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DRILL HOLE RECORD

Location Que River | Property Mineral Lease 2m/15 | District Tasmania. | Bearing (M) 96° | Hole No QR98D.

Commenced 27.8.76. | Completed 8.9.76. | % Recovery 95.75% | Grid bearing (M) 8.75° | Date 11.9.76

Objective To test for Pb-Zn 7700N 510 RL. | Core size BQ. | Logged C.H. Young

Co-ordinates Daughter Hole off QR98 | Dip 56.3° | Alt./R.L. 597.74

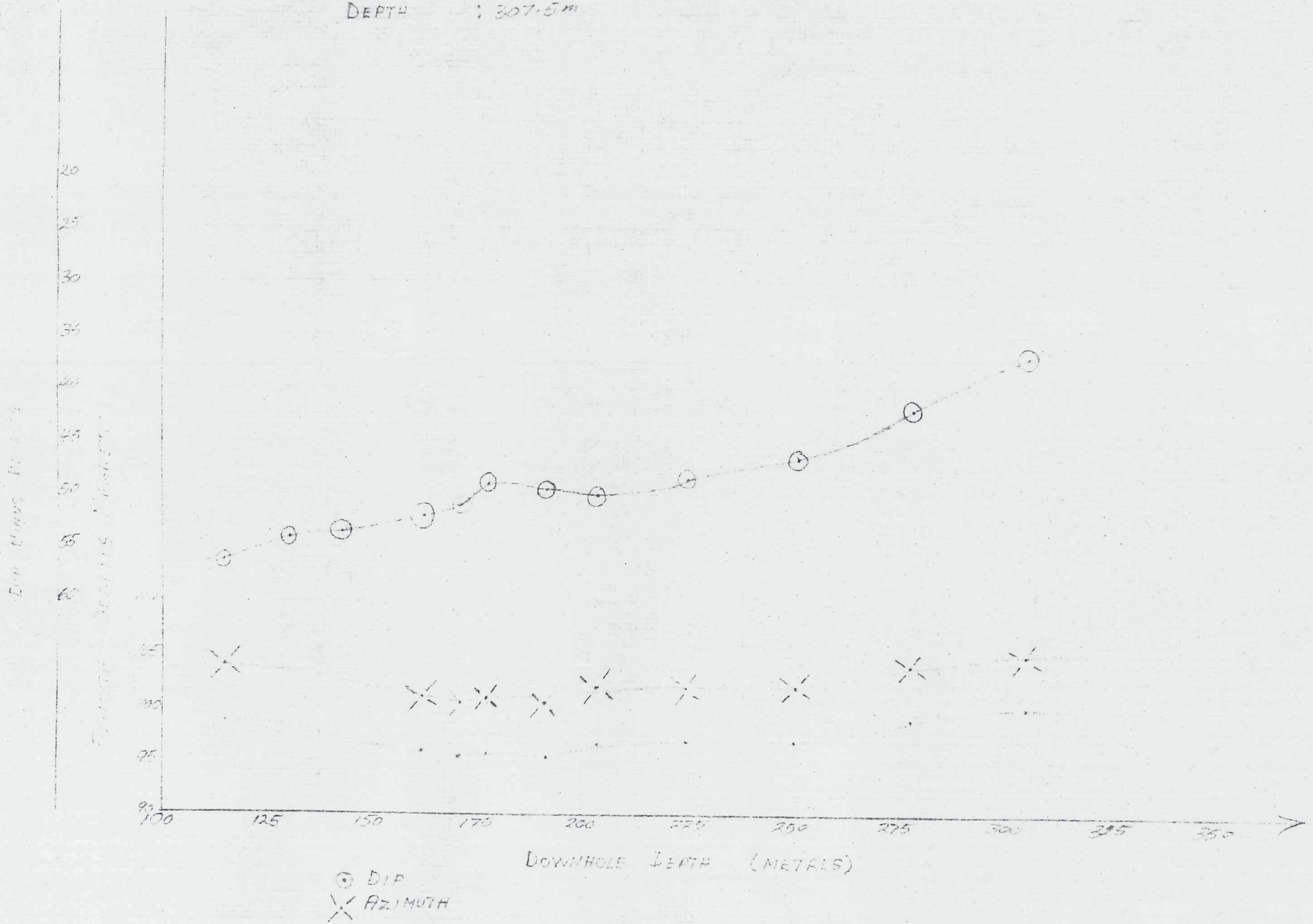
Bottom of hedge is 307.5m.

