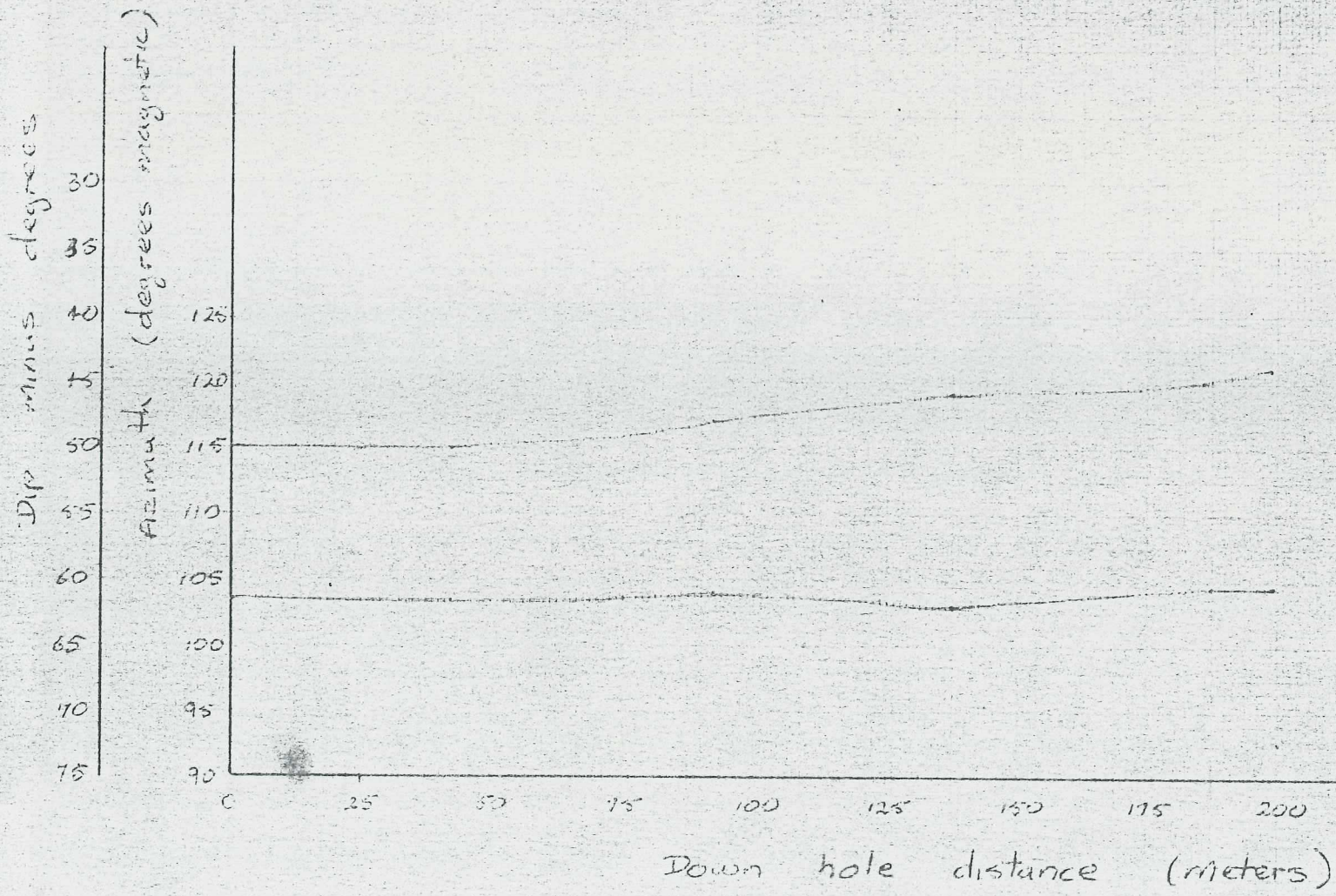


OR 12

QR12.



