PASMINCO ROSEBERY

A.C.N. 004 074 962

Hole No: 002B **Location:** Browns Tunnel 5288N 4929E

Objective: To test the continuity of 'Lens 1' on the 5290N section.

Result: Mineralised where expected, weathering affected zinc grade? 20m at 1.4%Zn 15g/t Ag; best, 1m at 1.4%Pb, 5.2%Zn, 0.21%Cu, 51g/t Ag, 1g/t Au.

Planned Direction: 270°
Planned Dip: -70°
Planned Depth: 60.0 m
Planned Northing: 5288 m N
Planned Easting: 4929 m E
Planned Collar R.L.: 478 m RL

Drilling Commenced: 1/06/98
Drilling Completed: 3/06/98
Actual Depth: 60.2 m
Surveyed Northing: 5289.50 m N
Surveyed Easting: 4928.70 m E
Surveyed Collar R.L.: 477.70 m RL

Date Logged: 16-Jun-1998
Logged By: Michael Whitbread
Hole Size: HQ
Hole Category: Other
Grouted:

Date Log Verified: 30-Sep-1998
Verified By: Michael Whitbread

Summary Log:

Large shear zone? 0.0-2.0m NC; -5.3m HO (oxidised); -22.6m HOTS (saprolite to 10m; part ox ends ~20m); -25.3m HODS, -25.6m Fault;-27.7m HODS;-29.9m HOTS; -31.5m HOSM; -34.4m HODS; -49.7m Fault/shear zone containing breccias and sediments., -60.2m (EOH) HO (competent).

Depth	Direct	Dip
0.0	270.0	-70.0
30.0	272.0	-70.0
60.0	272.0	-69.5
60.2	272.0	-69.5

Depth	Direct	Dip

Depth	Direct	Dip

Depth	Direct	Dip

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int.	Description
0.0	**2.0**	**NC**				**NO CORE**
0.0	2.0		NC		a	No core recovered.
2.0	**5.3**	**HO**				**HOST SEQUENCE**
2.0	5.3		BR cy si RK si SA		a	More of less completely oxidised material. Consists of zones of clay with remnant oxidised clasts, and zones of silicified medium grained material (sandstone? rhyolite?). This material may be glacials, but looks more like oxidised versions of the unit further downhole. Namely, silicified sediments and breccia, and sericite altered matrix supported breccia. No competency to core. Looks to be ~90cm core loss, with only partial recovery of the remainder.
5.3	**11.9**	**HOTS**				**HOST - TRACE SULPHIDES**

@ Depth	Feature	LCA Deg°

RQD To (m)	RQD %
5.8	0
7.6	83
8.7	18
18.6	87
19.4	12
34.1	87
45.4	12
46.4	90
50.0	8
60.2	94

Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU $
90235	5.3	6.3	1.0	0.1	0.1	0.01	4	0.5	1.7	7
90236	6.3	7.3	1.0	0.1	0.1	0.10	43	0.2	2.1	12
90237	7.3	8.3	1.0	0.1	0.1	0.01	6	0.1	0.6	4
90238	8.3	9.3	1.0	0.1	0.1	0.01	4	0.1	0.6	4
90239	9.3	10.0	0.7	0.1	0.1	0.20	11	0.2	1.6	8
90240	10.0	11.0	1.0	0.1	0.1	0.14	12	0.2	1.8	7
90241	11.0	11.9	0.9	0.1	0.1	0.12	16	0.2	2.6	8
90242	11.9	12.9	1.0	0.2	0.1	0.15	9	0.1	1.9	6
90243	12.9	13.9	1.0	0.1	0.1	0.07	7	0.1	1.7	5
90244	13.9	14.9	1.0	0.2	0.3	0.17	17	0.1	1.6	11
90245	14.9	15.9	1.0	0.1	0.1	0.26	31	0.1	1.3	11
90246	15.9	16.9	1.0	0.9	1.0	0.52	31	0.2	1.8	31
90247	16.9	18.1	1.2	0.5	0.8	0.22	21	0.4	2.3	23
90248	18.1	19.1	1.0	0.1	0.1	0.08	25	0.2	1.4	9
90249	19.1	20.1	1.0	0.3	0.8	0.16	15	0.4	1.9	20
90250	20.1	21.1	1.0	1.6	3.4	0.14	16	0.4	3.3	60
90251	21.1	22.1	1.0	0.7	1.0	0.04	10	0.3	3.3	21
90252	22.1	22.6	0.5	0.5	0.7	0.03	4	0.1	1.9	14
90253	22.6	23.3	0.7	0.7	1.5	0.13	9	0.2	3.4	28
90254	23.3	24.3	1.0	0.7	1.1	0.06	1	0.1	2.8	20
90255	24.3	25.3	1.0	0.3	0.3	0.05	1	0.1	2.4	7
90256	25.3	25.6	0.3	0.9	0.3	0.01	45	0.3	9.2	19

