RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 220
Logged By: Ian Foreman
Date: Oct 09 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	222.50	223.92	PPHmz DPEH	4	m	1	m	/	1.0	/	1.0	/	m	m	m	/	/	/	Tr	/	/	w

LITH+MIN:

50% light greyish green and 50% light reddish to pinkish brown with 1% porphyritic texture very well preserved throughout. 25% 1-4 mm subrounded to embedded light translucent green and brown to cream feldspars and 20% <1-3mm subang to embedded lath shaped buff to cream hornblendes. Locally, particularly near the upper contact, the unit is similar to DPEH while elsewhere it looks like PPHmz. The dyke does not have chlorite altered mafics nor hematite throughout and on the fractures. Hematite does, however, occur throughout as disseminated 1-2mm dark red specs.

L.C: indistinct

ALTERATION:

The light greyish green sections are moderately Qtz-Ank -ser +/- Kfs altered and the light reddish to pinkish brown sections are weakly to moderately potassic altered. These sections are also hematite stained. Throughout the unit carb/pyrite veins have sericite envelopes

STRUCTURE:

- no notable structures

	223.92	226.60	PPHm	4	m			1.0	4	/	0.5	/	/	m	m	/	m-s	/	w	/	/	w

LITHMIN + ALT:

This is the same main phase unit that is described between 149.90m and 161.03 metres. This is a continuation of the well mineralized zone (that occurs between dykes) between 194.29 and 209.48 metres or well between 214.83 and 222.50 metres

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DRILL HOLE NO. 95 - 220
Logged By: Ian Forsdick
Date: Oct 09 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	223.92	226.60	CONT'D		L.C:																			
						The lower contact is marked over 1.0 metre because it is very indistinct and locally both rock types (UPHm and USED) occur over 5-10cm sections throughout. This may be interpreted as accumulation resulting in the mixing of the two rock types.															
					STRUCTURE:																			
					-	224.58 -	225.35m →	medium grained DYKE w/ 2-3% disseminated Pyrite throughout.																	
	226.60	235.48	USED	1	m	4	m	0.9	4	/	1.0		/	m	m	m	/	m	/	w	/	/	w	
					LITH+MIN:																			
					This unit varies greatly. 60% is bright to dark reddish brown while the other 40% is greenish grey to yellowish green. The unit is aphanitic and massive throughout except for local 5-10cm sections that have 3-5% clear to translucent yellowish green <1mm subangular grains.															
					Chlorite clots +/- pyrite occur throughout the unit (and fracture fill as well?) and locally are concentrated giving the core a dark green appearance.																			
					Weak carbonate throughout as fracture fill and veining. The quartz stockwork is moderate, locally strong, throughout. The quartz veins are moderately well mineralized with chalcopyrite. The rest of the 0.8 - 1.0% chalcopyrite occurs as very fine disseminations and <1-2mm blebs throughout the matrix as well as fracture fill associated with pyrite. 4% pyrite occurs as fine disseminations and 1-3mm blebs (both are commonly associated with chlorite (?)) as well as in veins and as fracture fill. 0.5 - 2% hematite occurs throughout the unit in veins, fracture fill and blebs throughout the matrix															
					L.C:																			
					indistinct																			

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AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 220
Logged By: I. Foreman
Date: Oct 09 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
	226.60	235.48	CONT'D																					
	235.48	243.93	PPAM	4	m			0.70	3	/	Tr		/	/	m	m	/	m	/	w	/	/	w	

226.60 – 235.48 (CONT'D)

ALTERATION:

The bright to dark brown sections are moderately potassic altered while the greyish green to yellowish green sections are assumed to be moderately Qtz-Ser-Ank +/- Kao altered.

STRUCTURE:

- 227.40 - 227.54 m → Fault Zone with gouge @ 40°
- 229.24 - 229.89 m → reddish brown DMAF with moderate carbonate veining and 5-8% subhedral 1-6 mm light green hornblendes

235.48 – 243.93 PPAM

LITH + MIN:

The core is pale greyish green with very well preserved porphyritic texture. 20-25% lt to dark [illegible] green 1-4 mm subrounded to euhedral feldspars and 15-20% lt green to buff <1-3 mm subangular to euhedral hornblendes. Locally the phenocryst appear to be aligned @ 30-40°.

Weak carbonate as fracfill and veins. The moderate quartz stockwork is ~~[illegible]~~ moderately well mineralized and contains >80% of the chalcopyrite. The rest of the 0.7% chalcopyrite is in fracture fill and rarely as v.f.g'd disseminations within 1-2 cm of either veins or fractures. 3% pyrite occurs as f.g'd disseminations and in fracture fill as well as in veins. Trace hematite occurs in fracture [illegible].

L.C.

Shrp @ 50-60°

ALTERATION:

Mod to Strong Qtz-Ank-Ser +/- Kao throughout - particularly strong Ser alt.

STRUCTURE:

- 241.62 - 241.8[illegible] → Mod Bkn core & gouge
- 242.33 m → Slip & 3 mm gouge @ 0-10°.

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Date: Oct 10th '95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	Te	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	243.43	280.31	PPHm2	4	m	1	Tr	Tr	0.5	/	Tr	/	Tr	m	m	/	Tr	/	w	—	—	w

LITH + MIN:

The unit is generally light green ± 20% being light reddish brown. 20-25% light translucent green and brown rarely clear, 1-3mm subrounded to subhedral feldspars and 15% light green to buff <1-3mm subrounded to subhedral hornblende. The unit is very homogenious throughout.

Trace quartz veins throughout PP unit are poorly mineralized commonly containing only pyrite. Weak carbonate veining throughout carbonate also occurs locally as fracture fill.

Trace to locally 1% Pyrite occurs in veins, fracture fill & locally as 1-4mm blebs and as fine disseminations throughout. Trace chalcopyrite occurs in quartz veins. Hematite locally occurs as <1-2mm rounded specs in the light reddish brown sections.

L.C:

Slump @ 60°

ALTERATION

Moderate Qtz-Ank-Ser ± Kfsp alteration throughout with the light reddish brown sections being weakly potassic altered as well.

STRUCTURE:

- 252.32m → 1cm clay gouge @ 50°
- 269.7m → slip + gouge @ 50°
- 273.01m → slip + gouge @ 50°
- 278.37m → trace gouge on break @ 40°

	280.31	286.27	VSED	4	m	1	w	0.6	3	/	1	/	w	m	m	/	m	/	w	—	—	w

LITH + MIN:

The unit is greenish grey with 10-30cm sections that are

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Date: Oct 10 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	280.31	286.27	CONT'D																					

orangish brown to dark brown. The seds are aphanitic but locally <1mm angular to subangular grains make up to 2-4% of the rock. Elsewhere, <2mm subrounded light translucent greyish green grains make up 7-10% over 10-15 cm's. These may be phenocrysts. <1mm pyrite and chlorite clots make up to 5% and give the core a mottled appearance.

weak to moderate carbonate throughout as veins and fracture fill. No gypsum veining. Moderate quartz stockwork contains pyrite, chalcopyrite and hematite.

The remainder of the 0.6% chalcopyrite occurs as fracture fill, as v.f.g.'d disseminations, <1-2mm blebs associated with pyrite and chlorite and in carbonate veins. 3% pyrite occurs as f.g.'d disseminations, 1-3mm blebs (commonly with chlorite) and as frac fill. Hematite occurs throughout the unit as disseminations, 1-8mm irregular blebs, fracture fill and in veins.

284.71 to 285.43m is weakly sheared with a concentration of carbonate and quartz. Throughout this section are 2-6mm blebs of cpy.

L.C.:

Top @ end of F.G. @ 50°

ALTERATION:

Moderate Qtz-Ser-Ank ± Kao alteration throughout with patches of weak potassic alteration

STRUCTURE:

- 283.72m → 3-5mm gouge in shear @ 50°
- 283.97m → gouge on slip @ 60°
- 284.71 - 285.43m → shear zone @ 50°
- 285.80 - 286.27m → Shear zone / Fault zone with sections of 1-3mm gouge @ 50°

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Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
	286.27	306.93	PPHmz	4	m			/	1	/	/		/	/	m	m	/	Tr	/	w	/	/	w	
	306.93	306.93	E.O.H																					

LITH + MIN.:
This is the same PPHmz unit that occurs above the volcanic sediments except that this portion has no reddish brown sections as is described between 43.93 and 280.31 metres.

Lc:
E.O.H.

ALTERATION:
The alteration is the same as the PPHmz above the volcanic sediments except that there is no potassic alteration.

STRUCTURE:
- 287.84m → Slip ē gouge @ 90°
- 289.05 m → 3mm gouge on slip @ 30°
- 298.08 m → gouge on slip @ 30°
- 300.19 m → py-rich gouge on slip @ 50°
- 303.43 – 303.71 m → Bx w̄ slip in centre @ 10°

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AMERICAN BULLION MINERALS LTD.

Location Sketch

Grid Northing (m):	100 500	Date Started:	Oct. 7th/95
Grid Easting (m):	51 000	Date Completed:	Oct. 9th/95
Elevation (m):		Logged By:	B. Thurston
Total Length (m):	245.06	Date Logged:	Oct. 8th/95
Casing Depth (m):	8.23	Data Entry:	
Reduction Depth:	—	Entry Date:	
Collar Core Size:	NQ	Casing (In/Out):	out

Survey	Depth	Azimuth	Dip
1	152.40	182°	-61.5°
2	245.06	186.5°	-61.7°

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	moly	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	0.00	8.23	CASN																				
P	8.23	39.00	PPHM	3	m			.3	3	o	T	T	o	o	S	W	o	T	T	V	o	o	m

Lithology: Light grey to light green rock. Very, very poor porphyritic texture preserved. Plag. & mafic phen's altered to ser + clay + carb & blend into strongly sericitized + clay alt'd groundmass. Strong mottled texture pervasive w blebs of ser + py ~ 1→3 mm and as envelopes on fractures & veins. Trace Qtz veins, ~ 1→3 mm wide, down section; Carb. veins / fracture filling very weak throughout. Calcite is not observed. No magnetite. Hc in green fragment @ 37m.

Miner: Py is ~ 3% overall mainly diss but also as veins, fracture fill.ng, & blebs ~ 20%. Cpy is diss, assoc. w/ py diss. & trace in Qtz veins. Moly is observed once in matrix as diss.

Structure: * Rock is fractured throughout w/ minor shearing @ 30°→45°.
* L.C. sharp @ 35° over 1m of shearing.

P	S	39.00	83.00	PBRM	3	m	1	T	<.3	3.5	o	T		T		S	W	T	T	o	V	T	o	W

Lithology: Patchy green→grey w/ light brown to beige sections. Porphyritic texture is mainly destroyed to weak upsection however downsection porphyritic texture is good, as well fragment size increased from <1cm up to 5cm down-section. Overall fragments are rounded but not always spherical. Frags make up ~ 10→15% of rock composition and tend to

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Date:

Graphic Log (m): 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100

blend into the groundmass downsection due to alteration. Fragments are compositionally the same as the matrix; where porphyritic plag. pheno's are sometimes zoned, sericitized (weakly), cream coloured subhedral xtl's. Mafics are buff coloured laths & bio. pheno's (primary? or secondary?) are observed.

Alt'n: Strong sericitization throughout (light green) + pyrite & a mottled texture. Small potassic section ~60→65m w/ He (bio), Orange color.

Min'z: Calcite is not observed. Qtz veins unbroken are trace. Most Qtz occurs as rounded Fragments usually barren of cpy but not py. Cpy is diss in matrix & observed strong in some porphyritic fragments w/out qtz-veins. Py is diss, as blebs >> veinlets or fracture fillings. He is diss & mainly in carb. veins. Gypsum is observed only @ 61→62m as fracture filling.

Structure:
* Brecciated strong throughout.
* Shearing is most commonly 50°→65°.
* L.C. @ Faul @ 35→45°? small shear @ 40° but first strong SH in fault ~30cm is @ 20°.

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	moly	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	83.00	98.20	FAUL					.20	3	0	0	0	0	0	S	S	0	FRAGS	0	0	0	0	W-M
P	98.20	105.80	PBRM	3	m			.20	3	0	0	.	.	0	S	m	0	↓	0	T	0	0	W
P	105.80	106.95	FAUL					.20	5	0	0	0	0	0	S	S	0	↓	0	0	0	0	W
P	106.95	112.00	PBRM	3	m			.20	5	0	0	0	0	0	S	m	0	↓	0	T	0	0	W
P	112.00	127.00	FAUL					.20	4.5	0	0	0	0	0	S	S	0	↓	0	0	0	0	W-M
P	127.00	141.00	PBRM	3	m			.40	5	0	0	T	0	0	S	m	0	0	0	T	T	0	W-M

Lithology & Structure: This section from 83→141m is all the same PBRM material described in the previous unit. A light grey-green colour overall. Rounded Fragments occur in gouge material (cream to green ser+clay material) in fault zones, occur in clay+ser altered partially healed gouge near Fault / PBRM contacts & occur as Fragments in the PBRM / SHZN sections. The solid PBRM sections have multiple small gouge zones and shears & fractures with or without gouge. The sections could be called a SHZN

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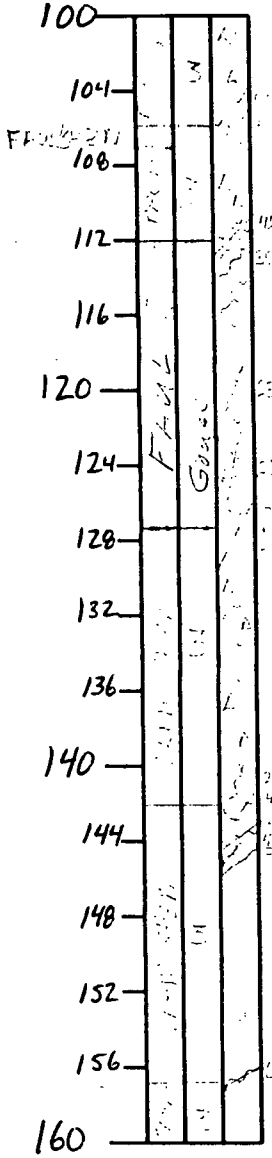
Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	moly	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			Structure cont'd:			but to show lithology on the sections have been noted as PBRM.																	
					*	Fault sections consist of 50% and above gouge.																	
					*	SHZN sections consist of ~10 → 20% SH + gouge sections.																	
					*	83m U.C. of FAULT is ? Strong 20° 1cm black SH ~ 30cm in from contact																	
						but 35° → 40° shears in area. Strong 10° 1.5cm black SH @ 94m																	
						L.C. of Fault @ 98.2m @ 20°																	
					*	Fault @ 105.80 → 106.95m @ 40° U.C. & L.C.																	
					*	Fault @ 112 m U.C. @ ~45°? & 23° contact @ 120.75m w 1.75m solid																	
						section. mod. 20° shear @ 124.15m but L.C. is questionable?																	
						Rock is @ ~40° → 30° to gouge.																	
					*	Green (bright) fragments occure in last PBRM section from 127 → 141m																	
					*	L.C. w PPHM/SHZN is ambiguous. SHZN or shearing + fracturing +																	
						gouge continues but fragments decrease to only dk green																	
						fragments after strong shearing from 140 → 141m @ 45°, 65° & 20° mod																	
						+ Gouge.																	
P	141.00	157.00	PPHM	3	m			.40	3.5	o	T	T	o	o	S	w	T?	T	T	V	o	o	m
			Lithology:			This unit is similar to the past PBRM units w fewer fragments, and the																	
						fragments observed are a bright green fragment not of the same material																	
						(PPHM) as the matrix and fragments of past PBRM units. The unit is																	
						SH'd / fractured throughout ± gouge. One difference is the Qtz Veins																	
						are more veins & not fragments as well they are continuous through the																	
			Minz:			core. He & To? diss's are throughout. Trace moly diss in matrix.																	
						Cpy is observed as a very very fine dusting in grey areas of core &																	
						also coarser as diss & in fractures. Py is diss = fractures & Veins.																	
			Alt'n:			Some Mottled Ser + Py Alt'n:																	
			Structure:		*	Shearing throughout @ 40° to 75°																	
					*	L.C. @ 60° Sharp 3cm black Sh.																	

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Date:

Graphic Log (m): 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 204, 208, 212, 216, 220

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Mineralization moly	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	157.00	180.50	PPHM	3	m			.75	6	o	T	T	o	o	S	W	?	M	o	T	o	o	W-M
S	180.50	201.30	PPHM	3	m			.45	4	o	T	T	o	o	S	W	T	T	o	W	o	o	M

<u>Lithology:</u> 157→180 m Mottled mod. green PPHM w̄ very poor to no porphyritic texture preserved. Qtz Stockwork is mod→strong but Qtz veins are fuzzy w̄ indistinct grain boundaries. These Qtz veins are grey & seem to be contaminated w̄ ser ± Ank?. The Veins are visible when core is dry but difficult to see when wet.

<u>minz:</u> Py is strong ~6% diss. & fracture fillings. Cpy is diss 80% but difficult to see on cut surface. Cpy is observed on broken surfaces. Trace moly diss. & He diss (red is to pink He). Calcite is only observed in carb. fracture fills? (<0.3%). Cpy is 40% in Qtz Vns.

<u>Lithology:</u> 180→201 m mottled light beige w̄ green ser blebs. This core is very fine grain w̄ very little porphyritic texture preserved. Qtz stock-WRK is trace, Cpy has also decreased along w̄ Py. Carb. fracture filling is weak & fracturing has increased as fault becomes closer.

<u>Alt'n:</u> 157→201 m Mottled phyllic. Ser + py blebs & envelopes on fractures w̄ Py. weak clay in matrix especiall in beige core down section.

<u>Structure:</u>
- * Minor fragments down section approaching fault.
- * Prominent shears @ ~20°
- * Blocky 1m + carb. @ 180→181 m where Qtz veins decrease & PPHM changes.
- * 45 cm Healed SH/Faul @ 22° @ 193 m.
- * L.C. @ 35° w̄ Faul/SHZN @ 201.30 m.

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P	201.30	207.15	FAUL	4	m			.40	1	o	2	o	o	o	S	M	o	T	o	*	o	o	M
P	207.15	214.27	PPHM	4	m			.40	0.03	o	2	o	o	o	S	M	o	T	o	T	o	o	M
S	214.27	217.32	PPHM	1	m			.60	0.03	T	2	o	T	M	M	W	o	T	o	W	o	T	W
P	217.32	220.70	FAUL	4	m			1.20	0.03	T	1	o	o	o	S	M	o	M	o	*	o	o	S
P	220.70	230.08	PPHM	4	m			1.0	1	T	<1	o	o	o	S	W	o	W-M	o	W	o	o	M
P	230.08	231.40	DYKE					—	T	o	o	o	o	o	M	M	o	o	o	W	o	o	M
P	231.40	245.06	PPHM	4	m			1.5	1	T	2	o	o	o	M	M	o	S	o	vW	o	vW	S

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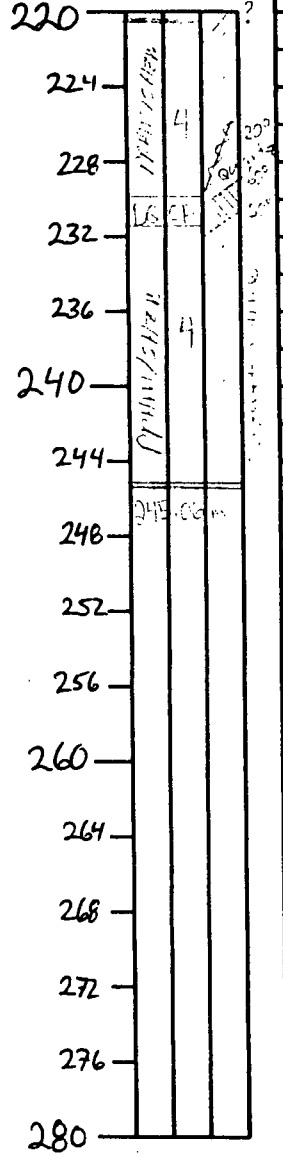
Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	Lithology:		From 201.30 → 245.06 m the rock type/material is PPHM w varying amounts of shearing / fracturing & faulting. Some areas of PPHM were broken out as PPHM when they could be classified as SHZN but in order to put the Lithology type & stockwork classification on the cross-section they are called PPHM. Some core from ~207.50 → 209.50 m looks like dyke (? DPH?) material but it is sheared & insignificant & not broken out. Most PPHM is med. Porphyritic w plag & mafic phen's somewhat preserved. Plag phen's & matrix are strongly sericitized. Core is very light green throughout. Clay alt'n ± gouge is mod. in Faulted & Sheared areas. He is diss. throughout as pink to red to black diss's. No Mag. Potassic From ~214 → 217 m.																			
	Alt'n:																					
	Min'z:		Qtz stk wrk is trace to fault @ 217 m then becomes mod to fault @ 228.25 m @ 20° then becomes strong. These Qtz veins are different from previous Qtz veins. They have very distinct vein boundaries that are strait & not undulating. The qtz is white & has lots of diss cpy w little py in it. He is diss & occurs as veins w in the qtz veins. Bornite is also diss in the Qtz Vn's assoc. w cpy or by itself. Bo is also observed in fractures. Py is weak mainly diss near Qtz veins or as fracture filling. Carb also mainly occurs as fracture fillings & as fragments in faulted areas. He ~ 2% diss throughout.																			
	Structure:	*	DYKE @ 230.00 → 231.40 m U.C. 60° L.C. 50° This dyke has amygdules of carb & is light beige. Like DQCA But has phenocrysts that match DMAF besides the biotite phen's which are distinctive for DMAF.																			
		*	DYKE material of the same type is observed. From 235.55 → 235.71 m, but core is blocky w poor recovery & Not broken out?																			
		*	Fault 201.30 → 207.15 m U.C. @ 35°; L.C. @ 30°																			
		*	Fault 217.32 → 220.70 m U.C. @ 45°; L.C. ?																			
		*	Strong sh's @ 228.25 m @ 20°																			
			@ 231.40 → 245.06 m @ ?°																			

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

DRILL HOLE NO. 95 - 222

AMERICAN BULLION MINERALS LTD.

Location Sketch (N arrow)

Grid Northing (m):	100 300
Grid Easting (m):	50 800
Elevation (m):	
Total Length (m):	251.76
Casing Depth (m):	3.66
Reduction Depth:	
Collar Core Size:	HQ

Date Started:	OCT. 9
Date Completed:	OCT. 11
Logged By:	G. ALLEN
Date Logged:	OCT. 10, OCT. 11, 12
Data Entry:	
Entry Date:	
Casing (In/Out):	OUT

Survey	Depth	Azimuth	Dip
G.A.	COLLAR	180	-60
S-S	152.4	181½	-62
S-S	251.76	184½	-62½

Graphic Log (m): 0–50 m; CASN (0–3.66), FAUL (PPHL), PPHL, FAUL, PPHL, FAUL, PPHL, FAUL; annotations 2, 22°, 0-10, 10°, 25-30°, 2/3, 30°

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	0	3.66	CASN																					
P	3.66	11.50	FAUL (PPHL)	2	M				4						M				M	VW			S	

LITHOLOGY: Medium blue-grey homogeneous medium-grained feldspar phyric intrusion. Typical late phase; 40% 1-2mm white 'stubby' anhedral to subhedral square to prismatic feldspar phenos in a blue-grey groundmass. Narrow dark grey sericite envelopes around some fractures. Narrow "dykes" to 10cm of intrusive breccia (< 5%). Some parts have recognizable pinkish subhedral hornblende prisms to 2mm.

ALTERATION: Pervasive sericite. Very weak reaction to cold HCl on scratched surface.

MINERALIZATION: Sporadic dissem. & stringer PY ~ 4-5%.

STRUCTURE: Broken blocky core throughout. Py stringers and shearing 22° CA. Crush & gouge to 2cm.

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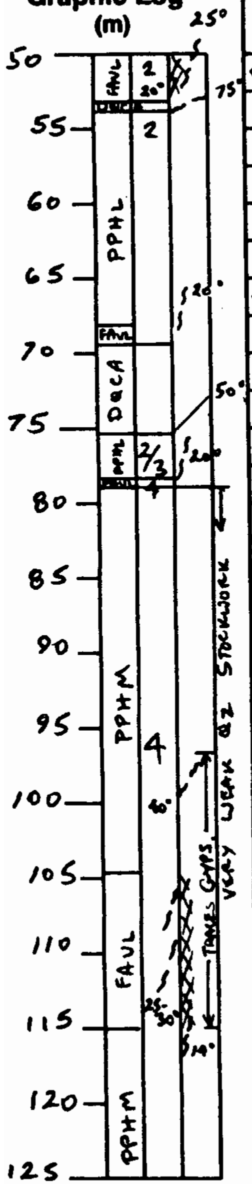
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 222
Logged By: G. ALLEN
Date: OCT. 10/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	11.50	14.97	PPHL	2	M				5						M				W	VW			W

As unit above but more competent. Rare yellow-green fragments to 1cm.

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	14.97	21.2	FAUL	2	M				4						M				W	VW			S

As 3.66 - 11.50.

STRUCTURE: fractures with PY 15° CA. Shearing 10° to subparallel CA. Blocky core. Minor rubble zones. Not strong shearing. Little gouge.

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	21.2	25.95	PPHL	2	M				4						M				VW	VW			W

LITHOLOGY: Medium blue-grey fsp-hb porphyry. 40% blue-grey stubby anhedral to subhedral square-shaped to prism-shaped plagioclase to 2mm. Distinct subhedral hb (alt to pink-grey) to 2mm ~ 10-15%. Homogeneous, massive.

ALT: Pervasive sericite

MIN: 4-5% dissem & trace stringer PY.

STRUCTURE: Weak shearing 10° CA.

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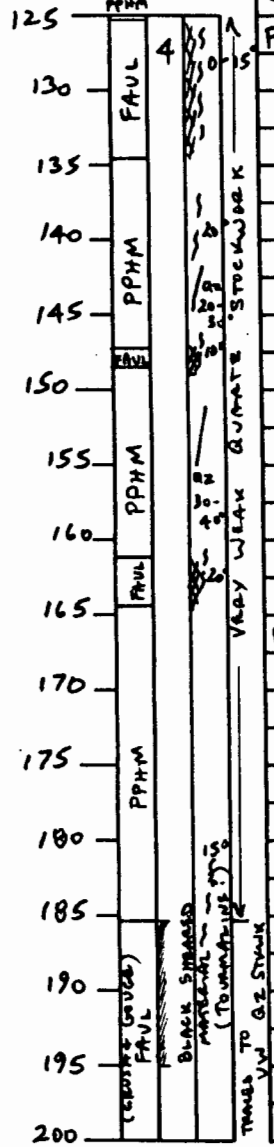
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 222
Logged By: G. ALLEN
Date: OCT. 10/95

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	25.95	29.83	FAUL	2	M				4					M								S

LITHOLOGY: As above but some intervals shown to dark grey gouge.

ALT: Pervasive sericite. Some parts are black earthy or possibly graphitic.

MIN: 4-5% f-g disem + stringy PY. 7-8% PY in gouge zones.

STRUCTURE: Shearing 25-30° CA.

26.21 - 27.4 - Broken shrund PPHL
27.4 - 28.4 - Gouge
28.4 - 29.5 - Shrund PPHL. Broken
29.5 - 29.83 - Crush, gouge

P	29.83	48.78	PPHL	2	M	3	W		3		T			M		?		VW	VW			M

LITHOLOGY: PPHL as above fault zone but with weak crush zones to 50 cm throughout. Crush zones typically have black alteration around hairline fractures. Tr zones of black crush to 2 cm. Graphite? Tourmaline? Some to soft for tourmaline & not soft enough for graphite.

ALT: Pervasive sericite + carbonate as typical. Some dark green-grey sericitic seams to 5 mm giving rock a "spickled" appearance.

MIN: 3-4% fine-med disem PY.

STRUCTURE: Shearing ranges from 20-70° CA; predom at 30° CA.

29.83-38 - Sporadic weak crush zones

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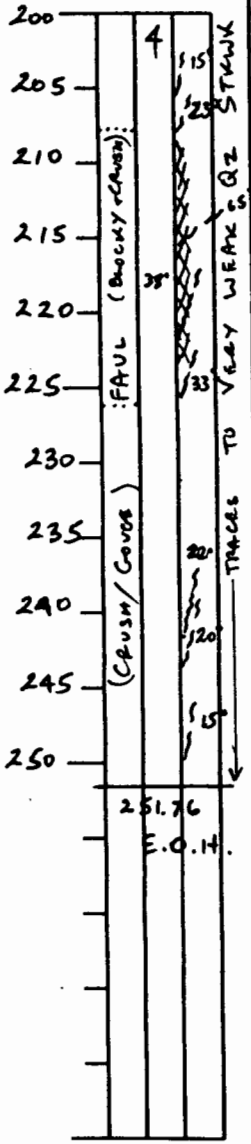
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 222
Logged By: G. ALLEN
Date: OCT. 10

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	48.78	53.00	FAUL	2	M			T	6					M					M			M
				LITHOLOGY: Crushed, sheared latite phase as above																			
				MINERALIZATION: 6% fine-grain disem PY. Trace disem CP with PY.																			
				STRUCTURE: Sporadic crush zones with gouge matrix to granular ground rock. Some carbonate flooding																			
				Shearing: 25° CA.																			
				20°																			
				Some undulating subparallel CA.																			
P	53.00	53.73	DQCA (?)						2		T										T	W
				LITHOLOGY: medium-dark greenish-grey flow banded very fine-grained feldspar porphyry with an aphanitic groundmass.																			
				MIN: Sporadic 0-3% f-g disem PY.																			
				STRUCTURE: Lower contact sharp at 75° along wide shear. Upper contact irregular, ~20° CA. Flow banding undulating subparallel CA.																			
P	53.73	68.45	PPHL	2	M				3		T			M				W				W
				LITHOLOGY: Medium bluish to greenish-grey medium-grained sub-homogeneous intrusion as 21.2-25.29.																			
				ALT: Pervasive silicification - carbonate. Minor black mineral developed along + adjacent to hairline stringers.																			

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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 222
Logged By: G. ALLEN
Date: OCT. 10

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
				MINERALIZATION: 2-3% disem & stringer - minor PY.																		
				STRUCTURE: Minor zone bleaching core. S bearing subparallel to 20° CA.																		
P	68.45	69.60	FAUL	2	M				5					M					S			W
				Healed crush/gouge zone 20° CA. Flooded by abundant white carbonate. 5% disem PY.																		
P	69.60	75.33	DQCA																W			M
				LITHOLOGY: Mottled medium greenish-grey to dark red-brown medium-grained lith-feld porphyry. 30% f-g plag phenos to 1mm & 20% subtrachytic lath phenos alt to dark pink-grey up to 4mm long. Margins of dyke fine-grained. Core contains grained with up to 20% quartz +/- calcite amygdules to 1cm.															
				STRUCTURE: Upper contact: 15° parallel shear. Lower contact: Sharp 50° CA																		
P	75.33	78.05	PPHR	2	M	3	M		5										W			M
				LITHOLOGY: Medium greenish to bluish-grey medium-grained feldspar-hornblende phyric trachytic intrusive as above fault. Texture somewhat more dyscrete.																		
				ALT: Pervasive sericite-carbonate with patches dark green-grey sericite to 5mm, commonly with a PY core.																		

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DRILL HOLE NO. 95 - 222
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Date: OCT. 10/95

Graphic Log (m)

MINERALIZATION: 5% dissem & lesser stringer PY.

STRUCTURE: Shearing ~20°CA.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	SL	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	78.05	78.55	FAUL	4	M				3						M					W			W

LITHOLOGY: Shear crush gouge - intrusion as above (?), possibly protolith as unit below. CONTACT.

STRUCTURE: Upper contact 20°CA. Shearing within zone 30°CA.
Lower contact 55°CA.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	SL	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	78.55	104.70	PPHM	4	M			0.3	2		3	T			M		VW ?	T-VW		VW	/VW STARTS ~97 m	VW	W

LITHOLOGY: Mottled light greenish-grey to dark blue-grey to light red-brown fine to medium grained weakly trachytic hornblende feldspar phyric intrusion not too dissimilar to PPHL above, but less homogeneous in appearance.

ALT: Pervasive sericite - carbonate

MIN: 3-5% dissem. red-black specular hematite. Sporadic <1-4% PY, predom dissem. Distinctively less PY than in units above. Trace dissem CP throughout, ranging from trace to 1.5%, averag. ~0.3% CP.

STRUCTURE: Trace to VW quartz stockwork with blue-grey quartz stringers generally 2-3mm but up to indistinctly bounded flooded zones to 10cm. Generally ≤1/m. Commonly with carb, PY, hem.

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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 222
Logged By: G. ALLEN
Date: OCT. 10

Graphic Log (m)

96.1 - 96.4 - Quartz flooded zone with 30% f-g black material. Possibly tourmaline but seems too soft.

~98 - rare gypsum stringers with CP blebs to 2 mm.

99.95 - 100.35 - Fault: shear / crush zone 40° CA.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
P	104.70	115.00	FAVR			4	W	0.B	7						W		I ?	M			T		S	

LITHOLOGY: Mottled black to greenish-grey (black predom.). Some black parts show remnant fsp porphyritic texture as in unit above with black subhedral fsp phenos in a dark grey g.m. Some parts have breccia texture with rogue subrdd to angular frags to 1 cm. Some parts simply aphanitic black. Unit sheared & typically greenish parts contact black parts along shears. Probably a cataclastite altered to black with some mineral (possibly tourmaline).

ALT: Black parts mod. soft to medium hard. Could be tourmaline but too soft? Greenish parts pervasive sericite - carbonate.

MINERALIZATION: Sporadic 5-8% PY mostly in black parts. PY dissem and in masses to 1 cm. Sporadic 0.5-1% CP dissem in black host but predom in quartz flooded / stringer areas. Trace Sl c̄ quartz

STRUCTURE: Abundant shears 25-35° CA. W-M quartz stockwork / flooded zone.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 222
Logged By: G. ALLEN
Date: OCT. 11

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	115.00	125.07	PPHM	4	M			0.5	3		2				M		W ?	VW	VW	W			W	

LITHOLOGY: Predom. medium blkish to grnish-grey medium-grained hornblende-feldspar porphyry with 40% studby blue-grey anhedral to subhedral equig to prism-shaped phen. to 2 mm or 15% subhedral pinkish phenocrysts of carbonate alt hornblende to 3 mm (av 1-2 mm). Hairline fractures typically filled with f-g blkish mineral or have dark sericitic envelopes to 2 cm wide.

ALT: Pervasive sericite + carbonate. Blkish mineral could be tourmaline.

MIN: 1-4% f-g disem + fracture-related pyrite. Trace to 1% CP predom as wispy f-g disseminated blebs with PY. CP also in rare quartz stringers. 2-3% f-g disem. and to blkish hematite.

STRUCTURE: 117.0 - 117.8 - Shear zone 14° CA. Very weak quartz stockwork & blue-grey quartz stringers to 1 cm (averages ≤ 5 mm) with PY + carbonate core. Composite Lite ~ 30° CA.

P	125.07	134.4	FAUL	4	M			0.3	2		2				M			VW	VW	W		T	S	

LITHOLOGY: light to medium grnish-grey porphyritic intrusion as above.

ALT: Pervasive sericite - carbonate.

MINERALIZATION: PY generally low ~ 2% average but some intervals up to 5% across ~1 m. Minor amounts CP disem throughout along fractures or in quartz stringers ~2% hematite disem throughout.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 222
Logged By: G. ALLEN
Date: Oct. 11

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	SL	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				STRUCTURE:																			
					129.07 - 129.5			- Crushed, altered rock but core relatively competent. Shearing predom subparallel CA, but some to 35° CA, 65° CA.															
					129.5 - 134.4			- Sheared bleached core. Crush/gouge shows predom., up to 35° CA											15° CA.		Shallower		
P	134.4	147.14	PPHM	4	M			0.6	2		4	T			M			VW		W		T	W
				LITHOLOGY: Mottled light to medium greenish-grey to dark blue-grey medium-grained hornblende-feldspar porphyritic intrusive as unit above.																			
				ALT: Pervasive sericite-carbonate																			
				MIN: 1-2% predom disseminated PY, 4-5% disseminated specs of black to red-grey hematite. Traces to >1% CP disseminated in host rock as with PY, along fractures & in quartz stringers (minor component). Traces SL with some quartz stringers																			
				STRUCTURE: Minor weak crush zone. Some shearing 20° CA. Very weak quartz stockwork with widely spaced (≤1/m) blue-grey stringers generally <1cm ~ 20-30° CA.																			
P	147.14	148.75	FAUL	4	M			2	5			T			M		M	M		W			S
				LITHOLOGY: Much of interval altered main phase as above. Upper part black cataclastite / breccia.																			
				ALT: Sericite / carbonate. Black parts possibly tourmaline-rich.																			

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 222
Logged By: G. ALLEN
Date: OCT. 11

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
				MINERALIZATION: Sporadic PY up to 10% across a few cms. Average ~ 5%. Sporadic disem + gravity / carb stringer - related CP up to 5%, but average ~ 2%. CP blebs to 5mm. Trace SL in gravity.																			
				STRUCTURE: Blocky core, rubble + shrund rock. Shearing ~ 10° CA. Quartz stringers shallow angle also + broken up into carbonate.																			
P	148.75	161.25	PPHM	4	M			0.5	2		4			M			VW	VW	VW		T	W
				LITHOLOGY: As above fault.																			
				ALT: Pervasive sericite / carbonate																			
				MINERALIZATION: 2% random disem PY. 4-5% disem hematite in bleached grey sericite. 0.5% (Trace to 1%) disem + qz stringer - related CP. Visible CP in most pieces inspected.																			
				STRUCTURE: Very weak quartz stockwork with widely spaced (<1-2/m) <1cm blue-grey quartz stringers 30-40° CA.																			
P	161.25	164.4	FAUL	4	M			0.3	2					M			VW				T	M-S
				LITHOLOGY: Sheared intrusive as above.																			
				ALT: Pervasive Sericite / carbonate. Black mineral (tourmaline?) developed adjacent fractures																			
				MIN: 2% random disem PY. Trace disem CP in most pieces inspected. CP also common in quartz stringers.																			
				STRUCTURE: 161.25 - 163 sporadic crush. 163 - 164 + gouge. Shear 20° CA.																			

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 222
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Date: OCT. 11

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	164.4	185.55	FPHM	4	M			0.6	2		2-3				M			VW		W		T	W	

LITHOLOGY: Mottled light greenish-grey to dark blue-grey mag feldspar hornblende phyric plutonic as above. Creamish fsp phase to 2 mm + euhedral pinkish altered hornblende.

ALT: Pervasive sericite / carbonate

MIN: 1-4% f-g dissem PY. (average ~2%). 2-3% f-g dissem hematite. Typically inverse relationship between PY + HEM. 0.6% (Trace to 1.5%) CP predom. dissem. + in quartz stringers.

STRUCTURE: Very weak to weak quartz stockwork with blue-grey quartz (+ carbonate, hematite, pyrite) stringers generally ≤ 0.5 cm, 10-50° CA. Quartz stgs truncated by carb-filled fractures.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	185.55	251.70 E.O.H.	FAUL	4	M			T	5						M		M?/T	VW	VW				M-S	

LITHOLOGY: Black to greenish-grey intense crush / gouge zone typically with subrounded fragments of intrusion up to 5 cm, average ~1-2 cm. Some fragments of blue-grey quartz. VERY STRONG FAULT ZONE.
185.55 - 195 Black predom. 195 - 208.35 Green-grey.

ALT: Sericite / carbonate. Black parts may be tourmaline-rich.

MIN: 5-8% dissem PY. Trace CP with rare quartz stringers. PY also occurs in stringers to 1 cm (av 1-2 mm).

STRUCTURE: Shearing ~ 15° CA with slickensides 90° CA. If drilling 90° to fault strike direction, fault movement horizontal (strike-slip). Mostly massive crush zone c̄ no shear orientation.

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 222
Logged By: C. ALLEN
Date: OCT. 12

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	

185.55 - 208.35 - Predom. massive crush gouge + cataclastic breccia
185.55 - 195 - Predom dark grey to black gougy matrix

208.35 - 223.1 - Blocky Core. Rubble + zones of crush to 0.5m. Minor gouge. Rock is a medium greenish-grey vaguely feldspar phyric fine to medium-grained feldspar porphyritic intrusion. Rare quartz stringers + weak copper mineralization

223.1 - 251.70 - Strong crush + massive gouge/crush/breccia. Rubble in part. Medium grey to greenish-grey smashed equivalent of above.

Clean shear orientations surprisingly uncommon:

203.4 - 42°, 35° CA
206.5 - 15° shear within crush zone
208.8 - 23° CA
209.4 - 33° CA
216 - 65°
222 - 35°
226 - 33° Graphitic slip (tourmaline?) within crush zone.
242 - 22°
243 - 20°
247.5 - 25°
250 - 15°

E.O.H.

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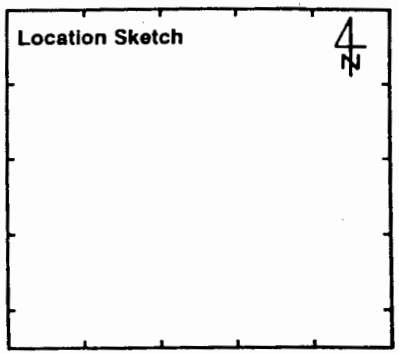
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 223

Location Sketch

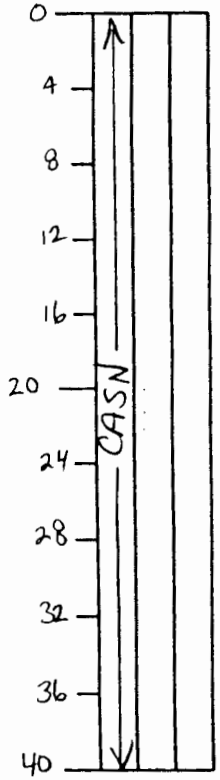


Grid Northing (m):	99250N
Grid Easting (m):	48850E
Elevation (m):	
Total Length (m):	408.74 m
Casing Depth (m):	73.15 m
Reduction Depth:	—
Collar Core Size:	NQ

Date Started:	Oct 9/95
Date Completed:	Oct 13/95
Logged By:	T. Fraser
Date Logged:	Oct 11/95
Data Entry:	
Entry Date:	
Casing (In/Out):	(lost 130ft)

Survey	Depth	Azimuth	Dip
SS	154.5	(050.5°) unreliable azimuth	-62.5
SS	408.7	195.5°	-65°

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
	0	45.72	CASN																			
	45.72	50.68	PPHM/PBRM	1	W	-	-	<0.3	2.5	0	0	0	W	vW	vW	0	TR	W	TR	0	0	W

Lithology - Buff to light orange coloured possible Main Phase or breccia (PBRM). The unit appears to contain cryptic /obscure clasts but this may be a feature of alteration. "Clasts" are highly porphyritic, with plagioclase phenos 1mm - 4mm, subhedral to euhedral, although margins are somewhat obscured / fuzzy. Plagioclase phenos are buff/cream-coloured. The groundmass is aphanitic to fine grained there do not appear to be any mafic minerals (or they are extremely altered).

