Drill Hole Record

Comineo

Property Mackintosh EL2/70	District Tasmania, Australia	Hole No. QR4	
Commenced 5/6/74	Location Que River Area	Tests at with Eastman single shot	Hor. Comp.
Completed 11/6/74	Core Size NQ to 48.80, BQ to completion	Corr. Dip	Vert. Comp.
Co-ordinates 5200E 7200N		True Brg.	Logged by EHS/DBW
Objective To test southward of QR1 in an area with good EM conductivity		% Recov. 100% except as specified	Date 17/6/74

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

Footage Metres From	To	Description	Sample No.	Length	Analysis
		SURVEYS: Surface Minus 49.5° 104° magnetic			
		18.60 " 49° 102° "			
-		21.35 " 49° 105° "			
		45.50 " 48.5° 105° " - Ignore - plot of azimuth vs. depth suggests 103° is more likely			
		48.50 " 49° 103° "			
		48.5 " 48° 134° " - Ignore, trial survey with short aluminium rods.			
		119.10 " 44.5° 103° "			
		136.45 " 43.5° 104.5° "			
		161.05 " 43° 101° " - Ignore - plot of azimuth vs. depth suggests 101° unlikely.			
		184.50 " 40° 105° "			
0 - 5.80		Brown fawn siliceous gritty unit with veins and vugs.			
Core losses throughout		partly filled by light to very dark brown iron oxides.			
5.80 - 6.15		Sharp contact (i.e. rock type change not just termination of weathering) Breccia of spherulitic(?) rhyolite or dacite			
		Light grey-white quartz-feldspar aggregates, angular to rounded			

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Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

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

Footage Metres From	To	Description	Sample No.	Length	Analysis
		up to 4mm in a mid-dark grey matrix.			
		Shearing 45° to core axis.			
6.15	22.75	Richly sericitic schist, fine grained except 20.55 to 21.80			
T1		which is a medium grained feldspathic tuff, Streaked out			
CORE LOSSES		white blebs suggest an original spherulitic(?) character.			
Probably 40%		(HCl testing indicates this spotting is not carbonate).			
6.15	10.20	Black bands and zones indicate chloritisation. This commonly			
		shows gradual intensification over 1-2cms with a sharp but			
		wavy cut off against light grey low chlorite schist. Shearing			
		is typically 40° to core axis. Chlorite bands have similar			
		attitude but may be rotated by 20°. (Deduce that cleavage			
		post dates alteration). Fragmental character visible locally.			
		Pyrite 2-5% as fine crystal aggregates 1-2mm, and stringers			
		commonly oblique to cleavage. Also occurs as occasional 1-2cms			
		bands parallel to colour banding rather than cleavage.			
		The core is broken, puggy and sheared at numerous points,			
		particularly 7.85			
		8.50			
		10.20			
		11.80			
		12.80			

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Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

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

Footage From	Footage To	Description	Sample No.	Length	Analysis
		13.40			
		15.20			
		20.75			
22.95	24.25	Sericitic tuff with subhedral to anhedral feldspar phenocrysts			
		Comment: From 24.25 through to 6.15 there would be graded bedding			
		of feldspathic tuffs showing two cycles fining (i.e. top) up the hole.			
24.25	26.86	Chlorite schist with irregular quartz-carbonate veining and ramifying			
		pyrite stringers of very fine crystals - 5%, locally 20% over maximum			
		5cms. Core broken.			
26.86	28.86	Vitric rhyolite in which the glassy fragments have been converted to			
		sericite blebs aligned at 40° to the core axis.			
		Weakly chloritic bands occur. Shearing is more intense where sericite			
		is in greater abundance.			
		Pyrite < 2% as rare bands.			
28.86	36.90	Sericitic lithic tuff of strongly spherulitic or feldspathic character			
		Gross fragmental texture becomes gradually but regularly coarser			
		down the hole. Fragment size typically 5mm at 29m increasing to 2cms			
		at 32.50 and to 3-5cms at 35m. Close packing suggests autobreccia			

