

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

SAMPLING INFORMATION:

From	To	Element/Isotopes Petrology/etc.	Sample	Method	Lab	Date
0 (1m sample every 10m)	463.5 5m	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.	
28.4	34.75	Mafic dyke.	29-30 73% Fe
34.75	64.6	Mod. alt. Lithic Sandstone.	35-36 "
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-phy schist. 10% pyrite	89-94.5 73% Fe 97-100 High K/Na.
104.5	106.4	Mod. altered siliceous 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 1760 ppm 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 75% Fe
182.4	183.4	Mafic dyke.	

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 dike.	
224.1	250.6	Mod. alt. feldspar phyric dacite lava	325-326 1560 ppm Zn 335-336 1620 " "
250.6	253.6	Deformed & intensely qtz- sericite-altered ?dacite lava. 8-10% py.	252-269 High K/Na 252-305 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 Fe
284.8	285.7	Mafic dike.	
285.7	295.2	Mod. alt. dacite lava	
295.2	295.6	Mafic dike.	
295.6	367.2	Mod. altered dacite lava.	
367.2	406.5	? lithic sandstone	380-381 73% Fe
406.5	437.9	Intensely-mod. alt. amygdaloidal dacite lava.	425-428 1500 ppm Zn 430-432 1220 " "
437.9	449.5	Intensely qtz-sericite altered + deformed ?sediment 5-10% pyrite.	438-448 High K/Na 436-450 73% Fe (ave)
449.5	463.5 E.O.H.	Mod. altered amygdaloidal dacite lava.	

Depth (m)	Structure	Mineralogy / Petrology
1.3	Tricone HQ core	Tricone - No Sample
10	Foliation at 32° to 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 mottly appearance. Weak silicification in the matrix. Rare fine grained, chloritic & pyritic ? clasts. i.e. 22.0m Also a clast of cherty nature @ 16.7. T 72377 T.S. 22.5m <u>Dacitic lava.</u> quartz in groundmass; apatite as microphenocrysts. Mod. Altered.
28.4		cb 2 Green, vesicular, fine grained Basic dyke. Top contact broken, bottom @ 80° to core. quartz, carbonate + haematite stringers throughout.
34.75		cb chl sil. 1 ? Dacite lava breccia or Sediment. Breccia clasts are chloritic, matrix is a buff colour and siliceous. T.S. 39.0m T72378. <u>Probably a poly mictic Lithic Sandstone.</u> WK-Mod. Alt.
42.0		cb chl ser (sil) Foliation 35-38° to core. 1 Feldspar-phyric ? Dacite lava or ? Sediment. Wispny, 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 <u>Lithic Sandstone</u> Variable ser, chl alt.
50		4 T.S. 63.0m; T72380 <u>Fine grained Lithic Sandstone.</u>
60	sil bands Bands @ 32° to core	

Scale 1:250.

Depth (m)	(Core Size (mm))	Structure	Min.	Max.	Rock Description / Petrology	Sample
64.6						
64.7						
70						
80						
84.0		Both contacts @ 45° ↓				
84.3						
86.6						
91.1						
94.8						
97.1						
98.6						
100.3						
100.1						
104.5						
106.4						
108.8						
109.4						
109.8						
110						
120						

ser
sil
(cb)
(chl)

Green, basic dyke.

Feldspar-phyric ?dacite lava.
Feldspars altered to carbonate.
Siliceous alteration pervades the rock, leaving behind "islands" of sericite alteration.
Minor chlorite alteration
Pervasive, but weak, carbonate alteration
Pyrite mostly in siliceous zones.

2-5

Green, vesicular, basic dyke.

Feldspar-phyric ?dacite lava.

Increasing silicification from 94.5

T.S. 97.6, T72381 And-dac. lava Int. Act.

Altered & deformed ?sediments.

Approaching a schist.

Granular, siliceous texture. Sil. bands zone with sharp boundaries. Numerous pink spots (?alt. feldspars) and sil-filled vugs. (?vesicles)

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.

