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DRILL HOLE RECORD

Location Que River **Property** Mineral Lease 2M/75 **District** Tasmania, Australia. **Bearing (M)** 98°56' **Hole No** QR83 D.

Commenced 30.1.1976 **Completed** 9.2.1976 **% Recovery** 95.5 **Grid bearing (M)** 8°45' **Date** 10.2.1976

Objective To test P south lens 7520N 500 RL. **Core size** NQ to 110 m BQ to completion. **Logged** C.H. YOUNG

Co-ordinates 7517.8N 5017.4E **Dip** 54°19' **Alt./R.L.** 701.28 m

SURVEY DATA				GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE	DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
0	54	96	Clinometer and Surveyors Pegs/Theo-dolite.	0	54.25	99.0	7517.80	5017.40	701.28	
0	54°19'	98°56'	Surveyors Pickup	25	54.25	99.0	7517.74	5031.99	680.98	
28	54	104.5	Old Eastman	50	54.00	98.5	7517.74	5046.63	660.71	
37	54	-		75	54.25	98.5	7517.80	5061.27	640.45	
43	54	104	"	100	55.00	98.5	7517.86	5075.74	620.06	
63	54	103	"	125	54.00	98.0	7517.99	5090.25	599.71	236.2 - 240.2 m Semi-massive pyrite with
83	54	104	"	150	51.25	98.5	7518.12	5105.42	579.85	associated disseminations, aggregates and
103	55	104	"	175	47.50	99.5	7518.04	5121.69	560.88	veinlets of sphalerite and galena.
108	54.5	104	"	200	43.25	102.0	7517.42	5139.22	543.09	257.0 - 274.35 m Semi-massive to massive
127	54	103.5	"	225	40.50	104.0	7516.03	5157.76	526.40	pyrite with aggregates and veins of
158	50	104.5	"	250	39.00	104.0	7514.27	5176.90	510.42	sphalerite and galena with minor
185	45.5	105.5	"	275	38.00	103.5	7512.57	5196.39	494.86	chalcopyrite.
218	41.0	109.5	"	300	34.50	104.5	7510.72	5216.46	480.08	299.35 - 302.8 m Semi-massive to massive
248	39	109	New Eastman	325	32.75	104.5	7508.64	5237.17	466.24	pyrite with disseminations and aggregates
272	38	109	"	329	32.00	104.5	7508.30	5240.53	464.10	of sphalerite, galena and minor chalco-
302	36.5	110	"							pyrite.
326	32.5	110	"							

HOLE No QR 83D DATE 11/2/76

SAMPLE Nº	FROM (M)	TO (M)	W (cm)	REMARKS	INITIAL ANALYSIS: %Cu AAS	%Cu XRF	%Pb AAS	%Pb XRF	%Zn AAS	%Zn XRF	%Fe TIT	ppm Ag AAS	ppb Au AAS	ppm Au FIRE	CHECK LAB: INT.	%Cu	%Pb	%Zn
163349	234.60	236.15	155	Datum 233 core loss 30 cm.	0.07		0.05		0.16			1	100					
163350	236.15	239.00	285	" 239	0.59			5.20		9.00		17	100					
163351	239.00	240.40	140	" 239	.	1.20		6.25		7.80		62	200					
179352	240.40	242.00	160	" 242	0.18		0.55			1.09		32	350					
179353	242.00	245.00	300	" 245	0.20		0.10		0.55			11	500					
179354	245.00	247.80	280	" 248	0.01		0.06		0.74			5	500					
179355	247.80	250.50	270	" 251	0.09		0.26			1.35		14	450					
179356	250.50	252.80	230	" 254	0.03		0.22			1.16		11	300					
179357	252.80	254.90	210	" 254	0.05		0.22		0.69			12	200					
179358	254.90	257.00	210	" 257	0.21			1.04		1.20		28	200					
179359	257.00	260.00	300	" 260	0.32			4.45		11.2		20	500					
179360	260.00	263.00	300	" 263	0.11			3.55		6.60		23	400					
	236.15	240.40	425		0.79		5.54		8.60			31.8	(0.13)					
	257.00	272.00	1500		0.32		2.51		8.31			22.6	.59					

