






DIAMOND DRILL LOG

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
	25.00								
	1.70	Major <u>FAULT ZONE</u> : rubble, short lengths of brecciated core, patchy carbonate veining in feldspathic tuff agglomerate.							Pyrite in fault zone is disseminated throughout. Euhedral crystals to 2mm.
	0.70								
	30								
	1.60								
	35								
	1.80								
	1.00								
	40								
	1.00								
	0.65								
	45								
	2.70								
	49.4								
	50								

BROKEN CORE

VERY BROKEN CORE



DIAMOND DRILL LOG

Hole No QR31

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
	3.00	Rock colour tends to pinkish-green in part							
	80							81.0	Py occurs as veins, colloform aggregates with carbonate etc.
	3.00	Sericitisation is intense in pyritic zones, carbonate occurs as fine yellow permeations and also as white veinlets.							
	85							84.10	Py is typically <5% with occasional vein and stringers of 50% sulphide, usually less than 1cm thick, randomly oriented, irregular - diffuse in form.
	3.00								
	90	Very fine grained disrupted grey chert is associated with sulphide enrichment.						89.60	
	3.00								
	95								
	3.00								
	97.6	<u>FAULT ZONE</u> within which the tuff-lava is brecciated. Some fragments appear pyroclastic, and a joint origin of the fabric is probable.							



DIAMOND DRILL LOG

Feature :
 Bedding
 Foliation
 Fragment-size & shape

Shearing
 Fault
 Vein carbonate
 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
	100.4					
	3.00					
	3.00 (?)					
	105		BROKEN			
	2.30					
	108.5					
	0.20	<u>FAULT ZONE</u> , with much disrupted and broken carbonate veining.			108.90	Irregular veinlets and aggregates of fine pyrite in ruptured, sheared rock
	110				110.35	of fault zone.
	3.00					
	112.65					
	2.90		BROKEN CORE			
	115					
	2.30	<u>FAULT ZONE</u> . Multiple shears at oblique angles, all low angle to core axis, typically 30°. Carbonate veining is intense, also 30° to c.a. Small (2cm) fragments are probably fault breccia, but may (119m) be sheared slump breccia.				
	2.40					
	119.20				119.20	Massive Py vein in
	120.15				119.60	sheared host.
	120.15	<u>DTL (?)</u> PyP			120.15	
	1.20	<u>Tuff-agglomerate</u> , sheared and sericitised throughout with carbonate veining. Fragments are mid to dark grey in a light grey matrix, probably originally rich in feldspar. Fragments have a (sheared) trachyte texture with numerous sericitised feldspar phenocrysts. Fragments are sub-angular to amoeboid, typically				General aspect of Py unit, is more pyritic. Typically 3-5%, often to 7% with fragments of sulphide rock, veins and stringers, and disseminated euhedral crystals.
	2.20					
	2.95					
	125					



DIAMOND DRILL LOG

Feature : Bedding Shearing
 Foliation Fault
 Fragment-size & shape 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
		up to 5cm in long axis. Foliation (shearing) is 45° to c.a. Between 126.7 and 128.5m - medium grained lithic tuff.							
3.70	128.10	Med. gr. feld. crvs. lithic tuff							
	128.60	Coarse lithic feldspar crvs. tuff locally tuff-agglomerate, with random fragments v. rich in sulphide (Py). Frags. are subangular elongate. Colour is grey to blue-grey, with carbonate and sericite alteration throughout, and irregular, richly chloritic bands.						132.0	
3.00	133.0	Med. gr. feld. crvs. fine lith. tuff							
	133.6	Coarse lithic tuff/tuff agglomerate; fragments up to 5cm, carbonate, sericite and pyrite rich; colour from pale green, light grey to black in a grey feldspathic matrix. Some pyritic fragments.						134.80	
2.80	135								136m and below, Py rich rock fragments common.
3.00	139.6								
	140	Med. to fine gr. feld. crvs. tuff, rare lithic frags to 3cms.						140.4	
3.00	140.4	Coarse lithic tuff to tuff agglomerate as previously.							
	142.65							142.60	Chloritic band with Py.
		Chloritic, cleaved for 1m above fault zone.						143.10	Py c.20% marginal to and within siliceous veins, disseminated.
2.90	144.10	FAULT ZONE, pug, carbonated chips of sulphide bearing lithic tuff.							
	145.20	chloritic between faults, sil. pygmatic veins, also carb. veining							
	146.40	FAULT ZONE. puggy, chips lith. tuff						146.00	
3.00		chloritic							
	148m to 150.50m	intense quartz carbonate veining parallel to cleavage at 30° to c.a.						149.70	95%Py