Hole No: 002B

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int	Description	@ Depth	Feature	LCA Deg°	RQD To (m)	RQD %
5.3	10.0		SA ST	cy si	a	Oxidised material, dominantly saprolitic after silicified fine grained (siltstone, occasional sandstone) sediments. The intensity of weathering decreases after 7m, where the clay content drops off and silicified fragments with uncommon unoxidised portions dominate. The fine sediments are often banded, with the bands usually 1-3cm in thickness, usually running fairly close to the CA. These are also observed in less oxidised fine grained zones further down the hole e.g. 20.9m. The origin of the bands may be sedimentary, however they usually contain or are sub-paralleled by thin (mm scale) pyrite bands, or the oxidised version thereof. The competent pieces are criss-crossed by thin fractures and quartz veins in variable orientations. The fractures and veins commonly contain small (1-10mm wide) cavities. These may be lined with goethite, hematite, open space quartz and a fine black residue - most likely after the sphalerite-pyrite-quartz + the gun-metal sphalerite-chalcopyrite-pyrite mix assemblages seen later in unweathered core. A piece at 7.4m does bear a fragment of sphalerite in the cavity. Unit is weak Hots. The core is not competent, although occasional pieces may reach 30cm. ~20cm core loss 7.9-8.5m. Breaks along banding, fractures and veins. Difficult to tell faulting from breaks just due to weathering. Possible fault ~8.5m (broken ground) and at 9.9m (break with fine mush in it).	7.4 9.0 9.0 9.9	VN JT BD FT	34° 2° 17° 20°		
10.0	11.9		SA ST	si	b	As before except unweathered fragments (medium grey) dominate. Oxidation generally confined to fractures and their immediate wall rocks (nice liesegangs!). Banding of the fine grained material quite visible now. Pyrite bands still present, as well as the cavities (up to 2cm wide e.g. 10.1m). Perhaps meteoric waters are responsible for the removal of sulphides - or perhaps the cavities are early features, incompetely filled by sulphides. Sphalerite blebs rare, depsite the abundance of cavities. Generally competent, except broken zone 11.4-11.8m. Sharp contact with next unit along a quartz vein/fracture. Orientation mark at 10m. Orientated measurements: 10.2m, banding/cleavage ~N/S strike, dip 61 degrees to the west; 10.4m, cleavage/banding ~N/S strike (just NNE/SSW of N/S), dip 76 degrees to the west. Proper magnetic strike measurements not taken due to interference by metal racks in Core Shed.	10.2 10.3 10.4 11.9	BD JT JT CT	22° 49° 36° 73°		
11.9	**22.6**	**HOTS**				**HOST - TRACE SULPHIDES**					

Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU $
90257	25.6	26.6	1.0	1.5	2.9	0.09	36	2.2	2.6	72
90258	26.6	27.2	0.6	0.5	3.6	0.18	25	1.0	3.8	64
90259	27.2	27.7	0.5	0.7	1.2	0.11	31	1.6	6.2	40
90260	27.7	28.7	1.0	0.1	1.5	0.01	1	0.1	1.9	21
90261	28.7	29.9	1.2	0.1	1.2	0.02	12	0.1	3.6	19
90262	29.9	30.7	0.8	0.1	0.4	0.08	23	0.1	6.7	12
90263	30.7	31.5	0.8	0.1	0.2	0.01	16	0.1	6.3	7
90264	31.5	32.6	1.1	0.1	0.5	0.02	12	0.1	2.7	10
90265	32.6	33.6	1.0	0.1	1.6	0.06	1	1.0	2.0	31
90266	33.6	34.4	0.8	0.1	1.5	0.04	13	0.6	2.1	28
90267	34.4	35.4	1.0	1.4	5.2	0.27	51	1.0	5.4	95
90268	35.4	36.5	1.1	0.5	1.8	0.05	12	0.2	3.9	30
90269	36.5	37.4	0.9	0.1	0.3	0.01	5	0.1	7.8	6
90270	37.4	38.0	0.6	0.3	0.1	0.01	12	0.2	2.7	7
90271	38.0	39.0	1.0	0.9	2.2	0.15	25	0.6	4.9	44
90272	39.0	40.0	1.0	0.2	0.8	0.07	4	0.1	1.8	14
90273	40.0	41.0	1.0	0.2	0.6	0.04	8	0.1	2.5	12
90274	41.0	42.0	1.0	0.2	0.6	0.05	8	0.2	3.3	13
90275	42.0	43.0	1.0	0.5	1.9	0.09	13	0.4	3.5	34
90276	43.0	44.0	1.0	0.2	0.7	0.06	10	0.3	3.3	15
90277	44.0	45.0	1.0	0.2	0.4	0.03	7	0.3	3.0	10
90278	45.0	46.0	1.0	0.1	0.1	0.01	1	0.1	1.0	3
90279	46.0	47.0	1.0	0.1	0.1	0.01	1	0.1	0.7	3
90280	47.0	48.0	1.0	0.1	0.1	0.01	1	0.1	0.6	3
90281	48.0	49.0	1.0	0.1	0.1	0.01	1	0.1	0.5	3
90282	49.0	49.7	0.7	0.1	0.1	0.01	1	0.1	1.1	3
90283	49.7	51.2	1.5	0.1	0.2	0.01	1	0.1	1.5	4
		Total Length:	45.9							

Standards

Reference Values for:	LBM-06						14/03/97	
	2.0	5.0	0.15	70	0.4	5.5		
Variances Allowed:	20%	20%	30%	20%	20%	20%		
90284 Inserted @ 51.2m	1.9	4.8	0.15	64	0.6	5.0	N	

Weighted Averages

25.3	36.5	11.2	0.5	1.8	0.07	19	0.6	3.9	35
25.6	27.2	1.6	1.1	3.2	0.12	32	1.8	3.0	69
25.6	27.7	2.1	1.0	2.7	0.12	32	1.7	3.8	62
25.6	45.0	19.4	0.4	1.4	0.07	15	0.5	3.7	28
27.7	34.4	6.7	0.1	1.0	0.03	11	0.3	3.5	18
32.6	36.5	3.9	0.5	2.6	0.11	19	0.7	3.4	47
34.4	36.5	2.1	0.9	3.4	0.15	31	0.6	4.6	61
34.4	39.0	4.6	0.7	2.1	0.11	22	0.4	5.0	40

Thin Sections

PTS0001 16.4 m 002B_16.4 sample no. Partially weathered zone, sub economic.

