PASMINCO ROSEBERY

A.C.N. 004 074 962

Hole No: 007B **Location:** Brown's Tunnel 5370N

Objective: Test extent of Lens 1

Result: Disappointing result - 70.2-81m at 1.3%Zn, 0.3g/t Au, 0.26%Cu,22g/t Ag ($29 TMU). 101-102m - 4.6g/t Au, 1.9%Zn, 1.5%Pb ($79TMU).

Planned Direction: 270°
Planned Dip: -56°
Planned Depth: 120.0 m
Planned Northing: 5368 m N
Planned Easting: 4994 m E
Planned Collar R.L.: 489 m RL

Drilling Commenced: 26/06/98
Drilling Completed: 29/06/98
Actual Depth: 120.1 m
Surveyed Northing: 5366.50 m N
Surveyed Easting: 4996.90 m E
Surveyed Collar R.L.: 489.70 m RL

Date Logged: 21-Jul-1998
Logged By: Michael Whitbread
Hole Size: HQ/NQ
Hole Category: other
Grouted: No

Date Log Verified: 28-Aug-1998
Verified By: Michael Whitbread

Summary Log:

0-1m NC; -8.0m Ho, 36.5m F, -46.5m FW; -63.7m Ho; -70.2m HOTS: -70.5m Hosm; -78.8m HOTS; -79.7m Hosm; -81m HODS; -115.6 Hots; -120.1 PR.

Depth	Direct	Dip
0.0	270.0	-56.0
33.0	270.0	-55.8
62.2	269.0	-53.8
92.2	270.0	-53.0
120.0	269.5	-51.7
120.1	269.5	-51.7

Depth	Direct	Dip

Depth	Direct	Dip

Depth	Direct	Dip

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int.	Description	@ Depth	Feature	LCA Deg°
0.0	**1.0**	**NC**				**NO CORE**			
0.0	1.0		NC		a	No core.			
1.0	***8.0***	***HO***				**HOST SEQUENCE**			
1.0	8.0		RK SA VC	cy si	a	Weathered, pale green grey coloured, partly clay altered, mildly silicified, sandstone textured rock. Carries occasional silicified 'clasts' (mm-cm scale). Most likely a volcanoclastic sandstone. Quartz vein fragments at 6.5m. Competency very bad, 0.6m core loss to 2m, 0.7m from 4.3-5.3m, 1.2m loss 5.3-6.5m and 1.2m loss 6.5-8m.	3.0	JT	20°
8.0	**36.5**	**F**				**FAULT**			
8.0	15.7		CY RK	cy si	a	Main zone of fault? Weathered unit. Broken zone of extensive core loss, with abundant clay and quartz fragments to 11m, after which clay content drops but quartz continues (10 percent of fragments). Other fragments are yellow clay altered rock (looks to be after previous unit), and mottled green rock (from next unit). Core loss: 2.6m loss to 11m, 4.2m further loss to end of unit.			

