MBD. 43

028528

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

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

INTERVAL	DEPTH from-to : ROCK UNIT / Depth : Description and notes	GRAPHIC LOG	MINERALISATION
0-36.1 (36.1m)	**0 - 36.1 DOLOMITE, weakly recrystallised.** Fine grained pale grey and cream dolomite with weak recrystallisation along brecciation fractures. Some segregation of qtz and carbonates into open space fillings. Well fractured - yellowish clayey material lining fracture planes and puggy zones. (Recovery poor to 18.2m) Fine grained grey dolomite with fine dark grey brecciation fractures alternates with the faintly mottled pale cream and grey recrystallised dolomite as above.	2/3	0-12.2 py-sp-fluorite as blebs along fractures, irregular veins with qtz and carbonates and patches to 30mm. 3-5% 12.2-19.9 trace sp in qtz-carbonate veining < 1% 19.9-36.1 sp, py with qtz, carbonates in veins 1-2%.
	Contact 70°		
36.1-37.2	36.1-37.2 DOLOMITE SULPHIDE LODE.	7/8	fluorite, py, po, sp, some cassit? 10%
37.2-46.6 (9.4)	37.2-46.6 DOLOMITE, weakly recrystallised. Contact Broken As for 0-36.1	2/3	As for 12.2-19.9, < 1%
	Gradual Change		
46.6-51.8 (5.2m)	46.6-51.8 Recrystallised DOLOMITE. Dark grey recrystallised carbonates and qtz with white calcite and creamy dolomite surrounding embayed clasts of bleached dolomite.	3/2	sp, py, fluorite as blebs and grains to 5mm 3-5%.
51.8-93.6 (41.8)	51.8-93.6 SILTSTONES AND QUARTZITES. Contact Broken (fault zone) Khaki green and pale grey clay rich siltstones - sericitic? with some brownish quartzose siltstones, thinly bedded (mostly < 2cm). The quartzites are hard, bluish or brownish grey, some well bedded altering qtzose siltstones and sandstones, and occur in intervals 30cm - 2m, separated by siltstone intervals. Brecciated and disrupted, with later fine fracturing 80-60° CA Some sparse greenish shale beds 60m - 75m.	10/11	51.8-58.5 py, po disseminated as blebs, stringers and veinlets 1-2%. Some minor dolomite-qtz-fluorite-py-sp veining. TOTAL 5%. 58.5-93.6 py, trace po, disseminated and in veinlets, Some carbonate-py-fluorite-qtz-sp-po-marcasite-ga veining. TOTAL 2-3%
	79.5-89.2 Quartzites > siltstones.	11/10	
		10/11	
	Contact 65°		
93.6-101.25 (7.65)	93.6-101.25 QUARTZ FELSPAR PORPHYRY. Matrix - finely crystalline, in places pale grey and 5cm translucent, or yellowish cream Qtz - subhedral - rounded grains to 4mm 10-15% Felspar - yellowish or greenish due to alteration, 2mm or less, 3-5%.	1	py, marcasite, trace po, arsenopyrite, fluorite and sp, cassiterite. Variable concentrations and proportions 3-35%, average 20%. Some weak qtz-py-cassiterite-sp veining (1%)
101.25-112.5 (11.25)	101.25-112.5 SILTSTONES and QUARTZITES. Contact irregular, 30° As for 51.8-93.6	10/11	101.25-103.5 py, trace marcasite, disseminated in blebs and stringers 7% 103.5-112.5 py, disseminated blebs, stringers. Some sparse qtz-carbonate-fluorite-py veining. TOTAL 2-3%.
	END OF HOLE 112.5 m		

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 (when reduced to A4)

Prepared by: G. BROADBENT Date: 7/5/80.

HOLE No. MBD 43.

Sheet of

REPORT No. 028529

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD43

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1) MBJV	1899.82 N	940.44 E	632.99
(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

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

Inclination at collar 65°

Total length 112.5m

Commenced: 13 / 4 / 80

Completed: 17 / 4 / 80

Drilling contractor: LONGYEAR (AUST) PTY LTD

Rig type: LONGYEAR 38

Details of down hole location-survey methods.
TROPARI and ACID ETCH

Purpose of drilling and anticipated lengths to targets.
To investigate possible tin mineralisation in 'White Face' porphyry dyke, and to delineate the main dolomite horizon.

Core size and non-coring (NC)

		TO
NQ	0.0	TO 63.0
BQ	63.0	TO 112.5
		TO
		TO
		TO

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type AZIMUTH	DIP
25	68°	150
112.5	66°	ACID ETCH.

