PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Hole ID
YHV2

DRILLING

Location	HENTY VALLEY
Project	YOLANDE
Prospect	HENTY VALLEY
Design By	P.M.Quayle
Logged By	D.Gardner
Relogged	
Commenced	28th February 1995
Completed	24th March 1995
Drilled By	Diamond Drilling Tasmania
Drill Rig	Longyear LM38

OBJECTIVE

To test for mineralization and alteration beneath outcropping massive pyrite within black shales, and coincident with an IP / Restivity anomaly. This outcrop occurs in the bed of the Henty River.

RESULT

The massive pyrite outcrop correlated with a pyritic fault seperating black mudstones from silicified siltstones. The IP anomaly correlated with black pyritic mudstones and/or black pyritic limestones.

COLLAR SURVEY (AMG)

AMG mN	5351400.0	Bearing	275.0
AMG mE	375435.0	Dip	-50.0
mN		Hole Length	163.5
mE		DH Survey Type	Eastman single :
RL	120.0		

DOWNHOLE SURVEY (AMG)

Depth	Bearing	Dip
0.0	-48.00	274.00
30.0	-47.00	274.50
60.0	-46.00	274.00
90.0	-45.00	273.00
120.0	-44.00	274.00
150.0	-43.00	273.50
163.0	-42.00	274.50

SIGNIFICANT CORE LOSS

From	To	Loss

POOR GROUND CONDITION ZONES

From	To	Condition
94	99.4	fault zone with pug.

HOLE SIZE

From	To	Size
0	84	HQ
84	163.5	NQ

HOLE CONDITIONS AFTER COMPLETION

Collar	
Steel Casing	HW shoe left cemented into top of hole.
PVC Casing	0 - 163.5m
Ground Water	
Wedge	
Drill Pad	

SIGNIFICANT INTERSECTIONS

From	To	Int	Cu	Pb	Zn	Ag	Au	Comments

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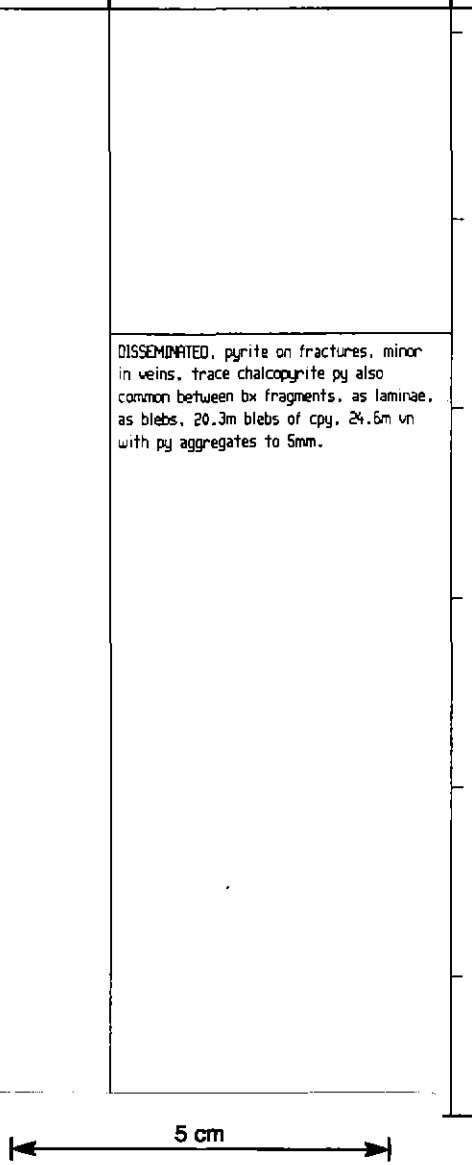
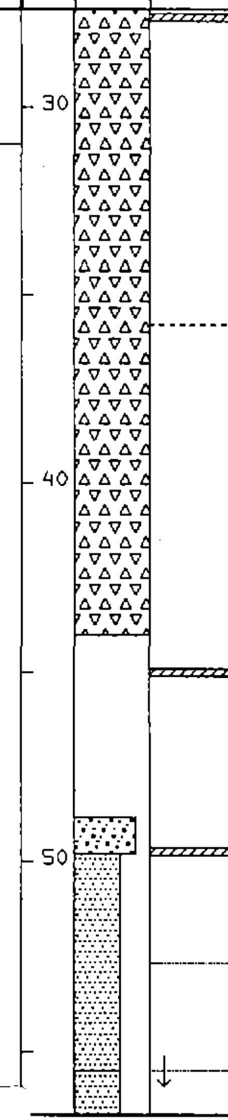
Vertical Scale 1 : 200

