

Drill Hole Record



Property Mackintosh EL 2/70 **District** Tasmania, Australia **Hole No.** QR1
Commenced 23/4/74 **Location** Que River area **Tests** ~~X~~ with Eastman single shot Hbr. Comp.
Completed 29/4/74 **Core Size** NQ to 36.50m, BQ to **Corr. Dip** **Vert. Comp.**
Co-ordinates ~~522511E 7400N~~ 522511E 7400N 7400.0N completion **True Brg.** **Logged by** EHSkey
Objective To test lead soil anomaly and VHEM conductor **% Recov.** 100 **Date** 18/5/74

Claim
 T. Brg.
 Collar Dip
 Elev.
 Length
 Hole No.
 Sheet

Footage-Metres		Description	Sample No.	Length	Analysis									
From	To													
		SURVEYS: Surface minus 50°, 101° magnetic												
		49metres " 48°, 102° "												
		111metres " 46°, 104° "												
		148metres " 46°, 105° "												
		Similar rock types are identified by T1, T2 etc. Major lithological changes are indicated by an asterisk.												
0	5.40	No core. Humus, clay, sand.												
5.40	6.40	Bleached tuff(?)												
6.40	11.90	Sheared grey sericitised recrystallised silicified rock (tuff?).												
		Disseminated pyrite, rare galena, sphalerite.												
		Cleavage 20° to core axis.												
		Zones with approximately 50% pyrite contain minor galena, sphalerite												
		8.20 - 8.50												
		9.20 - 9.55												
11.90	16.10	Brecciated silicified (?) coarse rhyolite (?) lithic tuff with pumice fragments. Foliation 35° to core axis												
		Pyrite (approx. 1mm cubes) ramifying throughout, patchily up to 10%, sparse dark sphalerite seen in section. Sulphides occur in vesicles and elsewhere												
16.10	17.05	Sheared sericitised fine tuff. Typical feature is occurrence of												

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Footage From To	Description	Sample No.	Length	Analysis						
	1 - 3mm lenticles of clear green sericite. Foliation 30° to core axis.									
	Pyrite as fine grained dusting ≤ 5(?)%. Dark sphalerite apparent in section, also stringers of quartz and coarser pyrite.									
17.05 - 25.20	Sericitised volcanic with flow banding (?). Gross texture of agglomerate or tuff agglomerate. Could be autobrecciated ash flow tuff. Light green patches of < 3mm are variously sericite-quartz-sulphide. Foliation 30° to core axis.	141733 at 18.05								
	Pyrite occurs as ramifying veinlets and stringers of (≤ 1mm) euhedral crystals. Sphalerite observed in sections.	141734 at 18.40 141735 at 25.15								
25.20- 36.50	Similar in gross texture to above, but richly sericitic. Sheared tuff agglomerate.									
T1(?)	Disseminated (2%) pyrite throughout; ramifying stringers up to 20% between 24.00 and 24.80.	141736 at 34.00								
	Massive, 80% pyrite between 27.90 and 28.40 encloses a 5mm quartz vein at 30° to core axis. Pyrite cubes are coarse (3mm) adjacent to the vein becoming progressively finer outwards to << 1mm.									
NQ core ends 36.50m	Below 29.00 ptigmatic veins of quartz-carbonate are common.									
36.50 - 40.80	Similar to above but with framboidal type aggregates of siderite or									

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Elev.

Length

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Footage		Description	Sample No.	Length	Analysis								
From	To												
	T1	ankerite of secondary nature of 1-2mm Vitric and pumice fragments often converted to lenticles of sericite. Cleaved vitric tuff agglomerate with carbonate alteration. Fine <u>pyrite</u> throughout.	141737 at 38.30										
40.80 - 45.20	T2	Dark grey to black <u>chloritised volcanic</u> ? possibly a glassy vesicular rock. Very fine grained with cream spots, 2-3mm carbonate, possibly in the vesicles. Disseminated <u>pyrite</u> 10% increases to 25% at 45.00 as ramifying veins and irregular stringers. Below 45.00 is about 5% pyrite.	141738 at 42.85										
45.20 - 56.70		Sheared grey volcanic becoming brecciated and siliceous below 54.50 but finely sericitised throughout. <u>Pyrite</u> 5-10% throughout except 50.40 to 51.80, 15% locally 25% with rare chalcopryrite (55.80). Minor sphalerite with pyrite below 54.50. Fault zone 45.70 - 46.50	141739 at 54.10 141740 at 56.10										
56.70 - 58.50		25% <u>pyrite</u> with visible chalcopryrite-galena-sphalerite. << 2% total. In siliceous host.											
58.50 - 71.40		Siliceous brecciated volcanic (<u>dacitic tuff</u> ?)	141741 at 67.05										