HOLE No QR 83D DATE 14/2/76

SAMPLE No	FROM |M|	TO |M|	IW |cm|	REMARKS	INITIAL ANALYSIS: %Cu AAS	%Cu XRF	%Pb AAS	%Pb XRF	%Zn AAS	%Zn XRF	%Fe TIT	ppm Ag AAS	ppb Au AAS	ppm Au FIRE	CHECK LAB: INT.	%Cu	%Pb	%Zn
179374	298.87	300.42	155	Datum 302	0.14		0.40		0.65			10	250					
179375	300.42	303.98	356	" 305		1.20		1.10		1.48		38	250					
179376	303.98	305.87	189	" 305	0.03		0.30		0.40			4	250					
179377	305.87	306.73	96	" 308	0.13			1.72		2.80		12	650					
179378	306.73	310.04	331	" 311	0.02		0.25		0.62			6	250					
					0.32		2.51		8.31			22.6	(0.47)					

HOLE No QR 83D DATE 13/2/76

SAMPLE No	FROM (M)	TO (M)	IW (cm)	REMARKS	INITIAL ANALYSIS: %Cu AAS	%Cu XRF	%Pb AAS	%Pb XRF	%Zn AAS	%Zn XRF	%Fe TIT	ppm Ag AAS	ppb Au AAS	ppm Au FIRE	CHECK LAB: INT.	%Cu	%Pb	%Zn
179361	263.00	266.00	300	Datum 266.00	0.13			2.60		7.60		19	350					
179362	266.00	269.00	300	" 269	0.54			1.05		10.3		31	600					
179363	269.00	272.00	300	" 272	0.50		0.92			5.85		20	500					
179364	272.00	274.34	234	" 275	0.48		0.65			1.56		36	800					
179365	274.34	277.28	294	" 278	0.03		0.54		0.74			10	550					
179366	277.28	280.45	317	" 281	0.02		0.39		0.48			10	500					
179367	280.45	283.65	320	" 284	0.01		0.06		0.02			4	250					
179368	283.65	286.78	313	" 287	0.03		0.15		0.29			7	300					
179369	286.78	290.00	322	" 290	0.01		0.09		0.15			4	400					
179370	290.00	293.00	300	" 293	0.01		0.13		0.22			5	450					
179371	293.00	294.30	130	" 296.00	0.83			1.78		3.05		21	300					
179372	294.30	296.00	170	" 296.00	0.02		0.19		0.23			5	300					
179373	296.00	298.87	287	" 299	0.03		0.05		0.04			3	250					

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DIAMOND DRILL LOG

Hole N° QR83D Page N° 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								
	10	No Core.							
	15								
	20								
	22.0								
0.8		AP Weathered, partly kaolinised, iron stained down to 24 m.	BROWN						Pyrite 1%-2% as disseminations and aggregates of fine subhedral to euhedral crystals.
1.6	25	Green chloritised locally carbonated <u>feldspar hornblende crystal lithic tuff agglomerate</u>. Lithic fragments are irregular in outline from 0.5 to 6 cm consisting of porphyritic lava with	GREEN						

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DIAMOND DRILL LOG

Hole N° QR83D 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
1.5		phenocrysts of feldspar to 3 mm (altered to carbonate) in a green chlorite rich groundmass. Feldspar crystals to 3 mm occasionally pink when altered to albite, more commonly white and carbonated are common in the groundmass, which is fine grained and siliceous. The rock is interpreted as a lava breccia. Hornblende crystals are inferred from euhedral aggregates of chlorite to 2 mm. 29.8 - 34.0 m Generally broken core.	BROKEN CORE / BROKEN CORE / F		Pyrite 1%-2% as above.
3.0	30				
2.7					
3.0	35				
3.0		37.5 - 44.2 m Rounded fragments to 6 cm of pink-buff feldspar crystal tuff-lava have been noted.			
3.0	40				
1.2					
0.5	45				
0.5					
0.55					
0.4					
0.6					
1.8		49.4 - 54.4 m Broken core, fractured at 10°, 20°, 30° and 50° to core axis, often chlorite lined.	BROKEN CORE		
0.3	50				