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Objective		% Recov.	Date

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

Footage Metres From	To	Description	Sample No.	Length	Analysis
		(ashflow?), but effect of strong cleavage (at 45° to the			
		core axis) difficult to ascertain. Locally the matrix shows			
		silicification, some areas of which look like fragments in			
		their own right.			
		Probable fault at 36.90.			
36.90	41.15	Characteristically chloritic.			
		36.90 to 38.90 spherulitic(?) unit; quartz-feldspar			
		(or carbonate?) aggregates of roughly 2mm diameter, are			
		grouped into chains and layers often becoming veinlike.			
		The 'matrix' is cryptocrystalline and black in colour.			
		It is not clear which of these two assemblages represents			
		the last phase to form. In some areas (c. 1-2cms) the			
		chloritic material looks like rock fragments in a white			
		matrix. Elsewhere the converse is true.			
		Quartz-carbonate veining is common, both parallel and			
		oblique to the cleavage - 45° to the core axis.			
		Pyrite, 5%, is concentrated in, (but not exclusive to)			
		the white mineral assemblage.			
		38.60 to 41.15. Partly the same as above but dominantly			
		a breccia. Grey to black subangular chloritic fragments			

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Objective		% Recov.	Date

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

Footage Metres From	To	Description	Sample No.	Length	Analysis
		(< 1cm) are set in a quartz-carbonate (feldspar?) matrix.			
		Around 41.10 some fragments are light grey and siliceous. Others are comprised			
		of 60% plus pyrite.			
41.15	42.90	Sheared sericitic feldspathic tuff agglomerate - light grey in colour			
		The fragments appear to contain less phenocrysts than the matrix.			
		Feldspars are sub- to anhedral (up to 4mm). Cleavage is 40° to core			
		axis. Pyrite 2-5% locally, elsewhere is not obvious.			
42.90	44.35	Massive chlorite rock, sheared in part.			
		Richly pyritic (average 10%, but locally 80%), with carbonate,			
		also in bands of varying crystal grain size - cryptocrystalline			
		to < 1mm. Bands are at 45° to core axis			
44.35	45.03	Light grey tuff agglomerate. The matrix is light grey and			
		siliceous, the fragments are mid-grey, greenish to fawn,			
		spherulitic in part, vitric and show a wide range of shapes from			
		round to tubular. Margins are commonly irregular with wispy			
		extensions both parallel to and oblique to the overall foliation			
		(40° to core axis).			
		Some fragments are less than 1cm thick but traverse the core.			
		A plastic state of extrusion is indicated as ash flow tuff agglomerate			

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Objective		% Recov.	Date

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

Footage From	Footage To	Description	Sample No.	Length	Analysis
		The foliation is probably original flow texture			
45.03	48.00	Massive chlorite rock with quartz-feldspathic aggregates			
		(+ carbonate) The latter occur as spheres, veins, masses and interstitial			
		to zones of massive pyrite (80%), which crudely parallel			
		the foliation (weak cleavage) 20-40° to core axis.			
48.00	63.70	Siliceous (ash flow) tuff agglomerate with rare ≤ 5cm			
		bands of pyritic, chloritic schist identical with the units above.			
		Agglomerate fragments are light grey			
		The glassy looking chips and ovoids			
		(1-2mm) are sericitised. Flow banding is quite apparent.			
		Large fragments are less common downwards.			
		Pyrite is associated with silicification (in the form of			
		diffuse veins), but is generally rare. Averages < 2% except			
		in discrete massive (50%+) zones: 54.95 to 55.55 (90%)			
		57.69 to 59.17 (av. 60%)			
		and other narrow (5cm) zones			
		Possible Fault at 59.17 - core sheared and puggy			
63.70	66.50	Sericitised (relatively weakly) vesicular lava; fawn and light			
T3?		grey in colour. Sheared at 25-35° to core axis.			