From (m)	To (m)	Strat Code	Desc Code	Alt Code	Alt Int.	Description	@ Depth	Feature	LCA Deg°	RQD To (m)	RQD %
11.9	18.1		BR	se	b	Unit is medium greenish-grey. It consits of relatively unoxidised material containing oxidised zones along fractures and veins. The unit is a sericite-chlorite altered matrix supported breccia OR poorly sorted clast bearing pumice breccia. Clasts consist of angular to sub-rounded silicified sediment of variable size (mm-5cm), and sericite-chlorite altered, slightly compressed ?pumice clasts (mm-5cm showing internal structures). Silica clasts predominate in the first 1-2m and in the last 40cm. Cleavage present, poorly developed, marked by pyrite and sericite wisps, but difficult to measure. Sulphides present are common pyrite wisps and veinlets and occasional-rare clots of sphalerite rimmed by pyrite (in cleavage or fractures) e.g. 16.6m. Cavities rimmed by pyrite, quartz and a 'black' coating (Mn oxide?) are still common (mm-cm widths) and often look to have box works (after sulphides?). These are still mostly related to veining or fracturing.. Core is of reasonable competency, with most pieces over 10cm. Breaks along weathered fractures/veins. Fault? with quartz fragments and weathered pug at 12.5m. Another large weathered fracture at 15.5-15.7m. Mn and iron oxides often on weathered breaks.	12.5	FT	36°		
				si			13.7	CV	40°		
			PU	sc			15.6	FT	20°		
			SA				16.6	CV	36°		
18.1	19.1		BR	si	a	Silicified rock/breccia. looks to be a silicified version of previous unit, containing small (<4mm) sericite altered clasts and lesser silica clasts. Fractures, weathering etc same as last unit. Core poor-moderate competency, most pieces at or under 10cm.	18.3	JT	25°		
			PU	si							
19.1	22.6		BR	si	a	Silicified ?fault breccia and sediments. Minimal weathering. Looks to be a breccia of the silicified fine grained sediments mention earlier in the hole. The fault breccia margin is present at 19.4m, and runs near parallel to CA, which may explain why core comes in and out of silicified breccias throughout the unit. Banded sediments, silicified rock and silicified ?pumice breccias are the lithologies that alternate with this. The clasts are angular to sub-rounded (mm-3cm scale or greater) and sit in a silicified, fine grained matrix. Open space fractures etc are abundant as before (did not measure orientations as there were many), however the amount of sphalerite +/-galena +/- pyrite clots increases down hole. Pyrite wisps and veinlets also common. Sulphide thus approaches disseminated grade near 22.6m. Difficult to pick a cleavage, however sericite wisps often occur around larger silicified clasts. Core, moderate to poorly competent (some pieces under 10cm). Core orientation at 22m.	19.4	FT	6°		
			ST	si			20.7	SR	55°		
22.6	**25.3**	**HODS**				**HOST - DISSEMINATED SULPHIDES**					
22.6	23.3		BR	se	b	Transitional between previous silica dominant unit and sericite matrix dominant breccia. Contains abundant silica clasts (mm to >5cm), some of which are banded. Doesn't appear to be much rotation, and clast orientation seems tobe sub-parallel to cleavage (marked by pyrite and sericite). Pyrite dominant sulphide. Sphalerite occurs in occasional small blebs. Core broken to 23m.	22.9	BD	39°		
				si			23.2	CV	28°		

Sample No	From (m)	To (m)	Length (m)	Pb %	Zn %	Cu %	Ag g/t	Au g/t	Fe %	TMU $
PTS0002		20.4 m	002B_20.4 sample no. Ore grade. Minimal weathering.							
PTS0003		26.4 m	002B_26.4 sample no. Ore grade. Non-weathered.							
PTS0004		35.1 m	002B_35.1 sample no. Associated with a fault zone.							

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 $
23.3	25.3				a	Return to sericite altered matrix supported breccia. Clasts as before. Cleavage weak-moderate, intense at end of unit.	24.8	JT	25°													
			BR	se		Sulphide content variable HODS-HOTS. Disseminate pyrite	24.9	CV	57°													
				si		dominates, with lesser sphalerite +/- galena spots and veinlets	25.3	CV	59°													
						sporadically distributed. Possibly some chalcopyrite amongst the pyrite. Some cavities present in fractures, but only one fracture shows oxidation. Core has moderate competency (some pieces under 10cm). Last 20cm not competent.																
25.3	**25.6**	**F**				**FAULT**																
25.3	25.6		RK	se	a	Shear/fault. Acual break at 25.5m, contains pug. Cleavage	25.5	FT	50°													
						intensity increases towards the break, as does sulphide	25.6	JT	33°													
						(pyrite +/- galena) content. Small pits and cavities in sulphides around break. Abrupt change on other side of fault (no cleavage gradation etc).																
25.6	**27.7**	**HODS**				**HOST - DISSEMINATED SULPHIDES**																
25.6	27.7		RK	sc	a	Dark grey, dark greenish grey, partially silcified sericite	27.1	CV	23°													
				si		pumice? breccia/rock and silicified siltstone. Possibly a	27.3	SR	23°													
			ST	si		bedded sequence, although the margins between siltstone and the sericite altered rock are often brecciated e.g. 27.2m. Up to 26.4m contains abundant cavities, usually containing or lined with a black friable pyrite-galena? mix. Wall rock around cavites is generally barren of sulphide. The more silicified areas contain the greater amounts of cavity. Clots (1-5mm wide) of sphalerite rimmed by pyrite+/- galena are occasionally evident. Pyrite +/- chalcopyrite, bands and blobs present at disseminated grade in last 60cm. Cleavage strong in less silicified zones, absent in silicifed portions. Core of moderate competeny except for 27.5-27.7m and 25.6-26m which are broken. Shear/fault at 27.3m.																
27.7	**29.9**	**HOTS**				**HOST - TRACE SULPHIDES**																
27.7	29.9		SH	sc	a	Greeny-yellow-gray, sericite-chlorite schist/pumice breccia. Occasionally (esp in first 1m) have (2-3mm) white sericite+/- sulphide (pyrite?) augen/wisps. Pyrite abundant, as wisps in cleavage, however neglible sphalerite noted. Some of the yellowy sericite patches contain small (<1mm) yellow-white spots, perhaps reflecting structures in a relict pumice? Core is competent.	29.8	CV	37°													
29.9	**31.5**	**HOSM**				**HOST - SEMI-MASSIVE SULPHIDES**																

