



PASMINCO ROSEBERY

A.C.N. 004 074 962

Hole No: 014B Objective: Test down dip extension of 009B intercept. Result: No significant intercept. Fruitcake! Best is 30cm @ 3%Pb, 7.4% Zn at 18.6-18.9m.	Location: Southern Trenches			Depth	Direct	Dip	Depth	Direct	Dip	Depth	Direct	Dip	Depth	Direct	Dip	
				0.0	90.0	-89.0										
				30.0	94.5	-88.5										
				60.0	100.0	-89.0										
			66.7	100.0	-89.0											
Planned Direction: 90° Planned Dip: -89° Planned Depth: 100.0 m Planned Northing: 4409 m N Planned Easting: 4656 m E Planned Collar R.L.: 422 m RL		Drilling Commenced: 12/10/98 Drilling Completed: 16/10/98 Actual Depth: 66.7 m Surveyed Northing: 4411.15 m N Surveyed Easting: 4657.82 m E Surveyed Collar R.L.: 422.07 m RL														
Date Logged: 26-Oct-1998 Logged By: Michael Whitbread Hole Size: HQ Hole Category: other Grouted:		Summary Log: 0-3m NC; -5.6m FW; -6.5m F; -7m FW; -18.6m F; -19m Hods; -25.9m Ho; -30.9m Hods; -46.5m Fwts; -49.9m Ho; -54.4m F; -58.5m Ho; -58.9m F; -60.1m Hods; -63.4m Hods; -63.5m F; -66.7m Hods EOH.														
Date Log Verified: 26-Nov-1998 Verified By: Michael Whitbread																

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int.	Description	@ Depth	Feature	LCA Deg°	RQD To (m)	RQD %	Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU \$
0.0	3.0	NC			a	NO CORE				3.0	NC	97196	3.0	4.0	1.0	0.1	0.1	0.01	1	0.1	0.2	3
0.0	3.0	NC			a	No core.				4.5	20	97197	4.0	5.0	1.0	0.1	0.8	0.01	1	0.1	0.3	12
3.0	5.6	FWTS			a	FOOTWALL - TRACE SULPHIDES				4.7	100	97198	5.0	5.6	0.6	0.4	2.1	0.05	4	0.1	0.6	31
3.0	5.6	BR	si		a	Light to medium grey, slightly brecciated looking, silicified rock/chert. Unit has suffered minor oxidation along fractures and broken surfaces. Unit consists of lighter coloured silicified cherty fragments (1-2cm to >5cm), separated by a darker, fine grained silicified matrix. Unit could be described as matrix supported. The lighter coloured fragments sometimes verge on being vein quartz and may be merely alteration artefacts rather the clasts. Unit contains numerous small pits most likely after either the white ?carbonate spots (generally 1-3mm in diameter) or after larger masses of now green-brown clayey material (possibly after chlorite-sericite). These carbonate spots are more numerous in preservation than the latter are fairly evenly spread throughout. Sphalerite+/-galena+/-fine grained black sulphide spots and blebs (1-5mm wide) occur sporadically throughout (and may have occupied some of the pits). Clay alteration between clasts increases towards the end of unit, and the 'clast' size decreases. Difficult to identify a consistent fabric. Unit is of poor competence, with occasional sticks exceeding 10cm.	6.3	25	97199	5.6	6.5	0.9	0.1	0.3	0.01	1	0.1	0.5	6			
		CH	qb				9.5	96	97200	6.5	7.0	0.5	0.1	0.5	0.01	1	0.1	0.5	8			
		RK	qb				14.0	6	97201	7.0	8.5	1.5	0.1	0.1	0.01	1	0.1	0.3	3			
							14.6	100	97202	15.3	16.9	1.6	0.1	0.2	0.01	1	0.1	1.7	4			
							25.8	13	97203	16.9	18.6	1.7	0.1	0.4	0.01	1	0.1	0.4	7			
							29.6	81	97204	18.6	18.9	0.3	3.0	7.4	0.02	22	0.1	1.3	116			
							31.0	14	97206	18.9	19.0	0.1	0.5	1.7	0.02	5	0.1	0.5	27			
							32.4	78	97207	19.0	20.2	1.2	0.1	0.1	0.01	1	0.1	0.2	3			
							33.4	40	97208	24.8	25.9	1.1	0.1	0.2	0.01	1	0.1	1.4	4			
							36.8	84	97209	25.9	26.9	1.0	0.1	0.1	0.03	1	0.1	1.0	3			
							43.9	16	97210	26.9	27.9	1.0	0.1	0.2	0.01	1	0.1	0.6	4			
							44.4	100	97211	27.9	28.9	1.0	0.1	0.2	0.01	1	0.1	0.8	4			
							46.8	22	97212	28.9	29.9	1.0	0.1	0.2	0.01	1	0.1	0.4	4			
							47.4	100	97213	29.9	30.9	1.0	0.1	0.1	0.01	1	0.1	0.3	3			
							54.6	16	97214	30.9	31.9	1.0	0.2	0.2	0.02	2	0.1	0.6	5			
						58.5	87	97215	31.9	32.6	0.7	0.1	0.2	0.02	3	0.1	0.5	5				
						58.9	0	97216	32.6	33.5	0.9	0.3	0.3	0.04	9	0.1	1.4	8				
						59.7	87	97217	33.5	34.5	1.0	0.2	0.1	0.01	3	0.1	1.2	4				
						61.8	14	97218	34.5	35.5	1.0	0.2	0.1	0.02	3	0.1	1.0	4				