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

Footage From	Footage To	Description	Sample No.	Length	Analysis
66.50	87.15	Lithic tuff			
		Above 72.40 very dark grey angular and subangular			
		andesitic(?) fragments < 2cm are characteristic.			
		Light grey/cream fragments are subordinate. Ground			
		mass is light grey, siliceous and locally silicified.			
		Below 72.40 andesitic fragments become less and less			
		common. Fragments generally mid grey, and becoming more significant			
		are 'areas' of up to 5cm diameter of quartz-carbonate			
		of a mottled appearance. Some of these 'areas' look			
		like fragments, elsewhere they vary into veinlets and stringers.			
		These 'areas' are usually, but not exclusively, pyritic.			
		Matrix silicification is common, (and would be the cause			
		of the apparent decline in dark fragments)			
		82.65 to 83.65 (and two minor intervals below this). Richly			
		chloritic with 1mm quartz-carbonate(?) spotting.			
		Broken core at 79.05 indicative of possible fault.			
		Pyrite mineralisation occurs throughout as veins and			
		stringers as well as finely disseminated, average			
		probably 2-5% except: 66.85 - 67.95 - 50% pyrite			
		72.40 - 73.17 - 90%			

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

Footage From	Footage To	Description	Sample No.	Length	Analysis
		78.75 - 79.15 20%			
		80.02 - 80.15 50%			
		The chloritic zones are more heavily mineralised than the			
		siliceous tuff probably 5-10% pyrite concentrated in part			
		into bands at 40° to core axis.			
87.15	96.55	Pyrite rich zone Massive pyrite of vein form has swamped lithic tuff.			
		The latter is composed of light grey fragments and ghosts in a			
CORE LOSS		thoroughly silicified white matrix. Fragment size increases			
89.91	to 92.70	downwards.			
(2.79) 1 metre		Below 94.70 it is a tuff agglomerate			
core loss in		87.15 to 89.71 90% pyrite			
mineralisat^{n}.		89.71 to 89.91 lithic tuff			
(not faulted-		89.91 to 92.70 about 50% of core is 90% pyrite. Note core loss comments.			
lifter failure		92.70 to 94.70 approx. 80% pyrite			
core redrilled)		95.87 to 96.55 60% pyrite			
96.55	130.75	Tuff agglomerate as above but less massive pyrite.			
		Crude alignment of fragments at 40° to core axis.			
		Pyrite still occurs as coarse stringers and clots,			
		averaging 5-10%.			
		Below 104m the white silicified matrix is less obvious			

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

Footage From	Footage To	Description	Sample No.	Length	Analysis
		though still present. Characteristic is carbonate spotting			
		(usually light brown, but occasionally wispy white carbonate is present)			
		of the order 5-15%, locally 20%. Pyrite is 5% as veinlets			
		and stringers, at all attitudes to the core axis.			
		The bottom of this unit is difficult to define but is chosen			
		as 132.42 (core) being the point at which:-			
		(i) groundmass silicification of a dark			
CORE LOSSES		grey lithic tuff ceases and			
110-60-112.85		(ii) siliceous vitric rhyolite with a pink			
(2.25m) prob-		colour (when wet) commences.			
ably 40% loss		Faulting is apparent. Broken core occurs at the following locations:			
		110.60 to 112.85			
		117.42 to 117.70			
119.00-120.45		119.00 to 120.45			
(1.45m) could		plus numerous other minor broken zones to 130.50.			
be 50% loss					
130.75-151.00		Defined as the point at which vein/stringer sulphide			
		mineralisation attains 50% (average)			
		130.75 to 131.35 60cms fine to medium (≤1mm) pyrite av. 50%.			
		131.35 to 132.33 98cms pyrite 60% with ramifying network of			
		chalcopyrite 15% in a siliceous matrix.			

