PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Hole ID
OP5

DRILLING

Location	TASMANIA
Project	OCEANA
Prospect	AUSTRAL VALLEY
Design By	M S SAXON
Logged By	M S SAXON
Relogged	
Commenced	1/8/95
Completed	25/8/95
Drilled By	EAST COAST DRILLING
Drill Rig	LONGYEAR 38

OBJECTIVE

To test for base metal mineralisation within the Gordon Limestone corresponding to an aircore Zn-Pb and ground magnetic anomaly.

RESULT

Minor galena-sphalerite mineralisation hosted by siderite was intersected down dip from the aircore/ground magnetic anomaly. A 3m zone of siderite-galena-sphalerite mineralisation was discovered at the upper contact of the Gordon Limestone, a largely untested stratigraphic position.

COLLAR SURVEY (AMG)

AMG mN	5359042.5	Bearing	70.0
AMG mE	362325.3	Dip	-55.0
mN		Hole Length	203.0
mE		DH Survey Type	Eastman Camera
RL	168.5		

DOWNHOLE SURVEY (AMG)

Depth	Bearing	Dip
30	70	-55
60	69	-56.5
90	66	-57.5
120	65	-57.0
150	65	-57

SIGNIFICANT CORE LOSS

POOR GROUND CONDITION ZONES

From	To	Condition
0	182	Numerous intervals of pug/rubble intersected in Gordon Limestone. Cavities comm.
182	203	Friable-running sand in Crotty Quartzite.

HOLE SIZE

From	To	Size
0	59.7	HQ
59.7	203	NQ

HOLE CONDITIONS AFTER COMPLETION

Collar	3m of collar pipe with support bar and cap
Steel Casing	
PVC Casing	Nil
Ground Water	Abundant water in hole
Wedge	
Drill Pad	Pad releveled, sump filled;

SIGNIFICANT INTERSECTIONS

21704

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Vertical Scale 1 : 200

5 cm

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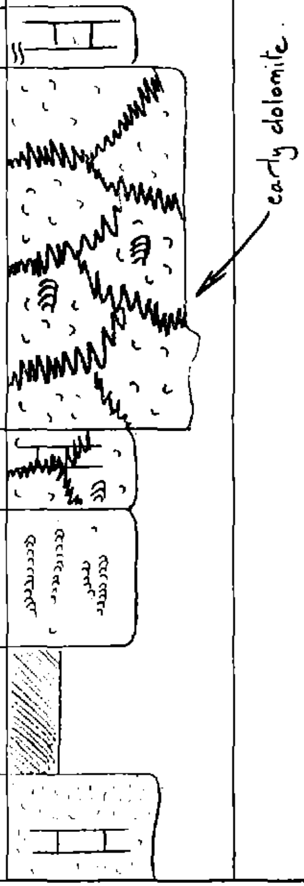
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
0.00	5.60	No core;			0			
5.60	7.20	MICRITE; massive to weak lamination; fossil poor; common early-dolomite replaced tube burrows;						
7.20	17.00	GRAINSTONE with minor rudstone, wackestone; blotchy steel grey; abundant fossils, typically shelly plus corals and stromatoporoids to 3cm; occasional intact gast.; occasional oncoidal growth on clasts; 'islands' of limestone and fossils surrounded by early-dolomite due to replacement, similar to Oceana hostrock; minor tube mottling;			10			FIRST CLEAVAGE. R 45. Slatey.
17.00	18.70	WACKESTONE; similar to above, increased lime matrix; shelly and coralline fragments; abundant early-dolomite replacement, bioturbation controlled;						
18.70	22.50	CORALLINE WACKESTONE; abundant branching coral in lime sand/micrite matrix; coral strongly calcite recrystallised; coral eqi-spread in matrix, potential growth position; minor early-dolomite as irregular matrix replacement;			20			
22.50	25.90	RUBBLE/PUG; fossiferous in part;						
25.90	29.70	Fine grained FOSSIL SANDSTONE grading to MICRITE; occasional large stromatoporoids; less fossiliferous downhole; minor bed controlled early-dolomite;						



