028545 MBD 46

INTERVAL	DEPTH from-to : ROCK UNIT (caps, start, underlined) Depth : Description and notes (indented about 10 mm)	GRAPHIC LOG	MINERALISATION	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

Interval	Depth from-to : Rock unit / Description and notes	Graphic log	Mineralisation	Bulked assays
	TRICONE TO 3.0m - NO CORE			
7.5	3.0 - 10.5 SILTSTONES AND SANDSTONES. Thinly bedded, highly fractured and bleached by weathering 5.2m to 11.0 m. Small fault.	10/11/5	3.0 - 10.5 No mineralisation - weathered	
5.5	10.5 - 16.00 TUFF Coarse grained agglomerate with siltstone and shale clasts to 5mm and ? felspar to 3mm	12	10.5 - 16.0 Trace py as small interstitial grains.	
5.8	16.00 - 21.8 SILTSTONES / SILTY SHALES Finely laminated 1-2mm. Small fault zone 16 - 17.9 m.	10/9	16.0 - 21.8 Trace finely dissem. py.	
1.2	21.8 - 23.00 TUFF	12	21.8 - 23.0 Trace py as veinlets and stringers	
10.2	23.0 - 33.2 THINLY BEDDED SILTSTONES AND SHALES WITH SANDSTONES. Thinly bedded siltstones interbedded with weakly micaceous sandstones and shales	10/11/9c	23.0 - 33.2 Trace py in thin veinlets and stringers.	
1.1	33.2 - 34.3 TUFF	12		
7.7	34.3 - 42.0 SILTSTONES, MINOR SHALES Dark grey clay rich siltstones with thin black shale beds. Disrupted, contorted and well fractured.	10/9c	34.3 - 42.0 py. qtz in stringers and veinlets with minor finely dissem. py. 2-3%	
13.17	42.0 - 55.17 SILTSTONES, MINOR SANDSTONES and SHALES Thinly bedded dark grey clay rich siltstones and mid grey fine grained sandstones to 5 cm. Fractured and broken to 45.0m; disrupted and contorted - soft sediment deformation.	10/11/9c	42.0 - 55.17 Py, finely dissem in siltstones and sandstones, sparse qtz py - carbonate veining. TOTAL 1-2%	
2.93	55.17 - 58.1 TUFF Fine grained and sheared at approx 65°	12	55.17 - 58.1 Sparse qtz-carbonate-py veining.	
11.5	58.1 - 69.6 THINLY BEDDED SILTSTONES, SHALES with SANDSTONES Very disrupted - clasts of siltstone in a highly contorted matrix of dark grey clay rich siltstone and shale with [illegible] of sandstone to 5-8cm.	10/11/9c	58.1 - 69.6 py. in thin veinlets and stringers with sparse qtz, carbonates or finely dissem. TOTAL 3%	
32.1	69.6 - 101.7 SILTSTONES, minor SHALES Thinly bedded siltstones and shales with rare sandstone beds to 10 cm. Bedding is contorted and disrupted, in places totally unrecognisable for 3-4m.	10/9c	69.6 - 101.7 py. finely dissem, as thin bedded laminae to 2mm and in sparse veinlets with qtz. TOTAL 3-5%.	
2.0	101.7 - 104.3 SANDSTONES and SILTSTONES.	11/5/10	101.7 - 104.3 py. finely dissem and in thin stringers 2-3%	
10.8	104.3 - 115.1 SILTSTONES Thinly bedded grey clay rich siltstones with lesser pale grey quartzose siltstones.	10	104.3 - 115.1 py. very finely dissem and as thin veinlets and irregular stringers	
10.2	115.1 - 125.3 SANDSTONES AND SILTSTONES As for 42.0 - 55.17, sandstone beds to 1.2m thick.	11/5/10	115.1 - 125.3 py. patchily disseminated. minor bluish grey fluorite / carbonate veining. TOTAL 3-5%	
58.4	125.3 - 183.7 SILTSTONES minor BLACK SHALES Dark grey siltstones, some sandy beds to 5cm. Thinly bedded, with thin laminae of black shale (to 3mm) dividing siltstone beds to 10 cm. Some thinly bedded / laminated siltstone / silty shale intervals (as for 16.0 - 21.8m) up to 0.5 m thick.	10/(9c)	125.3 - 1 py. as blebs ranging in size 1mm - 20×10mm and in veinlets with carbonates, qtz, fluorite, po, cp. TOTAL 3-5%. 148.5 - 150.3 Stockwork py-qtz-carbonate-fluorite-po-cp [illegible] veins. 7% ≈ 35-40° 153.0 - 177.8 py, trace po as blebs and rarely finely dissem. Sparse carbonate-qtz veinlets. 1-2% 177.8 - 184.6 Carbonate - qtz/py veining and blebs dissem. py.	
2.9	183.7 - 186.6 QUARTZITES, minor SILTSTONES	11/10	184.6 - 192.0 - py. finely dissem and in carbonate etc veining. 3-5%	
23.0	186.6 - 209.6 SILTSTONES, lesser BLACK SHALES, minor SANDSTONES Very disrupted and brecciated - as for 58.1 - 69.6m, but less sandstones.	10/9c/11	186.4 40cm carbonate - fluorite - py - qtz - cp - qtz vein, 25°. 192.0 - 209.6 py, in veins and stringers with carbonate - qtz - fluorite - po - cp. 3-5%.	
2.1	209.6 - 211.7 QUARTZITE massive and brecciated	11	209.6 - 211.7 py. dissem minor veining as above 2-5%	
1.3	211.7 - 213.0 As for 186.6 - 209.6.		211.7 - 213.0 [illegible] 192 - 209.6.	
7.25	213.0 - 220.25 SILTSTONES and BLACK SHALES Finely laminated 1-2m minor disruption and contortion	10/9c	213.0 - 220.25 py. as sparse veinlets and stringers and finely dissem. 2%.	
4.95	220.25 - 225.2 THINLY BEDDED SILTSTONES AND SHALES, minor SANDSTONES	10/9c/11	220.25 - 234.6 py. dissem along bedding and in thin veinlets and stringers with qtz and carbonates. 1-2%.	
9.4	225.2 - 234.6 THINLY BEDDED SANDSTONES AND SILTSTONES. See 42.0 - 55.17m for description.	11/10		
8	234.6 - 243.3 THINLY BEDDED SILTSTONES, minor SANDSTONES AND BLACK SHALES	10/11/9c	234.6 - 243.3 py. finely dissem and in sparse veinlets. 2-1%.	
2.9	243.3 - 246.2 SILTSTONES finely laminated	10/9	As for 213.0 - 220.25. 2%	
3.8	246.2 - 250.0 THINLY BEDDED SILTSTONES AND BLACK SHALES	10/9c	py. as veinlets, stringers, thin bedded laminae or finely disseminated. 3%	

