



PASMINCO ROSEBERY

A.C.N. 004 074 962

Hole No: 010B		Location: Southern Trenches		Depth	Direct	Dip	Depth	Direct	Dip	Depth	Direct	Dip	Depth	Direct	Dip
Objective: Extend ore from STRC5 and 009B slightly North and Up-dip.				0.0	276.0	-50.0									
Result: Success 29-32.9 m 6.4%Pb, 9.2%Zn, 0.98%Cu, 32g/t Ag, 1.1g/t Au, 9.7%Fe, \$178TMU. Despite triple tube, large % core loss in this zone.				35.0	275.0	-48.2									
Planned Direction: 280°		Drilling Commenced: 10/07/98		60.0	274.5	-47.1									
Planned Dip: -50°		Drilling Completed: 15/07/98		94.0	275.0	-46.0									
Planned Depth: 70.0 m		Actual Depth: 120.2 m		120.0	274.0	-46.0									
Planned Northing: 4408 m N		Surveyed Northing: 4409.40 m N		120.2	274.0	-46.0									
Planned Easting: 4653 m E		Surveyed Easting: 4651.10 m E													
Planned Collar R.L.: 422 m RL		Surveyed Collar R.L.: 421.80 m RL													
Date Logged: 29-Jul-1998		Summary Log:													
Logged By: Michael Whitbread		Hole ~5 degrees Az off plan.													
Hole Size: HQ		0-4m NC; -15.9m Hots; -21.2m F; -23.9m Hots; -24.8m Ho;													
Hole Category: Other		-29m F; -31.9 HOSM (F); -32.9m HODS (F); -35.2m Hots (F?);													
Grouted:		-57.9m Hots; -73m Ho; -91.8m Hots; -107m Ho;													
Date Log Verified: 25-Sep-1998		-116.7m ROSEBERY FAULT													
Verified By: Michael Whitbread		-120.2m Ho EOH 120.2m.													

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	4.0	NC				NO CORE				4.0	NC	81958	4.0	5.0	1.0	0.1	0.1	0.01	1	0.1	0.9	3
0.0	4.0	NC		a		No core.				5.6	18	81959	5.0	6.0	1.0	0.1	0.1	0.01	1	0.1	0.9	3
4.0	12.7	HOTS				HOST - TRACE SULPHIDES				8.0	83	81960	6.0	7.0	1.0	0.1	0.1	0.01	1	0.1	0.5	3
4.0	8.0	RK	cs	a		Lightly weathered, medium to dark grey, patchily silicified and generally moderately chlorite-sericite altered rock. Contains numerous white clayey spots, and flecks. These may be carbonate (now weathered) after former phenocrysts or laths and many are partially to completely weathered, leaving a pitted surface. Intensity of spotting varies. After about 6.3m unit crossed by common sericite wisps and veinlets ~62 degrees to CA (though can be close to CA in places). Some uncommon sulphide remnants remain - as isolated spots and blebs (often associated with carbonate), or as veinlets/fractures. Veinlets can run close to CA, near orthogonal to CA, or close to the sericitic wisp orientation. Sulphide present as dark fine grained mass - possibly galena or chalcopyrite-galena disease of sphalerite. Commonly breaks are along the joints/fractures close to CA. Competency is poor to bad. 6-8m is reasonable, prior to that is fairly rubbly and broken. 0.1m core loss to 5m.	6.5	CV	62°	20.3	21	81961	7.0	8.0	1.0	0.1	0.1	0.01	1	0.1	0.6	3
			cy				7.1	CV	59°	24.8	71	81962	8.0	9.0	1.0	0.1	0.1	0.01	1	0.1	0.4	3
			si							26.7	0	81963	9.0	10.0	1.0	0.1	0.1	0.01	1	0.1	0.6	3
										27.4	100	81964	10.0	11.0	1.0	0.1	0.4	0.01	1	0.1	0.2	7
										33.7	14	81965	11.0	12.7	1.7	0.3	0.6	0.03	1	0.1	0.4	11
										34.3	83	81966	12.7	14.0	1.3	0.1	0.2	0.10	1	0.1	0.6	5
										36.0	17	81967	14.0	15.0	1.0	0.1	0.3	0.03	1	0.1	0.8	6
										41.7	80	81968	15.0	15.9	0.9	0.1	0.1	0.03	1	0.1	1.3	3
										42.0	0	81969	15.9	16.7	0.8	0.1	0.1	0.01	1	0.1	0.7	3
										45.8	76	81970	16.7	17.6	0.9	0.2	0.3	0.01	1	0.1	0.7	6
										46.8	10	81971	17.6	18.7	1.1	0.7	0.8	0.03	1	0.1	1.8	15
										48.6	77	81972	18.7	20.4	1.7	0.9	1.1	0.06	10	0.2	1.3	23
										49.0	0	81973	20.4	21.2	0.8	0.6	2.2	0.06	7	0.1	1.9	34
										49.3	100	81974	21.2	21.9	0.7	0.4	1.3	0.04	4	0.1	1.4	21
										51.2	15	81975	21.9	22.9	1.0	0.1	1.3	0.08	4	0.1	1.0	20
										52.1	88	81976	22.9	23.9	1.0	0.1	0.3	0.03	1	0.1	1.3	6
										57.7	25	81977	23.9	24.8	0.9	0.2	0.7	0.03	1	0.1	1.9	11
										60.5	71	81978	24.8	26.7	1.9	0.2	1.5	0.02	1	0.1	2.4	22
										64.1	25	81979	26.7	27.4	0.7	0.5	3.6	0.15	5	0.2	6.4	54

