DRILL HOLE RECORD

Location Que River Area **Property** Mackintosh EL 2/70 **District** Tasmania, Australia. **Bearing (M)** 99° 07' **Hole No** QR 57 D.

Commenced 2.8.1975 **Completed** 6.8.1975 **% Recovery** 98 **Grid bearing (M)** 8.75 **Date** 9.8.1975

Objective To test P south lens at RL 590 section 7300N. (Development). **Core size** NQ to 75.5 m, BQ to 185 m E.O.H. **Logged** C.H. YOUNG

Co-ordinates 7299.22N 5045.29E **Dip** 49° 46' **Alt./R.L.** 698.68

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	49.75	99	7299.2	5045.3	698.7	
0	49°46'	99°07'	Theodolite	25	50	99	7299.1	5061.4	679.6	
64	52	102.5	Eastman	50	50	99	7299.1	5077.5	660.4	
113	50	104	Single Shot	75	50	99.5	7298.9	5093.6	641.3	
158	45	107	Camera	100	50	100	7298.6	5109.6	622.1	
183	43	107	" "	125	48.5	101.5	7298.1	5125.9	603.2	
				150	46.5	103	7297.0	5142.8	584.8	141.45 - 154 m Interpreted P lens massive,
				175	44	103.5	7295.7	5160.3	567.0	semi-massive and disseminated base metal
				185	42.5	103.5	7295.1	5167.6	560.2	sulphides.

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DIAMOND DRILL LOG

Hole No QR57(D) 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								
	15								
	20								
	25								

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DIAMOND DRILL LOG

Hole No QR57(D) 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
	27	No Core.			
1.6		DP Pale grey-green carbonated lithic tuff agglomerate. The rock is weathered and weakly kaolinised. Fragments of porphyritic lava, up to 5 cm are irregular in outline and characterised by white carbonate replacing feldspar. Small chlorite aggregates may represent hornblende. The matrix is "gritty".	BROKEN CORE		Pyrite 2%-3% as disseminations of fine subhedral to euhedral crystals.
2.5	30 30.5	DTL Rusty and iron stained down to 32.45 m.	BROKEN CORE	30.5	Pyrite less than 1% as fine disseminations.
2.5		Grey-green-buff locally chloritic and carbonated feldspar crystal lithic tuff-lava. Lithic fragments are randomly distributed, irregular to sub-rounded from 0.5 mm to 1 cm, buff dacitic lava and chloritised tuff? Feldspar crystals are represented by aggregates of carbonate-chlorite.			
3.5	35	The matrix is fine grained and siliceous weakly chloritic and carbonated. Chlorite lined solution cavities have been noted. There is a crude foliation at various core angles from 10° - 40°.	BROKEN CORE		
3.0		Irregular fractures at 30° - 40° - 90° to core axis, iron stained down to 39.5 m.	BROKEN CORE		
3.0	40 40.4	Pale green-pink lithic tuff agglomerate. Fragments are generally sub-rounded, average 3 cm up to 15 cm, pink-buff dacitic tuff-lava. Some grey recrystallised chert has been noted. The matrix is fine grained and siliceous.	F		
3.0	45				
3.0	47.15	Green feldspar quartz crystal tuff-lava. This rock is essentially fine grained with carbonate-chlorite aggregates after feldspar? to 3 mm and irregular quartz aggregates to 2 mm, all randomly distributed in a siliceous matrix.			
	50				

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DIAMOND DRILL LOG

Hole No QR57(D) Page No 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	DEPTH m	MINERALIZATION
3.0		The rock is identified as a lava on the basis of carbonate filled vesicles (amygdules) - up to 1 cm, roughly oriented in the direction of foliation at 10° - 30° to core axis. Fractures 30° - 60° to core axis.	BROKEN CORE		Pyrite < 1% as above.
3.0	55				
3.0					
3.0	60				
	61.45	Grey-green carbonated and silicified locally chloritic lithic tuff agglomerate. The rock appears to be partly sheared and brecciated at 40° - 50° to core axis. Carbonate and silica appear to have recemented the fragments.	BROKEN CORE		
3.0		Fragments are irregular to sub-rounded increasing in size to about 6 cm near the base of the unit. They consist of pink to buff dacitic tuff lava, green chloritised lava?, occasionally sericitised trachyte? and grey chert.			
	65				
1.7			F	66.7	The rock is pyritic and grey in colour hence PyP_1, pyrite 3%-5% as disseminations and aggregates.
1.3		The matrix is "gritty" and siliceous.		67.0	
1.9		69.4 m The rock is pale green due to illite or possibly epidote.			Pyrite < 1% as above.
	70				
1.1	70.3	Fault zone Pug, sheared and broken core, various angles to core axis, generally 50°.			
0.6					
	72.15	Pink-buff carbonated feldspar crystal tuff-lava. Relatively fine grained, feldspar crystals up to 2 mm are represented by pale green sericite aggregates and are randomly distributed. The matrix or groundmass is fine grained and siliceous although heavily carbonated.	F		
2.4					
1.5	75				

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DIAMOND DRILL LOG

Hole No QR57(D) Page No 4.

