





# DIAMOND DRILL LOG

Hole No QR87

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	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
	5 10 15 20 21.0	NO CORE							
1.2		AP Green <u>feldspar, hornblende crystal lithic tuff agglomerate.</u> Chloritic locally carbonated.							Pyrite <1% as disseminations and aggregates of fine sub-euhedral crystals.
1.0		The rock is brown-ironstained and weathered down to 28.0m.							
0.6		Then partly weathered and ironstained							
	25		BROKEN CORE						



# DIAMOND DRILL LOG

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

Mineralization : Trace 1 5%  
 Common 5 15%  
 Abundant 15 40%  
 Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
1.4		with fresh kernels as indicated down to 55.5m.							Pyrite <1% as above
1.5		Iron staining has been noted on fractures down to 75m.							
1.7		Feldspar crystals often euhedral in outline are common, partly albitised (when pinkish) and carbonated - white carbonate aggregates up to 4mm are interpreted as altered feldspars.							
1.8	30	Hornblende crystals							
1.2									
1.8		Hornblende crystals are represented by aggregates of chlorite - occasionally euhedral in outline - up to 2mm.							
1.0	35								
1.4		-Oval-elongate, shaped - dark green aggregates of chlorite? are interpreted as devitrified glass filled vesicles.							
1.2									
1.0		Small <1mm flecks of carbonate are common, randomly distributed through the rock.							
2.0	40								
1.3		Lithic fragments are irregular to sub-rounded in outline, consisting of green feldspar, hornblende crystal lava - of similar composition and texture as the matrix. The rock thus may be a lava-breccia.							
1.0									
1.3		Other fragments - up to 6cm in size, are buff coloured feldspar crystal tuff-lava. With green chlorite-sericite replacing feldspar.							
	45								
2.8									
2.2		Aggregates of grey quartz have been noted and are interpreted as secondary.							
	50								









# DIAMOND DRILL LOG

Hole No QR87

Page No 6.

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
	3.0	127.0m. Fracture//core axis.							Pyrite <1% as above.
	3.0								
	1.30								
	3.0								
	1.8								
	134.2	Fault zone. Minor pug, sheared and broken core.							
	135								
	0.9								
	136								
	3.0								
	140								
	3.0								
	3.0								
	145								
	3.0								
	146.7m.	5cm carbonate cemented breccia. 147.4 - 155.0m. The rock appears to be an autobrecciated lava. Aggregates of white carbonate to 5mm may be filled vesicles.							Pyrite <1% locally 2%-3% as disseminations and aggregates.
	147.4 - 155.0m.								
	3.0								
	150								









# DIAMOND DRILL LOG

Hole No QR 87 Page No 10.

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

**Mineralization :** Trace 1.5%  
 Common 5.15%  
 Abundant 15.00%  
 Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
	3.0	226.0 - 233.4m. The rock is grey in colour (pyrite/sericite alteration?) - similar in appearance to PyP1.							Pyrite 1-2% as above.
	3.0	Crude fragment alignment 40° C.A.							
	3.0	DTL Green chloritic feldspar, hornblende crystal-lava.  (porphyritic lava)  Feldspar crystals are interpreted from aggregates of chlorite - sericite in direction of foliation at 40° C.A.  The groundmass is fine grained and siliceous.							
	3.0	This rock is possibly a chloritised DTL.							
	0.6	Below 244.0m the rock is locally brecciated.						244.3	Pyrite 10% as irregular veins.
	2.4							244.7	
	1.8								



# DIAMOND DRILL LOG

Hole No QR87

Page No 11.

Feature : Bedding   
 Foliation   
 Fragment - size & shape

Shearing   
 Fault   
 Vein c carbonate  
 q quartz

Mineralization : Trace 1-5%  
 Common 5-15%  
 Abundant 15-40%  
 Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
	2.7	AP or DTL as above.							Pyrite 1-2% as above.
	0.5								
	252.35	Py P1 Grey carbonated and sericitised <u>lithic tuff agglomerate</u> . Lithic fragments from 0.5mm to 6cm are sub-rounded in outline and appear to be abraded volcanic debris. The rock is a "volcanic conglomerate".  The predominant fragment type is buff coloured feldspar crystal tuff-lava, with pale grey-green aggregates of sericite after feldspar.  Other fragments include sericitised trachyte? grey recrystallised chert and occasionally pyrite.  The matrix is fine grained grey siliceous and pyritic.						252.25	Pyrite 3-5% as disseminations, irregular aggregates and occasional fragments.
	2.8								
	255								
	4.0								
	260								
	3.0								
	3.0								
	265								
	3.0	Fractures sub-parallel and up to 30° to C.A.							
	3.0								
	270								
	3.0								
	275								

BROKEN CORE



# DIAMOND DRILL LOG

Hole No QR87

Page No 12.