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DIAMOND DRILL LOG

Hole No QR 831 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
0.8		AP as above.	BROKEN CORE		Pyrite 1%-2% as above.
0.6					
0.3					
0.4					
0.2					
0.6					
0.6					
0.1					
0.6	55				
2.7	56.0	Green chloritised locally carbonated feldspar hornblende crystal lava. (The rock is not obviously fragmental.) Feldspar crystals are represented by aggregates to 4 mm of white carbonate aggregates of chlorite to 2 mm often euhedral in outline are thought to represent hornblende. The groundmass is fine grained and chloritic. The rock may be a chloritised DTL. 58.3 - 60.5 m Fractures parallel and 30°, 50° to core axis. 65.3 m Sample for Petrology 176495.	BROKEN CORE		
0.5					
0.2					
2.1	60				
1.5				62.0	Pyrite <1% as disseminations and aggregates, locally 1%-2%.
0.7					
2.1					
	65				
1.4					
2.9					
0.2	70				
1.4			BROKEN CORE		
0.7					
1.4					
0.5			BROKEN CORE		
	75				

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DIAMOND DRILL LOG

Hole N° QR83D Page N° 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
2.2		AP as above.	BROKEN CORE						Pyrite as above.
0.6									
1.8									
0.7	79.8		BROKEN CORE						
1.2	80	Green chloritic locally carbonated feldspar crystal lithic tuff agglomerate, (lava breccia) as above 56 m.							
0.6	82.3								
1.2		Fault zone. Pug, breccia, 80% sheared and broken core.							
0.6									
0.8									
	85								
0.6									
	85.6								
1.2		Carbonate alteration zone, the rock is buff in colour.							
	87.1								
0.8		Fault zone. The rock is locally brecciated, sheared and disrupted. Numerous cavities have been noted and may represent the solution of carbonate cement. Chlorite alteration has been noted.	BROKEN CORE F						
0.3									
0.6									
0.5	90	Fragments are angular in shape.							
0.6									
0.5									
0.6									
0.5	93.5								
0.9		The rock is a lithic tuff agglomerate with irregular green (chloritised) fragments of feldspar crystal lava?	BROKEN CORE DDH F						
	95	and occasional DTL to 6 cm.							
1.1		The groundmass is fine grained, pale buff in colour and carbonate rich.							
0.3									
1.2									
0.3									
0.8			BROKEN CORE F						
0.4	100								

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DIAMOND DRILL LOG

Hole N° QR83D 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
0.8		AP as above.	BROKEN CORE						Pyrite < 1% locally 1%-2% as above.
0.9									
0.5									
1.0									
0.5									
	104.5								
0.6	105	Fault zone. Pug, sheared and broken core. 50° to core axis.							
0.6									
	105.80	Fault Contact.						105.8	Pyrite 3% as disseminations, aggregates and irregular veins filling fractures.
		DTL Buff-grey carbonated and locally sericitised feldspar crystal tuff-lava.							
2.5		Feldspar crystals are represented by aggregates of pale green sericite to 3 mm and are randomly distributed in a quartzo-feldspathic groundmass. The rock is locally altered grey in colour along pyrite filled fractures.	BROKEN CORE						
0.7									
1.0									
	110								
1.0									
1.7									
2.3									
	115							115	Pyrite 3%-5% as disseminations, aggregates and irregular veins.
0.5		PyP_1 Light grey-buff carbonated locally sericitised lithic tuff agglomerate. Similar to the DTL above. Irregular shaped fragments from 5 mm to 6 cm of DTL predominate, commonly grey in colour due to pyrite alteration. The matrix is grey and siliceous, pyrite rich.	BROKEN CORE						
1.9									
1.1									
2.3									
	119.6							119.6	Pyrite 3% as above.
	120	DTL Grey-green, buff feldspar crystal tuff-lava locally breccia. Similar to above 115 m, includes minor fragmental bands of grey pyritic rock.							
0.7									
1.8									
0.4									
	125								

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DIAMOND DRILL LOG

Hole N° QR83D Page N° 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	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
1.9		125.3 m 3 cm carbonated cemented breccia zone. Irregular fragments of feldspar crystal tuff-lava with white carbonate aggregates to 3 mm after feldspar? have been noted.	Broken core						Pyrite 3% as above.
1.2									
1.2		Fractures 20°, 30°, 50° to core axis often chlorite lined.							
3.0	130								
3.0									
1.8	135								
2.7									
3.0	140	142.0 - 155.0 m Pale green in colour minor chlorite alteration, occasionally lithic tuff agglomerate, lava breccia?							
3.0	145								
3.0									
	150								

