MBD-45

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

028539

INTERVAL	DEPTH from–to : ROCK UNIT (capital letters, underlined) Depth : Description and notes (indented about 10mm)	GRAPHIC LOG	MINERALISATION	ASSAYS AVAILABLE	BULKED ASSAYS
0-3.0	TRICONE TO 3.0m - NO CORE.				
3.0-27.36 (24.36)	3.0 - 27.36 SILTSTONES AND BLACK SHALES. dark grey clay rich siltstones and minor mid grey quartzose siltstones surrounded by irregular lenses and contorted beds of black shale and siltstone. Very brecciated - soft sediment disruption Well fractured - puggy fault zone 10.8-11.4m Contact 45°	10/9/c F	3.0-27.36 Py in thin stringers and veinlets and dissem in some siltstone beds. Weak qtz-carbonate-py veining. TOTAL 3%.		
27.36-53.00	27.36 - 53.00 QUARTZ FELSPAR PORPHYRY. Matrix grey and finely crystalline, greyish cream near margins Qtz - rounded grains to 6mm, mostly 1-3mm 10% Felspar - soft, white, and weathered. some well formed grains to 6x3mm, mostly 2-3 mm. 15%. Finely fractured and quite weak (easily broken in places), weathered. Contact 60°	1	27.36-31.9 Py. trace fluorite, sp. 2% 31.9-49.1 trace sp, fluorite, rare qtz-carbonate-fluorite veining. 49.1-53.0 Py, trace sp, fluorite and ? tourmaline 2-3%.		
53.00-60.3 (7.3m)	53.00-60.3 SILTSTONES, minor SANDSTONES dark grey siltstones with sandstone beds to 20cm. Brecciated Gradual Change	10/11/s	53.0-60.3 py, qtz-carbonate-fluorite-sp 'sepatite' in veins and stringers to 20cm TOTAL 3-5%.		
60.3-73.0 (12.7m)	60.3 - 73.0 SILTSTONES AND BLACK SHALES As for 0-27.36 Gradual Change	10/9/k	60.3-73 decrease in dolomitic veining, py dissem in siltstones and as thin stringers 2-3%.		
73.0-88.0 (15.0m)	73.0-88.0 SILTSTONES AND BLACK SHALES WITH SANDSTONES Thinly bedded, brecciated siltstones and black shales with hard bluish grey quartzite beds up to 1.5m thick. Some quartzites are weakly micaceous. Well fractured and broken. Gradual Change	10/11/9/k	73-88 py, marcasite, dissem and in stringers and veinlets ± qtz, carbonate. 3-5%.		
88.0-97.8 (9.8m)	88.0 - 97.8 QUARTZITES AND SILTSTONES. As for 73.0 - 88.0, but quartzites > siltstones Gradual Change	11/10/c	88-97.8 Py. dissem in qtzites and veinlets, stringers as above 2-3%		
97.8-133.0	97.8 - 133.0 SILTSTONES AND BLACK SHALES. 97.8 - 103.5 As for 0-27.36. 103.5 - 120 SILTSTONES, FINELY LAMINATED. Dark grey, clay rich. Brecciated, finely bedded (< 2mm) with rare thin qtzose siltstones to 5mm and very thin black shale laminae. 120 - 133.0 As for 0-27.36. Gradual Change	10/9/c 10 10/9/c	97.8-120 Py increases to 3-5% 120-133 py as thin veinlets and dissem, sparse blebs and stringers qtz, carbonates, minor veining 2%		