DIAMOND DRILL LOG

Hole No **QR31**

Page No 7

Feature :

- Bedding
- Foliation
- Fragment-size & shape
- Shearing
- Fault
- Vein c carbonate
q quartz

Mineralization :




- Trace 1-5%
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

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
	2.90	Below 150m the lithic tuff, tuff agglomerate texture is obscure due to the siliceous cherty matrix. Fragments are subangular to lath-like and vary from pink, through grey to green (chloritic)	BROKEN CORE	152.10	Py 50-60% finely dissem. euhedral crystals in a chloritic matrix.
	3.11			153.40	
	2.82	Below 155m, the host rock, between richly pyritic or chloritic zones is very siliceous, a cherty matrix surrounds lithic fragments. Carbonate veining in siliceous tuff host.	BROKEN CORE	155.0	Py 75%
	2.85			155.50	
	2.85		BROKEN CORE	156.4	Py 50%, siliceous lithic tuff host; veins and aggregate of sulphide.
	2.85			158.65	
	2.95		BROKEN CORE	160	Py approx. 15-20% often as veins sub-parallel to the c.a.
	2.95			162.20	
	3.05	5cms pug zone Massive richly chloritic black schist, with coloform like carbonate alteration and carbonate filling tension cracks.	BROKEN CORE	163.50	Py 95%, chloritic matrix.
	3.05			163.80	Py 10%, trace gn.
	2.94		BROKEN CORE	165.0	Py 40-50% as clots, veinlets, disseminations banded in part parallel to foliation, traces of gn and sp towards bottom of unit
	2.94			168.70	
	2.94	Sulphide dominant, where sulphide 50% host matrix seen to be cleaved sericite-chlorite.	BROKEN CORE	170.90	Py 40-60%, massive bands and disseminations parallel to the foliation.
	2.94			170.90	
	3.00		BROKEN CORE	173.10	Gn 40% Sph 25% Py 15% Foliated
	3.00			173.60	100m - Sph 60%, Gn 10% Trace C Py
	175			174.50	Pyrite 75%
					Sph 40%, Gn 40% Py 15%



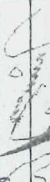


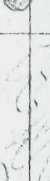
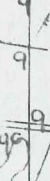
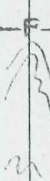
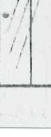
DIAMOND DRILL LOG

Feature :

Bedding 
 Foliation 
 Fragment-size & shape 

Shearing 
 Fault 
 Vein  c carbonate
 q quartz

Mineralization : Trace 1-5%
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CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
								00.00	Gn crystals range up to 1mm.
2.90		The matrix is variably sericitic to siliceous (dark grey green to light grey-blue) with fine sulphide. 200.1 to 200.75m Agglomerate, greenish/white vesicular fragment						200.55	Py 10%, Gn 1% Py 10%, Gn 5%, Sph 5% as veins, clots and stringers, locally richer than elsewhere but mineralised throughout.
3.06		Carbonate occurs with silica as coarse irregular veins. Quartz, alone, is typically as narrow (<1cm) veins at right angles to the cleavage/rock foliation which is 30° to the c.a. The quartz veins appear to predate the cleavage, having a strained appearance and containing galena in "tension gashes" parallel to the cleavage - i.e. perpendicular to the veins.						205.205	
2.92								209.60	Py 20%, Gn 15%, Sph 10-15% (?). Fine diffused bands at 30° to c
								210.04	Py 5%, Gn plus Sph 3-5% combined.
3.07	212.85	PyP FT						212.78	Trace Py, rare galena in quartz-carbonate veins.
		Transition zone to next unit. Coarse siliceous grey lithic tuff with plastically deformed clasts of ser. fine feld. (?) tuff-lava (?)						214.0	
3.01	215	Fine, greenish fawn, sericitic, carbonate rich quartz-crystal tuff (possibly ashflow). Cleavage (and bedding) is 35° to core axis. A 40cm zone in the centre of the unit is of coarse siliceous lithic tuff.						220.60	Py < 5%, Tr Gn and Sph except where indicated: Py 15%, Gn 10%, Sph 5%.
2.91								223.63	Disrupted bands (?) and fragments of sulphide. Py 10% Gn 7% Sph 7%
		FT PyP FAULT ZONE Sericitised, carbonate rich lithic tuff-agglomerate, blue grey in colour, with carbonate veining, locally sheared and richer in sericite-chlorite. Fragments ore elongate due to shearing at 30-40° to c.a., typically light greenish grey with green sericite flecking.						225.0	