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Footage From To	Description	Sample No.	Length	Analysis							
	characterised by rare chrome gr-en sub oval forms (up to 5mm rarely larger) of unknown mineralogy (viz. 65.10) but probably fuchsitic.										
	Pyrite typically about 2% to 63.60, except for bands 40% plus at:										
	60.25 8cms at 30° to core axis										
	61.75 3cms										
	62.90 10cms										
	63.40 20cms at 30° to core axis										
	No visible base metal sulphides.										
	Below 63.60 consistent splashes of pyrite in coarse ramifications attain 10-15% consistently, locally up to 50%. Sulphide is interstitial to siliceous fragments of 1-2cms. Some fragments show banding (67.85): tuff breccia.										
71.40 - 74.60	Tuff breccia fragments variously silicified or sericitised. Distinguished from adjacent units by being only weakly pyritic. 141742 at 72.45										
74.60 - 81.10	Silicified pyritic breccia (probably volcanic) 141743 at 79.40 Pyrite (as fine euhedral and subhedral crystals) normally 5% but reaching 15% as aggregates with traces of galena and sphalerite. Probable Fault Zone (broken, sheared core) 74.63 to 74.90										

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Objective		% Recov.	Date			

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From	To	Description	Sample No.	Length	Analysis										
*															
81.10	107.80	Coarse lithic tuff seen to be patchily (relatively weakly) silicified, chloritised and sericitised in section.													
	T6	This represents a <u>gross change</u> from generally silicified, pyritic rocks to cleaner looking volcanics (c.f. 203.10 in QR2). This unit becomes more siliceous down the hole. Below 100m approx., quartz phenocrysts are present, fragments show distorted (flow?) banding and are generally larger - <u>tuff agglomerate</u> . The smaller (< 32mm) fragments consistently show amoeboid shapes suggestive of a plastic character during effusion (<u>ash flow tuff to tuff agglomerate</u>). Between 105.70 and 106.05 occurs a fine grained dark grey (andesitic)tuff.													
			141744 at 84.05												
			141745 at 105.80												
107.80	111.75	Sulphide Pyrite 10-20% consistently. Very fine grained matrix of chlorite(?) quartz and carbonate. Quartz veining at 111.55.													
		107.80 to 108.00 1% chalcopryrite, 3% sphalerite, minor galena													
		109.90 to 111.25 rare splashes of galena and sphalerite													
			141766 at 108.05												
			141765 at 110.85												
111.75	112.30	Siliceous (silicified?) lithic tuff													
		Pyrite approx. 10% with rare galena, sphalerite and chalcopryrite.													
		Fine pyrite grain aggregates (rarely bands) are concentrated in this tuff matrix.													
			141746 at 111.85												

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Footage From To	Description	Sample No.	Length	Analysis						
112.30-113.55	Sulphide totals 40-50% in lithic tuff host Pyrite dominant (30%) with 10% sphalerite, 5% chalcopyrite. Sphalerite locally up to 30% over 10cm intervals.	141764 at 112.90								
113.55-114.80	Sulphide characterised by presence of galena as 1cm bands, medium - coarse (3mm approx.) grainsize Pyrite 50%, sphalerite 5%, galena 5% total, but up to 80% in some bands. Banding at 30° to core axis. Matrix is dominantly quartz.	141763 at 113.56								
114.80-115.35	Massive galena - 80%, with 15% sphalerite occurring dominantly in narrow 1-2cm bands at 32° to core axis, plus minor pyrite and chalcopyrite.	141762 at 115.10								
115.35-119.10	Pyritic lithic tuff Continuous splashes of pyrite - range 5-10% Richly pyritic (60% approx.) 116.55, 5cms with minor galena 116.85 to 117.10, pyrite 15%, chalcopyrite 2%, sphalerite 2%. 117.40 to 117.60, pyrite, chalcopyrite, sphalerite totals approx. 10%.	141761 at 115.60 141760 at 115.95 141759 at 119.00								

