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DRILL HOLE RECORD

Location Que River Area | Property Mackintosh EL 2/70 | District Tasmania, Australia. | Bearing (M) 99° 21' | Hole No QR 49

Commenced 11.6.1975 | Completed 24.6.1975 | % Recovery 95 | Grid bearing (M) 8.75 | Date 24.6.1975

Objective To test P lens above the intersection in QR 32. | Core size NQ to 81.93 m BQ to 176 m E.O.H. | Logged C.H. YOUNG

Co-ordinates 7904.1N 5141.2E | Dip 48° 41' | Alt./R.L. 685.6

SURVEY DATA				GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE	DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
0	50	99	Clinometer & Tube Compass	0	48.5	99.5	7904.1	5141.2	685.6	
0	48°41'	99°21'	Theodolite	25	48	101	7903.7	5157.8	667.0	
22	48.5	105.5	Eastman	50	46	104.5	7902.5	5174.8	648.7	
52	46	109	Single Shot	75	44.5	105.5	7900.6	5192.3	631.0	
88	45	110	Camera	100	42.5	104.5	7898.6	5210.4	613.7	108.25 - 116.75 m Mineralized PyP unit
112	42	108	"	125	40	103	7896.9	5229.1	597.2	containing an 8 cm band and fragments of
142	40.5	109.5	" Disc Lost	150	37.5	105	7895.2	5248.5	581.6	massive sphalerite-galena, considered to
175	34.5	110.5	"	176	34.5	110.5	7892.0	5268.4	566.9	correlate with the intersection in QR 32.

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DIAMOND DRILL LOG

Hole No QR 49 Page No 1.

Feature : Bedding, Foliation, Fragment - size & shape; Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization : Trace 1-5%; Common 5-15%; Abundant 15-60%; Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
	5	No Core.							
	10								
2.0		PyP Grey-green locally carbonated and sericitised lithic tuff agglomerate. The rock does not appear to be appreciably weathered.							Pyrite 5%-10%, 60% where indicated as disseminations and irregular veins and aggregates of very fine subhedral to euhedral crystals. Some colloform textures have been noted.
0.6									
2.4	15	Lithic fragments are irregular up to 6 cm, commonly 1-3 cm. Fragments are varied (indicating transported volcanic debris?), fine grey tuff, pale green-buff feldspar crystal tuff lava? grey chert or shale and pyrite.	BROKEN CORE						
2.6		The matrix is grey pyritic and essentially siliceous. Crude fragment alignment at 30° to core axis.	BROKEN CORE						
	19.1								
0.4	20	Fault zone Pug, sheared and broken core 40° to core axis. Fragment outlines are obscure, the rock is highly sericitised where not pug.							
3.0									
	22.2							22.2	Pyrite rare.
3.0		~~MP~~ DP Fault Contact. Green carbonated lithic tuff agglomerate. Lithic fragments are irregular to rounded from 0.5 mm to >10 cm. Amygdaloidal lava clasts with white carbonate filled vesicles are common.							
	25								

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DIAMOND DRILL LOG

Hole No QR 49 Page No 2.

Feature : Bedding, Foliation, Fragment - size & shape; Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization : Trace 1-5%; Common 5-15%; Abundant 15-60%; Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
		Other lithic fragments appear to be themselves lithic tuff, where irregular shaped chloritic fragments to 1 cm are randomly distributed in a fine grey siliceous matrix.			Pyrite rare as above.
2.25		The matrix is "ashy" and siliceous.			
2.1	30	The rock is pale green to 26 m, then pale green fragments in a darker green (chloritic) matrix. Below 33.75 m the rock is dark green-increasing chlorite.			
1.7		Minor shredded sericite has been noted.			
0.75		32.75 - 33.2 m Heavily carbonated.			
1.0		There is a crude fragment alignment at 50° to core axis.			
0.8		The core is commonly fractured and broken at 10°, 20°, 30° and 60° to core axis.			
0.25	35				
1.15					
0.8					
0.75					
2.8					
	40				
3.0					
2.9	45				
	45.6	DTL Buff carbonated feldspar crystal tuff-lava. Large fragment within MP?			
	46.4	MP ~~as above~~.		46.4	Pyrite < 1% as very fine disseminations.
2.6		Amygdaloidal lava fragments and green illite-hydromuscovite are more common.			
		Below 49 m the rock becomes lighter green in colour.			
0.7	50				

BROKEN CORE

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DIAMOND DRILL LOG

Hole N° QR 49 Page N° 3.