SURVEY DATA			
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE
115	56.25	104°	OLD EASTMAN
131	54	—	"
143	53.5	—	"
162	52	101°	"
171	51	100.5	"
177	49	101°	"
191	49.5	100.5	"
203	50.0	102	"
224	48.5	102	"
250	46.5	102	"
277	42	104	"
304	37	105	"

GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
120	56.3	96.0	7707.68	5116.30	597.74	
125	54.8	98.5	7707.75	5119.13	593.62	
150	53.0	96.5	7708.03	5133.86	573.43	
175	49.8	95.5	7708.83	5149.44	553.91	
200	50.0	96.0	7709.68	5165.53	534.79	Hole completed successfully at 307.5m.
225	48.5	97.0	7710.31	5181.84	515.85	
250	46.5	97.0	7710.83	5198.71	497.42	
275	42.5	98.5	7711.13	5216.53	479.91	
300	37.5	100.0	7710.96	5235.66	463.86	
307.5	36.8	100.0	7710.83	5241.64	459.33	

QR 98W EASTMAN SINGLE SHOT DOWNHOLE SURVEYS.

COMMENCED : 27.8.76.
COMPLETED : 8.9.76.
DEPTH : 307.5m.



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DIAMOND DRILL LOG

Hole No QR98W 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	DEPTH m	MINERALIZATION
		NO CORE			
	130	EWA NOSE BIT.			
BQ	130.8	PyPl Grey carbonated, sericitized lithic tuff-agglomerate.		131.2	Pyrite 40% locally 70% Trace Spl, Gn, Cpy @ 131.2
1.3				132.2	Py 15% 20% Spl 5% 8% Gn 3%
1.2	132.3	Fault zone. Pug, sheared and broken core.		133.4	Pyrite 10% Trace Spl, Gn.
1.1		60° to C.A.			Pyrite 1% locally 40% Spl 3-5, Gn 2-3.
	134.45				
2.6	135	Shearing and alteration. Occ obscured meal fragment outlines.		135.7	Pyrite 30% locally 50% Spl 3% 8% Gn 2% 3%
2.2	137.1	Fault zone. Pug. 50% sheared and broken core. 40° to C.A. Partly recemented by carbonate		136.9	Pyrite 15% locally 40% Trace Gn, Spl.
	139.0			138.3	Pyrite 5%
	139.3			139.3	Pyrite 2%
2.4	140	DTL Buff to grey green carbonated tuff-lava. (locally chloritic) Fine grained massive tuff-lava - groundmass is quartz-feldspathic.			
1.6		Ill rock is massive.			
1.6					
	145				
3.4		Buff to green carbonated locally chloritic lava breccia. Fragments are irregular to outlines to 6 cm. Commonly flow banded. — Probably lithic tuff-agglomerate.			
2.1	150				

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DIAMOND DRILL LOG

Hole No GR98W Page No 2

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
		150.8 - 152.6 The rock is pale - buff in colour due to carbonate alteration.							Pyrite <1% as above.
1.2		- The rock may be a lithic tuff - agglomerate. Fragments commonly exhibit cuspate outlines.							
0.3		The matrix is light grey in colour - "oolg" highly siliceous							
3.6	155								
2.2								157.3	Pyrite 1% as disseminations and aggregates.
3.4	160								
3.0		Below 162m. Fragments of pyrite to 1cm have been noted.							
core	165								
	165.3	NO CORE BULL NOSE BIT							
	168.2	Green - buff carb tuff - lava.						168.2	Pyrite <1%
3.0	170	Fine grained with flow banding 30° CA.							
core	171.3							171.3	Pyrite <1%
		NO CORE BULL NOSE BIT							
	174.2	Green - buff carbonated tuff lava as above						174.2	Pyrite <1%
	175								