133.0-155.97	133.0 - 155.97 SILTSTONES AND BLACK SHALES WITH SANDSTONES. As for 73.0 - 88.0 149.9-150.6 qV, 30° Contact 80° (?)	10/11/9/k qV	133-150.6 py, trace po, as blebs and dissem. Minor qtz-py-po-fluorite-carbonate-sp-cp veining. 5% 0.5m vein as described at 149.9-150.6, 30° 150.6-155.97 py, marcasite, trace po, much veining. Total 7%.		
155.97-156.5	155.97-156.5 DOLOMITE, RECRYSTALLISED	3	155.97-156.5 fluorite trace sp, ? cassiterite 10-15%		
156.5-181.0 (24.5)	156.5 - 181.0 SILTSTONES, minor SANDSTONES Contact 25° Very brecciated, thinly bedded siltstones some carbonaceous with dark grey, sometimes weakly micaceous, sandstones to 30cm Gradual Change	10/c/11/s	156.5-170.2 py dissem and in veins with fluorite-dolomite-qtz-py-po-sp-marcasite. Abundance of veins decreases with depth. 5-7%. 170.2-181.0 - py, dissem and minor veining as above. 2-3%		
181.0-190.9 (9.9m)	181.0 - 190.9 SILTSTONES, finely laminated. As for 103.5 - 120	10/c	181.0-190.9 py, finely dissem and in veinlets with qtz. < 1%		
190.9-201.1 (10.2)	190.9 - 201.1 SILTSTONES with BLACK SHALES As for 0-27.36	10/9/c	190.9 - 201.1 py, dissem in siltstones 1-2%		
201.1-208.5 (7.4m)	201.1 - 208.5 SILTSTONES, finely laminated. As for 103.5 - 120, but only minor disruption and contortion of beds,	10	201.1 - 208.5 py, very finely dissem and as thin laminae and blebs to 2x1 cm. 3%		
208.5-210.9	208.5 - 210.9 TUFFS, SANDSTONES and SILTSTONES.	12/11/10/k	208.5 - 210.9 py, dissem in tuffs and siltstones, 3%		
210.9-218.9 (8.0m)	210.9 - 218.9 SILTSTONES, SANDSTONES, minor BLACK SHALES Well bedded thin siltstone and shale (< 2cm) in intervals to 1m with pale grey sandstones to 20cm.	10/11/9/k	210.9 - 218.9 py, dissem and in sparse qtz, carbonate stringers. 1-2%.		
218.9-224.2 (5.3)	218.9-224.2 TUFF with SANDSTONES and SILTSTONES Coarse grained tuff, grades into sandstones, separated by siltstones	12/11/s/10	218.9-224.2 py, with qtz, py, marcasite stringers, 1%.		
224.2-249.0	224.2 - 249.0 SILTSTONES and BLACK SHALES with SANDSTONES As for 210.9 - 218.9, minor faulting, well bedded with only minor contortion. Sandstone content decreases 239-249 (EOH)	10/11/9/k	224.2-249 py, dissem. along bedding, some thin bedded laminae, weak carbonate-py-sp-marcasite veining. TOTAL 5%.		
	END OF HOLE 249.0 m				