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	DEPTH m	MINERALIZATION
1.5		Flow banding at 50° to core axis has been noted.	BROKEN CORE		Pyrite <1% as above.
1.2		The rock is altered grey along fractures due to the introduction of ultra fine pyrite.			
1.8		There are minor zones of recemented breccia.		77.6	10 cm Pyrite 3%.
		Fractures 30° to core axis.			
0.4	80			81.3	Pyrite 2%-3% as disseminations and aggregates of fine subhedral to euhedral fragments.
1.7		Below 81.3 m the rock is autobrecciated grey-buff in colour due to increased pyrite alteration interstitial to the "fragments".	BROKEN CORE		
1.2					
1.8	85				
1.5		87 m 15 cm pyrite-carbonate cemented breccia.	BROKEN CORE		
1.5					
1.0	89			89.0	Pyrite <1% as above.
	90	Grey to buff carbonated and locally chloritised fine grained feldspar crystal tuff-lava.			
2.0		Feldspar crystals are represented by small aggregates of green sericite-illite and occasionally chlorite? to 2 mm and are randomly distributed.	BROKEN CORE		
0.6		The matrix is very fine grained and siliceous although carbonated and often pale grey in colour due to the presence of ultra fine pyrite.			
1.95					
	95	There is a fine bedding or flow banding at 40° - 50° to core axis.	BROKEN CORE		
1.7		Fractures are sub-parallel to 30° to core axis occasionally chlorite lined.			
0.1					
0.8					
3.0					
	100				

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DIAMOND DRILL LOG

Hole N° QR57(D) Page N° 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 < 1% as above.
3.0									
3.0	105		c						
3.0		108 m solution cavities to 5 mm after carbonate?						108	5 cm Pyrite 3% as secondary veinlets associated with solution cavities.
	110		c						Pyrite < 1% as above.
3.0									
3.0									
	115								
2.5									
0.4									
0.3									
	120		c						
2.7									
2.3		123.4 m 20 cm carbonated cemented breccia.							
	125								

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DIAMOND DRILL LOG

Hole No QR 57 Page No 6.

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
2.6		DTL as above.			Pyrite 1% as above.
0.7					
2.5	130				
3.1		131.2 - 131.8 m Carbonate cemented breccia, irregular fragments to 3 cm.		131.2	Pyrite 1%-3% as disseminations, aggregates and irregular veinlets filling fractures within the carbonate cement.
		133.1 - 133.4 m Carbonate cemented breccia.		133.4	Pyrite 1% as above.
3.0	135				
		136.6 - 136.8 m Carbonate cemented breccia.		136.5	Pyrite 1%-3% as above.
3.0					
	139.8	Fault Contact 60° to C.A.		139.8	Pyrite 3%-5% as disseminations of fine subhedral to euhedral crystals.
0.9	140	PyP_1 Grey siliceous and sericitised lithic tuff agglomerate. Fragments to			
1.0	141.45	5 cm are generally sub-rounded.		141.45	141.45-142.5 m Banded massive sulphides at approx. 50° to C.A. Py 20% brown to grey Sph 30%-40%
		Massive Sulphides.		142.5	Gn 15%-20% Cpy 1%.
1.05				142.9	142.5-142.9 m Py 70% Cpy 10% Sph 1%-2% Gn 1%.
2.2					Bands and fragments of massive to semi-massive sulphides. Py 20%-30%, Sph 15%-25% Gn 3%-10% trace Cpy.
	145				
0.7		145.3 - 146 m Sub-rounded fragments of grey feldspar crystal tuff or lava, chert and pyrite to 1.5 cm and occasional sphalerite and galena aggregates in a sulphide rich matrix.		146.45	Py 40%-60% Sph as aggregates and disseminations 2%-3% Gn 1%-2%.
3.0		Below 148.7 m the rock is grey silicified and sericitised coarse lithic tuff. Fragments are irregular to sub-rounded to 3 cm, grey sericitised trachyte? grey feldspathic lava and grey recrystallised chert. The matrix		148.65	Py 5%-10% trace Sph, Gn and Cpy.
	150	is ashy and siliceous blue-grey in		149.7	Py 30%-40% Sph 3%-5% Gn 2%-3% Cpy 1% as

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DIAMOND DRILL LOG

Hole No QR 57 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	151.25	colour due to pervasive pyritization.			as disseminations, bands and aggregates.
		Grey silicified and sericitised lithic tuff as matrix to disseminated and semi-massive sulphides.		151.25	Pyrite 10%-15%, Sph 10%-15% Gn 5%-10% trace Cpy as disseminations and aggregates.
3.0				152.9	Py 10% Sph 1%-2% Gn 1% trace Cpy as disseminations and aggregates.
	154			154.0	Py 5% as disseminations and aggregates.
		Grey siliceous locally sericitised coarse lithic tuff/tuff agglomerate.			
	155	Fragments where not obscured by alteration are irregular to sub-rounded up to 5 cm, sericitised and occasionally silicified feldspar crystal tuff (trachyte?).		155.5	Py 60% trace Sph, Gn.
3.0				155.75	Py 5%-10% locally 30% as disseminations, aggregates and irregular veins. Trace Sph and Gn.
		The matrix is grey and siliceous-pervasively pyritised.			
		There is a crude fragment alignment parallel to the foliation at 60° to core axis.			
3.0	160				
		Below 161 m pale green "shredded" sericitised of porphyritic lava? have been noted, fragments average 2 cm.			
3.0				162.9	5 cm Py 10% Sph 5% Gn 3%
	165			169.75	15 cm Py 20% Sph 5% Gn 3%.
3.0				170.5	Minor stringers and
				171.0	aggregates of Sph 3% Gn 2%.
					Py 5%-10% trace Sph, Gn as above.
3.0	169				
	170	The rock is similar to above, however fragments are larger average 3 - 5 cm. Grey silicified locally sericitised lithic tuff agglomerate.			
3.0					
3.0	175				

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DIAMOND DRILL LOG

Hole No QR 57 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	DEPTH m	MINERALIZATION
		175.5 - 175.9 m Carbonate cemented breccia 30° to core axis.		176.4	Pyrite 5% rare Sph, Gn.
3.0		Below 178.4 m irregular pale grey-green sericitised and partly "shredded" fragments up to 6 cm have been noted.			
3.0	180				
3.0					
	185	E.O.H.			