Green basic dyke - ?dacite

Buff - light green colour.
Fine ground mass.

Clear quartz ± carbonate, chlorite & haematite fills vugs, interpreted as amygdaloides here.

increase ↓

10

2

5 (bottom contact)

3-5

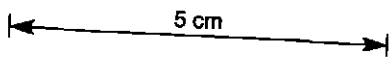
Fractures, filled with blue amorphous silica.

Altered silicic ?dacitic ash or, more likely, Dacite/andesite lava. T.S. 121.5m T72383. Silicified Andesite/Dacite

Scale 1:250

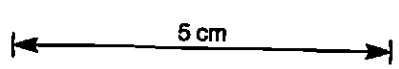
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Depth (m)	Structure	Structure	Mineralogy	Notes
130	○ V ○ V	Sharp uphole boundary on alteration @ 15°	ser ser sil ser (cb)	Zone of differing alteration, grey colour with siliceous patches. Flecks of sericite.
136.6	△	Tectonic / Fault Breccia	ser sil	3 Breccia probably tectonic. Numerous fractures filled with sericite and amorphous silica.
139.3	△			
140	V ○	contacts 50°	ser ser	? Vesicular dacite sheared + intensely altered. Nodules of silicification.
141.6	V			
142.1	V	Folded qtz / chlor / py stringers throughout. F.A. 10°	cb chl (sil)	3 Green, vesicular dyke. Fine ground mass. Rounded and flattened blebs of clear quartz - interpreted as amygdaloides. Amygdaloidal? Dacite lava.
147.5	V	147.5m, py band @ 5°		Carbonate alteration probably siderite. Size of amygdaloides appears to fine up hole.
150	V D V			
154.7	V V V		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	V			
160.8	V	Blurred uphole contact @ 20° downhole @ 20°	cb chl	Green, mafic dyke.
162.8	V		cb ser (sil) chl	Feldspar now carbonate.
170	V V V	band @ 30° Foliation defined by a network of py. @ 40°		5 Chlorite alteration extends down hole out of the dyke. T.S. 1665 T72384. Silicified andesite-dacite.
173.0	V	uphole contact 60° Downhole " 40°	chl cb	2 Green, vesicular, mafic dyke. Pyrite on bottom contact.
175.3	V			
175.9	V	Clearance @ 40°	ser cb sil	3 Polymictic Breccia. - grey sil seeds (cherty) clasts, pink sil. acid volc. + conglomerate. Deformed sericite cbsks.
180	V		ser sil	5 Quartz-sericite-altered? Volcaniclastic pyrite-networks of veins.
181.3	V			
182.4	V	chl / carb / py veins 182.3-182.5	sil ser	3 Quartz-sericite-altered Fragmental appearance. Could have been a sediment. Possible py clast @ 181.4
183.4	V	uphole contact 60° downhole " 40°	Tr Sp. @ 181.6-181.8	Lithic Sandstone. Green Mafic Dyke

Scale 1: 250

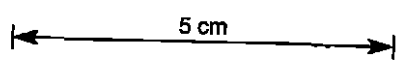


HOLE NO. -

Depth (m)	Core Size (mm)	Structure	Mineralogy	Alteration	Rock Description / Petrology Sample
250	253.6		Sil Ser	8-10	Deformed dacite lava. Strong silica + sericite alteration.
	253.6		Sil (Sil) (Ser)	1-2	Feldspar-phyric ? dacite lava.
260	261.5	Brilliated 260-261.5	rare spots Fuch-site		Feldspars now carbonate, prob. siderite.
	263.0	Strong cleavage 45°		2-5	Deformed + altered ? lava.
	268.2	- sil band - 15-20°	Sil (Sil) (Ser)	5-10	Increasingly siliceous rock. Patches of cherty breccias* - with rounded sil. fragments, many have purple colour. Siliceous band 2653-2654. Altered sediment.
270		qtz carb vein 282.7	Sil Ser (chl) (sil)	1-3	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.
		Broken ground 283.8-284.0			
280		bleached contact @ 30°		8	Alteration makes rock difficult to identify. Green mafic dyke.
	284.8		Sil sil (chl) (Ser)	2	Feldspar-phyric ? dacite lava. Stronger siderite alteration.
	285.7	contact 50° Slightly cross-cut cleavage which is 30° 2859-367.5 is a zone of qtz-carb veining.			Green, mafic dyke.
290		contacts at 35°			
		Intensity of veins + orient- ation varies from 60-80°. Most dip the same way as cleavage, others conjugate. Some contain chlor ? related to dykes.			
300					
310					

