421091

DIAMOND DRILL LOG

PROSPECT: Burn's Peak Tas. E.L. 44/88 HOLE No.: BPD 67

Set-up Azimuth: 290° mag. Decl'n: 70° Final Depth: 463·5

Date Commenced: 24/5/90 Date Finished: 26/6/90

Purpose of Hole: To test for base metal mineralisation beneath Chester Mine.

Result: A pile of moderately to intensely altered dacite lavas with some epiclastic horizons was intersected. Pyrite, but not base metal mineralisation was found.

Contractor: Diamond Drillers Tasmania Hole Size: HQ/NQ

Casing (m steel/pvc in hole): 463·5 m P.V.C.

Co-ordinates: Local ____ N ____ E ____ m RL
AMG 53 80918·9 N 378533·2 E 33·1 m RL

Surveyed by: W.C.M.E.S. (G. Watts, Rosebery) Date: Oct. 1990

DOWN HOLE SURVEY DATA:

Depth	Azimuth (mag.)	Decl'n	Depth	Azimuth	Decl'n
30	285°	70			
60	283°	68·5			
90	284°	67			
121·5	283°	66			
151·5	284°	63			
211	281°	61			
241	28°	60			
271·5	280°	60			
301·5	28°	58			
331·5	28°	59			
361·5	282°	58·5			
391	282°	58·5			
421·5	280°	58			

Survey Instrument: Eastman Camera

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SAMPLING INFORMATION:

From	To	Element/Isotopes Petrology/etc.	Sample	Method	Lab	Date
0 (1m sample every 10m)	463.5	Au Cu Pb Zn Mn Fe K Na Ca Ag Ti Zr Ba	Split Core	FA 1 AAS 1 AAS3/AAS4 XRF 1	Classic	July 1990.
	22.5 39.0 63.0 97.6 102.0 55.7 63.0 121.5 166.5	Petrology	Thin Section		J. Stolz C.O.D.E.S (Tas. Uni.)	July 1990
0	463.5	Magnetic Susceptibility.				August 1990
0	463.5	Sirotem			McSkimming	Nov. 1990.

DRILL LOG SUMMARY

From	To	Core Description	Significant Assays
0	28.4	Mod. altered. feldspar-phyric dacite lava breccia	29-30 >3%Fe
28.4	34.75	Mafic dyke.	35-36 "
34.75	64.6	Mod. alt. Lithic Sandstone.	
64.6	64.7	Mafic dyke	
64.7	88.0	Mod. alt. dacite lava.	
88.0	89.3	Mafic dyke.	
89.3	96.6	Mod. alt. feldspar-phyric dacite lava.	
96.6	104.5	Intensely altered ?sediments approaching a sericite-ft. schist. 10% pyrite	89-94.5 >3%Fe 97-100 High K/Na.
104.5	106.4	Mod. altered silicic, dacitic ash.	
106.4	108.8	Mafic dyke.	
108.8	109.4	Mod. alt. dacite lava	
109.4	109.8	Mafic dyke.	
109.8	136.3	Mod. alt. amygdaloidal dacite lava.	
136.3	139.3	Fault breccia	
139.3	141.6	Sheared, intensely altered dacite lava.	
141.6	142.1	Mafic dyke.	
142.1	160.8	Mod. alt. amygdaloidal feldspar phyric dacite lava.	
160.8	162.8	Mafic dyke.	
162.8	173.0	Mod. altered feldspar-phyric dacite lava.	181-183 1760ppm Zn 170-183 High K/Na.
173.0	175.3	Mafic dyke.	
175.3	175.9	Polymict breccia ?sedimentary.	
175.9	182.4	Quartz-sericite altered ?Volcaniclastic sediment.	181-183 >3% Fe
182.4	183.4	Mafic dyke.	