Eastman single shot camera
Dip
Azimuth

DIAMOND DRILL LOG

Hole No.

QR 12

Feature:

Bedding

Foliation

Fragment —

size & shape

Shearing

Fault

Vein

Mineralization:

Trace 1%

Common 1% — 15%




Abundant 15% — 60%




Massive > 60%

CORE REC'D	DEPTH	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH	MINERALIZATION
	1.6	subhedral carbonate replaced feldspar to 3mm. and green chlorite flecks (after hornblende) in a pale green-grey matrix.						26.85	
	1.4	<u>Agglomerate</u> (similar to QR 8 6.8-49.8 and QR 11 33.7-140.3). This unit is characterised by large angular to rounded fragments (to 10cm.) of a light grey coloured (often altered to pale fawn) fine grained siliceous material containing numerous pale green patches of sericite (to 4mm.), sometimes euhedral in outline, most appear to be cavity filling. Other fragments are smaller (to 3cm.) sericitised filamentous pumice, often aligned parallel to the foliation at 40° to core axis. Fragments of featureless grey cryptocrystalline silicate (chert?) have been noted. The matrix, of minor volume with respect to the fragments is light grey "ashy" material often containing up to 60% fine pyrite. Fractures at 20° and 40° to core axis.	A BROKEN CORE					26.85	Pyrite 5% locally 10% as fine subhedral to euhedral crystals, interstitial to the fragments and as minor irregular veins and networks.
	3.2		A BROKEN CORE						
	1.5		A BROKEN CORE						
	1.6		A BROKEN CORE						
	1.7		A BROKEN CORE						
	1.8		A BROKEN CORE						
	0.4		A BROKEN CORE						
	2.2	Samples for Petrology	A BROKEN CORE						
	40	46.75m 141096 52.7m 141097	A BROKEN CORE						
	2.7		A BROKEN CORE						
	2.6		A BROKEN CORE						
	45		A BROKEN CORE						
	1.2		A BROKEN CORE						
	2.5		A BROKEN CORE						

DIAMOND DRILL LOG



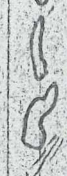


Feature:

Bedding 
 Foliation 
 Fragment—
 size & shape 

Shearing 
 Fault 
 Vein 

Mineralization:

Trace 1%
 Common 1%—15%
 Abundant 15%—60%
 Massive > 60%

CORE REC'D	DEPTH	GEOLOGY	VISUAL LOG	TRACE COMMON	ABUNDANT	MASSIVE	DEPTH	MINERALIZATION
		described above are now less obvious. Disrupted and siliceous down to 76m. The unit is now a <u>pumice agglomerate</u> . The pumice fragments (to 6cm.) show some eutaxitic structures, they tend to be elongated parallel to the foliation, some are amoeboid in shape and others filamentous. They vary from light to dark grey in colour and are generally highly sericitised sometimes carbonated. Glass filled vesicles? are now represented by pale grey patches of sericite. Occasional lithic fragments, grey siliceous material (chert?) have been noted. The matrix is grey siliceous and often contains fine disseminated pyrite.						Pyrite as above.
	3.0						78.8	Pyrite 50% irregular
		At 83.2m there is a 3cm. band of fine grey "argillaceous" material, bedded? at 30° to core axis.					79.1	vein of fine subhedral to euhedral crystals.
	3.0							
	3.0	87.5m situated on a fracture plane a few small crystals <2mm. of brown coloured adamantine sphalerite?						
	3.0	Fractures at 20°, 30° and parallel to foliation at 40° to core axis.						
	3.0							
	3.0	Between 96.6 - 99.7 the core is weakly sheared at 35° to core axis.						
	3.0							
	100							


DIAMOND DRILL LOG

Feature:

Bedding

Foliation

Fragment -

size & shape 

Shearing 

Fault 

Vein 

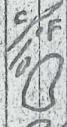




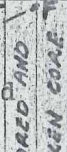

Mineralization:

