

PASMINGO EXPLORATION DIAMOND DRILL HOLE LOG

Hole ID
AD3

DRILLING		OBJECTIVE	COLLAR SURVEY (AMG)	
Location	LUINA EL 17/93	To test a Zn-Pb soil geochemistry anomaly.		
Project				
Prospect	ARTHUR DAM	RESULT Cleavage parallel and east-west striking veins of carbonate and late quartz show minor galena, sphalerite and/or pyrite.	DOWNHOLE SURVEY (AMG)	
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				
SIGNIFICANT CORE LOSS	POOR GROUND CONDITION ZONES			
HOLE SIZE	HOLE CONDITIONS AFTER COMPLETION			
SIGNIFICANT INTERSECTIONS				

303228

PASMINCO EXPLORATION

DIAMOND DRILL HOLE LOG

Hole No.

AD3

PROJECT:

Vertical Scale 1 : 200

5 cm

Page 1 of 1

DESCRIPTION

GRAPHIC

FROM	TO	LITHOLOGY	ALTERATION	MINERALISATION	GRAPHIC			STRUCTURES
					Depth	Lith	Struct	
5.00	14.80	VARIABLELY TEXTURED VOLCANICS Dark grey-green pyroxene phyrlic lava interbedded with volcanoclastics 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 phyrlic 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.				
14.80	17.50	VOLCANICLASTICS Fine-medium grained intercalated siltstone shale volcanoclastics	highly chloritised, carbonate has preferentially replaced coarser sands and infilled fractures in places, with trace of hematite in places +/- talc					
17.50	21.00	Intermixed pyroxene phyrlic lava and volcanoclastic sandstone-siltstone.	20mm calcite vein with sericitic margins					
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-sericitic veinlets					
26.70	28.90	Dark grey-green intermixed lava and sediments with some peperitic-hyaloclastic textures	highly chloritised, slightly sericitised, minor talc					

303229

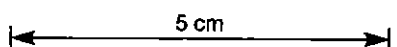
PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Hole No. **AD3**

PROJECT: Vertical Scale 1 : 200

Page of 1

DESCRIPTION			GRAPHIC					
FROM	TO	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Struct	STRUCTURES
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.	26.70			
28.90	30.60	SEDIMENTS Fine grained, green-grey chloritic-talcosed sediments with occasional intermixed fine grained sericitic ?lava			30.00			
30.60	46.60	VOLCANICS Intermixed lava breccia, hyaloclastite and volcanoclastics 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		35.00			FIRST CLEAVAGE A36
			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	40.00			FAULT A40 FAULT A34 pug FIRST CLEAVAGE A20
			moderately chloritised. change to cream coloured Mn-Fe carbonate in net veinlets parallel to cleavage; minor late silica in carbonate veinlets		45.00			FIRST CLEAVAGE A36 FAULT A29 FAULT A38 pug FIRST CLEAVAGE A15 FAULT A22 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	moderately chloritised. carbonate parallel to cleavage and clast replacement; minor quartz, infilling cavities; late carbonate-quartz veins cross-cutting cleavage	DISSEMINATED minor sphalerite disseminated minor pyrite disseminated. plus sphalerite in carbonate veinlets +/- parallel to LCA DISSEMINATED trace pyrite associated with alteration. -carbonate parallel to cleavage	50.00			FIRST CLEAVAGE D53



303230

PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

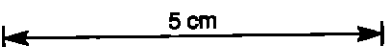
Hole No. **AD3**

PROJECT:

Vertical Scale 1 : 200

Page of 1

FROM		TO	DESCRIPTION	ALTERATION	MINERALISATION	GRAPHIC			STRUCTURES
FROM	TO		LITHOLOGY			Depth	Lith	Struct	
46.60	57.60		LAVA Green-grey pyroxene phyrlic 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	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				
57.60	90.40		MIXED LAVA-SEDIMENTS Grey-green pyroxene phyrlic lava and breccia with vesicular pyroxene phyrlic clasts (as above) intermixed with reworked breccia and volcanoclastics. Some amygdales in clasts infilled with chlorite > silica. Peperitic and hyaloclastic contacts common.	carbonatised, yellow-cream in 'stringers' parallel to bedding (and cleavage) textures slightly fuchsitic moderately chloritised. calcite > carbonate in net veinlets +/- parallel to cleavage; minor late silica in veinlets; traces of sericite	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 DISSEMINATED trace pyrite disseminated, with quartz filling spaces in carbonate	60 70 80			



303231

PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Hole No. **AD3**

PROJECT: Vertical Scale 1 : 200 Page of 1

DESCRIPTION

GRAPHIC

STRUCTURES

FROM	TO	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Struct	STRUCTURES
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 amygdaloids in clasts infilled with chlorite > silica. Peperitic and hyaloclastic contacts common.	moderately chloritised. calcite > carbonate in net veinlets +/- parallel to cleavage; minor late silica in veinlets; traces of sericite	DISSEMINATED trace pyrite disseminated Ver minor disseminated pyrite on margins of (<) sphalerite, present with quartz (post carbonate)	70			
90.40	90.80	CONTACT: faulted		DISSEMINATED trace pyrite disseminated	90			
90.80	91.50	grey, peperitic. CONTACT: missing		DISSEMINATED trace pyrite disseminated	91			
91.50	92.60	INTERMEDIATE LAVA grey, fine grained porphyritic		DISSEMINATED trace pyrite disseminated disseminated trace magnetite disseminated	92			
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	110			FIRST CLEAVAGE D60 carbonate