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

Footage Metres From	To	Description	Sample No.	Length	Analysis
		132.33 to 134.23 Pink vitric rhyolite breccia, with 10% pyrite,			
		stockwork veining. Breccia matrix is quartz of cryptocrystalline			
		form, white-grey-translucent. 2cm band of chalcopyrite/pyrite			
		at 133.30. Elsewhere chalcopyrite is nil.			
		134.25 to 134.87 (corresponds to end of sample) 30% pyrite,			
		5% chalcopyrite as amorphous shapes suggestive of fluid deformation.			
		134.87 to 135.85 Massive pyrite 70%. Chalcopyrite 20%, typically			
		banded at 35° to 45° to core axis. Banding shows fluid deformation.		Calculated average	
		Seem to be two short (20cm, 30cm) cycles in which pyrite of fine		131.35 to 139.73m is	
		grain increases in grain size downwards and then rapidly becomes		7.6% chalcopyrite over	
		rich in chalcopyrite		8.38m (ignores all	
		135.85 to 136.85 Massive 75% pyrite, 5% chalcopyrite		trace occurrences)	
		136.85 to 137.25 Pyrite 40%, trace chalcopyrite in lithic tuff			
		matrix (grey as per previous logged interval)			
		137.25 to 139.73 Pyrite, massive 80%, chalcopyrite up to 10%			
		but averages 5%.			
		139.73 to 140.37 Grey lithic tuff, pyrite 5% plus rare splashes			
		chalcopyrite.			
		140.37 to 144.80 Massive pyrite 80%			
		144.80 to 145.65 Grey siliceous lithic tuff to tuff agglomerate			
		145.65 to 146.96 Massive pyrite, minor intervals of lithic tuff,			
		patchy sericitisation. Crude foliation at 35° to 40° to core axis.			

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

Footage Metres From	To	Description	Sample No.	Length	Analysis
		Pyrite shows vein form, subparallel to core axis locally.			
		146.96 to 147.50 Lithic tuff with minor carbonate veining.			
		147.50 to 148.12 Dominantly massive 90% pyrite			
		148.12 to 148.30 Lithic tuff			
		148.30 to 149.70 Massive 80% pyrite, patchy sericitisation of lithic tuff and minor carbonate veining.			
		149.70 to 150.70 Lithic tuff			
		150.70 to 151.00 Pyrite 80%			
		Broken core indicative of faulting is present at the following positions:-			
		146.54			
		150.25			
		150.90 to 151.70			
		152.25 to 155.15			
151.00	184.80	Broken and ruptured as described above to 155.15, light grey lithic tuff. Sericitisation of fragments is erratic, silicification in the form of irregular veins is both white and light grey. Carbonate veining is parallel and oblique to the core axis. Carbonate spotting is locally present. The grey-green tinge of the sericitised fragments is similar to the lowest unit in QP3. Foliation is 40° to core axis			

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Footage From	Footage To	Description	Sample No.	Length	Analysis
		Pyrite averages 5% and fringes quartz rich silicified areas which			
		are often subparallel to the foliation.			
		END OF HOLE			

COCKINGTON PRINT

HOLE NO QR4 DATE 20-6-74

INITIAL ANALYSIS: A.C.S. Labs.

SAMPLE NO	FROM (M)	TO (M)	I.W. (cm)	REMARKS	%Cu AAS	%Cu XRF	%Pb AAS	%Pb XRF	%Zn AAS	%Zn XRF	%Fe TIT	ppm Ag AAS	ppb Au AAS	ppm Au FIRE
145299	130.60	131.20	60	Datum 130.45		0.046		0.023		0.071	23.8	6	<20	
300	131.20	132.20	100			6.45		0.14		0.56	28.5	38	40	
145426	132.20	133.20	100	ties block 132.95		0.68		0.034		0.10	12.0	10	95	
427	133.20	133.80	60			0.11		0.017		0.11	786	5	80	
428	133.80	134.65	85			1.12		0.10		0.45	17.4	20	<20	
429	134.65	135.25	60			7.38		0.23		0.71	38.7	67	<20	
430	135.25	135.95	70			5.20		0.14		0.21	33.5	30	<20	
431	135.95	136.45	50			3.54		0.035		0.15	37.9	22	<20	
432	136.45	137.20	75			2.04		0.037		0.10	36.1	19	<20	
433	137.20	138.20	100			4.17		0.12		0.11	36.1	40	<20	
434	138.20	138.80	60	10cm core loss betw. above and 139.05.		2.69		0.085		0.16	35.8	31	<20	
435	138.80	139.50	70			3.20		0.052		0.17	38.8	26	<20	
WEIGHTED AVERAGE														
	131.20	139.50	830		3.32		0.09		0.26			27.98		