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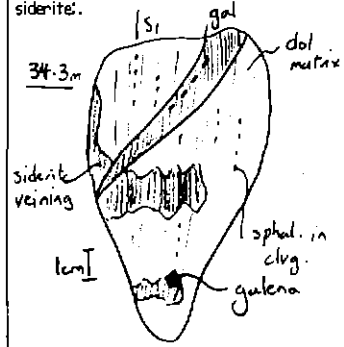
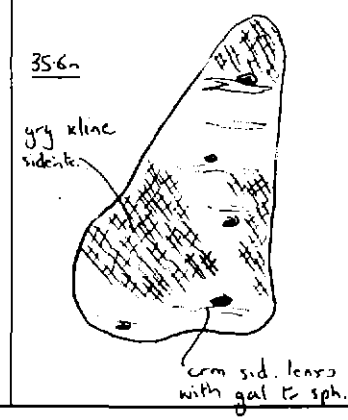
DESCRIPTION					GRAPHIC			
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
		downhole; minor bed controlled early-dolomite;						
29.70	30.70	PUG; grey, limey.			30			
30.70	33.40	Crystalline SIDERITE/CALCITE with minor mineralization; creamy-brown in color, crushed/powdery, 80cm of core recovered;	minor vein gal.	30.7-33.4m siderite-calcite-galena-sphalerite vein? - broken core.				
		Black PUG; plastic texture;						
~~33.40~~ 33.70	~~33.70~~ 35.80	Crystalline SIDERITE with galena/sphalerite mineralization; interval typically creamy-brown, crushed/powdery; at 34.3m matrix to minz dolomitic, non-crystalline, strongly clvd, disseminated sphalerite attenuated in clvg; at 35.6m matrix to minz dark grey crystalline siderite with cream siderite lenses;	minor vein gal.	33.7-35.8m siderite-galena-sphalerite mineralization; siderite grey crystalline and crm lenses; strong cleavage in part, sphalerite dissem. and attenuated in clvg; galena veins siderite.				
35.80	44.20	PUG/RUBBLE; pug to 40.1m; predominantly micritic;			40			FIRST CLEAVAGE, A 35.
44.20	51.50	GRAINSTONE with minor mudstone, wackestone; 3-8mm shelly and coralline fragments with numerous coarser fragments; clast supported, matrix poor; common oncoids; calcite cement in part, best developed 51-52m; replacive early-dolomite abundant;			50			
51.60	55.00	BIOTURBATED WACKESTONE; fossil rich wackestone with bioturbation mottling highlighted by early-dolomite; bio-tubes stylolite modified;						
55.00	58.50	FOSSIL-ONCOIDAL GRAINSTONE; preserved 5-10mm shells with oncoidal coating; lag accumulated;						

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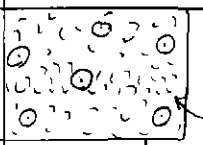
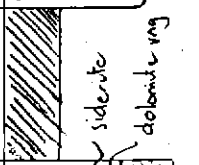
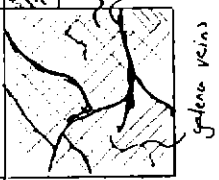
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
55.00	58.90	FOSSIL-ONCOIDAL GRAINSTONE; preserved 5-10mm shells with oncoidal coating; lag accumulated;						PRIMARY FABRIC, A 45, Facing downhole,
58.90	62.00	BIOTURBATED WACKESTONE; rubble;		59.7-59.7m siderite-galena vein:.	60			
62.00	66.40	PUG; dark grey;						
66.40	70.20	SIDERITE with galena/sphalerite mineralisation; cream-brown color; semi-massive crystalline siderite veined and invaded by black dolomite(?); angular siderite clasts hosted by black dolomite; galena veinlets crosscut siderite; pyrite locally abundant; core very rubbly; lower contact gradational with reducing siderite alteration;		66.4-70.2m siderite-galena-pyrite-(sph) as vein/replacement: siderite fract. by black dolomite: galena as veinlets in siderite, pyrite as clots in siderite: rubble:.				
70.20	83.70	SILICA ALTERED BRECCIA ZONE; dark grey, slightly porous zone of intensively silicified carbonate; angular to irregular clasts supported by massive to slightly spotted matrix of silica; clasts typically massive partly altered dolomite, but near upper contact includes angular fragments of ophcle siderite-galena-sphalerite unit; sphalerite in both clasts and silica matrix; common blebs of grey silica; interval moderately pyritic; *silica alteration not previously seen*		70.2-71.2m sphalerite-pyrite-galena: 2% sphalerite: present as reddy sph in clasts and honey sph in silica matrix as dissemination, seperate generations: abundant disseminated pyrite in silica matrix: minor dissem. galena:.	70			
					80			
83.70	87.90	PUG; grey;		83.0-83.7m siderite-sphalerite: trace:.				

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From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
83.70	87.90	PUG; grey;						
87.90	98.70	GRAINSTONE grading to rudstone and fossil sandstone; well sorted shell fragment and minor small coral, clast supported unit; typically sand-sized clasts, occasional coarser beds; calcite cement in part; minor early-dolomite; bioturbation in finer grained zones;			90			
98.70	100.20	CAVITY						
100.20	110.50	BIOTURBATED MICRITE, with minor interbedded wackestone; occasional large intact fossils; bioturbation predominantly tube mottling, minor sculpture mottle; common early-dolomite controlled by bedding and burrows;	birds eye fenestrae		100			PRIMARY FABRIC, A 45.
110.50	111.70	CORAL HEAD(S); *compound coral heads to 0.3m; micritic* lst between heads; stylotised margins;			110			
111.70	112.20	MICRITE; pale grey; birdseye fenestral porosity;						

