MBD-31

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

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

028464

0	(1.5m)	TRICONE TO 1.5m - NO CORE.	
5	(6.0m)	1.5-7.5 QUARTZ FELSPAR PORPHYRY Brownish-grey fine grained matrix, well fractured and broken, with bleaching and removal of material by weathering. Qtz - rounded and irregular turbid phenocrysts to 6 x 5 mm. Felspar not apparent - possibly removed by weathering? Broken contact →	Pyrite, porous and pitted, some grains up to 3mm. TOTAL 10%
10	(9.5m)	7.5-17 FAULTED DOLOMITE SULPHIDE LODE. Very faulted and broken - recovery 25-30%. Mostly residual pyrite, with qtz grains in a matrix of sticky black clay. Some intervals of fine grained ochreous grey pug with very little sulphide - faulted weathered dolomite? Some rare fragments of weathered porphyry (apophyses?) Broken contact →	Py 40-50%, porous, pitted, in almost massive fragments
20	(9m)	17-26 FAULT ZONE Laminated black puggy clay with minor intercalations of fault breccia - clasts of pale grey dolomite and bluish green (?) serpentine with pyrite fragments in a brownish or black puggy matrix. The laminated clay has a banding of silt and clay size grains 1-5mm, and a shiny parting along the fine grained laminations Broken Contact →	Py in fragments in breccia zones 2-3%.
25	(8m)	26-34.0 Weakly altered DOLOMITE. Some fragments DSL in top 4m, with heavy pinkish	Py in upper 4m as porous aggregates
	(1.5)	LOST CORE ZONE	?
30	white	altered dolomite, lower 4m is brecciated unmineralised washed dolomite fragments, some in a matrix of soft white pug. Recovery poor Broken contact →	with quartz intergrown. TOTAL 10%.
35	(8.5)	34 - 38.3 Brecciated grey siltstones, sandstones and silty shales. Quartzose Siltstones, sandstones are hard and silicified, medium grey. More clay rich siltstones and shales are a darker grey and softer. Very fractured and broken - core reduced to rubble. 38.3 - 41.0 Grey quartzite? - weakly banded 50 CCA with sparse 1-2mm cavities. Well fractured and broken. 41 - 42.5 Friable soft white fine grained fault pug. Originally siltstone? →	Nil - possibly removed by weathering.
45	(9.5m)	LOST CORE ZONE. - SILTSTONES AND QUARTZITES? Sludge samples - grey qtzite fragments and white qtz grains with some minor grains Py.	Trace Py in sludge samples.
50	(1.0)	52-53.0 GREY SILTSTONES AND SILTY SHALES Bedding 25° Bedding 30° →	Trace thinly bedded Py
55		END OF HOLE 53.0m. The interval 7.5-52m has been badly crushed and broken by faulting, with attendant removal of diagnostic mineral assemblages by a combination of cataclasis and subsequent weathering. Total core recovery: 30%	
60			

5 cm

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

FIELD COPY - COPY TO BE SENT TO MELBOURNE FOR TYPING

METALS EXPLORATION LTD. EXPLORATION DEPARTMENT

SUMMARY DRILL LOG Scale 1:1000, 1:500, 1:250

Prepared by: G. BROADBENT. Date 11/3/82

HOLE No. MBD 31

Sheet of

SAMPLE NO.	SAMPLE NO	FROM	TO	INTER-VAL	Sn	Sn	Cu	Pb	Zn	Ag	W	As	Check Sn	Bulked Assays
SPLIT CORE	GROUND CORE	m	m	m	SPLIT	GROUND								
977292		1.5	3.5	2.0	2350		470	65	70	2	30	360		
93		3.5	5.5	"	410		290	100	5200	2	20	210		
94		5.5	7.5	"	4300		310	55	910	1	25	260		
95		7.5	9.5	"	1.02%		1200	85	26	1	70	5300		
96		9.5	11.5	"	860		930	4	550	<1	<10	540		
97		11.5	13.5	"	410		850	14	1600	<1	<10	820		
98		13.5	15.5	"	1.42%		500	90	1500	<1	80	1350		
99		15.5	17.5	"	3350		540	440	9800	3	65	9400		
976600		17.5	19.5	"	3600		920	740	2.50%	7	75	9160	2500	Re check of check assay
01		19.5	21.5	"	5900		520	170	1.20%	1	55	800		
2		21.5	23.5	"	3450		430	100	7100	<1	40	600		
3		23.5	25.5	"	5100		410	120	4200	1	60	1750		
4		25.5	27.5	"	2850		430	40	2500	<1	10	320		
5		29.0	30.4	1.4	1000									
6		30.4	32.0	1.6	130									
7		32.0	34.0	2.0	85									
8		34.0	36.0	"	290									
9		36.0	37.8	1.8	330									
10		39.3	41.0	2.7	1000									
11		41.0	42.5	1.5	65									