5 cm

METALS EXPLORATION LTD.
EXPLORATION DEPARTMENT

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

Prepared by: G. BROADBENT
Date: 8/5/90.

HOLE No. MBD 45
Sheet of

REPORT No. 028540

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 45

COLLAR LOCATION

Grid name	Rectangular space co-ordinates PLANAR CO-ORDINATES		ELEVATION
(1) MBJV	1640.38 N	820.18 E	609.69
(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
- 180° grid (1)
- grid (2)
- grid (3)
- true

Inclination at collar 75°

Total length 249.0m.

Commenced: 23/4/80

Completed: 27/4/80

Drilling contractor: LONGYEAR (AUST) PTY LTD

Rig type: LONGYEAR 38.

Details of down hole location-survey methods.
EASTMAN every 40m.

Purpose of drilling and anticipated lengths to targets.
To intersect a continuation of the dolomite horizon intersected in holes B18, B19, B15 and MBD 41.

Core size and non-coring (NC)

TRICONE	0	TO	3.0
NQ	3.0	TO	56.0
BQ	56.0	TO	249.0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type AZIMUTH	DIP
40	208°	75°40'
79	152°	76°20'
121	149°	78°30'
160	133°	78°
202	122°	78°
244	105°	79°

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. BROADBENT FROM 0 TO 249.0m DATE 8/5/80

LOGGED BY ____ FROM ____ TO ____ DATE ____

LOGGED BY ____ FROM ____ TO ____ DATE ____

Company managing exploration programme.
METALS EXPLORATION LTD

HOLE No. MBD 45
Log sheet 1 of 4

028541

TRICONE TO 3·0 m – NO CORE.

3·0 – 27·36 SILTSTONES AND BLACK SHALES. (10/9c)

Very disrupted and brecciated – rounded clasts of dark grey siltstone surrounded by discontinuous irregular lenses of siltstone and shale.
Rare clasts pale grey quartzose siltstones and sandy siltstones.
Well fractured, with some minor bleaching of irregular patches along small fracture zones.

17·4–19·8 Bleached zone associated with faulting – pale grey, soft and weathered.

Structural and vein information:
- 3·0–10·8 Well fractured and broken – fine anastomosing clay filled fractures at variable angles to LCA.
- 10·8–17·4 Fault zone – core losses with grey puggy material and rubbly fragments siltstone.
- 17·4–27·36 Well fractured and broken, some bleaching in upper 2m, incidence of fine fracturing decreases with depth.
- ← 20·9 Bedding 25°
- ↙ Contact 45°

Mineralisation:
- 3·0–10·8 py, in thin stringers and veinlets to 5 mm, also dissem in some siltstone and sandstone clasts. Minor qtz-carbonate-py stringers and 'sweat-outs' to 3x1cm. — 3-5%
- 10·8–17·4 As above, but weathered and leached. — 1-2%
- 17·4–19·8 py, minor qtz in thin veinlets, some dissem. py. — 1%
- 19·8–27·36 py in thin stringers and veinlets to 5 mm, dissem in some beds and in sparse qtz-carbonate stringers and veinlets. — 3-5% / 2-3%

27·36 – 53·00 QUARTZ FELSPAR PORPHYRY. (1)

27·36–29·2 Finely crystalline groundmass, greyish cream in colour. Phenocrysts: qtz as subhedral grains to 2 mm, 3-5%
: Felspar, very small (1·5 mm max.), yellowish cream in colour, weathered, 3-5%

29·2–31·9 Increase in phenocryst size and abundance – qtz – rounded→subhedral, to 6 mm, mostly 1-3 mm, 10%
Felspar – well formed grains to 6x4 mm, soft and weathered with some weak alteration, 15-20%.

31·9–35·7 As above 29·2–31·9, but highly fractured and sheared – greenish grey matrix with fine, yellowish, pervasive, fracture planes. The rock has a granular, crumbly fabric.

35·7–49·1 Matrix dark, faintly greenish grey.
Phenocrysts: Qtz – clear rounded grains to 6 mm, 10-15%
Felspar – white→pale cream, weathered, well formed grains to 5x3 mm with some weak alteration. Small inclusions of hard pale brown ? topaz. 15%

49·1–53·00 Matrix fine grained, creamy-grey, with qtz, felspar as for 27·36–29·2

Mineralisation:
- 27·36–29·2 py, as rounded blebs and grains to 2·5 mm; trace fluorite, sp, ? tourmaline — 2-3%
- 29·2–31·9 traces sp, fluorite, as ? grains replacing felspar. — 1%
- 31·9–49·1 Trace ? sp, fluorite, rare qtz-carbonate-fluorite veining < 3 mm. — 1%
- 49·1–53·00 py, as rounded blebs and grains to 3 mm, trace fluorite, ? sp and rare needles ? tourmaline in last 50 cm. — 2-3%

53·00 – 60·30 MASSIVE SILTSTONES, MINOR SANDSTONES (10/11)

Dark grey sandy siltstone beds, rather structureless, with some minor thinly bedded intervals and sparse micaceous sandstone beds to 20-30 cm.
Minor soft-sediment disruption, with extensive later fracturing and shearing to 57·4 m + some bleaching. Well broken to 62·7 m.