CHECK LAB: SUPERVISE SHEEN/C

INTERVAL & BULK NO	%Cu TIT	%Pb GRAV	%Zn TIT
BULK *5	0.75	0.05	0.2
	(1.10)	(0.053)	(0.22)
BULK *6	5.24	0.13	0.3
	(5.47)	(0.14)	(0.36)
BULK *7	2.48*	0.10	0.2
	(3.13)	(0.07)	(0.13)
Individual assays			
145300	6.91	0.18	0.7
145431	3.16	0.05	0.1

* CEPL Check of Cu is 2.80

HOLE Nº QR 4 DATE 29-6-74

INITIAL ANALYSIS: A.C.S. Labs

SAMPLE Nº	FROM (M)	TO (M)	I.W. (cm)	REMARKS	%Cu AAS	%Cu XRF	%Pb AAS	%Pb XRF	%Zn AAS	%Zn XRF	%Fe TIT	ppm Ag AAS	ppb Au AAS	ppm Au FIRE
145437	139.50	140.20	70			0.30		0.059		0.058	17.1	9	75	
438	140.20	140.64	44			0.29		0.059		0.072	38.2	19	<20	
439	140.64	141.68	104			0.66		0.060		0.078	38.1	15	50	
440	141.68	142.58	90			1.77		0.087		0.11	39.0	31	<20	
441	142.58	143.88	130			0.17		<0.01		0.052	32.9	13	150	
442	143.88	144.85	97			1.25		0.064		0.11	40.8	24	<20	
443	144.85	145.63	78	ties in block 145.15		0.040		0.025		0.028	9.45	<2	30	
444	145.63	146.26	63			0.43		0.037		0.037	31.0	10	70	
445	146.26	147.12	86			0.73		0.031		0.037	37.9	14	<20	
446	147.12	147.58	46			0.095		0.016		0.039	11.9	5	25	
447	147.58	148.12	54			1.47		0.033		0.063	32.9	20	2300	
448	148.12	148.75	63			0.64		0.050		0.036	39.5	13	540	
449	148.75	149.63	88	8cm short at 148.20		0.065		0.079		0.13	32.3	11	<20	
450	54.95	55.97	102			0.14		0.045		0.033	37.7	8	410	
145401	57.75	58.35	60			0.027		0.019		0.021	33.0	3	170	
402	58.35	59.45	110			<0.01		0.041		0.029	36.6	9	210	
403	66.85	67.98	113			0.55		0.037		0.025	26.6	8	190	
404	72.40	73.29	89			0.035		0.033		0.062	33.1	9	<20	
405	87.15	88.01	86			0.011		0.020		0.010	25.7	<2	85	
406	88.01	88.81	80			0.012		0.039		0.030	40.3	4	<20	
407	88.81	89.68	87			<0.01		0.030		0.018	36.0	<2	<20	
408	89.68	90.66	98			0.017		0.022		0.010	21.8	<2	110	
409	90.66	92.70	204	(Severe core loss)		<0.01		0.035		0.016	32.7	<2	<20	
410	92.70	93.67	97			0.011		0.028		0.013	29.5	<2	<20	
411	93.67	94.68	101			0.015		0.015		0.021	34.8	3	<20	
412	94.68	95.94	126			<0.01		<0.01		<0.01	19.7	<2	45	
413	95.94	96.86	92			<0.01		0.013		0.015	25.7	<2	130	
414	98.03	98.58	55			<0.01		0.018		<0.01	23.5	<2	85	

CHECK LAB:

INTERVAL & BULK Nº	%Cu TIT	%Pb GRAV	%Zn TIT	Δ