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DRILL HOLE RECORD

Location Que River | Property Mineral Lease 2m/75 | District Tasmania | Bearing (M) 95°.46'. | Hole No QR 98

Commenced 16.8.76. | Completed 23.8.76. | % Recovery 93.6% | Grid bearing (M) 8°.45'. | Date 25.8.76

Objective To test for Plan 7700N 513 RL | Core size HQ. to 24m., NQ to 154m, B.Q. to completion. | Logged C.H. Young

Co-ordinates 7704.49N. 5051.53E. Dip 58°.20'. | Alt./R.L. 698.7m.

SURVEY DATA			
DEPTH	DIP	BEARING (M)	INSTRUMENT TYPE
0	58.5	097°	THEODOLITE AND BRUNTON
0	58°.20.	95°.46'	SURVEYORS PICK UP
5	58.5	—	OLD EASTMAN
20	58	104°	"
49	57.5	104°	"
73	57	104°	"
94	56.5	103.5°	"
115	56.25	104°	"
136	56	103.5°	"
154	56	104.5°	"
171	56	104	"
188	56	103	"

GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING (M)	NORTHING	EASTING	ALTITUDE	
0	58.3	95.8	7704.49	5051.53	698.70	
25	58.0	96.0	7705.15	5064.70	677.46	
50	57.5	96.0	7705.79	5078.03	656.32	Hole abandoned at 187.8m Due to required deflection not being achieved
75	57.0	96.0	7706.44	5091.53	635.29	
100	56.5	95.8	7707.13	5105.22	614.39	
125	56.3	96.0	7707.82	5119.05	593.57	
150	56.0	96.3	7708.46	5132.97	572.81	- Re drilled from Wedge set at
175	56.0	96.0	7709.10	5146.94	552.09	
187.8	56.0	95.5	7709.48	5154.08	541.47	

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DIAMOND DRILL LOG

Hole No QR98 Page No 1.

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
	5								
HQ 0.1	6.1	RyP. Grey carbonated and sericitized lithic tuff - agglomerate/agglomerate. Lithic fragments are irregular in outline from 0.5 mm to 15 cm	SHEARED and BROKEN					6.1	Pyrite 3% - 5% as disseminations, aggr. to and irregular fracture filling veins of fine subhedral to euhedral crystals.
3.0	9.3	Fault zone. Pvg. sheared and broken core							
2.9	9.9 10	possibly to 2m. - Here are lengths of core of uniform feldspar crystal tuff - lava interpreted here to be fragments. Feldspar is altered to pale green sericite. The matrix is grey - fine grained and "oaty".	BROKEN CORE						
3.1	15	Fragments show typical "cusp" outlines. The larger fragments are often fractured. Feldspar crystals may be present within the matrix.							
3.1									
1.4	20								
1.5									
2.2									
HQ NQ 1.5	25								

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DIAMOND DRILL LOG

Hole N° QR 98 Page N° 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	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
2.1	30	P & P, as above Grey carbonated locally silicified lithic tuff agglomerate / agglomerate as above. Below 31.7m the rock is contorted - largely to secondary carbonate alteration.	C						Pyrite 3% - 5% as above.
0.8									
3.0	35	32.7 – 34.9. Large fragment of feldspar crystal tuff - lava illustrating flow lagering							
3.0									
3.0	40	Crude fragment alignment or foliation at 25° - 30° to C.A.							
3.0									
3.0	45								
3.0			F						
	50								