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DIAMOND DRILL LOG

Hole No PR 92 W | Page No 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	VISUAL LOG	DEPTH m	MINERALIZATION
3.6		DP Green-buff lithic tuff agglomerate below 175.0 m. Grey-buff below 176.8 m.			Pyrite <1% as above
				176.8	Pyrite 1% as above
2.0	177.3	PyPx Grey locally sheared carbonated and sericitised lithic tuff agglomerate. Lithic fragments are irregular to sub-rounded in outline from 0.5 mm to 5 cm. Occasionally with "shredded" outlines similar		177.3	Pyrite 3% as disseminations aggregates and irregular veins. - occasional fragments.
2.1	180				
2.5	181.5	Fault zone Some gug, sheared and broken core - massive white quartz carbonate veins to 40 cm. 80° to core axis.			
0.5	184.0	to PyP. types.	BROKEN CORE		
3.0	185	The upper 50 cm may be a reworked tuff. The matrix is grey in colour, siliceous and "ashy" in appearance.			
2.3		Crude fragment alignment 20° C.A. Brown Pink phenocrysts have been noted in fragments.			
2.1	190 / 190.3	GP Green-grey carbonated coarse lithic tuff. Mixed fragment types (some amygdaloidal) - including pyrite. Green illite hydromuscovite is common. FAULT CONTACT 40° CA. 10cm PUG		190.3	Pyrite 3% - 5% as disseminations and aggregates
3.0	193.1	PyP1 Massive Sulphides. Basically Massive Pyrite in a siliceous - barite rich gangue.		193.1	Pyrite 60% Sph 3% - 5% Gn 2% - 3% Cpy 1% - 5% Barite 3% - 5%.
	195			195.0	Py 30 Sph 5-10 Gn 3-5, Ba 10.
1.2				195.3	Py 60% Sph 5-10% Gn 3-5% Ba 10-15%
2.7				196.8	Py 30% locally 40%. Sph 3% - 5%, Gn 1% - 3% Barite 3% - 10%.
	200	Below 199 m the host rock is a grey carbonated, sericitised coarse lithic tuff.			

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DIAMOND DRILL LOG

Hole No DR 98W 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
2.4	200.15	Fault zone Highly sheared sulfide zone, fug and breccia. 45° C.A	BADLY CORE	201	Py 30% - Sph 3-5% Gn 1-3% as above. Pyrite 10% Trace Sph, Gn
1.5	201.6	There are mixed fragment types from 0.5 mm to 3 cm. Generally with outlines elongated in the direction of foliation at 20° C.A.		202	Pyrite 5% as disseminations aggregates and irregular veins. Rare Sph, Gn.
2.4	205	The rock may be a reworked tuff.			
3.0	207	The matrix is grey - siliceous and sericite - and argillaceous. Major Fault zone Fug and breccia 40° CA.		208.5	Pyrite 10% Trace Sph, Gn.
1.7	209.5			209.5	
	210	Py P as above. CONTACT 45° to C.A			Py 5 as above.
1.5	210.2 DP	Grey - buff carbonated locally sericitized lithic tuff agglomerate Fragments are irregular in outline to 3.5 cm of pink dacite. The matrix is grey and siliceous - occasional pyrite fragments.		210.2	Pyrite locally 3% as disseminations and fragments.
2.4	213.4	CONTACT BEDDED 45° CA		213.4	Pyrite 3-5% as disseminations and aggregates.
0.7	214.5 215	Py P Grey carbonated and sericitized lithic tuff agglomerate SHEARED CONTACT. Massive Sulfides		214.5	Pyrite 50% Sph 10-20% Gn 5-10% Barite 1-2% as a massive band.
2.2	216.3	Py, Rut grey carbonated and sericitized lithic tuff (Reworked tuff) Lithic fragments are irregular to subrounded in outline to 3 cm.		216.3	Pyrite 10% as disseminations, aggregates and occasional fragments.
3.0	218.8 220	Py P Grey carbonated and sericitized coarse lithic tuff. Lithic fragments are irregular to subrounded in outline from 0.5 mm to 3 cm is dia. The matrix is grey - fine grained partly argillaceous. Below 221.8 Carbonate alteration is very pronounced. - associated with Barite. Pyrite veins are common. Below 232.6 m carbonate alteration is not pronounced.		218.8	Pyrite 5% Rare Sph, Gn.
3.0				221.85 222.0	Massive Sulfide band Py 50 Sph 10 Gn 5. Tr Barite.
3.0	225				Pyrite 10% as disseminations aggregates and irregular veins. Sph 1-3% Gn 1-2% with a similar habit. Minor Barite.