From (m)	To (m)	RQD To (m)	RQD %	Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU $
		1.0	NC	81745	60.1	61.1	1.0	0.1	0.1	0.01	1	0.1	1.6	3
		17.2	6	81746	61.1	62.1	1.0	0.1	0.3	0.01	1	0.1	2.0	6
		18.3	90	81747	62.1	63.1	1.0	0.1	0.1	0.01	1	0.1	1.8	3
		36.5	10	81748	63.1	63.7	0.6	0.1	0.1	0.01	1	0.1	1.7	3
		42.2	77	81749	63.7	65.2	1.5	0.1	0.3	0.03	1	0.1	1.8	6
		44.0	0	81750	65.2	66.2	1.0	0.2	1.4	0.08	1	0.1	1.5	21
		46.3	91	81751	66.2	66.9	0.7	0.3	2.1	0.07	11	0.1	3.8	32
		47.0	14	81752	66.9	67.3	0.4	0.1	0.1	0.01	1	0.1	1.6	3
		60.5	86	81753	67.3	68.2	0.9	0.1	0.1	0.01	1	0.1	2.1	3
		61.6	9	81754	68.2	69.2	1.0	0.1	0.1	0.01	1	0.1	3.0	3
		62.9	84	81755	69.2	70.2	1.0	0.1	0.4	0.05	1	0.1	2.9	7
		64.4	6	81756	70.2	70.5	0.3	1.1	6.2	5.63	124	2.5	18.3	194
		65.3	100	81757	70.5	71.5	1.0	0.2	0.3	0.14	27	0.4	2.1	15
		67.1	5	81758	71.5	72.5	1.0	0.2	0.5	0.04	10	0.3	1.0	12
		86.6	90	81759	72.5	73.5	1.0	0.3	0.6	0.08	13	0.2	1.5	14
		88.1	6	81760	73.5	74.5	1.0	0.3	0.7	0.05	13	0.2	1.6	15
		115.9	87	81761	74.5	75.7	1.2	0.2	0.8	0.05	8	0.2	1.5	15
		116.8	11	81762	75.7	76.7	1.0	0.6	2.8	0.19	17	0.5	2.4	49
		118.6	72	81763	76.7	77.7	1.0	0.5	1.8	0.20	14	0.1	3.1	31
		119.5	0	81764	77.7	78.8	1.1	0.4	1.3	0.12	14	0.2	5.9	24
		120.1	83	81765	78.8	79.7	0.9	0.5	0.7	0.05	53	0.4	18.4	25
				81766	79.7	81.0	1.3	0.2	2.3	0.17	24	0.2	4.4	39

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int.	Description	@ Depth	Feature	LCA Deg°	RQD To (m)	RQD %
15.7	18.5		PU SA VC	 cy si	a	Weathered unit. White, mottled with green-black, variably silicified and clay altered, poorly sorted, very coarse and angular volcanoclastic breccia. Some mottles appear to be pseudo-fiamme, and a few have internal structure, possibly after pumice? Uncommon altered-'feldspars' are noted. Unit possibly mass flow pumice breccia, of dacitic affinity. Quartz vein fragments present to 17.2m. Unit of poor to bad competency, with most pieces around 5cm. Core loss 0.9m to 17.2m.	18.1	BD	26°		
18.5	27.6		DA SA VC	 cy si	a	More weathered and broken version of previous unit. Abundant core loss - 3.8m loss to 26 metres.					
27.6	34.7		BR RY VC	 cy si	a	Weathered unit. Change in composition to a more silica rich unit. Dog's breakfast texture, dark groundmass, with generally creamy, light coloured clasts. Presence of occasional quartz phenocrysts indicates rhyolitic, to rhyodacitic composition. Angular clasts may be 10cm in size. Still have occasional pseudo-fiamme (pumice?), but clasts are dominant comprised of a fine grained silica rich matrix, carrying occasional phenocrysts of quartz +/- feldspar. Vague banding/?bedding, by parallel clast orientation occasionally noted. May be a brecciated pumiceous lava, or a mass flow pumice breccia. Unit occasionally cut by quartz veins (barren) a few cm thick. Some quartz vein fragments around 29m. Unit of poor to bad competence. Occasional fragments are over 10cm. 0.4m core loss 28-29m.	33.4 33.7	BD QV	40° 60°		
34.7	36.5		DA	cy sc	b	Mildly weathered, green, altered feldspar phyric, dacite. Some phenocrysts (orthoclase?) altered to a pinky red clay. Small 10cm interval of previous unit, incorporated near end of this unit. Cleavage fabric noted, marked by sericite wisps. Competency bad. Possibly 10-20cm core loss 36.1-36.4m.	35.6	CV	40°		
36.5	**42.8**	**FW**				**FOOTWALL SEQUENCE**					
36.5	42.8		BR DA RY VC	 se se si	b	Continuation of silicified rhyolitic-dacitic ?pumiceous breccia. Dog's breakfast texture of dark groundmass, with creamy, white, green or pinky red clasts. Weathering light, mainly confined to fractures. Unit contains many hair fractures/sericite veinlets, perhaps defining a vague fabric ~25-30 degrees to CA. Also close to CA (0-10 degrees), are thicker fractures and quartz veins. Unit may carry black shale clasts. After 42.3, unit becomes more sericite altered, and possibly more dacitic in composition (becoming pale green in colour). Boundary with next unit is transitional. Core of moderate to good competency throughout. Small broken zones 36.8-37m, and 38.3-38.6m. Core orient at 39.5m.	37.7 39.6	VN CV	10° 26°		
42.8	**46.5**	**FW**				**FOOTWALL SEQUENCE**					

Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU $
81767	81.0	82.0	1.0	0.1	0.3	0.04	1	0.1	1.5	6
81768	82.0	83.2	1.2	0.1	1.3	0.17	1	0.1	2.0	20
81769	83.2	84.2	1.0	0.3	0.7	0.04	30	0.4	9.6	20
81770	84.2	85.2	1.0	0.1	0.2	0.01	14	0.2	5.2	7
81771	85.2	86.2	1.0	0.1	0.1	0.01	1	0.1	2.2	3
81772	86.2	86.7	0.5	0.1	0.1	0.01	1	0.1	2.6	3
81773	86.7	87.7	1.0	0.1	0.1	0.01	1	0.1	1.7	3
81774	87.7	88.7	1.0	0.1	0.3	0.01	1	0.1	2.2	6
81775	88.7	89.7	1.0	0.1	0.3	0.01	1	0.1	2.3	6
81776	89.7	90.7	1.0	0.1	0.1	0.01	1	0.1	1.6	3
81777	90.7	91.4	0.7	0.1	0.1	0.01	1	0.1	1.3	3
81778	91.4	92.2	0.8	0.1	0.1	0.01	1	0.1	1.9	3
81779	92.2	93.2	1.0	0.1	0.1	0.01	1	0.1	2.8	3
81780	93.2	94.2	1.0	0.1	0.1	0.01	1	0.1	1.7	3
81781	94.2	95.2	1.0	0.1	0.1	0.01	1	0.1	0.8	3
81782	95.2	96.2	1.0	0.1	0.1	0.01	1	0.1	1.4	3
81783	96.2	97.2	1.0	0.1	0.1	0.01	1	0.1	1.1	3
81784	97.2	98.2	1.0	0.1	0.1	0.01	1	0.0	0.9	2
81785	98.2	99.2	1.0	0.1	0.1	0.01	1	0.1	1.6	3
81786	99.2	100.2	1.0	0.5	0.8	0.05	1	0.1	2.7	15
81787	100.2	101.0	0.8	0.1	0.6	0.05	1	0.1	1.9	10
81788	101.0	102.0	1.0	1.5	1.9	0.17	26	4.6	4.2	79
81789	102.0	103.0	1.0	0.3	0.5	0.05	7	0.3	2.4	12
81790	103.0	104.0	1.0	0.2	0.4	0.02	6	0.1	1.7	8
81791	104.0	104.8	0.8	0.3	0.6	0.06	7	0.1	1.6	12
81792	*104.8*	*105.8*	*1.0*	*0.4*	*1.1*	*0.14*	*7*	*0.1*	*1.0*	*20*
81793	105.8	106.8	1.0	0.5	0.8	0.10	8	0.1	1.0	16
81794	106.8	107.3	0.5	0.2	0.4	0.04	1	0.1	1.4	8
81795	107.3	108.2	0.9	0.1	0.1	0.01	1	0.1	1.6	3
81796	108.2	109.2	1.0	0.1	0.1	0.01	1	0.1	1.3	3
81797	109.2	110.2	1.0	0.1	0.1	0.01	1	0.1	1.0	3
81798	110.2	111.2	1.0	0.2	0.3	0.03	1	0.1	1.7	6
81799	111.2	112.2	1.0	0.1	0.2	0.02	1	0.1	1.5	4
81800	112.2	113.2	1.0	0.1	0.1	0.01	1	0.1	1.3	3
81801	113.2	114.2	1.0	0.1	0.1	0.01	1	0.1	1.7	3
81802	114.2	115.6	1.4	0.1	0.2	0.01	1	0.1	2.3	4
81803	115.6	116.2	0.6	0.1	0.1	0.01	1	0.1	1.3	3
81804	116.2	117.2	1.0	0.1	0.1	0.01	1	0.1	0.4	3
		Total Length:	57.1							