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
C. BROADBENT	0	112.5m	24/4/80

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD43
Log sheet 1 of 2

Depth from-to : ROCK UNIT / Detailed rock description and notes	Graphic log	Structural and vein information	Mineralisation	Percent mineralisation (visual estimate)
0 – 19.9 DOLOMITE, weakly recrystallised. Mottled pale greys and creams, with some segregation of qtz and calcite. Extensively disrupted and brecciated - early recrystallisation has proceeded along brecciation fractures, with some deposition of qtz and recrystallised dolomite, calcite in open spaces. LOST CORE 3.0 m - 5.2 m. Later fracturing has broken the core to a significant extent - sections are highly broken, with yellowish puggy clay on shear surfaces. LOST CORE 14.8 - 16.0 m.	2/3	Recovery poor to 18.2 m. 10.2 - 12.0 Fault zone. - core badly broken + washed. Faulted and broken. - shears at low angles to core. Gradual Change	0.0 - 12.2 py-sp-fluorite-qtz as irregular veins and patches in brecciation cavities.	3-5%
			12.2 - 19.9. sparse qtz-carbonate -sp veining	<1%
19.9 - 22.9 DOLOMITE Grey fine grained rather structureless dolomite, extensively brecciated, with medium grey staining of brecciation fractures.	2	Gradual Change	19.9 - 22.9 qtz-carbonate-trace sp-py veining	1-2%
22.9 - 36.1 DOLOMITE, weakly recrystallised. Alternating intervals pale grey weakly recrystallised dolomite and slightly darker grey fine grained unaltered dolomite on a 0.5 - 1.5 m scale. Extensively brecciated and disrupted - fine dark grey brecciation fractures, some of which have poorly defined fronts of recrystallisation to 3-5 cm. in the unaltered dolomite. Well fractured and sheared (post recrystallisation) - small discrete breccia zones throughout.	2/3	← Contact 70°	22.9 - 36.1 qtz - carbonate - trace sp - py - veining and blebs, irregular patches in brecciation cavities.	1-2%
36.1 - 37.2 DOLOMITE SULPHIDE LODE serpentinite, Grossly brecciated fabric, with bluish green hard/fluorite and qtz rich layers finely interbanded with qtz and carbonates (1-2 mm).	7/8	Contact irregular.	36.1 - 37.2 fluorite, py, po, sp trace ? casserite as blebs and grains dissem. along banding	10%
37.2 - 46.6 DOLOMITE, weakly recrystallised. See 22.9 - 36.1 for description.	2/3	Gradual Change.	37.2 - 46.6 trace sp, py. Fluorite as blebs and irregular patches in brecciation cavities.	<1%
46.6 - 51.8 Recrystallised DOLOMITE Dark grey recrystallised carbonates and qtz with patches of white calcite and dolomite. The recrystallisation has apparently proceeded along brecciation fractures - some corestones of pale grey, bleached, but otherwise relatively unaltered dolomite. 48.5 - 51.0 Minor talcose alteration - some bands of talcy carbonate to 30 cm.	3/2	48-52 m - FAULT ZONE. Contact broken.	46.6 - 51.8 sp, py, fluorite as blebs in recrystallised zones, with qtz and remobilised carbonates. 48.8 - 51.8 5-7%.	3-5%
51.8 - 93.6 SILTSTONES, minor QUARTZITES. Thinly bedded (mostly <2 cm) khaki green/grey sericitic clay rich siltstones. Extensively disrupted by soft-sediment deformation with later minor brecciation and fracturing, some folding. Some siltstones are quartzose, hard and bluish or brownish grey in colour; these may be interbedded with, or grade into, quartzite intervals up to 1 m thick. (The quartzite beds show alternation of silty sand and sandy-silt beds on a 1-2 cm scale) Fine white clay filled fractures, some with Fe-sulphides and carbonates permeate the rock at 30-60° LCA. 60.0 - 93.6 Some minor, contorted greenish shale beds, also some intervals of darker grey, less sericitic material begin to appear. 72.7 m Sample No 98073 taken for thin sectioning and petrology. 72.8 - 73.6 Some bedded talcy material with qtz - originally dolomitic? 79.5 - 89.2 Quartzites > siltstones. 86 - 93.6 Hard and weakly silicified siltstones and quartzites.	10/(11)	53.5 20 mm dolomite-fluorite-sp vein, 35°. ← 53.7 Bedding 15°. ← 56.2 15 mm dolomite vein with sediment inclusions, 35°. ← 58.2 70 mm dolomite-sp-ga-fluorite-qtz vein, 30°. 58.3 40 mm dolomite-fluorite-py-marcasite-qtz-sp-po vein, 45°. 58.4 10 mm dolomite-py-po vein, 15°. ← 63.0 30 mm carbonate-fluorite-py-qtz-po vein, broken core. ← 64.4 25 mm qtz-ga-carbonate-fluorite-sp-py vein, 45°. ← 73.9 30 mm breccia zone - dolomite - fluorite with sediment inclusions, 30°. ← 79.5 Bedding 50°. ← 82.0 20 mm dolomite-sp-fluorite-py vein, 35°. 82.4 20 mm sp-dolomite-py-marcasite vein, 15°. ← 84.8 50 mm dolomite-sp-ga-py-fluorite vein, 20°. 85.3 40 mm dolomite-sp breccia vein, 10°. ← 86.5 20 mm vuggy py-marcasite-dol-sp-qtz vein, 30°. 87.2 10 mm dol-sp-qtz vein, 35°. ← 89.7 m 140 mm vuggy py-sp-qtz-carbonate vein, 50°. ← 90.7 Bedding 15°. ← Contact 65°	51.8 - 58.5 py, trace po dissem along bedding and as blebs and stringers. 1-3% dolomite-qtz-fluorite-py-sp veining.	3-5%
			58.5 - 93.6 py, trace po, finely dissem along bedding and in veinlets and stringers. Sparse dolomite-qtz-fluorite-py-sp veining.	
93.6 - 101.25 QUARTZ FELSPAR PORPHYRY Matrix finely crystalline, in places siliceous and almost glassy; pale yellowish or greyish cream in colour. The first 50 cm is white and fine grained, with weakly altered felspar 5%, qtz 3%. 94.1 - 98.2 Phenocrysts: qtz, subhedral grains to 4 mm, turbid and colourless, 10%. Felspar, altered - hard yellowish or greenish brown grains to 2 mm, variable 1-7%. 98.2 - 101.25 White finely crystalline groundmass, in some places faintly greyish and translucent. Phenocrysts: Qtz rounded and subhedral grains 1-4 mm, 10%. Felspar, weakly altered, to 2 mm, 3-5%. Decrease in grain size and phenocryst abundance in last 40 cm.		← Contact irregular, 30°	93.6 - 94.1 py, marcasite, trace po	15%
			94.1 - 95.0 py, marcasite, trace arseno, fluorite and fine gr. cassiterite	3-5%
			95.0 - 98.2 py, marcasite > po, trace cassiterite, arseno, sp. Sulphides as fine grained aggregates to 3 mm, concentration variable 3-35%. Some sparse qtz-py-marcasite-cassiterite veining.	25%
			98.2 - 101.25 py, marcasite, trace arseno, cassiterite and po, weak trace sp. Fine grained aggregates and discrete blebs and grains to 2 or 3 mm.	20-25%
101.25 - 112.50 SILTSTONES, minor QUARTZITES. See 51.8 - 93.6 m for description.		← 103.9 Bedding 35°. ← 109.3 Bedding 55°	101.25 - 103.5 py, trace marcasite, finely dissem and in thin stringers and small blebs	7%
			103.5 - 112.5 py, dissem. and in fine stringers; sparse qtz-carbonate-fluorite-py veinlets.	2%
END OF HOLE 112.5 m.				