DESCRIPTION					GRAPHIC			
From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
0.00	8.00	FLUVIOGLACIAL DEPOSITS Abrupt contact						
8.00	44.00	BRECCIA , GREYWACKE , SILTSTONE WITH MINOR BLACK SHALE Green, Grey, Fine grained, Very coarse grained, Brecciated, Matrix supported, Polymict, Lithic, Breccia with clasts of mudstone (often laminated), and greywacke (with a high volcanic component) in a mudstone-greywacke matrix, a lot of the strung out textures suggest soft sediment deformation/injection of a partially lithified/cemented mudstone sequence. Fragments are s/rnd-s/ang and up to 10cm. Intervals of more massive greywacke occur at 15. -16.4m, and 32-33m CONTACT: Indistinct, Broken core		DISSEMINATED, pyrite on fractures, minor in veins, trace chalcopyrite py also common between bx fragments, as laminae, as blebs, 20.3m blebs of cpy, 24.6m vn with py aggregates to 5mm.				VEIN, Carbonate, There is strong carbonate (+/- quartz) veining throughout the hole, except where intensely silicified, veining is calcite or siderite FRACTURE, Shear, Chlorite, Fractures at 10-40 to LCA with slickensides and chlorite VEIN, 8.60, Carbonate,



From	To	DESCRIPTION: LITHOLOGY	ALTERATION	MINERALISATION	STRUCTURES
					chlorite VEIN, A 60, Carbonate, Quartz. Tension gashes?
		INTERMEDIATE VOLCANICLASTIC Dark, Grey, Medium grained, Massive, Porphyritic, Feldspar phyric, Either a tuff or a very immature epiclastic, feldspar crystals to 1mm, some auto brecciation CONTACT: Conformable abrupt, at 50 degrees to Lower 30cm are brecciated suggesting younging downhole		DISSEMINATED, very minor pyrite 39.7m 5cm strong py in vn, 41-42.5m mnr py in blebs and in clasts.	
44.00	48.80	GREYWACKE Grey, Green, Medium grained, Massive sandy greywacke, with patches of silt - mud grade material	Moderately Carbonatised, Replacement of feldspars?		FRACTURE, Shear, Chlorite, Fractures at 10-40 to LCA with slickensides and chlorite VEIN, A 40, Carbonate,
48.80	49.80	SILTSTONE AND BRECCIA WITH MINOR GREYWACKE WITH MINOR BLACK SHALE Green, Black, Fine grained, Laminated, Brecciated, Micro faulting, and soft sediment disruption and brecciation of bedding leads to blocks of laminated mudstone in a mudstone matrix CONTACT: Conformable abrupt, Micro faulted contact? very small flames indicate younging downhole?			
49.80	55.50	SILTSTONE AND GREYWACKE AND BRECCIA Green, Black, Fine grained, Medium grained, Brecciated, Matrix supported, Polymict, Fragments of mudstone and greywacke (volcanic) with injection/disruption of soft mudstone in a greywacke matrix CONTACT: Gradational,	Slightly Carbonatised, Fine carbonate in matrix		VEIN, A 10, Carbonate, PRIMARY FABRIC, So confused, changing rapidly => folding, So is often subparallel to LCA
55.50	58.50	GREYWACKE Black, Green, Medium grained, Massive, Greywacke (volcanic?) with minor laminate mudstone inclusions, some weak So 70 to LCA at bottom of interval			BEDDING, Younging