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int.	Description	@ Depth	Feature	LCA Deg°	RQD To (m)	RQD %	Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU \$	
5.6	8.5	F				FAULT				63.3	86	97219	35.5	36.5	1.0	0.1	0.1	0.02	1	0.1	1.7	3	
5.6	6.5	BR	cy	qb	a	Broken zone of material as in previous unit. Most breaks along core axis. Unit darker coloured due to higher clay content. Puggy clay present in last 20cm of unit, containing small silicified/cherty clasts (fabric in this appears to be along core axis). 30-40cm of unmarked core loss assigned to this unit. At best there is only partial (50%) recovery.				63.7	0	97220	36.5	37.5	1.0	0.2	0.1	0.01	1	0.1	0.9	3	
		CH									66.3	76	97221	37.5	38.5	1.0	0.1	0.1	0.01	2	0.1	0.7	3
											66.7	0	97222	43.5	44.5	1.0	0.1	0.1	0.01	2	0.1	0.6	3
													97223	44.5	45.5	1.0	0.4	0.1	0.01	5	0.1	0.8	5
													97224	45.5	46.5	1.0	0.5	0.1	0.02	6	0.1	1.4	6
													97225	46.5	47.8	1.3	0.2	0.1	0.01	1	0.1	0.6	3
6.5	7.0	FW				FOOTWALL SEQUENCE						97226	47.8	48.7	0.9	0.2	0.2	0.01	3	0.1	0.6	5	
6.5	7.0	RK	si	a		As in 3-5.6m. However carbonate spotting is far less common. Sphalerite+etc blebs and wisps up to 2cm across are common. Dull greenish-brown colour and slightly softer nature of the 'matrix' indicates some slightly weathered ?chlorite-sericite alteration. The degree of brecciation and the intensity of this alteration increases towards end of unit (however it also becomes more weathered and pitted as well). Core competent.	6.6	JT	15°			97227	56.9	58.5	1.6	0.1	0.1	0.01	1	0.1	1.3	3	
													97228	58.5	58.9	0.4	0.1	0.3	0.02	3	0.1	1.6	6
													97229	58.9	60.1	1.2	0.1	1.2	0.16	5	0.1	1.9	20
													97230	60.1	61.0	0.9	0.1	0.4	0.03	1	0.1	1.2	7
													97231	61.0	62.0	1.0	0.3	1.7	0.08	2	0.1	2.3	26
													97232	62.0	63.4	1.4	0.1	0.9	0.04	1	0.1	1.5	14
													97233	63.4	63.5	0.1	0.1	0.2	0.01	1	0.1	1.2	4
													97234	63.5	64.5	1.0	0.1	0.8	0.01	1	0.1	3.3	12
													97235	64.5	65.4	0.9	0.1	0.6	0.01	1	0.1	3.7	9
													97236	65.4	65.9	0.5	0.2	1.0	0.02	1	0.1	1.4	15
7.0	18.6	F				FAULT						97237	65.9	66.7	0.8	0.1	0.1	0.01	1	0.1	0.6	3	
7.0	9.4	BR	si	a		Dull green-brown clayey pug with cherty fragments. Matrix proportion and clast size grade (up and down respectively) from last unit in the 15cm or so of preserved core. 1.3m loss to 8.5m. A further 90cm loss attributed to 9.4m.																	
		CY																					
9.4	12.3	CH	qb	a		Broken zone of cherty unit (as in previous units), with carbonate spotting, and variable sericite alteration. Core loss marked - 0.4 to 10m and 0.6 to 10.9m.																	
		RK	se																				
12.3	12.8	CY		a		Core block errors in this vicinity, not to mention unmarked core loss. So boundary is an educated guess. 40cm core loss assigned to this unit. Loose sand fill of brown clay and cherty fragments (particle size mm to 1cm diameter).																	
		RK																					
12.8	13.9	RK	qb	a		Broken zone of cherty, carbonate spotted rock. Very dark green, but hard (silica-chlorite altered) from ~13m to 13.5m. Cherty rubble again to 13.9m.																	
			ql																				
13.9	14.7	RK	qb	a		Competent patch of silicified, carbonate spotted rock. Minor sericite altered wisps and bands. Sericite alteration intense in																	
			se																				
14.7	16.9	SH	cl	a		Broken zone of dark green, chloritic-silica schist. Strong fabric close to CA for the more preserved fragments. Some carbonate spots noted, and possible breccia fragments. 50cm core loss assigned to this zone (core block errors make it difficult to accurately indicate where the core loss originated). Often find rounded silica fragments after core blocks - believe these to be rubble from further up the hole.	15.4	CV	5°														
			si																				
16.9	18.6	RK	qs	a		Broken zone of pale yellow-green silicified, and sericite+/-chlorite altered rock. Looks to be after a 'host' like cherty breccia and sandstone, as against the inferred siliceous pumice breccias of earlier in the hole. Minimal carbonate spotting. Rare flecks of fine grained black sulphide, pyrite increasing towards end of unit. Some cherty breccia type banding towards end of unit.	18.5	BD	20°														
			sc																				