Alteration/Mineralization - The groundmass of PPHM/matrix of PBRM is weakly Kspar altered (orange colouration). Plagioclase phenos are very weakly clay and sericite altered. The unit is cut by pyrite veins which have thin (2-4mm) grey quartz-sericite envelopes. Pyrite is fine grained throughout. Trace carbonate-quartz veinlets.

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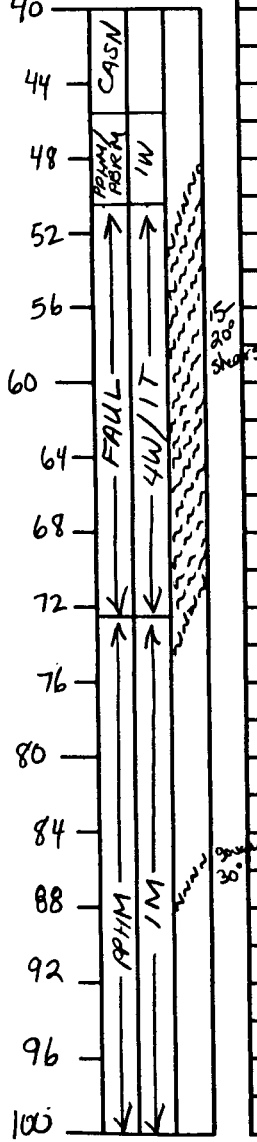
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 223
Logged By: T. Fraser
Date: Oct 11/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Structure @ 50.68 m the upper contact of the fault occurs.																		
	50.68	72.24	FAUL	4	W	1	T	<0.3	4	0	TR	0	W	W	W	0	0	M	0	0	TR	S
				Lithology - The unit is mostly rubble, broken and with minor gouge. Generally pieces/fragments are < 5-7 cm. Fragments appear to be PPHM/PBRM which is described in interval 45.72 - 50.68 m. The unit is patchy orange and grey. Locally, fragments are porphyritic, containing 30% plagioclase phenos 1-3 mm, subhedral and trace - 3% possible cream-coloured hornblende phenos (euhedral), 1-2 mm. The rock unit is probably PBRM - since 2-3 cm clasts are visible locally.																
				Alteration/Mineralization - Plagioclase phenocrysts are weakly sericite and kaolinite altered. Pyrite is finely disseminated throughout as well as occurring as weak to moderate pyrite rimlets. Trace chalcopyrite-pyrite rimlets. Trace chalcopyrite veins. Trace red/purple hematite veins. The groundmass of PPHM/PBRM is weakly Kspar altered locally.																
				Structure - Shears throughout the fault @ 15-20° to c.A.																		
				@ 72.24 m lower contact of FAUL. (broken)																		
	72.24	124.85	PPHM	1	M	—	—	0.4	3	0	5	W	M	M	VW	0	TR	W	TR	M (Dyp)	0	W
				Lithology - Dark brown to medium orange-coloured Main Phase plagioclase hornblende porphyry. Locally the unit is quite porphyritic and in other areas, primary texture is obscured by alteration. Porphyritic areas contain approximately 25-30% subhedral cream to green plagioclase phenocrysts. Plagioclase																

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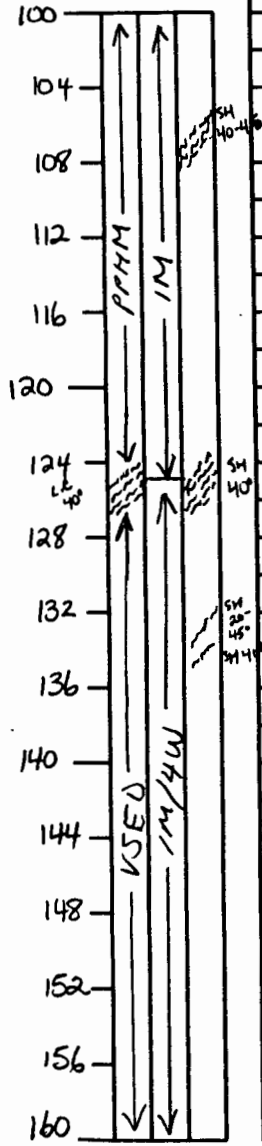
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 223
Logged By: I. Fraser
Date: Oct 11/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.

phenocrysts vary in size from 1-4 mm. Locally hornblende phenos are visible + they probably range from <1-2 mm, and trace - 5%. Plagioclase phenos are the most prominant. The groundmass is aphanitic to fine grained, dark brown to orange.

Alteration / Mineralization - The unit contains plagioclase phenos which are moderately sericite altered to very weakly clay altered (locally). The occassional plagioclase pheno is hematite stained. Kspar alteration within the unit tends to be rather patchy, and intensity varies as well. Locally Kspar alteration is strong to intense. On average orange Kspar alteration is moderate. Most of the dark colour of the unit is due to fine grained brown biotite disseminated within the matrix. Biotite alteration is also patchy. Purple/black hematite is disseminated throughout. The most distinctive veins cutting the unit is a moderate intensity gypsum stockwork (grey to orange in colour). Quartz veins are present in trace amounts to locally weak and contain disseminated pyrite. Pyrite is finely disseminated throughout and occasionally blebby. Pyrite veins have occasional quartz-sericite envelopes. Local finely disseminated chalcopyrite. IR carbonate veins locally

Structure - 86.33 - 86.36 m gouge @ 30°
96.62 - 97.55 m sheared with gouge and moderate carbonate veins
105.95 - 107.30 m sheared 40 - 45° to C.A.

@ 124.85 - 126.45 m sheared RPHM/VSED @ 40° (marks the upper VSED contact + but it quite scrambled and it is difficult to distinguish

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GEOLOGIC DRILL LOG

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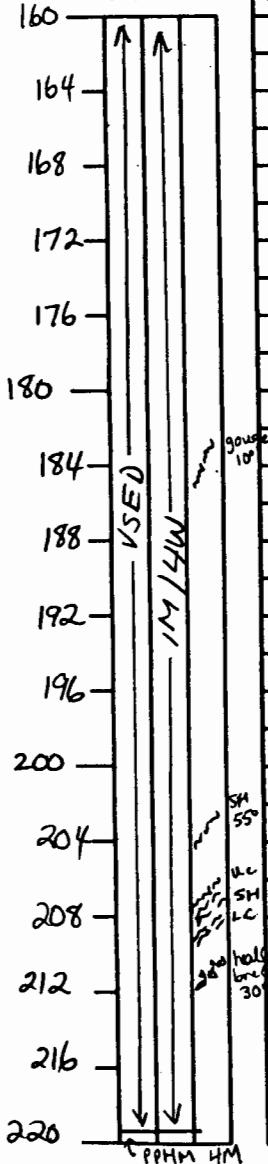
DRILL HOLE NO. 95 - 223
Logged By: T. Fraser
Date: Oct 11/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				which lithology is sheared. Gypsum veins cut across the shear.																		
	124.85	165.98	VSED	1	M	4	W	0.7	3.5	0	TR	M	M	W	O	O	Ws	W→M	W	M (qve)	TR	W

Lithology - The unit varies in colour from olive green / light green to dark brown and orange. The lithology locally is porphyritic, with up to 20% subhedral green plagioclase phenocrysts (1-2 mm). No mafic phenocrysts were observed. Most often, the unit is aphanitic to fine grained. In places the lithology appears to be tuffaceous in appearance. The VSED unit contains local clasts. Fragments range up to 12 cm in size. The unit appears to have a scrabbled look to it - probably due to alteration (and the possibility of there being a volcanic breccia). The unit is highly variable.

Alteration/Mineralization - The lithology is cut by a moderate to locally strong gypsum stockwork (gney to orange veins). There are weak to moderate pyrite veins throughout and fine grained disseminated pyrite. The VSED unit is highly mineralized with finely disseminated chalcopyrite (and local blebs). Quartz veins occur from trace to weak intensity and contain disseminated chalcopyrite and pyrite. Trace pyrite - chalcopyrite veins. Trace red/purple hematite rivulets. Weak to locally strong carbonate veining. Plagioclase phenos are moderately to weakly sericite altered. The unit has patchy K-spar alteration which is locally strong, and fine grained disseminated brown biotite alteration.

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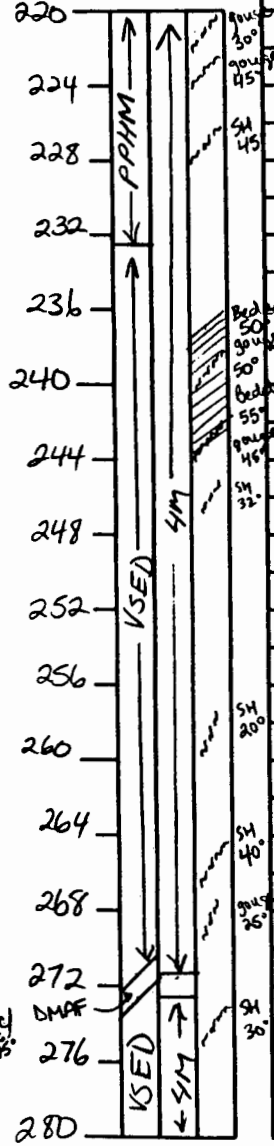

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			Structure	-		132.85 - 133.18 m blebby chalcopyrite within a shear 30-45° to CA.																
						133.23 - 133.70 m shear 40°																
						134.40 - 134.55 m shear 45-50°																
						136.15 - 136.25 m gouge																
						@ 165.98 m alteration changes to strong biotite.																
	165.98	197.90	VSED	1	S	-	-	0.8	2.5	0	TR	S	W	vW	0	0	WS	vW	TR	M (gyp)	TR	vW

Lithology - The unit is dark brown with patches of dark orange. The lithology is a volcanic sediment - probably reworked. the unit appears to be somewhat fragmental / tuffaceous. Plagioclase phenocrysts are present, but they may be broken. Plagioclase "phenos" fragments range from 1mm - 4mm, and locally account for up to 25%. No mafic phenos were visible. Locally the VSED unit is aphanitic to very fine grained and exhibits no primary texture.

Alteration/Mineralization - The unit is distinctive since it contains very fine grained dark brown felted biotite. Locally, though the unit's orange colour is due to interstitial Kspar alteration. Kspar alteration varies from weak to locally intense. The lithology is cut by a moderate dyke/sill stockwork (dykes are perpendicular to the walls). The Kspar and biotite alteration are patchy. Chalcopyrite is finely disseminated. There are generally very weak pyrite veins to locally moderate. Quartz veins contain disseminated chalcopyrite and pyrite. Trace chalcopyrite - pyrite veins. Trace red hematite veins and Qtz + Py + Hm veins. Locally up to 5% disseminated red/black hematite

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GEOLOGIC DRILL LOG

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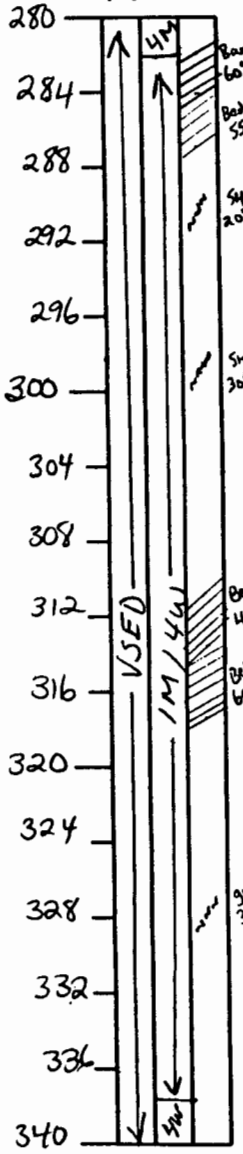

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			Structure -			183.19 - 183.77 m		sheared with carbonate veins														
						184.45 m		gouge 10°														
						190.33 - 190.45 m		hematitic shear														
	197.90	209.15	VSED	4	M	1	W	0.6	6	0	0	vW	0	M	vW	0	Ws	M	W	W (gyp)	0	W

Lithology - This unit is grey-green and appears to be intermixed with potential Main Phase plagioclase porphyry. The lithology appears granular-textured locally and elsewhere is plagioclase and hornblende microphyric. The unit is moderately sheared throughout. The majority of the unit has a grain size <1mm and appears plagioclase-rich. Small 1-4 cm areas have a buff-green colour and are aphanitic - illustrating typical VSED appearance and texture. Locally there appear to be trace fragments of sediments. The PPHM-looking areas contain 20-25% 1-2mm subhedral plagioclase phenos and 5-10% 1mm beige hornblende phenos.

Alteration / Mineralization - The unit is cut by a weak gypsum stockwork down to approximately 203.00 m. Carbonate veining at this point becomes more prominant. The lithology is cut by moderate pyrite veins. Chalcopyrite is finely disseminated, along with pyrite. Quartz veins have disseminated chalcopyrite and pyrite. Trace quartz-carbonate veins. Locally, the unit has patchy brown fine grained biotite alteration.

Structure - 203.75 - 203.95 m Shear @ 55°
206.93 - 209.15 m gouge/shear zone U.C.@ 45°, L.C@ 42°.

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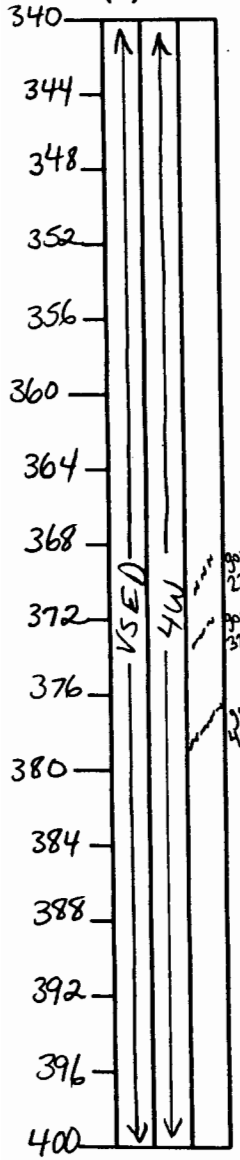

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	209.15	219.25	VSED	4	M	–	–	0.9	2.5	0	0	0	0	M	vW	0	M-Ss	W	M	0	0	M

Lithology – The unit is light yellow-green and locally beige. The lithology is fine grained to aphanitic and has a somewhat granular texture. Sparse 1-2 mm apple green plagioclase phenocrysts are observed throughout. There are no mafic phenos. Beige areas contain 10-15% 1-2 cm aligned clasts (subrounded). The groundmass is aphanitic beige to light green. The lithology appears somewhat tuffaceous and highly variable in character.

Alteration/Mineralization – The unit is cut by moderate to locally strong quartz stockwork. Quartz veins have a sheeted appearance, probably due to fine grained molybdenum or specular hematite. Quartz veins contain disseminated fine grained pyrite and chalcopyrite. The interval is cut by moderate white carbonate veins (these cross-cut the quartz stockwork). The lithology appears to be moderately to strongly sericite-carbonate altered. Plagioclase grains are sericitized and the groundmass may have a higher degree of carbonate alteration. Trace disseminated chalcopyrite and occasional blebs. Trace quartz-carbonate-chalcopyrite veins.

Structure – 211.30 – 211.60 m broken breccia @ 30° to C.A.

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	219.25	232.38	PPHM	4	M	–	–	035	1.5	0	0	0	0	M	vW	0	TR	W	vW	0	0	vW

Lithology – Buff to dominantly light green, highly porphyritic Main Phase. The unit contains distinctive pale green subhedral plagioclase phenocrysts – 30-40% <1 mm – 2 mm in length. Hornblende phenocrysts are beige to pale brown, euhedral and 1-3 mm in length.

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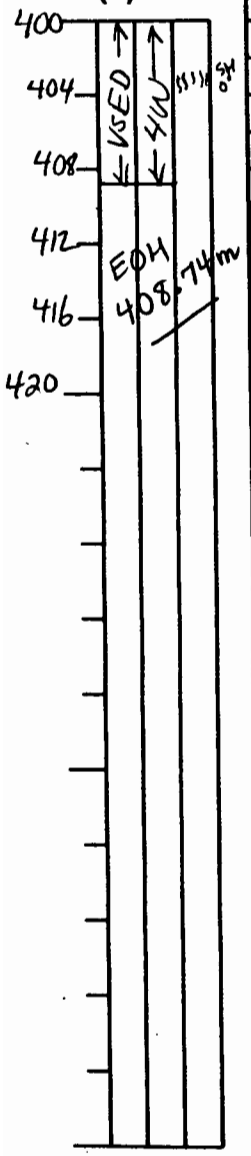

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.

Hornblende phenocrysts comprise approximately 8-10%. The groundmass is plagioclase-rich, fine grained to aphanitic.

Alteration/Mineralization - Plagioclase phenocrysts are moderately sericitized. The hornblende phenos are carbonate-sericite altered. It is likely that the groundmass is also sericitized. The unit is cut by weak pyrite veins. Pyrite is finely disseminated throughout. Trace grey quartz veins contain disseminated pyrite. There are very weak to weak carbonate veins. Trace disseminated chalcopyrite

Structure - 221.20 - 221.29 m gouge @ 30°
223.67 m gouge @ 45°
225.53 - 226.05 m DMAF, U.C. @ 55°, L.C. @ 20°
227.69 - 227.85 m shear @ 45°

	232.38	271.60	VSED	4	M	-	-	0.65	2.5	0	TR		0	0	M	0	0	Ms	W	M	0	0	W

Lithology - Same as interval 209.15 m - 219.25 m but locally the unit appears to be more fragmental. Short sections (10-20 cm) appear to be reworked (volcanic breccia) and contain clasts of siltstone size as well as possible porphyritic clasts. Dominantly the unit is aphyric to plagioclase microphyric. Locally, the unit also exhibits a weak to definite bedding/banding on a mm to cm scale. Usually the rock tends to be buff/pale brown in bedded areas, with bands approximately 50-60° to core axis.

Alteration/Mineralization - Same as interval 209.15 - 219.25 m. Trace quartz-carbonate-chalcopyrite-molybdenum veins. Chalcopyrite and pyrite are finely disseminated. Quartz stockwork varies from weak to moderate and contains

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DRILL HOLE NO. 95 - 223
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Date: Oct 12/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.

disseminated chalcopyrite and pyrite. Weak carbonate veins cut the quartz stockwork. There are weak to locally moderate pyrite veins. Quartz veins are sheeted (like interval 209.15 - 249.25 m)

Structure - 235.95 m gouge @ 40°
235.70 - 235.75 carbonate - chalcopyrite - pyrite vein
239.62 - 239.65 m gouge @ 50°
236.83 - 239.88 Banded SED'S @ 50°
239.88 - 242.93 Banded SED's @ 55°
244.89 - 244.92 m gouge 45°
246.29 m shear 32°
258.60 - 258.82 m shear with gouge 20°
260.90 - 260.95 m gouge.
262.21 - 262.48 m gouge
265.70 - 265.73 m shear 40°
269.27 - 269.40 m gouge 25°

@ 271.60 m upper contact of DMAF @ 45°

	271.60	272.78	DMAF	-	-	-	-	-	0.5	0	0		0	0	W	0	0	0	TR	W	0	0	VW

Lithology - Pale olive green Biotite-pyroxene phyric Mafic dike. The upper and lower contacts are sharp but appear gouged. The dike contains 8-10% euhedral dark brown biotite phenos (approximately 1-4 mm in length). Pyroxene phenos comprise 5-8%, and are pale green to cream coloured. Pyroxenes are euhedral, 1 mm - 1 cm in length. The dike also contains 2-3% white carbonate-filled amygdules (1-4 mm in diameter).
The unit is cut by weak carbonate veins and trace pyrite veins. Pyroxenes appear to be carbonate-sericite altered.

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Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			Structure - @ 272.78 m the lower contact of DMAF is @ 45°.																			
	272.78	281.85	VSED	4	m	—	—	0.55	3	0	0	0	0	M	0	0	Ws		W	0	0	W
			Lithology - same as interval 232.38 - 271.60 m. Vague banding @ 60° to core axis.																			
			Alteration/Mineralization - same as interval 232.38 - 271.60 m.																			
			Structure - 274.35 m Shear @ 30°																			
	281.85	337.76	VSED	1	M	4	W	0.6	2	0	TR	M	W	vW	0	0	Ws	W>m	W	TR	TR	W
			Lithology - The unit is dark to medium brown with several greenish grey patches. The lithology is aphanitic to fine grained. Dominantly the unit is vaguely bedded/banded with what appears to be soft sediment deformation features. Locally bedding is well defined but irregular (ie not planar) and at a high angle to core axis. Bands are defined by alternating tan and brown mm-scale beds. Locally though the unit has a fine granular texture (wacke?) and appears to be a breccia (siltstone-like fragments 1-2 cm) with a reworked matrix. Brecciated areas appear somewhat scrambled and have mottled alteration (biotite-rich)																			
			Alteration/Mineralization - The lithology contains disseminated and blebby pyrite. Chalcopyrite is finely disseminated. Pyrite veins vary from weak to moderate in intensity - locally there are trace & weakly developed gypsum veins (319.00 m - 325 m). Weak carbonate veins. Quartz veins contain disseminated pyrite and chalcopyrite. Trace grey quartz-carbonate-chalcopyrite veins. Trace pyrite-chalcopyrite veins.																			

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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 223
Logged By: I. Fraser
Date: Oct 13/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				the unit is moderately potassic altered with very fine grained brown biotite (dominantly). Local areas are weakly to moderately Kspar altered (appears orange in colour). Trace red hematite veins.																		
				Structure - 281.85 - 284.07 Banding @ 60°																		
				287.00 - 287.12 m gouge																		
				284.07 - 287.12 m very weak banding @ 55°																		
				289.68 - 289.76 m gouge																		
				290.75m shear @ 20°																		
				296.17m gouge																		
				298.20 - 298.82 m shear with gouge @ 30°																		
				299.40 m shear @ 40°																		
				311.51 + 314.25 m weak banding @ 47°																		
				312.40 - 312.80 shear/gouge																		
				314.25 - 317.60 Banding @ 60°																		
				316.00 - 317.60 m broken																		
				327.96 gouge @ 30°																		
	337.76	408.74	VSED	4	W	—	—	1.0	2	0	TR	0	0	W	0	0	Ws	W	W	0	0	W
				Lithology - Buff to tan coloured volcanic sediments. The unit is fine grained to aphanitic (silt-sized). Dominantly the lithology has very weak to somewhat well-defined bedding at a high angle to core axis. The lithology appears to be a siltstone/mudstone with a volcanic wacke component. Locally, within bedded areas there are <1 meter intervals of wacke/breccia. The breccia is polylithic and clast-supported. Fragments are generally 1 cm on average and may be up to 5-10 cm. The most common clast type appears to be of the same siltstone/mudstone lithology as the unit.																		

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 223
Logged By: T. Fraser
Date: Oct 13/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.

Alteration / Mineralization - Chalcopyrite and pyrite are finely disseminated throughout the interval. Occasionally chalcopyrite is blebby. The interval is well mineralized, although it doesn't appear that way without a hand lens. The unit is cut by weak quartz stockwork which contains disseminated chalcopyrite and pyrite. Trace quartz-carborate-chalcopyrite ± pyrite veins. Weak carbonate veins. Weak to moderate pyrite veinlets. Trace hematite is disseminated near the end of the interval.

Structure - 337.76 - 338.25 sheared with gouge
340.20 - 340.30 gouge
369.54 m shear / gouge @ 22°
373.25 m gouge 32°
378.40 m gouge 40°
403.10 - 403.60 m shear 0° to C.A.

EOH @ 408.74 m

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GEOLOGIC DRILL LOG

DRILL HOLE NO. 95 - 224

AMERICAN BULLION MINERALS LTD.

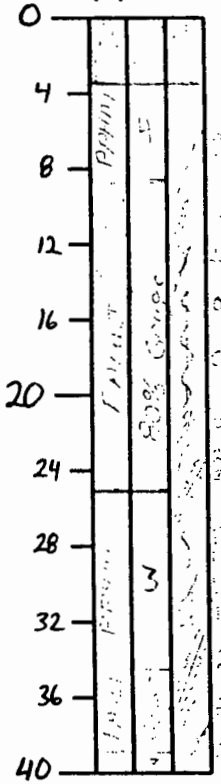
Location Sketch — 4 NN

Grid Northing (m):	100 300
Grid Easting (m):	50 750
Elevation (m):	
Total Length (m):	264.26
Casing Depth (m):	3.66
Reduction Depth:	—
Collar Core Size:	HQ

Date Started:	Oct. 12/95
Date Completed:	Oct. 14/95
Logged By:	B. Thurston
Date Logged:	Oct. 12/95
Data Entry:	
Entry Date:	
Casing (In/Out):	Out

Survey	Depth	Azimuth	Dip
1	264.26	182°	-61°

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	0.00	3.66	CASN																			
P	3.66	8.60	PPHM	4	W			.60	1	o	<1	o	o	m	w	o	W	o	W	o	o	m

Lithology: Beige-grey colour very fine porphyry cut by ~1-2mm Qtz veins w/ py cores. This almost looks like dyke material. Rock has
Altn:
min: carb. healed fracturing. Hematite is in Qtz veins. Py is very trace diss. and mainly in Qtz veins & fractures. Cpy is mainly diss. in Qtz. veins and less in matrix.
Structure: * Rock is mod. blocky w/ very little gouge or clay altd material.
* L.C. w/ fault is 1?°, blocky w/ gouge.

P	8.60	25.08	FALL			3	T	.30	2.5	o	T	o	o	s	s	o	T	o	o	o	T	m

Lithology & Structure: * This fault unit is approx. 80% gouge & clay altered material w/ fragments consistently < 1cm. Solid material w/in fault consists of clay altered PPHM w/ trace Qtz veining. Parallel Hematite veins are observed from 13.85→14.00m but no magnetite. No Py on Carb veins. Py is diss in gouge fragments. Cpy is usually observed in solid core w/ Qtz veins. No Calcite Fizz.
* Shears are // to C.A. to 20° throughout.
* L.C. @ 25° or 35°
* Strong 3 alteration (mottled phyllic) occurs on some solid core.

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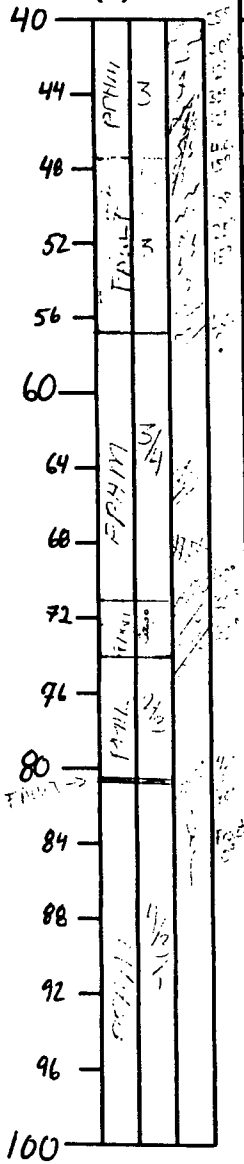
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 224
Logged By: B. Thurston
Date: Oct. 12/95

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	25.00	34.60	PPHM?	3	S			<.3	3	o	T	?	o	S	W	?	o	vW	vW	o	o	W-M
				Lithology:			Strong mottled phyllic alteration as blebs & ser+py envelopes																
				& Altn:			on fractures & veins. Core is light grey-green-beige w dark grey-green																
				& Mineral:			ser+py blebs. Porphyritic texture is weakly to moderately																
							preserved (1→2mm phenos ser+clay alt'd). This looks like PPHM																
							but there is no cpy & no Qtz veining. As well the structure																
							consists of Fracturing & veining parallel to core axis. All this																
							points to this section possibly being PPHL. Diss & as envelopes																
							on fractures & veins is black material which @ times looks																
							like biotite & others looks like tourmaline? The determining																
							factors to call this PPHM were ⓐ this same material appears in																
							the fault above & contains Qtz veins & Hz. & ⓑ No good Hz exists																
							in this unit but a red hematite dusting? occurs throughout.																
				Structure:		*	Fracturing / Veining // to C.A.																
						*	L.C. w Fault @ 20° sharp.																
P	34.60	37.85	FAUL					<.3	3	o	o	o	o	S	S	o	o	o	o	o	o	vW
				Structure:		*	+50% gouge material & clay alt'd PPHM, light beige to grey colours.																
						*	No frags in gouge.																
						*	gouge @ 20° for U.C. @ 25°, 30° for m.c. @ 25° for L.C.																
P	37.85	47.50	PPHM?	3	m			<.3	2.5	o	o	?	o	S	m	?	o	T	o	o	o	m
P	47.50	56.69	FAUL	3	m			<.3	1.5	o	T	?	o	S	S	?	T	T	w	o	o	m-S
				Lithology & Structure:			This is the same core as previously described. Greyish green w																
							strong sericitization & clay altered ± gouge depending on amount of																
							shearing on Faultin. Good porphyritic texture.																
						*	37.85 → 43.50 m SHEN ~ 25° → 30°																
						*	43.50 → 47.50 m minor SH's ± gouge ± clay altered @ 12° & 30°																
						*	47.50 U.C. Fault @ 15° w 30cm gouge. L.C. end of Blocky clay altered ± gouge @																
						*	47.50 → 56.69 m Clay alt'd ± Gouge ± SH'ing @ 10°, 15°, 25°																56.69 m.

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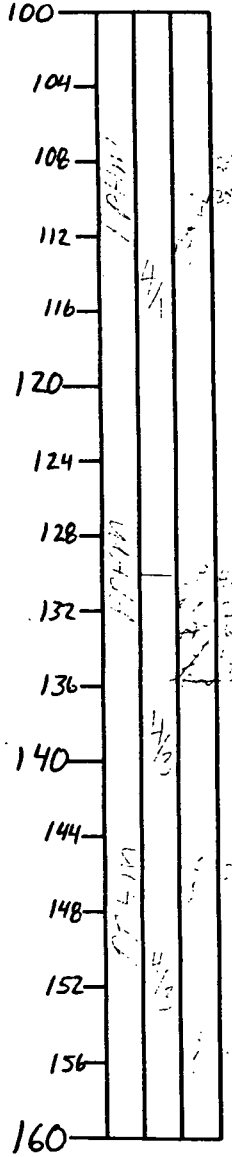
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 224
Logged By: B. Thurston
Date: Oct. 13/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Alt. Typ	Alt. Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	56.69	71.00	PPHM?	3	m	4	T	<.3	2	o	<1	T	o	S	W-m	?	*	T	T	o	T	w-m
				Lithology: Same as described 25.08 → 34.60 m. Grey-green porphyritic, strongly																		
				Alt'n: sericitized & mottled PPHM?. Py + He ± Qtz ± Carb + Ser veins / fracture filling																		
				Min: run roughly parallel to cor axis (on 0° → 10°). Cpy is noted as trace																		
				in fractures & in these veins. No calcite. Phyllic envelopes (grey)																		
				on fractures & py veins. Very weak to trace Carb veins 1-2mm w one																		
				~1cm in thickness. Some zonation in places. Py is ~50% diss & 50%																		
				as veinlets & in fractures.																		
				Structure: * Less clay altered / fractured overall.																		
				* 64.70 → 66.60 m Blocky & clay alt'd. No angle																		
				* 68.40 → 71.00 m " " " " " "																		
				* L.C. @ ~40° to 35° w fault.																		
P	71.00	74.00	FAUL					<.3	2.3	o	o	o	o	S	m	o	o	o	T	o	o	S
				Lithology: * Same as above material & past fault w strong fracturing +																		
				Structure: clay alteration ± gouge.																		
				* U.C. ~40° m.c. strong 35° in 30cm gouge L.C. ~35° shear.																		
P	74.00	80.30	PPHL?	2	m	3	w	<.3	2	o	o	o	o	S	W	o	o	o	vW	o	o	W
				Lithology: Same as above unit 56.69 → 71.00 m w-out the Py + He + Qtz + Carb. Vns.																		
				Alt'n: phyllic ser + py pervasive & mottled ser blebs & envelopes.																		
				Min: diss py. & fracture filling																		
				Structure: * SH @ 30°																		
				* L.C. @ 70cm gouge @ 42° & 70°																		
P	80.30	80.50	FAUL					<.3	2	o	o	o	o	m	S	o	o	o	o	o	o	o
				Lithology: → 20cm gouge.																		

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 224
Logged By: B. Thurston
Date: Oct. 14/95

Graphic Log (m): 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 204, 208, 212, 216, 220

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	80.50	130.00	PPHM	4	m	1	T	.30	1	0	1	T	W	vW	S	w	?	T	T	T	0	vW	W
S	130.00	137.00	PPHM	4	m	3	W	<.30	<1	0	T	0	T	0	M	W	?	T	0	M	0	0	W
S	137.00	158.00	PPHM	4	m	3	W	.60	3.5	0	<1	?	W	?	S	W	?	vW-W	vW	vW	0	0	T
S	158.00	203.00	PPHM	4	m	3	vW	.90	3.5	0	<1	0	W	?	S	W	?	W-M	vW	W	0	0	M

Lithology & Alt'n: Entire unit is PPHM with mainly ser ± Qtz ± Ank ± Py Altered porphyry with Patchy Potassic (±K-sp + He ± Mag) & patchy Mottled phyllic blobs & ser/Py envelopes. Matrix is sericitized & Plag pheno's are Zoned & partially sericitized. Mafic pheno's are buff coloured (Ank ∓ Clay?) & euhedral. Crowded Porphyry. Qtz Stk-WRK is usually only 1-2(5)mm w/ py ∓ carb + He in the core & fractures. Qtz is trace to 130m where shearing occurs to 137m, Then Qtz Stk work increases to vW to Weak. and Cpy is noted occasionally in Qtz veins. At 158 m Qtz increases to Moderate to Weak & Cpy is more evident in veins. Core is mainly a light green colour w/ Orangy brown dominating in Potassic areas.

Mmz:
- Py is diss > fractures & Veins but in some areas py is very weak <1%.
- Cpy is diss & on micro fractures to 158m then Cpy is noted in Qtz veins but still less than diss. Cpy.
- Trace moly is observed in healed Carb + Qtz + Py + Black Vein/SH. @ 152m.
- No calcite noted by HCL. ; Carb veins are mainly as fracture filling and in shear Zones.
- Hematite is diss as black & red-orange specks & as veinlets and fracture fillings as well as staining.
- Mag. is trace pervasive in Potassic areas

Structure:
- * 83.50 m fract // to C.A
- * 111.50 → 112m Strong 30° & 0° → 10° SH/Fault
- * 130.00 → 137m Carb. Healed ~ 4% carb + 50° < km SH & 60° gouge & 45° 3cm Breccia L.C. @ 22° 2cm gouge. & 40° SH.
- * @ 146.40 → 146.80m 20° SH + Fault gouge.
- * 40 → 45° Sh'ing ~160 → 200m
- * L.C. w/ Fault through Blocky sections & gradational SH's @ 20°, 30°, 45°

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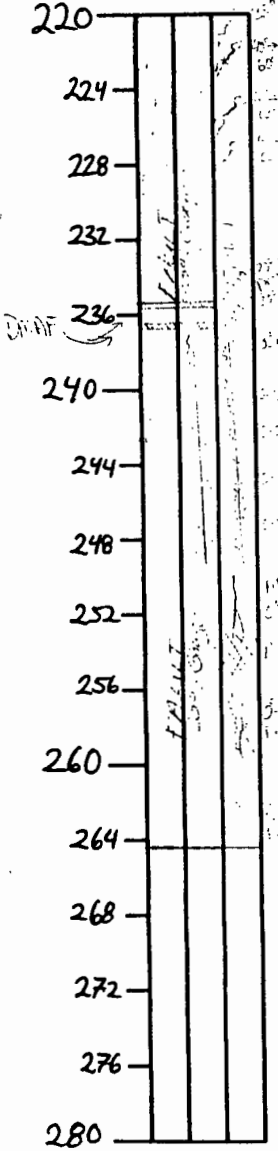
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 224
Logged By: B. Thurston
Date: Oct. 14/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	203.00	264.26	FAUL	4	W			.56	4	o	<1	m	o	s	m	T	vW	vW	vW	o	T	m-s	

Lithology: - Fault material is ~35% gouge throughout which consists of Black material and grey to beige gouge. Qtz vein fragments or PPHM ± Qtz veins broken up are the most observed fragment type within the gouge sections. These fragments are semi-angular to sub-rounded, ranging in size usually <5cm. The Qtz vein fragments are mineralized ± diss. Cpy & Py.

- Solid core within the fault consists of PPHM material described in earlier unit with the difference being that this PPHM material has mod. → strong headd shearing throughout ± clay altered & gouge sections. Py & Cpy are still diss & along fractures. He is diss. & as stain. Bio? To? Black → Brown material is strong aband shearing & along fractures.

Altn: Ser + Py + Ank ± Kad ± Qtz. dominate the alteration mineral assemblage. He is diss. & as stain. Carb. occurs as fracture fillings & healing shears. Calcite is very weak in Carb. veins/fracts. but is not pervasive in matrix.

Mnz: Cpy is mainly in Qtz veins as disseminations. Cpy is less observed in matrix but is seen filling fractures. Cpy is not assoc. ± Py. Py is also diss. & as veins & fracture fillings.

Structure: * Shearing occurs throughout the Fault.

** The most common shears assoc ± Gouge is 35°→45° From 203→237m
0°→10° From 237°→264.26m.

DYKE → DMAF? + Dyke material is observed @ 235.90→236.25m @ 25° & 35°
@ 236.7→237.25m @ ?°

Colour is light beige → green → gray. Aphanitic groundmass of ser+clay? ± ~3% bright green sericitized plag. phenos & 2 varieties of altered mafic phenos ? Hbld. & Bio? Black patches ~1→2mm contain Py &?. Fracturing ± Carb. healing/veins. Positive identification of biotite phenocrysts in second dyke but they are small & brown like phalogopite not like the large black bio. crystals commonly assoc. ± DMAF. No Hematite. Trace calcite partially replacing some phenos.

* Strong 0°→5° from 237→249m

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225

Location Sketch (N arrow)

Grid Northing (m):	99 250
Grid Easting (m):	49 050
Elevation (m):	
Total Length (m):	310.90 m
Casing Depth (m):	90 ft 27.43
Reduction Depth:	—
Collar Core Size:	NQ

Date Started:	Oct 13 '95
Date Completed:	Oct 16 '95
Logged By:	Ian Foreman
Date Logged:	Oct 14 '95
Data Entry:	
Entry Date:	
Casing (In/Out):	OUT

Survey	Depth	Azimuth	Dip
S.S	154.53	171.5°	-63
S.S	306.93	176.0	-64

Graphic Log (m): 0 – 27.43 CASING; 27.43 – 40 PPHM 4M mod-strong stkwk; depth marks 0, 8, 16, 24, 27.43, 32, 40

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	0.0	27.43																						
	27.43	44.28	PPHM	4	m			Tr	3	/	Tr		/	/	m	M	/	Tr	/	Tr	/	/	VS	

LITH + MIN:

The unit is predominately greenish grey with 1 to 3 meter sections that are yellowish green. The porphyritic texture is well preserved throughout. 20% 1-4mm subrounded to euhedral cream to clear feldspars and 15% <1 to 3mm subhedral to euhedral cream to pale green, locally dk green, hornblendes. The groundmass is aphanitic throughout and locally has a mottled appearence.

Trace carbonate veining is irregular throughout the unit. Trace quartz stockwork as irregular 2-4mm dark grey quartz veins with predominately pyrite and trace chalcopyrite. Chalcopyrite also occurs in fracture fill associated with pyrite. The remainder of the pyrite occurs as f.g'd disseminations and 1-3 mm irregular blebs.

L.C.:

in bkn core

ALTERATION:

Moderate Qtz - Ank - Ser - Kao alteration throughout

DRILL HOLE NO. 95 - 225

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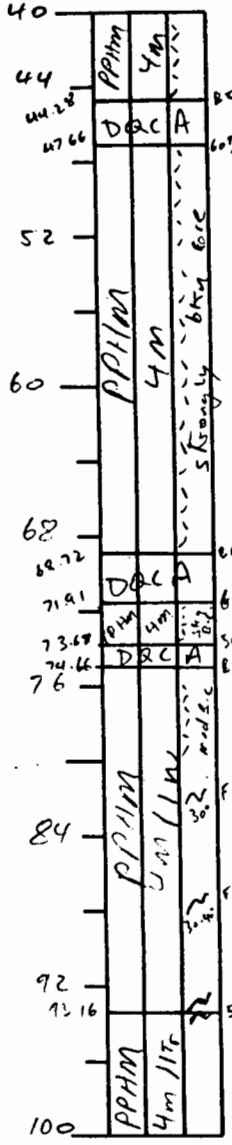
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: IAN FOREMAN
Date: OCT 14 '95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	27.43	44.28	CONT'D		with Hg yellowish green sections having stronger anhorite alteration. Trace hematite occurs as cl mm rounded blebs in the groundmass.																	
					STRUCTURE: - 27.43 - 44.28 m → mod to strongly bkn subrounded to ang. (as cl to 10cm core. Local gouge in bkn core and on slips																	
	44.28	47.66	DQCA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tr	-	-	w-m
					LITHOLOGY: light to medium grey with green aphanitic groundmass with 30% <0.5mm cream specs (phenos) and 10-15% <1.0mm subrounded to rounded dark green grains, 3-6% white to light grey 2-8mm ovoid amygdules. Trace carbonate veining, weak Sericite (light green) alteration along fractures.																	
					L.C: in bkn core b.l mod dc is 60°																	
					STRUCTURE: - 5-10cm sections of weak to mod alt bkn 1-3 cm core = trace gouge																	
	47.66	68.72	PPHm	4	m			Tr	3	/	Tr	/	/	Am	m	/	VW	/	W	/	/	S
					LITHOLOGY + ALT: This is the same main phase unit that occurs above the dyke and is described between 27.43m and 44.28 meters																	
					L.C: in bkn core																	
					STRUCTURE: - 47.66 - 68.72m → strongly bkn ang - subrounded <1 & 10cm core = l.c.! gouge in bkn core and on slips.																	