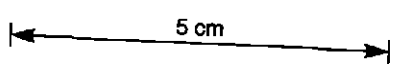
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HOLE No. 1



Depth (m)	Grain Size (mm)	Structure	Alt.	Fe %	Pyrite %	Rock Description / Petrology Samples
320	✓ ✓ ✓ ✓	Zone of late (post cleavage) veining.	sil chl (sid) (xv)		1-3	Feldspar-phyric ?dacite lava Brecciated appearance ? lava breccia. Clasts frequently more siliceous than the matrix. Alteration variable, alot of chlorite overprinting from late stage veins.
330	✓ ✓ ✓ ✓	Veins @ 318.5-322.1 have altered margins extending 4cm into host.				Some siliceous zones have a pink tinge. Colour predom. dark green, though areas of stronger siderite alteration are buff colour.
340	✓ ✓ ✓ ✓	Veins at 324mm, 30x 95° to core. Clearage 40°	sil chl		1	
350	✓ ✓ ✓ ✓ ✓ ✓	High density cb/sil veins ~20/m. Some E. chlorite ?dyke areas. Bleaching around veins 364.9-367.0	chl cb.		1	Rock becomes coarser grained. Sil-filled vugs. Strong sil. top contact, strong chlorite. Feldspar-phyric ?dacite lava Predom. colour dark green
360	✓ ✓ ✓ ✓		sil chl sil. ser sid sil		1 1 1 1	? dacite lava clear -qtz-filled blubs ?amygdalites. Diffuse boundaries. Probably a lithic sandstone cherty clasts and aggregates of feldspar (⇒CO ₃) throughout

Scale 1:250.

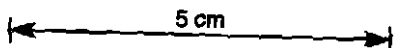


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Core No	Grain Size (mm) 16 5 2 8 32	Structure	Alt.	Pb Zn %	Pyrite %	Rock Description / Petrology Sample
380						Patch strong chlor + coarser py 400.4 - 400.55 Probably a clast.
390						
400						
406.5						
410	V D D V D					Rock has a brecciated appearance Clasts more siliceous than matrix, they are cloud-shaped. Matrix fine chlorite + siderite
420	V D D V					2 inc to ↓ 3 Rock contains the clear qtz- filled vugs, thought to be vesicles / amygdalae. Variably silicified? dacite lava.
427.5	V					- 10
430	V D V D					9 Vesicular dacite lava. 2- qtz-filled blebs 3 Fine qtz-ser-sid matrix. Even, no fol-phenos
437.0	V					inc intensity.

Scale 1:250.



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Depth (m)	Grain Size (mm)	Structure	Min	TL	Moist	Rock Description / Petrology Samples
440	R H ₀ o H ₀ H ₀	Shearing @ 40°	sil ser cb rare fract-sil			Altered, deformed 'Nobby' appearance Breccia @ 437.9-438 5-10 with angular, vein-type qtz in a sericite matrix. Cherty fragments from 440m. Probably a sediment.
449.5	V a V a	Weak cleavage @ 45°	sil cht sil			3 Rock with fine ground mass and apparent vesicles, filled by clear quartz. ? Vesicular dacite lava.
460	V o					
463.5	END OF HOLE.					

Scale 1:250.

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