greenish-grey colour). 10% qtz phenocrysts to 3 mm. Feldspars almost entirely replaced by sulphides. Occasional veins of qtz ± fluorite ± py 5 cm		1		py, marc - 15% sulphides coarsely disseminated and as occasional veins. py commonly replaced or rimmed by marc.

PTO
CONTINUED OVER PAGE.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION SUMMARY DRILL LOG

Prospect or project

HOLE No MDD 72

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes, veins over 50mm. (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION Excluding veins over 50mm. Visual estimate of % mineralisation in brackets	ASSAYS AVAILABLE	BULKED ASSAYS Sn
120	30.9	119.1 - 150.0 SILTSTONE, SHALE, minor QUARTZITE Moderately to strongly disrupted in parts. Usually well bedded. Mainly interbedded siltstone and shale, with minor thin quartzite beds. Rare veins and stringers of carbonate.				py > po 2% py in common veins and stringers. po appears as thin (1 mm) beds, and occasional irregular veins.		
140								
		HOLE COMPLETED 150.0 m						
160								
180								

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE. 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 72

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121302		8.0	9.0	1.0	7200									
3		9.0	10.0	"	3300									
4		10.0	11.0	"	30									
5		11.0	12.0	"	55									
6		12.0	13.0	"	X									
7		13.0	14.0	"	15									
8		14.0	15.0	"	X									
9		15.0	16.0	"	25									
310		16.0	17.0	"	X									
11		17.0	18.0	"	X									
12		18.0	19.0	"	X									
13		19.0	20.0	"	20									
14		20.0	21.0	"	X									
15		21.0	22.0	"	X									
16		22.0	23.0	"	X									
17		23.0	24.0	"	20									
18		24.0	25.0	"	25									
19		25.0	26.0	"	25									
320		26.0	27.0	"	20									
21		27.0	28.0	"	X									
22		28.0	29.0	"	30									
23		29.0	30.0	"	40									
24		30.0	31.0	"	25									
25		31.0	32.0	"	X									
26		32.0	33.0	"	280									
27		33.0	34.0	"	30									
28		34.0	35.0	"	20									
29		35.0	36.0	"	15									
330		36.0	37.0	"	25									
121331		37.0	38.0	"	15									

Notes :— XRF A14 Method for Sn.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 72

SAMPLE TYPE : DRILL CORE FROM 8.0 TO 38.0

8321184 177

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121332		38.0	39.0	1.0	20									
33		39.0	40.0	"	45									
34		40.0	41.0	"	20									
35		41.0	42.0	"	X									
36		42.0	43.0	"	X									
37		43.0	44.0	"	55									
38		44.0	45.0	"	30									
39		45.0	46.0	"	20									
340		46.0	47.0	"	20									
41		47.0	48.0	"	35									
42		48.0	49.0	"	20									
43		49.0	50.0	"	40									
44		50.0	50.9	0.9	85									
45		50.9	51.9	1.0	210									
121346		97.5	98.5	1.0	1350									
47		98.5	99.5	"	1800									
48		99.5	100.5	"	2700									
49		100.5	101.5	"	1450									
350		101.5	102.5	"	1600									
51		102.5	103.5	"	7000									
52		103.5	104.5	"	4350									
53		104.5	105.5	"	3700									
54		105.5	106.5	"	4600									
55		106.5	107.5	"	380									
56		107.5	108.5	"	2050									
57		108.5	109.5	"	1.86%									
121358		109.5	110.5	"	5000									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 72

SAMPLE TYPE : DRILL CORE FROM 38.0 TO 110.5

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121359		110.5	111.5	1.0	1400									
60		111.5	112.5	"	4200									
61		112.5	113.5	"	2900									
62		113.5	114.5	"	5700									
63		114.5	115.5	"	3700									
64		115.5	116.5	"	930									
65		116.5	117.5	"	1200									
66		117.5	118.5	"	1950									
67		118.5	119.1	0.6	5650									
68		119.1	120.1	1.0	550									

Notes :— XRF A14 Method for Sn.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 72

SAMPLE TYPE : DRILL CORE FROM 110·5 TO

832187

82-1698 Vol 2. Cover 81-005 E

METALS EXPLORATION LIMITED

MT BISCHOFF TIN PROSPECT

MT BISCHOFF MINE AREA

STAGE 3A
DRILLING PROGRAMME

as at 20-4-81

Scale 1:2000

5 cm

698E ● MBD 64

MBD 63 MBD 44 MBD 45 MBD 42 MBD 57 MBD 25 MBD 41 ● MBD 58 MBD 46 MBD 26 MBD 24 MBD 69 MBD 10 MBD 68 GOSSAN FACE MBD 70 MBD 23 MBD 22 MBD 29A MBD 29 MBD 21 MBD 48 MBD 49 MBD 47 MBD 50 MBD 20 MBD 51 MBD 15 MBD 27 MBD 17 MBD 65 MBD 72 MBD 19 MBD 16 WHITE FACE GOSSAN MBD 53 MBD 54 MBD 71 PIT FLAT MBD 18 MBD 28 DYKE HAPPY VALLEY MBD 30 MBD 67 MBD 35 MBD 31 MBD 32 MBD 34 MBD 33 FACE WHITE ○● MBD 66, 66A

SLAUGHTERYARD FACE MBD 36 MBD 37 MBD 56 MBD 55 BROWN FACE MBD 38 STANHOPE DYKE MBD 14 DESERT FACE MBD 39 MBD 40 QUEEN DYKE

M.E.L. GRID NORTH (330°)
ADOPT MAG. NTH.

0 50 100
METRES

Porphyry
Dolomite
Dolomite Sulphide Lode
Siltstones, Shales, Quartzites
Fault
Interpreted Geological Contact

Diamond Drillhole
○ *Proposed*
● *Completed*

Completed Drillholes

December	MBD 47,48,49
January	MBD 50,51,52
February	MBD 53, 54, 55, 56, 57, 58
March	MBD 63
April	MBD 64, 65, 66, 66A, 67, 68, 69, 70, 71, 72
May	
June	

Rev 30·5 81

Drg. No. 81-005 E

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832188 180

METALS EXPLORATION LTD.
80 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

3-7-81.

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR MAY, 1981.

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G.M. Motteram.
30 6 81

MT. BISCHOFF TIN PROSPECT.

REPORT FOR MAY, 1981.

General:

Diamond drilling rates achieved during the month were significantly over target as a result of good performance from the Longyear 44 rig and the presence of the second contractor on site. Metres drilled for the month were 1396.7, taking cumulative meterage for Stage 3A to 4050.9 m. Budget meterage to end May, 1981 was 4850 m, with total programmed meterage of 5600 m for Stage 3A.

During the month a re-assessment was made of the requirement for certain of the later holes in the programme relating to deeper porphyry reserves. This resulted in removal of four proposed holes and reduction of proposed depth for one other. The 745 metres involved were assigned to further close spaced drilling, an additional metallurgical hole and extension of holes to intersect a lower Dolomite/DSL horizon.

Virtually all results are now available for metallurgical work performed on Stage 2B samples and work is progressing on Stage 3 bulk samples. As a result of time constraints and lack of grade achieved in certain DSL and porphyry intercepts, the number of bulk composites to be tested has been reduced to three (2 DSL and 1 porphyry, versus 3 DSL and 2 porphyry planned). Arrangements have been made for both Aberfoyle and Renison to assess the MBJV Stage 3 composites, at cost.

Initial evaluation of engineering parameters relating to plant and infrastructure was begun during the month. Meetings were held in Tasmania with the Waratah Shire, Australian Mines and Metals and with the Department of Industrial Development.

The process of transfering Comstaffs' Mining Lease covering the main DSL reserves to M.E.L. was initiated. This area currently carries a tribute agreement with Mr. D. Kenworthy of Waratah and this agreement will be re-written once the area is in M.E.L.'s name.

Geology:

(i) Diamond Drilling.

During the period 12 holes were commenced and 13 completed for a total of 1396.7 metres.

Drilling targets included DSL, porphyry and Queen Dyke Porphyry. One additional hole to the Stage 3A programme was drilled to provide extra samples for metallurgical testing.

Drill Log summaries are not available for this report for holes MBD 24E, MBD 43E, MBD 79 and MBD 82. These will be provided along with assay sheets next month.

.../2

(i) Diamond Drilling Contd.

Holes drilled are discussed in order, as follows:

MBD 73.

Drilled as a porphyry infill hole on Section 1140E, this hole achieved a porphyry intersection as expected between 25.1 to 50.8 metres (25.7 m). However, grades were lower than expected with the best intercept in the middle as:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
39.1	46.1	7.0	0.24	Porphyry

MBD 74.

Drilled as a porphyry extension hole onto Section 1460E, the most easterly section on which reserves were inferred for the Stage 2B report. The intercept achieved of 17.7 m was thicker than expected and carried significant tin.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
30.4	42.4	12.0	0.73	Porphyry

MBD 75, 76 & 77.

These holes represent three of the four holes targeted to intercept the Queen Dyke Porphyry during the Stage 3A programme (the fourth hole will be MBD 78).

MBD 75 (Section BB120) intersected porphyry between 145.7 and 166.1 metres and indicated considerable alteration. This intercept was approximately 30 metres below target and 12 metres wider than expected however, tin values were low with the best intersection between 159.7 and 166.0 m as 6.3 metres at 0.22% Sn. Core grinding indicated the Queen Vein intercept to be carrying tin (ie. 11.5 m at 0.34% Sn).

MBD 76 (Section BB200) achieved two porphyry intersections, from 142.6 - 115.6 m (13.0 m) and 166.7 to 170.2 m (3.5 m). These intersections were approximately in the expected positions but together were approximately double the expected thickness. Alteration again appeared to be intense with pyrite entirely replacing feldspars however, tin content was minimal.

MBD 77 (Section BB280) had not reached porphyry by period end, although at 163 metres the hole was 15 metres beyond the expected target.

.../3

(i) Diamond Drilling Contd.

MBD 79.

Drilled as a porphyry infill hole on Section 1380E, this hole achieved a porphyry intercept approximately in the interpreted position between 11.2 and 28.4 m (17.2 m). Good grades were achieved:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
19.2	25.2	6.0	1.24	Porphyry

MBD 80.

Drilled on Section 1300E, this hole was targeted to infill porphyry reserves and to define an interpreted fault displacing the porphyry. An intersection of porphyry was achieved between 0.1 and 22.6 m (22.5 m) as expected. However, an expected lower intersection resulting from the fault interpretation was not achieved. The following grade intercept was achieved:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
8.1	16.1	8.0	0.41	Porphyry

MBD 81.

This hole was drilled on Section 1000E with the upper Sections (through porphyry) in H core in order to obtain further metallurgical sample. The hole was also intended to explore the lower dolomite horizon on Section 1000E and to provide further close spaced drilling data, being 7 metres east of B10 which intersected 25 metres of good grade DSL.

In fact, MBD 81 failed to provide significant additional DSL sample as it passed through only 4.7 metres of DSL in the interpreted DSL position, the remainder being dolomite and cavity. Porphyry was intersected as expected and minor DSL was intersected below porphyry.

The hole was continued to 133.6 m to intersect the lower DSL/dolomite unit and achieved an intercept of dolomite/shale between 113.9 and 127.6 m. Assay returns are incomplete however, DSL assays above porphyry were good.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
45.9	48.7	3.0	0.68	DSL
61.0	62.7	1.7	1.76	DSL

.../4

(i) Diamond Drilling Contd.

MBD 82.

Drilled on Section 1080E this hole was programmed as an infill hole in the DSL and porphyry reserve. It was extended to investigate the grade DSL intersected below porphyry in MBD 54 on the same section.

The intersection of DSL achieved above the porphyry was less than expected with minor DSL between 0.1 and 10.1 metres followed by shales and a DSL intercept of 18.3 metres between 37.6 - 55.9 metres. Porphyry was intersected higher than expected between 55.9 and 84.2 metres (28.3 m).

Below the porphyry a 1.2 metre band of DSL was intersected, followed by 21.1 metres of dolomite. This indicates that the DSL at the base of MBD 54 does not carry the 25 metres north to the MBD 82 position. Significant intercepts were:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
7.9	9.8	1.9	1.02	DSL
38.5	49.9	17.4	0.44	DSL
60.9	83.9	23.0	0.40	Porphyry
84.2	85.4	1.2	3.60	DSL

MBD 83.

Drilled on Section 920E, this hole was programmed as a porphyry extension hole and extended to test the lower dolomite. The intersection of porphyry was achieved higher than interpreted, between 52.9 and 65.8 metres (12.9 m). Assays are not available as yet.

Dolomite was intersected almost immediately below the porphyry between 67.4 and 87.0 metres (20.4 metres). Minor DSL existed at the base of the dolomite, between 87.0 and 90.4 metres (3.3 m).

MBD 84.

Drilled on Section 880E, this hole was programmed as an extension hole to the porphyry reserve and extended to explore the lower dolomite. Porphyry was intersected as interpreted between 53.0 and 75.4 metres (22.4 m). Assay grades were low.

The lower dolomite was intersected in the form of pyritic DSL, between 86.4 and 94.8 metres (7.3 m). Significant tin was contained in this intercept ie.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
88.2	94.8	6.6	0.64	DSL

.../5

(i) Diamond Drilling Contd.

MBD 24 EXTN.

The Stage 2B hole MBD 24 on Section 920E was extended by 90.5 metres to infill the porphyry reserve and to explore the lower dolomite. The main porphyry was not intersected and this throws doubt on fault interpretations for the area. However, the lower dolomite was intersected in the form of DSL between 118.0 and 120.0 metres (2.0 m).

MBD 43 EXTN.

Extension of this Stage 2B hole on Section 940E was not programmed. However, on review it was decided to allow 50 metres for its extension to check porphyry interpretations in the area and to explore the lower dolomite. Neither the main porphyry nor the lower dolomite were intersected, indicating that the lower dolomite does not extend significantly to the north on Section 940E.

Drilling Statistics:

HOLE NO.	N.	E.	DIP	AZIMUTH	FROM	TO	FINAL DEPTH
MBD 73	1947.26	1140.27	-90	-	0	65.0	65.0
MBD 74	2060.02	1460.10	-69	180	0	63.7	63.7
MBD 75	2312.75	1261.05	-90	-	108.0	174.0 (66.0)	174.0
MBD 76	2337.08	1177.10	-79	045	0	176.0	176.0
MBD 77	2359	1087	-60	045	0	163.0	163.0
MBD 79	2051.17	1379.40	-66	180	0	40.1	40.1
MBD 80	2050.33	1299.93	-83	180	0	120.2	120.2
MBD 81	1805.21	1000.05	-55	360	0	133.6	133.6
MBD 82	1961.75	1080.03	-64	180	0	121.4	121.4
MBD 83	1755.56	919.93	-90	-	0	130.0	130.0
MBD 84	1770.19	879.25	-90	-	0	140.0	140.0
MBD 24 EXTD			-75	180	101.0	191.5 (90.5)	191.5
MBD 43 EXTD			-65	180	112.5	159.8 (47.3)	159.8

Note: MBD 77 in progress at end of period.

.../6

(ii) Analyses for Holes Reported Previously:

The following assay results are now available for holes reported in previous months.

MBD 63 & 64.

Porphyry intercepts from these two holes drilled to test the Buried Dolomite on Sections 800E and 700E (MBD 63 & 64 respectively) were reported last month as being low grade. Core grinding of the surrounding sediments has now indicated no significant tin values.

MBD 65 (Section 1040E).

Part assays reported in April, full assays are now:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
34.5	52.8	18.3	0.98 *	DSL
53.5	58.5	5.0	1.44	Qtz. Vein
58.5	64.5	4.0	0.42	Porphyry
66.8	72.8	6.0	0.49	Porphyry

* Includes 1.3 m reduced from 9.0% Sn to 4.0% Sn.

MBD 67 (Section 1140E).

Weathered dolomite with poor core recovery (approximately 30%) in interpreted DSL reserve position. Analyses indicated very low tin content except for one assay interval covering 9 metres (due to low core recovery).

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
13.5	22.5	9.0	0.30	Weathered Dolomite

MBD 69 & 70 (Section 940E).

Altered DSL occured in each hole within the main dolomite horizon with poor core recovery. Assay grades were generally low with the exceptions indicated below. MBD 70 intersected the lower dolomite as DSL with grade intersections below the porphyry as indicated.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
MBD 69				
3.0	4.5	1.5	3.30	DSL
30.0	31.5	1.5	0.50	DSL

.../7

(ii) Analyses for Holes Reported Previously Contd:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
MBD 70				
7.0	31.0	24.0	Minor	DSL
31.5	34.5	3.5	0.49	DSL
MBD 70				
40.1	42.0	1.9	0.52	DSL
44.7	47.0	2.3	0.26	DSL
53.1	55.7	2.5	0.23	DSL
57.0	71.0	14.0	0.44	Porphyry
98.0	99.1	1.1	0.34	DSL
105.0	107.7	2.2	0.67	DSL

MBD 71 & 72 (Section 1040E).

MBD 71 achieved unexpected DSL and mineralised dolomite above and below porphyry. MBD 72 intersected extensive DSL infilling an indicated grade position however, tin grades were minimal ie.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
MBD 71				
34.9	37.4	2.5	1.77 *	DSL/Dolomite
46.4	51.4	5.0	0.36	Porphyry
55.8	60.8	5.0	0.43	Porphyry
61.9	69.4	7.5	1.06	DSL

* Includes 0.5 m reduced from 6.85% Sn to 4.0% Sn.

MBD 72				
8.0	10.0	2.0	0.53	DSL
12.1	50.7	38.6	Minimal	DSL
102.5	115.5	13.0	0.49	Porphyry

(iii) Samples for Petrological Examination:

Mr. W. Fander of C.M.S. in Adelaide presented his report on the Tin distribution at Mt. Bischoff.

The main conclusion of the report is that there is no clear reason for the erratic distribution of cassiterite. In particular he does not find an association between high (or low) tin values and gangue mineralogy.

.../8

(iii) Samples for Petrological Examination Contd:

He also believes the original lithologies to be more complex than originally thought. No obvious correlation exists between host rock type and tin values.

(iv) Regional Exploration:

Line cutting over the Stanhope aero-magnetic anomaly has been completed. However, ground magnetic survey has been delayed by pressure of processing drill core.

Metallurgy:

(i) General:

Sulphur analyses have now been received for sulphide flotation roughing and cleaning tests at various primary grind sizes reported previously in terms of tin distribution only.

Heavy liquids test results have been obtained from Amdel for sulphide flotation tails from SC1, SC2 and porphyry following a coarse primary grinds. These results have been used to specify the required primary grind for Stage 3 bulk composite tests.

Size assay investigations have been made on sulphide flotation concentrates from each Stage 2B sample in order to determine requirements for sulphide regrind.

Tin flotation roughing and cleaning tests for SC1 and porphyry samples were completed, however full tin assays are not available as yet.

Initial tests on the Stage 3 DSL composites have begun and the porphyry composite is being made up. The number of bulk composites to be tested has been reduced to 2 DSL composites and 1 porphyry as a result of time constraints to provide data to plant design studies during the second half of the year, plus problems in obtaining sample at the desired grade within categories.

As a result more emphasis will be placed on variability studies for individual sections during the second half of the year.

(ii) Initial Phase Metallurgical Program:

Completed analyses were received for sulphide flotation tests at -150μm, -250μm and -355μm grinds on porphyry SC1 and SC2 ore samples and results are attached.

.../9

(ii) Initial Phase Metallurgical Program Contd:

Flotation of sulphides was satisfactory at each grind for the three samples and, with the exception of the porphyry material, there was no excessive loss of sulphide recovery in the cleaning stages. Overall rougher sulphides recovery was typically about 90% for porphyry and 95% for the two DSL composites, with flotation times of about 8 minutes.

It was observed that addition of talc depressant to the sulphide cleaning stages depressed sulphide flotation and attempts at re-activation were not totally successful. For porphyry material about 15% of the sulphides did not refloat in cleaning stages at the minus 355μm grind. This probably could be overcome by a Na Ex addition to that stage.

Deportment of tin in these sulphide flotation tests has been reported and discussed in an earlier monthly report.

The results of heavy liquid separations on sized fractions of rougher tailing samples from the above sulphide flotation tests were received from Amdel. Detailed results for the -355μm grind are included. Trends were similar for the finer grind tested (-250μm). Heavy liquid fractions have been sent to Mineralogist, W. Fander, for study.

The table below compares relative cassiterite "liberation" at various sizes for the samples.

SIZE RANGE (μm)	% liberated tin in size range (ie. % tin in > 4.0 SG)		
	PORPHYRY	SC1	SC2
-355 + 150	81.2	30.1	79.5
-150 + 75	88.9	44.0	88.0
- 75 + 38	96.2	72.9	92.3

Results show that cassiterite in the SC2 sample is quite coarse, being sufficiently liberated at the primary grind of minus 355μm for conventional gravity concentration techniques to be successfully applied. On the other hand, cassiterite in the SC1 sample is very poorly liberated at particle sizes coarser than 75 microns indicating a grind of minus 150μm, or finer, would be needed to satisfactorily liberate cassiterite for treatment. The difference in the average apparent grain size of cassiterite in these two DSL samples is very significant in terms of processing requirements and achievable Metallurgical performance and as a consequence, definition of the extent of this grain size variability will have to be a most important part of the remaining Stage 3 Metallurgical program.

.../10

(ii) Initial Phase Metallurgical Program Contd:

For the porphyry material 'liberation of cassiterite' to the $\gtrsim 4.0$ SG range was as good as for the coarse SC2 sample however, tin grades were generally lower for porphyry. These lower grades would be partly due to the much lower head assay of the porphyry material ($\simeq$ 0.3% Sn c/w $>$ 1.6% Sn). Mineralogical work should determine the implications of this in terms of attainable concentrate grades and upgrading requirements.

Detailed size and tin analyses were carried out on sulphide concentrates to assess the potential benefit of regrinding (results attached). There appears to be little benefit in regrinding porphyry and SC2 sample sulphide concentrates, but considerable potential to reduce tin losses in SC1 sample sulphide concentrate, where losses are greatest.

(iii) Stage 3A Metallurgical Testwork:

Laboratory batch sulphide flotation tests were carried out on Metallurgical composites MCA (talcose DSL) and MCC (qtz/carbonate DSL from below porphyry) prior to commencement of 50 kg pilot trials. (Results are attached). Distribution of tin in products from sample MCA was characteristic of results obtained with the SC2 talcose DSL composite. Flotation of sulphides for sample MCC appeared satisfactory. Tin loss to recleaner concentrate was 18.3%.

The composites MCA and MCC both assay about 1% tin and 22% sulphur. Samples have been sent to H.W. Fander for mineralogical study.

Engineering:

Initial work on engineering aspects of the Stage 3 programme took place during the month with a visit to site by Mr. G. May and discussions with the Waratah Shire Clerk concerning township facilities etc.

This was followed by meetings in Hobart with representatives from the Hydro Electric Commission, Rivers and Water Supply, Housing, Environment and Mines Departments under the general arrangement of the Department of Industrial Development. Follow up communications are taking place with relevant departments to:

- Ensure planning within the HEC for possible MBJV power requirements.
- Obtain full topographic cover of the MBJV area in Lands Department mapping.

A further meeting was held with Australian Mines and Metals as general background and to be introduced to an affiliated body TIAFEC (Environmental Consulting Group set up by Tasmanian Companies). M.E.L. has now applied to join this group.

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

	MAY 1981		8 MONTHS TO 31.5.81	
	ACTUAL	BUDGET	ACTUAL	BUDGET
Technical Services	22,914	24,750	154,560	174,730
Travel & Accommodation	1,266	700	9,681	5,600
Labour	1,594	1,900	13,689	12,550
Camp & Messing	1,092	1,300	5,339	9,800
Vehicles	946	1,000	6,796	7,100
Equipment Rental	250	550	550	3,450
Consumables & General	11,829	1,900	49,895	39,920
Tenement Expenses	-	-	-	500
Track Cutting	-	-	875	4,000
Geophysical Surveys	-	-	8,945	4,000
Diamond Drilling	64,986	41,000	194,276	299,000
Site Preparation	-	-	540	8,000
Assays	394	2,800	6,495	16,800
Mining Studies	-	4,090	-	12,070
Metallurgical	12,724	16,200	44,482	76,100
Engineering Studies	-	3,730	-	6,310
Capital Items	-	-	43,783	38,500
	117,995	99,920	539,906	718,430

SUMMARY OF EXPENDITURE TO MAY 1981

		FINANCIAL YEAR TO DATE
Stage 1	270,000	
Stage 2A - Early Start	29,020	
Stage 2A	198,818	
Overruns: Stage 1 - M.E.L.	11,308	
Metallurgical - CRAE	23,500	
Stage 2B	482,354	18,121
Stage 2B - 3A Holding Costs Offset - A.I.R. & D. Grant	40,000	40,000
Stage 3A	539,906	539,906
CUMULATIVE EXPENDITURE TO DATE	1,594,906	598,027

832200

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

	8 MONTHS TO 1.5.81 ACTUAL	FORECAST FOR 1 MONTH TO 30.6.81	FORECAST FOR* 9 MONTHS TO 30.6.81	BUDGET FOR 9 MONTHS TO 30.6.81
	$	$	$	$
Technical Services	154,560	30,000	184,560	200,660
Travel & Accommodation	9,681	2,000	11,681	6,300
Labour	13,689	1,800	15,489	14,100
Camp & Messing	5,339	1,100	6,439	11,100
Vehicles	6,796	2,000	8,796	8,100
Equipment Rental	550	250	800	3,900
Consumables & General	49,895	10,000	59,895	41,620
Tenement Expenses	-	500	500	1,000
Track Cutting	875	2,000	2,875	4,000
Geophysical Surveys	8,945	-	8,945	4,000
Diamond Drilling	194,276	103,000	297,276	340,000
Site Preparation	540	5,000	5,540	4,000
Assays	6,495	3,000	9,495	19,600
Mining Studies	-	-	-	14,600
Metallurgical	44,482	15,000	59,482	93,400
Capital Items	43,783	-	43,783	38,500
Engineering Studies	-	-	-	11,620
	539,906	175,650	715,556	816,500

Stage 3A Summary:

Expenditure 8 months to 31.5.81		$539,906
Forecast 1 month to 30.6.81		175,650
Forecast Overrun to 31.7.81		105,000
Forecast	Stage 3A Expenditure	$820,556
	Stage 3A Budget	816,500
Forecast	Stage 3A Over-Expenditure	$4,056

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

EL 13/79

	MAY 1981	EIGHT MONTHS TO 31.5.81
Technical Services	22,195	129,706
Travel & Accommodation	1,267	8,539
Labour	1,594	13,169
Camp & Messing	1,092	5,212
Vehicles	946	6,722
Equipment Rental	250	550
General Expenses & Consumables	9,377	43,404
Track Cutting		875
Diamond Drilling	64,986	157,137
Metallurgical	12,724	44,467
Assays	394	6,495
Capital Items		43,523
Geophysical Surveys		3,979
	114,825	463,778

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

AP 5/80

	MAY 1981	EIGHT MONTHS TO 31.5.81
Technical Services	720	24,854
Travel & Accommodation		1,144
Labour		519
Camp & Messing		
General Expenses & Consumables	2,451	6,690
Geophysical Surveys		4,965
Diamond Drilling		37,140
Site Preparation		540
Assays		15
Capital Items		260
	3,171	76,127

832203

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

CUMULATIVE CAPITAL EXPENDITURE

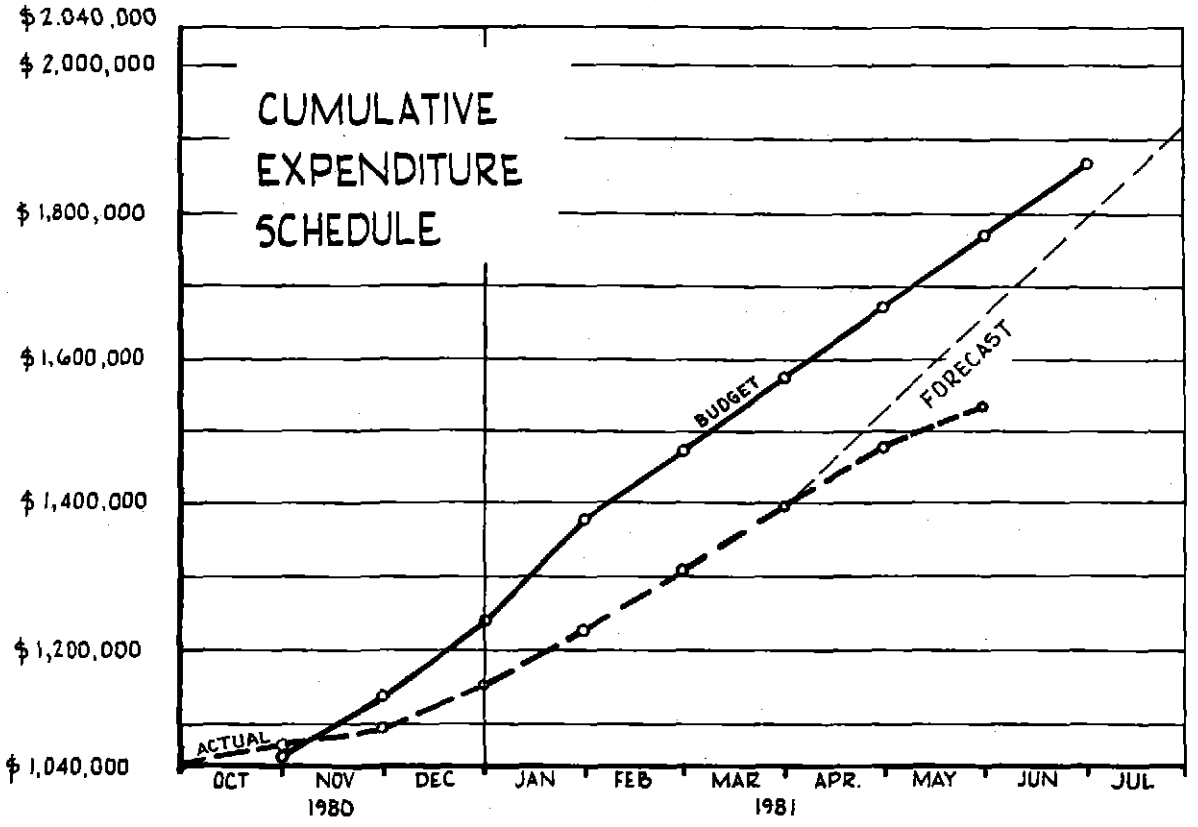
		AS AT 30.4.81	MAY 1981 EXPENDITURE	AS AT 31.5.81
STAGE 1 & 2	Core Shed	$15,295	-	$15,295
	Concrete Foundations	$ 2,100	-	$ 2,100
		$17,395		$17,395
STAGE 3A	Core Shed	$ 8,660	-	$ 8,660
	Accommodation Unit	$32,500	-	$32,500
	TOTAL	$58,555	-	$58,555

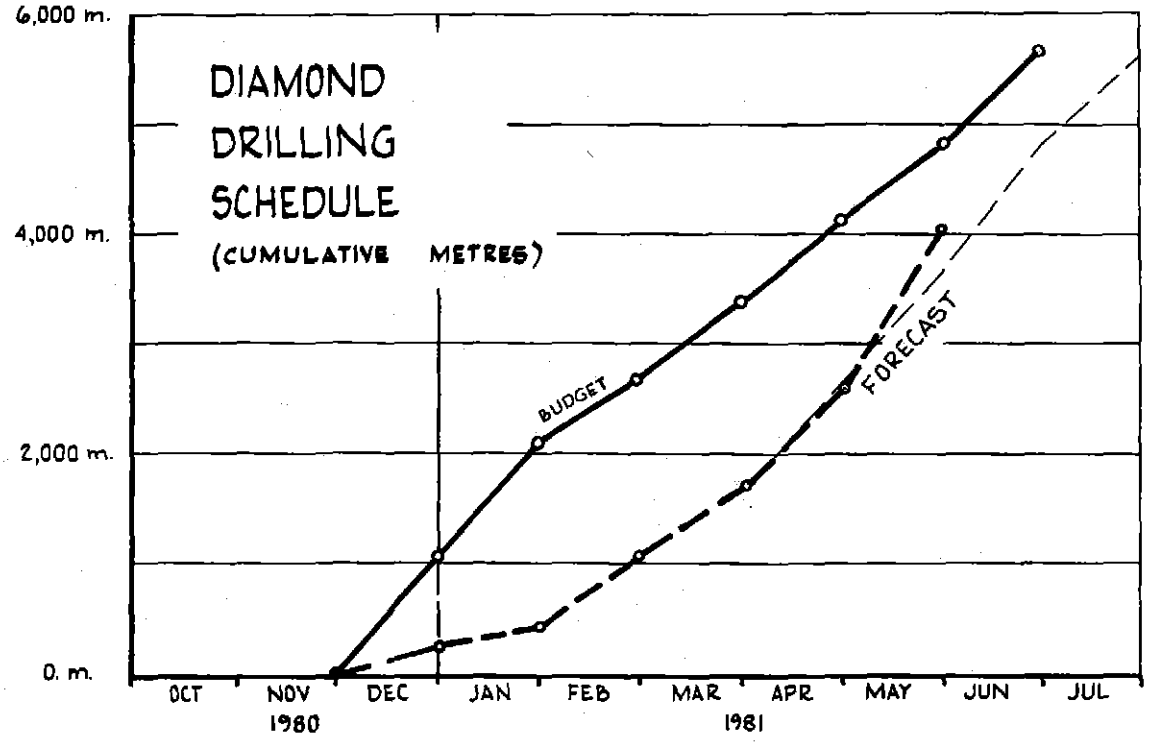
Beneficial Ownership - As at 31st. May, 1981.

C.R.A. $25 \times \frac{100}{85} = 29.4\%$

M.E.L. $60 \times \frac{100}{85} = 70.6\%$

832204





MT. BISCHOFF

STAGE 3A SUMMARY
as at 30·5·81

832205

INITIAL PHASE METALLURGICAL PROGRAM.

Section B: Sulphide Flotation Tests.

1. General Conditions.

Ore Sample: 1 kg

Grind: stage grind to pass specified size (microns)

Flotation cell: 2½ litre Denver for all stages

Feed density: 30% solids in rougher feed

Reagents.

(i) Rougher Stage

Daicel 1120:	0.4 kg/tonne
NaEx:	0.10 kg/tonne + stage additions of 0.04 kg/tonne
$CuSO_4$:	0.5 kg/tonne
MIBC:	5 drops + stage addition as required
H_2SO_4:	as needed to control to pH 5.0 - 5.5

(ii) Cleaner Stage

Daicel 1120:	0.2 kg/tonne - Tests 11 & 12 only
NaEx:	0.02 kg/tonne + 0.02 kg/tonne stage additions
MIBC:	as required
pH:	5.5 at coarse grinds only (ie N16, 17 & 18)

(iii) Recleaner Stage

NaEx:	0.02 kg/tonne stage additions as required
MIBC:	as required

Regrind: Cleaner concentrate stage ground to pass 53 microns except for tests N16, 17 & 18.

.../2

2. Results.

Ore Sample: Porphyry

(a) -150 μm grind (N8)

PRODUCT	%wt	Assay Sn	S	As	Fe	Distribution Sn	S	As	Fe
Reclean. Conc. 1	2.5	0.19	46.8	1.25	42.5	1.5	24.6	20.6	21.0
Reclean. Conc. 2	4.7	0.35	47.0	1.45	43.0	1.4	47.7	46.0	41.0
(Recleaner Conc)	(7.2)	(0.30)	(46.9)	(1.38)	(42.8)	(2.9)	(72.3)	(66.6)	(62.0)
Recleaner Tail	1.3	0.38	27.5	1.78	27.2	1.6	7.7	15.6	7.1
(Cleaner Conc)	(8.5)	(0.31)	(44.0)	(1.44)	(40.4)	(8.5)	(80.0)	(82.2)	(69.1)
Cleaner Tail	2.8	0.29	8.6	0.26	9.72	2.6	5.1	4.8	5.4
(Rougher Conc)	(11.3)	(0.30)	(35.3)	(1.15)	(32.9)	(11.1)	(85.1)	(87.0)	(74.5)
Rougher Tail	88.7	0.31	0.78	0.02	1.42	88.9	14.9	13.0	25.4
(Feed)	(100.0)	(0.31)	(4.66)	(0.15)	(4.96)	(100.0)	(100.0)	(100.0)	(100.0)

( ) denotes calculated value
Rougher tail sizing 80% passing 90 μm

(b) -250 μm grind (N7)

PRODUCT	%wt	Assay Sn	S	As	Fe	Distribution Sn	S	As	Fe
Reclean. Conc.	8.1	0.34	47.8	1.58	43.0	8.9	83.4	83.4	69.2
Reclean. Tail	0.4	0.57	19.5	0.78	20.5	0.8	1.8	2.2	1.7
(Cleaner Conc)	(8.5)	(0.35)	(46.4)	(1.54)	(41.9)	(9.7)	(85.2)	(85.6)	(70.9)
Cleaner Tail	1.5	0.29	8.9	0.24	11.7	1.4	2.9	2.4	3.5
(Rougher Conc)	(10.0)	(0.34)	(40.7)	(1.34)	(37.3)	(11.1)	(88.1)	(88.0)	(74.4)
Rougher Tail	90.0	0.30	0.61	0.02	1.42	88.9	11.9	12.0	25.6
(Feed)	(100.0)	(0.31)	(4.62)	(0.15)	(5.01)	(100.0)	(100.0)	(100.0)	(100.0)

Rougher tail sizing 80% passing 106 μm

.../3

(c) -355 micron grind (N16)

PRODUCT	%wt	Assay Sn	Assay S	Assay As	Distribution Sn	Distribution S	Distribution As
Reclean. Conc. 1	3.8	0.16	46.5	1.19	1.9	37.2	32.2
Reclean. Conc. 2	7.6	0.23	46.0	1.29	2.6	34.9	33.1
(Recleaner Conc)	(7.4)	(0.19)	(46.2)	(1.24)	(4.5)	(72.1)	(65.3)
Recleaner Tail	0.8	0.48	22.6	0.78	1.2	3.8	4.4
(Cleaner Conc)	(8.2)	(0.22)	(44.0)	(1.19)	(5.7)	(75.9)	(69.7)
Cleaner Tail	4.0	0.53	15.5	0.84	6.6	13.1	24.0
(Rougher Conc)	(12.2)	(0.32)	(34.6)	(1.08)	(12.3)	(89.0)	(93.7)
Rougher Tail	87.8	0.32	0.6	<0.01	87.7	11.0	6.3
Calc. Feed		(0.32)	(4.75)	(0.14)	(100.0)	(100.0)	(100.0)

Rougher tail sizing 80% passing 160μm

Comments.

1. Acid to control rougher pH to 5.0 was 0.25 kg/t (-150μm) and 0.20 kg/t (-355μm).

2. 0.02 kg/t NaEx added to 1st. cleaner stages except for the -355μm grind. This could have contributed to poorer sulphide recovery in that test.

Ore Sample: SC1.

(a) -150 micron grind (N10)

PRODUCT	%wt	Assay Sn	S	As	Fe	Distribution Sn	S	As	Fe
Recleaner Conc. 1	8.1	0.38	30.9	2.20	44.6	2.6	18.2	35.9	16.0
Recleaner Conc. 2	4.4	0.33	30.0	1.36	44.3	1.2	9.6	12.0	8.7
Recleaner Conc. 3	5.0	0.30	29.9	1.17	44.5	1.2	10.9	11.8	9.9
Recleaner Conc. 4	8.4	0.24	29.8	0.69	46.2	1.7	18.2	11.8	17.2
Recleaner Conc. 5	8.1	0.21	29.7	0.47	42.2	1.4	17.5	7.7	15.2
Recleaner Conc. 6	7.4	0.29	29.5	0.47	46.0	1.8	15.9	7.0	15.1
(Recleaner Conc)	(41.2)	(0.29)	(30.1)	(1.03)	(44.9)	(9.9)	(90.4)	(86.2)	(82.1)
Recleaner Tail	3.0	2.77	14.3	1.19	28.2	6.8	3.1	7.2	3.8
(Cleaner Conc)	(44.2)	(0.45)	(29.0)	(1.04)	(43.7)	(16.7)	(93.5)	(93.4)	(85.9)
Cleaner Tail	3.7	1.42	7.3	0.32	16.1	4.4	2.0	2.4	2.6
(Rougher Conc)	(47.9)	(0.53)	(27.4)	(0.99)	(41.6)	(21.1)	(95.5)	(95.8)	(88.5)
Rougher Tail	52.1	1.82	1.2	0.04	4.99	78.9	4.5	4.2	11.5
(Calc. Feed)	(100.0)	(1.20)	(13.7)	(0.49)	(22.5)	(100.0)	(100.0)	(100.0)	(100.0)

Rougher tail sizing 80% passing 84 µm

Analysis of Recleaner Conc. Tin Loss.

PRODUCT	TOTAL Sn	SOLUBLE Sn	CASSITERITE Sn	SOLUBLE Sn	CASSITERITE Sn
Recleaner Conc. 1	0.38	0.28	0.10	1.9	0.7
Recleaner Conc. 2	0.33	0.20	0.13	0.7	0.5
Recleaner Conc. 3	0.30	0.12	0.18	0.5	0.7
Recleaner Conc. 4	0.24	0.06	0.18	0.4	1.3
Recleaner Conc. 5	0.21	0.06	0.15	0.4	1.0
Recleaner Conc. 6	0.29	0.02	0.27	0.1	1.7
Calc. Recl. Conc.	0.29	0.12	0.17	4.0	5.9

.../2

(b) -250 micron grind (N9)

PRODUCT	%wt	Assay Sn	Assay S	Assay As	Assay Fe	Distribution Sn	Distribution S	Distribution As	Distribution Fe
Recleaner Conc. 1	7.0	0.28	31.9	1.48	50.7	1.6	15.4	20.4	14.2
Recleaner Conc. 2	4.8	0.31	31.7	2.50	49.7	1.2	10.5	23.7	9.6
Recleaner Conc. 3	6.9	0.29	31.9	1.08	50.5	1.6	15.2	14.7	14.0
Recleaner Conc. 4	8.3	0.27	31.9	1.03	50.9	1.8	18.2	16.8	16.9
Recleaner Conc. 5	6.1	0.20	30.6	0.47	51.1	1.0	12.9	5.7	12.5
(Recleaner Conc)	(33.1)	(0.27)	(31.6)	(1.25)	(50.6)	(7.2)	(72.1)	(81.3)	(67.2)
Recleaner Tail	9.9	1.21	28.8	0.52	47.5	9.5	19.6	10.1	18.8
(Cleaner Conc)	(43.0)	(0.49)	(31.0)	(1.08)	(49.9)	(16.7)	(91.7)	(91.4)	(86.2)
Cleaner Tail	3.2	1.45	13.2	0.35	21.0	3.7	3.0	2.2	2.7
(Rougher Conc)	(46.2)	(0.55)	(29.7)	(1.03)	(47.9)	(20.4)	(94.7)	(93.6)	(88.7)
Rougher Tail	53.8	1.85	1.43	0.06	5.24	79.6	5.3	6.4	11.3
(Calc Feed)	100.00	1.25	14.5	0.51	25.0	(100.0)	(100.0)	(100.0)	(100.0)

Rougher tail sizing 80% passing 110 μm

(c) -355 micron grind (N17)

PRODUCT	%wt	Assay Sn	Assay S	Assay As	Distribution Sn	Distribution S	Distribution As
Recleaner Conc.	47.7	0.71	30.3	0.91	26.1	93.2	94.7
Recleaner Tail	0.9	1.64	8.9	0.34	1.1	0.5	0.7
(Cleaner Conc)	(48.6)	(0.73)	(29.9)	(0.90)	(27.2)	(93.7)	(95.4)
Cleaner Tail	3.2	1.47	7.6	0.21	3.6	1.6	1.5
(Rougher Conc)	(51.8)	(0.77)	(28.5)	(0.86)	(30.8)	(95.3)	(96.9)
Rougher Tail	48.2	1.86	1.5	0.03	69.2	4.7	3.1
(Calc Feed)	(100.0)	(1.30)	(15.5)	(0.46)	(100.0)	(100.0)	(100.0)

Rougher tail sizing 80% passing 180 μm

.../3

Comments.

1. Acid additions to control pH in roughing to 5.0 - 5.5 were 110 kg/t (-150μm) and 0.35 kg/t (-355μm).

2. Initial NaEx dosage to rougher flotation was 0.1 kg/t, and a further 0.02 to 0.04 kg/t was needed to complete flotation for the two finer grinds. Similarly, during the 1st. cleaning stage an additional 0.02 to 0.04 kg/t NaEx was required for satisfactory flotation for the two finer grinds.

3. After regrinding sulphide concentrates to -53 microns, 0.04 kg/t NaEx was added for successful re-flotation.

Ore Sample SC2

(a) -150 micron grind (N12)

PRODUCT	%wt	Assay Sn	S	As	Fe	Distribution Sn	S	As	Fe
Recleaner Conc. 1	2.7	0.29	39.7	0.10	44.7	0.7	10.3		6.4
Recleaner Conc. 2	3.0	0.16	35.9	0.07	46.3	0.4	10.4		7.3
Recleaner Conc. 3	3.9	0.07	31.9	0.03	46.9	0.3	12.0		9.7
Recleaner Conc. 4	4.4	0.05	31.8	0.01	48.0	0.2	13.5		11.2
Recleaner Conc. 5	9.0	0.03	32.6	<0.01	50.9	0.3	28.2		24.2
(Recleaner Conc)	(23.0)	(0.09)	(33.6)		(48.3)	(1.9)	(74.3)		(58.8)
Recleaner Tail	2.3	0.29	26.2	0.03	44.6	0.7	5.8		5.4
(Cleaner Conc)	(25.3)	(0.11)	(32.9)		(48.0)	(2.6)	(80.1)		(64.2)
Cleaner Tail	11.8	0.45	12.9	<0.01	20.9	5.0	14.6		13.0
(RougherConc)	(37.1)	(0.22)	(26.6)		(39.4)	(7.6)	(94.7)		(77.2)
Rougher Tail	62.9	1.55	0.86	<0.01	6.85	92.4	5.3		22.8
(Calc. Feed)	(100.0)	(1.05)	(10.4)		(18.9)	(100.0)	(100.0)		(100.0)

Rougher tail sizing 80% passing 90 μm

(b) -250 micron grind (N11)

PRODUCT	%wt	Assay Sn	S	As	Fe	Distribution Sn	S	As	Fe
Recleaner Conc. 1	4.0	0.15	33.1	0.10	44.8	0.6	12.6		9.4
Recleaner Conc. 2	4.4	0.09	34.1	0.06	46.5	0.4	14.2		10.8
Recleaner Conc. 3	6.9	0.04	33.0	0.03	49.0	0.2	21.6		17.8
Recleaner Conc. 4	5.6	0.02	32.1	0.01	48.7	0.1	17.0		14.3
(Recleaner Conc)	(20.9)	(0.07)	(33.0)		(47.6)	(1.3)	(65.4)		(52.3)
Recleaner Tail	1.3	0.35	26.5	0.06	42.0	0.4	3.3		2.9
(Cleaner Conc)	(22.2)	(0.08)	(32.6)		(47.3)	(1.7)	(68.7)		(55.2)
Cleaner Tail	10.7	0.31	19.6	0.02	30.9	3.0	19.9		17.4
(Rougher Conc)	(32.9)	(0.16)	(28.4)		(41.9)	(4.7)	(88.6)		(72.6)
Rougher Tail	67.1	1.56	1.8	<0.01	7.78	95.3	11.5		27.4
(Calc. Feed)	(100.0)	(1.10)	(10.5)	(0.02)	(19.0)	(100.0)	(100.0)		(100.0)

Rougher tail sizing 80% passing 123 μm

.../2

(c) -355 micron grind (N18)

PRODUCT	%wt	Assay Sn	Assay S	Assay As	Distribution Sn	Distribution S	Distribution As
Recleaner Conc.	30.7	0.14	33.3	0.01	3.9	88.7	
Recleaner Tail	0.8	0.57	19.3	<0.01	0.4	1.3	
(Cleaner Conc)	(31.5)	(0.15)	(32.9)		(4.3)	(90.0)	
Cleaner Tail	2.7	0.57	10.7	<0.01	1.4	2.5	
(Rougher Conc)	(34.2)	(0.18)	(31.2)		(5.7)	(92.5)	
Rougher Tail	65.8	1.60	1.3	<0.01	94.3	7.5	
(Calc. Feed)	(100.0)	(1.16)	(11.5)		(100.0)	(100.0)	

Rougher tail sizing 80% passing 182 µm

Comments.

1. Acid consumption to control to pH 5.0 - 5.5 in roughing was:

N 12	-150 µm	2.2 kg/tonne
N 11	-250 µm	2.0 kg/tonne
N 18	-355 µm	1.5 kg/tonne

2. Talc depressant added to the 1st. cleaner stages at the two finer grinds appreciably reduced sulphide recovery despite further staged NaEx additions ie 3 x 0.02 kg/t, and 2 x 0.02 kg/t for N 12 and N 11 respectively. At the coarsest grind, where no talc depressant was added to the 1st. cleaning stage, sulphide recovery was high in that stage without any addition of NaEx.

3. After an initial NaEx addition of 0.1 kg/t in roughing a further 0.04 kg/t was added to complete flotation for the two finer grinds.

   As for the SC1 sample, the finer grinds appeared to require more NaEx to complete flotation in the 1st. cleaner stage ie 0.04, 0.02 and zero kg/t NaEx for -150, -250 and -355 micron grinds respectively.

4. After regrinding of sulphide concentrate to pass 53 µm, about 0.04 kg/t of NaEx was needed for re-flotation.

5. Sulphide recovery in recleaning for the -250 µm grind was very poor but the reason is not apparent.

Section B: Liberation Tests on Sulphide Rougher Tailings.

(a) Ore Sample: SC1 -355μm grind (N17)

Size (microns)	S.G. Range (g/cc)	wt% Size	wt% Rough. T.	%Sn	Sn units	Tin Distribution Size	Tin Distribution Rough. T.
+ 150	>4.0	2.98	0.81	14.5	11.75	30.1	6.84
	4.0 - 2.96	52.91	14.39	1.46	21.00	53.9	12.23
	<2.96	44.11	12.00	0.52	6.24	16.0	3.64
	Total	100.00	27.20	(1.43)	(38.99)	100.0	(22.71)
- 150 + 75	>4.0	2.55	0.52	26.0	13.52	44.1	7.87
	4.0 - 2.96	56.03	11.37	1.17	13.30	43.4	7.75
	<2.96	41.42	8.41	.455	3.83	12.5	2.23
	Total	100.00	20.30	(1.51)	(30.65)	100.0	(17.85)
- 75 + 38	>4.0	3.42	0.50	41.8	20.90	72.8	12.17
	4.0 - 2.96	57.94	8.52	.73	6.22	21.7	3.62
	<2.96	38.64	5.68	.28	1.59	5.5	0.93
	Total	100.00	14.70	(1.95)	(28.71)	100.0	(16.72)
- 38			37.80	1.94	73.33		42.71
Total Rougher Tail			100.00	(1.72)	(171.68)		
Total + 38	>4.0	2.9	1.83	25.2	46.17	46.9	26.90
	4.0 - 2.96	55.1	34.28	1.18	40.52	41.2	23.60
	<2.96	42.0	26.09	0.447	11.66	11.9	6.79
	Total	100.0	(62.20)	(1.58)	(98.35)	100.0	(57.29)

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(b) Ore Sample: SC2 -355μm grind (N18)

Size (microns)	S.G. Range (g/cc)	wt% Size	wt% Rough. T.	%Sn	Sn units	Tin Distribution Size	Tin Distribution Rough T.
+ 150	> 4.0	5.26	1.47	30.1	44.25	79.6	28.44
	4.0 - 2.96	44.55	12.43	.79	9.82	17.7	6.31
	< 2.96	50.19	14.00	.11	1.54	2.7	0.99
	Total	100.00	27.90	(1.99)	(55.61)	100.0	(35.74)
- 150 + 75	> 4.0	4.50	0.83	44.6	37.02	87.9	23.79
	4.0 - 2.96	43.91	8.12	.55	4.47	10.6	2.87
	< 2.96	51.59	9.55	.064	0.61	1.5	0.39
	Total	100.00	18.50	(2.28)	(42.10)	100.0	(27.05)
- 75 + 38	> 4.0	3.95	0.56	42.8	23.97	92.3	15.40
	4.0 - 2.96	41.52	5.90	.305	1.80	6.9	1.16
	< 2.96	54.53	7.74	.027	0.21	0.8	0.14
	Total	100.00	14.20	(1.83)	(25.98)	100.0	(16.70)
- 38			39.40	0.81	31.91		20.51
Total Rougher Tail			100.00	(1.56)	(155.60)		100.00
Total + 38	> 4.0		2.86	36.8	105.24	85.1	67.63
	4.0 - 2.96		26.45	0.61	16.09	13.0	10.34
	< 2.96		31.29	.075	2.36	1.9	1.52
	Total		(60.60)	2.04	(123.69)	100.0	79.49

(c) Ore Sample: Porphyry -355 μm grind (N16)

Size (microns)	S.G. Range (g/cc)	wt% Size	wt% Rough. T.	%Sn	Sn units	Tin Distributic Size	Tin Distributic Rough.
+ 150	> 4.0	3.14	0.71	8.56	6.08	81.2	19.59
	4.0 - 2.96	21.50	4.88	.195	0.95	12.7	3.06
	< 2.96	75.36	17.11	.027	0.46	6.1	1.48
	Total	100.00	22.70	(0.33)	(7.49)	100.0	(24.13
- 150 + 75	> 4.0	0.83	0.22	34.2	7.52	89.0	24.23
	4.0 - 2.96	16.38	4.29	.12	0.52	6.2	1.67
	< 2.96	82.79	21.69	.019	0.41	4.8	1.32
	Total	100.00	26.20	(0.32)	(8.45)	100.0	(27.22
- 75 + 38	> 4.0	0.57	0.12	48.1	5.77	85.4	18.59
	4.0 - 2.96	27.52	5.56	.022	0.12	1.8	0.39
	< 2.96	71.91	14.52	.006	0.87	12.8	2.80
	Total	100.00	20.20	(0.33)	(6.76)	100.0	(21.78
- 38			30.90	0.27	8.34		26.87
Total Rougher Tail			100.00	(0.31)	(31.04)		100.00
Total + 38	> 4.0	1.5	1.05	18.4	19.37	85.3	62.40
	4.0 - 2.96	21.3	14.73	0.11	1.59	7.0	5.12
	< 2.96	77.2	53.32	.033	1.74	7.7	5.61
	Total	100.0	(69.10)	(0.33)	(22.70)	100.0	(73.13

Sizing Analyses of Sulphide Flotation Concentrates.

Size (μm)	%wt	%Sn	units	dist	%wt	%Sn	units	di
	N18[1]; SC2 Sample (-355μm)				N20[2]: Porphyry Sample (-300μm			
+250	10.2	0.18	1836.	12.6				
+212	8.2	0.18	1.476	10.1	5.9	0.26	1.534	4
+180	9.0	0.15	1.350	9.3	6.1	0.33	2.013	6
+150	6.0	0.14	0.840	5.8	4.9	0.34	1.666	5
+125	6.9	0.13	0.897	6.2	5.9	0.34	2.006	6
+106	5.6	0.12	0.672	4.6	4.7	0.34	1.598	4
+ 90	5.5	0.10	0.550	3.8	4.5	0.37	1.665	5
+ 75	6.8	0.11	0.748	5.1	6.3	0.38	2.394	7.
+ 63	5.0	0.12	0.600	4.1	3.9	0.38	1.482	4.
+ 53	4.0	0.14	0.560	3.8	3.5	0.36	1.260	3.
+ 38	10.9	0.16	1.744	12.0	9.1	0.37	3.367	10.
- 38	21.9	0.15	3.285	22.6	45.2	0.31	14.012	42.
TOTAL	100.0	(0.15)	(14.558)	100.0	100.0	(0.33)	(32.997)	100.
A HEAD		0.14				0.33		
	N17[1]: SC1 Sample (-355μm)				N19[2]: SC1 Sample (-300μm)			
+212	17.6	1.18	20.768	27.3	7.5	1.10	8.250	13.
+180	10.4	1.03	10.712	14.0	9.1	0.92	8.372	13.
+150	6.7	1.04	6.968	9.2	7.2	0.93	6.696	10.
+125	7.7	0.82	6.314	8.3	8.6	0.77	6.622	10.
+106	5.4	0.84	4.536	6.0	6.9	0.77	5.313	8.
+ 90	5.4	0.76	4.104	5.4	6.4	0.73	4.672	7.
+ 75	7.9	0.63	4.977	6.6	8.6	0.70	6.020	9.
+ 63	3.7	0.61	2.257	3.0	4.3	0.55	2.365	3.
+ 53	3.7	0.56	2.072	2.7	4.3	0.51	2.193	3.
+ 38	9.5	0.47	4.465	5.9	11.0	0.57	6.270	9.
- 38	22.0	0.40	8.800	11.6	26.3	0.26	6.838	10.
TOTAL	100.0	(0.76)	(75.973)	100.0	100.0	(0.64)	(63.611)	100.
A HEAD		(0.71)				0.67		

1. 1 kg scale - Recleaner concentrate with no regrind.
2. 10 kg scale - Rougher concentrate.

STAGE 3A METALLURGICAL TESTWORK.

Sulphide Flotation Test (N1)

Composite MCA: Talcose DSL

(a) Procedure

As for preliminary phase testwork. No regrind.

(b) Results

PRODUCT	%wt	Assay Sn	Assay S	Assay As	Distribution Sn	Distribution S	Distribution As
Recleaner Conc. 1	20.6	0.10		0.19	2.3		55.3
Recleaner Conc. 2	12.5	0.11		0.09	1.5		15.9
Recleaner Conc. 3	11.0	0.13		0.07	1.6		10.9
Recleaner Conc. 4	6.6	0.14		0.08	1.0		7.5
Recleaner Conc. 5	3.4	0.17		0.05	0.2		2.4
(Σ Recleaner Conc)	(54.1)	(0.11)		(0.12)	(6.6)		(91.9)
Recleaner Tail	0.7	0.52		0.06	0.4		0.6
(Cleaner Conc)	(54.8)	(0.12)		(0.12)	(7.0)		(92.5)
Cleaner Tail	1.9	0.60		0.05	1.3		1.3
(Rougher Conc)	(56.7)	(0.13)		(0.12)	(8.3)		(93.8)
Rougher Tail	43.3	1.91		<0.01	91.7		6.2
(Calc. Feed)	100.0	(0.90)		(0.07)	100.0		100.0
Assay Feed		1.09	21.1	0.07			

Comments.

1. Primary grind -355μm
2. Sulphur assays not available.
3. Result characteristic of talcose DSL composite SC2 with low tin losses to sulphide concentrates.

Sulphide Flotation Test (N2)

Composite MCC: Qtz/carb. DSL, below porphyry.

(a) Procedure

As for initial phase program. No regrind.

(b) Results.

PRODUCT	%wt	Assay Sn	Assay S	Assay As	Distribution Sn	Distribution S	Distribution As
Recleaner Conc. 1	9.1	0.33		0.58	3.3		26.3
Recleaner Conc. 2	9.0	0.30		0.44	3.0		19.7
Recleaner Conc. 3	10.3	0.29		0.43	3.3		22.0
Recleaner Conc. 4	9.6	0.41		0.29	4.3		13.9
Recleaner Conc. 5	9.9	0.41		0.26	4.4		12.8
(Σ Recleaner Conc)	(47.9)	(0.35)		(0.40)	(18.3)		(94.7)
Recleaner Tail	0.6	0.98		0.21	0.6		0.6
(Cleaner Conc)	(48.5)	0.36		(0.39)	(18.9)		(95.3)
Cleaner Tail	3.8	0.80		0.12	3.3		2.3
(Rougher Conc)	(52.3)	0.39		(0.37)	(22.2)		(97.6)
Rougher Tail	47.7	1.49		0.01	77.8		2.4
(Calc. Feed)	100.0	0.91		(0.20)	100.0		100.0
Assay Feed		1.00	21.4	0.18			

Comments.

1. Primary grind -355 μm
2. Sulphur assays not available.
3. Tin loss to recleaner concentrate (18.3%) less than corresponding losses for SC1 sample (27.2%). Sulphide recovery appeared to be satisfactory.

832219 211

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 73

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	1947.26 N	1140.27 E	646.38
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar 90°
Total length 65.0 m
Commenced: 2 / 5 / 81
Completed: 4 / 5 / 81

Drilling contractor LONGYEAR AUSTRALIA
Rig type LONGYEAR 44

Details of down hole location-survey methods.
Eastman single shot camera,

Purpose of drilling and anticipated lengths to targets.
Test White Face Porphyry from 20 - 50 m.

Core size and non-coring (NC)

TRICONE	0	TO	3.5
NQ	3.5	TO	65.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30 m	286	88½
6 m	356	89

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON
FROM 0 TO 65.0
DATE 8/5/81

LOGGED BY _____
FROM _____ TO _____
DATE _____

LOGGED BY _____
FROM _____ TO _____
DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 73
Log sheet 1 of 2

83220212

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT CAPITAL LETTERS, UNDERLINED Depth Description and notes INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.5	0 - 3.5 Tricone. No core						
	21.6	3.5 - 25.1 QUARTZITE, lesser SILTSTONE, minor SHALE. Moderately disrupted in parts. Mainly light grey, fine, siliceous qtzite, with lesser siliceous siltstone. Rare thin shale beds.		11/10/9		py trace in stringers		
20	25.7	25.1 - 50.8 PORPHYRY. Altered qtz - feldspar porphyry. Matrix greenish grey to off-white, translucent lustre. 12% qtz phenocrysts to 10 mm 5-20% feldspars, almost totally replaced by py. Minor tourmaline. Occasional joints - porphyry leached near these.		1		10-15% coarsely disseminated py, and occasional py veins. minor sph disseminated.		
40	14.2	50.8 - 65.0 SILTSTONE, minor SHALE. Moderately disrupted in parts. Mid-grey siliceous siltstone, with minor thin shale beds. Rare py veins. Occasional carbonate veins, stringers.		10/9		trace py in thin veins and stringers.		
60		HOLE COMPLETED 65.0						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL(ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 73

LOG SHEET 1 OF 1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121369		24.1	25.1	1.0	50									
70		25.1	26.1	"	190									
71		26.1	27.1	"	450									
72		27.1	28.1	"	1050									
73		28.1	29.1	"	570									
74		29.1	30.1	"	420									
75		30.1	31.1	"	710									
76		31.1	32.1	"	540									
77		32.1	33.1	"	1750									
78		33.1	34.1	"	2300									
79		34.1	35.1	"	2100									
380		35.1	36.1	"	1950									
81		36.1	37.1	"	1700									
82		37.1	38.1	"	800									
83		38.1	39.1	"	1650									
84		39.1	40.1	"	2150									
85		40.1	41.1	"	4050									
86		41.1	42.1	"	1800									
87		42.1	43.1	"	650									
88		43.1	44.1	"	3450									
89		44.1	45.1	"	2600									
390		45.1	46.1	"	2250									
91		46.1	47.1	"	880									
92		47.1	48.1	"	790									
93		48.1	49.1	"	1100									
94		49.1	50.1		920									
95		50.1	50.8	0.7	490									
96		50.8	51.8	1.0	50									

Notes :— XRF Alq Method for Sn.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 73

SAMPLE TYPE : DRILL CORE split FROM 24.1 TO 32.1

8322221 213

832222 214

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 74

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1)	2060.02 N	1460.10 E	705.46	
(2)	N	E		
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	mA.H.D.	

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) ____ mag
G.N.(2) ____ mag
G.N.(3) ____ mag
T.N. ____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -69°
Total length 63.3 m
Commenced: 4 / 5 / 81
Completed: 6 / 5 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.
Rig type: LONGYEAR 44

Core size and non-coring (NC)

TRICONE	0	TO 3.0 m
NQ	3.0 m	TO 63.3 m
		TO
		TO
		TO
		TO

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test Stanhope Porphyry from 35 m to 50 m.

Comments on drilling.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30 m	148°	69°
63 m	148°	69°

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON	LOGGED BY	LOGGED BY
FROM 0 TO 63.3	FROM TO	FROM TO
DATE 12/5/81	DATE	DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 74

Log sheet 1 of 2

832223 215

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0 TRICONE. No core.						
	27.4	3.0 - 3.4 QUARTZITE, lesser SILTSTONE. Weakly to moderately disrupted in parts. Mainly fine grained siliceous qtzite, with lesser thin siltstone. Common veins of py. Rare veins and stringers of qtz. Rare thin layers with high volcano-clastic component.		11/10		py 1% - common thin veins and stringers.		
20								
	17.7	30.4 - 48.1 PORPHYRY. 30.4 - 43.8: Deeply weathered porphyry matrix opaque white. 10-15% qtz. Most sulphides weathered out.		1		?py 0-5% common veins of altered py. Coarsely disseminated. py weathered out.		
40		43.8 - 48.1: Matrix grey.				py 10% coarsely disseminated.		
	15.2	48.1 - 63.3 QUARTZITE, SILTSTONE, minor SHALE. Moderately to strongly disrupted in parts. Mainly interbedded qtzite and siltstone. Minor thin shale.		11/10/9		py trace - thin veins and stringers.		
60		HOLE COMPLETED 63.3 m						

5 cm

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 8 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 74

LOG SHEET 1 OF 1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121397		29.4	30.4		18.00									
98		30.4	31.4		2150									
99		31.4	32.4		52550									
400		32.4	33.4		1200									
01		33.4	34.4		4000									
2		34.4	35.4		3050									
3		35.4	36.4		1750									
4		36.4	37.4		8650									
5		37.4	38.4		1.59%									
6		38.4	39.4		2.67%									
7		39.4	40.4		3750									
8		40.4	41.4		8150									
9		41.4	42.4		8350									
410		42.4	43.4		1450									
11		43.4	44.4		1500									
12		44.4	45.4		1250									
13		45.4	46.4		490									
14		46.4	47.4		1450									
15		47.4	48.1		3050									
16		48.1	49.1		150									

Notes :— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 74

SAMPLE TYPE : DRILL CORE split FROM 29.4 TO 49.1

8222224 216

832225 217

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 75

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		2312.75 N	1261.05 E	709.3
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: -90°
Total length: 174.0 m
Commenced: 27 / 4 / 81
Completed: 6 / 5 / 81

Drilling contractor: PARRY EXPL. DRILLING.
Rig type: BAYLES 37

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test the Queen Dyke Porphyry. Anticipated length to target 95 - 105 m.

Core size and non-coring (NC)

TRICONE	0	TO	3.0 m
NQ	3.0 m	TO	69.0 m
BQ	69.0 m	TO	174.0 m
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30 m	262	88.5
60 m	066	89
90 m	096	88
120 m	137	88
150 m	215	88½
171 m	176	88½

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON
FROM 0 TO 174.0
DATE 10/5/81

LOGGED BY _____
FROM _____ TO _____
DATE _____

LOGGED BY _____
FROM _____ TO _____
DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 75
Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (capital letters, underlined) Depth Description and notes (indented about 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0 TRICONE. No core.						
	44.8	3.0 - 47.8 QUARTZITE, lesser SILTSTONE, minor SHALE. Weakly to moderately disrupted in parts. Mainly fine light-grey qtzite, with lesser siltstone. Occasional thin shale beds.		11/10/9		7py trace weathered ?py in veins and stringers.		
20								
40		5 cm						
	22.8	47.8 - 70.6 SILTSTONE, lesser QUARTZITE, minor SHALE. As above, except siltstone more abundant than qtzite.		10/11/9		as above.		
60								
	10.0	70.6 - 80.6 QUARTZITE, minor SILTSTONE, SHALE. Mainly mid-grey, fine qtzite, in beds up to 1.5 m. Minor thin beds of siltstone and shale.		11/10/9		as above		
80								
	22.3	80.6 - 102.9 SILTSTONE, lesser QUARTZITE, minor SHALE. Moderately disrupted in parts. Mainly thin bedded siltstone, with lesser qtzite and minor shale. Common thin py veins and stringers. Occasional qtz veins.		10/11/9		py - 1% common thin veins and stringers.		
100								
	42.8	102.9 - 145.7 QUARTZITE, minor SILTSTONE, SHALE. Moderately disrupted in parts. Mainly fine-medium qtzite, with minor thin siltstone and shale. Occasional qtz veins and stringers.		11/10/9		py - 1-2% in veins and stringers also disseminated through qtzite.		
120								

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL". D.A. BERKMAN & W.R. RYALL (EDS.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 75

LOG SHEET 1 OF 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

120

CONTINUED FROM PREVIOUS PAGE.

140

INTERVAL	DEPTH from - to : ROCK UNIT	GRAPHIC LOG	MINERALISATION
20.4	145.7 - 166.1 PORPHYRY. Altered matrix, translucent grey colour. 10% qtz phenocrysts up to 5 mm. Feldspars almost entirely replaced by sulphide (py). Occasional veins of qtz-py-arsenopy.	1	py, arsenopy 15% py - coarsely disseminated through porphyry. Also as veins with qtz and arsenopy.

160

INTERVAL	DEPTH from - to : ROCK UNIT
7.9	166.1 - 174.0 SILTSTONE, lesser QUARTZITE. Moderately disrupted and slumped in parts. Mainly thin, interbedded siltstone and qtzite.

END OF HOLE 174.0 m

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 75

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	120776	3.0	5.0	2.0		795								
	77	5.0	7.0	"		95								
	78	7.0	9.0	"		160								
	79	9.0	11.0	"		150								
	780	11.0	13.0	"		170								
	81	13.0	16.0	"		150								
	82	15.0	17.7	"		40								
	83	17.7	20.0	"		610								
	84	20.0	22.0	"		1550								
	85	22.0	24.0	"		110								
	86	24.0	26.0	"		210								
	87	26.0	28.0	"		730								
	88	28.0	29.0	1.0		570								
	89	29.0	31.0	2.0		930								
	790	31.0	33.8	2.8		2900								
	91	33.8	35.0	1.2		300								
	92	35.0	37.3	2.3		250								
	93	37.3	39.3	2.0		85								
	94	39.3	41.3	"		85								
	95	41.3	43.3	"		50								
	96	43.3	45.2	"		65								
	97	45.2	47.2	"		85								
	98	47.2	50.0	2.8		20								
	99	50.0	52.0	2.0		65								
	121600	52.0	54.0	"		5500								
	01	54.0	56.0	"		1650								
	2	56.0	58.5	2.5		4700								
	3	58.5	60.5	2.0		1200								
	4	60.5	61.5	1.0		540								
	5	61.5	63.5	2.0		5150								

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD75

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 63.5

Ground.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	121606	63.5	65.5	2.0		300								
	7	65.5	67.5	"		2300								
	8	67.5	69.5	"		310								
	9	69.5	71.5	"		280								
	610	71.5	73.5	"		180								
	11	73.5	75.5	"		210								
	12	75.5	77.5	"		>100								
	13	77.5	79.5	"		660								
	14	79.5	81.5	"		260								
	15	81.5	83.5	"		120								
	16	83.5	85.5	"		140								
	17	85.5	87.5	"		1700								
	18	87.5	89.5	"		410								
	19	89.5	91.5	"		210								
	620	91.5	93.5	"		120								
	21	93.5	95.5	"		390								
	22	95.5	97.5	"		1700								
	23	97.5	99.5	"		1100								
	24	99.5	101.5	"		190								
	25	101.5	103.2	1.7		330								
	26	103.2	105.2	2.0		1600								
	27	105.2	107.2	"		590								
	28	107.2	109.2	"		300								
	29	109.2	111.2	"		330								
	630	111.2	113.2	"		180								
	31	113.2	115.2	"		360								
	32	115.2	117.2	"		350								
	33	117.2	119.5	2.3		550								
	34	119.5	121.5	2.0		670								
	35	121.5	123.5	"		490								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 75

SAMPLE TYPE : DRILL CORE ground FROM 63.5 TO 123.5

832229

127

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	121636	123.5	125.5	2.0		290								
	37	125.5	127.5	"		160								
	38	127.5	129.5	"		550								
	39	129.5	131.5	"		240								
	640	131.5	133.5	"		350								
	41	133.5	135.5	"		120								
	42	135.5	137.5	"		210								
	43	137.5	139.5	"		140								
	44	139.5	141.5	"		550								
	45	141.5	143.5	"		370								
	46	143.5	144.7	1.2		200								
121417		144.7	145.7	1.0	550									
18		145.7	146.7	"	380									
19		146.7	147.7	"	580									
420		147.7	148.7	"	310									
21		148.7	149.7	"	450									
22		149.7	150.7	"	370									
23		150.7	151.7	"	160									
24		151.7	152.7	"	80									
25		152.7	153.7	"	75									
26		153.7	154.7	"	50									
27		154.7	155.7	"	100									
28		155.7	156.7	"	25									
29		156.7	157.7	"	75									
430		157.7	158.7	"	200									
31		158.7	159.7	"	720									
32		159.7	160.7	"	1400									
33		160.7	161.7	"	2450									
34		161.7	162.7	"	320									
35		162.7	163.7	"	720									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD75

SAMPLE TYPE : DRILL CORE FROM 123.5 TO 163.7

Ground. / split

8322230

222

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121436		163.7	164.7	1.0	130									
37		164.7	166.0	1.3	685									
38		166.0	167.0	1.0	170									
	121647	167.0	169.0	2.0		420								
	48	169.0	171.0	2.0		120								
	49	171.0	172.5	1.5		95								
	50	172.5	174.0	1.5		110								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 75

SAMPLE TYPE : DRILL CORE FROM 163.7 TO

split / Ground.

832231 223

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 76

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		2337.1 N	1177.1 E	715.0
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	mA.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3 | 1:100 000 Sheet No. 8015 | State Tasmania

Mineral Tenement E.L. 13/79 Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -79°

Total length 176.0 m

Commenced: 7 / 5 / 81

Completed: 20 / 5 / 81

Drilling contractor: PARRY EXPL. DRILLING

Rig type: BAYLES 37

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test for position and grade of Queen Dyke.

Core size and non-coring (NC)

NC	0	TO 4.5
NQ	4.5	TO 60.0
BQ	60.0	TO 176.0
		TO
		TO
		TO

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30 m	No bearing	78°
60 m	"	78.5°
90 m	"	39°
120 m	"	79°
145 m	051	79½°
175 m	046	79½°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 176.0 DATE 22/5/81

LOGGED BY _____ FROM _____ TO _____ DATE _____

LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 76

Log sheet 1 of 3

832233

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R RYALL (EDS.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

4.5		0 - 4.5 TRICONE. No core.				
0.8		4.5 - 5.3 OVERBURDEN. No core.				
20.5		5.3 - 25.8 QUARTZITE, lesser SILTSTONE, minor SHALE. Moderately disrupted in parts. Light grey siliceous qtzite, with lesser siltstone and minor shale. Rare veins of qtz and/or weathered sulphide.		11/10/9		?py trace weathered py in veins.
29.9		25.8 - 55.7 SILTSTONE, lesser QUARTZITE, minor SHALE. Moderately disrupted in parts. Mainly mid-grey siltstone (5-20 mm) with lesser thin qtzite and minor shale. Occasional veins of qtz and/or weathered py.		10/11/9		as above.
6.9		55.7 - 112.6 QUARTZITE, lesser SILTSTONE. Moderately disrupted, or slumped in parts. Mainly thinly interbedded fine qtzite and siltstone. Occasional veins and stringers of py and/or qtz.		11/10		py trace in veins and stringers also disseminated through qtzite beds.
19.7		112.6 - 132.3 SILTSTONE, lesser SHALE, minor QUARTZITE. Moderately disrupted in parts. Mainly thin bedded siltstones with lesser shale.		10/9/11		

0 20 40 60 80 100 120

5 cm

CONTINUED OVER PAGE.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 76

LOG SHEET 1 OF 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (capital letters, underlined) Depth Description and notes (indented about 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

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120		Occasional thin beds of qtzite occur. Rare qtz veins, occasionally with disseminated cass.			py>?cass - trace py in common veins with stringers also dissem. through qtzite and siltstone beds, and as thin pyritic beds. trace cass. dissem. through qtz veins.
	10.3	132.3 - 142.6 QUARTZITE, lesser SILTSTONE. Moderately disrupted in parts. Fine, siliceous qtzite, up to 25 cm beds, with lesser siltstone. Occasional qtz and/or py veins.		11/10	py, sph, arsenopy→2-3% py in veins with stringers, and finely disseminated through qtzite sph - vein (1 only) arsenopy, trace in py veins.
140					
	13.0	142.6 - 155.6 PORPHYRY. Altered translucent grey matrix. 10% qtz phenocrysts up to 2.5 mm. Feldspars entirely replaced by py.		1	py 15% coarsely disseminated and as occasional veins.
	11.1	155.6 - 166.7 QUARTZITE, lesser SILTSTONE. Moderately disrupted in parts. Mainly thick qtzite, with sequences of thin qtzite-siltstone beds.		11/10	py 3% finely disseminated through sediments and as veins.
160					
	3.5	166.7 - 170.2 PORPHYRY. Opaque white matrix. Patchy sulphide dist.		1	py 10% coarsely dissem. and veins.
	5.8	170.2 - 176.0 SILTSTONE, minor QUARTZITE, SHALE. Moderately disrupted in parts. Thin siltstone beds, minor qtzite and shale.		10/11/	py trace in veins and stringers.
		END OF HOLE 176.0 m			
180					

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 76

LOG SHEET 2 OF 2

832235 227

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 77

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	N	E	
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	mA.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -60°
Total length 203 m
Commenced: 21 / 5 / 81
Completed: 3 / 6 / 81

Drilling contractor: PARRY EXPLORATION DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test the Queen Porphyry between 155 m and 165 m.

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	81.0
BQ	81.0	TO	203
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
21 m	014°	59°
61 m	in casing	61°
91 m	018°	62°
121 m	019°	64½°
151 m	021°	65½°
181 m	020°	66°
202 m	021°	66°

Comments on drilling. Cemented from 13.0 - 27 m. Drilled out of side of cement at 19.0 m.

Legend for graphic log column

FIELD ROCK NAME, ETC.	
1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 3.0 TO 203.0 DATE 8/6/81
LOGGED BY _____ FROM _____ TO _____ DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 77
Log sheet 1 of 3

832236 228

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT — CAPITAL LETTERS, UNDERLINED Depth Description and notes — INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0 TRICONE. No core.						
	13.1	3.0 - 16.1 QUARTZITE, SILTSTONE. Fine, light grey qtzite and siltstone - interbedded in beds 1-5 cm thick. Rare thin qtz veins, some with cassiterite.		11/10		trace cassiterite in qtz veins.		
	1.9	16.1 - 18.0 SHALE, SILTSTONE - very broken.		9/10		no apparent mineralisation.		
20	9.5	18.0 - 27.5 SHALE, lesser SILTSTONE. Thin bedded shale and siltstone. 21.2 - 21.4 Breccia with angular sediment and porphyry fragments.		9/10		trace cassiterite in rare veins with qtz.		
		27.5 - 61.7 QUARTZITE, lesser SILTSTONE. Light grey interbedded quartzite and siltstone. Common py veins and stringers. Rare qtz veins and stringers, some with cassiterite. Py also disseminated in qtzite, or as thin layers parallel to bedding.		11/10		py, cass. trace. py in veins and stringers, cass in qtz veins.		
40								
60								
	12.3	61.7 - 73.0 SILTSTONE, lesser QUARTZITE. Mainly light grey, soft siltstone with lesser qtzites. Beds usually 2-5 cm.		10/11		py in rare veins and stringers from 67.3.		
	0.9	73.0 - 73.9 PORPHYRY. Altered green matrix.		I		10% dissem. py.		
	78.7	73.9 - 152.6 SILTSTONE, lesser QUARTZITE. Thinly interbedded siltstone and fine qtzite, weakly disrupted in parts. Occasional py veins and stringers. Rare qtz veins. Rare breccia zones.		10/		py, arsenopy, cass. py and arsenopy in occasional veins and stringers. Cassiterite in rarer veins with qtz. Zones with no cassiterite as follows: 73.9 - 99.0 116.5 - 123.5		
80								
100								

5 cm

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
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CONTINUED NEXT PAGE.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 77

LOG SHEET 1 OF 2

832237 229

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
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CONTINUED FROM PREVIOUS PAGE.

120

123.5
py, cass, arsenopy - TRACE in veins and stringers. Cass. with qtz veins.

140

152.6 - 153.3 QUEEN VEINS. Massive qtz - py vein. | 9b | 20% py, arsenopy in vein.

153.3 - 182.4 SILTSTONE, QUARTZITE. | 10/11
Interbedded light grey siltstone and qtzite. Moderately disrupted in parts. Occasional py and qtz veins and stringers.
trace py in occasional veins and stringers.

160

180

35°

11.8 | 182.4 - 194.2 PORPHYRY. | 1
Altered grey translucent matrix phenocrysts - 10% qtz to 5 mm dia.
- feldspars replaced by sulphide.
Occasional veins of py with minor qtz and arsenopy.
py>> arsenopy - 15%
py coarsely disseminated and as occasional veins.
minor arsenopy in veins.

45°

8.8 | 194.2 - 203.0 SILTSTONE, minor QUARTZITE. | 10/11
trace py in occasional veins and stringers.

