HOLE No. BPD 71

PASMINCO EXPLORATION
DIAMOND DRILL HOLE LOG

Page of

LOCATION	TASMANIA
PROJECT	BURNS PEAK
PROSPECT	LEO'S FIND
DESIGNED BY	A. LORRIGAN
LOGGED BY	A. LORRIGAN
RELOGGED	
COMMENCED	1/11/1990
COMPLETED	21/12/1990
DRILLED BY	Diamond Drilling Tasmania Pty Ltd.
DRILL RIG	LY 38

OBJECTIVE

To test for strike extensions of the Brown's Tunnel mineralisation on the Western Limb of the Pinnacles Anticline.

RESULT

57.2 m of 'Brown's Tunnel Sediments' were intersected, these rocks contain trace amounts of sphalerite and galena, disseminated and in carbonate veinlets.

LOCATION/SURVEY DATA (AMG)

Grid	AMG	RL Collar m	589.0
Northing m	5383573.5	Bearing Collar	120 (mag)
Easting m	378279.5	Dip Collar	75
DH Survey Type	Eastman Camera	Length Hole m	553.6 m.

Depth m	Bearing	Dip	Depth m	Bearing	Dip
50	115				
100	115				
150	[illegible]				
200	115				
250	119				
300	[illegible]				
350	120				
450	121				
500	124				
553	124				

SIGNIFICANT INTERSECTIONS

From m	To m	Interval m	Cu ppm	Pb ppm	Zn ppm			Comments
136	142	6	32.3	1013.3	2883.3			
403	407	4	11.0	5025	5275			
469	471	2	2350	330	17900			

SIGNIFICANT CORE LOSS

From m	To m	% Lost

POOR GROUND CONDITION ZONES

From m	To m	Condition
547	553.6	Broken, clay pug.

HOLE SIZE

Size	Depth m
Tricone (HW)	3.5
HQ	37.0
NQ	(EOH) 553.6

HOLE CONDITIONS AFTER COMPLETION

Collar	
Steel Casing	0-2m HW
PVC Casing	PVC Casing for Down Hole EM 0-553.6m.
Ground Water	
Wedge	
Drill Pad	

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PROJECT: BURN'S PEAK

Graphic Scale 1:250

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CORE RECOVERY				DESCRIPTION						CODES			
From m	Interval m	%	RQD	From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Lithology	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
0	33	99		0	64.6	Pink and dark green breccia, clasts of pink siliceous, feldspar + quartz - phyric rhyolite. Some of these are flow banded, other clasts of chlorite with large feldspar phenocrysts, now altered to carbonate, also some quartz phenos. The matrix is a mixture of chlorite and very fine grained silica. Probably a primary breccia (not alteration effect) because the flow banded clasts are mixed up with non flow banded clasts. Rhyolite Lava Breccia.	0	0 0.6 1.5 2 8 32						
33	82.9	100												
							60m							

0070

1290724

5 cm

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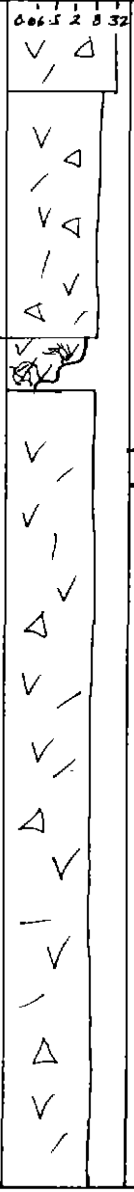
Graphic Scale 1: 250

CORE RECOVERY From m	Interval m	%	RQD	DESCRIPTION From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	MINERALISATION	LITHO	STRUCT	ALTN	MIN
							64.6					
				64.6	77.0	Rhyolite Lava Breccia. As above, but clast size is smaller, also density of clasts is lower. Chlorite alteration increases down hole. Sphalerite + Galena in quartz stringers from 74.0m.		74.0 — Sphalerite and galena in quartz stringers and in patches + spots through breccia + sediment matrix. (Trace)				
				77.0	79.6	Rock becomes very fine grained. Both contacts are gradational. Perlitic fractures at 78.1m. Some feldspar + quartz phenocrysts, but in general the rock is massive + very fine grained. Chilled Rhyolite Lava ?Hyaloclastite.	77.0 / 79.6					
				79.6	137	Predominantly pink, feldspar + quartz-phyric, rhyolite lava, with some flow banded and chlorite-rich ?clasts. Brecciated appearance not as strong as 0-77.0m. Rhyolite Lava Breccia. Intense sericite and carbonate alteration 82.9-84.2		106.9 – 107.9 quite intense sphalerite spotting.				
82.9	84.2	98										
84.2	175.9	100						Traces of sphal + galena in stringers + spots + patches				
							120					