HOLE No QR 31

DATE 2/6/75

INITIAL ANALYSIS: CHECK LAB: AMDEL

SAMPLE NO	FROM M	TO M	IW cm	REMARKS	%Cu		%Pb		%Zn		%Fe	ppm Ag	ppb Au	ppm Au	INT	%Cu	%Pb	%Zn
					AAS	XRF	AAS	XRF	AAS	XRF	TIT	AAS	AAS	FIRE		XRF	XRF	XRF
159631	170.60	172.58	198		0.02		0.74			1.55		12	150					
159632	172.58	174.50	192		0.28			4.47		6.69		75	>500	1.3				
159633	174.50	177.00	250		0.54			9.65		16.0		165	>500	3.5				
159634	177.00	178.40	140		0.03		0.39			0.33		20	310					
159635	178.40	180.35	195		0.10			2.48		3.85		47	>500	2.7				
159636	180.35	182.34	199		0.64			14.9		25.1		200	>500	5.5				
159637	182.34	184.40	206		0.44			10.9		17.5		160	>500	6.0				
159638	184.40	186.52	212		0.37			15.5		25.2		190	>500	4.5				
159639	186.52	188.21	169		0.66			7.84		13.6		145	>500	5.0				
159640	188.21	190.90	269		0.50			7.33		13.8		140	>500	4.0				
159641	190.90	192.50	160		0.10		0.78			1.45		24	280					
159642	192.50	194.40	190		0.10			1.15		2.05		26	250					
159643	194.40	196.33	193		0.09			1.67		2.67		42	420					
159644	196.33	199.10	277		0.24			3.56		5.94		105	>500	1.0				
159645	199.10	201.85	275		0.16			2.53		4.01		31	320					
159646	201.85	204.60	275		0.36			4.23		6.47		70	460					
159647	204.60	206.73	213		0.20			2.29		3.12		39	260					
159348	206.73	209.60	287		0.27			2.30		4.12		58	340					
159649	209.60	210.97	137		0.66			6.50		15.5		110	>500	2.0				
159650	210.97	212.76	179		0.28		0.84			1.60		66	310					
159423	212.76	213.77	101		0.05		0.55			0.93		9	45					
	172.58	177.0	442		0.43			7.40		11.96		125.9		2.5				
	178.40	190.90	1250		0.45			9.82		16.56		147.5		4.6				
	196.33	210.97	1464		0.29			3.34		5.80		66.2	0.6	P NTH	East*0.11	3.05	6.00	
	172.58	190.90	1832		0.41			8.52		14.21		132.6	3.2	P Nth	0.38	8.45	14.4	

*0.11 result checked by CEPL Individually 0.22
Composite 0.25

HOLE No QR 31

DATE _____

INITIAL ANALYSIS:

CHECK LAB: AMDEL

SAMPLE NO	FROM [M]	TO [M]	IW [cm]	REMARKS	%Cu		%Pb		%Zn		%Fe	ppm Ag	ppb Au	ppm Au	INT.	%Cu	%Pb	%Zn
					AAS	XRF	AAS	XRF	AAS	XRF	TIT	AAS	AAS	FIRE		XRF	XRF	XRF
	220.25	234.41	1416		0.25		3.89		6.30			48.4		1.4		0.25	3.65	5.85
	<u>Includes</u>																	
	226.05	231.79	574		0.37		5.62		9.45			65.0		2.3				
	238.46	242.19	373		0.13		2.99		4.35			32.1		1.0		0.13	2.75	4.15
	<u>Includes</u>																	
	238.46	240.39	193		0.12		3.91		5.58			38.7		1.7				