200

END OF HOLE: 203.0 m

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 77

LOG SHEET 2 OF 2

832238

230

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 80

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	2050.33 N	1299.93 E	688.57 m
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag

G.N.(2) _____ mag

G.N.(3) _____ mag

T.N. _____ mag

1:250 000 Sheet No. SK55-3

1:100 000 Sheet No. 8015

State Tasmania

Mineral Tenement E.L. 13/79

Holder Metals Exploration Ltd.

Cadastral location and details Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar 83°

Total length 120.2

Commenced: 8 / 5 / 81

Completed: 12 / 5 / 81

Drilling contractor LONGYEAR AUST. PTY. LTD.

Rig type LONGYEAR 44

Details of down hole location-survey methods.

Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.

To test the Stanhope Porphyry between 0 and 25 m, and the White Face Porphyry bewteen 75 and 95 m.

Core size and non-coring (NC)

TRICONE	0 TO	0.1
NQ	0.1 TO	120.2
	TO	
	TO	
	TO	
	TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30 m	149	82½
60 m	147	83
90 m	145	83
120 m	141	81½

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON
FROM 0 TO 120.2
DATE 20/5/81

LOGGED BY _____
FROM _____ TO _____
DATE _____

LOGGED BY _____
FROM _____ TO _____
DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

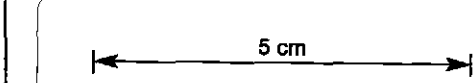
HOLE No. MBD 80

Log sheet 1 of 2

832239 231

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0		0.1 - 22.6 PORPHYRY. 0.1 - 12.5 m: Matrix mainly leached to white, and sulphides weathered out. 10-15% qtz phenocrysts to 5 mm. Rare veins of py. 12.5 - 22.6: Matrix translucent grey/green coarsely disseminated sulphides.		1		0.1 - 12.5: py 2-5% py mainly weathered out coarsely disseminated. 12.5 - 22.6: py 15% coarsely disseminated and as occasional py veins.		
20								
		22.6 - 120.2 QUARTZITE, lesser SILTSTONE, minor SHALE. Moderately to strongly disrupted and slumped in parts. Mainly fine, slight grey siliceous quartzite, with lesser dark siltstone and occasional shale beds. Rare stringers of qtz and carbonate. Occasional stringers of py.				py trace in occasional stringers and disseminated through occasional qtzite beds.		
40								
60								
80								
100								
120		END OF HOLE 120.2 m						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES



FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 80

LOG SHEET 1 OF 1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
12836		0·1	1·1	1·0	1600									
38		1·1	2·1	"	1500									
39		2·1	3·1	"	1750									
840		3·1	3·6	0·5	580									
41		3·6	4·1	"	940									
42		4·1	5·1	1·0	320									
43		5·1	6·1	"	590									
44		6·1	7·1	"	530									
45		7·1	8·1	"	740									
46		8·1	9·1	"	2050									
47		9·1	10·1	"	2100									
48		10·1	11·1	"	2050									
49		11·1	12·1	"	4500									
850		12·1	13·1	"	1·08%									
51		13·1	14·1	"	3900									
52		14·1	15·1	"	2850									
53		15·1	16·1	"	4400									
54		16·1	17·1	"	490									
55		17·1	18·1	"	490									
56		18·1	19·1	"	1000									
57		19·1	20·1	"	1300									
58		20·1	21·1	"	3000									
59		21·1	22·6	1·5	290									
860		22·6	23·6	1·0	190									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 80

SAMPLE TYPE : DRILL CORE FROM 0·1 TO

8322240 232

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 81

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	1805.21 N	1000.05 E	625.27
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	mA.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -55°
Total length 133.6 m
Commenced: 12 / 5 / 81
Completed: 19 / 5 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.
Rig type: LONGYEAR 44

Details of down hole location-survey methods: Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets: To obtain additional DSL for metallurgical testing.

Core size and non-coring (NC)

TRICONE	0	TO	1.6
HQ	1.6	TO	54.0
NQ	54.0	TO	133.6
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30 m	in casing	54½
60 m	329°	54°
90 m	338°	54°
133 m	327°	54°

Comments on drilling: Very bad ground for first 48 m. Cemented (twice).

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

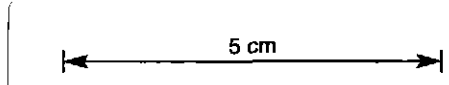
Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 133.6 DATE 25/5/81
LOGGED BY _____ FROM _____ TO _____ DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 81
Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.6	0 - 1.6 TRICONE. No core.						
	37.1	1.6 - 38.7 DOLOMITE SULPHIDE LODE, RECRYSTALLIZED DOLOMITE. 1.6 - 6.0: DSL - 50% qtz-carbonate, 20% fluorite (wrigglite), 30% py } very poor recovery 6.0 - 12.0: clay - very poor recovery. 12.0 - 15.6: DSL - very poor recovery. 65% qtz-carbonate, 30% py, 5% recrystallized dolomite. 15.6 - 21.3: clay, poor recovery. 21.3 - 27.3: recrystallized dolomite, very poor recovery. 27.3 - 31.8: no core. 31.8 - 38.7: recrystallized dolomite.				py - 30% in irregular veins and aggregates. sph - minor in veins. py trace in veins and stringers.		
20								
40	8.1	38.7 - 46.8 PORPHYRY. Matrix off-white to grey, translucent 7% qtz phenocrysts.		1		15% py>>po>gal. py coarsely dissem. and in veins. po ! gal - minor in veins.		
	1.1	46.8-48.7 DOLOMITE SULPHIDE LODE. Mainly "wrigglite"		8/7/5		py> po - irregular veins		
	2.3	48.7-51.0 NO CORE.						
	11.7	51.0 - 62.7 DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Pale grey dolomite with minor veins of recrystallized dolomite.		2/3		py trace in occasional veins.		
60								
	16.9	62.7 - 79.6 PORPHYRY. Matrix off-white, translucent lustre 15% qtz phenocrysts to 8 mm diam. Feldspars replaced by sulphides. Rare dissem. fluorite.		1		po>> py po, py coarsely disseminated py also in veins.		
80	4.2	79.6 - 83.8 DOLOMITE. Pale grey, well-bedded dolomite.		2		po> py? gal - trace (~1%) all in veins.		
	2.3	83.8-86.1 PORPHYRY - translucent white matrix.		1		po> py 15% coarsely dissem.		
	27.8	86.1 - 113.9 SILTSTONE, lesser QUARTZITE. 86.1 - 88.9: transition zone - abundant qtz carb.-py veins. 88.9 - 113.9: siltstone with lesser grey qtzite. Moderately to strongly disrupted in parts.		10/11		py > po trace in veins and stringers. Minor py disseminated in some qtzite beds.		
100								
	13.7	113.9 - 127.6 DOLOMITE, SHALE. Interbedded silicified dolomite and shale. Strongly disrupted and brecciated in most parts.  		2/9		po > py > sph all in veins and stringers, sometimes with carbonate.		

CONTINUED ON NEXT PAGE.

FOR LEGEND SEE DRAWING NO.

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE. 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 81

LOG SHEET 1 OF 2

832243 235

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9- AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

CONTINUED FROM PREVIOUS PAGE.

120

6.0	127.6 - 133.6 SHALE, SILTSTONE, QUARTZITE. Strongly disrupted and slumped.		9/ 10/ 11		po, py trace in veins and stringers.
	END OF HOLE 133.6 m				

140

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 81

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121439		1.6	2.6	1.0	1.08%									
40		2.6	4.6	2.0	141									
41		4.6	6.0	"	1350									
42		6.0	7.5	1.5	360									
43		7.5	9.0	1.5	30									
44		10.5	12.0	2.0	500									
45		12.0	13.5	1.5	4900									
46		13.5	15.6	2.1	4500									
47		15.6	17.2	1.6	840									
48		17.2	18.3	1.1	1200									
49		19.8	21.3	1.5	30									
450		21.3	22.8	1.5	20									
51		22.8	24.3	"	30									
52		24.3	26.0	1.7	10									
53		26.0	28.8	2.8	100									
54		31.8	32.8	1.0	160									
55		32.8	33.8	"	200									
56		33.8	34.8	"	470									
57		34.8	35.8	"	2150									
58		35.8	36.8	"	5410									
59		36.8	37.8	"	230									
460		33.0	34.5	1.5	180									
61		34.5	36.0	"	860									
62		36.0	37.0	1.0	15550									
121463		37.0	38.0	"	2910									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 81

SAMPLE TYPE : DRILL CORE FROM 1.6 TO 38.0

8322244

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121464		38.0	38.8	0.8	6450									
65		38.8	39.8	1.0	820									
66		39.8	40.8	"	600									
67		40.8	41.8	"	170									
68		41.8	42.8	"	920									
69		42.8	43.8	"	280									
470		43.8	44.9	1.1	1500									
71		44.9	45.9	1.0	880									
72		45.9	46.9	"	6550									
73		46.9	47.9	"	9200									
74		47.9	48.7	"	4650									
75		51.0	52.9	1.9	170									
76		54.0	55.0	1.0	80									
77		55.0	56.0	"	215									
78		56.0	57.0	"	150									
79		57.0	58.0	"	800									
480		58.0	59.0	"	1150									
81		59.0	60.0	"	4910									
82		60.0	61.0	"	15000									
83		61.0	62.0	"	2.10%									
84		62.0	62.7	0.7	1.27%									
85		62.7	63.7	1.0	2050									
86		63.7	64.7	"	3350									
87		64.7	65.7	"	1800									
88		65.7	66.7	"	1350									
89		66.7	67.7	"	680									
490		67.7	68.7	"	2950									
121491		68.7	69.7	"	3900									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 81.

SAMPLE TYPE : DRILL CORE FROM 38.0 TO 69.7.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121492		69.7	70.7	1.0	1700									
93		70.7	71.7	"	1650									
94		71.7	72.7	"	3250									
95		72.7	73.7	"	4000									
96		73.7	74.7	"	3600									
97		74.7	75.7	"	2350									
98		75.7	76.7	"	2200									
99		76.7	77.7	"										
120800		77.7	78.7	"										
01		78.7	79.5	0.8										
02		79.5	81.5	2.0										
120803		82.9	83.9	1.0										
04		83.9	84.9	"										
05		84.9	86.0	1.1										
06		86.0	87.0	1.0										
120807		80.5	81.5	1.0										
08		81.5	82.9	1.4										
120811		112.9	113.9	1.0										
12		113.9	115.4	1.5										
13		115.4	116.4	1.0										
14		116.4	117.4	"										
15		117.4	118.2	0.8										
16		118.2	118.9	0.7										
17		118.9	119.9	1.0										
18		119.9	121.0	1.1										
19		121.0	122.2	1.2										
120		122.2	122.8	0.6										

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 81

SAMPLE TYPE : DRILL CORE FROM 69.7 TO 122.8

832246 238

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
B0&B1		122.8	123.8	0.4										
B2		123.2	124.6	1.4										
B3		124.6	125.3	0.7										
B4		125.3	126.3	1.0										
B5		126.3	127.7	1.4										
B6		127.7	128.7	1.0										

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 81

SAMPLE TYPE : DRILL CORE FROM 122.8 TO 128.7

832247 239

832248 240

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 83

COLLAR LOCATION

Grid name — Rectangular space co-ordinates

	PLANAR CO-ORDINATES		ELEVATION
(1)	1755.56 N	919.93 E	
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) ____ mag
G.N.(2) ____ mag
G.N.(3) ____ mag
T.N. ____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: -90°
Total length: 130.0

Commenced: 23 / 5 / 81
Completed: 25 / 5 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.
Rig type: LONGYEAR 44

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test the White Face Porphyry from 75 m to 95 m.

Core size and non-coring (NC)

TRICONE	0	TO	1.5
NQ	1.5	TO	49.7
BQ	49.7	TO	130.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
29 m	in casing	89°
59 m	254	88.5°
89 m	284	89°
119 m	286	88°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON — FROM 0 TO 130.0 — DATE 3/6/81
LOGGED BY ____ — FROM ____ TO ____ — DATE ____
LOGGED BY ____ — FROM ____ TO ____ — DATE ____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 83
Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.5	0 - 1.5 TRICONE. No core.						
	14.3	1.5 - 15.8 SILTSTONE, lesser SHALE, minor QTZITE. Moderately disrupted in parts. Mainly black siltstone and lesser black shale. Occasional beds of fine qtzite. Occasional veins and stringers of carbonate. Gradual change to→		10/ 9/11		py trace in stringers through qtzite beds.		
20	13.7	15.8 - 29.5 QUARTZITE, lesser SILTSTONE, minor SHALE. Moderately to strongly disrupted in parts. Mainly fine qtzite and siltstone in beds 1 mm - 10 cm. Rare veins and stringers of carbonate. Gradual change to→		11/ 10/ 9		py trace disseminated, and as stringers, through qtzite.		
40	17.0	29.5 - 46.5 SILTSTONE, lesser SHALE, minor QUARTZITE. Moderately to strongly disrupted for most parts. Rare carbonate veins and stringers.	30°	10/9/ 11		py trace in veins and stringers and disseminated through some qtzite beds.		
	2.1	46.5-48.6 PORPHYRY Matrix white→grey to centre.		1		15% py-coarsely dissem. and in veins.		
	4.3	48.6-52.9 SILTSTONE, minor SHALE, QUARTZITE, Mod. disrupted in parts, occasional veins and stringers of py.	80°	10/9/ 11		sph - dissem. py trace in thin veins and stringers.		
60	12.6	52.9 - 65.5 PORPHYRY. Translucent grey/white matrix. Phenocrysts: 12% qtz to 11 mm. Feldspars almost entirely replaced by sulphide. Rare green fluorite grains. Occasional veins of qtz-carbonate-py-gal-fluorite.	85° 65°	1		py >> gal. fl. py coarsely disseminated and in veins with qtz-fluorite-carbonate-gal. gal - coarse grains dissem. thru veins.		
	1.9	65.5 - 67.4 SILTSTONE, lesser SHALE.		10/9		py - disseminated (finely) and stringers 2%		
80	19.6	67.4 - 87.0 DOLOMITE. Strongly disrupted and brecciated. Pale grey dolomite, thin bedding visible in parts. Common veins and stringers of carbonate, some with py and/or sph.		2		py > sph >> po 2-3% in veins with carbonate sph also finely disseminated through dolomite.		
	3.4	87.0 - 90.4 DOLOMITE SULPHIDE LODE. 50% serp, 35% qtz-carb, 10% dolomite, 5% sph, py		8/7		5% sph, py in veins and stringers minor po in veins.		
	4.6	90.4 - 95.0 SILTSTONE, minor SHALE, QUARTZITE. Strongly disrupted and brecciated in parts.		10/ 9/11		py > po py-dissem. in siltstone and in veins. Po in veins. Trace vivianite.		
100	35.0	95.0 - 130.0 QUARTZITE, SILTSTONE, minor SHALE. Moderately disrupted for most parts. Occasional carbonate veins and stringers.		11/ 10/ 9		py, po, sph trace in rare veins and stringers.		
120		5 cm						

CONTINUED ON NEXT PAGE.

FOR LEGEND SEE DRAWING NO.

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 83

LOG SHEET 1 OF 2

832250 242

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT CAPITAL LETTERS, UNDERLINED Depth Description and notes INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

120 CONTINUED FROM PREVIOUS PAGE.

As above. | As above.

END OF HOLE 130.0 m

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or Project: Mt. Bischoff Tin

HOLE No. MBD 83

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
120986		456	466	10										
87		466	476	"										
88		476	486	"										
89		486	496	"										
120990		520	530	10										
91		530	540	"										
92		540	550	"										
93		550	560	"										
94		560	570	"										
95		570	580	"										
96		580	590	"										
97		590	600	"										
98		600	610	"										
99		610	620	"										
121000		620	630	"										
01		630	640	"										
02		640	650	"										
03		650	656	06										
04		656	666	10										
05		666	672	06										
06		672	682	10										
07		682	692	"										
08		692	699	07										
21009		711	721	10	90									
810		721	731	"	1050									
11		731	741	"										
12		741	751	"										
13		751	761	"										

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 83

SAMPLE TYPE : DRILL CORE FROM 456 TO 761

8322251 R43.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121814		76·1	77·1	1·0										
15		77·1	78·1	"										
16		78·1	79·1	"										
17		79·1	80·1	"										
18		80·1	81·1	"										
19		81·1	82·1	"										
820		82·1	83·1	"										
21		83·1	84·4	1·3										
22		84·4	85·5	1·1										
23		85·5	86·0	0·5										
24		86·0	87·0	1·0										
25		87·0	88·0	"										
121868		88·0	89·0	"										
69		89·0	90·0	"										
870		90·0	91·0	"										
71		91·0	92·0	"										
121905		92·0	93·0	"										
04		93·0	94·0	"										
05		94·0	95·0	"										

otes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. mBD 85

SAMPLE TYPE : DRILL CORE FROM 76·1 TO

8322252 244

832253 245

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 84

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	177.19 N	879.25 E	613.7
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	mA.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -90°

Total length 140 m

Commenced: / /
Completed: / /

Drilling contractor: LONGYEAR AUST. PTY. LTD.
Rig type: LONGYEAR 44

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test the White Face Porphyry between 55 m and 80 m

Core size and non-coring (NC)

TRICONE	0	TO	1.5
NQ	1.5	TO	47.8
BQ	47.8	TO	140.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
29 m	in casing	89°
59 m	296	89½°
89 m	316	87½°
119 m	296	87°
140 m	296	87°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON
FROM 0 TO 140.0
DATE 6/6/81

LOGGED BY
FROM TO
DATE

LOGGED BY
FROM TO
DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 84
Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CORE	GRAPHIC LOG	POINTER & CORE	MINERALISATION	ASSAYS AND ALL	BULKED ASSAYS Ni
0	1.5	0 - 1.5 HQ CASING. No core.						
	51.5	1.5 - 53.0 SHALE, lesser SILTSTONE, minor QUARTZITE. Strong disrupted black shale and siltstone. Minor qtzite as disrupted thin beds. Common carbonate veins and stringers. 48.4 - 49.3: Massive carbonate - py vein with minor sph and trace galena.		9/10 11		py > sph trace py and sph in rare veins and stringers. Sph more common in brecciated zones (usually 5 cm)		
20								
40								
	22.4	53.0 - 75.4 PORPHYRY. Matrix mainly opaque white colour, altered in parts to translucent green. Phenocrysts: 10% qtz to 6 mm 10% feldspar, up to 10 mm replaced in part by py. 10% py sph.		1		10% py, sph py - disseminated grains, commonly weathered, and as rare veins. Sph - disseminated in patches (up to 15%).		
60	10.9	75.4 - 86.3 SILTSTONE, lesser SHALE, minor DOLOMITE. Strongly disrupted and slumped. Mainly black siltstone and shale, with disrupted minor dolomite, in parts. Occasional carbonate veins.		10/ 9/2		py > sph py in veins and stringers, disseminated through siltstone and as irregular aggregates.		
	7.8	86.3 - 94.1 DOLOMITE SULPHIDE LODE. 75% py - vuggy veins and aggregates 20% qtz-carbonate - blotchy texture 5% fluorite		5/8		py > sph 75% py - abundant as veins and aggregates. sph in veins with carbonate.		
	33.3	94.1 - 127.4 SILTSTONE, SHALE, minor QUARTZITE. Strongly disrupted in most parts. Mainly black siltstone and shale, with minor irregular qtzite fragments. Common carbonate veins and stringers. 5 cm		10/ 9/11		py > sph trace py and sph in veins with carbonate.		

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A BERKMAN & W. R RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

CONTINUED NEXT PAGE.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 84

LOG SHEET 1 OF 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
120		CONTINUED FROM PREVIOUS PAGE.						
	2.4	127.4 - 129.8 "TUFF" volcaniclastic greywacke		12		no apparent mineralisation.		
	3.1	129.8 - 132.9 SILTSTONE, QUARTZITE, minor "TUFF" Thin siltstone, qtzite, minor with fine volcaniclastic.		10/11/12		py trace in veins and stringers.		
	1.0	132.9 - 133.9 TUFF - Volcaniclastic greywacke		12		py trace in thin veins and stringers.		
140		133.9 - 140.0 SILTSTONE, QUARTZITE. Moderately disrupted in parts. Thin bedded siltstone and qtzite. Rare carb. stringers.		10/11		py trace in thin veins and stringers.		
		END OF HOLE 140.0 m.						

5 cm

FOR LEGEND SEE DRAWING NO.

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL". D.A. BERKMAN & W.R. RYALL (EDS.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 84

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124006		47.5	48.5	1.0	610									
07			49.3		1758									
08		49.3	50.0	0.7	400									
09		50.0	51.0	1.0	70									
121826		52.0	53.0	1.0	85									
27		53.0	54.0	"	200									
28		54.0	55.0	"	320									
29		55.0	56.0	"	410									
830		56.0	57.0	"	170									
31		57.0	58.0	"	550									
32		58.0	59.0	"	200									
33		59.0	60.0	"	1150									
34		60.0	61.0	"	250									
35		61.0	62.0	"	240									
36		62.0	63.0	"	210									
37		63.0	64.0	"	1550									
38		64.0	65.0	"	850									
39		65.0	66.0	"	1750									
840		66.0	67.0	"	2750									
41		67.0	68.0	"	1700									
42		68.0	69.0	"	1050									
43		69.0	70.0	"	1450									
44		70.0	71.3	1.3	5250									
45		71.3	72.3	1.0	140									
46		72.3	73.3	"	110									
47		73.3	74.3	"	150									
48		74.3	75.4	1.1	100									
49		75.4	76.4	1.0	65									
850		78.7	79.7	"	120									

Notes :— XRF 014 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 84

SAMPLE TYPE : DRILL CORE FROM 47.5 TO 79.7

832256 248

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1218-51		79.7	80.7	1.0	10									
52		80.7	81.7	"	30									
53		81.7	82.7	"	40									
54		82.7	83.7	"	40									
55		83.7	84.7	"	40									
56		84.7	85.7	"	65									
57		85.7	86.4	0.7	60									
58		86.4	87.2	0.8	1950									
59		87.2	88.2	1.0	1450									
860		88.2	89.2	"	6450									
61		89.2	90.2	"	2600									
62		90.2	91.2	"	2050									
63		91.2	91.6	0.4	4300									
64		91.6	92.8	1.2	6550									
65		92.8	93.8	1.0	5750									
66		93.8	94.8	"	1.57%									
67		94.8	95.8	"	100									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 84

SAMPLE TYPE : DRILL CORE FROM 79.7 TO

832257

249

The following Assay Summary Sheets relate to holes reported in last months report.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	120700	51.0	53.0	2.0		X								
	1	53.0	55.0	"		15								
	2	55.0	57.0	"		25								
	3	57.0	59.0	"		30								
	4	59.0	61.0	"		25								
	5	61.0	63.0	"		20								
	6	63.0	65.0	"		30								
	7	65.0	67.0	"		50								
	8	67.0	69.0	"		70								
	9	69.0	71.0	"		30								
	710	71.0	73.0	"		380								
	11	73.0	74.1	1.1		50								
118824		74.1	75.1	1.0	690									
25		75.1	76.1	"	1300									
26		76.1	77.1	"	3850									
27		77.1	78.2	1.1	4650									
	12	78.2	80.2	2.0		700								
	13	80.2	82.2	"		890								
	14	82.2	84.2	"		80								
	15	84.2	86.2	"		90								
	16	86.2	88.2	"		60								
	17	88.2	90.2	"		50								
	18	90.2	92.2	"		80								
	19	92.2	94.2	"		110								
	720	94.2	96.2	"		100								
	21	96.2	98.2	"		60								
	22	98.2	100.2	"		30								
	23	100.2	102.2	"		30								
	24	102.2	104.2	"		750								
	120725	104.2	106.2	"		10								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 63

SAMPLE TYPE : DRILL CORE FROM 51.0 TO 106.2

8322259 251

SAMPLE NO.	SAMPLE NO	FROM	TO	INTE. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
118828		83.9	84.9	1.0	180									
29		84.9	85.9	"	2600									
30		85.9	86.9	"	1050									
31		86.9	87.9	"	370									
32		87.9	88.9	"	200									
33		88.9	89.9	"	180									
34		89.9	90.9	"	280									
35		90.9	91.9	"	340									
36		91.9	93.0	1.1	420									
37		93.0	94.0	1.0	180									
38		113.7	114.7	1.0	240									
39		114.7	115.7	"	120									
840		115.7	116.7	"	150									
41		116.7	117.7	"	180									
42		117.7	118.7	"	170									
43		118.7	119.7	"	190									
44		119.7	120.7	"	130									
45		120.7	121.7	"	150									
46		121.7	122.7	"	150									
47		122.7	123.7	"	160									
48		123.7	124.3	0.6	130									
49		124.3	125.3	1.0	35									

Notes:— XRF Bi Melhaet & Sn.
X = 24

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 64

SAMPLE TYPE : DRILL CORE FROM 83.9 TO 94.0
113.7 125.3

832260 252

SAMPLE NO.	SAMPLE NO	FROM	TO	INTE-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
118850		15.0	22.5	7.5	2100									
51		22.5	23.5	1.0	140									
52		23.5	24.5	"	110									
53		24.5	25.5	"	200									
54		25.5	26.5	"	400									
55		26.5	27.5	"	110									
56		27.5	28.5	"	100									
57		28.5	29.5	"	170									
58		29.5	30.5	"	260									
59		30.5	31.5	"	20									
860		31.5	32.5	"	90									
61		32.5	33.5	"	190									
62		33.5	34.5	"	630									
63		34.5	35.5	"	3000									
64		35.5	36.5	"	2400									
65		36.5	37.5	"	5350									
66		37.5	38.5	"	6850									
67		38.5	39.5	"	7300									
68		39.5	40.5	"	1.10%									
69		40.5	41.5	"	6550									
870		41.5	42.5	"	3150									
71		42.5	43.5	"	3850									
72		43.5	44.5		5200									
73		44.5	45.5	"	5500									
74		45.5	46.5	"	3250									
75		46.5	47.5	"	5650									
76		47.5	48.5	"	9700									
77		48.5	49.5	"	1.02%									
78		49.5	50.5	"	1.97%									
79		50.5	51.5	"	1.82%									

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 65

SAMPLE TYPE : DRILL CORE FROM 15.0 TO 51.5

83226 61

253

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
118280		51.5	52.8	1.3	9.00%									
81		52.8	53.5	.3	9300									
82		53.5	54.5	1.0	1.28%									
83		54.5	55.5	1.0	1.10%									
84		55.5	56.5	1.0	1.10%									
85		56.5	57.5	"	1.50%									
86		57.5	58.5	"	1.20%									
87		58.5	61.5	3.0	4000									
88		61.5	62.5	1.0	3200									
89		62.5	63.5	"	2800									
890		63.5	64.5	"	2100									
91		66.8	67.8	"	5000									
92		67.8	68.8	"	6300									
93		68.8	69.8	"	9200									
94		69.8	70.8	"	1600									
95		70.8	71.8	"	4500									
96		71.8	72.8	"	2200									
97		72.8	73.8	"	1600									
98		73.8	74.8	"	1050									
99		74.8	75.9	1.1	850									
180 200		75.9	76.9	1.0	270									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 65

SAMPLE TYPE : DRILL CORE FROM 51.5 TO 76.9

832262 254

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1R0R01		6.0	7.0	1.0	770									
02		7.0	10.5	3.5	630									
03		10.5	13.5	3.0	50									
04		13.5	22.5	9.0	2950									
05		22.5	28.5	6.0	320									
06		28.5	29.5	1.0	90									
07		29.5	31.5	"	160									
08		31.5	37.5	5.0	80									
09		37.5	39.5	2.0	35									
10		39.5	40.5	1.0	20									
11		40.5	42.0	2.0	10									
12		42.0	43.5	1.5	X									
13		43.5	44.5	1.0	30									
14		44.5	45.5	"	X									
15		45.5	46.5	"	85									
16		46.5	49.0	2.5	25									
17		49.0	50.5	1.5	40									
18		50.5	51.5	1.0	150									
19		51.5	54.0	2.5	30									
20		54.0	55.5	1.5	X									
21		55.5	56.5	1.0	X									
22		56.5	57.5	"	X									
23		57.5	58.5	"	X									
24		58.5	59.5	"	20									
25		59.5	60.5	"	X									
26		60.5	61.5	"	15									
27		61.5	62.9	1.4	15									
28		62.9	63.9	1.0	110									

Notes:— XRF DI4 method

X- <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 67

SAMPLE TYPE : DRILL CORE FROM 6.0 TO 63.9

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
R0237		3·0	4·5	1·5	3 3%									
38		4·5	7·5	3·0	180									
39		7·5	9·1	1·6	530									
R40		9·1	10·5	1·4	510									
41		10·5	13·5	3·0	400									
42		13·5	15·6	2·1	300									
43		15·6	17·0	1·4	130									
44		17·0	19·1	2·1	130									
45		19·1	22·5	3·4	210									
46		22·5	24·5	2·0	15									
47		24·5	25·0	·5	200									
48		25·0	27·0	2·0	900									
49		27·0	28·0	1·0	10									
R50		28·0	29·0	"	X									
51		29·0	30·0	"	60									
52		30·0	31·5	1·5	5000									
53		31·5	32·5	1·0	110									
54		32·5	33·5	"	550									
55		33·5	34·5	"	10									
56		34·5	35·5	"	X									
57		35·5	36·5	"	10									
58		36·5	37·5	"	X									
59		37·5	38·5	"	X									
R60		38·5	39·5	"	15									
61		39·5	40·5	"	X									
62		40·5	41·5	"	110									
63		41·5	42·5	"	350									
64		42·5	43·5	"	100									

Notes :— XRF 214 Method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 69

SAMPLE TYPE : DRILL CORE FROM 3·0 TO 43·5

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
120265		7.0	10.1	3.1	1800									
66		10.1	13.5	3.4	150									
67		19.5	24.5	5.0	1500									
68		24.5	26.8	2.3	1050									
69		26.8	28.5	1.7	110									
270		28.5	29.5	1.0	1050									
71		29.5	31.0	1.5	1800									
72		31.0	31.5	.5	5200									
73		31.5	32.2	.7	3700									
74		32.2	33.7	1.5	4050									
75		33.7	34.5	.8	7500									
76		34.5	35.5	1.0	150									
77		35.5	36.5	"	210									
78		36.5	37.5	"	670									
79		37.5	38.5	"	110									
280		38.5	39.5	"	130									
81		39.5	40.5	"	320									
82		40.5	41.5	"	5400									
83		41.5	42.5	"	5050									
84		42.5	43.5	"	75									
85		43.5	44.7	1.2	190									
86		44.7	46.0	1.3	3100									
87		46.0	47.0	1.0	2050									
88		47.0	48.0	"	1400									
89		48.0	49.0	"	110									
290		49.0	50.0	"	50									
91		50.0	51.0	"	15									
92		51.0	52.0	"	X									
93		52.0	53.0	"	30									
94		53.0	54.1	1.1	2200									

Notes:— XRF 214 method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 70

SAMPLE TYPE : DRILL CORE FROM 7.0 TO 54.1

8322665

257

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1206295		54·1	55·0	·9	2500									
96		55·0	55·7	·7	2100									
97		55·7	57·0	1·3	1550									
98		57·0	58·0	1·0	5050									
99		58·0	59·0	"	1.6%									
1211200		59·0	60·0	"	8900									
01		60·0	61·0	"	2400									
02		61·0	62·0	"	1450									
03		62·0	63·0	"	1250									
04		63·0	64·0	"	3100									
05		64·0	65·0	"	4250									
06		65·0	66·0	"	3150									
07		66·0	67·0	"	1050									
08		67·0	68·0	"	5350									
09		68·0	69·0	"	1850									
210		69·0	70·0	"	1200									
11		70·0	71·0	"	3750									
12		71·0	72·0	"	1650									
13		72·0	73·0	"	1550									
14		73·0	74·0	"	390									
15		74·0	75·0	"	55									
16		91·7	92·7	"	95									
17		92·7	93·7	"	590									
18		93·7	94·7	"	25									
19		94·7	95·2	·5	20									
220		95·2	96·4	1·2	260									
21		96·4	97·4	1·0	60									
22		97·4	98·0	·6	95									
23		98·0	99·1	1·1	3450									
24		99·1	100·1	1·0	45									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 70

SAMPLE TYPE : DRILL CORE FROM 54·1 TO 100·1

832266 258

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
12125		100·1	101·5	1·4	7									
26		101·5	102·5	1·0	90									
27		105·5	106·5	"	8100									
28		106·5	107·7	1·2	5300									
29		107·7	108·7	1·0	1900									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 70

SAMPLE TYPE : DRILL CORE FROM 100·1 TO 108·7

832267

259

832268

82-1698 Vol 2. Cover 81-005 F (MAY)

METALS EXPLORATION LIMITED

MT BISCHOFF TIN PROSPECT

MT BISCHOFF MINE AREA

STAGE 3A
DRILLING PROGRAMME

as at 30-5-81

Scale 1:2000

5 cm

698E ● MBD 64

MBD 63

MBD 44

MBD 45

MBD 42

MBD 57

MBD 25

MBD 41

MBD 58

MBD 84

MBD 46

MBD 76

MBD 83

MBD 24

MBD 69

MBD 70

MBD 68

GOSSAN FACE

MBD 40

MBD 23

MBD 22

MBD 29A

MBD 29

MBD 47

MBD 21

MBD 48

MBD 49

MBD 50

MBD 20

MBD 81

MBD 51

MBD 15

MBD 27

MBD 71

MBD 65

MBD 72

MBD 19

WHITE FACE

MBD 16

MBD 9

MBD 54

MBD 82

MBD 17

MBD 18

MBD 28

HAPPY VALLEY

MBD 30

MBD 67

MBD 73

MBD 35

MBD 31

MBD 32

MBD 34

MBD 33

WHITE FACE

MBD 66, 66A

MBD 36

MBD 37

MBD 56

MBD 55

MBD 80

STANHOPE DYKE

MBD 38

MBD 14

MBD 79

MBD 39

MBD 40

DESERT FACE

MBD 74

SLAUGHTERYARD FACE

MBD 77

MBD 76

MBD 75

BROWN FACE

DYKE

WESTERN DYKE

QUEEN DYKE

M.E.L. GRID NORTH (330°)

ADOPT MAG NTH

0 50 100

METRES

Porphyry

Dolomite

Dolomite Sulphide Lode

Siltstones, Shales, Quartzites

Fault

Interpreted Geological Contact

Diamond Drillhole

○ *Proposed*

● *Completed*

Completed Drillholes

December .. . MBD 47,48,49
January .... MBD 50,51,52
February ... MBD 53, 54, 55, 56, 57, 58
March . . . MBD 63
April . . . . MBD 64, 65, 66, 66A, 67, 68, 69, 70, 71, 72
May ..... . MBD 73, 74, 75, 76, 77, 79, 80, 81, 82, 83, 84
June ....

Rev 30 5 81 02 Drg. No. 81-005 F

MT BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

MONTHLY REPORTS FOR JANUARY TO DECEMBER 1981

VOL. 3

832270 261

METALS EXPLORATION LTD.
60 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

17-8-81

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR JUNE, 1981.

Distribution:

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G.M. Motteram.
12/8/81.

MT. BISCHOFF TIN PROSPECT.

REPORT FOR JUNE, 1981.

General:

The Stage 3A drilling programme was essentially completed by the end of June with a total of 1229.5 metres drilled for the month, bringing total meterage to 5280.4 m versus the Stage 3A planned meterage of 5600.0 m.

Remaining drilling for Stage 3A included completion of MBD 95, a planned extension of MBD 30 and approximately 200 metres of unallocated drilling for "Buried Dolomites." The further drilling has been postponed pending interpretation of a lower Dolomite/DSL sequence discovered during Stage 3A.

Actual drilling for Stage 3A included:

- Metallurgical and Mining Evaluation Purposes:

  11 holes drilled on close spacings into DSL and/or Porphyry.
  2 holes drilled on close spacings into Porphyry.
  2 specific metallurgical holes.

- Regional Exploration:

  4 holes drilled into the "Buried Dolomite" area.
  4 holes drilled into Housego Grid Anomolies.
  4 holes drilled on the Queen Dyke.

- Dolomite Sulphide Lode (DSL) Infill and Extension:

  11 holes, bringing nominal spacing in DSL to 40 x 40 metres.

- Porphyry Infill and Extension:

  13 holes, bringing nominal spacing on Porphyry to 40 x 80 metres.

Broad results of the programme have been:

- Possible minor extensions to the DSL reserve (unestimated as yet).
- Possible extension of porphyry reserves to the north east.
- Identification through close spaced drilling of potential problems in mining due to problems of grade zone continuity in the DSL.
- No major extensions to reserves via Regional Exploration, but
- Discovery of a Dolomite/DSL sequence below the main Dolomite/DSL and,

General Contd:

- Recognition of a zone of poor core recovery which may contain DSL within the main Dolomite sequence.

The June Operating Committee Meeting was held on 26th. June and the programme and budget to end December, 1981 agreed to.

Specific activities for June were as follows:-

Geology:

(i) Diamond Drilling.

During the period 12 holes were commenced and eleven completed for a total of 1229.5 metres. Productivity was down on last period due to ground difficulties in MBD 90 and MBD 95. Both Contractors performed well during the period with few mechanical problems.

Longyear drilled 13.21 m per available shift, while Parry drilled 16.81 m per available shift.

Problems have been encountered in assay turn around time and several holes drilled during June still have assays outstanding. In addition drill logs for holes MBD 85, 88 and 93 (drilled during June) will not be available until the July report.

This report contains Summary Drill Logs for holes MBD 79 and 82 which were not available for the May Report, plus assay sheets from MBD 76, 79, 82, 83, 43 EXTN and 24 EXTN which were not available.

Results of drilling for the period are discussed below:

MBD 77 & 78.

These holes represent the last of four holes drilled specifically to intersect the Queen Dyke. MBD 95 is also targeted to intersect the Queen Dyke near its junction with the main White Face/Stanhope porphyry dyke.

As with MBD 75 and 76 the intercepts achieved for the Queen Dyke were much deeper than anticipated, with low tin grades. A summary of intercepts achieved and grades for each Queen Dyke hole is given below, indicating the lack of grade potential at depth.

MBD 77 (Section BB280). Furthest from the junction with Stanhope dyke, this hole intersected the porphyry between 182.4 and 194.2 metres. Assay results over the Queen Vein area did not indicate significant tin.

MBD 78 (Section BB-40). Closest to the junction with Stanhope dyke, this hole intersected the porphyry from 183.3 to 219.3 metres versus target at approximately 104 metres. Within the intercept pyrite averaging approximately 15% is accompanied by sericite alteration which is locally intense. Trace sphalerite and arseno pyrite was also observed.

Geology Contd:

GRADE INTERCEPTS.

HOLE.	PORPHYRY INTERCEPT (m) FROM	TO		INTERCEPT (m) FROM	TO	LENGTH (m)	GRADE % Sn
MBD 75	145.7	166.1		159.7	166.0	6.3	0.22
			(incl	164.7	166.0	1.3	0.69)
MBD 76	142.6	155.6		148.6	152.6	4.0	0.27
			(incl	149.6	151.6	2.0	0.41)
	and 166.7	170.2		-	-	-	-
MBD 77	182.3	194.3		187.5	188.5	1.0	0.33
MBD 78	183.3	219.3		193.3	194.3	1.0	0.24

MBD 85.

Drilled on 980E Section to test the extent of DSL development above and below the porphyry intersected several zones containing minor amounts of sulphide lode in the upper dolomite. The following intersections were achieved:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
2.5	8.9	6.4	0.50	DSL
27.0	28.5	1.5	0.49	DSL
33.5	34.5	1.0	0.66	DSL

It should be noted that this section is within a zone of low recovery and hence assay results should be used with caution.

Assay values within the porphyry were generally low giving an overall grade as follows:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
35.0	54.4	19.4	0.20	Porphyry

MBD 86 & 87, 92 & 93.

These minus 50° angled holes were drilled into the Greisen Face ore zone in order to establish a 10 metre grid bounded by 970 and 990E Sections. Previous holes incorporated in this grid are MBD 20, MBD 47, MBD 48, MBD 49 and MBD 50.

Drilling results confirm that the DSL in the region is thicker than was interpreted from Stage 2B (ie 25 metres versus 15 to 18 metres previously).

Geology Contd:

Assay results are available for MBD 86 only at present, with the following intercepts.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
37.0	42.0	5.0	1.89	DSL
47.0	49.0	2.0	0.47	DSL

The grade continuity picture for the 30 metre grid will not be known until the results from MBD 87, 92 and 93 are available.

MBD 88.

Drilled on Section 1220E this hole was intended to infill underground White Face porphyry reserves. The intersection achieved was in the interpreted position although slightly thinner than expected. Grades achieved were lower than the inferred porphyry ore ie.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
125.5	128.5	3.0	0.29	PORPHYRY

The ground mass of the porphyry was altered with minor pyritic alteration.

MBD 89.

Drilled on 880E Section was designed to test for westerly extensions to the Greisen Face DSL. It was drilled to 50 m entirely in shales and siltstones and gives no encouragement for further drilling this target.

MBD 90.

Drilled on Section 880E to test for extension of the White Face porphyry reserves, this hole achieved a 19.5 metre porphyry intercept between 171.5 and 191.0 metres. This intercept was deeper than expected and simplifies interpretation of the porphyry structure in the area.

Grades achieved were encouraging ie.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
174.8	187.8	13.0	0.45	PORPHYRY

In addition, core grinding of sediments containing significant carbonate veining above the porphyry indicated high tin values in two positions. This core will now be split and assayed.

MBD 91.

Drilled on Section 1380 to infill porphyry reserves, this hole achieved an intersection slightly higher than expected and thicker than expected. Assay results are not yet available.

Geology Contd:

MBD 94.

Drilled on Section 1180 to infill porphyry reserves, this hole achieved a much thicker intersection of porphyry than expected. This is interpreted to be a result of drilling through the junction of the White Face and Western Dykes. This junction was expected to occur close to the target zone. The porphyry intercept was 95.8 to 132.7 m. (ie 36.9 m)

Two grade positions were indicated ie.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
95.8	101.6	5.8	0.33	PORPHYRY
124.6	129.6	5.0	0.64	PORPHYRY

MBD 95.

MBD 95 was in progress at period end at 41.5 m in shales and siltstones. Targets for this hole are the Queen and Stanhope Dykes and target depth is 130 m.

Drilling Statistics:

HOLE NO.	N +	E +	DIP	AZI.	FROM	TO	METRES DRILLED	FINAL DEPTH
MBD 77	2357.36	1085.11	-60	45°	1630	203.0	40.0	203.0 #
MBD 78	2180.84	1358.07	-76	45°	0	224.0	224.0	224.0 #
MBD 85	980	1800	-70	180	0	110.0	110.0	110.0
MBD 86	1948.31	970.30	-50	360	0	60.0	60.0	60.0
MBD 87	1948.31	990.45	-50	360	0	58.0	58.0	58.0
MBD 88	2099.59	1219.97	-60	180	0	140.0	140.0	140.0
MBD 89	2000.59	880.11	-75	360	0	50.0	50.0	50.0
MBD 90	1936.07	880.39	-72	180	0	196.45	196.45	196.45
MBD 91	2134.77	1379.98	-67	180	0	90.0	90.0	90.0 #
MBD 92	1939.40	971.45	-50	360	0	66.4	66.4	66.4
MBD 93	1938.96	990.06	-50	360	0	70.1	70.1	70.1
MBD 94	2075	1180	-60	180	0	83.0	83.0	83.0 #
MBD 95	2130	1460	-72	180	0	41.5	41.5	41.5 *
							1229.45	

* MBD 95 in progress at period end.

\+ Where no decimal places shown, indicates hole collar not surveyed.

\# Holes drilled by Parry Exploration Drilling.

(ii) Drilling General.

Following completion of MBD 95 early in July, the Longyear crew and gear will be leaving the site at the end of their contract. The total meterage drilled by them should be about 4370 m compared to guaranteed minimum of 4000 m.

At the recent Operating Committee meeting it was decided to pursue a close spaced drilling programme in the Greisen Face area to help determine more accurately the tin distribution on a 5 metre grid pattern. This drilling will be undertaken in July - August by Parry Exploration Drilling using HQ equipment.

(iii) Analyses from Holes reported previously.

Assay results were received for the following holes reported earlier:

MBD 83.

Drilled on Section 920E as a porphyry extension hole producing significant porphyry grades. The hole then passed into the Lower Dolomite sequence with DSL and mineralised siltstone at the base. Tin grades within the dolomite itself were low.

	FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
	53.0	65.6	12.6	0.30	PORPHYRY
Incl	55.0	60.0	5.0	0.56	PORPHYRY
	87.0	91.0	4.0	0.41	DSL
	91.0	93.0	2.0	0.76	SILTSTONE

MBD 84.

Drilled on Section 880E as a porphyry extension hole, this hole also passed into the Lower Dolomite with DSL. Porphyry grades were low and not reported previously however, the DSL grades were. All tin bearing intercepts are therefore reported below:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
63.0	71.3	8.3	0.18	PORPHYRY
88.2	94.8	6.6	0.64	DSL

MBD 24 EXTN.

Drilled on Section 920E this hole intersected the Lower Dolomite as DSL between 117.7 and 120 m. Assays were low grade ie.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
117.7	120.0	2.3	0.15	DSL

(iii) Holes reported previously Contd.

MBD 43 EXTN.

Drilled on Section 940E to explore the Lower Dolomite, this hole did not achieve a dolomite DSL intercept. However, it did terminate due to drilling difficulties 2.2 metres into a deep porphyry intercept. Assays were low grade ie.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
157.6	159.8	2.2	0.17	PORPHYRY

QUEEN VEIN (MBD 75).

Results of core grinding in the region of the Queen Vein for MBD 75 (52.0 to 67.5 m) were previously reported as indicating 11.5 m of 0.34% Sn. This core has now been split and assayed with poor correlation between grinding and splitting. Assays are now:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
56.0	59.5	3.5	0.36	QUEEN VEIN

(iv) Samples for Petrological Examination.

A request has been made for Central Mineralogical Services to return slides and polished sections used in their study on Mt. Bischoff ores, so they may be sent for a second opinion.

(v) Regional Exploration.

No activity this period.

Metallurgy:

Testing of the composites MCA (talc rich DSL) and MCC (quartz/carbonate DSL) on a 50 kg scale was continued. Processing is via the conventional route of grinding (to minus 315 microns), flotation to remove sulphides, gravity concentration of coarse cassiterite by tabling and recovery of fine cassiterite by flotation.

Grinding, sulphide flotation and tabling of the MCA composite was completed. Limited results available show cassiterite is well liberated at -315 microns with low tin loss to sulphide concentrate ($<$ 10%) and excellent recovery of cassiterite in tabling.

Grinding and sulphide flotation of the MCC composite was carried out but no results are available.

Metallurgy Contd:

H.W. Fander's mineralogical report on the two composites was received and was briefly as follows:

		MCA	MCC
Dominant	(> 60%)	-	pyrrhotite
Major	(30-60%)	talc, pyrrhotite	-
Minor	(10-30%)	carbonate	carbonate, quartz
Accessory	(1-10%)	cassiterite, quartz	cassiterite, sellaite, topaz
Trace	(< 1%)	pyrite, arseno-pyrite (some Bi in arseno-pyrite)	chalcopyrite, stannite (rare)

In MCA, cassiterite was mostly associated with talc and existed as grains up to 500 microns. Apparently "free" cassiterite with talc smearing or rims was frequently observed, emphasising the need for talc depression in sulphide flotation. Cassiterite associated with sulphides tended to be finer grained (10-150μm).

For MCC Fander commented that cassiterite may in fact be coarser grained than in MCA. Inclusions were observed in pyrrhotite, carbonate, sellaite, talc and quartz.

Mining:

Meetings were held during the month to assess the potential problems associated with mining ore reserve estimation and general mine planning resulting from the apparent lack of grade continuity between close spaced holes.

As a result of these meetings a further programme of close spaced drilling (to 5 metres) was agreed upon for the Greisen Face area. This region represents ore with good metallurgical response and logical early development. In addition, the possible need for additional delineation drilling on some sections and possible second series of close spaced holes in another area was recognised.

This information would be required to:

- Permit detailed specification of the overall reserve for mine planning, and

- Judge the confidence with which selective mining may be planned for benches in the order of 5 metres.

Engineering:

Contact was maintained with various Government Departments scheduled to supply base information to pre-feasibility estimating.

A detailed programme for engagement of, and supply of data to, an Engineering Consultant was established.

Mr. J. Stephens, Environmental Consultant, was briefed on site and initiated sampling for base line water analyses etc.

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

	JUNE 1981		9 MONTHS TO 30.6.81	
	ACTUAL $	BUDGET $	ACTUAL $	BUDGET $
Technical Services	43,951	25,930	198,511	200,660
Travel & Accommodation	1,648	700	11,329	6,300
Labour	2,559	1,550	16,248	14,100
Camp & Messing	1,218	1,300	6,557	11,100
Vehicles	1,503	1,000	8,299	8,100
Equipment Rental	250	450	800	3,900
Consumables & General	14,824	1,700	64,719	41,620
Tenement Expenses	20	500	20	1,000
Track Cutting	-	-	875	4,000
Geophysical Surveys	-	-	8,945	4,000
Diamond Drilling	169,438	41,000	363,714	340,000
Site Preparation	8,133	-	8,673	8,000
Assays	10,189	2,800	16,684	19,600
Mining studies	-	2,530	-	14,600
Metallurgical	9,835	17,300	54,317	93,400
Engineering Studies	-	5,310	-	11,620
Capital Items	-	-	43,783	38,500
	263,568	102,070	803,474	820,500

SUMMARY OF EXPENDITURE TO 30.6.81

		FINANCIAL YEAR
Stage 1	270,000	
Stage 2A - Early Start	29,020	
Stage 2A	198,818	
Overruns: Stage 1 - M.E.L.	11,308	
Metallurgical - CRAE	23,500	
Stage 2B	482,354	18,121
Stage 2B - 3A Holding Costs Offset - A.I.R. & D. Grant	40,000	40,000
Stage 3A - Partly offset by A.I.R & D Grant received in June - $6500	803,474	803,474
CUMULATIVE EXPENDITURE TO DATE	1,858,474	861,595

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

. EL 13/79

	JUNE 1981	NINE MONTHS TO 31.6.81.
Technical Services	43,931	173,637
Travel & Accommodation	1,648	10,187
Labour	2,559	15,728
Camp & Messing	1,218	6,430
Vehicles	1,503	8,225
Equipment Rental	250	800
General Expenses & Consummables	14,844	58,248
Track Cutting	-	875
Diamond Drilling	169,438	326,575
Metallurgical	9,835	54,302
Assays	10,189	16,684
Capital Items		43,523
Geophysical Surveys		3,979
Site Preparation	6,981	6,981
	262,396	726,174

MT. BISCHOFF PROJECT

STAGE 3A EXPENDITURE

AP 5/80

	JUNE 1981	NINE MONTHS TO 31.6.81.
Technical Services	20	24,874
Travel & Accommodation		1,144
Labour		519
Camp & Messing		
General Expenses & Consummables		6,690
Geophysical Surveys		4,966
Diamond Drilling		37,140
Site Preparation	1,152	1,692
Assays		15
Capital Items		260
	1,172	77,300

832283

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

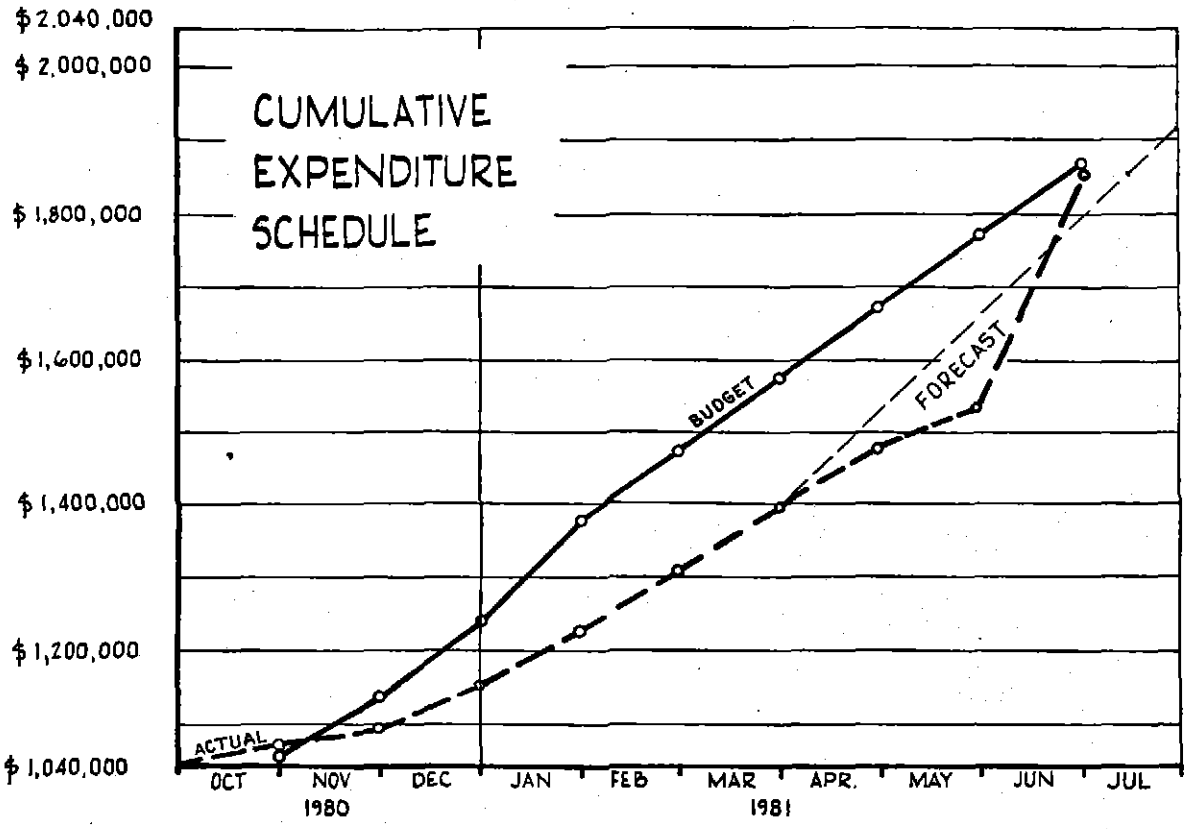
CUMULATIVE CAPITAL EXPENDITURE

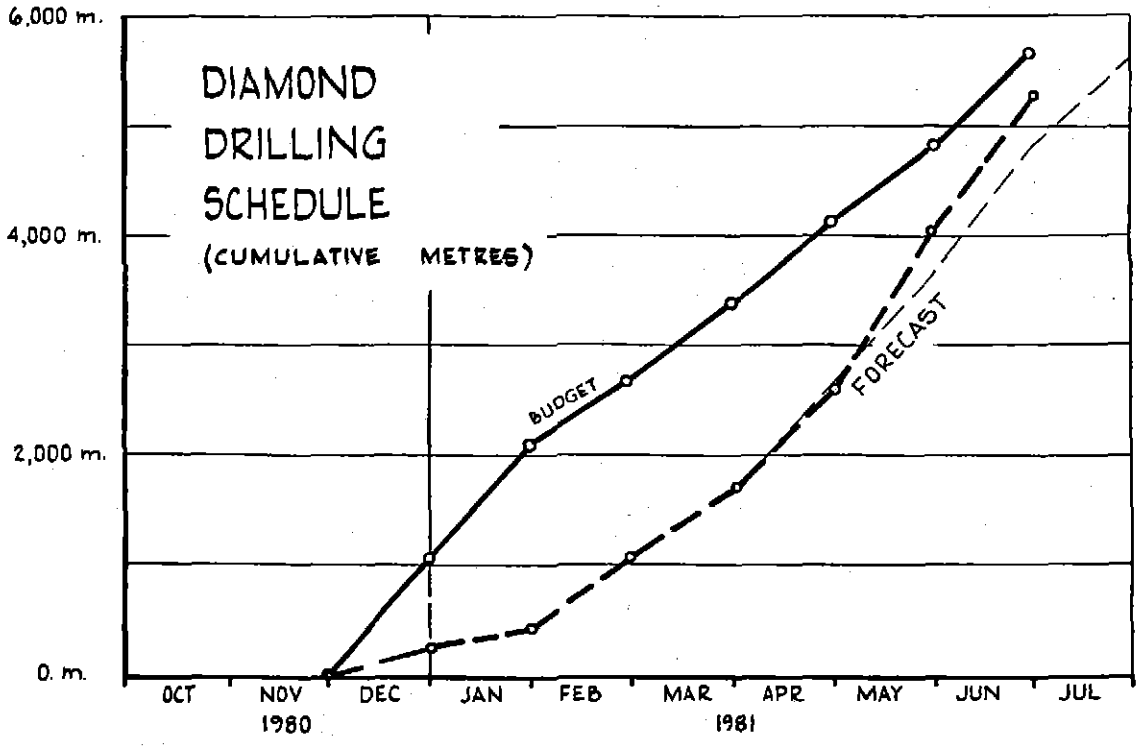
		AS AT 31.5.81	JUNE 1981 EXPENDITURE	AS AT 30.6.81
STAGE 1 & 2	Core Shed	$15,295	-	$15,295
	Concrete Foundations	$ 2,100	-	$ 2,100
		$17,395		$17,395
STAGE 3A	Core Shed	$ 8,660	-	$ 8,660
	Accommodation Unit	$32,500	-	$32,500
	TOTAL	$58,555	-	$58,555

Beneficial Ownership - As at 30th. June, 1981.

C.R.A. $25 \times \frac{100}{85} = 29.4\%$

M.E.L. $60 \times \frac{100}{85} = 70.6\%$





MT. BISCHOFF

STAGE 3A SUMMARY
as at 30·6·81

Rev 30.5.81 Drg No. 80-119

832285 276

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 77

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		N	E	
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag

G.N.(2) _____ mag

G.N.(3) _____ mag

T.N. _____ mag

1:250 000 Sheet No. SK55-3

1:100 000 Sheet No. 8015

State Tasmania

Mineral Tenement E.L. 13/79

Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -60°

Total length 203 m

Commenced: 21 / 5 / 81

Completed: 3 / 6 / 81

Drilling contractor: PARRY EXPLORATION DRILLING.

Rig type: BOYLES 37

Details of down hole location-survey methods.

Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.

To test the Queen Porphyry between 155 m and 165 m.

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	81.0
BQ	81.0	TO	203
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
21 m	014°	59°
61 m	in casing	61°
91 m	018°	62°
121 m	019°	64½°
151 m	021°	65½°
181 m	020°	66°
202 m	021°	66°

Comments on drilling. Cemented from 13.0 - 27 m. Drilled out of side of cement at 19.0 m.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 3.0 TO 203.0 DATE 8/6/81

LOGGED BY _____ FROM _____ TO _____ DATE _____

LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 77

Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UN. Depth Description and notes (CAPITAL LETTERS, UNDERLINED; INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

INTERVAL	DEPTH from - to : ROCK UN. Depth Description and notes	GRAPHIC LOG	MINERALISATION
3.0	0 - 3.0 TRICONE. No core.		
13.1	3.0 - 16.1 QUARTZITE, SILTSTONE. Fine, light grey qtzite and siltstone - interbedded in beds 1-5 cm thick. Rare thin qtz veins, some with cassiterite.	11/10	trace cassiterite in qtz veins.
1.9	16.1 - 18.0 SHALE, SILTSTONE - very broken.	9/10	no apparent mineralisation.
9.5	18.0 - 27.5 SHALE, lesser SILTSTONE. Thin bedded shale and siltstone. 21.2 - 21.4 Breccia with angular sediment and porphyry fragments.	9/10	trace cassiterite in rare veins with qtz.
	27.5 - 61.7 QUARTZITE, lesser SILTSTONE. Light grey interbedded quartzite and siltstone. Common py veins and stringers. Rare qtz veins and stringers, some with cassiterite. Py also disseminated in qtzite, or as thin layers parallel to bedding.	11/10	py, cass. trace. py in veins and stringers, cass in qtz veins.
12.3	61.7 - 73.0 SILTSTONE, lesser QUARTZITE. Mainly light grey, soft siltstone with lesser qtzites. Beds usually 2-5 cm.	10/11	py in rare veins and stringers from 67.3.
0.9	73.0 - 73.9 PORPHYRY. Altered green matrix.	1	10% dissem. py.
78.7	73.9 - 152.6 SILTSTONE, lesser QUARTZITE. Thinly interbedded siltstone and fine qtzite, weakly disrupted in parts. Occasional py veins and stringers. Rare qtz veins. Rare breccia zones.	10/	py, arsenopy, cass. py and arsenopy in occasional veins and stringers. Cassiterite in rarer veins with qtz. Zones with no cassiterite as follows: 73.9 - 99.0 116.5 - 123.5

5 cm

CONTINUED NEXT PAGE.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 77

LOG SHEET 1 OF 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UN — CAPITAL LETTERS, UNDERLINED Depth : Description and notes INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

CONTINUED FROM PREVIOUS PAGE.

120

123.5
py, cass, arsenopy - TRACE in veins and stringers. Cass. with qtz veins.

140

152.6 - 153.3 QUEEN VEINS. Massive qtz - py vein. | 9b | 20% py, arsenopy in vein.

153.3 - 182.4 SILTSTONE, QUARTZITE.
Interbedded light grey siltstone and qtzite. Moderately disrupted in parts. Occasional py and qtz veins and stringers. | 10/11 | trace py in occasional veins and stringers.

160

180

35°

11.8 | 182.4 - 194.2 PORPHYRY.
Altered grey translucent matrix phenocrysts - 10% qtz to 5 mm dia.
- feldspars replaced by sulphide.
Occasional veins of py with minor qtz and arsenopy. | 1 | py>> arsenopy - 15%
py coarsely disseminated and as occasional veins.
minor arsenopy in veins.

45°

8.8 | 194.2 - 203.0 SILTSTONE, minor QUARTZITE. | 10/11 | trace py in occasional veins and stringers.

200

END OF HOLE: 203.0 m

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 77

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	121725	3.0	5.0	2.0		90								
	26	5.0	7.0	"		55								
	27	7.0	9.0	"		170								
	28	9.0	11.0	"		75								
	29	11.0	13.0	"		240								
	730	13.0	15.0	"		140								
	31	15.0	17.6	2.6		2850								
	121732	18.8	20.8	2.0		85								
	33	20.8	22.8	"		160								
	34	22.8	24.2	1.4		1800								
	121735	27.0	29.0	2.0		100								
	36	29.0	31.0	"		75								
	37	31.0	33.0	"		50								
	38	33.0	35.0	"		40								
	39	35.0	37.0	"		220								
	740	37.0	39.0	"		30								
	41	39.0	41.0	"		130								
	42	41.0	43.0	"		90								
	43	43.0	45.0	"		X								
	44	45.0	47.0	"		380								
	45	47.0	49.0	"		110								
	46	49.0	51.0	"		100								
	47	51.0	53.0	"		620								
	48	53.0	55.0	"		860								
	49	55.0	57.0	"		5650								
	750	57.0	59.0	"		110								
	51	59.0	61.0	"		50								
	52	61.0	63.0	"		X								

Notes:— XRF 214 method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 77

SAMPLE TYPE : DRILL CORE (ground) FROM 3.0 TO 63.0

8322888

279

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	121753	63.0	65.0	2.0		15								
	54	65.0	67.0	"		45								
	55	67.0	69.0	"		65								
	56	69.0	71.0	"		950								
	57	71.0	72.4	1.4		70								
124000		72.4	73.4	1.0	75									
01		73.4	73.9	0.5	300									
02		73.9	74.9	1.0	80									
	121758	74.9	76.9	2.0		60								
	59	76.9	78.9	"		30								
	760	78.9	80.9	"		40								
	61	80.9	82.9	"		70								
	62	82.9	84.9	"		35								
	63	84.9	86.9	"		X								
	64	86.9	88.9	"		45								
	65	88.9	90.9	"		10								
	66	90.9	92.9	"		35								
	67	92.9	94.9	"		4350								
	68	94.9	96.9	"		45								
	69	96.9	98.9	"		60								
	770	98.9	100.9	"		150								
	71	100.9	102.9	"		460								
	72	102.9	104.9	"		1450								
	73	104.9	106.9	"		2450								
	74	106.9	108.9	"		100								
	75	108.9	110.9	3.0		100								
	76	110.9	112.9	2.0		150								
	77	112.9	114.9	2.0		290								
	78	114.9	116.9	"		830								
	79	116.9	118.9	"		460								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 77

SAMPLE TYPE : DRILL CORE FROM 63.0 TO 118.9

Split/ Ground

832289

280

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	121780	118·9	120·9	2·0		110								
	81	120·9	122·9	"		90								
	82	122·9	124·9	"		110								
	83	124·9	126·9	"		220								
	84	126·9	128·9	"		220								
	85	128·9	130·9	"		230								
	86	130·9	132·9	"		1800								
	87	132·9	134·9	"		140								
	88	134·9	136·9	"		70								
	89	136·9	138·9	"		55								
	790	138·9	140·9	"		50								
	91	140·9	142·9	"		130								
	92	142·9	144·9	"		370								
	93	144·9	146·9	"		450								
	94	146·9	148·9	"		700								
	95	148·9	150·9	"		1700								
	96	150·9	152·9	"		2000								
	97	152·9	154·9	"		4100								
	98	154·9	156·9	"		3100								
	99	156·9	158·9	"		150								
	124100	158·9	160·9	"		90								
	01	160·9	162·9	"		170								
	02	162·9	164·9	"		110								
	03	164·9	166·9	"		75								
	04	166·9	168·9	"		60								
	05	168·9	170·9	"		55								
	06	170·9	172·9	"		270								
	07	172·9	174·9	"		150								
	08	174·9	176·9	"		480								
	09	176·9	178·9	"		130								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBO 77

SAMPLE TYPE : DRILL CORE (ground) FROM 118·9 TO 178·9

832290

281

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124110	178·9	181·5	2·6		85								
124013		181·5	182·5	1·0	170									
14		182·5	183·5	"	170									
15		183·5	184·5	"	1450									
16		184·5	185·5	"	390									
17		185·5	186·5	"	220									
18		186·5	187·5	"	240									
19		187·5	188·5	"	3300									
020		188·5	189·5	"	280									
21		189·5	190·5	"	120									
22		190·5	191·5	"	190									
23		191·5	192·5	"	350.									
24		192·5	193·5	"	150									
25		193·5	194·2	0·7	690									
26		194·2	195·2	1·0	490									
	124111	195·2	197·2	2·0		220								
	12	197·2	199·2	"		120								
	13	199·2	201·2	"		120								
	14	201·2	203·2	"		160								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 77

SAMPLE TYPE : DRILL CORE (split) FROM 178·9 TO 203·2

8322291

282

832292 283

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 78

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	2180.84 N	1358.07 E	695.02
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -76°
Total length 224.0 m
Commenced: 4 / 6 / 81
Completed: 19 / 6 / 81

Drilling contractor: PARRY EXPLORATION DRILLING.
Rig type: BOYLES 37

Details of down hole location-survey methods: Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets: Test the Queen Dyke Porphyry from 105-110 m.

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	224.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
20 m	015	77
50 m	013	77½
80 m	019	77½
110 m	018	78
140 m	022	78
170 m	018	78
194 m	024	79½
224 m	017	80

Comments on drilling.

Legend for graphic log column — FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 224.0	FROM TO	FROM TO
DATE	DATE	DATE

Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 78
Log sheet 1 of 1

832293 284

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0		0 - 3.0: TRICONE, no core.						
		3.0 - 29.5: SILTSTONE, QUARTZITE. Moderately to strongly disrupted in parts. Siltstone and quartzite interbedded on scale of 1 - 5 cm. Rare thick qtzite. Minor py veins.		10/ 11		py - trace in veins and stringers.		
46.7		29.5 - 76.2: QUARTZITE, lesser SILTSTONE. Mainly thick, massive quartzite beds up to 3.0 m. Minor siltstone occurs between quartzite and also interbedded thinly with qtzite. Occasional py veins.		11/ 10		py, sph trace in thin veins and stringers.		
51.1		76.2 - 127.3: QUARTZITE, SILTSTONE. Moderately disrupted in parts. Interbedded siltstone and quartzite. Beds usually 1 - 5 cm, with occasional qtzite beds to 1.5 m. Py veins common. 103.4 - 104.0: clay? Fault Pug? 5 cm		11/		trace py in veins and stringers.		

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL". D.A. BERKMAN & W.R. RYALL (EDS.). MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1978
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 78

LOG SHEET 2 OF 3

832294 285

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 · AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

120

140

160

180

200

220

240

127.3 - 139.4: QUARTZITE, minor SILTSTONE. Mainly massive, fine qtzite, in beds 30 - 80 cm thick, with minor thin siltstone beds.		11/ 10		py trace in thin veins and stringers also occasionally disseminated through quartzite.
139.4 - 147.5: SILTSTONE, lesser QUARTZITE. Moderately disrupted in parts. Thinly interbedded siltstone and qtzite. Beds usually < 2 cm.		10/ 11		trace py in rare veins and stringers.
147.5 - 165.0: QUARTZITE, SILTSTONE. Weakly disrupted in parts. Rythmically interbedded fine quartzite and siltstone (2 - 5 cm beds). Occasional thicker qtzite.		10/ 11		trace py in thin veins and stringers.
165.0 - 183.3: SHALE, SILTSTONE, lesser QUARTZITE. Moderately disrupted in parts. Thinly interbedded light grey shale and siltstone, with lesser fine quartzite.		9/10/ 11		trace py in thin veins and stringers.
183.3 - 219.3: PORPHYRY. Matrix mainly translucent grey/brown. Strongly sensitized in parts. 7 - 10% qtz. phenocrysts to 7 mm. Py - coarsely disseminated and as veins.		1		10% py - as coarsely disseminated grains, and occasional veins.
219.3 - 224.0: QUARTZITE, lesser SILTSTONE. Moderately disrupted, mainly fine quartzite in < 30 cm beds, with lesser thinner siltstone.		11/		
END OF HOLE 224.0 m.				

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 78

LOG SHEET 3 OF 3

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124161	3·0	5·0	2·0		X								
	62	5·0	7·0	"		X								
	63	7·0	9·0	"		X								
	64	9·0	11·0	"		10								
	65	11·0	13·0	"		10								
	66	13·0	15·0	"		X								
	67	15·0	17·0	"		X								
	68	17·0	19·0	"		20								
	69	19·0	21·0	"		20								
	170	21·0	23·0	"		35								
	71	23·0	25·0	"		80								
	72	25·0	27·0	"		220								
	73	27·0	29·0	"		730								
	74	29·0	31·0	"		560								
	75	31·0	33·0	"		290								
	76	33·0	35·0	"		140								
	77	35·0	37·0	"		90								
	78	37·0	39·0	"		210								
	79	39·0	41·0	"		170								
	180	41·0	43·0	"		170								
	81	43·0	45·0	"		590								
	82	45·0	47·0	"		490								
	83	47·0	49·0	"		310								
	84	49·0	51·0	"		810								
	85	51·0	53·0	"		330								
	86	53·0	55·0	"		640								
	87	55·0	57·0	"		990								
	88	57·0	59·0	"		410								
	89	59·0	61·0	"		620								
	190	61·0	63·0	"		330								

Notes :— XRF 214 method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 78

SAMPLE TYPE : DRILL CORE FROM 30 TO 630

Ground

8229528

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124191	63.0	65.0	2.0		340								
	92	65.0	67.0	"		7300								
	93	67.0	69.0	"		970								
	94	69.0	71.0	"		880								
	95	71.0	73.0	"		1300								
	96	73.0	75.0	"		2600								
	97	75.0	77.0	"		1150								
	98	77.0	79.0	"		4200								
	99	79.0	81.0	"		420								
	124200	81.0	83.0	"		490								
	01	83.0	85.0	"		830								
	02	85.0	87.0	"		2400								
	03	87.0	89.0	"		170								
	04	89.0	91.0	"		100								
	05	91.0	93.0	"		65								
	06	93.0	95.0	"		55								
	07	95.0	97.0	"		60								
	08	97.0	99.0	"		55								
	09	99.0	101.0	"		180								
	210	101.0	103.0	"		290								
	11	103.0	105.0	"		65								
	12	105.0	107.0	"		65								
	13	107.0	109.0	"		590								
	14	109.0	111.0	"		420								
	15	111.0	113.0	"		120								
	16	113.0	115.0	"		65								
	17	115.0	117.0	"		200								
	18	117.0	119.0	"		270								
	19	119.0	121.0	"		1900								
	220	121.0	123.0	"		540								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 78

SAMPLE TYPE : DRILL CORE (ground) FROM 630 TO 1230

8322962871

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	1E4221	1230	1250	2.0										
	E2	1250	1270	"										
	E3	1270	1290	"										
	E4	1290	1310	"										
	1E4228	1310	1330	"										
	E9	1330	1350	"										
	E30	1350	1370	"										
	31	1370	1390	"										
	32	1390	1410	"										
	33	1410	1430	"										
	34	1430	1450	"										
	35	1450	1470	"										
	36	1470	1490	"										
	37	1490	1510	"										
	38	1510	1530	"										
	39	1530	1550	"										
	E40	1550	1570	"										
	41	1570	1590	"										
	42	1590	1610	"										
	43	1610	1630	"										
	44	1630	1650	"										
	45	1650	1670	"										
	46	1670	1690	"										
	47	1690	1710	"										
	48	1710	1730	"										
	49	1730	1750	"										
	E50	1750	1770	"										
	51	1770	1790	"										
	52	1770	1810	"										
	53	1810	1823	1.3										

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBO 78

SAMPLE TYPE : DRILL CORE (ground) FROM 1230 TO 1823

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124560		182.3	183.3	1.0	460									
61		183.3	184.3	"	700									
62		184.3	185.3	"	140									
124536		185.3	186.3	"	200									
37		186.3	187.3	"	1200									
38		187.3	188.3	"	290									
39		188.3	189.3	"	120									
540		189.3	190.3	"	720									
41		190.3	191.3	"	770									
42		191.3	192.3	"	1250									
43		192.3	193.3	"	430									
44		193.3	194.3	"	2400									
45		194.3	195.3	"	460									
46		195.3	196.3	"	85									
47		196.3	197.3	"	370									
48		197.3	198.3	"	560									
49		198.3	199.3	"	510									
550		199.3	200.3	"	410									
51		200.3	201.3	"	410									
52		201.3	202.3	"	690									
53		202.3	203.3	"	290									
54		203.3	204.3	"	590									
55		204.3	205.3	"	260									
56		205.3	206.3	"	140									
57		206.3	207.3	"	200									
58		207.3	208.3	"	460									
59		208.3	209.3	"	300									
560		209.3	210.3	"	320									
61		210.3	211.3	"	200									
62		211.3	212.3	"	300									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. mBO 78

SAMPLE TYPE : DRILL CORE FROM 182.3 TO 212.3

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124563		212.3	213.3	1.0	290									
64		213.3	214.3	"	360									
65		214.3	215.3	"	370									
66		215.3	216.3	"	410									
67		216.3	217.3	"	1000									
68		217.3	218.3	"	990									
69		218.3	219.3	"	250									
570		219.3	220.3	"	290									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 78

SAMPLE TYPE : DRILL CORE FROM 212.3 TO 220.3

832300 291

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 79

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1) _____ 2051.17 N 1379.40 E 695.83

(2) _____ N E

(3) Aust. Map Grid (PRECISE / APPROX.) _____ mE _____ mN _____ m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag

G.N.(2) _____ mag

G.N.(3) _____ mag

T.N. _____ mag

1:250 000 Sheet No. SK55-3

1:100 000 Sheet No. 8015

State Tasmania

Mineral Tenement E.L. 13/79

Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -66°

Total length 40.1 m

Commenced: 6 / 5 / 81

Completed: 7 / 5 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.

Rig type: 44

Details of down hole location-survey methods.

Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.

To test the Stanhope Porphyry from 15 m to 30 m.

Core size and non-coring (NC)

TRICONE	0	TO	1.0
NQ	1.0	TO	40.1
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
37 m	146°	67°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 40.0 DATE 10/5/81

LOGGED BY _____ FROM _____ TO _____ DATE _____

LOGGED BY _____ FROM _____ TO _____ DATE _____

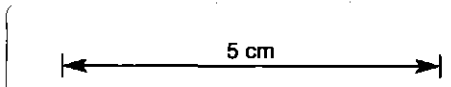
Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 79

Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth · Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.0	0 - 1.0: TRICONE - no core.						
	0.4	1.0 - 1.4: PORPHYRY. Grey matrix, may be rubble.		2		py 15% disseminated.		
	10.3	1.4 - 11.7: SHALE, lesser SILTSTONE, minor QUARTZITE. Moderately to strongly disrupted. Dark grey shale, with lesser siltstone, increasing to 11.7. Minor thin, strongly disrupted qtzite.		9/ 10/ 11		trace py in stringers and thin "beds"		
10								
	16.9	11.7 - 28.6: PORPHYRY. 11.7 - 23.1: Weathered porphyry. Matrix milky white, to reddish. 15% qtz phenocrysts to 5 mm. Feldspars and sulphides mainly weathered out.		1		trace py - relict disseminated grains.		
20		23.1 - 28.6: Matrix grey, translucent. 15% qtz phenocrysts to 5 mm.				py 15% coarsely disseminated minor sph disseminated.		
	11.5	28.6 - 40.1: QUARTZITE, SILTSTONE, minor SHALE. Moderately disrupted in parts. Thinly bedded qtzite and siltstone - bedding < 1 cm. Minor black shaley beds.		11/ 10/ 9		py >> cass. py - rare veins and stringers trace cassiterite? in py veins.		
30								
40		END OF HOLE 40.1 m.						



FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 79

LOG SHEET 2 OF 2

832302 293

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 82

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1) _____ 1961.75 N 1080.03 E 643.47

(2) _____ N E

(3) Aust. Map Grid (PRECISE / APPROX.) _____ mE _____ mN _____ m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) 330° mag

G.N.(2) _____ mag

G.N.(3) _____ mag

T.N. 360° mag

1:250 000 Sheet No. SK55-3

1:100 000 Sheet No. 8015

State Tasmania

Mineral Tenement E.L. 13/79

Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -64°

Total length 121.4

Commenced: 20 / 5 / 81

Completed: 22 / 5 / 81

Drilling contractor: LONGYEAR AUST. P/L

Rig type: LONGYEAR 44

Details of down hole location-survey methods: Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets: To test dolomite from 0 - 40 m, and intersect White Face Porphyry from 85 m - 105 m. Total depth anticipated 120.0 m.

Core size and non-coring (NC)

TRICONE	0	TO	1.5
HQ	1.5	TO	8.5
NQ	8.5	TO	58.5
BQ	58.5	TO	121.4
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30 m	in casing (po rich)	64°
60 m	166°	64°
90 m	151°	64°
120 m	154½°	64 3/4°

Comments on drilling: Rig push off-line during drilling. 3 m HQ casing & casing shoe left in hole.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 121.4 DATE 29/5/81

LOGGED BY _____ FROM _____ TO _____ DATE _____

LOGGED BY _____ FROM _____ TO _____ DATE _____

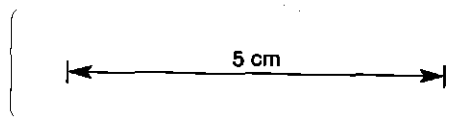
Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 82

Log sheet 1 of 2

832303 294

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (capital letters, underlined) Depth Description and notes (indented about 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0		0.0 - 1.5: NO CORE.						
		1.5 - 2.7: DOLOMITE SULPHIDE LODE-mainly wrigglite.		8/5		15% py - irregular veins.		
	5.4	2.7 - 8.1: RECRYSTALLIZED DOLOMITE. Pale mottled grey/green recrystallized dolomite. Occasion small patches of talc.		3		po> sph 3 - 5% po as small aggregates and veins sph diss. through carbonate veins		
	2.0	8.1 - 10.8: DOLOMITE SULPHIDE LODE - 45% talc 40% qtz. carb.		6/8/4		15% po-irregular aggregates & veins.		
	1.7	10.1-11.8: SHALE-dark chloritic shale, disrupted.		9		no apparent mineralization.		
20	21.9	11.8 - 33.7: SILTSTONE, MINOR SHALE. Mainly grey, silicified siltstone, weakly dolomitic, with minor black shale. Strongly disrupted in parts.		10/9		po, py trace in veins and stringers.		
	3.9	33.7 - 37.6: DOLOMITE, RECRYSTALLIZED DOLOMITE. Pale grey fine dolomite with veins and patches of cream recrystallized dolomite.		2/3		po - 1-2% in occasional stringers and disseminated grains.		
40	18.3	37.6 - 55.9: DOLOMITE SULPHIDE LODE. 37.6 - 46.0: 60% bronze pyrrhotite 30% qtz - carbonate 10% serpentine/talc		4/8/6		po - irregular aggregates, bands and veins 60%		
		46.0 - 55.9: 40% bronze pyrrhotite 50% mid-green talc 10% qtz - carbonate		4/6/8		po>>py po - irregular bands and aggregates py - occasional veins and diss. grains through po. 40%		
60	28.3	55.9 - 84.2: PORPHYRY. Translucent grey/white matrix. 15% qtz phenocrysts to 5 mm. 25% feldspar phenocrysts to 8 mm, totally replaced by sulphide. Minor disseminated, fluorite. Rare veins po.	50%	1		20-25% pyrrhotite, py - coarsely diss. replacing feldspars. Also rare veins of po, py.		
80	1.1	84.2 - 85.3: DOLOMITE SULPHIDE LODE. 75% po, 20% qtz - carbonate.	60%	4/8		75% pyrrhotite - aggregates and bands.		
	21.1	85.3 - 106.4: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Pale grey, finely crystalline dolomite, with minor veins of recrystallized dolomite. Abundant thin veins of black material.  		2/3		py trace in rare veins and stringers.		
100	15.0	106.4 - 121.4: QUARTZITE, lesser SILTSTONE, minor SHALE. Moderately disrupted in parts. Siliceous qtzite in beds up to 1.2 m, thinner siltstone and minor shale. Occasional qtz and py veins and stringers.		11/10/9		py trace in rare veins and stringers.		
120		END OF HOLE 121.4				FOR LEGEND SEE DRAWING NO.		