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DIAMOND DRILL LOG

Hole N° 0298 W Page N° 5

Feature : Bedding, Foliation, Fragment - size & shape 0%, 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
		PyP as above.							Pyrite 10%, Sph 1%, 3% Gn 1%, 2% as above Minor Barite.
3.0								227.4	Pyrite 30%-40%, Sph 5%-10% Gn 2%-5% Barite 10% as irregular veins or stringers // to C.A.
	229.4							229.4	
3.0	230	Blue grey carbonated and sericitized lithic tuff agglomerate.						230.6	Pyrite 5% locally 15% as disseminations, aggregates and irregular veins or stringers. Trace Sph, Gn, Barite
1.8		Lithic fragments are irregular in outline - from 0.5 mm to 6 cm. They consist generally of porphyritic dacite.						230.6	3cm Py 30 Sph 5, Gn 3 vein sub-parallel to C.A.
1.1	235	The rock appears similar to PyD (pyritic dacite) although is definitely fragmental.						235.3	10 cm Py 30 Sph 10, Gn 5, Tr Barite vein 20° C.A.
3.0		The matrix is of low overall volume, consisting of fine grey siliceous and argillaceous material						237	5cm Py 15, Sph 5-10 Gn 3 with Chlorite, vein 20° C.A
3.0	240	The rock is generally disrupted by carbonate veins and stringer sulphide veining.						238.7	Pyrite 30%-50%, Sph 5%-15% Gn 3%-5% Trace Barite as a 3cm vein // C.A.
								239.7	
								241.5	2cm Py 30% Tr Sph, Gn vein 30° CA.
3.0								242.6	2cm Py 30% 40° C.A. vein.
								243.2	Pyrite 10%-15% locally 30% Sphalerite 1%-3% locally 10%. Galena 1% locally 3%-5%. As stringer veins at 30°-40° to C.A. Trace Barite overall.
3.0	245								
3.0								247.7	Pyrite 5%-7% as disseminations aggregates and irregular veins. Trace Sph, Gn.
	250								

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DIAMOND DRILL LOG

Hole Nº PR78W 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
1·8		PyP as above. Porphyritic dacite fragments are abundant.
1·2	2	
3·0	255	
3·0		
	259·3	GRADATIONAL CONTACT
3·0	260	PySht Grey carbonated and sericitised **tuff** - locally tuff - agglomerate. Generally fine grained - intense sericite development reflects argillaceous character. Generally sheared and disrupted. Heavily Carbonated 259·3 - 260·6 m. Foliation 30° - 40° to C.A.
	263·3	PyP Blue-grey carbonated and sericitised coarse lithic tuff.
3·0	265	Lithic fragments are irregular to sub - rounded from 0.5 mm to 3 cm and consist of porphyritic dacite, sericitised tuff, minor pumice and pyrite.
3·0		The matrix is grey in colour siliceous and argillaceous locally sericitised.
3·0	270	There is a crude fragment alignment - bedding at 45° to C.A.
3·0		Very minor grey disrupted chert bands (0·5 cm) have been noted.
	275	The rock is similar to a rent, fine to coarse banding has been noted.