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
	276	PyP1 as above. <u>GRADATIONAL CONTACT</u>							Pyrite 3-5% as above.
3.0		The rock is sheared 30° C.A. Grey sericitised locally carbonated coarse lithic tuff.							
3.0		Similar to above. Lithic fragments are up to 3cm in size, generally fragment outlines are obscured by shearing.							
NQ 1.0	280								
BQ 2.0		The matrix is fine grained and siliceous. blue grey in colour.							
2.8									
	285								
1.2									
1.9									
	286								Pyrite 10% locally 30% as disseminations, aggregates and irregular veins of fine sub-hedral to euhedral crystals. Trace sphalerite and galena.
1.1	290								
1.9									
	292								Pyrite 3 5% as above.
3.0									
	293.5								Pyrite 10% locally 20% as disseminations and irregular veins.
	295								
1.5		296.0 - 296.2m. Massive white quartz carbonate veins.							Pyrite 3-5% as above.
1.5									
	297								Pyrite 50% as disseminations and aggregates.
0.6	298.35	<u>Fault zone.</u> Pug, sheared and broken							
	299.0	<u>core.</u>							Pyrite 30% as above.
1.8									
	299.8								
	300	<u>Fault zone.</u>							Pyrite 40% as above.





# DIAMOND DRILL LOG

Hole No QR87

Page No 14.

**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	PyP1 (DTL) as above.							Pyrite 2-3% as above.
	3.0	330							
	3.0	333.8 - 334.7m. Carbonate cemented breccia 20° C.A.. Sericite is common							
	3.0	335							
	3.0	337.0 - 339.0m. The rock is locally brecciated, carbonate cemented, sub-parallel to core axis.							
	3.0	340							
	3.0	343.6 - 346.15m. The rock is locally sheared 50° C.A. Grey in colour.							
	3.0	345							
	3.0	345.8 - 346.15m. Fault zone. Pug, sericite sheared 30°CA							45.2 Tr gn in carbonate vein
	3.0								
	3.0	350							







# DIAMOND DRILL LOG

Hole No QR87

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**Feature :** Bedding Shearing   
 Foliation Fault Vein   
 Fragment - size & shape 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
	1.6	PyP1 as above			400.8	Pyrite 10% as above.
	3.0	Semi-massive to massive pyrite with a carbonate, sericite matrix. Minor barite.				Pyrite 60% as disseminations, aggregates and irregular veins. Sub-euhedral crystals to 3mm. V. fine chalcopyrite 2-5% as above. Barite 5%.
	405					
	2.9					
	406.9	Grey carbonated locally sericitised coarse lithic tuff as above.			406.9	Pyrite 15% trace cpy, ba.
	2.8					
	408.1				408.1	Pyrite 50% as above
	408.55				408.55	Pyrite 10%
	409.1				409.1	Pyrite 40%
	409.4				409.4	
	409.7					
	1.0	<u>Fault zone.</u> Pug, sheared and broken core, partly recemented with Py.				Pyrite 3-5% as disseminations and aggregates.
	410.8	PyP1 DTL. FAULT CONTACT 35° C.A.			411.0	
	3.0	Grey locally green-buff feldspar crystal tuff-lava. (DTL) Grouped as PyPi on basis of minor pyrite content, grey colouration.				Pyrite 1-3% locally 5% as disseminations and aggregates.
	1.3	Feldspar crystals are represented by aggregates of white carbonate and or pale green sericite to 3mm.				
	415					
	3.0	The groundmass is fine grained quartz-feldspathic.				
	1.6	Occasional rounded carbonate aggregates may represent filled vesicles.				
	420					
	3.0	Foliation 30°-50° core axis.				
		Chlorite commonly lines irregular fractures.				
	3.0					
	425					