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: Ian Foreman
Date: Oct 15 '95

Graphic Log (m): 100 – 160 (PPHM 4m/Tr; USED. 4m/1w; 137.42; 157.14)

P S	Interval From	To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	68.72	71.91	DQCA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tr	-	-	S	

LITHOLOGY:
This very similar to (or even the same as) the quartz + carbonate amygdaloidal dyke between 44.28 and 47.66m
L.C.:
in bkn core but possibly @ 60°
STRUCTURE:
- 68.72 - 71.91m → mod to strongly bkn core w gouge throughout - 10cm white to cream gouge @ 69.55m.

P S	Interval From	To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	71.91	73.68	PPHM	4	m			Tr	3	/	Tr		/	/	m	m	/	w	/	w	/	/	m	

LITH + MIN + ALT:
This is the same main phase that occurs between and above the dykes and is described between 27.43 and 44.28m
L.C.:
Sharp = dyke @ 50°
STRUCTURE:
- 71.91 - 73.68m → 25% mod to strongly bkn <1 to 2cm ang core w trace gouge

P S	Interval From	To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	73.68	74.66	DQCA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tr	-	-	w	

LITHOLOGY:
This is very similar to the previous quartz + carbonate amygdaloidal dykes above and is described between 44.28 and 47.66m.
L.C.:
lower contact is in bkn core.

P S	Interval From	To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	74.66	93.16	PPHM	4	m	1	w	0.5	3	/	/		/	w	m	m	/	Tr-vw	/	vw	w	/	w-m	

LITH + MIN:
The unit has a greenish grey aphanitic appearance. The porphyritic texture is poorly preserved throughout. 15-20%.

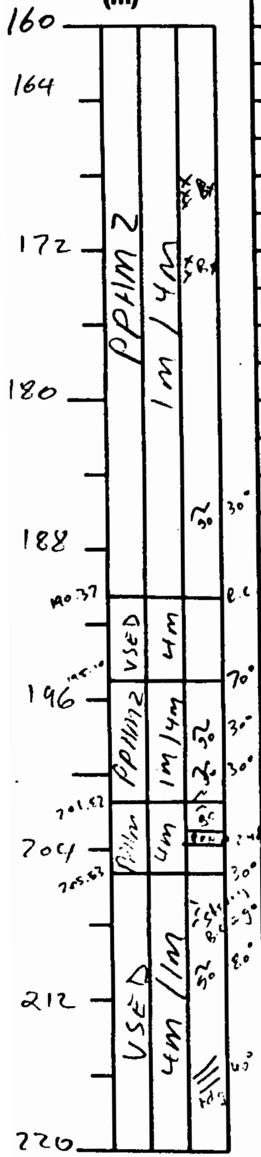
RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: Ian Foreman
Date: Oct 15 '95

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	74.66	93.16	CONT'D																					

cream to translucent light greenish grey 1-2mm subang to rounded feldspars and 10-15% light greenish grey to buff <1-2mm subang to subrounded hornblendes. At times the phenocrysts are very difficult to distinguish from the groundmass. Between 84.25 and 86.25m the unit has a weak pinkish brown tint. locally through this section it appears weakly brecciated containing angular 1-3cm fragments.

Trace to very weak quartz stockwork throughout as <0.5 to 2cm veins. These veins are weakly mineralized. Very weak carbonate as veins and fracture fill and trace to weak gypsum veins. The density of gypsum veins increases downwards. The gypsum is both white and orange. LAST GYPSUM VEIN is @ 92.53m.

0-5% chalcopyrite occurs predominantly as disseminations and fracture fill associated with pyrite as well as in quartz veins. The 2.5-4% pyrite occurs as f.g. disseminations and 1-4mm irregular blebs as well as in veins and as fracture fill.

L.C.:

in F.Z. to 17cm gouge @ 50°

ALTERATION:

Predominantly moderate Qtz-Ser-Ank ± Kao alteration throughout except for the light pinkish brown section between 84.25 and 86.25 m which is weak to moderate potassic altered.

STRUCTURE:

- 76.00 - 80.50m → local 10-15 cm sections of mod to strongly 1-2cm ang clasts in thin gouge
- 81.09 - 81.31m → strongly btn and carb in 8cm gouge.
- 82.19 - 82.52m → cemented gouge in FZ @ 30°
- 86.87 - 87.17m → gouge
- 88.05 - 88.73m → cemented gouge in F.Z. @ 30-40°
- 92.62 - 93.16m → 5-17cm sections of gouge in F.Z @ 30°

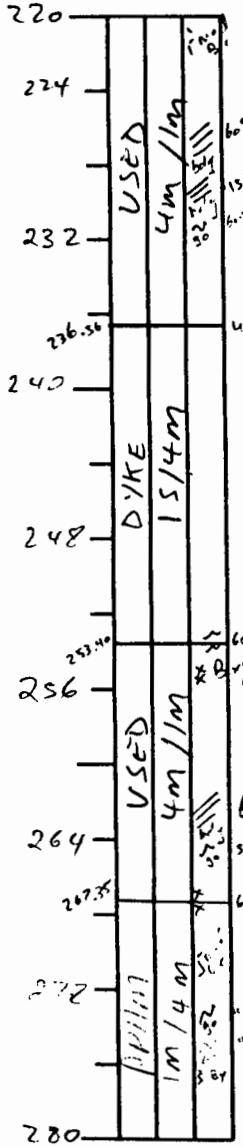
RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: Tom Fulleman
Date: Oct 15 '95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	93.16	137.42	PPHN	4	m	1	Tr	0.9	4	/	Tr	/	Tr	m	m	/	w	/	vw	/	/	w

LITH+MIN:

This unit is main phase with 5 to 20cm sections of Volcanic SEDS. The unit has an overall greenish grey colour with 20cm to 2.65m sections that are reddish brown. Generally the Main Phase unit is moderately well preserved porphyritic texture except near fractures and veins where the texture is obscured by alteration. The unit is strongly cross-cut by local fractures, which combined with the veins results in a very inhomogenious appearence. The main phase has 20% cream to translucent green 1-3mm subrounded to euhedral Feldspars and 15% cream to buff <1-3mm subangular to euhedral hornblendes.

The sections of USEDS are aphanitic in appearence but on closer inspection grains (phenos) are apparent. These grains are <1-2mm, subrounded, light greyish green to cream and make up <10% of the unit. The USEDS sections also have some typical characteristics such as py, cpy and py/cpy blebs occuring with chlorite giveing the rock a mottled appearence, the typical yellowish green colour with locally clots of bright green (magnesite) alteration, and the sharp and smooth nature of the fresh surfaces when broken.

The contacts between the PPHN and the USEDS are always obscured by the strong fracturing and local veining.

Locally the unit is brid with both PPHN and possible USEDS fragments.

Weak quartz stockwork with 2mm to 3cm generally poorly mineralized quartz veins. Rare quartz veins are well mineralized. Very weak carbonate as veins and fracture fill. No Gypsum veining.

0.8-1.1% chalcopyrite occurs predominately as fine dissemenations and <1-2mm rounded blebs. Chalcopyrite also occurs as fracture fill and in quartz veins. 4% pyrite occurs

DRILL HOLE NO. 95 - 225

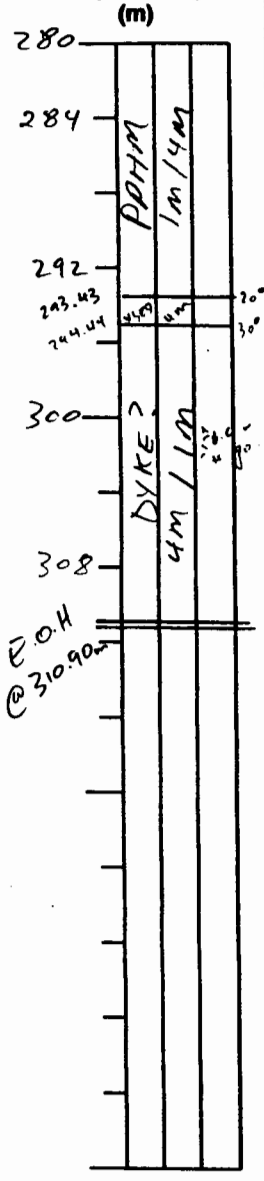
RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: Ian Forsman
Date: Oct 15 '95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	93.16	137.42	CONT'D		in the same manner as CPY. locally sphalerite occurs as 1-2mm rounded blebs in carbonate veins. Trace molybdenum occurs as specs in one quartz vein.																	
					L.C.																	
					Shear zone = lower contact @ 20-25°																	
					ALTERATION: Predominately moderate Qtz-Ser-Ank ± Kao alteration throughout with the light reddish brown sections being weakly potassic altered particularly between 126.00 and 128.65 m. The brown colour is mostly a result of pervasive hematite staining on the sample only stained weakly													
					STRUCTURE:																	
					- 101.99m → 1-2cm cemented gouge @ 30°																	
					- 108.15m → cemented gouge in slip @ 15-20°																	
					- 111.75m → gouge on slip @ 30°																	
					-125.0 - 125.62m → bx = indistinct upper contact and lower contact is slip = gouge @ 60°																	
					-130.78m → gouge on slip @ 30°																	
					-133.20m → gouge on slip @ 35°																	
					-135.69m → 3cm gouge on slip @ 45°																	
					-136.86 - 137.42m → shear zone @ 20-25° and @ top starts @ 30°																	
	137.42	157.14	USED?	4	m	1	w	0.8	3.5	/	Tr	/	w	m	m	/	w	/	vw	/	/	w
					LITH + MIN: This unit is lithologically different from any units previously described in the alley zone. Locally it is aplenitic whereas elsewhere it has a well preserved porphyritic texture. The unit can be broken up into 3 parts. 1) 137.42 to 143.90m 2) 143.90 to 154.25m and 3) 154.25 to 157.14m. Parts 1 and 3 are the same and may prove to be different from the middle portion all located. Tit 3 are being lumped because each contains a couple of													

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: IAN FOREMAN
Date: OCT 15 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	137.42	157.14	cont'd																			

characteristics of the altn. The outer portions are yellowish green to tan in colour whereas the middle of the unit is dark green. When aphanitic in appearance the unit appears massive but locally 1-4mm subhedral cream to yellowish green phenos occupy up to 6-7%. Throughout entire unit is 10-15% light translucent green 1-3mm crystals. >50% of these are subrounded to rounded (detrital?). In the central portion of the unit where the unit has a porphyritic appearance, the crystals are light green, subhedral, <1-4mm and occupy 15 to 30% of the rock. This portion does not look like PPHM because no mafics were identified, the crystals are not sericite altered, many crystals appear rounded and the matrix has a texture rather than being massive and aphanitic.

If this central portion is indeed intrusive then it is different from the main and late phases noted elsewhere in the alty zone. Locally the unit is bx'd. At 151.50m mainphase fragments do exist in the breccia.

Weak quartz stockwork with poorly mineralized veins. Weak to trace carbonate as veins and fracture fill.

0.6-1.0% chalcopyrite occurs primarily as 1-4mm blebs and fracture fill. Cpy also occurs in quartz veins.

3-4% pyrite occurs as 1-4mm blebs as well as in veins. Sphalerite occurs rarely but @ 145.60m the sphalerite is semi-massive in a 0.5cm carbonate vein. The Sph occurs in patches throughout the quartz veins throughout the unit. Trace molybdenem occurs in rare quartz veins throughout the unit. Trace Hematite primarily occurs as fracture fill and in veins.

L.C.

Slump @ 70°

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: Ian Freeman
Date: Oct 15 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	137.42	157.14	CONT'D		ALTERATION:																	
					Predominately moderate Qtz-Ant-Ser +/- trace alteration throughout with weak potassic alteration occurring as patches between 2 and 15 cm in size.																	
					STRUCTURE:																	
					-141.45 - 141.52m @ mod btn org core w trace gouge																	
					-142.40 - 143.23m @ light grey DMAF w the upper contact obscured by strongly btn core at the lower contact sharp @ 70°																	
					-150.23 - 150.35m @ strongly bx - partially rebrecciated core																	
	157.14	190.37	PPHM2	1	m	4	m	—	0.5	—	0.5	—	m	m	m	—	—	—	w	—	—	w
					LITH + MIN																	
					This unit varies greatly in colour and ranges from pale greenish grey to dark brownish red. 20-25% <1-4mm subhedral to euhedral cream to light green feldspars and 20-25% euhedral lath shaped <1-3mm buff to dark green hornblendes. Locally, there is 3-5% <1-2mm subangular to rounded black specs (tourmaline?). Locally, 185.33 - 185.87m, the unit is identical to classic DPFM. Weak carbonate throughout as veins and fracture fill. Tr to 1% pyrite as fine disseminations. Tr to 3% hematite as rare blebs but mostly as pervasive colouration of ground-mass (and feldspars?).															
					L.C:																	
					lower contact is in btn core.																	
					ALTERATION:																	
					It is possible that the entire unit was potassic and the greenish grey units were leached or that the entire unit was Qtz-Ant-Ser +/- trace altered and the potassic sections are overprinted.																	

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: Ian Foreman
Date: Oct 16 '95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
	157.14	190.37	Cont'd																					
	190.37	195.10	VSED	4	m			0.6	3	/	/		/	/	m	m		vw	/	m	/	/	w	

157.14 – 190.37 (Cont'd)

STRUCTURE:
- 168.65 - 168.98m → Bx w 0.5-3cm ang. PAHMZ/DPFH frags in a dark grey pyrite-rich matrix. Bx has rare subrounded qtz frags.
- 173.34 - 173.50m → Bx very similar to the one described above. Contacts @ 60°
- 186.26 - 186.40m → cemented gouge @ 30°

190.37 – 195.10 VSED

LITH + MIN:
The unit is a mottled light-dark grey to greenish grey. Typically, the unit is aphanitic and massive but locally it contains 10-15% <1-3mm subhedral to subrounded grey crystals which may be feldspars. The unit also contains 1-3% <1mm black specs (tourmaline?)
Locally the unit has a mottled grey and green appearance due to 5-10% chlorite as blebs and frac fill. These chlorite blebs commonly contain Py +/- Cpy.
Trace to weak quartz stockwork and moderate carbonate as veins and fracture fill.
0.6% Cpy as f.g'd disseminations, <1-3mm rounded blebs, fracture fill and in quartz veins. 2-4% pyrite occurs in the same manner.

L.C.:
Sharp igneous contact @ 70°

ALTERATION:
It is assumed that the unit has pervasive Qtz-Ank-Ser +/- Kao alteration throughout

STRUCTURE:
- no notable structures

DRILL HOLE NO. 95 - 225

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: JW FREEMAN
Date: OCT 16 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	195.10	201.82	PPHm2	1	m	4	m	/	0.5	/	0.5		/	m	m	m		/	/	w	/	/	w
					LITH+MIN+ALT:																			
					This is the same dyke that is above the volcanic seds and is described between 157.4 and 190.37 meters																			
					L.C:																			
					Sharp @ 2-4mm gouge zone @ 30°																			
					STRUCTURE:																			
					- 198.32 m → gouge on slip @ 30°																			
					- 200.56 m → gouge on slip @ 30°																			
					- 200.64 m → gouge on slip @ 50°																			
	201.82	205.53	PPHm	4	m			0.5	3	/	/		/	/	m	m	/	vw	/	M	/	/	w
					LITH+MIN:																			
					The unit is greyish green with a well preserved porphyritic texture. 20% greyish green to cream 1-3mm subrounded to euhedral feldspars and 15-20% <1-3mm buff to light green subang to euhedral hornblendes. Locally the unit has a mottled white and grey colour.															
					very weak quartz stockwork ~ poorly mineralized qtz veins.																			
					Moderate carbonate on fracture fill and 2mm to 3cm veins.																			
					0.3-0.6% chalcopyrite and 3% pyrite on fracture fill and disseminations.																			
					1-3mm blebs fracture fill and in veins.																			
					L.C:																			
					Sharp regular contact (~ flow feature?) or weak shear zone @ 30°																			
					ALTERATION:																			
					Weak to moderate qtz-ank-ser ± kao alteration throughout																			
					STRUCTURE:																			
					- 202.76 - 203.12 m → PPHm2 dyke ~ sharp contacts @ 40°																			

DRILL HOLE NO. 95 - 225

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: Ian Foreman
Date: Oct 15 '95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	205.53	236.56	USED	4	m	1	m	0.8	3	/	Tr		/	m	m	m	/	Tr	/	w	/	/	w	

LITH + MIN:

This unit varies greatly both in lithology and in colour. It is predominantly greenish grey or reddish brown but locally it is dark green, pale grey or orange. Lithologically the unit is predominantly aphanitic in appearance and massive. Locally the unit contains 3-8% <1-2mm white to greenish grey subangular to subrounded crystals (feldspars?). Elsewhere the unit contains 1-3% light turquoise green subrounded to rounded 1-3mm grains which may be detrital. Over 10-15cm there are concentrations of <1-4mm irregular chl and hematite blebs. These blebs are commonly associated w Py +/- cpy.

Locally the unit has well preserved bedding. The proximity of bedding at varying angles may indicate that they are fragments (up to 15-20cm?). The unit locally appears fragmental with 5-10% 0.5-3cm subrounded to subangular VSED fragments. The 1st 3 metres of the unit has a "splotchy" appearance w reddish brown to dark green 0.5 to 2cm clots. 222.25 - 223.0m appears porphyritic.

Trace quartz stockwork a irregularly spaced 2-8mm grey quartz veins that are typically poorly mineralized. Weak carbonate veining throughout.

0.6-1% chalcopyrite and 2-4% pyrite occur primarily as fed disseminations, 1-3 mm rounded to irregular blebs, fracture fill and in quartz veins. Hematite occurs as both blebs and fracfill.

L.C.:

Sharp contact at edge of carbonate vein w angular frags @ 40°

ALTERATION:

The predominant style of alteration through this unit is assumed to be moderate Qtz-Ank-Ser +/- Kao ; Sections [illegible]

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: Ian Foreman
Date: Oct 16'95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
	205.53	236.56	CONT'D																			

a.a weakly to moderately potassic altered although most of the reddish brown colour may be due to hematite

STRUCTURE:

- 207.21 – 207.32m → gouge in strongly btn core
- 209.37 – 209.41m → cemented gouge ± rubble @ 20°
- 209.86 m → 1cm cemented gouge ± rubble @ 90°
- 210.91 m → gouge on break @ 33°
- 216.30 – 216.40m → weak bedding @ 40°
- 220.93 – 221.17m → mod btn angular 1-4cm core.
- 227.95 – 228.23m → bedding @ 60°
- 229.20 – 229.32m → bedding @ 45°
- 230.72 m → 2cm cemented gouge and rubble @ 60-70°

	236.56	253.40	DYKE	1	S	4	M	/	1.5	/	1.0	/	S	M	M	/	/	/	TR	/	/	W

LITH+ MIN:

80% of the unit is reddish brown and the other 20% is green with 10-20cm sections where alteration has obliterated it. The porphyritic texture is generally well preserved except in pale reddish brown to cream 1-2mm sub-euhedral plagioclase and 15% buff to dark green <1-2mm sub to euhedral hornblendes. The unit is very homogeneous except for 1-2% locally up to 5%, 2mm-15cm irregular to rounded dark green to translucent green blebs which commonly contain pyrite.

Two quartz +/- dolomite veins occur towards the bottom of the unit. These two veins are @ 247.50 and 251.15m eles and contain 0.5 to 2cm blebs of cpy +/- Py. Weak contacts can be seen near the 1st vein (@ 247.43 and 247.87m) that indicate that these veins are in sections of mm in place.

L.C:

Sharp or slip ± gouge @ 60°

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 225
Logged By: Ian Foreman
Date: Oct 18 '95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
	236.56	253.40	Cont'd																					
	253.40	267.35	USED	4	m	1	M	0.8	3	/	Tr		/	M	M	m	/	VW	/	W	/	/	W	
	267.35	293.43	PPtlm	1	m	Ll	m	/	1.5	/	Tr	/	/	m	M	m	/	/	/	Tr	/	/	W	

236.56 – 253.40 (Cont'd)

ALTERATION:
The majority of this unit (80%) is strongly potassic altered. however there are 2-15cm bords of strong phyllic alteration as envelopes to py/carbonate veins. The top 2.5 meters of the unit is light greyish green and is moderately Qtz-Ank-Ser +/- Kao altered.

STRUCTURE:
- no notable structures

253.40 – 267.35 (USED)

LITH + MIN + ALT:
This is a continuation of the VOLCANIC SEDIMENTARY unit that is above the dyke and is described between 205.53 and 236.56 meters.
The potassic alteration is locally very strong in small sections for example certain beds of a cm scale bedded section.

L.C.:
sharp contact @ the top of shear/breccia zone @ 60°

STRUCTURE:
- 255.18 - 255.72 → heterolithic bx = 0.5-3cm ang frags in dark grey matrix. U.C @ 40 and L.C @ 60°
- 263.25 - 263.65m → bedding @ 60°
- 264.85m → 1cm gouge in slip @ 50°

267.35 – 293.43 (PPtlm)

LITH + MIN:
80% of the unit is pale reddish brown and the remaining 20% is greyish green. The porphyritic texture is moderately well preserved throughout. 20-25% transtricted reddish brown to green <1-2mm sub to euhedral feldspars … 15-20% <1-2mm

DRILL HOLE NO. 95 - 225

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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 225
Logged By: Ian Foreman
Date: Oct 16 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
	267.35	293.43	cont'd																					

cream and buff to reddish brown subhedral to euhedral hornblendes. locally the unit appears crowded - containing >60% phenocrysts. The unit is very homogeneous with trace carbonate veins and weak healed fractures. No quartz veins were noted through the unit.

1.5% pyrite occurs as v.f.g'd disseminations and as fracture fill

L.C.:

Sharp @ 20°

ALTERATION:

Predominantly moderate, locally strong, potassic alteration throughout with the 20% greyish green sections being moderately Qtz - Anh - ser +/- Kao altered.

STRUCTURE:

- 271.76 - 272.41m → moderately broken 1-4cm on core to trace gouge
- 274.25m → cemented gouge + rubble in healed fracture @ 10-15°
- 275.63m → gouge on break @ 40-50°
- 276.07 - 276.16m → bx = 2-8mm angular and rounded fragments in a dark grey groundmass.
- 286.37m → 1cm cemented gouge = rubble @ 10-15°

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
	293.43	294.44	USED	4	m			0.4	3	/	/		/	/	m	m	/	Tr	/	Tr	/	/	w	

LITH + MIN:

grey to greenish grey aphanitic and massive sediments with 1-3% rounded translucent light green rounded blebs. Dark green translucent irregular blebs as fracture fill (sericite vs talc?) are very soft.

Trace quartz as <2mm veins and as 0.5-2cm irregular blebs (- bkn veins vs irregular veins). Trace carbonate as fracture fill and veins. 0.3-0.5% chalcopyrite and 3% pyrite occur as f.g'd disseminations, 1-3mm rounded blebs, fracture fill

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Liard Mining Division
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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 225
Logged By: Ian Foreman
Date: Oct 16 '95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	293.43	294.44	CONT'D	and in veins																				
				L.C:																				
				lower contact is @ the end of the run and is possibly @ 30°																				
				ALTERATION:																				
				It is assumed that this unit is moderately Qtz-Ank+Sericite altered. The unit is strongly sericite altered as evidenced by the sericite blebs and fracture fill.																				
				STRUCTURE:																				
				-No notable structures																				
	294.44	310.90	DYKE	4	m	1	m	/	1.0	/	/		/	m	m	m	/	Tr	/	Tr	/	/	~	
				LITHO-MIN:																				
				The unit is greenish grey to pale brownish green and has a well preserved porphyritic texture throughout. 20% light translucent green to cream 1-2 mm sub-euhedral feldspars and 15-20% cream to buff <1-3 mm sub to euhedral hornblendes. What distinguishes this unit is 2-5% dark green 2mm-2.5cm irregular blebs. These blebs commonly contain f.g'd pyrite. The blebs are soft (can be easily scratched by a nail) and are most probably sericite +/- chlorite. Trace quartz veins @ the end of the unit are all <5mm.																				
				L.C:																				
				E.O.H																				
				ALTERATION																				
				The alteration of this unit is deceiving. The unit stains moderately in HF. Coincidentally the parts that stained were the brownish green sections. The rest of the unit is moderately Qtz-Ser-Ank ± Kao altered.																				
				STRUCTURE:																				
				- 301.00 - 302.75 m fault gouge in 5-10 cm sections of broken core.																				
	310.90	310.90	E.O.H																					

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

DRILL HOLE NO. 95 - 226

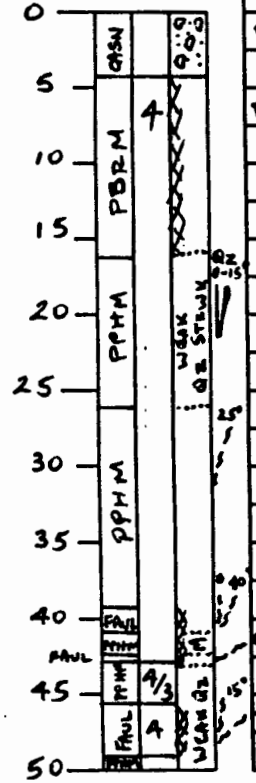
AMERICAN BULLION MINERALS LTD.

Location Sketch

Grid Northing (m):	100 350	Date Started:	OCT. 14
Grid Easting (m):	50650	Date Completed:	OCT. 17
Elevation (m):		Logged By:	G. ALLEN
Total Length (m):	242.93	Date Logged:	OCT. 15, 16, 17
Casing Depth (m):	4.57	Data Entry:	
Reduction Depth:	—	Entry Date:	
Collar Core Size:	HQ	Casing (In/Out):	

Survey	Depth	Azimuth	Dip
J.D.	COLLAR	180	-60
S-S	121.92	186½	-59
S-S	242.93	189½	-60

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Mo	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	0	4.57	CASN																				
P	4.57	16.65	PBRM	↑	M			0.3	4			T			M			T		VW			S

LITHOLOGY: Mottled medium greenish-grey to brownish-grey to dark blue-grey feldspar-hornblende phyric intrusive breccia. Vague to distinct subrounded to subangular porphyritic fragments up to 20 cm (commonly 1-5 cm) in a fine-grained porphyry with texture largely obliterated. Brecciation could in part be due to intergrowth alteration. Porphyritic fragments are medium-grained with 30-40% 1-2 mm stubby equant to prism-shaped outlines, 10-15% pinkish brown prism/lath hornblende to 2 mm. Subtrachytic.

ALT: Potassic silicate-carbonate. Weak fizz on scratched surface with HCl.

MINERALIZATION: 3-4% pyrite disseminated. Minor pyrite in veins to 1 cm. Trace to 0.5% disseminated cpy. Minor cpy with vein quartz stringers. Trace disseminated Mo. 12.5- more cpy than with pyrite.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 14

Graphic Log (m): 50 – 125 (PPHM; 4/(1), 35°; FAULT 4/3, 40°, 57°, 20°; STOCKWORK, QUARTZ, WEAK; 4; PPHM)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	16.65	26.25	PPHM	4	M			0.3	3		4				M			W		W			W	

STRUCTURE: 4.57 - 5.18 - White carbonate - flooded breccia.
5.18 - 7.62 - Blocky core. Rubble sheared subparallel CA.
12.5 - 16 - " "

Rare quartz in irregular masses to 1.5cm. Some look like fragmented quartz stringers.

LITHOLOGY: Predom. medium-grained greenish to brownish-grey, hornblende-feldspar phyric intrusion with some breccia intervals (minor). 30-40% stubby to prismatic greenish euhedral to anhedral phenos to 2mm. Pinkish subhedral to euhedral alt prisms of hornblende to 3mm. Sporadic black specs of hematite to 5%.

ALT: Pervasive sericite / carbonate.

MIN: 1-4% dissem PY (average ~ 3% PY). PY also in cores of quartz stringers with white carbonate + hematite. 5% dissem hematite. Hematite + pyrite appear to have an inverse relationship. Traces to 0.6% CP predom with quartz stringers but also dissem.

STRUCTURE: Weak quartz stockwork with blue-grey quartz stringers to 1.5cm (average < 1cm). Stringers typically 0-15° CA.

DRILL HOHOLE NO. 95 - 226

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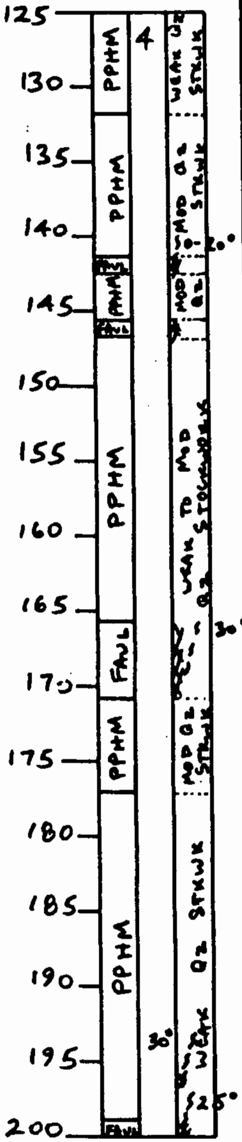
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 14

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	26.25	39.20	PPHM	4	M			0.4	2		4				M		VW	T		VW		T	W
P	39.20	40.90	FAUL	4	M			0.3	3				S ?		M		S ?						M

26.25 – 39.20 PPHM

LITHOLOGY: Mottled medium to light greenish-grey to dark blue-grey medium-grained hornblende-feldspar phyric intrusion much as unit above. Textures in upper part of interval obscure. Unit separated out on basis of quartz stringer content (low).

ALT: Pervasive sericite - carbonate. Minor massive black tourmaline around carb stgs.

MINERALIZATION: 1-4% disseminated PY. 4-5% f-g specular dissem. hematite. Dissem + quartz stringer related CP to 0.6%, average 0.4%.

STRUCTURE: Minor shearing 25° CA. 32-33 - Weak crush zone. Fractures subparallel CA.

39.20 – 40.90 FAUL

LITHOLOGY: Predom black + less greenish-grey sheared rock. Black colour could be f-g biotite or possibly tourmaline. Part of interval gouge.

ALT: Pervasive sericite ± tourmaline ± biotite.

MINERALIZATION: 3-4% f-g dissem PY. Traces to 0.3% CP, disseminated throughout.

STRUCTURE: Shear 40° subparallel CA.

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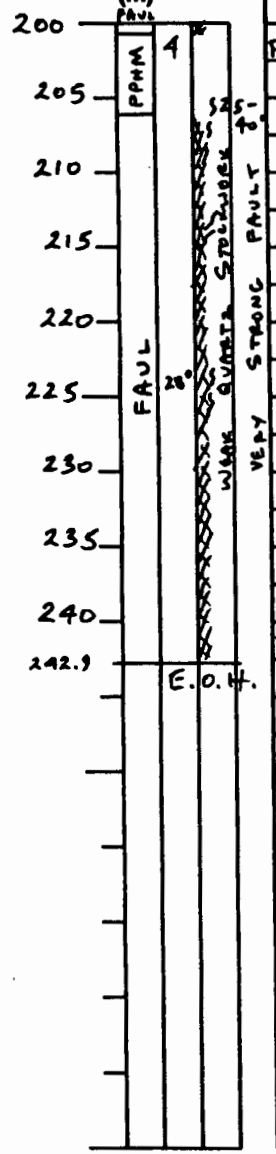
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 14

Graphic Log



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	40.90	42.25	PPHM	4	M			0.5	3		2			M		VW	M	T	VW			M

LITHOLOGY: Medium greenish-grey to dark greenish grey medium-grained feldspar phyric intrusive at above fault. Textures largely obscured.

ALT: Pervasive calc/silicate. Black f-g tourmaline developed adjacent to fault.

MINERALIZATION: 2-4% disem PY. 0.5% disem + quartz stringer-related CP. Sporadic radial specs hematite.

STRUCTURE: Moderate quartz stockwork with several blue-grey quartz stringers to 4cm (average < 1cm), generally 70°-80° TA.

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	42.25	42.88	FAUL	4	M				4					M		M						I

LITHOLOGY: Greenish to black crush, gouge + rock fragments to 1cm. Shearing 60°.

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	42.88	45.95	PPHM	4	M	3	W	0.6	2		3			M			W		VW			W

LITHOLOGY: Mottled light to medium greenish-grey medium-grained hornblende-feldspar phyric intrusive as units above.

ALT: Pervasive silicate-carbonate alt. Minor intervals with dark green silicate clots to 5mm.

MINERALIZATION: 1-2% f-g disem PY. Sporadic disem hematite as black specs and in quartz stringers. Disem + qtz stringer-related CP

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 14

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
				STRUCTURE: Weak quartz stockwork with 3-4 stringers / m, 40-70° CA.													≤ 1 cm		quartz / carb			
P	45.95	49.05	FAUL	4	M			0.3	4					M		M ?	W	T				S
				LITHOLOGY: Mottled blackish to dark greenish - grey feldspar phyric plutonic + cataclastic breccia. Intrud sporadically crushed + sheared.																		
				ALT: Black mineral (tourmaline ?) developed along fracture + pervasive pervasive sericite / carbonate.																		
				MINERALIZATION: 4% fine disem PY. Minor stringer PY. Trace to 0.3% CP, generally disem but with obscure discontinuous quartz stringers + fract.																		
				STRUCTURE: Sporadic crush + shear throughout. Shearing 15° CA, 40° CA.																		
P	49.05	86.60	PPHM	4	M	1	VW	0.6	2		4			M			W			T	W	W
				LITHOLOGY: Mottled light greenish - grey to dark blue - grey to medium brownish - grey medium - grained feldspar phyric intrusive. Fracture sporadically destroyed. Some weak plutonic breccia with frags to 1 cm. Generally it looks like a inhomogeneously altered intrusive.																		
				ALT: Pervasive sericite - carbonate. Minor dark sericitic envelopes around fractures. 83-85 - brownish colour. Very weak yellow stain with K Co NO_2																		
				MIN: 2% disem PY. 4-5% disem f-g hematite + fracture - related hem. 75-76.5 - Strong hematite stockwork.																		

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 14

Graphic Log (m)

Sporadic cp up to 1% (average ~ 0.6% cp) both dissem & in quartz stringers.

63.70 - 64.64 - Strong quartz stockwork / flooding with 1.5% cp.

STRUCTURE: Weak quartz stockwork with blue-grey hematitic ± quartz carbonate stringers average ~ 0.5-1 cm wide. ~ 3-4/m. Generally 0, 30, 40, 60° CA.

54.2 - 54.6 Crush zone. Shear 35° CA. Some gouge cementing c-g sandy crush.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	86.60	95.85	FAUL	4	M	3	W	0.3	3		4				M		M	W		W			M	

LITHOLOGY: Mottled greenish-grey to black sheared + sporadically crushed feldspar porphyry as above. Black mineral developed along fractures + crush zones. Black masses to 20 cm + sporadically throughout.

ALT: Pervasive sericite + carbonate overprinted by secondary black mineral related to fractures. Minor type 3 alt with dark green sericite masses to 5mm.

MINERALIZATION: 3% dissem PY. 4% dissem. f-g hematite. 0.3% dissem CP + in blue-grey quartz stringers + fragments.

STRUCTURE: Sporadic crush + shear throughout

Shearing:
88.8 40°
90.8 35°
92 57
93 50
93.8 - 15°
95.8 - 20°

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 14

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	95.85	131.80	PPHM	4	M			0.6	2.5		4			M		W	W	VW	W		VW	W

LITHOLOGY: Mottled light - medium to dark greenish - grey sporadically altered feldspar porphyry as above fault. Textures mostly obscure. Pseudobreccia textures from alteration to darker grey along fractures. Sporadic minor Carb intervals with associated black mineral giving core an inhomogeneous appearance.

ALT: Pervasive sericite - carbonate. Minor black tourmaline associated with fractures.

MIN: Average 2.5% PY, predom disem & minor stringer - related PY. Sporadic f-g disem. hematite average ~ 4%. Hematite also in quartz stringers. Average 0.6% CP both disseminated and in quartz stringers.

121-124 - Strong quartz stockwork with ~ 2% CP.

STRUCTURE: Weak quartz stockwork with 3-4 blue-grey quartz stringers / m, average ≤ 1 mm. Qz 10-80° CA, mostly > 45°.

P	131.80	141.4	PPHM	4	M			1.2	3		5			M			M		W	T		W

LITHOLOGY: Predom light to medium greenish grey aphanitic (due to alteration) to medium - grained feldspar porphyritic intrusion. Strongly to prism - shaped greenish grey enclosed in mineral feldspar phenocrysts ~ 25-40%.

140.2 - 141.4 breccia, with grey aphanitic to m-g fsp phyric subangular fragments to 1 cm. Quartz veins brecciated in a vaguely porphyritic groundmass. ∴ post mineralization structural breccia.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 15

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				ALTERATION: Pervasive sericite - carbonate																		
				MINERALIZATION: Sporadic 3% disem PY. 4-5% disem. hematite: very f. g blade specs disem in host rock + in quartz stringers. Average 1 1/2%. CP present in quartz stringers + lesser disem.																	
				STRUCTURE: Medium quartz stockwork with several blue-grey quartz stringers per metre. Stringers up to 3 cm (average 1-2 cm) subparallel to 20° CA. Quartz typically has white carbonate core with PY. Quartz crosscut by white carbonate + rare gypsum.																	
P	141.4	142.6	FAUL	4	M			T	<1		4			M			VW					S
				LITHOLOGY: Medium grained - grey medium - grained fsp phyric plutonic. Mafics above. Mostly homogenous but some breccia. Pebble throughout. Blocky core.																	
				ALT: Pervasive sericite - carbonate.																		
				MIN: Trace CP in rare quartz stringers. <1% disem PY. 4-5% disem hematite.																		
				STRUCTURE: Blocky core throughout. Shears 0-20° CA. Minor gouge crush on fracture surfaces.																		

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 15

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	142.6	145.55	PPHM	4	M			1.5	3		4				M			M		W			W	
P	145.55	146.30	FAUL	4	M			0.6	2						M			W					S	
P	146.30	165.72	PPHM	4	M			0.8	1.5						M			W-M		W		VW	W	

142.6 – 145.55 m

LITHOLOGY: Medium greenish-grey, vaguely m-g feldspar phyric intrusion as above. Roughly 50% of interval is a breccia with subrounded aphanitic to f-g fsp phyric fragments to 1 cm in a fsp phyric intrusive matrix.

ALT: Pervasive sericite - carbonate.

MIN: 3% PY predom in quartz stringers but also dissem. 4% f-g dissem black to dark red-grey spec & massive to 2 mm. 1.5% dissem + quartz stringer - related CP.

STRUCTURE: Moderate quartz stockwork with several blue-grey qz stringers to 1 cm / m. Orientation typically 20-40° CA.

145.55 – 146.30 m

LITHOLOGY: Strong crush, rubble, blocky core. Medium greenish-grey vaguely fsp phyric intrusion & some breccia, as above. Most of interval crushed & rubbly. Minor gouge. Sheared 30°. Chunks of quartz to 2 cm with 5% PY & 2% CP.

146.30 – 165.72 m

LITHOLOGY: Mottled light to medium greenish-grey to dark grey to brown-grey (minor). 0% of interval massive vaguely fsp phyric intrusion. Some parts vague breccia with rounded fsp phyric frags to 2 cm in fsp phyric matrix. Some parts pseudobreccia due to alt around fractures & veining.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: C. ALLEN
Date: OCT. 15

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				ALT: Pervasive sericite, carbonate.																		
				MINERALIZATION: 1-3% f-g disem + gtz stringer-related PY. 4-8% f-g disem blebs hematite giving rock a dark colour in some intervals. Average 0.8% CP (<1%) predom. in + adjacent to quartz stringers. Some disseminated throughout. Minor CP lines on fractures.																	
				STRUCTURE: Weak to moderate gtz stockwork ± 2-10 stringers of blue-grey quartz (+ white carbonate, cpy + PY) to 3 cm wide. Generally hematitic. Stringers 30-80° CA. 163.6 - 165.72 - Blocky core.																	
P	165.72	170.78	FAUL	4	M			0.5	1					M			W		W			S-M
				LITHOLOGY: Mottled medium grained grey to dark grey sheared mylonitized feldspar porphyry as above. Most of texture obliterated. Some parts bleached (hematite?)																	
				ALT: Pervasive sericite / carbonate																		
				MIN: 1% disem pyrite. Average 0.5% cp predom in quartz stringers + fragments of stringers																		
				STRUCTURE: Sheared / crushed + silicified (mylonite?) throughout. Shearing predom ~ 30° CA. Quartz or carbonate stringers fragmented by shearing.																		

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
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Date: OCT. 15

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	170.78	177.20	PPHM	4	M			0.5	1.5		5			M			M		W		W	W

LITHOLOGY: Medium grained - grey variably feldspar phyric medium - grained intrusive. Texture obscured by alteration. Black specs or clots to 1 cm of hematite, disseminated, along fractures, and in quartz stringers.

ALT: Pervasive sericite ± carbonate.

MINERALIZATION: Average 1.5% PY as disseminated in quartz stringers. 5-7% hematite. Inverse relationship between PY & hematite. ~0.5% CP as disseminated in quartz stringers & minor disseminations.

STRUCTURE: Moderate quartz stockwork with several (4-10%) blue-grey hematite quartz stringers to 1 cm most commonly 30-40° CA.

| P | 177.2 | 199.0 | PPHM | 4 | M | | | 0.6 | 1.5 | T | 5 | | | M | | | W | | W | | W | W |

LITHOLOGY: As above. Unit separated from above because of lesser amounts of quartz stringers.