Structural and vein information:
- ← 54·80 10 mm dolomite-chlorite-fluorite-white mica-py vein, 10°
- ← 55·7 200 mm dolomite-fluorite-py-sp breccia zone, 30°
- } 57·6–58·1 Puggy fault zone.

Mineralisation:
- 53·0–57·4 py, qtz, carbonate-fluorite-? chlorite veining: – minor stockworks and some stringers. — 3-5%
- 57·4–60·3 py, dissem in siltstones and sandstones and in stockwork-type stringers. Sparse dolomite-fluorite-sp veining. — 3-5%

60·3 – 88·0 THINLY BEDDED SILTSTONES, MINOR SHALES. (10/9c/(11))

Dark grey clay rich siltstones, occasional sandy beds and thin black shale beds.
Extensively disrupted and contorted, with some quite well bedded intervals up to 2 m thick separated by brecciated and disrupted material.

66–73 Brecciation and disruption decreases.

73–88·0 Very disrupted and brecciated, with minor qtzose siltstones and sandstones, some of which are yellowish/greenish due to finely disseminated py.

74·7–75·5 Thinly bedded sandstones/siltstones.

Structural and vein information:
- } 62·2–62·7 Small fault zone.
- ← 67·8 Bedding 50°
- ← 71·3 30 mm carbonate-talc-fluorite-qtz-mica vein, 30°
- ← 72·9 Bedding 30°
- ← 74·9 Bedding 25°

Mineralisation:
- 60·3–88·0 py, dissem along bedding and in thin irregular stringers along brecciation paths. Dolomite-fluorite-py-sp veins become rare with depth. — 2-3% / 3-5% / 2-3%

Core recovery (drill advance / core recovered / % recovery), top to bottom:

Drill advance	Core recovered	% recovery
2.0	1.6	80
3.0	3.0	100
3.0	1.4	47
3.0	0.6	20
3.0	0.5	17
3.0	2.5	83
3.0	3.0	100
3.0	2.9	97
1.9	1.9	100
1.1	1.1	100
1.8	1.6	89
1.2	1.2	100
3.0	3.0	100
2.4	2.1	88
0.9	0.9	100
1.9	1.9	100
0.8	0.8	100
1.8	1.8	100
1.2	1.2	100
3.0	3.0	100
1.5	1.5	100
2.5	2.5	100
2.0	2.0	100
1.7	1.7	100
1.3	1.3	100
1.4	1.4	100
0.6	0.6	100
1.0	1.0	100
1.1	1.1	100
1.9	1.9	100
1.2	1.2	100
1.8	1.6	89
3.0	3.0	100
2.8	2.7	96
3.1	3.1	100
2.1	2.1	100
1.0	1.0	100
3.0	3.0	100
2.3	2.0	87
1.9	1.9	100

Depth scale: 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84

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
Logged by: G. BROADBENT — date 8/5/80
HOLE No. MBD45.
LOG SHEET 2 OF 4
from 0·0 m. to 84·0 m.

See previous page for description

See previous page 2-3%

Gradual Change.

88.0 - 97.8 MASSIVE QUARTZITES WITH SILTSTONES.
Pale grey quartzite beds to 1.5 m, brecciated and disrupted; separated by thinly bedded dark grey clay rich siltstones
Some quartzites are weakly micaceous, with white mica on bedding planes.
Well fractured, with fine anastomosing clay filled fractures.