Standards

Reference Values for: LBM-07 21/08/98

2.0 6.3 0.17 51 0.4 9.4

Variances Allowed: 20% 20% 30% 20% 20% 20%

97205 Inserted @ 18.9m

2.0 5.5 0.17 45 0.5 7.9 Y

TMU Parameters

Date of Parameters: 21/07/98 Aust-US Exch. Rate: 0.7000

Pb Metal Price (US\$/t): \$525 Pb Recovery (%): 68.40%

Zn Metal Price (US\$/t): \$1,200 Zn Recovery (%): 75.50%

Cu Metal Price (US\$/t): \$1,750 Cu Recovery (%): 45.40%

Ag Metal Price (US\$/oz): \$6 Ag Recovery (%): 70.00%

Au Metal Price (US\$/oz): \$300 Au Recovery (%): 63.70%

014B

Hole No: 014B

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int.	Description	@ Depth	Feature	LCA Deg°	RQD To (m)	RQD %	Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU \$		
25.9	30.9		BR		a	Brownish-green grey, occasionally yellow, variably sericite altered, occasionally brecciated, silica rock/chert. Sericite alteration most visible as orangey yellow thin wisps, clumps of which occur sporadically throughout. Greenish chlorite-sericite alteration is less commonly developed, though sericite alteration of the matrix in cherty breccia intervals is common. Chlorite wisps and veinlets sporadically present throughout - (often closer to CA than the sericite wisps). Unit could be FW or Ho - the less brecciated intervals look more like FW. Brecciated intervals consist of rounded to sub-angular clasts of cherty rock 0.5-3cm in diameter, in a generally matrix supported mode. Unit has occasional wisps and spots of carbonate (the latter showing minor preference to the silica clasts). Surface of core pitted - some after carbonate, most probably after the small blebs, wisps and veinlets of sphalerite and attendant fine grained sulphide-galena-pyrite. The sulphides are really only commonly present between 28.7-29.4m and are accompanied by, and sometimes carried within 1-5mm quartz+/-chlorite+/-sulphide veins. A dominant fabric is difficult to pick -sometimes sericite wisps conflict themselves - most run ~35-45, while others run ~20. Core generally competent - small broken zones 30.2-30.5m and the last 10cm of unit.	26.0	VN	30°															
			CH				26.9	VN	25°															
			RK	qs			28.2	VN	20°															
				sb			28.2	VN	42°															
						28.4	QV	35°																
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30.9	37.5	FWTS					FOOTWALL - TRACE SULPHIDES																	
30.9	32.6		PU		a	Similarly altered but more FW looking unit (when compared with the previous unit). Unit is a lighter grey, seems to possess a shinier lustre than the previous unit. Silica clasts/fragments, can be quite distinct and rounded, or appear to be aggregates of a number of small clasts. Unit is clast supported. Clast size varies from 1cm to greater than 5cm. Some minor sulphide spots etc as in previous unit. Strong sericite wisping close to CA - varies around clasts though. Core competent.	31.8	CV	12°															
			RK	qs			32.5	CV	8°															
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32.6	37.5		PU		a	Dark greenish-grey, fairly heavily carbonate altered, brecciated siliceous unit. Appears to be mainly clast supported, but the boundaries of some silica 'clasts' can be difficult to see. Matrix is chlorite+/-sericite altered, with a few sericite wisps present. Unit visually dominated by large, or aggregate yellow carbonate spots. These seem to favour the the more pure silica clasts, sometimes present as fill in crystal edges or tension gashes, or as more rounded spots and aggregates. The carbonate is also found within some sericite and chlorite-sericite wisps. Unit carries very small, occasional spots of sphalerite etc (as in the last few units), which are spatially related to carbonate alteration, but are not necessarily bounded by or adjacent to the spots themselves. Impossible to pick a fabric in clast rich intervals - the sericite wisps in these areas run between 20 and 40 degrees to CA, but can run against the perceived fabric present in matrix rich intervals (which run 30 degrees). Core is competent.	35.9	CV	28°															
			RK	ql			36.5	CV	30°															
				sb																				
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37.5	46.5	FWTS					FOOTWALL - TRACE SULPHIDES																	