MINERALIZATION: 1.5% PY as disseminated in quartz stringers. 5-7% disseminated fine-grained black hematite. 0.6% CP disseminated & in quartz stringers. Trace bornite with CP in quartz stringers.

STRUCTURE: 3-4 generally < 0.5 cm blue-grey quartz stringers / m. Stringers 30-90° CA but most commonly 35° CA ∴ probably vertical to BS°N if 90° to azimuth of hole.

193.45 - 194.1 - strong quartz stringer zone 35° CA. 5%+ CP.

196.8 - 197 - crush zone - 30° CA.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 15

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	199.0	200.85	FAUL	4	M			0.3	1		5				M			W		W			M	
P	200.85	206.15	PPHM	4	M			0.3	1	T	5				M			W		W		VW	W	

199.0 – 200.85

LITHOLOGY: As above. Medium greenish - grey vaguely fsp phyric m-g intrusion. Blocky. Sporadic weak crush. 200.4 - 200.85 - Mylonite / breccia 25° CA. Quartz stringers fragmented ∴ post mineralization.

200.85 – 206.15

LITHOLOGY: As units above. Medium greenish - grey vaguely fsp. phyric fine-medium - grained intrusion with 5-7% blebs disseminated f-g hematite. Some hematite clots to 1 cm giving rock a mottled appearance.

ALTERATION: Pervasive sericite - carbonate.

MINERALIZATION: 1% PY seldom in quartz stringers. 5-7% f-g diss + clots of hematite. ~0.3 % CP seldom in quartz stringers. Traces bornite with CP in quartz stringers.

STRUCTURE: Weak quartz stockwork. Several (8-10) generally <0.5 cm blue-grey quartz stringers /m, 20-70° CA.

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G. ALLEN
Date: OCT. 15

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	206.15	242.93	FAUL	4	M			<0.3	4					M		M ?	W		W			S

E.O.H.

LITHOLOGY: Greenish - grey to black medium - grained feldspar phyric intrusion. VERY STRONG FAULT ZONE. Unit sporadically intensely crushed to rubble of coarse - grained sand with gouge matrix.

ALTERATION: Pervasive sericite - carbonate. Some parts show feldspar phenos altered to black soft material. Black alteration most intense around fractures. Some gouge intervals also black. Mineralogy?

MINERALIZATION: 2 - 4% f - g disem PY. Distinctly more pyritic rich than above. CP probably < 0.6% (at least in upper part) in chunks of blue - grey quartz. Overall CP < 0.3% in quartz stringers

STRUCTURE: Blue - grey qtz stringers to 1cm in less sheared parts.

206.15 - 206.65 - Crush gouge cemented breccia 40° CA
206.65 - 213.8 - Sporadically crushed blocky. Shearing 40° CA.
213.8 - 214.4 - Greenish - grey to black gouge cemented crush zone, fine. 32° CA.
214.4 - 217.7 - Greenish to black sporadically crushed intrusive.
217.7 - 219.45 - Blocks to pebbles of gouge - cemented crush. Upper contact sharp at 35° CA. Shear within at 20° CA. Lower contact gouge / competent rock 50° CA.
219.45 - 220.3 - Dark grey but strong quartz stockwork. 5% PY. No CP noted
220.3 - 226.87 - Medium - grained medium greenish - grey feldspar phyric intrusive. Bleached, crushed. Weak qtz stockworks
224 - 225 - Crush + gouge. Sand. Shear 28° CA.
226.87 - 234 - Dark grey to black fine grey as above but with patches of black alteration mineral (soft). Biotite? Tourmaline?

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 226
Logged By: G-ALLEN
Date: OCT. 17

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
							230	234	- Strong crush				Friable breccia of					c-g sand +	chunks to					
									5cm cemented by clay/gouge. Abundant quartz chunks +															
									veins to 10cm. Looks like a strong qtz stockwork.															
									Veins 40° CA, 20° CA, 45° CA. Massive 1-2 PY between															
									stringers to 5cm wide. Trace CP. CP content low considering															
									strength of stockwork.															
						234	241	-	Crumbly - gouge weak to strong crushed porphyry. Mod - W															
									qtz stockwork.															
						241	242.93		- Black biotitic (?) alt material. Crushed + cemented															
									gouge. Trace CP in quartz chunks.															
											E.O.H.					242.93							

DRILL HOLE NO. 95 - 226

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

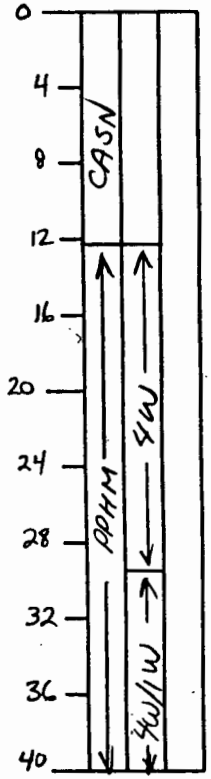
DRILL HOLE NO. 95 - 227

Location Sketch

Grid Northing (m):	99150 N	Date Started:	Oct 16/95
Grid Easting (m):	49050 E	Date Completed:	Oct 18/95
Elevation (m):		Logged By:	T. Fraser
Total Length (m):	302.36 m	Date Logged:	Oct 17/95
Casing Depth (m):	33.53 m	Data Entry:	
Reduction Depth:	—	Entry Date:	
Collar Core Size:	NQ	Casing (In/Out):	Out

Survey	Depth	Azimuth	Dip
SS	154.5	181.5°	-62°
SS	289.6	184°	-63°

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	0	12.19	CASN																			
	12.19	29.57	PHM	4	W	-	-	40.3	3	0	0	0	0	vW	vW	0	TR	vW	TR	0	0	M

Lithology - Pale to medium grey Main Phase plagioclase hornblende porphyry. The unit is moderately porphyritic with 20-25% plagioclase phenocrysts (subhedral), 9-2 mm in length. Hornblende phenos comprise 5-8%, sub to euhedral 1-3 mm in size. Plagioclase phenos are pale green to grey in colour while hornblende phenos are beige. The groundmass is pale grey to buff. The unit is moderately fractured and is iron stained along joints/breaks.

Alteration/Mineralization - Plagioclase phenocrysts are very weakly sericite and clay altered. Hornblende phenos appear to be carbonate-sericite altered. The unit is cut by very wak to weak pyrite veins. Disseminated pyrite is > vein pyrite. Trace carbonate veinlets. Occassional pyrite veins have sericite-quartz envelopes (very thin, up to 3mm). Some phenocrysts appear to be weakly iron stained due to weathering.

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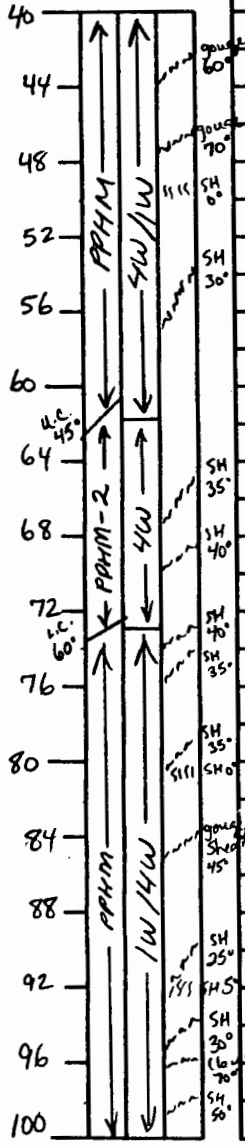
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 227
Logged By: T. Fraser
Date: Oct 17/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			Structure -					15.40 - 15.54m gouge														
								24.00 - 24.10m gouge														
								29.50 - 29.57 m gouge.														
	29.57	61.80	PPHM	4	W	1	W	0.35	3	0	TR	0	W	W	0	0	Ws	W	TR	0	0	M

Lithology - The lithology is pale grey-green to light orange in colour. The unit is moderately porphyritic in texture. Plagioclase phenocrysts predominate. Plagioclase phenos vary from 1-4 mm, subhedral and are grey to orange-coloured. Plagioclase probably accounts for 25-35% by volume. Hornblende phenos comprise 3-8% sub to euhedral grains 1-2 mm in length. The groundmass is grey to buff in colour.

Alteration/Mineralization - The unit has patchy Kspar alteration which is interstitial and weak to very weak in intensity. Some orange colouration may be due to very weak hematite staining. The plagioclase phenocrysts are weakly sericite altered. Hornblende phenos are carbonate-sericite altered. Disseminated fine grained pyrite is dominant over weak pyrite veinlets. There are trace to v... weak carbonate veins. The unit is cut by trace to weak grey quartz veins. Quartz stockwork contains mostly disseminated pyrite and trace amounts of chalcopyrite. Trace disseminated red/purple hematite.

Structure - The unit is generally sheared throughout, with minor gouge.
42.75 - 42.80m gouge @ 60°.
46.68 - 46.71 m gouge @ 70°
50.18 - 50.90 m gouge/shear 0° to core axis
55.40 - 55.90 m healed gouge.

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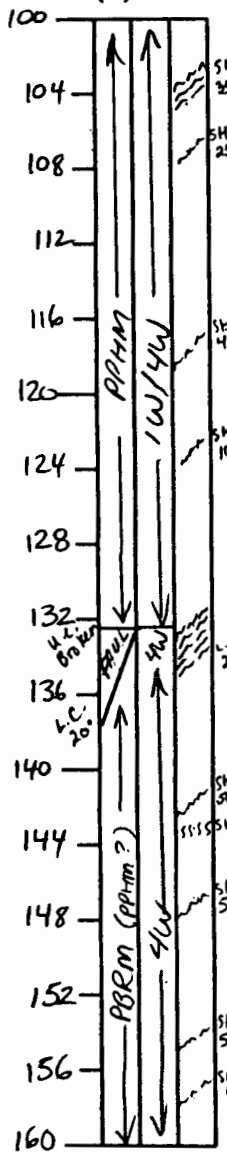
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 227
Logged By: I. Fraser
Date: Oct 17/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
					54.60 - 55.10 m shear @ 30°																	
60°				@ 61.80 m upper contact of PPHM-2 (dyke?) @ 45° to core axis.																		
	61.80	72.77	PPHM2	4	W	–	–	0	0.5	0	0	0	0	M	0	0	TR	TR	M	0	0	W

Lithology - The lithology is pale green to very light orange in colour (dominated by green colouration). The unit is highly porphyritic, containing 25-30% subhedral apple green plagioclase phenos (1-3 mm in length). Hornblende phenos comprise 8-12% beige 1-2 mm and generally euhedral. Sometimes the mafics appear frothy. Locally there appears to be a very weak alignment of plagioclase and mafic constituents. The groundmass is fine grained, plagioclase-rich and is pale green.

Alteration/Mineralization - Plagioclase phenocrysts are moderately to strongly sericite altered. The unit is cut by trace pyrite veinlets and contains trace to locally 1% finely disseminated pyrite. Moderate white to pinkish carbonate veins cut the dike-like body. Trace grey quartz-carbonate veins

Structure - 63.70 - 63.75 m gouge
66.03 - 66.05 m shear @ 35°
69.70 m shear 40°.
There are numerous mm-width slip planes which contain clay and trace gouge

@ 72.77 m lower contact of PPHM-2 @ 60° to core axis.

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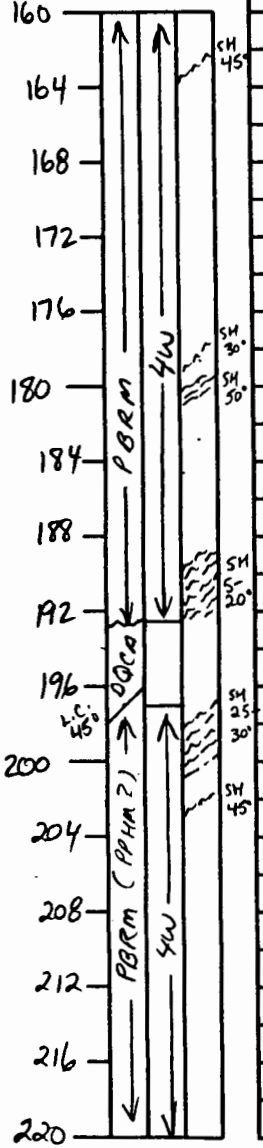
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 227
Logged By: I. Fraser
Date: Oct 17/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	72.77	132.40	PPHM	1	W	4	W	0.8	3	0	TR	0	W	W	0	0	W→M	W	VW	0	TR	W

Lithology - Pale orange Main Phase plagioclase hornblende porphyry. The unit is highly plagioclase physic. Plagioclase phenocrysts are quite prominant - comprising 35-40% subhedral, 1-3 mm orange phenos. Hornblende phenocrysts are rare and probably account for less than 5%. The unit appears to be quite homogeneous in texture. The groundmass is granular and pale orange (probably plagioclase-rich).

Alteration/Mineralization - The unit is cut by weak to locally moderate grey quartz veins. Quartz veins contain disseminated fine grained Rhdlchpyrite and pyrite. Host veins appear moderately mineralized. Disseminated fine grained pyrite is > veinlet pyrite. Occasional pyrite veins have thin sericite-quartz envelopes. Chalcopyrite is disseminated locally and also blebby. Trace chalcopyrite-pyrite veins. Very weak to trace white carbonate veins cut mineralization. Trace red/purple hematite veins. The unit is weakly to moderately Kspar altered. Potassium feldspar alteration is interstitial but it is patchy - with more sericite-altered areas inbetween.

Structure - 74.25 - 74.40 m Shear @ 40°.
75.00 m Shear 35° to C.A.
75.80 - 75.40 m Shear/gouge
79.15 m Shear/gouge 35° to C.A.
80.00 m Shear 30° to C.A.
80.15 - 81.25 m Shear 0° to C.A.
84.62 - 84.78 m gouge/shear @ 45°

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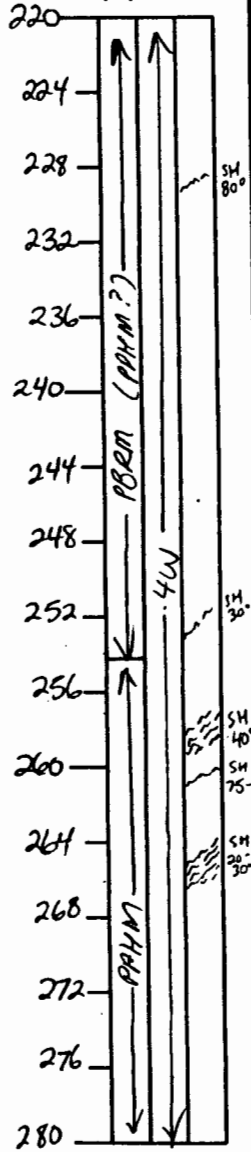
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 227
Logged By: T. Fraser
Date: Oct 17/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				90.68 m gouge @ 25°																		
				92.25 - 92.33 m healed gouge 5° to core axis																		
				94.15 - 94.45 m shear with gouge 30°																		
				95.38 m clay seam @ 70°																		
				97.90 - 98.05 m shear @ 50°																		
				103.57 - 104.24 shear 35-60° to C.A.																		
				106.70 - 107.05 m shear 25°																		
				111.53 - 111.86 m healed gouge																		
				113.64 m shear 0° to C.A.																		
				117.90 m shear 45°																		
				123.36 - 123.50 m shear 10°																		
				@ 132.40 m upper contact fault is broken																		
	132.40	134.50	FAUL	4	W	-	-	0.40	5	0	0	0	0	M	W	0	TR	W	W	0	0	W
				The majority of the unit is highly sheared Main Phase plagioclase hornblende porphyry similar to the unit described below. Sections of sheared area are black fine grained and appear to be altered rock flour. These black, highly sheared areas are brecciated and contain 1mm - 2cm fragments of PPHM. Locally clasts are lozenge-shaped (mylonitic). Pyrite is finely disseminated throughout, there are trace chalcopyrite blebs and weak pyrite stringers. Trace brecciated/ truncated quartz veins are rare.																	
				Structure - @ 134.50 m lower contact of FAULT at 20° to core axis.																		

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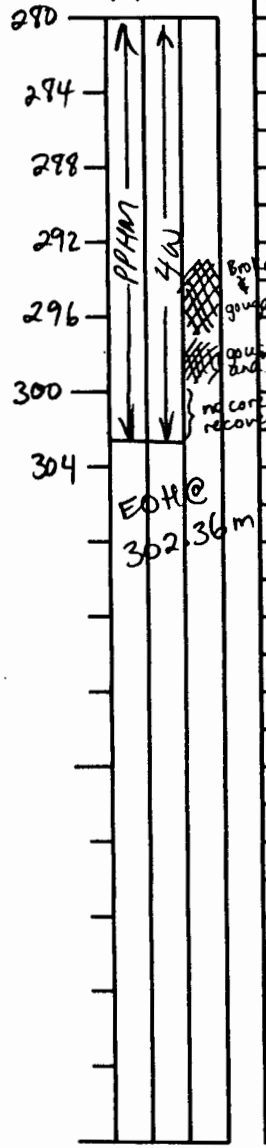
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 227
Logged By: I. Fraser
Date: Oct 18/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Py	Cb	A: (Qvp)	H:	Fr.
	134.50	192.63	PBRM (PPHM?)	4	W	—	—	<0.3	3.5	0	0	0	0	W	W	0	0	vW	TR	W→M	0	W

Lithology - Bleached, pale grey to buff coloured Main Phase unit. The majority of the interval appears to be brecciated containing 10-20% fragments. Clasts are subrounded to subangular, <2 cm on average. Several fragments are 5-15 cm in width. The unit is highly porphyritic (matrix as well as fragments). It is likely that the entire interval may be called PBRM (Main Phase breccia with PPHM matrix). But, locally, however there are sections which appear to be unbrecciated Main Phase. Plagioclase phenocrysts comprise near 30%; 1-3 mm (locally up to 15 mm). Plagioclase grains are subrounded, white to buff to grey in colour. Hornblende phenocrysts are obscured. Groundmass is pale grey to buff, fine grained.

Alteration/Mineralization - Plagioclase phenocrysts are weakly sericite-clay altered. Pyrite is finely disseminated throughout and occasionally blebby. There are very weak to trace pyrite veinlets. Trace white carbonate veins. The unit is characterized by bleached appearance and weak to moderate grey-coloured gypsum stockwork. Trace disseminated and veinlet sphalerite. Trace carbonate-sphalerite veins.

Structure - 142.15 m Shear @ 50° to C.A.
142.90 - 143.03 m Shear @ 0° to C.A.
147.40 m Shear @ 55° to C.A.
154.65 m Shear @ 50°.

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 227
Logged By: T. Fraser
Date: Oct 18/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				157.56 m shear @ 45°																		
				163.57 - 163.68 m gouge / shear @ 45° to C.A.																		
				178.78 m shear @ 30°																		
				180.68 - 181.13 m shear @ 50°.																		
				183.30 - 183.73 m sheared with gouge																		
				184.30 - 184.40 m gouge																		
				183.80 - 183.90 m RMAF with irregular contacts.																		
				189.08 m - 192.63 m sheared PBRM / PPHM, with minor gouge. Shears @ 5-20° to C.A.																		
				@ 192.63 m upper contact of DQCA - irregular																		
	192.63	196.93	DQCA	—	—	—	—	—	0.5	0	0	0	0	0	0	0	0	TR	W	0	0	W
				Lithology - Buff to tan coloured quartz - carbonate amygdaloidal dike. The dike has sharp contacts with the host rock. The dike is fine grained and has a granular appearance / texture with the hand lens. The unit appears to be aphyric. Amygdules are approximately 0.5 - 1.5 cm in diameter and are white carbonate - quartz filled. Amygdules are subrounded. The dike is cut by trace pyrite veinlets and weak carbonate veins.																	
				Structure - @ 196.93 m lower contact DQCA @ 45° to C.A.																		
	196.93	254.24	PBRM / (PPHM?)	4	W	—	—	0.3	3.5	0	0	0	0	W	VW	0	0	VW	TR	M (Gyp)	0	W
				Lithology - same as interval 134.50 - 192.63 m																		
				Alteration / Mineralization - same as interval 134.50 - 192.63 m but the unit is cut by moderate grey and orange gypsum stockwork. Trace chalcopyrite blebs / Trace sphalerite veins.																		

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 227
Logged By: T. Fraser
Date: Oct 18/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Mag	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Structure -				197.77 - 198.15 m DQCA - sheared and fragmented															
								198.60 - 201.38 m sheared 25-30° with small 5-10 cm DQCA sheared slices.															
								202.27 - 202.30 m shear @ 45°															
								228.75 m shear @ 70°															
								240.45 - 240.75 m DQCA - upper contact 40°, lower contact 35°.															
								245.80 - 246.32 sliver of DQCA at 0° to C.A.															
								252.73 m shear/gouge @ 30°.															
				@				254.24 m upper contact PPHM @ 40° (marked by small shear).															
	254.24	302.36	PPHM	4	W	-	-	0.3	4.5	0	TR	TR (MAG)	0	?	W	vW	0	TR	vW	TR	M (eye)	TR	M
				Lithology - Main phase plagioclase hornblende porphyry which is pale grey to deep orange in colour. The unit is moderately porphyritic, with 20-35% subhedral white to orange-coloured plagioclase phenocrysts. Plagioclase phenos average 2-3 mm in length. Hornblende phenos are obscured locally but may comprise up to 5% of 1-2 mm subhedral to euhedral dark-coloured (green?) phenos. The groundmass is pale orange to pale brown in colour. No core recovery 299.31 - 302.36 m.																		
				Alteration/Mineralization - The unit is characterized by moderate gypsum stockwork and moderate to locally strong orange hematite staining. Pyrite is disseminated throughout and locally blebby. Trace carbonate veins. Trace magnetite and magnetite-hematite veins. Trace grey quartz-chalcopyrite-pyrite ± magnetite veins near the end of the interval. There are very weak to weak pyrite veins. Plagioclase phenocrysts are weakly sericite to clay altered and may be hematite stained.																		

DRILL HOLE NO. 95 - 227

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 227
Logged By: T. Fraser
Date: Oct 18/95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
				Structure + 256.43 - 256.95 DMAF (pyroxene - biotite phyric) @ 20 - 30° to core axis.																		
				257.95 - 259.08 m sheared PPHM @ 40° to CA.																		
				260.55 - 260.70 m sheared 75 - 80°																		
				264.50 - 266.08 m sheared PPHM @ 20 - 30°																		
				293.26 - 296.88 m broken and gouged																		
				297.18 - 297.50 m broken rock.																		
				297.80 - 299.31 gouge and clay.																		
				299.31 - 302.36 No core recovery - beginning of fault?																		
		EOH @ 302.36 m																				

DRILL HOLE NO. 95 - 227

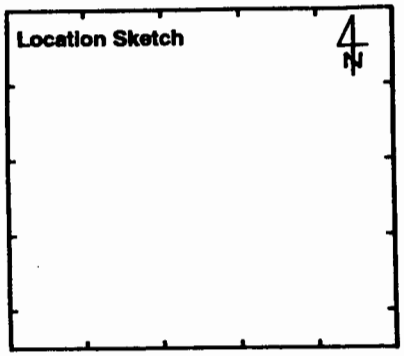
RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

DRILL HOLE NO. 95 - 228

AMERICAN BULLION MINERALS LTD.

Location Sketch

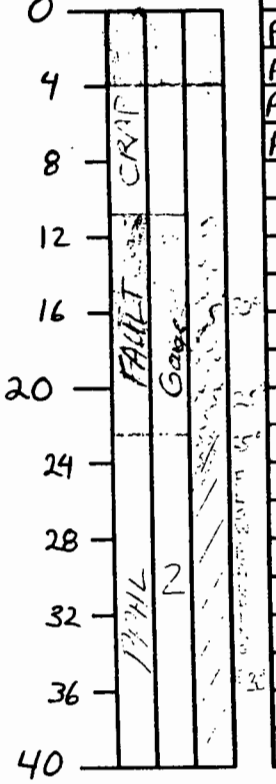


Grid Northing (m):	100 400
Grid Easting (m):	51 050
Elevation (m):	
Total Length (m):	148.44
Casing Depth (m):	3.96
Reduction Depth:	~~0~~
Collar Core Size:	HQ

Date Started:	Oct 17/95
Date Completed:	Oct 18/95
Logged By:	B. Thurston
Date Logged:	Oct 18/95
Data Entry:	
Entry Date:	
Casing (In/Out):	Out

Survey	Depth	Azimuth	Dip
1	148.44	182.5°	-61.5°

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	0.00	3.96	CASN																			
P	3.96	8.23	Float																			
P	8.23	11.28	Mud																			
P	11.28	22.40	FAUL	—	—	2	m	0	1.5	0	0	W	0	S	S	0	T	T	0	0	0	m
				Lithology: Limonite stained (yellow-orange) fault gouge material w/ rock fragments <1cm or >10cm. Rock is strongly sericitized & clay altered. Solid core (clay alt'd) from 19.50 → 21.70m is PPHL w/ increased py as diss & Trace veins + Carb. Strong shearing in this section w/ gouge on fractures. Qtz veins, actual broken/brecciated remnant Qtz in vein form is observed but no cpy assoc. w/ them. Limonite stain extends to 21m. Plag phenos → sericitized & clay alt'd are still visible down section py diss. ~95%. No cpy. Strong calcite pervasive in biotite altered fragments. No Calcite in Gouge or Late Phase Frags.																	
				Alt'n:																		
				Min'z:																		
				Structure:				* Mainly gouge & Rock contacts @ 25° → 30°. including L.C.														
								* Not Solid competent Rock.														
P	22.40	50.60	PPHL	2	S			0	4	0	0	W	0	S	m	0	0	T	T	0	0	m
				Lithology: Medium grey clolown to core w/ good porphyry texture preserved. in Plag & Mafic phenos. Core is Strongly fractured throughout w/																		

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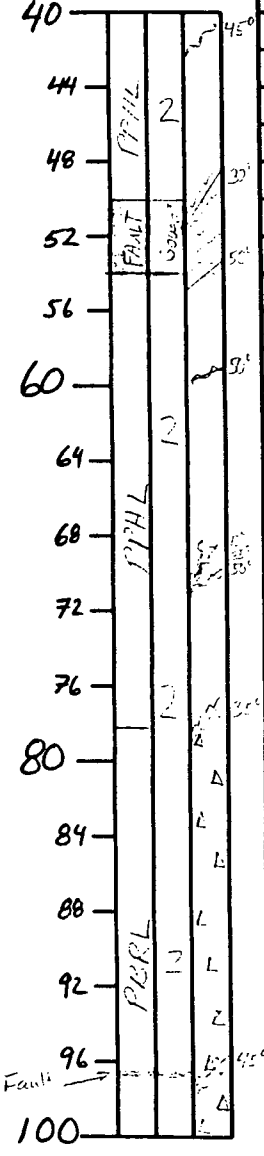
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 228
Logged By: B. Thurston
Date: Oct. 18/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
							gauge healing fractures on biotite (Alt'n?) envelopes on ds fracture filling.															
				Alt'n:			Strong Sericite alteration ± mod. clay alteration. Plag & Mafic Phano's															
				Min'z:			are both cream coloured & very soft. Py is diss. throughout and is less															
							(~5%) observed filling fractures & as veins. Carb. is also Trace as (															
							fracture filling. Calcite is observed strong pervasive in banded areas ±															
							biotite alt'n in other areas No calcite is observed. No cpy.															
				Struct:		*	Flow banding is consistant @ 30° to C.A. throughout section.															
							Biotite is alt'n assoc. ± this banding.															
						*	Mod. Fracturing & shearing in this section ± gauge on Fractures															
						*	Shears are 25°→45°.															
						*	L.C. ± fault is @ 32°															
						*	Strong 10°→20° Fracture/Shear system down section.															
P	50.60	54.20	FAUL	–	–	2	S	o	3.5	o	o	W	o	S	S	o	o	o	T	o	o	W
P	54.20	62.00	PPHL	2	S			o	5	o	o	W-M	o	S	M	o	o	T	T	o	o	M
				Lithology:				Fault is PPHL material ± gouge ~ 35%.														
						*	U.C @ 32° → L.C. @ 50° → Shearing parallel to C.A. ± in.															
							PPHL after fault has strong healed fracturing / shearing ± (															
							mod. biotite along fractures & pervasive. Carb. fragments are															
							scattered throughout (once carb. veins). Bio. Alt'n is patchy.															
				Structure:		*	Shearing & Fracturing @ 10° or 11 to C.A. throughout.															
						*	Strong 50° SH's + gouge @ 62 m.															
S	62.00	78.20	PPHL	2	S			o	5	o	o	o	o	S	M	o	o	T	o	o	o	W
				Lithology:				Very homogeneous med. grey porphyritic PPHL. Weak → Mod. trachytic														
							texture of Phenocrysts.															
				Alt'n:				Strong Ser + Py + Clay Alt'n. pervasive.. No Calcite. No biotite patches.														
				Min'z:				No Cpy. Py ~ 95% disseminated ± trace veinlets @ ~55°→60° to C.A.														
				Structure:		*	SH'ing @ 55°→50° upsection ± 35° & 10° downsection ± minor gouge.															

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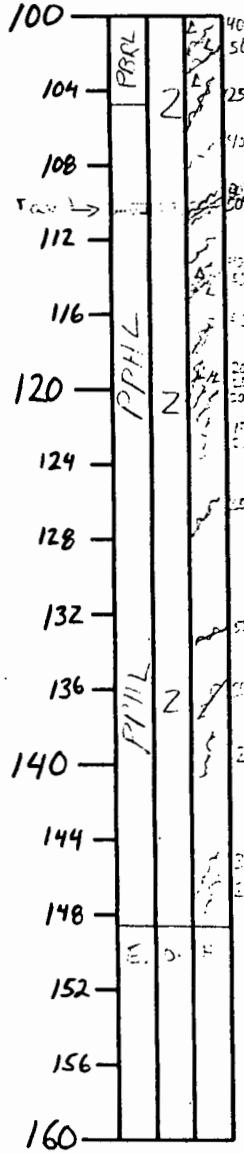
AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 228
Logged By: B. Thurston
Date: Oct 18/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Alteration Facies Typ	Alt. Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Structure cont'd:				* Solid homogeneous core.														
								* No stockwork of any kind throughout.														
								* L.C. w/ PBRL @ 35° shear + gouge sharp.														
P	78.20	104.70	PBRL	2	S			o	5	o	o	o	o	S	m-S	o	o	T	T	o	o	W
				Lithology:				Same PPHL material described above makes up the matrix & fragments of this breccia unit. The matrix is slightly darker gray & less porphyritic in places. Fragments are generally 1→3 cm but larger & smaller ones occur. Frags are subangular mainly & constitute > 20% of the rock unit.														
				Alt'n:				Some Ser + Py + Clay alteration pervasive throughout unit.														
				Min'z:				Py diss. ~ 5%! No Gyp. No calcite.														
								Trace Carb. & Py as fracture fillings.														
				Structure:				* Fragmental.														
								* Minor shearing ± gouge ± clay alteration throughout. @ 15°-20°														
								* Fault @ 96.80→ 97.35m @ 45° u.c. & L.C.														
								* Carb. + Shearing + fewer & indistinct fragments (gradational contact) from 100→104.70 m SH's @ 40-50°, 50°, 0°-5°, 25°.													
P	104.70	148.44	PPHL	2	S			o	6	o	o	T	o	S	m	T	o	vV	T	o	o	W-m
				Lithology:				Same PPHL material described upsection. Grey, med porphyritic, plag phenos ser + clay alt'd better preserved than matics.														
				Structure:				* Strong to mod. Shearing From 110→120m w/ breccia + Gouge + Clay alteration @ 80°, 55°, 50°, 40°, 45° & down @ L.C. 30°, 35°, 25°.														
								* Weak Shearing from 120→E.O.H. @ 15°→50° common @ 35°.														
								- Biotite on some fractures @ 124→131m.														

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 229

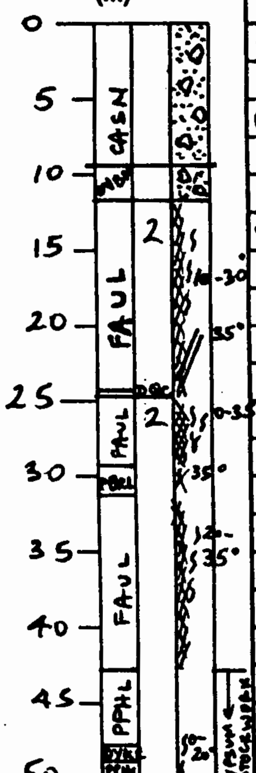
Location Sketch	
	N

Grid Northing (m):	99100
Grid Easting (m):	49100
Elevation (m):	
Total Length (m):	197.21
Casing Depth (m):	9.14
Reduction Depth:	—
Collar Core Size:	NQ

Date Started:	OCT. 18
Date Completed:	OCT. 19
Logged By:	G. ALLEN
Date Logged:	OCT. 19
Data Entry:	
Entry Date:	
Casing (In/Out):	OUT

Survey	Depth	Azimuth	Dip
G.A.	COLLAR	180	-60
S-S	99.67	177½	-60
S-S	197.21	176½	-61

Graphic Log (m)



P S	Interval From	To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	0	9.14	CASN																					
P	9.14	9.30	OV																					
				LITHOLOGY: Dark grey wacke boulder																				
P	9.30	12.00			No RECOVERY																			
P	12.00	24.35	FAUL	2	M				A-S						M								S	
				LITHOLOGY: Medium blue-grey late phase breccia sheared to rubble + gouge: Coarse-grained and crushed rock with a clay matrix. A few short pieces up to 10 cm with clear texture: Medium-grained feldspar phyric fragments (subangular to subrounded) to 2 cm with 30% blue-grey subhedral plag phenos to 2 mm in a lighter grey groundmass. Some frags with a dark blue-grey selvage alteration rim to 1 mm. Dark blue-grey aphanitic frags. to 5 mm. Matrix of vaguely fsp phyric med-grained intrusion.																				
				ALTERATION: Pervasive sericite - carbonate.																				

DRILL HOLE NO. 95 - 229

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GEOLOGIC DRILL LOG

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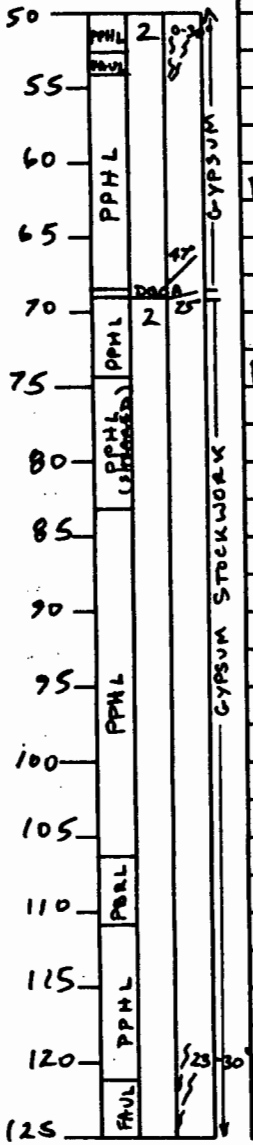
DRILL HOLE NO. 95 - 229
Logged By: G. ALLEN
Date: OCT. 12



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
				MINERALIZATION: 4-5% fine-grained disseminated PY									PY										
				STRUCTURE: Sheared 10-30° CA.																			
P	24.35	24.70	DQCA						T													M	
				LITHOLOGY: Medium greyish-grey aphanitic dyke with 5% calcite amygdules to 2 mm. Contact - 35° (lower).																			
P	24.70	29.30	FAUL	2	M				4-5					M								I	
				LITHOLOGY: Crushed gouge breccia (late phase) at 12.0 - 24.35. Shearing subparallel to 35° CA.																			
P	29.30	31.78	PBRL	2	M				4-5					M								M	
				LITHOLOGY: Medium blue-grey medium-grained feldspar phyric intrusive with 15% subangular lithic fragments to 1 cm. Fragments bounded by a) light grey fine to medium-grained feldspar porphyry (intrusive) b) Dark grey-blue-grey very f-g feldspar porphyry (intrusive breccia																	
				ALT: Pervasive silicate/carbonate.																			
				MIN: 4-5% disseminated PY.																			
				STRUCTURE: Sporadic crush, shear, gouge in shears to 5 cm wide 35° CA																			

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GEOLOGIC DRILL LOG

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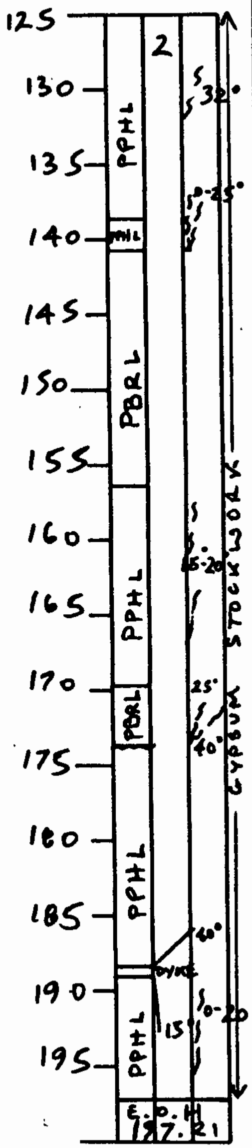
DRILL HOLE NO. 95 - 229
Logged By: G. ALLEN
Date: OCT. 19

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
P	31.78	43.05	FAUL	2	M				4						M								S	

LITHOLOGY: As unit above sporadically crushed + sheared to gouge in intervals to 30cm

MIN: 4% dissem. PY

ALT: Pervasive sericite / carbonate.

STRUCTURE: 020-30° CA shearing.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
P	43.05	47.85	PPHL	2	M				5-6						M						W		W	

LITHOLOGY: Medium grey to blue-grey inhomogeneous medium-grained feldspar phyric intrusion with 30% subhedral to euhedral white to grey fsp prisms to 2mm. Some short irregular intervals of darker blue-grey very f-g later phase intrusion. Whole interval weakly sporadically crushed. Texture commonly obscured by alt + shear.

ALT: Pervasive sericite - carbonate alt.

MIN: 5-6% f-g dissem PY.

STRUCTURE: Weak shearing 40-45° CA. Weak gypsum stockwork with widely spaced (5-10/m) stringers up to 3mm generally 20-50° CA.

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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 229
Logged By: G. ALLEN
Date: OCT. 19

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
P	47.85	48.55	DYKE	2	M				4-5						M						W		W	
P	48.55	52.45	PPHL	2	M				5-6						M						W		W	
P	52.45	54.30	FAUL	2	M				5						M						W-M		W	

47.85–48.55 DYKE

LITHOLOGY: Medium blue-grey very f-g fsp phyric dyke? with distinct banding at 73° CA. Core of dyke is a breccia with vague blue-grey subangular frags. to 5 mm. Looks like a f-g to c-g sediment but setting suggests otherwise. Probably a late stage intrusion. Chilled contacts. Upper contact // to gypsum stringer? at 60° CA. Lower contact (banding) 35° CA. Shallower of two contacts probably true.

MIN: 4-5% very f-g PY. (Dissem)

48.55–52.45 PPHL

LITHOLOGY: As above dyke. Vague lithic clasts to 2 cm in short intervals.

MIN: 5-6%. f-g diss PY.

STRUCTURE: Sporadically weakly crushed. Shearing subparallel to 20° CA.

52.45–54.30 FAUL

LITHOLOGY: Late phase as above but sheared + crushed to f-g sandy material with some frags to 3 cm cemented by clay gouge.

STRUCTURE: Shearing subparallel to 30° CA. Gypsum stringers to 5 mm parallel shearing.

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DRILL HOLE NO. 95 - 229
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Date: OCT. 19

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	54.30	68.22	PPHL	2	M				5					M					VN	W		W

LITHOLOGY: Inhomogeneous medium blue-grey to dark grey mottled fsp phyric intrusive. More homogeneous parts are a medium-grained feldspar phyric intrusive with 30% generally subhedral light blue-grey fsp phenos to 2 mm in a darker grey f-g grn. Texture obscured by alteration. Some intervals with angular to subrounded lithic fragments (feldspar porphyry) to 2cm of same material discerned above. Some darker blue-grey vf-f-g intrusive sporadically brecciating host in intervals to 30cm. Rare blue-grey fragments to 1cm apparently typical of host phase (B. Thurston).

ALT: Pervasive sericite / carbonate.

MIN: 5% f-g disem PY. Trace F-G sphalerite + galena in carbonate stringers

STRUCTURE: Wide gypsum stockwork (4-10/m; generally 1-3 mm wide) 15-40° CA most common 20-40° CA. Min shearing 40° CA

| P | 68.22 | 69.00 | DQCA | | | | | | | | | | | W | | | | | W | | | |

LITHOLOGY: Medium greenish-grey to dark blue-grey (along fractures) aphanitic dacite with 5% dark grey-grey subhedral grains (fsp?) 0.5 mm & rounded blebs calcite amygdules to 4 mm. Blue-grey envelopes & patches related to fractures are probably due to sericite alt.

STRUCTURE: Upper contact 47° CA. Lower contact irregular 75° CA. No gypsum observed ∴ post gypsum stockwork.

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Date: OCT. 19

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	69.00	74.68	PPHL	2	M				4-5					M					VW	W		W

LITHOLOGY: As above DQCA. medium-grained fsp phyric intrusion cut by darker blue-grey f-g later intrusion in intervals to 20cm.

STRUCTURE: lower part of interval weakly crushed. Gypsum stringers subparallel CA.

| P | 74.68 | 83.47 | PPHL | 2 | M | | | | 5 | | | | | M | | | | | VW | W | | W |

LITHOLOGY: As above. Unit separated due to sporadic crush zone + shearing. Not strong enough shearing to call a fault. Shearing subparallel CA. Gypsum stringers to 5mm follow shearing.

| P | 83.47 | 106.63 | PPHL | 2 | M | | | | 4-5 | | | | | M | | | | | VW | W | | W |

LITHOLOGY: As 54.30-68.22. Some intrusive breccia intervals + dark blue-grey dyke/s, but mostly med-grained fsp phyric intrusion.