Feature : Bedding, Foliation, Fragment - size & shape; Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization : Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		MP as above.							
2.55	51.5	Contact at 40° to core axis.						51.5	Pyrite rare.
		DTL							
0.45		Pink to buff and light grey carbonated feldspar crystal tuff lava.	BROKEN CORE						
2.0		Feldspar crystals (phenocrysts) are generally small < 2 mm and consist of carbonate and sericite often aligned in flow direction.							
	55								
1.0		The matrix (groundmass) is fine grained and consists essentially of quartz with minor sericite.							
0.9									
1.8		Lithic fragments to 1 cm, of sericitised dacitic lava? have been noted.							
	59								
0.5		Fault zone Sheared and broken core.							
0.5	60								
0.8	60.8								
1.2									
1.5									
	63.3								
0.4		Fault zone 80% broken core. Some chlorite-carbonated breccia.							
	65								
0.4	65.6								
0.8		Flow banding or foliation? at 45° to core axis is common.							
1.3		Fractures 10° - 60° to core axis, often chlorite lined.							
1.4			BROKEN CORE						
1.1	70								
0.35									
0.6									
1.0									
	72.7								
0.8		Fault zone 90% broken core.							
	73.5								
0.4									
0.9									
	75								

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DIAMOND DRILL LOG

Hole No QR 49 Page No 4.

Feature : Bedding, Foliation, Fragment - size & shape; Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization : Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
0.7		DTL as above.	BROKEN CORE						Pyrite rare as above.
0.8									
0.4									
	79								
0.8	80	Fault zone 90% sheared and broken core some pug, 50° to core axis.							
0.6		Some recemented breccia.	BROKEN CORE						
0.35									
0.6									
0.3									
2.3	84.2								
	85	Fractures 30° - 40° to core axis. Generally chlorite lined.							
0.25									
3.0									
	89.5								
3.0	90	Grey to buff coarse lithic feldspar crystal tuff, lava. Irregular fragments to 3 cm, generally chloritised tuff? in a lava matrix.							
	91	Brown-buff fine feldspar crystal tuff lava as above.							
	92.23								
3.0		Coarse lithic feldspar crystal tuff-lava as above. Fragments are irregular to 3 cm grey-green (chloritic), occasional shredded carbonate-chlorite fragments in a feldspar crystal tuff-lava matrix. Foliation or bedding at 35° - 50° to core axis.							
	95								
	95.2								
3.0		Light grey to buff feldspar crystal tuff-lava as above. Foliation or flow banding? at 30° to core axis.							
3.0									
	100								

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DIAMOND DRILL LOG

Hole No QR 49 Page No 5.

Feature : Bedding, Foliation, Fragment - size & shape; Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization : Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		DTL as above.							Pyrite rare as above.
1.6	102								
		Fault zone Some pug, 80% broken core most of the rock within the fault zone appears to be coarse lithic tuff as described above.							
0.5									
0.8									
0.5	104.6								
2.4	105	Sericite aggregates after feldspar? are dark green-chloritic.							
3.0	108.25	Contact 60° to core axis.						108.25	Py 3%-5%, 10% where indicated as disseminations and fragments to 4 cm. There are occasional fragments of massive sphalerite-galena to 4 cm trace Sph, Gn overall.
		PyP Blue-grey locally sericitised lithic tuff agglomerate. Lithic fragments are irregular to sub-rounded, from 0.5 mm to 7 cm. They comprise: grey vesicular lava where rounded white carbonate aggregates appear to fill vesicles, grey to off-white sericitised and pyritised trachyte?, grey porphyritic dacitic lava where green sericite aggregates replace feldspar, grey chert and massive pyrite. There are occasional fragments of massive sphalerite-galena.							The mineralized PyP unit from 108.25 to 116.75 m is considered to correlate with the intersecti in QR 32.
3.0	110								
3.0									
3.0	115	The matrix is siliceous, sericitised and pyritised.							
		There is a crude fragment alignment at 30° to core axis.						116.2	Massive pyrite 70%
	116.75							116.75	includes 8 cm, irregul band of light brown to grey Sph 40%, Gn 10%.
3.0		~~PyP? (PyP$_2$)~~ DP Green chloritic locally carbonated lithic feldspar crystal tuff agglomerate. The characteristic lithic fragment is irregular in shape to 6 cm with a "shredded" outline, feldspar crystals to 3 mm are represented by green aggregates of chlorite-sericite, often elongated in direction of foliation at 35° to C.A. There are also within the fragments irregular white carbonate aggregates. The groundmass is pale green to off-white and carbonate rich. The matrix appears to be of similar texture and composition (hence feldspar crystal tuff) smaller fragments of sericitised trachyte? and pyrite? have been noted. 122.1-122.85 m the rock is grey in colour PyP type.							Below 116.75 m Py 2%-5 as disseminations and aggregates of fine sub hedral to euhedral crystals. Pyrite often replaces sericite aggregates.
3.0	120								
3.0								122.1	Py 5%-10% as above.
								122.85	
	125	DP? Fault Contact. Fault zone.						124.6	Py <1% as disseminatio