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DIAMOND DRILL LOG

Hole No DR 98 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	TRACE / COMMON / ABUNDANT / MASSIVE	DEPTH m	MINERALIZATION
		Py P_1. Grey carbonated and sericitized lithic tuff - agglomerate / agglomerate. This unit includes fragmental to 1.5m of pyritized - tuff feldspar crystal tuff - lava				Pyrite 3% - 5% as above
2.5	55					
0.2		Locally sheared 30° - 40° to C.A.				
1.4						
1.8		Bedding ? 35° to C.A. axis.				
	58.7					
0.7	59.7	Fault zone Pug, breccia, sheared and broken core. 50° C.A.				
1.8	60					
3.0					63.0	5cm Py 30. Vein 20° C.A.
1.5	65	64.5 - 67.3. Sericitic alteration is predominant.			64.5	Pyrite 10% locally 20% (where indicated) as disseminations, aggregates and irregular veins.
3.1						
3.3	70	Foliation, bedding ? 30° C.A.			70.3	Pyrite 3% - 5% as above.
1.2						
	73.5	FAULT CONTACT			73.5	Pyrite 5% 30% where indicated.
3.0	75	Blue grey carbonated and sericitized coarse lithic tuff / tuff agglomerate. (Possibly reworked tuff)				Euhedral crystals to 4mm

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DIAMOND DRILL LOG

Hole No QH 93 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	DEPTH m	MINERALIZATION
		Lithic fragments from 0.5mm to 5cm (occasionally) are generally sub-rounded to rounded in outline. Mineral fragment types include buff feldspar crystal tuff, grey tuff, grey recrystallized chert, sericitized tuff(?). The matrix is grey in colour fine grained and siliceous. There is a poorly defined foliation at 30° to C.A. Pyrite has been noted as fragments.			Have been noted.
3.0	80				Interpreted N limb position
3.0				78.2	Pyrite 1% locally 3% (where indicated) Sph blende 3% locally 5% Galena 1%-2% in a carbonate - barite 10% gangue.
1.4				81.4	Pyrite 1% as disseminations and aggregates. Locally 3% as veins. Trace Sph, Gn.
3.1	85				
3.1		Below 88.0m the fragment size increases, locally 5cm. The rock is a lithic tuff agglomerate.		87.00	Pyrite 5%-7% as above
0.8	90				
3.1	91.4	Fault zone. Minor fug, carbonate cemented breccia, sericite. 20°-30° C.A.		91.4	Pyrite 10% locally 15% in a breccia, carbonate gangue.
	92.6			92.6	
3.1	95			96.1	Pyrite 5%-7% as above, Trace Sph, Gn as aggregate.
3.1	97.2	Blue grey carbonated sericitized lithic tuff. as above.		99.1	10 cm pyrite 50% no vein.
		Clearing 30° C.A.		99.5	5cm vein Py 30% Sph 20% Gn 5% Gang. 3%
	100				

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DIAMOND DRILL LOG

Hole No PR 98 Page No 5

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
3.1		Py P, as above.							Pyrite 5% - 7% as above. Trace Sph, Gn.
3.1	105								
	106.9	Below 106.0 m the rock is lithic tuff - agglomerate.						106.7	Pyrite 15% as disseminations and aggregates Trace Sph, Gn.
2.1		Fault zone 106.7 - 119.5 m. Sheared and sericitized to 109.1 m. including abundant carbonate alteration. 25° C.A.						109.1	Pyrite 5% - 7% trace Sph, Gn.
2.5	110								
0.6		111.6 - 115.6 Mostly fg and breccia.							
1.7									
1.4								114.6	Pyrite 40%, Sphalerite 3% - 6% Galena 2% 3% Barite - 1 Chalcopyrite 1% - 2%. as aggregates, veins and some massive bands.
2.1	115	115.3. Brecciated massive sulfides.							
		116.0 - 121.2. The rock is heavily carbonated.						117.1	Pyrite 5% as above
2.0		119.3 m. 15cm carbonate cemented breccia.							
	119.5								
2.2	120	Grey carbonated, sericitized, lithic tuff - agglomerate as above. Possibly reworked.						121.3	Pyrite 40% Trace Sph, Gn
2.7								122.5	Pyrite 5% as above.
	125	124.8 30cm Chlorite alteration zone						124.6	Pyrite 10% locally 15%