Graphic Lithology: 0.06 .5 2 8 32



Struct.: Broken Ground

5 cm

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CORE RECOVERY From m	Interval m	%	RQD	DESCRIPTION From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
									of the breccia matrix.				
						Intense quartz veining, 124.8 – 126.1		q Py All angles; q 45°	124.8 – 126.1 Intense sphalerite + galena spotting assoc. with CO_3 alteration zone.				
						Intense sericite and carbonate alteration, 132.0 – 134.0.			Traces of sphalerite + galena in stringers + in spots + patches in breccia matrix				
							137						
						Gradual change from fragmental appearance to massive, flow banded, quartz + feldspar phyric rhyolite. <u>Flow Banded Rhyolite Lava.</u>		q 35°	140.9 – 141.1 Intense sphal. + gal. min. (spots.)				
								q 25°					
175.9	177.0	75											
177.0	244.9	100						q all angles; Bx ground					
				178.2	194.2	Coarse fragmental appearance, fragments	178.2; 180						

0070

129079

5 cm

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CORE RECOVERY				DESCRIPTION						CODES			
From m	Interval m	%	RQD	From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Lithology	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
				178.2	194.2	3-80mm in size, rounded-sub angular Some fragments are feldspar-quartz physic pink rhyolite, occasionally flow banded. Others are wispy and sericitic or chloritic Matrix of fine sericite and silica. Rhyolite Lava Breccia.	194.2		Breccia Quartz vein Matrix.	180 Spots and veinlets of sphalerite + galena 185.8				
				194.2	381.7	Feldspar + rarely quartz, physic Flow Banded Rhyolite Lava. Variably altered as follows:-								
						194.2-228.2 Pink, siliceous with Chlorite patches.								
						228.2-241.0 Strong sericite alteration throughout. Feldspars ⇒ Carbonate.								
						241.0-281.0 Pink siliceous with Chlorite patches.								
						281.0-289.0 Feldspar ⇒ sericite.								
						289.0-296.6. Strong carbonate alteration, associated with carbonate veining. Minor sericite alt.								
						296.6-310.8. Pink siliceous with chlorite patches.								
						310.8-326.9 Feldspar ⇒ sericite. Clay on breaks.								
						326.9-349.9 Pink siliceous with Chlorite patches. Minor carbonate alt'n of feldspars.	340							

5cm

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CORE RECOVERY				DESCRIPTION							CODES			
From m	Interval m	%	RQD	From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Lithology	Graphic Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
						349.9-353.9 - Sericite + carbonate								
244.9	247.5	98				alt'n of matrix + feldspars								
247.5	289.0	100				353.9-364.8 Pink siliceous with			Bkn ground Cb, q vng.					
289.0	296.6	95				chlorite patches.								
296.6	310.9	100				364.8-369.0 Silica alt. of matrix with								
						sericite alt'n of matrix +								
						feldspars.								
						369.0-379.3 Pink siliceous with chlorite								
						patches.								
						379.3-381.7 Very strong pink colour,								
						siliceous, sericite patches								
									Sil-filled hairline fractures.					
									Broken Ground Carbonate Veining.	289.0 Trace galena associated with carbonate veining. 296.6				
							300							

0080

129081

5 cm

PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. BRD 71

PROJECT :

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CORE RECOVERY				DESCRIPTION							CODES			
From m	Interval m	%	RQD	From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Lithology	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
310.9	3.44	90												
324.4	36.48	100							Broken Ground Angry Clay between breaks					
							360							

OUT.

129082

5 cm

PASMINCO EXPLORATION
DIAMOND DRILL CORE LOG

HOLE No. BPD 71

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Graphic Scale 1: 250

CORE RECOVERY				DESCRIPTION						CODES			
From m	Interval m	%	RQD	From m	Interval m	(Incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Lithology	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
364.8	369.0	90												
369.0	412.3	100							Broken Ground. Some gouge between breaks.					
412.3	413.3	98												
413.3	426.1	100												
				381.7	383.1	Pink coloured, very fine grained, finely brecciated with curved fractures characteristic of perlitic fracturing. Chilled Rhyolite lava.	381.7 383.1		Top contact fragmented Bottom contact sharp, 60°					
				383.1	402.9	Feldspar (quartz-rare) phyric Rhyolite lava Alteration:- 383.1 - 388.5 - Light green, sericite alt'n throughout. 388.5 - 402.9 - Pink, siliceous with chlorite patches.	402.9		Sharp contact 85°					
				402.9	403.4	Buff coloured, very fine grained. ? Chilled Rhyolite lava.	403.4		30° q/c vhg ? Fault on contact.					
				403.4	410.1	Strongly chlorite altered rock. Enhanced, carbonate-altered feldspar phenocrysts throughout. Sphalerite + galena on rims of chlorite-altered patches. ? Altered Rhyolite lava.	410.1 412.9 400		Sharp contact 45° Bkn Crnd Fault. Main Breaks 30°.	417.9 galena assoc. with siliceous patches.				