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DIAMOND DRILL LOG

Hole N° QR 49 Page N° 6.

Feature : Bedding, Foliation, Fragment - size & shape 0%, Shearing, Fault F, Vein c carbonate q quartz

Mineralization : Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
0.4		Fault zone as above. Pug and broken core, quartz veining is common.							Pyrite <1% as above.
0.8		Within the fault zone the rock is a DP type.							
0.6									
0.85	129								
2.0	130	Green chloritic locally carbonated feldspar, hornblende crystal lithic tuff agglomerate.							
2.9		Lithic fragments are dark green, irregular in shape to 5 cm. Feldspar crystals? within the fragments and matrix are represented by irregular aggregates to 3 mm of white carbonate, often altered pink. The groundmass is dark green and chloritic.							
3.1		Small <2 mm lath like chlorite aggregates may represent hornblende crystals.	BROKEN CORE						
	135	The matrix is siliceous, locally carbonated and similar in texture to the fragments.							
		At 131 m and 135.8 - 137 m the rock is altered pink in colour suggesting an occasion with the DTL group.							
3.0									
	139.9								
	140	DTL Gradational Contact.							
3.0		Pink-buff carbonated fine grained feldspar quartz crystal tuff-lava. The rock is partly fragmental down to 144 m. Fragments are generally of tuff-lava although erratics of PyP type and grey chert have been noted. The matrix is fine grained and siliceous. At 140 m and 141 m 10 cm bands of PyP type rock.							
	144								
3.0		Pink-buff carbonated feldspar quartz crystal tuff-lava. The rock is fine grained and consists mainly of suggary <1 mm quartz grains. (Quartz crystals or a recrystallised siliceous groundmass). Feldspar crystals or phenocrysts? are represented by <2 mm sericite aggregates.							
	145								
3.0		Irregular carbonate veins are common.							
	150								

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DIAMOND DRILL LOG

Hole Nº QR 49 Page Nº 7.

Feature : Bedding, Foliation, Fragment - size & shape; Shearing, Fault, Vein; c carbonate, q quartz

Mineralization : Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
3.0		DTL as above. The rock is often altered grey alongside carbonate filled fractures. 152.2 m "Kinked" folded flow banding? fold axis parallel to core axis, plunge of fold axis at 70° to core axis.			Pyrite <1% as above.
3.0				152.7	Pyrite 5% overall as aggregates and irregul veins associated with carbonate, often sub-parallel to core axis.
	155				
3.0		156 - 158 m Quartz veining, occasionally sheared and chloritic. Fractures 20°, 30°, 50° and 60° to core axis.		155.6	Pyrite <1% as above.
3.0					
	160				
3.0					
2.1	164.8			164.8	Pyrite 1%-2% as dissem-inations aggregates or fragments of fine subhedral to euhedral crystals.
	165	Buff-grey green coarse lithic tuff. Disrupted at first. Fragments are irregular in outline up to 3 cm. They consist of green sheared chloritic lava?, buff dacitic lava, pale green shredded sericite and occasionally pyrite. The matrix is light grey to buff feldspar quartz crystal tuff-lava.			
0.9					
3.0	168.6	Crude fragment alignment 45° to C.A. Pink to buff DTL as above 164.8 m.			
	170				
	170.1				
3.0		Buff-grey-green lithic tuff agglomerate similar to 164.8 - 168.6 m above. Fragments are larger, occasionally to 10 cm, some tuff-lava varieties show flow banding. Fragments of DP and chert have been noted.		173	Pyrite 5% as aggregates and disseminations with the matrix.
3.0				174.5	Pyrite 1%-2% as above.
	175				

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DIAMOND DRILL LOG

Hole No QR 49 Page No 8.

Feature : Bedding, Foliation, Fragment - size & shape, Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization : Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		Fragmental DTL as above.							Pyrite 1%-2% as above.
	176	E.O.H.							
	180								