Hole No: 010B

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 \$
8.0	12.7	CH			a	Lightly weathered - bleached. Light dull yellow-green and medium grey unit. Similar to previous unit except more strongly sericite wisped/cleaved, also with stronger whitish ?carbonate spotting-alteration. Carbonate spotty aggregates/blobs can be 3cm wide - possibly replacement of a former clast. Sulphide content up - veinlets occur, but spots and blebs are common, often associated-with/rimmed-by the alleged carbonate (some spots partially or completely weathered). Sulphide assemblage is sphalerite (dark brown) rimmed by dark fine grained material+/-pyrite+/-chalcopyrite. Cherty fragments become obvious in last 1m or so of unit - is unit an altered cherty volcanoclastic breccia? Unit fairly broken throughout - fault? Core orient at 8m. Unmarked core loss throughout esp 9.5-11m and 11-14m (maybe 1m in total). Samples from 10-11m and 12.7-14m assumed to take up the loss (81964 and 81966). Orientated measurement - ~8m, Fracture/cleavage (near to CA) dip 66-68 degrees north, strike ~E-W. Fracture (core break) dip 40 degrees North, strike ~E-W. Wispy cleavage (near orthogonal to CA), sub-horizontal. Mineralised Fracture dip 68 degrees East, strike ~190-010.	9.8	CV	71°	90.2	90	81980	27.4	29.0	1.6	0.1	1.0	0.03	1	0.1	2.0	15
		RK		cb			9.9	CV	65°	91.5	38	81981	29.0	31.0	2.0	5.7	8.9	0.96	34	1.2	14.4	172
				se						93.0	73	81982	31.0	31.9	0.9	9.9	10.2	1.40	37	0.8	6.2	212
				si						93.7	42	81983	31.9	32.9	0.9	4.3	8.9	0.59	24	1.0	3.1	157
										97.5	71	81984	32.9	34.3	1.4	0.3	1.6	0.06	7	0.1	0.9	25
										99.0	6	81985	34.3	35.2	0.9	1.2	0.1	0.01	5	1.2	0.5	19
										100.3	69	81986	35.2	36.0	0.8	0.5	0.4	0.01	1	0.1	0.5	9
										103.1	17	81987	36.0	37.0	1.0	0.1	0.3	0.01	1	0.1	0.7	6
										104.9	66	81988	37.0	38.0	1.0	0.1	0.6	0.01	1	0.1	0.9	9
										118.2	7	81989	38.0	39.0	1.0	0.1	0.3	0.01	1	0.1	0.8	6
										120.2	85	81990	39.0	40.0	1.0	0.2	1.1	0.03	1	0.1	0.9	17
												81991	40.0	41.0	1.0	0.1	0.6	0.01	1	0.1	0.8	9
												81992	41.0	42.0	1.0	0.2	0.3	0.02	1	0.1	0.5	6
												81993	42.0	43.0	1.0	0.1	0.1	0.02	1	0.1	0.3	3
												81994	43.0	44.0	1.0	0.1	0.4	0.03	1	0.1	0.4	7
												81995	44.0	45.0	1.0	0.1	0.1	0.02	1	0.1	0.3	3
												81996	45.0	46.0	1.0	0.1	0.1	0.01	1	0.1	0.3	3
												81997	46.0	47.0	1.0	0.1	0.1	0.01	1	0.1	0.3	3
												81998	47.0	48.0	1.0	0.1	0.1	0.01	1	0.1	0.3	3
												81999	48.0	49.0	1.0	0.1	0.1	0.01	1	0.1	0.3	3
12.7	15.9	HOTS				HOST - TRACE SULPHIDES																