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 82

LOG SHEET 2 OF 2

832304 295

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 86

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1)	1948.31 N	970.3 E	644.16
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -50°
Total length 60.0 m
Commenced: 5 / 6 / 81
Completed: 6 / 6 / 81

Drilling contractor: LONGYEAR AUST. P/L
Rig type: LONGYEAR 44

Details of down hole location-survey methods.
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets.
To test the ore variability of thick dolomite sulphide lode horizon. Anticipated depth 50 m.

Core size and non-coring (NC)

TRICONE	0	TO	4.0
NQ	4.0	TO	60.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
28 m	345	50½
58 m	323	51°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON
FROM 0 TO 50.0
DATE 16/6/81

LOGGED BY _____
FROM _____ TO _____
DATE _____

LOGGED BY _____
FROM _____ TO _____
DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

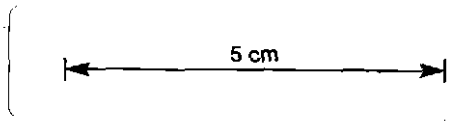
SUMMARY LOG

HOLE No. MBD 86
Log sheet 1 of 2

832305 296

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	4.0	0 - 4.0: TRICONE. No core.						
	1.1	4.0 - 5.1: DOLOMITE SULPHIDE LODE - "wrigglite"				10% irregular py		
	6.7	5.1 - 11.8: ALTERED DOLOMITE, lesser RECRYSTALLIZED DOLOMITE. Grey, finely crystalline dolomite with irregular patches of coarsely crystalline cream dolomite, with minor qtz, sulphide, fluorite and talc.		2/3		py, py, fluorite - 3% po and py as irregular blobs and disseminated through recrystallized dolomite.		
	5.6	11.8 - 17.4: RECRYSTALLIZED DOLOMITE, lesser DOLOMITE. Coarsely recrystallized mottled grey dolomite (lesser fine dolomite as corestones.		3/2		po> py 15% po coarsely disseminated and as occasional aggregates. py - coarse aggregates.		
20	3.8	17.4 - 21.2: DOLOMITE SULPHIDE LODE. 45% qtz carb, 30% pyrrhotite, 20% py, 5% talc.		8/4/5		30% pyrrhotite, coarsely diss. 20% py - irregular veins and agg.		
	1.9	21.2 - 23.1: DOLOMITE, RECRYSTALLIZED DOLOMITE.		2/3		po-py 1-2% disseminated.		
	31.4	23.1 - 54.5: DOLOMITE SULPHIDE LODE. 50% bronze pyrrhotite. Varies from 20% to almost massive. 50% talc. Minor qtz carbonate.		4/6		50% pyrrhotite in irregular bands or coarsely disseminated.		
40		50.1 - 54.5: 35% qtz carbonate.						
	5.5	54.5 - 60.0: SILTSTONE. Strongly disrupted, hard, pale grey siltstone. Minor disseminated po.				po, py - 5-7% po - disseminated and in stringers. py - in veins, increasing with depth.		
60		END OF HOLE 60.0 m.						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", G.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.



FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 86

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124081		4.0	5.0	1.0	1400									
82		5.0	6.0	"	4350									
83		6.0	7.0	"	340									
84		7.0	8.0	"	300									
085		8.0	9.0	"	110									
86		9.0	10.0	"	170									
87		10.0	11.0	"	95									
88		11.0	12.0	"	65									
89		12.0	13.0	"	120									
090		13.0	14.0	"	320									
91		14.0	15.0	"	85									
92		15.0	16.0	"	190									
93		16.0	17.4	1.4	1050									
94		17.4	18.0	0.6	2350									
95		18.0	19.0	"	25									
96		19.0	20.0	"	20									
97		20.0	21.1	1.1	370									
98		21.1	22.0	0.8	1500									
99		22.0	23.0	1.0	70									
124100		23.0	24.2	1.2	55									
01		24.2	25.0	0.8	9450									
02		25.0	26.0	1.0	460									
03		26.0	26.9	0.9	1750									
04		26.9	28.0	1.1	X									
05		28.0	29.0	1.0	35									
06		29.0	30.0	"	X									
07		30.0	31.0	"	X									
08		31.0	32.0	"	X									
09		32.0	33.0	"	X									
910		33.0	34.0	"	15									

Notes:— XRF 014 method

X = <4

832306

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 86

SAMPLE TYPE : DRILL CORE FROM 4.0 TO 34.0

[redacted] NO.	[redacted] NO	[redacted] ON	[redacted] O	[redacted] TER. VAL	[redacted] Sn	[redacted] Sn	Cu [redacted]	Pb [redacted]	Zn [redacted]	[redacted] g	W [redacted]	Au [redacted]	Check Sn [redacted]	Bulked Assays [redacted]
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
12/1911		34.0	35.0	1.0	10									
12		35.0	36.0	"	X									
13		36.0	37.0	"	410									
14		37.0	38.0	"	3.98%									
15		38.0	39.0	"	1.40%									
16		39.0	40.0	"	2.35%									
17		40.0	41.0	"	1.20%									
18		41.0	42.0	"	4400									
19		42.0	43.0	"	740									
920		43.0	44.0	"	380									
21		44.0	45.0	"	110									
22		45.0	46.0	"	90									
23		46.0	47.0	"	290									
24		47.0	48.0	"	3200									
25		48.0	49.0	"	6250									
26		49.0	50.0	"	1450									
27		50.0	51.0	"	1500									
28		51.0	52.0	"	820									
29		52.0	52.8	0.8	430									
930		52.8	53.5	0.7	190									
31		53.5	54.5	1.0	350									
32		54.5	55.5	"	1000									
33		55.5	56.5	"	4550									

Notes :—

832307

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 86

SAMPLE TYPE : DRILL CORE FROM 34.0 TO 56.5

298

832308 299

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 87

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	1948.31 N	990.45 E	643.76
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -50°

Total length 58.0

Commenced: 6 / 6 / 81
Completed: 7 / 6 / 81

Drilling contractor: LONGYEAR AUST. P/L

Rig type: LONGYEAR 44

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test ore variability in talc-pyrrhotite DSL.
Anticipated final depth 50.0 m.

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	58.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
58 m	340°	50°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 58.0	FROM TO	FROM TO
DATE 25/6/81	DATE	DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 87

Log sheet 1 of 2

832309 300

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: TRICONE - no core.						
	25.4	3.0 - 28.4: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly grey, finely crystalline dolomite, with minor patches of mottled recrystallized dolomite, and rarer dsl.		2/3		2-3% po, fluorite. minor po disseminated through veins and patches of recrystallized dolomite. Fluorite veins.		
20	9.4	28.4 - 37.8: DOLOMITE SULPHIDE LODE. Mainly 50% bronze po - weakly banded. 45% green talc. 5% qtz carbonate.		4/6		50% pyrrhotite - as weak banding, blotches and disseminated varies from ~20% to almost massive.		
		37.8 - 40.0: RECRYSTALLIZED DOLOMITE. Mottled grey colour minor DSL		3		5-10%		
40	13.8	40.0 - 53.8: DOLOMITE SULPHIDE LODE. 55% bronze pyrrhotite 40% talc 5% dark serpentine in irregular blobs.		4/6		55% po)see 28.4 - 37.8) trace arsenopy, cpy		
	2.1	53.8 - 55.9: PYRRHOTITIC SILTSTONE. Fine greenish grey siltstone.		10		po - 40% disseminated and in veins.		
	1.2	55.9 - 57.1: DOLOMITE SULPHIDE LODE. 40% talc, 30% serpentine, 15% qtz carbonate.		5/7/5 10		py, po - veins and blobs 30%		
	0.9	57.1 - 58.0: SILTSTONE. Silicified, grey, strongly disrupted.				py - veins		
		END OF HOLE 58.0 m						

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 87

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124225	30	50	20		120								
	26	50	70	"		170								
	27	70	90	"		110								
	124133	90	110	"		40								
	34	110	130	"		630								
	35	130	150	"		290								
	36	150	172	22		170								
121934		172	178	0.6	4600									
35		178	188	10	55									
36		188	198	"	1600									
37		198	208	"	2950									
38		208	218	"	150									
39		218	228	"	200									
940		228	235	0.7	350									
41		235	245	1.0	360									
42		245	255	"	110									
43		255	265	"	530									
44		265	276	1.1	25									
45		276	284	0.8	9700									
46		284	294	1.0	1.05%									
47		294	304	"	2.15%									
48		304	314	"	2.05%									
49		314	324	"	2.80%									
950		324	334	"	8150									
51		334	344	"	1.70%									
52		344	358	1.4	1.25%									
53		358	368	1.0	3550									
54		368	374	0.6	4850									
55		374	379	0.5	760									
56		379	389	1.0	830									

Notes :— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. mBO 67

SAMPLE TYPE : DRILL CORE (Grand) FROM 30 TO 389

8323103 01

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121957		38.9	39.9	1.0	250									
58		39.9	40.4	0.5	1.65%									
59		40.4	41.4	1.0	3000									
960		41.4	42.4	"	2200									
61		42.4	43.4	"	2.85%									
62		43.4	44.4	"	2.65%									
63		44.4	45.4	"	5.85%									
64		45.4	46.4	"	2.40%									
65		46.4	47.4	"	4.15%									
66		47.9	48.4	"	5600									
67		48.4	49.4	"	3350									
68		49.4	50.4	"	2200									
69		50.4	51.4	"	315%									
970		51.4	52.4	"	4.60%									
71		52.4	53.9	1.5	1100									
72		53.9	54.9	1.0	270									
73		54.9	55.9	"	85									
74		55.9	57.1	1.2	100									
75		57.1	58.0	0.9	170									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 87

SAMPLE TYPE : DRILL CORE FROM 38.9 TO 58.0

832311 302

832312

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 89

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1)	2000.59 N	880.11 E	666.27	
(2)	N	E		
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.	

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -75°
Total length 50.0 m
Commenced: 11 / 6 / 81
Completed: 12 / 6 / 81
Drilling contractor: LONGYEAR AUST P/L
Rig type: LONGYEAR 44

Details of down hole location-survey methods.
Not Surveyed.
(Camera unservicable)

Purpose of drilling and anticipated lengths to targets.
Exploration hole to test possible extension of dolomite sulphide lode.

Core size and non-coring (NC)

TRICONE	0 TO 1.5	
NQ	1.5 TO 50.0	
	TO	
	TO	
	TO	
	TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 50.0	FROM TO	FROM TO
DATE 25/6/81	DATE	DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 89
Log sheet 1 of 2

832313 304

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth · Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.5	0 - 1.5: TRICONE - no core.						
	17.4	1.5 - 18.9: SILTSTONE, lesser SHALE, minor QUARTZITE. Strongly disrupted. Mainly grey siltstone and lesser darker shale. Occasional qtzite layers up to 2 cm. Occasional carbonate veins and stringers.				py >> sph trace. rare thin veins of py, some with minor sph.		
20	31.1	18.9 - 50.0: SILTSTONE, QUARTZITE. Moderately disrupted in parts. Fine grained qtzite and siltstone, in beds up to 20 cm. Common carbonate stringers. Occasional py veins.				py >> sph > cass? trace in veins.		
40								
		END OF HOLE 50.0 m.						
60								

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 89

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124137	1.5	3.5	2.0		45								
	38	3.5	5.5	"		45								
	39	5.5	7.5	"		50								
	140	7.5	9.5	"		45								
	41	9.5	11.5	"		25								
	42	11.5	13.5	"		45								
	43	13.5	15.5	"		65								
	44	15.5	17.5	"		45								
	45	17.5	19.5	"		45								
	46	19.5	21.5	"		55								
	47	21.5	23.5	"		140								
	48	23.5	25.5	"		160								
	49	25.5	27.5	"		180								
	150	27.5	29.5	"		340								
	51	29.5	31.5	"		80								
	52	31.5	33.5	"		400								
	53	33.5	35.5	"		2500								
	54	35.5	37.5	"		50								
	55	37.5	39.5	"		200								
	56	39.5	41.5	"		310								
	57	41.5	43.5	"		1150								
	58	43.5	45.5	"		90								
	59	45.5	47.5	"		40								
	160	47.5	50.0	2.5		55								

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 89

SAMPLE TYPE : DRILL CORE FROM 1.5 TO

Grand

832314305

832315 306

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 90

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1936.07 N	880.39 E	640.28
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		m E	m N	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -72°
Total length 196.45 m
Commenced: 13 / 6 / 81
Completed: 22 / 6 / 81

Drilling contractor
LONGYEAR AUST. PTY. LTD.
Rig type
LONGYEAR 44

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test White Face Porphyry from 120 m to 150 m.

Core size and non-coring (NC)

TRICONE	0 TO	1.5
NQ	1.5 TO	65.8
BQ	65.8 TO	196.4
	TO	
	TO	
	TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
45 m	in casing	74½°
75 m	150½°	76½°
105 m	150°	77½°
135 m	148°	79°
165 m	164°	82°
195 m	174°	82°

Comments on drilling. Broken ground - hole cemented at 190.6 m. NQ casing blasted at 60 m, 50 m, & 40 m. All left in hole, plus 7 m HQ casing.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 196.45 DATE 3/7/81
LOGGED BY _____ FROM _____ TO _____ DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 90
Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.5	0 - 1.5: TRICONE. No core.						
	6.0	1.5 - 7.5: SILTSTONE, minor QUARTZITE.		10/ 11		trace py in veins and stringers.		
	88.5	7.5 - 96.0: DOLOMITIC SILTSTONE. 7.5 - 32.3: Very fine dark brown rock - hardness Dolomitic. Abundant disseminated carbonate grains, some with py cores. Core very broken. 32.3 - 96.0: Colour changes to grey. Rock generally hard and unbroken. 64.0: Bedding becomes apparent, defined by coarser beds of qtzite. (<1 cm) 5 cm		10		py - trace in thin veins (also as cores to carbonate blobs 7.5 - 32.3 m).		
	5.2	96.0 - 101.2: SILTSTONE, SHALE. Strongly disrupted in parts. Bedding < 1 cm.		10/ 9		1% py - disseminated in siltstone and as veins.		
	3.3	101.2 - 104.5: DOLOMITIC SILTSTONE. Light to mid grey hard (silicified) strongly disrupted.		10		py, sph trace in carbonate veins and stringers.		
	42.5	104.5 - 147.0: SILTSTONE SHALE, lesser QUARTZITE. Moderately disrupted in parts. Interbedded on scale 1-2 cm, qtzite occasionally thicker. Weakly dolomitic, decreasing with depth.		10/ 11/ 9		py > sph >> arsenopy trace in carbonate veins and stringers. py also disseminated in some siltstone beds.		

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

CONTINUED NEXT PAGE.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 90

LOG SHEET 2 OF 3

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (EDS.), MONOGRAPH NO. 9, AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
120		CONTINUED FROM PREVIOUS PAGE.						
140	1.8	147.0 - 143.8: PORPHYRY. Grey/yellow matrix, 10% qtz.		1		15% py, sph - disseminated and veins.		
	1.9	148.8 - 150.7: SILTSTONE, SHALE, minor QTZITE. Beds 1 - 15 mm.		10/9/11		trace py in veins and stringers.		
	1.8	150.7 - 152.5: PORPHYRY. Grey/yellow matrix, 12% qtz phenocrysts.		1		15% py, sph - disseminated and veins.		
	5.8	152.5 - 158.3: SILTSTONE, minor SHALE, QTZITE. Moderately disrupted. Bedding 1-15 mm thick. Common carbonate veins.		10/9/11		trace py in carbonate veins.		
160	1.0	158.3 - 159.3: PORPHYRY. Mottled white, few phenocrysts.		1		py, sph, arsenopy - mainly veins.		
	12.5	159.3 - 171.8: SILTSTONE, lesser SHALE, minor QUARTZITE. Moderately to strongly disrupted. Beds 0.5-2 cm. Top 4 m has abundant irregular sph (±carb±py ±arsenopy±gal) veining.		10/9/		7% sph, py, arsenopy, gal in irregular vein stock work to 163.5 m, then decrease to~ 1%.		
	19.4	171.8 - 191.2: PORPHYRY. Matrix off-white to grey. 10% qtz phenocrysts. Feldspars replaced by sulphide, and/or weathered out.		1		15% py > sph disseminated through porphyry and as occasional veins.		
180	5.25	191.2 - 196.45: SILTSTONE, minor QTZITE, SHALE. Moderately disrupted. Bedding ∠ 4 cm.		10/9/11		trace py, sph in rare veins and stringers.		
200		END OF HOLE 196.45 m.						

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 90

LOG SHEET 3 OF 3

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124254	1.5	4.2	2.7										
	124255	6.2	8.2	2.0										
	56	8.2	10.2	"										
	57	10.2	12.2	"										
	58	12.2	14.2	"										
	59	14.2	15.7	1.5										
	124260	17.8	19.8	2.0										
	61	19.8	21.8	"										
	62	21.8	23.8	"										
	63	23.8	27.0	3.2										
	64	27.0	29.7	2.7										
	65	29.7	30.9	1.2										
	66	30.9	32.9	2.0										
	67	32.9	34.9	"										
	68	34.9	36.9	"										
	69	36.9	38.9	"										
	270	38.9	40.9	"										
	71	40.9	42.9	"										
	72	42.9	44.9	"										
	73	44.9	46.9	"										
	74	46.9	48.9	"										
	75	48.9	50.9	"										
	76	50.9	52.9	"										
	77	52.9	54.9	"										
	78	54.9	56.9	"										
	79	56.9	58.9	"										
	280	58.9	60.9	"										
	81	60.9	62.9	"										

Notes:— XRF 214 method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD90

SAMPLE TYPE : DRILL CORE FROM 1.5 TO 62.9

blond

8323318

309

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124282	62·9	64·9	2·0										
	83	64·9	66·9	"										
	84	66·9	68·9	"										
	85	68·9	70·9	"										
	86	70·9	72·9	"										
	87	72·9	74·9	"										
	88	74·9	76·9	"										
	89	76·9	78·9	"										
	290	78·9	80·9	"										
	91	80·9	82·9	"										
	92	82·9	84·9	"										
	93	84·9	86·9	"										
	94	86·9	88·9	"										
	95	88·9	90·9	"										
	96	90·9	92·9	"										
	97	92·9	94·9	"										
	98	94·9	96·9	"										
	99	96·9	98·9	"										
	124400	98·9	100·9	"										
	01	100·9	102·9	"										
	02	102·9	104·9	"										
	03	104·9	106·9	"										
	04	106·9	108·9	"										
	05	108·9	110·9	"										
	06	110·9	112·9	"										
	07	112·9	114·9	"										
	08	114·9	116·9	"										
	09	116·9	118·9	"										
	410	118·9	120·9	"										
	11	120·9	122·9	"										

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 90

SAMPLE TYPE : DRILL CORE (ground) FROM 62·9 TO 122·9

832319

310

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124412	122·9	124·9	2·0										
	13	124·9	126·9	"										
	14	126·9	128·9	"		2650								
	15	128·9	130·9	"		3550								
	16	130·9	132·9	"		1·65%								
	17	132·9	134·9	"		2280								
	18	134·9	136·9	"		370								
	19	136·9	138·9	"		4200								
	420	138·9	190·9	"		1150								
	21	140·9	142·9	"		110								
	22	142·9	145·3	2·4		65								
124363		145·3	146·3	1·0	910									
64		146·3	147·3	"	210									
65		147·3	148·3	"	300									
66		148·3	148·9	0·6	190									
67		148·9	149·9	1·0	75									
68		149·9	150·7	0·8	180									
69		150·7	151·7	1·0	460									
370		151·7	152·5	0·8	250									
71		152·5	153·5	1·0	130									
	124423	153·5	155·5	2·0		90								
	24	155·5	157·3	1·8		420								
124372		157·3	158·3	1·0		980								
73		158·3	159·2	0·9	0·6%				0·2%		X			
74		159·2	160·2	1·0	1·0%				>3%		X			
75		160·2	161·2	"	0·11%				>10%		X			
76		161·2	162·2	"	0·08%				>1%		T			
77		162·2	163·5	1·3	0·09%				>3%		T			
	124425	163·5	165·5	2·0		410								
	26	165·5	167·5	"		1·45%								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 90

SAMPLE TYPE : DRILL CORE (ground) FROM 122·9 TO 167·5

832320

311

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124427	167·5	169·5	2·0		530								
	28	169·5	170·8	1·3		730								
124378		170·8	171·8	1·0	400									
79		171·8	172·8	"	1050									
380		172·8	173·8	"	2550									
81		173·8	174·8	"	1550									
82		174·8	175·8	"	2450									
83		175·8	176·8	"	2750									
84		176·8	177·8	"	2700									
85		177·8	178·8	"	3600									
86		178·8	179·8	"	2900									
87		179·8	180·8	"	6750									
88		180·8	181·8	"	1·00%									
89		181·8	182·8	"	2100									
390		182·8	183·8	"	9750									
91		183·8	184·8	"	7200									
92		184·8	185·8	"	3200									
93		185·8	186·8	"	2050									
94		186·8	187·8	"	2350									
95		187·8	188·8	"	1650									
96		188·8	189·8	"	1200									
97		189·8	191·2	1·4	1850									
98		191·2	192·2	1·0	1050									
	124429	192·2	194·2	2·0		150								
	30	194·2	196·45	2·25		130								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD90

SAMPLE TYPE : DRILL CORE (ground) FROM 167·5 TO 196·45

8323221

312

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 91

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		2134.77 N	1379.98 E	629.62
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -67°

Total length 90.0 m

Commenced: 20 / 6 / 81
Completed: 25 / 6 / 81

Drilling contractor: PARRY EXPLORATION DRILLING.

Rig type: BOYLES 37.

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	90.0
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
Eastman Single Shot Survey.

Purpose of drilling and anticipated lengths to targets.
To test the Stanhope Porphyry Dyke between 65 m and 80 m.

Comments on drilling.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR	150°	67°
30 m	149°	68°
60 m	150°	69½°
90 m	150°	70°

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 3.0 TO 90.0	FROM ____ TO ____	FROM ____ TO ____
DATE 28/6/81	DATE ____	DATE ____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 91

Log sheet 1 of 2

832323 314

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: TRICONE. No Core.						
	48.9	3.0 - 51.9: QUARTZITE, lesser SILTSTONE. Weakly disrupted in parts. Mainly fine qtzite, in beds to 10 cm, interbedded with darker siltstones to 1.5 cm. Py in veins and stringers.		11/10		1-2% py in veins and stringers. Oxidized to 21.8 m.		
20								
40		36.9 - 37.2: Greywacke - subrounded fragments of siltstone and shale, and minor feldspars in light grey matrix.						
	15.6	51.9 - 67.5: PORPHYRY. Deeply weathered for most part - matrix milky white. (Grey where unweathered). 15-20% qtz phenocrysts, no apparent feldspars.		1		3-5% py relict coarsely disseminated grains - up to 15% locally.		
60								
	22.5	67.5 - 90.0: QUARTZITE, lesser SILTSTONE. Thick beds of fine quartzite, with much interbedded thin qtzite and siltstone layers. Occasional py veins.		11/10		py - trace in occasional veins and stringers.		
80								
		END OF HOLE 90.0 m.						
100								

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 91

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124493	3.0	5.2	2.2										
	94	5.2	7.5	2.3										
	95	7.5	10.0	2.5										
	96	10.0	12.0	2.0										
	97	12.0	14.0	"										
	98	14.0	16.0	"										
	99	16.0	18.0	"										
	124700	18.0	20.0	"										
	01	20.0	22.0	"										
	02	22.0	24.0	"										
	03	24.0	26.0	"										
	04	26.0	28.0	"										
	05	28.0	30.0	"										
	06	30.0	32.0	"										
	07	32.0	34.0	"										
	08	34.0	36.0	"										
	09	36.0	38.0	"										
	710	38.0	40.0	"										
	11	40.0	42.0	"										
	12	42.0	44.0	"										
	13	44.0	46.0	"										
	14	46.0	48.0	"										
	15	48.0	51.0	3.0										
124571		51.0	52.0	1.0	2.00									
72		52.0	53.0	1"	12.50									
73		53.0	54.0	"	19.00									
74		54.0	55.0	"	1.30%									
75		55.0	56.0	"	2.750									
76		56.0	57.0	"	4.25%									
77		57.0	58.0	"	3.85%									

Notes :— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 91

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 58.0

Ground/Split

8323324

315

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124578		58.0	59.0	1.0	2.55%									
79		59.0	60.0	"	9950									
580		60.0	61.0	"	1.50%									
81		61.0	62.0	"	1750									
82		62.0	63.0	"	4150									
83		63.0	64.0	"	1700									
84		64.0	65.0	"	1.50%									
85		65.0	66.0	"	7550									
86		66.0	67.5	1.5	1650									
87		67.5	68.5	1.0	570									
	124716	68.5	71.5	3.0										
	124717	70.5	72.5	2.0										
	18	72.5	74.5	"										
	19	74.5	76.5	"										
	720	76.5	78.5	"										
	21	78.5	80.5	"										
	22	80.5	82.5	"										
	23	82.5	84.5	"										
	24	84.5	86.5	"										
	25	86.5	88.5	"										
	26	88.5	90.0	"										

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 91

SAMPLE TYPE : DRILL CORE FROM 58.0 TO 90.0

Grand/Split

8322325 41b

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 92

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1939.4 N	971.45 E	643.94
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1: 250 000 Sheet No. SK55-3
1: 100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -50°
Total length 66.4
Commenced: 23 / 6 / 81
Completed: 24 / 6 / 81
Drilling contractor: LONGYEAR AUST. P/L
Rig type: LONGYEAR 44

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test ore variability in the Greisen Flat area, in talc-pyrrhotite DSL.

Core size and non-coring (NC)

TRICONE	0	TO	6.0
NQ	6.0	TO	66.4
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR	330°	50°
61 m	323°	50½°

Comments on drilling. Core frequently broken and ground during drilling every 15-30 cm in ore zone.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON	LOGGED BY	LOGGED BY
FROM 0 TO 66.4	FROM TO	FROM TO
DATE 24/6/81	DATE	DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 92
Log sheet 1 of 2

832327 318

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	6.0	0 - 6.0: TRICONE. No Core.						
	20.4	6.0 - 26.4: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly pale grey dolomite, with minor veins and small patches of recrystallized dolomite, commonly with fluorite and/or qtz. Minor small patches and veins of DSL occur below 20.0 m.		2/3		py, sph, po~ 1% minor py and po in veins and stringers, and disseminated through sph - disseminated through carbonate veins.		
20	27.5	26.4 - 53.9: DOLOMITE SULPHIDE LODE. 26.4 - 38.8: 40% bronze po - weakly banded, up to 80% in parts. 40% qtz - carbonate - blotchy texture. 20% talc.		4/8		40% po >> py		
40		38.8 - 52.6: 65% bronze po - weakly banded, almost massive in parts. 30% mid green talc. 5% qtz-carbonate - irregular distribution.		4/6		65% po >>> cpy po - weakly banded, almost massive in parts. cpy - trace, finely disseminated through po.		
		52.6 - 53.9: 80% dark green serpentine. 15% qtz - carbonate. 15% sulphide - py, po						
60	12.5	53.9 - 66.4: SILTSTONE. Strongly disrupted in most parts. Even grained light grey, siliceous siltstone. Occasional veins of qtz, carbonate, py and/or po. Common disseminated blobs of po to 58.0 m.		10		po, py, sph po - veins and disseminated blobs. py - veins and stringers. sph - disseminated through carbonate veins.		
		END OF HOLE 66.4 m.						
80								
100								

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 92

LOG SHEET 2 OF 2

832328 319

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 94

COLLAR LOCATION

Grid name

Rectangular space co-ordinates

	PLANAR CO-ORDINATES		ELEVATION
(1)	N	E	
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -60°
Total length 140.0
Commenced: 25 / 6 / 81
Completed: 3 / 7 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test the White Face Porphyry between 110 m and 130 m.

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	51.0
BQ	51.0	TO	140.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR	150°	60°
29 m	in casing	59°
59 m	148°	60½°
89 m	149°	61°
119 m	148.5°	61°
140 m	146.5°	62°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON
FROM 0 TO 140.0
DATE 7/7/81

LOGGED BY _____
FROM _____ TO _____
DATE _____

LOGGED BY _____
FROM _____ TO _____
DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 94

Log sheet 1 of 3

832329 320

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: TRICONE.						
	11.9	3.0 - 14.9: QUARTZITE, SILTSTONE, minor SHALE. Moderately disrupted in parts. Thinly interbedded qtzite and siltstone. Bedding 0.5 - 2 cm. Quartzite, strongly sencitized.		11/ 10/ 9		trace py disseminated in some qtzite beds.		
20	21.5	14.9 - 36.4: SILTSTONE, minor QUARTZITE. Mainly thin siltstone beds, many with abundant py and sencitized in parts. Occasional thin py veins.		10/ 11		3-5% py occasional veins with thin pyritic layers parallel to bedding.		
40	13.1	36.4 - 49.5: QUARTZITE, lesser SILTSTONE. Mainly fine qtzite in beds up to 1.0 m, and thinly interbedded with siltstone. Common pyritic beds. (< 0.5 cm). Strongly disrupted in parts.		11/ 10		1-2% py as thin pyritic beds (~ 1-3 mm) and occasional veins and stringers.		
	24.7	49.5 - 74.2: SILTSTONE, minor QUARTZITE. Weakly disrupted in parts. Mainly thin siltstone beds, with occasional pyritic layers, and qtzite beds up to 5 cm.		10/ 11		py - 1-2% as above.		
60								
80	22.6	74.2 - 96.8: QUARTZITE, minor SILTSTONE. Moderately disrupted in parts. Mainly thick beds of qtzite, to 3.0 m, with thin siltstone beds in between. Occasional zones of interbedded siltstone and qtzite.		11/ 10		py>>po ~1% py in veins and stringers and disseminated through some qtzite beds. trace po in thin veins.		
100	35.8	96.8 - 132.6: PORPHYRY. Matrix grey or greenish. Sencitized from 117.0 - 119.2. 8-12% qtz phenocrysts up to 5 mm. 15% feldspar, mainly replaced by sulphide (py). FAULT ZONE from 102.6 - 110.0 m. 5 cm		1		py >>arsenopy, sph 15% py coarsely disseminated, and in occasional veins with arsenopy and sph.		
120								

FOR LEGEND SEE DRAWING NO.

CONTINUED NEXT PAGE.

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 94

LOG SHEET 2 OF 3

832330 321

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth - Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
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120

CONTINUED FROM PREVIOUS PAGE.

7.4	132.6 - 140.0: SILTSTONE, lesser QUARTZITE. Weakly to moderately disrupted. Mainly interbedded siltstone and qtzite. Beds 0.5 - 2 cm thick.	10/ 11		1% py finely disseminated in qtzite, and rare thin veins.

140

END OF HOLE 140.0 m.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 94

LOG SHEET 3 OF 3

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124453	3.0	4.4	1.4		160								
	124454	6.4	7.5	1.1		80								
	124455	8.1	10.1	2.0		30								
	56	10.1	12.1	"		20								
	57	12.1	14.1	"		15								
	58	14.1	16.1	"		20								
	59	16.1	18.1	"		35								
	460	18.1	20.1	"		310								
	61	20.1	22.1	"		260								
	62	22.1	24.1	"		220								
	63	24.1	26.1	"		25								
	64	26.1	28.1	"		90								
	65	28.1	30.1	"		100								
	66	30.1	32.1	"		35								
	67	32.1	34.1	"		190								
	68	34.1	36.1	"		100								
	69	36.1	38.1	"		220								
	470	38.1	40.1	"		120								
	71	40.1	42.1	"		70								
	72	42.1	44.1	"		45								
	73	44.1	46.1	"		1500								
	74	46.1	48.1	"		120								
	75	48.1	50.1	"		860								
	76	50.1	52.1	"		770								
	77	52.1	54.1	"		2150								
	78	54.1	56.1	"		290								
	79	56.1	58.1	"		1250								
	480	58.1	60.1	"		730								

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 94

SAMPLE TYPE : DRILL CORE FROM 30 TO 60.1

split/ground

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124401	60.1	62.1	2.0		70								
	82	62.1	64.1	"		45								
	83	64.1	66.1	"		20								
	84	66.1	68.1	"		25								
	85	68.1	70.1	"		35								
	86	70.1	72.1	"		80								
	87	72.1	74.1	"		60								
	88	74.1	76.1	"		95								
	89	76.1	78.1	"		170								
	490	78.1	80.1	"		390								
	91	80.1	82.1	"		290								
	92	82.1	84.1	"		70								
	124727	84.1	86.1	"		90								
	28	86.1	88.1	"		140								
	29	88.1	90.1	"		180								
	730	90.1	92.1	"		290								
	31	92.1	94.1	"		400								
	32	94.1	95.8	1.7		350								
124830		95.8	96.8	1.0	3150									
31		96.8	97.5	"	7050									
32		97.8	98.8	"	920									
33		98.8	99.8	"	670									
34		99.8	100.8	"	1250									
35		100.8	101.6	0.8	7900									
36		101.6	104.6	3.0	670									
37		104.6	106.3	1.7	1150									
38		106.3	108.1	1.8	1250									
39		108.1	110.6	2.5	1250									
840		110.6	111.6	1.0	680									
41		111.6	112.6	"	2550									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 94

SAMPLE TYPE : DRILL CORE split/ground FROM 60.1 TO 112.6

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124842		112.6	113.6	1.0	2150									
43		113.6	114.6	"	550									
44		114.6	115.6	"	520									
45		115.6	116.6	"	750									
46		116.6	117.6	"	1000									
47		117.6	118.6	"	490									
48		118.6	119.6	"	810									
49		119.6	120.6	"	350									
850		120.6	121.6	"	590									
51		121.6	122.6	"	510									
52		122.6	123.6	"	490									
53		123.6	124.6	"	580									
54		124.6	125.6	"	2900									
55		125.6	126.6	"	5500									
56		126.6	127.6	"	6200									
57		127.6	128.6	"	7350									
58		128.6	129.6	"	9850									
59		129.6	130.6	"	1350									
860		130.6	131.6	"	540									
61		131.6	132.6	"	240									
62		132.6	133.6	"	55									
	124733	133.6	135.6	2.0		35								
	34	135.6	137.6	"		35								
	35	137.6	140.0	2.4		140								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 94

SAMPLE TYPE : DRILL CORE (ground/split) FROM 112.6 TO 140.0

832333 324

832334 325

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 95

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	N	E	
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -72°
Total length 139.3 m.
Commenced: 28 / 6 / 81
Completed: 9 / 7 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.
Rig type: LONGYEAR 44

Details of down hole location-survey methods: Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets: To intersect the Queen Porphyry from 30 - 45 m and the Stanhope Porphyry from 100 - 115 m.

Core size and non-coring (NC)

TRICONE	0	TO	6.0
NQ	6.0	TO	55.5
BQ	55.5	TO	139.3
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR	150°	70°
31 m	in casing	71½°
61 m	in casing	72°
91 m	151°	72°
139 m	151°	72°

Comments on drilling: Badly broken ground. Hole cemented (twice) at 63.9 m. NQ casing shoe left down hole at 60.50.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 139.3	FROM ____ TO ____	FROM ____ TO ____
DATE 15/7/81	DATE	DATE

Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 95

Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth · Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	6.0	0 - 6.0: TRICONE. No drilling.						
20	23.5	6.0 - 29.5: SILTSTONE, lesser QUARTZITE. Strongly disrupted and faulted in parts. Mainly thinly bedded siltstone (< 5 cm), with occasional qtzite beds to 10 cm. Occasional fault pug, in following intervals: 17.1 - 17.9, 18.5 - 18.9, 19.1 - 19.3, 20.8 - 21.5, 27.3 - 28.2. Occasional py veins and stringers, rare qtz. veins.		10/ 11		trace py in veins and stringers.		
40	12.8	29.5 - 42.3: QUARTZITE. Thick massive beds of fine siliceous qtzite. Disrupted in parts. Minor py veins, usually oxidized.		11		trace py in veins and stringers. Minor coarse disseminated grains from 37.7 - 39.2 m.		
60	34.6	42.3 - 76.9: SILTSTONE, lesser QUARTZITE. Moderately disrupted in parts. Mainly interbedded siltstone and thinner qtzite beds. Scale of bedding < 3.0 cm. Rare thicker qtzite beds. Common finely disseminated py in thin qtzite to ~ 64 m. Py also as occasional thin veins and stringers.		10/		2-3% py finely disseminated through some thin qtzite beds, and as occasional veins and stringers.		
80	14.5	76.9 - 91.4: PORPHYRY. Mainly weathered to 87.4 m. Weathered matrix opaque milky colour, common stained by feoxide. Unweathered matrix translucent grey. 15% qtz phenocrysts up to 10 mm. No apparent feldspars.		1		76.9 - 87.4: trace py. Mainly weathered out or heavily oxidized. Originally coarsely disseminated and occasional veins. 87.4 - 91.4: py 8% - coarsely disseminated and rare veins.		
100	31.0	91.4 - 122.4: SILTSTONE, QUARTZITE. Thinly interbedded siltstone and qtzite on scale of 2-10 mm. Occasional thick qtzite beds. Occasional py veins and stringers.		10/ 11		trace py in occasional veins and stringers.		
120								

5 cm

CONTINUED ON NEXT PAGE.

FOR LEGEND SEE DRAWING NO.

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METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 95

LOG SHEET 2 OF 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976.
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE. 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

120

CONTINUED FROM PREVIOUS PAGE.

INTERVAL		GRAPHIC LOG	MINERALISATION
1.0 0.9	122.4 - 123.4: PORPHYRY. Yellowish, 10% qtz, 8% feldspar phenocrysts.	10	10% py - coarsely disseminated.
	123.4 - 124.3: SILTSTONE. Dark grey, strongly disrupted.		1-2% py - in common stringers.
10.2	124.3 - 134.5: PORPHYRY. Matrix off-white to greenish grey. Trace qtz phenocrysts, no apparent feldspar. 124.8 - 125.6: porphyry - very similar to 122.4 - 123.4, may be second phase of dyke intrusion.	1	py - 10% coarsely disseminated, common
4.8	134.5 - 139.3: SILTSTONE, lesser QUARTZITE. Thinly interbedded siltstone and lesser fine qtzite. Bedding up to 2 cm.	10/11	py - trace in occasional veins and stringers.

140

END OF HOLE 139.3 m.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 95

LOG SHEET 3 OF 3

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124736	6.0	7.5	1.5		90								
	37	7.5	9.0	"		45								
	38	9.0	11.5	"		35								
	39	11.5	13.5	2.0		70								
	124740	19.1	19.1	2.0		230								
	41	19.1	21.7	2.6		120								
	42	21.7	23.7	2.0		160								
	43	23.7	25.7	"		220								
	44	25.7	27.7	"		120								
	45	27.7	29.7	"		55								
	46	29.7	31.7	"		330								
	47	31.7	33.7	"		930								
	48	33.7	36.4	2.7		110								
	49	36.4	38.3	1.9		960								
	750	38.3	41.5	3.2		650								
	51	41.5	43.5	2.0		150								
	52	43.5	46.5	3.0		530								
	53	46.5	48.5	2.0		100								
	54	48.5	51.6	3.1		280								
	55	51.6	53.5	1.9		70								
	56	53.5	55.5	2.0		85								
	57	55.5	57.5	"		100								
	58	57.5	59.9	2.4		460								
	59	59.9	62.9	3.0		1750								
	760	62.9	64.2	1.3		1100								
	61	64.2	66.2	2.0		320								
	62	66.2	68.2	"		440								
	63	68.2	70.2	"		190								
	64	70.2	72.2	"		130								

Notes :— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 95

SAMPLE TYPE : DRILL CORE FROM 6.0 TO 72.2

Grand

8323317 328

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124765	72.2	74.2	2.0		230								
	66	74.2	75.9	1.7		220								
124863		75.9	76.9	1.0	85									
64		76.9	77.9	"	3550									
65		77.9	78.9	"	1550									
66		78.9	79.9	"	6555									
67		79.9	80.9	"	2350									
68		80.9	81.9	"	1.25%									
69		81.9	82.9	"	6150									
870		82.9	83.9	"	3000									
71		83.9	84.9	"	1.55%									
72		84.9	85.9	"	1.30%									
73		85.9	86.9	"	4250									
74		86.9	87.9	"	4700									
75		87.9	88.9	"	4000									
76		88.9	89.9	"	1950									
77		89.9	90.9	"	1200									
78		90.9	91.4	0.5	1500									
79		91.4	92.4	1.0	230									
	124767	92.4	94.4	2.0		150								
	68	94.4	96.4	"		260								
	69	96.4	98.4	"		60								
	770	98.4	100.4	"		35								
	71	100.4	102.4	"		65								
	72	102.4	104.4	"		85								
	73	104.4	107.0	2.6		55								
	74	107.0	109.0	2.0		60								
	75	109.0	111.0	"		60								
	76	111.0	113.0	"		85								
	77	113.0	115.0	"		55								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 95

SAMPLE TYPE : DRILL CORE FROM 72.2 TO 115.0

1
Grand Split

8223338

329

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124778	115·0	117·0	2·0		100								
	79	117·0	119·0	"		200								
	780	119·0	121·4	2·4		130								
124880		121·4	122·4	1·0	200									
81		122·4	123·4	"	380									
82		123·4	124·3	0·9	110									
83		124·3	125·3	1·0	100									
84		125·3	126·3	"	240									
85		126·3	127·3	"	110									
86		127·3	128·3	"	210									
87		128·3	129·3	"	240									
88		129·3	130·7	1·4	380									
89		130·7	131·7	1·0	190									
890		131·7	132·7	"	140									
91		132·7	133·7	"	220									
92		133·7	134·5	0·8	140									
93		134·5	135·5	1·0	250									
	124781	135·5	137·5	2·0		550								
	82	137·5	139·3	1·8		110								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 95

SAMPLE TYPE : DRILL CORE FROM 115·0 TO 139·3

1
Grand Split

The following Assay Summary Sheets relate to holes reported in last months report.

832341 332

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 24 X

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1864.31 N	920.05 E	637.08
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) 330 mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -75°
Total length 89.5 m
Commenced: 29 / 5 / 81
Completed: 31 / 5 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.
Rig type: LONGYEAR 44

Core size and non-coring (NC)

BQ	101.0	TO	190.5
		TO	
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
Eastman Down-Hole Camera.

Purpose of drilling and anticipated lengths to targets.
To test for development of lower dolomite unit.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
118 m	153	-75°
160	148	-77.5°
190	146	-79.5°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D.C. SIMPSON	LOGGED BY	LOGGED BY
FROM 101.0 TO 190.50	FROM TO	FROM TO
DATE 11/7/81	DATE	DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 24 X

Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth: Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL., 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

INTERVAL	DEPTH from - to : ROCK UNIT / Description and notes	GRAPHIC LOG	MINERALISATION
	START OF EXTENSION = 101.0 m.		
16.7	101.0 - 117.7: QUARTZITE, SHALE. Fine grained massive quartzite with minor shale contact.	11/9	
2.3	117.7 - 120.0: DOLOMITE SULPHIDE LODE. Weakly developed USL. Pyritic with dolomite or sericite and quartz.		pyrite 10%, trace sph, comb 80% sericite/chlorite/quartz 10%
22.55	120.0 - 142.55: SHALE - SILTSTONE. Fine grained massive to bedded grey shales, locally grading to mudstones. Siltstones are locally dolomitic.	9/10	
3.85	142.55 - 146.4: QUARTZITE - SHALE. Light grey massive quartzite with minor interbedded shale, locally disrupted.	11/9	
17.6	146.4 - 164.0: SHALE. Dark grey to black faintly bedded shales varying locally to siltstones. Minor interbedded siltstones locally.		
	164.0 - 165.25: QUARTZ-FELDSPAR/PORPHYRY. Feldspar partly replaced by pyrite.		
	165.25 - 187.8: SHALE. As for preceding section (146.4 - 164.0).		
	187.8 - 190.5: QUARTZITE - SHALE. Light to dark grey massive to disrupted quartzite with local shale beds.	11/9	trace pyrite.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 24 X

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121672		116·8	117·7	0·9	80									
73		117·7	118·7	1·0	1900									
74		118·7	120·0	1·3	1000									
75		120·0	120·7	0·7	250									
76		163·0	164·0	1·0	60									
77		164·0	165·2	1·2	160									
78		165·2	166·2	1·0	25									

Notes:— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 24 Extn.

SAMPLE TYPE : DRILL CORE FROM 116·8 TO 166·2

8323433 334

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 43 X

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1899.82 N	940.44 E	632.99
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) 330 mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: -65°
Total length: 47.8 m
Commenced: 31 / 5 / 81
Completed: 1 / 6 / 81

Drilling contractor: LONGYEAR AUST. PTY. LTD.
Rig type: LONGYEAR 44

Details of down hole location-survey methods:
Eastman Down-Hole Camera.
No surveys because of hole abandonment.

Purpose of drilling and anticipated lengths to targets:
To test for Porphyry at approximately 525 m RL on 940E Section.

Core size and non-coring (NC)

BQ	112.5 TO	159.8
	TO	
	TO	
	TO	
	TO	
	TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		

Comments on drilling: Casing in hole from 29 m. At first bit change 159.8 m couldn't get past top of casing which fell to one side. Hole abandoned in porphyry.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D.C. SIMPSON FROM ____ TO ____ DATE ____

LOGGED BY ____ FROM ____ TO ____ DATE ____

LOGGED BY ____ FROM ____ TO ____ DATE ____

Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 43 X

Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
100		START 112.5 m.						
	29.0	112.5 - 141.5: SILTSTONE - SHALE. Variable sequence of massive to slumped siltstones and shales. Local sections rich in carbonate.		10/9				
120								
	17.1	141.5 - 158.6: SILTSTONE - QUARTZITE. Well bedded sequence of siltstone with about 15% quartizte. Quartzite beds often pyritic.		10/11				
140								
		158.6 - 159.8: QUARTZ FELDSPAR PORPHYRY. Highly pyritic.		1		trace disseminated $Sn O_2$ near veinlet at 159.4 m.		
		END OF HOLE 159.8 m.						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1978
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project

HOLE No. MBD 43 X

LOG SHEET 2 OF 2

[redacted] NO.	[redacted] NO	[redacted]	[redacted]	[redacted] VAL	Sn	Sn	Cu	Pb	Zn	[redacted] g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
12010		157.6	158.6	1.0	2300									
011		158.6	159.8	1.2	1900									

Notes :— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 43 Extn.

SAMPLE TYPE : DRILL CORE FROM TO

832340

337

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121994		3·0	4·0	1·0	45									
95		4·0	5·0	"	40									
96		5·0	6·0	"	55									
97		6·0	7·0	"	100									
98		7·0	8·0	"	150									
99		8·0	9·0	"	150									
124300		9·0	10·0	"	270									
01		10·0	11·0	"	50									
02		11·0	12·0	"	310									
03		12·0	13·0	"	75									
04		13·0	14·0	"	90									
05		14·0	15·0	"	160									
06		15·0	16·0	"	50									
07		16·0	17·0	"	55									
08		17·0	18·0	"	110									
09		18·0	19·0	"	600									
310		19·0	20·0	"	190									
11		20·0	21·0	"	2250									
12		21·0	22·0	"	510									
13		22·0	23·0	"	110									
14		23·0	24·0	"	70									
15		24·0	25·0	"	60									
16		25·0	26·0	"	170									
17		26·0	27·0	"	270									
18		27·0	28·0	"	510									
19		28·0	29·0	"	2400									
320		29·0	30·0	"	950									
21		30·0	31·0	"	2500									
22		31·0	32·0	"	440									
23		32·0	33·0	"	2050									

Notes:— XRF 014 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 75-1

SAMPLE TYPE : DRILL CORE FROM 30 TO 330

8223417 338

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERSECTION VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124329		33.0	33.8	0.8	250									
25		33.8	35.0	1.2	100									
26		35.0	36.0	1.0	190									
27		36.0	37.3	1.3	50									
28		37.3	38.3	1.0	45									
29		38.3	39.3	"	45									
330		39.3	40.3	"	45									
31		40.3	41.3	"	60									
32		41.3	42.3	"	15									
33		42.3	43.3	"	30									
34		43.3	44.3	"	6650									
35		44.3	45.2	0.9	65									
36		45.2	46.2	1.0	120									
37		46.2	47.2	"	55									
38		47.2	48.2	"	30									
39		48.2	49.2	"	30									
340		49.2	50.0	0.8	30									
41		50.0	51.0	1.0	90									
42		51.0	52.0	"	35									
43		52.0	53.0	"	40									
44		53.0	54.0	"	900									
45		54.0	55.0	"	550									
46		55.0	56.0	"	810									
47		56.0	57.0	"	2200									
48		57.0	58.5	1.5	6100									
49		58.5	59.5	1.0	1350									
350		59.5	60.5	"	1050									
51		60.5	61.5	"	520									
52		61.5	62.5	"	1000									
53		62.5	63.5	"	780									

Notes :—

832348

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 75

SAMPLE TYPE : DRILL CORE FROM 330 TO 635

339

[redacted] NO.	[redacted] NO	[redacted]	[redacted]	[redacted] VAL	[redacted]	Sn	Cu	Pb	Zn	[redacted] g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124354		63.5	64.5	1.0	280									
55		64.5	65.5	"	320									
56		65.5	66.5	"	1500									
57		66.5	67.5	"	370									
58		67.5	68.5	"	220									
59		68.5	69.5	"	230									

Notes :—

832349

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 75

SAMPLE TYPE : DRILL CORE FROM 63.5 TO 69.5

340

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
120986		45.6	46.6	1.0	45									
87		46.6	47.6	"	470									
88		47.6	48.6	"	1050									
89		48.6	49.6	"	60									
120990		52.0	53.0	1.0	880									
91		53.0	54.0	"	840									
92		54.0	55.0	"	1600									
93		55.0	56.0	"	4150									
94		56.0	57.0	"	2200									
95		57.0	58.0	"	9150									
96		58.0	59.0	"	7050									
97		59.0	60.0	"	5600									
98		60.0	61.0	"	970									
99		61.0	62.0	"	1750									
121000		62.0	63.0	"	1350									
01		63.0	64.0	"	580									
02		64.0	65.0	"	1300									
03		65.0	65.6	0.6	2150									
04		65.6	66.6	1.0	1750									
05		66.6	67.2	0.6	110									
06		67.2	68.2	1.0	X									
07		68.2	69.2	"	X									
08		69.2	69.9	0.7	60									
121009		71.1	72.1	1.0	50									
810		72.1	73.1	"	X									
11		73.1	74.1	"	X									
12		74.1	75.1	"	X									
13		75.1	76.1	"	420									

Notes :— XRF 214 method
X = <4

832350

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 83

SAMPLE TYPE : DRILL CORE FROM 45.6 TO 76.1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121814		76·1	77·1	1·0	460									
15		77·1	78·1	"	95									
16		78·1	79·1	"	X									
17		79·1	80·1	"	25									
18		80·1	81·1	"	10									
19		81·1	82·1	"	50									
820		82·1	83·1	"	30									
21		83·1	84·4	1·3	30									
22		84·4	85·5	1·1	250									
23		85·5	86·0	0·5	30									
24		86·0	87·0	1·0	35									
25		87·0	88·0	"	1700									
121868		88·0	89·0	"	1850									
69		89·0	90·0	"	2350									
870		90·0	91·0	"	1·10%									
71		91·0	92·0	"	1700									
124003		92·0	93·0	"	1·35%									
04		93·0	94·0	"	560									
05		94·0	95·0	"	180									

Notes :—

832351

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. mBD 83

SAMPLE TYPE : DRILL CORE FROM 76·1 TO 95·0

342

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124006		47.5	48.5	1.0	610	610								
07			49.3		1750	1750								
08		49.3	50.0	0.7	400	400								
09		50.0	51.0	1.0	70	70								
10														
121826		52.0	53.0	1.0	85	85								
27		53.0	54.0	"	200	200								
28		54.0	55.0	"	320	320								
29		55.0	56.0	"	410	410								
830		56.0	57.0	"	170	170								
31		57.0	58.0	"	550	550								
32		58.0	59.0	"	200	200								
33		59.0	60.0	"	1150	1150								
34		60.0	61.0	"	250	250								
35		61.0	62.0	"	240	240								
36		62.0	63.0	"	210	210								
37		63.0	64.0	"	1350	1350								
38		64.0	65.0	"	850	850								
39		65.0	66.0	"	1750	1750								
840		66.0	67.0	"	2750	2750								
41		67.0	68.0	"	1700	1700								
42		68.0	69.0	"	1050	1050								
43		69.0	70.0	"	1450	1450								
44		70.0	71.3	1.3	3250	3250								
45		71.3	72.3	1.0	140	140								
46		72.3	73.3	"	110	110								
47		73.3	74.3	"	130	130								
48		74.3	75.4	1.1	100	100								
49		75.4	76.4	1.0	65	65								
850		78.7	79.7	"	120	120								

Notes :— XRF 014 Method

832352

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 84

SAMPLE TYPE : DRILL CORE FROM 47.5 TO 79.7

343

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
12851		79.7	80.7	1.0	10									
52		80.7	81.7	"	30									
53		81.7	82.7	"	40									
54		82.7	83.7	"	40									
55		83.7	84.7	"	40									
56		84.7	85.7	"	65									
57		85.7	86.4	0.7	60									
58		86.4	87.2	0.8	1950									
59		87.2	88.2	1.0	1950									
8860		88.2	89.2	"	6450									
61		89.2	90.2	"	2600									
62		90.2	91.2	"	2050									
63		91.2	91.6	0.4	4300									
64		91.6	92.8	1.2	6550									
65		92.8	93.8	1.0	5750									
66		93.8	94.8	"	1.57%									
67		94.8	95.8	"	100									

Notes :—

832353

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 84

SAMPLE TYPE : DRILL CORE FROM 79.7 TO 95.8

3744.

832354

82-1698 Vol 2. Cover 81-005F. (JUNE)

METALS EXPLORATION LIMITED

MT BISCHOFF TIN PROSPECT

MT BISCHOFF MINE AREA

STAGE 3A
DRILLING PROGRAMME

as at 30-6-81

Scale 1:2000

5 cm

MEL GRID NORTH (330°)

ADOPT MAG NTH

0 50 100

METRES

Porphyry

Dolomite

Dolomite Sulphide Lode

Siltstones, Shales, Quartzites

Fault

Interpreted Geological Contact

Diamond Drillhole

○ *Proposed*

● *Completed*

Completed Drillholes

December	MBD 47,48,49
January	MBD 50,51,52
February .	MBD 53, 54, 55, 56, 57, 58
March .. .	MBD 63
April	MBD 64, 65, 66, 66A, 67, 68, 69, 70, 71, 72
May	MBD 73, 74, 75, 76, 77, 79, 80, 81, 82, 83, 84
June.. .. .	MBD 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95

Rev 30 5 81

03 Drg. No. 81-005 F

832355 345

METALS EXPLORATION LTD.
80 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR JULY, 1981

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21.9.81

MT. BISCHOFF TIN PROSPECT

REPORT FOR JULY, 1981.

General:

Drilling activity on site included completion of two Stage 3A holes and the drilling of eight close spaced holes into the Greisen Face area under the mining budget for Stage 3B. The Longyear contract was completed and the LY44 rig left site. Total metres drilled for the period were 640.9 m, including 486.1 m as close spaced drilling.

The Parry Exploration Drilling rig remains on site and will be utilised for drilling of further holes budgeted for Stage 3B.

Re-interpretation of the main Porphyry and Dolomite Sulphide Lodes took place during the period. This work is continuing and will lead to a re-estimation of ore reserves by the end of August.

Metallurgical testwork continued under the programme to demonstrate circuitry on 50 kg batches of DSL and porphyry composite. In addition, arrangements were made for evaluation of pre-concentration of porphyry ore at Mineral Deposits Ltd. in Queensland.

Mining and Engineering studies in relation to Stage 3B development option assessment commenced.

Delay in production of this report has again been due to slow turn round on assay results and a backlog of logging. This was caused by activity on site being directed towards re-interpretation of sections and re-estimation of ore reserves during July (and August).

Geology:

(i) Diamond Drilling

Two holes from the Stage 3A programme were completed during the period and are discussed below.

In addition, eight holes were drilled under the Mining Budget into the close spaced grid on Greisen Face. These holes are discussed under Mining.

Summary Logs and assay sheets for these holes, MBD 94 to 103, are included in this report, except for assay sheets on MBD 102 (not available). The summary log and assay sheets for MBD 93 are also included.

MBD 94

This hole was drilled on Section 1180E and designed as a porphyry infill hole. An extremely large porphyry intercept was achieved below 96.8 and 132.6 metres (i.e. 35.8 m). The following grade intercepts were achieved:

Geology (cont'd) :

FROM:	TO:	LENGTH (m):	% Sn:	ROCK TYPE:
95.8	97.8	2.0	0.51	SEDIMENT/PORPHYRY
100.8	101.6	0.8	0.79	PORPHYRY
124.6	129.6	5.0	0.63	PORPHYRY

MBD 95

This hole was drilled on the most easterly section 1460E as a porphyry extension hole. Two intercepts of porphyry were achieved, however, only the upper intercept contained significant tin values, i.e.

FROM:	TO:	LENGTH (m):	% Sn:	ROCK TYPE:
78.9	88.9	10.0	0.72	PORPHYRY

(ii) Analyses From Holes Reported Previously

Significant assay results were obtained for the following holes reported earlier:

MBD 79 & 91

These holes were drilled as porphyry infill holes on Section 1380E. MBD 79 achieved a 17.2 metre intercept including the high grade intercept indicated below. The grade enrichment on this section was repeated some 80 metres down dip in MBD 91 which achieved a 15.6 metre intercept including the high grade section indicated below:

HOLE NO:	FROM:	TO:	LENGTH (m):	% Sn:	ROCK TYPE:
MBD 79	19.2	25.2	6.0	1.31	PORPHYRY
MBD 91	54.0	66.0	12.0	1.48	PORPHYRY

MBD 82

Drilled on Section 1080E as an infill hole for DSL and Porphyry with the following significant intercepts:

FROM:	TO:	LENGTH (m):	% Sn:	ROCK TYPE:
38.5	55.9	17.4	0.46	DSL
55.9	84.2	28.3	0.48	PORPHYRY
84.2	85.4	1.2	3.46	DSL

Geology (cont'd):

MBD 88

Drilled as porphyry infill hole on Section 1220E, with the following poor intercept:

FROM:	TO:	LENGTH (m):	% Sn:	ROCK TYPE:
125.5	128.5	3.0	0.29	PORPHYRY

MBD 90

Drilled on Section 880E to extend porphyry reserves at depth, this hole achieved several significant intercepts.

FROM:	TO:	LENGTH (m):	% Sn:	ROCK TYPE:
126.9	132.9	6.0	0.75	SILTSTONE/QUARTZ VEIN (sub-parallel to core axis)
165.5	167.5	2.0	1.45	SILTSTONE
177.8	185.8	8.0	0.58	PORPHYRY
FROM:	TO:	LENGTH (m):	% Zn: (approx.)	ROCK TYPE:
158.3	163.5	5.2	4.0	VEINED SEDIMENTS

(iii) Surface Sampling

Surface samples have been taken over the Greisen Face DSL outcrop on Sections 940, 960, 980 and 1000E. Samples were taken at 2m intervals with hand auger to bedrock where required. Completed assay results are available for the following sections:

940E	1940 N to 1946N	6m @ 0.32 % Sn
	1966 N to 1974N	10m @ 0.57 % Sn
960E	1982N to 1996N	16m @ 0.95 % Sn
1980E	1980N to 1996N	18m @ 0.79 % Sn
	2004N to 2026N	24m @ 0.55 % Sn

(iv) Geological Re-Interpretation

A major re-interpretation of geology for the main DSL and Porphyry orebodies was conducted. This resulted in draft versions of the following, at 1:500 scale:

Geology (Cont'd)

(iv) Geological Re-interpretation (cont'd)

Cross Sections	920E to 1260E
Longitudinal Sections	1740N to 2060N
Level Plans	500 m RL to 650 m RL

These drafts have been reviewed by Mr. A. Jannink and Mr. G. Bujtor (CRA). Minor corrections are being included in a final re-draft prior to re-estimation of ore reserves.

Re-interpretation of the Lower Dolomite and Buried Dolomite sequences is not yet included in this work.

(v) Fooks Lode

During the period a report was prepared covering Stage 3A drilling on the Fooks Lode AP 5/80. This report will now be submitted to the Tasmanian Mines Department.

Mining Investigations:

(i) Drilling

A programme of drilling to a 5 metre spacing within a 20 x 20 metre grid on the Greisen Face area was completed (ie Sections 970 to 990E). This drilling expands upon previous 10 metre close spaced drilling in the area and was intended to demonstrate continuity of grade zones into blocks of over 5 metre cubed.

Seventeen holes have now been drilled into the grid with the following results available to date:

Section 970E:

HOLE NO	FROM:	TO:	INTERVAL:	% Sn:	ROCK TYPE
MBD 49*	22.3	33.9	11.6	1.52	DSL
MBD 86*	37.0	42.0	5.0	1.89	DSL
	47.0	49.0	2.0	0.47	DSL
MBD 92*	26.4	53.9	27.5	<0.10	DSL
	55.3	60.2	4.95	1.47	SEDIMENT

Section 975E:

HOLE NO	FROM:	TO:	INTERVAL	% Sn	ROCK TYPE
MBD 101	32.4	50.7	18.3	1.27	DSL
	50.7	51.6	0.9	0.67	SEDIMENT
MBD 102	33.4	35.5	2.0	1.26	DSL
	51.1	54.1	3.0	1.22	DSL
	62.2	66.0	3.8	0.66	SEDIMENT

Mining Investigations (cont'd)

Section 980E:

HOLE NO:	FROM:	TO:	INTERVAL:	% Sn:	ROCK TYPE:
MBD 103	18.1	27.0	8.9	0.60	DSL
MBD 20#	24.0	31.5	7.5	0.72	DOLOMITE/DSL
	37.5	41.0	3.5	0.30	DSL
MBD 98	31.7	52.7	21.0	1.45	DSL
MBD 48*	44.9	55.9	11.0	1.11	DSL
MBD 99	20.6	26.9	6.3	0.43	DOLOMITE
	33.1	40.6	7.5	0.49	DOLOMITE/DSL
	45.9	55.9	10.0	2.24	DSL
MBD 47*	12.9	16.3	3.4	0.48	DSL
	34.0	40.9	6.9	1.06	DOLOMITE/DSL
MBD 100	NOT AVAILABLE				

Section 985E:

HOLE NO:	FROM:	TO:	INTERVAL:	% Sn:	ROCK TYPE:
MBD 96	28.5	51.0	22.5	1.14	DSL
MBD 97	27.0	54.8	27.8	1.15	DSL

Section 990E:

HOLE NO:	FROM:	TO:	INTERVAL:	% Sn:	ROCK TYPE:
MBD 50*	22.4	36.4	14.0	0.74	DSL
MBD 87*	27.6	52.4	24.8	1.64	DSL
MBD 93*	29.9	48.7	18.8	1.75	DSL

NOTE:

1) # Denotes Stage 2B Drilling.

* Denotes Stage 3A Drilling.

2) Sediment intercepts quoted include some core ground results.

3) All high grade intercepts subject to confirmation on + 1% analyses. Plus + 4% Sn cut to 4%.

These results indicate a general improvement in grade for the zone with denser drilling. However, in terms of ore reserve calculation, it would appear that extrapolation beyond 5 m in either direction is difficult to justify. Although some continuity into $5m^3$ blocks has been demonstrated, significant dilution with barren DSL may be expected in mining. A further summary of these intercepts is appended.

Mining Investigations (cont'd)

(ii) Mine Planning

Studies have been initiated for mine pre-development and equipment requirements for the initial DSL open pit.

Metallurgy

(i) Testwork

The 50 kg pilot scale tests on composites MCA (talc rich DSL) and MCC (qtz/carbonate DSL below porphyry) continued. Grinding, sulphide flotation and cassiterite concentration by tabling has been completed. Good liberation and recovery of cassiterite has been achieved in these tests. Work still to be carried out on the composites is re-grinding and re-tabling of table tailing and cassiterite flotation of fines.

Grinding and sulphide flotation of the composite MCD (Porphyry) was completed with results similar to earlier tests on porphyry material.

Samples were sent to Amdel for Rod Mill, Ball Mill and Regrind Work Index determinations. Results received to date are:

MCA Ball Mill Work Index 11.1 kWh/tonne
MCC Ball Mill Work Index 10.2 kWh/tonne

A sample of porphyry ore was sent to Mineral Deposits for initial investigations into the application of gravity concentrates (eg. spirals, trays or cones) as preconcentrators at a relatively coarse size (i.e. - minus 1 mm).

Engineering

Preliminary engineering studies in relation to mine development began during the period. In addition, work continued on preparation enquiry letters and briefs for engineering work to be carried out for Stage 3B, up to end December, 1981.

Budget

A budget for the six months to 31st December, 1981, was agreed to at the June Operating Committee Meeting. This budget is appended and included carry overs of Stage 3A Drilling and Metallurgy into July, plus all stage 3B work.

In fact, drilling for Stage 3A was virtually complete by end June, and drilling for July consisted of close spaced drilling under the Mining Budget, carried forward from October.

Budget (cont'd)

In view of the transitory position between Budgets and stages during July, no attempt has been made to graph the budget situation. A Stage 3B progress graph will be included next month.

Actual expenditure for Stage 3A against budget is summarized below:

Stage 3A (As per Stage 3A Programme & Budget)

	As at 31 July	Forecast Total	Budget	Variance
Technical Services	202,511	202,511	221,500	(18,989)
Travel & Accom.	12,329	12,329	6,300	6,029
Labour	16,248	16,248	14,100	2,148
Camp & Mining	6,557	6,557	11,100	(4,543)
Vehicles	8,299	8,299	8,100	199
Equipment Rental	800	800	3,900	(3,100)
Cons. & General	64,719	64,719	47,000	(17,719)
Tenement	20	20	1,000	(980)
Track Cutting	875	875	4,000	(3,125)
Geophysical Survey	8,945	8,945	4,000	4,945
Diamond Drilling	384,714	384,714	349,900	34,814
Site Preparation	8,673	8,673	8,000	673
Assays	16,684	19,680	20,000	(320)
Metallurgy	65,317	65,317	93,400	(28,083)
Capital Items	43,783	43,783	38,500	5,283
	840,474	843,470	831,000	12,670

Positive Variance on Budget		$12,670
Less AIR & DIB Grants	$ 6,500	
" " "	25,863	$32,363
Under expenditure of funds		(19,693)

Over-expenditure on Diamond Drilling related to poor performance by the Longyear HC150 rig early in the programme, and is accentuated by the fact that approximately 200 metres of unallocated Buried Dolomite drilling was not drilled.

On the other hand, Diamond Drilling suffered from an expensive metallurgical hole MBD 80, which will be applicable to AIR & DIB Grants.

APPENDED INFORMATION

- JULY EXPENDITURE STATEMENTS
- MINING - CLOSE SPACED DRILLING
- BUDGET, JULY-DECEMBER, 1981
- MBD 93
- MBD 96 to 103
- ASSAYS SECTIONS 940E, 980E, 1000E.
- ASSAYS PREVIOUSLY REPORTED HOLES

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A/3B EXPENDITURE

	JULY 1981		Months to		Six Months To December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
Administration	10	12			67	67
Geology	25	111			267	317
Mining	9	5			126	116
Metallurgy		27			136	136
Engineering	5	4			161	161
Commercial					13	13
Stage 3A	37				37	
TOTAL PROJECT:	86	159			807	810

SUMMARY OF EXPENDITURE TO 31.7.81

	CURRENT PERIOD $000	ACCUMULATIVE $000
Stage 1		270
Stage 2A - Early Start		29
Stage 2A		199
Overruns: Stage 1 - M.E.L.		11
Metallurgical - C.R.A.E.		24
Stage 2B		482
Stage 2B - 3A Holding Costs Offset - A.I.R. & DIB		40
Stage 3A - Partly offset by A.I.R. & DIB Grant Received June 1981 - $6,500	37	840
Stage 3B - Partly offset by A.I.R. & DIB Grant Received July, 1981 - $25,863	49	49
ACCUMULATIVE EXPENDITURE TO DATE	86	1,944

MT. BISCHOFF PROJECT

STAGE 3A/3B EXPENDITURE

	JULY 1981		Months to		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
ADMINISTRATION						
Technical Services	9	11			63	63
Consumables	1				1	1
Travel					2	2
Consultants		1			1	1
	10	12			67	67
GEOLOGY						
Technical Services	15	11			60	60
Labour	1	2			8	8
Consumables	1	9			22	22
Accommodation		1			7	7
Vehicles		1			5	5
Travel					2	2
Contractors		74			138	188
Consultants		5			17	17
Capital Expenditure	8	8			8	8
	25	111			267	317
MINING						
Technical Services	7	2			25	15
Labour					1	1
Consumables	2	1			9	9
Travel		1			3	3
Contractors					64	64
Consultants		1			24	24
	9	5			126	116
METALLURGY						
Technical Services		13			77	77
Labour		1			4	4
Consumables		6			24	24
Accommodation					1	1
Travel		1			12	12
Contractors		6			12	12
Consultants					6	6
		27			136	136
ENGINEERING						
Technical Services	5	2			30	30
Consumables					1	1
Travel					8	8
Contractors		1			114	114
Consultants		1			8	8
	5	4			161	161

MT. BISCHOFF PROJECT

STAGE 3A/3B EXPENDITURE

	JULY 1981		Months to		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
COMMERCIAL						
Technical Services					11	11
Consumables					2	2
					13	13
TOTAL:	49	159			770	810
STAGE 3A EXPENDITURE						
Technical Services	4				4	
Travel & Accommodation	1				1	
Diamond Drilling	21				24	
Metallurgical	11				11	
	37				40	
	86	159			810	810

NOTE:

Budgeted figures for July and Six months to December include expected Stage 3A carry-over. Figures have been broken out here for identification purposes.

Mining

Collar Position	S E C T I O N				
	970E	975E	980E	985	990E
1968N			MBD 103* 18 to 27m 9m @ 0.6%Sn		
1960N	MBD 49 22 to 34m 12m @ 1.5%Sn		MBD 20 24 to 32m 8m @ 0.6%Sn		MBD 50 22 to 36 14m @ 0.5%Sn
1953N		MBD 101* 33 to 51m 18m@1.3%Sn	MBD 98 32 to 53m 21m @ 1.5%Sn	MBD 96 29 to 51m 22m @ 1.1%Sn	
1945N	MBD 86 37 to 42m 5m @ 1.9%Sn 47 to 49m 2m @0.5%Sn		MBD 48 45 to 56m 11m @ 1.1%Sn		MBD 87 28 to 53 25m @ 1.6%Sn
1938N		MBD 102* 33 to 35m 2m @ 1.3%Sn 51 to 54m 3m @ 1.2%Sn	MBD 99 33 to 41m 8m @ 1.5%Sn 46 to 56m 10m @ 2.2%Sn	MBD 97* 27 to 55m 28m @ 1.2%Sn	
1932N	MBD 92* No DSL Grade		MBD 47 34 to 41m 7m @ 1.1%Sn		MBD 93 30 to 49 19m @ 1.8%Sn
1927N			MBD 100 N/A		

(i) 960E - 1955N : -B1 - approx 23.0 to 36.0m 13m@ 1.2%Sn
1000E - 1965N : -B2 - approx 20.0 to 32.0m 12m@ 1.0%Sn

(ii) * Assays received this period.

SUMMARY OF BUDGET JULY - DECEMBER, 1981.

MT. BISCHOFF PROJECT.

		JULY.	AUGUST.	SEPT.	OCT.	NOV.	DEC.	TOTAL.
01	ADMINISTRATION	11,900	10,100	11,700	11,400	11,100	10,700	66,900
02	GEOLOGY	111,400	26,600	75,700	74,400	15,900	13,000	317,000
03	MINING	4,600	3,500	28,000	34,500	38,000	7,100	115,700
04	METALLURGY	27,100	26,200	22,800	21,400	18,800	19,900	136,200
05	ENGINEERING	4,200	4,800	19,600	42,400	42,700	47,800	161,500
06	COMMERCIAL	300	-	600	900	5,000	5,600	12,400
	TOTAL	$159,500	$71,200	$158,400	$185,000	$131,500	$104,100	$809,700

832369 359

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 93

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	N	E	
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -50°
Total length 70.1
Commenced: 25 / 6 /81
Completed: 27 / 6 /81

Drilling contractor: LONGYEAR AUST. LTD.
Rig type: LONGYEAR 44

Core size and non-coring (NC)

TRICONE	0	TO	1.8
NQ	1.8	TO	70.1
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets.
To test grade variability in talc-po DSL in the Greisen Face area.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		

Comments on drilling. Core considerably ground during drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSON FROM 0 TO 70.1 DATE 2/7/81
LOGGED BY FROM TO DATE
LOGGED BY FROM TO DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 93
Log sheet 1 of 2

832370 360

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0		0 - 1.8 NOT CORED.						
		1.8 - 24.0: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly finely crystalline, light grey dolomite. Occasional patches of coarsely recrystallized cream dolomite, usually with disseminated sph, po.		2/3		sph > po 1-2% sulphides disseminated or veined through patches of recrystallized dolomite.		
20		24.0 - 29.9: RECRYSTALLIZED DOLOMITE, lesser DOLOMITE. Mainly mottled grey-green recrystallized dolomite with minor green talc. Occasional patches of unaltered dolomite.		3/2		po >> py 7% disseminated through recrystallized dolomite.		
		29.9 - 65.8: DOLOMITE SULPHIDE LODE. 29.9-46.0: 55% bronze pyrrhotite 45% talc		4/6		55% bronze pyrrhotite. Coarsely disseminated in parts, mainly weakly banded. Varies from 10% to almost massive in 10 cm intervals. Trace finely disseminated cpy.		
40		46.0-56.8: 55% qtz carbonate 40% bronze pyrrhotite		8/4/6		40% po - see above trace cpy		
		56.8-64.9: 50% bronze pyrrhotite 25% dark green serpentine 20% green talc		7/6		50% po - see above trace finely disseminated cpy		
60		64.9-65.8: transition zone				15% po, py		
		65.8 - 70.1: SILTSTONE, lesser QUARTZITE. Strongly disrupted pale grey siltstone and lesser darker qtzite.		10/11				
80								

5 cm

FOR LEGEND SEE DRAWING NO.

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO 9 - AUSTRALAS INST MIN METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 93

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124431	1.8	3.8	2.0		1350								
	32	3.8	5.8	"		270								
	33	5.8	7.8	"		490								
	34	7.8	9.8	"		65								
	35	9.8	11.8	"		110								
	36	11.8	13.8	"		150								
	37	13.8	15.8	"		120								
	38	15.8	17.8	"		120								
	39	17.8	19.8	"		180								
	440	19.8	21.8	"		540								
	41	21.8	24.0	2.2		100								
124588		24.0	25.0	1.0		100								
89		25.0	26.0	"		25								
590		26.0	27.0	"		90								
91		27.0	28.0	"		140								
92		28.0	29.0	"		95								
93		29.0	29.9	0.9		95								
94		29.9	30.9	1.0		1.05%								
95		30.9	31.9	"		1900								
96		31.9	32.9	"		1650								
97		32.9	33.9	"		1.20%								
98		33.9	34.9	"		1.25%								
99		34.9	35.9	"		8400								
124600		35.9	36.9	"		8.50%								
01		36.9	37.9	"		3000								
02		37.9	38.9	"		3.20%								
03		38.9	39.9	"		2.95%								
04		39.9	40.9	"		9550								
05		40.9	41.9	"		1.75%								

Notes:— XRF 04 method
X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 93

SAMPLE TYPE : DRILL CORE FROM 1.8 TO 41.9

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
184606		41.9	42.9	"	900									
07		42.9	43.9	"	710									
08		43.9	44.9	"	2.25%									
09		44.9	46.0	1.1	3.25%									
610		46.0	46.7	0.7	9750									
11		46.7	47.7	1.0	3.95%									
12		47.7	48.7	"	3150									
13		48.7	49.7	"	150									
14		49.7	50.7	"	30									
15		50.7	51.4	0.7	45									
16		51.4	52.8	1.4	3200									
17		52.8	53.8	1.0	110									
18		53.8	54.8	"	20									
19		54.8	55.8	"	X									
680		55.8	56.8	"	X									
21		56.8	57.8	"	X									
22		57.8	58.8	"	X									
23		58.8	59.8	"	X									
24		59.8	60.8	"	X									
25		60.8	61.8	"	X									
26		61.8	62.8	"	X									
27		62.8	63.8	"	X									
28		63.8	64.9	1.1	10									
29		64.9	65.8	0.9	90									
690		65.8	66.8	1.0	340									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 93

SAMPLE TYPE : DRILL CORE FROM 41.9 TO 66.8

832373 363

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 96

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	1952.79 N	985.03 E	644.06
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	mA.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: -50°
Total length: 58.5 m
Commenced: 8 / 7 / 81
Completed: 14 / 7 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods:
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets:
Part of close spaced drilling program to test ore variability in talc-po DSL.

Core size and non-coring (NC)

TRICONE	0	TO 1.5
HQ	1.5	TO 58.5
		TO
		TO
		TO
		TO

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR	-	50°
20 m	329½°	50°
58.5	331°	51°
EOH		

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/6	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 58.5	FROM TO	FROM TO
DATE 15/7/81	DATE	DATE

Company managing exploration programme:
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 96
Log sheet 1 of 2

832374 364

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.5	0 - 1.5: TRICONE. NO CORE.						
	11.0	1.5 - 12.5: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly fine grey dolomite. Irregular veins and patches of recrystallized dolomite.		2/ 3		1-2% po, py - disseminated through recrystallized dolomite.		
	10.0	12.5 - 22.5: RECRYSTALLIZED DOLOMITE, DOLOMITE, minor DSL. Mottled recrystallized dolomite and grey dolomite. Minor irregular patches of DSL, up to 1.0 m long		3/ 2/ 8		3-5% po, py disseminated through recrystallized dolomite.		
20								
	3.8	22.5 - 26.3: DOLOMITE SULPHIDE LODE. 55% bronze po, 20% talc, 20% serpentine		4/ 6/ 7		55% po in irregular bands and aggregates.		
	1.2	26.3 - 27.5: DOLOMITE, minor RECRYSTALLIZED DOLOMITE.		2/3		3-5% disseminated po.		
	8.7	27.5 - 36.2: DOLOMITE SULPHIDE LODE. 70% talc 25% bronze pyrrhotite 5% qtz-carbonate, irregularly distributed		6/ 4		25% po - weakly banded. Varies from approx 5% to almost massive.		
	0.6	36.2 - 36.8: DOLOMITE.		2		3-5% po		
40	14.2	36.8 - 51.0: DOLOMITE SULPHIDE LODE. 36.8-42.5: 60% talc 40% pyrrhotite 42.5-51.0: 60% po 20% talc 20% serpentine minor qtz-carbonate in parts.		6/ 4 4/ 6		40% po - disseminated, weakly banded in parts. trace fine cpy 60% po po - weakly banded, almost massive in parts. trace arsenopy, coarsely dissem, and trace fine cpy.		
	7.5	51.0 - 58.5: SILTSTONE, lesser QUARTZITE. 51.0-52.6: po rich transition zone. 52.6-58.5: pale grey siliceous siltstone, with lesser darker qtzite. Moderately disrupted in parts.		10/ 11		po, py po-abundant in transition zone, then minor veins. py-alteration from po, and veins.		
60		END OF HOLE: 58.5 m.						

5 cm

FOR LEGEND SEE DRAWING NO.

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 96

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124783	1.5	3.5	2.0		180								
	84	3.5	5.5	"		100								
	85	5.5	7.5	"		580								
	86	7.5	9.5	"		710								
	87	9.5	11.5	"		170								
	88	11.5	13.5	"		160								
	89	13.5	15.5	"		70								
124894		15.5	16.5	1.0	37									
95		16.5	17.7	1.2	50									
96		17.7	18.3	0.6	200									
97		18.3	18.7	0.4	80									
98		18.7	19.5	0.8	410									
99		19.5	19.9	0.4	890									
124900		19.9	20.6	0.7	860									
01		20.6	21.5	0.9	460									
02		21.5	22.2	0.7	490									
03		22.2	22.5	0.3	75									
04		22.5	23.5	1.0	10									
05		23.5	24.5	"	X									
06		24.5	25.5	"	X									
07		25.5	26.3	0.8	X									
08		26.3	27.5	1.2	1900									
09		27.5	28.5	1.0	2900									
910		28.5	29.5	"	1.95%									
11		29.5	30.5	"	1950									
12		30.5	31.5	"	1.85%									
13		31.5	32.5	"	5050									
14		32.5	33.5	"	2750									
15		33.5	34.5	"	3.05%									
16		34.5	35.5	"	3.10%									

Notes:— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 96

SAMPLE TYPE : DRILL CORE FROM 1.5 TO 35.5

8322375

365

832376 366

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 97

COLLAR LOCATION

Grid name — Rectangular space co-ordinates

	PLANAR CO-ORDINATES		ELEVATION
(1) _____	1938.19 N	985.11 E	643.89
(2) _____	_____ N	_____ E	_____
(3) Aust. Map Grid (PRECISE / APPROX.)	_____ mE	_____ mN	_____ m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -50°
Total length 72.0
Commenced: 14 / 7 / 81
Completed: 16 / 7 / 81

Drilling contractor: PARRY EXPL. DRILLING.
Rig type: BOYLES 37

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test grade variability in talc-po DSL in Greisen Face area.