ALT: Pervasive sericite, carbonate

MIN: 4-5% f-g disem PY

STRUCTURE: 2-10 <1-5mm gypsum stringers/m, 20-70°CA, mostly 20-40°CA.

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GEOLOGIC DRILL LOG

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Logged By: G-ALLEN
Date: OCT. 19

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	106.63	111.18	PBRL	2	M				5-6					M					VW	W		W

LITHOLOGY: Dark, to medium brown - grey f-g feldspar phyric matrix hosting ~ 50% limeted fragments (subangular to rounded) up to 8cm, average 1-2cm. Fragments are f-g brown-grey fsp phyric intrusive fragments. Slightly medium-grained fsp phyric

ALT: Pervasive silicate, carbonate

MIN: Fine-grained disem PY, ~ 5-6%

STRUCTURE: 5-10 1-2mm gypsum stringers / m. Unoriented.

| P | 111.18 | 121.70 | PPHL | 2 | M | | | | 5-6 | | | | | M | | | | | | M | | W |

LITHOLOGY: As 54.30 - 68.22. Inhomogeneous due to limeted intrusive. Medium brown-grey m-g fsp phyric intrusive sporadically & irregularly cut by f-g darker brown-grey intrusive. Few distinct fragments as in interval above.

ALT: Pervasive silicate / carbonate

MIN: 5-6% f.-g. disp PY.

STRUCTURE: Medium gypsum stockwork 8-12 gypsum stringers / m up to 5mm at all angles to CA but most commonly 30-50° CA. Unoriented.

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Date: OCT. 19

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	121.70	125.05	FAUL	2	M				5-6					M						W		W

LITHOLOGY: As above. Unit separated because of sporadic shearing + crush. Very wide fault with minimal movement. 23-30° shearing. Gypsum stringers parallel shearing.

P	125.05	138.3	PPHL	2	M				6-7					M				VW		W		W

LITHOLOGY: As above show. Mottled medium blue-grey medium-grained fsp phyric intrusive (predom.) cut by minor amounts of darker blue-grey f-g intrusive. Selvages indistinct suggesting that the later intrusive is part of the same intrusive event as the host. Both rock types altered to sericite / chlorite.

MIN. 6-7% f-g diss PY.

STRUCTURE: 5-15 <1 - 5 mm gypsum stringers / m. 60-70° CA. Minor shearing / crush zone 32° CA.

P	138.3	140.77	PPHL	2	M				6-7					M						W		W

LITHOLOGY: As above. Unit sporadically crushed or sheared throughout. Very wide fault. 0-25° CA.

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Date: OCT. 19

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	140.77	156.55	PBRL	2	M				6-7						M				VW	VW	W		W

LITHOLOGY: Medium blue-grey generally subrounded medium-grained fsp phyric intrusive fragments to 10cm average 1-2 cm. Sporadic 5-10% in a darker blue-grey fine-grained fsp phyric matrix

ALT: Pervasive sericite - carbonate.

MIN: 6-7% f-g disem PY. Minor stringer-related PY.

STRUCTURE: Weak gypsum stockwork.

P	156.55	169.77	PPHL	2	M				5						M				VW	VW	W		W

LITHOLOGY: Relatively homogeneous vaguely med-grained fsp phyric intrusion. Medium blue-grey. ± 30-40% 1-2 mm subhedral white to light grey fsp phenos in a darker grey grn. Textures largely destroyed by alt. Probably Hb phenos also but not distinct from fsp.

ALT: Pervasive sericite - carbonate.

MIN: 5-7% f-g disem PY. Minor fracture-related PY.

STRUCTURE: Weak shearing 15-20° CA.

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Logged By: G. ALLEN
Date: OCT. 19

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	169.77	173.55	PBRL	2	M				5					M				VW		W		W

LITHOLOGY: Lite phase medium-grained fsp phyric intrusion as above with > 50% intervals of intrusive breccia with dark grey matrix of f-g feldspar phyric intrusion w 50%. <1 - 10cm (average <1-2cm) subangular to rounded m-g lithic frags. Some aphanitic frags also. Three phases intrusion.

ALT: Pervasive sericite - carbonate.

MIN: 5-7% f-g diss & minor fracture-related PY.

STRUCTURE: Minor shearing subparallel CA. Shear along lower unit boundary 40° + 25° CA. Weak gypsum stockwork.

| P | 173.55 | 187.90 | PPHL | 2 | M | | | | 5 | | | | | M | | | | | | W | | W |

LITHOLOGY: As 196.55 - 169.77

ALT: Pervasive sericite - carbonate.

MIN: 5-7% f-g diss PY.

STRUCTURE: Weak gypsum stockwork.

| P | 187.90 | 188.80 | DYKE | 2 | M | | | | 5 | | | | | M | | | | | | W | | W |

LITHOLOGY: Medium to dark blue-grey vy f-g vaguely fsp phyric dyke. Aphanitic bands.

Upper contact shrnd 40° CA.
Lower contact: Banded 15° CA. Flow-banding / chill.

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 229
Logged By: G. ALLEN
Date: OCT. 19

Graphic Log (m)

P	Interval		Rock	Alteration Facies				Mineralization					Alteration Mineralogy					Structure - Veining						
S	From	To	Code	Typ	Int.	Typ	Int.	Cp	Py	Bn	Hm		Bi	Kf	Ms	Cy	To	Qz	Py	Cb	A:	H:	Fr.	
P	188.80	197.21	PPHL	2	M				5						M						W		W	
		E.O.H.																						

LITHOLOGY: Mix of medium - grained vaguely fsp phyric intrusion + intrusive breccia with fragments generally < 1cm. As units above.

STRUCTURE: Sporadically sheared throughout 0 - 20° CA. One at 40° CA. Crush zones to 0.5 m. Weak gypsum stockworks. Stringers to 5mm generally parallel shears.

197.21 E.O.H.

DRILL HOLE NO. 95 - 229

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GEOLOGIC DRILL LOG

DRILL HOLE NO. 95 - 230

AMERICAN BULLION MINERALS LTD.

*Lost 20 rods & core tube

Location Sketch — 4 NW

Grid Northing (m):	100 500
Grid Easting (m):	50 950
Elevation (m):	
Total Length (m):	299.31m
Casing Depth (m):	3.66
Reduction Depth:	
Collar Core Size:	HQ

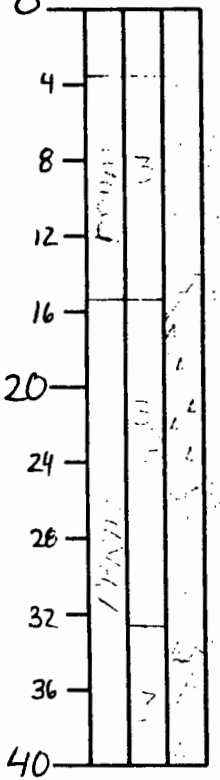
Date Started:	Oct. 18/95
Date Completed:	Oct. 22/95
Logged By:	B. Thurston
Date Logged:	Oct 19/95
Data Entry:	
Entry Date:	
Casing (In/Out):	* Lost Rods & Tube

Survey	Depth	Azimuth	Dip
1	152.4	162.5°	-60°
*S.S.	taken	pulling Rods up	
∴ possible	mistake on	drillers part. on surface	

* Not Correct Lots the alte magnetite be no mag.

180°@ -60°

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	0.00	3.66	CASV																			
P	3.66	15.65	PPHM	3	m			.45	3.5	o	o	o	o	m	W	o	T	VW	T	o	o	m
				Lithology:			Typical 3 altered PPHM. Light beige, grey, green colour to mottled core. Porphyritic texture is mod w anhedral plag phenos. Trace Qtz veins w py cores ± carb. Carb. mainly as fracture fillings & in Qtz veins. No calcite. Limonite to 7m.															
				Altn:			Ser + Py blebs & envelopes on Qtz-Py, Py veins & fractures.															
				Mnz:			Diss. Cpy only visible when core is freshly broken. Py diss > fractures & veins (~40%).															
				Structure:		*	Blocky throughout.															
						*	L.C. w 20cm Fault @ 35°?															
P	15.65	32.61	PBRM	3	m	4	?	.45	5	o	T	T	o	m	m	?	o	W	W	o	o	m
				Lithology:			Same material as above but patchy sections of yellow-green weakly porphyritic fine grain PPHM occure as sections 1-in the Breccia unit. The Fragments make up slightly >10% of the rock and comprise rock fragments of the rock described above.															
				Mnz:			Cpy is observed diss. in fragments as well as matrix & in Py veins. Py is diss ≈ to veins & fractures. He is diss.															

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 230
Logged By: B. Thurston
Date: Oct. 19/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	mdy	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	32.61	102.00	PBRM	3	S			.36	6	o	o	T	o	o	S	W	?	T	vW	vW	o	o	W

Lithology: Medium to dark grey/grey rock. Porphyritic texture is mainly blown out; w/ remnant to unhedral plag. phen's, cream to green in colour.

Alt'n: Matrix is strongly sericitized + diss, bleby & patchy Py. Trace Qtz veins usually discontinuous or in fragment form. Fragments are commonly >2cm rounded Mottled PPHM the same as matrix and make up >25% of rock. Carb. occurs mainly as fracture filling and w/ Py veins. Calcite is not observed. Py is described above diss?? Veins & fractures (~35%). Cpy is diss. 90% & in Py fractures. Moly is diss in matrix & in 2mm wide Qtz veins. No Mag & He.

Structure:
- Breccia. Fragments >25% usually >2cm.
- Mainly small shears throughout this unit <1cm ± gouge most commonly @ 50°→60°.
- U.C w/ PBRM/SHZN is gradational to fairly homogeneous PBRM unit.
- Carb. Breccia Veins @ 20°→30°

S	102.00	168.00	PBRM	3	m	1	T	.36	4.5	o	T	T	T	T	S	m	T	T	vW	W	T	T	W

Lithology: Same rock as above only core is more buff to light grey & beige in colour. Also fragments are mixed w/ those described above and Aphanitic brown/beige frags w/ diss Py. Porphyritic frags described above are usually >3cm rounded to more irregular in shape w/ poor porphyritic texture.

Alt'n: Same as above w/ small potassic patches consisting of diss. → patchy He up to 2%, No Magnetite & pervasive mod. K-spar replacing matrix (plag) & some plag phen's. Calcite is weak pervasive in Potassic areas but not observed elsewhere in the matthed phyllic.

Min'z: Py is diss 70% & in fractures, veins & patches 30%. Cpy is assoc. w/ Py usually diss. but sometimes in Py blebs. Moly is observed only in Qtz veins as very tiny diss.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 230
Logged By: B. Thurston
Date: Oct. 20/95

Graphic Log (m)

100 — 104 — 108 — 112 — 116 — 120 — 124 — 128 — 132 — 136 — 140 — 144 — 148 — 152 — 156 — 160

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Moly MAG	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Structure:		*	Carb. Breccia veins range from 2 → 10cm throughout this unit.																	
						*	Very few shears, less significant shears. (or none)																
						*	No actual contact w/ last PBRM section just a colour change & different fragment characteristics.																
						*	Frags are usually >2cm up to 20cm & ~ 20% of Rock.																
S	168.00	230.75	PBRM	3	W	1	W	.45	2	T	2	T	vW		M	W	T	T	0	vW	T	T	W
				Lithology:			Combination of last two PBRM units w/ less aphanitic fragments but increase in patchy & diss. red, black & specular hem. alt. as well as decreased Py content both due to the potassic alteration? Frag's still are irregularly shaped & constitute 25→30% of rock. Qtz vein fragments have																
				Min:			diss cpy but mainly cpy is diss in groundmass. Bornite is observed rimming cpy → as diss. and in fractures & Qtz veins. Py is diss. Moly is in Qtz material diss. He is described above. Mag. is trace & in areas of concentrated He. No calcite.																
				Alt'n:			K-spar is pervasive in fragments, in matrix & on Fractures. Biotite is observed as phenocrysts & a brown (stain?) colour, possibly very fine biotite. Bio and/or To is observed as envelopes on fractures. He is diss < patchy > veins. Ser is pervasive in matrix & fragments.																
				Structure:		*	30% Fragments.																	
						*	No major structures.																	
						*	3cm 35° SH range is possible U.C. w/ last PBRM unit however it is more likely gradational as areas w/ increased He & Potassic alt'n were observed above.																
						*	Fragment on PPHM Raft from 210.40 → 217.2m L.C. @ 60°, U.C. irregular.																
						*	Carb. fracture filling increases in @ beginning of PPHM raft @ 213.50m and before L.C. w/ Sheared/brecciated PPHM @ 230.75m @ 20°.																

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 230
Logged By: B. Thurston
Date: Oct. 21/95

Graphic Log (m)

160 — 164 — 168 — 172 — 176 — 180 — 184 — 188 — 192 — 196 — 200 — 204 — 208 — 212 — 216 — 220

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	230.73	242.35	PPHM	4	m	1	w	+3.0%	3	o	T	w	w	s	w	o	s	vw	T	o	To	w

Lithology: Green ± Cream colour to core. Porphyry texture is weak. Mottled texture of green Sericitized blebs ± envelopes. Matrix is mainly Cream colour, Clay ± Carb ± ser altered. Strong qtz veins throughout however +80% of them are just fragments or discontinuous due to strong shearing + brecciation that has affected this unit. This unit is not called PBRM because there are very few actual rounded discernable fragments ± frags are only of Qtz vein ± matrix material. If any thing this is a healed SHZN of PPHM.

Alt'n: Strong Ser ± clay altn; K-sp pervasive weak. Bio diss.'s/phenos ± pervasive. Hem diss and as rare veins. No Mag.

Min: Bornite? Py is mainly in Qtz veins. Cpy is +85% in Qtz veins as diss. and micro-fracture fillings. Possible bornite rimming Cpy but difficult to tell w/ Hem ± fine grain nature. Calcite is trace in Carb. fracture fillings.

Structure: * Healed Shearing/brecciation.
* Sol.d competent core
* L.C. w/ Fault strong @ 35°.

P	242.35	299.31	FAUL	4	m	1	w			T	1.5	vw	vw	s	s	o	m-s	o	vw	o	vw	m

Lithology & Structure:
* Fragments of above material (230-242m) in gouge. Approx 50% of the interval is good gouge material, Cream to light green, w/ fragments ranging in size from 1mm to > 5cm, some rounded ± some angular. Most small fragments are Qtz vein Material ± the larger ones are host rock described above w/ Qtz veins/stockwork. 1→3% of fragments are Carbonate.
* Other 50% of unit is large fragments or rafts of PPHM units that are strongly fractured w/ gouge ± shearing.
* Shears strong @ 35° w/ 20°→40° shears observed.

Min: - Cpy + Bornite 85% diss. in Qtz Veins, less diss. in matrix of Sold core.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 230
Logged By: B. Thurston
Date: Oct. 22/95

Graphic Log (m): 220, 224, 228, 232, 236, 240, 244, 248, 252, 256, 260, 264, 268, 272, 276, 280

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	

Minz. Cont'd: Py diss in Qtz veins & less in matrix. Hematite is red to black (martite) from Magnetite. Qtz veins become smaller (~<1cm thick) down section w a dark grey colour increased Hematite as vein cores & diss. as well as an increase in the Bo:Cpy ratio. Due to hematite & fine grain diss nature of Bornite the amount of Bornite contributing to the overall Cu grade is not estimated.

Structure: * down section the amount of gouge decreases & the amount of Solid core w minor gouge, fractures & clay altered surfaces ± Blocky nature increases. ∴ the area down section could be called SHZN w small faults cutting it.

☆ Hole ended early. 20 rods & core tube were stuck down the hole. The drilling was not difficult or tight and could have continued.

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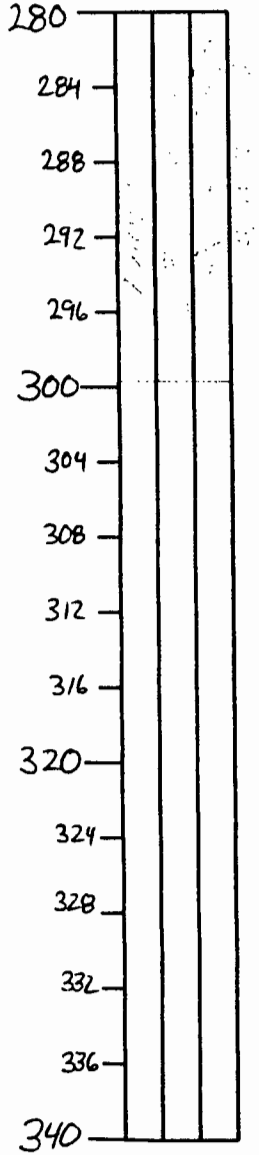
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 230
Logged By: B. Thurston
Date: Oct. 22/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	

DRILL HOLE NO. 95 - 230

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231

Location Sketch (N)

Grid Northing (m):	99 141
Grid Easting (m):	48 958
Elevation (m):	
Total Length (m):	297.79
Casing Depth (m):	9.14
Reduction Depth:	–
Collar Core Size:	NQ

Date Started:	OCT. 19
Date Completed:	OCT. 21
Logged By:	G. ALLEN
Date Logged:	OCT. 20, 21, 22
Data Entry:	
Entry Date:	
Casing (In/Out):	OUT

Survey	Depth	Azimuth	Dip
G.A.	COLLAR	180	-60
S-S	152.4	179½	-62½
S-S	297.79	182½	-64

Graphic Log (m): 0–50; CASN 0–9.14; FAUL 9.14–50; 4/1; POOR RECOVERY; RUBBLE

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	0	9.14	CASN																					
P	9.14	55.78	FAUL	4	M	1	M		4-5					M	M								I	

LITHOLOGY: Grey to brownish medium-grained feldspar phyric intrusion. 30% vague to distinct anhedral to euhedral greenish-grey to cream-coloured feldspar phenocrysts to 2 mm. Some parts have distinct pinkish altered hornblende phenos to 2 mm. Possible late phase but potassic alt suggests PPHM.

ALT: Pervasive sericite-carbonate. Sporadic potassic alt. Yellow stain.

MINERALIZATION: 4-5% disseminated PY.

STRUCTURE: Whole interval rubble. Very poor recovery. Fragments average 1-2 cm.

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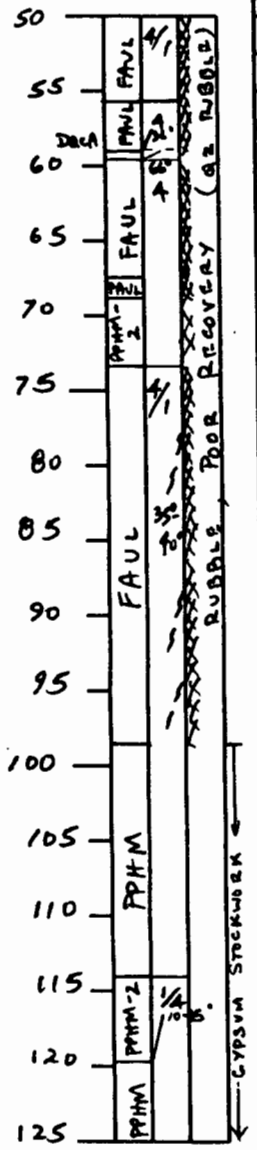
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: Oct. 20



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	55.78	58.95	FAUL	4	M			0.6	5					M			T	VW	VW			S

LITHOLOGY: Medium blue-grey medium-grained feldspar phyric intrusive with 30-40% 1-2 mm subhed blue-grey feldspar phenos. Intrusive largely obscured by alt + shearing. Probable PPHM

ALT: Pervasive sericite/carbonate.

MINERALIZATION: 5% disem & minor fracture-related PY. 0.6% CP disem. or on fractures.

STRUCTURE: Most of interval rubble. Some fragments adjacent dyke show sub-parallel CA. Trace quartz stringers to 1 cm.

P	58.95	59.55	DQCA																			M

LITHOLOGY: Medium greenish-grey to blue-grey (along fractures) aphanitic with sporadic 5% calcite amygdules to 2 mm.

Contacts shown: Upper 36° CA
Lower 66° CA

P	59.55	67.50	FAUL	4	M			0.6	5					M			W					S

LITHOLOGY: Mottled dark blue-grey to brownish-grey medium to f-g feldspar phyric intrusive. Main phase (PPHM)

ALT: Pervasive sericite - carbonate

DRILL HOLE NO. 95 - 226

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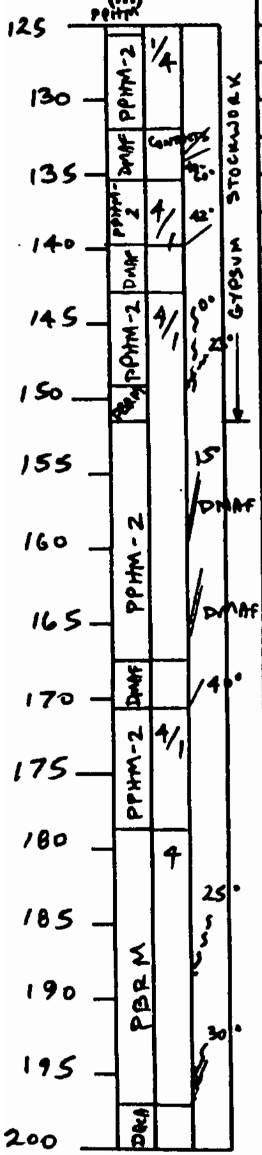
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: OCT. 20

Graphic Log (m)



MINERALIZATION: 5% f-g dissem + lesser fracture-related PY. 0.6%
CP dissem with PY + in quartz stringer rubble.

STRUCTURE: Sheared to rubble. Blocky core. Poor recovery. Fragments
blue-grey quartz indicating probable weak stockwork

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	67.50	68.88	FAUL	4	M	1	M		1		I			M	M								S	

LITHOLOGY: light brownish-grey homogeneous medium-grained fsp
phyric intrusion. 30-40% subhedral to anhedral cream blue-grey
fsp phenos to 2mm. Some pinkish phenos could be hornblende.
Could be PPHL or PPHM-2. Potassic alt suggests PPHM-2

ALT: Pervasive sericite/carbonate.
compared to unit above.
MIN: Distinct lack of PY. ~1-2% f-g dissem PY. 2% f-g reddish
specs of hematite.

STRUCTURE: Blocky core.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	68.88	73.46	PPHM-2	4	M	1	M		1-2		2			M	M								M	

LITHOLOGY: Medium brownish to greenish-grey medium-grained feldsparphyric
intrusion with 30% anhedral stubby to prism-shaped cream to
grey-coloured fsp phenos to 4mm (average 1-3mm).

ALT: Pervasive sericite/carb. Moderate yellow stain, ∴ potassic.
MIN: 1-2% vf g dissem PY. 2% dark reddish-grey specs of hematite.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: OCT. 20

Graphic Log (m): 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250, 255, 260, 265, 270, 275 — DQCA; FAUL; PORM; DYKE; FAUL; PPHM-2; PPHL (PBRL); 4; 4; 2; 30°; 60; 30° BAND; 20; 15; 15-20°; 45-60; GYPSUM STOCKWORK

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	73.46	98.57	FAUL	4	M	1	M	0.6	5		1-2			M	M			W				T	S	
P	98.57	114.35	PPHM	4	M	1	M-S	0.5	4					M	M			W	VW	W	W		W	

STRUCTURE: Blocky core. Shearing (weak 25° CA)

73.46 – 98.57 FAUL

LITHOLOGY: Mottled dark blue-grey to brownish-grey (pink/brown) medium-grained feldspar phyric brown to greenish-grey stubby to prism-shaped fsp phenos to 2 mm (average ≤ 1 mm) ~ 30-40%. Texture largely obscured by alt. PPHM.

ALT: Pervasive sericite/carbonate. Sporadic potassic alt judging by colour.

MINERALIZATION: 5% disseminated and lesser fracture-filling PY. Sporadic 0.2->1% CP dissem & in quartz stringer fragments. Rare [illegible] CP to 5 mm x 1 cm.

STRUCTURE: Entire interval rubble. Some crush/gouge zones. Recovery very poor. Chunks of quartz in rubble suggests at least a weak quartz stockwork. Sheared 40° CA, 35° CA.

98.57 – 114.35 PPHM

LITHOLOGY: Probably as above. Mottled pinkish-brown to dark greenish-grey fine to medium-grained plutonic with 40% subhedral to euhedral brown square to prism shaped plag phenos to 2 mm, average < 1 mm. Texture largely obscured by alteration.

ALTERATION: Relatively strong potassic alteration with pervasive sericite alt. Greenish-grey patches probably sericite overprint around fractures.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: OCT. 21

Graphic Log (m)

275 — PPHL (PBRL) 2 — GYPSUM STOCKWORK
280
285
290
295
297.79 m

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	114.35	119.92	PPHM-2	1	S	4	M		5					S	M					VW	W		W	

MINERALIZATION: 4% f-g dissem + minor fracture-related PY. 0.5% dissem + quartz stringer related CP.

STRUCTURE: Stockwork of blue-grey quartz, blue-grey gypsum + blue-grey carbonate. Interval looks like 'moderate' stockwork but individually (ie quartz) weak stockworks. Stringers quartz to 1cm, average 4-5 mm.

LITHOLOGY: Medium brownish to greenish-grey homogeneous massive fine to medium-grained feldspar phyric intrusion. 40% white specs <<1 mm possible alt fsp. 10% greenish-grey stubby to prism-shaped alt fsp phenos. Unit has sharp contacts and is clearly a dyke. Distinct colour contrast + lack of quartz stringers. Thought to be PPHL except strong potassic alteration.

ALT: Strong yellow stain, ∴ strong potassic alt. Pervasive sericite alt.

MIN: 5% f-g dissem PY.

STRUCTURE: Weak gypsum + carb stockwork. Sharp irregular lower contact ~ 10-15° CA.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: OCT. 21

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	118.92	125.40	PPHM	1	S	4	M	0.3	5				S	M			VW	VW	W	W		W
				LITHOLOGY: As 98.57 - 114.35. Random pinkish - brown to greenish - grey fine to medium - grained fsp phyric intrusion with texture largely obscured by alt.																		
				ALT: Strong potassic alt. Pervasive sericite alt.																		
				MIN: 5%. Random disseminated PY. 0.3% disseminated + quartz stringer - related chalcopyrite.																		
				STRUCTURE: Weak to mod gypsum stockwork. Very weak quartz.																		
P	125.40	132.35	PPHM-2	1	M	4	M	2-3			2-3		M	M					VW	VW		W
				LITHOLOGY: Relatively homogeneous pinkish brown to greenish - grey medium - grained feldspar phyric intrusion. 30-40% brown to greenish grey subhedral to euhedral altered to prism - shaped phenocrysts. Brown phenos generally ≤ 1 mm. Occasional euhedral phenos to 3 mm. Texture somewhat obscured by alt.																		
				ALT: Weak to moderate potassic alt. Pervasive sericite																		
				MIN: 2-3% fine disseminated PY. 2-3% dark grey to subhedral lenticular specs.																		
				STRUCTURE: Widely spaced carbonate + gypsum stringers.																		

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G-ALLEN
Date: OCT. 21

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	132.35	136.36	DMAF																	VW	VW		W

LITHOLOGY: medium to light greenish - grey aphanitic groundmass hosting fine to coarse - grained feldspar phenocrysts. Medium greenish - grey subhedral prism shaped plag to 7 mm, up to 10%. 5% hornblende grains to 2 mm (sporadic distribution) probably altered biotite. Sporadic white calcite amygdules to 1 cm (average 2-3 mm), 0-20%.

STRUCTURE: Very weak gypsum and carbonate stockwork.
upper contact: irregular ~ 25° CA
lower contact: irregular ~ 50° CA.

Within 30cm. dyke inclusions of host (or perhaps several parallel dykes) to
Contacts: (40, 60°) (30, 35°)

P	136.36	139.87	PPHM-2 ?	4	M	1	M		T		2			M	M					VW	W		W

LITHOLOGY: Homogeneous orange - brown massive medium - grained feldspar phyric intrusion. F-G orange brown matrix hosting 40% (rounded) generally subhedral prisms of plagioclase (greenish to brown - grey) up to 4 mm. Bimodal 35% ≤ 1 mm + 5% 2-4 mm. 5-8% lighter grey brown laths to 3 mm could be altered hornblende. Subtrachytic.

ALT: Pervasive silicate. Colour suggests potassic alteration also, but not stained.
MIN: Distinctive by its lack of mineralization. Only traces of PY. 2-3% f-g disseminated dark hematite. Minor dark aphanitic with carbonate stringers

STRUCTURE: Weak gypsum stockworks. Gypsum stringers to 5 mm 30-60° CA

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G-ALLEN
Date: Oct. 21

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	139.87	143.00	DMAF																VW	VW		W

LITHOLOGY: Light to medium blue-grey - grey aphanitic groundmass hosting 10-15% grey to brown subhedral plagioclase prisms to 1 cm, average ~ 3-4 mm. 5-8% dark brown biotite phenos to 3 mm. Subtle biotite.

STRUCTURE: Weak gypsum stockwork with stringers to 5 mm. Upper contact irregular 42° CA. Lower contact: irregular, sharp.

P	143.00	149.1	PPHM-2	4	M	1 ?	M		3		2											W

LITHOLOGY: Mottled grey-green - grey to pinkish - brown medium-grained fsp phyric intrusive. Some parts have distinct clots of fsp phyric intrusive to 2 cm. Other parts homogeneous intrusive at 136.36 - 139.87. Unit is sheared & crushed in part. Some carbonate stringer fragments.

ALT: Pervasive sericite + probably Kf potassic.

MIN: Minor disseminated PY, predom in sheared parts.

STRUCTURE: Chloritic zone to 1 m. Sheared subparallel CA. Lower contact along shear at 23° CA.

P	149.1	151.9	PBRM	4	M	1 ?	M	0.3	5				M ?	M			T		T	W		W

LITHOLOGY: Mottled dark grey to medium brown-grey intrusive breccia. Bimodal fragments: Dark grey-brown aphanitic fragments to 1 cm, generally subangular. Dark grey med-grained subrounded intrusive frags to 2 cm. Host a brown-grey fsp phyric intrusive. Fragments commonly irregularly bounded.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: C. ALLEN
Date: OCT. 21

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Alteration Facies Typ	Alt. Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				ALTERATION: Pervasive sericite + probably potassic.																		
				MIN: 5% f-g disem PY. Minor f-g disem CP. Some CP associated with quartz stringers (irregular veins q-g flooded zone). Rare massive CP to 1mm adjacent q-g flooded zone.																		
				STRUCTURE: Very weakly developed quartz stockwork. Trace quartz.																		
P	151.9	167.60	PPHM-2	4	M	1	M						M	M			T		VW			W
				LITHOLOGY: Medium grained to coarse grained - brown - grey medium - grained feldspar phyric intrusive. 30 - 40% (crowded) grained to cream subhedral to euhedral plag prisms to 5mm averag 1-2mm. Some 5% lighter grey prisms to 3mm could be altered hornblende. Much as unit above PBRM.																		
				ALT: Pervasive sericite, carbonate. Moderate yellow stain with K Co NO indicating potassic feldspar.																		
				MIN: Sporadic 0 - 3% disem PY.																		
				STRUCTURE: Virtually no gypsum stringers. One stringer observed at 155.5 m adjacent one of the less quartz flooded zones.																		
								158.0 - 158.3 -				DMAF	15° CA.			10 cm wide						
								158.65 - 158.8 -				DMAF	10° CA.			5 cm wide						
								164.75 - 165.40 -				DMAF irregular contacts. Shallow to CA? Zone include some PPHM.										

DRILL HOLE NO. 95 - [ ]

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G-ALLEN
Date: OCT. 21

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	167.60	171.00	DMAF																W			W

LITHOLOGY: Medium grained grey, to blue-green to purplish-grey aphanitic groundmass with 10-15% subhedral plag phenos to 1 cm. Centrally subhedral & average 3-4 mm. 5-8% subhedral biotite to 2 mm. Sporadic 0-10% white calcite amygdules to 2 mm.

STRUCTURE: Weak white carbonate stockwork. No gypsum noted.
* Two triaxial samples taken from interval
168.2 - 168.5
170.4 - 170.7
lower contact sharp at ~ 40°. Irregular.

| P | 171.00 | 178.65 | PPHM-2 | 4 | M | 1 | M | | 1 | | 1-2 | | M | M | | | | | W | | | W |

LITHOLOGY: Pervasively texturally homogeneous orangy-brown & lesser greenish-grey medium-grained feldspar phyric intrusion with 40% subhedral plag phenos to 2 mm. As previous unit.

ALT: Pervasive sericite-carbonate. Probably potassic; ridging from colour & similar unit overall above.

MIN: Trace to 2% f-g disem PY. 1-2% disem hematite.

STRUCTURE: Weak white carbonate stockwork. Veins to 1 cm 20-60°CA.

171.85 - 172.10 - DMAF Upper contact 45°CA. Lower contact 35°CA.
Contacts not clear to parallel

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: OCT. 21

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	178.65	197.20	PBAM	4	M			0.5	6					M			VW		VW			W

LITHOLOGY: Mottled dark grey to brown - grey to pinkish - brown matrix supported breccia with 60% rounded fragments to 2 cm (average ± 1 cm). Fragments have generally indistinct outlines. Fragments range from dark brown med. hard aphanitic material to light to grey - brown medium - grained vaguely feldspar phyric intrusive material. Matrix is a brown medium - grained feldspar phyric intrusive.

ALT: Pervasive biotite - carbonate. No stain in $CoNO_3$ solution ∴ apparently not potassic although it looks potassic.

MINERALIZATION: 6% generally disseminated pyrite. 0.5% diffuse + brown QZ - veinlet CP. @ 190.1 - 10 cm qz flooded zone ± CP blebs to 1 cm.

STRUCTURE: Few stringers of any kind. A few quartz stringers to 2 mm. Some calcite stringers. No gypsum noted.

188.65 - 189.4 - Shear zone 25° CA. Part of interval is a blade matrix cataclastite / mylonite.

194.68 - 197.20 - Weak crush zone. Shearing 30° to subparallel CA.

PS	Interval From	Interval To	Rock Code	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	197.20	208.73	DQcA			W	T		W

LITHOLOGY: Medium grained - grey very f-g to aphanitic groundmass. 15% rounded white calcite amygdules to 1 cm (average 4-5 mm). Amygdules sporadically distributed.

207.9 - 208.15 - PPHM.

208.15 - 208.73 - flow banded - 30° CA.

Contacts: Upper 60° 207.9 - irregular ~ 90

208.15 - 36° sharp

208.73 - 32° sharp } * dyke probably vertical.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: Oct. 22

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
P	208.73	211.40	PPHM	4	M			T	5						M					VW			W	
P	211.40	212.25	FAUL	4	M				6						M				W				M	
P	212.25	215.92	PORM	4	M				6						M			W	VW	VW			W	

208.73 – 211.40 (PPHM)

LITHOLOGY: Inhomogeneous mottled medium to dark greenish - grey fine to medium - grained feldspar phyric intrusion. Contact area shows dyke is flow banded + aphanitic. Looks like an intrusive contact which the DQCA followed. Unit grades down hole into medium - grained fp phyric intrusion within 2 m.

ALT: Pervasive sericite - carbonate.
MIN: 5% f-g diss PY. Trace CP.
STRUCTURE: Very weak carbonate stockwork. Flow banding 60° CA.

211.40 – 212.25 (FAUL)

LITHOLOGY: Strong crush zone. CG sandy + pebbly rubble poorly cemented with clay gouge. Dissem + stringer PY. Shearing 30° CA, 26° CA.

212.25 – 215.92 (PORM)

LITHOLOGY: Mottled dark to medium blue - grey plutonic breccia. Vague clasts to 5 cm of medium - grained feldspar phyric intrusion. Groundmass or matrix texture obscured by shearing + alt. Brecciation could be due to shearing + alt.

ALT: Pervasive sericite. No stain in K CoNO
MIN: 6% dissem + lesser stringer pyrite.
STRUCTURE: Fragmented blue - grey quartz stringers to 1 cm ~ 5%. Entire unit weakly crushed + sheared 20° CA.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: Oct. 22

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	215.92	217.5	DYKE																	S			W	
P	217.5	235.35	FAUL	4	M				4		1-2				M					VW			M	
P	235.35	252.75	PPHM-2	4	M				1 (pinkish brown)		2				M					VW	W			

215.92 – 217.5 DYKE

LITHOLOGY: Medium grey to pinkish-grey aphanitic dyke. Rare amygdules to 1mm. Could be DQCA. Unit brecciated + flooded by white carbonate. Shear contacts 15° CA.

217.5 – 235.35 FAUL

LITHOLOGY: Mottled dark grey to medium greenish-grey to pinkish-brown or tan medium-grained feldspar hornblende phyric intrusion. Unit sporadically sheared + crushed, but appears to have been texturally homogeneous. Texture commonly obliterated but where apparent a f-g sericitic gm hosts 30-40% generally anhedral + lesser subhedral + euhedral fsp phenos (square to prism-shaped) to 2mm. Anhedral nature of phenos could be due to alteration making crystal edges obscure. 8-10% pinkish-grey carbonate alt hornblende to 3mm. Rock could be PPHM-2

ALT: Pervasive sericite-carbonate.
MIN: Sporadic 1-5% PY. PY mostly in sheared parts. Competent rock pyrite-poor.
STRUCTURE: Crushed + sheared in 75% of interval. Shearing ranges from 15-25° CA.

235.35 – 252.75 PPHM-2

LITHOLOGY: Tan to greenish-grey hornblende feldspar phyric intrusion as described above in fault zone. Some greenish fsp phenos to 5mm but average 1-3mm. Homogeneous (except for colour), massive.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: OCT. 22

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				ALT: Pervasive silicate - carbonate.								No stain	∴ not potassic.									
				MIN: Very low pyrite content + sporadic disem. hematite up to 1-2%, coincidental with presence of fracture system allowing influx of sulphide - bearing solutions.								235.35 - 247.5 to 2%. Below	247.5 generally < 1% PY									
				STRUCTURE: Very weak carbonate stockwork.																			
				* ~ 247.5 REAPPEARANCE OF GYPSUM STOCKWORK. Stringers to 1 cm 20-90° CA. 248.12 - 248.65 - Crush zone 45-60° CA. B-10% f-g pyrite.																			
P	252.75	294.65	PPHL (PORL)	2	M				5-6									VW	VW	W		W
				LITHOLOGY: Mottled medium to dark blue-grey fine to medium-grained feldspar phyric intrusion. Some parts are homogeneous intrusion some parts (<50%) appear to be fragmental. Medium-grained fsp phyric intrusion clearly cut by irregular f-g dark blue-grey intrusion. Contacts "softened" by alteration. Contact with unit above vague + based on colour change + coincident change in PY content. Could be the same unit																			
				ALT: Pervasive silicate. No stain. Colour grades from blue-grey to dark grey-ish-grey down hole.																			
				MIN: 5-6% f-g disem. PY. Minor fracture-related PY																			
				STRUCTURE: Weak-moderate gypsum stockwork with stringers to 1 cm, average 2-5 mm.																			

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 231
Logged By: G. ALLEN
Date: OCT. 22

P S	From	To	Rock Code	Alt. Facies Typ	Int.	Typ	Int.	Cp	Py	Bn	Hm	Bi	Kf	Ms	Cy	To	Qz	Py	Cb	A:	H:	Fr.
P	294.55	295.46	DMAF																M			
P	295.46	297.79	PBRX	5	?	4	?													M		W

294.55–295.46 DMAF

LITHOLOGY: Medium greenish to brownish-grey aphanitic gm with 20% euhedral greenish grey fsp phenos to 5 mm. Average 3-4 mm. 5-8% euhedral black biotite to 3 mm. Contacts irregular but appear to be 70-80° CA.

295.46–297.79 PBRX

LITHOLOGY: Dark greenish to brownish grey f-g fsp phyric matrix with 30% rounded medium-grained fsp phyric frags of intrusion up to 3 cm. Could be relatively unaltered breccia. Edge of alt. system?

ALT: Greenish colour suggests propylitic.

MIN: 4-5% f-g diss PY.

STRUCTURE: Weak gypsum stockwork

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GEOLOGIC DRILL LOG

GB

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 232

Location Sketch

Grid Northing (m):	99 100	Date Started:	Oct 21 '95
Grid Easting (m):	49 000	Date Completed:	Oct 22 '95
Elevation (m):		Logged By:	Jon Foreman
Total Length (m):	157.58m	Date Logged:	Oct 23 '95
Casing Depth (m):	HQ of 42.67m	Data Entry:	
Reduction Depth:	—	Entry Date:	
Collar Core Size:	NQ	Casing (In/Out):	OUT

Survey	Depth	Azimuth	Dip
S.S.	154.53	176°	-61.5°

Graphic Log (m)

0
8
16
24
32
40
CASING

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	0.0	42.67	CASN																			
	42.67	48.25	PBRL	2	m	3?	w	/	1.5	/	/	/	/	m	w	/	/	/	/	/	/	5

LITH + MIN:

The core is light grey throughout. The porphyritic texture is moderately well preserved through the matrix & very well preserved in the fragments. The matrix and fragments are of the same composition. An aphanitic pale to dark grey matrix with 20-25% cream to white 1-4mm sub to euhedral feldspars and 15-20% buff to grey <1-2mm sub to euhedral hornblendes. The fragments range from <1cm to 7cm and are typically subrounded. ≥50% of the fragments are lighter in colour, cream & pale grey, than the surrounding matrix.

No veining (gypsum, carbonate or quartz) is through this unit. 1-2% pyrite occurs throughout as a g'd dissemination and 1-5mm irregular blebs.

L.C.:

in broken core.