12.7	15.9	BR			a	Light pale greenish-grey coloured rock. Looks to be a more completely altered version of previous unit - has small whitish patches (up 3cm across) of silica and carbonate +/-sulphides (assemblage as before) in the first few metres of the unit. Contains occasional silica 'clasts' up to a few cm in size within the sericite-chlorite matrix. The matrix is occasionally flecked by white sericite, marking a fabric. Fabric marked elsewhere by sericite wisps and veinlets and vague alignment of silicic clasts. Rare pyrite clasts/spots are present. Thin (1-2mm) Quartz +/- "sphalerite+sulphide-mix+/-pyrite+/-chalcopyrite" veins and blebs common. Many of these veinlets sit close to CA. Core of moderate to poor competency. Most pieces 5-10cm in length. Core orient at 14m. Orientated measurements at 14m. Weak break/fracture/?cleavage dip 78-80 degrees East, 160-340 strike. Veining (close to CA) dip 58-58 degrees South, ~080-260 strike.	14.4	CV	55°			82000	49.0	50.0	1.0	0.1	0.1	0.01	1	0.1	0.3	3
		CH					14.9	VN	7°			97001	50.0	51.0	1.0	0.1	0.1	0.01	1	0.1	0.4	3
		RK		sc			14.9	JT	11°			97002	51.0	52.0	1.0	0.1	0.1	0.01	1	0.1	0.3	3
							15.5	CV	59°			97003	52.0	53.0	1.0	0.1	0.1	0.01	1	0.1	0.3	3
												97004	53.0	54.0	1.0	0.1	0.1	0.01	1	0.1	0.3	3
												97005	54.0	55.0	1.0	0.1	0.1	0.01	1	0.1	0.3	3
												97006	55.0	56.0	1.0	0.1	0.1	0.01	1	0.1	0.2	3
												97007	56.0	57.0	1.0	0.2	0.1	0.01	1	0.1	0.3	3
												97008	57.0	57.9	0.9	0.2	0.5	0.02	1	0.1	0.7	9
												97009	57.9	59.0	1.1	0.1	0.1	0.01	1	0.1	0.4	3
												97010	59.0	60.0	1.0	0.1	0.1	0.01	1	0.1	0.5	3
												97011	60.0	61.0	1.0	0.1	0.1	0.01	1	0.1	0.5	3
												97012	61.0	61.8	0.8	0.1	0.1	0.01	1	0.1	0.3	3
												97013	61.8	62.8	1.0	0.1	0.1	0.01	1	0.1	0.4	3
												97014	62.8	64.0	1.2	0.1	0.1	0.01	1	0.1	0.6	3
												97015	64.0	65.0	1.0	0.1	0.1	0.01	1	0.1	0.9	3
15.9	18.7	BR			a	Broken version of previous unit, poorer in silica intervals. 0.5m loss to 17.9m and 0.2m loss to 18.7m						97017	65.0	66.0	1.0	0.1	0.2	0.02	1	0.1	1.0	4
		CH										97018	66.0	67.0	1.0	0.1	0.1	0.01	1	0.1	0.8	3
		RK		sc								97019	67.0	68.0	1.0	0.1	0.1	0.01	1	0.1	0.7	3
												97020	68.0	69.0	1.0	0.1	0.1	0.01	1	0.1	1.5	3
18.7	21.2	F				FAULT																
												97021	69.0	70.0	1.0	0.1	0.1	0.02	1	0.1	1.0	3
												97022	70.0	71.0	1.0	0.1	0.1	0.01	1	0.1	1.8	3
												97023	71.0	72.0	1.0	0.1	0.1	0.01	1	0.1	1.3	3
												97024	72.0	73.0	1.0	0.1	0.1	0.01	1	0.1	1.2	3
												97025	73.0	74.0	1.0	0.1	0.1	0.01	1	0.1	1.5	3
												97026	74.0	75.0	1.0	0.1	0.1	0.01	1	0.1	0.9	3
												97027	75.0	76.0	1.0	0.1	0.1	0.01	1	0.1	0.9	3