11/10c

88.0 - 97.8 py, as thin irregular stringers along breccia paths, and heavily disseminated in some fine siltstone breccia clasts. The quartzites have very fine py disseminated throughout 1-2%. 2-3%

Gradual Change

97.8 - 102.5 THINLY BEDDED SILTSTONES WITH BLACK SHALES.
Dark grey clay rich siltstones, very disrupted and intermingled with black shale beds in a soft pebble conglomerate like fabric.
Originally thinly bedded 1-2 cm

10/9c

97.8 - 120.0 py, finely disseminated throughout, and in thin stringers and irregular veinlets with qtz. 3-5%

Gradual Change.

103.5 - 120.0 SILTSTONES
Soft dark grey clay rich siltstones with occasional mid grey quartzose beds and some rare black shale laminae.
Highly brecciated and disrupted by soft sediment deformation

10

105 Bedding 45°

115.8-116.1 massive sp-dolomite -py breccia zone with sediment inclusions, 45°

119.6-120 mm vuggy py-sp-dolomite -marcasite- quartz vein, 35°

120.0 - 133.0 THINLY BEDDED SILTSTONES WITH BLACK SHALES.
See 97.8 - 103.5 for description

10/9c

120 - 133.0 py as thin veinlets and stringers, finely disseminated and in sparse blebs and stringers with qtz and rare carbonates. 1-2%

124.2 133 mm f-gr bluish fluorite - carbonate - py - qtz vein 40°

Gradual change

133.0 - 154.97 THINLY BEDDED SILTSTONES AND SHALES WITH MINOR SANDSTONE BEDS.
Thinly interbedded grey clay rich siltstones, and silty sandstone beds with black shale laminae.
Disrupted and brecciated - soft sediment deformation and contortion.
Sandstone beds to 20 cm thick, generally with alternating silty / sandy intervals on a 1-2 cm scale.

10/9/9c

133.0 150 mm brecciated and bleached zone with py, fg carbonate, fluorite, 10-15% ;

134.2 Bedding 50°

140.3 30 mm qtz-carbonate - py - sp vein, 35°

144.7 20 mm py - carbonate - fluorite - sp vein, 35°

133.0 - 149.9 py, po as blebs and veinlets, minor bedded laminae and in veinlets and stringers with qtz, carbonates and fluorite. 3-5%

149.9 - 150.6 fluorite - py - carbonate - sp - qtz - po - arseno - sp vein, 30°.

152.5 - 155.97 Bleached portions - pale grey, soft, zones to 0.5 m.

30°

30°

150.2 40 mm breccia zone - qz - fluorite - carbonate - sp - py, 50°

151.2 10 mm py - qtz - carbonate vein, 35°

150.6 - 155.97 py, marcasite, trace po, mostly in veinlets and small stockworks adjacent to large veins and the dolomite. 5-7%

155.7 50 mm dolomite - fluorite - mica - dolomite vein, 50°

155.4 10 mm fluorite - carbonate - white mica vein, 35°

Contact observed by vein at 50°

155.97 - 156.5 ALTERED DOLOMITE pale grey, very brecciated and extensively altered and recrystallised - fluorite, qtz, disseminated throughout.

3

Contact 25°

155.97 - 156.5 fluorite, trace sp and marcasite disseminated throughout 15-20%

156.5 - 190.9 THINLY BEDDED SILTSTONES AND SHALES WITH SANDSTONES.
See 133.0 - 155.97 for description.

10/10/9c

156.5 - 158.2 Stockwork of carbonate - fluorite - py - mica veins 10%

157.3 20 mm carbonate - fluorite - mica vein, 70°

158.5 100 mm massive vuggy dolomite and fluorite, irregular.

158.2 - 164 py, minor po disseminated, and in decreasingly abundant carbonate - fluorite veins 1-2%

164 - 170.2 py, with minor marcasite, po, in large blebs or finely disseminated blebs, grains to 0.5 mm, some thin veinlets, stringers. 3%

5 cm

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

GRAPHIC LOG | STRUCTURAL AND VEIN INFORMATION | MINERALISATION | NOTES

METALS EXPLORATION LIMITED

MINERAL EXPLORATION
DRILL LOG
Scale 1:100

Prospect or project: MOUNT BISCHOFF
Logged by: C. BROADBENT date 8/5/80

HOLE No. MBD 65
LOG SHEET 3 OF 4
from 86.0 m. to 168.0 m.