END OF HOLE 250.0 m

METALS EXPLORATION LTD.
EXPLORATION DEPARTMENT

SUMMARY DRILL LOG
Scale 1:1000, 1:500, 1:250 (when [illegible] to A4)

Prepared by: [illegible]
Date: 17/6/80 (?)

HOLE. No. MBD 46
Sheet of

REPORT No. 028546

METALS EXPLORATION LTD.
& SUBSIDIARY COMPANIES

MINERAL EXPLORATION
DIAMOND DRILL LOG

Prospect, area, project or mine. MOUNT BISCHOFF

HOLE No. MBD 46

COLLAR LOCATION

Grid name — Rectangular space co-ordinates

		PLANAR CO-ORDINATES		ELEVATION
(1)	MBJV	1600·32 N	920·07 E	632·76
(2)		N	E	
(3) Aust. Map Grid (PRECISE / APPROX.)		mE	mN	mA.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 EL 13/79 | Holder METALS EXPLORATION LTD

Inclination at collar VERTICAL

Total length 250·0m.

Cadastral location and details (CROWN LAND / PRIVATE)

Commenced: 29 / 4 / 80
Completed: 5 / 5 / 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 possible continuation of the dolomite horizon intersected in holes B15, B18, B19 and MBD41.

Core size and non-coring (NC)

TRICONE	0	TO	3·0
NQ	3·0	TO	69·00
BQ	69·0	TO	250·0
		TO	
		TO	
		TO	

Results of down hole location-survey.

LENGTH FROM COLLAR	W.C. BEARING type AZIMUTH	DIP
160	288°	84°
202	301°	85°
244	330°	84°

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 250·0m — DATE 11/5/80

LOGGED BY ____ — FROM ____ TO ____ — DATE ____

LOGGED BY ____ — FROM ____ TO ____ — DATE ____

Company managing exploration programme.
METALS EXPLORATION LTD.