Core size and non-coring (NC)

TRICONE	0	TO	1.5
HQ	1.5	TO	72.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
28 m	345½°	50°
72 m	314°	50½°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / 8	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON	_____	_____
FROM 0 TO 72.0	FROM _____ TO _____	FROM _____ TO _____
DATE 20/8/81	DATE _____	DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 97
Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.5	0 - 1.5 NOT CORED						
	10.7	1.5 - 12.2: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Finely crystalline light grey dolomite with minor patches of cream recrystallized dolomite. Minor sulphides and talc in recrystallized dolomite.		2/3		TRACE sph, po disseminated through recrystallized dolomite. Minor veins.		
	2.1	12.2 - 14.3: DOLOMITE SULPHIDE LODE. Mainly "WRIGGLITE" with lesser coarse qtz carbonate.				py >> po 5% - finely disseminated.		
	7.7	14.3 - 22.0: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Fine, pale grey dolomite with speckled (cream) appearance in parts. Minor patches of coarsely recrystallized dolomite.		2/3		po TRACE disseminated through recrystallized dolomite. Trace fluorite, vivianite.		
20	2.1	22.0 - 24.1: DOLOMITE SULPHIDE LODE. Mainly wrigglite.				po > py 15% finely disseminated.		
	2.9	24.1 - 27.0: DOLOMITE, minor DOLOMITE SULPHIDE LODE. Mainly pale grey dolomite, with minor irregular talc patches.		2/6		po - finely disseminated in talc-rich DSL 2-3%		
	38.2	27.0 - 65.2: DOLOMITE SULPHIDE LODE.						
		27.0-30.6: 90% talc 10% ?serpentine Rare dolomite corestones.		6/7		27.0-31.5: trace finely dissem. po, minor secondary py.		
		30.6-31.5: 85% qtz-carbonate 10% talc 5% po		8/6 4		31.5-37.3: 75% po-weakly banded minor secondary py, trace dissem. arsenopy, cpy.		
40		31.5-37.3: 75% pyrrhotite-from 50% to almost massive locally. Weakly banded. 25% dark green talc		4/6				
		37.3-46.3: 55% talc 45% pyrrhotite Minor blotchy qtz-carbonate		6/4		37.3-46.3: 40% po as above		
		46.3-50.0: 50% blotchy qtz-carbonate 35% talc 15% disseminated po		8/6 4		46.3-50.0: 15% finely dissem. po, up to 50% locally. Trace very fine cpy dissem. in po.		
		50.0-54.3: 50% talc 30% po 20% dark green ?serpentine		6/4 7		40.0-54.3: 30% po as for 31.5-37.3.		
		54.3-56.3: 45% qtz-carbonate 40% po 15% talc		8/4 6		54.3-62.5: 45% po as above.		
60		56.3-65.2: 45% po 30% talc 25% blotchy qtz-carbonate		4/6 8				
	6.8	65.2 - 72.0: SILTSTONE, lesser QUARTZITE. 65.2-66.2: transition zone-altered siltstone. 66.2-72.0: strongly disrupted grey siliceous siltstone with lesser darker qtz. Occasional veins of carbonate + py + fl.		10/ 11		2-3% po > py po-disseminated in parts, and in thin veins and stringers. py in veins and stringers.		
		72.0: END OF HOLE.						
80								

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (EDS.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 97

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124790	1.5	4.2	2.7		25								
	124791	5.3	7.3	2.0		250								
	92	7.3	9.3	"		120								
	93	9.3	11.2	1.9		280								
124937		11.2	12.2	1.0	440									
38		12.2	13.7	1.5	2200									
39		13.7	14.3	0.6	9100									
940		14.3	15.3	1.0	130									
	124794	15.3	17.3	2.0		85								
	95	17.3	19.3	"		190								
	96	19.3	21.0	1.7		85								
124941		21.0	22.0	1.0	650									
42		22.0	23.0	"	5200									
43		23.0	24.1	1.1	6800									
44		24.1	25.1	1.0	720									
45		25.1	26.0	0.9	1400									
46		26.0	27.0	1.0	180									
47		27.0	28.0	"	1400									
48		28.0	29.0	"	2500									
49		29.0	30.0	"	1.56%									
950		30.0	30.6	0.6	2.90%									
51		30.6	31.5	0.9	0.994%									
52		31.5	32.5	1.0	3700									
53		32.5	33.5	"	70									
54		33.5	34.5	"	190									
55		34.5	35.5	"	2.16%									
56		35.5	37.0	1.5	2.29%									
57		37.0	38.0	1.0	7700									
58		38.0	39.0	"	4.72%									

Notes:—XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 97

SAMPLE TYPE : DRILL CORE FROM 1.5 TO 39.0

8323378

368

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124959		39.0	40.0	1.0	3.99%									
960		40.0	41.0	"	2.03%									
61		41.0	42.0	"	1.13%									
62		42.0	43.0	"	2.01%									
63		43.0	44.0	"	4400									
64		44.0	45.0	"	1900									
65		45.0	46.3	1.3	4500									
66		46.3	47.1	0.8	7700									
67		47.1	48.5	1.4	3200									
68		48.5	50.0	1.5	1200									
69		50.0	51.0	1.0	2600									
970		51.0	52.0	"	0.98%									
71		52.0	53.0	"	1.25%									
72		53.0	54.0	"	1.91%									
73		54.0	54.8	0.8	3900									
74		54.8	55.6	"	60									
75		55.6	56.3	0.7	35									
76		56.3	57.3	1.0	20									
77		57.3	58.3	"	15									
78		58.3	59.3	"	10									
79		59.3	60.3	"	20									
980		60.3	61.3	"	15									
81		61.3	62.3	"	35									
82		62.3	63.3	"	35									
83		63.3	64.3	"	30									
84		64.3	65.2	0.9	20									
85		65.2	66.3	1.1	110									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 97

SAMPLE TYPE : DRILL CORE FROM 39.0 TO 66.3

832380 370

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 98

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	1952.68 N	980.03 E	644.04
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	mA.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) ____ mag
G.N.(2) ____ mag
G.N.(3) ____ mag
T.N. ____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -50°
Total length 58.50
Commenced: 16 / 7 / 81
Completed: 18 / 7 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods: Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets: To test ore grade variability in talc-po DSL in Greisen Face area.

Core size and non-coring (NC)

TRICONE	0	TO 1.5
HQ	1.5	TO 58.5
		TO
		TO
		TO
		TO

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
13.5 m	331°	51°
58.5 m	328½°	50°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON
FROM 0 TO 58.5
DATE 21/1/81

LOGGED BY ____
FROM ____ TO ____
DATE ____

LOGGED BY ____
FROM ____ TO ____
DATE ____

Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 98

Log sheet 1 of 2

832381 371

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.5	0 - 1.5: NOT CORED.						
	0.7	1.5 - 2.2: NO CORE.						
	11.8	2.2 - 14.0: DOLOMITE, lesser RECRYSTALLIZED DOLOMITE. Mainly finely crystalline, light grey dolomite, with lesser cream recrystallized dolomite as irregular veins and patches.		2/3		2-3% po, py Occasional patches of euhedral py grains up to 8 mm. Po - disseminated through recrystallized patches.		
	4.9	14.0 - 18.9: RECRYSTALLIZED DOLOMITE, minor DOLOMITE. Mottled grey/green recrystallized dolomite, with corestones of unaltered grey dolomite.		3/2		1-2% po irregularly disseminated through recrystallized dolomite.		
20	1.3	18.9 - 20.2: SILTSTONE. Highly altered black rock.		10		trace po.		
	2.2	20.2 - 22.4: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly grey dolomite, minor recrystallized dolomite.		2/3		3% po in irregular veins and patches.		
	3.1	22.4 - 25.5: DOLOMITE SULPHIDE LODE.						
	2.4	55% po, 35% talc, 10% qtz-carbonate.		2/3		55% po as irregular bands and aggregates. Trace arsenopyrite.		
		25.5 - 27.9: DOLOMITE, lesser RECRYSTALLIZED DOL. Mainly dolomite, lesser recrystallized dolomite, minor talc				trace po, py as irregular veins.		
	9.7	27.9 - 37.6: DOLOMITE SULPHIDE LODE.		4/6/		30% po-irregular aggregates and coarsely disseminated, minor secondary py		
		27.9-32.5: 30% bronze pyrrhotite, 20% green talc, 20% qtz-carbonate, 30% dolomite and recrystallized dolomite.		8 4/6		60% po - weakly banded. Varies		
40	2.1	32.5-37.6: 60% pyrrhotite, 35% talc, 5% re-crystallized.		2/3		from trace to almost massive locally.		
		37.6 - 39.7: DOLOMITE, lesser RECRYSTALLIZED DOLOMITE.				po - 2-3% in occasional aggregates.		
	11.9	39.7 - 51.6: DOLOMITE SULPHIDE LODE. 65% po-almost massive in parts 30% green talc 5% blotchy qtz-carbonate		4/6/ 8		65% po po>>arsenopy>cpy po-irregular aggregates and bands. Also disseminated. Varies from 40% to almost massive trace arsenopy disseminated and as rare aggregates, trace finely disseminated cpy		
	6.9	51.6 - 58.5: SILTSTONE, lesser QUARTZITE. 51.6-52.6: transition zone-altered siltstone with abundant po carbonate. 52.6-58.5: strongly disrupted grey siltstone and lesser, darker qtzite.		10/		51.6-52.6: 20% po-disseminated 52.6-58.5: trace po disseminated and in veins. Minor py in veins.		
60		58.5: END OF HOLE.						
80								

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (EDS), MONOGRAPH NO. 9 AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 98

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124797	2.2	4.2	2.0		60								
	98	4.2	6.2	"		220								
	99	6.2	8.2	"		80								
	126200	8.2	10.2	"		300								
	01	10.2	12.2	"		540								
	02	12.2	14.2	"		460								
	03	14.2	16.0	1.8		390								
124986		16.0	17.0	1.0	55									
87		17.0	17.9	0.9	190									
88		17.9	18.9	1.0	240									
89		18.9	20.2	1.3	420									
990		20.2	21.3	1.1	1700									
91		21.3	22.4	1.1	970									
92		22.4	23.4	1.0	15.50									
93		23.4	24.4	"	X									
94		24.4	25.5	1.1	X									
95		25.5	27.0	1.5	4450									
96		27.0	27.9	0.9	1800									
97		27.9	29.0	1.1	210									
98		29.0	29.7	0.7	2100									
99		29.7	30.7	1.0	3200									
126300		30.7	31.7	"	2300									
01		31.7	32.6	0.9	5450									
02		32.6	33.6	1.0	7900									
03		33.6	34.6	"	2550									
04		34.6	35.6	"	1.55%									
05		35.6	36.4	0.8	3.15%									
06		36.4	37.6	1.2	1.25%									
07		37.6	38.6	1.0	980									
08		38.6	39.7	1.1	1000									

Notes :- XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 98

SAMPLE TYPE : DRILL CORE FROM 2.2 TO 39.7

Ground Split

8323382

372

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126309		39.7	41.2	1.5	1.35%									
310		41.2	42.6	1.4	1.90%									
11		42.6	43.9	1.3	110									
12		43.9	45.1	1.2	40									
13		45.1	46.0	0.9	1.90%									
14		46.0	47.0	1.0	2.80%									
15		47.0	48.0	"	2.50%									
16		48.0	49.0	"	4.15%									
17		49.0	50.0	"	4.75%									
18		50.0	51.0	"	270									
19		51.0	51.6	0.6	2.50%									
320		51.6	52.7	1.1	3800									
21		52.7	53.7	1.0	2300									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 98

SAMPLE TYPE : DRILL CORE FROM 39.7 TO 53.7

832383

373

832384 374

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 99

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1937.98 N	980.08 E	643.98
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: -50°
Total length: 69.6
Commenced: 20 / 7 / 81
Completed: 21 / 7 / 81
Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods.
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets.
To test ore variability in Greisen Face area.

Core size and non-coring (NC)

TRICONE	0	TO	1.5
HQ	1.5	TO	69.6
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
16.5 m	329°	49½°
67.5	314°	50½°
69.6	316°	50½°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 69.6 DATE 24/8/81
LOGGED BY _____ FROM _____ TO _____ DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 99
Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT — CAPITAL LETTERS, UNDERLINED Depth Description and notes INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.5	0 - 1.5: NOT CORED.						
	11.8	1.5 - 13.3: DOLOMITE, lesser RECRYSTALLIZED DOLOMITE. Mainly finely crystalline light grey dolomite, with lesser recrystallized dolomite in irregular veins and patches.		2/3		TRACE py, sph irregularly disseminated in patches of recrystallized dolomite.		
	8.6	13.3 - 21.9: RECRYSTALLIZED DOLOMITE, minor DOLOMITE. Mainly finely recrystallized cream or grey dolomite, with minor patches of finer unaltered dolomite. Occasional veins of qtz and calcite.		3/2		sph, py - trace in veins of qtz and carbonate.		
20	11.2	21.9 - 33.1: DOLOMITE SULPHIDE LODE. 21.9-26.9: WRIGGLITE - finely banded fluorites qtz-carbonate, and po-py. 26.9-33.1: 60% blotchy qtz-carbonate 30% gre-talc 10% po		8/6/4		21.9-26.9: 7% po and py finely disseminated in irregular bands. 26.9-33.1: 10% py - tinely disseminated and irregular aggregates up to 3 cm.		
	8.4	33.1-41.5: RECRYSTALLIZED DOLOMITE, lesser lesser DOLOMITE, minor DOLOMITE SULPHIDE LODE. Mainly mottled grey/white recrystallized dolomite, with lesser unaltered dolomite. Minor irregular patches of talc-rich DSL.		3/2		5% po - irregularly disseminated and occasional aggregates.		
40	21.9	41.5 - 63.4: DOLOMITE SULPHIDE LODE. 41.5-48.2: 60% pyrrhotite 30% green/grey talc 10% qtz-carbonate 48.2-59.6: 50% bronze po 35% talc 10% serpentine 5% qtz-carbonate 59.6-63.4: 50% po 40% qtz-carbonate 10% serpentine		4/6/		60% po - weakly banded in parts varies from 25% to almost massive trace finely disseminated cpy. 48.2: 50% pyrrhotite - finely disseminated and aggregates. trace coarse arsenopy trace fine cpy trace fine cassiterite? 59.6: 50% po As above.		
60	6.1	63.4 - 69.5: SILTSTONE, minor QUARTZITE. 63.4-64.8: transition zone highly altered siltstone 64.8-69.5: strongly disrupted grey siliceous siltstone and lesser qtzite.		10/11		occasional py veins. Minor finely disseminated po.		
		69.5: END OF HOLE.						

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 99

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	126204	1.5	2.7	1.2		220								
	126205	4.5	6.5	2.0		15								
	06	6.5	8.5	"		10								
	07	8.5	10.5	"		X								
	08	10.5	12.5	"		X								
	09	12.5	14.5	"		X								
	210	14.5	16.5	"		70								
	11	16.5	17.5	1.0		X								
126322		17.5	18.5	"	26									
23		18.5	19.6	1.1	134									
24		19.6	20.6	1.0	561									
25		20.6	21.1	0.5	4610									
26		21.1	21.9	0.8	658									
27		21.9	22.9	1.0	5140									
28		22.9	23.9	"	5570									
29		23.9	24.9	"	7270									
330		24.9	25.9	"	401									
31		25.9	26.9	"	6580									
32		26.9	27.4	0.5	2250									
33		27.4	28.6	1.2	110									
34		28.6	30.0	1.4	2710									
35		30.0	30.4	0.4	120									
36		30.4	31.4	1.0	3910									
37		31.4	32.4	"	148									
38		32.4	33.1	0.7	64									
39		33.1	34.1	1.0	3920									
340		34.1	35.1	"	1.17%									
41		35.1	36.1	"	4280									
42		36.1	37.4	1.3	2300									

Notes :— XRF 2A method
X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 99

SAMPLE TYPE : DRILL CORE FROM 1.5 TO 37.4

6 cm split

8322386 376

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126343		37.9	38.6	1.2	1410									
44		38.6	39.6	1.0	7380									
45		39.6	40.6	"	3640									
46		40.6	42.0	1.4	1610									
47		42.0	43.0	1.0	319									
48		43.0	44.0	"	X									
49		44.0	45.0	"	X									
350		45.0	45.5	0.5	27									
51		45.5	45.9	0.4	32									
52		45.9	46.9	1.0	5490									
53		46.9	48.3	1.4	2.56%									
54		48.3	48.9	0.6	6830									
55		48.9	49.9	1.0	4.67%									
56		49.9	50.9	"	8490									
57		50.9	51.9	"	249									
58		51.9	52.9	"	2.06%									
59		52.9	53.9	"	5280									
360		53.9	54.9	"	7.13%									
61		54.9	55.9	"	3.24%									
62		55.9	56.9	"	2200									
63		56.9	57.9	"	120									
64		57.9	58.9	"	8									
65		58.9	59.9	"	7									
66		59.9	60.9	"	576									
67		60.9	61.9	"	33									
68		61.9	62.9	"	33									
69		62.9	63.4	0.5	39									
370		63.9	64.8	1.4	72									
71		64.8	65.8	1.0	2050									
72		65.8	67.0	1.2	982									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 99

SAMPLE TYPE : DRILL CORE FROM 37.4 TO 67.0

8323381

377

832388 378

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 100

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	1927.39 N	979.95 E	643.63
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: -50°
Total length: 61.5
Commenced: 22 / 7 / 81
Completed: 24 / 7 / 81
Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods:
Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets:
To test ore variability of talc-po DSL in Greisen Face area.

Core size and non-coring (NC)

TRICONE	0	TO	1.5
HQ	1.5	TO	61.5
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
22 m	329°	50°
61.5 m	322°	50.25°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 61.5 DATE 4/9/81
LOGGED BY _____ FROM _____ TO _____ DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 100
Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	1.5	0 - 1.5: NOT CORED.						
	2.6	1.5 - 4.1: WEATHERED. Very poor recovery.						
	10.9	4.1 - 15.0: DOLOMITE. Finely crystalline grey or yellowish dolomite. Rare veins of py Occasional qtz veins.		2		py > sph TRACE py in veins and stringers sph disseminated through qtz-carbonate veins.		
	5.7	15.0 - 20.7: DOLOMITE SULPHIDE LODE. Banded "wrigglite" at contacts - mainly massive rock-abundant blotches of fine qtz-carbonate.				TRACE sph, py sph - trace disseminated py-minor veins and disseminated.		
20	20.3	20.7 - 41.0: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly finely crystalline grey dolomite, with irregular veins and patches of qtz-carbonate alteration.		2/3		trace po, sph as irregular veins and disseminated through qtz-carbonate.		
40	16.5	41.0 - 56.5: DOLOMITE SULPHIDE LODE. 41.0-44.3: 50% talc 20% po 30% qtz-carbonate 44.3-56.5: 60% po 30% talc 10% qtz-carbonate		6/4/8 4/6/8		41.0-44.3: 20% po - irregularly disseminated. 44.3-56.5: 60% po - weakly banded in parts. Varies from 40% to almost massive. Trace arsenopy, cpy		
60	5.0	56.5 - 61.5: SILTSTONE. Strongly disrupted pale grey siliceous siltstone. Occasional veins of carbonate, py or po		10		Trace po, py in veins and stringers, minor disseminated po.		
		END OF HOLE: 61.5 m.						

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 100

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A BERKMAN & W.R RYALL(ED), MONOGRAPH NO. 9 - AUSTRALAS INST. MIN. METALL - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	126212	4.1	6.1	2.0		260								
	13	6.1	8.1	"		30								
	14	8.1	10.1	"		X								
	15	10.1	12.1	"		X								
	16	12.1	13.2	1.1		35								
126373		13.2	14.0	0.8										
74		14.0	15.0	1.0										
75		15.0	16.0	"										
76		16.0	17.0	"										
77		17.0	18.0	"										
78		18.0	19.0	"										
79		19.0	20.0	"										
380		20.0	20.7	0.7										
81		20.7	21.7	1.0										
	126217	21.7	23.7	2.0		40								
	18	23.7	25.7	"		X								
	19	25.7	27.7	"		310								
	220	27.7	29.7	"		470								
	21	29.7	31.7	"		85								
	22	31.7	33.7	"		120								
	23	33.7	35.7	"		25								
	24	35.7	37.7	"		70								
126400		37.7	38.7	1.0										
01		38.7	39.7	"										
02		39.7	41.0	1.3										
03		41.0	42.0	1.0										
04		42.0	43.0	"										
05		43.0	44.0	"										
06		44.0	45.0	"										
07		45.0	45.7	0.7										

Notes :— XRF 214 method

X = 24

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 100

SAMPLE TYPE : DRILL CORE FROM 4.1 TO 45.7

66 mm split

832390

380

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126408		45.7	46.7	1.0										
09		46.7	47.7	"										
410		47.7	48.7	"										
11		48.7	49.7	"										
12		49.7	50.7	"										
13		50.7	51.7	"										
14		51.7	52.7	"										
15		52.7	53.7	"										
16		53.7	54.7	"										
17		54.7	55.7	"										
18		55.7	56.5	0.8										
19		56.5	57.5	1.0										

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 100

SAMPLE TYPE : DRILL CORE FROM 45.7 TO 57.5

832391

38

832392 -382

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 101

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	1953.05 N	974.83 E	644.16
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -50°
Total length 57.0
Commenced: 24 / 7 / 81
Completed: 28 / 7 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods: Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets: Greisen Face - close spacing to 5 metre grid

Core size and non-coring (NC)

	TO	
HQ	TO	57.0
	TO	
	TO	
	TO	
	TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 57.0 DATE
LOGGED BY FROM TO DATE
LOGGED BY FROM TO DATE

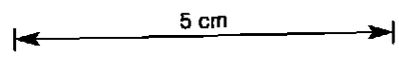
Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 101
Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth · Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS, ANALYSES	BULKED ASSAYS Ni
0	1.5	0 - 1.5: NOT CORED.						
	8.4	1.5 - 9.9: DOLOMITE, lesser RECRYSTALLIZED DOLOMITE. Finely crystalline grey or yellowish dolomite, with patches of incipient recrystallization. Occasional patches of coarsely recrystallized dolomite.		2/3		1-2% po, py irregularly disseminated and as aggregates in recrystallized dolomite.		
	4.2	9.9 - 14.1: RECRYSTALLIZED DOLOMITE, lesser DOLOMITE. Mixed mottled recrystallized dolomite with lesser unaltered fine dolomite.				20% po, py coarsely disseminated and loose aggregates.		
	8.2	14.1 - 22.3: RECRYSTALLIZED DOLOMITE, DOLOMITE, minor DOLOMITE SULPHIDE LODE. As above, except talc occurs in irregular blobs and veins up to 15 cm.				15% po - mainly in recrystallized dolomite, as disseminated grains and aggregates. In dolomite as veins.		
20	28.5	22.3 - 50.8: DOLOMITE SULPHIDE LODE. 22.3-32.3: 50% bronze pyrrhotite 25% qtz-carbonate } rarely occur 25% talc } together 32.3 - 50.8: 55% green/grey talc 45% bronze pyrrhotite		4/8/ 6 6/4		50% po (minor arsenopy, cpy) po-weakly banded in parts, generally irregularly dissem. Varies from 20% to 80% locally. Trace disseminated arsenopy and cpy. 45% po - as above.		
40	6.2	50.8 - 57.0: SILTSTONE, minor QUARTZITE. 50.8-51.9: transition zone-altered siltstone. 51.9-57.0: strongly disrupted siliceous grey siltstone and lesser darker qtzite.		10/ 11		1-2% po, py po - finely disseminated in parts py - in veins with carbonate.		
60		END OF HOLE: 57.0 M.						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 · AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES



FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 101

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126420		1.5	2.5	1.0	294									
21		2.5	3.5	"	80									
22		3.5	4.1	0.6	39									
23		4.1	5.1	1.0	53									
24		5.1	6.5	1.4	57									
25		6.5	7.5	1.0	70									
26		7.5	8.8	1.3	19									
27		8.8	9.8	1.0	124									
28		9.8	10.8	"	173									
29		10.8	11.8	"	624									
430		11.8	13.1	1.3	108									
31		13.1	14.1	1.0	167									
32		14.1	15.3	1.2	65									
33		15.3	16.8	1.5	23									
34		16.8	18.0	1.2	256									
35		18.0	19.0	1.0	2540									
36		19.0	19.9	0.9	442									
37		19.9	21.3	1.4	540									
38		21.3	22.4	1.1	323									
39		22.4	23.4	1.0	325									
440		23.4	24.4	"	X									
41		24.4	25.4	"	X									
42		25.4	26.4	"	X									
43		26.4	27.4	"	X									
44		27.4	28.4	"	1380									
45		28.4	29.4	"	5280									
46		29.4	30.4	"	49									
47		30.4	31.4	"	135									
48		31.4	32.4	"	341									
49		32.4	33.4	"	9400									

Notes :— XRF 214 method
X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 101

SAMPLE TYPE : DRILL CORE FROM 1.5 TO 33.4

8223394 384

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126450		35.4	34.4	1.0	6600									
51		34.4	35.4	"	3600									
52		35.4	36.4	"	1580									
53		36.4	37.4	"	5870									
54		37.4	38.4	"	1.20%									
55		38.4	39.4	"	6610									
56		39.4	40.4	"	3940									
57		40.4	41.4	"	1.08%									
58		41.4	42.4	"	1160									
59		42.4	43.4	"	4.80%									
460		43.4	44.4	"	4.44%									
61		44.4	45.4	"	5.18%									
62		45.4	46.1	0.7	4.03%									
63		46.1	47.1	1.0	1.48%									
64		47.1	48.3	1.2	2290									
65		48.3	49.3	1.0	77.1									
66		49.3	50.7	1.4	3030									
67		50.7	51.6	0.9	6680									
68		51.6	52.6	1.0	1460									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 101

SAMPLE TYPE : DRILL CORE FROM 35.4 TO 52.6

832395 385

832396 386

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. 102

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1)	1938.62 N	974.87 E	644.04	
(2)	N	E		
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.	

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: -50°
Total length: 690 m
Commenced: 28 / 7 / 81
Completed: 30 / 7 / 81
Drilling contractor: Parry Exploration Drilling
Rig type: Boyles 37

Details of down hole location-survey methods.

Purpose of drilling and anticipated lengths to targets.
Greisen Face - Close Spacing to 5 metres grid

Core size and non-coring (NC)

	TO	
HQ	TO	69.0
	TO	
	TO	
	TO	
	TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. Compston | LOGGED BY _____ | LOGGED BY _____
FROM _____ TO _____ | FROM _____ TO _____ | FROM _____ TO _____
DATE _____ | DATE _____ | DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. 102

Log sheet 1 of 3

832397 387

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth · Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
	2.0	0-2.0: NOT CORED						
	1.2	2.0-3.2: no core						
	17.3	3.2-20.5: DOLOMITE, minor RECRYSTALLIZED DOLOMITE Mainly pale gray to yellow, finely crystalline dolomite, with occasional patches of incipient recrystallization. Minor irregular veins of quartz and coarse carbonate. Rare stylotites		2/3		trace py, sph disseminated in qtz-carbonate veins and patches		
20.0	1.5	20.5-22.0: DOLOMITE SULPHIDE LODE: 75% po		4/8		75% po - minor 2ndary py		
	3.4	22.0-25.4: DOLOMITE, minor RECRYSTALLIZED DOLOMITE minor DOLOMITE SULPHIDE LODE. Mainly Dolomite, with minor wrigglits and recrystallized dolomite.		2/3/6		1-2% py po in veins and aggregates		
		25.4-60.0: DOLOMITE SULPHIDE LODE		4/8/6		50% po - almost massive in parts mainly coarsely disseminated		
		25.4-29.1: 50% po 25% qtz. carbonate 25% talc		8/4 6		20% po - coarsely disseminated -minor alteration to py		
		29.1-33.9: 70% qtz. carbonate 20% po 10% talc		8/4		45% po - irregularly disseminated up to 65% locally		
40.0	34.6	33.9-37.1: 55% mottled off-white qtz. carbonate 45% po		4/6/8		60% po - weakly banded in parts Varies from 30% disseminated to almost massive locally trace disseminated py, and arsonopy		
		37.1-53.5: 60% po 25% talc 10% qtz. carbonate 5% dark green serpentine						
		53.5-60.0: 60% po 25% dark green ? serpentine 5% talc 10% qtz-carbonate		4/7/8/6		as above arsenopy to 10% locally		
60.0	3.0	60.0-63.0: TRANSITION ZONE Altered siltstone - black, fine grained				15% po - mainly disseminated minor veins and aggregates		
	6.0	63.0-69.0: SILTSTONE, lesser QUARTZITE Strongly disrupted pale gray siltstone, with lesser darker quartzite.		10/11		TRACE po, py po- disseminated in parts py - in veins		
		END OF HOLE = 69.0 m						

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project

HOLE No.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	126825	3.3	5.3	2.0		87								
	26	5.3	7.3	"		18								
	27	7.3	8.6	1.3		38								
	126828	9.0	11.0	2.0		17								
	29	11.0	13.0	"		61								
	830	13.0	15.0	"		15								
	31	15.0	17.0	"		17								
	32	17.0	19.4	2.4		119								
126469		19.4	20.5	1.1	16									
470		20.5	22.0	1.5	X									
71		22.0	23.0	1.0	215									
72		23.0	24.4	1.4	1030									
73		24.4	25.4	1.0	174									
74		25.4	26.4	"	131									
75		26.4	27.4	"	50									
76		27.4	28.4	"	96									
77		28.4	29.4	"	210									
78		29.4	30.4	"	97									
79		30.4	31.4	"	55									
480		31.4	32.4	"	4									
81		32.4	33.4	"	507									
82		33.4	34.4	"	1.16%									
83		34.4	35.4	"	1.36%									
84		35.4	36.4	"	238									
85		36.4	37.1	0.7	12									
86		37.1	38.1	1.0	41									
87		38.1	39.1	"	68									
88		39.1	40.1	"	X									
89		40.1	41.1	"	X									

Notes :— XRF 014 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 102

SAMPLE TYPE : DRILL CORE FROM 3.3 TO 41.1

1 brand Split

8323388

388

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126490		41.1	42.1	1.0	39									
91		42.1	43.1	"	81									
92		43.1	44.1	"	132									
93		44.1	45.1	"	255									
94		45.1	46.1	"	19									
95		46.1	47.1	"	20									
96		47.1	48.1	"	961									
97		48.1	49.1	"	1850									
98		49.1	50.1	"	168									
99		50.1	51.1	"	1340									
126500		51.1	52.1	"	7690									
01		52.1	53.1	"	2.60%									
02		53.1	54.1	"	2960									
03		54.1	55.1	"	583									
04		55.1	56.1	"	448									
05		56.1	57.2	1.1	671									
06		57.2	58.2	1.0	680									
07		58.2	59.2	"	671									
08		59.2	60.2	"	784									
09		60.2	61.2	"	1300									
510		61.2	62.2	"	1200									
11		62.2	63.0	0.8	8820									
12		63.0	64.0	1.0	2350									
13		64.0	65.0	"	1.22%									
14		65.0	66.0	"	2120									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 102

SAMPLE TYPE : DRILL CORE FROM 41.1 TO 66.0

8323399

389

~~832400~~ 390

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. 103

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1) _____ 1968.32 N 980.07 E 647.41

(2) _____ _____ N _____ E _____

(3) Aust. Map Grid (PRECISE / APPROX.) _____ mE _____ mN _____ m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag

G.N.(2) _____ mag

G.N.(3) _____ mag

T.N. _____ mag

1:250 000 Sheet No. SK55-3

1:100 000 Sheet No. 8015

State Tasmania

Mineral Tenement E.L. 13/79

Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -53°

Total length 40.0 m

Commenced: 30. / 7 /81

Completed: 31 / 7 /81

Drilling contractor: Parry Exploration Drilling

Rig type: Boyles 37

Details of down hole location-survey methods.

Purpose of drilling and anticipated lengths to targets.

Greisen Face - Close Spacing to 5 metres

Core size and non-coring (NC)

____	____	TO ____
HQ	____	TO 40.0
____	____	TO ____
____	____	TO ____
____	____	TO ____
____	____	TO ____

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. Compston
FROM ____ TO ____
DATE ____

LOGGED BY ____
FROM ____ TO ____
DATE ____

LOGGED BY ____
FROM ____ TO ____
DATE ____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. 103

Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0m	1.0m	0.0 - 1.0 - NOT CORED						
	8.9m	1.0 - 9.9: DOLOMITE, Lesser RECRYSTALIZED DOLOMITE, minor DOLOMITE SULPHIDE LODE Finely crystalline grey dolomite with common irregular patches of recrystallized dolomite and minor patches of talc-rich DSL		2/ 3/ 6		2-3% po disseminated in DSL patches and recrystallized dolomite. Also occasional veins.		
		9.9-33.0: DOLOMITE SULPHIDE LODE 9.9-18.1: 60% po 35% quartz carbonate 5% talc 18.1-18.6: Coarsely recrystallized dolomite 18.6-21.5: 60% po 25% qtz. carbonate 15% talc 21.5-24.7: 70% qtz. carbonate (mainly carbonate) 30% po 24.7-27.0: 55% po 45% talc 27.0-33.0: 45% po 40% qtz. carbonate 15% green talc		4/ 8/ 6		60% po - weakly banded in parts Varies from coarsely disseminated to almost massive aggregates trace cpy - finely dissem. Minor 2ndary py		
20m				4/ 8/ 6		60% po - as above		
				8/ 4		30% po - finely to coarsely disseminated and occasional aggregates		
				4/ 6		55% po- mainly weakly banded varies from 10% to almost massive trace cpy.arsenopy.		
				4/ 8/6		45% po as above		
	1.4m	33.0-34.4: TRANSITION ZONE - altered siltstone				25% po - disseminated in bands		
	5.6m	34.4-40.0: SILTSTONE, lesser QUARTZITE Strongly disrupted gray siliceous siltstone and lesser dark qtzite. Occasional veins of carbonate + py + Fluorite		10/ 11		trace po, py, arsenopy. po - minor disseminated and stringers py-in veins with carbonate and rare arsenopy.		
40m		END OF HOLE = 40.0 m						
60m								

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 103

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126515		1.0	2.0	1.0	44									
16		2.0	2.7	0.7	92									
17		2.7	3.7	1.0	38									
18		3.7	4.7	"	100									
19		4.7	5.8	1.1	37									
520		5.8	6.5	0.7	137									
21		6.5	7.2	"	1990									
22		7.2	8.2	1.0	662									
23		8.2	8.9	0.7	524									
24		8.9	9.9	1.0	837									
25		9.9	10.9	"	419									
26		10.9	12.1	1.2	367									
27		12.1	13.1	"	193									
28		13.1	14.1	"	333									
29		14.1	15.1	"	429									
530		15.1	16.1	"	236									
31		16.1	17.1	"	274									
32		17.1	18.1	"	373									
33		18.1	19.1	"	1.86%									
34		19.1	20.1	"	368									
35		20.1	21.1	"	1930									
36		21.1	22.1	"	1.74%									
37		22.1	23.1	"	3450									
38		23.1	23.7	0.6	1970									
39		23.7	24.7	1.0	2000									
540		24.7	25.7	"	4740									
41		25.7	27.0	1.3	2590									
42		27.0	28.0	"	308									
43		28.0	29.0	"	157									
44		29.0	30.0	"	207									

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 103

SAMPLE TYPE : DRILL CORE FROM 1.0 TO 30.0

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126545		30·0	31·0	1·0	212									
46		31·0	32·0	"	46									
47		32·0	33·0	"	6									
48		33·0	33·9	0·9	98									
49		33·9	34·9	1·0	1490									
550		34·9	36·0	1·1	637									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 103

SAMPLE TYPE : DRILL CORE FROM 30·0 TO 36·0

The following assay sheets represent surface sample assays for Sections

940E

980E

1000E

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
1P6600		940E	1940N		P490									
01		"	1942N		4310									
02		"	1944N		P720									
03		"	1946N		1060									
04		"	1948N		853									
05		"	1950N		486									
06		"	1952N		177									
07		"	1954N		855									
08		"	1956N		863									
09		"	1958N		875									
610		"	1960N		838									
11		"	1962N		604									
12		"	1964N		1400									
13		"	1966N		7850									
14		"	1968N		1610									
15		"	1970N		5810									
16		"	1972N		9500									
17		"	1974N		3840									
18		"	1976N		P640									
19		"	1978N		1930									
620		"	1980N		1500									
21		"	1982N		1460									
22		"	1984N		P080									
23		"	1986N		P940									
24		"	1988N		1770									
25		"	1990N		737									

Notes :— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM TO

832405 3.95

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124917		35.5	36.2	0.7	9400									
18		36.2	36.8	0.4	1400									
19		36.8	37.3	0.5	1.59%									
920		37.3	37.6	0.3	790									
21		37.6	38.6	1.0	700									
22		38.6	39.6	"	1.10%									
23		39.6	40.6	"	2.05%									
24		40.6	41.6	"	2.15%									
25		41.6	42.6	"	4.15%									
26		42.6	43.6	"	200									
27		43.6	44.6	"	7350									
28		44.6	45.6	"	3600									
29		45.6	46.6	"	210									
930		46.6	47.6	"	6550									
31		47.6	48.6	"	580									
32		48.6	49.6	"	50									
33		49.6	51.0	1.4	2.15%									
34		51.0	52.0	1.0	760									
35		52.0	52.6	0.6	320									
36		52.6	54.0	1.4	1890									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD96

SAMPLE TYPE : DRILL CORE FROM 35.5 TO 54.0

832406

396

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
126668		980E	1970N		720									
69		"	1972N		5990									
670		"	1974N		1.17%									
71		"	1976N		6270									
72		"	1978N		6520									
73		"	1980N		1.75%									
74		"	1982N		5280									
75		"	1984N		1.48%									
76		"	1986N		1.02%									
77		"	1988N		328									
78		"	1990N		1140									
79		"	1992N		184									
680		"	1994N		208									
81		"	1996N		493									
82		"	1998N		1280									
83		"	2000N		1160									
84		"	2002N		1890									
85		"	2004N		398									
86		"	2006N		449									
87		"	2008N		209									
88		"	2010N		640									
89		"	2012N		862									
690		"	2014N		1000									
91		"	2016N		227									

Notes :— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM TO

SURFACE	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SAMPLES	GROUND CORE			m	SPLIT	GROUND								
126637		1000E	1980N		7054									
38		"	1982N		1.47%									
39		"	1984N		1.43%									
640		"	1986N		950									
41		"	1988N		7550									
42		"	1990N		3680									
43		"	1992N		8550									
44		"	1994N		1450									
45		"	1996N		1.30%									
46		"	1998N		61									
47		"	2000N		2050									
48		"	2002N		1650									
49		"	2004N		4800									
650		"	2006N		5940									
51		"	2008N		2052									
52		"	2010N		4800									
53		"	2012N		1.44%									
54		"	2014N		3030									
55		"	2016N		4320									
56		"	2018N		184									
57		"	2020N		7240									
126692		1000E	2022N		6250									
93		"	2024N		732									
94			2026N		1.43%									
95			2028N		1110									
96			2030N		919									

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM TO

832408

398

The following assay sheets represent assays from holes reported previously.

Additional Assay Sheets:

MBD 79

82

85

88

90

91

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
120965		1.0	1.4	0.4	4200									
66		1.4	2.4	1.0	90									
120967		10.2	11.2	1.0	270									
68		11.2	12.2	"	610									
69		12.2	13.2	"	2550									
970		13.2	14.2	"	2250									
71		14.2	15.2	"	2100									
72		15.2	16.2	"	2350									
73		16.2	17.2	"	510									
74		17.2	18.2	"	870									
75		18.2	19.2	"	1050									
76		19.2	20.2	"	5650									
77		20.2	21.2	"	4.36%									
78		21.2	22.2	"	1.56%									
79		22.2	23.2	"	5500									
980		23.2	24.2	"	3900									
81		24.2	25.2	"	3700									
82		25.2	26.2	"	1150									
83		26.2	27.2	"	710									
84		27.2	28.4	1.2	440									
85		28.4	29.4	1.0	740									

Notes:— XRF 214 Method.

832411

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 79

SAMPLE TYPE : DRILL CORE FROM 1.0 TO 29.4

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
120861		1.5	2.8	1.3	7000									
62		2.8	3.8	1.0	420									
63		3.8	4.8	"	220									
64		4.8	5.4	0.6	55									
65		5.4	6.0	"	1150									
66		6.0	7.0	1.0	120									
67		7.0	7.9	0.9	35									
68		7.9	8.9	1.0	4600									
69		8.9	9.8	0.9	1.46%									
870		9.8	10.8	1.0	330									
71		10.8	11.7	0.9	250									
72		11.7	12.7	1.0	160									
73		12.7	13.5	0.8	60									
74		13.5	14.5	1.0	40									
120875		21.5	22.5	1.0	30									
76		22.5	23.5	"	25									
77		23.5	24.5	"	30									
78		24.5	25.5	"	25									
79		25.5	26.5	"	25									
880		26.5	27.5	"	45									
81		27.5	28.5	"	35									
82		28.5	29.5	"	40									
83		29.5	30.5	"	65									
84		30.5	31.5	"	50									
85		31.5	32.5	"	40									
86		32.5	33.8	1.3	2050									

otes :— XRF 214 method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. mBD 82

SAMPLE TYPE : DRILL CORE FROM 1.5 TO 33.8

8324122

402

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
B0887		33.8	34.8	1.0	220									
88		34.8	35.8	"	20									
89		35.8	36.8	"	15									
890		36.8	37.8	"	530									
891		37.8	38.5	0.7	8140									
92		38.5	39.2	0.7	3100									
93		39.2	40.2	1.0	9950									
94		40.2	41.0	0.8	1.30%									
95		41.0	42.0	1.0	6950									
96		42.0	43.0	"	9100									
97		43.0	44.0	"	1600									
98		44.0	45.0	"	1750									
99		45.0	46.3	1.3	6050									
B0900		46.3	47.3	1.0	3600									
01		47.3	48.2	0.9	2800									
02		48.2	48.9	0.7	3400									
03		48.9	49.9	1.0	3500									
04		49.9	50.9	"	1650									
05		50.9	51.9	"	590									
06		51.9	52.9	"	2700									
07		52.9	53.9	"	1350									
08		53.9	54.9	"	1850									
09		54.9	55.9	"	6650									
910		55.9	56.9	"	1800									
11		56.9	57.9	"	610									
12		57.9	58.9	"	660									
13		58.9	59.9	"	620									
14		59.9	60.9	"	1150									
15		60.9	61.9	"	4000									
16		61.9	62.9	"	2900									

Notes:— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 82

SAMPLE TYPE : DRILL CORE FROM 33.8 TO 62.9

8324133 403

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1P0917		62·9	63·9	1·0	3000									
18		63·9	64·9	"	3150									
19		64·9	65·9	"	2250									
920		65·9	66·9	"	1·2%									
21		66·9	67·9	"	3200									
22		67·9	68·9	"	3100									
23		68·9	69·9	"	1650									
24		69·9	70·9	"	5600									
25		70·9	71·9	"	9650									
26		71·9	72·9	"	3200									
27		72·9	73·9	"	2700									
28		73·9	74·9	"	2100									
29		74·9	75·9	"	2350									
930		75·9	76·9	"	1·30%									
31		76·9	77·9	"	4500									
32		77·9	78·9	"	2650									
33		78·9	79·9	"	3450									
34		79·9	80·9	"	1300									
35		80·9	81·9	"	1050									
36		81·9	82·9	"	4000									
37		82·9	84·2	1·3	2000									
38		84·2	85·4	1·2	3·60%									
39		85·4	86·4	1·0	120									
940		86·4	87·4	"	150									
41		87·4	88·4	"	X									
42		88·4	89·4	"	25									
43		89·4	90·4	"	15									
44		90·4	91·4	"	X									
45		91·4	92·4	"	X									
46		92·4	93·4	"	X									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 82

SAMPLE TYPE : DRILL CORE FROM 62·9 TO 93·4

832414 404

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
120947		93·4	94·4	1·0	20									
48		94·4	95·4	"	5									
49		95·4	96·4	"	4									
950		96·4	97·4	"	65									
51		97·4	98·4	"	5									
52		98·4	99·4	"	15									
53		99·4	100·4	"	20									
54		100·4	101·4	"	10									
55		101·4	102·4	"	7									
56		102·4	103·4	"	25									
57		103·4	104·4	"	9									
58		104·4	105·4	"	X									
59		105·4	106·4	"	X									
960		106·4	107·4	"	90									
20961		113·1	114·1	1·0	20									
62		114·1	115·1	"	25									
63		115·1	116·0	0·9	15									
64		116·0	117·0	1·0	20									

otes:— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 82

SAMPLE TYPE : DRILL CORE FROM 95·4 TO 117·0

8224 15 405

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1240E9		2·5	3·9	1·4	2250									
030		3·9	4·5	0·6	450									
31		4·5	7·3	2·8	3700									
32		7·3	8·9	1·6	1450									
33		8·9	11·5	2·6	1450									
34		11·5	13·1	1·6	1700									
35		13·1	14·2	1·1	1650									
36		14·2	16·6	2·4	2300									
37		16·6	19·1	2·5	330									
38		19·1	20·1	1·0	1350									
39		20·1	21·3	1·2	1350									
040		21·3	22·4	1·1	140									
41		22·4	23·4	1·0	920									
42		23·4	24·8	1·4	50									
43		24·8	25·8	1·0	410									
44		25·8	27·0	1·2	2400									
45		27·0	28·5	1·5	4950									
46		28·7	29·7	1·0	310									
47		29·7	30·6	0·9	110									
48		30·6	31·6	1·0	90									
49		31·6	32·6	1·1	870									
050		32·6	33·5	0·9	140									
51		33·5	34·5	1·0	6600									
52		34·5	350	0·5	2400									
53		350	35·9	0·9	1050									
54		35·9	37·1	1·2	1000									
55		37·1	38·1	1·0	80									
56		38·1	39·2	1·1	340									
57		39·2	40·2	1·0	1350									

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBO 85

SAMPLE TYPE : DRILL CORE FROM 2·5 TO 40·2

832416 406

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124058		40.2	41.2	1.0	2700									
59		41.2	42.2	"	1550									
060		42.2	43.2	"	1000									
61		43.2	44.2	"	1900									
62		44.2	45.2	"	2400									
63		45.2	46.2	"	3050									
64		46.2	47.2	"	1850									
65		47.2	48.2	"	2450									
66		48.2	49.2	"	1450									
67		49.2	50.2	"	1500									
68		50.2	51.2	"	6300									
69		51.2	52.2	"	2600									
070		52.2	53.4	1.2	510									
71		53.4	54.4	1.0	5650									
72		54.4	55.4	"	390									
	124115	55.4	57.4	2.0		70								
	16	57.4	59.4	"		25								
	17	59.4	60.4	1.0		110								
124078		60.1	61.1	1.0	2400									
	124118	61.0	63.0	2.0		180								
	19	63.0	65.0	"		160								
	120	65.0	67.0	"		190								
	21	67.0	69.0	"		160								
	22	69.0	71.0	"		230								
	23	71.0	73.0	"		650								
	24	73.0	75.0	"		40								
	25	75.0	77.0	"		95								
	26	77.0	79.0	"		1950								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 85

SAMPLE TYPE : DRILL CORE FROM 40.2 TO 79.0

brand

83241

407

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124127	79.0	81.0	2.0		95								
	28	81.0	83.0	"		6								
	29	83.0	85.0	"		4								
	130	85.0	87.0	"		3								
	31	87.0	88.4	1.4		60								
	32	88.4	90.4	2.0		130								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 85

SAMPLE TYPE : DRILL CORE FROM 79.0 TO 90.4

832418

408

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124599		37.5	38.5	1.0	110									
124500		38.5	39.5	"	40									
01		39.5	40.5	"	35									
02		40.5	41.5	"	30									
03		41.5	42.5	"	210									
04		42.5	43.5	"	35									
05		43.5	44.5	"	35									
06		44.5	45.5	"	40									
07		45.5	46.5	"	40									
08		46.5	47.5	"	25									
09		47.5	48.5	"	25									
510		48.5	49.5	"	20									
11		49.5	50.5	"	20									
12		50.5	51.5	"	25									
13		51.5	52.5	"	25									
14		52.5	53.5	"	35									
15		53.5	54.5	"	20									
16		54.5	55.5	"	25									
17		55.5	56.5	"	30									
18		56.5	57.5	"	40									
19		57.5	58.5	"	35									
520		58.5	59.5	"	30									
21		59.5	60.5	"	20									
124522		93.0	94.0	1.0	25									
23		94.0	95.0	"	25									
24		95.0	96.0	"	20									
25		96.0	97.0	"	30									
26		97.0	98.0	"	20									
27		98.0	99.0	"	27									

Notes:— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD88

SAMPLE TYPE : DRILL CORE FROM 37.5 TO 990

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124528		99·0	100·0	1·0	25									
29		100·0	101·0	"	30									
530		101·0	102·0	"	60									
31		102·0	103·0	"	50									
32		103·0	104·0	"	40									
33		104·0	105·0	"	40									
34		105·0	106·0	"	40									
35		106·0	107·1	1·1	45									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 88

SAMPLE TYPE : DRILL CORE FROM 99·0 TO 107·1

832420 410

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121976		114.6	115.6	1.0	580									
77		115.6	116.6	"	130									
78		116.6	117.6	"	120									
79		117.6	118.5	0.9	240									
980		118.5	119.5	1.0	3100									
81		119.5	120.5	"	1200									
82		120.5	121.5	"	840									
83		121.5	122.5	"	1000									
84		122.5	123.5	"	2100									
85		123.5	124.5	"	520									
86		124.5	125.5	"	1550									
87		125.5	126.5	"	4900									
88		126.5	127.5	"	2100									
89		127.5	128.5	"	2100									
990		128.5	129.5	"	1750									
91		129.5	130.5	"	1100									
92		130.5	131.1	0.6	410									
93		131.1	132.1	1.0	120									

Notes:— XRF 214 Method.

832421

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 88

SAMPLE TYPE : DRILL CORE FROM 114.6 TO 132.1

411

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124254	1·5	4·2	2·7		640								
	124255	6·2	8·2	2·0		8.05%								
	56	8·2	10·2	"		510								
	57	10·2	12·2	"		6910								
	58	12·2	14·2	"		180								
	59	14·2	15·7	1·5		340								
	124260	17·8	19·8	2·0		120								
	61	19·8	21·8	"		120								
	62	21·8	23·8	"		120								
	63	23·8	27·0	3·2		70								
	64	27·0	29·7	2·7		60								
	65	29·7	30·9	1·2		90								
	66	30·9	32·9	2·0		9300								
	67	32·9	34·9	"		1260								
	68	34·9	36·9	"		1200								
	69	36·9	38·9	"		95								
	270	38·9	40·9	"		25								
	71	40·9	42·9	"		280								
	72	42·9	44·9	"		110								
	73	44·9	46·9	"		35								
	74	46·9	48·9	"		70								
	75	48·9	50·9	"		150								
	76	50·9	52·9	"		380								
	77	52·9	54·9	"		100								
	78	54·9	56·9	"		890								
	79	56·9	58·9	"		60								
	280	58·9	60·9	"		5100								
	81	60·9	62·9	"		330								

Notes:— XRF 214 method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD90

SAMPLE TYPE : DRILL CORE FROM 1·5 TO 62·9

Grand

8322422 412

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124282	62.9	64.9	2.0		75								
	83	64.9	66.9	"		45								
	84	66.9	68.9	"		60								
	85	68.9	70.9	"		X								
	86	70.9	72.9	"		100								
	87	72.9	74.9	"		55								
	88	74.9	76.9	"		1850								
	89	76.9	78.9	"		940								
	290	78.9	80.9	"		230								
	91	80.9	82.9	"		2050								
	92	82.9	84.9	"		90								
	93	84.9	86.9	"		40								
	94	86.9	88.9	"		80								
	95	88.9	90.9	"		9400								
	96	90.9	92.9	"		290								
	97	92.9	94.9	"		85								
	98	94.9	96.9	"		30								
	99	96.9	98.9	"		55								
	124400	98.9	100.9	"		20								
	01	100.9	102.9	"		35								
	02	102.9	104.9	"		25								
	03	104.9	106.9	"		30								
	04	106.9	108.9	"		25								
	05	108.9	110.9	"		65								
	06	110.9	112.9	"		30								
	07	112.9	114.9	"		20								
	08	114.9	116.9	"		15								
	09	116.9	118.9	"		40								
	410	118.9	120.9	"		120								
	11	120.9	122.9	"		620								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD90

SAMPLE TYPE : DRILL CORE FROM 62.9 TO 122.9

Brand

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124418	122·9	124·9	2·0		100								
	13	124·9	126·9	"		810								
	14	126·9	128·9	"		2650								
	15	128·9	130·9	"		3550								
	16	130·9	132·9	"		1·65%								
	17	132·9	134·9	"		280								
	18	134·9	136·9	"		370								
	19	136·9	138·9	"		4200								
	420	138·9	140·9	"		1150								
	21	140·9	142·9	"		110								
	22	142·9	145·3	2·4		65								
124363		145·3	146·5	1·0	90									
64		146·5	147·5	"	210									
65		147·5	148·5	"	300									
66		148·5	148·9	0·6	190									
67		148·9	149·9	1·0	75									
68		149·9	150·7	0·8	180									
69		150·7	151·7	1·0	460									
370		151·7	152·5	0·8	250									
71		152·5	153·5	1·0	130									
	124423	153·5	155·5	2·0		90								
	24	155·5	157·5	1·8		420								
124372		157·5	158·5	1·0		980								
73		158·5	159·2	0·9	0·6%				0·2%		X			
74		159·2	160·2	1·0	1·0%				>3%		X			
75		160·2	161·2	"	0·11%				>10%		X			
76		161·2	162·2	"	0·08%				>4%		T			
77		162·2	163·5	1·3	0·09%				>3%		T			
	124425	163·5	165·5	2·0		410								
	26	165·5	167·5	"		1·45%								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 90

SAMPLE TYPE : DRILL CORE FROM 122·9 TO 167·5

Ground

8324424 414

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124427	167·5	169·5	2·0		530								
	28	169·5	170·8	1·3		730								
124378		170·8	171·8	1·0	400									
79		171·8	172·8	"	1050									
380		172·8	173·8	"	2550									
81		173·8	174·8	"	1550									
82		174·8	175·8	"	2450									
83		175·8	176·8	"	2750									
84		176·8	177·8	"	2700									
85		177·8	178·8	"	3600									
86		178·8	179·8	"	2900									
87		179·8	180·8	"	6750									
88		180·8	181·8	"	1·00%									
89		181·8	182·8	"	2100									
390		182·8	183·8	"	9750									
91		183·8	184·8	"	7200									
92		184·8	185·8	"	5800									
93		185·8	186·8	"	2050									
94		186·8	187·8	"	2350									
95		187·8	188·8	"	1650									
96		188·8	189·8	"	1200									
97		189·8	191·2	1·4	1850									
98		191·2	192·2	1·0	1050									
	124429	192·2	194·2	2·0		150								
	30	194·2	196·45	2·25		130								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 90

SAMPLE TYPE : DRILL CORE FROM 167·5 TO 196·45

832425

415

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
26551		28.0	29.0	1.0										
52		29.0	30.0	"										
53		30.0	31.0	"										
54		31.0	32.0	"										
55		32.0	33.0	"										
56		33.0	34.0	"										
26557		56.0	57.0	1.0										
58		57.0	58.0	"										
59		58.0	59.0	"										
560		59.0	60.0	"										
61		60.0	61.0	"										
62		61.0	62.0	"										
26563		73.0	74.0	1.0										
64		74.0	75.0	"										
65		75.0	76.0	"										
66		76.0	77.0	"										
67		77.0	78.0	"										
68		78.0	79.0	"										
69		79.0	80.0	"										
570		80.0	81.0	"										
71		81.0	82.0	"										
72		82.0	83.0	"										
73		83.0	84.0	"										
74		84.0	85.0	"										
75		85.0	86.0	"										
76		86.0	87.0	"										
77		87.0	88.0	"										
78		88.0	89.0	"										

Notes :- XRF Sn method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 90

SAMPLE TYPE : DRILL CORE FROM 28.0 TO 89.0

8324426

416

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126579		89·0	90·0	1·0										
580		90·0	91·0	"										
581		91·0	92·0	"										
582		92·0	93·0	"										

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 90

SAMPLE TYPE : DRILL CORE FROM 89·0 TO 93·0

NQ/BQ split

832427

417

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124493	3·0	5·2	2·2		50								
	94	5·2	7·5	2·3		45								
	95	7·5	10·0	2·5		50								
	96	10·0	12·0	2·0		50								
	97	12·0	14·0	"		15								
	98	14·0	16·0	"		15								
	99	16·0	18·0	"		15								
	124700	18·0	20·0	"		15								
	01	20·0	22·0	"		25								
	02	22·0	24·0	"		70								
	03	24·0	26·0	"		90								
	04	26·0	28·0	"		220								
	05	28·0	30·0	"		6900								
	06	30·0	32·0	"		240								
	07	32·0	34·0	"		130								
	08	34·0	36·0	"		150								
	09	36·0	38·0	"		100								
	710	38·0	40·0	"		220								
	11	40·0	42·0	"		100								
	12	42·0	44·0	"		410								
	13	44·0	46·0	"		150								
	14	46·0	48·0	"		130								
	15	48·0	51·0	3·0		170								
24571		51·0	52·0	1·0	200									
72		52·0	53·0	1 "	12·50									
73		53·0	54·0	"	1900									
74		54·0	55·0	"	1·30%									
75		55·0	56·0	"	2750									
76		56·0	57·0	"	4·25%									
77		57·0	58·0	"	3·85%									

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 91

SAMPLE TYPE : DRILL CORE FROM 3·0 TO 58·0

Grand Split

8324288

418

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
124578		58·0	59·0	1·0	2·55%									
79		59·0	60·0	"	9950									
580		60·0	61·0	"	1·50%									
81		61·0	62·0	"	1750									
82		62·0	63·0	"	4150									
83		63·0	64·0	"	1700									
84		64·0	65·0	"	1·50%									
85		65·0	66·0	"	7550									
86		66·0	67·5	1·5	1650									
87		67·5	68·5	1·0	570									
	124716	68·5	71·5	3·0		190								
	124717	70·5	72·5	2·0		660								
	18	72·5	74·5	"		480								
	19	74·5	76·5	"		940								
	720	76·5	78·5	"		660								
	21	78·5	80·5	"		200								
	22	80·5	82·5	"		140								
	23	82·5	84·5	"		110								
	24	84·5	86·5	"		170								
	25	86·5	88·5	"		190								
	26	88·5	90·0	"		5800								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 91

SAMPLE TYPE : DRILL CORE FROM 58·0 TO 90·0

(Ground Split)

832429

419

METALS EXPLORATION LTD.
80 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR AUGUST, 1981.

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G.M. Motteram
12/10/81.

MT. BISCHOFF TIN PROSPECT.

REPORT FOR AUGUST, 1981.

General:

Drilling activity was suspended on site between 1st. August and 20th. August, 1981. During this period the contractor took a field break and emphasis was placed on geological re-interpretation and reserve re-calculation.

Mine planning activity included design and costing for an initial pit to extract DSL ore above porphyry. Planning for the ultimate pit developments is continuing.

Metallurgical testing continued on the 50 kg bulk samples.

Enquiry letters were prepared for Engineering Consultants to provide assistance in estimation for plant and infrastructure requirements on a range of development options.

Geology.

(i) Re-interpretation & Reserve Calculation.

A major effort during the month was assigned to completion of geological re-interpretations and re-calculation of ore reserves.

Revised cross-sections were completed along with longitudinal sections, and level plans for the orebody at 25 metre intervals.

Re-calculation of reserves took place under the following criteria:

DSL

- Reserves not assigned in areas more than 20 metres from a known intercept.
- Areas of conflicting drill information disregarded.
- Low core recovery zones disregarded.

PORPHYRY

- Reserves generally not assigned in areas more than 40 metres from known information.
- Calculation at zero, 0.1, 0.2 and 0.3% Sn cut-off.

(i) Re-interpretation & Reserve Calculation Contd.

Results were as follows:

		Stage 2B Drill Indicated & Inferred	Stage 3A Drill Indicated
Total DSL (0.3% cut-off)			
	Tonnes	1,299,000	1,199,240
	Grade	1,06% Sn	0.89% Sn
	Contained Tin	13,770 tonnes	10,646 tonnes
Porphyry Ore (0.3% cut-off)			
	Tonnes	2,433,000	2,098,080
	Grade	0.54% Sn	0.69% Sn
	Contained Tin	13,140 tonnes	12,798 tonnes

The difference between Stage 3A and 2B reserves, relates essentially to inclusion of inferred reserves in Stage 2B. Changes in assigned grade represent more knowledge of the DSL ore continuity and higher grade porphyry outlined in the Stanhope area during Stage 3A.

(ii) Diamond Drilling.

As a result of areas of uncertainty recognised in the geological re-interpretation and reserve re-estimation, it has been decided that budgeted funds under Mining for a second close spaced drilling exercise would be better utilised in continued definition drilling. A revised programme has therefore been adopted for testing the DSL, and the porphyry between Sections 1340 and 1500E.

The programme consists of 2,000 metres of Primary Drilling with allowance for further secondary priority holes, which would be drilled if surface sampling warrants and meterage is available. Details of holes to be drilled are appended.

Three holes were drilled during the month. ie.

MBD 40 Extn. (Remaining Stage 3A hole)

Drilled on Section 1420E to test the interpretation of porphyry between 117.0 and 130.0 m downhole. The extension achieved a minor intercept of porphyry only from 133.5 to 136.9 m. Grades within the intercepts were low.

MBD 104.

Drilled on Section 980E to test interpreted DSL development on the dolomite footwall. The hole achieved a shorter intercept of DSL than interpreted 71.0 to 74.0 m (3.0 m). The intercept was low grade and causes doubt about a small block in the DSL reserve.

(ii) Diamond Drilling Contd.

MBD 105.

Drilled on Section 1040E to test for possible DSL above and below porphyry. The hole intersected 3.5 m of DSL above porphyry and was drilling in porphyry at the end of the month. Core recovery from 0 to 25.5 m was non-existent.

(iii) Adjustments to Previous Reports.

The following alterations should be made to copies of previous monthly reports:

February, 1981.

MBD 56 - Drill Log Face sheet, mark in:
Co-ordinates 1259.98E
2029.75N
RL 688.24 m
Assays appended to this report.

February, 1981.

MBD 57 - Assays appended to this report.

MBD 58 - Assays appended to this report.

March, 1981.

MBD 59 - Drill Log Face sheet, mark in:

Co-ordinates 10302N
9956E
RL Not determined.

Full assays appended to this report.

MBD 60 - Drill Log Face sheet, mark in:

Co-ordinates 10381E
9990N
RL Not determined.

MBD 61 - Drill Log Face sheet, mark in:

Co-ordinates 10183E
10103N
RL Not determined.

Full assays appended to this report.

(iii) Adjustments to Previous Reports Contd.

March, 1981.

MBD 62 - Drill Log Face sheet, mark in:

Co-ordinates 10920E
10310N
RL Not determined.

Full assays appended to this report.

MBD 63 - Drill Log Face sheet, mark in:

Co-ordinates 800E
1730N
RL 599.71 m

April, 1981.

MBD 64 - Drill Log Face sheet, mark in:

Co-ordinates 697.96E
1630.40N
RL 582.36 m

Full assay appended to this report.

MBD 65 - Drill Log Face sheet, mark in:

Co-ordinates 1039.72E
1889.75N
RL 582.36 m

MBD 68 - Drill Log Face sheet, mark in:

RL 631.33 m
Inclination at Collar -90
(correction)

MBD 70 - Drill Log Face sheet, correct:

Core Sizes: NC 0 to 3.0
NW 3.0 to 21.0
NQ 21.0 to 117.5

MBD 71 - Drill Log Face sheet, mark in:

Co-ordinates 1039.9E
1809.2N
RL 625.49 m

(iii) Adjustments to Previous Reports Contd.

April, 1981.

MBD 72 - Drill Log Face sheet, mark in:

Co-ordinates 1040.18E
1960.79N
RL 643.29 m

May, 1981.

MBD 76 - Drill Log Face sheet, correct:

Down Hole Survey at 90 m.
Dip = 79 degrees.

Full assays appended to this report.

MBD 81 - Full assays appended to this report.

Overlap of some intervals refer to Mines Department and Analays assaying.

MBD 82 - Drill Log Face sheet, mark in:

RL 621.83 m

MBD 84 - Drill Log Face sheet, correct:

Co-ordinate 1770.19N

June, 1981.

MBD 85 & 88 - Summary Logs included in this report.

MBD 91 - Drill Log Face sheet, correct:

RL 692.62 m

July, 1981.

MBD 93 - Drill Log Face sheet, mark in:

Co-ordinates 990.06E
1938.98N
RL 644.0

MBD 94 - Drill Log Face sheet, mark in:

Co-ordinates 1180.0E (approx)
2075.0N (approx)

(iii) Adjustments to Previous Reports Contd.

July, 1981.

MBD 95 - Drill Log Face sheet, mark in:
Co-ordinates 1460.0E (approx)
2130.0N (approx)

Mining.

(i) DSL Grade Continuity.

Results have now been received for all holes drilled in the 5 metre close spaced gridding of the Greisen Face DSL are (Section 970 to 990E).

The appended tabulation sets out intercepts achieved. Meterages quoted are down the hole on uniform - 50 degree holes.

Although some continuity into 5 m3 blocks has been demonstrated, significant dilution with barren DSL may be expected in mining.

(ii) Mine Planning.

An open pit to extract DSL ore above the porphyry was designed by Mr. J. Murphy. This pit involved some 4 months of pre-production stripping and provided 890,000 tonnes of diluted DSL ore.

Refinements of this pit and planning for extensions to take in porphyry ore and DSL below porphyry are continuing. This work is being carried out by Mr. P. Thysen of CRA.

Metallurgy.

(i) Circuit Development.

Work continued during the period on detailed testing of the two DSL bulk composites and the porphyry bulk composite.

All stages to tin flotation had been tested for the DSL composite by the end of the month. The porphyry composite had been tested through sulphide flotation and primary tabling.

(i) Circuit Development Contd.

The results below summarise response indicated so far:

	DSL - MCA		DSL - MCC		PORPHYRY	
	Grade %Sn	Distn %Sn	Grade %Sn	Distn %Sn	Grade %Sn	Distn %Sn
Gravity Cleaner Conc.	62.9	51.6	59.3	35.6	53.9	47.8
Reground Rougher Gravity Conc.	15.4	9.0	14.7	4.4	n/a	n/a
Tin Flotation Feed	0.72	19.9	1.02	3.14	n/a	n/a
Sulphide Reject	0.16	9.8	0.24	11.4	0.38	9.4
Gravity Tail Reject						
Coarse Circuit	0.22	0.8	0.34	1.3	n/a	n/a
Regrind Circuit	0.31	0.2	0.39	1.4	n/a	n/a
Intermediate Prods.	-	8.7	-	14.5	n/a	n/a
Calculated Head	0.91	100	0.99	100	0.44	100

It is expected that reground rougher gravity concentrates will clean to approximately 50% Sn at over 80% Sn recovery.

Tin flotation recovery to a 20% Sn concentrate grade is expected to exceed 70%. Likely recovery from intermediate products will be assessed on the basis of mineralogy.

Sulphide reject loss on the porphyry is essentially stanite and hence irrecoverable.

(ii) Preconcentration - Porphyry Ore.

Results were received for testwork conducted on the porphyry composite at Mineral Deposits Ltd. in Queensland.

Heavy liquids tests had previously indicated that, after coarse grinding, over 60% of +53 micron material could be rejected at less than 20% Sn loss. Mineral Deposits work simulated rod mill grinding and simple cone concentration with the following results.

(ii) Preconcentration - Porphyry Ore Contd.

	Reject	
Size (micron)	% wt	% Sn Loss
- 1000 + 53	87.2	53.0

The tin loss and reject weight demonstrated are both too high and Mineral Deposits have been instructed to retreat the tails to achieve a 60% weight reject.

A surface position has been identified to provide a 2 tonne sample of porphyry for large scale testing of preconcentration.

(iii) Grindability Determinations.

Further grindability data was received from Amdel ie.

DSL Composite MCA	Rod Mill Wi = 13.4
	Ball Mill Wi = 11.1
DSL Composite MCC	Rod Mill Wi = 13.8
	Ball Mill Wi = 10.2

Pre-Feasibility Engineering.

Enquiry letters were drafted for assistance in Pre-feasibility Engineering estimation for all development options. This budgeted work will now proceed through Stage 3B.

M.E.L.

C.R.A.

MT. BISCHOFF PROJECT

STAGE 3A/3B EXPENDITURE

	August, 1981		2 Months to August, 1981		Six Months to December, 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
Administration	12	10	22	22	67	67
Geology	29	27	54	138	267	317
Mining	40	3	49	8	126	116
Metallurgy	8	26	8	53	119	136
Engineering	8	5	13	9	171	161
Commercial	1		1		13	13
Stage 3A	8		45		40	
TOTAL PROJECT	106	71	192	230	803	810

SUMMARY OF EXPENDITURE TO 31.7.81.

	CURRENT PERIOD $000	ACCUMULATIVE $000
Stage 1		270
Stage 2A - Early Start		29
Stage 2A		199
Overruns: Stage 1 - M.E.L.		11
Metallurgical - C.R.A.E.		24
Stage 2B		482
Stage 2B - 3A Holding Costs offset - A.I.R. & D		40
Stage 3A - Partly offset by A.I.R. & D Grant Received June 1981 $6,500	45	848
Stage 3B - Partly offset by A.I.R. & D Grant Received July 1981 $25,863	147	147
ACCUMULATIVE EXPENDITURE TO DATE	192	2,050

832440

M.E.L.

C.R.A.

MT BISCHOFF PROJECT

STAGE 3A/3B EXPENDITURE

	August 1981		2 Months to August 1981		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
ADMINISTRATION						
Technical Services	11	9	20	20	63	63
Consumables			1		1	1
Travel	1	1	1	1	2	2
Consultants				1	1	1
	12	10	22	22	67	67
GEOLOGY						
Technical Services	17	11	32	22	60	60
Labour	6	2	7	4	8	8
Consumables	5	9	6	18	22	22
Accommodation		1		2	7	7
Vehicles	1	1	1	2	5	5
Travel					2	2
Contractors				74	138	188
Consultants		3		8	17	17
Capital Expenditure			8	8	8	8
	29	27	54	138	267	317
MINING						
Technical Services	6	2	13	4	25	15
Labour					1	1
Consumables	5	1	7	2	9	9
Travel				1	3	3
Contractors	29		29		64	64
Consultants				1	24	24
	40	3	49	8	126	116
METALLURGY						
Technical Services	8	13	8	26	57	77
Labour				1	4	4
Consumables		8		14	24	24
Accommodation					1	1
Travel		1		2	12	12
Contractors		3		9	15	12
Consultants		1		1	6	6
	8	26	8	53	119	136
ENGINEERING						
Technical Services	6	3	11	5	40	30
Consumables					1	1
Travel		1		1	8	8
Contractors				1	114	114
Consultants	2	1	2	2	8	8
	8	5	13	9	171	161

../2

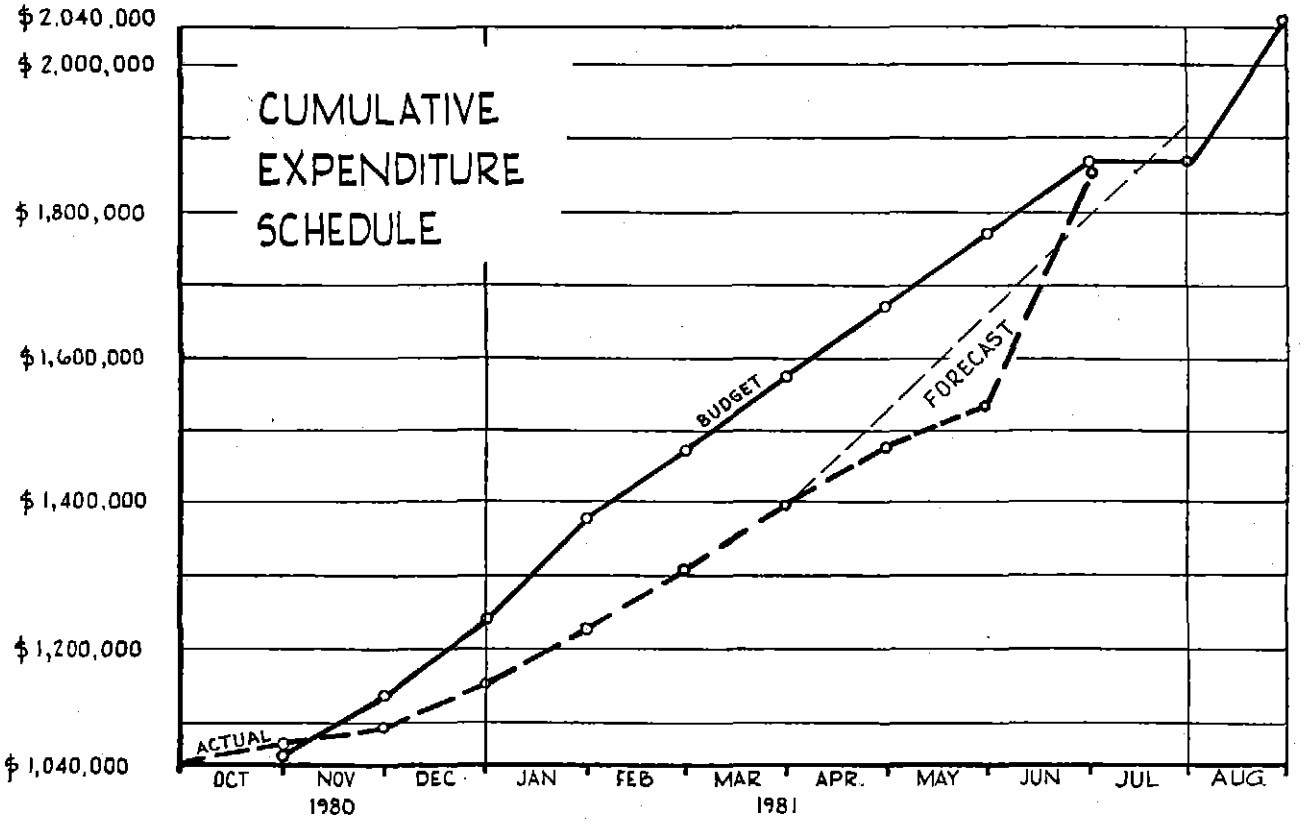
MT. BISCHOFF PROJECT

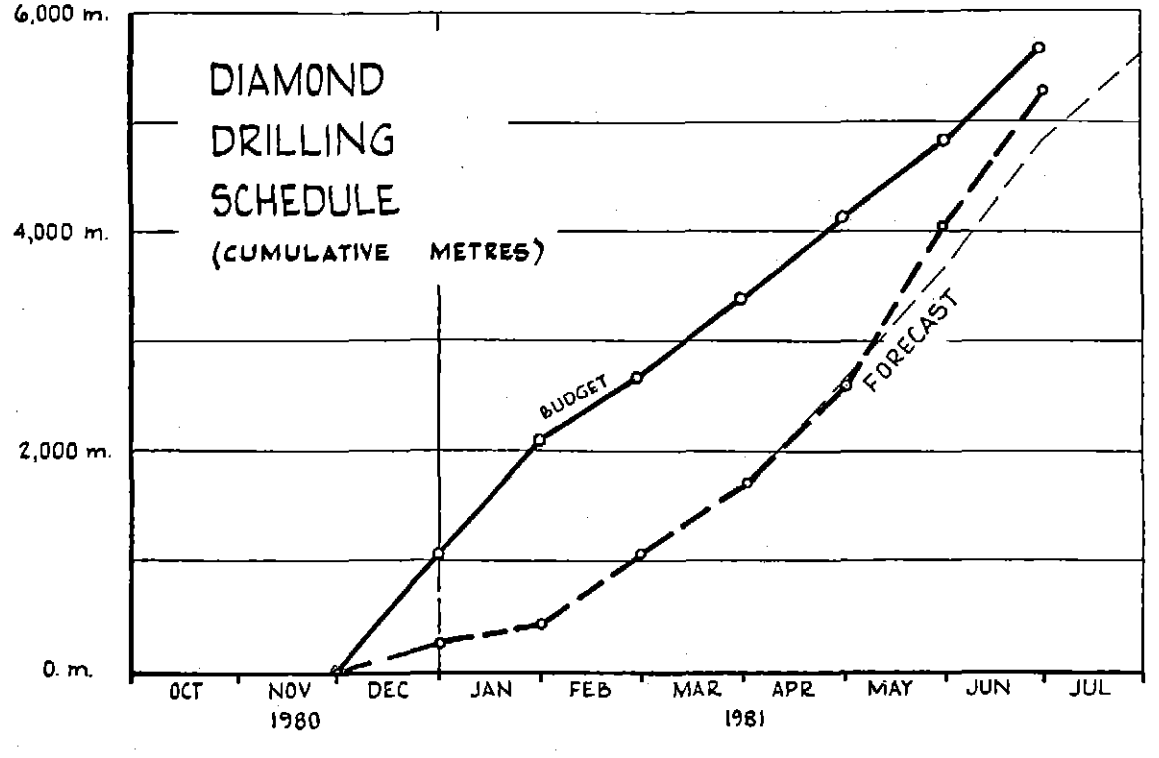
STAGE 3A/3B EXPENDITURE

	August, 1981 Actual	August, 1981 Budget	2 Months to August, 1981 Actual	2 Months to August, 1981 Budget	Six Months to December, 1981 Forecast	Six Months to December, 1981 Budget
	$000		$000		$000	
COMMERCIAL						
Technical Services	1		1		11	11
Consumables					2	2
	1		1		13	13
TOTAL STAGE 3B	98	71	147	230	763	810
STAGE 3A EXPENDITURE						
Technical Services	1		5			
Travel & Accommodation			1			
Diamond Drilling			21			
Assaying	4		4		3	
Metallurgical	2		13			
Consumables	1		1			
TOTAL STAGE 3A	8		45		40	
TOTAL STAGE 3A & 3B	106	71	192	230	803	810

NOTE:

Budgeted figures for July and Six Months to December, include expected Stage 3A carry-over. Figures have been broken out here for identification purposes.





MT. BISCHOFF

STAGE 3A SUMMARY
as at 30·6·81

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 104

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1909.80 N	979.98 E	643.33
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar 81°/180°
Total length 83.0 m
Commenced: 26 / 8 / 81
Completed: 29 / 8 / 81

Drilling contractor: PARRY EXPLORATION DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods: Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets: To test possible DSL extension from known positions on 980E section.

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	83.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30.5	154°	80°
60.5	155°	80°
81.5	153°	81°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON
FROM 0 TO 83.0
DATE 10/9/81

LOGGED BY _____
FROM _____ TO _____
DATE _____

LOGGED BY _____
FROM _____ TO _____
DATE _____

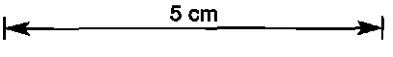
Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 104
Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: TRICONE. Not cored.						
20	30.6	3.0 - 33.6: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly fine grey dolomite, with occasional patches and veins of recrystallized dolomite.		2/3		sph > py sph - finely disseminated and as rare thin veins. py - rare veins and aggregates.		
	2.1	33.6 - 35.7: DOLOMITE SULPHIDE LODE. WRIGGLITE.		8/5		15% py >> sph > arsenopy		
40	8.4	35.7 - 44.1: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly fine grey dolomite, with minor veins and patches of recrystallized dolomite.		2/3		trace sph - finely disseminated and rare veins.		
	2.3	44.1 - 46.4: DOLOMITE SULPHIDE LODE. WRIGGLITE.		5/8		50% py >> sph py - disseminated		
60	24.0	46.4 - 70.4: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly fine grey dolomite, weathered in parts. Occasional patches, up to 1 m, of recrystallized dolomite, with trace sulphides.		2/3		po, sph, py trace disseminated and as rare thin veins with carbonate.		
	3.2	70.4 - 73.6: DOLOMITE SULPHIDE LODE. 20% po, 30% talc, 25% qtz-carbonate, 15% mica		6/8 4		20% po mainly massive aggregates		
80	9.4	73.6 - 83.0: SILTSTONE, lesser QUARTZITE. 73.6 - 77.0: transition zone - dark serpentinous siltstone, with minor po. 77.0 - 83.0: moderately disrupted siltstone and lesser qtzite. Minor carbonate veining.		10/ 11		po - trace in occasional aggregates and stringers. sph, py - trace in veins with carbonate.		
		END OF HOLE: 83.0 m.						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W. R. RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.



FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 104

LOG 5 FET

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	126245	3.0	6.0	3.0		290								
	46	6.0	8.0	2.0		30								
	47	8.0	10.0	"		36								
	48	10.0	12.0	"		60								
	126249	13.0	15.0	2.0		90								
	250	15.0	17.0	"		14								
	51	17.0	19.0	"		50								
	52	19.0	21.0	"		780								
	53	21.0	23.0	"		610								
	54	23.0	25.0	"		190								
	55	25.0	27.0	"		679								
	56	27.0	29.0	"										
	57	29.0	31.0	"										
	58	31.0	32.8	1.8										
126589		32.8	33.8	1.0	2000									
590		33.8	34.8	"	4800									
91		34.8	35.8	"	460									
	126261	36.7	39.0	2.3										
	62	39.0	41.0	2.0		210								
	63	41.0	43.0	"		95								
126592		43.0	44.0	1.0	130									
93		44.0	45.0	"	3300									
94		45.0	46.3	1.3	1650									
95		46.3	47.3	1.0	460									
96		47.3	48.3		740									
	126266	48.3	50.3	2.0		470								
	67	50.3	52.3	"		400								
	68	52.3	54.3	"		980								

Notes :— XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 104

SAMPLE TYPE : DRILL CORE (ground) FROM 3.0 TO 54.3

832445 435

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	126269	54·3	56·3	2·0		1650								
126597		56·6	58·1	1·5	420									
	126270	58·1	60·1	2·0		150								
	71	60·1	62·1	"		360								
	72	62·1	63·9	1·8		720								
126598		64·0	65·0	1·0	510									
99		65·0	66·0	"	460									
126750		66·0	67·0		15									
	126273	67·0	69·0	2·0		26								
	74	69·0	70·4	1·4		12								
126701		70·4	71·4	1·0	620									
02		71·4	72·4	"	1250									
03		72·4	73·4	"	20									
04		73·4	74·4	"	440									
05		74·4	75·4	"	90									
06		75·4	76·4	"	170									
07		76·4	77·4	"	190									

Notes:— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 104

SAMPLE TYPE : DRILL CORE FROM 54·3 TO 77·4

Grand

8324436

832447 437

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 105

COLLAR LOCATION

Grid name | Rectangular space co-ordinates: PLANAR CO-ORDINATES | ELEVATION

(1)	1850.21 N	1020.03 E	643.67
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) ____ mag
G.N.(2) ____ mag
G.N.(3) ____ mag
T.N. ____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: 90°
Total length: 77 m
Commenced: 31 / 8 / 81
Completed: 7 / 9 / 81

Drilling contractor: PARRY EXPLORATION DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods:
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets:
To check accuracy of previous hole (H 3) and test for possible DSL below porphyry.

Core size and non-coring (NC)

TRICONE	0	TO	25.5
NQ	25.5	TO	72.0
BQ	72.0	TO	77.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
46.0 m	296°	89°
76.0 m	271°	89°

Comments on drilling: No rock core until 34.2 m. Broken ground common. Rods stuck at 63 m. Fired off - 4 x 3 m NQ rods + 1.5 m core barrel. *UNEXPLODED CHARGE BELIEVED TO BE AT BOTTOM OF HOLE*****

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 77.0 DATE 16/9/81
LOGGED BY ____ FROM ____ TO ____ DATE ____
LOGGED BY ____ FROM ____ TO ____ DATE ____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 105
Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	25.5	0 - 25.5: TRICONE. Not cored.						
20	8.7	25.5 - 34.2: CLAY. Possibly fault pug. Very poor recovery. Mainly brown to off-white clay. Minor fragments of chert.						
	3.1	34.2 - 37.3: TRANSITION ZONE. Mainly py in hard siliceous matrix. Deeply weathered.				50% py in bands and aggregates.		
40	28.2	37.3 - 65.5: PORPHYRY. Translucent white-grey matrix, altered in parts to soft opaque brown-red material. 20% qtz penocrysts, up to 12 mm. 15% coarsely disseminated py, weathered in most parts.		1		15% coarsely disseminated py		
60	4.1	65.5 - 69.6: DOLOMITE SULPHIDE LODE. Mainly banded "wrigglite". Minor qtz-carb and py.		5/8		15% finely disseminated py		
	7.4	69.6 - 77.0: SILTSTONE, minor QUARTZITE. Moderately disrupted fine siltstone, with lesser qtzite in beds to 10 cm. Rare thin carbonate veins.		10/11		trace py, sph in veins		
80		END OF HOLE: 77.0 m.						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (EDS.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Scale

Prospect or project

HOLE No. NBD 105

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126708		25.5	27.5	2.0	90									
09		27.5	28.5	1.0	32									
710		28.5	29.5	"	270									
11		29.5	33.1	2.6	60									
12		33.1	34.1	1.0	350									
13		34.1	35.1	"	8000									
14		35.1	36.1	"	1.47%	*								
15		36.1	37.3	1.2	1.65%	*								
16		37.3	38.3	1.0	1450									
17		38.3	39.3	"	2800									
18		39.3	40.3	"	1100									
19		40.3	41.3	"	7200									
720		41.3	42.3	"	3050									
21		42.3	43.3	"	2350									
22		43.3	44.3	"	1700									
23		44.3	45.3	"	3650									
24		45.3	46.3	"	940									
25		46.3	47.3	"	1900									
26		47.3	48.3	"	4050									
27		48.3	49.3	"	4050									
28		49.3	50.3	"	1.03%									
126729		50.3	51.3	"	7200									
730		51.3	52.3	"	7900									
31		52.3	53.3	"	4500									
32		53.3	54.3	"	6100									
33		54.3	55.6	1.3	2650									
34		55.6	57.5	1.9	9600									
35		57.5	58.5	1.0	3900									
36		58.5	59.5	"	1950									
37		59.5	60.5	"	6900									

Notes :— XRF BI Method
* This result has been determined by Lode BP.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 105

SAMPLE TYPE : DRILL CORE FROM 25.5 TO 60.5

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126738		60.5	61.5	1.0	720									
39		61.5	62.5	"	900									
740		62.5	63.5	"	6900									
41		63.5	64.9	1.4	7900									
42		64.9	66.5	1.6	1.02%									
43		66.5	67.5	1.0	6300									
44		67.5	68.5	"	5200									
45		68.5	69.7	1.2	1.24%									
46		69.7	70.7	1.0	85									

Notes :— XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MDD 105

SAMPLE TYPE : DRILL CORE FROM 60.5 TO

832450

440

832451 441

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 40EX

COLLAR LOCATION

Grid name

Rectangular space co-ordinates

	PLANAR CO-ORDINATES			ELEVATION
(1)	2170.50 N	1419.99 E		702.37
(2)	N	E		
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN		mA.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) 150° mag

G.N.(2) mag

G.N.(3) mag

T.N. mag

1:250 000 Sheet No. SK55-3

1:100 000 Sheet No. 8015

State Tasmania

Mineral Tenement E.L. 13/79

Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar

Total length 30.1 m

Commenced: 20 / 8 / 81

Completed: 25 / 8 / 81

Drilling contractor: PARRY EXPLORATION DRILLING

Rig type: ROYLES 37

Details of down hole location-survey methods: EASTMAN Single Shot Camera

Purpose of drilling and anticipated lengths to targets: To delineate Stanhope Dyke porphyry - estimated target 120.0 - 130.0 m.

Core size and non-coring (NC)

BQ	115.4	TO 145.5
		TO
		TO
		TO
		TO
		TO

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
143.5	148°	62°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. CONSTABLE | LOGGED BY | LOGGED BY

SUMMARY LOG

HOLE NO MBD 40 EX

DEPTH (Length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (metres about 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES. 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

]15.4	0 -]15.4: See previous log (MBD 40).					
]7.3	]15.4 -]32.7: SILTSTONE, QUARTZITE. Moderately disrupted in parts. Fine siliceous siltstones in beds]-]0 mm thick with interbedded fine qtzite.]24.3 -]32.7: Thinly interbedded qtzite and siltstone. Weakly developed, upward facing graded bedding.		]0/11	45°	trace py in thin veins and stringers.	
4.]	]32.7 -]36.8: PORPHYRY. Altered slightly translucent matrix 2-3% qtz pheno finely disseminated py - up to 30% locally.		]		]0% finely disseminated py. Varies from 2-30% locally.	
5.]	]36.8 -]4].9: QUARTZITE, lesser SILTSTONE. Thin qtzite beds up to 0.5, with lesser thin siliceous siltstone. Weakly disrupted in parts.		11/]0	60°	Trace py in veins and stringers.	
3.6	]4].9 -]45.5: SILTSTONE, QUARTZITE. Thinly interbedded qtzite and siltstone, weakly disrupted.		]0/11		Trace py in rare stringers.	
	END OF HOLE:]45.5 m.					

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 40 EX

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	126233	115.4	117.4	2.0		140								
	34	117.4	119.4	"		230								
	35	119.4	121.4	"		370								
	36	121.4	123.4	"		85								
	37	123.4	125.4	"		75								
	38	125.4	127.4	"		290								
	39	127.4	129.4	"		65								
	240	129.4	132.5	3.1		65								
	126241	137.8	139.8	2.0		220								
	42	139.8	141.8	"		220								
	43	141.8	143.8	"		80								
	44	143.8	145.5	1.7		50								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 40 EXTN

SAMPLE TYPE : DRILL CORE FROM TO

Ground

8324533

443

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126583		132.0	133.0	1.0	140									
84		133.0	134.0	1.0	110									
85		134.0	135.0	1.0	120									
126586		136.0	137.0	1.0	85									
87		137.0	137.7	0.7	160									

Notes :— XRF DH1 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. M6D 40 EXTN.

SAMPLE TYPE : DRILL CORE FROM 132.0 TO 137.7

1/2 Split

8324544

APPENDED INFORMATION

MT. BISCHOFF PROJECT

STAGE 3B AMMENDED

DRILLING PROGRAMME

The Stage 3B drilling programme for Mt. Bischoff as approved by the Operating Committee in June, 1981 included allowance for:

- Mining Studies related drilling -
  Two sets of close spaced drilling in the Greisen Face area and one other area. Total 900 metres.

- Geological Drilling -
  Continued definitional drilling in DSL and Porphyry expected to be required as a result of Stage 3B re-interpretations. Total 1600 metres.

The first set of close spaced holes into the Greisen Face area were completed in July and resulted in recognition of a significant grade variation over 5 metre intervals.

As a result of this exercise and identification of significant areas requiring further definition within the DSL and Porphyry reserves during re-interpretation and reserve re-estimation, it has been decided to allocate remaining meterage from mining studies to further definition drilling.

Budgeted expenditure for Stage 3B Drilling covered the following:

Geology:	Tricone	150 m	
	N Core	600 m	
	B Core	850 m	
			1600 metres
Mining:	Allocation of $60,000 for Contracting in relation to grade control assessment.		
	Equivalent to 900 m of drilling		900 m
	TOTAL		2500 metres

Actual drilling of Greisen Face close spaced holes under the Mining Budget amounted to 486 metres. This leaves an allocation of 2,000 metres for the continued infill drilling of DSL and Porphyry.

.../2

The drilling programme will be, according to the attached sheets, as follows:

DSL Infill -	Primary Drilling	1260 metres
Porphyry Infill -	Primary Drilling	765 metres
TOTAL		2025 metres

Secondary DSL drill targets will be drilled from any meterage saved in primary drilling. Priority for the secondary targets will depend on results from primary holes drilled and surface sampling etc.

DOLOMITE SULPHIDE LODE

STAGE 3B DRILLING

PROGRAMME

DSL Primary Drilling.

SECTION (Easting)	COLLAR LOCATION (Northing)	AZIMOUTH	DIP	DEPTH (metres)	TARGET
930	1950	-	90°	45	MBD 23 DSL Footwall DSL
940	1920	180°	75°	60	MBD 23 DSL Footwall DSL
950	1930	-	90°	25	MBD 23 DSL
960	1775	360°	80°	65	DSL Above & Below Porphyry
	1910	360°	70°	60	Footwall DSL
980	1910	180°	81°	75	Footwall DSL
	1850	-	90°	90	DSL Aobve & Below Porphyry
1000	1945	360°	55°	55	Extn Greisen Face D
1020	1950	360°	75°	50	Greisen Face DSL
	1840	360°	70°	80	DSL Above & Below Porphyry
1040	1850	-	90°	85	Check #3
	1925	-	90°	75	Footwall DSL Infill
1060	1890	-	90°	90	DSL Infill Above & Below Porphyry
	1890	360°	50°	75	Footwall DSL
1080	1950	360°	60°	50	Footwall DSL Extn
1090	1915	360°	45°	50	MBD 18 DSL
1100	1865	-	90°	95	DSL Extn ex 1080E
	1950	360°	65°	45	Footwall DSL
1120	1920	360°	45°	25	MBD 18 DSL

SLAUGHTERYARD TOTAL. 2 holes for 65

1260 metres

DSL Secondary Drilling.

SECTION (Easting)	COLLAR LOCATION (Northing)	AZIMOUTH	DEPTH (metres)	TARGET	
1020	1770	180°	70°	45	DSL Extn Above & Below Porphyry
1040	1760	180°	45°	45	Extn DSL Below Porphyry
1060	1835	180°	70°	60	DSL Extns.
1110	1920	360°	45°	30	Depends on 1120E Primary Drilling
1120	1850	-	90°	110	Depends on 1100E Deep Primary Drillin
TOTAL				290 metres	

PORPHYRY ORE

STAGE 3B DRILLING

PROGRAMME

Porphyry Primary Drilling.

SECTION (Easting)	COLLAR LOCATION (Northing)	AZIMOUTH	DIP	DEPTH (metres)	TARGET
1220	2050	180°	60°	105	
1240	2070	180°	55°	90	
1340	2120	180°	60°	65	Stanhope Porphyry Infill
1380	2095	180°	60°	55	Stanhope Porphyry Infill
1400	2135	-	90°	130	Queen Dyke Definitic
1420	2122	180°	60°	95	Queen Dyke Definitic
	2150	360°	60°	65	Queen Dyke
1500	Unallocated			80	Stanhope/Queen
	Unallocated			80	Dyke Definition
TOTAL				765 metres	

Collar Position	SECTION				
	970E	975E	980E	985	990E
1968N			MBD 103 18 to 27m 9m @ 0.6%Sn		
1960N	MBD 49 22 to 34m 12m @ 1.5%Sn		MBD 20 24 to 32m 8m @ 0.6%Sn		MBD 50 22 to 36m 14m @ 0.5%Sn
1953N		MBD 101 33 to 51m 18m@1.3%Sn	MBD 98 32 to 53m 21m @ 1.5%Sn	MBD 96 29 to 51m 22m @ 1.1%Sn	
1945N	MBD 86 37 to 42m 5m @ 1.9%Sn 47 to 49m 2m @0.5%Sn		MBD 48 45 to 56m 11m @ 1.1%Sn		MBD 87 28 to 53m 25m @ 1.6%Sn
1938N		MBD 102 33 to 35m 2m @ 1.3%Sn 51 to 54m 3m @ 1.2%Sn	MBD 99 33 to 41m 8m @ 1.5%Sn 46 to 56m 10m @ 2.2%Sn	MBD 97 27 to 55m 28m @ 1.2%Sn	
1932N	MBD 92 No DSL Grade		MBD 47 34 to 41m 7m @ 1.1%Sn		MBD 93 30 to 49m 19m @ 1.8%Sn
1927N			MBD 100 39.7 to 41m 12m @ 0.49% Sn		

Note Also: (i) 960E - 1955N : -B1 - approx 23.0 to 36.0m 13m@ 1.2%Sn
1000E - 1965N : -B2 - approx 20.0 to 32.0m 12m@ 1.0%Sn

(ii) MBD 86, 92, 101 and 102 also intersected grade in sediments below DSL (not shown or reported here).

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98993		5.0	6.0	1.0	46									
94		6.0	7.0	"	900									
95		7.0	8.0	"	840									
96		8.0	8.8	0.8	2700									
97		11.3	12.3	1.0	60									
98		43.8	44.8	"	110									
99		44.8	45.6	0.8	85									
118700		45.6	46.6	1.0	920									
01		46.6	47.6	"	820									
2		47.6	48.6	"	880									
3		48.6	49.6	"	3250									
4		49.6	50.6	"	2700									
5		50.6	51.6	"	1150									
6		51.6	52.6	"	1250									
7		52.6	53.6	"	720									
8		53.6	54.6	"	800									
9		54.6	55.6	"	1150									
710		55.6	56.6	"	3350									
11		57.6	57.6	"	2500									
12		58.6	58.6	"	1150									
13		59.6	59.6	"	1250									
14		60.6	60.6	"	400									
15		61.6	62.3	0.7	740									
16		62.3	63.3	1.0	1500									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 56

SAMPLE TYPE : DRILL CORE FROM 5.0 TO 63.3

8324 62

452

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118916	3.0	5.0	2.0		34								
	17	5.0	7.0	"		32								
	18	7.0	9.0	"		65								
	19	9.0	11.0	"		1600								
	920	11.0	13.0	"		700								
	21	13.0	15.0	"		80								
	22	15.0	17.0	"		65								
	23	17.0	19.0	"		60								
	24	19.0	21.0	"		85								
	25	21.0	23.0	"		42								
	26	23.0	25.0	"		32								
	27	25.0	27.0	"		20								
	28	27.0	29.0	"		20								
	29	29.0	31.0	"		14								
	930	31.0	33.0	"		16								
	31	33.0	35.0	"		10								
	32	35.0	37.0	"		12								
	33	37.0	39.0	"		12								
	34	39.0	41.0	"		10								
	35	41.0	43.0	"		14								
	36	43.0	45.0	"		22								
	37	45.0	47.0	"		24								
	38	47.0	49.0	"		30								
	39	49.0	51.0	"		20								
	940	51.0	53.0	"		20								
	41	53.0	55.0	"		16								
	42	55.0	57.0	"		24								
	43	57.0	59.0	"		40								
	44	59.0	61.0	"		2350								
	118945	61.0	63.0	"		75								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 57

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 63.0

GROUND

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118946	63.0	65.0	2.0		40								
	47	65.0	67.0	"		28								
	48	67.0	69.0	"		28								
118718		69.0	70.0	1.0	410									
19		70.0	71.0	"	2450									
20		71.0	72.0	"	4700									
118731		72.0	73.0	"	3150									
32		73.0	74.0	"	2300									
33		74.0	75.0	"	3650									
34		75.0	76.0	"	5200									
35		76.0	77.0	"	2650									
36		77.0	78.0	"	680									
37		78.0	79.0	"	1500									
38		79.0	80.0	"	3500									
39		80.0	81.0	"	1050									
740		81.0	82.0	"	520									
41		82.0	83.0	"	350									
42		83.0	84.0	"	360									
43		84.0	85.0	"	500									
44		85.0	86.0	"	250									
45		86.0	87.0	"	250									
46		87.0	88.0	"	410									
47		88.0	89.0	"	960									
48		89.0	90.4	1.4	560									
118749		90.4	91.4	1.0	140									
	118949A	91.4	93.4	2.0		26								
	49B	93.4	95.4	"		24								
	50	95.4	97.4	"		14								
	51	97.4	99.4	"		16								
	52	99.4	101.4	"		16								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 57

SAMPLE TYPE : DRILL CORE FROM 63.0 TO 101.4.

Ground

832464 454

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118953	101.4	103.4	2.0		12								
	54	103.4	105.4	"		22								
	55	105.4	107.4	"		14								
	56	107.4	109.4	"		28								
	57	109.4	111.4	"		22								
	58	111.4	113.4	"		32								
	59	113.4	114.6	1.2		50								
118750		14.6	115.0	0.4	26									
	60	115.0	117.5	2.5		14								
51		117.5	118.5	1.0	16									
52		118.5	119.5	1.0	16									
	61	119.5	120.1	0.6		18								
53		120.1	121.1	1.0	1.0									
	62	121.1	122.3	1.2		14								
54		122.3	123.3	1.0	12									
	63	123.3	125.0	1.7		8								
55		125.0	126.0	1.0	14									
56		126.2	127.2	1.0	12									
	64	127.2	128.5	1.3		18								
57		128.5	129.5	1.0	16									
	65	129.5	131.5	"		70								
	66	131.5	133.5	"		16								
58		133.5	134.5	"	14									
	67	134.5	136.5	2.0		14								
	68	136.5	138.5	"		12								
	69	138.5	140.5	"		12								
	970	140.5	142.5	"		24								
	71	142.5	144.5	"		30								
	72	146.5	146.5	"		150								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 57

SAMPLE TYPE : DRILL CORE FROM 101.4 TO 146.5

Ground.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118973	146·5	148·5	2.0		70								
	74	148·5	149·8	1·3		46								
118759		149·8	150·8	1.0	150									
60		150·8	151·8	"	3200									
61		151·8	152·8	"	1050									
62		152·8	153·8	"	1650									
63		153·8	154·5	0·7	16									
64		155·0	156·0	1.0	8									
65		156·0	157·0	"	16									
66		157·0	158·0	"	14									
	75	158·0	160·5	2·5		10								
67		160·5	161·5	1·0	6									
	76	161·5	163·5	2·0		10								
	77	163·5	165·5	"		10								
	78	165·5	167·5	"		12								
	79	167·5	170·0	2·5		14								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 57

SAMPLE TYPE : DRILL CORE FROM 146·5 TO 170.0

832466 456

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118670	3.0	5.0	2.0		620								
	71	5.0	7.0	"		860								
	72	7.0	9.0	"		70								
	73	9.0	11.0	"		150								
	74	11.0	13.0	"		120								
	75	13.0	15.0	"		540								
	76	15.0	17.0	"		70								
	77	17.0	19.0	"		34								
	78	19.0	21.0	"		22								
	79	21.0	23.0	"		18								
	680	23.0	25.0	"		60								
	81	25.0	27.0	"		18								
	82	27.0	29.0	"		18								
	83	29.0	31.0	"		10								
	84	31.0	33.0	"		20								
	85	33.0	35.0	"		24								
	86	35.0	37.0	"		18								
	87	37.0	39.0	"		22								
	88	39.0	41.0	"		280								
	89	41.0	43.1	2.1		310								
118768		43.1	44.1	1.0	640									
69		44.1	45.1	"	290									
70		45.1	46.1	"	300									
71		46.1	47.1	"	400									
72		47.1	48.1	"	470									
73		48.1	49.1	"	250									
74		49.1	50.1	"	130									
75		50.1	51.1	"	120									
76		51.1	52.1	"	80									
118777		52.1	53.1	"	640									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 58

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 53.1

8324671 457

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
118778		53.1	54.1	1.0	200									
79		54.1	55.1	"	240									
80		55.1	56.1	"	2950									
81		56.1	57.1	"	880									
82		57.1	58.1	"	1000									
83		58.1	59.1	"	500									
84		59.1	60.1	"	120									
85		60.1	61.1	"	1250									
86		61.1	62.1	"	1250									
87		62.1	63.1	"	160									
88		63.1	64.1	"	300									
89		64.1	65.1	"	1350									
790		65.1	66.1	"	740									
91		66.1	67.1	"	1950									
92		67.1	68.1	"	100									
93		68.1	69.1	"	160									
94		69.1	70.1	"	500									
95		70.1	71.1	"	600									
96		71.1	72.1	"	450									
97		72.1	73.1	"	240									
98		73.1	74.1	"	1750									
99		74.1	75.1	"	1800									
800		75.1	75.8	0.7	110									
d		75.8	76.8	1.0	42									
	118690	76.8	78.8	2.0		34								
	91	78.8	80.8	"		36								
	92	80.8	82.8	"		36								
	93	82.8	84.8	"		28								
	94	84.8	86.8	"		28								
	95	86.8	88.8	"		50								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 58

SAMPLE TYPE : DRILL CORE FROM 53.1 TO 88.8

832468

458

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118696	88.8	90.8	2.0		38								
	97	90.8	92.8	"		22								
	98	92.8	94.8	"		18								
	99	94.8	96.8	"		24								
	120194	96.8	98.8	"		20								
	95	98.8	100.8	"		34								
	96	100.8	102.8	"		40								
	97	102.8	104.8	"		120								
	98	104.8	106.8	"		75								
	99	106.8	108.8	"		6600								
	118900	108.8	110.8	"		130								
	01	110.8	112.8	"		80								
	2	112.8	114.4	1.6		120								
118802		114.4	115.4	1.0	120									
3		115.4	116.4	"	12									
4		116.4	117.4	"	100									
5		117.4	118.4	"	30									
6		118.4	119.4	"	46									
7		119.4	120.4	"	12									
8		120.4	121.4	"	85									
9		121.4	122.4	"	520									
810		122.4	123.4	"	90									
	118903	123.4	125.4	2.0		80								
	4	125.4	127.4	"		100								
	5	127.4	129.4	"		70								
	6	129.4	131.4	"		50								
	7	131.4	133.4	"		70								
	8	133.4	135.4	"		1800								
	9	135.4	137.4	"		60								
	910	137.4	139.4	"		34								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 58

SAMPLE TYPE : DRILL CORE FROM 88.8 TO 139.4.

8332469 459

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	118911	139.4	141.4	2.0		38								
	12	141.4	143.4	"		65								
	13	143.4	145.4	"		50								
	14	145.4	147.4	"		600								
	15	147.4	150.0	2.6		80								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 58

SAMPLE TYPE : DRILL CORE FROM 139.4 TO 150.0

832470 460

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
118980		23.4	25.4	2.0	10									
81		25.4	27.4	"	X									
82		27.4	29.4	"	X									
83		29.4	31.4	"	X									
84		31.4	33.4	"	X									
	118985	33.4	35.4	"		12								
	86	35.4	37.4	"		4								
	87	37.4	39.4	"		4								
	88	39.4	41.4	"		14								
	89	41.4	43.4	"		10								
	990	43.4	45.4	"		12								
	91	45.4	47.4	"		12								
	92	47.4	49.4	"		12								
	93	49.4	51.4	"		10								
	94	51.4	53.4	"		10								
	95	53.4	55.4	"		10								
	96	55.4	57.4	"		4								
	97	57.4	59.4	"		10								
	98	59.4	61.4	"		12								
	99	61.4	63.4	"		14								
	120400	63.4	65.4	"		8								
	01	65.4	67.4	"		8								
	2	67.4	69.4	"		10								
	3	69.4	71.4	"		10								
	4	71.4	73.4	"		10								
	5	73.4	75.4	"		10								
	6	75.4	77.4	"		12								
	7	77.4	79.4	"		8								
	8	79.4	81.4	"		12								
	120409	81.4	83.4	"										

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 59.

SAMPLE TYPE : DRILL CORE FROM TO 83.4

8324 (P)

461

SAMPLE NO.	SAMPLE NO	FROM	TO	INTE-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	ANALYSIS	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND						Wilma's Pty		
	12040	83.4	85.4	2.0		12								
	11	85.4	87.4	"		12								
	12	87.4	89.4	"		12								
	13	89.4	91.4	"		16								
	14	91.4	93.2	1.8		42								
118811		93.2	94.2	1.0	11									
12		94.2	95.2	1.0								<1000		
13		95.2	96.2	"								<1000		
14		96.2	97.6	1.4								<1000		
15		97.6	98.6	1.0	122*								50	
16		98.6	99.6	"	12*								125	
17		99.6	100.6	"	6.5*								70	
18		100.6	101.4	0.8	48*								65	
	15	101.5	103.5	2.0		20								
	16	103.5	105.5	"		14								
	17	105.5	107.5	"		12								
	18	107.5	109.5	"		12								
	19	109.5	111.5	"		4								
	420	111.5	113.5	"		12								
	21	113.5	115.5	"		16								
	22	115.5	117.5	"		10								
	23	117.5	119.5	"		12								
	24	119.5	121.5	"		14								

Notes:— * By Amdel

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 59

SAMPLE TYPE : DRILL CORE FROM 83.4 TO 121.5

8324/2/205

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	120303	89.5	91.5	2.0		4								
	04	91.5	93.5	"		9								
	05	93.5	95.0	1.5		10								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 61

SAMPLE TYPE : DRILL CORE FROM 89.5 TO

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	120312	5.6	7.7	2.1		30								
	13	7.7	10.2	2.5		15								
	14	10.2	12.1	1.9		5								
	15	12.1	14.9	2.8		15								
	16	14.9	16.8	1.9		5								
	17	16.8	18.9	2.1		10								
	18	18.9	20.9	2.0		X								
	19	20.9	22.9	"		15								
	320	22.9	24.9	"		10								
	21	24.9	27.0	2.1		3								
	22	27.0	29.3	2.3		4								
	23	29.3	30.4	1.1		6								
	24	30.4	33.5	3.1		X								
	25	33.5	35.4	1.9		X								
	26	35.4	37.7	2.3		4								
	27	37.7	39.7	2.0		X								
	28	39.7	41.9	2.2		9								
	29	41.9	44.0	2.1		7								
	30	44.0	46.0	2.0		X								
	31	46.0	48.0	"		X								
	32	48.0	50.0	"		4								
	33	50.0	52.0	"		X								
	34	52.0	54.0	"		3								
	35	54.0	56.0	"		X								
	36	56.0	58.0	"		6								
	37	58.0	60.0	"		5								
	38	60.0	62.0	"		4								
	39	62.0	64.0	"		X								
	120340	64.0	66.0	"		65								
	41	66.0	68.0	"		6								

Notes :— XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 62

SAMPLE TYPE : DRILL CORE FROM 5.6 TO 680.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	120342	68·0	70·0	2·0		50								
	43	70·0	72·0	"		4								
	44	72·0	74·0	"		5								
	45	74·0	76·0	"		3								
	46	76·0	78·0	"		7								
	47	78·0	80·0	"		X								
	48	80·0	82·0	"		5								
	49	82·0	84·0	"		X								
	350	84·0	86·0	"		X								
	51	86·0	88·0	"		X								
	52	88·0	90·0	"		3								
	53	90·0	92·0	"		3								
	54	92·0	94·0	"		X								
	55	94·0	96·0	"		X								
	56	96·0	98·0	"		X								
	57	98·0	100·0	"		7								
	58	100·0	102·0	"		4								
	59	102·0	104·0	"		5								
	360	104·0	106·0	"		7								
	61	106·0	108·0	"		4								
	62	108·0	110·0	"		7								
	63	110·0	112·0	"		7								
	64	112·0	114·0	"		X								
	65	114·0	116·0	"		7								
	66	116·0	118·0	"		X								
	67	118·0	120·0	"		X								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 62

SAMPLE TYPE : DRILL CORE FROM 680 TO

832475 465

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	120748	4.5	6.5	2.0		15								
	49	6.5	8.5	"		X								
	50	8.5	10.5	"		X								
	51	10.5	12.5	"		10								
	52	12.5	14.5	"		20								
	53	14.5	16.5	"		30								
	54	16.5	18.5	"		20								
	55	18.5	20.5	"		15								
	56	20.5	22.5	"		15								
	57	22.5	24.5	"		10								
	58	24.5	26.5	"		20								
	59	26.5	28.5	"		20								
	760	28.5	30.5	"		55								
	61	30.5	32.5	"		120								
	62	32.5	34.5	"		40								
	63	34.5	36.5	"		15								
	64	36.5	38.5	"		20								
	65	38.5	40.5	"		X								
	66	40.5	42.5	"		10								
	67	42.5	44.5	"		15								
	68	44.5	46.5	"		120								
	69	46.5	48.5	"		75								
	770	48.5	50.5	"		30								
	71	50.5	52.5	"		X								
	72	52.5	54.5	"		X								
	73	54.5	56.5	"		X								
	74	56.5	58.5	"		X								
	75	58.5	60.0	"		X								

Notes :— XRF by A14 Method for Sn.
X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 64

SAMPLE TYPE : GROUND DRILL CORE FROM 4.5 TO 28.5 60.0

832476 466

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	120368	600	620	20		7								
	69	620	640	"		20								
	370	640	660	"		X								
	71	660	680	"		7								
	72	680	700	"		4								
	73	700	720	"		5								
	74	720	734	14		7								
	75	734	754	10		15								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 64

SAMPLE TYPE : DRILL CORE FROM 60·0 TO

832477

46

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
119828		83.9	84.9	1.0	180									
29		84.9	85.9	"	2600									
30		85.9	86.9	"	1050									
31		86.9	87.9	"	370									
32		87.9	88.9	"	200									
33		88.9	89.9	"	180									
34		89.9	90.9	"	280									
35		90.9	91.9	"	340									
36		91.9	93.0	1.1	420									
37		93.0	94.0	1.0	180									
38		113.7	114.7	1.0	240									
39		114.7	115.7	"	120									
840		115.7	116.7	"	150									
41		116.7	117.7	"	180									
42		117.7	118.7	"	170									
43		118.7	119.7	"	190									
44		119.7	120.7	"	130									
45		120.7	121.7	"	150									
46		121.7	122.7	"	150									
47		122.7	123.7	"	160									
48		123.7	124.3	0.6	130									
49		124.3	125.3	1.0	35									

Notes :— XRF Bi Melhaet for Sn.

X = 24

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 64

SAMPLE TYPE : DRILL CORE FROM 83.9 TO 94.0
113.7 125.3

8324/78

468

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	121651	6.0	8.0	2.0		140								
	52	8.0	10.0	"		120								
	53	10.0	12.0	"		80								
	54	12.0	14.0	"		65								
	55	14.0	16.0	"		100								
	56	16.0	18.0	"		65								
	57	18.0	20.0	"		630								
	58	20.0	22.0	"		440								
	59	22.0	24.0	"		510								
	660	24.0	26.0	"		190								
	61	26.0	28.0	"		55								
	62	28.0	30.0	"		Insufficient Sample								
	63	30.0	32.0	"		20								
	64	32.0	34.0	"		60								
	65	34.0	36.0	"		110								
	66	36.0	38.0	"		60								
	67	38.0	40.0	"		50								
	68	40.0	42.0	"		55								
	69	42.0	44.0	"		60								
	670	44.0	46.0	"		40								
	71	46.0	48.0	"		65								
	72	48.0	50.0	"		55								
	73	50.0	52.0	"		85								
	74	52.0	54.0	"		80								
	75	54.0	56.0	"		3900								
	76	56.0	58.0	"		1550								
	77	58.0	60.0	"		150								
	78	60.0	62.0	"		200								
	79	62.0	64.0	"		120								
	121680	64.0	66.0	"		230								

Notes :— XRF DIA Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 76

SAMPLE TYPE : DRILL CORE FROM 6.0 TO 66.0

Ground.

SAMPLE NO.	SAMPLE NO	FROM	TO.	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	121681	66·0	68·0	2·0		840								
	82	68·0	70·0	"		90								
	83	70·0	72·0	"		130								
	84	72·0	74·0	"		95								
	85	74·0	76·0	"		120								
	86	76·0	78·0	"		270								
	87	78·0	80·0	"		55								
	88	80·0	82·0	"		60								
	89	82·0	84·0	"		560								
	690	84·0	86·0	"		70								
	91	86·0	88·0	"		270								
	92	88·0	90·0	"		2000								
	93	90·0	92·0	"		230								
	94	92·0	94·0	"		210								
	95	94·0	96·0	"		870								
	96	96·0	98·0	"		140								
	97	98·0	100·0	"		80								
	98	100·0	102·0	"		95								
	99	102·0	104·0	"		540								
	700	104·0	106·0	"		220								
	01	106·0	108·2	2·2		710								
	121702	110·6	112·6	2·0		220								
	03	112·6	114·6	"		130								
	04	114·6	116·6	"		55								
	05	116·6	118·6	"		25								
	06	118·6	120·6	"		150								
	07	120·6	122·6	"		140								
	08	122·6	124·6	"		190								
	09	124·6	126·6	"		120								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 76

SAMPLE TYPE : DRILL CORE (ground) FROM 66·0 TO 126·6

8324480 470.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	121710	126·6	128·6	2·0		100								
	11	128·6	130·6	"		140								
	12	130·6	132·6	"		230								
	13	132·6	134·6	"		720								
	14	134·6	136·6	"		3000								
	15	136·6	138·6	"		500								
	16	138·6	140·6	"		600								
	17	140·6	141·6	1·0		1150								
121871		141·6	142·6	"	2350									
80		142·6	145·6	"	430									
81		145·6	144·6	"	490									
82		144·6	145·6	"	350									
83		145·6	146·6	"	670									
84		146·6	147·6	"	1330									
85		147·6	148·6	"	110									
86		148·6	149·6	"	1300									
87		149·6	150·6	"	4350									
88		150·6	151·6	"	3750									
89		151·6	152·6	"	1550									
890		152·6	153·6	"	230									
91		153·6	154·6	"	200									
92		154·6	155·6	"	140									
93		155·6	156·6	"	210									
	121718	156·6	158·6	2·0		200								
	19	158·6	160·6	"		250								
	720	160·6	162·6	"		180								
	21	162·6	164·6	"		240								
	22	164·6	165·7	1·1		280								
121894		165·7	166·7	1·0	1350									
95		166·7	167·7	"	270									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 76

SAMPLE TYPE : DRILL CORE FROM 126·6 TO 167·7

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121896		167·7	168·7	1·0	260									
97		168·7	169·7	"	150									
98		169·7	170·2	0·5	95									
99		170·2	171·2	1·0	50									
	121723	171·2	173·2	2·0		75								
	24	173·2	176·0	2·8		60								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 76

SAMPLE TYPE : DRILL CORE FROM 167·7 TO 1760

split/ ground

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121439		1.6	2.6	1.0	1.08%									
40		2.6	4.6	2.0	141									
41		4.6	6.0	"	1350									
42		6.0	7.5	1.5	360									
43		7.5	9.0	1.5	30									
44		10.5	12.0	2.0	500									
45		12.0	13.5	1.5	4900									
46		13.5	15.6	2.1	41500									
47		15.6	17.2	1.6	9410									
48		17.2	18.3	1.1	1200									
49		19.8	21.3	1.5	30									
450		21.3	22.8	1.5	20									
51		22.8	24.3	"	30									
52		24.3	26.0	1.7	10									
53		26.0	28.8	2.8	100									
54		31.8	32.8	1.0	160									
55		32.8	33.8	"	200									
56		33.8	34.8	"	470									
57		34.8	35.8	"	2150									
58		35.8	36.8	"	5410									
59		36.8	37.8	"	230									
460		33.0	34.5	1.5	180									
61		34.5	36.0	"	860									
62		36.0	37.0	1.0	1550									
121463		37.0	38.0	"	290									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 81

SAMPLE TYPE : DRILL CORE FROM 1.6 TO 38.0

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121464		38.0	38.8	0.8	6450									
65		38.8	39.8	1.0	820									
66		39.8	40.8	"	600									
67		40.8	41.8	"	170									
68		41.8	42.8	"	980									
69		42.8	43.8	"	280									
470		43.8	44.9	1.1	1500									
71		44.9	45.9	1.0	880									
72		45.9	46.9	"	6550									
73		46.9	47.9	"	9500									
74		47.9	48.7	"	46.50									
75		51.0	52.9	1.9	170									
76		54.0	55.0	1.0	80									
77		55.0	56.0	"	215									
78		56.0	57.0	"	50									
79		57.0	58.0	"	200									
480		58.0	59.0	"	1150									
81		59.0	60.0	"	4910									
82		60.0	61.0	"	1500									
83		61.0	62.0	"	2.10%									
84		62.0	62.7	0.7	1.27%									
85		62.7	63.7	1.0	2050									
86		63.7	64.7	"	3550									
87		64.7	65.7	"	1800									
88		65.7	66.7	"	1350									
89		66.7	67.7	"	680									
490		67.7	68.7	"	2950									
121491		68.7	69.7	"	3900									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 81.

SAMPLE TYPE : DRILL CORE FROM 38.0 TO 69.7.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
121492		69.7	70.7	1.0	1700									
93		70.7	71.7	"	1650									
94		71.7	72.7	"	3250									
95		72.7	73.7	"	4000									
96		73.7	74.7	"	3600									
97		74.7	75.7	"	2350									
98		75.7	76.7	"	2200									
99		76.7	77.7	"	1750									
120800		77.7	78.7	"	700									
01		78.7	79.5	0.8	7150									
02		79.5	81.5	2.0	2300									
120803		82.9	83.9	1.0	440									
04		83.9	84.9	"	2700									
05		84.9	86.0	1.1	2650									
06		86.0	87.0	1.0	130									
120807		80.5	81.5	1.0	100									
08		81.5	82.9	1.4	270									
120811		112.9	113.9	1.0	240									
12		113.9	115.4	1.5	100									
13		115.4	116.4	1.0	160									
14		116.4	117.4	"	340									
15		117.4	118.2	0.8	400									
16		118.2	118.9	0.7	1750									
17		118.9	119.9	1.0	760									
18		119.9	121.0	1.1	640									
19		121.0	122.2	1.2	1300									
820		122.2	122.8	0.6	1250									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 81

SAMPLE TYPE : DRILL CORE FROM 69.7 TO 122.8

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1205B1		122.8	123.2	0.4	2550									
B2		123.2	124.6	1.4	1350									
B3		124.6	125.3	0.7	500									
B4		125.3	126.3	1.0	650									
B5		126.3	127.7	1.4	310									
B6		127.7	128.7	1.0	130									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 81

SAMPLE TYPE : DRILL CORE FROM 122.8 TO 128.7

832487 477

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 85

COLLAR LOCATION

Grid name	Rectangular space co-ordinates: PLANAR CO-ORDINATES		ELEVATION
(1) MT. BISCHOFF	1799.70 N	979.86 E	625.16
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) 150 mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -70°
Total length 110 m
Commenced: 1 / 6 / 81
Completed: 5 / 6 / 81
Drilling contractor: LONGYEAR AUST. LTD.
Rig type: LY 44

Details of down hole location-survey methods.
Eastman Downhole
Single Shot

Purpose of drilling and anticipated lengths to targets.
To test for development of sulphide lode below porphyry. Target zone 50-100 m.

Core size and non-coring (NC)

NC	0	TO	2.50
HQ	2.50	TO	39.1
NQ	39.1	TO	110.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		-70°
58.0	153°	-70°
88.0	155°	-70°
110.0	149°	071°

Comments on drilling.
Casing broke apart at 27 m. Left in hole 4 x 3.0 m HQ rods plus shoe.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. SIMPSON
FROM 0 TO 110.0
DATE 27/6/81

LOGGED BY
FROM TO
DATE

LOGGED BY
FROM TO
DATE

Company managing exploration programme.
Metals Exploration Ltd.

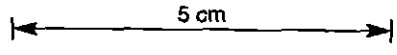
SUMMARY LOG

HOLE No. MBD 85
Log sheet 1 of 2

832488 478

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: NOT CORED.						
	4.8	2.5 - 7.3: DOLOMITE, SULPHIDE LODE. Quartz carb rich DSL irregular banded to blotchy mineralisation		8		Pyrite 15-20% Quartz-carbonate 70-80%. Trace sp, trace aspy		
	19.7	7.3 - 27.0: DOLOMITE. Cream to grey dolomite. Rubble with low recovery. Minor alteration along some fractures and veins. Local introduction of pyrite.		2		Fragments of pyrite rich material especially in low recovery areas.		
20								
	1.5	27.0 - 28.5: DOLOMITE SULPHIDE LODE. Weathered & broken DSL, quartz, carb py with fine grained tourmaline.		8				
		RUBBLE						
	4.8	28.7 - 33.5: DOLOMITE. Fine grained pale grey to cream dolomite. Network of dark grey veinlets locally.		2		Rare specks of sphalerite.		
				5				
		33.5-35.0: DOLOMITE SULPH LODE. Py DSL carb & quartz		1		Py 50-60% carb 3% Qtz 10-20%		
		35.0-36.4: PORP TRANSITION ZONE. Var tm-py-QFP				Py 5-30% Tr fluorite & sph		
40	17.0	36.4 - 53.4: PORPHYRY. Quartz feldspar porphyry varying locally to quartz porphyry. Heavily altered in central section with introduction of pyrite.		1		Local zones of disseminated pyrite, fluorite & sphalerite. Trace cassiterite.		
		53.4-54.4: DOLOMITE SULPHIDE LODE. Quartz-carb-py		5		Qtz-carb 80-85% Py 15-20% Fluo tr		
60	33.5	54.4 - 87.9: DOLOMITE. Pale grey, cream or buff coloured dolomite, dominantly fine grained. Dolomite is characterised by network of fine dark grey to black veinlets.		2		Trace pyrite developed on irregular veinlets.		
						Trace sphalerite 60.5 - 62.6		
80								
		87.9-88.5: TRANSITION ZONE. Mixed Dol/siltstone/shale				2/10/9		
	21.5	88.5 - 110.0: SILTSTONE-SHALE. Uniform sequence of very dark grey slumped to bedded siltstone and shales. Bedding generally disrupted past 105 m.		10/9				
100								
		END OF HOLE: 110.0 m.						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (EDS), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES



FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Scale

Prospect or project

HOLE No. MBD 85

LOG SHEET 2 OF 2

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 88

COLLAR LOCATION

Grid name — Rectangular space co-ordinates

	PLANAR CO-ORDINATES		ELEVATION
(1) MT. BISCHOFF	2099.59 N	1219.97 E	682.30
(2)	N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) 150 mag
G.N.(2) mag
G.N.(3) mag
T.N. mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar -60°
Total length 140.0 m
Commenced: 7 / 6 / 81
Completed: 10 / 6 / 81

Drilling contractor: LONGYEAR AUST. LTD.
Rig type: LY 44

Details of down hole location-survey methods.
Eastman Downhole Camera Single Shot

Purpose of drilling and anticipated lengths to targets.
To test White Face Dyke at RL 575 m. Target interval 110-130 m.

Core size and non-coring (NC)

NC	0.0	TO	3.0
NQ	3.0	TO	70.80
BQ	70.80	TO	140.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR	150	-60
30 m	-	-60
60 m	150	-60
90 m	149	-61
140 m	145	-62

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

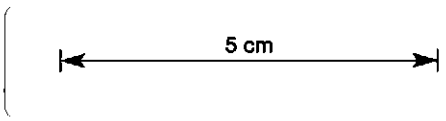
Symbols and abbreviations

LOGGED BY D. SIMPSON FROM 0 TO 140.0 DATE 27/6/81
LOGGED BY FROM TO DATE
LOGGED BY FROM TO DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 88
Log sheet 1 of 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: NOT CORED.						
	16.9	3.0 - 19.9: SHALE - SILTSTONE. Fine grained pale to mid-grey shales with minor siltstone. Shales are locally sericitic and siltstones contain 1-5% pyrite. 		9/10				
20	9.5	19.9 - 29.4: QUARTZITE (SHALE). Fine to medium grained quartzite, generally massive but locally interbedded with minor shale.		11/9				
	7.1	29.4 - 36.5: SHALE - SILTSTONE. Similar to 3.0 - 19.9. Core very broken.		9/10				
	3.6	36.5 - 40.1: QUARTZITE - SHALE. Fine grained massive quartzite. Irregular network of pyritic veinlets.		11/9				
40	2.6	40.1 - 42.7: SHALE - SILTSTONE. Similar to 3.0 - 19.9.		9/10				
		42.7 - 44.2: SHALE - QUARTZITE. Massive shales - local quartzite.		9/11				
	24.3	44.2 - 68.5: SHALE - SILTSTONE. Light to mid grey shale grading to mudstone with minor siltstone. Siltstone and occasional quartzite tend to be thin and irregular.		9/10				
60	5.9	68.5 - 74.4: QUARTZITE. Pale to mid grey massive quartzite with dendritic alteration pattern developed locally.		11				
	5.0	74.4 - 79.4: SHALE - SILTSTONE. Similar to 44.2 - 68.5.		9/10				
80	9.9	79.4 - 89.3: QUARTZITE. Pale to mid grey massive quartzite similar to above with minor shale and siltstone beds. Some slump brecciation developed locally.		11				
	7.8	89.3 - 107.1: SHALE - SILTSTONE. Similar to 44.2 - 68.5 with addition of many thin beds of apparently syngenetic pyrite from approximately 94.0 m.		9/10				
100	8.5	107.1 - 115.6: QUARTZITE. Pale grey massive quartzite similar to above. Some thin interbeds of shale locally.		11				
	15.45	115.6 - 131.05: QUARTZ-FELDSPAR PORPHYRY. Light grey to brownish porphyry with minor pervasive alteration to		1				

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FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 88

LOG SHEET 2 OF 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
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120

groundmass.
From 117.3 the feldspars are progressively replaced by irregular pyrite aggregates.

1

Pyrite averages 3-5%
Locally pyritic veinlets are excised.

131.05 - 140.0: SHALE - SILTSTONE.
Mid grey shales, well bedded to slumped and interbedded with white to pale grey siltstones.
Local spotting due to pyrite.

9/10

Pyrite content <0.1%

140

END OF HOLE: 140.0 m.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 88

LOG SHEET 3 OF 3

MT BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

MONTHLY REPORTS FOR JANUARY TO DECEMBER 1981

VOL. 4

METALS EXPLORATION LTD.
60 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR SEPTEMBER, 1981.

Distribution:

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G.M. Motteram
6/11/81.

MT. BISCHOFF TIN PROSPECT

REPORT FOR SEPTEMBER, 1981

General

Drilling of the Stage 3B infill programme continued on site with 571 metres drilled during the period. Formal agreement to this programme was achieved at the Operating Committee meeting held during the month.

Mining studies are continuing with the aim of production of mine plans for three pits over the Bischoff DSL and porphyry ores. This planning is required for input to the Preliminary Engineering Study.

Pilot scale (50 kg) metallurgical testwork is virtually complete and variability studies are progressing.

Austin Anderson has been appointed to perform plant and infrastructure estimates for a range of development options. This work is progressing.

Geology

(i) Diamond Drilling

Drilling is being carried out by Parry Exploration on 1 shift/day on a 5 day week basis. Twenty two shifts were drilled for the month giving a shift average of 25.95 m. Diamond drilling was directed at Dolomite Sulphide Lode targets and are in the category of infill holes.

Holes are discussed individually below. Drill hole statistics are appended.

MBD 105

MBD 105 collared at 1850N on 1040E Section was designed to check the geology and grade in the position assigned to DDH H3. The hole demonstrated the presence of DSL below the porphyry and confirmed its presence above.

Unless there is a very sharp change in basin shape or there is faulting, it is apparent that the position of DDH H3 on section 1040E is unreliable.

Geology Contd.

MBD 105 Contd

Intersections achieved in this hole are as follows:

FROM	TO	LENGTH (m)	% Sn	ROCK TYPE
34.1	37.3	3.2	1.33	Transition DSL & Porphyry
37.3	64.9	27.6	0.45	Porphyry
49.3	64.9	15.6	0.57	Porphyry
64.9	69.7	4.8	0.89	DSL

MBD 106

This hole was collared at 1950N on 930E Section and was designed to test the development of DSL towards the western edge of the basin especially in the upper lens. The hole achieved an intersection of DSL from 5.6 to 30.0 m with the following grade:

FROM	TO	LENGTH (m)	% Sn	ROCK TYPE
17.0	29.0	12.0	1.42	DSL

Current interpretation is that this intersection is part of the Greisen Face lens rather than being the footwall mineralisation seen on 940E Section. This is supported by the contact angles below the DSL which are around 45-60 degrees.

MBD 107 & 108

These holes were both drilled on 1020E Section to test for grade continuity in the DSL and achieved intersections greater than expected with 107 in DSL from 17.7 to 57.5 m and 108 in DSL from 14.9 to 41.2 m.

Assay results from both holes show tin values generally less than 100 ppm through the main DSL intercepts. This confirms the sudden loss of grade seen in MBD 72 drilled on a similar northing on 1040E Section.

MBD 108 did however, achieve a small grade intercept prior to the main DSL ie.

0 - 9 m No core
9 - 11 m 2 m @ 0.91% Sn

Geology Contd

MBD 109

Drilled on 950E to test the extent of the Greisen Face lens easterly intersected only dolomite. This can possibly be explained in that the lens, as seen in level plan, is further west by 3-5 metres than originally interpreted. This is consistent with the intersection in MBD 106.

No grade intercepts were achieved.

MBD 110

Drilled on 960E Section to test for development of DSL, achieved on two minor intersections of DSL in the target position as follows:

FROM	TO	LENGTH (m)	% Sn	ROCK TYPE
60.0	65.6	5.6	0.39	DSL/Dolomite
68.6	69.8	1.2	0.49	DSL

The remainder of the hole to 79.5 m is dolomite which then passes into quartzite/siltstone and finishes at 84.5 metres.

The existence of dolomite at 620 m RL on 960E Section in this hole, places some doubt on positioning of B 26. A further hole will be considered to test whether DSL exists in this zone.

MBD 111

Drilled on 1000E Section to test for grade continuity achieved a DSL intersection from 21.4 m to 61.0 m. The hole shows that the basin deepening continues through from 1020E although, the generally barren nature of DSL by 1020E was confirmed. This effectively closes off the high grade DSL observed in the close spaced drilling on Greisen Face to 990E. Intercepts achieved were:

FROM	TO	LENGTH (m)	% Sn	ROCK TYPE
35.0	38.0	3.0	0.67	DSL
59.0	61.0	2.0	0.63	DSL

MBD 112

Drilled on 1100E Section to test the extent of development of the MBD 18 pod intersected only sediments. This posses a problem in regards to the boundary between sediments and DSL. The sediments contain minor disseminated pyrrhotite indicating that ore may not be far away.

Core grinding indicated no grade in the sediments.

Geology Contd

MBD 113

Drilled on 1080E on a similar northing indicates the block of sediments is probably a facies equivalent of the dolomite-DSL. This hole intersected DSL from 5.9 - 13.8 m, containing a minor grade intercept (ie 11.8 to 13.7 m, 1.9 m @ 0.71% Sn).

MBD 114

Drilled on 1040E Section to check for DSL development and grade continuity was collared at 1925N and achieved a substantial DSL intersection from 29.0 - 79.0 m and was in porphyry at 82.0 m at period end. Assay data is incomplete however, a DSL intercept of 20 m @ 1.02% Sn is indicated within the upper section of the DSL. This zone was not included in recent reserve re-estimates.

(ii) Assays received for holes previously reported

MBD 97

Drilled on 985E Section (one of the group of close spaced holes) achieved the following intersection:

FROM	TO	LENGTH (m)	% Sn	ROCK TYPE
22.0	54.8	32.8	1.03	DSL

This is a revised calculation using check assays for values over 1% Sn.

MBD 100

Another of the close spaced holes drilled on 980E.

FROM	TO	LENGTH (m)	% Sn	ROCK TYPE
39.7	51.7	12.0	0.49	DSL

This intersection fits well with the grade boundary shown on the Ore Reserve Sections and adds slightly to the area outlined.

(iii) Surface Sampling

Assay results have now been received for limited samples taken over the DSL on lines 940E to 1000E.

In general, there is a loose correlation between interpreted position of orebody at surface and the surface sample assays.

(iii) Surface Sampling Contd

On 940E Section the surface values are alterated compared to those obtained in core, similarly on 960E while on 980E there is good correlation with respect to grade but the surface values are displaced to the south by about 20.0 metres. Only on 1000E does there appear to be a good correlation both in space and magnitude of tin values.

(iv) Adjustments to Previous Reports

Assays are appended for hole MBD 92 which was previously unavailable and MBD 56 (one sample ommitted in February report).

April, 1981

MBD 65

RL advised in August report as 582.36 m incorrect. Actual RL 635.89 m.

MBD 71

RL advised in August report as 625.49 m incorrect. Actual RL 628.57 m.

May, 1981

MBD 82 & 83

RL notification in August report for MBD 82 should have been MBD 83, RL = 621.83 m.

August, 1981

MBD 105

Co-ordinates in error, corrected. Repeated in this report.

Mining

Planning is progressing on an open pit for extraction of the DSL reserves plus porphyry ore contained with the "main" pit. In addition, a supplementary pit is planned to take White Face Porphyry and a third pit is planned to take higher grade porphyry in the Stanhope area.

Metallurgy

Pilot Scale 50 kg Tests

The following work was carried out, to virtually complete this phase of testing.

(i) Composite MCD - regrind and retabling of primary table middlings products.

(ii) Composites MCA, MCC & MCD - desliming of fines and cassiterite flotation of deslimed product.

Assay results are not yet available for the above work on composite MCD.

Results are now available for MCA and MCC composites. These results are preliminary in that some weights are calculated and check assays are not complete. These results are summarised as follows:

Product	MCA			MCC		
	% wt	% Sn	Dist	% wt	% Sn	Dist
Total Concentrates	1.7	37.9	71.7	1.6	36.3	60.0
Total Tails	85.2	0.21	19.3	79.5	0.30	24.1
Total Recycled Prod.	13.1	0.62	9.0	18.9	0.84	15.9
Calc. Feed	100.0	0.91	100.0	100.0	0.99	100.0

Recovery of tin to concentrates is 72% for MCA and 60% for MCC with potential for further recovery from middlings products made in testwork.

Total concentrates assayed 36 to 38% tin. Leaching and magnetic separation tests (low intensity) are to be used to investigate further upgrading.

For composite MCC the flotation froth was heavily mineralised at the beginning of rougher and cleaner stages and flotation was continued till the froth was almost barren. A concentrate grade of 27% tin was obtained for a tin recovery of 76%.

For composite MCA, talc depressant (Daicel 1120) had to be added to sulphide scavenging to prevent flotation of talc. In the subsequent cassiterite flotation stage, the froth looked barren and only a small weight recovery could be obtained in roughing and scavenging even with extra dosage of S.P.A.

Pilot Scale 50 kg Tests Contd

Because of the small weight recovery, rougher concentrate was cleaned only once. Overall, a tin recovery of 63% was obtained at a concentrate grade of 22% tin. Scavenger concentrate grade was high (9% Sn) so longer flotation times should improve recovery. The high grade of the first cleaner concentrate (47% tin) and lower solids content of froth, indicates significantly less gangue flotation by S.P.A. than obtained for composite MCC or generally observed in tin flotation practice. The influence of the talc depressant on this result, or the general interaction of cassiterite/S.P.A./talc/Daicel, is not clear from this one-off test and could usefully be the subject of further study when time and sample is available.

Work Index Determinations

Amdel have now completed Work Index determinations and results are as follows:

	Composite	Wi (kwh/t)	Feed P80 (microns)	Product P80 (microns)
Rod Mill	MCA	13.4	10,500	1,000
	MCC	13.8	9,550	955
	MCD	18.0	9,700	950
Ball Mill	MCA	11.1	1,900	170
	MCC	10.2	1,980	163
	MCD	14.4	1,950	158
Regrind	Sulph. Conc.	31.0	158	71

Porphyry Preconcentration

Mineral Deposits were requested to retable tailings generated in a preliminary preconcentration test to obtain a weight rejection of the order of 60% of the +53 micron material.

A weight rejection of 57% of +53 micron material was achieved with a +53 micron tin loss of 12%, which is sufficiently encouraging to proceed with larger scale testwork.

A bulk sample of about 1 tonne has been allocated and this will be crushed and assayed at the Department of Mines before despatch to Mineral Deposits.

Variability Testwork

Assessment of the metallurgical variability of DSL ore has commenced. Approximaely 15 ore intersections from throughout the DSL, are to be evaluated. In addition, some u/d B series intersections are to be studied mineralogically.

Assessment of 8 ore intersections is underway, with sulphide flotation work completed and samples being prepared for heavy liquid analysis at Amdel.

Engineering

Austin Anderson have been awarded the Preliminary Engineering Study with options to be assessed as follows:

(i)	300,000 tpa plant and infrastructure (including porphyry preconcentrator). Estimated from basics to +- 25% accuracy.
(ii)	200,000 tpa case - factored from (i).
(iii)	260,000 tpa Custom Milled DSL at Cleveland.

This work is due for completion by end November.

MT. BISCHOFF JOINT VENTURE - SEPTEMBER, 1981.

DRILL HOLE STATISTICS.

HOLE NO.	N	E	RL	DIP	AZI	FROM	TO	METRES DRILLED	FINAL DEPTH
MBD 105	1850.21	1040.16	636.22	-90	-	25.5	77.0	51.5	77.0
MBD 106	1949.83	930.10	647.83	-90	-	0.0	47.0	47.0	47.0
MBD 107	1950.18	1020.06	643.67	-80	360	0.0	63.0	63.0	63.0
MBD 108	1951.11	1020.06	643.64	-50	360	0.0	52.0	52.0	52.0
MBD 109	1929.89	950.06	643.81	-90	-	0.0	26.0	26.0	26.0
MBD 110	1909.74	959.96	643.58	-70	180	0.0	84.5	84.5	84.5
MBD 111	1945.14	1000.05	643.81	-55	360	0.0	68.0	68.0	68.0
MBD 112	1949.32	1099.26	641.91	-45	360	0.0	46.0	46.0	46.0
MBD 113	1950.22	1079.91	645.93	-60	360	0.0	51.0	51.0	51.0
MBD 114	1925.0	1040.0	-	-90	-	0.0	82.0	82.0	*
								571.0	

* In progress at period end.

MT BISCHOFF JOINT VENTURE

	September, 1981		3 Months to September, 81		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
Administration	11	11	33	34	67	67
Geology	21	76	75	214	267	317
Mining	2	28	51	36	126	116
Metallurgy	14	23	22	76	119	136
Engineering	7	19	20	29	171	161
Commercial		1	1	1	13	13
STAGE 3A	14		59		59	
TOTAL PROJECT:	69	159	261	390	822	810

SUMMARY OF EXPENDITURE TO 30.9.81

	CURRENT PERIOD $000	ACCUMULATIVE $000
Stage 1		270
Stage 2A - Early Start		29
Stage 2A		199
Overruns: Stage 1 - M.E.L.		11
Metallurgical - C.R.A.E.		24
Stage 2B		482
Stage 2B - 3A Holding Costs offset - A.I.R. & D.		40
Stage 3A - Partly offset by A.I.R. & D Grant Received June, 1981 $6,500	59	862
Stage 3B - Partly offset by A.I.R. & D Grant Received July, 1981 $25,863	202	202
ACCUMULATIVE EXPENDITURE TO DATE	261	2,119

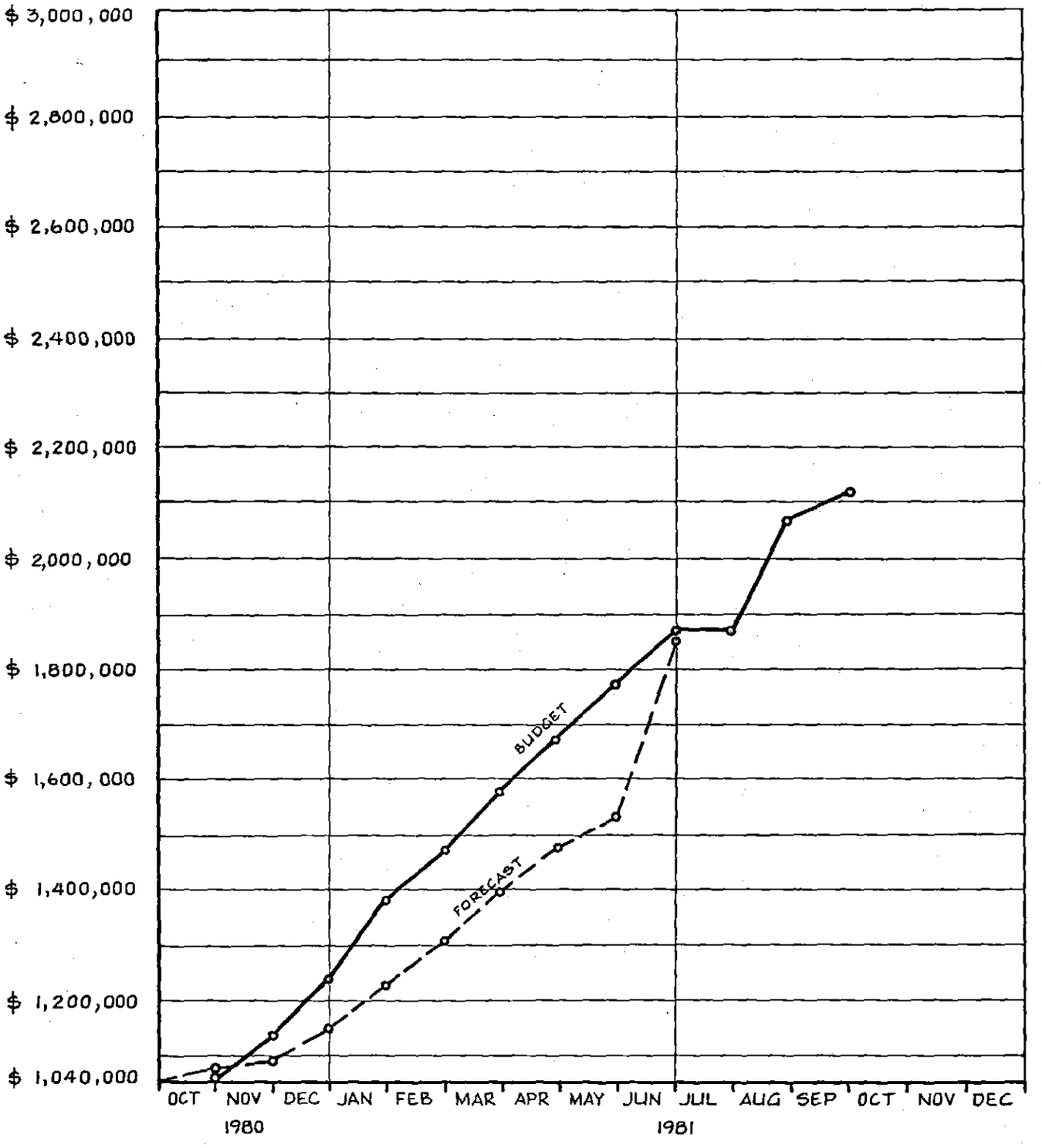
MT BISCHOFF PROJECT

	September,1981		3 Months to Sept. 1981		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
ADMINISTRATION						
Technical Services	11	12	31	32	63	63
Consumables			1		1	1
Travel			1	1	2	2
Consultants				1	1	1
	11	12	33	34	67	67
GEOLOGY						
Technical Services	12	10	44	32	60	60
Labour		2	7	6	8	8
Consumables	5	1	11	20	22	22
Accommodation	1	1	1	3	7	7
Vehicles		1	1	3	5	5
Travel	1	1	1		2	2
Contractors		57		131	138	188
Consultants	2	3	2	11	17	17
Capital Expenditure			8	8	8	8
	21	76	75	214	267	317
MINING						
Technical Services	1	2	14	6	25	15
Labour					1	1
Consumables		3	7	5	9	9
Travel				1	3	3
Contractors	1	20	30	20	64	64
Consultants		3		4	24	24
	2	28	51	36	126	116
METALLURGY						
Technical Services	9	13	17	39	57	77
Labour				1	4	4
Consumables		9		23	24	24
Accommodation					1	1
Travel		1		3	12	12
Contractors	4		4	9	15	12
Consultants	1		1	1	6	6
	14	23	22	76	119	136
ENGINEERING						
Technical Services	6	4	17	9	40	30
Consumables					1	1
Travel		1		3	8	8
Contractors	1	11	1	12	114	114
Consultants		3	2	5	8	8
	7	19	20	29	171	161

../2

MT BISCHOFF PROJECT

	September, 1981		3 Months to September, 81		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
COMMERCIAL						
Technical Services		1	1	1	11	11
Consumables					2	2
		1	1	1	13	13
TOTAL:	55	159	202	390	763	$810
STAGE 3A EXPENDITURE						
Technical Services	(2)		3			
Travel & Accommodation			1			
Diamond Drilling	13		34			
Assaying	2		6			
Metallurgical			13			
Consumables	1		2			
	14		59		59	
	69	159	261	390	822	810



CUMULATIVE EXPENDITURE SCHEDULE

MT. BISCHOFF

STAGE 3 SUMMARY
as at . .81

Drg. No. 81 - 407

APPENDED INFORMATION

Summary Log and Assays

MBD 105
MBD 106
MBD 107
MBD 108
MBD 109
MBD 110
MBD 111
MBD 112
MBD 113

Assays

MBD 56
MBD 92
MBD 97
MBD 100

Revised Stage 3 Drill Hole Location Map

832508 497

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 105

COLLAR LOCATION

Grid name

Rectangular space co-ordinates

	PLANAR CO-ORDINATES		ELEVATION
(1)	1850.21 N	1040.03 E	682.52
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar 90°

Total length 77 m

Commenced: 31 / 8 / 81
Completed: 7 / 9 / 81

Drilling contractor: PARRY EXPLORATION DRILLING

Rig type: BOYLES 37

Details of down hole location-survey methods.
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets.
To check accuracy of previous hole (H 3) and test for possible DSL below porphyry.

Core size and non-coring (NC)

TRICONE	0	TO	25.5
NQ	25.5	TO	72.0
BQ	72.0	TO	77.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
46.0 m	296°	89°
76.0 m	271°	89°

Comments on drilling. No rock core until 34.2 m. Broken ground common. Rods stuck at 63 m. Fired off - 4 x 3 m NQ rods + 1.5 m core barrel. *UNEXPLODED CHARGE BELIEVED TO BE AT BOTTOM OF HOLE******

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 77.0	FROM TO	FROM TO
DATE 16/9/81	DATE	DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 105

Log sheet 1 of 2

832509 498

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT — Depth : Description and notes (CAPITAL LETTERS, UNDERLINED; INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	25.5	0 - 25.5: TRICONE. Not cored.						
20	8.7	25.5 - 34.2: CLAY. Possibly fault pug. Very poor recovery. Mainly brown to off-white clay. Minor fragments of chert.						
	3.1	34.2 - 37.3: TRANSITION ZONE. Mainly py in hard siliceous matrix. Deeply weathered.				50% py in bands and aggregates.		
40	28.2	37.3 - 65.5: PORPHYRY. Translucent white-grey matrix, altered in parts to soft opaque brown-red material. 20% qtz penocrysts, up to 12 mm. 15% coarsely disseminated py, weathered in most parts.		1		15% coarsely disseminated py		
60	4.1	65.5 - 69.6: DOLOMITE SULPHIDE LODE. Mainly banded "wrigglite". Minor qtz-carb and py.		5/8		15% finely disseminated py		
	7.4	69.6 - 77.0: SILTSTONE, minor QUARTZITE. Moderately disrupted fine siltstone, with lesser qtzite in beds to 10 cm. Rare thin carbonate veins.		10/11		trace py, sph in veins		
80		END OF HOLE: 77.0 m.						

5 cm

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project

HOLE No. MBD 105

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126708		25.5	27.5	2.0	90									
09		27.5	28.5	1.0	32									
710		28.5	29.5	"	270									
11		29.5	33.1	2.6	60									
12		33.1	34.1	1.0	350									
13		34.1	35.1	"	5000									
14		35.1	36.1	"	1.47%	*								
15		36.1	37.3	1.2	1.65%	*								
16		37.3	38.3	1.0	1450									
17		38.3	39.3	"	2800									
18		39.3	40.3	"	1100									
19		40.3	41.3	"	7200									
720		41.3	42.3	"	3050									
21		42.3	43.3	"	2350									
22		43.3	44.3	"	1700									
23		44.3	45.3	"	3650									
24		45.3	46.3	"	940									
25		46.3	47.3	"	1400									
26		47.3	48.3	"	4050									
27		48.3	49.3	"	4050									
28		49.3	50.3	"	1.03%									
126729		50.3	51.3	"	7200									
730		51.3	52.3	"	7900									
31		52.3	53.3	"	4500									
32		53.3	54.3	"	6100									
33		54.3	55.6	1.3	2650									
34		55.6	57.5	1.9	9600									
35		57.5	58.5	1.0	3900									
36		58.5	59.5	"	1950									
37		59.5	60.5	"	6900									

Notes :— XRF BI method
* This result has been determined by lode BP.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 105

SAMPLE TYPE : DRILL CORE FROM 25.5 TO 60.5

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126738		60.5	61.5	1.0	720									
39		61.5	62.5	"	900									
740		62.5	63.5	"	6900									
41		63.5	64.9	1.4	7900									
42		64.9	66.5	1.6	10.2%									
43		66.5	67.5	1.0	6300									
44		67.5	68.5	"	9200									
45		68.5	69.7	1.2	1.24%									
46		69.7	70.7	1.0	85									

Notes :— XRF BI Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 105

SAMPLE TYPE : DRILL CORE FROM 60.5 TO 70.7

832512 501

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 106

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	1949.83 N	930.1 E	647.83
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: -90°
Total length: 47.0 m
Commenced: 8 / 9 / 81
Completed: 8 / 9 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods:
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets:
To test western edge of basin for presence of DSL

Core size and non-coring (NC)

NC	0	TO	2.0
NQ	2.0	TO	47.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
45 m	291°	88°

Comments on drilling:

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 47.0 DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____

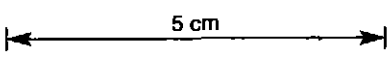
Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 106

Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth · Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	2.0	0 - 2.0: TRICONE. No core.						
	3.6	2.0 - 5.6: SILTSTONE/QUARTZITE, minor SHALE. Very broken disrupted sediments.		10/11		weak trace py disseminated		
	24.4	5.6 - 30.0: DOLOMITE SULPHIDE LODE. 5.6 - 7.5: 60% carbonate, 40% pyrite 7.5 - 9.0: 60% carbonate, 25% pyrite, 15% pyrrhotite 9.0 - 13.0: 50% carbonate, 40% pyrrhotite, 10% talc 13.0 - 15.1: 60% pyrrhotite, 30% carbonate, 10% talc 15.1 - 17.1: 50% carbonate, 40% pyrrhotite, 10% talc 17.1 - 18.5: 70% talc/serpentinite, 30% pyrrhotite 18.5 - 22.0: 60% pyrrhotite, 40% talc 22.0 - 27.7: 60% pyrrhotite, 20% carbonate, 20% talc 27.7 - 28.0: 80% talc, 20% pyrrhotite 28.0 - 28.7: Carbonate/Recrystallized Dolomite 28.7 - 28.8: Talc/Carbonate with 10% pyrrhotite 28.8 - 29.1: Talc/Serpentinite 29.1 - 30.0: Carbonate/Recrystallized Dolomite.		4/8/6		For sulphide content see adjoining column.		
30	17.0	30.0 - 47.0: SILTSTONE. 30.0 - 30.2: Transition Dolomite Sulphide Lode/ Siltstone 33.4 - 33.9: Dolomite Sulphide Lode: Serpentine/pyrrhotite 35.5 - 36.6: Dolomite Sulphide Lode: Serpentine/pyrite/carbonate/talc 37.5 - 37.9: Dolomite Sulphide Lode: Serpentine/talc/fluorite Rest of intersection is disrupted grey siltstone.		10		in siltstone, <1-3% po>py in stringers, veins, minor disseminated. In Dolomite Sulphide Lode patches 10-20% sulphides except 37.5 - 37.9 where 1-3% po>py		
40		END OF HOLE: 47.0 m.						



FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project

HOLE No. MBD 106

LOG SHEET 2 OF 2

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
26747		2.0	3.6	1.6	290									
48		3.6	5.6	"	170									
49		5.6	7.0	1.4	26									
750		7.0	8.0	1.0	34									
51		8.0	9.0	"	38									
52		9.0	10.0	"	16									
53		10.0	11.0	"	50									
54		11.0	12.0	"	46									
55		12.0	13.0	"	110									
56		13.0	14.0	"	26									
57		14.0	15.0	"	4500									
58		15.0	16.0	"	70									
59		16.0	17.0	"	360									
760		17.0	18.0	"	9200									
61		18.0	19.0	"	1.97%	2.15%	BP method							
62		19.0	20.0	"	1.85%	2.07%	BP method							
63		20.0	21.0	"	2.30%	2.44%	BP method							
64		21.0	22.0	"	8100									
65		22.0	23.0	"	7800									
66		23.0	24.0	"	2750									
67		24.0	25.0	"	2.54%	3.00%	BP method							
68		25.0	26.0	"	2.36%	2.74%	BP method							
69		26.0	27.0	"	6700									
770		27.0	28.0	"	1.31%	1.37%	BP method							
71		28.0	29.0	"	1.27%	1.42%	BP method							
72		29.0	30.0	"	1500									
73		30.0	31.0	"	490									
74		31.0	32.0	"	95									
75		32.0	33.0	"	320									
76		33.0	34.0	"	1300									

Notes :— XRF BI method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 106

SAMPLE TYPE : DRILL CORE FROM 2.0 TO 340

8325514

503

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126777		34·0	35·0	1·0	50									
78		35·0	36·0	"	170									
79		36·0	37·0	"	360									
780		37·0	38·0	"	420									
81		38·0	39·0	"	32									
82		39·0	40·0	"	60									
83		40·0	41·0	"	450									
84		41·0	42·0	"	55									
85		42·0	43·0	"	32									
86		43·0	44·0	"	14									
87		44·0	45·0	"	170									
88		45·0	46·0	"	34									
89		46·0	47·0	"	82									

Notes :— XRF BI method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 106

SAMPLE TYPE : DRILL CORE FROM 34·0 TO 47·0

8325 15

504

832516 505

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 107

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1950.18 N	1020.03 E	643.67
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar 80°/360°
Total length 65 m
Commenced: 9 / 9 / 81
Completed: 11 / 9 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	65.0
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods:
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets:
To test DSL and possibly close off ore-block.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 65.0	FROM TO	FROM TO
DATE 25/9/81	DATE	DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 107
Log sheet 1 of 2

832517 506

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: TRICONE. Not cored.						
	4.4	3.0 - 7.4: DOLOMITE, DOLOMITE SULPHIDE LODE? Fragments of dolomite, DSL. Also pyritic sludge.		2/8/5		2-5% py		
	10.3	7.4 - 17.7: DOLOMITE, minor RECRYSTALLIZED DOLOMITE minor DOLOMITE SULPHIDE LODE. Mainly finely crystalline grey dolomite. Minor patches of recrystallized dolomite and qtz-carbonate dolomite sulphide lode.		2/3/8		2-3% po, py - disseminated through patches of dolomite sulphide lode.		
20	39.8	17.7 - 57.5: DOLOMITE SULPHIDE LODE. 17.7 - 26.5: 40% po 45% qtz-carbonate 10% talc 5% serpentine graduated change to		8/4/6/7		40% po - irregular aggregates and coarsely disseminated. Minor py after po, trace cpy		
		26.5 - 30.6: 70% po 25% serpentine 5% talc gradual change to		4/7		70% coarsely disseminated and occasional aggregates		
		30.6 - 42.9: 50% po 45% siliceous talc 5% calcite - coarsely disseminated		4/6		50% po - coarsely disseminated and occasional aggregates. Trace fine cpy finely disseminated		
40		42.9 - 44.1: 50% po, 45% qtz-carb, 5% talc		4/8		50% coarsely disseminated po		
		44.1 - 49.7: Broken gravelly core, 50% talc, 45% po, 5% qtz-carbonate		6/4		45% disseminated po		
		49.7 - 56.3: 35% po 30% serpentine 30% qtz-carbonate 5% talc		4/7/8		35% disseminated po		
		56.3 - 57.5: 60% qtz-carb, 25% serpentine, 15% po		8/4/7		15% disseminated po		
60	7.5	57.5 - 65.0: QUARTZITE, lesser SILTSTONE. 57.5 - 58.2: transition zone, serpentinous siltstone 58.2 - 65.0: thick qtzite beds with lesser thinner siltstone. Occasional carbonate veins.		11/		trace po, py - po disseminated py veins		
		END OF HOLE: 65 m.						

5 cm

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT. BISCHOFF

HOLE No. MBD 107

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn		W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	126275	7·2	9·2	2·0		1750								
	76	9·2	11·0	1·8		1·05%								
126790		11·0	12·0	1·0	140									
91		12·0	13·0	"	210									
92		13·0	14·0	"	500									
93		14·0	15·0	"	240									
94		15·0	16·0	"	1650									
95		16·0	17·0	"	60									
96		17·0	18·0	"	200									
97		18·0	19·0	"	110									
98		19·0	20·0	"	20									
99		20·0	21·0	"	85									
130000		21·0	22·0	"	1400									
01		22·0	23·0	"	26									
02		23·0	24·0	"	12									
03		24·0	25·0	"	10									
04		25·0	26·0	"	10									
05		26·0	27·0	"	X									
06		27·0	28·0	"	6									
07		28·0	29·0	"	14									
08		29·0	30·0	"	8									
09		30·0	31·0	"	14									
010		31·0	32·0	"	18									
11		32·0	33·0	"	40									
12		33·0	34·0	"	22									
13		34·0	35·0	"	20									
14		35·0	36·0	"	12									
15		36·0	37·0	"	14									
16		37·0	38·0	"	16									
17		38·0	39·0	"	16									

Notes :— XRF 61 method

X = 44

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 107

SAMPLE TYPE : DRILL CORE (brand) FROM 7·2 TO 39·0

832518

507

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
130018		39.0	40.0	1.0	26									
19		40.0	41.0	"	16									
020		41.0	42.0	"	26									
21		42.0	43.0	"	12									
22		43.0	44.0	"	26									
23		44.0	45.0	"	18									
24		45.0	46.0	"	16									
25		46.0	47.0	"	30									
26		47.0	48.0	"	34									
27		48.0	49.0	"	160									
28		49.0	50.0	"	120									
29		50.0	51.0	"	18									
030		51.0	52.0	"	20									
31		52.0	53.0	"	20									
32		53.0	54.0	"	8									
33		54.0	55.0	"	X									
34		55.0	56.0	"	12									
35		56.0	57.0	"	16									
36		57.0	57.5	0.5	8									
37		57.5	58.5	1.0	60									
	126277	58.5	60.5	2.0		210								
	78	60.5	62.5			65								
	79	62.5	65.0	2.5		50								

Notes :— XRF BI method

X = 44

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 107

SAMPLE TYPE : DRILL CORE FROM 39.0 TO 65.0

8325519

508

832520 509

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 108

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1951.11 N	1020.06 E	643.64
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: 50/360°
Total length: 52.0 m

Commenced: 11 / 9 / 81
Completed: 14 / 9 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods: Eastman Single Shot Camera.