5 cm

DEPTH from-to : ROCK UNIT capital letters, underlined
Depth : Detailed rock description and notes indented about 15 mm

DRILL ADVANCE | LOST CORE ZONE | CORE LENGTH RECOVERED | % RECOVERY ESTIMATE OR | 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
Logged by: C. BROADBENT date 24/4/80
HOLE No. MBD 43
LOG SHEET 2 OF 2
from 0.0 m. to 112.5 m

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
98010		1.1	3.0	2.0	470									
98011		5.2	7.2	"	980									
12		7.2	9.2	"	520									
13		9.2	11.2	"	420									
14		11.2	13.2	"	210									
15		13.2	14.8	1.6	160									
16		16.1	18.1	2.0	10									
17		18.1	20.1	"	30									
18		20.1	22.1	"	110									
19		22.1	24.1	"	180									
20		24.1	26.1	"	270								205	check assay
21		26.1	28.1	"	180									
22		28.1	30.1	"	330									
23		30.1	32.1	"	X									
24		32.1	34.1	"	18									
25		34.1	36.1	"	150									
326		36.1	37.2	1.1	65									
27		37.2	39.2	2.0	5600									
28		39.2	41.2	"	14									
29		41.2	43.2	"	12									
030		43.2	45.2	"	16									
31		45.2	47.2	"	10									
32		47.5	48.5	1.3	130									
33		48.5	50.5	2.0	8400									
34		50.5	51.8	1.8	2850									
35		51.8	53.8	2.0	90									
36		91.6	93.6	"	180									

028531

Notes :— Sn by XRF B. Method

X – means less than 4

A

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 43

SAMPLE TYPE : DRILL CORE FROM 1.1 TO 93.6

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								
98037		93.6	95.6	2.0	2150									
38		95.6	97.6	"	6400									
39		97.6	99.6	"	3400									
40		99.6	101.2	1.6	3350								0.29%	check Assay
98041		101.2	103.2	2.0	880									

Notes — Sn by XRF Bi Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET HOLE NO. MBD 43

SAMPLE TYPE : DRILL CORE FROM 93.6 TO 103.2

B

0285332