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DIAMOND DRILL LOG

Hole No QR83D 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.			Pyrite 3% as above.
3.0		The rock is generally fragmental, lithic fragments of feldspar crystal tuff-lava are pale green in colour, feldspar is represented by pale green aggregates of sericite up to 3 mm.			
	155	There are minor bands of feldspar crystal tuff-lava, irregular shaped aggregates of sericite may represent devitrified glass.			
2.7					
3.0					
	160				
3.0					
	165				
3.0		166.4 - 169.6 m Carbonate alteration zone. The rock is generally carbonated, minor veins to 2 cm at various core angles are common.			
1.5					
1.5					
	170				
3.0					
		174.5 - 181.8 m The rock is generally carbonated, minor carbonate veins to 1 cm are common.			
3.0					
	175				

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DIAMOND DRILL LOG

Hole N° QR83D Page N° 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
		175.0 - 176.3 m The rock is disrupted and sheared at 40° to core axis.							Pyrite 3% as above.
3.0									
	180								
3.0		181.0 - 183.0 m Minor PyP_1 band. Irregular fragments of sheared and sericitised pale green feldspar crystal tuff-lava to 3 cm are common.							
3.0		184.2 - 185.9 m Carbonate alteration zone, carbonate veinlets to 3 cm at various core angles.							
	185								
3.0		186.0 m Numerous vitric shards are interpreted from irregular aggregates of green sericite.							
3.0									
	190								
3.0									
		Below 194.0 m the rock is generally a massive lava, pyrite is common along fractures.						193.6	Pyrite 5%-10% as disseminations of fine subhedral-euhedral crystals.
	195								
3.0		Fractures 30° - 40° to core axis often chlorite lined.						195.2	Pyrite 2%-3% as above.
								196.0	10 cm Pyrite 15% as aggregates associated with carbonate vein.
		198.8 - 200.6 m Carbonate alteration zone, carbonate veins to 5 cm at 10°-20° to core axis.							
3.0									
	200								

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DIAMOND DRILL LOG

Hole N° QR85D Page N° 9.

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		Altered DTL as above. 206.0 - 207.1 m Minor grey carbonated coarse lithic tuff band.							Pyrite 2%-3% as above.
3.0	205								
3.0		208.0 m The rock is fractured 20° - 30° to core axis commonly "healed" with chlorite.							
3.0	210							209.5	15 cm pyrite 30% as disseminations, aggregates and irregular veins.
								211.0	Py 10% as disseminations aggregates and irregular veins.
								211.7	
								212.4	Py 2%-3% as above.
									Py 10%-15% as irregular veins and aggregates.
	213.0	Gradational Contact.							
3.0		PyP_1 Grey sericitised locally carbonated lithic tuff agglomerate. The rock is generally sheared and disrupted. Lithic fragments where visible are angular to sub-rounded feldspar crystal tuff-lava, grey recrystallised chert and occasional						213.9	Py 3%-5% as above.
	215							215.3	Py 15%-20% as disseminations, aggregates and irregular veins.
1.8	216.2	pyrite. The matrix is grey & siliceous. Fault zone. Pug, sheared and broken core 40° to core axis, minor carbonate						216.8	Py 5%-10% as above.
1.0	217.3	alteration. The rock is highly sheared 50° to core axis.							
2.8	219.9								
	220	Fault zone. Pug, sheared & broken core.						220.3	Py 30%-40%.
	220.3	220.8 - 221.9 m Grey-green vesicular lava or large fragment? Carbonate filled vesicles to 4 mm are common.						220.8	Py 1%-2% as disseminations.
3.0	221.9	Grey carbonated and sericitised lithic tuff agglomerate. Lithic fragments to 6 cm consist of feldspar crystal tuff-lava and occasional fine grey tuff.						221.9	Py 10%-15%, rare Sph, Gn as disseminations and aggregates.
								223.9	Py 5%, locally 10% as disseminations, aggregates and irregular veins with rare SPh, Gn, Cpy.
	225								

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DIAMOND DRILL LOG

Hole N° QR83D Page N° 10.