Standards

Reference Values for:	HBM-02						17/07/98	
	3.4	12.5	0.46	150	1.3	22.7		
Variances Allowed:	20%	20%	30%	20%	20%	20%		
81805 Inserted @ 117.2m	3.5	13.8	*0.16*	155	*0.7*	21.0	N	

Weighted Averages

70.2	81.0	10.8	0.4	1.3	0.26	22	0.3	4.4	29

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 $
42.8	46.5		SH VC	se si	a	Light pale greeny-brown, sericite and lesser silica altered, clast bearing, fine grained matrix, volcanoclastic/schist. Unit is strongly banded by sericite altered intervals of squashed clasts interspersed with fine grain silicified material,looks schistose, fabric may be a cleavage superimposed onto initial bedding. Clasts generally less than 1cm, may be squashed of have pressure shadows, or be relatively undeformed. Rare black silicified siltstone present as clasts. Unit consists of broken fragments to 43.8m, and is broken after 46.1m; of moderate competency in between.	44.1 46.1	BD BD	57° 57°												
46.5	**52.9**	**HO**				**HOST SEQUENCE**																
46.5	48.0		ST	se si	b	Medium to light grey, patchily sericite altered, mildly silicified siltstone. Unit has abundant hair like fractures, along which sericite alteration has taken place (and possibly silicification as well). One set of cracks sits ~58 degrees to CA. Patches *furthest from the fractures are light grey, patches adjacent to* the cracks are dark grey. Some cracks have been filled by brittle quartz veining. Unit competent except for first 10cm, which is broken. Irregular boundary with next unit. Possibly 30cm core loss in first broken zone.	47.0 47.7 47.8	QV QV JT	60° 12° 58°												
48.0	49.5		VC	se	a	Light green sericite+/-chlorite and mildly silica altered, silcified siltstone clast bearing, volcanoclastic/rock. Unit has a strong fabric, marked by sericite wisps and veinlets. Unit cut by occasional quartz veinlets (<1cm). Unit competent.	48.3 49.5	CV CT	40° 55°												
49.5	52.9		SL		b	Black shale unit, with small sericite or quartz cracks/wisps and larger carbonate+/-quartz veins. Contains small bands and inclusions of poorly sorted sandstone material. Cracks/wisps sit 20-40 degrees to CA. Unit of moderate competency.	51.5 51.9 52.9	BE VN CT	85° 7° 63°												
52.9	**61.1**	**HO**				**HOST SEQUENCE**																
52.9	61.1		SH VC	sc	a	NQ from 55.40m. Stongly sericite-chlorite altered, light green, altered-feldspar-phyric-clast beanng, schistose rock/volcanoclastic. Probably after a dacitic derived volcanoclastic (dacitic - indicated by feldspar). Strong fabric present, possibly bedding rather than a cleavage. Mild silicification sporadically present. May carry uncommon, shale clasts. Clast 1-2cm or smaller in size generally. Unit competent except for 55-55.2m and 60.6-61.1m.	54.3 55.9 59.7	CV CV CV	47° 56° 40°												
61.1	**63.7**	**HO**				**HOST SEQUENCE**																
61.1	63.7		BR CH ST VC	sc	a	Yellow and dark greeny-grey, variably sericite+/-chlorite altered (as wisps - marking a cleavage), poorly sorted, cherty clast bearing, patchily silicified volcanoclastic breccia with a siltstone matrix, interspersed with silty intervals. Clast size can vary from mm to >3cm. Unit of poor competency (moderate in parts). Worst zone- 63.1-63.5m, which is broken. Core orient at 62.2m. Orientated measurement - 61.9m, sericite "cleavage" - 82-86 degrees dip East, striking ~020-.200 (to 030-210).	61.1 62.6	CT CV	51° 40°												

