HOLE No. MM1/MM1a

PASMINCO EXPLORATION
DIAMOND DRILL CORE RECORD

LOCATION	TASMANIA
PROJECT	TULLAH EL 22/90
PROSPECT	MURCHISON MINE
DESIGNED BY	J.G. PURVIS
LOGGED BY	J.G. PURVIS
RELOGGED	
COMMENCED	14·1·93
COMPLETED	19·2·93
DRILLED BY	W. HOW
DRILL RIG	LONGYEAR 38

OBJECTIVE

TO LOCATE POSTULATED CAMBRIAN VOLCANOGENIC SOURCE OF THE REMOBILIZED BASEMETAL SULPHIDES IN THE DEVONIAN LODE AT THE MURCHISON MINE.

RESULT

HOLE MM1 ABORTED AT 60m AFTER LIFTING SHARPLY AND RECOMMENCED FROM 18m AS HOLE MM1a.
NO SIGNIFICANT MINERALIZATION INTERSECTED.
FARRELL SLATES SEQUENCE ENCOUNTERED TO 267·5m, AND ALTERED RHYODACITIC VOLCANICLASTICS AND LAVAS OF MURCHISON VOLCANICS BELOW 267·5m. UNMINERALIZED MURCHISON MINE HOST ROCK INTERSECTED 218–237m.

LOCATION/SURVEY DATA (AMG)

Grid	AMG		RL Collar m 178·7
Northing m	S 376487·1		Bearing Collar 102°
Easting m	385432·9		Dip Collar −70°
DH Survey Type	SINGLE SHOT EASTMAN CAMERA		Length Hole m 400·7m

Depth m	Bearing	Dip	Depth m	Bearing	Dip
MM1: (0–60m)					
30	099·5°	−65·25°			
60	098°	−60·25°			
MM1a: (18–400·7m)					
30	100·5°	−67·5°			
61	101·5°	−66·75°			
91	100°	−65°			
121	097·5°	−63°			
151	096°	−59·75°			
181	096°	−56·75°			
211	097·75°	−55°			
241	097·25°	−53·25°			
271	098·5°	−52°			
301	098°	−50°			
331	097°	−49°			
361	097·5°	−48·5°			
391	097°	−48°			

SIGNIFICANT INTERSECTIONS

From m	To m	Interval m	Pb	Zn	Ag			Comments
351·6	352·85	1·25	0·09%	0·15%	2 g/t			BEST INTERSECTION: TUFFACEOUS SILTSTONE BAND IN MURCHISON VOLCANICS.

SIGNIFICANT CORE LOSS

From m	To m	% Lost

POOR GROUND CONDITION ZONES

From m	To m	Condition
0	8	FLUVIOGLACIAL SAND AND WEATHERED BROKEN SHALE

HOLE SIZE

Size	Depth m
HQ	69
NQ	400·7

HOLE CONDITIONS AFTER COMPLETION

Collar	STEEL CAP SCREWED INTO CASING CEMENTED AT GROUND SURFACE
Steel Casing	6·5m OF HW-SIZED GALVANIZED STEEL CASING PLACED IN TOP OF HOLE
PVC Casing	40mm ID UNSLOTTED PVC PLACED TO BASE
Ground Water	
Wedge	
Drill Pad	

HASMINCO EXPLORATION
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HOLE No. MM1