Notes:— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 31A

SAMPLE TYPE : DRILL CORE FROM 1.5 TO 42.5

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
97732		7.0	8.5	1.5	2.76%									
33		8.5	9.5	1.0	3.22%									
34		9.5	11.0	1.5	5900									
35		11.0	12.5	"	2150									
36		12.5	14.0	"	4300									
37		14.0	15.5	"	1.28%									
38		15.5	17.0	"	7700									
39		17.0	18.5	"	9300									
740		18.5	20.0	"	9600								1.05	pulp check
41		20.0	21.5	"	9100									
42		21.5	23.0	"	7900									
43		23.0	24.5	"	8700									
44		24.5	26.0	"	8100									
45		26.0	27.5	"	4600									
46		27.5	29.0	"	5700									
47		29.0	30.5	"	4500									
48		30.5	31.5	"	2550									
49		32.0	33.5	"	4000									
750		33.5	35.0	"	1150									

028466

Notes:— Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 31 B

SAMPLE TYPE: DRILL CORE FROM 7.0 TO 35.0

SLUDGE

028467

REPORT No.

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

MBD·31

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 31

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1) MBJV	1900·82 N	11875 E	642·85
(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 3015 | 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 53·0 m.

Commenced: 12 / 2 / 80

Completed: 17 / 2 / 80

Drilling contractor: LONGYEAR AUST PTY LTD

Rig type: LONGYEAR B35 3

Core size and non-coring (NC)

TRICONE	0	TO	1·5 m.
NQ	1·5	TO	53·0 m.
		TO	
		TO	
		TO	
		TO	

Details of down hole location-survey methods.
TROPARI every 50 m.

Purpose of drilling and anticipated lengths to targets.
To investigate possible tin mineralisation in dolerite 7-45 m.
Planned depth of hole 50 m.

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type magnetic	DIP
50·5 m	058°	89°

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 C. BECKMANN	LOGGED BY	LOGGED BY
FROM 0 TO 53 m.	FROM ____ TO ____	FROM ____ TO ____
DATE 23.2.80	DATE	DATE

Company managing exploration programme.
METALS EXPLORATION LTD

HOLE No. MBD 31
Log sheet 1 of 2

028468

Drill advance	Core length recovered	% recovery estimate
2.0	0.8	40
1.5	0.9	60
2.8	2.1	75
0.7	0.6	85
0.8	0.5	62
1.6	0.6	37
1.5	0.6	40
1.6	0.3	19
1.2	0.4	25
1.8	0.4	22
1.5	1.2	80
1.5	0.2	13
1.5	0.8	53
1.5	0.2	13
1.5	0.6	40
1.5	0.5	33
1.5	0.2	13
1.5	(lost core zone)	0
1.5	0.2	13
1.5	0.2	13
1.5	0.2	13
1.5	0.5	33
1.5	0.6	40
1.3	1.1	85
0.5	(lost core zone)	0
0.7	0.2	28
0.5	0.3	60
1.5	0.3	20
1.5	0.4	27
8.0	(lost core zone)	0
1.5	(lost core zone)	0
1.0	1.0	100