Hole No: 014B

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int.	Description	@ Depth	Feature	LCA Deg°	RQD To (m)	RQD %	Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU \$
37.5	43.5		DA RK		qs a	Light greeny-grey, fairly massive looking, intensely ?carbonate spotted/altered feldspar phyric, sericite+/-silica altered rock. Flecks and spots of white soft sericite or carbonate are 1-2mm in size - look like alteration after ?feldspar. Some chlorite wisps (near orthogonal to CA) and small chlorite alteration blebs and spots occur sporadically. Unit then is most likely of dacitic affinities. A joint/s is/are present at CA for most of the unit. Difficult to determine a fabric in the unit. Core of variable competency. Unit quite broken in first 20cm and after ~39M. Moderate competency elsewhere.	39.0	JT	2°													
43.5	46.5				a	Similar to last unit, except darker green in colour, and more densely packed spots/altered phenocrysts. However, most spots do not appear to be pseudomorphs after feldspar (rounded, diffuse not angular boundaries), especially around a mildly mineralised joint which runs close to CA for most of unit. This may be 1-5mm thick and can carry galena and fine grained black sulphide. Small blebs of sphalerite etc occur occasionally, separate from this joint. Some blebs occur within or adjacent to quartz veinlets. Last 10cm of core broken.	45.5	JT	2°													
46.5	47.8	HO				HOST SEQUENCE																
46.5	47.8		RK		si a	Silicified rock (possibly after sandstone) with only scarce quantities of the 'spots' of the previous unit. Minor carbonate and chlorite wisps. Very minor galena mineralisation along some breaks in core. Core competent.	47.0	JT	25°													
47.8	49.9	HO				HOST SEQUENCE																
47.8	49.9		RK		sc si a	More sericite-chlorite altered version of previous, also more broken. Joints common, and are generally black chlorite coated. Small breccia of silicified rock at 48.6m contained within one of these chlorite joints. Faint fabric at 35 to CA. Some chlorite 'joints' run conjugate to this. Unit becomes more broken and altered towards next unit. Possibly could be included in the 'fault' strat of next unit.	48.0 48.6	CV JT	35° 45°													
49.9	54.4	F				FAULT																
51.3	54.4		RK		sc cl qb a	Broken rock, which is variably chlorite-sericite altered (dark green) and intensely silica-carbonate altered. Carbonate as spots, veins and wisps. Carbonate and silica alteration dominates with only minor intervals of dark chlorite+/-sericite alteration (although patches and wisps of chlorite-sericite alteration may be found intermixed with the other). Evidence of a breccia of silicic clasts in latter parts of unit.	54.2	CV	27°													
54.4	56.9	HO				HOST SEQUENCE																