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		PyP_1 as above.		226.2	Py 30% as an irregular vein of subhedral-euhedral crystals.
3.0				227.5	Py 5%, locally 10% as disseminations, aggregates and irregular veins, rare Sph, Gn.
3.0	230				
3.0				233.8	Py 20% as dissemination
3.0				234.1	and aggregates.
	234.8			234.9	Py 5%, locally 10% as abo
	235	Fault zone. Pug, sheared & broken core carbonate rich.	F		Py 20%-30%, rare Sph, Gn a
	235.3	The rock is sheared at 60° to core axis locally cemented with carbonate down to 237 m.	C	236.2	disseminations and aggreg ates banded at 60° to C.A
3.0					Py 20%-30%, Sph 5%-8%, Gn 5 Cpy 1% as disseminations, aggregates and irregular veins with a carbonate gangue.
3.0				239.4	Py 40%, Sph 2%-3%, Gn 1%- Cpy 2%-3%.
	240				
3.0		240.4 m The rock is carbonate rich, carbonate aggregates to 4 mm are very common.		240.2	Py 10% as disseminatic and aggregates.
		Grey carbonated locally sericitised feldspar crystal lithic tuff. Feldspar crystals are represented by white aggregates of carbonate to 4 mm. Lithic fragments, irregular to sub-rounded are up to 2 cm. Generally fragment outlines are obscure.		241.3	Py 60% rare Sph, Gn.
3.0				242.1	Py 10%, locally 15% as disseminations, aggregate and irregular veins.
	245	Carbonate spotting is common.	F	243.2	Py 20-30%. Sph 1-2%, Gn 1%.
3.0				245.5	Py 5% as above.
				246.0	Py 20%-30% as above.
		247.0 m Sample for Petrology 173975.		246.5	Py 10%-15% rare Sph, Gn.
				247.8	Py 60%, Sph 1%-3%, Gn 1%
				248.25	2% as irregular veins and aggregates.
3.0					Pyrite 20%-30% rare Sph, Gn as disseminations and aggregates.
	250				

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DIAMOND DRILL LOG

Hole N° QR83D Page N° 11.

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
		PyP_1 as above.		250.4	Py 3%-5%, locally 10% rare Sph, Gn as disseminations and aggregates.
3.0				252.4	5 cm Py 50%, Sph 1%-2% Gn 2%.
	255			255.0	5 cm Py 40%, Sph 2%-3%,
3.0	255.5	Fault zone. Pug, 60% sheared and broken core. 50° to core axis. Chlorite and		255.5	Gn 3%. Py 5%, locally 10%, trace Sph, Gn and Cpy as dissemi ations and aggregates.
	256.8	sericite alteration is common.		257.0	
		Semi-massive to massive pyrite with associated sphalerite and galena in a sericite gangue. Contact parallel to cleavage 30° to core axis.		258.8	Py 40%-50%, Sph 8%-10%, Gn 5%-8%, trace Cpy. as disseminations, aggregates and irregular veins. Py 20%-30%, Sph 2%-3%, Gn 2 trace barite as dissemin- ations and aggregates.
3.0		The sulphides are generally banded 30° - 50° to core axis.		260.7	Py 40%-50% as dissemin- ations, aggregates of fine subhedral to euhedral crystals, occasional fragments to 1 cm. Sph 5%-8%, Gn 5% as diss- eminations and aggregates Cpy 1% locally 5%.
	260				
3.0					
	265				
3.0				268.7	Py 40%-50% as above Sph 3%-5%, Gn 3%-5%, Cpy 1%-3% as disseminat -s and aggregates of fine subhedral to euhedral crystals.
3.0	270				
			F	272.8	Py 30 %, Sph 8%, Gn 5%, tr
				273.1	Cpy. Py 40%-50%, Sph 3%-5%, G 2%-3%, Cpy 1%-2%.
3.0				274.35	Py 30%-40% tr Sph, Gn, C
		Grey pyritised silicified and sericitised			
	275	lithic tuff agglomerate as matrix to			

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DIAMOND DRILL LOG

Hole Nº QR85D Page Nº 12.

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
3.0		semi-massive sulphides.		276.0	Pyrite 10%, locally 40% Sph 1%-2%, Gn 1%, trace Cpy as disseminations, aggregates and irregular veinlets.
3.0	280			280.2	Py 30%-40%, Sph 1%-2%,
				280.6	Gn 1%, trace Cpy.
3.0					Py 30%-40% as above, trace Sph, Gn, Cpy as disseminations, aggregates and irregular veins.
3.0	285				
3.0		288.3 m Grey carbonated and silicified lithic tuff agglomerate.	F	288.3	Py 5% locally 15% as disseminations and aggregates.
3.0	290			289.9	Py 20%-30%, Sph 1%-2% Gn 1% as disseminations aggregates and irregular
				291.0	veins.
3.0			F		Py 10%, locally 15% as disseminations & aggregat
				292.9	Py 40% locally 60%, Sph 3%-5%, Gn 3%, Cpy 3%.
3.0		Below 294.3 m the rock is weakly sheared and completely sericitised lithic tuff agglomerate? as gangue to semi-massive sulphides.		294.3	Py 15%, locally 30% rar Sph, Gn, Cpy. Trace barit
	295		F		
3.0					
				299.0	Py 30% as above.
				299.35	Py 50%, Sph 3%-5%, Gn 3% Cpy 1%-2% as disseminatio
	300				

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DIAMOND DRILL LOG

Hole N° QR83D Page N° 13.