HOLE No. MBD 46
Log sheet 1 of 4

028547

DEPTH from-to : ROCK UNIT / Depth: Detailed rock description and notes	GRAPHIC LOG	STRUCTURAL AND VEIN INFORMATION	MINERALISATION	PERCENT MINERALISATION (visual estimate)
TRICONE TO 3.0 m - NO CORE				
3.0 - 10.5 SILTSTONES WITH SANDSTONES. Thinly bedded clay rich siltstones with sandstones to 20 cm thick. Sandstones are pale grey, fine grained and possibly weakly tuffaceous. Originally well bedded, but highly broken and bleached by faulting and subsequent weathering	10/11s	← 3.4 Bedding 35°; 5.2 - 11.0 FAULT ZONE Core highly broken, some puggy material, soft and bleached. Contact Broken	3.0 - 10.5 Weathered - non mineralised.	—
10.5 - 16.00 TUFF Coarse grained agglomerate of black, grey and brownish siltstone and shale fragments with white and cream ? felspar phenocrysts in a fine grained, faintly greenish pale grey matrix. Rock fragments and 'felspar' to 3 mm, 80-90% of the rock. Rather structureless, some disruption and brecciation.	12	← Contact irregular, 35°	10.5 - 16.00 trace py as small rounded interstitial grains < 1 mm, weathered.	<1%
16.00 - 21.8 FINELY LAMINATED SHALEY SILTSTONES Pale grey finely bedded / laminated (1-2 mm) siltstones with intercalated discontinuous silty shale lenses 1-2 mm thick. Well bedded to 17.9 m, then brecciated and disrupted. Well fractured and bleached, soft and crumbly - faulted.	10/9c	16.1 Bedding 60°; 16.0 - 17.9 FAULT ZONE Minor puggy material. 17.9 - 21.8 Faulted, recoveries poor, rock is soft crumbly and bleached. Contact Broken	16.00 - 21.8 trace dissen. py, pitted and weathered.	<1%
21.8 - 23.00 TUFF Finer grained siltstone, shale and ? felspar agglomerate (max clast size 1-2 mm) in a fine grained grey shaley matrix.	12	Gradual change via sandstone beds.	21.8 - 23.0 py as fine interstitial grains, weathered.	<1%
23.0 - 33.2 THINLY BEDDED SILTSTONES AND SHALES WITH SANDSTONES. See 3.0 - 10.8 for description. Well bedded to 26.8 m, then highly broken and bleached by faulting - soft, almost puggy intervals to 30 cm. - to 33.2 m.	10/11s/(9)	← 24.3 Bedding 5°; ← 26.5 Bedding 50°; Contact Broken.	23.00 - 33.2 trace py in veinlets and stringers, pitted and weathered.	<1%
33.2 - 34.3 TUFF Fine grained siltstone, shale and ? felspar agglomerate as for 21.8 - 23.00. Well fractured and sheared.	12	Contact Broken.	33.2 - 34.3 trace interstitial pyrite.	<1%
34.3 - 42.00 SILTSTONES, MINOR SHALES Dark grey, almost black clay rich siltstones thinly interbedded with black shales. Quite finely bedded, in places almost laminated (as for 16.00 - 21.8), with shiny black ? graphitic partings along bedding planes. Highly fractured and broken, decreasing with depth. Minor contortion and soft-sediment disruption.	10/9c	← 39.7 Bedding 35°; Gradual Change	34.3 - 42.00 py, qtz; in irregular stringers and veinlets with carbonates. Some finely dissem. py towards base of interval.	2-3%