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DRILL LOG SUMMARY

From	To	Core Description	Significant Assays	
183.4	189.7	Deformed, silicified Lithic Sandstone.		
189.7	213.5	Silicified amygdaloidal + feldspar-phyric. Dacite Lava.		
213.5	224.1	Mafic dyke.		
224.1	250.6	Mod. alt. feldspar phyric dacite lava	325-326 335-336	1560 ppm Zn 1620 " "
250.6	253.6	Deformed & intensely qtz-sericite-altered ?dacite lava. 8-10% py.	252-269 252-305	High K/Na ave > 3% Fe
253.6	261.5	Mod. alt. feldspar-phyric dacite lava.		
261.5	263.5	Deformed - intensely qtz-sericite altered ?dacite lava		
263.5	268.2	Siliceous rock "cherty breccia".		
268.2	284.8	Mod. alt. dacite lava	370-371	1500 ppm Zn
284.8	285.7	Mafic dyke.		
285.7	295.2	Mod. alt. dacite lava		
295.2	295.6	Mafic dyke.		
295.6	367.2	Mod. altered dacite lava.		
367.2	406.5	?Lithic Sandstone	380-381	7.3% Fe
406.5	437.9	Intensely- mod. alt. amygdaloidal dacite lava.	425-426 430-432	1500 ppm Zn 1220 " "
437.9	449.5	Intensely qtz-sericite altered + deformed ?sediment 5-10% pyrite.	438-448 436-450	High K/Na 7.3% Fe (ave)
449.5	463.5 E.O.H.	Mod. altered amygdaloidal dacite lava.		

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Depth (m)

TRICONE 1.3
HQ core

Foliation at 32° to core.

-10

-20

28.4
-30

34.75

42.0
-40

Foliation 35-38° to core.

-50

-60

Silbands

Bands @ 32° to core

	Cb Chl (Sil)	Tricone – No Sample 1.3m Start HQ core
5		Breccia with homogenous, irregularly shaped, feldspar-phyric clasts. ?Lava Breccia of Dacite composition. Alteration enhances fragmental appearance. Zones of more intense chlorite or pyrite alteration impart a mottled appearance. Weak silicification in the matrix.
2		Rare fine grained, chloritic & pyritic ?clasts. i.e. 22.0m Also a clast of cherty nature @ 16.7. T72377 T.S. 22.5m Dacitic Lava. quartz in groundmass; apatite as microphenocrysts. Mod. Altered.
	Cb	Green, vesicular, fine grained Basic dyke. Top contact Broken, bottom @ 80° to core. quartz, carbonate ± haematite stringers throughout.
1	Cb Chl Sil.	?Dacite lava breccia or Sediment. Breccia clasts are chloritic, matrix is a buff colour and siliceous. T.S. 39.0m T72378. Probably a polymictic Lithic Sandstone. Wk-Mod. Alt.
1	Cb Chl Ser (Sil)	Feldspar-phyric ?Dacite lava or ?Sediment. Wispy, siliceous banding from 62.8-63.2. Sericite increases at the expense of chlorite, down the hole. Pyrite along siliceous band boundaries. Occasional lithic fragments. T.S. 55.7m; T72379 Lithic Sandstone variable ser, chl alt.
4		T.S. 63.0m; T72380 Fine grained Lithic Sandstone.

Scale 1:250.

HOLE NE - BPD 67

Depth (m)	Lithology Sketch (not to scale)	Structure	Alteration	Pyrite %	Rock Description / Petrology Notes
64.6					
64.7			ser sil (cb) (chl)	2-5	Green, Basic dyke.
70					Feldspar-phyric ?dacite lava. Feldspars altered to carbonate. Silica alteration pervades the rock, leaving behind "islands" of sericite alteration. Minor chlorite alteration Pervasive, but weak, carbonate alteration Pyrite mostly in siliceous zones.
80					
88.0		Both contacts @ 45° ↓	(cb)		Green, vesicular, basic dyke.
89.3					
90		93.8-94.2 py-qtz vein, 15° to core. 94.8 fracture @ 15° foliation fra 95m @ 40° to core	sil (ser) (cb) (chl)	5 increasing	Feldspar-phyric ?dacite lava. Increasing silicification from 94.5 T.S. 97.6, T72381 And-dac. lava Int. Alt.
96.6	97.1 98.6 100.1	40° 60° 30° Sil bands ≈ 15mm wide	sil ser (cb)	10	Altered & deformed ?sediments. Approaching a schist. Granular, siliceous texture. Sil. bands
100	100.3	Top boundary 46° Bottom " 42°	sil alb.	10	zone with sharp boundaries. Numerous pink spots (?alt. feldspars) and sil-filled voughs. (?vesicles)
104.5 Reduce To NQ Core		Alignment of vesicles & sericite on foliation @ 38° py ± hem. stringers.	ser sil (chl)	2	Siliceous rounded features are interpreted as relicts of recryst. glassy lava. Rock pink from 104.5. Sericite flecks throughout T.S. 102.0m; T72382 Altered silicic ?dacitic ash.
106.4		Top contact broken Bottom " 20° ± qtz-carb stringers	chl (cb)	5 (bottom contact)	Green Basic dyke - ?dacite
108.8					
109.4					
109.8		Top contact 10° Bottom " 30° not parallel.	sil ser (cb) rare spots ? fuchsite ?	3-5	Buff-light-green colour. Fine grained mass. Clear quartz ± carbonate, chlorite & haematite fills voughs, interpreted as amygdales here.
120		- fractures, filled with - blue amorphous silica.			Altered silicic ?dacitic ash or, more likely, Dacite/andesite lava. T.S. 121.5m T72383. Silicified Andesite/Dacite

Scale 1:200.