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Graphic Scale 1: 250

CORE RECOVERY From m	Interval m	%	RQD	DESCRIPTION From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Lithology	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
				410.1	410.3	Highly altered rock, strong sericite and pink siliceous alteration. Numerous carbonate altered feldspar phenocrysts are surrounded by very fine, grey siliceous material. Rock develops a wispy layering down hole. ?Altered Rhyolite Lava mixed with Pumiceous Volcaniclastics.		~	Bkn. Gnd.					
426.1	426.8	80		412.9	449.0	Highly altered and deformed rock. Very strong sericite alteration and pink and grey siliceous patches. Siliceous areas in the rock are surrounded by wispy sericite. Tube pumice texture at 414.4. Below 427.7 there are rounded chlorite spots. At 439.2m + 440.1m, there are basalt or andesite clasts. Altered Pumiceous Volcaniclastic. This rock correlates with the lithology found beneath the black shale in BPD 62.	449.0; fol'n 25°; fol'n 10°; contact 50°	V						
426.8	5524	100												
				449.0	463.1	Very fine grained, massive siliceous lava with perlitic fracturing (especially 453.5 - 454.0) is juxtaposed with foliated sericitic rock. Boundaries are not	463.1; layering 55-60°; fol'n 40°; contact 40°; 473.6; fol'n 40°; 480	~		463.1m. Sphalerite in siliceous patches and veins. One 15mm vein at 20° to core. Tr - 1% pyrite disseminated throughout. 473.6.				

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CORE RECOVERY				DESCRIPTION							CODES			
From m	Interval m	%	RQD	From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Lithology 0.06 5.2 8 32	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
						clear cut between these lithologies, the clastic appearance is thought to be an alteration feature or the result of quenching chilling part of a lava. The perlitic fracturing supports this.	488.5			488.5 Trace bedded pyrite in mudstone. Trace sphalerite and galena in quartz-carbonate veins.				
						Acid Hyaloclastite lava. Rounded white carbonate and silica spots from 455m.	Body 60° Contact 50° 501.1			501.1				
				463.1	473.6	Pink, fragmental looking rock with numerous wispy sericitic fragments. A wispy layering penetrates much of the rock and appears to pre-date the lower angled foliation.								
						Altered, Deformed Pumiceous Volcaniclastic								
				473.6	488.5	These rocks are grouped together because boundaries cannot be defined between them. Top consists of green highly altered, sericitic, fine grained ?Pumiceous Siltstone, grades to rock with a fine siliceous matrix and lots of small chlorite-rich flecks and clasts, also larger chlor-alt. feldspar + quartz-phyric clasts, grey mudstone also occurs in this interval. Then into coarse, angular breccia with quartz-feldspar phyric acid clasts and also	Contact 50° 522.7 Body 60° Contact 40° 527.3 Fault 40° 530.8 Faulted Contact Slicken-Sides SHID			523.0 ?Pyrite clast. 527.3 Trace Sphal. + galena in quartz-carbonate stringers. 530.8 Clots pyrite. ↑ Tr pyrite on contact. 537.9				

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From m	Interval m	%	RQD	From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Lithology	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
						green, vesicular ? basalt/andesite clasts in a fine grey mud matrix which exhibits soft sed. deformation textures.				1-2% disseminated pyrite.				
										-5459				
										-5466				
						Polymict Mass Flow Deposit.			85° final bdg	1% diss. pyrite throughout.				
552.4	553.6	95					→ flow bdg 85°							
						Grading suggests an uphole facing.	-553.6	E.O.H.	Broken ground.					
				488.5	501.1	Mafic / Intermediate volcanic breccia with mudstone + minor sandstone matrix. Fig - sw fracturing + arcuate quench fracturing suggests mixing of lava with wet sediments.								
						Basalt or Andesite Peperite.								
						495.5 - graded bedding, grades uphole. Volcanic clasts are sericite altered, with spots originating on amygdales.								
				501.1	522.7	Light green, sericite altered, amygdaloidal (q-filled) Basalt or Andesite Lava.								
				522.7	527.3	Bedded sandstone. Upward fining unit with graded mudstone beds near top + coarser unit at base.								
				527.3	530.8	Highly deformed rock, consisting of layers of fine grey, siliceous mudstone + sandstone and chloritised-sericitised								

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From m	Interval m	%	RQD	From m	Interval m	(incl. LITHOLOGY, STRUCTURE & ALTERATION)	Depth	Graphic Lithology	Struct.	MINERALISATION	LITHO	STRUCT	ALTN	MIN
						Andesite & basalt.								
						527.3-528 Spots originating from feldspar phenocrysts, now carbonate & quartz.								
						Alteration is blotchy with patches of sericite, chlorite & grey silica.								
						Either a deformed, altered Pepertite								
						or " " Volcaniclastic.								
				530.8	553.6	Monomict breccia with angular, feldspar phyric, flow banded clasts.								
						Dacite lava Breccia.								
						Alteration varies throughout :-								
						530.8 - 537.9 Predominantly siliceous. Feldspar= Carbonate. Minor qtz/carb. veining. Intense veining at 535.8 assoc. with chloritic zone.								
						537.9-545.9 Flow banding highlighted by chlorite alteration. Qtz/carbonate stringers throughout (90/m)								
						545.9-546.6. Predominantly siliceous.								
						546.6 - 553.6. Silica of matrix / sericite of clasts. Clay associated with broken ground. 552.4 - 553.6.								
						END OF HOLE 553.6 m								