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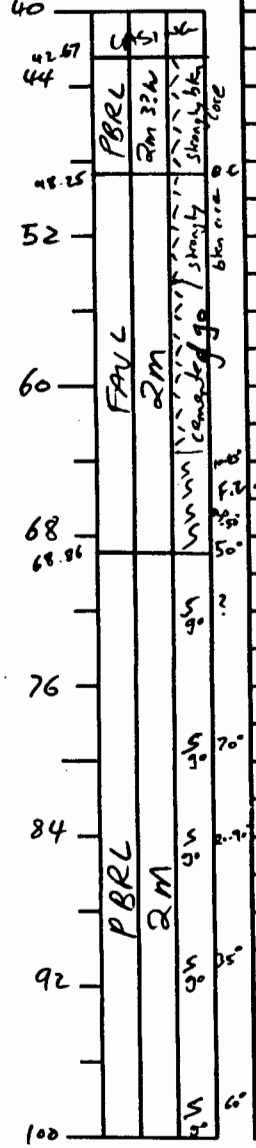
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 232
Logged By: Ian Forbes
Date: Oct 23 '95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	42.67	48.25	cont'd		ALTERATION:																	

The unit has pervasive sericite alteration. Locally the unit appears to have 2-3mm rounded translucent grey blebs which are probably sericite. These blebs commonly contain pyrite

STRUCTURE:

- 42.67 - 48.25 m → strongly bkn <1 to 8cm angular to subrounded core with gouge throughout

	48.25	68.86	FAUL	2	m			/	1.5	/	/	/	/	m	/	/	/	/	/	w	/	m

LITH + MIN:

The top half of this unit is 100% gouge and thus the rock is unrecognizable. Below 63.81m the core is more competent. The zone is more like a shear zone with 0.5cm to 35 cm shears separated by late phase. The shears locally contain gouge and or dark grey to black ophonitic material. Locally the larger shears contain 2mm to 3cm rounded late phase fragments.

L.C:

Sharp @ end of shear @ 50°

ALTERATION

Moderate Qtz-Ser-Py alteration throughout

STRUCTURE:

- 48.25 - 54.15 m → very strongly bkn <1-3cm angular to subrounded core to gouge throughout
- 54.15 - 63.81 m → cemented gouge to local bkn core
- 63.81 - 68.86 m → healed faults and shear zones @ 10-25° and 30-50°

	68.86	107.69	PBRL	2	m			/	2	/	/	/	/	m	/	/	/	/	/	m	/	w

LITH+MIN:

This is not typical late phase breccia. This breccia contains 30-40% fragments surrounded by 2-9mm very dark grey

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GEOLOGIC DRILL LOG

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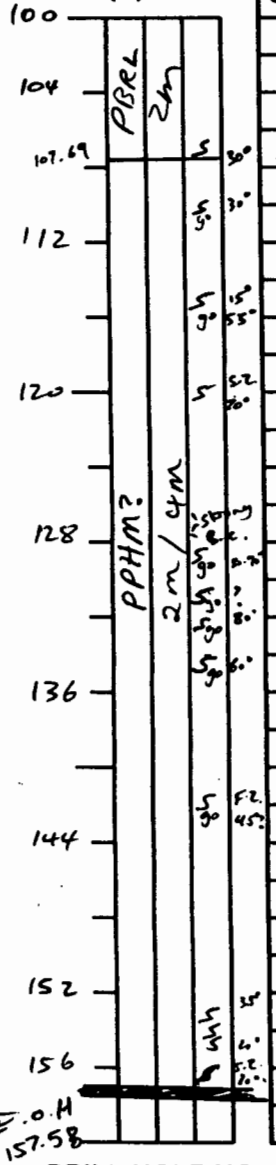
DRILL HOLE NO. 95 - 232
Logged By: Jon Forsman
Date: Oct 23 95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	68.86	107.69	CONT'D																			

aphanitic matrix. The fragments range from 2mm to 10cm with the only exception being a fragment @ 92.0m which is 64cm wide. The fragments are typically angular to subangular and have very well preserved porphyritic texture. The feldspars are 2-4mm and typically white while the hornblendes are buff and often blend in with the groundmass. This results in a striking white and grey speckled appearance.

Gypsum veining creates a moderate - stockwork. The veins are both straight and irregular. No quartz veins and carbonate veins were noted.

1-3% pyrite occurs as fg'd disseminations and 1-3 mm blebs.

L.C:

Sharp @ shear @ 30°

ALTERATION:

The fragments have moderate Qtz-ser-Py alteration.

STRUCTURE:

- 72.24 m → 2cm clay/gouge @ unknown angle.
- 79.81 m → 1cm cemented gouge and gypsum vein @ 70°
- 84.72 m → gouge in centre of gypsum + talc (?) vein @ 80-90°
- 91.43 m → gouge on gypsum vein @ 35°
- 97.17 - 97.24 m → gouge and gypsum veins @ 60°
- 107.69 m → 1cm shear @ 30°

	107.69	157.58	PPHM?	2	m	4	m	Tr	1.5	/	Tr	/	/	m	m	/	/	/	w	vw	/	w

LITHMIN

This unit varies greatly in color. Generally the unit has a greyish green tint but locally it is green, greenish grey, grey and reddish brown and dark brown. The porphyritic texture is generally well preserved except locally it is obscurred near small fault zones. The groundmass is aphanitic and surrounds

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 232
Logged By: Jon Forenan
Date: Oct 23 95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	107.69	157.58	cont'd		25% cream to light greyish							green 1-4mm					Sub to euhedral feldspars					
					and 15-20% <1 to 3mm buff							to light green					Sub to euhedral lath-					
					shaped hornblendes. Rare feldspars are larger than 4mm.																	
					The unit resembles main phase in that the core is																	
					not pale grey and the feldspars appear													sericite altered. Locally,					
					though the unit does appear to be late phase due to the																	
					greyish colour and white bleby feldspars. The reddish brown to brownish																	
					sections of this unit are very similar to main phase seen elsewhere																	
					in the area zone. These sections also have <1mm blebs of hematite																	
					and are weakly magnetic																	
					One carbonate vein @ 113.95m may contain quartz. If so, this is																	
					the only quartz present in the unit. Carbonate is weak throughout																	
					as vel.s and fracture fill. Tr to weak gypsum veining occurs mostly assoc = F.Z's																	
					Pyrite occurs throughout as fg'd disseminations and as 1-4mm																	
					irregular blebs. Chalco pyrite occurs as 1-8mm elong to blebs (cross																	
					fracture fill:) below a shear zone that ends @ 154.83m.																	
					L.C.:																	
					E.O.H.																	
					ALTERATION																	
					" weak Qtz-Ank-Ser +/- Kao alteration with possible																	
					Qtz-Ser-Py alteration occurring locally. The reddish brown																	
					to brown section at the beginning of the unit does not stain																	
					and is probably due to pervasive hematite alteration.																	
					STRUCTURE:																	
					- 110.87m → gouge on break @ 30°																	
					- 115.40m → cemented gouge + rubble on slip @ 15°																	
					- 115.97m → gouge on slip @ 55°																	
					- 120.75m → Shear @ 70°																	
					- 126.82 - 126.90m → Strongly bkn ore = gouge.																	
					- 128.15 - 128.23m → gouge @ 80-70°!																	

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

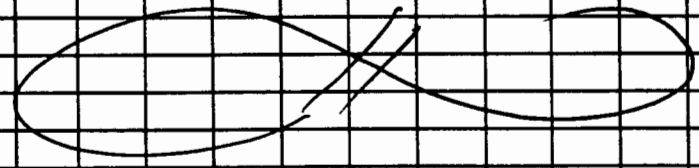
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 232
Logged By: Ian Freeman
Date: Oct 23 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
	107.69	158.58	CONTD		-	130.39	- 131.09m →			irregular 1-		Scm	Shear zones @				various angles and fracture gouge					
					-131.97m		→			1cm gouge		@	unknown angle									
					-132.27m		→			fracture gouge		in	healed shear @				80°					
					- 134.65m		→			fracture gouge		in	healed shear @				60°					
					-142.34		- 142.71m →			healed fault zone /		shear w/ fracture gouge					@	45°?				
					-153.92		- 154.83m →			shear zone		w/	U.C. @ 35°		and	L.C. @	20°					
					-156.12m		→			2cm shear zone		@	70°									
	157.58	157.58	E.O.H.																			



RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

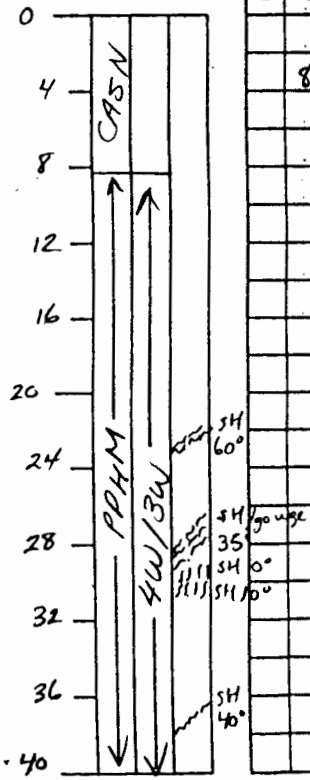
DRILL HOLE NO. 95 - 233

Location Sketch

Grid Northing (m):	100350 N	Date Started:	Oct 22/95
Grid Easting (m):	50900 E	Date Completed:	Oct 24/95
Elevation (m):		Logged By:	T. Fraser
Total Length (m):	212.45	Date Logged:	Oct 23/95
Casing Depth (m):	8.84 m (29 ft)	Data Entry:	
Reduction Depth:	—	Entry Date:	
Collar Core Size:	HQ	Casing (In/Out):	lost 3.66 m (12 ft)

Survey	Depth	Azimuth	Dip
SS	212.45	180.5°	-62°

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	0	8.23	CASN																			
	8.23	50.68	PPHM	4	W	3	W	0.4	2	0	2	0	0	W	VW	0	TR	W	TR	0	0	M

Lithology - Buff to pale brown highly porphyritic plagioclase hornblende porphyry - Main Phase material. Plagioclase phenocrysts are pale green to tan coloured, subhedral to locally obscured (resorbed?). Plag phenos range from <1mm - 3mm and comprise up to 35-40%. Hornblende phenocrysts are relatively rare - comprising only 5-8%, 1-2 mm beige phenos. Hornblende phenos are sub to euhedral in morphology. The groundmass is aphanitic grey to brown. In places the rock appears to be banded and resembles late Phase however due to the presence of trace grey quartz veins and abundance of hematite - the unit has been called Main Phase.

Alteration / Mineralization - Plagioclase phenos are weakly sericite altered and occasionally sericite - clay altered. Generally the alteration consists of sericite - qtz - pyrite & carbonate. Trace grey quartz veins contain disseminated pyrite, rare chalcopyrite and red hematite. The unit contains disseminated red hematite and its abundance may be up to locally 5%. Average is probably more

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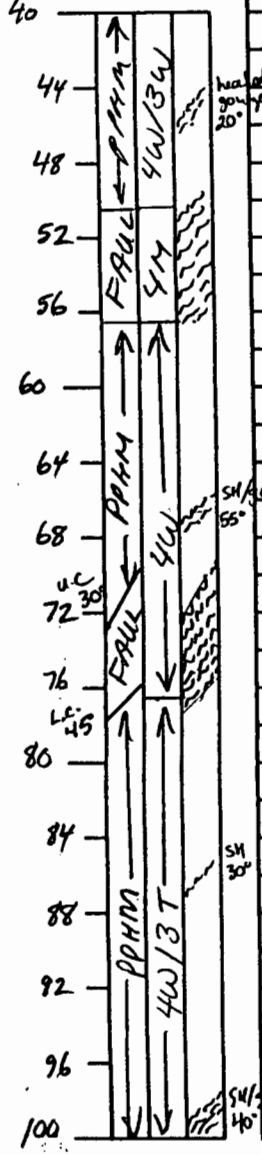
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 233
Logged By: T. Fraser
Date: Oct 23/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				like 1-2%. Trace white carbonate veins. There are weak to very weak pyrite veins. Pyrite is disseminated throughout and is locally blebby. Trace chalcopyrite blebs. Locally the unit has a mottled appearance - with dark green sericite margins around pyrite blebs.																		
			Structure -	16.60 - 16.70 m broken/gouge																		
				20.53 - 20.58 m gouge																		
				22.72 - 23.05 m Shear @ 60°																		
				27.91 - 28.40 m black shear with gouge @ 35°																		
				28.50 - 29.20 m shear 0° to CA																		
				30.03 - 30.43 m shear with gouge @ 10°																		
				34.95 - 35.06 m shear with gouge																		
				37.03 - 37.08 m gouge																		
				37.88 m shear @ 40°																		
				41.90 - 42.10 m broken with gouge																		
				44.00 - 44.20 m broken with gouge																		
				45.00 - 45.53 m healed gouge @ 20°																		
				47.00 - 47.24 m broken with gouge																		
				@ 50.68 m upper contact of fault																		
	50.68	56.38	FAUL	4	M	—	—	0.7	3	0	1.5	0	0	M	W	0	W-Ms	VW	TR	0	0	W
			Lithology -	The unit appears to be Main Phase plagioclase hornblende porphyry with is highly brecciated. Clasts/fragment size is approximately 0.5 cm. Fragments consist of PPHM and dominantly quartz-rich material. The quartz material appears to be brecciated quartz-pyrite-chalcopyrite veins (?). The unit is dominantly a healed breccia/gouge. Some of the matrix appears silicified and elsewhere is partially consolidated gouge/rock flour/clay material. The unit is medium																	

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Liard Mining Division
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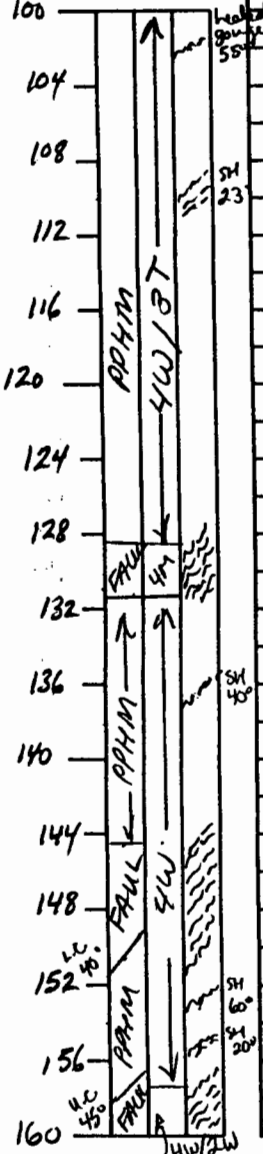
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 233
Logged By: T. Fraser
Date: Oct 23/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				grey to beige (buff) in colour.																		
				Alteration/Mineralization - The unit has undergone moderate quartz-sericite-pyrite alteration. Pyrite is disseminated throughout and is occasionally blebby. Fragments contain grey quartz and disseminated pyrite and chalcopyrite. There are veh weak to trace pyrite veins and trace white carbonate blebs. Red hematite is disseminated and locally has concentrations up to 3%. Plagioclase and hornblende phenocrysts are moderately sericite-clay altered. There are weak to locally moderate grey quartz veins that cut the healed gouge and contain finely disseminated pyrite and chalcopyrite																
				Structure - shears throughout are usually around 35°.																		
				@ 56.38 m lower contact of fault is somewhat gradational.																		
	56.38	71.70	PPHM	4	W	—	—	0.8	2.5	0	1		0	0	W	vW	0	Ws	TR	TR	0	0	W
				Lithology - same as interval 8.23 - 56.68 m but hornblende phenocrysts comprise 10-15%, euhedral, beige and are quite prominant. Locally the unit is dark grey and is highly porphyritic - with both plagioclase and hornblende phenos. The groundmass is brown to grey and aphanitic. Hornblende phenos range in size from 1-2 mm. Plagioclase phenocrysts are visibly zoned and average 1-3 mm in size.																
				Alteration/Mineralization - The unit is weakly sericite-quartz-pyrite altered. Plagioclase phenos are weakly to moderately sericite-clay altered and hornblendes are sericite-carbonate altered. Pyrite is dominantly found as fine disseminations and within qtz veins.																

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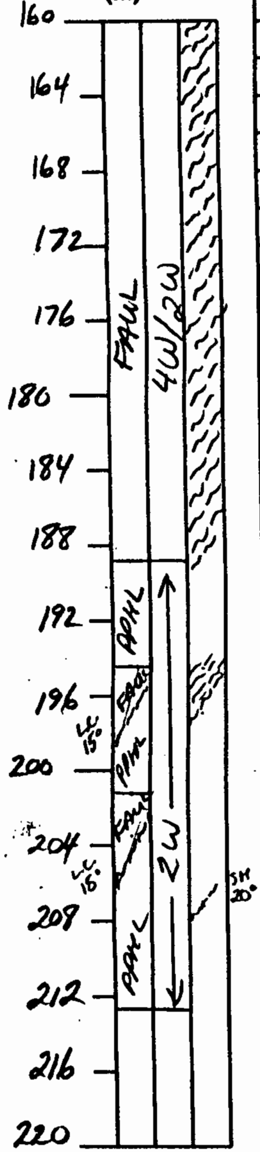
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 233
Logged By: T. Fraser
Date: Oct 23/95

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	71.70	76.45	FAUL	4	W	—	—	0.6	3.5	0	1		0	0	W	W	?	Ws	M	W	0	0	M	

Quartz veins vary in intensity from weak to moderate and generally contain disseminated chalcopyrite and pyrite. There are trace pyrite-chalcopyrite veins. Red hematite is finely disseminated. Trace carbonate and carbonate-pyrite veins.

Structure – 57.27 – 57.40 m shear/broken rock @ 25-30°
58.35 – 58.95 m Shear/broken rock
62.20 – 62.80 shear with gouge
63.00 – 63.10 m healed gouge
65.00 m gouge
67.00 – 67.92 healed gouge/shear @ 55°.

@ 71.70 m upper contact fault @ 30° to core axis.

71.70 76.45 FAUL 4 W — — 0.6 3.5 0 1 0 0 W W ? Ws M W 0 0 M

Lithology – The fault is notable due to its dark grey to black colour. Plagioclase hornblende porphyry (Main Phase PHM) material is sheared and brecciated. Part of the fault is healed gouge with a high clay component. The majority of the black sections are brecciated, contain abundant disseminated pyrite associated with carbon?-rich(?) groundmass/matrix.

Alteration/Mineralization – The unit is weakly sericite-clay-pyrite altered. Plagioclase phenocrysts are weakly to moderately sericitized. Pyrite is disseminated and blebby throughout and comprises up to 8%. There are moderate pyrite veinlets cutting the fault breccia. Weak white carbonate veins cut pyrite veins. Quartz veins contain disseminated chalcopyrite and pyrite (and trace hematite?). Local red hematite is disseminated (up to 5%). Pyrite is disseminated

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 233
Logged By: T. Fraser
Date: Oct 23/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			throughout.																			
			Structure - @ 76.45 m lower contact fault @ 45° to core axis.																			
	76.45	128.43	PPHM	4	W	3	T	0.5	3	0	2	0	0	W	vW	0	Ws	vW	vW	0	TR	M
			Lithology - same as interval 8.23 - 50.68 m. the unit is highly porphyritic, containing 25-35% 1-2 mm subhedral visibly zonal plagioclase phenocrysts. Plag phenos are pale green to white in colour. Hornblende phenocrysts are quite prominant and abundant. Hornblende phenocrysts comprise 8-12% 1-3 mm euhedral beige phenos. Most mafics appear streaky in texture. The groundmass is aphanitic tan to grey in colour.																	
			Alteration/Mineralization - Plagioclase phenocrysts are weakly sericite altered to very weak clay (kaolinite) altered. Hornblende phenocrysts appear to be partially carbonate-sericite and weak hematite altered. Red hematite is disseminated throughout the groundmass (up to 3% locally). Chalcopyrite is locally disseminated and is present in grey quartz veins (calcite containing pyrite). Trace hematite veins (rare) which have pyrite and chalcopyrite. Pyrite is finely disseminated throughout and its concentration is ↳ veinlet pyrite. Trace to very weak carbonate veins. Trace quartz-chalcopyrite-hematite veins.																	
			Structure -			86.10 - 86.30 m		gouge/healed gouge @ 30°														
						88.75 - 88.90 m		shear/gouge														
						90.20 - 90.30 m		shear/gouge														
						94.90 - 95.10 m		gouge/broken														
						95.57 - 95.65 m		gouge														

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 233
Logged By: T. Fraser
Date: Oct 24/95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
				99.40 - 99.10 m shear with gouge @ 40°																				
				99.33 - 99.76 m broken / shattered																				
				101.55 - 101.73 m healed gouge @ 55°																				
				100.40 - 100.90 m sheared and broken																				
				105.77 - 106.12 m healed gouge																				
				109.15 - 110.20 m sheared/healed gouge @ 23°																				
				112.15 - 112.65 m sheared PPHm with healed gouge																				
				125.65 - 126.15m healed gouge																				
				@ 128.43 m upper contact fault/shear with a gradational contact.																				
	128.43	131.38	FAUL	4	M	—	—	0.6	3.5	0	TR	TR	0	0	M	W	0.	W→M	VW	W	0	0	W	

Lithology - same unit as interval 76.45 - 128.43, however it is highly sheared and brecciated. The majority of the interval consists of quartz-veined Plagioclase hornblende porphyry (PPHm) fragments within a clay-rich (rock-flour?) matrix. Host rock fragments are 0.5cm to approximately 10cm in diameter. Most clasts are subrounded. There are several intervals up to 20-30cm which are competent rock (just slightly sheared).

Alteration/Mineralization - The PPHm fragments in the fault breccia are veined by a weak to moderate quartz stockwork which carries fine grained pyrite and chalcopyrite mineralization. Several clasts display disseminated fine grained red hematite. Pyrite is disseminated throughout the interval (also within the matrix). Weak white carbonate veins. The clasts also display weak to moderate #4 alteration - with sericitized plagioclase phenos and quartz veins. There are very weak to trace pyrite veins. Trace carbonate-sphalerite veins.

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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 233
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Date: Oct 24/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			Structure - @ 131.38m lower contact of fault is gradational.																			
	131.38	144.55	PPHM	4	W	—	—	0.7	3	0	1	0	0	W	vW	0	W-Ms	TR	vW	0	TR	W
			Lithology - same as interval 76.45 - 128.43 m. The unit is buff to light grey coloured.																			
			Alteration/Mineralization - The plagioclase phenocrysts are weakly sericitized to very weakly clay altered (pale green colored). Hornblende phenocrysts are Carbonate - Sericite ± Red Hematite altered. Quartz veins are well-mineralized with chalcopyrite and pyrite plus trace amounts of red hematite. Trace disseminated chalcopyrite. Weak red hematite veins and up to 1-2% disseminated fine grained hematite.															
			Structure - 136.20 - 136.35m shear/gouge @ 40°																			
			136.95 - 138.45m sheared/gouged PPHM																			
			139.17 - 139.40 m healed gouge																			
			142.30 - 143.20m sheared PPHM with clay and gouge.																			
			@ 144.55m upper contact of fault.																			
	144.55	150.65	FAUL	4	W	—	—	0.7	4	0	TR	0	0	vW	W	0	Ws	vW	W	0	0	W
			Lithology - same as interval 128.43 - 131.38 m but there are numerous black to dark grey thin shears which are approximately 5-30° to core axis. The host rock appears to be quartz-veined Mafic Phase unit, but some areas are particularly highly sheared and brecciated. These intervals contain PPHM fragments up to 2 cm in size (Subrounded clasts). The matrix consists of healed gouge and rock flour.															

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 233
Logged By: T. Fraser
Date: Oct 24/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
				Alteration/Mineralization - The PPHM host unit is weakly sericite - quartz - chalcopyrite - pyrite altered. The PPHM unit contains grey quartz veins with disseminated chalcopyrite; chalcopyrite - hematite and pyrite - chalcopyrite. Pyrite is finely disseminated throughout. There are weak white carbonate veinlets and very weak pyrite veins. The matrix of the fault breccia / healed gouge is clay altered. Trace disseminated hematite.															
				Structure - @ 150.65 m the lower contact of the fault is @ 40°.																		
	150.65	157.73	PPHM	4	W.	-	-	0.7	2.5	0	1	0	0	W	vW	0	Ws	vW	W	0	0	W
				Lithology - same as interval 76.45 - 128.43																		
				Alteration/Mineralization - same as interval 76.45 - 128.43 but the unit probably averages only 1% disseminated hematite. There are weak carbonate veins. Pyrite is disseminated throughout. Weak quartz veins contain disseminated chalcopyrite. Trace disseminated chalcopyrite.															
				Structure - 152.94 - 153.30 m shear / healed gouge @ 60° 155.15 - 155.80 m shear @ 20° to c.a.																		
				@ 157.73 m upper contact fault @ 45° to core axis																		
	157.73	188.70	FAUL	4	W	2	W	0.35	4	0	2	0	0	W	W	0	TR	vW	TR	0	TR	W
				Lithology - The unit contains highly sheared and brecciated PPHL / PPHM material. Dominant clasts are subrounded to subangular and generally contain only trace quartz veins. Part of the fault is very distinctive and is comprised of black shears, which may be																		

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British Columbia, Canada

GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 233
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Date: Oct 24/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				carbon-rich (the material does not appear to be tourmaline since it is relatively soft. The unit is brecciated locally and contains 70% fragments within a clay-rich matrix. These intervals tend to be grey to greenish-buff in colour and fine material (matrix) has been washed away.																		
				Alteration/Mineralization - Since the host rock may have been Late Phase to relatively unmineralized Main Phase, it contains trace grey quartz veins. Plagioclase phenos are sericite to clay altered. Quartz veins generally contain disseminated pyrite. Trace disseminated chalcopyrite and pyrite throughout. Red hematite is disseminated and found in trace veinlets. Very weak to trace pyrite veins and trace white carbonate veins. Trace chalcopyrite blebs.																
				Structure - The shears throughout range from 20 - 60°, however the shears probably average 38-40° to core axis.																		
				@ 188.70m the lower contact of the fault is gradational.																		
	188.70	194.16	PPHL	2	W	-	-	40.3	5	0	0	0	0	VW	W	0	0	VW	TR	0	0	W
				Lithology - Pale grey Late Phase plagioclase hornblende porphyry. Plagioclase phenocrysts comprise approximately 25-30%, subhedral 1-3mm. Plagioclase phenos are white to pale green in colour. Hornblende phenos are pale beige in colour, euhedral and 1-3mm in size. Hornblende phenos comprise 5-12 % by volume.																	
				Alteration/Mineralization - The unit contains very weakly sericite altered plagioclase to weakly Kaolinite altered (clay altered). Hornblende																	

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Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
				phenocrysts are very weakly carbonate-sericite altered. Pyrite is disseminated and occasionally blebby throughout. There are trace white carbonate veins and very weak pyrite veins.																			
				Structure - @ 194.16m upper contact fault is gradational																			
	194.16	195.70	FAUL	2	W	–	–	<0.3	2.5	0	0	0	0	VW	W	0	0	TR	0	0	0	W	
				Lithology - the fault is dominantly sheared and brecciated Late Phase material from the interval above (188.70 – 194.16m). The unit contains subrounded PPHL fragments (1 cm – 10 cm) in a white/grey clay-rich matrix																			
				Alteration/Mineralization - Pyrite is finely disseminated throughout and rarely blebby. There are trace pyrite veins. Alteration of the PPHL fragments are the same as interval 188.70 – 194.16m.																			
				Structure - @ 195.70m the lower contact of the fault is @ 15° to core axis																			
	195.70	201.20	PPHL	2	W	–	–	<0.3	5	0	0	0	0	VW	W	0	0	TR	TR	0	0	W	
				Lithology - same as interval 188.70 – 194.16m																			
				Alteration/Mineralization - same as interval 188.70 – 194.16m																			
				Structure - 200.00 – 200.20m healed gouge. @ 201.20m upper contact of fault is sheared at 0–5° to core axis.																			
	201.20	203.45	FAUL	2	W	–	–	<0.3	4	0	0	0	0	VW	W	0	0	0	TR	0	0	W-M	
				Lithology - same as interval 194.16 – 195.70m																			
				Alteration/Mineralization - same as interval 194.16 – 195.70 but there is a higher concentration of disseminated pyrite. Trace white carbonate blebs and no pyrite veins																			

RED - CHRIS PROJECT
Liard Mining Division
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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 233
Logged By: I. Fraser
Date: Oct 24/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
				Structure - @ 203.45 m the lower contact of the fault is @ 20° to CA.																				
	203.45	212.45	PPHL	2	W	–	–	<0.3	5	0	0		0	0	vW	W	0	0	TR	W	0	0	M	
				Lithology - same as interval 188.70 - 194.16 m																				
				Alteration/Mineralization - same as interval 188.70 - 194.16 m but there are trace pyrite veins and weak white carbonate veins.																				
				Structure - 207.42 - 207.45 m Shear @ 20° to core axis																				
				207.87 - 208.50 m Shear/gouge																				
		EOH @	212.45 m																					

DRILL HOLE NO. 95 - 233

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RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

DRILL HOLE NO. 95 - 234

AMERICAN BULLION MINERALS LTD.

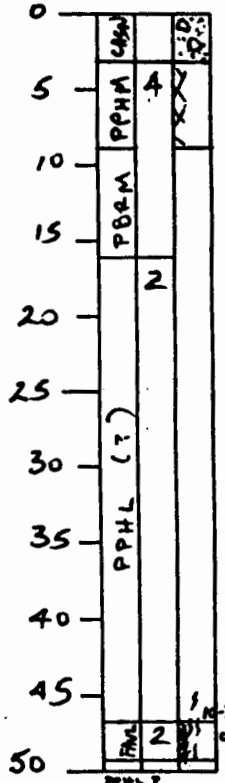
Location Sketch

Grid Northing (m):	99900	Date Started:	OCT. 22
Grid Easting (m):	49950	Date Completed:	OCT. 24
Elevation (m):		Logged By:	G. ALLEN
Total Length (m):	252.07	Date Logged:	OCT. 24, 25
Casing Depth (m):	3.05	Data Entry:	
Reduction Depth:	-	Entry Date:	
Collar Core Size:	NQ	Casing (in/Out):	OUT

Survey	Depth	Azimuth	Dip
G.A.	COLLAR	180	-60
* S-S	152.40	182½	-62½
S-S	252.07	181½	-63½

* AZ. QUESTIONABLE DUE TO MAGNETITE

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	0	3.05	CASN																			
P	3.05	8.90	PPHM	A	M			0.5	3		1-2			M					VW			M

LITHOLOGY: Medium brownish-grey to pinkish-grey fine to medium-grained feldspar phyric intrusive. FOC grey groundmass of sericite with 25% irregular to distinct subhedral (2nd to alt?) to subhedral equant to prism-shaped pinkish feldspar phenos averaging ≤1mm. Sizes of phenos increasing down hole to 2mm. Some parts with 1-2mm subhedral greenish glassy phenos. Some of the phenos probably altered hornblende.

ALT: Pervasive sericite

MIN: 3-5% f-g disseminated PY. Traces to 1% CP, average ~0.5%; f-g disseminated sporadic hematite to 2%, diffuse.

STRUCTURE: Blocky core. Very weak carbonate stockwork. Traces gouge stringers to 2mm.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G. ALLEN
Date: OCT. 24

Graphic Log (m)

50 – 2/1 – PPHL (?)
55
60
65 – 4 – V3 Qz STOCKWORK
70 – 47° / 5
75 – PPHM
80 – 4/5 – DPFH
85
90 – 2/3 – PPHL
95 – 4/1 – PPHM
100
105 – 4 – PPHM
110 – 4/1 – V3 Qz STOCKWORK
115 – PPHM
120 – 20° / 3
125

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	8.90	16.46	PBRM	4	M			0.5	3		2				M					VW			W	
P	16.46	47.00	PPHL	2	M			T	5						M			T	VW	W			W	

LITHOLOGY: Mottled medium grey to brownish grey sporadic intrusive breccia. Matrix of medium-grained hornblende-feldspar porphyry with green to brown f-g sericite groundmass and 30-40% 1-2mm subhedral to anhedral greenish-grey stubby to prism shaped feldspar. Some parts have 15% pinkish anhedral altered hornblende prisms. 5-10% angular to subrounded dark grey to light greenish-grey f-g phyric intrusive frags to 5cm.

ALT: Pervasive sericite. Possible potassic in brownish parts although no stain with KCoNO.

MIN: Sporadic 1-5% PY with up to 5% hematite. Inverse relationship between PY + hm. Sporadic CP up to 0.6%, generally dissem.

STRUCTURE: Blocky core (weakly fractured). Weak carbonate stockwork.

(PPHM?) LITHOLOGY: Mottled medium to dark bluish-grey + minor pinkish-grey medium-grained hornblende feldspar phyric intrusion. Some parts vaguely fragmented, possibly pseudo breccia caused by inhomogeneous alt. Texture largely obscure. Where apparent 30% blue-grey subhedral plag phenos to 2mm. 15-20% pinkish subhedral alt. hornblende to 6mm (average 1-3mm). Unit could be main phase. Colour suggestive of PPHL.
42.95 - 47.0 - Pinkish-grey.

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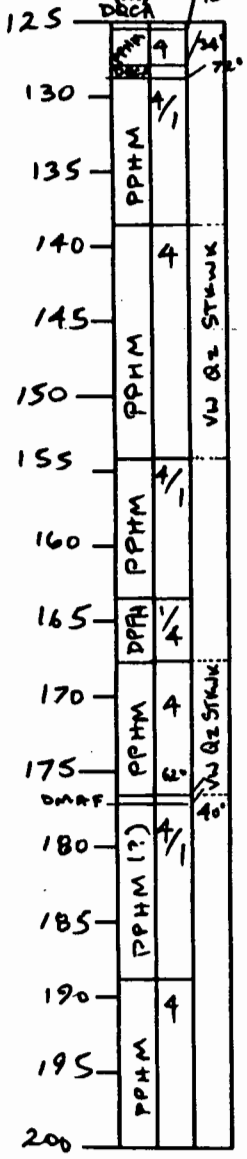
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G-ALLEN
Date: OCT. 24

Graphic Log



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				ALT: Pervasive sericite. Pinkish patch (+ brown) not potassic (no stain).																		
				MIN: 5-6% f-g disem + fracture - related PY. Trace CP.																		
				disem or related to vein quartz stringer																		
				STRUCTURE: Very weak carb. stockwork. Trace quartz stringer																		
								27.0 - 2cm gangue on shear 47° CA.														
P	47.00	49.50	FAUL	2	M				5					M				VW	W			S
				LITHOLOGY: As above but sheared 32° CA to 10° CA. Blocky core. Rubble.																		
				Shear + gouge to 2cm. Weak fault.																		
P	49.50	64.84	PPHL (?)	2	M	1	W		5			W		M					VW			W
			(PPHM?)	LITHOLOGY: As above fault. Pinkish medium blue-grey to dark blue-grey mottled roughly med-grained fsp phyric intrusive. Minor vague fluxion.																		
				57-64.84 - Medium grey to brownish-grey more homogenous medium-grained fsp phyric intrusive. Presence of fg biotite suggests possible potassic alteration. Main phase?																		
				ALT: Pervasive sericite. 57-64.84 biotitic.																		
				MIN: 5% f-g disem + clots of PY to 1cm x 3mm.																		
				STRUCTURE: Very weak carbonate stockwork. Relatively massive.																		

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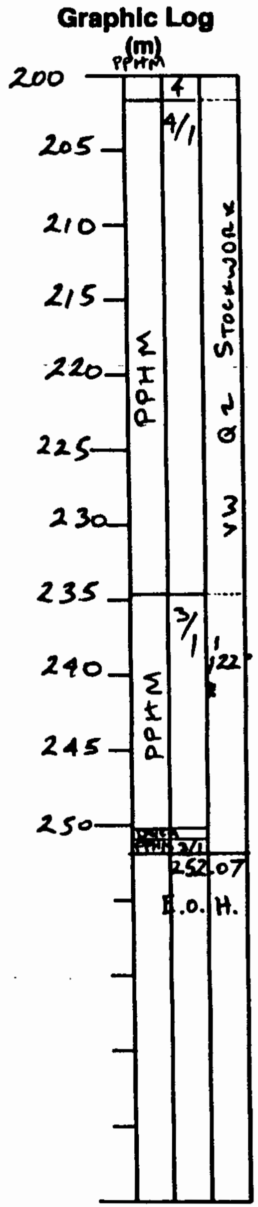
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G. ALLEN
Date: OCT. 24

Graphic Log (m)



P S	Interval From	To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	64.84	78.60	PPHM	4	M			0.5	4		2				M			VW	VW	W			W

LITHOLOGY: Mottled light grey to bluish-grey to greenish-grey fine to medium-grained feldspar phyric intrusion with up to 30% blue-green feldspar phenocrysts up to 2 mm. Texture largely obscured by alteration. Appears aphanitic in parts due to alteration.
73.53 - 74.86 - Dark green magnetic main phase.
ALT: Pervasive sericite. No stain or test piece.
MIN: 4-5% predom. dissem + lesser fracture filling (stringer) PY. Up to 3% dissem CP, but averag ~ 0.5% predom dissem. Some cp with rare quartz stringers. 2% dissem hematite.
STRUCTURE: Widely-spaced quartz stringers (4 1/m) up to 1 cm wide generally at a shallow angle to core axis.
71.0 - 71.2 crush zone + gouge 47° CA.

P S	Interval From	To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	78.60	87.48	DPFH	4	M	5	W		5				M		M					T			W

LITHOLOGY: Gradational contact with above. Relatively homogeneous, dark brown-grey medium grained roughly equigranular intrusion. Biotite - hornblende - plagioclase crystals. 40% + medium greenish - brown subhedral plag phenos to 4 mm average ~ 2 mm. 15% dark greenish - grey subhedral hornblende phenos to 3 mm average ~ 2 mm. 5-8% brownish biotite to 1 mm. Primary? This rock may be a relatively unaltered Red Stock. Non magnetic. (PPHM?) (PPHZ?)

BIOTITE PRIMARY? → ALT: Pervasive sericite. Colour suggests potassic alt but no stain.
MIN: 5% pervasive f-g dissem. PY.
STRUCTURE: Very little stringer activity of any kind.

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G. ALLEN
Date: OCT. 24

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Mag	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	87.48	92.75	PPHL	2	M	3	VW		5						M				T	T			W

LITHOLOGY: Medium to light grey homogeneous medium-grained feldspar phyric intrusive. Gradational contact with above. Two units texturally similar & separated on basis of colour. Of the two units one the same, alteration has obliterated signs of hornblende & biotite.

ALT: Pervasive sericite. Very weakly developed dark green clots sericite to 4mm.
MIN: 5% disem. & fracture strongly PY.
STRUCTURE: Very few stringers of any kind. Massive.

P	92.75	101.4	PPHM	4	M	1	M	0.2	4		1	W		M	M				VW	VW			W

fine to

LITHOLOGY: Mottled dark grey to greenish-grey to red-brown medium grained feldspar phyric intrusive. Alteration has obscured feldspar phenos but where apparent they are anhedral blue-grey to grey phenos up to 2mm. Alteration has made the unit look fine-grained, distinct from unit above.

ALT: Pervasive sericite & potassic (moderate stain).
MIN: 4-5% disem & fracture-related PY. Sporadically weakly magnetic. Magnetite partly altered to hematite. Up to 5% iron oxide (Hm+mag)

STRUCTURE: Very weak carbonate & pyrite stringer vein.

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G. ALLEN
Date: OCT. 24

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	101.4	106.5	PPAM	4	M			T	5		2				M				VW	W			W	

LITHOLOGY: Mottled medium to light grey to greenish-grey fine to medium-grained feldspar phyric plutonic as above. Gradational contact with unit above. Units differentiated on basis of colour. Textures largely destroyed + appears fine-grained.

ALT: Pervasive sericite

MIN: 5% dissem + fracture-related PY. Traces CP to 0.5%, but generally not apparent.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	106.5	124.65	PPAM	4	M	1	M	0.2	4		2	2-3			M			VW	VW				W	

LITHOLOGY: Mottled dark greenish-grey to red-brown fine to medium-grained feldspar phyric intrusion. Textures largely destroyed by alteration. Vague subhedral greenish-grey plag phenos to 2mm. Unit looks fine-grained, probably due to alteration.

ALT: Pervasive sericite. Moderate yellow stain indicating potassic alt. Unit [illegible] becomes less potassic down hole.

MIN: 4-5% f-g dissem + fracture-related PY. 5% f-g specs of magnetite partly altered to hematite. Sporadic fine-grained dissem CP up to 1% mixed with PY. CP not apparent in most parts. Some CP with some quartz stringers.

STRUCTURE: Very weak quartz stockwork with ≤ 1 quartz stringer/metre. Blue-grey quartz stringers with white carbonate core, PY + minor CP. Stringers 30-60° CA.

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G-ALLEN
Date: OCT. 24

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Mk	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	124.65	125.48	DQCA																	VW			W
				LITHOLOGY: light to medium grumish-grey aphanitic dacite. With up to 10% ≤1 mm rounded calcite amygdules. Fault-bounded near upper contact. Upper contact 20° CA. Lower contact 15° CA.																			
P	125.48	127.8	PPHM	4	M			T	3						M			T					W
				LITHOLOGY: Mottled light to dark grey fine-grained fsp phyric intrusive. 3% PY (disem + fracture). Trace CP disem.																			
P	127.8	128.45	DQCA																				W
				LITHOLOGY: As 124.65-125.48. Upper contact steep at 34°. Lower contact 72°.																			
P	128.45	138.41	PPHM	4	M	1 (?)	W	T	5		2	2			M			T	VW	VW.			
				LITHOLOGY: As 106.5-124.65. Mottled light grey to dark grumish-grey to red-brown irregularly medium-grained fsp phyric intrusive. Texture largely destroyed & the unit appears to be aphanitic. Vague grumish fsp phenos. up to 3 mm apparent in some places.																			
				ALT: The unit looks like it is potassic, but no stain obtained. Pervasive silicification.																			
				MIN: 5% f-g disem & fracture-related PY. 3-5% f-g black oxide mix of hematite & magnetite.																			
				STRUCTURE: Trace quartz stringers to 2 mm.																			

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G. ALLEN
Date: OCT. 24

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Mag	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	138.41	154.35	PPHM	4	M			0.3	4		1				M			VW	VW	W			W

LITHOLOGY: Mottled medium to dark brown to greenish-grey medium-grained feldspar phyric intrusion. Texture largely destroyed. Vague greenish plag phenos to 3 mm.

ALT: Pervasive sericite.

MIN: 4% f-g disem + stringer PY. Minor disem hematite. Sporadic disem + qtz-stringer - related Cp to 3%, average = 0.3%.

