PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Hole ID
AD3

DRILLING

Location	LUINA EL 17/93
Project	
Prospect	ARTHUR DAM
Design By	N.K. MCGUNNIGLE
Logged By	N.K. MCGUNNIGLE
Relogged	
Commenced	1 MAY 1996
Completed	16 MAY 1996
Drilled By	DIAMOND DRILLING TASMANIA
Drill Rig	

OBJECTIVE

To test a Zn-Pb soil geochemistry anomaly.

RESULT

Cleavage parallel and east-west striking veins of carbonate and late quartz show minor galena, sphalerite and/or pyrite.

COLLAR SURVEY (AMG)

DOWNHOLE SURVEY (AMG)

SIGNIFICANT CORE LOSS

POOR GROUND CONDITION ZONES

HOLE SIZE

HOLE CONDITIONS AFTER COMPLETION

SIGNIFICANT INTERSECTIONS

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Hole No. AD3

PROJECT:

Vertical Scale 1 : 200

5 cm

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DESCRIPTION					GRAPHIC			
FROM	TO	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Struct	STRUCTURES
5.00	14.80	VARIABLY TEXTURED VOLCANICS Dark grey-green pyroxene phyric lava interbedded with volcaniclastics and breccia. At 5.2m, lava is composed of 10% pyroxene (up to 3mm, av 0.5 -1mm) and <2% feldspar. Intercalated fine grained tuffaceous sediments are strongly chloritic. Lava breccia is composed of amygdaloidal and pyroxene phyric clasts in a mid-grey matrix of px-feld lava with peperitic and mixed sediment margins.	highly chloritised, moderately sericitic in veinlets/cleavage planes, minor carbonate in veinlets	Traces of fine grained disseminated pyrite in and along margins of carbonate veinlets parallel to foliation. Trace of magnetite.				FIRST CLEAVAGE A40
14.80	17.50	VOLCANICLASTICS Fine-medium grained intercalated siltstone shale volcaniclastics	highly chloritised, carbonate has preferentially replaced coarser seds and infilled fractures in places, with trace of hematite in places +/- talc					FAULT A10
17.50	21.00	Intermixed pyroxene phyric lava and volcanoclastic sandstone-siltstone.	20mm calcite vein with sericitic margins					A36
21.00	26.70	LAVA BRECCIA Autoclastic and hyaloclastic andesite, containing clasts of chloritically altered pyroxene, 8-10% abundance, averaging 1mm. Amygdales in clasts and matrix filled with chlorite.	highly chloritised, carbonate has infilled vesicles and amygdales and replaced matrix in breccia, minor carbonate-sericite veinlets					
26.70	28.90	Dark grey-green intermixed lava and sediments with some peperitic-hyaloclastic textures	highly chloritised, slightly sericitised, minor talc					

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26.70	28.90	Dark grey-green intermixed lava and sediments with some peperitic-hyaloclastic textures	highly chloritised, slightly sericitised, minor talc	Traces of fine grained disseminated pyrite in and along margins of carbonate veinlets parallel to foliation. Trace of magnetite.				
28.90	30.60	SEDIMENTS Fine grained, green-grey chloritic-talcose sediments with occasional intermixed fine grained sericitic ?lava						
30.60	46.60	VOLCANICS Intermixed lava breccia, hyaloclastite and volcaniclastics composed of dark green-grey pyroxene phyric lava and clasts, rounded chert and angular bedded siltstone-sandstone clasts. Some hyaloclastite matrix is replaced by carbonate.	highly chloritised. Carbonate has replaced hyaloclastite matrix and sandstone beds; minor sericite lies on margins of fractures; traces of talc in matrix		30			FIRST CLEAVAGE A36 FAULT A40 FAULT A34 pug
			highly chloritised. carbonate (calcite) in veinlets with very minor silica (infilling cavities); traces of talc on cleavage planes	Silica-hematite clast (10mm) contains spotty sphalerite and pyrite	40			FIRST CLEAVAGE A29
			moderately chloritised. change to cream coloured Mn-Fe carbonate in net veinlets parallel to cleavage; minor late silica in carbonate veinlets					FIRST CLEAVAGE A36 FAULT A29 FAULT A38 pug
46.60	57.60	LAVA Green-grey pyroxene phyric lava containing quenched vesicular and porphyritic clasts (with convex edges), preferentially carbonate altered. Pyroxene constitutes 3%, < 2mm (up to 4mm in clasts). Decreasing grainsize downhole		DISSEMINATED minor sphalerite disseminated minor pyrite disseminated. plus sphalerite in carbonate veinlets +/- parallel to LCA				FIRST CLEAVAGE A15 FAULT A22 pug
			moderately chloritised. carbonate parallel to cleavage and clast replacement; minor quartz, infilling cavities; late carbonate-quartz veins cross-cutting cleavage	DISSEMINATED trace pyrite associated with alteration. -carbonate parallel to cleavage	50			FIRST CLEAVAGE D53

5 cm

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57.60	90.40	MIXED LAVA-SEDIMENTS Grey-green pyroxene phyric lava and breccia with vesicular pyroxene phyric clasts (as above) intermixed with reworked breccia and volcaniclastics. Some amygdales in clasts infilled with chlorite> silica. Peperitic and hyaloclastic contacts common.		DISSEMINATED trace sphalerite disseminated trace galena disseminated. in carbonate-quartz veinlets parallel to cleavage				
				DISSEMINATED minor galena disseminated trace sphalerite disseminated. in carbonate-quartz vein	70			
			carbonatised. yellow-cream in 'stringers' parallel to bedding (and cleavage) textures					
			slightly fuchsitic	DISSEMINATED trace pyrite disseminated. with quartz filling spaces in carbonate				
			moderately chloritised. calcite>carbonate in net veinlets +/- parallel to cleavage: minor late silica in veinlets: traces of sericite		80			