Trace 1%

Common 1% - 15%




Abundant 15% - 60%




Massive > 60%

CORE REC'D	DEPTH	GEOLOGY	VISUAL LOG	TRACE COMMON ABUNDANT MASSIVE	DEPTH	MINERALIZATION
	3.0	Fault at 100.2m, 10cm. carbonate vein containing brecciated wall rock, 20° to core axis.				Pyrite as above.
	1.0	<u>Fault zone 103.2 - 117.6m.</u> 60% sheared and broken core. Some pug zones (breccias) at 40° to core axis.				
	2.0	From 104.7 - 106.9 the rock is heavily carbonated and sericitised, there are some minor carbonate veins parallel to core axis.				
	1.7					
	1.5					
	2.5					
	2.9				112.6	Pyrite 25% fine disseminated, subhedral to euhedral crystals in a grey sericitic matrix.
	1.8	From 114.2 to the end of the fault zone the rock is heavily carbonated and sericitised.			114.9	Pyrite 10% fine subhedral to euhedral crystals.
	1.8	<u>Gradational contact in fault zone.</u> <u>Fine vitric tuff.</u> Small <2mm. lenticular patches of grey-green sericite represent devitrified vitric shards in a light grey-green featureless groundmass. Small <4mm. quartz fragments (with corroded margins) have been noted as well as occasional lithic fragments (<1cm.). Heavily carbonated, with numerous small veins and stringers some parallel to core axis (tension veins). Foliation and fracture at 25° - 30° to core axis.			117.2	
	3.0				117.65	Pyrite 5% where indicated as small irregular veins of fine euhedral crystals in a quartz carbonate gangue.
	3.0	<u>Fault zone.</u> Sericitised, chloritised and partly siliceous <u>pumice lithic tuff.</u> This unit is thoroughly disrupted and often faulted.			121.9	Pyrite 20% - 30%. Two ages of pyrite are indicated by the presence of fine cryptocrystalline material and euhedral crystals up to 1mm.
	0.8	Pumice fragments where evident are often filamentous, amoeboid in shape				

DIAMOND DRILL LOG









Feature:

Bedding 
 Foliation 
 Fragment—
 size & shape 

Shearing 
 Fault 
 Vein 

Mineralization:

Trace 1%
 Common 1%—15%
 Abundant 15%—60%
 Massive > 60%

CORE REF. D	DEPTH	GEOLOGY	VISUAL LOG	MINERALIZATION		
				TRACE	COMMON	ABUNDANT
		and are thoroughly sericitised. Lithic fragments, rarely to 5cm., are rounded grey and siliceous (chert)				
2.2	126.5	<u>Fault zone</u> sheared broken and brecciated.				
0.6	127.6					
2.4		The siliceous fragments described above contain fine disseminated pyrite. Fragments of rounded pyrite (framboidal) to 5mm. have been noted. The matrix is very fine and dark grey, now "flooded" with fine pyrite.				
	130					
1.9						
	132.4					
2.2		<u>Fault zone</u> Pug, sheared and broken core.				
	134.2					
2.0	135	Fractures at 20° and parallel to foliation at 45° to core axis.				
	138.9	3cm. band of grey siliceous material (chert?) bedded? at 40° to core axis.				
	140					
3.0						
	143.9					
2.9	144.1					
	144.85	Yellow-green coloured <u>altered tuff</u> . Gradational contact down to 144.85 fragments of chert, pumice and pyrite in a disrupted siliceous matrix, "dropped" fragments of pyrite suggest stratigraphic top is up hole. There are some thin <1cm. disrupted chert beds down to 146.05 - then 60cm. of grey chert, possibly bedded at 20° to core axis. (The chert shows tension fractures filled with carbonate at 80° to core axis). From 146.7 - 150.3 there is a fracture parallel to core axis and brecciated core.				
1.2						
2.1						
3.0						
	150					

The pyrite is distributed throughout the matrix and as occasional irregular veins and aggregates.