028543

Depth from-to : Rock unit / Description	Graphic log	Structural and vein information	Mineralisation	%
See previous page for description.		Gradual Change	See previous page for description.	
			170.2-181.0 py, as thin veinlets and finely dissem. in some siltstone beds 2-3% (high concentrations in some breccia clasts) Sparse py-carbonate-qtz-chlorite veins <2mm.	3%
			181.0-190.9 py, finely dissem, in sparse veinlets with qtz.	<1%
<u>190.9 - 201.1 SILTSTONES WITH MINOR BLACK SHALES</u> Thinly bedded siltstones - mostly medium-dark greys and clay rich, with some thin pale grey quartzose beds. The black shale laminae are thin (<2mm), and concentrated in small zones to 10 cm thick. Very disrupted and brecciated by soft-sediment deformation. Weakly fractured, with soft black ? graphitic material on partings at variable angles to LCA. 197.5 -> extent of disruption and brecciation decreases gradually	10/9/c	←197.8 Bedding 45°; 200.2-200.6 Faultzone; Gradual Change	190.9-201.1 py. dissem. in qtzose siltstone beds, irregularly distributed in some breccia clasts.	1-2%
<u>201.1 - 208.5 FINELY LAMINATED SHALEY SILTSTONES.</u> Finely bedded 1-2mm, pale-medium grey siltstone laminae with irregular shale lenses to 1mm thick and occasional pale grey quartzose siltstone beds to 1 cm thick.	9/10	←202.5 Bedding 15°; ←205.4 Bedding 25°; ←207.5 Bedding 50°. Bedded contact, 48°	201.1-208.5 py, very finely disseminated throughout and as thin veinlets and stringers, some rare blebs to 2x1 cm, as thin discontinuous bedded laminae.	3%
<u>208.5 - 210.9 INTERBEDDED TUFFS, SANDSTONES AND SILTSTONES.</u> Coarse grained (clasts to 2mm) tuff bed 209.1-210.0, with thin tuff beds to 20 cm on either side which grade into sandstones. Sandstones are pale grey, with small (<1mm) black shaleclasts, to 30 cm thick, divided by thin clay rich siltstone beds.	12/11/10c	← Bedded contact 50°	208.5-210.9 py. finely dissem in tuffs and siltstones. Weak qtz-carbonate-py veining.	3%
<u>210.9 - 218.9 THINLY BEDDED SILTSTONES, SANDSTONES AND BLACK SHALES.</u> Pale grey sandstones (probably tuffaceous in part) with well defined bedding laminations; up to 10-15 cm thick beds interspersed with thinly bedded grey clay rich siltstones, pale grey quartzose siltstones and black shale beds. Well bedded, with occasional disrupted and contorted intervals up to 1.5 m thick.	10/11/9c	←212.7 Bedding 65°; ←215.0 Bedding 20°; 218.7 Bedding 25°; ← Contact 65°, conformable to bedding.	210.9-218.9 py, weakly dissem along bedding and in stringers with qtz, carbonates.	1-2%
<u>218.9 - 221.2 TUFF</u> Clasts of black shale, grey siltstone and white ? felspar to 2mm in a pale grey fine grained shaley matrix. Alternating coarse grained / fine grained intervals 1-2 cm, disrupted and brecciated.	12	←2 .0 Bedding 25°; Gradual change over 20 cm.	218.9-224.2 py, finely dissem throughout, and in thin stringers with qtz, py. marcasite.	1-2%
<u>221.2 - 221.9 THINLY BEDDED SILTSTONES.</u> Clay rich and quartzose siltstones interbedded 1-2 cm	10	← Contact bedded, 45°		
<u>221.9 - 222.7 TUFF</u> Fine grained tuff as above gradually becomes finer grained with depth - overturned?	12	← Gradual Change.		
<u>222.7 - 223.5 THINLY BEDDED SILTSTONES, MINOR SANDSTONES</u> Thinly bedded siltstones with some minor tuffaceous sandstone beds to 2 cm	10/11	← Contact bedded, 60°		
<u>223.5 - 224.2 TUFF</u>	12/11	← Contact bedded, 60°		
<u>224.2 - 249.0 THINLY BEDDED SILTSTONES, SANDSTONES WITH MINOR SHALES.</u> See 210.9 - 218.9 for description.	10/11s/9c	←228.9 Bedding 50°; ←231.2 Bedding 80°	224.2-232.5 py. dissem. along bedding, concentrated in some siltstone beds. Sparse irregular veins/stringers qtz, rare carbonates, py, marcasite, sp., which increase in abundance with depth.	3%
		←235.8 Bedding 70°; 237.2-237.5 250 mm vein dolomite-py-fluorite-qtz-sp-po-cassiterite. Upper contact 60°, lower contact 40°.	232.5-240 carbonate-py-sp-marcasite-qtz-chlorite-talc-serpentinite veining, also some dissem. py and sparse bedded laminae of py.	5%
239 -> EOH. Sandstone content gradually decreases with depth.		←240.7 Bedding 40°	240.0-249.0 py, dissem along bedding, some bedded laminae. Veinlets/stringers of qtz, carbonate-py-marcasite etc diminish with depth.	3%
243.7 - 245.2 Finely laminated shaley siltstone as for 201.1 - 208.5.	9/10	←244.3 Bedding 15°		
	10/9c/11s	←248.9 Bedding 75°		
END OF HOLE 249.0 m.				