42.00 - 55.17 SILTSTONES AND SANDSTONES, MINOR BLACK SHALES. Thinly interbedded dark grey clay rich siltstone and mid grey silty sandstone beds on a 1 - 5 cm scale. Disrupted and contorted, with some well bedded intervals. Fractured and badly broken to 45 m, then fracturing decreases.	10/11s/9c	45.5 - 47.5 fold zone - contorted bedding, most angles <10°. ← 49.9 Bedding 45°; ← 51.9 Bedding 60°; 54.9 Bedding 80°; Contact 60°	42.00 - 55.17 py, finely dissem in siltstones and sandstones, minor qtz - py - carbonate veining, with thin py stringers and irregular blebs.	1-2%
55.17 - 58.1 TUFF 1-3 mm Black shale clasts, greyish siltstone clasts and whitish / yellowish felspars in a pale greenish grey shaley matrix (sericitic ?). Quite soft, weakly foliated 65° - shearing ?, some clasts are almost talcose - alteration ?, or depositional ?	12	Contact irregular, ≈55°	55.17 - 58.1 trace minor qtz - carbonate - py veining	<1%
58.1 - 69.6 SILTSTONES AND SHALES, Minor SANDSTONES. Very brecciated and disrupted - dark grey, almost black intimate mixture of siltstones and shales with rounded clasts of mid grey qtzose siltstone, dark grey clay rich siltstone and grey sandstone to 3-4 cm.	10/11s/9c	Gradual Change	58.1 - 69.6 py, in thin veinlets and stringers along brecciation paths, dissem. in siltstone and sandstone clasts. Rare qtz - carbonate - sp veinlets.	3%
69.6 - 101.7 SILTSTONES AND SHALES, sparse SANDSTONES. As above, 58.1 - 69.6, with a reduced proportion of sandstone clasts. Slightly lesser disruption - intervals of disrupted and contorted material to 2 m alternate with totally disrupted material to 10 m. 99.8 - 101.7, thinly bedded siltstones, dark grey and not as carbonaceous.	10/9c	← 73.4 Bedding 10°; ← 76.3 10 mm vuggy py-marcasite vein, 30°. ← 88.1 Bedding 60°; ← 101.1 Bedding 50°	69.6 - 101.7 py, as bedded laminae, finely dissem. Rare irregular qtz - carbonate - py - sp stockworks to 5 cm, 30 - 40°	3-5%
101.7 - 104.3 SANDSTONES WITH SILTSTONES. Dark greys, disrupted and brecciated Sandstone beds to 30 cm intercalated with thinly bedded siltstones.	11s/10	Gradual change; ← 103.7 Bedding 55°	101.7 - 104.3 py, finely dissem in sandstone and siltstone beds, sparse fine stringers with qtz, carbonates	2-3%
104.3 - 115.1 SILTSTONES. Medium grey thinly bedded clay rich and quartzose siltstones with some rare sandy beds to 5 cm. Quite well bedded, with occasional thin shale laminae < 1 mm dividing siltstone beds. Minor disruption and contortion, well fractured, with some puggy zones 1-2 cm.	10	Gradual change; ← 107.2 Bedding 35°; 107.5 - 110.1 fault zone - broken core and thin puggy intervals 40° LCA. Minor folding 111-113 - soft sediment deformation. ← 113.0 12 mm dolomite - fluorite - py - qtz - sp vein, 40°; 15 mm dolomite - fluorite - py - qtz - sp vein, 50°; Gradual Change.	104.3 - 115.1 py, very finely dissem. in siltstone beds, as thin films along fracture planes, and occasional irregular stringers and blebs.	3%
115.1 - 125.3 SANDSTONES AND SILTSTONES. Massive disrupted and brecciated sandstone beds to 1.5 m, grey and quartzose, alternating with thinly bedded clay rich and quartzose siltstones. Highly disrupted and brecciated by soft-sediment deformation.	11/s/10		115.1 - 125.3 py, finely dissem in some sandstone and siltstone beds, also as thin veinlets and stringers. Weak bluish green fluorite - carbonate stringers.	3-5%