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 $
29.9	31.5		SH	sc	a	Unit as before, except with disseminated to semi-massive sulphides - namely pyrite (both medium and fine grained varieties) +/- chalcopyrite bands and wisps with 2-4mm sphalerite 'clasts/augen' common. The latter are usually rimmed by a grey-black material, presumably the chalcopyrite-galena-sphalerite mix referred to in PASEX reports. The sphalerite occurrences are restricted to the bands of medium grained pyrite, which can cross-cut fine grained pyrite bands (but both types sub-parallel cleavage/bedding). Core is fairly competent. The contact with the following silicified unit sits close to cleavage (perhaps conformable if the 'cleavage' is reflecting bedding?).	30.1 31.2 31.5	CV CV CT	37° 28° 35°													
31.5	**34.4**	**HODS**				**HOST - DISSEMINATED SULPHIDES**																
31.5	32.6		RK	cs si	a	White and pale yellow silicified rock. The unsilicified parts look like the sericite-chlorite schist of previous units. The amount of cavities is significant, looking to have come after sphalerite-sulphide mix-pyrite clots (up to 3mm wide) which are still preserved in places. Unable to identify a feature to explain silcification, however numerous thin fractures/veins now exist, many run at a similar angle to cleavage in the previous unit. Coor is of poor-moderate competency.	31.8	VN	25°												
32.6	34.4		SH	sc	a	Return to the sericite-chlorite schist. Sulphide content trace-disseminated. Sphalerite content up, relative to pyrite, which is now only present as disseminated cubes and <mm blebs in cleavage. The sphalerite-mix sulphide-pyrite clots (mm-10mm) are either constrained in cleavage, or in ?fractures/joints/?later cleavage that cross the dominant cleavage. They often have a white halo (silica, white sericite?). Some have been washed out. Core orient at 33.8m. Core is of moderate competency. Orientated measurement at 33.8m (again, magnetic bearing approximate) - Cleavage fabric stikes ~N/S, and dips 78 degrees to the west.	32.7 32.7 33.9 34.1 34.3	JT CV JT CV CV	24° 26° 3° 20° 24°												
34.4	**49.7**	**F**				**FAULT**																
34.4	36.5		BR PY	qs	a	Polymict Breccia consisting of variably matrix and clast supported material. Clasts are: silicified sediment (mm->5cm size), black-sulphide mix clasts (mm-cm), sphalerite-mix-pyrite clot clasts (mm-cm), rarer sericite schist clasts (mm-cm). Generally the matrix is quartz-sericite, but in the 50cm either 35.4m may be semi-massive pyrite. Thus most of the unit is semi-massive sulphide (dominantly pyrite and the balck sulphide-mix); the base metal sulphides may be found outside of the clasts. The clasts are angular to sub-rounded, of extremely variable size. The unit is badly broken, however in larger pieces there appears to be a vague alignment of elongated clasts close to the sericite ?cleavage occasionally visible in the matrix. Core competency is quite bad. Last 60cm of unit has only trace sulphide content.	35.9	CV	24°												