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	TRACE / COMMON / ABUNDANT / MASSIVE	DEPTH m	MINERALIZATION
3.0		PyP_1 as above. Crude foliation 40° - 50° to core axis.				aggregates and irregular veins.
3.0					302.8	Py 10%, locally 30%, trace Sph, Gn as dissemi ations, aggregates and irregular veins.
	305					
3.0	306.5				305.9 306.5	Py 30%, Sph 3%-5%, Gn 5% trace Cpy as disseminat ions and aggregates.
		Grey carbonated locally sericitised and silicified lithic tuff agglomerate. Lithic fragments are irregular to sub-rounded from 0.5 mm to 5 cm and consist of buff coloured feldspar crystal tuff-lava, grey fine grained tuff and recrystallised chert. The matrix is grey fine grained and siliceous. Aggregates of green illite-hydro-muscovite to 3 mm have been noted.			307.2	Py 5%-10% rare Sph, Gn. 10 cm Py 20%, Sph 3%, Gn2
					308.0	5 cm Py 20%, Sph 3%, Gn2
3.0					308.5	15 cm trace Sph, Gn, Py 2
	310				310.0	15 cm Py 30% trace Sph Gn.
					310.8	5 cm Py 30% tr Sph, Gn.
					311.4	15 cm Py 30% tr Sph, Gr
3.0						
	315					
3.0					315.3	Py 15%, rare Sph, Gn.
					316.0	Py 5% rare Sph, Gn.
3.0						
					319.5	Py 15%.
	320				320.0	
3.0						Py 5% rare Sph, Gn.
3.0					324.5	5 cm Py 40% tr Cpy.
	325					

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DIAMOND DRILL LOG

Hole N° QR83D Page N° 14.

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	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		PyP_1 as above.							
3.0								327.0	15 cm Py 30% trace Sph, Gn.
	329.0	E.O.H.							
	330								

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DRILL HOLE RECORD

Location Que River | Property ML 2M/75 | District Tasmania | Alt./R.L. | Hole No QR83D extension

Commenced 4/7/76 | Completed 12/7/76 | Core size BQ 329m to EOH 536.5 | Co-ordinate | Date 14/7/76

Objective To test beneath S lens 7500N, 480 RL. | % Recovery 99 | Bearing (M) | Grid bearing (M) 8.75° | Logged C.H. Young | Dip

SURVEY DATA			
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE
319	34	109.5	Eastman
346	31	109	Single
376	29	111	Shot
406	27.75	111.5	Camera
435	25.5	112.5	"
462	23.5	114.5	"
493	22	113	"
520	21	111.5	"
533	21	113	"

GRAPH DERIVED DATA						REMARKS
DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
325	32.75	104.5	7508.64	5237.17	466.24	
350	31.0	104.5	7506.51	5258.29	453.04	Very minor base metal mineralization
375	29.0	105.0	7504.25	5279.32	440.54	400-430m, may represent "S" lens
400	28.0	106.5	7501.57	5301.62	423.61	position.
425	26.5	107.5	7498.38	5323.62	417.17	
450	24.5	109.0	7494.66	5345.87	406.41	
475	23.0	109.5	7490.48	5368.36	396.34	
500	21.75	108.5	7486.37	5391.11	386.82	
525	21.0	107.5	7482.63	5414.09	377.71	
536.5	21.0	108.5	7480.89	5424.77	373.55	

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DIAMOND DRILL LOG

Hole No QR83D ext Page No 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
	329.0	Commence QR 83D extension			
N/C	330	PyP_1. Grey carbonated locally sericitised and silicified lithic tuff agglomerate as above.			Pyrite 5% as above, as disseminations, aggregates and veins. Rare Sph, Gn, Cpy.
0.6					
3.1		Fragments are commonly sericitised, occasionally silicified feldspar porphyry lava.			
	335				
3.1					
1.4		Crude fragment alignment 55° C.A.			
2.0	340				
2.8					
3.1	345				
3.1					
	350				