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 11 / 5 / 80

HOLE No. MBD 46
LOG SHEET 2 OF 4
from 0.0 m to 120.0 m

028548

Drill advance	Core length recovered	% recovery
2.7	2.7	100
3.1	3.1	100
3.1	3.1	100
3.1	3.1	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
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
3.5	3.5	100
2.5	2.5	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

Rock description

See previous page for description (11/5/10)

125.3 - 183.7 SILTSTONES, minor BLACK SHALES, SANDSTONES (10/9c/11s)

Dark grey siltstones, thinly bedded and sandy in places. Disrupted and brecciated, but bedding directions are still measurable.
Black shales are mostly thin laminae (1-5 mm) dividing siltstone beds; in places they are finely laminated 1-2 mm.
Well fractured - fractures have been healed by py ± carbonates and qtz.

157.0 → Disruption and contortion gradually increases - bedding directions unreliable due to minor faulting and soft sediment disruption.

177.8 - 184.6 Finely fractured - thin white clay filled partings at low angles LCA.

183.7 - 186.6 QUARTZITES, minor SILTSTONE (11/10)

Hard grey massive quartzites, disrupted and brecciated, up to 0.9 m thick, separated by thinly bedded qtzose and clay rich siltstones

186.6 - 209.6 SILTSTONES WITH BLACK SHALES, SANDSTONES. (10/9c/11s)

Pale grey siltstone clasts (quartzose) in a contorted black shale/siltstone matrix, with grey sandy siltstone beds to 30 cm thick. Occasional sandstone beds to 1.5 m thick, some of which are weakly micaceous.
Extensively disrupted and deformed - soft sediment deformation.

Depth tags: 120, 124, 128, 132, 136, 140, 144, 148, 152, 156, 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 204

Structural and vein information

- ← 130.4 Bedding 40°
- ← 132.3 20 mm carbonate - qtz - py - po vein, 50°
- ← 136.1 Bedding 45°
- ← 139.5 40 mm qtz - py - carbonate - po - fluorite - sp vein, 35°
- ← 140.1 Bedding 25°
- ← 141.1 8-30 mm irregular qtz - py - carbonate - po - sp vein, 35°
- ← 141.7 - 142.2 Bedding < 5°
- ← 144.9 30 mm py - po - carbonate - qtz vein, 40°
- ← 145.7 Bedding 50°
- ← 147.9 Broad open fold, axis 90° LCA
- ← 148.8 45 mm fluorite - carbonate - py - arseno - sp - po vein, 35°
- ← 149.4 Bedding 40°
- ← 150.3 30 mm py - qtz - fluorite - sp - ga vein, 60°
- ← 153.3 Bedding 55°
- ← 157.0 Bedding 35°
- ← 161.3 fold - plane 60°, axis 90°
- ← 162.7 Bedding 25°
- ← 168.2 Bedding 55°
- ← 171.9 Bedding 30°
- ← 174.5 Bedding 50°
- Gradual Change
- ← 186.4 40 mm carbonate - fluorite - py - ga - qtz vein, 25°
- Gradual Change
- ← 188.8 Bedding 20°
- ← 195.8 20 mm carbonate - chlorite - fluorite - po - qtz vein, 20°
- ← 202.2 Bedding 50°

5 cm

Mineralisation

Mineralisation	Percent mineralisation (visual estimate)
See previous page for description.	
125.3 - 148.5 py, mainly as blebs 1 mm → 20 x 10 mm and thin stringers and veinlets. Some rare blebs po with py. Minor carbonate - fluorite - py - qtz - po - sp veining	3%
148.5 - 150.3 As above, with 5% veining of py - qtz - carbonates ± trace fluorite, po, sp, ga	7%
150.3 - 177.8 py, as blebs, veinlets and stringers, trace po as rare blebs to 5 x 2 cm. Rare thin carbonate - qtz - py stringers.	1-2%
177.8 - 184.6 Increased carbonate - qtz - py stringers and some blebby dissem. py. po gradually disappears.	3%
184.6 - 192.00 py, as veinlets, stringers and dissem. heavily in siltstone clasts or as blebs in shales. Weak qtz - py - stringers.	5%
192.0 - 213.0 py in stringers and veinlets with qtz, carbonates, some rarely finely dissem. 195.7 → some rare po, confined to veins > 5 mm.	3-5%

DRILL ADVANCE	LOST CORE ZONE	CORE LENGTH RECOVERED OR % RECOVERY ESTIMATE	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 11 / 5 / 80

HOLE No. MBD 46
LOG SHEET 3 OF 4
from 120.0 m. to 204.0 m.