GRAPHIC



5 cm

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55.50	58.50	Greywacke (volcanic?) with minor laminate mudstone inclusions, some weak So 70 to LCA at bottom of interval CONTACT: Faulted, at 35 degrees to		
58.50	59.80	GREYWACKE AND SILTSTONE AND BRECCIA Green, Grey, Fine grained, Medium grained, Brecciated, Matrix supported, Polymict, Soft sediment deformation/injection/brecciation of mudstone and greywacke CONTACT: Gradational,		
59.80	64.30	BRECCIA AND GREYWACKE AND SILTSTONE WITH MINOR BLACK SHALE Green, Black, Fine grained, Medium grained, Brecciated, Clast supported, Polymict, As before with much greater proportion of clasts of lithified rock (fragments to 20cm) CONTACT: Gradational,		DISSEMINATED, abundant pyrite on fractures, in veins, pyrrhotite on fractures, minor in veins,
64.30	65.80	GREYWACKE AND SILTSTONE WITH MINOR BLACK SHALE WITH MINOR BRECCIA	Intensely Carbonatised, Flooding	DISSEMINATED, very minor pyrite on fractures, in veins,
65.80	69.40	Green, Black, Fine grained, Medium grained, Brecciated, As before but less brecciated more micro-faulted/autobrecciated, discontinuous So below 67m at high angle to LCA, below 65.8m fragments are more rounded with some 20cm beds/blocks of greywacke CONTACT: Gradational,		DISSEMINATED, abundant pyrite on fractures, in veins, minor pyrrhotite VEIN, 2% pyrrhotite on fractures, as stringers, 2% pyrite on fractures, as stringers, 2-5% po & py in veins, bands, blebs and in breccia fill.
69.40	74.00	GREYWACKE AND SILTSTONE WITH MINOR BLACK SHALE Green, Black, Fine grained, Medium grained, Brecciated, As before with a distinct So at 70-80 to LCA disrupted by intense micro faulting, generally 2cm thick, some coarser greywacke up to 20cm beds/blocks which have a very high immature volcanic component (glass shards? crystal fragments? pumice?), 71.3m 10cm bed quartz & feldspar crystal rich tuff/epiclastic in silt matrix, fines uphole, flaming in muds suggests younging uphole?, 71.6m 40cm bx bed, 72.2m 15cm & 72.5m 5cm crystal rich greywacke/tuff beds/blocks, at 73.5m the bedding is more disrupted CONTACT: Faulted,		DISSEMINATED, abundant pyrite on fractures, in veins, minor pyrrhotite BANDED, 20% pyrrhotite DISSEMINATED, abundant pyrite on fractures, in veins, minor pyrrhotite VEIN, 5% pyrrhotite on fractures, as stringers, 2% pyrite on fractures, as stringers, 5-10% po & py in veins, bands, disseminated in breccia fill, rare po clasts?, blebs of cp at 74.5 & 75m.
74.00	79.40	DEFORMED ZONE AND BLACK SHALE AND GREYWACKE Black, Green, Fine grained, Very coarse grained, Brecciated, Sheared, Polymict, Fault Zone strongly disrupted and brecciated rocks, with numerous puggy and graphitic faults, with intense carbonate veining, 74.05m 30cm crm-wh massive rock similar to 80m; 77.2m 70cm crystal rich greywacke/tuff CONTACT: Faulted,	Moderately Silicified,	DISSEMINATED, abundant pyrite on fractures, in veins, minor pyrrhotite VEIN, 20% pyrrhotite in veins, as stringers, and bx fill. DISSEMINATED, trace pyrite disseminated.
79.40	88.60	SILTSTONE Cream, Green, Fine grained, Massive, Brecciated Mudstone steeply bx/fractured with silica	Intensely Silicified,	

GRAPHIC

Depth | Lith | Structures | STRUCTURES

STRUCTURES:
- subparallel to LCA
- BEDDING, Younging downhole,
- VEIN, A 35, Shear, Carbonate, Quartz. Carbonate veining along a shear? with slickensides
- FAULT, Younging uphole, So disrupted by micro faulting, some flaming
- FAULT, Shear, Pug, Breccia. Fault Zone with numerous pug zones and sheared and brecciated rock, strong carbonate veining

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		SILTSTONE Cream, Green, Fine grained, Massive, Brecciated, Mudstone, strongly bx/fractured with silica and carbonate fill CONTACT: Conformable abrupt, at 30 degrees to Intrusive contact	Intensely Silicified, Slightly Silicified,					
88.60	90.30	INTERMEDIATE LAVA Buff, Fine grained, Porphyritic, Lava/dyke? strongly porphyritic at both contacts but with fine sections of 10cm at 88.65m, and 88.85m (possible flow contact at 88.85m => younging downhole?), sericitised crystals after feldspar and hornblende? to 1cm, where fine there are needle like chlorite (phenocrysts?glass?) CONTACT: Conformable abrupt, at 10 degrees to Intrusive contact	Moderately Sericitised.					VEIN, Carbonate, Strong siderite veining
90.30	100.00		Intensely Silicified.	DISSEMINATED, minor pyrite disseminated.	90			PRIMARY FABRIC, A 30, Weak flow fabric?
		SILTSTONE Grey, White, Fine grained, Massive, Mudstone, intensely silicified, v weak banding So? at 80-90 to LCA CONTACT: Indistinct, Fault?						
100.00	119.20	LIMESTONE GRADING WITH SANDSTONE GRADING WITH SILTSTONE Black, Yellow, Medium grained, Fine grained, Massive, Stylolites, Alternating calcite (black) and siderite? (yellow Fe stain) rich intervals of 2-3m, the carbonate has some recrystallised? textures. The siderite? rich bands tend to be coarser with a higher lithic content, some fine laminations, and stylolites at 50-70 to LCA CONTACT: Conformable abrupt, at 50 degrees to	Carbonatised. Primary or alteration? bands of calcite and siderite rich rock	DISSEMINATED, 10% pyrite disseminated, v fine diss py up to 10%. DISSEMINATED, 5% pyrite disseminated, fine diss py 2-5%.	100 110			FAULT, Fault? strongly cleaved VEIN, Carbonate, Strong siderite and calcite veining FAULT, Missing core around 103m => possible faulting, or cavities in carbonate rocks VEIN, Carbonate, Strong siderite and calcite veining PRIMARY FABRIC, A 60, Shear, Shearing and