# DIAMOND DRILL LOG

Hole No **QR87**

Page No 18

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
		PyP1 DTL as above.							Pyrite 1-3% locally 5% as above.
	3.0								
	3.0	430							
	1.4								
	3.0	435							
		Below 435.2m the rock is grey in colour, carbonate rich, locally disrupted.							
	3.0								
	1.0								
	0.30	440							
	0.30	Sericite, sheared feldspathic lava?							
	2.40							442	441-446m, rare stringers of pyrite with sphalerite and galena, subparallel to core axis, general increase in pyrite content to 7-10% below 442 - disseminated euhedral crystals, stringers.
	3.10	445							
		Strong cleavage 35° to core axis							
	3.00	447m							
		447.9m							
	448.7	PyP1						448.7	Pyrite 10-15%, disseminated crystals
	2.97	450 Chloritised, carbonate rich sheared lithic tuff?. Shearing is 30° to core axis. Chlorite content declines down hole.							



DIAMOND DRILL LOG

Hole No 87D

Page No 19

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
								450.10	
	3.00								Pyrite >5% locally 95%. Foliation at 130° to core axis.
	455	PyP1 Cherty lithic tuff patchily chloritic, carbonate veining throughout. Foliation, (cleavage) is 40° to core axis.						454.25	454.05-454.25, approx. 1% cpy in massive pyrite Pyrite averages 2-5% patchily 5010cm veins with carbonate.
	2.98							445.90	Pyrite 20-50% as fine bands of varying density parallel to the foliation
	0.95							457.70	
								457.90	457.70 to 457.90, massive pyrite, trace galena.
	2.10								457.90 onwards - pyrite is 5-10% as disseminated euhedral (?) crystals, also massive fractured veins and as stringers, locally 15-20%.
	1.16	Cherty bands present in altered (sericite carbonate) ?lithic tuff or tuff agglomerate.							
	1.88	Colour is light grey, locally pale green to cream.							
								463.90	
	1.37								
	465								
	1.90								
	2.90								
	470								
	2.60								
	471.80	PyP1 Pale fawn, patchily dark grey, richly sericitised, sheared feldspar porphyry							
	3.00								
	474.80								chalcopyrite
	475	See over						474.90	Massive pyrite, trace

FRACTURED CORE









# DIAMOND DRILL LOG

Hole No QR87D

Page No 23

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
								550.2	3cm stringer Py 30% Sph 5% Gn 3% Cpy 5% Barite 3%
	1.3								
	1.7								
	555								
	3.0								
	3.0								
	560								
	3.0								
	3.0								
	565								
	3.0								
	570								
	3.0							568	Pyrite 5-10% as disseminations, aggregates and irregular veins.
	575								
	3.0							573.3	Pyrite 3-5% as above.





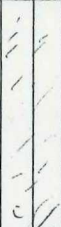




# DIAMOND DRILL LOG

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
	2.8	The rock is locally brecciated with irregular fragments from 0.5 to 4cm.							
	3.1	There is a weak foliation direction and 50% to core axis.							
	605								
	3.1								
	3.0								
	610	PyP1 Grey-green chloritised, carbonated locally sericitised ( <u>lithic tuff agglomerate</u> ). Subrounded fragments of fdxt-lava to 4cm predominate in a grey siliceous matrix.						610	5cm Py 30% Gn 5% Sph 1-2% Py 5% over interval.
	3.0							610.8	5cm Py 30% Gn 10% Sph 5%
	612.9							611.05	Gn 10% Sph 5% as above
	3.0	AP (DTL?) Green fine grained chloritised locally carbonated vesicular lava. Similar to above 610.0m. Fine grained, carbonate filled vesicles to 4mm are common. Contact 45° to C.A.						612.9	Pyrite <1%.
	616.3							613.3	
	3.0	PyP1. Grey carbonated locally sericitised lithic tuff - coarse lithic tuff. Lithic fragments are commonly feldspar crystal tuff-lava, subrounded in outline up to 3cm. Other fragments include pyrite, recrystallised chert and chloritised tuff?						613.5	Pyrite 5% as above. 5cm Py 40% rare Cpy
	620.	E.O.H. The matrix is fine grained and siliceous  Below 618.75m the rock is lithic tuff fragments generally <1cm. Crude bedding at 30° to CA. has been noted.							Trace Sph, Gn as v. minor stringers.