DRILL ADVANCE	CORE LENGTH RECOVERED	% RECOVERY ESTIMATE OR LOST CORE ZONE	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
3.0	3.0	100	See previous page for description.	204		10/9c/11s		← 205.6 Bedding 60°	See previous page for description.		
3.0	3.0	100	209.6 - 211.7 Hard grey brecciated quartzite bed - massive, with some disruption.	208		11		← 208.6 15 cm carbonate - fluorite - py - po stockwork, 20% veins. ← 209.7 15 mm qtz-py vein, 75° ← 209.8 Bedding 40°			
3.0	3.0	100		212		10/9c/11s		← 212.1 15 mm py-po-qtz vein, 65° Contact bedded, 45°			
3.0	3.0	100	213.0 - 220.3 FINELY LAMINATED SHALEY SILTSTONES. Finely bedded / laminated 1-2 mm medium grey clay rich siltstone with thin discontinuous shale lenses <1-2 mm. Overall medium grey and weakly carbonaceous, with some almost black carbonaceous intervals to 10 cm thick. Minor disruption and contortion	216		10/9/c		← 215.8 Bedding 45°	213.0 - 220.3 py. as sparse veinlets, stringers with qtz, carbonates or very finely dissem.	2%	
3.0	3.0	100		220				← 219.6 Bedding 55° Gradual Change			
3.0	3.0	100	220.3 - 225.2 SILTSTONES AND BLACK SHALES, minor SANDSTONES. Thinly bedded 1-2 cm, mid grey clay rich and pale grey quartzose siltstones, some of which grade into sandstones. Some very small tuffaceous beds 1-2 cm. Very well bedded - 'stripey' appearance, with only very minor soft sediment disruption.	224		10/9c/11s		← 222.6 Bedding 65° ← 225.0 20 mm carbonate - fluorite-py - talc - mica vein, 85°	220.3 - 225.2 py. dissem. along bedding and in thin veinlets and stringers with qtz, carbonates.	2-3%	
2.5	3.4	100	225.2 - 234.6 THINLY BEDDED SANDSTONES AND SILTSTONES. Well bedded mid grey speckled quartzose sandstones with thin dark silty laminae along bedding planes. The sandstones are frequently micaceous along bedding planes. Intervals of sandstone to 1.5 m are separated by thinly bedded siltstones with rare black shale laminae. Well fractured and broken by a set of shear planes at low angles to core.	228		11s/10/(9)		← Contact bedded, 60° ← 228.8 Bedding 70°	225.2 - 234.6 py. finely dissem 1-2%, with rare thin qtz-carbonate veinlets and pyrite stringers.	2%	
2.3	1.4	100									
1.2	1.2	100									
2.7	2.7	100		232				← 232.4 Bedding 65°			
2.8	2.8	100						Gradual Change.			
3.1	3.1	100	234.6 - 243.3 THINLY BEDDED SILTSTONES AND BLACK SHALES, MINOR SANDSTONES. See 220.3 - 225.2 for description.	236				← 236.2 Bedding 55°	234.6 - 243.3 py. finely dissem in sporadic patches within some sandstone and siltstone beds. Minor qtz-py 'sweatouts' and veinlets.	2-3%	
3.1	3.1	100		240				← 240.4 Bedding 55°			
3.0	3.0	100						Contact irregular, 45°			
3.0	3.0	100	243.3 - 246.2 FINELY LAMINATED SHALEY SILTSTONES. As for 213.0 - 220.3.	244		10/c		← 243.4 Bedding 65° ← 246.0 Bedding 55°	243.3 - 246.2 py finely dissem. along bedding laminations, weak qtz-carbonate veinlets and stringers.	2-3%	
3.0	3.0	100	246.2 - 250.0 THINLY BEDDED SILTSTONES AND BLACK SHALES. Dark grey, almost black clay rich siltstones, silty shales, separated by black shale beds <2 mm thick, with pyrite laminae. Very well bedded - 'stripey' appearance, some weak disruption of beds.	248		10/9/c		Contact irregular. ← 248.1 Bedding 40° ← 249.3 30 mm irregular py-marcasite - sp-po-qtz stockwork, 70°	246.2 - 250.0 py, as veinlets and small irregular stringers, and thin bedded laminae to 2 mm with black shales. Some siltstone beds have very finely dissem. py-	3%	
2.0	2.0	100	END OF HOLE 250.0 m.	252							

5 cm

METALS EXPLORATION LIMITED

MINERAL EXPLORATION
DRILL LOG
Scale 1:100

Prospect or project: MOUNT BISCHOFF

Logged by: G. BROADBENT date: 11 / 5 / 80

HOLE No. MBD 46
LOG SHEET 4 OF 4
from 204.0 m. to 250.0 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								
98071		186.4	187.1	0.7	6100								6100	check assay

Notes :— Sn by XRF 6. Method.

METALS EXPLORATION LTD - MT BISCHOFF TIN PROSPECT

ASSAY SUMMARY SHEET. HOLE NO. MBD-46

SAMPLE TYPE : DRILL CORE FROM 186.4 TO 187.1