DEPTH m	MINERALIZATION
250·6	20 cm Py 30% Sph 10% 15% Gn 3% - 5% as a stringer.
252·3	Pyrite 10% locally 30% Sph 3% Gn 1% as disseminations, aggregates and stringers with a carbonate, barite gangue.
256·4	Pyrite 5% trace Sph, Gn
257·5	Pyrite 10% locally 30% Sph 5% Gn 2% - 3% . Minor Barite. as disseminations and stringers.
259·3	Pyrite 10% locally 15% as disseminations aggregates and irregular veins. Trace Sph, Gn.
263·3	Pyrite 5% - 7% Sph 1% 3% Gn 1% 2% as disseminations and aggregates.
265·6	Pyrite 5% - 7% Trace Sph, Gn as disseminations and aggregates.

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DIAMOND DRILL LOG

Hole No QR93W 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	DEPTH m	MINERALIZATION
3.0		PyP as above.		Pyrite 5%-7%, Trace Sph, Gn. as above.
3.0	280	Below 280.0 m large fragments to 6 cm become more common. Commonly sericitised trachyte?		
3.0		Crude fragment alignment or bedding at 35° to CA.		
3.0	284.7 285	PyP. Blue grey carbonated locally sericitised lithic tuff agglomerate. Similar to the rock above 284.7 m. Sericite fragments are less common.	284.7	Pyrite 10% Sph. 1%-3% Gn. 1%-2% as disseminations aggregates and stringers.
			286.5	Aggregate of Gn Sph in Carb vein Sub-parallel to CA
3.0		The predominant fragment type is porphyritic dacite. - Blue grey in colour. The matrix is light grey in colour and fine grained.		
3.0	290 291.8		290.3 290.8	Pyrite 30% Sph 3%-5%, Gn 3% As semi-massive band.
	291.8	PyD Grey carbonated and siliceous autobrecciated porphyritic dacite. Minor inter fragmental areas of lithic tuff agglomerate.		Pyrite 5%-7% Trace Sph, Gn.
3.0	295	This unit is not dissimilar to the footwall unit of S Lens.	294.8	Pyrite 7% locally 10% Trace Sph., Gn. Cpy.
3.0		Fragments are irregular in outline porphyritic dacite - light grey to buff-green in colour. They appear to have been formed by "shattering" of the parent rock.		Stringer Mineralisation.
			297.6	20 cm Vein. Py 15% Sph 5, Gn 5 Tr Cpy. Exhib. some colloform banding.
			298.6	20 cm vein Py 30% Sph 5%-10% Gn 3%-5% Tr Cpy.
	300	The inter fragment areas are		Below 297.8 m. Pyrite 10%-15% Sph 1%-5% Gn 1%-3% Tr Cpy.

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DIAMOND DRILL LOG

Hole No QK98-14 Page No 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	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		filled with silica and or sulphides.							Py 10%-15% . Sph 1%-5% Gn 1%-3% Tr Cpy as above.
								301.0 m	15 cm Stringer Py 30 Sph 5, Gn 3 Tr Cpy.
3.0		quartz filled tension fractures have been noted with aggregates of Sph, Gn, Cpy.							Pyrite 15% Sph 1-5% Gn 2-3% Tr Cpy.
	303.5								
		PyP Blue grey Carbonated and Silicified lithic tuff agglomerate. Similar to						304.4	15 cm Stringer vein Py 20% Sph 15% Gn 10% Cpy 10% 20°CA.
	305	Above. Fragments are porphyritic							
3.0		dacite to 5 cm. Generally irregular to sub-rounded in outline.							
	307.5 EOH.	Minor disrupted chert or silicification has been noted. (Similar 295 m QK 14.							