Purpose of drilling and anticipated lengths to targets: To test DSL and extend probable ore reserves.

Core size and non-coring (NC)

TRICONE	0	TO	4.0
NQ	4.0	TO	52.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
14 m	329½°	50°
51 m	327°	49 3/4°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz / carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 52.0	FROM TO	FROM TO
DATE 15/9/81	DATE	DATE

Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 108

Log sheet 1 of 2

832521 510

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	4.0	0 - 4.0: TRICONE. Not cored.						
	1.0	4.0 - 5.0: No core recovered.						
	8.0	5.0 - 13.0: DOLOMITE SULPHIDE LODE.			8	po, py - 8%		
		5.0 - 9.1: poor recovery - weathered py and qtz-carb				po - in irregular aggregates		
		9.1 - 10.2: wrigglite				py after po		
		10.2 - 13.0: 90% qtz-carb, blotchy texture, minor talc,po						
	1.9	13.0 - 14.9: DOLOMITE. Fine grey dolomite.			2	trace - disseminated po		
	26.3	14.9 - 41.2: DOLOMITE SULPHIDE LODE.			8/4	no apparent mineralisation		
		14.9 - 16.1: 75% talc, 20% qtz-carb, 5% serpentine				20% po - coarsely disseminated		
20		16.1 - 22.5: 70% qtz-carb				and aggregates, minor py after		
		20% po				p		
		5% talc, 5% serpentine						
		22.5 - 24.1: 40% po, 40% qtz carb, 20% serp			4/8/7	40% po - weakly band and aggregates		
		24.1 - 35.0: 50% po			4/7/	50% po - mainly coarsely		
		40% serpentine			8	disseminated up to 90% locally.		
		1-% qtz-carbonate				trace fine cpy through po		
		35.0 - 37.0: 50% carb-qtz, 40% po, 10% serp			8/4/7	40% coarsely disseminated po		
		37.0 - 40.4: 65% qtz-carb, 20% talc, 10% po			8/6/	25% po - disseminated and		
40		40.4 - 41.2: 50% po, 20% qtz-carb, 30% serp			4	massive aggregates.		
	1.9	41.2 - 43.1: TRANSITION ZONE. 65% serp, siltstone 35% disseminated po			10/4	po 35% finely disseminated		
	8.9	43.1 - 52.0: SILTSTONE, SHALE, lesser QUARTZITE.			10/	po - 1-2% finely disseminated		
		Moderately disrupted in parts.			9/	and rare fine aggregates.		
		Grey siltstone and shale with lesser dark grey			11	trace py, sph, arsenopy in		
		qtzite.				veins with coarse carbonate.		
		END OF HOLE: 52.0 m.						
60								

NOTES: 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (ED), MONOGRAPH NO 9 AUSTRALAS INST MIN. METALL. - 1978
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 108

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
130058		9.0	10.0	1.0	8000									
39		10.0	11.0	"	101%									
040		11.0	12.0	"	80									
41		12.0	13.0	"	1200									
42		13.0	14.0	"	200									
43		14.0	15.0	"	190									
44		15.0	16.0	"	330									
45		16.0	17.0	"	20									
46		17.0	18.0	"	32									
47		18.0	19.0	"	18									
48		19.0	20.0	"	70									
49		20.0	21.0	"	22									
050		21.0	22.0	"	18									
51		22.0	23.0	"	4									
52		23.0	24.0	"	X									
53		24.0	25.0	"	X									
54		25.0	26.0	"	12									
55		26.0	27.0	"	12									
56		27.0	28.0	"	14									
57		28.0	29.0	"	16									
58		29.0	30.0	"	X									
59		30.0	31.0	"	12									
060		31.0	32.0	"	X									
61		32.0	33.0	"	X									
62		33.0	34.0	"	6									
63		34.0	35.0	"	X									
64		35.0	36.0	"	X									
65		36.0	37.0	"	X									
66		37.0	38.0	"	10									
67		38.0	39.0	"	6									

Notes :— XRF Bi Method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 108

SAMPLE TYPE : DRILL CORE FROM 9.0 TO 39.0

No Split

8325225 11.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
130068		390	400	10	4									
69		400	410	"	12									
070		410	420	"	48									
71		420	427	0·7	20									
72		427	431	0·4	55									
73		431	441	10	300									
	126280	441	460	1·9		840								
	81	460	480	20		6000								
	82	480	500	"		230								
	83	500	520	"		150								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 108

SAMPLE TYPE : DRILL CORE FROM 390 TO 520

NP split

8325223 512

832524 513

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 109

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES			ELEVATION
(1)	1929.89 N	950.06 E		643.81
(2)	N	E		
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN		mA.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: -90°
Total length: 26.0 m
Commenced: 15 / 9 / 81
Completed: 15 / 9 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods: Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets: To test the easterly extent of Greisen Face DSI.

Core size and non-coring (NC)

NC	0	TO	6.0
NQ	6.0	TO	26.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
23.0 m	290°	87°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz / carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON FROM 0 TO 26.0 DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____
LOGGED BY _____ FROM _____ TO _____ DATE _____

Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 109

Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	6.0	0 - 6.0: TRICONE. No Core.						
	7.6	6.0 - 13.6: DOLOMITE. Minor recrystallized dolomite massive, partly brecciated.		2		<1% sp in stringers, disseminated, rare blebs		
10	2.2	13.6 - 15.8: RECRYSTALLIZED DOLOMITE. 13.6 - 14.9: Sphalerite irreg banded along core 14.9 - 15.8: Shattered core-prob shear/fault zone		3		10-15% sp irregularly banded <1% sp, py, po disseminated		
	10.2	15.8 - 26.0: DOLOMITE. Minor recrystallized dolomite, massive, partly brecciated. 20.1 - 20.2: Dolomite Sulphide Lode: Carbonate, lesser fluorite, pyrite minor talc, pyrrhotite.		2		<1% sp, py in stringers, disseminated, minor blebs		
20		END OF HOLE: 26.0 m.						

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG

Prospect or project

HOLE No. MBD 109

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126284		6·0	8·0	2·0	150									
285		8·0	10·0	"	34									
286		10·0	12·0	"	615									
287		12·0	13·9	1·9	290									
130074		13·9	14·9	1·0	280									
755		14·9	15·8	0·9	680									
126288		15·8	18·0	2·2	330									
289		18·0	20·0	2·0	180									
290		20·0	22·0	"	1250									
291		22·0	24·0	"	740									
292		24·0	26·0	"	620									

Notes :— XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 109

SAMPLE TYPE : DRILL CORE FROM 6·0 TO 26·0

Nϕ split

832526

515

832527 516

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 110

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1909.74 N	959.96 E	643.58
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: 70/180°
Total length: 84.5 m
Commenced: 15 / 9 / 81
Completed: 22 / 9 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods.
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets.
To test possible extension of grade bearing DSL.

Core size and non-coring (NC)

TRICONE	0	TO 6.0
NQ	6.0	TO 84.5
		TO
		TO
		TO
		TO

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30 m	154°	69.5°
60 m	151°	70°
84 m	153°	70°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON
FROM 0 TO 84.5
DATE 29/9/81

LOGGED BY _____
FROM _____ TO _____
DATE _____

LOGGED BY _____
FROM _____ TO _____
DATE _____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 110

Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (capital letters, underlined) Depth Description and notes (indented about 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES: 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERGMAN & W R RYALL (ED.), MONOGRAPH NO 9 AUSTRALAS INST MIN. METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

INTERVAL	DEPTH from - to : ROCK UNIT	GRAPHIC LOG	MINERALISATION
6.0	0 - 6.0: TRICONE. No core.		
16.0	6.0 - 22.0: DOLOMITE, minor RECRYSTALLIZED DOLOMITE.	2/3	trace py and sph as thin veins in recrystallized dolomite.
0.9	22.0 - 22.9: DOLOMITE SULPHIDE LODE. Wrigglite.		35% py - bands and aggregates.
37.1	22.9 - 60.0: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly finely crystalline grey or creamy dolomite. Rare veins of recrystallized dolomite, commonly with minor sulphides.	2/3	trace py, sph, po as minor veins and disseminated in recrystallized dolomite.
3.1	60.0 - 63.1: DOLOMITE SULPHIDE LODE. Wrigglite with fine py and qtz-carbonate bands.	W	20% py - fine, irregular bands and occasional aggregates.
1.5	63.1 - 64.6: DOLOMITE, RECRYSTALLIZED DOLOMITE. Brecciated	2/3	no apparent sulphides.
1.0	64.6 - 65.6: DOLOMITE SULPHIDE LODE. Wrigglite	W	10% py - bands and aggregates
3.0	65.6 - 68.6: DOLOMITE, minor RECRYSTALLIZED DOLOMITE	2/3	
1.2	Fine grey dolomite with minor recrystallized dol.	W	
	68.6 - 69.8: DOLOMITE SULPHIDE LODE. Wrigglite.		10% py > sph - disseminated
9.7	69.8 - 79.5: DOLOMITE. Fine cream dolomite, slightly weathered in most parts.	2	py - trace in stringers sph - trace disseminated
5.0	79.5 - 84.5: QUARTZITE, SILTSTONE. Strongly disrupted - fine qtzite and siltstone.	11/10	trace py in stringers and rare sph in carbonate veins.
	END OF HOLE: 84.5 m.		

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 110

LOG SHEET 1 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
126293		11.0	13.0	2.0	65									
94		13.0	15.0	"	42									
95		15.0	17.0	"	60									
96		17.0	19.0	"	320									
97		19.0	22.0	3.0	420									
130076		22.0	22.9	0.9	270									
126298		23.0	25.0	2.0	150									
99		25.0	27.0	"	32									
130200		27.0	29.0	"	38									
01		29.0	31.0	"	4150									
02		31.0	33.0	"	520									
03		33.0	35.0	"	450									
04		35.0	37.0	"	95									
05		37.0	39.0	"	55									
06		39.0	40.7	1.7	3410									
07		40.7	45.0	4.3	20									
08		45.0	47.6	2.6	20									
09		47.6	49.6	2.0	400									
210		49.6	51.3	1.7	34									
11		51.3	54.3	3.0	520									
12		54.3	56.4	2.1	90									
13		56.4	58.4	2.0	32									
	130214	58.4	60.0	1.6		20								
130077		60.0	61.0	1.0	3750									
78		61.0	62.0		3150									
79		62.0	63.1	1.1	8500									
080		63.1	64.4	1.3	100									
81		64.4	65.6	1.2	3800									
	130215	65.6	68.6	3.0		110								
130082		68.6	69.8	1.2	4850									

Notes :— XRF B1 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 110

SAMPLE TYPE : DRILL CORE FROM 11.0 TO 69.8

Grand

8325229 518

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	130216	69·8	72·3	2·5		220								
	17	72·3	75·0	2·7		16								
	18	75·0	77·4	2·4		46								
	19	77·4	79·5	2·1		28								
	220	79·5	81·5	2·0		250								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 110

SAMPLE TYPE : DRILL CORE FROM 69·8 TO 81·5

Grand

832530 519

832531 520

METALS EXPLORATION LTD. & SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 111

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)	1945.14 N	1000.05 E	643.81
(2)	N	E	
(3) Aust. Map Grid PRECISE / APPROX.	mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: 55/360°
Total length: 68.0 m
Commenced: 22 / 9 / 81
Completed: 24 / 9 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Details of down hole location-survey methods: Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets: To test probable DSL.

Core size and non-coring (NC)

TRICONE	0	TO	5.0
NQ	5.0	TO	68.0
		TO	
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
20 m	330.5°	55°
66 m	323°	54.5°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY D. COMPSTON	LOGGED BY	LOGGED BY
FROM 0 TO 68.0	FROM TO	FROM TO
DATE 1/10/81	DATE	DATE

Company managing exploration programme: Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 111

Log sheet 1 of 2

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
	5.0	0 - 5.0: TRICONE. Not cored.						
	2.3	5.0 - 7.3: No core recovered.						
	14.1	7.3 - 21.4: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly fine grey dolomite. Speckled in parts. Minor small veins of recrystallized cream dolomite, usually with minor sulphides.		2/3		po, py trace disseminated in recrystallized dolomite vein.		
	37.6	21.4 - 59.0: DOLOMITE SULPHIDE LODE.		6		no apparent sulphides		
		21.4 - 22.4: talc		8/4/6		20% po, mainly coarsely dissem. weakly banded in parts.		
		22.4 - 26.2: 60% mottled qtz-carbonate, 20% disseminated po, 20% talc		6/7/4/8		10% disseminated po		
		26.2 - 28.5: 60% talc, 20% dark serpentine, 10% po, 10% qtz-carbonate		4/8/6/7		po>>cpy 40% coarsely disseminated with occasional aggregates. trace fine cpy		
		28.5 - 34.9: 40% po, 35% qtz-carbonate, 20% talc, 5% serpentine.		6/4/7		40% po - coarsely disseminated trace fine cpy		
		34.9 - 37.6: 55% talc, 40% po, 5% serpentine		4/8/6		40% po - finely disseminated and occasional coarse aggregates.		
		37.6 - 44.8: 40% qtz carbonate 40% po 20% green talc						
		44.8 - 55.2: 45% po 30% dark green serpentine 25% talc		4/7/6		45% po - coarsely disseminated to almost massive aggregates, trace finely disseminated cpy.		
		55.2 - 59.0: 50% po 20% talc, 20% qtz-carbonate 10% serpentine		4/6/8/7		po - 50% mainly irregular almost massive aggregates.		
	2.0	59.0 - 61.0: TRANSITION ZONE. Altered siltstone.		10		gal, sph - 1-2% in veins.		
	6.0	61.0 - 68.0: SILTSTONE, QUARTZITE. Strongly disrupted. Siliceous grey siltstone and darker fine qtzite. Qtzite beds up to 1.5 m.		10/11		arsenopy, gal, sph, py - minor amounts in veins with qtze and/or carbonate.		
		END OF HOLE: 68.0 m.						

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL(EDS), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project Mt. Bischoff Tin

HOLE No. MBD 111

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	130221	7.3	9.3	2.0		130								
	22	9.3	11.3	"		120								
	23	11.3	13.3	"		130								
	24	13.3	15.3	"		260								
	25	15.3	17.3	"		680								
	26	17.3	20.5	3.2		130								
130083		20.5	21.5	1.0	80									
84		21.5	22.5	"										
85		22.5	23.6	1.1	12									
86		23.6	24.7	"	X									
87		24.7	25.8	"	30									
88		25.8	27.2	1.4	160									
89		27.2	28.4	1.2	36									
090		28.4	29.4	1.0	50									
91		29.4	30.5	1.1	X									
92		30.5	32.0	1.5	X									
93		32.0	33.0	1.0	X									
94		33.0	34.0	"	130									
95		34.0	35.0	"	230									
96		35.0	36.0	"	2200									
97		36.0	37.0	"	3700									
98		37.0	38.0	"	1.41%	*								
99		38.0	39.0	"	360									
130100		39.0	40.0	"	12									
01		40.0	41.0	"	6									
02		41.0	42.0	"	26									
03		42.0	43.0	"	10									
04		43.0	44.0	"	4									
05		44.0	45.0	"	4									
06		45.0	46.0	"	12									

Notes :— XRF Bi method

X implies less than detection limit

* Being determined by Wole BP

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 111

SAMPLE TYPE : DRILL CORE (Ground) FROM 7.3 TO 46.0

8325335 522

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
130107		46·0	47·0	1·0	4									
08		47·0	48·0	"	X									
09		48·0	49·0	"	X									
110		49·0	50·0	"	X									
11		50·0	51·0	"	10									
12		51·0	52·0	"	4									
13		52·0	53·0	"	6									
14		53·0	54·0	"	6									
15		54·0	55·0	"	16									
16		55·0	56·0	"	24									
17		56·0	57·0	"	8									
18		57·0	58·0	"	X									
19		58·0	59·0	"	30									
120		59·0	60·0	"	3300									
21		60·0	61·0	"	9200									
22		61·0	62·0	"	600									
23		62·0	63·0	"	3050									
24		63·0	64·0	"	760									
25		64·0	65·0	"	1350									
26		65·0	66·0	"	460									
130127		66·0	67·1	1·1	5200									
28		67·1	68·0	0·9	150									

Notes :— XRF Bi method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 111

SAMPLE TYPE : DRILL CORE FROM 46·0 TO 68·0

N½ split

8325534 523

832535 524

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MT. BISCHOFF TIN

HOLE No. MBD 112

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1949.32 N	1099.26 E	641.91
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement E.L. 13/79
Holder Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar 65/363°
Total length 46.0
Commenced: 24 / 9 / 81
Completed: 25 / 9 / 81

Drilling contractor: PARRY EXPL. DRILLING.
Rig type: BOYLES 37

Details of down hole location-survey methods.
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets.
To test possible DSL extension

Core size and non-coring (NC)

TRICONE	0	TO 3.0
NQ	3.0	TO 46.0
		TO
		TO
		TO
		TO

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
45 m	335°	64.5°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9 / c	Shale / carbonaceous.
10	Siltstone.
11 / s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 46.0	FROM TO	FROM TO
DATE 1/10/81	DATE	DATE

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 112
Log sheet 1 of 2

832536 525

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT — CAPITAL LETTERS, UNDERLINED Depth : Description and notes INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: TRICONE. Not cored.						
	43.0	3.0 - 46.0: QUARTZITE, SILTSTONE, minor SHALE. Weakly disrupted in parts. Mainly fine siliceous siltstone and qtzite. Qtzite beds up to 1'm thick. Occasional beds of black shale. Weak sericite alteration of qtzite in parts.		11/ 10/ 9		trace po as rare thin veins and stringers, also disseminated in some thin siltstone beds. trace py in thin veins and stringers.		
20								
40								
		END OF HOLE: 46.0 m.						
60								

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 9. AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES.

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT. BISCHOFF

HOLE No. MBD 112

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	130227	3.0	5.0	2.0		26								
	28	5.0	7.0	"		14								
	29	7.0	9.0	"		14								
	230	9.0	11.0	"		18								
	31	11.0	13.0	"		26								
	32	13.0	15.0	"		24								
	33	15.0	17.0	"		14								
	34	17.0	19.0	"		16								
	35	19.0	21.0	"		20								
	36	21.0	23.0	"		24								
	37	23.0	25.0	"		26								
	38	25.0	27.0	"		30								
	39	27.0	29.0	"		70								
	240	29.0	31.0	"		120								
	41	31.0	33.0	"		170								
	42	33.0	35.0	"		65								
	43	35.0	37.0	"		370								
	44	37.0	39.0	"		150								
	45	39.0	41.0	"		110								
	46	41.0	43.5	2.5		46								
	47	43.5	46.0	"		280								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 112

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 46.0

8325371 526

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine: MT. BISCHOFF TIN

HOLE No. MBD 113

COLLAR LOCATION

	Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1)		1950.22 N	1079.91 E	645.93
(2)		N	E	
(3) Aust. Map Grid PRECISE / APPROX.		mE	mN	m A.H.D.

Magnetic bearing of true and grid norths at collar (* = observed)

G.N.(1) _____ mag
G.N.(2) _____ mag
G.N.(3) _____ mag
T.N. _____ mag

1:250 000 Sheet No. SK55-3
1:100 000 Sheet No. 8015
State Tasmania

Mineral Tenement: E.L. 13/79
Holder: Metals Exploration Ltd.

Cadastral location and details: Mt. Bischoff mine area, on crown land northerly of Waratah.

Inclination at collar: 60/360°
Total length: 51.0 m
Commenced: 26 / 9 / 81
Completed: 26 / 9 / 81

Drilling contractor: PARRY EXPL. DRILLING
Rig type: BOYLES 37

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	51.0
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
Eastman Single Shot Camera

Purpose of drilling and anticipated lengths to targets.
To test possible DSL body within sediments - approximately 30-40 m.

Results of down hole location-survey.

LENGTH FROM COLLAR	MAGNETIC BEARING (Whole Circle)	DIP
AT COLLAR		
30 m	334°	59°
51 m	335°	59°

Comments on drilling.

Legend for graphic log column

FIELD ROCK NAME, ETC.

1	Porphyry.
2	Dolomite
3	Recrystallised dolomite
4	Dolomite sulphide lode - pyrrhotite rich.
5	Dolomite sulphide lode - pyrite rich.
6	Dolomite sulphide lode - talc rich.
7	Dolomite sulphide lode - serpentinite rich.
8	Dolomite sulphide lode - quartz/carbonate rich.
9/c	Shale / carbonaceous.
10	Siltstone.
11/s	Quartzite / sandstone.
12	Tuff.

Symbols and abbreviations

LOGGED BY	LOGGED BY	LOGGED BY
D. COMPSTON		
FROM 0 TO 51.0 m	FROM ____ TO ____	FROM ____ TO ____
DATE 7/10/81	DATE ____	DATE ____

Company managing exploration programme.
Metals Exploration Ltd.

SUMMARY LOG

HOLE No. MBD 113
Log sheet 1 of 2

NOTES: 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", O. A. BERKMAN & W. R. RYALL (ED.), MONOGRAPH NO. 9 - AUSTRALAS. INST. MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC. IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth : Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: TRICONE. Not cored.						
	2.9	3.0 - 5.9: DOLOMITE, minor DOLOMITE SULPHIDE LODE. Fine grey dolomite with minor wrigglite veins.		2		2% py, sph, po - disseminated through wrigglite veins.		
	7.9	5.9 - 13.8: DOLOMITE SULPHIDE LODE.		6/4/3		35% po, 2nd py, trace cpy		
		5.9 - 9.2: 45% talc, 35% po, 20% qtz-carbonate						
		9.2 - 13.8: 30% talc, 30% serpentine, 15% po, 25% qtz-carbonate.						
20	37.2	13.8 - 51.0: SILTSTONE, lesser QUARTZITE. Moderately disrupted in parts. Mainly pale grey siltstone with lesser darker fine qtzite. Trace po, py in stringers and po occurs disseminated in rare thin beds.		10/11		trace py, po in stringers and rare po-rich beds.		
40		43.2 - 51.0: po becomes more common, both as stringers and thinly bedded.				43.2 - 5% po as thin beds and stringers.		
		END OF HOLE: 51.0 m.						
60								

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: MT. BISCHOFF

HOLE No. MBD 113

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
130[illegible]		3·4	4·4	1·0	170									
130		4·4	5·8	1·4	920									
31		5·8	6·8	1·0	4									
32		6·8	7·8	"	6									
33		7·8	8·8	"	6									
34		8·8	9·8	"	48									
35		9·8	10·8	"	X									
36		10·8	11·8	"	190									
37		11·8	12·9	1·1	7300									
38		12·9	13·7	0·8	6900									
39		13·7	15·1	1·4	120									
140		15·1	16·1	1·0	100									
	130498	16·1	18·1	2·0		46								
	499	18·1	20·1	"		28								
	250	20·1	22·1	"		20								
	51	22·1	24·1	"		26								
	52	24·1	26·1	"		24								
	53	26·1	28·1	"		28								
	54	28·1	30·1	"		38								
	55	30·1	32·1	"		40								
	56	32·1	34·1	"		30								
	57	34·1	36·1	"		48								
	58	36·1	38·1	"		24								
	59	38·1	40·1	"		42								
	260	40·1	42·1	"		45								
	61	42·1	44·1	"		55								
	62	44·1	46·1	"		28								
	63	46·1	48·1	"		22								
	64	48·1	51·1	3·0		26								

Notes :— XRF Bi Method

X-24

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. mBD 113

SAMPLE TYPE : DRILL CORE FROM 3·4 TO 51·1

NQ split

8325540

529

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL		Sn	Cu	Pb	Zn		W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
98-112		5.0	6.0	1.0	46									
941		6.0	7.0	"	900									
945		7.0	8.0	"	8410									
946		8.0	8.8	0.8	12700									
948-947		11.3	12.3	1.0	60									
948-998		43.8	44.8	1.0	110									
99		44.8	45.6	0.8	85									
1185700		45.6	46.6	1.0	9120									
01		46.6	47.6	"	820									
02		47.6	48.6	"	880									
03		48.6	49.6	"	30550									
04		49.6	50.6	"	12700									
05		50.6	51.6	"	1150									
06		51.6	52.6	"	1250									
07		52.6	53.6	"	720									
08		53.6	54.6	"	800									
09		54.6	55.6	"	1150									
710		55.6	56.6	"	33550									
11		56.6	57.6	"	12500									
12		57.6	58.6	"	1150									
13		58.6	59.6	"	1250									
14		59.6	60.6	"	700									
15		60.6	61.6	"	740									
16		61.6	62.3	0.7	1500									
17		62.3	63.3	1.0	95									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 56

SAMPLE TYPE : DRILL CORE FROM 5.0 TO 63.3

832541

530

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	IP4442	6·0	8·0	2·0		1750								
	43	8·0	10·0	"		2500								
	44	10·0	12·0	"		2450								
	45	12·0	14·0	"		1450								
	46	14·0	16·0	"		470								
	47	16·0	17·9	1·9		3100								
IP9631		17·9	18·9	1·0	45									
32		18·9	19·9	"	30									
33		19·9	20·9	"	180									
34		20·9	21·9	"	90									
35		21·9	22·9	"	95									
36		22·9	23·9	"	1500									
37		23·9	24·9	"	1800									
38		24·9	26·9	1·5	2470									
39		26·9	27·9	1·0	65									
640		27·9	28·9	"	35									
41		28·9	29·9	"	15									
42		29·9	30·9	"	1600									
43		30·9	31·9	"	30									
44		31·9	32·9	"	35									
45		32·9	33·9	"	250									
46		33·9	34·9	"	170									
47		34·9	35·9	"	7									
48		35·9	36·9	"	7									
49		36·9	37·9	"	6									
650		37·9	38·9	"	9									
51		38·9	39·9	"	7									
52		39·9	40·9	"	X									
53		40·9	41·9	"	X									
54		41·9	42·9	"	X									

Notes :— XRF 219 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 92

SAMPLE TYPE : DRILL CORE (ground/split) FROM 6·0 TO 42·9

832542

531

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
12416.545		42.4	43.4	1.0	3									
562		43.4	44.4	"	3									
57		44.4	45.4	"	8									
58		45.4	46.4	"	X									
59.1		46.4	47.4	"	X									
60		47.4	48.4	"	30									
61		48.4	49.4	"	7									
62		49.4	50.4	"	15									
63		50.4	51.4	"	X									
64		51.4	52.6	1.2	20									
65		52.6	53.9	1.3	600									
66		53.9	54.65	1.75	180									
67		54.65	55.25	0.60	1450									
68		55.25	56.2	1.05	1.35%									
	12444E	56.2	58.2	2.0		1.7%								
	49	58.2	60.2	"		1.3%								
	450	60.2	62.2	"		1500								
	51	62.2	64.2	"		1350								
	52	64.2	66.2	"		1050								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 12

SAMPLE TYPE : DRILL CORE (Grand Split) FROM 42.4 TO 66.2

8325543 532

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	124790	1.5	4.2	2.7		25								
	124791	5.3	7.3	2.0		250								
	92	7.3	9.3	"		120								
	93	9.3	11.2	1.9		280								
124937		11.2	12.2	1.0	440									
38		12.2	13.7	1.5	2200									
39		13.7	14.3	0.6	11000									
940		14.3	15.3	1.0	130									
	124794	15.3	17.3	2.0		85								
	95	17.3	19.3	"		190								
	96	19.3	21.0	1.7		85								
124941		21.0	22.0	1.0	650									
42		22.0	23.0	"	5200									
43		23.0	24.1	1.1	6800									
44		24.1	25.1	1.0	720									
45		25.1	26.0	0.9	1400									
46		26.0	27.0	1.0	180									
47		27.0	28.0	"	1400									
48		28.0	29.0	"	2500									
49		29.0	30.0	"	1.56%									
950		30.0	30.6	0.6	2.90%									
51		30.6	31.5	0.9	0.994%									
52		31.5	32.5	1.0	3700									
53		32.5	33.5	"	70									
54		33.5	34.5	"	190									
55		34.5	35.5	"	2.16%									
56		35.5	37.0	1.5	2.29%									
57		37.0	38.0	1.0	7700									
58		38.0	39.0	"	4.72%									

Notes:—XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 97

SAMPLE TYPE : DRILL CORE FROM 1.5 TO 39.0

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
1249159		39.0	40.0	1.0	3.99%									
9160		40.0	41.0	"	2.03%									
61		41.0	42.0	"	1.13%									
62		42.0	43.0	"	2.01%									
63		43.0	44.0	"	4400									
64		44.0	45.0	"	1900									
65		45.0	46.3	1.3	4500									
66		46.3	47.1	0.8	7700									
67		47.1	48.5	1.4	3200									
68		48.5	50.0	1.5	1500									
69		50.0	51.0	1.0	12600									
9170		51.0	52.0	"	0.980%									
71		52.0	53.0	"	1.25%									
72		53.0	54.0	"	1.91%									
73		54.0	54.8	0.8	3900									
74		54.8	55.6	"	60									
75		55.6	56.3	0.7	35									
76		56.3	57.3	1.0	20									
77		57.3	58.3	"	15									
78		58.3	59.3	"	10									
79		59.3	60.3	"	20									
9180		60.3	61.3	"	15									
81		61.3	62.3	"	35									
82		62.3	63.3	"	35									
83		63.3	64.3	"	30									
84		64.3	65.2	0.9	20									
85		65.2	66.3	1.1	110									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 97

SAMPLE TYPE : DRILL CORE FROM 39.0 TO 66.3

8325545

534

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	126212	4.1	6.1	2.0		260								
	13	6.1	8.1	"		30								
	14	8.1	10.1	"		X								
	15	10.1	12.1	"		X								
	16	12.1	13.2	1.1		35								
126373		13.2	14.0	0.8	4864									
74		14.0	15.0	1.0	1230									
75		15.0	16.0	"	2520									
76		16.0	17.0	"	36									
77		17.0	18.0	"	1580									
78		18.0	19.0	"	4660									
79		19.0	20.0	"	1760									
380		20.0	20.7	0.7	3400									
81		20.7	21.7	1.0	2791									
	126217	21.7	23.7	2.0		40								
	18	23.7	25.7	"		X								
	19	25.7	27.7	"		310								
	220	27.7	29.7	"		470								
	21	29.7	31.7	"		85								
	22	31.7	33.7	"		120								
	23	33.7	35.7	"		25								
	24	35.7	37.7	"		70								
126400		37.7	38.7	1.0	1770									
01		38.7	39.7	"	565									
02		39.7	41.0	1.3	3080									
03		41.0	42.0	1.0	7270									
04		42.0	43.0	"	3150									
05		43.0	44.0	"	2520									
06		44.0	45.0	"	2720									
07		45.0	45.7	0.7	3910									

Notes :— XRF 214 Method

X = 24

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 100

SAMPLE TYPE : DRILL CORE FROM 4.1 TO 45.7

Ground/Split

8325535

SAMPLE NO. SPLIT CORE	SAMPLE NO GROUND CORE	FROM m	TO m	INTERVAL m	Sn SPLIT	Sn GROUND	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
126408		45.7	46.7	1.0	2940									
09		46.7	47.7	"	7210									
410		47.7	48.7	"	8960									
11		48.7	49.7	"	3490									
12		49.7	50.7	"	5670									
13		50.7	51.7	"	1030									
14		51.7	52.7	"	245									
15		52.7	53.7	"	155									
16		53.7	54.7	"	21									
17		54.7	55.7	"	12									
18		55.7	56.5	0.8	8.4									
19		56.5	57.5	1.0	354.									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 100

SAMPLE TYPE : DRILL CORE FROM 45.7 TO 57.5

8325417

536

832548

82-1698 Vol 2. Cover 81-005F.

METALS EXPLORATION LIMITED SEPTEMBER REPORT.

MT BISCHOFF TIN PROSPECT

MT BISCHOFF MINE AREA

STAGE 3
DRILLING PROGRAMME

as at -9-81

Scale 1:2000

5 cm

MEL GRID NORTH (330°)
ADOPT MAG NTH

0 50 100
METRES

Porphyry
Dolomite
Dolomite Sulphide Lode
Siltstones, Shales, Quartzites
Fault
Interpreted Geological Contact

Diamond Drillhole
Proposed
Completed

Completed Drillholes

December.	MBD 47,48 49
January	MBD 50,51,52
February	MBD 53, 54, 55, 56, 57, 58
March	MBD 63
April	MBD 64, 65, 66, 66A, 67, 68, 69 70, 71, 72
May	MBD 73, 74, 75 76, 77, 79, 80, 81, 82 83, 84
June .	MBD 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95
July	MBD 96, 97, 98, 99, 100, 101, 102, 103, 104
August	MBD 104
September	MBD 105, 106, 107, 108, 109, 110, 111, 112, 113, 114
October	

Rev 30 5 81

04

Drg. No 81-005 F

METALS EXPLORATION LTD.
80 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR OCTOBER, 1981.

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G.M. Motteram
27/11/81.

MT. BISCHOFF TIN PROSPECT

REPORT FOR OCTOBER, 1981

General

Activity on site continued with programmed infill drilling of the DSL ore plus surface sampling of DSL, Dolomite and Porphyry outcrop within the main pit area. Eight holes were drilled for a total of 566.0 m during the month.

Mine planning studies being conducted by CRA Mining Engineer Mr. P. Tysen, continued as development of pit plans and cost estimates for the Preliminary Engineering Study. The Engineering Study being conducted by Austin Anderson in Sydney was 63% completed by end October. Capital and Operating cost estimates will be available for three major development options by end November.

Results from the above work will be utilised during December/January to define the optimal scope for feasibility evaluation during the first half of 1982.

Actual contributions to expenditure on the project from CRA reached $2.0 million during the period. As a result CRA now have a 51% interest in the Joint Venture, MEL 34% and Comstaff/Preussag a 15% carried interest.

Geology

(i) Diamond Drilling

Drilling by the Contractor was increased to 10 shifts per week as of 13/10/81. However, the drilling rate fell to 17.7 metres per shift due to inexperience of the second driller in the ground conditions.

Targets for drilling during the month were infill to sections of the DSL still requiring better definition. Results obtained for each hole are described below with comment as to the likely effect on Stage 3A reserve estimates.

MBD 114

Completed on Section 1040E as an infill hole to the DSL zone, this hole achieved significant grade DSL intercepts outside of the Stage 3A reserve blocks.

FROM	TO	INTERVAL	% Sn	ROCK TYPE
28.5	46.5	18.0	1.08	DSL
74.5	77.5	3.0	1.27	DSL
77.5	95.6	18.1	0.92	Porphyry
95.6	107.3	11.7	0.23	Porphyry

MBD 114 Contd

The interval of DSL from 46.5 to 74.5, although well mineralised averaged less than 100 ppm with only two values over 1000 ppm.

MBD 115

Drilled on Section 940E to test the southerly limit of a high grade DSL block centred on MBD 23, this hole was continued to the dolomite/sediment contact.

The MBD 23 block was not intersected and in addition, no footwall contact DSL exists in the area. A short interval of DSL was intersected as indicated below. It is not expected that this hole will significantly affect the Stage 3A DSL reserve estimate.

FROM	TO	INTERVAL	% Sn	ROCK TYPE
32.0	37.0	5.0	0.80	DSL

MBD 116

Drilled on Section 1020E at 1850N this hole was designed to test for DSL above porphyry in areas currently interpreted as barren dolomite. The hole achieved DSL intercepts as indicated below. These intercepts correlate with DSL intersected in Hole B9 and indicate a minor addition to reserves.

The hole passed out of dolomite into sediments at 49.4 m and into porphyry from 53.0 to 76.8 m. Hence, it is unlikely that signifcant DSL mineralisation in contact with porphyry exist in this area. Porphyry grades were particularly low.

FROM	TO	INTERVAL	% Sn	ROCK TYPE
31.5	38.0	6.5	1.49	DSL (low core rec)
40.6	48.0	7.4	1.02	DSL (low core rec)
69.0	74.0	5.0	0.15	Porphyry

MBD 117

This hole was drilled on Section 1100E to test for extension to the deep DSL intersected during Stage 3A on Section 1080E. The hole passed out of porphyry deeper than expected at 37.0 m and passed through a zone of faulted clayey material to 55.5 m. Several zones of DSL were intersected between 59.0 and 72.6 m with a major intercept from 79.5 to 90.7 m. Significant grade intercepts were as indicated below indicating a likely extension of the Stage 3A DSL reserve.

FROM	TO	INTERVAL	% Sn	ROCK TYPE
13.0	33.4	20.4	0.18	Weathered Porphyry
69.7	74.7	5.0	1.25	Dolomite/DSL
81.7	83.7	2.0	0.82	DSL

MBD 118

Drilled on Section 1090E this hole is 10 m east of MBD 18 and was designed to confirm the large intercept of high grade DSL achieved in MBD 18. The hole passed through DSL from 4.5 to 10.4 m and 19.8 to 35.7 m. Although the length of DSL intercept is consistent with MBD 18, assays given below indicate a significant down-grading of tin content in the major block centred on MBD 18.

FROM	TO	INTERVAL	% Sn	ROCK TYPE
4.5	5.3	1.8	1.18	DSL
20.5	29.5	9.0	0.54	DSL

MBD 119 & MBD 120

Both holes were drilled from the same site on Section 1060E. MBD 119 was a vertical hole investigating DSL above porphyry and stepping out on the deep DSL known on Section 1080E. As with MBD 117, DSL was intersected at the bottom of the basin over 9 metres, with clayey fault zone material between the porphyry and deep DSL. Assay results are incomplete however, an extension to Stage 3A reserves is expected. DSL was also intersected above porphyry to 14 m. The porphyry was higher than previously interpreted in this area. The following intercepts were indicated.

FROM	TO	INTERVAL	% Sn	ROCK TYPE
4.0	14.0	10.0	0.60	Weathered DSL/Porph
15.6	39.7	24.1	0.33	Porphyry
69.8	80.2	9.4 Approx	1.6*	Dolomite/DSL

* Assays incomplete.

MBD 120 was an angled hole 50 degrees north and passed through DSL over most of its length (ie. 9.5 to 70.0 m DSL). Assays indicate high grade (+1% Sn) DSL in a zone partly outside of Stage 3A reserves. However, raising of the porphyry position in the area may reduce the effect on reserves.

FROM	TO	INTERVAL	% Sn	ROCK TYPE
7.0	67.0	60.0	1.09*	DSL (minor Dol/Porp)

* Plus 1% Sn assays subject to check. All +4% Sn assays reduced.

MBD 121

Drilled on 1120E to test for MBD 18 block extension (mentioned above). This hole experienced siting difficulties and was drilled for 25.0 metres in porphyry. The higher position of porphyry is not expected to alter Stage 3A reserve estimates for the area.

FROM	TO	INTERVAL	% SN	ROCK TYPE
4.0	25.0	21.0	0.17	Porphyry

MBD 122

Drilled on 980E at 1850N this hole was designed to test the conflicting information between MBD 81 and DSL in B10 in the 1850N region, as well as testing for DSL below porphyry. The hole experienced drilling difficulties in the "low core recovery zone" above porphyry with minor DSL bands only. It was in porphyry at period end.

(iii) Surface Sampling

Hand auger surface sampling every 2 metres over the DSL, Dolomite and Porphyry exposure was continued. Lines 1060E, 1080E and 1100E were completed with assay returns for 1060E and 1080E, as indicated below. The results obtained show substantial zones of potential preconcentrator feed over weathered dolomite and porphyry previously interpreted as barren (less than 0.1% Sn) overburden. Lines 940 to 1000E previously sampled over DSL regions only will now be extended over interpreted barren dolomite.

These results are indicative only as physical movement of material on the surface at Mt. Bischoff may have caused contamination at the surface or surface enrichment may be present. As a result, extensive trenching and channel sampling is proposed. Typical results have been:

SECTION 1060E

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE	PREVIOUS INTERP
1722N	1728N	8	0.21	Dolomite	Barren
1742N	1776N	36	0.18	Porphyry	Similar
1778N	1788N	12	0.48	Porphyry	<0.1
1794N	1802N	10	0.28	Dol/Porph	Barren
1858N	1876N	20	0.22	Dolomite	Barren
1878N	1908N	32	0.50	Dolomite	Barren
1920N	1978N	60	0.36	Dol/DSL	Barren
2018N	2028N	12	0.18	Altered	Barren
2030N	2040N	12	0.62	Sediment?	Barren

SECTION 1080E (Assays Incomplete beyond 1932N)

FROM	TO	INTERVAL	% Sn	ROCK TYPE	PREVIOUS INTERP
1750N	1766N	18	0.32	Dol/Porph	<0.1
1776N	1784N	10	0.50	Porphyry	Similar
1822N	1868N	48	0.20	Porphyry	<0.1
1870N	1916N	48	0.51	DSL	0.57
1918N	1932N	16	0.80	DSL	Barren

Full assays achieved so far are appended however, it is emphasised that representivity of samples is questionable.

(iv) Gridding

Remaining lines over the Stanhope extended grid to 1600E were pegged by Contractors. A magnetometer was obtained from CRAE and the Stanhope extended Mag Survey was to be conducted early in November.

Line 1500E was laid in by theodolite in the region of 2100N. This line will be mapped in preparation for drawing of a full section prior to drilling for extension of the Stanhope Porphyry.

Mine Planning

Detailed pit planning is in progress, as part of the Pre-Feasibility Engineering Study, for three separate rates of development. Initial results of this indicate that stripping ratios will be excessive to obtain the deep DSL on Sections 1060E to 1100E and, to obtain required porphyry tonnages between White Face and the Stanhope areas.

Extensive adjustments to the base plans developed are expected to be required during the period November to end January.

Metallurgy

(i) Pilot Scale 50 kg Tests

Processing of composites MCA, MCC and MCD through the conventional treatment flowsheet was virtually completed with only some concentrate upgrading work outstanding. Results are summarised below:

	% wt			% Sn			Sn Distn		
	MCA	MCC	MCD	MCA	MCC	MCD	MCA	MCC	MCD
Gravity Conc	1.31	0.98	0.52	43.0	44.3	44.5	61.8	44.3	52.7
Cass. Flot. Conc	0.42	0.58	0.37	22.5	26.7	16.0	10.4	15.8	13.5
Combined Conc	1.73	1.56	0.89	38.0	37.8	32.7	71.2	60.1	66.2
Combined Tails	90.66	76.93	90.95	0.20	0.25	0.10	20.0	19.3	21.5
Combined Re-cycles	7.61	21.51	8.16	1.17	0.93	0.66	9.8	20.6	12.3
Calc. Feed	100	100	100	0.91	0.98	0.44	100	100	100

(i) Pilot Scale 50 kg Tests Contd

Recovery of cassiterite to concentrates for the DSL composites averaged about 65%, with an additional 15% contained in middlings streams not retreated in this lab. scale work. Because of the difficulties of scaling up from closely controlled laboratory work to plant practice, 65% tin recovery is considered a reasonable estimate to be used in ongoing work.

For the porphyry sample cassiterite recovery to concentrates was 66% with an additional 12% contained in recycles.

(ii) Concentrate Upgrading

Mineralogical work has reported that carbonates are a significant diluent (>10%) of all gravity and tin flotation concentrates. For the carbonate rich DSL composite (MCC), carbonates in flotation concentrate were reported up to 60% and in gravity concentrates, about 25%.

Upgrading of gravity and flotation concentrates has been investigated using leaching and high intensity magnetic separation to remove carbonates.

Leaching was carried out in 300 kg/t of 15% (v/v) sulphuric acid, for two hours, at 70 to 80 degrees C. Assay results are not yet available but weight losses, assuming no tin losses, indicate the following upgrading.

PRODUCT		% Sn (pre leach)#	wt loss (%)	% Sn (post leach)*
MCA	Gravity Conc	43.0	19.2	53.1
	Flotation Conc	22.5	13.3	26.3
	Combined Conc	(38.0)	(17.9)	(46.3)
MCC	Gravity Conc	44.3	23.1	57.9
	Flotation Conc	26.7	35.5	41.6
	Combined Conc	(37.8)	(28.2)	(52.6)
MCD	Gravity Conc	44.5	11.7	50.3
	Flotation Conc	16.0	24.3	21.1
	Combined Conc	(32.7)	(16.9)	39.3

\# Calculated from test products
* Calculated using weight loss, assuming no tin loss

A blended concentrate grade of greater than 45% is indicated for the DSL (MCA & MCC) composites after application of acid leaching. Leached porphyry (MCD) concentrates were less than 40% tin, mainly as a consequence of lower flotation concentrate grades. The affect of this on overall concentrate grade will be significant in the Feasibility Study case where both DSL and Porphyry ores are mined and treated.

(ii) Concentrate Upgrading Contd

The results of porphyry preconcentration tests at Mineral Deposits and subsequent variability and tin flotation work at the Department of Mines on products from those tests, should define more clearly, achievable grades.

High intensity magnetic separation of gravity concentrates gave greater weight removal than leaching but products were observed to contain significant cassiterite. No interpretation can be made until assays are available.

(iii) Penalty Element Analyses

Penalty element analyses are proceeding for the above concentrate products. Initial indications are that no exceptional penalties will be involved.

(iv) Smelter Discussions

A visit was made to Penang during the period and discussions held with the two prospective smelters in Malaysia. In both cases keen interest was expressed in potential Mt. Bischoff concentrates at grades and impurity levels currently forseen.

Current Malaysian terms were confirmed for 45% Sn concentrates at approximately 94% payment for metal.

(v) Variability Testwork

Sulphide flotation work on 17 ore samples from throughout the DSL orebody has been completed and non sulphide tails have been sent to Amdel for heavy liquid analysis to assess cassiterite liberation.

Features of results available to date are:

1. Cassiterite losses to sulphide concentrates average approximately the average of losses for MCA and MCC composites (approx. 18%).

2. The average sulphur assay of samples tested, is about 19% which is lower than used in the current Feasibility Study (21%). As a consequence the weight floated to sulphide concentrate is lower ie. (50% c/w 57%).

(v) Variability Testwork Contd

3. Sulphur content varied from 5 to 27%, highlighting the need for blending of ores before treatment.

The porphyry preconcentrate from initial tabling work at Mineral Deposits, has also been tested. Weight floated to sulphide concentrate was 23% which also is lower than allowed in the current Feasibility Study (27%).

Comparative Work Index tests were commenced at the end of October.

(vi) Porphyry Preconcentration

The bulk porphyry sample (designated MCF), has arrived at Mineral Deposits. Preliminary heavy liquid testwork is being carried out to determine grind size for preconcentration. Large scale spiral testwork should be underway in mid-November.

Engineering

(i) Preliminary Engineering Study

Preliminary Engineering Study into 3 alternative methods of developing the Mt. Bischoff orebody was commenced utilizing the services of Austin Anderson Pty. Ltd. Progress on the study has been to programme with a total of 1063 manhours of Engineers time representing 63% of budgeted manhours for 63% of programme time.

The detailed Engineering is completed, preparation for estimating and final drafting is well advanced. The presentation of the final draft will be on the programmed date 18/11/81.

(ii) Environmental

The Environmental Assessment programme is continuing with routine water samples and testing being carried out. A detailed botantical survey was completed which represents the completion of the collection of baseline data with the exception of the ongoing water sampling.

(iii) Topographical Mapping

The large scale aerial mapping of the mine area being carried out by the Lands Department of Tasmania, is on schedule with the aerial photography completed and photographs produced in preparation for photogrametric plotting.

BUDGET

An up to date forecast of expenditure during the period June to December, 1981 is shown below. This expenditure includes carry over of work and payments for Stage 3A plus Stage 3B work.

It is expected that a carry over of Stage 3B expenditures will also occur, as indicated below, bringing expenditure commitments and work performed during the period into line with budget.

	Forecast June-Dec '81 $000	Carry Over to 1982 $000	Total $000	Budget June-Dec '81 $000
Administration	69	-	69	67
Geology	254	36	290	317
Mining	112	22	134	116
Metallurgy	95	8	103	136
Engineering	142	4	146	161
Commercial	12	-	12	13
Stage 3A	59	-	59	Incl. in above
TOTAL PROJECT	743	70	813	810

APPENDED INFORMATION

Drill Hole Statistics

Project Expenditure Details

Summary Logs and Assays	-	MBD	114
			115
			116
			117
			118
			119 (incomplete)
			120
			121
Assays	-	LINE	940 (incomplete)
			960 "
			980 "
			1000 "
			1020 "
			1040
			1060
			1080 (incomplete)

Revised Stage 3 Drill Hole Location Map

MT. BISCHOFF JOINT VENTURE - OCTOBER, 1981.

DRILL HOLE STATISTICS.

HOLE NO.	N	E	RL	DIP	AZI	FROM	TO	METRES DRILLED	FINAL DEPTH
MBD 114	1925.10	1039.95	642.47	-90	-	82.0	113.0	31.0	113.0
MBD 115	1919.54	940.23	636.89	-75	180	0.0	60.0	60.0	60.0
MBD 116	1840.44	1020.02	629.65	-70	360	0.0	83.0	83.0	83.0
MBD 117	1865.13	1099.62	625.53	-90	-	0.0	98.0	98.0	98.0
MBD 118	1916.06	1090.33	626.68	-45	360	0.0	50.0	50.0	50.0
MBD 119	1890.65	1060.95	626.37	-90	-	0.0	90.0	90.0	90.0
MBD 120	1892.01	1060.96	626.17	-50	360	0.0	76.0	76.0	76.0
MBD 121	1911.92	1120.13	629.35	-40	360	0.0	25.0	25.0	25.0
MBD 122	1850.0 #	980.0 #	636.0 #	-90	-	0.0	53.0	53.0	98.0
								566.0	

Approximate only - collar not surveyed.

MT. BISCHOFF JOINT VENTURE

	October, 1981		4 Months to October		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
Admin.	14	11	46	45	69	67
Geology	81	74	157	288	254	317
Mining	6	34	57	70	112	116
Metallurgy	15	21	37	97	95	136
Engineering	12	42	32	71	142	161
Commercial		1	1	2	12	13
STAGE 3A			59		59	
TOTAL PROJECT	128	183	390	573	743	810

SUMMARY OF EXPENDITURE TO 31.10.81

	CURRENT PERIOD $000	ACCUMULATIVE $000
Stage 1		270
Stage 2A - Early Start		29
Stage 2A		199
Overruns: Stage 1 - M.E.L.		11
Metallurgical - CRAE		24
Stage 2B		482
Stage 2B - 3A Holding Costs Offset - AIR & DIB		40
Stage 3A - Partly offset by AIR & DIB Grant - Received June, 1981 $6,500	59	862
Stage 3B - Partly offset by AIR & DIB Grant - Received July, 1981 $25,863	330	330
ACCUMULATIVE EXPENDITURE TO DATE	389	2,247

MT. BISCHOFF JOINT VENTURE

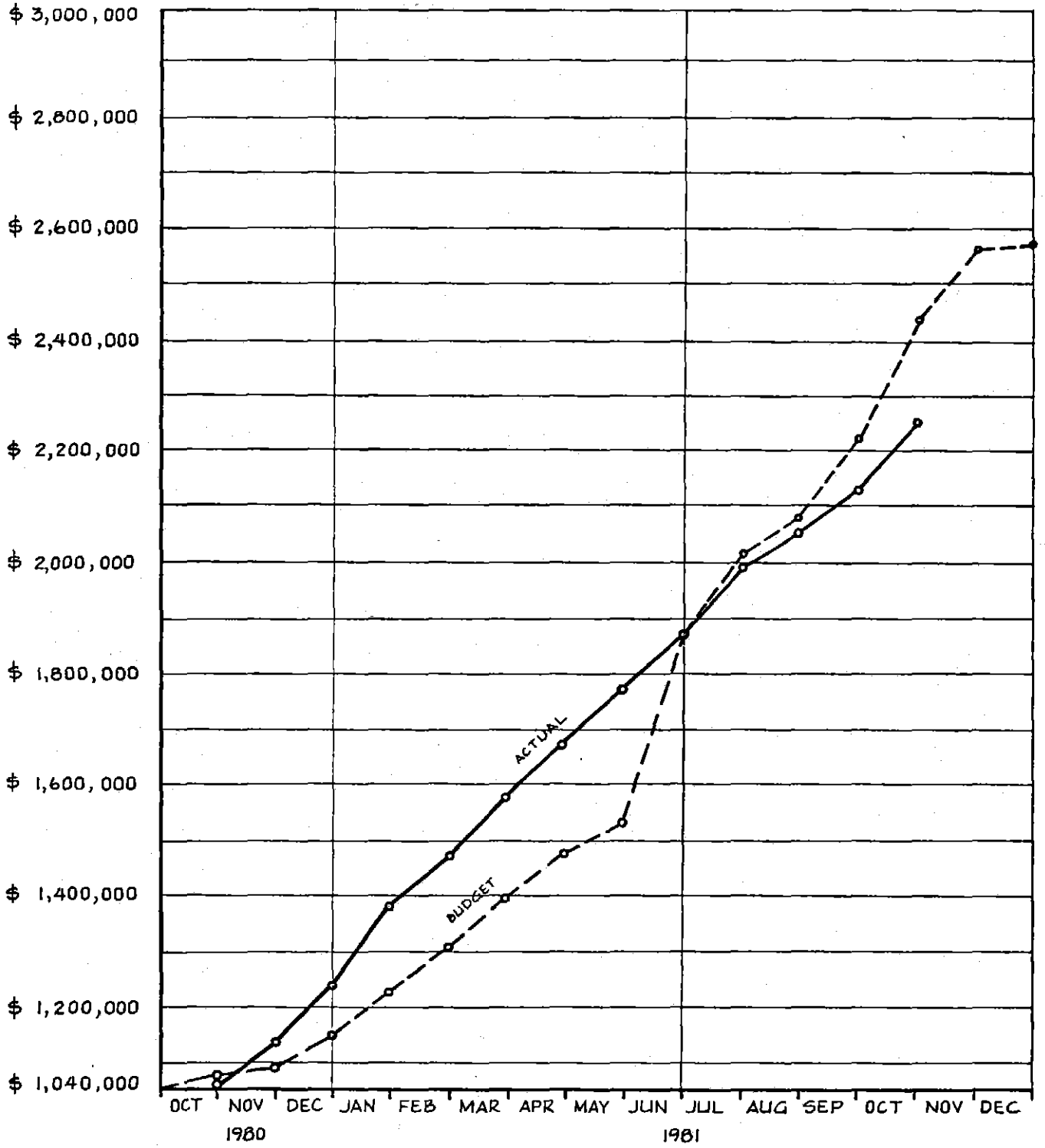
	October, 1981		4 Months to October		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
ADMINISTRATION						
Tech Services	11	11	42	43	63	63
Consumables			1		1	1
Travel	3		4		5	2
Consultants					-	1
TOTAL	14	11	47	43	69	67
GEOLOGY						
Tech Services	14	11	58	43	75	60
Labour	3	1	10	7	13	8
Consumables	4	1	15	21	20	22
Accommodation	1	1	2	4	5	7
Vehicles		1	1	4	5	5
Travel	1		2		3	2
Contractors	58	57	59	188	120	188
Consultants		2	2	13	5	17
Capital Expenditure			8	8	8	8
	81	74	157	288	254	317
MINING						
Tech Services		3	14	9	30	15
Labour						1
Consumables		2	7	7	7	9
Travel				1	3	3
Contractors	5	21	35	41	44	64
Consultants	1	8	1	12	28	24
	6	34	57	70	112	116

MT. BISCHOFF JOINT VENTURE

	October, 1981		4 Months to October		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
METALLURGY						
Tech Services	10	13	27	52	57	77
Labour		1		2	4	4
Consumables		1		24	4	24
Accommodation					1	1
Travel	1	2	1	5	10	12
Contractors	4	2	8	11	15	12
Consultants		2	1	3	4	6
	15	21	37	97	95	136
ENGINEERING						
Tech Services	9	8	26	17	40	30
Consumables					-	1
Travel	1	2	1	5	2	8
Contractors	2	31	3	43	96	114
Consultants		1	2	6	4	8
	12	42	32	71	142	161

MT. BISCHOFF JOINT VENTURE

	October, 1981		4 Months to October		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
COMMERCIAL						
Technical Services	1	1	2		10	11
Consumables					2	2
	---	---	---	---	---	---
		1	1	2	12	13
TOTAL	128	183	331	573	684	810
STAGE 3A EXPENDITURE						
Technical Services			3			
Travel & Accommodation			1			
Diamond Drilling			34			
Assaying			6			
Metallurgical			13			
Consumables			2			
			---		---	
			59		59	
			---		---	
	128	183	390	573	743	810



CUMULATIVE EXPENDITURE SCHEDULE

MT. BISCHOFF

STAGE 3 SUMMARY
as at 24.11.81

Drg. No. 81 - 407

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 114

Objective and Anticipated Lengths to Targets: To delineate DSL and porphyry. Investigate possibility of DSL below porphyry.

Estimated targets: DSL - 30-60 m

PORPHYRY - 80-95 m

Drilling Commenced: 28/9/81 Drilling Completed: 8/10/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: Boyles 37

Bearing of Hole: -

Angle of Hole: 90°

Final Depth of Hole: 113.0 m

Core Sizes:

From 0 To 8.5 = TRICONE

From 8.5 To 113.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 10/10/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg
	0				
0		13.5	90°	-	
	13.5				
27.0		30.0	89°	057°	027°
	43.5				
60.0		31.5	88.5°	(032°)	-
	75.0				
90.0		26.5	88.5°	008°	338°
	101.5				
113.0		11.5	88.5°	327°	297°
	113.0				
-113.0					

Collar and Change Points: Length to C.P	North	East	R. L.
0	1925.10	1039.95	642.47
13.5	1925.10	1039.95	628.97
43.5	1925.39	1040.39	598.97
75.0	1926.08	1040.83	567.49
101.5	1926.77	1040.92	540.99
113.0	1927.02	1040.76	529.49

Survey By: D. COMPSTON Date: 10/10/81

Calculated By: R.J. REID Date: 12/10/81

HOLE N°: MBD 114

832566

554

832567 555

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (capital letters, underlined) Depth Description and notes (indented about 10mm)	GRAPHIC LOG	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES 1 FOR ABBREVIATIONS SEE 'FIELD GEOLOGIST'S MANUAL', D A BERKMAN & W R RYALL (EDS), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

DEPTH	INTERVAL	DEPTH from - to ROCK UNIT / Description and notes	GRAPHIC LOG	MINERALISATION
0	8.5	0 - 8.5: TRICONE. Not cored.		
	20.5	8.5 - 29.0: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly finely crystalline pale grey dolomite, with rare thin veins of coarsely recrystallized dolomite. Minor patches of wrigglite DSL in following intervals: 22.1 - 22.8, 24.0 - 24.7	2/3	
20				
	49.7	29.0 - 78.7: DOLOMITE SULPHIDE LODE.	7/4/6	20% bronze po - finely disseminated
		29.0 - 32.5: 70% dark green talc 20% po 5% talc, 5% carbonate	7/4/6	40% finely disseminated bronze pyrrhotite. Trace fine cpy.
40		32.5 - 41.5: 40% finely disseminated po 45% dark green serpentine 5% mid green talc		
		41.5 - 74.0: 45% mid green talc 40% pyrrhotite - wispy aggregates with irregular bands. Almost massive in parts. 5% dark green serpentine	6/4/7	
60				
		74.0 - 78.7: 70% po 20% qtz 10% talc	4/8/6	70% po - almost massive aggregates up to 1% cpy locally.
80	28.5	78.7 - 107.2: PORPHYRY. Matrix grey/white, translucent. 15% qtz phenocrysts up to 8 mm diameter average 15% disseminated sulphides, mainly bronze po with secondary py.	1	15% coarsely disseminated po and secondary py. In top 5 m, common veins of py up to 2.5 cm thick.
100		5 cm		
	5.8	107.2 - 113.0: SILTSTONE, SHALE. Interbedded grey siltstone and black shale. Strongly disrupted for most part.	10/9	trace po and py - as rare stringers.
		END OF HOLE: 113.0 m.		

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 114

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	130265	12.0	14.0	2.0		190								
	66	14.0	16.0	"		75								
	67	16.0	18.0	"		40								
	68	18.0	20.0	"		170								
	69	20.0	22.1	"		190								
130141		22.1	22.8	0.7	680									
	130270	22.8	24.0	1.2		810								
130142		24.0	24.9	0.9	3050									
43		24.9	25.9	1.0	250									
44		25.9	27.5	1.6	110									
45		27.5	28.5	1.0	120									
46		28.5	29.5	"	7200									
47		29.5	30.5	"	1.02%									
48		30.5	31.5	"	9600									
49		31.5	32.5	"	9700									
150		32.5	33.5	"	1.77%	*								
51		33.5	34.5	"	1.78%	*								
52		34.5	35.5	"	1.62%	*								
53		35.5	36.5	"	4.40%	*								
54		36.5	37.5	"	5500									
55		37.5	38.5	"	3750									
56		38.5	39.5	"	7700									
57		39.5	40.5	"	1.35%									
58		40.5	41.5	"	6100									
59		41.5	42.5	"	5100									
160		42.5	43.5	"	5500									
61		43.5	44.5	"	7800									
62		44.5	45.5	"	8400									
63		45.5	46.5	"	3700									
64		46.5	47.5	"	600									

Notes:— XRF 314 method

* Result being re-determined by Lode Bz

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBO 114

SAMPLE TYPE : DRILL CORE FROM 12.0 TO 47.5

Ground No Split

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
130165		47.5	48.5	1.0	3400									
66		48.5	49.5	"	280									
67		49.5	50.5	"	150									
68		50.5	51.5	"	240									
69		51.5	52.5	"	18.50									
170		52.5	53.5	"	50									
71		53.5	54.5	"	26									
72		54.5	55.5	"	240									
73		55.5	56.5	"	30									
74		56.5	57.5	"	26									
75		57.5	58.5	"	26									
76		58.5	59.5	"	18									
77		59.5	60.5	"	46									
78		60.5	61.5	"	18									
79		61.5	62.5	"	6									
180		62.5	63.5	"	8									
81		63.5	64.5	"	18									
82		64.5	65.5	"	14									
83		65.5	66.5	"	85									
84		66.5	67.5	"	12									
85		67.5	68.5	"	8									
86		68.5	69.5	"	16									
87		69.5	70.5	"	X									
88		70.5	71.5	"	X									
89		71.5	72.5	"	X									
190		72.5	73.5	"	350									
91		73.5	74.5	"	70									
92		74.5	75.5	"	4750									
93		75.5	76.5	"	1.84%	* 1.88% BP Method								
94		76.5	77.5	"	1.50%	* 1.60% BP Method								

Notes:— XRF B1 Method

* Being redetermined by Code BP

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 119

SAMPLE TYPE : DRILL CORE FROM 47.5 TO 77.5

NØ Split

8325669

55

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
130195		77·5	78·5	1·0	1650									
96		78·5	79·6	1·1	1650									
97		79·6	80·6	1·0	1050									
98		80·6	81·6	"	3350									
99		81·6	82·6	"	1650									
131000		82·6	83·6	"	3·14%	* 3·10% BP method								
01		83·6	84·6		4·68%	* 4·91% BP method								
02		84·6	85·6	"	1700									
03		85·6	86·6	"	7000									
04		86·6	87·6	"	8900									
05		87·6	88·6	"	2·18%	* 2·22% BP method								
06		88·6	89·6	"	6200									
07		89·6	90·6	"	5600									
08		90·6	91·6	"	5100									
09		91·6	92·6	"	10·9%									
010		92·6	93·6	"	5000									
11		93·6	94·6	"	4600									
12		94·6	95·6	"	7150									
13		95·6	96·6	"	3100									
14		96·6	97·6	"	3150									
15		97·6	98·6	"	2350									
16		98·6	99·6	"	3500									
17		99·6	100·6	"	1150									
18		100·6	101·6	"	2400									
19		101·6	102·6	"	3550									
020		102·6	103·6	"	1600									
21		103·6	104·6	"	1600									
22		104·6	105·6	"	3050									
23		105·6	106·6	"	1300									
24		106·6	107·3	0·7	1850									

Notes :— XRF BI method

* being redetermined by Lode BP.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 114

SAMPLE TYPE : DRILL CORE FROM 77·5 TO 107·3

No Split

8325 10 558

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn		W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
131625		107·3	108·3	1·0	1900									
	130731	108·3	110·3	2·0		55								
	72	110·3	113·0	2·7		10								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 114

SAMPLE TYPE : DRILL CORE FROM 107·3 TO 113·0

Grind

8332 3/4

559

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 115

Objective and Anticipated Lengths to Targets: To test DSL - possibly delineate western extent of ore-body.

Drilling Commenced: 8/10/81 Drilling Completed: 9/10/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: 180°

Angle of Hole: 75°

Final Depth of Hole: 60.0 m

Core Sizes:

From 0 To 3.0 = TRICONE

From 3.0 To 60.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 20/10/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg
	0				
0		15.0	75°	180°	
	15.0				
30.0		30.0	74°	184°	154°
	45.0				
60.0		15.0	74.5°	186°	156°
	60.0				
-60.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	1919.54	940.23	686.89
15.0	1915.66	940.23	622.40
45.0	1907.41	939.65	593.56
60.0	1903.42	939.23	579.11

Survey By: D. COMPSTON Date: 9/10/81

Calculated By: R.J. REID Date: 15/10/81

HOLE N°: MBD 115

832572

560

832573 561

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: TRICONE.						
20	28.9	3.0 - 31.9: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Finely crystalline pale grey dolomite with rare small patches of recrystallized dolomite.		2/3		trace py, sph in occasional veins and stringers.		
	4.6	31.9 - 36.5: DOLOMITE SULPHIDE LODE. Mainly fluorite-sellaite wrigglite with abundant carbonate, po and serpentine.		4/8/7		30% bronze po - in irregular bands and aggregates. Minor py.		
40	15.0	36.5 - 51.5: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Finely crystalline grey dolomite with lesser recrystallized dolomite as occasional patches.		2/3		trace sph, py in occasional veins and stringers.		
	8.5	51.5 - 60.0: SILTSTONE, lesser QUARTZITE. Mid grey siliceous siltstone with lesser fine qtzite. Strongly disrupted. Occasional thin carbonate veins.		10/11		py, sph - trace in occasional veins up to 1.5 cm.		
60		END OF HOLE: 60.0 m.						

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDS), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 115

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	130273	7.0	9.0	2.0		760								
	74	9.0	11.0	"		1450								
	75	11.0	13.0	"		230								
	76	15.0	15.0	"		1150								
	77	15.0	17.0	"		680								
	78	17.0	19.0	"		3150								
	79	19.0	21.0	"		510								
	280	21.0	23.0	"		920								
	81	23.0	25.0	"		350								
	82	25.0	27.0	"		120								
	83	27.0	29.0	"		150								
	84	29.0	30.9	1.9		38								
131026		30.9	31.9	1.0	50									
27		31.9	32.9	"	9700									
28		32.9	33.9	"	8100									
29		33.9	34.9	"	8200									
030		34.9	35.9	"	5900									
31		35.9	36.5	0.6	8000									
32		36.5	37.5	1.0	34									
	130285	37.5	39.5	2.0		180								
	86	39.5	41.5	"		350								
	87	41.5	43.5	"		240								
	88	43.5	45.5	"		110								
	89	45.5	47.5	"		12								
	290	47.5	49.5	"		8								
	91	49.5	51.5	"		22								
	92	51.5	53.5	"		120								
	93	53.5	55.5	"		60								
	94	55.5	57.5	"		30								
	95	57.5	60.0	2.5		30								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 115

SAMPLE TYPE : DRILL CORE FROM 7.0 TO 60.0

No Split

8325-14

562

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 116

Objective and Anticipated Lengths to Targets: Test DSL and porphyry. Possible DSL below porphyry.

NB 9 metres of rods & NQ barrel dropped and abandoned down hole.

Drilling Commenced: 11/10/81 Drilling Completed: 15/10/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: 360°

Angle of Hole: 70°

Final Depth of Hole: 83.0 m

Core Sizes:

From 0 To 10.0 = TRICONE

From 10.0 To 83.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 23/10/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Survey Data: Dip	Survey Data: Grid Brg	Mag Brg
	0				
0		25.5	70°	360°	
	25.5				
51.0		41.5	70°	01°	331°
	67.0				
83.0		16.0	70°	02°	332°
	83.0				
-83.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	1840.44	1020.02	629.65
25.5	1849.16	1020.02	605.69
67.0	1863.35	1020.27	566.69
83.0	1868.82	1020.46	551.66

Survey By: D. COMPSTON Date: 15/10/81

Calculated By: R.J. REID Date: 19/10/81

HOLE N°: MBD 116

832575563

832576 564

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT : CAPITAL LETTERS, UNDERLINED Depth Description and notes INDENTED ABOUT 10mm	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	10.0	0 - 10.0: TRICONE. Not cored.						
	21.5	10.0 - 31.5: DOLOMITE. Finely crystalline light grey dolomite. Rare thin veins and stringers of py. Fault Zone: 17.9 - 18.5 26.0 - 28.5		2		trace py in rare thin veins and stringers.		
20	6.5	31.5 - 38.0: DOLOMITE SULPHIDE LODE. Very broken core, fault pug 33.0 - 36.0 m. Mainly pyrite - bands and aggregates with lesser qtz-carbonate.		5/8		massive aggregates and veins of py. 50% of rock.		
	3.0	38.0 - 41.0: DOLOMITE. Finely crystalline pale grey dolomite.		2		trace py in stringers.		
40	6.0	41.0 - 47.0: DOLOMITE SULPHIDE LODE. Mainly py veins and aggregates with lesser qtz-carbonate.		5/8		50% py as veins and aggregates. Minor sph disseminated.		
	2.4	47.0 - 49.4: DOLOMITE. Soft, cream weathered dolomite.				no apparent sulphides.		
	4.6	49.4 - 54.0: QUARTZITE, SILTSTONE. Moderately disrupted fine qtzite and siltstone.		11/10		no apparent sulphides.		
	22.7	54.0 - 76.7: PORPHYRY. Altered translucent grey-green matrix. 15% qtz phenocrysts up to 5 mm. 15% feldspars, mainly replaced by py (66.0 - 75.4 m), up to 1 cm.		1		15% coarsely disseminated py. Up to 20% locally. No sulphides in intervals 54.0 - 66.0, 75.4 - 76.7 m.		
60								
80	6.3	76.7 - 83.0: QUARTZITE, lesser SILTSTONE. Mainly fine grey qtzite, with the lesser siltstone.		11/10		no apparent sulphides.		
		END OF HOLE: 83.0 m.						

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", O A BERAMAN & W R RYALL (ED), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL, 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 116

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	130296	10.0	13.4	3.4		520								
	97	13.4	17.9	4.5		190								
	98	17.9	20.0	2.1		30								
	99	20.0	23.0	3.0		12								
	144500	23.0	31.5	8.5		40								
131033		31.5	33.0	1.5	4200									
34		33.0	35.0	2.0	720									
35		35.0	38.0	3.0	2.96%	*								
	144501	38.0	40.6	2.6		180								
131036		40.6	44.0	3.4	2850									
37		44.0	47.0	3.0	1.96%	*								
38		47.0	48.0	1.0	6900									
39		48.0	49.3	1.3	110									
040		49.3	50.3	1.0	70									
	144502	50.3	53.0	2.7		40								
131041		53.0	54.0	1.0	55									
42		54.0	55.0	"	46									
43		55.0	56.0	"	110									
44		56.0	57.0	"	48									
45		57.0	58.0	"	50									
46		58.0	59.0	"	140									
47		59.0	60.0	"	60									
48		60.0	61.0	"	210									
49		61.0	62.0	"	290									
050		62.0	63.0	"	130									
51		63.0	64.0	"	260									
52		64.0	65.0	"	280									
53		65.0	66.0	"	210									
54		66.0	67.0	"	120									
55		67.0	68.0	"	200									

Notes:— XRF Bi method
* Being redetermined by Lode B2

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 116

SAMPLE TYPE : DRILL CORE FROM 10.0 TO 680

1
NQ Split

83256 (1)

565

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
13105 56		68.0	69.0	1.0	150									
57		69.0	70.0	"	1600									
58		70.0	71.0	"	8000									
59		71.0	72.0	"	500									
C60		72.0	73.0	"	2100									
61		73.0	74.0	"	1900									
62		74.0	75.0	"	320									
63		75.0	76.0	"	210									
64		76.0	77.0	"	790									
65		77.0	78.0	"	10									
66		78.0	79.0	"	14									
67		79.0	80.0	"	6									
68		80.0	81.0	"	X									
69		81.0	82.0	"	6									
C70		82.0	83.0	"	10									

Notes :— XRF Bi method

X = <4

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MDD 116

SAMPLE TYPE : DRILL CORE FROM 68.0 TO 83.0

No Split

8325 78 566

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 117

Objective and Anticipated Lengths to Targets: To test "footwall DSL" between approximately 75 m and 85 m.

Drilling Commenced: 16/10/81 Drilling Completed: 19/10/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: -

Angle of Hole: 90°

Final Depth of Hole: 98 m

Core Sizes:

From 0 To 13.0 = TRICONE

From 13.0 To 60.0 = NQ

From 60.0 To 98.0 = BQ

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 27/10/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg
	0				
0		15.0	90°	-	
	15.0				
30.0		31.5	88.75°	282.5°	252.5°
	46.5				
63.0		34.0	89°	272°	242°
	80.5				
98.0		17.5	88°	310°	280°
	98.0				
-98.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	1865.13	1099.62	625.53
15.0	1865.13	1099.62	610.53
46.5	1865.28	1098.95	579.04
80.5	1865.30	1098.36	545.04
98.0	1865.69	1097.89	527.55

Survey By: Date:

Calculated By: R.J. REID Date: 21/10/81

HOLE N°: MBD 117

8325579 567

832580568

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10 mm)	POINTER B CODE	GRAPHIC LOG	POINTER B CODE	MINERALISATION	SELECTED SAMPLES	BULKED ASSAYS Ni
0	13.0	0 - 13.0: TRICONE.						
20	22.0	13.0 - 35.0: PORPHYRY. Broken core with minor fragments of weathered py-rich dsl to 15.5. Mainly weathered porphyry - matrix altered to dark red-brown approx. 20% disseminated qtz pehnocrysts up to 5 mm.		1		10% coarsely disseminated py.		
40	20.0	35.0 - 55.0: FAULT PUG. Very poor recovery. Mainly grey/brown clay with very minor fine py.		F.2		trace fine py through clay.		
	4.4	55.0 - 59.4: DOLOMITE. Finely crystalline grey dolomite. Rare py veins.		2		trace py in rare veins.		
60	1.1	59.4 - 60.5: DOLOMITE SULPHIDE LODE. Py/carbonate.		5/8		70% py in aggregates and dissem.		
	3.8	60.5 - 64.3: RECRYSTALLIZED DOLOMITE. Coarsely crystallized grey dolomite. Rare py vein.		3		trace py in veins.		
	8.2	64.3 - 72.5: DOLOMITE SULPHIDE LODE. 64.3 - 65.6: 70% green serp, 20% dissem sph, minor py, talc and carbonate. 65.6 - 69.1: coarsely recrystallized dolomite with very abundant py veins. 69.1 - 72.5: 40% po (minor secondary py), 30% serp, 30% qtz-carbonate.		7/4/8		sph, po, py - 35% sph - disseminated in dsl 64.3 - 68.6. py - abundant veins (approx 35%) in dolomite 65.5 - 69.1 m, minor after po. po - aggregates from 69.1-72.5.		
80	7.0	72.5 - 79.5: RECRYSTALLIZED DOLOMITE, DOLOMITE. Mainly coarsely recrystallized grey dolomite, with lesser fine dolomite towards 79.5 m.		3/2				
	11.2	79.5 - 90.7: DOLOMITE SULPHIDE LODE. 75% pale to mid green talc, banded in parts. 15% py after po - as aggregates and veins. Minor pyrrhotite. 5% green serpentine 5% qtz-carbonate - disseminated.		6/5		15% py after po. As veins and irregular aggregates. Minor pyrrhotite as aggregates.		
	7.3	90.7 - 98.0: QUARTZITE, SILTSTONE. Strongly disrupted fine qtzite and siltstone. In parts brecciated. Rare thin veins of carbonate.		11/10		trace py in stringers.		
100		END OF HOLE: 98.0 m.						

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 117

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
131071		13·0	20·0	7·0	2550									
72		20·0	25·9	5·9	1150									
73		25·9	30·7	4·8	1850									
74		30·7	33·4	2·7	1150									
75		33·4	35·0	1·6	640									
76		35·0	38·0	3·0	860									
77		38·0	41·0	"	400									
78		41·0	53·0	12·0	110									
79		53·0	57·7	4·7	46									
080		57·7	58·7	1·0	8									
81		58·7	59·7		100									
82		59·7	60·7	"	1400									
83		60·7	61·7	"	24									
84		61·7	62·7	"	65									
85		62·7	63·7	"	190									
86		63·7	64·7	"	50									
87		64·7	65·7	"	1250									
88		65·7	66·7	"	75									
89		66·7	67·7	"	270									
090		67·7	68·7	"	70									
91		68·7	69·7	"	390									
92		69·7	70·7	"	8900									
93		70·7	71·7	"	4 90%	*								
94		71·7	72·7	"	19150									
95		72·7	73·7	"	7200									
96		73·7	74·7	"	4200									
97		74·7	75·7	"	860									
98		75·7	76·7	"	180									
99		76·7	77·7	"	260									
198000		77·7	78·7	"	110									

Notes :— XRF Bi Method

* Being redetermined by Lode BP

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 117

SAMPLE TYPE : DRILL CORE FROM 130 TO 78·7

1

NIL * BD Split

8325881

569

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
14RC01		78.7	79.7	1.0	350									
02		79.7	80.7	"	90									
03		80.7	81.7	"	410									
04		81.7	82.7	"	1.40%	*								
05		82.7	83.7	"	2300									
06		83.7	84.7	"	34									
07		84.7	85.7	"	40									
08		85.7	86.7	"	18									
09		86.7	87.7	"	4									
010		87.7	88.7	"	16									
11		88.7	89.7	"	6									
12		89.7	90.7	"	12									
	144503	90.7	92.7	2.0		120								
	04	92.7	94.7	"		250								
	05	94.7	96.7	"		65								
	06	96.7	98.0	1.3		44								

Notes :— XRF B1 Method

* Being redetermined by Lode Be

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 117

SAMPLE TYPE : DRILL CORE FROM 78.7 TO 98.0

½ Split

8322588

510

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 118

Objective and Anticipated Lengths to Targets: To delineate DSL in "pig flat area.

Drilling Commenced: 20/10/81 Drilling Completed: 21/10/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: 360° (grid)

Angle of Hole: 45°

Final Depth of Hole: 50.0 m

Core Sizes:

From 0 To 4.5 = TRICONE

From 4.5 To 50.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 28/10/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Survey Data: Dip	Survey Data: Grid Brg	Mag Brg
	0				
0		25.0	45°	360°	
	25.0				
50.0		25.0	44°	358°	328°
	50.0				
-50.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	1916.06	1090.33	626.68
25.0	1933.74	1090.33	609.00
50.0	1951.71	1089.70	591.64

Survey By: Date:

Calculated By: R.J. REID Date: 21/10/81

HOLE N°: MBD 118

832583 571

8325845 72

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDS), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

3.5	0 - 3.5: TRICONED.			
6.9	3.5 - 10.4: DOLOMITE SULPHIDE LODE. Weathered to approx 6.5 m. Approx 40% weathered po, mainly in interval 3.5-6.5 m. 55% pale green talc. Minor py, sph. Fluorite vein at 66.0 m.		6/4	40% - mainly weathered po aggregates in interval 3.5 - 6.5 m. Minor py, sph disseminated and veins.
9.4	10.4 - 19.8: DOLOMITE. Finely crystalline pale grey dolomite, with abundant veins and blebs of talc, carbonate, serpentine and py. Minor disseminated sph.		3	1-2% py, sph - as occasional veins (py) and disseminated sph through carbonate.
14.9	19.8 - 34.7: DOLOMITE SULPHIDE LODE. 40% po - as irregular veins and aggregates. Minor amounts coarsely disseminated in parts. 20% dark green serpentine, mainly in interval 19.8 - 26.8. 20% qtz-carbonate - coarsely recrystallized dolomite in interval 29.0 - 31.2. 10% green talc irregularly distributed. 10% py - as veins.		4/7/8	40% - mainly irregular aggregates and veins of po. Minor py as veins, especially interval 29.0 - 31.2 m.
15.3	34.7 - 50.0: SILTSTONE, QUARTZITE. Moderately disrupted in parts. Strongly silicified medium grey fine qtzite and paler siltstone. Occasional qtzite beds contain up to 5% finely disseminated py. Occasional patches of disseminated po. Rare thin veins and stringers of carbonate.		10/11	1-2% po, py - occasional patches of finely disseminated po or py. Mainly occur in qtzite. Rare veins of py, with arsenopy and sph.
	END OF HOLE: 50.0 m.			