HOLE No OR 31

DATE 25/4/75

INITIAL ANALYSIS: CHECK LAB:

SAMPLE NO	FROM [M]	TO [M]	IW [cm]	REMARKS	%Cu		%Pb		%Zn		%Fe	ppm Ag	ppb Au	ppm Au	INT	%Cu	%Pb	%Z
					AAS	XRF	AAS	XRF	AAS	XRF	TIT	AAS	AAS	FIRE				
156597	219.40	220.25	85	Datum block 217.4	<0.01			0.28		0.35		2	< 20					
156598	220.25	220.95	72	Block 220.4 ties in	0.25			3.79		4.60		51	>500	1.0				
156599	220.97	221.66	69		0.07			2.23		2.86		17	360					
156600	221.66	222.64	98		0.16			2.33		3.17		34	>500	1.0				
156601	222.64	223.66	102	Block 223.4 ties in	0.06			0.94		1.53		9	240					
156602	223.66	225.04	138		0.32			4.93		9.33		56	>500	1.3				
156603	225.04	225.71	67		0.17			2.00		3.97		34	>500	1.3				
156604	225.71	226.05	34		0.06			1.86		1.62		15	70					
156605	226.05	227.23	118	Block 226.4 ties in	0.46			6.17		10.5		92	>500	2.0				
156606	227.23	227.85	62		0.34			6.47		12.2		74	>500	3.0				
156607	227.85	229.50	165	Block 229.4 ties in	0.42			6.30		10.7		59	>500	4.0				
156608	229.50	230.48	98		0.45			5.25		8.49		63	>500	1.3				
156609	230.48	231.45	97		0.14			3.90		5.23		38	>500	1.0				
156610	231.45	231.79	34		0.30			4.83		9.59		67	>500	2.0				
156611	231.79	233.40	161	Block 232.4 ties in	0.18			2.89		3.64		45	>500	1.0				
156612	233.40	234.41	101		0.10			1.86		3.04		43	400					
156613	234.41	235.41	100		0.05			1.50		2.14		31	500	0.3				
156614	235.41	236.43	102		<0.01			0.71		0.90		7	>500	1.0				
156615	236.43	237.43	100		0.03			0.63		0.86		13	>500	0.5				
156616	237.43	238.46	103	Block 238.4 Meas 238.35	<0.01			0.42		0.21		4	>500	1.0				
156617	238.46	238.86	40		0.06			2.38		3.48		27	>500	1.3				
156618	238.86	239.86	100	Block 240 Meas.239.7	0.05			2.91		3.65		21	>500	2.3				
156619	239.86	240.39	53		0.31			6.95		10.8		81	>500	0.7				
156620	240.39	241.35	96	Block 241.4 Mea.241.33	0.02			0.85		1.53		12	300					
156621	241.35	242.19	84		0.26			3.32		4.73		40	200					
156622	242.19	243.40	121		0.09			1.42		2.28		12	250					
156623	243.40	244.75	135	Block 244.4 ties in	0.03			0.61		1.09		9	380					
156624	244.75	246.40	165	Block 245.9 ties in	0.39			2.08		3.95		27	350					
156625	246.40	247.30	90	Block 247.4 Mea.247.3	0.03			0.30		0.21		9	240					
156626	247.30	248.43	113		0.15			1.72		1.31		34	>500	1.0				
156627	248.43	250.33	190		0.16			2.83		2.35		38	>500	0.7				
156628	250.33	251.43	110	Block 250.4 ties in	0.10			1.85		1.33		29	370					
156629	251.43	252.95	152		0.04			1.09		1.16		17	300					
156630	252.95	253.96	101	Block 253.4 ties in	0.02			0.82		0.90		15	400					
	220.25	234.41	1416		0.25			3.89		6.30		48.4		1.4				