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 $
63.7	**70.2**	**HOTS**				**HOST - TRACE SULPHIDES**																
63.7	66.2		RK	si	a	Steaked white and dark grey, strongly silica altered, banded, cherty rock. Carries small blebs and wisps of sphalerite/-sulphide mix-galena+/-pyrite. Sulphide wisps sit sub-parallel to banding. Pyrite also present as disseminated fine grained cubes. Unit has numerous thin fractures, which are often cavitous after quartz veins +/-sulphide, which may still patchily fill them. Thin, discontinuous tension gash like quartz-carbonate veins sit conjugate to the banding. Unit of moderate to poor competency, mainly due to breaks close to CA.	64.0 65.0	JT BD	10° 38°											
66.2	67.3		CH VC	 cs	b	Dark greeny grey, chlorite-sericite altered fine grained volcanoclastic siltstone and sandstone with cherty bands and clasts. Unit has common wisps and blebs of fine grained pyrite, and uncommonly of sphalerite. May be a shear present at 66.7m. Unit well banded/cleaved. Terminates in a 10cm zone of ?sericite-carbonate alteration.	66.7 67.3	CV CT	57° 37°											
67.3	70.2		RK	sc si	a	Green-grey, silica-sericite+/-chlorite altered rock. Might be a sandstone due to numerous small serticitic flecks and spots throughout. Unit heavily veined by sericite and quartz-carbonate wisps and veinlets, however these do not define a clear fabric. The wisps seem to favour a number of orientations (~orthogonal, ~15-20 degrees and sub-parallel to CA). Some quartz veins show brecciation of the host e.g. 69.3m. Remnant banding visible in spots, but indicates that folding is present. Unit of moderate competency.	69.3 69.5	VN VN	45° 16°											
70.2	**70.5**	**HOSM**				**HOST - SEMI-MASSIVE SULPHIDES**																
70.2	70.5		PY ST	 si	b	Bands of pyrite-chalcopyrite and quartz-carbonate in a silicified siltstone. Look to be multiple veins, or one large stockworky vein. Unit poor to moderately competent. Unit assayed ~6% Zn: sphalerite not noted during logging however.																
70.5	**75.8**	**HOTS**				**HOST - TRACE SULPHIDES**																
70.5	75.7		ST	si	b	Fairly bland looking medium grey, variably massive to thinly banded/bedded, silicified siltstone and fine grained sandstone.. Unit has common very thin fractures, after or filled with quartz +/-sphalerite-galena-chalcopyrite veins. Pyrite bands are occasionally present sub-parallel to bedding. Thin quartz-carbonate + sulphide veins are sporadically present (<1-2cm in width). Unit competent. Core orient at 74.2m. Orientated measurement - 74.2m, cherty banding. dip 46-48 degrees North, strike ~E-W. Fracture/Joint - dip 74-76 degrees South, strike ~E-W.	73.7 74.2 74.2 75.1 75.1	BD BD JT VN VN	34° 25° 22° 70° 30°											