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DIAMOND DRILL LOG

Hole No QR 93 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
		Pyf as above.		125.2	Pyrite 30% Sph 5-8% Galena 3-5%
3.0	126.0	Fault zone Pug and breccia, 60%			
	127.0	Broken core		127.1	Pyrite 5% locally 10%
3.0					
	129	Fault zone Pug and breccia. Some quartz.		129.	Pyrite 40% locally 70%
	129.8			129.8	Sph 3-5% Gn 1-3% Cpy 1-2%.
	130	Bk core is oblong at 55° to C.A.			Below 129.8. Pyrite 10%.
3.0				131.2	
				131.5	Pyrite 40% Trace Sph, Gn.
	132.0	Fault zone Pug and breccia. 60% oblong and broken core. 50° to C.A.			Pyrite 10% Trace Sph, Gn.
0.5					
	133.8			133.8	Pyrite 15% locally 40% Trace Sph, Gn. as disseminations, aggregate and irregular veins.
2.3	135				
1.3					
	137.1				
	137.5	Fault zone Pug and Breccia.			
1.7					
				138.7	Pyrite 5%.
	139.1	CONTACT 30° core axis.		139.1	Pyrite <1% as discrete disseminations.
		DTL Buff to grey green carbonated tuff-lava. (locally chloritic) Fine grained massive tuff-lava. Groundmass is quartzo-feldspathic.			
2.0	140				
3.0		Slk rock is massive and jointed. Fractures - 30° to core axis.			
1.5	145				
	145.5				
2.5		Buff to green carbonated locally chloritic lava breccia with a siliceous matrix. Fragments are irregular in outline to 6cm. Commonly flow banded.			
3.0	150				

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DIAMOND DRILL LOG

Hole No QR 98 Page No 7

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
	150.7	Lam breccia as above		150.7	Pyrite <1 as above.
		GP Grey-green coarse lithic tuff with abundant illite - hydromuscovite.			Pyrite 5% locally 10% as disseminations and aggregates
2.0	151.6	DTL Pink - buff and grey green carbonated lithic tuff - agglomerate / agglomerate.		151.6	Pyrite 1% as disseminations and occasional aggregates and fragments.
NQ / BQ 0.5	153	(This unit has occasionally been logged as RyPo in other holes)			
3.0	155	Lithic fragments are generally buff in colour, fine grained tuff from 0.5 mm to 20 cm in size.			
1.0		Fragments of pyrite have been noted.			
3.0		The matrix is grey in colour fine grained - "ashy". and siliceous.			
	160				
2.1		163.0 - 172.0. Fragments are generally green in colour due to weak chlorite alteration.			
1.0		Crude fragment alignment 10° CA.	BROKEN CORE		
	165				
2.3					
2.1					
	170				
3.0					
	171.6	Gradational contact		171.6	Pyrite <1%
		Buff - green carbonated tuff - lava - very fine grained.			
3.0					
	175				

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DIAMOND DRILL LOG

Hole No QR 98 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
		tuff - lava as above.							Pyrite < 1% as above
3.0	176.8	buff-grey carbonated lithic tuff - agglomerate as above.						176.8	Pyrite 1% as above
	177.9	CONTACT BEDDED? 30° CA. GRADATIONAL CONTACT						177.9	
3.0	180	P_1P_2 Grey - locally sheared carbonated and sericitized lithic tuff - agglomerate. Lithic fragments are irregular to sub-rounded in outline from 0.5mm to 5cm. Occasionally well shredded outlines similar P_1P_2 types.							Pyrite 3% as disseminations, aggregates and irregular veins. and occasional fragments.
1.5		The matrix is light grey in colour - siliceous and ashy in appearance.							
1.4									
1.5	185	Crude fragment alignment 20° CA.							
1.5	186.35	Fault zone Peg, breccia and quartz carbonate veining 40° CA.							
	187.40							187.4	Pyrite 5%.
	187.8 E.O.H.	Sheared grey lith as above.							
		Hole abandoned at 187.8 m. No kick could be induced using 5 ft core barrel and BQ step Bit.							
		Wedge set at 150.2 m in NQ casing. New hole drilled as QR 98W.							

QR 98 EASTMAN SINGLE SHOT DOWNHOLE COMPASS SURVEY.

QR 98A.

COMMENCED : 14-8-76 & 16-8-76.

COMPLETED : 23-8-76

DEPTH OF HOLE : 187.80 m.