DIAMOND DRILL LOG

Feature : Bedding Shearing
 Foliation Fault
 Fragment - size & shape Vein carbonate
 quartz




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

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE COMMON ABUNDANT MASSIVE	DEPTH m	MINERALIZATION	
1.5		300.2m, end silica alteration zone. Below 300.2m the rock is carbonated and silicious.	BROKEN CORE	c	300.2	Pyrite 5% as disseminations and irregular aggregates. Rare sphalerite and galena.	
3.0	Blue grey carbonate (silica) feldspar crystal lithic tuff agglomerate.						
3.0	Foliation approx. 40° C.A. Fragments are smaller than above 300.2m. Feldspar crystals are interpreted from aggregates of carbonate and sericite often with euhedral outlines.					305 305.25	Pyrite 40%, trace Gn, Sph. Irregular vein.
3.0	Lithic fragments are irregular to sub-rounded in outline - feldspar porphyry lava - occasional pyrite fragments have been noted.						Pyrite 5% rare sph, gn, as above.
1.1							
3.0	310						
3.05							
3.15							
3.1							
0.6		318.6 - 320m - sericite alteration is common.					
3.0	320				319.3	15cm pyrite 40% trace sph, gn as irregular vein.	
2.8		323.3 - 324.3m - sericite alteration is common.					
2.8					323.3	Pyrite 5% locally 10%, sphalerite 3%, galena 2-3% as irregular stringers. Pyrite 5% as above tr Sph	
	325					Gn	




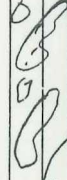








DIAMOND DRILL LOG

Hole No **QR31** 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
3.1		Feldspar crystal lithic tuff agglomerate as above.							Pyrite 5% trace sph, gn as above.
3.1	327.2							327.2	Pyrite 10% sph 1% to <1% as disseminations and irregular veins associated with minor carbonate veining.
3.1	330							330.3	
3.1	330.3								Pyrite 5% rare sph, gn as disseminations and aggregates.
3.1	335								
3.1	337.8							337.8	20cm py 30%, sph 10, gn 8% as a stringer.
3.1	340								
3.1	345								
3.1	347.5							347.5	Pyrite 30% as disseminations and aggregates.
3.1	350								



DIAMOND DRILL LOG

Hole No QR31 ext. Page No 6

Feature : Bedding Shearing Fault Vein carbonate
 Foliation Fragment - size & shape Vein 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
		Lithic tuff agglomerate as above.							Pyrite 3-5% as above.
3.1	380	Grey-green carbonate weakly chloritic coarse lithic tuff similar to the lithic tuff-agglomerate above.						330.1	Pyrite 3% as disseminations and aggregates.
1.8	385	Grey-green carbonated weakly chloritised lithic tuff-agglomerate - as above.							
3.1	386	Grey-green carbonated weakly chloritised lithic tuff-agglomerate - as above.							
3.1	390	Minor chlorite has been noted on fracture planes.							
3.1	395	Below 396.0m the matrix is light grey-green in colour, fragments green and chloritic.							
3.1	400								



DIAMOND DRILL LOG

Hole No QR31 ext Page No 9

Feature : Bedding Shearing
 Foliation Fault
 Fragment - size & shape Vein carbonate
 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
	2.9	Below 451.0m the rock is light grey to grey in colour. As above.							Pyrite 3-5% as above.
	455								
	3.0								
	3.0								
	460	Below 460.0m. Occasional pyrite fragments have been noted. Foliation, fragment alignment 40° C.A.							
	3.0								
	463.0 - 473.5m.	Siliceous alteration zone. Numerous quartz veins.							
	465	Light grey siliceous feldspar porphyry lava breccia. Feldspar phenocrysts are represented by aggregates of pale green sericite and more often white carbonate. The rock is "fragmented"! Fragments up to 6cm have been noted.						465	Pyrite 2-3% as disseminations, aggregates and irregular veins.
	3.0							467.2	Pyrite 15% as irregular
	470	The groundmass is light grey and siliceous, of similar colour and texture as the fragments.						467.5	vein at 20° to C.A.
	3.0								
	475								