Hole No: 010B

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 \$	
18.7	21.2	BR			a	Broken zone of medium grey, occasionally dull-green-grey, moderately silicified fine sandstone and siltstone/chert, with sporadic greeny sericite-chlorite bands and patches of alteration. Some of the latter altered patches can appear to be breccias of chert material, still difficult to say if sericite-chlorite alteration is generating the texture, or has merely replaced the fine grained matrix of an existing cherty-breccia. Cherty zones contain numerous thin quartz wisps. Spots, blebs and wisps of sphalerite common, with medium brown sphalerite more dominant and visible than previously - otherwise assemblage as before. Veins generally ~close to CA or near orthogonal to it. Unmarked core loss (10cm or so in each zone is likely). Competency begins to improve after 20.4m.	19.6	BD	55°			97028	76.0	77.0	1.0	0.1	0.2	0.03	1	0.1	1.1	4	
		ST		sc			19.8	VN	80°			97029	77.0	78.0	1.0	0.1	0.1	0.03	1	0.1	1.1	3	
				si			20.6	VN	26°			97030	78.0	79.5	1.5	0.1	0.1	0.03	1	0.1	1.0	3	
							20.9	JT	4°			97031	79.5	80.5	1.0	0.1	0.1	0.01	1	0.1	3.6	3	
												97032	80.5	81.9	1.4	0.1	0.1	0.15	1	0.1	4.3	5	
												97033	81.9	83.0	1.1	0.1	0.1	0.01	1	0.1	2.5	3	
												97034	83.0	83.7	0.7	0.1	0.1	0.01	1	0.1	2.4	3	
												97035	83.7	85.0	1.3	0.1	0.1	0.01	1	0.1	3.6	3	
												97036	85.0	86.0	1.0	0.1	0.1	0.01	1	0.1	4.1	3	
												97037	86.0	87.0	1.0	0.1	0.1	0.01	1	0.1	5.0	3	
											97038	87.0	88.0	1.0	0.1	0.1	0.01	1	0.1	4.6	3		
											97039	88.0	89.0	1.0	0.1	0.1	0.01	1	0.1	5.2	3		
											97040	89.0	90.0	1.0	0.1	0.1	0.01	1	0.1	4.1	3		
21.2	23.9	HOTS				HOST - TRACE SULPHIDES																	
21.2	21.9	ST		sc	a	Less broken version of previous unit	21.3	VN	27°			97041	90.0	91.0	1.0	0.1	0.1	0.01	1	0.1	3.4	3	
				si								97042	91.0	91.8	0.8	0.1	0.1	0.01	1	0.1	2.2	3	
21.9	23.9	ST		qb	b	Light grey, silicified sandstone-siltstone/rock as previous, but without the bands and zones of soft greeny sericite-chlorite alteration. This unit is spotted with creamy light yellow patches and bands of ?silica-?carbonate, which are possibly clasts. These have irregular, but often sub-rounded boundaries. Some are more cherty grey and are partially replaced by fine grained pyrite. Green chlorite swirls become common in last 80cm of unit, and creamy patches die out. Unit carries occasional blebs of sphalerite+sulphide mix, much less than previous lithology. Unit has strong hair thin quartz wisps throughout. These criss-cross, and it is difficult to pick a fabric. Unit competency.	22.0	BD	47°			97043	91.8	92.8	1.0	0.1	0.1	0.01	1	0.1	1.2	3	
				si									97044	92.8	93.6	0.8	0.1	0.1	0.01	1	0.1	1.4	3
													97045	93.6	93.8	0.2	0.1	0.1	0.01	1	0.1	1.4	3
													97046	93.8	95.0	1.2	0.2	0.1	0.01	1	0.1	2.0	3
													97047	95.0	96.6	1.6	0.2	0.3	0.01	1	0.1	2.1	6
													97048	96.6	97.5	0.9	0.1	0.4	0.01	1	0.1	3.6	7
													97049	97.5	98.5	1.0	0.2	0.8	0.01	1	0.1	3.4	13
													97050	98.5	99.5	1.0	0.2	0.8	0.01	1	0.1	4.4	13
													97051	99.5	100.5	1.0	0.1	0.6	0.01	1	0.1	3.5	9
													97052	100.5	101.9	1.4	0.1	0.7	0.01	1	0.1	3.3	11
												97053	101.9	103.0	1.1	0.1	0.2	0.01	1	0.1	2.2	4	
												97054	103.0	104.0	1.0	0.1	0.1	0.01	1	0.1	1.3	3	
23.9	24.8	HO				HOST SEQUENCE																	
23.9	24.8	CH			a	Dull yellowy-green, strongly chlorite-sericite altered rock, contain occasionally rounded silica clasts (3mm-3cm). Last 15-20cm is silicified (similar to previous units). Rare sulphide spots in silica rich part (pyrite, rare sphalerite and sulphide-mix). Unit has strong banding/fabric (dark versus lighter bands, and vague clast orientation). Core of moderate competency.	24.1	BD	70°			97056	104.9	106.0	1.1	0.1	0.1	0.01	1	0.1	1.3	3	
		RK		cs			24.7	JT	8°			97057	106.0	107.0	1.0	0.1	0.1	0.01	1	0.1	1.4	3	
				si								97058	107.6	108.8	1.2	0.1	0.1	0.01	1	0.1	1.5	3	
												97059	108.8	110.0	1.2	0.2	0.2	0.01	1	0.1	3.7	5	
												97060	110.0	111.1	1.1	0.2	1.1	0.05	6	0.1	3.9	18	
												97061	111.1	112.8	1.7	0.1	0.1	0.01	1	0.1	3.4	3	
												97062	112.8	114.2	1.4	0.1	0.1	0.01	1	0.1	3.7	3	
												97063	114.2	115.0	0.8	0.1	0.1	0.01	1	0.1	4.1	3	
												97064	115.0	116.7	1.7	0.1	0.1	0.01	1	0.1	4.5	3	
												97065	116.7	117.6	0.9	0.1	0.1	0.01	1	0.1	4.2	3	
24.8	29.0	F				FAULT																	
24.8	26.7	RK		sc	a	Broken cherty bearing and banded material, similar to previous unit. 0.6m loss to 25.8, 0.7 further loss to 26.7m. Some stronger sericite alteration (with ?carbonate) present (light yellow-green fragments). Some pyrite and other fine grained dark sulphides present on breaks. Also some Dark chlorite altered fragments in last 20cm or so, and dark-green chlorite found on some breaks.						97066	117.6	118.6	1.0	0.1	0.1	0.01	1	0.1	3.0	3	
				si								97067	118.6	120.2	1.8	0.1	0.1	0.01	1	0.1	2.9	3	
													Total Length: 115.6										