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 $
36.5	37.4		BR SA	cy	a	Oxidised polimict breccia. However, there are no obvious sulphide clasts. Some sulphide (sulphide-mix and pyrite) in the matrix in the last 10cm of the unit. Core competency is poor-moderate (some pieces over 10cm). Possible fault/shear position at 37m (crumbled material 15cm wide). Fabric measurememt dodgy.	37.2	CV	21°													
37.4	38.0		SS	se si	b	Grey-black, fairly massive, sericite altered, fine to medium grained sandstone and siltstones. Possibly some silcification. Moderate cleavage/bedding marked by sericite, pyrite wisps and alternations in grain size. Sulphides trace grade, mainly pyrite wisps, sphalerite etc are absent. Competency poor with all pieces under 10cm. Contact with next unit ~45 degress.	37.7 38.0	CV CT	15° 45°													
38.0	45.0		BR VC	se se	b	Grey-black, poorly sorted, sericite altered silt size matrix supported, polymict breccia/volcanoclastic. Clast size varies from mm to greater than 3cm, most are 4mm-2cm in size. Clasts are angular to sub-rounded, with some showing elongation parallel to the dominant fabric (near parallel to CA). Clasts are: Dominantly silicified sandstones and siltstones, rare sericite altered clasts; Sulphide clasts are common, some being pyrite dominant, others similar to the sphalerite etc clots of previous units, or are dominantly the black sulphide-mix and pyrite. Dissolution of some clasts has occurred. Fabric is quite strong and runs very close to the CA. Fine grained pyrite may make up a significant compenent of the matrix. At 41.2-41.6m there is a siltstone (silicified) 'layer' 1-2cm thick which runs 30cm in length. Is this ripped from the wall rock, did it form in place in a fault, or is the whole unit a primary volcanoclastic that has been faulted. Competency is terrible. Most of unit is very broken, but little clay-pug is evident. Zones which are resonably competent are 38-39.8m is moderately commpetent and 41-41.8m. Boundary with next unit is 'faulted' comprising 10cm of fragments under 2cm. Most breaks in core on cleavage, or near perpendicular to CA.	41.4 41.9	CV CV	3° 17°													
45.0	49.7		SS ST	qs qs	b	Grey-black, fairly massive, sericite altered, fine to medium grained sandstone and siltstones. Possibly some silcification. Cleavage difficult to recognize, but pieces break easily along planes, in varying orientations ('joints' measured at 20-30 degrees may reflect cleavage). Sulphides trace grade, mainly pyrite wisps, sphalerite present as uncommon spots and blebs, sometimes in thin fractures.Thin (mm wide) veinlets common in first metre of unit - now appear to be clay, difficult to identify parent, there is one quartz-carbonate veinlet bearing trace galena present at 45.3m. Competency poor with most pieces under 10 and 5cm. Contact with next unit badly broken, and contains pug in last 20cm. Contact runs ~30-40 degrees to CA. Competent zone from 45.3-46.7m.	46.0 47.4 47.7	JT CV JT	21° 27° 60°													
49.7	**60.2**	**HO**				**HOST SEQUENCE**																

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 $
49.7	60.2		PU VC	sc qs sc	b	EOH at 60.2m. Greenish-yellow and medium gray, sericite+/-chlorite+/-silica altered, clast bearing volcanoclasitc sandstone/pumice breccia. The material is poorly sorted with fragments ranging from sub-mm to 1-2cm. Fragments may be angular to sub-rounded. Most smaller fragments seem to be feldspar (or altered varieties), while the larger clasts are silicified siltstone and sandstone fragments. The rock is almost schistose in places with sericite-chlorite wisps and clots (up to 2cm thick)alternating with more silicified material. The wisps seem to mark a weak cleavage close to CA for most of the unit but possibly ~30-40 degrees to CA in last few metres of core. The sericite-chlorite clots sometimes have internal structure (pumice?), but this may merely be overprinting of feldpar crystals. Unit has occasional 2-3cm thick sericite-chlorite rich bands crossing the core after ~57.3m. Commonly carbonate and quartz-carbonate +/- trace sphalerite veinlets occur, some of which run very close to CA. Core is generally competent. Small shear/fault 'zone' 52.2-52.3m, with clay/pug on the 52.3m surface, and carbonate veining within the zone; yellow 'hue' of unit not as pronounced after this zone (change in carbonate content?). Orientation at 54.5m. Orientation measurement at 54.5m, cleavage fabric strikes ~NNE/SSW and dips 77 degrees to the west.	50.6 52.2 52.3 52.6 54.9 57.8 58.2 58.8	QV SR SR CV VN BD CV BD	52° 18° 27° 14° 4° 46° 34° 42°													