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90.40	90.80	CONTACT: faulted		DISSEMINATED trace pyrite disseminated	90			
90.80	91.50	grey, peperitic. CONTACT: missing		DISSEMINATED trace pyrite disseminated trace magnetite disseminated				
91.50	92.60	INTERMEDIATE LAVA grey. fine grained porphyritic						
92.60	120.50	MIXED LAVA-SEDIMENTS Pyroxene-leucoxene phyric, amygdaloidal (chlorite filled) mafic volcanics, massive and brecciated, intermixed with bedded volcaniclastic sandstone and breccia. Leucoxene increases to up to 10% in some beds.		DISSEMINATED trace pyrite disseminated	100 110			FIRST CLERVAGE D60 carbonate

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120.50	122.90	Hyaloclastite/mixed sediment-lava contact with porphyritic volcanic unit composed of medium grained dark (chloritic) rimmed phenocrysts, up to 20%			120			
122.90	128.00	VOLCANICLASTIC Coarse grained sandstone composed of reworked and rounded olivine +/- feldspar, replaced by chlorite and carbonate respectively. Bedded and cleaved.	carbonate + chlorite-sericite in veinlets/cleavage planes carbonate-quartz veins cuts foliation; trace fuchsite					
128.00	134.00	LAVA Peperitic, slightly brecciated contact with fine grained dark grey porphyritic volcanics. Increasing clast size to reworked volcanic breccia at 129.5m, containing very finely vesicular clasts, and bedded volcaniclastics from 130m.					FAULT A40 pug	
		VOLCANICLASTICS Sandstone and breccia containing rounded clasts of porphyritic (pyroxene + amphibole < 6%) volcanics in a pale grey matrix, and reworked rimmed pyroxene and pink feldspar crystals.	highly chloritised. increasing carbonate in veinlets anastomising about cleavage and minor brecciation; carbonate>quartz (infilling spaces)	DISSEMINATED very minor pyrite disseminated	130		FIRST CLEAVAGE D2B carbonate	
		INTERMIXED VOLCANICS Variably textured lava, breccia, hyaloclastite and volcaniclastics containing pyroxene +/- feldspar +/- amphibole phenocrysts and chlorite filled vesicles in a medium grey groundmass/matrix. Lava is porphyritic up to 15%, including pink feldspar glomerocrysts up to 10mm (154.0-154.3) and pyroxene up to 8mm. Volcaniclastics include most commonly bedded sandstone to mass flow breccias, containing clasts of green-grey porphyritic lava and rounded silicic sandstone.	highly chloritised. carbonate in cleavage planes and replacing clasts and sandstone beds; minor silica; minor sericite on margins of carbonate veins	DISSEMINATED trace galena disseminated trace sphalerite disseminated. in carbonate-quartz vein DISSEMINATED trace sphalerite disseminated trace galena disseminated. in carbonate-quartz veining DISSEMINATED trace pyrite associated with alteration				
134.00	139.70							

5 cm

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139.70	213.20	INTERMIXED VOLCANICS Variably textured lava, breccia, hyaloclastite and volcaniclastics containing pyroxene +/- feldspar +/- amphibole phenocrysts and chlorite filled vesicles in a medium grey groundmass/matrix. Lava is porphyritic up to 15%, including pink feldspar glomerocrysts up to 10mm (154.0-154.3) and pyroxene up to 8mm. Volcaniclastics include most commonly bedded sandstone to mass flow breccias, containing clasts of green-grey porphyritic lava and rounded silicic sandstone.	highly chloritised. carbonate in cleavage planes and replacing clasts and sandstone beds; minor silica; minor sericite on margins of carbonate veins	minor pyrite replacing carbonate in sandstone beds Traces of pyrite>galena in carbonate vein Traces of galena>pyrite in carbonate vein DISSEMINATED trace sphalerite disseminated trace galena disseminated. in carbonate-quartz DISSEMINATED trace pyrite disseminated Traces of pyrite>galena, disseminated on margins of carbonate vein DISSEMINATED trace pyrite disseminated. in 10mm carbonate-quartz vein	140 150 160		FIRST CLEAVAGE A23 FIRST CLEAVAGE A40 carbonate FIRST CLEAVAGE D44 carbonate FAULT A28 shear pug
			chlorite pervasive and replaced clasts/crystals; Fe-Mn carbonate blotchy in veinlets and cleavage planes, and clast replacment > abundant than calcite; minor silica and sericite				

5 cm

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			strong pervasive chlorite: moderate carbonate replacement of m-f.g. crystals in bedded volcaniclastics and in cleavage planes: minor late silica					

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213.40	220.00	Massive volcanics. Grey, massive unit, moderately silicieous with chlorite in fractures and ?replacing phenocrysts. Possibly intrusive. LAVA BRECCIA Brecciated contact with dark grey, mafic volcanic lava breccia, highly chloritic including infilling of amygdales, and some clasts altered to carbonate.	moderately silicified. chlorite patchy, in fractures highly chloritised. carbonate replacement and minor veinlets		220			

5 cm

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