Standards

Reference Values for: HBM-02 17/07/98

3.4 12.5 0.46 150 1.3 22.7

Variations Allowed: 20% 20% 30% 20% 20% 20%

97016 Inserted @ 65.0m 3.8 14.9 0.49 160 1.5 22.8 Y

Hole No: 010B

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 \$		
26.7	27.4	RK	sb	a		Competent zone of light yellowy coloured rock, stongly sericite-?carbonate altered. Contain bands (up to 1cm) of fine to medium grained pyrite, and a couple of quartz-sphalente-sulphide mix-pyrite veins - one lacks quartz and seems to contain chlorite. Unit also has small dark spots, which may be fine grained sulphide or unaltered host. Some fractures and cavities present - after sulphide veining most likely. Unit competent.	26.8	JT	5°				Weighted Averages											
							26.9	JT	44°				29.0	32.9	3.9	6.4	9.2	0.98	32	1.1	9.7	178		
							26.9	VN	29°															
							27.3	VN	23°															
							27.3	VN	47°															
27.4	29.0	CH RK	sc	a		Zone of broken fragments, mainly of cherty/silicic clasts bearing sericite-chlorite altered rock. Occasional minor fine grained pyrite blebs, and rare sphalerite spots. 1m core loss before 29m, possibly lost some of the mineralisation of the next unit.																		
29.0	31.9	HOSM		HOST - SEMI-MASSIVE SULPHIDES																				
29.0	31.9	BR CH GA PY	sc	a		Broken zone of semi massive to massive sulphides, most likely after a cherty breccia. Sulphides are pyrite dominant to ~30.7m, after which galena/sulphide mix with lesser sphalerite becomes important. Assemblage is: fine to medium grained pyrite, followed by a fine grained black sulphide mass, medium grained galena and sphalerite with lesser chalcopryite. Sulphides mainly as bands and blobs, usually in the matrix around, or fractures within, the silicic clasts (1-3cm in size). Sphalerite usually occurs as 2-5mm blebs within galena and/or the black sulphide mix. Chalcopryite usually present on the periphenes of sphalerite-galena etc masses, but is also present as brighter yellow coloured tinges in pyrite masses. After 31.3m, it is difficult to identify cherty clasts, but the sulphides seem to be as veins-bands, accompanied/bordered by chlorite-sericite. Pyrite also present as uncommon 1-2cm clasts (or has replaced them). Streaks of sericite are occasionally present throughout. Some evidence of quartz veining inside some of these sulphide veins. Unit fairly strongly banded (?cleavage) ~50 degrees to CA. Unit contains numerous pits and cavities (1-3mm wide, 1-2cm long, some up to 1cm wide and 2-3cm long, 2-3cm deep), most likely after sulphide (probably sphalente), and are usually rimmed by black sulphide mix or pyrite. There is extensive core loss in this zone, despite triple tubing, the driller thinks that there weren't cavities, merely that the material was washing away during drilling. Some pieces 5-10cm in length, however there 1m core loss 29-30.2m, 0.3m core loss to 31.3m. Possibly 10-20cm loss to 31.8m. 81981 is believed to have taken up 1-1.3m core loss.	30.4	BD	50°															
							30.9	BD	53°															
							31.6	VN	66°															
31.9	32.9	HODS		HOST - DISSEMINATED SULPHIDES																				

Hole No: 010B

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 \$				
31.9	32.9	CH	RK	sc	a	Essentially HODS version of previous. Silic intervals and cherty fragments commonly present. Where not mineralised, matrix is speckled sericite+?chlorite altered. Hair like quartz veinlets are present within one of the sericite zones which contains a folded or breccia type quartz+sphalerite-mix-pyrite vein (.5-2cm). Once again, sulphides present, either in the matrix, or as discrete bands/veins, often accompanied by sericite-chlorite. Unit is quite broken. Plenty of rubble in this and the last unit around the core blocks, beware contamination from uphole. Possible 10cm or so core loss.	32.5	BD	47°																	
				si			32.8	JT	35°																	
32.9	35.2	HOTS				HOST - TRACE SULPHIDES																				
32.9	35.2	RK	se	si	a	Dull-greenish grey, essentially a broken zone of silicic rock, pervasively altered by sericite. Worst breaks from 34.2-35.2m (70cm core loss). Sericite mainly visible as strong wisps, (marking a fabric). Some zones are still quite silicified esp 34.3--35.2 (70cm core loss in this zone). Some small, thin (2-3mm) blebs and discontinuous veinlets of sphalerite-mix etc, which may or may not be accompanied by quartz. These may run ~ with the fabric, against it, or close to CA. Slight oxidation on some joint surfaces.	33.7	CV	54°																	
35.2	57.9	HOTS				HOST - TRACE SULPHIDES																				
35.2	42.0	BR	sc	si	a	Dull greenish-light grey, variably sericite-chlorite altered, patchily silicified, silicified clast and chloritic wisp bearing breccia/rock. Silic clasts vary from rounded to sub angular and elongate, may be 5mm to 3-4cm in size - some have white carbonate within them (disrupted quartz-carbonate veining?). One is folded, or the hinge of a fold (or possibly a folded vein). Silica clasts become less identifiable after 38-39m, and discontinuous thin (2-5mm wide) elongate chlorite blebs and wisps appear. Looks to be more of an incipient brecciation and alteration of silicified rock (as against the matrix supported nature earlier on). Unit contains common blebs and wisps of sphalerite-mix, plus specks of pyrite +/- chalcocopyrite. These are often associated with the silicified intervals/clasts and are variably orientated (pretty much the same orientations as in last unit). Some appear to have been partially washed out. Sericite (and lesser sericite-chlorite) mark a fabric, with some strong banding of these present at 38-38.3m. Core orient at 38m. Generally competent, small broken zone 35.5-35.7 (possibly from up hole), and minor breaks around 39 and 40m. Occasional joints run close to CA, slight oxidation present on these. Orientated measurements 37.8m - fracture (thin - close to CA), dip 52-54 degrees North, strike -80-260. 38m - banding (sericite-chlorite)dip 42-44 degrees North, strike 100-280. Faint fractures and breaks - dip 78-80 degrees East, strike 160-340.	36.3	JT	4°																	
		RK					38.0	CV	42°																	
							38.0	CV	50°																	
							40.7	BD	55°																	

