DRILL HOLE RECORD

Location Que River Area **Property** Mackintosh EL 2/70 **District** Tasmania, Australia. **Bearing (M)** 101° 47' **Hole No** QR 48

Commenced 5.6.1975 **Completed** 8.6.1975 **% Recovery** 97 **Grid bearing (M)** 8.75° **Date** 12.6.1975

Objective To test the S lens for grade and metallurgy. **Core size** NQ to 113 m E.O.H. **Logged** C.H. YOUNG

Co-ordinates 7450.2N 5269.7E **Dip** 51° 33' **Alt./R.L.** 711.1

SURVEY DATA				GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE	DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
0	52	99	Clinometer & Tube Compass	0	52	101.75	7450.2	5269.7	711.1	
0	51°33'	101°47'	Theodolite	25	50.5	101.75	7449.4	5285.3	691.6	
20	51	106	Eastman	50	48.5	102.5	7448.4	5301.5	672.6	
41	49	107	Single Shot	75	47	101.5	7447.5	5318.3	654.1	41.2 - 45.1 m Massive Pyrite 50%, bands
74	47	106	Camera	100	46	102	7446.6	5335.5	636.0	and aggregates of Sphalerite 20%, Galena 15%.
113	45.5	107	" "	113	45.5	107	7445.6	5344.5	626.7	45.1 - 55.9 m Bands of massive and
										semi-massive pyrite with associated
										sphalerite, galena and chalcopyrite.

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DIAMOND DRILL LOG

Hole N° QR 48 Page N° 1.

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
		No Core.			
	3.0				
1.8		PyP Light grey silicified carbonated lithic tuff. Thoroughly disrupted and altered. Lithic fragments are irregular mostly less than 5 mm and generally obscured by alteration. Aggregates of white carbonate and in some instances sericite are thought to represent small lithic fragments. The matrix is fine grained, highly siliceous and pyrite rich. Disrupted grey siliceous bands may be chert. Foliation or bedding at 30° - 40° to core axis. Fractures 25° - 60° to core axis.			Pyrite 5%-10% as disseminations, aggregates, irregular veins and nett-works of fine subhedral to euhedral crystals, colloform textures have been noted. Sphalerite 1%-3%, galena 1%-2% and rare chalcopyrite as small irregular veins and aggregates associated with pyrite and often cutting older pyrite veins. Partly leached, solution cavities are common down to 18 m.
	5				
3.0					
	10				
3.0					
	15				
3.0					
1.5				18.5	Pyrite 20%, Sph 5%, Gn 3%, trace Cpy as an irregular vein sub-parallel to core axis.
1.5				20.0	
	20				
	20.3	Contact at 30° to core axis.	F	20.3	Pyrite rare as discrete aggregates to 0.5 mm.
3.0		FT Light grey to buff feldspar crystal tuff lava. Numerous euhedral sericite aggregates and carbonate amygdules.			
	21.7			21.7	Pyrite 5%-10% as above, sphalerite 1%-2%, galena less than 1%, rare chalcopyrite.
		PyP Light grey silicified and carbonated lithic tuff, as above. Grey-yellow carbonate aggregates to 2 mm (replacing lithic fragments?) are common.			
3.0					
	25			24.8	Below 24.8 m Py 5%-10% trace Sph, Gn.

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DIAMOND DRILL LOG

Hole N° QR 48 Page N° 2.

Feature : Bedding, Foliation, Fragment - size & shape; 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
3.0		PyP as above. Some irregular lithic fragments to 2 cm. 27.5 - 29 m The rock is banded at various core angles suggesting small scale folds.			Pyrite 5%-10% trace sphalerite and galena as above.
3.0	30			28.9 29.2	Py 60% Sph 3% Gn 2% as veins at 30° to core axis.
				29.8 30.2	Py 60% Sph 3% Gn 2% as a vein at 30° to core axis.
					Py 5%-10% as disseminations, irregular veins and nettworks, trace Sph, Gn.
3.0				33.0	3 cm Py 60% Sph 3% Gn 2% as a vein at 30° to core axis.
					Py 5%-10% trace Sph, Gn.
3.0	35				
				37.7 38.25	Py 70% Sph 5% Gn 3% as disseminations and aggregates within a band at 40° to core axis.
3.0				39.7 40.0	Py 60% Sph 3% Gn 2%.
	40				
3.0		41.2 - 55.9 m Interpreted east lens (S lens) bands of massive and semi-massive pyrite with associated base metal mineralization. Irregular bands of mineralization are often at 30° to core axis.		41.2	Py 50% as aggregates and bands of subhedral to euhedral crystals to 2 mm. Brown sphalerite 20% as bands and aggregates. Recrystallised galena 15% rare Cpy.
3.0	45	Below 45.1 m irregular shaped lithic fragments up to 3 cm become more common.		45.1	Py 5%, 60% where indicated as aggregates and veins of fine euhedral crystals, trace Sph and Gn.
3.0				48.25	Py 70% as massive bands of fine subhedral to euhedral crystals, brown sphalerite 3% as irregular veins and aggregates
	50				

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DIAMOND DRILL LOG

Hole N° QR 48 Page N° 3.