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DIAMOND DRILL LOG

Hole No QR83D ext 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
3.0		PyP_1 as above.	F		Pyrite 5% as above. Rare Sph, Gn, Cpy.
3.0	354.4	Increased sericite alteration down to 361.0m.		354.4	354.4m. Pyrite 10% locally 15%. Rare Sph, Gn, Cpy.
3.0	355				
3.0				359	Pyrite 15% locally 20% Rare Sph, Gn, Cpy.
3.0	360				
3.0				361.7	Pyrite 2-3% as disseminations and aggregates.
3.0	365		F		
2.8					
3.1	370				
	375				

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DIAMOND DRILL LOG

Hole N° QR83D ext 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	MINERALIZATION
3.0		PyP_1 as above	Pyrite 2-3% as above.
			375.9 Pyrite 5% as above.
2.5	378		
		Sericite alteration zone. The core is soft and rich in sericite. Fragment outlines are obvious.	
3.1	380		
	381.8		
3.1		Below 381.8 the rock is grey carbonated locally sericitised lithic tuff agglomerate.	
	385	Lithic fragments up to 6cm have been noted, fragment outlines are often obscure.	385 Pyrite 10% as disseminations, aggregates and irregular veins. Rare Sph, Cn, Cpy generally associated with carbonate veins.
3.1			
	390		
3.1			370.4 15cm pyrite 15, Sph 2 Gn 3.
			391.1 Pyrite 5% as above.
3.1			
	395		
3.0			396.2 Pyrite 2-3% as disseminations and aggregates.
3.0			
	400		

VISUAL LOG: TRACE / COMMON / ABUNDANT / MASSIVE

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DIAMOND DRILL LOG

Hole No QR83D ext 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		PyPl as above.							Pyrite 2-3% as above.
								402.5	Pyrite 7-10% as disseminations, aggregates and irregular veins. Rare Sph, Gn.
3.0	405								
								406.6	Pyrite 5% as above.
3.0									
	410								
3.0									
		412.3 - 414.7m. Silica alteration is dominant.						412.4	Pyrite 7-10% as above. Trace Sph, Gn.
3.0		CONTACT							
	414.5							414.5	Pyrite 10%, trace Sph, Gn.
	415	Chlorite-silica alteration zone down to 417.2m. Grey siliceous feldspar crystal tuff or lava? Feldspar crystals up to 3mm are represented by aggregates of pale green sericite, often euhedral in outline. The matrix or groundmass is fine grained and siliceous. Foliation approx. 65° C.A. Occasional small 1cm lithic fragments have been noted.							
3.0								417.2	Pyrite 3-5% as disseminations and aggregates, very rare Sph, Gn as stringers.
									420.6 - 422.5. Rare aggregates of Cpy to 6cm.
	420								
3.0									
3.0	423.5	Dark grey carbonated locally sericitised and chloritised, coarse lithic tuff. (Feldspar crystal)							
	425								

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DIAMOND DRILL LOG

Hole N° QR83D ext 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	DEPTH m	MINERALIZATION
3.0		Lithic fragments are irregular in outline generally 1-2cm. They are commonly altered by chlorite/sericite and are darker coloured (green) than the matrix. The matrix is fine grained and siliceous and contains numerous aggregates of sericite after feldspar.			Pyrite 3-5% as above, very rare sph, gn.
3.0				428.1	5cm stringers, Py 10 sph 15, Gn 8.
3.0	430				
	430.6				
3.0		Grey carbonated locally sericitised lithic tuff agglomerate (feldspar crystal). Similar to the rocks above 430.6m. Fragments are larger, up to 6cm, irregular to sub-rounded in outline. Feldspar crystals are not common.			
3.0	435	Fragments are generally darker in colour (grey) than the matrix, replaced by sericite, feldspar porphyry. The matrix is grey-fine grained and siliceous.			
3.0					
3.0	440				
				446.5	Pyrite 3-5% as disseminations, aggregates and irregular veins.
3.0	445				
3.0					
	450				