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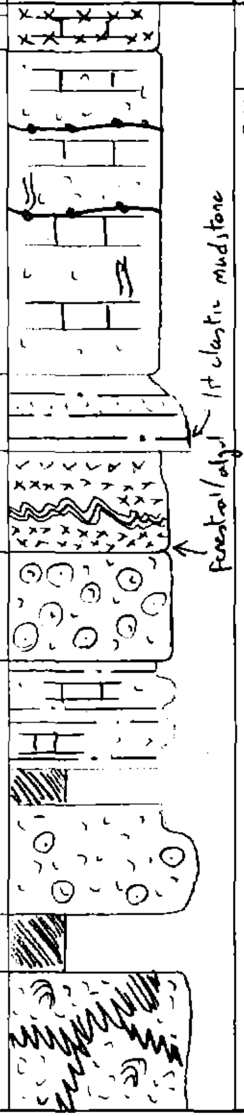
From	To	LITHOLOGY	MINERALISATION	STRUCTURES
111.70	112.20	MICRITE; pale grey; birdseye fenestral porosity;		
112.20	121.70	WACKESTONE; mid grey micritic matrix hosting intact and fragmented fossils; minor bioturbation;	114.3-114.4m galena; trace adjacent to calcite veins.	VEIN, Calcite-wallrock fragments VEIN, Calcite-wallrock fragments Crm-brn pug, probable siderite
121.70	123.00	Interbedded CLASTIC MUDSTONE and MICRITE; mid grey micrite with minor fossil debris, with 20% intercalated clastic mudstone; weak internal lamination;		PRIMARY FABRIC, A 35.
123.00	125.90	MICRITE; pale grey limestone with strong planer stylo-lamination in part; abundant irregular-elongate calcite filled fenestral pores, slight bed control, possible algal origin;		
125.90	128.80	ONCOIDAL-FOSSIL WACKESTONE; shelly debris in micrite matrix with common oncoidal coating on shell fragments; oncoids to 1.5cm diam.; solit. coral common but uncoated;		
128.80	135.50	Interbedded CLASTIC MUDSTONE and LIMESTONE; 3-10cm planer beds of brown mudstone and wackestone or grainstone; bed contacts sharp, stylotised; common tube bioturbation at bed margins; mudstone beds and grainstone horizons both host early-dolomite;		Crm-brn pug, probable siderite
135.50	137.00	PUG; dark grey;		
137.00	144.00	GRAINSTONE; coarse sandy clast supported grainstone, 2mm clast avg.; shell fragments plus coral to 5cm size; fossils calcite replaced; strong early-dolomite overprint, cut by stylolites;		

ALTERATION / GRAPHIC (Depth 120, 130, 140):



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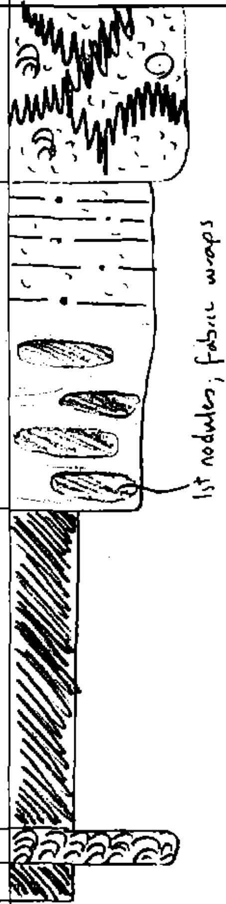
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
					140			
144.00	152.70	Interbedded CLASTIC MUDSTONE and MICRITE, grading to NODULAR LIMESTONE; pale grey micrite nodules have stylolite margins, elongate bed parallel, minor internal lamination, host occasional fossil debris; rubble and pug below 145m;			150			
152.70	161.30	RUBBLE, PUG; dark grey micritic lst fragments;			160			
161.30	161.90	CORAL HEAD; compound coral heads plus minor wackestone;						
161.90	163.00	PUG; dark grey;						
163.00	169.30	CAVITY						



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From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
169.30	175.10	PUG; dark grey;			170			
		SIDERITE; minor rubble of dark grey siderite; possible minor mineralization;	siderite rubble.					
175.10	175.40	PUG; dark grey-black;						
175.40	177.40	SIDERITE with GALENA and minor sphalerite mineralization; crm-brn coarsely cryst. massive siderite with intercryst. and fracture fill galena; trace disseminated sphalerite assoc.; below 178m siderite brecciated, clasts hosted by fine grained crm dolomite(?) matrix; siderite rim texture shows open space fill, vugs in siderite open or calcite filled; galena hosted by both siderite and dolomite veining; pug 179.9-180.1m;	galena veining dol. veining	177.4-180.3m siderite-galena-sphalerite: massive siderite with 5-10% disseminated and vein galena. 1% disseminated sphalerite; open space fill texture.				
177.40	180.30				180			
180.30	182.50	PUG; cream brn sideritic pug, possible minor mineralization;						
182.50	185.10	SANDSTONE; mid-grey medium grained quartz sandstone; bedded, laminated; core broken;						
185.10	187.40	QUARTZITE; pale grey coarse grained quartzite; clear quartz grains, minor lithics; silica cement;						
187.40	197.20	Interbedded SANDSTONE and SILTSTONE; pale grey quartz sand bedded with mid grey laminated siltstone; bedding contorted, folded;			190		PRIMARY FABRIC, A 40. FOLD. Axis. Open folding	

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From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
197.20	203.00	QUARTZITE; medium grained pale grey quartzite, silica cement;			200			FIRST CLEAVAGE, Spaced,
					210			
					220			