5 cm

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								PRIMARY FABRIC, N 60, Shear, Shearing and bedding at 50-70 tp LCA
								VEIN, Carbonate, Strong siderite and calcite veining
								FAULT, A 20, Shear, Graphitic shear
119.20	122.00	SILTSTONE Cream, Fine grained, Massive, Mudstone - siltstone strongly disrupted layering CONTACT: Indistinct,	Moderately Silicified.	VEIN, minor pyrite in veins, py in siderite veins.	120			VEIN, Carbonate, Strong siderite and calcite veining
122.00	128.30	SILTSTONE Cream, Green, Fine grained, Laminated, Mudtone - siltstone,strongly disrupted/folded/micro faulted bedding, inclusions of lower unit towards the bottom of this interval CONTACT: Gradational,		VEIN, abundant pyrite in veins, py in siderite veins. VEIN, minor pyrite in veins, py in siderite veins.				VEIN, Carbonate, Quartz, Strong - intense siderite/calcite veining with some quartz
128.30	131.70	BRECCIA CONTAINING CLASTS OF SANDSTONE AND SILTSTONE Brown, Grey, Medium grained, Fine grained, Brecciated, Laminated, Lithic, Fragments of finely laminated (1mm) brn lithic sst in a gn-gy mudstone matrix, a few more massive sections of sst, the lower 30cm of the interval is gn-gy mudstone CONTACT: Indistinct, Sharp, faulted?			130			PRIMARY FABRIC, So changes rapidly due to micro faulting, folding, and soft sediment disruption, strong calcite/siderite +/- quartz veining
131.70	133.30	GREYWACKE Brown, Medium grained, Massive, Lithic, Probable high volcanic component CONTACT: Conformable abrupt, Flaming of lower unit => younging uphole						
133.30	137.10	SILTSTONE AND BRECCIA Cream, Green, Fine grained, Coarse grained, Brecciated, Disrupted/folded/bx, So 30-60 to LCA CONTACT: Conformable abrupt, at 30 degrees to		VEIN, abundant pyrite in veins. chalcopyrite blebs.				VEIN, Carbonate, Quartz, Strong - intense siderite/calcite veining with some quartz
137.10	141.50	BRECCIA CONTAINING CLASTS OF SILTSTONE Grey, Green, Fine grained, Very coarse grained, Brecciated, Matrix supported, Ang-s/rnd mudstone fragments in a mudstone matrix, jigsaw fit in many places => auto brecciation CONTACT: Gradational,	Highly Silicified, Weak at top of interval becoming strong by 137.8	DISSEMINATED, pyrite in veins, trace on fractures.	140			

5 cm

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From	To	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Structures	STRUCTURES
		matrix, jigsaw fit in many places => auto brecciation CONTACT: Gradational,			140			
141.50	148.30	BRECCIA CONTAINING CLASTS OF SILTSTONE Grey, Yellow, Fine grained, Very coarse grained, Brecciated, Matrix supported, Ang-s/rnd gy mudstone fragments in a siderite? (yellow carbonate) matrix, intense fracturing or auto brecciation CONTACT: Indistinct, Broken core, faulted	Intensely Silicified.					VEIN, Carbonate, Strong siderite veining
148.30	149.50	SILTSTONE WITH MINOR BRECCIA Cream, Green, Fine grained, Very coarse grained, Laminated, Brecciated, Polymict, Mudstone with strongly disrupted bedding, some fragments of silicified gy mudstone (similar to uphole units) => younging downhole? CONTACT: Gradational,	Slightly Silicified. Slightly Sericitised,					VEIN, Quartz, Strong quartz veining Younging downhole.
149.50	159.40	SILTSTONE Red, Green, Fine grained, Laminated, Disrupted/folded/micro faulted So generally 60-70 to LCA, minor brecciation, bottom 30cm are green mudstone CONTACT: Conformable abrupt, at 50 degrees to			150			
				VEIN, 40% pyrrhotite in veins, pyrite trace chalcopyrite massive po vein with quartz, py, and cp.				PRIMARY FABRIC, Disrupted, folded/faulted So generally 60-70 to LCA, orientation gives strike of 030-350/40-60SE
159.40	163.50	SILTSTONE CHERT WITH MINOR CONGLOMERATE Pink, Red, Fine grained, Upper 20cm is conglomerate rapidly grading to silt/mud/chert, some possibly coarser textures are obscured by silicification	Intensely Silicified.		160			PRIMARY FABRIC, Grading downhole.
				DISSEMINATED, 2% pyrite on fractures.				VEIN, Quartz, Carbonate.

5 cm