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DIAMOND DRILL LOG

Hole N° QR83D ext 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
3.0		Feldspar crystal lithic tuff agglomerate as above.							Pyrite 3-5% as above.
3.0		This unit is characterised by "minor" changes in colour, dark grey, pale grey, green-grey etc. In general fragments are darker in colour than the matrix.							
	455							454.5	10cm pyrite 20%, Sph 5%, Gn 5% with chlorite, 40° C.A.
3.0									
3.0									
	460								
3.0									
	464.8	GRADATIONAL CONTACT						464.8	Pyrite 2-3% as disseminations, aggregates and irregular veins.
	465	DTL. Grey green carbonated locally sericitised feldspar porphyry lava. Feldspar phenocrysts to 3mm are represented by aggregates of pale green sericite - commonly replaced by pyrite.							
3.0		The groundmass is light grey to buff in colour - quartz-feldspathic.							
3.0		At 460m banding (flow banding) at 45° C.A.							
	470								
3.0									
	472.8							472.8	Pyrite <1%.
3.0		Green - buff carbonated locally chloritic dacitic lava. Fine grained locally vesicular lava with small feldspar phenocrysts.							
	475								

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DIAMOND DRILL LOG

Hole No QR83D ext 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	479.3	DTL. as above. Feldspar phenocrysts are small <2mm generally replaced by sericite. White carbonate aggregates elongate in outline fill vesicles.		478.3	Pyrite <1% as above.
3.0	480	PyP1. Green-grey carbonated locally sericitised lithic tuff/lithic tuff agglomerate. Mixed fragment type including green vein	BROKEN CORE	480.3	Pyrite 2-3% as disseminations and aggregates.
3.0	480.2	DTL. lava? Green carbonated locally chloritised dacite lava as above. Feldspar crystals generally <2mm replaced by sericite. The groundmass is green due to weak chlorite alteration, quartz-feldspathic.			Py <1 as above.
3.0	485	Contact 50° to core axis.			
3.0	485.9	PyP1. Blue grey carbonated locally sericitised coarse lithic tuff - lithic tuff agglomerate. Lithic fragments are irregular in outline from 0.5cm to 5cm. They are generally feldspar porphyry lava-dacite, occasionally sericitised trachyte?		485.9	Pyrite 3% as disseminations and aggregates.
3.0	490	Crude fragment alignment 50° C.A.			
3.0		The matrix varies from blue grey to pale grey green in colour, generally fine grained and siliceous.		491.4	5cm Py 30%
3.0	495				
3.0		498.6m. Banding 45° C.A.			
	500				

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DIAMOND DRILL LOG

Hole NO QR83D ext Page N° 8.

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
		PyP1 as above.			Pyrite 3% as disseminations and aggregates as above.
3.0	501.2	DTL. Pale green carbonated locally sericitised lava. "Boulder?"		501.2	Pyrite <1%
	502.3	PyP1. Grey carbonated locally sericitised lithic tuff/lithic tuff agglomerate.		502.3	Pyrite 3% as above. Locally 5%.
3.0		Lithic fragments are irregular in outline, generally sericitised. They consist of buff coloured DTL, grey chert and lava.			
	505	This rock may be a reworked tuff? Locally tuff agglomerate, some fragments up to 5cm have been noted.			
3.0		The matrix is fine grained and "gritty". Foliation is 60° C.A.			
	510				
3.0	510.5	Grey carbonated locally sericitised lithic tuff agglomerate.			
3.0		Lithic fragments from 0.5cm to 6cm are irregular to subrounded in outline - although fragment outlines are often obscured. Fragments vary from light grey, to grey green in colour. Occasionally vesicular.			
	515				
3.0					
3.0			F		
	520		F		
		Fractures common 40° C.A.	T c		
3.0					
				523.6	Pyrite 3-5%, rare Sph, Gn as minor stringers to 1 cm.
3.0	525				

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DIAMOND DRILL LOG

Hole N° QR83D ext Page N° 9.

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
		PyP1 as above.			Pyrite 3%, rare Sph, Gn as above.
	526.5			526.5	
2.6		Fault zone. 40° C.A. Pug, breccia. 70% broken core.			Pyrite 3% as above.
1.0	530				
2.2	531	Green-grey carbonated locally chloritic lithic tuff agglomerate. Lithic fragments are green - altered by chlorite - feldspar crystal lava - or vesicular lava.		531	Pyrite 2-3% locally 5%
3.0		The matrix is light grey and siliceous.			
	535				
	535.5	END OF HOLE.		534.8	1cm stringers, Py 10, Sph 5, Gn 5.