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Claim	T. Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
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Footage		Description	Sample No.	Length	Analysis										
From	To														
119.10	119.55	Massive banded pyrite-chalcopyrite-sphalerite-galena (70%) Pyrite 60%, chalcopyrite and sphalerite 8(?) matrix quartzo- feldspathic, cryptocrystalline													
			141758	at 119.45											
119.55	120.10	Massive finely banded ($\leq 1\text{mm}$) pyrite(40%), chalcopyrite (40%) with minor sphalerite and siliceous matrix. Foliation (bedding) is at 50° to core axis.													
			141757	at 119.70											
120.10	120.50	Sulphide 50%, dominantly pyrite (approx. 25%) with sphalerite and chalcopyrite irregularly distributed totalling 25%. Matrix is a translucent yellow green vitric volcanic.													
120.50	124.07	Vitric rhyolite or rhyolite vitric tuff, with quartz rich matrix.													
			141756	at 122.40											
T5		Pyrite 25-30% as irregular bands and ramifications, with sphalerite and galena in irregular bands at intervals, varying from 2-20cms; bands are typically $< 1\text{cm}$.													
124.07	135.00	Rhyolite autobreccia, Large yellow green fragments of core diameter plus, are composed of a siliceous finegrained translucent matrix with numerous appressed aligned shards of green glass. Foliation is typically 25° to core axis. Possibly an ash flow tuff, recrystallised and sericitised.													
			141747	at 124.50											

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Objective		% Recov.	Date

Claim
T. Brg.
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Footage Metres		Description	Sample No.	Length	Analysis					
From	To									
		Sulphide is pyrite with rare chalcopyrite and sphalerite; crystal aggregates, veins and stringers are largely restricted to the matrix between rock fragments, but blebs of pyrite also occur in the large fragments.								
		Total sulphide estimated at 10% but locally is 60% viz.								
		125.55 to 125.70								
		127.65 to 127.75								
		132.20 to 132.45								
135.00-150.00		Indistinct contact. Foliated mottled and creamy green siliceous lithic vitric tuff. Section reveals sericitic and carbonate alteration extensive. Foliation 30° to core axis.								
	T5	Possibly a thin dolerite dike at 139.55								
		The fracturing typical of the unit above (124.07 to 135.00) is not present in this unit. The characteristic mottling varies in pattern size and may be related to size/abundance of lithic fragments. The indistinct colour boundaries may be indicative of welding and subsequent blurring of fragment/matrix compositional variation.								
		Normally < 2% pyrite is disseminated throughout, also in veinlets and associated with quartz which appears to replace fragments and feldspar crystals(?).								

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Footage Metres.		Description	Sample No.	Length	Analysis									
From	To													
		Rare concentrations of 10-30% sulphide contains galena and sphalerite.												
		148.35 10cms												
		148.75 30cms												
		These are crude bands, parallel to the foliation, 35° to core axis. Sphalerite typically occurs as elongate ovoids forming a crude band of 5-10mm thickness.												
150.90-154.75		Pyrite rich zone in pale green rhyolite(?) agglomerate Pyrite typically 20% but locally 60% (154.25 to 154.75)*												
		*Will not correspond to samples for assay because of uncertain number block error.												
154.75-156.45		Tuff agglomerate. Low (<2%) pyrite. Rock fragments are siliceous fine lithic tuffs with small (1-3mm) chips of sericite, quartz-feldspar and chloritic material. The rock matrix is quartzo-feldspathic and richly chloritic in part (black)												
156.45-159.00		Pale yellow-green mottled recrystallised (welded?) lithic tuff Foliation is 35° to core axis. Quartz-carbonate(?) veining common (5-10%) in last 40cms of unit. Vein orientation 45° to core axis dominant.												

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Footage Metres		Description	Sample No.	Length	Analysis									
From	To													
		Disseminated pyrite 2-5%.												
159.00-163.35		Andesitic(?) lithic tuff to tuff agglomerate	141754	at 159.80										
unsheared T1?		Fine grained dark grey andesite or dacite blocks are set in a quartzo-feldspathic matrix. Sericite blebs throughout parallel the foliation at 35° to core axis. Pyrite occurs in stringers and veinlets totalling 5-10%	141755	at 162.85										
		END OF HOLE												
		NOTE: Sericite is obvious and common above 54.00m, but is typically less obvious below this point, except 154.75 to 156.45												
				159.00 to 163.35										

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HOLE NO QR 1DATE 9-5-74INITIAL ANALYSIS: A.C.S. Labs.