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 $
75.7	78.8		BR CH ST	si si	b	Medium grey silicified sediments. Mainly brecciated, banded chert and sandstone. Cherty fragments may be mm to 10cm in size. Evidence that brecciation may be due to folding e.g. cherty fragment has a hinge displayed in its internal banding, however, this does not match the surrounding fabric, which sits ~50 degrees to core axis. Cherty fragment banding is often rotated away from this trend. Unit mineralised by blobs and veins of sphalerite-galena-chalcopyrite and by disseminations of pyrite, with sulphides (esp disseminated pyrite) more prevalent in the coarse sand sized breccias-volcanoclastics, than in more massive silicified intervals. Sulphides often seem to sub-parallel the banding in the breccia zones. The more massive intervals are interspersed (on approximately a 10cm scale) with the cherty breccia intervals, the fine grained matrix of which may be sericite/-chlorite altered. The contact between the massive and breccia unit can be quite a high angle to CA e.g. 80 degrees. Unit competent.	77.4 77.8 78.4	CT BD BD	80° 50° 40°													
78.8	**79.7**	**HOSM**				**HOST - SEMI-MASSIVE SULPHIDES**																
78.8	79.7		BR CH PY	si	a	HOSM to HODS of very fine grained pyrite replacment of a cherty breccia/volcanoclastic. Some pyrite masses as renal forms, within the cherty breccia/sedimentary bands. Unit competent.	78.9	BD	39°													
79.7	**81.0**	**HODS**				**HOST - DISSEMINATED SULPHIDES**																
79.7	81.0		CH SS	 si	b	HODS to HOSM of medium to fine grained disseminated pyrite cubes and masses/splotches of sphalerite-sulphide-mix-chalcopyrite in a silicified sandstone containing thin cherty interbeds. Sphalerite masses are often elongate parallel to the dominant banding/?cleavage (varies between 35-50 degrees). Unit occasionally cut by thin quartz-carbonate +/- sulphide veinlets. Unit competent. Core orient at 80.2m. Orientated measurement 80.2-80.3m, vein + sulphide fracture zone, dip 80 degrees South, strike 065-245. Others, dip 86 degrees South, strike 060(-070)-240(-250).	79.7	BD	37°													
81.0	**115.6**	**HOTS**				**HOST - TRACE SULPHIDES**																
81.0	83.2		SS	si	b	Interval of medium grey, fairly massive silicified sandstone, with patches of blebby or veinlets of sphalerite-chalcopyrite and disseminated medium to fine grained pyrite. 5cm blebby occurrence of sphalerite-chalcopyrite is in a small brecciated interval at 82.3m. Thin quartz+/-carbonate veins common (varying orientations, may rarely carry sphalerite-chalcopyrite). Unit competent.	82.3	VN	30°													

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 $
83.2	86.7		ST VC	si sc	b	Dark greeny grey, mildly sericite-chlorite altered, poorly sorted, volcanoclastic breccia of ?dacitic composition. Numerous pseudo-fiamme present, indicate a fabric (bedding?cleavage?) in some places. These paler green sericite altered patches often have yellow-white altered-?feldspar phenocrysts (<1mm usually), which are also found in the surrounding groundmass. Unit interbanded with silicified siltstone intervals in first 50cm, after which it contains many clasts thereof (mm to >5cm). Unit has suffered extensive fine grained pyrite replacement in the first half of the unit (possibly HODS). Unit competent. Core orient at 86.00m. Orientated measurement 85.2m banding of pseudo-fiamme, dip 78 degrees East, strike ~N-S. Some others: 72 dip east, ~190-010 trend.	83.4 85.2	BE BD	51° 60°													
86.7	91.4		SH ST	 si	b	Fairly uniform and bland, medium grey siltstone, shale and lesser sandstone. Unit becomes finer grained and darker towards the end of unit. Criss-crossed by numerous thin, quartz-carbonate veinlets, which rarely carry sphalerite blebs, many veinlets are sub-parallel ~30 degrees to CA. Large solitary, pseudo fiamme in last 20cm of unit, also small band of next unit at 90.5m Unit quite broken to 88m, mainly along the veinlets. Competent thereafter.	89.2 89.5 89.6	VN BE BE	30° 60° 75°													
91.4	99.2		CH VC	 se si	b	Unit of volcanoclastics similar to 83.2-86.7m. Sericite+/-chlorite altered, occasionally weakly silicified. Contains numerous psudeo-fiamme often defining a fabric, and also bears numerous disseminated orangey or white ?carbonate spots/altered feldpsar. Cherty inteval 94.5-95.2m. Contains sporadic bands replaced by fine grained pyrite. Occasional carbonate-quartz veinlets present, with or conjugate to banding. Core competent, core orient at 92.2m, and 98.2m.	92.9 95.1 98.2	BD BD BD	30° 47° 45°													
99.2	101.0		BR CH	sc	a	Cherty breccia in a fine grained sericite-chlorite altered matrix/siltstone. Banding of chert preserved in places, jumbled in others. Some rotation of clasts (which can be up to 5-10cm in size) evident by corellation of internal banding within the clasts. Possible fabric preserved by sericite matrix, but orientation distorted around clasts. Unit cut by thin (1-2mm usually) veinlets of quartz and/or carbonate, which may or may not accompany sphalerite. Some cavities are present along these veins (timing unknown). Blebs of sphalerite+sulphide mix and chalcopyrite also present. Core of moderate to poor competency, with many pieces under 10cm.	99.5 99.6	BD VN	29° 32°													
101.0	104.8		BR CH	sc si	a	Dark grey to dark greeny grey, silcified and occasionally sericite-chlorite altered cherty breccia. Breccia clasts are often rounded and 1-2cm in size, larger, internally banded, and more angualr varieties do occur. Matrix sporadically replaced by chlorite-sericite. Banding (?bedding/?cleavage) preserved by clast orientation and alternation with sericite-chlorite altered matrix. Sphalerite-chalcopyrite etc spots and veinlets become more common in the last 40cm, but may be rarely found throughout. Core of moderate competency.	103.0	BD	25°													