010B

Hole No: 010B

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 \$			
42.0	57.9	BR	cb	a		Similar to last half of last unit - silicified rock/breccia, with common chlorite pseudo-fiamme (pumice? or alteration?) and carbonate spots. Breccia fairly clast supported. Some sericite alteration interspersed with the silica fragments (angular, 3-10cm in size, elongate 3-4cm long 3-10mm wide) and pseudo-fiamme. Carbonate very common, as blobs and spots associated with the quartz fragments, and as fracture fill within silicic clasts. Surface of core is extensively pitted, could be after sericite, carbonate, chlorite, weathered out silicic fragments, who knows. Also have thin fractures (usually within silicic intervals) washed/weathered out, most likely after carbonate fill. Sulphides rare, with some pyrite lining cavities, or some black fine grained sulphide on joint surfaces. Very weak oxidation on rare surfaces. Fabric difficult to pick in most places - long pseudo fiamme, elongate silicic fragments and sericite wisps define it best - cleavage or bedding? Core of moderate to poor competency - fairly broken interval 48.3-51.2m (first and last 20cm are worst). 30cm loss to 48.6 and 10cm loss to 49.8m. Many breaks along joints close to CA.	45.5	CV	50°																
			se				50.0	JT	25°																
			si				51.0	JT	12°																
		PU	cl				53.6	JT	17°																
							57.8	CV	55°																
57.9	73.0	HO				HOST SEQUENCE																			
57.9	61.8	RK	cl	a		More massive (cf brecciated last unit), dull-greenish light grey, silicified rock with occasional chlorite wisps/pseudo fiamme. Some disseminated 1-2mm yellow carbonate spots (and pits after these), but not as intense as last unit. Occasional sericite wisps present. Brittle yellow-brown (oxidised?) carbonate vein (1-2cm wide) at 58.5m. Uncommon thin quartz veins present. Possibly a weak fabric marked by occasional sericite wisps and chlorite wisps. Unit fairly broken after 60.6m. Possibly 40cm core loss after 61.4 (ie 61.4-62.8 - 40cm core loss). Core orient at 59m. Orientated measurement at 59m - 'Pumice' banding, dip 84 degrees East, strike 190-010 Quartz vein, dip 38-40 degrees North, ~060(070)-240(250) strike. Other ?quartz wisps near vertical, ~E-W strike Mineralised sub-horizontal break - ~25 degrees west, 120(140)-300(320).	58.5	VN	70°																
			si				59.4	CV	58°																
							60.2	JT	19°																
							60.3	CV	47°																
							61.6	CV	48°																
61.8	73.0	PU	cl	a		Dull grey, with vibrant medium green thin pseudo-fiamme (1-6mm wide), silicified, and patchily sericite altered rock/pumice breccia. Pseudo-fiammed very common, and brighter in colour than in previous units; usually elongate and thin. Fabric defined by them and sericite wisps. Unit also carries carbonate spots (1mm max diameter, generally), blebs and veinlets (1-2mm wide, often as quartz-carbonate), mostly sitting with the fabric. Carbonate also present as fracture fill in silic bands/clasts. Carbonate orangey brown to ~68.6m, yellow-white thereafter. Unit more obviously brecciated after 68.5m, where intense carbonate development is present. One galena bleb noted 69.4m, with carbonate-quartz veining. Core quite broken to ~64m (possible fault zone when combined with broken part of last unit). No clay or pug, fragments from 1-2cm up to 20cm in length. Core competent thereafter. Some pitting and cavity development in quartz-carbonate vein rich areas. Core orient 65m. Orientated measurement at 64.6m - 'Pumice' banding and breaks, dip 78-80 degrees East, strike ~N-S. Other one at 86-88 East, strike 190-010.	66.0	BD	48°																
		RK	cb				71.2	BD	60°																