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 118

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
148013		4.5	5.3	0.8	1.37%	*								
14		5.3	6.3	1.0	1.03%									
15		6.3	7.3		980									
16		7.3	10.0	2.7	300									
17		10.0	11.0	1.0	790									
18		11.0	13.5	2.5	180									
19		13.5	14.5	1.0	120									
020		14.5	15.5	"	290									
21		15.5	16.5	"	660									
22		16.5	17.5	"	190									
23		17.5	18.5	"	14									
24		18.5	19.5	"	20									
25		19.5	20.5	"	1600									
26		20.5	21.5	"	3150									
27		21.5	22.5	"	3200									
28		22.5	23.5	"	8200									
29		23.5	24.5	"	7300									
030		24.5	25.5	"	1.17%*									
31		25.5	26.5	"	4400									
32		26.5	27.5	"	6000									
33		27.5	28.5	"	1650									
34		28.5	29.5	"	3350									
35		29.5	30.5	"	120									
36		30.5	31.5	"	2700									
37		31.5	32.5	"	55									
38		32.5	33.5	"	X									
39		33.5	34.5	"	14									
040		34.5	35.5	"	60									
41		35.5	36.5	"	290									
	149507	36.5	38.5	2.0		34								

Notes :— XRF BI Method

* Being redetermined by Lode BP

X = 24

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 118

SAMPLE TYPE : DRILL CORE FROM 4.5 TO 38.5

No Split

8325805

5753

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	149508	32.5	40.5	8.0		82								
	09	40.5	42.5	"		36								
	510	42.5	44.5	"		510								
	11	44.5	46.5	"		80								
	12	46.5	48.5			130								
	13	48.5	50.0	1.5		48								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 118

SAMPLE TYPE : DRILL CORE (Grnd) FROM 38.5 TO 50.0

8325861

574

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 119

Objective and Anticipated Lengths to Targets: To test the "footwall" DSL at the base of the dolomite.

Drilling Commenced: 21/10/81 Drilling Completed: 27/10/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: -

Angle of Hole: 90°

Final Depth of Hole: 90.0 m

Core Sizes:

From 0 To 4.0 = TRICONE

From 4.0 To 62.5 = NQ

From 62.5 To 90.0 = BQ

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 4/11/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Survey Data: Dip	Survey Data: Grid Brg	Mag Brg
	0				
0		15.0	90°	-	
	15.0				
30.0		30.0	88.5°	199°	169°
	45.0				
60.0		30.0	89°	23°	353°
	75.0				
90.0		15.0	88.75°	117°	87°
	90.0				
-90.0					

Collar and Change Points: Length to C.P	North	East	R. L.
0	1890.65	1060.95	626.37
15.0	1890.65	1060.95	611.37
45.0	1889.91	1060.69	581.38
75.0	1890.39	1060.90	551.38
90.0	1890.24	1061.19	536.39

Survey By: Date:

Calculated By: R.J. REID Date: 3/11/81

HOLE N°: MBD 119

832588 576

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 0mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	4.0	0 - 4.0: TRICONE. Not cored.						
	4.0	4.0 - 8.0: DOLOMITE. Very poor recovery. Minor fragments of pale grey fine dolomite.		2				
	3.5	8.0 - 11.5: DOLOMITE SULPHIDE LODE. 60% py, 4-5% qtz-carb. Irregularly banded.				60% py - as irregular bands and aggregates.		
20	44.5	11.5 - 56.0: PORPHYRY. Matrix mainly translucent grey-white. Occasionally weathered/altered to brownish colour. 20% qtz phenocrysts up to 8 mm. 15% feldspar phenocrysts, replaced entirely by py. Trace disseminated fluorite and arsenopyrite in places.		1		15% coarsely disseminated py varies from 5-25% locally. Rare thin py veins and stringers.		
40	2.5	56.0 - 58.5: FAULT PUG. Uniform dark-brown clay.		FZ		no apparent sulphides.		
60	3.3	58.5 - 61.8: DOLOMITE SULPHIDE LODE. Medium green colour, mainly talc, lesser qtz-carbonate.		6/8/7		no apparent sulphides.		
	8.7	61.8 - 70.5: DOLOMITE, minor RECRYSTALLIZED DOLOMITE. Mainly finely crystalline grey dolomite bedded in parts. Minor patches and veins of cream recrystallized dolomite.		2/3		trace po in stringers with talc through recrystallized dolomite.		
80	9.8	70.5 - 80.3: DOLOMITE SULPHIDE LODE. 50% pyrrhotite - almost massive in parts. 20% qtz-carbonate, disseminated and as bands. 20% talc - pale green. 5% py - after po.		4/6		50% bronze pyrrhotite - varies from 25% to almost massive. Minor alteration to pyrite. Trace arsenopyrite.		
	9.7	80.3 - 90.0: SILTSTONE. Strongly disrupted mid-grey siltstone. Occasional aggregates and blebs of fine pyrrhotite. Rare stringers of carbonate.		10		trace po - as irregular fine blebs and aggregates.		
100		END OF HOLE: 90.0 m.						

NOTES: 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDS), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 119

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
14E048		4·0	14·0	10·0	6000									
43		14·0	15·6	1·6	990									
44		15·6	16·6	1·0	1500									
45		16·6	17·6	"	1700									
46		17·6	19·8	2·2	2750									
47		19·8	20·8	1·0	1850									
48		20·8	22·7	1·9	3600									
49		22·7	23·7	1·0	2100									
050		23·7	24·7	"	1750									
51		24·7	25·7	"	4200									
52		25·7	26·7	"	2750									
53		26·7	27·7	"	4800									
54		27·7	28·7	"	4550									
55		28·7	29·7	"	3600									
56		29·7	30·7	"	4750									
57		30·7	31·7	"	1950									
58		31·7	32·7	"	2100									
59		32·7	33·7	"	3800									
060		33·7	34·7	"	4500									
61		34·7	35·7	"	1·15%									
62		35·7	36·7	"	1150									
63		36·7	37·7	"	5500									
64		37·7	38·7	"	1400									
65		38·7	39·7	"	2650									
66		39·7	40·7	"	700									
67		40·7	41·7	"	310									
68		41·7	42·7	"	390									
69		42·7	43·7	"	460									
070		43·7	46·7	3·0	1700									
71		46·7	49·7	"	740									

Notes:— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 119

SAMPLE TYPE : DRILL CORE FROM 4·0 TO 49·7

NQ Split

8239

5/11

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
148072		49.7	50.7	1.0	2100									
73		50.7	51.7	"	560									
74		51.7	52.7	"	350									
75		52.7	53.7	"	310									
76		53.7	54.7	"	480									
77		54.7	56.0	1.3	780									
78		56.0	58.9	2.9										
79		58.9	60.5	1.6										
080		60.5	61.5	1.0										
	144514	61.5	62.8	1.3		210								
	15	62.8	64.8	2.0		38								
	16	64.8	66.8	"		10								
	17	66.8	69.8	3.0		16								
148081		69.8	70.8	1.0										
82		70.8	71.8	"										
83		71.8	72.8	"										
84		72.8	73.8	"										
85		73.8	74.8	"										
86		74.8	75.8	"										
87		75.8	76.8	"										
88		76.8	77.8	"										
89		77.8	78.8	"										
090		78.8	80.2	1.4										
91		80.2	81.2	1.0										
	144518	81.2	83.0	1.8		80								
	19	83.0	85.0	2.0		75								
	520	85.0	87.0	"		82								
	21	87.0	89.0	"		70								
	22	89.0	90.0	1.0		55								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 1196

SAMPLE TYPE : DRILL CORE FROM 49.7 TO 90.0

No split

8325 90

578

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 120

Objective and Anticipated Lengths to Targets: To locate and test DSL in approximate interval 50.0 - 65.0 m.

Drilling Commenced: 26/10/81 Drilling Completed: 28/10/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: 360°

Angle of Hole: -50°

Final Depth of Hole: 76.0 m

Core Sizes:

From 0 To 7.0 = TRICONE

From 7.0 To 76.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 6/11/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Survey Data: Dip	Survey Data: Grid Brg	Mag Brg	Collar and Change Points: Length to C.P	North	East	R.L.
	0					0	1892.01	1060.96	626.17
0		22.5	50°	360°					
	22.5					22.5	1906.47	1060.96	608.93
45.0		38.0	50.5°	358°	328°				
	60.5					60.5	1930.63	1060.12	579.61
76.0		15.5	51°	01°	331°				
	76.0					76.0	1940.38	1060.29	567.57
-76.0									

Survey By: Date:

Calculated By: R.J. REID Date: 3/11/81

HOLE N°: MBD 120

8325591

579

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni

NOTES 1. FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (ED), MONOGRAPH NO 9 AUSTRALAS INST MIN. METALL. - 1976
2. ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3. LENGTH IS GIVEN AS METRES OR MILLIMETRES

7.0	0 - 7.0: TRICONED. Not cored.				
31.6	7.0 - 38.6: DOLOMITE SULPHIDE LODE. 7.0 - 14.0: Weathered and leached py - qtz-carb DSL. Poor recovery zone. 14.0 - 25.4: 55% bronze po 45% mottled qtz-carbonate 25.4 - 30.5: 40% mottled qtz-carbonate 35% pale green talc 25% po & py. Disseminated and occasional aggregates and veins. 30.5 - 38.6: 65% bronze po 35% disseminated qtz-carbonate. Common coarsely disseminated fluorite. Up to]0% fine black cassiterite - e.g. about 34.7 m.		4/8	7.0 - 14.0: 40% weathered py in bands and aggregates. 14.0 - 25.4: 55% po - almost massive in parts. Trace cpy finely disseminated. 25.4 - 30.5: po, py - 25% po as irregular veins and disseminated. Py finely disseminated. 30.5 - 38.6: as for 14.0-25.4. Up to]0% fine black cassiterite. e.g. at 34.7 m.	
0.7	38.6 - 39.3: PORPHYRY. White, translucent matrix.		1	15% coarsely disseminated po.	
30.9	39.3 - 70.2: DOLOMITE SULPHIDE LODE. 55-60% massive bronze po, with lesser qtz-carbonate and minor fluorite disseminated. Occasional thin veins of amorphous py.		4/8	55-60% medium grained bronze po. Almost massive in parts. Trace finely disseminated cpy and coarser arsenopy.	
5.8	70.2 - 76.0: SILTSTONE. Srrongly disrupted medium grey stilstone. Occasional bands of po - esp 70.2-71.0. Rare py, po and carb stringers and veins.		10	1-2% po py. Po as veins and stringers. Also as bands up to] cm. Minor py veins.	
	END OF HOLE: 76.0 m.				

5 cm

832592

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 120

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
198092		7.0	12.3	5.3	6300									
93		12.3	14.0	1.7	6800									
94		14.0	15.0	1.0	1.05%									
95		15.0	16.0	"	1.64%	*								
96		16.0	17.0	"	9200									
97		17.0	18.0	"	6000									
98		18.0	19.0	"	7800									
99		19.0	20.0	"	1.23%	*								
198100		20.0	21.0	"	1.31%	*								
01		21.0	22.0	"	4.02%	*								
02		22.0	23.0	"	1.05%									
03		23.0	24.0	"	1.38%	*								
04		24.0	25.0	"	3950									
05		25.0	26.0	"	5400									
06		26.0	27.0	"	1.12%									
07		27.0	28.0	"	7800									
08		28.0	29.0	"	1.16%									
09		29.0	30.0	"	4900									
110		30.0	31.0	"	3.59%	*								
11		31.0	32.0	"	9200									
12		32.0	33.0	"	2.40%	*								
13		33.0	34.0	"	7.25%	*								
14		34.0	35.0	"	9.80%	*								
15		35.0	36.0	"	1.41%	*								
16		36.0	37.0	"	1.71%	*								
17		37.0	38.6	1.6	2300									
18		38.6	39.3	0.7	430									
19		39.3	40.0	0.7	940									
120		40.0	41.0	1.0	3.30									
21		41.0	42.0	"	4500									

8329693

Notes :— XRF Bi method
Cu by AAS
* Being redetermined by Code BE.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 120

SAMPLE TYPE : DRILL CORE FROM 7.0 TO 42.0

No Split

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
148/122		42.0	43.0	1.0	6600									
23		43.0	44.0	"	4100									
24		44.0	45.0	"	3150									
25		45.0	46.0	"	1450									
26		46.0	47.0	"	8300									
27		47.0	48.0	"	7100									
28		48.0	49.0	"	160									
29		49.0	50.0	"	310									
130		50.0	51.0	"	5100									
31		51.0	52.0	"	5600									
32		52.0	53.0	"	2550									
33		53.0	54.0	"	4750									
34		54.0	55.0	"	2.08%	*								
35		55.0	56.0	"	1.06%									
36		56.0	57.0	"	1.20%	*								
37		57.0	58.0	"	2650									
38		58.0	59.0	"	1.01%									
39		59.0	60.0	"	1.44%	*								
140		60.0	61.0	"	8800									
41		61.0	62.0	"	1.55%	*								
42		62.0	63.0	"	5300									
43		63.0	64.0	"	8100									
44		64.0	65.0	"	3.10%	*								
45		65.0	66.0	"	1.15%									
46		66.0	67.0	"	1.39%									
47		67.0	68.0	"	910									
48		68.0	69.0	"	2250									
49		69.0	70.0	"	1000									
150		70.0	71.0	"	330									
51		71.0	72.0	"	180									

Notes:— XRF Bi method
Cu by AAS

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 120

SAMPLE TYPE : DRILL CORE FROM 42.0 TO 72.0

½ NQ

8325/4

582

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	144523	72.0	79.0	8.0		9600								
	24	79.0	76.0			980								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 120

SAMPLE TYPE : DRILL CORE FROM 72.0 TO 76.0

grind

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 121

Objective and Anticipated Lengths to Targets: To test DSL and locate the footwall contact.

Drilling Commenced: 28/10/81 Drilling Completed: 29/10/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: 360°

Angle of Hole: -40°

Final Depth of Hole: 25.0 m

Core Sizes:

From 0 To 4.0 = TRICONE

From 4.0 To 25.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 6/11/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P.	Survey Data: Dip	Survey Data: Grid Brg	Mag Brg
	0				
0		12.5	40°	360°	
	12.5				
25.0		12.5	39°	359.5°	329.5°
	25.0				
-25.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	1911.92	1120.13	629.35
12.5	1921.50	1120.13	621.32
25.0	1931.21	1120.05	613.45

Survey By: Date:

Calculated By: R.J. REID Date: 3/11/81

HOLE N°: MBD 121

832596 584

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (capital letters, underlined) Depth Description and notes (indented about 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	4.0	0 - 4.0: TRICONED. Not cored.						
	21.0	4.0 - 25.0: PORPHYRY. Weathered (slightly) in few parts. Matrix slightly translucent grey/white. Up to 20% qtz phenocrysts to 10 mm dia. Feldspars entirely replaced by py - which is coarsely disseminated.		1		15% coarsely disseminated py - up to 25% locally.		
20		END OF HOLE: 25.0 m.						

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDS). MONOGRAPH NO 9 AUSTRALAS INST MIN METALL. - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 121

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
148152		4.0	6.0	2.0	1350									
53		6.0	7.0	1.0	1350									
54		7.0	8.0	"	620									
55		8.0	9.0	"	660									
56		9.0	11.0	2.0	1000									
57		11.0	12.0	1.0	6700									
58		12.0	13.0	"	1800									
59		13.0	14.0	"	1450									
160		14.0	15.0	"	520									
61		15.0	16.0	"	840									
62		16.0	17.0	"	660									
63		17.0	18.0	"	2500									
64		18.0	19.0	"	390									
65		19.0	20.0	"	1750									
66		20.0	21.0	"	4850									
67		21.0	22.0	"	3150									
68		22.0	23.0	"	640									
69		23.0	24.0	"	1100									
170		24.0	25.0	"	1200									

Notes:— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 121

SAMPLE TYPE : DRILL CORE FROM 4.0 TO

1/2 NSD

8325 95

586

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
126600		940E	1940N		2490									
01		"	1942N		4310									
02		"	1944N		2720									
03		"	1946N		1060									
04		"	1948N		8533									
05		"	1950N		486									
06		"	1952N		177									
07		"	1954N		855									
08		"	1956N		863									
09		"	1958N		875									
610		"	1960N		838									
11		"	1962N		604									
12		"	1964N		1400									
13		"	1966N		78550									
14		"	1968N		1610									
15		"	1970N		5810									
16		"	1972N		9500									
17		"	1974N		3840									
18		"	1976N		2690									
19		"	1978N		1930									
620		"	1980N		1500									
21		"	1982N		1960									
22		"	1984N		2080									
23		"	1986N		2940									
24		"	1988N		1770									
25		"	1990N		737									

Notes :— XRF Sn Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1940N TO 1990N

SURFACE SAMPLES 940E

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
126626		960E	1930N		2220									
27		"	1932N		1410									
28		"	1934N		1210									
29		"	1936N		3110									
630		"	1938N		769									
31		"	1940N		109									
32		"	1942N		318									
33		"	1944N		2210									
34		"	1946N		318									
35		"	1948N		451									
36		"	1950N		8870									
126658		960E	1970N		8800									
59		"	1972N		8270									
660		"	1974N		8510									
61		"	1976N		1120									
62		"	1980N		4500									
63		"	1982N		3860									
64		"	1984N		281									
65		"	1986N		3510									
66		"	1988N		1910									
67		"	1990N		518									

Notes :— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1930N TO 1990N

SURFACE SAMPLES 960E

832600

588

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
126668		98CE	1970N		720									
69		"	1972N		5990									
670		"	1974N		1.17%									
71		"	1976N		6270									
72		"	1978N		6520									
73		"	1980N		1.75%									
74		"	1982N		3220									
75		"	1984N		1.48%									
76		"	1986N		1.02%									
77		"	1988N		328									
78		"	1990N		1140									
79		"	1992N		184									
680		"	1994N		208									
81		"	1996N		493									
82		"	1998N		1280									
83		"	2000N		1160									
84		"	2002N		1890									
85		"	2004N		398									
86		"	2006N		499									
87		"	2008N		209									
88		"	2010N		640									
89		"	2012N		862									
690		"	2014N		1000									
91		"	2016N		227									

Notes :— XRF 214 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1970N TO 2016N

SURFACE SAMPLES 98CE

832601 581

SURFACE	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SAMPLES	GROUND CORE			m	SPLIT	GROUND								
126637		1000E	1980N		7054									
38		"	1982N		1.47%									
39		"	1984N		1.43%									
640		"	1986N		9150									
41		"	1988N		7550									
42		"	1990N		3680									
43		"	1992N		8550									
44		"	1994N		1450									
45		"	1996N		1.30%									
46		"	1998N		61									
47		"	2000N		2050									
48		"	2002N		1650									
49		"	2004N		4850									
650		"	2006N		5940									
51		"	2008N		2052									
52		"	2010N		4800									
53		"	2012N		1.44%									
54		"	2014N		3030									
55		"	2016N		4320									
56		"	2018N		184									
57		"	2020N		7240									
126692		1000E	2022N		6250									
93		"	2024N		732									
94			2026N		1.43%									
95			2028N		1110									
96			2030N		919									

Notes :- XRF 214 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1980N TO 2030N

SURFACE SAMPLES 1000E

8226602 590

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
WHERE SAMPLE	GROUND CORE			m	SPLIT	GROUND								
126697		10208	1902N		1.00%									
98		"	1904N		4300									
99		"	1906N		500									
131100		"	1908N		350									
01		"	1910N		560									
02		"	1912N		2500									
03		"	1914N		840									
04		"	1916N		460									
05		"	1918N		360									
06		"	1920N		470									
07		"	1922N		1600									
08		"	1924N		130									
09		"	1926N		910									
110		"	1928N		560									
11		"	1930N		500									
12		"	1932N		880									
13		"	1934N		4900									
14		"	1936N		6300									
15		"	1938N		5000									
16		"	1940N		5800									
17		"	1942N		3650									
18		"	1944N		2350									
19		"	1946N		1450									
120		"	1948N		320									
21		"	1950N		1550									
22		"	1952N		1.12%									
23		"	1954N		2750									
24		"	1956N		1900									
25		"	1958N		4100									
26		"	1960N		2900									

Notes:—XRF bl method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1902N TO 1960N

SURFACE SAMPLES 1000

8326003 591

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLE	GROUND CORE			m	SPLIT	GROUND								
131127		10POE	1962N		5000									
28		"	1964N		2750									
29		"	1966N		1910									
130		"	1968N		1400									
31		"	1970N		3000									
32		"	1972N		4100									
33		"	1974N		4900									
34		"	1976N		330									
35		"	1978N		6000									
36		"	1980N		3650									
37		"	1982N		3100									
38		"	1984N		1650									
39		"	1986N		4500									
140		"	1988N		4650									
41		"	1990N		4950									
42		"	1992N		1.79%	* 1.97% BP method								
43		"	1994N		6100									
44		"	1996N		1.98%	* 1.71% BP method								
45		"	1998N		75									
46		"	2000N		75									
47		"	2002N		440									
48		"	2004N		330									
49		"	2006N		65									
150		"	2008N		450									
51		"	2010N		300									
52		"	2012N		170									
53		"	2014N		160									
54		"	2016N		120									
55		"	2018N		2250									
56		"	2020N		660									

Notes :— XRF BI method

* being redetermined by Lode. BP

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 592

SAMPLE TYPE : DRILL CORE FROM 1962N TO 2020N

SURFACE SAMPLES 10POE

8326/04

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL m	Sn SPLIT	Sn GROUND	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE													
13157		10R0E	2022N		1100									
58			2021N		820									
59			2020N		5800									

Notes:— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 593

SAMPLE TYPE : DRILL CORE FROM 2022N TO 2020N

SURFACE SAMPLES 10R0E

8236605

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Zn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
13160		1040E	1900N		6500									
61		"	1902N		3200									
62			1904N		580									
63			1906N		230									
64		"	1908N		460									
65		"	1910N		1050									
66		"	1912N		2800									
67			1914N		1100									
68		"	1916N		840									
69			1918N		700									
170			1920N		1200									
71			1922N		320									
72			1924N		1800									
73			1926N		920									
74			1928N		2250									
75			1930N		2550									
76			1932N		2550									
77			1934N		1550									
78			1936N		1050									
79			1938N		3200									
180		"	1940N		2300									
81			1942N		4300									
82			1944N		3150									
83			1946N		3750									
84			1948N		3100									
85			1950N		3800									
86		"	1952N		2300									
87		"	1954N		3500									
88		"	1956N		5300									
89		"	1958N		1900									

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1900N TO 1958N

SURFACE SAMPLES 1040E

832606 594

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
1311-10		1040E	1960N		1650									
11		"	1962N		2250									
12		"	1964N		1650									
13		"	1966N		780									
14		"	1968N		660									
15		"	1970N		2100									
16		"	1972N		2250									
17		"	1974N		210									
18		"	1976N		120									
19		"	1978N		60									
1312-00		"	1980N		680									
01		"	1982N		2150									
02		"	1984N		310									
03		"	1986N		400									
04		"	1988N		1550									
05		"	1990N		4.78%	*6.84% BP method								
06		"	1992N		160									
07		"	1994N		44									
08		"	1996N		4950									
09		"	1998N		9500									
10		"	2000N		620									
11		"	2002N		760									
12		"	2004N		2100									
13		"	2006N		1.24%	*1.38% BP method								
14		"	2008N		70									
15		"	2010N		190									
16		"	2012N		270									
17		"	2014N		480									
18		"	2016N		360									
19		"	2018N		180									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1960N TO 2018N

SURFACE SAMPLES 1040E

8326 / 595

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
13/1220		10105E	2020N		110									
21		"	2022N		420									
22		"	2024N		850									
23		"	2026N		110									
24		"	2028N		140									
25		"	2030N		85									
26		"	2032N		75									
27		"	2034N		<180									
28		"	2036N		400									
29		"	2038N		1350									
230		"	2040N		860									
31		"	2042N		1200									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 596

SAMPLE TYPE : DRILL CORE FROM 2020N TO 2042N

SURFACE SAMPLES 104

8326/8

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
1312 32		1060E	1720N		450									
33		"	1722N		2350									
34		"	1724N		1400									
35		"	1726N		1200									
36		"	1728N		3500									
37		"	1730N		600									
38		"	1732N		120									
39		"	1734N		780									
1340		"	1736N		460									
41		"	1738N		600									
42		"	1740N		6.5									
43		"	1742N		1850.									
44		"	1744N		1350									
45		"	1746N		920									
46		"	1748N		1800									
47		"	1750N		8700									
48		"	1752N		1200									
49		"	1754N		1300									
1350		"	1756N		800									
51		"	1758N		1150									
52		"	1760N		1900									
53		"	1762N		6400									
54		"	1764N		780									
55		"	1766N		2300									
56		"	1768N		2400									
57		"	1770N		1900									
58		"	1772N		1150									
59		"	1774N		8490.									
1360		"	1776N		900									
61		"	1778N		8900									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 597

SAMPLE TYPE : DRILL CORE FROM 1720N TO 1778N

SURFACE SAMPLES 1060E

8326609

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
surface samples	GROUND CORE			m	SPLIT	GROUND								
1512612		1060E	1780N		1500									
63		"	1782N		2350									
64		"	1784N		1150									
65		"	1786N		7100									
66		"	1788N		9000									
67		"	1790N		720									
68		"	1792N		310									
69		"	1794N		3700									
270		"	1796N		4600									
71		"	1798N		2150									
72		"	1800N		2250									
73		"	1802N		1300									
74		"	1804N		160									
75		"	1806N		720									
76		"	1808N		150									
77		"	1810N		1600									
78		"	1812N		1450									
79		"	1814N		1700									
280			1816N		700									
81			1818N		2300									
82		"	1820N		3050									
83		"	1822N		1150									
84		"	1824N		720									
85		"	1826N		1050									
86		"	1828N		1700									
87		"	1830N		2150									
88		"	1832N		1900									
89		"	1834N		960									
290		"	1836N		320									
91		"	1838N		420									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1780N TO 1858N

SURFACE SAMPLES 1060E

8226610

598

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
~~SURFACE SAMPLE~~	GROUND CORE			m	SPLIT	GROUND								
131212		1060E	1840N		2400									
13		"	1842N		410									
14		"	1844N		470									
15		"	1846N		790									
16		"	1848N		1200									
17		"	1850N		1200									
18		"	1852N		2100									
19		"	1854N		1260									
131900		"	1856N		600									
01		"	1858N		2350									
02		"	1860N		3150									
03		"	1862N		2350									
04		"	1864N		3600									
05		"	1866N		1200									
06		"	1868N		2000									
07		"	1870N		1050									
08		"	1872N		1250									
09		"	1874N		2250									
410		"	1876N		2300									
11		"	1878N		4200									
12		"	1880N		4600									
13		"	1882N		4350									
14		"	1884N		3300									
15		"	1886N		4350									
16		"	1888N		3300									
17		"	1890N		4100									
18		"	1892N		3250									
19		"	1894N		1650									
420		"	1896N		1050	* ?								
21		"	1898N		1150									

Notes :—

* being redetermined by Lode BP
? matrix difficulties

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1840N TO 1898N

SURFACE SAMPLES 1060E

8326611 599

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLE	GROUND CORE			m	SPLIT	GROUND								
1314122		1060E	1900N		1250									
23		"	1902N		1.50%	*								
24		"	1904N		1.96%	*								
25		"	1906N		240									
26		"	1908N		7900									
27		"	1910N		1150									
28		"	1912N		460									
29		"	1914N		450									
430		"	1916N		430									
31		"	1918N		690									
32		"	1920N		3700									
33		"	1922N		5600									
34		"	1924N		2400									
35		"	1926N		5300									
36		"	1928N		1900									
37		"	1930N		3250									
38		"	1932N		3500									
39		"	1934N		3450									
440		"	1936N		3150									
41		"	1938N		5200									
42		"	1940N		3150									
43		"	1942N		2500									
44		"	1944N		9650									
45		"	1946N		2850									
46		"	1948N		2900									
47		"	1950N		1800									
48		"	1952N		2150									
49		"	1954N		410									
450		"	1956N		4650									
51		"	1958N		3750									

Notes:—

* Being redetermined by Lode BC

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 600

SAMPLE TYPE : DRILL CORE FROM 1900N TO 1958N

SURFACE SAMPLES 1060E

832612

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
1314152		1060E	1960N		3200									
53		"	1962N		1800									
54		"	1964N		2800									
55		"	1966N		3350									
56		"	1968N		3050									
57		"	1970N		3400									
58		"	1972N		3500									
59		"	1974N		2950									
460		"	1976N		3500									
61		"	1978N		3050									
62		"	1980N		430									
63		"	1982N		450									
64		"	1984N		790									
65		"	1986N		70									
66		"	1988N		330									
67		"	1990N		1.44%	*								
68		"	1992N		30									
69		"	1994N		<15									
470		"	1996N		70									
71		"	1998N		36									
72		"	2000N		800									
73		"	2002N		1900									
74		"	2004N		1900									
75		"	2006N		2200									
76		"	2008N		780									
77		"	2010N		2150									
78		"	2012N		200									
79		"	2014N		690									
480		"	2016N		300									
81		"	2018N		1250									

Notes :—

* Being redetermined by Lode BP

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 601

SAMPLE TYPE : DRILL CORE FROM 1960N TO 2018N

SURFACE SAMPLES 1060E

8326113

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
1314E.P		1060E	2080N		1150									
E5		"	2082N		5100									
E4		"	2084N		1100									
E5		"	2086N		2300									
E6		"	2088N		1000									
E7		"	2090N		1.3%	*								
E8		"	2092N		6500									
E9		"	2094N		3300									
4-10		"	2096N		2100									
"11		"	2098N		3150									
"12		"	2100N		4200									

Notes :—

* being redetermined by code BE

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 602

SAMPLE TYPE : DRILL CORE FROM 2080N TO 2100N

SURFACE SAMPLES 1060E

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
13/4513		1080E	1750N		3650									
514			1752N		2200									
515			1754N		10650									
516			1756N		2450									
517			1758N		2650									
518			1760N		4600									
519			1762N		53000									
13/3000			1764N		1950									
01			1766N		4650									
02			1768N		700									
03			1770N		16550									
04			1772N		1400									
05			1774N		580									
06			1776N		15100									
07			1778N		3650									
08			1780N		4950									
09			1782N		3850									
310			1784N		7100									
11			1786N		900									
12			1788N		1200									
13			1790N		2900									
14			1792N		610									
15			1794N		1500									
16			1796N		900									
17			1798N		2000									
18			1800N		1800									
19			1802N		3250									
320			1804N		580									
21			1806N		180									
22			1808N		900									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. GDC

SAMPLE TYPE : DRILL CORE FROM 1750N TO 1808N

SURFACE SAMPLES 1080E

8329615

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLE	GROUND CORE			m	SPLIT	GROUND								
131323		1060E	1810N		720									
24		"	1812N		600									
25		"	1814N		2450									
26		"	1816N		3700									
27		"	1818N		70									
28		"	1820N		300									
29		"	1822N		1500									
330		"	1824N		3150									
31		"	1826N		1200									
32		"	1828N		1350									
33		"	1830N		3900									
34		"	1832N		1400									
35		"	1834N		1100									
36		"	1836N		1700									
37		"	1838N		2750									
38		"	1840N		1600									
39		"	1842N		300									
340		"	1844N		1450									
41		"	1846N		900									
42		"	1848N		2850									
43		"	1850N		2500									
44		"	1852N		3100									
45		"	1854N		2550									
46		"	1856N		1600									
47		"	1858N		1700									
48		"	1860N		2600									
49		"	1862N		2100									
350		"	1864N		2100									
51		"	1866N		2050									
52		"	1868N		2950									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 6U4

SAMPLE TYPE : DRILL CORE FROM 1810N TO 1868N

SURFACE SAMPLES 1060E

8329616

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER. VAL	Sn	Sn	Cu	Pb	Zn		W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
1512353		1080E	1870N		3500									
54			1872N		2100									
55			1874N		2050									
56			1876N		2550									
57			1878N		2550									
58			1880N		4[illegible]									
59			1882N		1300									
360			1884N		4650									
61			1886N		3500									
62			1888N		3800									
63			1890N		2200									
64			1892N		2950									
65			1894N		3600									
66			1896N		2900									
67			1898N		3900									
68			1900N		9500									
69			1902N		8500									
370			1904N		1.99%	*								
71			1906N		4750									
72			1908N		8300									
73			1910N		7000									
74			1912N		5500									
75			1914N		4150									
76			1916N		8300									
77			1918N		8500									
78			1920N		1.54%	*								
79			1922N		5900									
380			1924N		9600									
81			1926N		5000									
82			1928N		1.05%	*								

8326611

Notes:—

* Being redetermined by Code BE

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. 605

SAMPLE TYPE : DRILL CORE FROM 1870N TO 1928N

SURFACE SAMPLES 1080E

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
131385		1080E	1930N		2100									
84			1932N		6800									
85			1934N		6000									
86			1936N		6600									
87			1938N		10450									
88			1940N		680									
89			1942N		8200									
3390			1944N		160									
91			1946N		160									
92			1948N		1350									
93			1950N		3050									
94			1952N		3000									
95			1954N		3300									
96			1956N		24450									
97			1958N		2750									
98			1960N		2850									
99			1962N		3000									
147500			1964N		3000									
01			1966N		4550									
02			1968N		3700									
03			1970N		5000									
04			1972N		3500									
05			1974N		1950									
06			1976N		2300									
07			1978N		55									
08			1980N		320									
09			1982N		250									
510			1984N		560									
11			1986N		580									
12			1988N		510									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1930N TO 1988N

SURFACE SAMPLES 1080E

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
197513		10E0E	1990N		820									
14			1998N		3400									
15			1994N											
16			1996N											
17			2002N		865									
18			2000N		10									
19			2004N		865									
520			2006N		30									
21			2008N		6									
22			2010N		12									
23			2012N											
24			2016N		320									
25			2014N		2650									
26			2018N		1000									
27			2020N		640									
28			2022N		4750									
29			2026N		4400									
530			2024N		4550									
31			2028N		4050									
32			2030N		5400									
33			2032N		1550									
34			2036N		1250									
35			2034N		8400									
36			2038N		1100									
37			2042N		1650									
38			2040N		1900									
39			2044N		2100									
540			2046N		2400									
41			2048N		1300									
42			2048N		150									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1990N TO 2048N

SURFACE SAMPLES 10E0E

83261D

607

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
surface samples	GROUND CORE			m	SPLIT	GROUND								
147543		10E/OE	2050N		56.0									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 2050N TO 2050N

SURFACE SAMPLES 10E/OE

809

832621

82-1698 Vol 2. Cover 81-005F.

METALS EXPLORATION LIMITED October Report.

MT BISCHOFF TIN PROSPECT

MT BISCHOFF MINE AREA

STAGE 3

DRILLING PROGRAMME

as at 10 - 81

Scale 1 2000

5 cm

MEL GRID NORTH (330°)

ADOPT MAG NTH

0 50 100 METRES

Porphyry

Dolomite

Dolomite Sulphide Lode

Siltstones, Shales, Quartzites

Fault

Interpreted Geological Contact

Diamond Drillhole

Proposed

Completed

Completed Drillholes

December .	MBD 47,48,49
January .	MBD 50,51,52
February	MBD 53, 54, 55, 56, 57, 58
March	MBD 63
April	MBD 64, 65, 66, 66A, 67, 68, 69, 70 71, 72
May .	MBD 73, 74, 75, 76, 77, 79, 80, 81 82 83, 84
June	MBD 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95
July	MBD 96, 97, 98, 99, 100, 101, 102, 103, 104
August	MBD 104
September	MBD 105, 106, 107, 108, 109, 110, 111, 112, 113, 114
October	MBD 115, 116, 117, 118, 119, 120, 121, 122

Rev 30 5 81

05

Drg. No. 81-005F

METALS EXPLORATION LTD.
80 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE (03) 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR NOVEMBER, 1981.

DKSG

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MT. BISCHOFF TIN PROSPECT

REPORT FOR NOVEMBER, 1981

General.

Activity on site continued with programmed infill drilling of porphyry in the White Face and Stanhope areas. Surface sampling over the pit area was continued and re-interpretation of the DSL ore reserve initiated in preparation for the Stage 3 report.

Mine planning studies for the three development proposals considered in the Austin Anderson study, were completed by Mr. P. Tysen of CRA. Preliminary optimisation of the mining plans by Mr. G. Jones, on contract to M.E.L., was begun immediately.

The Austin Anderson Preliminary Engineering study was presented in draft form and approval given to complete the study for presentation in early December.

Metallurgical work was confined to assessment of ore variability and commencement of the porphyry preconcentration piloting work at Mineral Deposits Ltd.

Geology.

(i) Diamond Drilling.

Six drill holes were commenced during the period and six completed for a total meterage of 553.4 m. The reduced number of holes drilled reflects the deeper drilling associated with porphyry infill holes. The general aim of the drilling being to infill the White Face, Stanhope and Queen Dykes to a 40 x 40 metre spacing. The drilling programme is scheduled to be completed prior to the contractor taking a Christmas break from 18th. December.

Results obtained for each hole are described below, with comment as to likely effect on Stage 3A reserve estimates.

MBD 122

Completed on Section 980E in the main pit, this hole was partially reported last month. Significant intercepts achieved were:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
48.4	53.0	4.6	0.71	DSL
59.0	60.0	1.0	1.18	DSL
63.0	77.0	14.0	0.21	Porphyry
77.0	86.6	9.6	1.85	DSL

MBD 122 Contd

The porphyry intercept achieved, basically confirms Stage 3A interpretations whereas DSL intercepts are outside of Stage 3A reserve blocks, indicating minor increases to reserves.

MBD 123

Drilled as an infill hole to the White Face Porphyry on Section 1240E, this hole achieved a porphyry intercept as interpreted from 79.4 to 96.9 m (ie. 17.5 metres). The grade of intercept shown below, indicates that the wide interval of plus 0.3% Sn interpreted in upper sections of the White Face Dyke, may continue at depth.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
79.4	95.5	16.1	0.38	Porphyry

MBD 124

A further infill hole to the White Face Porphyry on Section 1220E, this achieved two significant porphyry intercepts from 74.3 to 89.9 m (ie. 15.6 metres) and from 93.0 to 105.5 m (ie. 12.5 metres). The first intercept was approximately as interpreted, however the second appears to be an off shoot carrying low grade.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
76.3	88.3	12.0	0.32	Porphyry

MBD 125

Drilled on Section 1340E as an infill hole on the Stanhope Dyke. This hole intersected porphyry in the interpreted position from 37.8 to 52.7 m (ie. 14.9 metres).

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
38.8	46.8	8.0	0.62	Porphyry
52.7	53.7	1.0	0.41	Sediment

MBD 126

Drilled on Section 1380E as an infill hole on the Stanhope Dyke. This hole also intersected porphyry in the interpreted position from 28.5 to 43.5 m (ie. 15.0 metres).

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
29.8	41.8	12.0	0.42	Porphyry

MBD 127

Drilled on Section 1400E to confirm the interpretation of Queen Dyke approaching the junction with Stanhope Dyke. This hole achieved a large porphyry intercept from 62.5 to 89.6 m (ie. 27.1 metres) including 1.8 metres of old workings. The previous Queen Dyke interpretration would have provided a 14 metre intercept only and it is probable that the interpretation will change for this intercept to be Stanhope Dyke. Good grades were encountered, as indicated below.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
62.5	64.5	2.0	0.42	Porphyry
68.0	76.0	8.0	0.63	Porphyry
76.0	81.0	5.0	0.58	Zone-Old Workings
81.0	88.0	7.0	0.54	Porphyry

MBD 128

Drilled on Section 1420E to confirm the interpretation of Queen Dyke. This hole failed to intersect Queen Dyke in the interpreted position over an interpreted 12 metres. However, it did intersect Queen Dyke 18 metres further down the hole from 62.4 to 86.0 m (ie. 28.6 metres down hole intercept). This hole will significantly alter the interpretation of Queen Dyke and Stanhope Dykes within the Eastern Pit. Incomplete assay data indicates that the Queen Dyke in this position is low grade (ie less than 0.1% Sn).

(ii) Surface Sampling.

Surface sampling every 2 metres along North South section lines was continued with Sections 1120E to 1180E completed during the period. Indication of grade continues over areas previously interpreted as barren or less than 0.1% Sn. Assays are incomplete beyond Section 1120E.

This work will be continued over the White Face DSL to Section 1280E, prior to completion of Sections 940E to 1040E.

Arrangements have been made for a hydraulic excavator to be on site from early December, to start trenching to approximately 2 metres for channel sampling within the White Face DSL and, over the low core recovery areas of the main pit (to approximately 6 metre depth in selected places).

Mine Planning.

Mine planning studies associated with the three cases for the Austin Anderson Preliminary Engineering Study, were completed during the period. These plans aim for maximum mine life in open pitting and consider the mining plant to be Joint Venture owned and operated.

Mine Planning Contd.

All material moved is assumed to be drilled and blasted on 5 metre benches and dilution is taken as 10%.

Reserves used are those available from the August, 1981 revision and exclude possible low grade material indicated from surface sampling.

The stripping ratios developed, are excessive averaging approximately 5 to 1, on a tonnage basis, utilising a 0.1% Sn cut off in porphyry ore.

Optimisation of these mine plans has been initiated with the aim of reducing stripping required, increasing porphyry cut off grade to 0.2% Sn and reducing costs via utilisation of 10 metre benches in waste plus assessment of potential for partial ripping and dozing.

Priority has been placed on reinterpretation of ore reserves in the DSL and porphyry to ensure a realistic basis for optimisation.

Metallurgy

Metallurgical studies for the period have included continued work on ore variability in terms of recovery and grindability, plus bulk testing of the porphyry preconcentration circuit.

Preliminary results from the variability work, indicate variation in metallurgical response to be generally within the limits of that seen in the bulk DSL composites MCA and MCC. It does not appear that a head grade recovery relationship exists within DSL and variability of response will be explained more by DSL type and possibly position within the orebody. This assessment will be made when all results are available.

Results from the bulk preconcentration testwork on porphyry at Mineral Deposits Ltd are expected during December. However, preliminary work indicates similar response to that seen on smaller scale testwork performed previously.

Engineering.

The Austin Anderson Preliminary Engineering Study was presented in draft form towards the end of November. Cases studied included a base concentrator size of 300,000 tpa at Waratah, estimated from basic input criteria. A 200,000 tpa base concentrator at Waratah, factored from the above case and engineering required to mine and process 260,000 tpa through the Aberfoyle Cleveland plant on a custom milling basis. In each case, the cost of establishing a preconcentrator for porphyry ore was also estimated.

The costs established represent estimation of capital to +-25% on the brief document scope. Definition of this scope covered all facilities possibly required. Preparation of the brief for actual feasibility engineering will include cost justification of all aspects, particularly with respect to plant (the major capital cost component).

Budget.

Appended expenditure figures for the period June to December, 1981 indicate $518,000 spent to end November against a budget to end December of $810,000. As indicated last month, this discrepancy is largely due to lags in invoicing and payment.

A forecast carry over of $70,000 into 1982 still exists and this figure has been incorporated in the provisional budget for January to June, 1982 as appended to this report.

APPENDED INFORMATION

Drill Hole Statistics - November

Project Expenditure Details

Provisional Budget - January to June, 1982

Summary Logs and Assays - MBD 122
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Surface Sample Assays - SECTION 1080E
1100E
1120E

Revised Stage 3 Drill Hole Location Map

MT. BISCHOFF JOINT VENTURE - NOVEMBER, 1981.

DRILL HOLE STATISTICS.

HOLE NO.	N	E	RL	DIP	AZI	FROM	TO	METRES DRILLED	FINAL DEPTH
MBD 122	1849.19	981.94	636.81	-90	-	53.0	98.0	45.0	98.0
MBD 123	2069.75	1240.00	683.42	-55	180	0.0	105.0	105.0	105.0
MBD 124	2050.02	1219.91	682.60	-60	180	0.0	112.0	112.0	112.0
MBD 125	2119.13	1340.21	687.63	-60	180	0.0	65.0	65.0	65.0
MBD 126	2095.86	1379.93	694.57	-60	180	0.0	55.0	55.0	55.0
MBD 127	2135.05	1399.92	698.10	-90	-	0.0	109.4	109.4	109.4
MBD 128	2150.12	1420.02	701.98	-60	360	0.0	62.0	62.0	*
							TOTAL	553.4	

* In progress at period end.

Number of shifts - 35.
Average metres per shift 15.81.

MT BISCHOFF PROJECT

	November 1981		5 Months to November 1981		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
ADMINISTRATION						
Technical Services	1	10	43	53	63	63
Consumables	3		4		1	1
Travel	1	1	5	2	2	2
Consultants				1	1	1
	5	11	52	56	67	67
GEOLOGY						
Technical Services	10	9	68	52	60	60
Labour	4	1	14	8	8	8
Consumables	5	1	20	22	22	22
Accommodation		1	2	5	7	7
Vehicles	3	1	4	5	5	5
Travel	1	1	3	1	2	2
Contractors	52		111	188	138	188
Consultants	1	2	3	15	17	17
Capital Expenditure			8	8	8	8
	76	16	233	304	267	317
MINING						
Technical Services		3	14	12	25	15
Labour		1		1	1	1
Consumables		2	7	9	9	9
Travel	1	1	1	2	3	3
Contractors		22	35	63	64	64
Consultants		10	1	22	24	24
	1	39	58	109	126	116
METALLURGY						
Technical Services	21	13	47	65	57	77
Labour		1		3	4	4
Consumables	1		1	24	24	24
Accommodation	1		1		1	1
Travel	2	2	4	7	12	12
Contractors		1	8	12	15	12
Consultants	7	2	8	5	6	6
	32	19	69	116	119	136
ENGINEERING						
Technical Services	7	8	34	25	40	30
Consumables					1	1
Travel	2	3	3	8	8	8
Contractors	4	31	6	74	114	114
Consultants		1	2	7	8	8
	13	43	45	114	171	161

MT BISCHOFF JOINT VENTURE

	November 1981		5 Months to November 1981		Six Months to December 1981	
	Actual	Budget	Actual	Budget	Forecast	Budget
	$000		$000		$000	
Administration	5	11	52	56	67	67
Geology	76	16	233	304	267	317
Mining	1	39	58	109	126	116
Metallurgy	32	19	69	116	119	136
Engineering	13	43	45	114	171	161
Commercial	2	5	3	7	13	13
STAGE 3A	(1)		58		58	
TOTAL PROJECT:	128	133	518	706	821	810

SUMMARY OF EXPENDITURE TO _____

	CURRENT PERIOD $000	ACCUMULATIVE $000
Stage 1		270
Stage 2A - Early Start		29
Stage 2A		199
Overruns: Stage 1 - M.E.L.		11
Metallurgical - C.R.A.E.		24
Stage 2B		482
Stage 2B - 3A Holding Costs Offset - A.I.R. & D.		40
Stage 3A - Partly offset by A.I.R. & D Grant Received June, 1981 $6,500	58	861
Stage 3B - Partly offset by A.I.R. & D Grant Received July, 1981 $25,863	460	460
ACCUMULATIVE EXPENDITURE TO DATE	518	2376

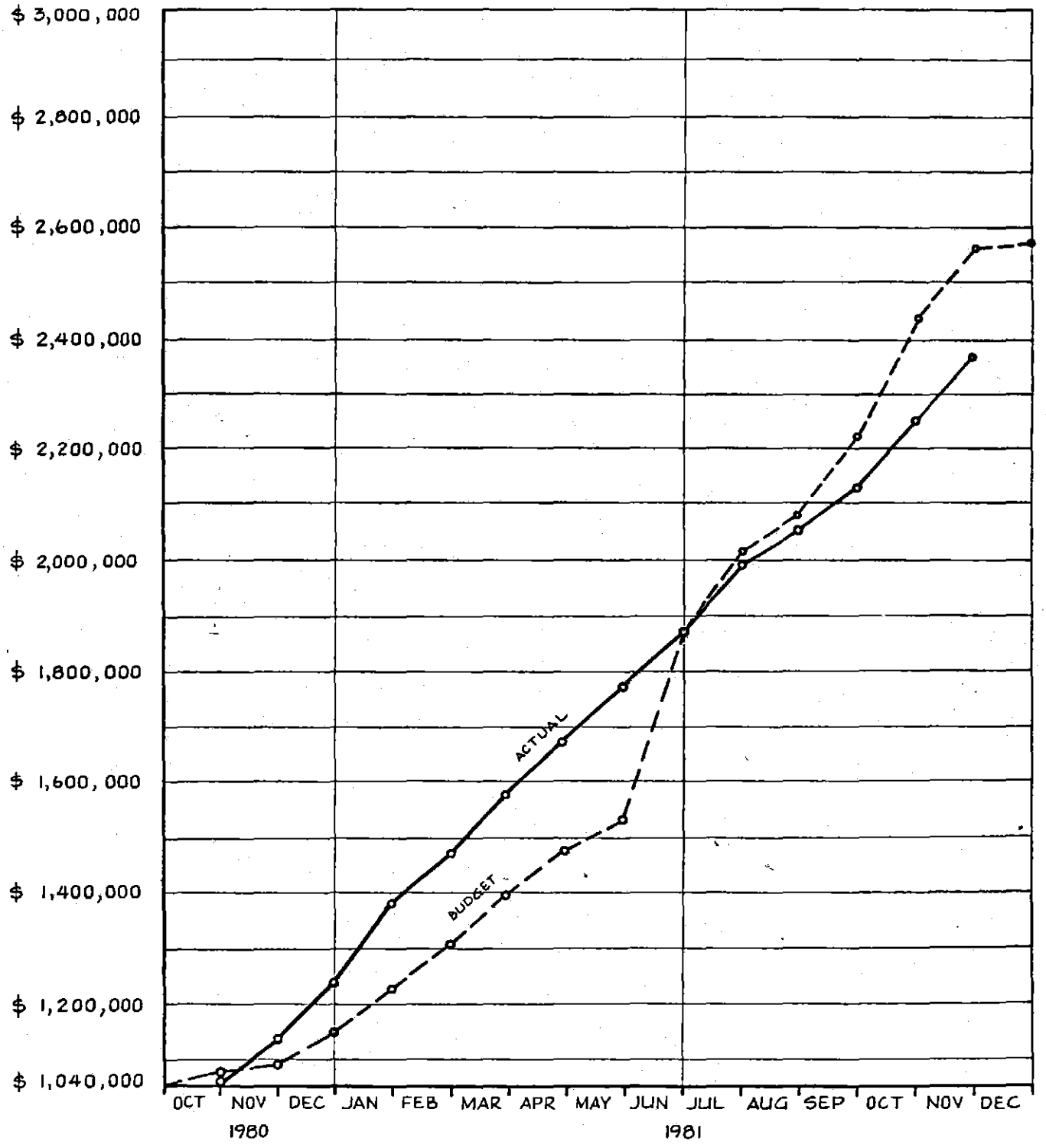
MT. BISCHOFF JOINT VENTURE - BUDGET SUMMARY

JANUARY - JUNE, 1982

ENTRE/AREA	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TOTAL
	$	$	$	$	$	$	$
Administration 01							
Technical Services 01	22,900	20,900	23,100	15,400	17,500	17,050	116,850
General Expenses 03	1,000	1,000	1,000	1,000	1,500	6,000	11,500
Travel 06	1,100	1,100	400	1,100	-	1,450	5,150
OTAL ADMINISTRATION	25,000	23,000	24,500	17,500	19,000	24,500	133,500
eology 02							
Technical Services 01	12,800	12,160	8,480	12,800	8,800	13,440	68,480
Labour 02	1,300	1,200	700	650	650	670	5,170
General Expenses 03	5,550	5,290	2,670	1,100	1,900	1,540	18,050
Accommodation 04	900	1,100	1,200	900	1,100	1,200	6,400
Vehicles 05	900	800	900	800	900	800	5,100
Travel 06	250	250	250	1,050	650	350	2,800
Contractors 07	21,400	30,900	1,500	-	-	-	53,800
Consultants 08	8,900	6,300	2,800	2,200	-	1,000	21,200
OTAL GEOLOGY	52,000	58,000	18,500	19,500	14,000	19,000	181,000
ining 03							
Technical Services 01	13,200	12,540	10,920	9,840	10,560	13,500	70,560
General Expenses 03	550	710	430	660	790	500	3,640
Travel 06	250	250	650	-	650	-	1,800
Consultants 08	7,000	8,000	3,000	4,000	4,000	4,000	30,000
OTAL MINING	21,000	21,500	15,000	14,500	16,000	18,000	106,000
letallurgy 04							
Technical Services 01	8,520	8,520	4,200	1,800	4,320	4,320	31,680
General Expenses 03	880	880	750	300	230	-	3,040
Travel 06	4,900	600	850	400	450	-	7,200
Contractors 07	12,000	3,000	3,000	2,000	-	-	20,000
Consultants 08	1,700	-	700	2,000	-	680	5,080
OTAL METALLURGY	28,000	13,000	9,500	6,500	5,000	5,000	67,000
ngineering 05							
Technical Services 01	3,600	7,440	7,920	6,840	8,160	8,160	42,120
General Expenses 03	500	500	250	250	250	250	2,000
Travel 06	650	700	3,800	3,500	3,200	400	12,250
Contractors 07	10,000	-	-	20,000	70,000	70,000	170,000
Consultants 08	1,250	5,360	3,030	1,410	1,390	190	12,630
OTAL ENGINEERING	16,000	14,000	15,000	32,000	83,000	79,000	239,000

CENTRE/AREA	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	TOTAL
	$	$	$	$	$	$	$
Commercial 06							
Technical Services 01	4,000	2,880	2,320	2,300	2,880	2,880	17,260
General Expenses 03	2,000	2,120	180	200	2,120	2,120	8,740
Travel 06			500	500	1,000	500	2,500
TOTAL COMMERCIAL	6,000	5,000	3,000	3,000	6,000	5,500	28,500
TOTAL BUDGET	148,000 *	134,500	85,500	93,000	143,000	151,000	755,000

* Includes Forecast $70,000 carry forward of delayed payments on Stage 3B Budget (June - Dec, 1981). On this basis Stage 3B total expenditure will be in line with budget.



CUMULATIVE EXPENDITURE SCHEDULE

MT. BISCHOFF

STAGE 3 SUMMARY
as at . .81

Drg. No. 81-407

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 122

Objective and Anticipated Lengths to Targets: To delineate porphyry and DSL above and below porphyry.

Drilling Commenced: 29/10/81 Drilling Completed: 6/11/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: -

Angle of Hole: VERTICAL

Final Depth of Hole: 98.0 m

Core Sizes:

From 0 To 6.0 = TRICONE

From 6.0 To 98.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged:

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg	Collar and Change Points: Length to C.P	North	East	R. L.
	0					0	1849.19	981.94	636.81
0		15.0	90°	-					
	15.0					15.0	1849.19	981.94	621.81
30.0		30.0	89°	312°	282°				
	45.0					45.0	1849.54	981.55	591.81
60.0		34.0	88°	311°	281°				
	79.0					79.0	1850.32	980.66	557.84
98.0		19.0	88.5°	347°	317°				
	98.0					98.0	1850.80	980.54	538.84
-98.0									

Survey By: Date:

Calculated By: R.J. REID Date: 16/11/81

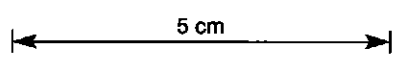
HOLE N°: MBD 122

8326635 622

832636 623

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	6.0	0 - 6.0: NOT CORED.						
	20.0	6.0 - 26.0: DOLOMITE. Pale grey finely crystalline dolomite. Mostly broken core. Occasional thin veins of py and/or sph, rarely exceeding 2 mm thick.		2		py, sph Trace in occasional thin blades and stringers.		
20	2.6	26.0 - 28.6: DOLOMITE SULPHIDE LODE. Mainly py as irregular veins and aggregates with qtz-carb.		5/8		60% py - coarse veins and aggregates - with poor recovery.		
	20.7	28.6 - 49.3: DOLOMITE. Pale grey dolomite, finely crystalline. Common thin py (with carbonate) veins and stringers.		2		trace py, sph in common thin veins and stringers. Occasional veins up to 10 cm; these contain carbonate.		
40	3.7	49.3 - 53.0: DOLOMITE SULPHIDE LODE. 65% qtz-carb, 20% py, 15% dark green serpentine?		7/8/5		20% py, finely disseminated and occasional veins. Also minor sph arsenopy.		
	3.0	53.0 - 56.0: DOLOMITE (RECRYSTALLIZED). Weathered cream dolomite with abundant py.		3		10% py in irregular veins and disseminated.		
	3.9	56.0 - 59.9: DOLOMITE SULPHIDE LODE. 85% qtz-carb, 10% py, 5% talc		8/5		10% finely disseminated py up to 25% locally.		
60	16.0	59.9 - 75.9: PORPHYRY. Matrix opaque white colour. Up to 25% qtz phenocrysts up to 10 mm dia. 20% coarsely disseminated py. Traces of fluorite, arsenopy, sph disseminated. Trace very finely disseminated cassiterite.		1		20% coarsely disseminated py. Traces of disseminated arsenopy sph, fluorite and fine cassiterite in places.		
	2.0	75.9 - 77.9: TRANSITION ZONE. Mixed porphyry and py rich DSL.		1/5/8		30% py as aggregates and dissem.		
80	8.7	77.9 - 86.6: DOLOMITE SULPHIDE LODE. 45% massive bronze po 35% qtz-carbonate 20% pale green talc		4/8		45% po - almost massive in parts. Minor arsenopy, py.		
	11.4	86.6 - 98.0: SILSTONE, lesser QUARTZITE, minor SHALE. Strongly disrupted in most parts. Mainly grey siltstone, with lesser fine qtzite, and black shale towards 98.0 m.		10/1/9		trace py, sph in veins and stringers with carbonate.		
100		END OF HOLE: 98.0 m.						

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (ED), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES



FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 122

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	144525	8.0	14.0	6.0		250								
	26	14.0	17.2	3.2		580								
	27	17.2	20.3	3.1		210								
148171		20.3	21.3	1.0	320									
	144528	21.3	25.5	4.2		620								
148172		25.5	27.5	2.0	3500									
148173		27.5	28.7	1.2	1150									
	144529	28.7	31.7	3.0		200								
	530	31.7	33.7	2.0		90								
	31	33.7	35.7	"		85								
	32	35.7	37.7	"		70								
	33	37.7	40.3	2.6		140								
	34	40.3	42.7	2.4		140								
	35	42.7	48.4	5.7		230								
148173		48.4	49.9	1.5	1.01%									
74		49.9	53.0	3.1	5700									
75		53.0	55.0	2.0	360									
76		55.0	56.0	1.0	1550									
77		56.0	57.0	"	2650									
78		57.0	58.0	"	1500									
79		58.0	59.0	"	1550									
180		59.0	60.0	"	1.18%									
81		60.0	61.0	"	1450									
82		61.0	62.0	"	820									
84		62.0	63.0	"	1250									
85		63.0	64.0	"	3100									
86		64.0	65.0	"	2750									
87		65.0	66.0	"	2400									
88		66.0	67.0	"	800									
89		67.0	68.0	"	3100									

Notes :— XRF BI method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 122

SAMPLE TYPE : DRILL CORE FROM 8.0 TO 68.0

½ NQ

8326314

624

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
148190		68.0	69.0	1.0	2900									
91		69.0	70.0	"	1700									
92		70.0	71.0	"	2200									
93		71.0	72.0	"	1900									
94		72.0	73.0	"	3600									
95		73.0	74.0	"	1550									
96		74.0	75.0	"	720									
97		75.0	75.9	0.9	2050									
98		75.9	77.0	1.1	2150									
99		77.0	78.0	1.0	4600									
148200		78.0	79.0	"	1.00%									
01		79.0	80.0	"	2.50%	*								
02		80.0	81.0	"	1.88%	*								
03		81.0	82.0	"	2.18%	*								
04		82.0	83.0	"	2.42%	*								
05		83.0	84.0	"	1.85%	*								
06		84.0	85.0	"	3.30%	*								
07		85.0	86.0	"	1.36%	*								
08		86.0	86.6	0.6	1.27%	*								
09		86.6	88.0	1.4	980									
	144536	88.0	90.0	2.0		140								
	37	90.0	92.0	"		32								
	38	92.0	93.9	1.9		210								
148210		93.9	94.9	1.0	980									
	144539	94.9	96.9	2.0		50								
	540	96.9	98.0	1.1		8								

Notes:—XRF Bi method

* Being redetermined by Lode Be

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 122

SAMPLE TYPE : DRILL CORE FROM 68.0 TO 98.0

1/2 core 1/2 ND

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 123

Objective and Anticipated Lengths to Targets: To delineate and test the Western Dyke (approx 60.0 - 70.0 m) and the Stanhope Dyke (75.0 - 85.0).

Drilling Commenced: 6/11/81 Drilling Completed: 11/11/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: 180° (grid)

Angle of Hole: 55°

Final Depth of Hole: 105.0 m

Core Sizes:

From 0 To 3.5 = TRICONE

From 3.5 To 105.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 13/11/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg
	0				
0		22.5	55°	180°	
	22.5				
45.0		37.5	55.5°	183°	153°
	60.0				
75.0		30.0	57°	181.5°	151.5°
	90.0				
105.0		15.0	58°	181°	151°
	105.0				
-105.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	2069.75	1240.00	683.42
22.5	2056.84	1240.00	664.99
60.0	2035.63	1238.89	634.08
90.0	2019.30	1238.46	608.92
105.0	2011.35	1238.32	596.20

Survey By: Date:

Calculated By: R.J. REID Date: 16/11/81

832640 627

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.5	0 - 3.5: NOT CORED.						
	61.3	3.5 - 64.8: SILTSTONE, minor QUARTZITE. Moderately disrupted for most parts. Main fine grey siltstone, in beds up to 0.7 m and lesser amounts of fine, siliceous qtzite in beds up to 1.0 m. Stringers of py are common. Rare thin veins of qtzite (<2 mm thick). Occasional beds of qtzite contain traces of finely disseminated euhedral py.		10/ 11		trace py - in common thin stringers (up to 25 per metre in places). finely disseminated through occasional qtzite beds.		
20								
40								
60								
	1.0	64.8 - 65.8: PORPHYRY. Translucent, altered matrix		1		15% coarsely disseminated py.		
	12.9	65.8 - 78.7: SILTSTONE, minor QUARTZITE. As 3.5 - 64.8.		10/		trace py in common stringers. Traces finely disseminated through occasional qtzite beds.		
80		78.4 - 79.0: PORPHYRY. Altered, white matrix.		1		15% disseminated py.		
		79.0 - 79.4: SILTSTONE. Strongly disrupted.				trace py in stringers.		
	12.9	79.4 - 96.9: PORPHYRY. Matrix mainly semi-translucent white/grey colour. 15% qtz phenocrysts up to 8 mm dia. Feldspars totally replaced by py - coarsely disseminated up to 10 mm. Py weathered (weakly) in most parts.		1		15% coarsely disseminated py, grains up to 10 mm. Trace finely disseminated sph and arsenopy. Rare thin py veins.		
	1.2	96.9 - 98.1: SILTSTONE. Moderately disrupted.		10		trace py in stringers.		
100	1.1	98.1 - 100.1: PORPHYRY. As 79.4 - 96.9.		1		15% coarsely disseminated py.		
	4.9	100.1 - 105.0: QUARTZITE, minor SILTSTONE. siltstone Mainly thin siliceous fine qtzite with minor interbeds.		11/		up to 5% finely disseminated py in qtzite. Rare py stringers.		
		END OF HOLE: 105.0 m.						
120		5 cm						

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDS), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 123

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	194541	3·5	6·0	2·5		48								
	42	6·0	8·0	2·0		110								
	43	8·0	10·0	"		960								
	44	10·0	12·0	"		390								
	45	12·0	14·0	"		1200								
	46	14·0	16·0	"		7500								
	47	16·0	18·0	"		70								
	48	18·0	20·0	"		55								
	49	20·0	22·0	"		44								
	5550	22·0	24·0	"		32								
	51	24·0	26·0	"		26								
	52	26·0	28·0	"		18								
	53	28·0	30·0	"		20								
	54	30·0	32·0	"		22								
	55	32·0	34·0	"		22								
	56	34·0	36·0	"		18								
	57	36·0	38·0	"		14								
	58	38·0	40·0	"		12								
	59	40·0	42·0	"		10								
	560	42·0	44·0	"		18								
	61	44·0	46·0	"		18								
	62	46·0	48·0	"		14								
	63	48·0	50·0	"		16								
	64	50·0	52·0	"		26								
	65	52·0	54·0	"		22								
	66	54·0	56·0	"		16								
	67	56·0	58·0	"		75								
	68	58·0	60·0	"		28								
	69	60·0	62·0	"		34								
	570	62·0	63·5	1·5		42								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 123

SAMPLE TYPE : DRILL CORE FROM 3·5 TO 63·5

Grind

8326411

329

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
148211		63·8	64·8	1·0	190									
12		64·8	65·8	"	520									
13		65·8	66·8	"	210									
	144571	66·8	68·8	2·0		95								
	72	68·8	70·8	"		98								
	73	70·8	72·8	"		99								
	74	72·8	74·8	"		94								
	75	74·8	76·8	"		75								
	76	76·8	77·7	0·9		110								
148214		77·7	78·7	1·0	170									
15		78·7	79·0	0·3	320									
16		79·0	79·5	0·5	190									
17		79·5	80·5	1·0	4200									
18		80·5	81·5	"	6200									
19		81·5	82·5	"	2000									
220		82·5	83·5	"	2500									
21		83·5	85·5	2·0	720									
22		85·5	86·5	1·0	1300									
23		86·5	87·5	"	8400									
24		87·5	88·5	"	3500									
25		88·5	89·5	"	4250									
26		89·5	90·5	"	6700									
27		90·5	91·5	"	4250									
28		91·5	92·5	"	5400									
29		92·5	93·5	"	4400									
230		93·5	94·5	"	3550									
31		94·5	95·5	"	2500									
32		95·5	96·9	1·4	540									
33		96·9	98·3	"	1200									
34		98·3	99·3	1·0	620									

Notes :— XRF 81 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 123

SAMPLE TYPE : DRILL CORE FROM 63·8 TO 99·3

NQ Split

8326642

629

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
148235		99.3	100.1	0.8	1250									
36		100.1	101.1	1.0	420									
	144577	102.2	103.7	1.5		44								
	78	103.7	105.0	1.3		32								

Notes :— XRF (B) method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 123

SAMPLE TYPE : DRILL CORE FROM 99.3 TO 105.0

N½ Split

832643

630

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 124

Objective and Anticipated Lengths to Targets: To delineate and test the western Dyke porphyry (60.0-70.0 m) and the Stanhope Dyke porphyry (approx 90.0-100.0 m).

Drilling Commenced: 11/11/81 Drilling Completed: 14/11/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES 37

Bearing of Hole: 180° (grid)

Angle of Hole: 60°

Final Depth of Hole: 112.0 m

Core Sizes:

From 0 To 3.5 = TRICONE

From 3.5 To 112.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 17/11/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg
	0				
0		19.5	60°	180°	
	19.5				
39.0		37.5	60°	182°	152°
	57.0				
75.0		36.5	62.5°	181°	151°
	93.5				
112.0		18.5	62.5°	181.5°	151.5°
	112.0				
-112.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	2050.02	1219.91	682.60
19.5	2040.27	1219.91	665.71
57.0	2021.53	1219.26	633.24
93.5	2004.68	1218.96	600.86
112.0	1996.14	1218.74	584.45

Survey By: Date:

Calculated By: R.J. REID Date: 16/11/81

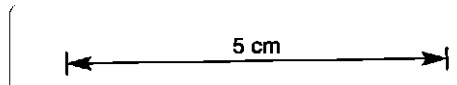
HOLE N°: MBD 124

832644

631

832645

632

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER B CODE	GRAPHIC LOG	POINTER B CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.5	0 - 3.5: NOT CORED.						
	70.8	3.5 - 74.3: SILTSTONE, minor QUARTZITE. Mainly fine grey siltstone, moderately disrupted for most part, with minor thin beds of fine siliceous grey qtzite. Core broken for most part. Occasional stringers of py, and rare veins of py up to 5 cm thick, usually with qtz. Rare beds of pyritic siltstone e.g approx. 53.5 m.		10/11		trace py in occasional stringers and rare veins.		
20								
40								
60		62.0: 10 cm clay fault pug. 						
	15.6	74.3 - 89.9: PORPHYRY. Matrix slightly translucent white-grey, leached to milky white in parts. 20% phenocrysts up to 10 mm. 15% coarsely disseminated py.		1		15% coarsely disseminated py - varies from 10-20% locally. trace disseminated arsenopy.		
80								
	3.1	89.9 - 93.0: SILTSTONE, QUARTZITE. Strongly disrupted thinly bedded.		10/11		trace py in stringers.		
	12.8	93.0 - 105.8: PORPHYRY. As 74.3 - 89.9.		1		15% coarsely disseminated py.		
100		105.2 - 105.5: Included sediment-brecciated qtzite and siltstone.						
	6.2	105.8 - 112.0: QUARTZITE, SILTSTONE. Moderately disrupted in parts. Thick qtzite beds, and massive siltstone horizons.		11/10		trace py disseminated through qtzite, and as occasional stringers.		
		END OF HOLE: 112.0 m.						
120								

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", G A BERKMAN & W R RYALL (ED), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 124

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	144579	35	11.0	7.5		24								
	580	11.0	14.0	3.0		48								
	81	14.0	16.0	2.0		42								
	82	16.0	18.0	"		38								
	83	18.0	20.0	"		28								
	84	20.0	22.0	"		230								
	85	22.0	24.0	"		660								
	86	24.0	26.0	"		60								
	87	26.0	28.0	"		24								
	88	28.0	30.0	"		8								
	89	30.0	32.0	"		26								
	590	32.0	34.0	"		30								
	91	34.0	36.0	"		50								
148237		36.0	36.45	0.45	1000									
38		36.45	37.3	0.85	1.04%									
39		37.3	38.0	0.7	200									
	144592	38.0	40.0	2.0		95								
	93	40.0	42.0	"		38								
	94	42.0	44.0	"		34								
	95	44.0	46.0	"		18								
	96	46.0	48.0	"		40								
	97	48.0	50.0	"		50								
	98	50.0	52.0	"		26								
	99	52.0	54.0	"		32								
	144700	54.0	56.0	"		24								
	01	56.0	58.0	"		32								
	02	58.0	60.0	"		38								
	03	60.0	62.0	"		140								
	04	62.0	64.7	"		110								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 124

SAMPLE TYPE : DRILL CORE FROM 3.5 TO 64.7

1 Grind.

633

8329649

SAMPLE NO. SPLIT CORE	SAMPLE NO GROUND CORE	FROM m	TO m	INTERVAL m	Sn SPLIT	Sn GROUND	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
148240		64·7	65·7	1·0	32									
41		65·7	66·3	0·6	70									
42		66·3	67·3	1·0	2800									
43		67·3	68·3	"	280									
44		68·3	69·3	"	75									
45		69·3	70·3	"	190									
46		70·3	71·3	"	320									
47		71·3	72·3	"	660									
48		72·3	73·3	"	920									
49		73·3	74·3	"	1050									
250		74·3	75·3	"	860									
51		75·3	76·3	"	1100									
52		76·3	77·3	"	3450									
53		77·3	78·3	"	2550									
54		78·3	79·3	"	3700									
55		79·3	80·3	"	3350									
56		80·3	81·3	"	3050									
57		81·3	82·3	"	2650									
58		82·3	83·3	"	3500									
59		83·3	84·3	"	2150									
260		84·3	85·3	"	4750									
61		85·3	86·3	"	2400									
62		86·3	87·3	"	3800									
63		87·3	88·3	"	2550									
64		88·3	89·3	"	580									
65		89·3	89·9	0·6	500									
66		89·9	91·3	1·4	230									
67		91·3	92·6	1·3	160									
68		92·6	93·3	0·7	220									
69		93·3	94·3	1·0	4000									

Notes:— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 124

SAMPLE TYPE : DRILL CORE FROM 64·7 TO 94·3

No Split

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
145270		94·3	95·3	1·0	410									
71		95·3	96·3	"	990									
72		96·3	97·3	"	680									
73		97·3	98·3	"	700									
74		98·3	99·3	"	560									
75		99·3	100·3	"	840									
76		100·3	101·3	"	1050									
77		101·3	102·3	"	400									
78		102·3	103·3	"	500									
79		103·3	104·3	"	300									
280		104·3	105·3	"	390									
81		105·3	105·8	0·5	560									
82		105·8	107·0	1·2	170									
	144705	107·0	109·0	2·0		160								
	06	109·0	111·0	"		100								
	07	111·0	112·0	1·0		30								

Notes :— XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. m80 124

SAMPLE TYPE : DRILL CORE FROM 94·3 TO 112·0

N½ Split

83264

635

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 125

Objective and Anticipated Lengths to Targets: To delineate and test Quartz Feldspar Porphyry in interval 50.0 - 60.0 m.

Drilling Commenced: 14/11/81 Drilling Completed: 18/11/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES

Bearing of Hole: 180°

Angle of Hole: 60°

Final Depth of Hole: 65.0 m

Core Sizes:

From 0 To 3.0 = TRICONE

From 3.0 To 65.0 = NQ

From To =

From To =

From To =

Logged By: D. COMPSTON

Date Logged: 24/11/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg	Collar and Change Points: Length to C.P	North	East	R.L.
	0					0	2119.13	1340.21	687.63
0		14.5	60°	180°					
	14.5					14.5	2111.88	1340.21	675.07
29.0		29.5	60.5°	180°	150°				
	44.0					44.0	2097.35	1340.21	649.40
59.0		18.0	61°	180.5°	150.5°				
	62.0					62.0	2088.63	1340.13	633.65
65.0		3.0	61°	180.5°	150.5°				
	65.0					65.0	2087.17	1340.12	631.03
-65.0									

Survey By: Date:

Calculated By: R.J. REID Date: 11/12/81

HOLE N°: MBD 125

832649 636

832650 637

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: TRICONE.						
	34.8	3.0 - 37.8: QUARTZITE, SILTSTONE. Thinly interbedded qtzite and siltstone. Beds rarely exceed 1 cm thick. In parts, siltstone is weakly calcareous or pyrrhoritic. Moderately disrupted in parts, core commonly broken. Trace py in common thin veins and stringers. Trace cassiterite in veins (eg. 8.0 m).		11/ 10		trace py≫cass py in thin veins and common stringers. Very minor cassiterite crystals in veins.		
20								
40	14.9	37.8 - 52.7: PORPHYRY. Matrix off white to pale brown. 20% qtz phenocrysts up to 10 mm diameter. 15% coarsely disseminated py. Rare veins of py with qtz. Trave arsenopy, sph disseminated.		1		15% py≫sph, arsenopy 15% coarsely disseminated py. Minor py in veins, some with qtz. Trace disseminated arsenopy and sph.		
	12.3	52.7 - 65.0: QUARTZITE, SILTSTONE. Interbedded fine qtzite and siltstone; beds rarely exceed 5 cm, usually 1-2 cm. Common stringers and rare veins of py.		11/ 10		trace py in thin veins and stringers.		
60								
		END OF HOLE: 65.0 m.						
80								

5 cm

FOR LEGEND SEE DRAWING NO.

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDS), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 125

LOG SHEET 1 OF 1

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	149708	3.0	6.0	3.0		90								
	09	6.0	8.0	2.0		48								
	710	8.0	10.0	"		22								
	11	10.0	12.0	"		22								
	12	12.0	14.0	"		26								
	13	14.0	16.0	"		28								
	14	16.0	18.0	"		130								
	15	18.0	20.0	"		42								
	16	20.0	22.0	"		55								
	17	22.0	24.0	"		22								
	18	24.0	26.0	"		55								
	19	26.0	28.0	"		36								
	720	28.0	30.0	"		240								
	21	30.0	32.0	"		34								
	22	32.0	34.0	"		48								
	23	34.0	36.8	2.8		210								
149263		36.8	37.8	1.0	300									
64		37.8	38.8	"	1250									
65		38.8	39.8	"	5700									
66		39.8	40.8	"	4250									
67		40.8	41.8	"	3750									
68		41.8	42.8	"	9000									
69		42.8	43.8	"	13.3%									
290		43.0	44.0	"	9100									
91		44.8	45.8	"	2500									
92		45.8	46.8	"	2500									
93		46.8	47.8	"	700									
94		47.8	48.8	"	1350									
95		48.8	49.8	"	2050									
96		49.8	50.8	"	1700									

Notes:— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 125

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 50.8

↓
grind

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
198297		508	527	1·9	8800									
98		527	537	10	9100									
	199724	537	557	20		390								
	25	557	577	"		170								
	26	577	597	"		1250								
	27	597	617	"		755								
	28	617	637	"		75								
	29	637	650	1·3		44								

Notes :— XRF BI method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 125

SAMPLE TYPE : DRILL CORE FROM 508 TO 650

NO Split

639

8326652

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 126

Objective and Anticipated Lengths to Targets: To test Stanhope Dyke.

Drilling Commenced: 18/11/81 Drilling Completed: 19/11/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES

Bearing of Hole: 180°

Angle of Hole: -60°

Final Depth of Hole: 55 m

Core Sizes: NQ

From 4.0 To 55.0 = 51.0 m

From To =

From To =

From To =

From To =

Logged By: N.R. Langsford

Date Logged: 2/12/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg
	0				
0		12.5	60°	180°	
	12.5				
25.0		27.5	60°	181.5°	151.5°
	40.0				
55.0		15.0	61°	181°	151°
	55.0				
~55.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	2094.86	1379.93	694.57
12.5	2088.61	1379.93	683.74
40.0	2074.86	1379.57	659.93
55.0	2067.59	1379.44	646.81

Survey By: Date:

Calculated By: R.J. REID Date: 10/12/81

832653 HOLE N°: MBD 126

640

832654 641

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	2.0	0 - 2.0: NO CORE.						
20	26.5	2.0 - 28.5: Grey fine grained faintly laminated SILTSTONES and interbedded QUARTZITES, thinly bedded. White medium grained SANDSTONE as thin interbeds and clasts in slump structures below 20 m. Core very broken by bedding plane parting joints, and irregular fractures. Brown tourmaline? alteration below 25 m. Narrow zone of silicification near contact.		11/10		Minor disseminated pyrite, few thin pyrite - qutz veins 1-3 mm wide, minor pyrite in "feathered" fractures in quartzite sections.		
40	15.0	28.5 - 43.5: Grey to light brown altered PORPHYRY 15-20% quartz phenocrysts up to 10 mm in fine gr. ground moss. Pyrite up to 20%, some as tabular grains replacing feldspar. Pyrite replacement not as complete near contacts, porphyry also finer grained.		1		Up to 20% disseminated pyrite, mainly 5-10 mm, minor asp, sph, cass. Thin qutz-cass-py-asp veins up to 10 mm. Cass. crystals visible in vughs 44-45 m.		
	11.5	43.5 - 55.0: Light grey fine grained faintly laminated irregularly bedded SILTSTONES. Slumps and flaser bedding common, with contorted pale SANDSTONE interbeds and clasts.		11/10		5 cm wide pyrite veins at 48.2, 48.5 m, minor disseminated pyrite and pyrite-quartz veinlets.		
60		END OF HOLE: 55.0 m.						

5 cm

NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL(ED), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 126

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	149730	4·0	6·0	2·0		24								
	31	6·0	8·0	"		20								
	32	8·0	10·0	"		36								
	33	10·0	12·0	"		36								
	34	12·0	14·0	"		22								
	35	14·0	16·0	"		32								
	36	16·0	18·0	"		30								
	37	18·0	20·0	"		22								
	38	20·0	22·0	"		310								
	39	22·0	24·0	"		130								
	740	24·0	26·0	"		130								
	41	26·0	27·8	1·8		470								
148299		27·8	28·8	1·0	1100									
148300		28·8	29·8	"	1600									
01		29·8	30·8	"	2800									
02		30·8	31·8	"	1800									
03		31·8	32·8	"	2500									
04		32·8	33·8	"	3300									
05		33·8	34·8	"	7900									
06		34·8	35·8	"	9700									
07		35·8	36·8	"	1850									
08		36·8	37·8	"	3350									
09		37·8	38·8	"	7400									
310		38·8	39·8	"	2050									
11		39·8	40·8	"	3300									
12		40·8	41·8	"	4050									
13		41·8	42·8	"	1000									
14		42·8	43·8	"	660									
15		43·8	44·5	0·7	110									
	149742	44·5	46·5	2·0		100								

Notes:— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 126

SAMPLE TYPE : DRILL CORE FROM 4·0 TO 46·5

1 grind

642

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	144743	46.5	48.5	2.0		780								
	44	48.5	50.5	"		85								
	45	50.5	52.5	"		38								
	46	52.5	55.0	2.5		32								

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 126

SAMPLE TYPE : DRILL CORE FROM 46.5 TO 55.0

1 grind

8822656

643

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 127

Objective and Anticipated Lengths to Targets: To test Queen Dyke.