HOLE No. - BPD 67

5 cm

Depth (m)	Structure	Alt	Min	Rock Description / Petrology
	Sharp uphole boundary on alteration @ 15°	sil ser		Zone of differing alteration, grey colour with siliceous patches. Flecks of sericite.
136.6		sil ser (cb)	3-5	Return to buff - lt green alt. Closely packed, clear, Silica Spheres.
139.3	Tectonic / Fault Breccia	ser sil	3	Breccia, probably tectonic. Numerous fractures filled with sericite and amorphous silica.
141.6	Contacts 50°	sil ser		?Vesicular Dacite sheared + intensely altered. Nodules of silicification.
142.1	Folded qtz/chlor/py stringers throughout. F.A. 10° 147.5m, py band @ 5°	cb chl (sil)	3	Green, vesicular dyke. Fine ground mass. Rounded and flattened blebs of clear quartz - interpreted as amygdales. Amygdaloidal? Dacite Lava. Carbonate alteration probably siderite. Size of amygdales appears to fine up hole.
154.7		cb ser (sil)	5	?Feldspar-phyric, dacite lava. Looks brecciated at the top, with sericite-alt. fragments in a more siliceous matrix. Becomes more homogeneous down hole.
160.8	Blurred uphole contact @ 20° downhole @ 20°	cb chl		Green, mafic dyke.
162.8	band @ 30° Foliation defined by a network of py. @ 40°	cb ser (sil) chl.	5	Feldspar now carbonate. Chlorite alteration extends down hole out of the dyke. T.S. 1665 T72384. Silicified andesite-dacite.
173.0	Uphole contact 60° Downhole ~ 40°	chl cb	2	Green, vesicular, mafic dyke. Pyrite on bottom contact.
175.3				
175.9	Cleavage @ 40°	Ser cb Sil	3	Polymictic Breccia. - grey sil seeds (cherty) clasts, pink/sil. acid volc + sericite clasts. conglomerate. Deformed
181.3		ser sil	5	Quartz - sericite - altered ? Volcaniclastic pyrite - networks of veins.
182.4	chl/carb/py veins 182.3-182.5 40° or 20°	sil ser	Tr Sp. @ 181.6-181.8	Quartz - sericite altered Fragmental appearance. Could have been a sediment. Possible py clast @ 181.4
183.4	Uphole 60° downhole 40° uphole contact 60° downhole 40°		3	Lithic Sandstone. / Green Mafic Dyke.

Scale 1:100.

HOLE No. -

5 cm

Depth (m.)	Grain Size (mm)	Structure	Alt.	Cu / Pb / Zn %	Pyrite %	Rock Description / Petrology	Samples
189.7			Sil Cb		5	Deformed + silicified ?Lithic sandstone. Possible fragmental texture. 187.5 - 190.1	
190		Brecciation ?Fault @ 205.5	Sil Cb (Chl) rare spots of ?fuchsite		3	Grey rock, fine, homogeneous groundmass. Numerous quartz & carbonate-filled vughs ?amygdales. Vesicular ?dacite lava.	
200							
207.5						gradational boundary	
		q-carb veins 207.5-211.5. 40° to core. Networks of infilled fractures	Sil Cb ?Sid ?fuchsite spots		3-7	Textures removed by alteration + deformation. Homogeneous, siliceous rock. ?Silicified dacite lava.	
210							
214.1		Upholde contact 30°; Downhole 35° Both parallel to cleavage.				Green mafic dyke	
230			Ser Sil Cb ?Sid		3-5	Feldspar-phyric ?dacite lava. feldspars now carbonate / quartz. Strong brecciated appearance, 228-234m.	
240		241.2 Weak Shearing 35°			2415 1-3		
250							

Scale 1:250.