Hole No: 010B

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 \$	
73.0	79.5	HOTS		HOST - TRACE SULPHIDES																			
73.0	79.5	PU	cs	a		As in last unit, but chlorite pseudo-fiamme are less common.	76.2	JT															
		RK	cb			Thin and pale, chlorite-sericite zones are present between silicic 'clasts' but do not appear 'fiamme' like, and often are not strongly visible. Sericite-chlorite wisps occasionally present.	77.4	BD	66°														
			si			Silic clast size 2mm-3cm in size, and may have irregular, elongate or rounded shapes. Carbonate spotting etc uncommon in first couple of metres, reasonably strong thereafter (white colouration). 2-10mm carbonate veins become more prominent in the latter zone as well. Uncommon blebs and spots of galena, black sulphide-mix and pyrite present in carbonate bearing silica intervals. Reasonably sparse disseminated pyrite cubes also present, mainly in more chlorite rich zones. Occasional joints present ~15-20 degrees to Ca, one at 76.2 has lineations down it - can't get consistent slip direction on it. Core competent. Contact with next unit a little broken.	79.2	VN	70°														
79.5	91.8	HOTS		HOST - TRACE SULPHIDES																			
79.5	81.9	BR		a		Dark grey-black, weird looking silica chlorite altered rock/breccia (?pumice breccia). Looks to be a breccia, as can see vague ghosts of clasts and small ?crystal fragments (mm-3cm). Ghosts are lightly silicified and are of a slightly lighter hue than the dark-grey-black matrix, which is generally chlorite altered - ghosting may merely be a silica alteration effect. Difficult to pick a fabric, possibly about 70 degrees to CA. Unit heavily veined by yellow-white carbonate +/- quartz veins (mm to 1cm wide). These run either close to CA or near orthogonal to it. Uncommonly have fine grained disseminated pyrite and chalcopyrite; rare small pyrite clasts noted as well. Core competent- minor breaks at contact with last unit. Core orient at 80m.	80.3	VN	6°														
		RK	cl				80.5	VN	75°														
			si																				
81.9	83.7	BR		a		Light coloured version of previous unit. Pinky cream coloured in last 70cm. At 82.1, have obvious breccia fabric, some rounded clasts (2cm) noted. Matrix here lighter greeny coloured (chlorite). Also have some 10cm bands between 82-83m which are quite sericite altered. Core competent.	82.1	BD	69°														
		RK	cs				82.6	VN	76°														
			si				82.7	BD	67°														
							83.5	VN	12°														
83.7	91.8	BR		a		As in 79.5-81.9m. Some carbonate present esp 86-87m. Possibly after feldspar laths/crystals (Feldspar phytic pumice?). Carbonate-quartz veins, often show brittle textures. Around 86.1m, unit speckled with small black chlorite spots, and when coupled with sericite and carbonate wisps, form a fabric. Core competent. Core orient 86m.	86.0	BD	55°														
		RK	cs				86.2	CV	61°														
			si				86.3	CV	45°														
							86.4	BD	73°														
							88.8	CV	60°														
							89.0	VN	47°														
							91.6	BD	75°														
							91.8	CT	65°														
91.8	93.8	HO		HOST SEQUENCE																			

Hole No: 010B

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 \$		
91.8	93.6		BR		a	Light pinky and orangey-brown coloured silicified rock (possibly Rhyolite), with chlorite-sericite alteration. Silica parts look to be incipiently brecciated, separated by chlorite-sericite wisps etc (which are a darker green-black hue). As before, brecciation might be primary, or the result of alteration. Thin quartz carbonate veinlets common, becoming dominantly yellow carbonate in last 40cm. Vague fabric indicated by clasts and alteration. Core competent. Funny "cappuccino fault pug" present at 92.4m (possibly drilling mud, gypsum or something), ground around it is pristine in competence. Core orient at 92m.	91.9	VN	22°															
			RK	sc			92.3	VN	61°															
				si			92.4	FT	80°															
							92.8	BD	69°															
							93.6	BD	58°															
93.6	93.8		RK	sc	a	Possible fault. Small broken zone - fragments from units either side. Possibly 10cm core loss here.																		
				si																				
			SL																					
93.8	103.0	HO				HOST SEQUENCE																		
93.8	96.6		BR	si	a	Variably black and medium to light grey, patchily silicified or silica clast bearing black shale. Looks to be a breccia of brown grey silica fragments (vary from 2-10mm clasts to 'clast supported' bands 10-20cm wide), in a dark shale matrix (usually soft). These silica zones may be rhyolitic lava fragments. Lesser sericite-chlorite alteration present in the matrix of the silica rich zones as well. Could be blobby-poddy silica alteration. However, some of the silica clast bands contain poorly sorted clast sizes and look to be coarse volcanoclastics mixed with shale. Shale dominant intervals have dominantly smaller clasts (5-10mm, few larger), but also contain occasional thin sandstone lenses and pyrite blobs. Small sphalerite wisps can be found in cracks in silicic clasts. Fabric present, especially visible in shale intervals. Some quartz-carbonate+/-chlorite+/-galena+/-sphalerite veining (5mm to 2cm) and carbonate spotting present. Core of moderate competency. Some breaks along joint close to CA.	95.4	JT	14°															
			SL				95.6	BD	60°															
			VC	sc																				
96.6	103.0		BR		a	Black unit of shale supported breccia containing altered sandstone lamellae/lenses and clasts. Like last unit except lacking thick brown-grey silica bands. 'Clasts' are light grey, green-grey in colour and consist of silica and/or chlorite-sericite +/-carbonate, some are completely (white) carbonate altered. Sphalerite, galena etc may also be found within or completely replacing these. Clasts may be small rounded quartz fragments, to larger (2-3cm wide) isolated rounded, but elongate, blobs to bands. Sub angular 4-5cm clasts are noted near end of unit. Larger ones look like altered sandstone blobs and bands. Some appear to be disrupted quartz+/-carbonate+/-sulphide veining. Thin, continuous quartz-carbonate veins are commonly found throughout, becoming carbonate dominant towards end of unit. 10cm quartz-carbonate-chlorite vein 102.75-102.9m, contains angular shale fragments. Fabric present, marked by bands and elongate clasts and tiny ?sericite wisps. Unit of moderate competency at beginning, but becomes increasingly broken as unit progresses, often along joints close to CA.	96.6	JT	4°															
			SL				99.3	BD	57°															
			SS	sc			99.5	BD	61°															
				si			100.1	BD	51°															