Feature : Bedding, Foliation, Fragment - size & shape; 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
3.0		PyP matrix to massive and semi-massive sulphides as above. Weak foliation 30° to core axis.
3.0	55	
	55.9	
1.2		Grey carbonated and sericitised coarse lithic tuff.
1.8		Lithic fragments are irregular in outline up to 3 cm, often dark green (chloritic). Aggregates of white carbonate to 3 mm are common.
3.0	60	The matrix is light grey and siliceous aggregates of yellowish carbonate and pale green sericite are common. There is a crude bedding, generally at 30° to core axis. Some foliations are sub-parallel to core axis.
3.0		
	65	
	66.3	
3.0		UPL Light-grey to buff siliceous vitric feldspar crystal tuff. Feldspar is represented by aggregates of pale green sericite up to 4 mm, often euhedral in outline.
3.0	70	Vitric shards are interpreted by virtue of fine patches and grains of difuse quartz. The groundmass (matrix) is fine grained light grey to buff in colour and siliceous.
3.0		The rock is often fractured, the fractures "welded" with secondary pyrite.
	75	

VISUAL LOG: BROKEN CORE

DEPTH m	MINERALIZATION
	Gn 1%-2% associated with the Sph, Cpy < 1% as splashes.
51.7	Py 10%, Sph 5%, Gn 3% trace Cpy.
52.7	Py 60%, generally as massive bands of euhedral crystals up to 3 mm. Sph 1% -2% Gn < 1% Cpy < 1%.
54.4	Py 10% trace Sph, Gn rare Cpy.
55.1	Py 60% trace Sph, Gn.
55.9	Py 10%, 60% where indicated. Trace Sph, Gn as small irregular veins.
57.6	Py 3%-5% as disseminations irregular veins and nettworks, rare Sph, Gn.
60.5	2 cm Py 10%, Sph 40%, Gn 20% as an irregular vein or stringer.
63.7	Py 40%, Sph 2%-3%, Gn < 2% trace Cpy as irregular veins and aggregates.
65.45	
66.3	Py 3%-5% as disseminations and irregular veins up to 4 cm of subhedral to euhedral crystals, rare Sph, Gn as small irregular veinlets.

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DIAMOND DRILL LOG

Hole No QR 48 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
3.0		UPL as above. Small aggregates of green illite-hydromuscovite have been noted. Below 76.5 m the rock is carbonated veins to 1 cm are common. Weak foliation at approx. 40° to core axis. Fractures at 20°, 60° and 75° to core axis.				Pyrite 3%-5% rare Sph, Gn as above. Pyrite commonly replaces sericite aggregates.
3.0						
	80				79.9	5 cm vein pyrite 40% sphalerite 2%-3% galena 1%-2%.
3.0						
3.0						
	85					
3.0		87.6 - 89.5 m the rock appears to be brecciated or fragmental with a pyrite matrix.			87.6	Py 30%, Sph 2%-3%, Gn 8% with secondary carbonate as irregular veins and aggregates.
1.65					89.5	Pyrite 5%-10% as disseminations, irregular veins and nettworks, rare Sph, Gn.
	90					
1.35						
3.0		Below 92.5 m the rock is increasingly sericitised, grey in colour due to increased ultra-fine pyrite.				
	95					
1.2						
	96.4					
1.8		PyP Gradational Contact. Grey siliceous sericitised and locally carbonated coarse lithic tuff.			97.5	Pyrite 3%-5% as disseminations, irregular veins and nettworks, rare Sph, Gn.
3.0		Lithic fragments from 0.5 mm to 3 cm are irregular in outline. They consist of altered porphyritic dacite, sericitised trachyte? and recrystallised chert.				
	100					

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DIAMOND DRILL LOG

Hole N° QR 48 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
3.0		Irregular quartz aggregates may represent devitrified glass. Shredded streaks of sericite occasionally wrap around fragments. The matrix is dark coloured due to fine pyrite and consists mainly of quartz. White carbonate aggregates to 3 mm are randomly distributed. Below 102.5 m the rock is darker-fragments often dark green due to increased chlorite alteration. There is a fragment alignment or bedding at 40° - 50° to core axis. Fractures, sub-parallel, 30° and 50° to core axis.						102	Pyrite 3%-5%, rare Sph, Gn, as above. 3 cm pyrite 30% galena 5% trace sphalerite as a minor band.
3.0	105								
3.0								108.9	Pyrite 20% sphalerite 5%, galena 3% as an irregular vein or stringer, sub-parallel to core axis.
	110							109.7	
3.0									
	113	E.O.H.							
	115								