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5 cm

Depth (m)	Structure		Rock Description / Petrology Sample
250	250.6		
	253.6	Sil Ser.	8-10 Deformed ?dacite lava. Strong silica + sericite alteration.
		Sid (Sil) (Ser) rare spots fuchsite	1-2 Feldspar-phyric ?dacite lava. Feldspars now carbonate, prob. siderite.
260	261.5	Brecciated 260-261.5. Strong cleavage 45°.	
	263.0		2-5 Deformed + altered ?lava.
		Sil (Sid) (Ser)	5-10 Increasingly siliceous rock. Patches of "cherty breccias" - with rounded sil. fragments, many have purple colour. Siliceous band 2653-2654. Altered sediment.
	268.2	- sil band - 15-20°	
270		Qtz-carb vein 282.7. Broken ground 283.8-284.0	Altered ?dacite lavas. Textures obliterated except for ex-feldspar phenocrysts @ 276.5-277.8. Some dark green-black patches of chlorite. Also some sericite patches. Major alteration is silica.
		Sil Ser (chl) (Sid)	1-3
280		Bleached contact @ 30°	
	284.8		8 Alteration makes rock difficult to identify.
	285.7		Green Mafic dyke.
		contact 50° Slightly cross-cuts cleavage which is 30° 2859-367.5 is a zone of qtz-carb veining. Intensity of veins + orientation varies from 60-80°. Most dip the same way as cleavage, others conjugate. Some contain chlor ?related to dykes. Sid Sil (chl) (Ser)	2 Feldspar-phyric ?dacite lava. Stronger siderite alteration.
290		contacts @ 35°	
			Green, mafic dyke.
300			
310			

Scale 1:200.

HOLE No:-

5 cm

Depth (m)	Grain Size (mm)	Structure	Alt.	Py %	Rock Description / Petrology / Samples
320		Zone of late (post cleavage) veining.	sil chl (sid) (ser)	1-3	Feldspar-phyric ?dacite lava. Brecciated appearance ?lava breccia. Clasts frequently more siliceous than the matrix. Alteration variable, a lot of chlorite overprinting from late stage veins. Some siliceous zones have a pink tinge. Colour predom. dark green, though areas of stronger sideritic alteration are buff colour.
330		Veins @ 318.5, 322.1 have altered margins extending 4cm into host.			
340		Veins ar ~2mm, 30-25° to core.			
		Cleavage 40°	sil chl	1	
342					Rock becomes coarser grained. Sil-filled vughs. Strong sil. top contact, strong chl.
350					Feldspar-phyric ?dacite lava. Predom. colour dark green.
		High density chl/cb/sil veins ≈20/m.	chl cb.		
360		Some ± chlorite ?dyke assoc. Bleaching around veins 364.9-367.0		1	
367.2					
367.4			sil cb chl sil.		?Dacite lava clear-qtz-filled blebs ?amygdales. Diffuse boundaries.
370			ser sid sil	1 inc to 3 d/h.	Probably a Lithic Sandstone cherty clasts and aggregates of feldspar (⇒CO_3) throughout

Scale 1:200.

5 cm

HOLE No:- BPD67

Depth	Grain Size (mm) 16 5 2 1 ⅛	Structure	Alt.	Py %	Pyrite %	Rock Description / Petrology Sample
						Patch strong chlor + coarser by 400·4 – 400·53. Probably a clast.
380			Ser sid sil			
390						
400			chl Ser sid sil			/
406·5						
410			chl sid sil		2 inc to 3	Rock has a brecciated appearance Clasts more siliceous than matrix, they are cloud-shaped. Matrix fine chlorite + siderite
420						Rock contains fine clear qtz-filled vughs, thought to be vesicles/amygdales.
427·35					10	Variably silicified ?dacite lava.
430			Sil Ser sid ↓ inc intensity		2-3	? Vesicular dacite lava. qtz - filled blebs Fine qtz - ser - sid matrix. Even, no fol - phenos.
437·9						

Scale 1:200.

5 cm

HOLE No:- BPD 67

Depth (cm)	Grain Size (mm) 64 32 16 8 4 2 1 ½ ¼	Structure	Alt	Py/Pl	Pyrite %	Rock Description / Petrology	Sample
440	R	Shearing @ 40°	sil ser cb rare thick sil		5	Altered & deformed. "Nobby" appearance	
					10	Breccia @ 437.9-438 with angular, vein-type qtz & in a sericite matrix. Cherty fragments from 440m. Probably a sediment.	
449.5		Shearing @ 45°					
450	V	Weak cleavage @ 45°.	sid chl sil		3	Rock with fine ground mass and apparent vesicles, filled by clear quartz. Vesicular dacite lava.	
460	V						
463.5		END OF HOLE.					

Scale 1:20.

HOLE No:- BPD 67.

5 cm