Depth from-to: Rock unit / Detailed rock description and notes	Graphic log	Structural and vein information	Mineralisation	Percent mineralisation (visual estimate)
TRICONE TO 1.5 m - NO CORE.				
1.5-7.5 QUARTZ FELSPAR PORPHYRY. Porous brownish-grey fine grained matrix, weathered. Well fractured and faulted - discrete narrow crumbly bleached and broken zones dividing soft, porous, relatively coherent 1m intervals of porphyry. Phenocrysts: Quartz - rounded and irregular phenocrysts to 6 x 5 mm, 20%. Felspar - not apparent, either removed by weathering or altered to resemble quartz.	1	Contact undulose, 55°	1.5-7.5 pitted and porous py. as discrete grains to 4 mm, also trace sp. Completely leached out adjacent to fracture zones.	10%
7.5-?17.0 FAULTED DOLOMITE SULPHIDE LODE? Faulted and broken. Residual pyrite with lesser quartz and carbonate fragments in a matrix of puggy black clay. Some intervals of ochreous grey fine grained puggy rubble with very little sulphide. An examination of sludge samples reveals residual pyrite, grey quartz and sparse carbonate fragments. 14 m - 20 cm piece of fine grained qtz porphyry.	8/F/5	7.5-52 Faulted and shattered - subsequent weathering has removed diagnostic mineral assemblages, making rock type boundaries difficult to determine exactly. Overall recovery no more than 30%. Contact Broken	7.5-17.0? py, 40-50% as porous pitted fragments. Some sparse fluorite grains and heavy black cassiterite? in sludge samples.	40-50%
17.0-26.0 FAULT PUG. Fine grained laminated black puggy clay, soft, friable, with a shiny fracture interlaminated with whitish laminae to 5 mm - more silty and friable. Some 10 cm patches of brecciated hard greenish serpentinite and crumbly carbonates with pyrite in a puggy matrix - originally dolomite sulphide lode?	F/7?	Contact Broken.	17.0-26.0 residual py. trace fluorite and ?cassiterite (2-3% in sludge samples). Some porous fragments of py with the dolomitic/serpentinous fragments.	3%
26.0-34.0 FAULTED DOLOMITE? Brecciated weakly recrystallised dolomite fragments with soft white puggy mineral.	3/F?		26.0-30.4 Fragments py with recrystallised qtz/carbonate.	10%
27.5-29.0 LOST CORE ZONE. Some sparse greenish serpentinite fragments in upper 4 m, one fragment of a hard, heavy pinkish brown carbonate as found in other faulted dolomite sequences at 30.5 m.	NC		27.5-29.0 NO CORE. 26.0-30.4 See above. 30.4-34.0 Weathered-unmineralised	
34.0-38.3 SILTSTONES, SANDSTONES, minor SHALES. Siltstone and quartzite fragments with soft grey silty shale fragments, apparently once quite well bedded. Some sparse greenish serpentinite? fragments - once interbedded material from footwall of dolomite? Pitted and porous due to weathering of py(?) - Fe sulphides	10/11/9.		34.0-38.3 No mineralisation - too weathered.	
37.8-38.3 LOST CORE ZONE.	N.C.		37.8-38.3 NO CORE.	
38.3-41.0 QUARTZITE? Bedded grey f.gr. hard matrix with small holes to 1.5 mm. Quite similar to microporphyry in MBD 30, but appears to be clastic rather than crystalline.	11? 1?		38.3-41.0 No mineralisation - weathered.	-
41.0-42.5 FAULT PUG - ?SILTSTONE or ?PORPHYRY. Friable fine grained soft white pug.	F/10?		41.0-42.5 Unmineralised - leached.	-
42.5-52.0 LOST CORE ZONE. Sludge samples have fragments of fine grained grey siltstones, quartzites, and residual qtz grains with a trace of pyrite.	N.C. (10/11?)		42.5-52.0 No core, trace py in sludge samples.	<1%
52.0-53.0 SILTSTONES AND SILTY SHALES. Well bedded pale grey qtzose siltstones, medium grey clay rich siltstones, shales 1-2 cm.	10/9	52.1 Bedding 25° 52.9 Bedding 30°	52.0-53.0 Trace thinly bedded py in shaley beds.	<1%
END OF HOLE 53.0 m.				

5 cm

DRILL ADVANCE	LOST CORE ZONE	CORE LENGTH RECOVERED	% RECOVERY ESTIMATE OR	DEPTH from-to : ROCK UNIT capital letters, underlined — Depth : Detailed rock description and notes indented about 15 mm	DRILL LOG DEPTH TAG	DEPTH POINTER	GRAPHIC LOG SEE LEGEND ON SHEET 1	DEPTH POINTER	STRUCTURAL AND VEIN INFORMATION — ATTITUDE = Angle between feature and LONG CORE AXIS	MINERALISATION	PERCENT MINERALISATION Visual estimate	NOTES

METALS EXPLORATION LIMITED

MINERAL EXPLORATION
DRILL LOG
Scale 1:100

Prospect or project: MOUNT BISCHOFF	HOLE No. MBD 31
Logged by: G. BROADBENT — date 22/2/80	LOG SHEET 2 OF 2
	from 0 m. to 53.0 m.

Prepared 8/6/80