Hole No: 010B

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 \$		
103.0	104.9	HO	HOST SEQUENCE																					
103.0	104.9	BR	cb	a		Creamy brown, to pale greeny-grey, variably massive to brecciated silicic rock/rhyolite. Rhyolite due to rounded quartz phyric nature of fairly massive unit at 103.4m. Where brecciated, generally clast supported, occasionally matrix supported. Matrix is shaley material from previous unit at 103.1 and 103.5, but after these 5cm zones the matrix is generally sericite-chlorite altered material (perhaps after the fine matrix of an auto-brecciated rhyolite). Unit is semi-massive (dull-cream) carbonate altered 103.5-104m. Patchy replacive carbonate +/-quartz alteration present elsewhere as well. Occasional veinlets of dull carbonate-sericite present throughout. Thin quartz veinlets in more massive parts of rhyolite. Banding present, more obvious in altered matrix rich intervals. Core moderate to poor competency (pieces 5-10cm or greater usually).	104.7	BD	58°															
			sc																					
		RK	si																					
		RY																						
104.9	107.0	HO	HOST SEQUENCE																					
104.9	107.0	BR	cb	a		As before but more broken (rubbly). Slightly more competent 106.3-106.9m. Possibly beginning of Rosebery fault.																		
			sc																					
		RK	si																					
		RY																						
107.0	116.7	F	FAULT																					
107.0	107.6	NC		a		No Core. Happy Rosebery fault!																		
107.6	108.8	CY		a		Light grey clay pug. 1m of core loss. Party mode Rosebery fault.																		
108.8	110.0	CY		a		Fragments of shale and pug. 0.7m loss. Riotous, drunken mode Rosebery fault.																		
		SL																						
110.0	111.1	CY		a		Baby poo looking clay, sands and beautiful slop and filth. 0.8m loss marked and loss attributed to this zone, but slop is spread over 1.3m of tray, thus difficult to quantify loss. Rosbery fault the next morning!																		
111.1	114.2	BR	si	a		Broken zone of shale carrying pale silicic clasts (as in units prior to the fault). Patch of brecciated silica+-carbonate altered fragments at 113-113.3m. Occasional patches quite clay altered. 0.7m loss to 113m; 0.3m loss to 114.2m.	113.6	CV	54°															
		SL	cy					113.6	CV	47°														
114.2	116.7	SL	cy	a		As in last unit, but of poor to bad competency (i.e. competency is improving). Some thin sandstone bands present (2mm wide). 3cm carbonate-quartz vein at 116m. 0.6m loss to 116m; 0.1m loss to 116.6m. Possibly folding in unit.	114.5	BD	20°															
							116.4	BD	55°															
							116.5	VN	65°															
116.7	120.2	HO	HOST SEQUENCE																					

Hole No: 010B

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 \$	
116.7	120.2	SL			b	EOH 120.2m. Continuation of shale unit (fairly soft could be sericite altered, or just soft to begin with), carries occasional sandstone laminations and bands. Carbonate-quartz veins (0.5-3cm) and veinlets are common (generally run ~ with banding. Poor to moderate competency; improving ground. 10cm loss to 117.5m; 10cm loss to 119m. Possibly a cleavage at a closer angle to CA than sandstone banding; marked by thin wisps of sericite?	116.8	CV	38°														
							116.8	BD	60°														
							119.1	BE	50°														

0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0