STRUCTURE: Very weak quartz stockwork with ≤ 1 stringer / m. Stringers to 1 cm wide + generally at shallow angle to core axis.

| P | 154.35 | 163.0 | PPHM | 4 | M | 1 (?) | W | 0.5 | 4 | | | 2 | | | M | | | T | VW | VW | | | W |

LITHOLOGY: As 128.35-138.41. Mottled dark greenish to brownish grey medium-grained feldspar phyric intrusion.

ALT: Pervasive sericite. Colour suggests potassic alt, but no stain.

MIN: 4% f-g disem + fracture-related PY. Disem Cp up to 1%, average ≤ 0.5%.

STRUCTURE: Few quartz stringers known in unit.

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G-ALLEN
Date: OCT. 29

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	163.0	167.64	DPFH	1	M	4	M	T	2				M	M	.	.	T		VW			M

LITHOLOGY: Homogeneous dark brownish to greenish - grey intrusion with vague embedded plag phenos to 2 mm (~40%). 10% dark grey-grey clots after mafics. Sporadically weakly magnetic.

ALT: Moderate potassic. Moderate stain. Fsp mod soft & probably sericitic.

MIN: 2-3% f-g pyrite; disem & coating fractures. Rare CP also on fractures.

STRUCTURE: Blocky core throughout.

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	167.64	176.73	PPHM	4	M			T	5					M			VW					W-M

LITHOLOGY: Medium grey to pinkish - brown fine - grained feldspar phyric intrusion with vague feldspar phenos average ~1 mm. Some parts have distinct pinkish - grey subhedral laths to 1 mm, probably altered hornblende.

ALT: Probably pervasive sericit. Pinkish - brown parts have potassic but no stain.

MIN: 5% f-g disem PY or lesser PY on fractures & in stringers.

STRUCTURE: Very weak fracture control with 1-3 mm quartz stringers, generally ≤ 1/m

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G. ALLEN
Date: OCT. 24

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	176.73	177.18	DMAF																	W			W	

LITHOLOGY: Medium greenish - grey aphanitic groundmass with 15% - 25% stubby greenish subhedral plag phenos + 8-10% dark brown biotite phenos to 2 mm. Upper contact sharp, irregular ~ 65° CA. Lower contact ~ 40° CA.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	177.18	189.02	PPHM ?	4	M	1 ?	W	T	3		2				M			T	VW	T				

LITHOLOGY: Mottled medium to dark greenish to brownish - grey medium-grained feldspar phyric intrusion. Texture somewhat obliterated. 30% - 40% subhedral prisms of fsp to 3 mm, average 1-2 mm + 10% 1-2 mm dark green clots of altered mafics. Rock is probably a less altered variety of PPHM. Non magnetic.

ALT: Pervasive sericite. Colour suggests potassic alt. but no stain in either the brownish or greenish parts.

MIN: 3% f-g dissem PY + sporadic hematite to 4%. Trace CP on fractures + disseminated

STRUCTURE: Rare quartz stringers to 5 mm mixed with white carbonate + PY.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
P	189.02	201.80	PPHM	4	M			0.3	5		2				M			T					W	

LITHOLOGY: Mottled dark blue - grey to light grey to greenish - grey fine to medium - grained feldspar ± hornblende phyric intrusion. Distinctly finer - grained than above, + with different colour. 30% vague subhedral green - grey fsp prisms to 2 mm, average <1 mm. 10-15%

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G-ALLEN
Date: OCT. 25

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
					pinkish-grey altered subhedral hornblende phyres, also + 1 mm.																	
				ALT: Pervasive sericite.																		
				MINERALIZATION: 5% fine-grained disseminated and fracture-related pyrite; sporadic CP to 0.6%, generally disseminated with CP.																		
				STRUCTURE: Very rare quartz stringers to 1 cm. Irregular selvages 195.8 - 200 - Moderate white carbonate stockwork / breccia flooded zone.																		
P	201.80	234.83	PPHM	4	M	1	W	0.25	5		1-2		W	M			VW	W	W			W
													medium									
				LITHOLOGY: Relatively homogeneous orange-brown to brown & locally grayish to brownish-grey fine to medium-grained vaguely feldspar phyric intrusion: light-colored grey subhedral mostly to 2 mm (average 1-2 mm) in a red-brown to orange-brown aphanitic groundmass.																		
				ALT: Pervasive sericite. Colour in part due to hematite. Some patches stain yellow + some don't, ∴ weak sporadic potassic alt.																		
				MIN: 5% disem + fracture-related PY. Sporadic disem Hm to 5% average 1-2% hematite. CP random disem but also in + adjacent to quartz stringers. CP up to 0.6% but average much less																		
				STRUCTURE: Very weak (<1-2/m) quartz stringers generally ≤ 5 mm, 0-60° CA. Wide white carbonate stockwork.																		

DRILL HOLE NO. 95 - 234

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 234
Logged By: G. ALLEN
Date: Oct. 25

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	234.83	250.50	PPHM	3	M	1	M	0.2	4				M	M				VW	VW			U-M

LITHOLOGY: Dark to medium grey to blue-grey to grey medium-grained feldspar phyric intrusion with 20% subhedral square to prism-shaped plag phenos to 3 mm, average ~ 2 mm in a dark grey aphanitic groundmass. Dark minerals clots ~ 20%, up to 4 mm, possibly nucleated around hornblende. Some parts angular intrusive breccia.

ALT: Type 3 sericitic alt. Moderate yellow stain indicating potassic alt.

MIN: 1% diffuse or fracture-related PY. Sporadic diffuse CP up to 1% but average very low.

STRUCTURE: Sporadic weak crush throughout.

241.3 - 241.6 - Crush / gouge zone, 22° CA.

P	250.50	251.25	DRCA															VW				

LITHOLOGY: Light greenish-grey to dark grey aphanitic dyke with 10% white calcite amygdules up to 5 mm. Upper contact irregular ~ 80° CA. Lower contact irregular.

P	251.25	252.07 E.O.H.	PPHM	3	M	1	M		4				M	M						VW		W
Aa	234.83 - 250.50. Porphyritic intrusion.																					

Random red-brown-grey medium-grained feldspar

DRILL HOLE NO. 95 - 234

E.O.H. 252.07

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

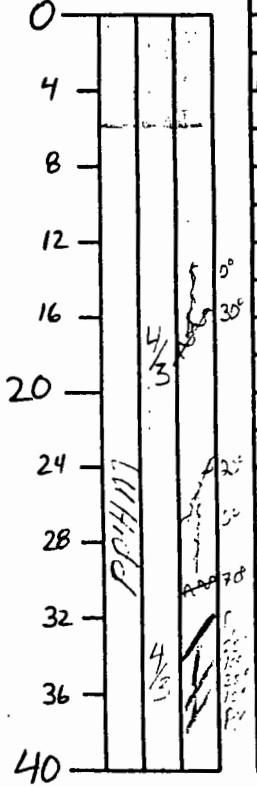
DRILL HOLE NO. 95 - 235

Location Sketch

Grid Northing (m):	100 300	Date Started:	Oct. 24/95
Grid Easting (m):	50 050	Date Completed:	Oct. 28/95
Elevation (m):		Logged By:	B. Thurston
Total Length (m):	440.14	Date Logged:	Oct 25/95
Casing Depth (m):	5.79	Data Entry:	
Reduction Depth:	351.13 m	Entry Date:	
Collar Core Size:	HQ	Casing (In/Out):	Out

Survey	Depth	Azimuth	Dip

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Moly MAG	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	0.00	5.79	CASN																				
P	5.79	94.15	PPHM	4	W	3	W	.72	4.5	o	<1	T	o	vW	S	W	vW	vW-W	W	W	o	T	W
P	94.15	96.40	DMAF																				
P	96.40	151.30	PPHM	4	W	3	W	.90	4.5	o	T	T	o	T	m-S	W	vW	W-M	W	W	o	o	W

Lithology: Altered PPHM is the main rock type for the first 150m of this hole. Besides slight variations in colour/alteration & degree of Qtz stockwork/cpy this unit is fairly homogeneous. Increased Shearing/Faulting is observed in the first 30m of core and then solid, competent rock is intersected to 151 m. The core is light pale grey to green → med. green and a pale orangey-brown-yellowy colour in potassic areas. Porphyritic texture is trace to very weak upsection through the faulting but increases to very weak to weak before DMAF and after DMAF to 151m. Plag. phenocrysts are most often preserved in patches. These pheno's are generally anhedral and strongly sericitized. Matics are seldom observed. They occure as ratty, buff coloured grains often partially replaced by Py. Qtz stock work is T→W to DMAF & W→M after DMAF. The quartz veins are 1mm → >2cm in size but most common 0.2→1cm. Carb veining occurs mainly in areas of shearing. It occurs as fracture filling > veins.

Alt'n: Core is strongly sericitized in matrix & pheno's ± Ank ± Qtz ± Kao ± Py disseminations. Weak mottled Amyllic blebs are observed throughout but mainly as ser + Py (Amyllic)

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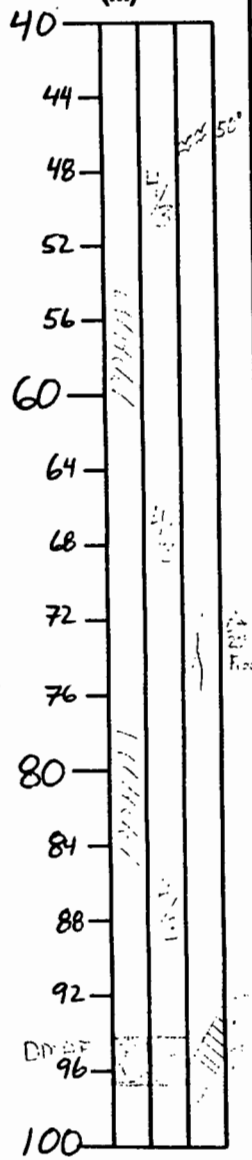
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 235
Logged By: B. Thurston
Date: Oct. 25/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	Alt'n	cont'd:	envelopes on Py & Py+Qtz Veins. Trace to weak Potassic alt'n is observed throughout. K-spar is generally vein/fracture controlled ⇐ pervasive K-spar. He is diss. as black → red colour to ~46m. He then occurs >2% as patches of bright orange red for 7→8m. He is then mainly Tr to 15m. Calcite is Trace in Carb. Veins/Fractures. Calcite is observed as pheno replacement in the potassic area around 80→90m. Tourmaline is diss in matrix >> fractures throughout core & up to 1% locally. Diss. are black & usually <1mm in dia.																		
	Minz:		Py is strong throughout as diss ≥ fractures & Veins. From 32→38m 2→4cm Py veins occur @ 10° & 25° + Cpy. Cpy is diss. mainly as fine grain cpy intermingled w diss. py. Cpy is also observed strong around Qtz Veins & in Qtz veins as well as coating fractures w or w/out Py & in Py veins.																
		**	Cpy & Py in this area (i.e. 94-107 & 94-105) are finely diss. and very close to the same colour ∴ estimation even on broken surfaces is questionable. Moly is very trace diss. in matrix.																		
	Structure:		* Strong 0→5° ~15m to 40cm gouge @ 20°																		
			* Strong Shearing + faulting from 23→31m ending in gouge @ 70° & 30°																		
			* Strong 50° over 80cm @ 46m																		
		DYKE	** DMAF @ 94.15→96.40m w u.c. and l.c.'s both assymilated irregular contacts ?° (Low angle ~25°) Typical DMAF 2% carb amygdules, bio & Hbld + (ser) Plag phono's. only trace magnetic.																		
			* L.C. w DPFH @ 151.3m also assymilate ?°																		

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GEOLOGIC DRILL LOG

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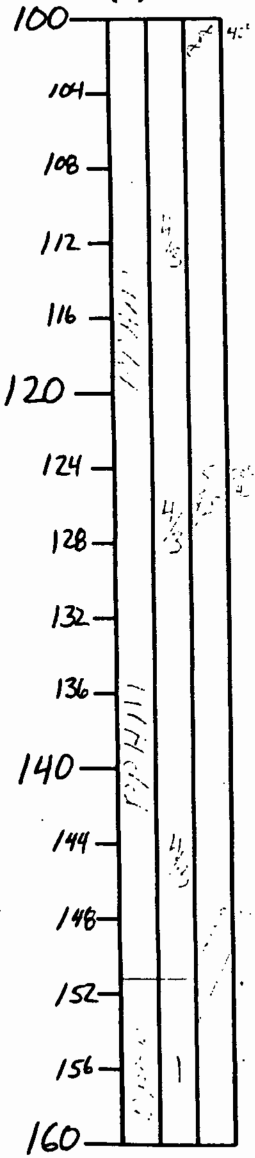
DRILL HOLE NO. 95 - 235
Logged By: B. Thurston
Date: Oct. 26/95

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Mineralization MAG	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
P	151.30	177.35	DPFH	1	S	4	W	0	0.5	0	1	m	0	S	m	W	0	0	0	W	0	0	m
P	177.35	273.00	PPHM	4	m	3	W	1.2	4	0	T	0	0	T	S	W	vW	W-M	W	T	0	0	vW

151.30 – 177.35 DPFH

Lithology: / Min'z: / Alt'n: Typical DPFH requiring No description but I'll humor you. 151 → 163m is Intensely Potassic. It is Dark red-brown w̄ very good euhedral phenocrysts and a good porphyritic texture preserved. Mafics are chloritized, plag is sericitized, Matrix is Potassicly (K-sp pervasive) altered. He & mag. ✓ + pervasive and disseminated. No Qtz stk-wrk. Carb as fracture filling (weak) and less as veining. Py is trace to 163m where Potassic alt'n becomes secondary to Ser + Py ± Ank ± KAO alt'n. No cpy. Calcite is strong in Potassic areas mainly as phenocryst replacement along w̄ the chloritized mafics. Where chlorite in pervasive in groundmass so is calcite. Mafics are a light green to buff colour in ④ alt'n areas.

Structure:
* Shears in Lower section of Dyke @ 30°
* U.C. & L.C. both assymilated ∴ No degree to C.A.

177.35 – 273.00 PPHM

Lithology: I hate not to write a long description but... This unit is exactly the same rock type as described from the beginning of the hole! light to med. green colour to core w̄ patchy yellowy-buff colour & the odd grey patch. Qtz Veining may be slightly more intense, slightly more moderate than last section.

Min'z: Cpy is noted as being >90% diss. in matrix and around Qtz veins but not necessicerily in the Qtz Veins. It is also easier to distinguish the cpy from the Py starting @ ~ 192m. Py is 60% diss & 40% as veins / fracture fillings.

Alt'n: Same as previous but Potassic is much less and not as strong.

Structure:
* 30cm Shearing @ 196m @ 40° & 65°
* 10cm Shear @ 215m @ 40°
* 18° & 48° 2cm Sh's @ 248.50 m
* Partially healed shearing + Clay alt'n @ 255 → 264m @ 30°, 30°, 40°, 30°, 30°

DRILL HOLE NO. 95 - 235

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GEOLOGIC DRILL LOG

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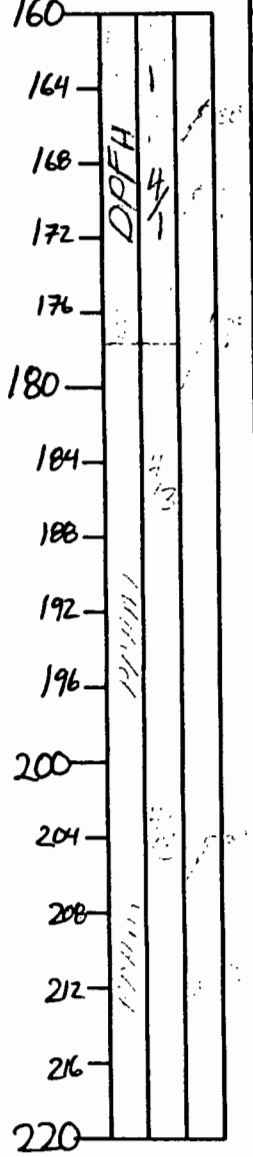
DRILL HOLE NO. 95 - 235
Logged By: B. Thurston
Date: Oct. 27th/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	273.00	273.65	DLAT					o	T	o	o	o	o	o	?	S	o	o	o	o	o	o	m
				Lithology: Cream to light buff colour w grey envelopes on Py fractures (0.5 mm). Ser? blebs filling fractures.																				
				Structure: ∦ 5° → 10° & 15° for U. & L. contacts. ? sheared sharp & Broken.																				
P	273.65	287.10	PPHM	4	m	3	w	1.2	3	o	T	o	o	T	S	W	vW	M-S	W	W	o	o	W
				Lithology: Same as before DLAT.																			
				Alt'n: Strong clay alteration of Matrix (Plag → clay)																			
				Mnz: Cpy is becoming more difficult to distinguish from Py																			
				Structure: ∦ L.C. w DQCA @ 45° sharp																			
P	287.10	288.15	DQCA					o	T	o	T	o	o	o	?	S	o	o	o	T	o	o	vW
				Lithology very fine grain Cream to light buff w <1% 3→7mm Qtz-Carb & Carb amygdaloids. Py on fractures w grey selvages. Hem Stain Pervasive and patchy.																				
				Structure: ∦ U.C. & L.C. sharp @ 45° sh'd.																				
P	288.15	302.15	PPHM	4	m	3	w	1.3	5	o	T	o	o	?	S	S	vW	S-m	W	T	o	o	vW
				Lithology Same as 273 → 287 m.																			
				Alt'n: Strong clay alteration of matrix.																			
				Mnz: Cpy is becoming difficult to distinguish from Py.																			
				Structure: ∦ L.C. w DQCA @ 45° sharp, shear.																			
P	302.15	304.87	DQCA					o	T	o	?	m	o		S	S	o	o	o	W	o	o	vW
P	304.87	306.93	PPHM	4	m	3	w	1.2	5	o	o	o	o	o	m	m	o	W	T	o	o	o	W
P	306.93	320.40	DQCA					o	T	o	?	m	o		S	S	o	o	o	W	o	o	vW
				Lithology: PPHM is same as above unit, possibly a raft caught up in dyke.																			
				DYKE Lithology: Dyke is Med to dark green → med. to dark red → purpley brown → light grey green. Although colour is varried Dyke is homogeneous. 1→2% carb and Quartz-Carb amygdaloids 1mm → 5mm throughout a fine grain to																			

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 235
Logged By: B. Thurston
Date: Oct. 27/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Mineralization Mag	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	
								aphanitic matrix containing diss. He? giving a red colour. Magnetite is																
								weak to moderate pervasive throughout entire dyke. Carb. veining / fracture																
								filling is only structure.																
				Structure:				U.C. at second DQCA @ PPHM is ?° blocky but L.C. is sharp & strong @																
								12° @ 2cm of Gouge / Breccia leading into a fracture system // to C.A.																
P	320.40	362.20	PPHM	4	m	3	w	.75	3.5	o	T	T	o	T	M	W	W	vW	W	vW	o	o	W	
				Lithology:				The PPHM has taken a change after the DQCA. It looks similar to																
				+Alt'n:				PPHM-2 @ distinctive, prominent buff coloured euhedral mafic laths.																
								The plag. phenos are sericitized very light green. and a very weak																
								Trachytitic texture is observed in the mafic laths. Overall the																
								core is light brown to buff colour. This unit does not however have the																
								diss. Hem. & low Py usually observed in the PPHM-2 unit. This unit																
								has gradational patches of more typical main phase @ zoned plag's																
								dominent to ragged mafic laths. These areas sometimes are																
								potassicly altered @ He + Mag + K-sp. Py & Carb. Stockworks																
								occur throughout and carb. also occurs as Fracture Filling.																
								Qtz Stockwork is very weak usually as < 5mm veins @																
								irregular to fuzzy vein boundaries ± Py and Carb. cores ± Phyllic envelope																
				Min'n:				Cpy still 90% diss. Cpy along fractures & small veins. Py as veins/fract																
								fillings >> diss. Trace He usually in patches almost as a stain or in																
								Qtz veins & less as diss. except in Potassic areas. Calcite is																
								Trace to not observed. Tourmaline is diss. throughout up to 1% locally.																
				Structure:				* 15cm @ 10° SH fgouge @ 349.8m																
								* L.C. 40° slick? 40° contact not gradational. Qtz vein @ contact.																

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 235
Logged By: B. Thurston
Date: Oct. 28/95

Graphic Log (m): 280, 284, 288 (DQCA → DG CA), 292, 296, 300, 304 (DQCA → DG CA), 308, 312, 316 (DQCA), 320, 324, 328, 332, 336, 340

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Moly / MAG	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	362.00	425.35	PPHM	4	m	3	m	1.3	4	o	T	*Mo	o	o	S	W	vW	W	vW	W	o	o	W

Lithology: Once again same as 96 → 151 m on almost all accounts except that the Qtz stk-work is weak and ** the unit, especially from 362 → 402 m looks Fragmental. Qtz, sub-angular, fragments are observed along w discontinuous Qtz veins and other PPHM fragm'ts.

Minz: This is not strong enough to call PBRM but mineralization is noted to be stronger in the matrix of this unit w less Qtz veins. Cpy is 90% diss. Py is diss = fractures/veins. He diss as dark red specks. Tourmaline diss. rosettes up to 1% locally. Tr Moly diss.

Structure: * except for the fragmental appearance up section this core is solid w/out any significant structure.
* L.C. w PPHM-2? unit is healed Qtz/assym SH @ No angle? but grade and Qtz are cut off abruptly @ 425.35 m.

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Moly / MAG	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
*	*	*	*DYKE*	* DQCA 363.55 → 363.75 m @ 30° u.c. Dyke very small ∴ not broken out as unit.																			
P	425.35	440.14	PPHM	4	m	1	W	.45	2.5	o	<1	T MAG	T	T	M	W	T	T-W	W	W	o	o	W-M

Lithology: This unit is described from 320.40 → 362.00 m. They are the same.

Alt'n: Potassic is slightly more domenent in this section possibly because it is a smaller unit. Mag + He + Bio ± K-sp is observed. Elsewhere Ser ± Ank ± Kao ± Qtz + Py is pervasive.

Structure: * core is slightly more fractured and ∴ more blocky.
* 20 cm SH breccia + gouge @ 70° @ 433.3 m
* Small SH's @ 60°

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GEOLOGIC DRILL LOG

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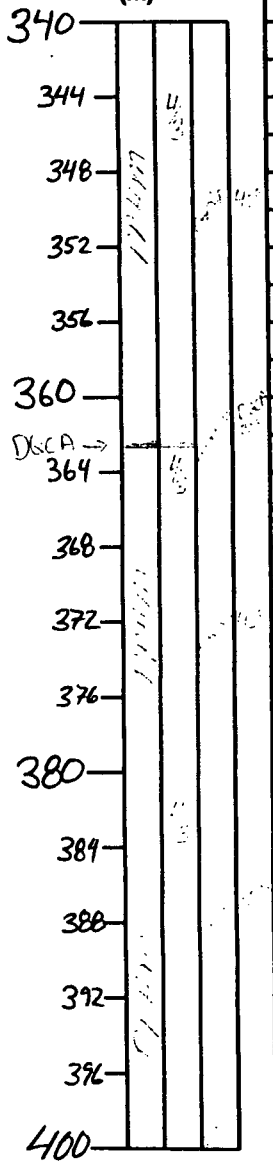
DRILL HOLE NO. 95 - 235
Logged By: B. Thurston
Date: Oct. 28/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	

DRILL HOLE NO. 95 - 235

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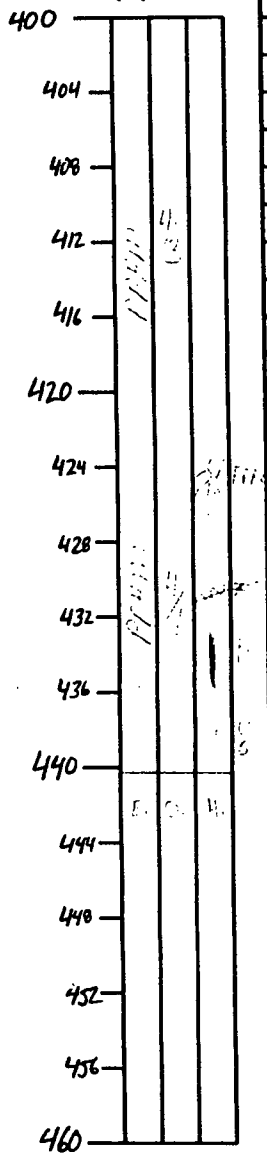
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 235
Logged By: B. Thurston
Date: Oct. 29/95

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm		Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.	

DRILL HOLE NO. 95 - 235

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GEOLOGIC DRILL LOG

DRILL HOLE NO. 95 - 236

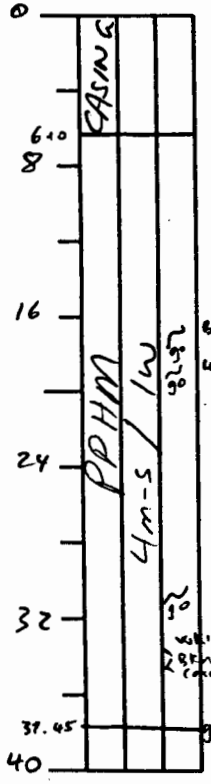
AMERICAN BULLION MINERALS LTD.

Location Sketch

Grid Northing (m):	99 950	Date Started:	OCT 24 '95
Grid Easting (m):	50 000	Date Completed:	OCT 26 '95
Elevation (m):		Logged By:	IAN FOREMAN
Total Length (m):	332.84	Date Logged:	OCT 25 '95
Casing Depth (m):	6.10	Data Entry:	
Reduction Depth:	/	Entry Date:	
Collar Core Size:	NQ	Casing (In/Out):	OUT.

Survey	Depth	Azimuth	Dip
S.S	152.4	180°	-55°
S.S.	300.84	184.5°	-47°

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	0.0	6.10	CASN																			
	6.10	37.45	PPHM	4	m-s	1	w	0.4	3.5	/	2	/	w	m-s	m-s	Tr	vw	/	w	/	/	w

LITH+MIN:

The porphyritic texture is well preserved throughout the unit. The core is generally greyish green but it is locally reddish brown, grey and cream. The appearence of the unit varies but in general it contains 20-25% white to translucent greyish green sub-euhedral, locally rounded, 1-3 mm feldspars and 10-15% <1-2mm sub to euhedral buff to cream, locally green, hornblendes. The feldspars are very distinctive and create the obvious porphyritic texture.

No gypsum veining noted through the unit. Carbonate is weak, locally moderate, as veins and fracture fill. Trace to weak quartz stock work as 1-5mm veins. The quartz veining increases to a moderate stockwork over 10-15 cm sections.

Mineralization is predominately associated with the quartz veining. 0.3-0.45% chalcopyrite occurs in the quartz veins and only locally occurs as fracture fill in sub veins and as disseminations and blebs within 1cm of veins.

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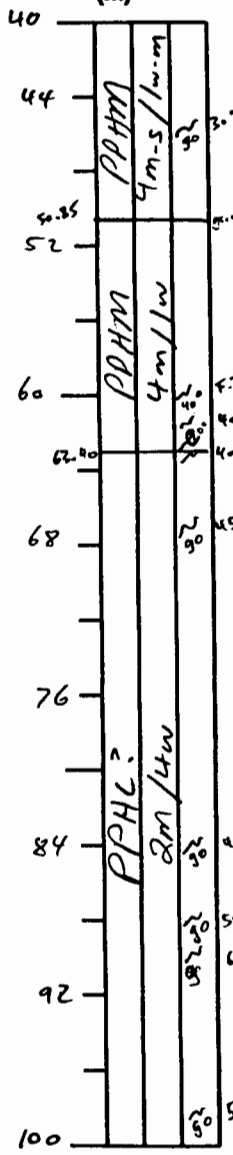
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 236
Logged By: IAN FOREMAN
Date: OCT 25'95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	6.10	37.45	country		3-4% pyrite occurs throughout as fgd disseminations, 1-4mm irregular blebs, in both carbonate and quartz veins and as fracture fill. 1-3% hematite occurs throughout the unit predominately as <1-3mm subrounded to subangular blebs. Hematite also rims pleno's, occurs as 0.5-1cm irregular massive blebs in quartz veins, fracture fill and as pervasive fgd staining of the groundmass. Between 12.70m & 13.25m the unit contains rare fragments. These fragments are typically 0.5-1.5cm subangular and massive. L.C: gradational, made at a slight increase in qtz veining and a 1.5m zone of weak to moderate potassic alteration. ALTERATION: The unit is pervassively mod to strongly Qtz-Ank-Ser-Kao altered locally though, the unit is reddish brown to brownish green as a result of weak potassic alteration. Often, this is remined with an increase in pervassive hematite staining. Local limonitic staining on breaks in the top 2.0 meters. STRUCTURE: - 17.62 - 17.65m → gouge in crushed rock - 17.97m → thick gouge on edge of carb/qtz vein @ 40° - 31.00m → gouge on irregular bkn surface followed by gouge or slip? - 34.91 - 35.09m → weakly bkn core																		
	37.45	50.85	PPHm	4	m-s	1	w-m	0.5	4	/	2.5	/	w-m	m-s	m-s	Tr	w	/	w	/	/	w	

LITH+MIN

This is the same main phase unit that is described between 6.10 and 37.45m except that the quartz stockwork is stronger. CONT

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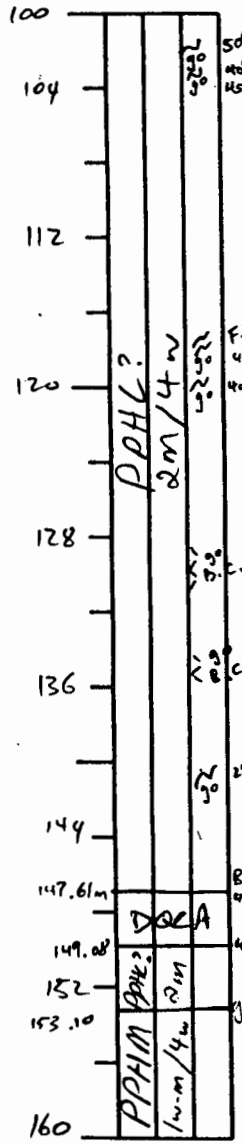
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 236
Logged By: Ian Foreman
Date: Oct 25 '95



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	37.45	50.85	conto		it is still only weak!) and the potassic alteration is locally stronger. Locally the quartz stockwork is moderate. The quartz veins are only moderately well to poorly mineralized. Between 47.60 and 48.50m the unit is dark brownish green. The section also has trace epidote alteration and hematite on the fractures. No contacts are descernable and it contains trace qtz veins. It is possible that this is DPFH?															
					LC: granodiorite. Marked @ end of weak qtz stockwork and weak to mod potassic alteration.																	
					ALTERATION: The alteration is the same as the above unit except that locally the potassic alteration is moderate resulting in combination with hematite - in reddish brown to brownish green core.																	
					STRUCTURE: - 46.29m → trace gouge on slip @ 30°																	
	50.85	63.40	PPHM	4	m	1	w	0.3	3	/	0.5	/	w	m	m	/	Tr	/	w	/	/	w
					LITH + MIN + ALT: This is the same unit as above (and described between 6.10 and 37.45m) except that here is much less hematite and less pyrite. Chalcopyrite occurs only in quartz veins and the quartz veins are less poorly mineralized.																	
					LC: a 15cm section that is either a fault zone or less planar banding. Zone is @ 40°																	
					STRUCTURE: -60.98-61.14m → Marked fault zone / gouge @ 40°																	

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

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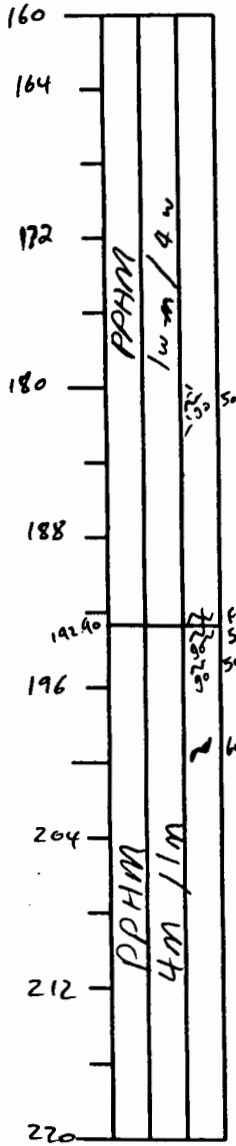
AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 236
Logged By: JAN KOREMAN
Date: OCT 25 '95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	50.85	63.40	CONT'D		-	61.28	- 61.32m →	cemented	gouge	@	40°												
	63.40	147.61	PPHL?	2	m	4	w	Tr	2.5	/	/		/	/	m	m	/	/	/	w	/	/	w

LITHMIN:

The unit is grey and has a well preserved porphyritic texture. 20-25% cream to translucent grey 1-3mm subhedral feldspars and 15-20% buff to dark grey/cream subhedral <1-3mm hornblendes. Rare hornblendes are >4mm.

Locally, the unit is very similar to main phase in that the core has a "glassy" appearance while the hornblendes are green and often contain dissem. py and the feldspars are only ghosts of the former phenos. These sections are 10-80cm wide!.

Elsewhere the unit appears aphanitic. In these sections feldspars are undeterminable and only rare >1mm hornblendes are visible. These sections are probably a result of alteration.

No gypsum veins crosscut this unit. Carbonate is weak as fracture fill and one off-white and pink vein is possibly quartz. 2-3% pyrite occurs throughout as fg'd disseminations, 1-8mm irregular and rounded blebs as well as fracture fill.

Chalcopyrite occurs between 119.02 and 119.38m as blebby fracture fill. This section is anomalous but not a different unit.

L.c:

in btm core, possibly @ 40°

ALTERATION:

Moderate phyllic (qtz-ser-py) alteration throughout with local sections being weakly to moderately qtz-kaol ser ± kao altered. Locally, pyrite fracture fill has 1-3cm sericite envelopes.

STRUCTURE:

- 69.05m → gouge on slip @ 45°

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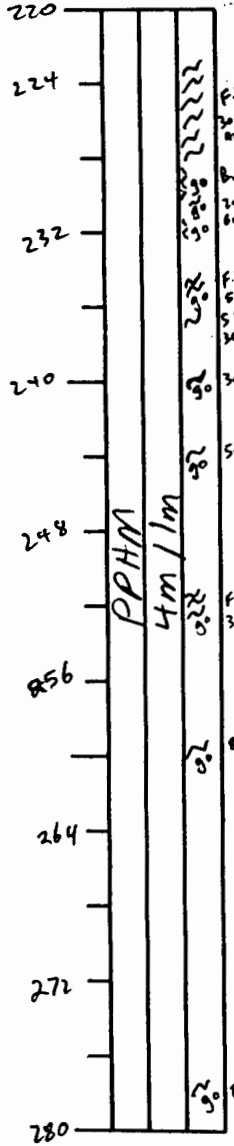

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	63.40	147.61	cont'd		-	84.70 m		→	gouge on edge of sheared carbonate vein @ 45°															
					-	88.90 m		→	gouge in btn core and on Slip @ 50°															
					-	89.68 m		→	2cm gouge and Slip @ 65°															
					-	97.12 m		→	gouge on Slip @ 50°															
					-	102.00 m		→	4-6 mm gouge on Slip @ 50°															
					-	102.28 m		→	1cm cemented gouge, gouge and rubble @ 40°															
					-	102.76 m		→	2mm gouge in Slip @ 45°															
					-	117.78 m		→	F.Z. w crushed rock and gouge @ 40°															
					-	119.79 m		→	3-6mm gouge on Slip @ 40°															
					-	131.90 - 132.00 m		→	gouge in wkly btn core															
					-	135.90 - 136.25 m		→	gouge in mod btn rock															
					-	141.38 m		→	1-4 mm gouge on Slip @ 25°															
	147.61	149.08	DQCA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	W	-	-	W	

LITHOLOGY:
olive green to greenish grey with an aphanitic matrix w 5-10% <1mm white specs (plags?) and 3-8% 1-5mm rounded carbonate amygdules. Blk carbonate veining throughout

L.C.:
Sharp @ 40°

	149.08	153.10	PPHL?	2	m		/	2.5	/	/			/	/	m	m	/	Tr	/	Tr	/	/	W	

LITH + MIN:
This is the same possible late phase unit that occurs above the dyke and is described between 63.40 and 147.61 metres

L.C.:
contact is gradational

ALTERATION:
The alteration is similar to the continuation of the unit above the dyke but there are no sections that are pervasively altered

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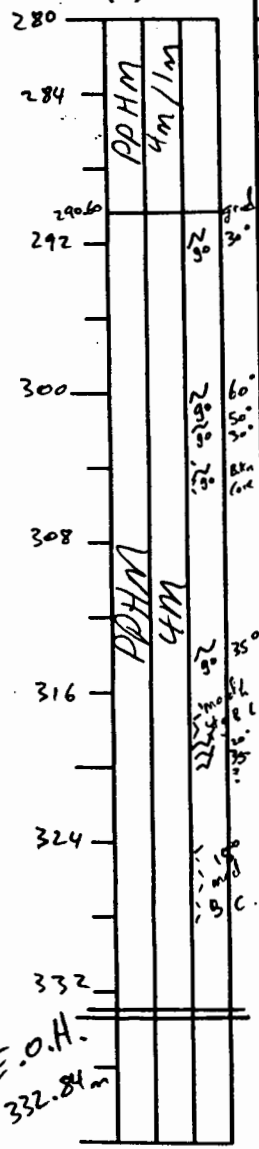
Date: OCT 26 '95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	149.08	153.10	cont'd		STRUCTURE:																	
					- No noticable structures																	
	153.10	192.90	PPHM	1	w-m	4	W	Tr	3	/	10	/	w-m	W	W	/	Tr	vw	Tr	/	/	W
					LITHOLOGY:																	
					The unit is mottled brown and tan with a well preserved porphyritic texture. 20-25% cream to translucent brown <1-3mm subhedral plagioclase and 15% buff to dark brown <1-2mm subhedral hornblendes. Locally the hornblendes are very difficult to distinguish from the groundmass.															
					Rare (<5!) quartz veins are poorly mineralized. Trace carbonate as veining and possible fracture fill. No gypsum veins occur through this unit.															
					3% pyrite occurs throughout as fgrd disseminations, 1-4mm rounded and irregular blebs as well as fracture fill and veins. Trace chalcopyrite occurs as v.f. grd specks in the rare quartz veins															
					Tr to 3% hematite occurs throughout as fgrd dissem, 1-3mm irregular blebs and as pervasive staining of the groundmass. The hematite is, locally, only evident on the stained surfaces.															
					L.C.:																	
					Sharp in 10cm fault zone @ 50°																	
					ALTERATION:																	
					Weak to moderate potassic alteration throughout results in a mottled stain. Locally, the rock does not stain. These sections are weakly Qtz-Ser-Ank ± Kao altered and the colour must be due to hematite.															
					STRUCTURE:																	
					- 181.71m → gouge on break @ 50° and moderately bkn core																	
					- 192.90m → 10cm fault zone with gouge @ 50°																	

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DRILL HOLE NO. 95 - 236
Logged By: Ian Forman
Date: Oct 26 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	192.90	290.60	PPHM	4	m	1	m	0.3	3.5	/	1.0	/	m	m	m	Tr	Tr-vw	vw	vw	/	/	w

LITH+MIN:

This unit is quite variable. It is generally green with sections that are reddish brown, brownish green, grey and light brown. The porphyritic texture is well preserved throughout. 20-25% cream to translucent light green to pinkish brown, <1-3mm sub to euhedral feldspars and 15-20% buff to dark green <1-2mm, rarely >4mm, sub to euhedral hornblendes. Locally, the unit appears aphanitic. These sections are commonly in the reddish brown portions of the unit.

The quartz stockwork varies from trace to weak and is locally absent. The quartz stockwork is strongest between 200.25 and 239.27 meters and decreases down hole to barely non existant. Trace to weak carbonate throughout as veins and fracture fill. This unit contains no gypsum veins.

3-4% pyrite occurs throughout primarily as fg'd dissem. and as 1-4mm irregular and rounded blebs. Pyrite also occurs in quartz and qtz veins as well as fracture fill and veins <0.3 to 0.45% chalcopyrite almost exclusively occurs within quartz veins or as disseminations within 1-2cms of quartz veins.

Hematite occurs as 1-3mm blebs, pervasive staining of the groundmass and on rare fractures. Hematite varies from Trace to 3%.

Tourmaline occurs locally as v. fg'd dissem. and associated with fractures

L.C.:

gradational - marked by a change in groundmass (coarser) and the presence of weak stockwork.