5 cm

303232

PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Hole No. **AD3**

PROJECT: Vertical Scale 1 : 200 Page of 1

DESCRIPTION			GRAPHIC			STRUCTURES	
FROM	TO	LITHOLOGY	ALTERATION	MINERALISATION	Depth		Lith
92.60	120.50	MIXED LAVA-SEDIMENTS Pyroxene-leucoxene phyric, amygdaloidal (chlorite filled) mafic volcanics, massive and brecciated, intermixed with bedded volcanoclastic sandstone and breccia. Leucoxene increases to up to 10% in some beds.	moderately chloritised. calcite) carbonate in net veinlets +/- parallel to cleavage; minor late silica in veinlets; traces of sericite highly chloritised, moderately carbonatised. vesicles infilled with carbonate	DISSEMINATED trace pyrite disseminated	120		
120.50	122.90	Hyaloclastite/mixed sediment-lava contact with porphyritic volcanic unit composed of medium grained dark (chloritic) rimmed phenocrysts, up to 20%					
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 volcanoclastics from 130m. 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 anastomosing about cleavage and minor brecciation; carbonate)quartz (infilling spaces)	DISSEMINATED very minor pyrite disseminated	130		Fault R40 pug FIRST CLEAVAGE D28 carbonate
134.00	139.70	INTERMIXED VOLCANICS Variably textured lava, breccia, hyaloclastite and volcanoclastics 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. Volcanoclastics 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			

5 cm

303233

PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Hole No.

AD3

PROJECT:

Vertical Scale 1 : 200

Page of 1

		DESCRIPTION			GRAPHIC			
FROM	TO	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	Struct	STRUCTURES
139.70	213.20	<p>INTERMIXED VOLCANICS Variably textured lava, breccia, hyaloclastite and volcanoclastics 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. Volcanoclastics include most commonly bedded sandstone to mass flow breccias, containing clasts of green-grey porphyritic lava and rounded silicic sandstone.</p>	<p>highly chloritised, carbonate in cleavage planes and replacing clasts and sandstone beds; minor silica; minor sericite on margins of carbonate veins</p>	<p>minor pyrite replacing carbonate in sandstone beds</p> <p>Traces of pyrite/galena in carbonate vein</p> <p>Traces of galena/pyrite in carbonate vein</p> <p>DISSEMINATED trace sphalerite disseminated trace galena disseminated, in carbonate-quartz</p> <p>DISSEMINATED trace pyrite disseminated</p>	<p>140</p> <p>150</p> <p>160</p>		<p>FIRST CLEAVAGE A23</p> <p>FIRST CLEAVAGE A40 carbonate</p> <p>FIRST CLEAVAGE D44 carbonate</p> <p>FAULT A28 shear pug</p>	
			<p>chlorite pervasive and replaced clasts/crystals; Fe-Mn carbonate blotchy in veinlets and cleavage planes, and clast replacement > abundant than calcite; minor silica and sericite</p>	<p>Traces of pyrite/galena, disseminated on margins of carbonate vein</p> <p>DISSEMINATED trace pyrite disseminated, in 10mm carbonate-quartz vein</p>				

5 cm

303234

PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Hole No. **AD3**

PROJECT: Vertical Scale 1 : 200

Page of 1

DESCRIPTION				GRAPHIC			STRUCTURES
FROM	TO	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	
139.70	213.20	<p>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.</p>	<p>chlorite pervasive and replaced clasts/crystals: Fe-Mn carbonate blotchy in veinlets and cleavage planes, and clast replacement > abundant than calcite; minor silica and sericite</p>	<p>DISSEMINATED trace galena disseminated trace pyrite disseminated. in rubbly carbonate-chlorite core</p> <p>DISSEMINATED trace pyrite disseminated</p> <p>DISSEMINATED trace pyrite disseminated trace galena disseminated. in calcite veinlets</p> <p>DISSEMINATED trace pyrite disseminated trace galena disseminated</p>	<p>170</p> <p>180</p> <p>190</p>		<p>FAULT R30 shear pug</p>
			<p>strong pervasive chlorite; moderate carbonate replacement of m-f.g. crystals in bedded volcaniclastics and in cleavage planes; minor late silica</p>				

5 cm

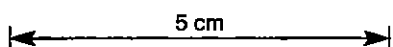
303235

PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Hole No. AD3

PROJECT: Vertical Scale 1 : 200 Page of 1

DESCRIPTION				GRAPHIC			STRUCTURES
FROM	TO	LITHOLOGY	ALTERATION	MINERALISATION	Depth	Lith	
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.	strong pervasive chlorite; moderate carbonate replacement of m-f.g. crystals in bedded volcaniclastics and in cleavage planes; minor late silica	DISSEMINATED trace pyrite disseminated trace galena disseminated. in carbonate veinlets parallel to cleavage	200		FIRST CLEAVAGE A40
			carbonate vein (pre-cleavage)		210		FIRST CLEAVAGE A45
213.40	220.00	Massive volcanics. Grey, massive unit, moderately siliceous 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		



303236