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	
145499	107.88	106.88	100	Datum block 107.88	<0.01		0.24		0.21	5.74	8	65							
500	106.88	105.88	100		<0.01		0.16		0.17	7.55	2	75							
501	105.88	104.88	100		<0.01		0.17		0.13	11.30	9	190							
502	104.88	103.88	100	105.25 ties	<0.01		0.23		0.22	14.0	8	210							
503	103.88	102.88	100		<0.01		0.14		0.18	8.97	5	85							
504	102.88	101.88	100		<0.01		0.26		0.22	9.27	4	75							
505	101.88	100.88	100		0.015		0.25		0.70	10.4	9	190							
506	100.88	99.88	100		<0.01		0.30		0.38	9.29	11	150							
507	99.88	98.88	100	99.40 does not tie	<0.01		0.22		0.73	9.65	8	75							
508	98.88	97.88	100		<0.01		0.17		0.29	8.62	8	75							
509	13.53	12.69	84	Datum block 11.90	<0.01		0.015		0.023	11.8	6	50							
510	12.69	11.92	77		<0.01		0.030		0.034	7.68	7	<20							
511	11.92	11.17	75	considerable CORE LOSS	<0.01		0.019		0.028	8.24	6	50							
512	10.96	10.16	80	considerable CORE LOSS	<0.01		0.10		0.12	17.8	8	<20							
513	10.16	9.16	100		0.017		0.19		0.073	12.0	11	210							
514	9.16	8.56	60		0.061		0.78		1.03	31.0	18	<20							
515	8.56	7.14	142	just below weathered zone	0.11		0.30		0.63	13.3	12	200							

HOLE NO QR 1

DATE 30-4-74

INITIAL ANALYSIS: ACS Labs.

CHECK LAB: AMDEL = A
GEN. SUP. = G.

SAMPLE NO	FROM (M)	TO (M)	IW (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	
147150	107.88	108.41	53			0.59		0.49		3.20	19.2	45	35	147150A	0.61	0.55	3.70		
151	108.41	108.91	50	Miscr core loss		0.23		0.12		1.29	21.0	15	85	151A	0.22	0.27	2.20		
152	108.91	109.42	51			0.010		0.19		0.26	20.5	10	<20						
153	109.42	109.92	56			0.032		0.12		0.34	21.2	10	<20						
154	109.92	110.42	50			0.072		0.15		0.21	23.5	11	<20	154A	0.09	0.19	0.24		
155	110.42	110.87	45			0.031		0.13		0.15	18.1	9	<20						
156	110.87	111.36	49			0.41		0.42		4.57	24.1	16	<20						
157	111.36	111.75	39			0.60		0.39		1.62	24.9	13	<20						
158	111.75	112.37	62			0.008		0.20		0.56	15.1	5	75						
159	112.37	112.85	48			1.71		1.20		5.29	19.0	155	35	159A	1.90	1.50	6.75		
160	112.85	113.36	51			3.96		1.87		18.6	26.1	220	90	160G	4.12	2.05	20.6		
161	113.36	113.86	50			1.64		4.51		31.3	15.4	180	90	161G	1.67	5.42	34.1		
162	113.86	114.38	52			1.45		0.83		13.9	24.6	27	<20	162A	1.52	0.93	15.4		
163	114.38	114.76	38			1.44		16.9		6.01	20.4	200	<20	163G	1.41	17.98	7.15		
164	114.76	115.44	68			0.70		49.3		10.2	6.1	540	55	164G	0.63	54.3	11.55		
165	115.44	115.95	51			0.60		1.30		2.22	10.5	20	125						
166	115.95	116.44	49			0.058		0.58		0.88	7.3	9	70						
167	116.44	116.96	52			1.39		2.09		2.02	19.3	38	35						
168	116.96	117.47	51			1.25		1.10		4.03	16.4	19	50						
169	117.47	117.96	49			1.00		0.97		2.33	15.0	20	170	169A	1.10	1.15	2.80		
170	117.96	118.45	49			1.87		0.50		1.15	19.4	33	75						
171	118.45	119.05	60			2.01		1.00		2.13	17.9	56	45						
172	119.05	119.47	42			6.85		3.87		17.7	23.3	190	250	172A	7.40	4.55	20.2		
173	119.47	120.07	60			14.00		3.04		2.14	48.0	320	200	173G	14.97	3.52	2.45		
174	120.07	120.69	62			2.59		2.65		6.70	22.3	63	25	174A	2.70	3.10	8.10		
175	120.69	121.20	51			1.25		0.91		1.19	20.4	20	150						
176	121.20	121.70	50			0.098		1.01		0.92	19.7	16	<20						
177	121.70	122.20	50			0.27		2.06		8.55	16.5	19	<20						
178	122.20	122.69	49			0.34		0.99		7.94	20.7	11	<20	178A	0.36	1.25	9.65		
179	122.69	123.27	58			0.38		1.50		11.6	17.8	15	<20	179G	0.35	1.87	12.15		
180	123.27	123.81	54			0.44		2.89		7.06	14.2	26	160	180A	0.40	3.35	8.10		
180	123.81	124.31	50			0.068		0.66		0.96	12.2	9	85						