Drilling Commenced: 19/11/81 Drilling Completed: 24/11/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES

Bearing of Hole: -

Angle of Hole: -90°

Final Depth of Hole: 109.4 m

Core Sizes: NQ

From 6.0 To 109.4 = 103.4

From To =

From To =

From To =

From To =

Logged By: N.R. Langsford

Date Logged: 3/12/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg	Collar and Change Points: Length to C.P	North	East	R.L.
	0					0	2135.02	1399.92	698.10
0		22.5	90°	-					
	22.5					22.5	2135.02	1399.92	675.60
45.0		37.5	89.5°	027°	357°				
	60.0					60.0	2135.31	1400.07	638.10
75.0		32.2	88.5°	096°	066°				
	92.2					92.2	2135.22	1400.91	605.91
109.4		17.2	89°	146°	116°				
	109.4					109.4	2134.97	1401.07	588.72
-109.4									

Survey By: Date:

Calculated By: R.J. REID Date: 10/12/81

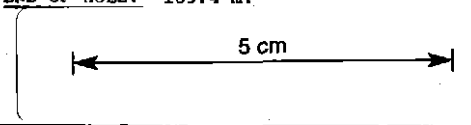
832657

HOLE N°: MBD 127

644

832658 645

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	6.0	0 - 6.0: NO CORE.						
	56.5	6.0 - 62.5: Interbedded grey SILTSTONES and QUARTZITES with minor interbeds of SANDSTONE and black SHALE. Pale grey to green, faintly laminated. Slump bedding with sandstone interbeds and clasts below 30 m. In upper 20 m, yellow clay and limonite along joints. Minor silicification at contact.		10/ 11		Very minor disseminated pyrite, few thin pyrite veins.		
20								
40								
60								
	27.1	62.5 - 89.6: PORPHYRY. Grey to light brown altered qutz-feldspar porphyry, strongly pyritic in part. Generally porous and weathered. Much sulphide leached out. Soft zones of white clay are strongly weathered porphyry. Limonite common along steeply dipping irregular joints and open veins.		1		When fresh porphyry contains 15-20% disseminated pyrite. Minor cross cutting pyritic veins and open veins containing limonite and acicular.		
80								
	19.8	89.6 - 109.4: Interbedded grey QUARTZITES and SILTSTONES. Thinly bedded siltstones show slump and flaser bedding with clasts and contorted beds of f.g. sandstone. Strongly brecciated and pyritized zone 97.8 - 99.8 m. Quartzite dominant below 104 m.		11/ 10		Minor disseminated pyrite, and thin py-qutz veinlets. Strongly pyritic zone (20% py) 97.8 - 99.8 m. Brecciated pyritic zone (10%) 102.5-103.4m.		
100								
120		END OF HOLE: 109.4 m.						



NOTES 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDS), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 127

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	144747	6.0	8.0	2.0		22								
	48	8.0	10.0	"		20								
	49	10.0	12.0	"		18								
	750	12.0	14.0	"		14								
	51	14.0	16.0	"		14								
	52	16.0	18.0	"		12								
	53	18.0	20.0	"		22								
	54	20.0	22.0	"		16								
	55	22.0	24.0	"		30								
	56	24.0	26.0	"		26								
	57	26.0	28.0	"		110								
	58	28.0	30.0	"		30								
	59	30.0	32.0	"		24								
	760	32.0	34.0	"		24								
	61	34.0	36.0	"		22								
	62	36.0	38.0	"		20								
	63	38.0	40.0	"		24								
	64	40.0	42.0	"		70								
	65	42.0	44.0	"		40								
	66	44.0	46.0	"		330								
	67	46.0	48.0	"		22								
	68	48.0	50.0	"		36								
	69	50.0	52.0	"		42								
	770	52.0	54.0	"		38								
	71	54.0	56.0	"		170								
	72	56.0	58.0	"		60								
	73	58.0	60.0	"		120								
	74	60.0	62.0	"		100								
	75	62.0	64.0	"		70								
148316		64.0	65.2	1.2	46									

SAMPLE NO	FROM	TO	INTERVAL	Sn
SPLIT CORE	m	m	m	SPLIT
148340	60.0	61.5	1.5	740
41	61.5	62.5	1.0	1900
42	62.5	63.5	"	3900
43	63.5	64.5	"	4450
44	64.5	65.5	"	580

Notes :— XRF BI method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 127

SAMPLE TYPE : DRILL CORE FROM 6.0 TO 65.2

grind 1st

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
148317		65·2	67·0	1·8	370									
18		67·0	68·0	1·0	900									
19		68·0	69·0	"	2400									
320		69·0	70·0	"	2300									
21		70·0	71·0	"	5700									
22		71·0	72·0	"	5100									
23		72·0	73·0	"	6200									
24		73·0	74·0	"	1·31%	*								
25		74·0	75·0	"	1·07%	*								
26		75·0	76·0	"	5200									
27		76·0	81·0	5·0	5200									
28		81·0	82·0	1·0	1300									
29		82·0	83·0	"	4300									
330		83·0	84·0	"	1950									
31		84·0	85·0	"	4250									
32		85·0	86·0	"	1·14%	*								
33		86·0	87·0	"	4400									
34		87·0	88·0	"	9900									
35		88·0	89·0	"	1850									
36		89·0	89·6	0·6	1050									
148367		89·6	90·6	1·0	1150									
	144776	90·6	92·6	2·0		270								
	77	92·6	94·6	"		300								
	78	94·6	97·0	2·4		900								
148337		97·0	98·0	1·0	240									
38		98·0	98·9	0·9	2300									
39		98·9	100·3	1·4	220									
	144779	100·3	102·3	2·0		210								
	780	102·3	104·3	"		1050								
	81	104·3	106·3	"		580								

Notes :— XRF 81 method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 127

SAMPLE TYPE : DRILL CORE FROM 65·2 TO 106·3

NQ Split

6417

2 SEP 69

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	149782	106·3	108·3	2·0		190								
	83	108·3	109·4	1·1		1150								

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 127

SAMPLE TYPE : DRILL CORE FROM 106·3 TO 109·4

1 grind

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 128

Objective and Anticipated Lengths to Targets: To test Queen Dyke.

Drilling Commenced: 24/11/81 Drilling Completed: 2/12/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES

Bearing of Hole: 360°

Angle of Hole: -60°

Final Depth of Hole: 92 m

Core Sizes: NQ

From 4.0 To 92.0 = 88.0 m

From To =

From To =

From To =

From To =

Logged By: N.R. Langsford

Date Logged: 7/12/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg
	0				
0		15.0	60°	360°	
	15.0				
30.0		30.0	61°	358°	328°
	45.0				
60.0		31.0	61°	359°	329°
	76.0				
92.0		16.0	61°	360°	330°
	92.0				
-92.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	2150.12	1420.02	701.98
15.0	2157.62	1420.02	688.99
45.0	2172.16	1419.51	662.75
76.0	2187.18	1419.25	635.64
92.0	2194.94	1419.25	621.64

Survey By: Date:

Calculated By: R.J. REID Date: 10/12/81

832662 HOLE N°: MBD 128

6449

832665 650

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	4.0	0 - 4.0: NO CORE.						
20	58.4	4.0 - 62.4: Grey laminated thinly bedded SILTSTONES with interbedded grey QUARTZITES. Quartzites become predominant 31-38 m, 46-56 m. Siltstones are thinly laminated and commonly show irregular bedding and slump structures. Quartzites generally massive. Core is closely jointed and broken, especially in siltstone intervals.		10/11		Minor disseminated pyrite and thin pyrite-quartz veins. Fractured quartzite zone 51-55 m shows pyrite with minor asp, cass along fractures in "stockwork". Limonite common along joints above this interval at 59.4 m. SnO_2 crystals in vugh in quartzite.		
40								
60	23.6	62.4 - 86.0: Altered QUARTZ PORPHYRY. Light grey to green, intense sericite alteration. 10-20% qutz phenocrysts up to 5 mm in fg sericite matrix. Low pyrite content, increasing with decreasing sericite. Brecciated zone at lower contact.		1		Pyrite content ≤ 1%. Thin qutz-limonite-SnO_2 veins (3 mm) at 68.5 m, 76.7 m and 62.4 m. Pyrite content increases to 15% below 80 m.		
80	6.0	86.0 - 92.0: Interbedded grey laminated SILTSTONES and QUARTZITES.		10/11		Minor disseminated pyrite.		
100		END OF HOLE: 92.0 m.						

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2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 128

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	144784	4·0	6·0	2·0		34								
	85	6·0	8·0	"		26								
	86	8·0	10·0	"		760								
	87	10·0	12·0	"		210								
	88	12·0	14·0	"		22								
	89	14·0	16·0	"		14								
	790	16·0	18·0	"		20								
	91	18·0	20·0	"		24								
	92	20·0	22·0	"		55								
	93	22·0	24·0	"		70								
	94	24·0	26·0	"		48								

Notes :— XRF bl method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBO 128

SAMPLE TYPE : DRILL CORE FROM 4·0 TO 26·0

grind

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
198345		65.5	66.5	1.0	500									
46		66.5	67.5		490									
47		67.5	68.5		5800									
48		68.5	69.5		520									
49		69.5	70.5		580									
350		70.5	71.5		460									
51		71.5	72.5		560									
52		72.5	73.5		390									
53		73.5	74.5		340									
54		74.5	75.5		820									
55		75.5	76.5		820									
56		76.5	77.5		1050									
57		77.5	78.5		1800									
58		78.5	79.5		540									
59		79.5	80.5		370									
360		80.5	81.5		800									
61		81.5	82.5		460									
62		82.5	83.5		600									
63		83.5	84.5		1350									
64		84.5	85.5		760									
65		85.5	86.6	1.1	740									
66		86.6	87.6	1.0	1280									

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 188

SAMPLE TYPE : DRILL CORE FROM 65.5 TO 87.6

NO Split

652

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
131493		10ECE	1750N		3050									
94			1752N		2800									
95			1754N		2050									
96			1756N		2450									
97			1758N		2650									
98			1760N		9600									
99			1762N		5300									
131500			1764N		1950									
01			1766N		4650									
02			1768N		700									
03			1770N		1650									
04			1772N		1400									
05			1774N		580									
06			1776N		5100									
07			1778N		3650									
08			1780N		4950									
09			1782N		3850									
310			1784N		7100									
11			1786N		900									
12			1788N		1120									
13			1790N		2900									
14			1792N		690									
15			1794N		1500									
16			1796N		900									
17			1798N		2000									
18			1800N		1800									
19			1802N		3250									
320			1804N		580									
21			1806N		180									
22			1808N		900									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1750N TO 1808N

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLE	GROUND CORE			m	SPLIT	GROUND								
131323		1050E	1810N		720									
24		"	1812N		600									
25		"	1814N		2450									
26		"	1816N		3700									
27		"	1818N		70									
28		"	1820N		320									
29		"	1822N		1300									
330		"	1824N		3150									
31		"	1826N		1200									
32		"	1828N		1350									
33		"	1830N		3900									
34		"	1832N		1900									
35		"	1834N		1100									
36		"	1836N		1700									
37		"	1838N		2750									
38		"	1840N		1600									
39		"	1842N		300									
340		"	1844N		1450									
41		"	1846N		900									
42		"	1848N		2850									
43		"	1850N		2500									
44		"	1852N		3100									
45		"	1854N		2550									
46		"	1856N		1600									
47		"	1858N		1700									
48		"	1860N		2600									
49		"	1862N		2100									
350		"	1864N		2100									
51		"	1866N		2000									
52		"	1868N		2950									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1810N TO 1868N

82/267/654

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn		W	Au	Check Sn	Bulked Assays
SURFACE SAMPLE	GROUND CORE			m	SPLIT	GROUND								
1313[illegible]		10E CE	1870N		3550									
54		"	1878N		2100									
55		"	1874N		2050									
56		"	1876N		2550									
57		"	1878N		2550									
58		"	1880N		4050									
59		"	1882N		4300									
360			1884N		4650									
61		"	1886N		3500									
62		"	1888N		3800									
63		"	1890N		2800									
64		"	1892N		2950									
65		"	1894N		3600									
66		"	1896N		2900									
67		"	1898N		3900									
68		"	1900N		9500									
69		"	1902N		8300									
370		"	1904N		1.99%	*								
71		"	1906N		4750									
72		"	1908N		8300									
73		"	1910N		7000									
74		"	1912N		5500									
75		"	1914N		4150									
76		"	1916N		8300									
77		"	1918N		8500									
78		"	1920N		1.54%	*								
79		"	1922N		5500									
380		"	1924N		9600									
81		"	1926N		5000									
82		"	1928N		1.05%	*								

Notes :—

* Being redetermined by Codes BE

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1870N TO 1928N

832668

655

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
131382		108OE	1930N		2100									
84			1932N		6800									
85			1934N		6000									
86			1936N		6600									
87			1938N		1050									
88			1940N		680									
89			1942N		8200									
3910			1944N		160									
91			1946N		160									
92			1948N		1350									
93			1950N		3050									
94			1952N		3000									
95			1954N		3300									
96			1956N		2450									
97			1958N		2750									
98			1960N		2800									
99			1962N		3000									
147500			1964N		3000									
01			1966N		4550									
02			1968N		3700									
03			1970N		5000									
04			1972N		3500									
05			1974N		1950									
06			1976N		2300									
07			1978N		55									
08			1980N		320									
09			1982N		250									
5910			1984N		560									
11			1986N		580									
12			1988N		540									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1930N TO 1988N

8326669 656

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
19713		10E0E	1990N		820									
14			1992N		3400									
15			1994N		55									
16			1996N		130									
17			1998N		85									
18			2000N		10									
19			2002N		65%									
520			2004N		30									
21			2006N		6									
22			2008N		12									
23			2010N		28									
24			2012N		390									
25			2014N		2650									
26			2016N		1000									
27			2018N		640									
28			2020N		4750									
29			2022N		4400									
530			2024N		4550									
31			2026N		1050									
32			2028N		5400									
33			2030N		1550									
34			2032N		1850									
35			2034N		8600									
36			2036N		1100									
37			2038N		1650									
38			2040N		1900									
39			2042N		2100									
540			2044N		2400									
41			2046N		1300									
42			2048N		150									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1990N TO 2048N

0493898

55

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLE.	GROUND CORE			m	SPLIT	GROUND								
147543		LODE	2050N		560									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 2050N TO 2050N

8326/71 658

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	[illegible]	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLE	GROUND CORE			m	SPLIT	GROUND								
147544		110CE	1760N		4150									
45			1762N		2000									
46			1764N		3150									
47			1766N		5200									
48			1768N		1400									
49			1770N		700									
550			1772N		1950									
51			1774N		1850									
52			1776N		2100									
53			1778N		360									
54			1780N		900									
55			1782N		4350									
56			1784N		2300									
57			1786N		2500									
58			1788N		2200									
59			1790N		2750									
560			1792N		5300									
61			1794N		4900									
62			1796N		1800									
63			1798N		3100									
64			1800N		4400									
65			1802N		6700									
66			1804N		3350									
67			1806N		1250									
68			1808N		880									
69			1810N		5600									
570			1812N		640									
71			1814N		1200									
72			1816N		5600									
73			1818N		3350									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1760N TO 1818N

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn		W	Au	Check Sn	Bulked Assays
Surface samples	GROUND CORE			m	SPLIT	GROUND								
147539		1100E	1820N		640									
75		"	1826N		1850									
76		"	1829N		480									
77		"	1836N		4850									
78		"	1838N		780									
79		"	1830N		3450									
5280		"	1832N		3500									
81		"	1834N		6100									
82		"	1836N		2950									
83		"	1838N		1650									
84		"	1840N		1050									
85		"	1842N		290									
86		"	1844N		460									
87		"	1846N		8300									
88		"	1848N		6500									
89		"	1850N		3150									
5290		"	1852N		4400									
91		"	1854N		4900									
92		"	1856N		2350									
93		"	1858N		3000									
94		"	1860N		4400									
95		"	1862N		2300									
96		"	1864N		4150									
97		"	1866N		1600									
98		"	1868N		3150									
99		"	1870N		2000									
147600		"	1872N		1850									
01		"	1874N		1450									
02		"	1876N		4300									
03		"	1878N		4800									

Notes :—

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1820N TO 1878N

8226 E 3 660

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
147604		110E	188N		3.14%	*	10%	BLANK						
05		"	188½N		5000									
06		"	189N		4150									
07		"	189½N		4550									
08		"	190N		2500									
09		"	190½N		4700									
610		"	191N		3100									
11		"	191½N		3900									
12		"	192N		4700									
13		"	192½N		5400									
14		"	193N		5900									
15		"	193½N		4050									
16		"	194N		5500									
17		"	194½N		5600									
18		"	195N		5400									
19		"	195½N		4600									
620		"	196N		7700									
21		"	196½N		7200									
22		"	197N		1200									
23		"	197½N		740									
24		"	198N		9200									
25		"	199½N		3950									
26		"	199½N		4950									
27		"	199½N		3200									
28		"	199½N		3250									
29		"	199½N		4750									
630		"	199½N		2600									
31		"	199½N		3000									
32		"	199½N		1100									
33		"	199½N		950									

Notes:— * Being redetermined by Lode B2

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 188ON TO 193BN

8326/4 661

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
147684		1120E	1836N		5000									
85		"	1838N		510									
86		"	1840N		320									
87		"	1842N		150									
88		"	1844N		820									
89		"	1846N		2450									
690		"	1848N		300									
91		"	1850N		600									
92		"	1852N		1050									
93		"	1854N		9300									
94		"	1856N		1100									
95		"	1858N		450									
96		"	1860N		4150									
97		"	1862N		100									
98		"	1864N		410									
99		"	1866N		2190									
147700		"	1868N		340									
01		"	1870N		430									
02		"	1872N		160									
03		"	1874N		800									
04		"	1876N		1900									
05		"	1878N		2700									
06		"	1880N		800									
07		"	1882N		230									
08		"	1884N		840									
09		"	1886N		230									
710		"	1888N		190									
11		"	1890N		2000									
12		"	1892N		210									
13		"	1894N		4030									

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1836N TO 1894N

SURFACE SAMPLES 1120E

8376/5

2 of 6

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTERVAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
197714		1120E	1896N		7000									
15		"	1898N		3550									
16		"	1900N		3000									
17		"	1902N		2150									
18		"	1904N		1550									
19		"	1906N		440									
720		"	1908N		3650									
21		"	1910N		3650									
22		"	1912N		720									
23		"	1914N		1100									
24		"	1916N		720									
25		"	1918N		1650									
26		"	1920N		2000									
27		"	1922N		520									
28		"	1924N		720									
29		"	1926N		1250									
730		"	1928N		520									
31		"	1930N		2300									
32		"	1932N		6900									
33		"	1934N		790									
34		"	1936N		600									
35		"	1938N		4900									
36		"	1940N		1250									
37		"	1942N		870									
38		"	1944N		1800									
39		"	1946N		260									
740		"	1948N		620									
41		"	1950N		110									
42		"	1952N		60									
43		"	1954N		460									

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1896N TO 1954N

SURFACE SAMPLES 1120E

6.69.3

SAMPLE NO.	SAMPLE NO	LINE	NORTHING	INTER-VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SURFACE SAMPLES	GROUND CORE			m	SPLIT	GROUND								
147744		11E0E	1956N		960									
45		"	1958N		60									
46		"	1960N		36									
47		"	1962N		95									
48		"	1964N		500									
49		"	1966N		600									
7150		"	1968N		880									
51		"	1970N		390									
52		"	1972N		860									
53		"	1974N		640									
54		"	1976N		600									
55		"	1978N		1450									
56		"	1980N		2200									

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO.

SAMPLE TYPE : DRILL CORE FROM 1956N TO 1980N

SURFACE SAMPLES 11E0E

8329-1

664

832678

82-1698 Vol 2. NOVEMBER REPORT.

METALS EXPLORATION LIMITED

MT BISCHOFF TIN PROSPECT

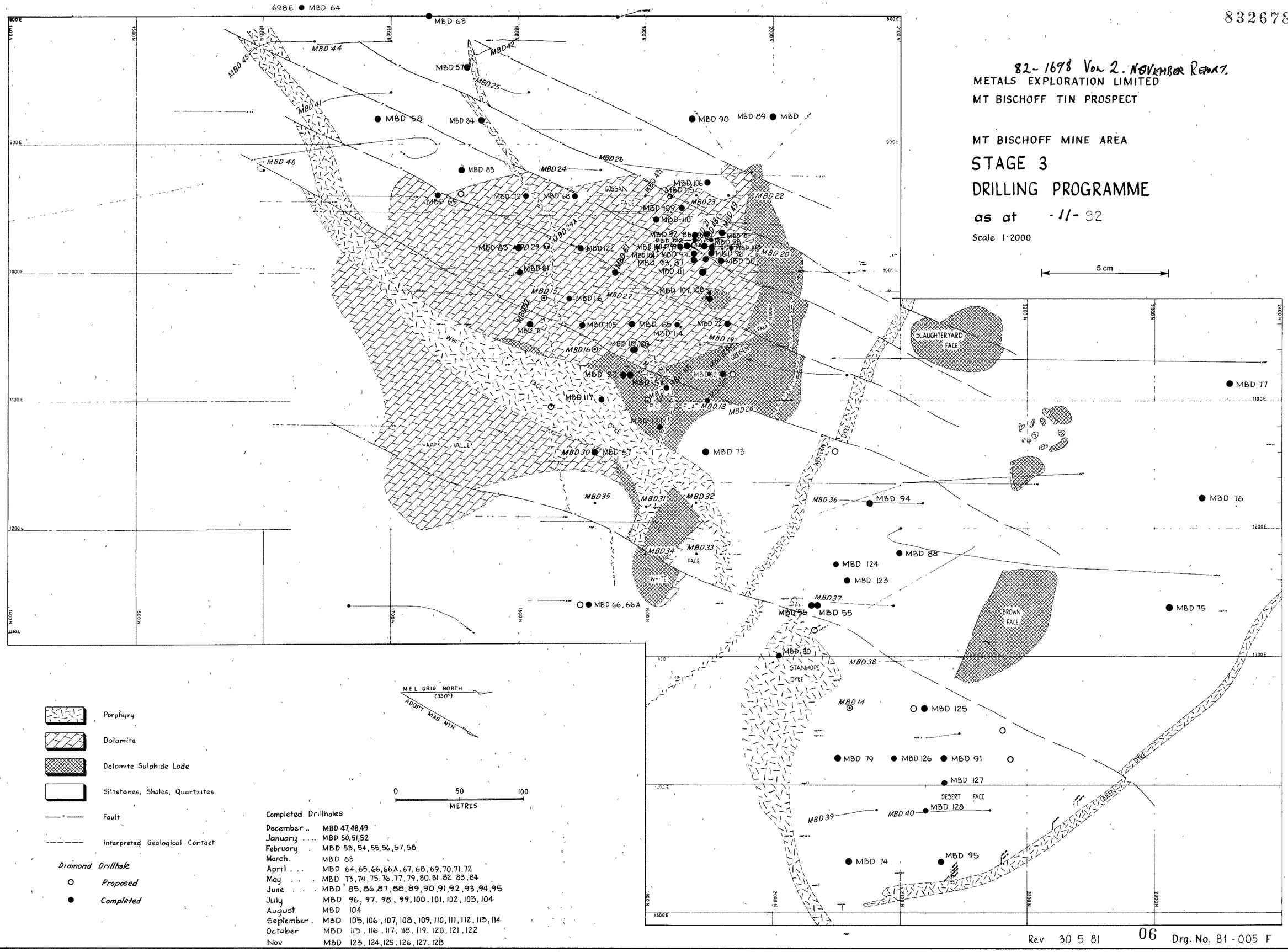
MT BISCHOFF MINE AREA

STAGE 3
DRILLING PROGRAMME

as at -11- 82

Scale 1:2000

5 cm



- Porphyry
- Dolomite
- Dolomite Sulphide Lode
- Siltstones, Shales, Quartzites
- Fault
- Interpreted Geological Contact

Diamond Drillhole

- ○ Proposed
- ● Completed

Completed Drillholes

December ..	MBD 47,48,49
January	MBD 50,51,52
February .	MBD 53, 54, 55, 56, 57, 58
March.	MBD 63
April . . .	MBD 64,65,66,66A,67,68,69,70,71,72
May . . .	MBD 73,74,75,76,77,79,80,81,82 83,84
June . . .	MBD 85,86,87,88,89,90,91,92,93,94,95
July	MBD 96, 97, 98, 99, 100, 101, 102, 103, 104
August	MBD 104
September .	MBD 105, 106, 107, 108, 109, 110, 111, 112, 113, 114
October	MBD 115, 116, 117, 118, 119, 120, 121, 122
Nov	MBD 123, 124, 125, 126, 127, 128

Rev 30 5 81

06

Drg. No. 81-005 F

METALS EXPLORATION LTD.
80 COLLINS STREET, MELBOURNE, AUSTRALIA 3000. TELEPHONE 653 7100. TELEX AA32051. TELEGRAM ROCKDOC.

MT. BISCHOFF TIN PROSPECT

EXPLORATION LICENCE 13/79

AND AUTHORITY TO PROSPECT 5/80

TASMANIA

REPORT FOR DECEMBER, 1981.

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MT. BISCHOFF TIN PROSPECT

REPORT FOR DECEMBER, 1981.

General

Infill drilling of Queen and Stanhope Porphyry Dykes was completed during the period. In addition, surface sampling over the main pit area continued and a trenching unit commenced surface excavation work.

Optimisation work on previous mine planning continued with Golder and Associates also performing tests on potential ripability of overburden and on pit wall slope angles.

The Austin Anderson Preliminary Engineering Study was received and initial assessments commenced on areas with potential for reduction in capital and operating cost.

Mineral Deposits Limited completed bulk testwork simulating porphyry preconcentration and the Project Metallurgist, Mr. K. O'Keefe relocated from Launceston to Melbourne.

Geology

(i) Diamond Drilling

Five drill holes were commenced during the period and six completed for a total meterage of 431.6 m. The drilling contractor left site on 24th. December, removing his rig to Wynyard for maintenance over the Christmas period. The rig will be available for further work in late January, if required.

Results obtained for each hole drilled are described below, with comment on likely effect on Stage 3A porphyry reserves.

MBD 128

Completed on Section 1420E, this hole was partially reported last month. Its purpose was to check the Stage 3A interpretation of the Queen Dyke position and grade. The Queen Dyke was not intersected in the interpreted position however, it did achieve a lower intercept 62.4 to 86.0 m down hole. Grades achieved were low as indicated.

The effect of this hole and MBD 127 has been to alter the Queen Dyke interpretation and to indicate that previous holes interpreted as Queen Dyke are actually Stanhope Dyke in a higher position. The effect on reserves and stripping ratio in the Stanhope pit is not known at present.

MBD 128 Contd

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
56.0	60.0	4.0	1.40	Veined Seds *
62.5	68.5	6.0	0.26	Queen Dyke Porphyry
(62.5	86.6	24.1	0.12	Queen Dyke Porphyry)

* Ground core result to be checked by splitting

MBD 129

Also drilled on Section 1420E, this hole was drilled as an infill hole on the Stanhope Dyke. It interesected porphyry higher that expected and passed through tin bearing veined sediments prior to intersecting porphyry in the interpreted position. The intercept was lower grade and less than expected.

Again the effect on reserves will require reinterpreation of the whole porphyry system.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
36.0	44.0	8.0	1.75	Veined Sed/Porph
44.0	48.0	4.0	0.77	Veined Sediment
66.0	68.4	2.4	0.20	Veined Sediment
68.4	72.4	4.0	0.43	Porphyry
77.4	79.2	1.8	1.80	Veined Sediment

MBD 130

Positioned on Section 1060E, this hole was drilled in an attempt to define the base of and grades in the Slaughter Yard Face DSL. This material was included in Stage 2B reserves as 70,000 tonnes of inferred ore, based on surface sampling. It was omitted from Stage 3A reserves.

Problems were encountered in location of the rig and the hole appears to have passed under the DSL through banded dolomite/DSL from 3.0 to 35.6 m. Further drilling on this location will be dependant upon achieving access to the top of the formation.

Best assay intervals were:

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
19.9	24.9	5.0	0.26	Dolomite/DSL Veined
29.9	34.9	5.0	0.34	" "

MBD 131

Drilled on Section 1500E, this hole was drilled as an extension of the Stanhope Dyke beyond the junction with Queen Dyke. (All pit wall material from 1470E to 1560E has previously been interpreted as waste, through lack of information).

The hole achieved an intercept of porphyry from 10.2 m to 14.8 m (ie. 4.6 metres) and the main Stanhope intercept from 41.0 m to 63.0 m (ie. 22.0 m down hole). Assay results however, indicated that the Stanhope Dyke does not contain significant grade beyond the Queen Dyke junction.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
42.9	43.9	1.0	0.44	Porphyry
57.9	60.9	3.0	0.23	Porphyry

MBD 132

Drilled from Section 1440E, this hole dipped to the east at 45 degrees, aiming to define the Queen Dyke prior to its junction with Stanhope on 1480E Section. Porphyry was intersected from 59.3 m to 70.0 m. This indicates that the Queen Dyke is near vertical at the junction with true width approximately 10 metres.

As with MBD 131 all grade material beyond 1470E would mean an increase in reserve and decrease in waste stripping.

Assay results were low confirming the lack of grade in the Queen Dyke porphyry ie.

FROM	TO	INTERVAL (m)	% Sn	ROCK TYPE
57.4	58.2	0.8	2.54 (Core Grinding)	Sediment
59.2	70.2	11.0	< 0.1	Porphyry

MBD 133

Drilled on Section 1400E, this hole was not programmed but was indicated as being required by MBD 128, to define the position of Queen Dyke moving out of the Stanhope pit to the west. It also failed to intersect the Queen Dyke in the Stage 3A interpreted position but did intersect it deeper from 94.3 m to 119.5 m down hole.

Assay results for the Queen Dyke were consistently less than 0.1% Sn, however the depth of intercept will proclude the Queen Dyke from mineable reserves west of approximately 1420E.

(ii) Surface Sampling

Surface samples as spot 2 m spaced samples at surface, were completed to Section 1220E in the main pit area. This work was then suspended and emphasis placed on channel sampling of trenches.

Further surface sampling to be performed in the New Year will include lines to 1280E (White Face), completion of 940 to 1000E, North Face and the base of Brown Face pit.

Trenching was performed as 2 m deep trenches in Dolomite/DSL on 1220E, 1180E, 1140E and 1100E. Pits to 6 m depth were being dug in specific positions on each line. This work will continue for the first half of January on lines 1060E, 1020E, 980E, 940E and plus two lines over the Don Hill alluvials.

Assay results from the channels are incomplete and as yet uninterpreted, however initial indications are that significant tin values occur in previously interpreted barren dolomite and in parts of the White Face DSL. Corresponding surface sample results are being confirmed with slight downgrading. In addition, a large amount of information is being gained on geological structure which will assist in overall interpretation.

As a result of this work, significant low grade reserves are likely to be inferred over areas currently interpreted as waste dolomite.

(iii) Reserve Reinterpretation

Reinterpretation of drill indicated reserves in the DSL and porphyry was commenced and is expected to be completed by early February.

Mine Planning

Optimisation of the Preliminary Engineering Mine Plans continued with separation of the proposed mine into two pits, the main DSL/Porphyry pit (base RL 570 m) and the Stanhope pit (base RL 610 m).

Golder and Associates visited site to perform seismic testing for ripability assessment and recommend pit slopes on the basis of core and general rock conditions. This report confirms the use of 45 degree slopes and identifies considerable areas of ripable overburden in both proposed pits.

Metallurgy

1. DSL Variability Testwork

All variability testwork on DSL has been completed, results are to hand and detailed assessment of data is underway.

It is apparent from samples tested that:

- Talc content varies widely but with no obvious trend at 20 m intervals in an East/West direction at about 1900N. Talc appears as a dominant species as far East as 1080E.
- The presence and proportion of other minerals eg. quartz, carbonate, topaz, sellaite, pyrrhotite, also varies erractically.
- Concentrate grades indicated by bulk tests on MCA and MCC are generally confirmed but are dependent on achieving excellent sulphide removal.

Assessment of other metallurgical parameters is not complete.

2. Concentrate Upgrading

Upgrading of table concentrates from 50 kg scale tests was investigated using:

(i) low intensity magnetic separation

(ii) medium to high intensity magnetic separation

(iii) leaching with hot dilute sulphuric acid

For each ore sample, a table concentrate composite was made up of the three cleaner table concentrates (ie. 3 sizes tested) and the two regrind table concentrates (ie. 2 sizes tested). This gave composite grades of 40 to 45% tin which is a realistic concentrate dressing feed grade from circuitry proposed.

Cassiterite flotation concentrates were upgraded by leaching only.

Mineralogical work was carried out on products from tests on composite MCC only because of small sample weights available.

Detailed results are given in Table 1 (Appended).

Mineralogy indicates the following minerals were removed at each stage of magnetic separation:

Low intensity - predominantly pyrrhotite, tramp iron from grinding, small tin losses as composites.

Concentrate Upgrading Contd

Medium intensity - higher iron and iron stained carbonates, goethite and sulphides. Small tin loss as composites.

High intensity - carbonates, some topaz and sulphides. Tin losses high as apparently free grains and also some composited.

Leaching would be expected to remove carbonates only.

The carbonates have not been specifically identified but observations show they range from calcite (indicated by colour and shape) to siderite (high SG) and are iron stained to varying degrees (change of colour on leaching/mineralogy). The carbonates probably exist along all parts of the Ca, Mg, Mn, Fe replacement series.

The effect of various concentrate treatment schemes on combined concentrate grade is also given in Table 1.

There is potential for improvement in gravity concentrate grades after medium intensity magnetic separation (product E) by inclusion (before or after) of a carefully controlled gravity concentration stage. This would remove coarser low SG (ie. low Fe) carbonates and coarse topaz whereas the magnetic separation tends to remove higher iron (higher SG) carbonates.

3. Porphyry Preconcentration

Mineral Deposits carried out heavy liquid tests on the composite (MCF) sent for pilot scale preconcentrator evaluations to confirm grind predictions from earlier work. Grinds of minus 1, 2 and 3 mm were tested. Results are attached in Table 2 (Appended).

Results do not show any trend with grind with respect to weight and tin distribution in fines (-45 microns) or tin losses in "reject" (ie. +45 <2.96 SG) but are similar to figures allowed in studies so far ie. 33% wt as fines, 50% weight to rejected 10-12% tin loss.

Calculated head assays vary from 0.23% tin to 0.30%. Calculating tin loss to reject based on a constant head grade of 0.27% tin loss varies as follows:

- 1 mm	9.5%	(c/w 11.2% based on calculated head)
- 2 mm	10.5%	(10.4%)
- 3 mm	13.8%	(12.4%)

Mineral Deposits were asked to carry out pilot spiral tests at a grind of - 1 mm. This work has been completed and tin analyses of products should be available early January, 1982.

4. Surface Sampling

Seven surface samples were received for preliminary metallurgical testing. Only two were found to contain significant tin ie.

126852	0.32%
126853	0.13%

These were crushed to - 3.2 mm sized and sent to Amdel for heavy liquid analysis.

Sample 126852 contained gangue minerals characteristic of DSL, viz talc, carbonate, quartz, topaz, sellaite, and spongy pyrite and weathered sulphides. Cassiterite was identified as being mostly <30 microns. Heavy liquid work indicated cassiterite was poorly liberated at the sizes tested (+ 75 microns) making preconcentration for high recovery at coarser sizes inappropriate.

Sample 126853 consisted mostly of aggregates of weathering products and these contained cassiterite identified as 40 to 150 microns. Scrubbing readily broke down these weathered aggregates liberating cassiterite, fresh pyrite and a whitish gangue. After scrubbing of - 3.2 mm material, virtually no cassiterite remained coarser than 300 microns.

Engineering

The Austin Anderson Preliminary Engineering Study was presented in final form on 1st. December. Cost estimates for the three cases: 300,000 tpa and 200,000 tpa stand alone and 260,000 tpa custom milling through the Aberfoyle Cleveland Plant, were presented. From the details included in the back up to the study an estimate of the costs for a 260,000 tpa stand alone case and the economic justification of areas of the plant were developed.

The economic evaluation of the alternatives presented in and developed from the Austin Anderson Study was completed.

The environmental study continued to programme with the water samples and subsequent analysis being carried out. An additional suite of samples were obtained in November to broaden the picture already obtained on contaminant origin.

The 1:2,000 scale topographical map of the mine and proposed tailings/mullock disposal areas was completed on schedule on the 1st. December by the Land Department of Tasmania.

APPENDED INFORMATION

Drill Hole Statistics - December, 1982

Project Expenditure Details

Joint Venture Assets Statement

Metallurgical Report - Tables 1 & 2

Assays MBD 128

Summary Log & Assays MBD 129
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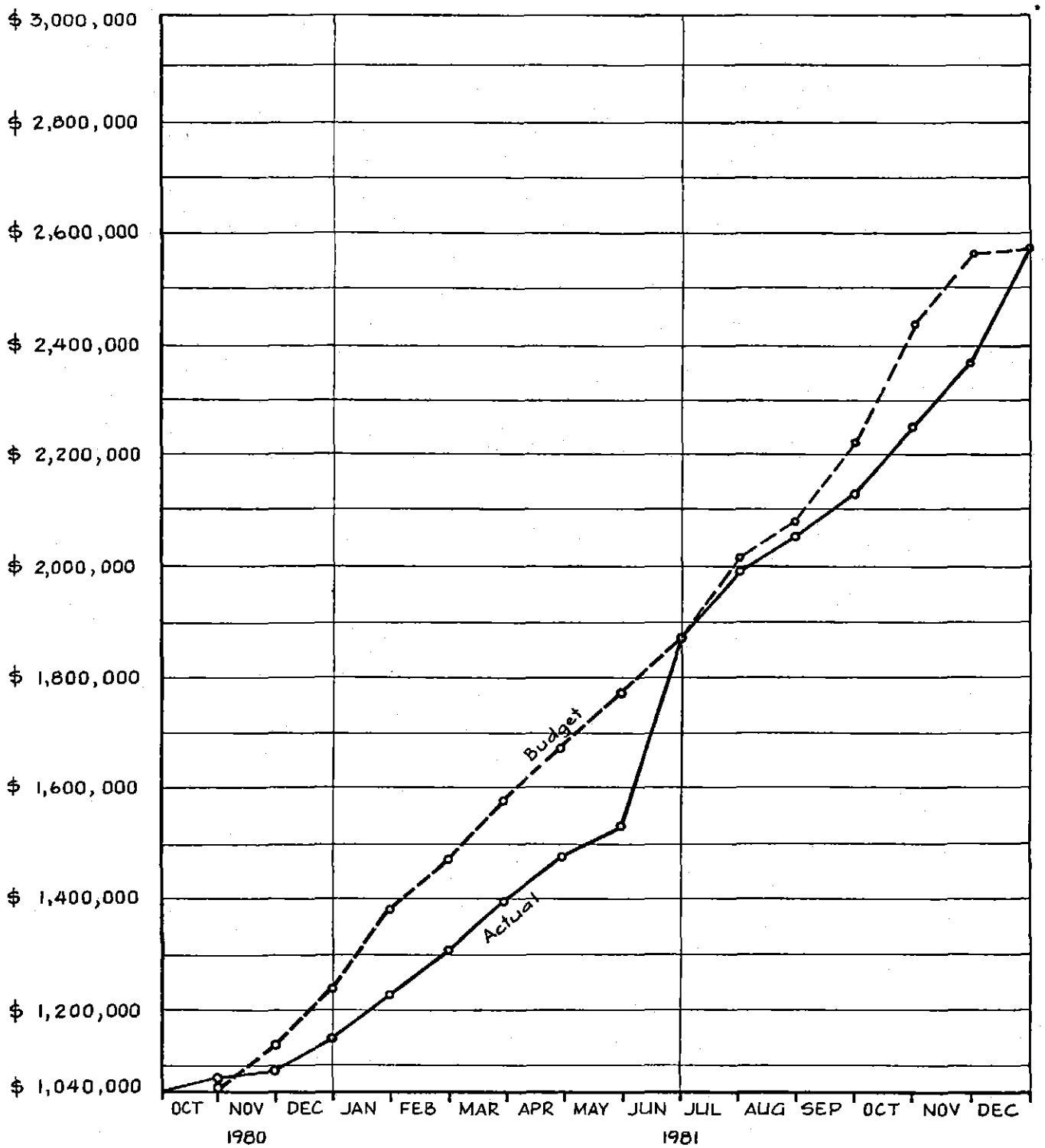
Revised Stage 3 Drill Hole Location Map

MT. BISCHOFF JOINT VENTURE - DECEMBER, 1981

DRILL HOLE STATISTICS.

HOLE NO.	N	E	RL	DIP	AZI	FROM	TO	METRES DRILLED	FINAL DEPTH
MBD 128	2150.12	1420.02	701.98	-60	360	62.0	92.0	30.0	92.0
MBD 129	2121.91	1420.24	700.13	-60	180	0.0	95.0	95.0	95.0
MBD 130	2177.11	1060.98	704.76	-45	180	0.0	35.6	35.6	35.6
MBD 131	2090.22	1500.16	697.93	-70	180	0.0	70.0	70.0	70.0
MBD 132	2119.80	1440.46	702.61	-45	90	0.0	76.0	76.0	76.0
MBD 133	2150.50	1400.18	698.86	-55	360	0.0	125.0	125.0	125.0
							TOTAL	431.6	

Number of shifts - 31.
Average metres per shift 13.9.



CUMULATIVE EXPENDITURE SCHEDULE

MT. BISCHOFF

STAGE 3 SUMMARY
as at . .81

Drg. No. 81 - 407

MT BISCHOFF JOINT VENTURE

	December 1981		6 Months to December 1981	
	Actual	Budget	Actual	Budget
	$000		$000	
Administration	5	11	58	67
Geology	54	13	287	317
Mining	17	7	75	116
Metallurgy	26	20	95	136
Engineering	108	47	153	161
Commercial	3	6	6	13
Stage 3A TOTAL PROJECT:	213	104	674	810
M.E.L. SHARE:	86	42	208	210

SUMMARY OF EXPENDITURE TO 30.12.81

	CURRENT PERIOD $000	ACCUMULATIVE $000
Stage 1		270
Stage 2A - Early Start		29
Stage 2A		199
Overruns: Stage 1 - M.E.L.		11
Metallurgical - C.R.A.E.		24
Stage 2B		482
Stage 2B - 3A Holding Costs Offset - A.I.R. & D.		40
Stage 3A - Partly offset by A.I.R. & D Grant Received June, 1981 $6,500	58	861
Stage 3B - Partly offset by A.I.R. & D Grant Received July, 1981 $25,863	674	674
ACCUMULATIVE EXPENDITURE TO DATE	732	2,590

MT BISCHOFF PROJECT

	December 1981		6 Months to December 1981	
	Actual	Budget	Actual	Budget
	$000		$000	
ADMINISTRATION				
Technical Services	3	10	46	63
Consumables	2	1	7	1
Travel			5	2
Consultants				1
	5	11	58	67
GEOLOGY				
Technical Services	14	9	82	60
Labour	4		18	8
Consumables	9		29	22
Accommodation	2	2	4	7
Vehicles	1		5	5
Travel			3	2
Contractors	21		132	188
Consultants	3	2	6	17
Capital Expenditure			8	8
	54	13	287	317
MINING				
Technical Services	16	3	30	15
Labour				1
Consumables			7	9
Travel	1	1	2	3
Contractors		1	35	64
Consultants		2	1	24
	17	7	75	116
METALLURGY				
Technical Services	15	13	62	77
Labour		1		4
Consumables	2		3	24
Accommodation	1	1	2	1
Travel	2	4	6	12
Contractors	4		12	12
Consultants	2	1	10	6
	26	20	95	136
ENGINEERING				
Technical Services	8	6	42	30
Consumables				1
Travel			3	8
Contractors	100	40	106	114
Consultants		1	2	8
	108	47	153	161

MT BISCHOFF PROJECT

	December 1981		6 Months to December 1981	
	Actual	Budget	Actual	Budget
	$000		$000	
COMMERCIAL				
Technical Services	1	5	4	11
Consumables	2	1	2	2
	3	6	6	13
TOTAL:	213	104	674	810
STAGE 3A EXPENDITURE				
Technical Services				
Travel & Accommodation				
Diamond Drilling				
Assaying				
Metallurgical				
Consumables				
	213	104	674	810

MT. BISCHOFF PROJECT

CUMULATIVE CAPITAL EXPENDITURE

		AS AT 31/12/81	DEC, 1982 EXPENDITURE	AS AT 31/12/81
STAGE 1 & 2	Core Shed	$15,295	-	$15,295
	Concrete Foundations	$ 2,100	-	$ 2,100
		$17,395		$17,395
STAGE 3A	Core Shed	$ 8,660	-	$ 8,660
	Accommodation Unit	$32,500	-	$32,500
	TOTAL	$58,555	-	$58,555

Beneficial Ownership - As at 31st. December, 1981.

C.R.A. $51 \times \frac{100}{85} = 60\%$

M.E.L. $34 \times \frac{100}{85} = 40\%$

Table 1: Concentrate Upgrading Test Results.

Product		MCA Rel. wt	MCA % Sn	MCA Dist	MCC Rel. wt	MCC % Sn	MCC Dist	MCD Rel. wt	MCD % Sn	MCD Dist
A.	Table Concentrate	1.31	43.0	100.0	0.98	43.6	100.0	0.52	45.1	100.0
B.	Ferromagnetics	0.08	4.0	0.5	0.06	4.5	0.6	0.02	1.4	0.1
C.	Non Ferromagnetic Table Conc	1.23	45.5	99.5	0.92	46.2	99.4	0.50	46.9	99.9
	Non FerroMag Table Conc	1.23	45.5	99.5	0.92	46.2	99.4	0.50	46.9	99.9
D.	Mag Conc 1	0.20	4.6	1.6	0.21	5.0	2.5	0.05	1.6	0.3
E.	N/Mag Table Conc	1.03	53.5	97.9	0.71	58.4	96.9	0.45	51.9	99.6
	Non Ferromagnetic Table Conc	1.23	45.5	99.4	0.92	46.2	99.4	0.50	46.9	99.9
F.	Leached	0.99	56.5	99.4	0.71	59.9	99.4	0.44	53.3	99.9
G.	Flotation Concentrate	0.42	21.7	100.0	0.58	25.9	100.0	0.37	16.5	100.0
H.	Leached Flotation Conc.	0.36	25.3	100.0	0.37	40.6	100.0	0.28	21.8	100.0
A + G:	Table Conc + Flotation Conc	1.73	37.8	100.0	1.56	37.0	100.0	0.89	33.2	100.0
C + G:	Non FerroMag Table Conc + Flotation Conc	1.65	39.4	99.5	1.50	38.3	99.5	0.87	34.0	99.9
E + G:	Non Mag Table Conc + Flot Conc	1.45	44.3	98.2	1.29	43.8	97.7	0.82	35.9	99.6
E + H:	Non Mag Table Conc + Leached Flotation Conc	1.39	46.2	98.2	1.08	52.3	97.7	0.73	40.4	99.6
F + G:	Leached N/FM Table Conc + Flotation Conc	1.41	46.2	99.5	1.29	44.6	99.5	0.81	36.5	99.9
F + H:	Leached N/FM Table Conc + Leached Flotation Conc	1.35	48.2	99.5	1.08	53.2	99.5	0.72	41.0	99.9

Table 2: Heavy Liquid Analyses of Porphyry Composite MCF

Size	Product	-1 mm % wt	-1 mm % Sn	-1 mm Dist	-2 mm % wt	-2 mm % Sn	-2 mm Dist	-3 mm % wt	-3 mm % Sn	-3 mm Dis
+ 45	> 4.05	1.06	5.69	26.3	0.98	5.3	19.2	0.76	5.9	14.
	4.05 - 2.96	17.00	0.32	23.7	19.17	0.38	26.9	22.09	0.49	36.
	< 2.96	51.24	0.05	11.2	47.15	0.06	10.4	46.65	0.08	12.
	TOTAL	69.30	(0.20)	61.2	67.30	(0.23)	56.5	69.50	(0.27)	63.
- 45		30.70	(0.29)	38.8	32.7	(0.36)	43.5	30.50	(0.36)	36.
Calc Head		100.0	(0.23)	100.0	100.0	(0.27)	100.0	100.0	(0.30)	100.
Assay Head [1.]			0.27							

1. Assay head from Department of Mines, Launceston. All others from Mineral Deposits - these have been shown to be low, possibly on account of stannite present.

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	14-1784	4·0	6·0	2·0		34								
	85	6·0	8·0	"		26								
	86	8·0	10·0	"		360								
	87	10·0	12·0	"		210								
	88	12·0	14·0	"		22								
	89	14·0	16·0	"		14								
	790	16·0	18·0	"		20								
	91	18·0	20·0	"		24								
	92	20·0	22·0	"		55								
	93	22·0	24·0	"		70								
	94	24·0	26·0	"		48								
	95	26·0	28·0	"		50								
	96	28·0	30·0	"		65								
	97	30·0	32·0	"		70								
	98	32·0	34·0	"		38								
	99	34·0	36·0	"		50								
	14-1800	36·0	38·0	"		49								
	01	38·0	40·0	"		50								
	02	40·0	42·0	"		95								
	03	42·0	44·0	"		60								
	04	44·0	46·0	"		65								
	05	46·0	48·0	"		90								
	06	48·0	50·0	"		120								
	07	50·0	52·0	"		180								
	08	52·0	54·0	"		110								
	09	54·0	56·0	"		95								
	810	56·0	58·0	"		1850								
	11	58·0	60·0	"		2·02% *								
14E-340		60·0	61·5	1·5		340								
41		61·5	62·5	1·0		1900								

Notes:— XRF Bi Method

* Being redetermined by Lode B2

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBO 128

SAMPLE TYPE : DRILL CORE FROM 4·0 TO 62·5

grind
N½ Split

683

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
14[illegible]42		62.5	63.5	1.0	3[illegible]00									
43		63.5	64.5	"	4450									
44		64.5	65.5	"	580									
45		65.5	66.5	"	500									
46		66.5	67.5	"	440									
47		67.5	68.5	"	5800									
48		68.5	69.5		520									
49		69.5	70.5	"	500									
350		70.5	71.5		460									
51		71.5	72.5	"	560									
52		72.5	73.5	"	350									
53		73.5	74.5	"	390									
54		74.5	75.5	"	420									
55		75.5	76.5	"	280									
56		76.5	77.5	"	1050									
57		77.5	78.5	"	1800									
58		78.5	79.5	"	540									
59		79.5	80.5	"	370									
360		80.5	81.5	"	500									
61		81.5	82.5	"	460									
62		82.5	83.5	"	600									
63		83.5	84.5	"	1350									
64		84.5	85.5	"	460									
65		85.5	86.6	1.1	340									
66		86.6	87.6	1.0	280									
	14982	87.6	89.6	2.0		360								
	13	89.6	92.0	2.4		110								

Notes:— XRF 81 Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 128

SAMPLE TYPE : DRILL CORE FROM 62.5 TO 92.0

No Split Grind

0.24 DJ.1

684

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 129

Objective and Anticipated Lengths to Targets: To test Stanhope Dyke.

Drilling Commenced: 2/12/81 Drilling Completed: 7/12/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES

Bearing of Hole: 180°

Angle of Hole: -60°

Final Depth of Hole: 95 m

Core Sizes: NQ

From 2.0 To 95.0 = 93.0 m

From To =

From To =

From To =

From To =

Logged By: N.R. Langsford

Date Logged: 8/12/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg
	0				
0		17.5	60°	180°	
	17.5				
35.0		32.5	61.5°	179°	149°
	50.0				
65.0		30.0	61.5°	179°	149°
	80.0				
95.0		15.0	61.5°	179°	149°
	95.0				
~95.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	2121.91	1420.24	700.13
17.5	2113.16	1420.24	684.97
50.0	2097.65	1420.51	656.41
80.0	2083.34	1420.76	630.05
95.0	2076.19	1420.89	616.87

Survey By: Date:

Calculated By: R.J. REID Date: 10/12/81

HOLE N°: MBD 129

832698

685

832699 686

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	4.0	0 - 4.0: NO CORE.						
	33.2	4.0 - 37.2: Interbedded grey SILTSTONE and QUARTZITE. Thinly bedded, faintly laminated. Weathered zones of yellow clay and limonite staining along joints. Massive quartzite bands predominate 17-22 m.		10/11		Minor disseminated pyrite. Oxidixed pyrite veins (now limonite-quartz-minor SnO_2 veins) 10.4 m, 22.4 m, 25.4 m and 36.4 m.		
20								
	5.4	37.2 - 42.6: Altered QUARTZ PORPHYRY. Highly weathered white crumbly, porous. Notable lack of sulphide. Contact within zone of low recovery.		1				
40								
	25.9	42.6 - 68.5: Grey massive QUARTZITE passing down into interbedded SILTSTONES and SANDSTONES. Graded bedding common below 52 m (beds overturned). Fracturing common in quartzites below porphyry. Quartzites dominant below 64 m.		11/10		42.5 - 48.0 m: Disseminated py, po in fractured limonite stained quartzite. SnO_2 crystals visible in vugns. Minor py-qutz veinlets. Fracturing decreases below porphyry contact. 57.7 - 58.2 m: 3 mm qutz-limonite-SnO_2 veins.		
60								
	6.5	68.5 - 75.0: Altered QUARTZ PORPHYRY limonite stained, strongly pyritic. 15% quartz phenocrysts up to 5 mm.		1		15% disseminated pyrite. Numerous thin qutz-limonite veins and linonite staining.		
	20.0	75.0 - 95.0: Interbedded grey-green SILTSTONES and QUARTZITES. Thinly bedded and laminated. Slumps and contorted bedding common.		10/11		Very minor disseminated pyrite and rare py-carbonate veins.		
80								
100		END OF HOLE: 95.0 m.						

5 cm

FOR LEGEND SEE DRAWING NO.

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 129

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	14+15	4·0	8·0	4·0		50								
	15	8·0	10·0	2·0		44								
	16	10·0	11·0	"		40								
	17	12·0	14·0	"		30								
	18	14·0	16·0	"		28								
	19	16·0	18·0	"		18								
	20	18·0	20·0	"		22								
	21	20·0	22·0	"		46								
	22	22·0	24·0	"		250								
	23	24·0	26·0	"		1350								
	24	26·0	28·0	"		170								
	25	28·0	30·0	"		120								
	26	30·0	32·0	"		190								
	27	32·0	33·7	1·7		190								
28+29		33·7	34·7	1·0	500									
30		34·7	35·0	1·3	1200									
31		35·0	37·0	2·0	2·00%	*7·44%	BP Method							
32		37·0	38·0	1·0	1250									
33		38·0	39·0	"	2450									
34		39·0	41·0	2·0	1·69%	*1·63%	BP Method							
35		41·0	44·0	3·0	3850									
36		44·0	45·0	1·0	1·17%	1·27%	BP Method							
37		45·0	46·0	"	9700									
38		46·0	47·0	"	4600									
39		47·0	48·0	"	3900									
40		48·0	49·0	"	4250									
41		49·0	50·0	"	1350									
42		50·0	51·0	"	470									
43		51·0	52·0	"	560									
44		52·0	53·0	"	330									

Notes :— XRF BP method

* Being redetermined by Lode BP

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 129

SAMPLE TYPE : DRILL CORE FROM 4·0 TO 53·0

Grind Split

687

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
14E 32-1		530	540	10	200									
	1-1E 35	540	560	20		500								
	21	560	580	"		4750								
	22	580	600	"		600								
	23	600	620	"		190								
	24	620	640	"		75								
	25	640	660	"		260								
	26	660	674	14		2450								
14E 26-2		674	684	10	1350									
27		684	694	"	3100									
28		694	704	"	3150									
29		704	714	"	5400									
30		714	724	"	4600									
31		724	734	"	1350									
32		734	744	"	370									
33		744	754	04	490									
34		754	764	10	520									
	1-1E 36	764	774	14		600								
14E 14		774	784	10	3100									
15		784	792	08	2620	3.16%	BD mixed							
16		792	802	10	960									
	1-1E 37	802	822	20		220								
	38	822	842	"		70								
	39	842	862	"		65								
	40	862	882	"		80								
	41	882	902	"		80								
	42	902	912	"		50								
	43	912	950	"		75								

Notes:— ABF BI method

* being redetermined by code BD

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 129

SAMPLE TYPE : DRILL CORE FROM 530 TO 950

1 Cross Split

688

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 130

Objective and Anticipated Lengths to Targets: To test DSL base in Slaughteryard face.

Drilling Commenced: 7/12/81 Drilling Completed: 9/12/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES

Bearing of Hole: 180°

Angle of Hole: -45°

Final Depth of Hole: 35.6 m

Core Sizes: NQ

From 2.0 To 35.6 = 33.6

From To =

From To =

From To =

From To =

Logged By: N.R. Langsford

Date Logged: 9-10/12/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P.	Survey Data: Dip	Survey Data: Grid Brg	Mag Brg
	0				
0		17.8	45°	180°	
	17.8				
35.6		17.8	47°	180°	(170°)?
	35.6				
-35.6					

Collar and Change Points: Length to C.P.	North	East	R.L.
0	2177.11	1060.98	704.76
17.8	2164.52	1060.98	692.17
35.6	2152.38	1060.98	679.16

Survey By: Date:

Calculated By: R.J. REID Date: 11/12/81

HOLE N°: MBD 130

832702

832703 690

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: NO CORE.						
20	32.6	3.0 - 35.6: DOLOMITE. Grey, hard partly silicified faintly laminated dolomite. Partly weathered and limonite stained to 6 m. Sections show slump bedding, others are massive. Below 22 m thin beds of pyrrhotite, and slumps with "pull aparts" of laminated po rich dolomite. Minor dolomitic siltstone 32-34 m.		2		Abundant veinlets, thin beds and laminae of pyrhotite including massive and laminated clasts in "pull aparts". Averages 10% below 15 m. Quartz-carbonate-pyrite-pyrrhotite-fluorite-asp. Veins very coarse grained, parallel to core axis. (Difficult to estimate thickness but 20-60 mm).		
40		END OF HOLE: 35.6 m.						

NOTES: 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDS), MONOGRAPH NO 9 AUSTRALAS. INST. MIN. METALL. - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG
Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 130

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
14E397		3.0	5.9	2.9	170									
98		5.9	6.9	1.0	2550									
99		6.9	7.9	"	1050									
14E400		7.9	8.9	"	900									
01		8.9	9.9	"	960									
02		9.9	10.9	"	24									
03		10.9	11.9	"	2500									
04		11.9	12.9	"	5300									
05		12.9	13.9	"	2500									
06		13.9	14.9	"	450									
07		14.9	15.9	"	5800									
08		15.9	16.9	"	500									
09		16.9	17.9	"	80									
410		17.9	18.9	"	110									
11		18.9	19.9	"	1900									
12		19.9	20.9	"	3100									
13		20.9	21.9	"	230									
14		21.9	22.9	"	2000									
15		22.9	23.9	"	4350									
16		23.9	24.9	"	3560									
17		24.9	25.9	"	500									
18		25.9	26.9	"	220									
19		26.9	27.9	"	640									
420		27.9	28.9	"	720									
21		28.9	29.9	"	1650									
22		29.9	30.9	"	3550									
23		30.9	31.9	"	4600									
24		31.9	32.9	"	1350									
25		32.9	33.9	"	4300									
26		33.9	34.9	"	2950									

Notes :— XRF Bi method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 130

SAMPLE TYPE : DRILL CORE FROM 30 TO 34.9

No Split

8327/04

691

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
142427		349	356	0.7	440									

Notes :— XRF by method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 130

SAMPLE TYPE : DRILL CORE (N½ Split) FROM 349 TO 356

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 131

Objective and Anticipated Lengths to Targets: To test mineralisation in Stanhope Dyke. Anticipated top dyke contact approx. 60 m.

Drilling Commenced: 9/12/81 Drilling Completed: 11/12/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES

Bearing of Hole: 180°

Angle of Hole: -70°

Final Depth of Hole: 70.0 m

Core Sizes: NQ

From 3.0 To 70.2 = 67.2 m

From To =

From To =

From To =

From To =

Logged By: N.R. Langsford

Date Logged: 12/12/81

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Survey Data: Dip	Survey Data: Grid Brg	Mag Brg
	0				
0		15.0	70°	180°	
	15.0				
30.0		35.0	70°	185°	155°
	50.0				
70.0		20.0	70°	186°	156°
	70.0				
-70.0					

Collar and Change Points: Length to C.P	North	East	R.L.
0	2090.22	1500.16	697.93
15.0	2085.09	1500.16	683.83
50.0	2073.16	1499.12	650.95
70.0	2066.36	1498.40	632.15

Survey By: Date:

Calculated By: R.J. REID Date: 4/1/82

HOLE N°: MBD 131

693-

832706

832707 694

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (capital letters, underlined) Depth Description and notes (indented about 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	2.5	0 - 2.5: NO CORE.						
	7.7	2.5 - 10.2: Interbedded SILTSTONE and QUARTZITE. Grey, thinly laminated and thinly bedded. Weathered, limonite stained.		10/11				
	4.6	10.2 - 14.8: Altered PORPHYRY. Light green sericitised quartz porphyry. Very minor pyrite. 10% qutz phenocrysts up to 5 mm.		1		Very minor disseminated pyrite.		
20	26.2	14.8 - 41.0: Interbedded QUARTZITES and SILTSTONES. Siltstones grey to dark grey, thinly laminated and thinly bedded, quartzites predominant below 32 m, massive, pale grey. Porous limonite stained quartzite band 30-31 m.		11/10		Very minor disseminated and veinlet pyrite.		
40	22.0	41.0 - 63.0: Altered QUARTZ PORPHYRY with SILTSTONE band 55.8-57.2 m. Pale grey green sericitised quartz-porphyry. 10% quartz phenocrysts up to 5 mm in f.g. green sericite ground mass. 1.4 m band of indurated massive brown siltstone. Porphyry contains pyrite above and below this contact, and is lomonite stained.		1		Minor disseminated pyrite, more abundant above and below sediment band.		
60	7.2	63.0 - 70.2: Thinly laminated SILTSTONES. Grey thinly bedded. Minor slump bedding.		10				
		END OF HOLE: 70.2 m.						
80								

NOTES · 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", G A BERKMAN & W R RYALL (ED), MONOGRAPH NO. 8 AUSTRALAS INST MIN. METALL. 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 131

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	144043	2.5	5.0	2.5		540								
	44	5.0	7.0	2.0		210								
	45	7.0	9.1	2.1		110								
144432		9.1	10.1	1.0	95									
33		10.1	11.1	"	420									
34		11.1	12.1	"	720									
35		12.1	13.1	"	660									
36		13.1	14.1	"	600									
37		14.1	15.0	0.9	240									
38		15.0	17.3	2.3	1450									
	144046	17.3	19.3	2.0		760								
	47	19.3	21.3	"		460								
	48	21.3	23.3	"		310								
	49	23.3	25.3	"		150								
	50	25.3	27.3	"		320								
	51	27.3	29.3	"		220								
	52	29.3	31.3	"		3500								
	53	31.3	33.3	"		1850								
	54	33.3	35.3	"		330								
	144055	35.3	37.3	"		190								
	56	37.3	39.6	2.3		700								
144435		39.6	40.9	1.3	600									
36		40.9	41.9	1.0	520									
37		41.9	42.9	"	720									
38		42.9	43.9	"	4400									
39		43.9	44.9	"	780									
40		44.9	45.9	"	580									
41		45.9	46.9	"	55									
42		46.9	47.9	"	130									
43		47.9	48.9	"	400									

Notes :— XRF Bi Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 131

SAMPLE TYPE : DRILL CORE FROM 2.5 TO 48.9

Split Core

80 4668

695

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
[illegible]		[illegible]	[illegible]	10	350									
[illegible]		[illegible]	[illegible]	"	470									
[illegible]		[illegible]	[illegible]	"	140									
[illegible]		[illegible]	[illegible]	"	280									
[illegible]		[illegible]	[illegible]	"	1050									
[illegible]		[illegible]	[illegible]	"	1750									
[illegible]		[illegible]	[illegible]	"	3000									
[illegible]		[illegible]	[illegible]	"	38									
[illegible]		[illegible]	[illegible]	"	700									
[illegible]		[illegible]	[illegible]	"	1950									
[illegible]		[illegible]	[illegible]	"	1500									
[illegible]		[illegible]	[illegible]	"	3550									
[illegible]		[illegible]	[illegible]	"	300									
[illegible]		[illegible]	[illegible]	"	130									
[illegible]		[illegible]	[illegible]	"	130									
	149257	63.9	65.9	2.0		740								
	58	65.9	67.9	"		90								
	59	67.9	70.2	2.3		100								

Notes :— XRF BY Mesco

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 131

SAMPLE TYPE : DRILL CORE FROM 48.9 TO 70.2

½ Split
½ Ground

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 132

Objective and Anticipated Lengths to Targets: To test mineralisation in Queen Dyke. Anticipated top dyke contact approx. 60 m.

Drilling Commenced: 12/12/81 Drilling Completed: 16/12/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES

Bearing of Hole: 90°

Angle of Hole: -45°

Final Depth of Hole: 76.0 m

Core Sizes: NQ

From 3.0 To 76.0 = 73.0 m

From To =

From To =

From To =

From To =

Logged By: N.R. Langsford

Date Logged: 17/12/81

Stored Rack N°:

Length From Collar	Mid Point and End
	0
0	
	23.0
46.0	
	61.0
76.0	
	76.0
-76.0	

Survey Data			
Length Between M.P	Dip	Grid Brg	Mag. Brg
23.0	45°	90°	
38.0	48°	93°	63°
15.0	50°	94°	64°

Collar and Change Points			
Length to C.P	North	East	R.L.
0	2119.80	1440.46	702.61
23.0	2119.80	1456.72	686.35
61.0	2118.47	1482.12	658.11
76.0	2117.80	1491.73	646.62

Survey By: Date:

Calculated By: R.J. REID Date: 4/1/82

HOLE N°: MBD 132

832710

697

832711 698

DEPTH (length from collar)	INTERVAL	DEPTH from - to ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 0mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
	3.0	0 - 3.0: NO CORE.						
	56.3	3.0 - 59.3: QUARTZITE with interbedded SILTSTONE. Grey fine massive quartzite with thinly laminated siltstone interbeds. Slump bedding common in siltstone interbeds. Limonite stained joints common to 30 m. Siltstone dominant 40-46 m. Core is jointed, very broken zones 36-44 m including old workings 38-39.5 m. Bedding 30-35° to core axis.		10/ 11		Minor thin pyrite veins.		
		Irregular contact, minor silicification and limonite stained joints.						
	10.6	59.3 - 70.0: ALTERED QUARTZ PORPHYRY. Light grey green to grey. 10-15% qutz phenocryst up to 5 m in fg qutz-sericite matrix. Up to 10% disseminated pyrite. Limonite stained joints. Lower contact irregular. Bedding 45°		1		Up to 10% disseminated pyrite.		
	6.0	70.0 - 76.0: QUARTZITE, white fg massive, minor siltatone interbeds. Bedding 45°		10/		Minor disseminated pyrite.		
		END OF HOLE: 76.0 m.						

0 20 40 60 80

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 132

LOG SHEET 2 OF 2

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	149860	3·0	6·0	3·0		50								
	61	6·0	8·0	2·0		34								
	62	8·0	10·0	"		190								
	63	10·0	12·0	"		55								
	64	12·0	14·0	"		42								
	65	14·0	16·0	"		150								
	66	16·0	16·4	0·4		140								
148-159		16·4	17·4	1·0	180									
160		17·4	18·4	"	320									
61		18·4	19·4	"	180									
62		19·4	20·4	"	150									
63		20·4	21·4	"	190									
64		21·4	22·4	"	1750									
65		22·4	23·4	"	120									
66		23·4	24·4	"	160									
67		24·4	25·4	"	5·300									
68		25·4	26·4	"	150									
69		26·4	27·4	"	85									
170		27·4	28·4	"	65									
71		28·4	29·4	"	50									
	149869	29·4	31·4	2·0		80								
	68	31·4	33·4	"		150								
	69	33·4	35·4	"		350								
	870	35·4	39·4	4·0		560								
	71	39·4	41·4	2·0		130								
	72	41·4	43·4	"		95								
	73	43·4	45·4											
	74	45·4	47·4	"		85								
	75	47·4	49·4	"	A	350	0·95							
	76	49·4	51·4	"		60								

Notes :— XRF Bi mained

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 132

SAMPLE TYPE : DRILL CORE FROM 3·0 TO 51·4

1 brand NQ split

8327/12

699

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	.g	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	148277	51.4	53.4	2.0		150								
	78	53.4	55.4	"		160								
	79	55.4	57.4	"		420								
	280	57.4	58.2	0.8		2.54%	*							
148282		58.2	59.2	1.0	190									
83		59.2	60.2	"	660									
84		60.2	61.2	"	560									
85		61.2	62.2	"	1200									
86		62.2	63.2	"	560									
87		63.2	64.2	"	590									
88		64.2	65.2	"	360									
89		65.2	66.2	"	410									
290		66.2	67.2	"	700									
91		67.2	68.2	"	1100									
92		68.2	69.2	"	740									
93		69.2	70.2	"	900									
94		70.2	71.2	"	1150									
	148281	71.2	73.2	2.0		290								
	80	73.2	75.2	"		540								
	83	75.2	76.0	0.8		740								

Notes:— XRF Bi method

* Being redetermined by Wale BC

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 132

SAMPLE TYPE : DRILL CORE FROM 51.4 TO 76.0

N & Split Core

83271 E

700

MOUNT BISCHOFF JOINT VENTURE

HOLE N°: MBD 133

Objective and Anticipated Lengths to Targets: To test mineralisation in, and position of, Queen Dyke.

Anticipated top contact of dyke approx. 95 m.

Drilling Commenced: 17/12/81 Drilling Completed: 24/12/81 Drilling Contractor: PARRY EXPL. DRILLING Rig Type: BOYLES

Bearing of Hole: 360°

Angle of Hole: -55°

Final Depth of Hole: 125.0 m

Core Sizes: NQ

From 3.0 To 125.0 = 122.0 m

From ..... To ..... = ...

From ..... To ..... = ...

From ..... To ..... = ...

From ..... To ..... = ...

Logged By: N.R. Langsford

Date Logged: 4/1/82

Stored Rack N°:

Length From Collar	Mid Point and End	Survey Data: Length Between M.P	Dip	Grid Brg	Mag Brg
	0				
0		15.0	55°	360°	
	15.0				
30.0		30.0	54°	359°	329°
	45.0				
60.0		30.0	54°	359°	329°
	75.0				
90.0		32.5	55°	360°	330°
	107.5				
125.0		17.5	55.5°	360°	330°
	125.0				
-125.0					

Collar and Change Points: Length to C.P	North	East	R. L.
0	2150.50	1400.18	698.86
15.0	2159.10	1400.18	686.57
45.0	2176.73	1399.87	662.30
75.0	2194.37	1399.56	638.03
107.5	2213.01	1399.56	611.41
125.0	2222.92	1399.56	596.99

Survey By: M. PROWSE Date: 23/12/81

Calculated By: R.J. REID Date: 4/1/82

HOLE N°: MBD 133

701
832714

832715 702

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
0	3.0	0 - 3.0: NO CORE.						
	91.3	3.0 - 94.3: Grey thinly bedded SILTSTONE with minor QUARTZITE interbeds. Siltstones thinly bedded, finely laminated. Fine gr. muscovite along some bedding planes. Quartzites are fg. massive, becomming predominant 34-65.0 m. Zone of fracturing and limonate staining 70.0 - 73.5 m. Slump bedding common in siltstone units below 30.0 m. Bedding 30°-45° to core axis.				< 1% disseminated py. Minor thin pyrite veinlets. Fractured limonite stained zone 70.0 - 73.5 m.		
20								
40								
60								
80		5 cm						
	25.3	94.3 - 119.6: Grey to white altered QUARTZ PORPHYRY. 10% qutz phenocrysts up to 5 mm in fg qutz-topaz groundmass. Minor limonite stained joints. 103.0 - 113.0: Leached porous limonite stained zone. 118.0 - 119.5: Dark brown alteration, porous pyritic zone.				Up to 15% disseminated pyrite, as grains up to 7 mm. Minor pyrite veinlets.		
100								
		Dark brown contact bx.						
120								

NOTES: 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D.A. BERKMAN & W.R. RYALL (ED.), MONOGRAPH NO 9 AUSTRALAS. INST. MIN. METALL. - 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 133

LOG SHEET 2 OF 3

DEPTH (length from collar)	INTERVAL	DEPTH from - to : ROCK UNIT (CAPITAL LETTERS, UNDERLINED) Depth Description and notes (INDENTED ABOUT 10mm)	POINTER & CODE	GRAPHIC LOG	POINTER & CODE	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS Ni
120	5.4	119.6 - 125.0: Grey interbedded SILTSTONES and QUARTZITES. Thinly laminated siltstones, slump bedded. Massive quartzites.				Minor disseminated pyrite.		
		END OF HOLE: 125.0 m.						
130								

NOTES: 1 FOR ABBREVIATIONS SEE "FIELD GEOLOGIST'S MANUAL", D A BERKMAN & W R RYALL (EDT), MONOGRAPH NO 9 AUSTRALAS INST MIN METALL. 1976
2 ATTITUDE OF BEDDING, VEIN, ETC IS ANGLE BETWEEN PLANAR STRUCTURE AND LONG AXIS OF CORE 3 LENGTH IS GIVEN AS METRES OR MILLIMETRES

5 cm

FOR LEGEND SEE DRAWING NO

METALS EXPLORATION LIMITED

SUMMARY DRILL LOG Scale

Prospect or project: Mt. Bischoff Tin

HOLE No. MBD 133

LOG SHEET 3 OF 3

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER. VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	1494	3.0	6.0	3.0		30								
	95	6.0	8.0	2.0		30								
	96	8.0	10.0	"		20								
	97	10.0	12.0	"		40								
	98	12.0	14.0	"		55								
	99	14.0	16.0	"		45								
	500	16.0	18.0	"		40								
	01	18.0	20.0	"		40								
	02	20.0	22.0	"		40								
	03	22.0	24.0	"		34								
	04	24.0	26.0	"		55								
	05	26.0	29.0	3.0		140								
	06	29.0	31.0	2.0		60								
	07	31.0	33.0	"		30								
	08	33.0	35.0	"		30								
	09	35.0	37.0	"		30								
	1410	37.0	39.0	"		40								
	01	39.0	41.0	"		60								
	02	41.0	43.0	"		70								
	05	43.0	45.0	"		95								
	04	45.0	47.0	"		210								
	05	47.0	49.0	"		210								
	06	49.0	51.0	"		220								
	07	51.0	53.0	"		760								
	08	53.0	55.0	"		300								
	09	55.0	57.0	"		450								
	510	57.0	59.0	"		600								
	11	59.0	61.0	"		1550								
	12	61.0	63.0	"		360								
	13	63.0	65.0	"		2050								

Notes :— XRF BI method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 153

SAMPLE TYPE : DRILL CORE FROM 3.0 TO 65.0

Grid

OC 2/11/

704

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
	149914	650	670	2.0		50								
	15	670	690	"		1450								
149011		690	710	"	8000									
12		710	730	1.0	820									
13		730	750	"	140									
14		750	770	"	540									
	149916	770	790	2.0		80								
	17	790	810	"		100								
	18	810	830	"		80								
	19	830	850	"		130								
	920	850	870	"		540								
	21	870	890	"		190								
	22	890	910	"		170								
	23	910	930	"		450								
	24	930	950	"		7000								
	25	950	965	1.5		1600								
149495		965	975	1.0	160									
86		975	985	"	640									
87		985	995	"	550									
88		995	997.5	"	160									
89		997.5	998.5	"	620									
990		998.5	999.5	"	310									
91		999.5	1005	"	960									
92		1005	1015	"	230									
93		1015	1025	"	200									
94		1025	1035	"	210									
95		1035	1045	"	900									
96		1045	1055	"	480									
97		1055	1065	"	560									
98		1065	1075	"	400									

Notes :— XRF BI method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 153

SAMPLE TYPE : DRILL CORE FROM 650 TO 1075

Grind N+Split

SAMPLE NO.	SAMPLE NO	FROM	TO	INTERVAL	Sn	Sn	Cu	Pb	Zn	Ag	W	Au	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
149499		107·5	108·5	1·0	250									
149500		108·5	109·5	"	590									
01		109·5	110·5	"	460									
02		110·5	111·5	"	340									
03		111·5	112·5	"	360									
04		112·5	113·5	"	410									
05		113·5	114·5	"	480									
06		114·5	115·5	"	1050									
07		115·5	116·5	"	620									
08		116·5	117·5	"	480									
09		117·5	119·5	2·0	390									
010		119·5	120·5	1·0	210									
	149426	120·5	122·5	2·0		420								
	27	122·5	125·0	2·5		600								

Notes :— XRF By Method

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 133

SAMPLE TYPE : DRILL CORE (NQ SPLIT ONLY) FROM 107·5 TO 125·0

8327 19

106

832720

82-1698 Vol 2. 81-005F(DEC)

METALS EXPLORATION LIMITED

MT BISCHOFF TIN PROSPECT

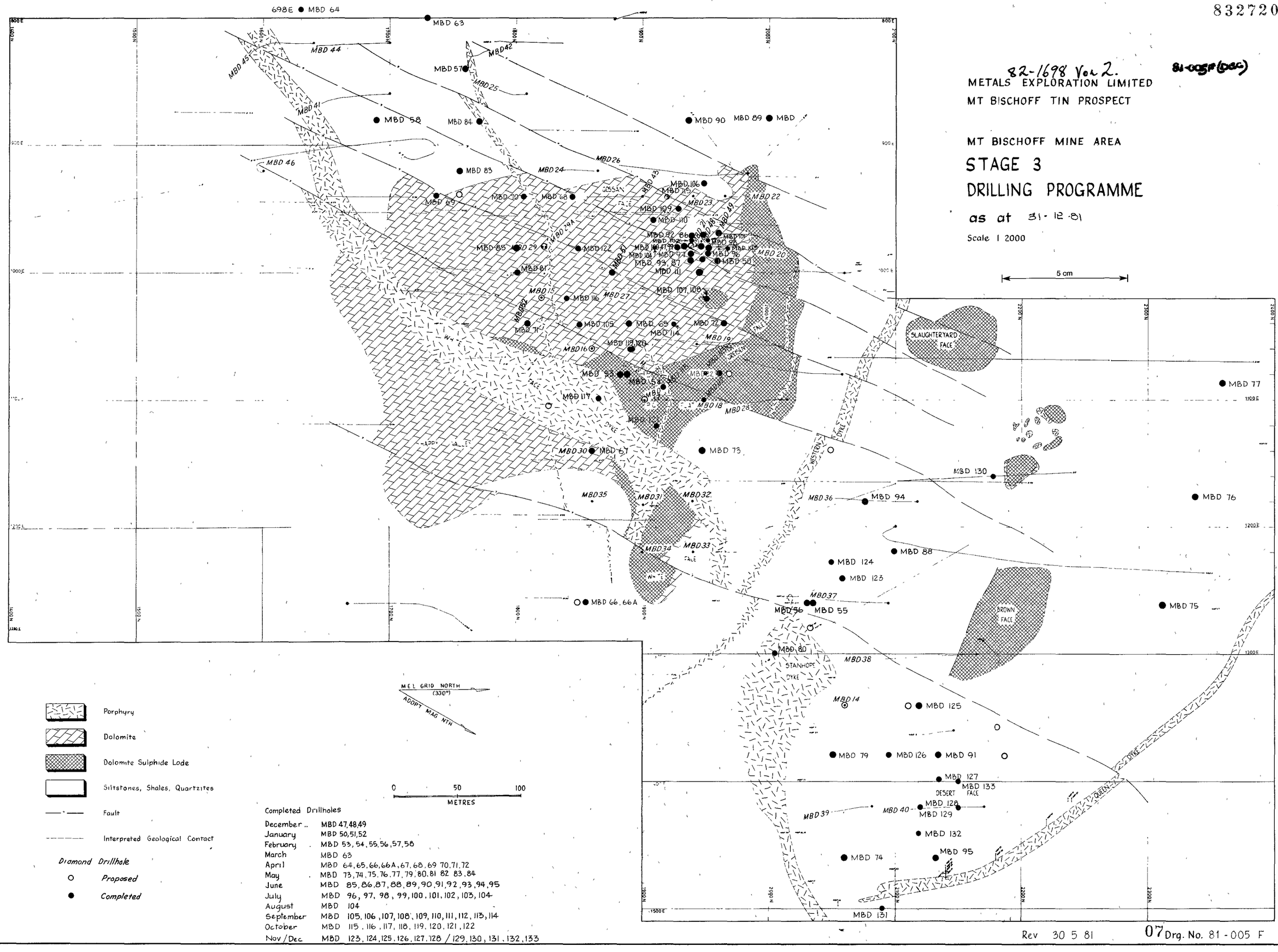
MT BISCHOFF MINE AREA

STAGE 3
DRILLING PROGRAMME

as at 31-12-81

Scale 1 2000

5 cm



Completed Drillholes

December ..	MBD 47,48,49
January	MBD 50,51,52
February	MBD 53, 54, 55, 56, 57, 58
March	MBD 63
April	MBD 64, 65, 66, 66A, 67, 68, 69 70, 71, 72
May	MBD 73, 74, 75, 76, 77, 79, 80, 81 82 83, 84
June	MBD 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95
July	MBD 96, 97, 98, 99, 100, 101, 102, 103, 104
August	MBD 104
September	MBD 105, 106, 107, 108, 109, 110, 111, 112, 113, 114
October	MBD 115, 116, 117, 118, 119, 120, 121, 122
Nov/Dec	MBD 123, 124, 125, 126, 127, 128 / 129, 130, 131, 132, 133

Rev 30 5 81

07 Drg. No. 81-005 F