014B

Hole No: 014B

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int.	Description	@ Depth	Feature	LCA Deg°	RQD To (m)	RQD %	Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU \$		
54.4	56.9	RK	qb	si	a	White, with yellow-white carbonate spots, extremely silicified rock. Spots are 1-3mm in size, fairly evenly distributed, carbonate - some appear to mildly oxidised (or mixed with sericite). Unit has common 1-5mm wide, brown carbonate-quartz veins. These generally run 25 degrees to CA, though other orientations occur. No fabric readily discernible. Rare thin chlorite wispy veinlets run near perpendicular to CA. Unit very competent. Seems to grade into next unit. Boundary with last unit is broken, but silicification does seem to increase within 10cm of the boundary.	56.8	VN	25°															
56.9	58.5	HO				HOST SEQUENCE																		
56.9	58.5	RK	co	qb	a	Silic rock, as in last unit but with intense carbonate spotting. Chlorite alteration also increases towards end of unit. Carbonate+chlorite blebs vein, at least 2cm thick on margin of core, runs close to CA. Core of moderate competency.	58.3	VN	6°															
58.5	58.9	F				FAULT																		
58.5	58.9	RK	co		a	Small broken zone of chlorite-carbonate altered rock fragments, most likely similar to last unit.																		
58.9	60.1	HODS				HOST - DISSEMINATED SULPHIDES																		
58.9	60.1	RK	ST	ql	a	Medium grey, with a green hue, sericite-chlorite and silica altered siltstone/chert. Unit carries weak HODS-HOTS grade sphalerite-fine grained black sulphide-galena-pyrite-chalcocopyrite blebs and wisps. Sphalerite as medium brown masses - unit may go 1-2%Zn. These may be rimmed by quartz-carbonate as thin veinlets, or may occur with very thin chlorite wisps. The veinlets exist in a number of orientations - 2 are conjugate and ~15-20 to CA, while other, but less numerous mineralised veins run near orthogonal to CA. Disseminated fine grained pyrite also present. Core of moderate competency - tends to split along the wispy veinlets orientations.	59.9	CV	17°															
60.1	62.0	HOTS				HOST - TRACE SULPHIDES																		
60.1	62.0	RK	ST	cl	a	As in last unit except more chlorite+/-sericite altered (thus dark green-grey coloured). Sulphides as much more fine grained and smaller wisps and blebs, generally occurring without any obvious quartz-carbonate veining. Fairly abrupt boundary with next unit. Core of poor to moderate competency.	60.6	CV	20°															
62.0	63.4	HOTS				HOST - TRACE SULPHIDES																		

014B

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62.0	63.4	RK	cl	qb	a	Pinky red silicified rock, with abundant carbonate spots. Suffers more or less complete chlorite+minor wispy sericite alteration as the unit progresses. Ends up looking like last unit, except for small 'windows' of silicified, spotted material. Mineralised by small brown sphalerite-fine grained black sulphide/galena blebs and small wisps - May go 1%Zn. Cleavage hard to pick out - silica rich portions tend to obscure it. Core competent - minor rubble at 63.3 - but may be from further up hole.	63.1	CV	18°																
63.4	63.5	F				FAULT																			
63.4	63.5	RK			a	Loose sand fill- with very fine grained fragments of black coloured, black streaked ?magnetite-?hematite or destroyed drill steel. Remainder is quartz and other lithics. Possible that this material is from further uphole.																			
63.5	66.7	HOTS				HOST - TRACE SULPHIDES																			
63.5	66.7	RK	cb	cs	qb	a	Looks to be a continuation of the very chlorite+/-sericite altered end member of 62-63.4m, with intervals of intense carbonate alteration. Difficult to tell if the occasional carbonate spotted silica fragments are clasts, or remnants due the chlorite alteration. The carbonate intervals looks to be intense aggregates of spotting, perhaps accompanied by sericite. Difficult to tell if the carbonate intervals (10-20cm wide in places) are after silica rich portions or not. Minor blebs and fine grained spots of mineralisation (assemblage as previous) seems to favour the carbonate (and silica) richer intervals, although they do occur elsewhere to a lesser extent. Overall grade <1%Zn. Carbonate drops off after 65.8m, and the unit starts to look quite schistose (quartz-chlorite-sericite schist). Dominant fabric is hard to pick earlier in unit, due to conjugate sericite wisps, but one orientation chosen due to vague carbonate 'interval/clast' orientations being sub-parallel to most breaks in core and one set of sericite wisping. Core of good to moderate competency. EOH 66.7m.	63.5	CV	30°															
							64.5	VN	22°																
							64.7	CV	28°																
							66.2	CV	35°																

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