Depth tags: 168, 172, 176, 180, 184, 188, 192, 196, 200, 204, 208, 212, 216, 220, 224, 228, 232, 236, 240, 244, 248, 252

Drill advance	Core length recovered	% recovery
1.5	1.5	100
3.0	3.0	100
3.0	3.0	100
3.0	3.0	100
3.0	3.0	100
3.0	3.0	100
3.0	3.0	100
3.0	3.0	100
3.0	3.0	100
3.0	3.0	100
1.3	1.3	100
2.3	2.3	100
2.4	2.4	100
3.0	3.0	100
3.0	3.0	100
2.8	2.8	100
0.3	0.3	100
2.2	2.2	100
3.1	3.1	100
3.1	3.1	100
0.5	0.5	100
1.0	1.0	100
1.4	1.4	100
2.5	2.5	100
1.5	1.5	100
0.9	0.9	100
1.7	1.7	100
2.3	2.3	100
1.5	1.5	100
0.7	0.7	100
2.3	2.3	100
3.1	3.1	100
2.7	2.7	100
3.1	3.1	100
2.9	2.9	100
0.4	0.4	100

5 cm

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

METALS EXPLORATION LIMITED

MINERAL EXPLORATION DRILL LOG
Scale 1:100

Prospect or project: MOUNT BISCHOFF
Logged by: C. BROADBENT date 8 / 5 / 80
HOLE No. MBD 45
LOG SHEET 4 OF 4
from 168.0 m. to 249.0 m.

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								
98051		25.4	27.4	2.0	18									
52		27.5	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	1.8	80									
57		37.5	39.5	2.0	110									
58		39.5	41.5	"	75									
59		41.5	43.5	"	70									
60		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									
66		149.9	151.0	1.1	4600									
67		156.0	156.0	2.0	130									
68		156.0	156.5	0.5	6.38%									
69		156.5	158.5	2.0	340									
70		237.2	237.6	0.4	1.44%									

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 25.4 TO 237.6

0285441