Rare sphalerite (pale brown blebs rimmed by galena) and very fine galena have been noted.

139.25 sphalerite 5%, galena 3% over 5 cm. minor concentration of sphalerite (very pale brown) blebs to 5mm. and fine disseminated galena roughly bedded at 30° to core axis.

143.9 galena 5% over 4cm. Fine banded disseminated galena and 144.85 pyrite at 20° to core axis.

144.1 - 144.85 pyrite 15% as fine disseminations and fragments.

Below 144.85 pyrite 5% - 10% as disseminations within the matrix, irregular veins and networks and as rounded fragments of cryptocrystalline


DIAMOND DRILL LOG

Feature:

Bedding 

Foliation 

Fragment —

size 8 shape 

Shearing 

Fault 

Vein 

Mineralization:

Trace 1%

Common 1% — 15%

Abundant 15% — 60%

Massive > 60%

CORE REC'D	DEPTH	GEOLOGY	VISUAL LOG	TRACE COMMON ABUNDANT MASSIVE	DEPTH	MINERALIZATION
		Below 150.3 the tuff is mostly siliceous and contains numerous small < 2mm. rounded quartz grains and larger rounded carbonate blebs. The rock is locally sericitic with small lenticular blebs of sericite, possibly replacing devitrified glass. Rounded chert fragments to 1cm. have been noted.				material (framboidal?).
	3.0					
	155	A "chrome" green coloured mineral is common throughout this unit often in elongate blebs to 5mm. mostly aligned parallel to the foliation at 30° to core axis. (This mineral is unlikely to be fuchsite.)				
	3.0					
	160	Below 159.5 the rock is a tuff agglomerate. The fragments consist of sub-angular to rounded pumice? (to 6cm.), smaller grey cherty material and occasional pyrite fragments.				
	3.0					
	163.5	The matrix is light grey-yellow in colour - "ashy" often replaced by aggregates of fine pyrite.				
	3.0	Sample for Petrology 156.2m 156099				
	163.5	Gradational contact. <u>Pumice tuff agglomerate</u> light grey-green in colour, bright green between 168 and 169.6m in zones of increased carbonate alteration. This unit also contains "chrome" green patches as described above.				
	3.0					
	165	The pumice fragments are generally amoeboid in shape, brecciated between 166.8 and 168.4 and are characterised in this unit by numerous round quartz-carbonate filled vesicles, some to 1cm. in diameter. The matrix is light grey-green "ashy" material.				168.4, 1cm. patch of a dark grey sulphide possibly bismuthinite in a small quartz carbonate vein.
	2.0					
	170	Sample for Petrology 169.8m 156100				
	2.6					
	171.65	Sharp contact at 45° to core axis. <u>Massive Sulphides</u> in a grey siliceous matrix.				171.65 Pyrite 60% <u>Sphalerite</u> 8% <u>Galena</u> 3%. The majority of the pyrite consists of rounded fragments up to 3cm. of fine cryptocrystalline material, dense
	3.0					
	175					

HOLE NO QR12

DATE 20/12/74

INITIAL ANALYSIS:

CHECK LAB:

SAMPLE NO	FROM (M)	TO (M)	IW (cm)	REMARKS	%Cu		%Pb		%Zn		%Fe	ppm Ag	ppb Au	ppm Au	INTERVAL & BULK NO	%Cu TIT	%Pb GRAV	%Zn TIT	Δ%
					AAS	XRF	AAS	XRF	AAS	XRF	TIT	AAS	AAS	FIRE					
156115	170.65	171.61	96	DATUM BLOCK 171.0	0.02		0.16		0.10			10	30						
16	171.61	172.10	49		0.38		19.2		23.4			430	>	4.0					
17	172.10	172.63	53		0.21		13.2		22.6			350	>	4.0					
18	172.63	173.10	47		0.39		12.1		15.1			280	>	5.5					
19	173.10	173.75	65		0.19		13.2		23.9			240	>	4.0					
20	173.75	174.29	54		0.19		6.01		11.0			185	>	4.0					
21	174.29	174.79	50		0.11		9.66		8.08			110	380						
22	174.79	175.40	61		0.50		8.10		13.8			105	240						
23	175.40	175.90	50		0.12		4.32		10.0			61	>	1.0					
24	175.90	176.49	59	BLOCK 175.4 MEASURED 175.2	0.27		10.6		10.0			104	30						
25	176.49	177.02	53		0.18		8.64		13.9			100	320						
26	177.02	177.47	45		0.11		4.88		7.15			49	310						
27	177.47	177.98	51		0.06		2.26		3.44			24	290						
28	177.98	178.41	43	BLOCK 178.4 MEASURED 178.0	0.02		0.62		0.27			7	150						
29	178.41	178.95	54		0.03		0.23		1.35			7	80						
30	178.95	179.47	52		0.07		1.86		2.31			27	260						
31	179.47	180.11	64		0.17		3.73		6.27			64	180						
32	180.11	180.63	52	BLOCK 180.2 TIES IN	0.17		3.33		4.13			52	>	1.3					
33	180.63	181.15	52		0.10		2.28		2.64			35	>	1.0					
34	181.15	181.73	58		0.05		1.05		1.16			33	>	1.0					
35	181.73	182.36	63		0.02		0.25		0.55			10	>	1.0					
36	182.36	182.98	62		0.02		0.21		1.19			13	>	1.0					
37	182.98	183.60	62	BLOCK 183.20 MEASURED 183.20	0.03		0.78		2.15			23	>	2.0					
156138	183.60	184.40	80	184.4 TIES IN	0.02		0.25		0.82			12	>	1.0					
	171.61	177.98	637		0.23		9.43		12.8			169.8		2.1					
	177.98	181.73	375		0.09		1.94		2.73			336		0.6					
	171.61	181.73	1012		0.18		6.65		9.70			119		1.3					

HOLE NO QR 12

DATE 12/12/74

INITIAL ANALYSIS

CHECK LAB

SAMPLE NO	FROM M	TO M	I.W. (cm)	REMARKS	%Cu		%Pb		%Zn		%Fe	ppm Ag	ppb Au	ppm Au	INTERVAL & BULK NO	%Cu	%Pb	%Zn	Δ%	
					AAS	XRF	AAS	XRF	AAS	XRF	TIT	AAS	AAS	FIRE		TIT	GRAV	TIT		
156101	132.85	133.75	90	DATUM BLOCK 132.1	0.05		0.05		0.98			5	80							
02	133.75	135.18	43	134-3 TIES IN	0.05	11	0.09		1.03			7	70							
03	135.18	136.10	92		0.01		0.05		0.24			7	85							
04	136.10	137.13	103	BLOCK SAYS 136.3. 1 SAY 136.3	0.01		0.06		0.17			6	160							
05	137.13	137.86	72		0.01		0.07		0.08			7	130							
06	137.86	138.73	87		0.01		0.09		0.27			6	170							
07	138.73	139.51	78	BLOCK SAYS 139.3 1 SAY 139.24	0.05		0.07		1.33			7	160							
08	139.51	140.22	71		0.01		0.06		0.35			5	310							
09	140.22	141.02	80		0.06		0.09		0.29			10	190							
10	141.02	141.64	62		0.02		0.12		0.36			12	250							
11	141.64	142.42	73	BLOCK SAYS 142.2 1 SAY 142.06	0.03		0.06		0.29			15	<20							
12	142.42	143.31	89		0.02		0.06		0.52			7	250							
13	143.31	143.90	59		0.17			1.69	2.54			17	90							
156114	143.91	144.70	79	BLOCK SAYS 144.1 1 SAY 144.76	0.05		0.20		0.63			12	70							