PROJECT: MURCHISON MINE, TULLAH EL 22/90

Graphic Scale 1: 200

CORE RECOVERY				DESCRIPTION						CODES			
From m	Interval m	%	RQD	From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth (m)	Graphic Lithology	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
						0 - 60.0m: FARRELL SLATES								
						0 - 5.5m: NO CORE								
						5.5 - 15.85m: PREDOMINANTLY DARK GREY SHALE **Lithology:** Partly carbonaceous & sericitic shale, with common interbeds of calcareous siltstone & v minor fine sandstone. **Alteration:** Essentially unaltered - sericite after degradation of vitric component, not hydrothermal alteration. Irreg barren qtz-carb vein 14 -14.35m. Minor carb veinlets. **Structure:** Generally thinly & regularly bedded. Bedding 38°/LCA @ 7m. Weak-mod cleavage (bedding //). Slight kinking in places. Broken, worst above 8m. Basal contact sharp (bedding plane) 43°/LCA.								
						15.85 - 18.85m: FINE VOLCANICLASTIC SANDSTONE **Lithology:** Grey, mod calcareous. Massive appearance, but slight variations in grainsize indicate unit comprises several pulses of detritus. Composed of feldspar > qtz & lithic grains, av <1mm, in sl sericitic and carbonaceous shaley matrix. Abund tiny wisps of deformed black shale. Bands of fine stretched-pebble conglomerate @ 16.05 - 16.25m & 17 -17.1m. (Pebbles comprise tuffaceous shale, cherl, carbonate & black shale. Up to max 10-20mm long & <5mm wide). **Alteration:** Essent unaltered. Feldspar grains carbonatised. Minor carb veinlets. **Structure:** Mod cleaved, with minor kinking. Basal contact sharp (bedding) 43°/LCA.								
						18.85 - 57.0m: CALCAREOUS SILTY TO SANDY SHALE **Lithology:** Dark grey. A mod calcareous fi gr sed, comprising subordinate silt to sand-sized feldspar, qtz and silic lithic grains scattered in dark grey to black, partly-carbonaceous & sl sericitic shaley matrix. Some qtz xyl grains to 4mm. Occ fine massive sst bands - largest 30.65 - 32.3m. **Alteration:** Carbonatisation of feldspar grains. Common veinlets (& lesser veins) of carb > qtz, gen in cleavage.								

5 cm

5.5 - 15.85m:

2% py-po, locally up to 3-5% (core weakly magnetic).
Fi gr dissem & v thin stringers along cleav.

15.85 - 18.85m.

Minor to 1% dissem py.

18.85 - 57.0m:

Gen 1% py>po, fi gr dissem. Varies from minor to +2%.

Trace cp in places.

TASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. MM1

PROJECT: MURCHISON MINE, TULLAH EL 22/90

Graphic Scale 1: 200

CORE RECOVERY				DESCRIPTION						CODES			
From m	Interval m	%	RQD	From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth (m)	Graphic Lithology	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
						Minor chlorite-sericite alteration assoc with carb-qtz veinlets in kink zones below 43m.				Minor coarse xylline sp>gn-py>cp in qtz-carb veinlets in axis of kink zone //LCA, 43-49m.				
						Structure: Bedding: 55°/LCA @ 24.2m (orientated core: dips 75° to 270° AMG), 48°/LCA @ 27.2m (orientated core: dips 72° to 261° AMG), 46°/LCA @ 37m, 57°/LCA @ 57m.	50	Silty to sandy shale						
						Bedding gen indistinct due to bedding-// mod-strong cleavage and assoc deformation (unit characteristic).	52	Kinks // LCA ± trace sp-cp		Similar (same?) kink zone @ 52 - 56.75m, with minor py & trace cp-sp.				
						Common augen of carb &/or qtz, av 2-3mm, up to 20-30mm. Most augen after deformed carbonatised feldspars.	54							
						Locally stronger deformation around kink zones sub-// LCA @ 43 - 49m & 52 - 56.75m.	56							
						Sl broken, esp 20 -22.5m & 55.7 - 56.25m. Qtz-healed breccia after weak fault @ 30.7m.	58	Predominantly shale						
						Basal contact sharp (bedding/cleav) 60°/LCA.	60							
						57.0 - 60.0m: GREY CALCAREOUS SHALE				57 - 60m:				
						Lithology: Weakly carbonaceous & sl sericitic. Some siltstone component.				Minor to 1% py. Traces of sp & cp. Dissem & tiny stringers.				
						Alteration: Occ carb veins & veinlets.								
						Structure: Bedding gen irreg & deformed with small folds in places. Bedding 65°/LCA @ 59.5m. At 60m grading in siltstone bed fines uphole.								
						Weak-mod bedding-// cleavage.								
						END OF HOLE				5 cm				