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 $
104.8	107.3		BR CH		b	Light grey, fractured and slightly brecciated cherty sediments with small interval of patchily sericite altered coarser bands (which may carry bands of chert fragments). Unit contains common wisps and thin veinlets of sphalerite (rimmed by a darker material - sulphide-mix)+chalcopyrite+/-galena. Core competent. Core orientation at 107.2m. Orientated measurement at 105.4m, cracks (sulphide bearing), strike ~010-190, dip 84-90 degrees East (can be slightly to the West too). Cherty banding - dip 66 degrees North, strike ~E-W, some strike slightly ~ENE-WSW of this.	105.9 105.9 106.8	VN VN BD	51° 23° 20°													
107.3	115.6		ST VC	 si sc	b	Mix of coarse grained volcanoclastic (with small cherty fragements) and silicified siltstones. The coarser bands tend to be more sericite-chlorite altered, while the finer sediments are silicified. Small cherty bands often show brecciation into surrounding coarse grained volcanoclastics. Negligible sulphide, only some disseminated pyrite present in the more sericite altered zones. Banding close to CA in first part of unit, steepens out in last half. Unit competent. Core orient at 113.2m. Orientated measurement at 107.4m of cherty (clast) banding and sericite veinlets - dip 78 degrees West, strike ~N/S to 170-350.	108.8 111.4 114.1	BD BD BD	15° 42° 35°													
115.6	**120.1**	**PR**				**PINNACLES RHYOLITE**																
115.6	116.2		BR CH RK	 qs	a	Transitional to rhyolite, consists of fine grained material, fairly heavily quartz-carbonate +/-sphalerite veined, which contains common cherty clasts. Matrix lightly sericite altered, and seems to be mildly silicified in places. Unit most likely an altered version of the coarse grained volcanoclastics of the previous unit. Core of poor competence.	115.8	VN	55°													
116.2	120.1		 RY	 si	b	EOH 120.1m. Creamy-yellow tan coloured, quartz phyric rhyolite. Appears to be pumiceous (and possibly rhyo-dacitic) after 119.2m. Unit has many 1-2cm quartz+/-carbonate veins, which appear to be barren now. Unit contains abundant thin sub-parallel quartz veinlets, which often sit ~45 degrees to CA, in opposing orientations to larger quartz veins - fabric? Mild weathering has taken place along veins and fractures, with iron oxides coating these features, possibly after sulphides in some of the veins. Unit of moderate to poor competency, with many pieces 5-10cm long. Small 10cm broken zone at 119.1m.	116.7 116.7	VN VN	37° 45°													