ALTERATION:

The alteration varies throughout the unit. It is predominately moderately Qtz-Ser-Ank-Hem altered. Locally the unit has

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Date: Oct 26 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Mineralization Typ	Mineralization Int.	Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	192.90	290.60	CONT'D																			

a porcelanous appearance. These strongly kaolinitized sections surround fractures. Elsewhere the unit has moderate potassic alteration. The stained sections show that the potassic alteration is commonly strongest surrounding carbonate +/- pyrite veins

STRUCTURE:

- 194.6m → 2-8mm gouge @ 50°
- 199.71m → gouge @ 80°
- 199.90 - 199.98m → Slen @ 60°
- 223.63 - 228.0m → Fault zone w gouge @ 30° and 40°
- 228.58 - 228.69m → gouge in strong bkn core
- 228.98m → gouge on Slip @ 20°
- 229.12 - 229.91m → gouge and bkn core in Fault Zone @ 55°
- 230.08 - 230.12m → gouge in bkn core and on slip @ 60°
- 231.03 - 231.08m → Gouge in bkn ore
- 231.17m → gouge on Slip @ 50°
- 235.35 - 235.42m → Fault Zone w gouge @ 55°
- 236.40 - 236.82m → Shear Zone @ 30°
- 240.34m → 1-2cm cemented gouge + rubble @ 30°
- 244.07m → gouge on Slip @ 50°
- 251.81 - 251.96m → Fault Zone w gouge, cemented gouge + rubble @ 35°
- 260.10 - 260.14m → gouge on slips @ 80°
- 278.13 - 278.16m → Fault Zone with gouge @ 60°

	290.60	332.84	PPHM	4	M		0.7	3.5	/	Tr		/	/	M	M	/	W-M	VW	W	/	/	W

LITHMIN:

The unit is green to greyish green and has a moderately well preserved porphyritic texture. 20-25% cream to light translucent green 1-4mm sub-euhedral feldspars and 10-15% buff to green sub to euhedral <1-3mm hornblendes. Locally the unit is grey or brownish green. Through the grey sections the feldspars

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DRILL HOLE NO. 95 - 236
Logged By: Ian Forsman
Date: Oct 27 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	290.60	332.84	Cont'd		blend in with the groundmass.																	
					Weak to moderate quartz stockwork with weak to moderately well mineralized 2mm - 2cm quartz veins. The quartz veins contain a majority of pyrite. Trace carbonate as fracfill and veining.													
					No gypsum.																	
					0.5 - 0.9% Chalcopyrite throughout as disseminations and																	
					blebs in quartz veins and disseminations and blebs in the groundmass																	
					within 1-2cm of the veins. Chalcopyrite also occurs as fracfill																	
					assoc. w pyrite. 3-4% pyrite as fg'd disseminations and																	
					1-4mm irregular and rounded blebs. Pyrite also occurs as veins																	
					and fracture fill.																	
					Massive cpy and pyrite occurs @ 1-2cm blebs of sphalerite																	
					in the fault zone between 321.95 and 324.34m.																	
				L.E:																		
					E.O.H.																	
				ALTERATION:																		
					Moderate Qtz-Ank-Ser +/- Kfs alteration throughout.																	
				STRUCTURE:																		
				- 292.15m → 3-4mm gouge on Slip @ 30°																		
				- 300.0m → gouge in 5mm Shear @ 60°																		
				- 300.14m → gouge on Slip @ 50°																		
				- 302.73m → 1cm cemented gouge @ 30°																		
				- 305.32 - 305.98m → gouge in Ank core																		
				- 314.08m → gouge on Slip @ 35°																		
				- 317.16 - 317.30m → mod to strongly Ank core.																		
				- 321.95 - 324.39m → Shear / Fault zone with fabric @ 35° - U.K @ 20° and C.C.?																		
				- 324.39 - 324.92m → Strongly Ank core and CORE LOSS																		
				- 324.92 - 378.0m → 15% moderately Ank core.																		
	332.84	332.84	E.O.H																			

DRILL HOLE NO. 95 - 236

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Location Sketch (N arrow)

Grid Northing (m):	99900 N	**Date Started:**	Oct 26/95
Grid Easting (m):	50300 E	**Date Completed:**	Oct 28/95
Elevation (m):		**Logged By:**	T. Fraser
Total Length (m):	286.82 m	**Date Logged:**	Oct 27/95
Casing Depth (m):	3.05 m	**Data Entry:**	
Reduction Depth:	—	**Entry Date:**	
Collar Core Size:	NQ	**Casing (In/Out):** (In circled)	lost 3.05 m

Survey	Depth	Azimuth	Dip
SS	154.5	181.5	-62°
SS	283.8	182.5	-62°

Graphic Log (m): 0, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40 — PPHM, 4W (from 4 to 40, arrows)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	0	3.05	CASN																				
	3.05	64.87	PPHM	4	W	—	—	0.45	4	0	2		0	0	W	vW	TR	Ws	M	W	0	0	W

Lithology - Medium grey to greenish buff-coloured Main Phase plagioclase hornblende porphyry. The unit is moderately porphyritic with approximately 25-30% subhedral plagioclase phenocrysts. Plag phenos vary in size from 1mm-2mm. Dominantly the plag phenos are pale to medium-coloured green. Hornblende phenos appear to be obscured, but locally are somewhat notable - beige phenos comprising 8-10%. Hornblende phenos are euhedral 1-3mm. It would appear that the unit is inhomogeneous with respect to the distribution of hornblende phenocrysts.

Alteration/Mineralization - The unit is weakly altered to carbonate-sericite ± clay-pyrite and quartz. Pyrite is finely disseminated throughout and occasionally blebby. Pyrite veins are dominantly moderate in intensity and locally weak. There are trace carbonate-quartz-pyrite veins. Locally 1-3% red hematite is finely disseminated. Plagioclase phenocrysts are sericite altered and occasionally clay altered. Some sections appear to be carbonate-sericite altered. A weak to very weak quartz stockwork contains disseminated CPY and pyrite.

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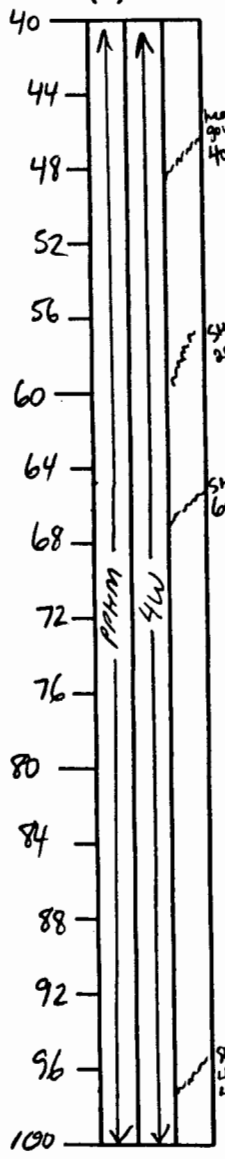

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	sph/gal	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			Structure -					8.50 - 9.45m slightly sheared / minor gouge															
								9.60 - 9.83m shear / gouge															
								27.80 - 28.20 gouge / healed gouge @ 20°.															
								28.20 - 28.96m Broken															
								31.35 - 31.89 m gouge															
								40.10 - 40.44m healed gouge															
								47.33 - 47.56m healed gouge @ 40°															
								52.00 - 52.73m healed gouge															
								50.95 - 51.05m shear / gouge															
								54.42 - 54.90m shear / healed gouge															
								57.90 - 58.15m Shear @ 20°															
	64.87	141.67	PHM	4	W	-	-	0.4	3	0	1.5	TR	0	0	M	vW	0	TR-W	W	TR	0	0	W
			Lithology - same as interval 3.05 - 64.87 m																				
			Alteration - Plagioclase phenocrysts are moderately to weakly sericitized. Locally though (122 - 127m) there are areas which are strongly clay altered - dominantly kaolinite altered plagioclase. These sections have a bleached white appearance. Pyrite is disseminated and blebby throughout. Pyrite veins are generally thin and comprise less by volume than disseminated variety. Pyrite veins vary from very weak to weak in intensity. There are trace to weak chlorite carbonate veins. The distinguishing feature between this interval and the previous one is the relative lack of quartz stockwork. Quartz veins generally contain trace disseminated chalcopyrite, pyrite and occasionally carbonate. Locally chalcopyrite is finely disseminated. Red earthy hematite is finely disseminated, locally up to 3-5%. Trace carbonate - sphalerite - galena veins.																						

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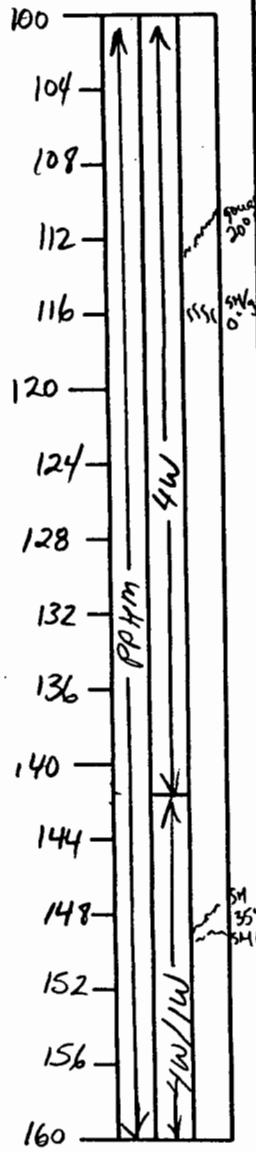

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Structure - 64.87 - 65.23 m broken with gouge
66.37 shear @ 60°
81.95 - 82.03 m sheared
96.45 - 96.80 m shear 40-45°
100.98 - 101.15 m gouge
108.50 m gouge
111.75 - 112.8 m healed gouge 20°
115.90 - 116.40 m sheared with gouge 0° to core axis
129.41 - 129.75 m gouge / broken rock

@ 141.67 m alteration of the PPHM unit changes

	141.67	195.90	PPHm	4	W	1	W	0.35	3	0	TR	W	TR	W	TR	0	TR	VW	W	0	0	M

Lithology - The Main Phase plagioclase hornblende porphyry is light brown/tan to grey in colour. The unit is highly porphyritic with notable hornblende phenocrysts. Plagioclase phenocrysts are subhedral to rarely euhedral. Sometimes the phenos are visibly zoned. Plagioclase grains are pale apple green and comprise 30-35% of 1-4 mm phenos. Hornblende phenocrysts are distinctive since they are light brown to beige and have a shreddy appearance. Mafic phenocrysts are euhedral, comprise 8-12% and range in size from 1-2 mm. The groundmass is tan to pale orange

Alteration / Mineralization - Plagioclase phenocrysts are weakly sericite altered, with trace amounts of clay/kaolinite. Hornblende phenocrysts appear to be weakly biotite altered - giving them a shreddy texture. The groundmass colour is due in part to hematite staining but also trace to weak amounts of Kspar alteration. Pyrite is finely disseminated and in very weak veinlets. Quartz veins are generally trace to very weak in intensity and consist

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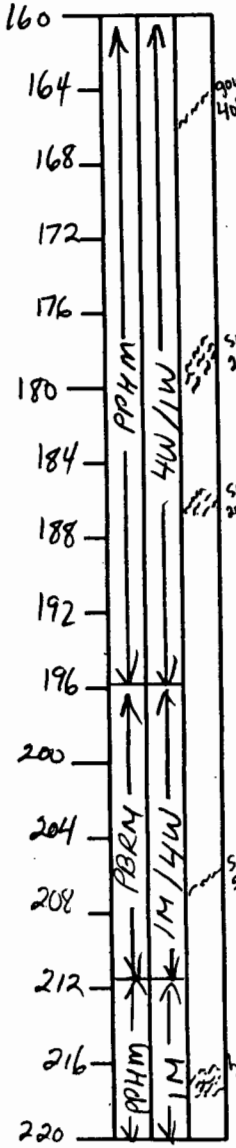

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small amounts of white carbonate, chalcopyrite and pyrite. There are weak to trace calcite veins and several pyrite veins with quartz-sericite envelopes. Trace disseminated chalcopyrite

Structure - 148.20 m shear @ 35°
148.52 m shear @ 40°
149.35 - 149.40 m shear @ 60°
159.15 - 159.30 m gouge
163.90 - 164.00 m shear/gouge
165.07 - 165.13 m gouge/shear @ 40°
176.70 - 177.30 m sheared with gouge
178.15 - 179.95 m sheared 20°.
186.35 - 186.90 m sheared 20-30°.
187.75 - 189.00 m sheared
190.03 - 190.05 m shear with clay @ 70°

@ 195.90 m gradational to slightly brecciated contact with Main Phase breccia.

	195.90	211.68	PBRM	1	M	4	W	0.3	5	0	0	M	W	vW	W	0	Ws	W	W	0	0	W

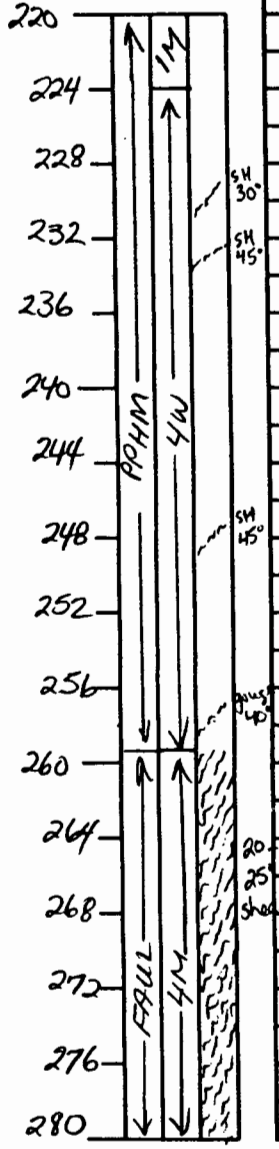
Lithology - The Main Phase breccia is mottled in colour, with dominantly orange to white and locally areas of grey. The unit is moderately porphyritic, with 30-35% plag feldspar phenos, 1-2 mm in length and pale green to white in colour. Hornblende phenos comprise 5-8% beige/tan coloured minerals, 1-2 mm in length and euhedral in morphology. Mottled alteration appears to obscure clast boundaries but locally the unit contains 70% fragments and ~30% biotite-rich matrix. Several fragments are quartz altered, while other sections of unbrecciated material are cut by quartz veins

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 237
Logged By: J. Fraser
Date: Oct 28/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Alteration/Mineralogy - The unit is variably hematite and Kspar altered. (dominantly within groundmass material). Locally through clasts and matrix are moderately to strongly biotite altered. Plagioclase phenos are weakly to very weakly sericitized. Locally some "matrix material" is clay altered. Quartz veins are brecciated and also appear late. Occassionally mineralized with chalcopyrite. Pyrite is finely disseminated and blebby throughout. There are weak pyrite veins and carbonate veins.																	
				Structure - 205.98 - 206.10 m healed gouge																			
				206.42 m Shear @ 50°																			
				207.42 - 207.55 m Shear/gouge.																			
				@ 211.68 m sheared (?) upper contact with PPHM																			
	211.68	224.00	PPHM	1	M	-	-	0.3	2.5	0	0	TR	TR?	M	vW	0	0	TR	vW	W→M	0	0	W
				Lithology - Dark brown Main Phase plagioclase hornblende porphyry. The unit appears to be fine grained, but on closer inspection is moderately porphyritic - the phenocrysts tend to blend in with the groundmass colour. Plagioclase phenos probably comprise 25-35%, 1mm average, and are hematite stained orange. Hornblende phenos appear pristine, comprising 5-10% 1-2mm grains, dark green to brown in colour. The groundmass is brown to orange and aphanitic.																	
				Alteration/Mineralization - The groundmass is moderately Kspar altered. Some of the phenocrysts (mafics) may be biotite altered (?). The unit is weakly magnetic - probably finely disseminated magnetite. Trace quartz veins contain white carbonate and pyrite. Pyrite is finely disseminated as well as very weak veins. White carbonate veins are present from weak to moderate intensity. Plagioclase phenos may be very weakly sericitized.																	

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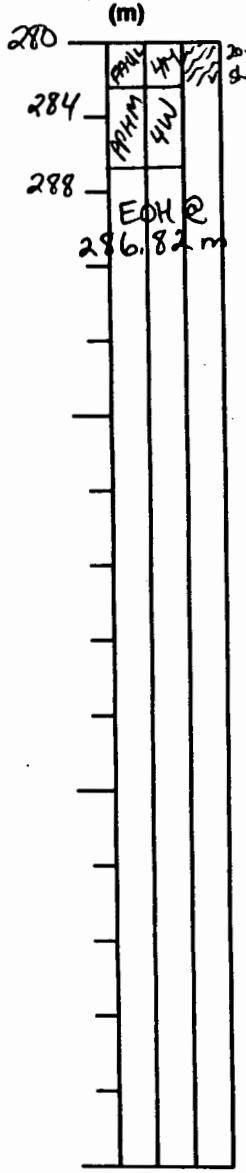
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 237
Logged By: T. Fraser
Date: Oct 28/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Structure - 215.50 m gouge @ 30° (2 cm width)																		
				216.71 - 217.90 m healed shear @ 15° to core axis																		
				221.95 - 222.07 m gouge																		
				222.15 - 222.50 m healed gouge.																		
				@ 224.00 m gradational change in alteration																		
	224.00	259.15	PPHM	4	W	-	-	0.35	2	6	1.5	0	0	W	0	0	TR	W	TR	0	0	W

Lithology - Buff to grey coloured Main Phase plagioclase hornblende porphyry. The unit is moderately porphyritic, with 25-30% subhedral grey to green plagioclase phenos (subhedral). Plagioclase phenos are 1-2 mm in length. Hornblende phenos are beige, euhedral, 1-2 mm in length and comprise 8-10%. The groundmass is aphanitic and beige/tan coloured. Locally primary texture has been somewhat obscured.

Alteration/Mineralization - Plagioclase phenocrysts are weakly sericitized. Hornblende phenos appear to be sericite - carbonate altered and look shreddy. Red hematite is locally finely disseminated (1-2%). Pyrite is disseminated throughout as well as weak veins. There are trace white carbonate veins. Trace quartz - carbonate - pyrite veins. and trace quartz - pyrite veins. Trace disseminated chalcopyrite.

Structure - 230.25 - 230.30 m gouge/shear @ 30°
231.75 - 232.80 m healed shear
233.44 - 233.60 m healed shear 45° to core axis
238.20 - 238.40 m healed gouge
248.00 m gouge @ 45°
258.00 m gouge seam @ 40°.

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 237
Logged By: T. Fraser
Date: Oct 29/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			@ 259.15m gradational contact with Fault/shear																			
	259.15	282.00	FAUL	4	M	-	-	0.3	3	0	TR	0	0	W	M	0	TR	W	W	0	0	M
			Lithology - same as interval 224.00 - 259.15m but the unit has been highly sheared and gouged. The interval contains sheared fragments of PPHM from the above unit and these are healed by rock flour, clay, and fissible quartz. Seams throughout the fault interval are shallow - approximately 20-25° to core axis.																			
			Alteration/Mineralization - Pyrite is finely disseminated throughout and there are weak pyrite veins. White carbonate veins are fragmented. The unit has moderate clay alteration - mostly within the matrix. Fragments contain trace to 1-2% disseminated red hematite and sericitized plagioclase. Trace quartz and quartz-pyrite veins are also fragmented.																			
			Structure - @ 282.00m lower contact of FAUL - gradational.																			
	282.00	286.82	PPHM	4	W	-	-	0.3	3	0	0	0	0	W	0	0	0	VW	VW	0	0	M
			Lithology - same as interval 224.00 - 259.15m.																			
			Alteration/Mineralization - same as interval 224.00 - 259.15m. The unit contains rare carbonate - pyrite - galena veins; disseminated fine grained pyrite and very weak pyrite veins. Plagioclase phenocrysts are weakly sericitized. This unit does not contain any quartz veins.																			
			Structure - none but from 285.60 - 286.82 the interval is broken parallel to the core axis (sheared?)																			
			EOH @ 286.82 m (shut down 40 ft early when the bit went).																			

DRILL HOLE NO. 95 - 237

GH

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

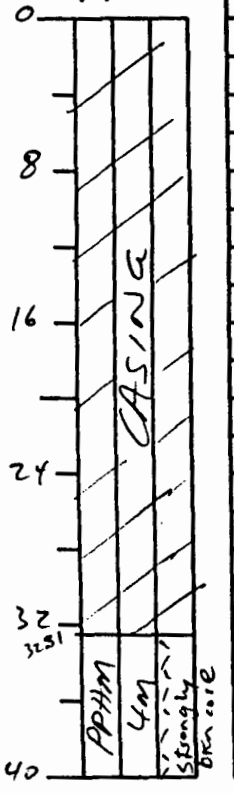
DRILL HOLE NO. 95 - 238

Location Sketch

Grid Northing (m):	99 250	Date Started:	Oct 28 '95
Grid Easting (m):	49 050	Date Completed:	Oct 31 95
Elevation (m):		Logged By:	Ian Foreman
Total Length (m):	216.41	Date Logged:	Oct 31 '95
Casing Depth (m):		Data Entry:	
Reduction Depth:	—	Entry Date:	
Collar Core Size:	NQ	Casing (In/Out):	OUT

Survey	Depth	Azimuth	Dip	
S.S	114.91	78.5°	-59.5	?
S.S	216.41	80.0°	-60°	?

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	0.0	32.31	CASN																			
					No core recovery due to TRICONING through soft overburden layers.																	
	32.31	44.84	PPHM	4	M LITH+MIN			0.6	4.0	—	1.0	—	—	M	M	—	M	—	TR	—	—	S
					The core has a grey green appearance and the porphyritic texture is generally well preserved. 15-20% 1-3mm sub to euhedral creem to light translucent green feldspars and 10-15% <1-2mm sub-euhedral buff hornblendes. Moderate quartz stockwork of moderately well mineralized 3mm to 2.5cm grey to white veins. Trace carbonate veinlets. No gypsum veining. 0.6% Chalcopyrite is predominately as disseminated grains in the groundmass near quartz veins and fractures. Cp also occurs as blebs, fracture fill and in quartz veins. 4.0% pyrite occurs primarily as fine disseminations as well as 1-4mm irregular blebs and as fracture fill and in veins. Hematite occurs throughout as 1-5mm blebs and fracture fill i.c. in the core.													

DRILL HOLE NO. 95 - 238

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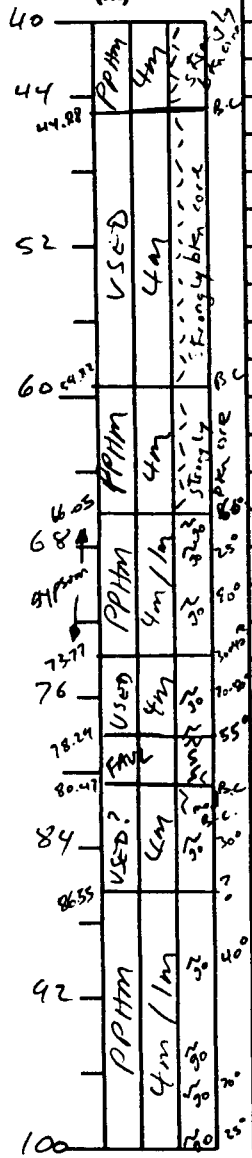
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 238
Logged By: Ian Foreman
Date: Oct 31 '95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	32.31	44.88	CONT'D		ALTERATION:																	
					Locally the unit is strongly sericitized. Throughout though the unit is moderately Qtz-Ank-ser ± Kfp altered.																	
					STRUCTURE																	
					+32.31 - 44.88m → Strongly bkn <1-8cm ang core to local gouge.																	
	44.88	59.82	USED	4	m			0.95	4.0	/	/	/	/	m	m	/	M	/	Tr	/	/	S
					LITH+MIN:																	
					The unit is predominately yellowish green with green and greyish brown patches. The unit is aphanitic and massive except for rare 1-3mm subrounded translucent crystals. 5-10cm patches have a mm scale striped appearence as chlorite is replacing grains etc... and/or chlorite in fracture filling. chlorite makes up 75% of the rock as fgd disseminations, discrete 1-3mm blobs, and as fracture fill. This can also create a mottled appearence.															
					Moderate quartz stockwork as 1-15mm straight and irregular moderately well mineralized quartz veins. Trace carbonate as both veins and fracture fill. No gypsum veining.															
					0.45% Chalcopyrite as fgd dissemination and 1-4mm fgd blebs which are commonly associated with chlorite. Cpy also occurs in quartz veins and as fracture fill. 4% pyrite predominately occurs as fgd disseminations and 1-4mm irregular blebs as well as in veins and fracture fill.															
					L.C:																	
					in bkn core																	
					ALTERATION:																	
					This unit is strongly sericite altered (resulting in the yellowish green color) and therefore is put into the moderate Qtz-ser-Ank±Kfp alteration scheme.															

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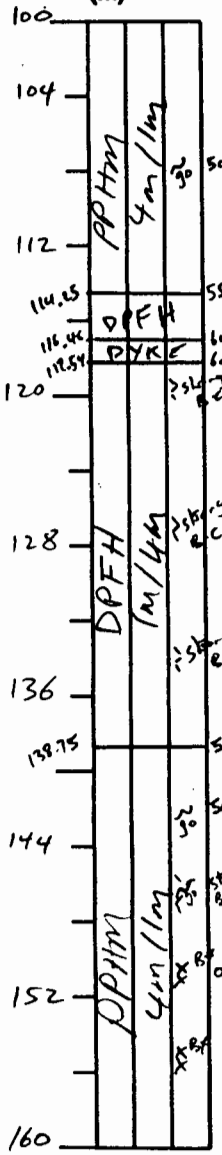
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - Z38
Logged By: Ian Foreman
Date: Oct 31 '95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	44.89	59.82	CONT'D		STRUCTURE																	
					- 44.89 - 59.82 m → Strongly bkn <1 - 6 cm ang core & local gouge.																	
	59.82	66.05	PPHM	4	m			0.45	4.0	/	1.0	/	/	m	m	/	m	/	Tr	/	/	s
					LITH + MIN + ALT:																	
					This is the same main phase unit that occurs above the volcanic sediments and is described between 32.31 and 44.88m.																	
					L.C:																	
					lower contact is a 10cm gouge and rubble zone @ 60°																	
					STRUCTURE:																	
					- 59.82 - 66.05 m → Strongly bkn <1 to 8cm angulas with local gouge.																	
	66.05	73.77	PPHM	4	m	1	m	0.36	3.0	—	1.0	/	m	m	m	/	w	/	Tr	w	/	w
					LITH + MIN:																	
					60% greyish green and 40% light reddish brown with a moderately well preserved porphyritic texture throughout. 15-20% 1-3 mm sub-euhedral cream to translucent reddish brown to green feldspars and 10-15% <1-2 mm sub-euhedral cream to buff hornblendes. The groundmass is aphanitic and locally appears to be translucent.																	
					Weak quartz veining and trace carbonate as veins and fracture fill. This unit has weak gypsum veining. The gypsum is both white and orange.																	
					0.36% chalcopyrite is predominately in the quartz veins but also occurs as fgd disem. and 1-3 mm irregular blebs within 1-3 cm of the quartz veins as well as fracture fill. 3% pyrite occurs predominately as fgd disseminations and 1-4 mm irregular blebs throughout the groundmass as well as in the veins and as fracture fill. Relative to the above units there is an increase in pyrite fracture fill. Tr & 2% hematite																	

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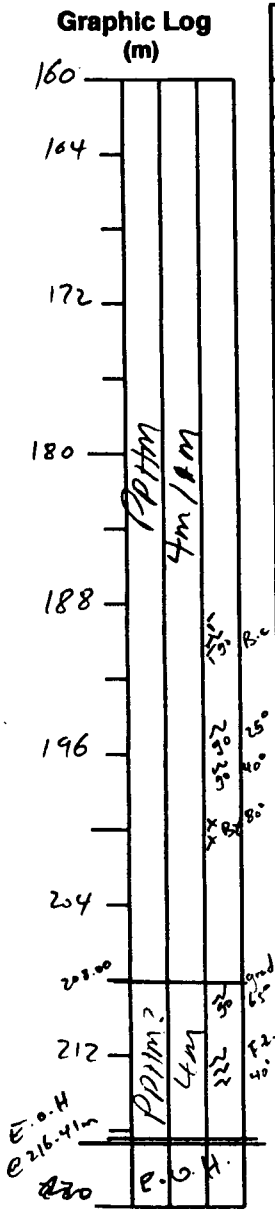
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 238
Logged By: IAN FOREMAN
Date: OCT 31 '95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	66.05	73.77	CONT'D		occurs sporadically throughout predominately as pervasive staining.																	
					L.C: The lower contact is indistinct and possibly @ 30-40°																	
					ALTERATION: The unit is predominately moderately Qtz-Ser-Ank±Kf altered. Although a portion of the reddish brown sections is due to pervasive hematite staining of the ground mass, the rest of the unit is weakly to moderately potassic altered.													
					STRUCTURE:																	
					-66.05 - 66.13m → gouge and rubble @ 60°																	
					-68.07m → 1-2cm cemented gouge and rubble along a gypsum vein @ 25°																	
					-68.18 - 68.46m → Breccia with 2mm - 1.5cm subangular fragments. The contacts are @ 30°																	
					-70.72 - 70.76m → gouge around gypsum vein @ 80-90°																	
	73.77	78.29	USED	4	m			0.6	4.0	/	/		/	/	m	m	/	W	Tr	Tr	/	/	W
					LITH + MIN: The unit is greenish grey throughout. It appears aphanitic and massive throughout but rare 1-3mm subrounded translucent crystals are noted. The core has a mottled appearance due to chlorite throughout as fine grain and 1-8mm blebs which often surround pyrite and/or chalcopyrite. Locally, 2-5cm patches are speckled as 1-2mm irregular angular translucent to clear specs are surrounded by massive aphanitic greenish grey matrix. These may also be crystals.															
					Weak quartz veining and Trace carbonate as both veining and fracture fill. NO gypsum veins were noted																	
					0.6% chalcopyrite occurs primarily as fgrd disseminations and 1-3mm rounded blebs which are commonly surrounded by																	

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 238
Logged By: Ian FOREMAN
Date: OCT 31 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	73.77	78.29	CONT'D		chlorite. Chalcopyrite also occurs as fracture fill associated with pyrite and in quartz veins. 4.0% pyrite is throughout the unit and occurs in the same manner as chalcopyrite as well as 1-3 mm irregular veins																		
					L.C: Sharp with fault @ 55°																		
					ALTERATION: Moderate Qtz-Ank-Ser +/- Kao alteration throughout.																		
					STRUCTURE: - 76.57m → 2cm cemented gouge @ 70-80°																		
	78.29	80.47	FAUL					0.45	4.0	/	Tr	/	/	/	/	/	Tr	/	Tr	/	/	W	
					LITH+MIN: 70% Cemented gouge and rubble surrounding 0.5-6cm subrounded fragments. The fragments are typically grey and often contain quartz blebs and/or veins and rarely carbonate veins. Chalcopyrite and pyrite occurs throughout the gouge and also in the fragments. Rare hematite occurs as 1-4mm blebs.																		
					L.C: in bkn core																		
					STRUCTURE: Dominant trend of the gouge ranges from 40 to 60°																		
	80.47	86.55	USED?	4	M			0.7	4.0	/	1.0	/	/	M	M	/	WAM	/	Tr	/	/	W	
					LITH+MIN: This is a confusing unit. It locally has the characteristics of both USED and PPHYD. Generally it is brownish grey with patches of reddish brown and green. A majority of the unit is aphanitic while <10% appears porphyritic. The sections that appear to be																		

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 238
Logged By: Ian Foreman
Date: Oct 31 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	80.47	86.55	cont'd																			

volcanic sediments are brownish grey and aphanitic. with a Lordlens, however, crystals can be seen. They are typically 1-2mm angular and translucent. These crystals occupy up to 5-10% of the rock. These sections also contain chlorite as 1-4mm blebs and as fracture fill. Trace 0.5-2cm subrounded dark grey fragments occur throughout.

The sections that are possibly PPHM are typically pale green to greenish grey and are porphyritic with up to 25-30% phenocrysts. The surrounding groundmass is aphanitic. These may be fingers of the intrusive or crystal rich sections of the volcanic rocks. As the other hand the sections that appear to be USEDS may possibly be very altered sections of PPHM!

Weak to moderate quartz stockwork as 2mm - 2.5cm dark grey to white moderately well mineralized quartz veins. Trace carbonate as veins and fracture fill. No gypsum veining.

0.45 - 0.7% chalcopyrite occurs throughout the unit as fine disseminations and 1-4mm irregular blebs as well as fracture fill and in quartz veins. 4:1 pyrite occurs in the same manner as chalcopyrite.

L.C:

Indistinct? - gradational?

ALTERATION

Moderate Qtz-Ank-Ser +/- Kao alteration is assumed to be throughout the unit.

STRUCTURE:

- 80.47 - 81.15m → mod bkn core & fine gouge. 50cm CORE LOSS.
- 84.83m → gouge on Slip @ 30°

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 238
Logged By: ~~Jane~~ FREEMAN
Date: OCT 31 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	86.55	114.25	PPHM	4	m	1	m	0.8	3.5	/	1.0	/	m	m	m	/	W	/	Tr	/	/	W

LITHMN:

Medium green with a very well preserved porphyritic texture. 15-20% 1-4mm sub-euhedral cream to light green to green plagioclase and 10-15% <1-3mm sub to euhedral cream to buff lath shaped hornblendes.

Locally the unit is aphanitic with a massive appearance. Elsewhere the cream white plagioclase are irregular and appear to fade into the ground mass. Rare (<1%) 0.5-2.0cm subrounded brownish grey fragments appear to be volcanic sediments.

Weak quartz stockwork throughout as irregularly spaced 3mm-4cm poorly mineralized grey quartz veins. Trace carbonate as veins and fracture fill - No gypsum veining.

The amount of chalcopyrite throughout this unit is deceptive. On closer inspection there is more than is apparent due to the amount of fine grained disseminated grains. The rest of the 0.6-0.9% chalcopyrite occurs as 1-4mm blebs, fracture fill and in quartz veins. Chalcopyrite also occurs on slip surfaces. 3.5% pyrite occurs in the same manner as CPY. Trace to 2%. Hematite occurs throughout as 1-8mm blebs, fracture fill and in quartz veins. Hematite also occurs as staining of the matrix

L.C:

Sharp irregular contact with DPFH @ 55°

ALTERATION:

The unit is predominately moderately Qtz-Ank-Ser +/- Kao altered as the plagioclase are altered to sericite and the hornblendes are altered to Ser-Ank +/- Kao. Patches of this unit up to 1.5 meters are moderately potassic altered.

STRUCTURE:

-91.06-91.16m → gouge on slip @ 40° followed by 30cm of wkly bxn core

Slough

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 238
Logged By: Ian Forsman
Date: Oct 31'95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	86.55	114.25	cont'd		-	94.41-95.40m		→ mod to strongly bkn <1-4cm angular core w/ trace gouge and 10-15cm core loss														
					-	95.70-95.80m		→ trace gouge in bkn core														
					-	97.38m		→ gouge on slip @ 70°														
					-	98.90m		→ 1cm gouge @ 40°														
					-	99.87m		→ gouge on curved slip @ 20°														
					-	108.11m		→ gouge on slip @ 50°														
	114.25	116.46	DPFH	1	m	4	m	/	2.0	/	1.0	/	m	m	m	/	/	/	Tr	/	/	w
					LITH+MIN: Dark reddish brown with light green patches. 15-20% light reddish brown to cream anhedral to euhedral 1-5mm feldspars and 15-20% <1-3mm sub-euhedral dark green to dark reddish brown hornblendes. Trace carbonate veining and 2.0% pyrite as fgd disseminations throughout.																
					L.C: Sloup to DYKE @ 60°																	
					ALTERATION: Moderate potassic alteration throughout the light green patches are either leached potassic sections or moderately Qtz-Ank-Ser+/-Kao altered																
					STRUCTURE: No notable structures																	
	116.46	117.54	DYKE	—	-	-	-	/	2.0	/	/	-	-	-	-	-	/	/	/	/	/	/
					LITH+MIN: Dark grey aphanitic matrix surrounding 10% <1-5mm round to irregular carbonate amygdules and <1-3mm angular reddish to green fragments. 2% pyrite throughout as fgd																

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 238
Logged By: IAN PONTIFEX
Date: OCT 31 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	116.46	117.54	CONT'D					disseminations														
					L.C:																	
						Sharp	with	10cm	chilled	margin	@	60°										
	117.54	138.75	DPFH	1	m	4	m	/	2.0	/	1.0	/	M	M	M	/	/	/	Tr	/	/	W
					LITH + MIN + ALT:																	
						This is the continuation of the DPFH that is above the DYKE																
						and is described between 114.25 and 116.46 meters.																
					L.C:																	
						Sharp @ 55°																
					STRUCTURE:																	
						- 119.62 - 119.79m →		Strongly bkn core ± gouge														
						- 127.72 - 127.93 m →		mod to strongly bkn core ± fine gouge														
						- 134.09 - 134.42 m →		mod bkn core ± gouge														
						- 135.0 - 138.75m →		15% mod bkn core														
	138.75	208.00	PPHm	4	m	1	m	0.7	3.5	/	1.0	/	m	m	m	/	W	/	Tr	/	/	W
					LITH + MIN + ALT:																	
						This is the same main phase unit that occurs above the																
						dykes and is described between 86.55 and 114.25 meters.																
						Locally the unit is very well mineralized over 10-20cm																
					Sections																	
						Rare carbonate veins contain sphalerite and moly.																
					L.C:																	
						gradational																
					STRUCTURE:																	
						- 140.75 - 140.31m →		Strongly bkn core ± gouge.														
						- 142.15m ← →		3cm gouge @ 50°														
						- 144.75 - 145.08m →		mod bkn 2-10 cm angular core ± fine gouge														
						- 147.95 - 148.13m →		Strongly bkn <2cm angular core ± fine gouge														

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 238
Logged By: Ian Foreman
Date: Oct 31'95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	138.75	208.00	Cont'd		- 151.3? - 152.20m → breccia with 0.2 - 1.5cm subangular to subrounded fragments. Bx runs subparallel to c.a.																			
					- 156.65 - 158.95m → Breccia with 0.2 - 2.0cm subang to subrounded light grey to brown (and rare light green = mariposite?) fragments																			
					- 163.08 - 163.11m → rubble + gouge @ unknown angle																			
					- 190.68m → gouge in bkn core																			
					- 191.52 - 191.56m → gouge + rubble in wkly bkn core																			
					- 195.25m → 2mm gouge on slip @ 25°																			
					- 196.24m → 2mm - 3cm gouge @ 40°																			
					- 200.94 - 201.31m → Breccia w grey to green 2mm - 2cm rounded fragments in a porphyritic matrix - U.C. @ 80° and L.C. in bkn core.																			
	208.00	216.41	PPHM	4	m			/	2.5	/	/		/	/	m	m	/	/	/	m	/	/	w	
					LITH + MIN: light grey green with a very well preserved porphyritic texture. 15-20% cream to light grey green 1-3mm sub to euhedral feldspars and 15-15% buff sub-euhedral lath shaped hornblendes. The unit is very homogenious and is probably a dyke (PPHM2?) Moderate carbonate veining throughout and no qtz and gypsum veins. 2.5% pyrite as f.g'd disseminations as well as fracture fill and in carbonate veins																			
					L.C.: E.O.H.																			
					ALTERATION: Moderate Qtz - Ank - Ser +/- Kao alteration throughout with sericite envelopes (up to 2cm wide) around fractures.																			
					STRUCTURE: 209.60m → 2mm gouge on slip @ 65°																			
					212.70 - 213.51m → Fault zone w cemented gouge and rubble in bkn core @ 40°																			

DRILL HOLE NO. 95 - 238 216.41 E.O.H

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British Columbia, Canada

GEOLOGIC DRILL LOG

DRILL HOLE NO. 95 - 239

AMERICAN BULLION MINERALS LTD.

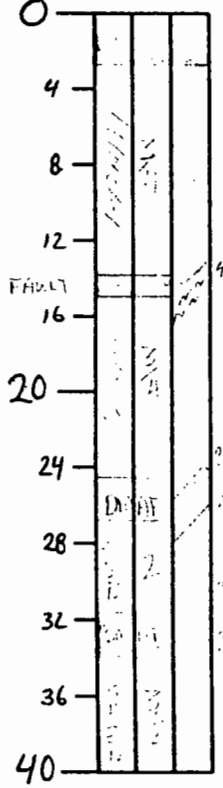
Location Sketch — 4 NN

Grid Northing (m):	99 800
Grid Easting (m):	50.050
Elevation (m):	
Total Length (m):	63.09
Casing Depth (m):	3.05
Reduction Depth:	~~X~~
Collar Core Size:	HQ

Date Started:	Oct. 28/95
Date Completed:	Oct. 29/95
Logged By:	B. Thurston
Date Logged:	Oct. 29/95
Data Entry:	
Entry Date:	
Casing (In)/(Out):	out

Survey	Depth	Azimuth	Dip

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	0.00	3.05	CASN																			
P	3.05	14.00	PPHM	3	m	4	w	.36	4.5	o	o	o	o	m-s	w	o	T	vW	T	o	o	m
P	14.00	15.00	FAUL					.65	4	o	o	o	o	m	m	o	o	o	o	o	o	vW
P	15.00	24.50	PPHM	3	m	4	w	.36	4.5	o	o	o	o	m	w	o	o	W	T	o	o	vW
P	24.50	26.72	DMAF					o	T	o	o	vW	o	m	m	o	o	T	W	o	o	m
P	26.72	31.85	SHZN	2	w			.30	4	o	o	o	o	m	m	T	o	T	T	o	o	W
P	31.85	33.80	DMAF					o	T	o	o	vW	o	m	m	o	o	T	W	o	o	m
P	33.80	47.25	SHZN	3	w	2	w	.36	5	o	o	o	o	m	m	o	o	W	T	o	o	S
P	47.25	63.09	PPHM	3	m			.45	3.5	o	T	o	o	m	w	T	T+W	W	vW	o	o	T

Lithology: PPHM is the only Rock type intersected in this hole other than Mafic Dykes. It is consistantly a light grey-green colour. Med. porphyritic texture is preserved w rusty buff colour ~1mm mafic phenos (laths); and subhedral, partially sericitized, occasionally zoned 1→2mm plag phenos. (crowded porphyry). Fairly typical PPHM. Qtz veining is inconsistent throughout hole however it is more prominent in the less sheared/more competent units.

Alt'n: Entire unit (3.05→63.09) is strong to moderately sericitized +py. The sheared sections are also strongly clay altered. Ser. bebs 1→3mm give core a mottled appearence and ser+py occures as envelopes on fy veins/fractures. Hematite is d.ss. down section <1%. Tourmaline is

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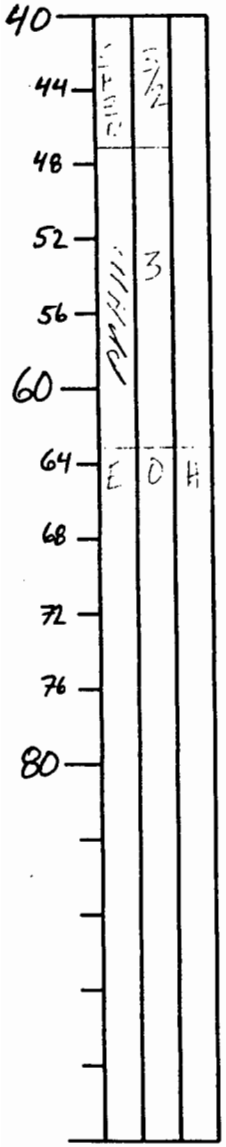
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 239
Logged By: B. Thurston
Date: Oct. 29/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Alt'n:		diss in the lower section of the unit. Calcite is not observed.																
				Mnz:		Py is diss. > veins/fractures (~ 60/40). Cpy is diss. ~90% usually diss. in matrix not assoc. w/ py blebs but sometimes w/in Py veins & Fractures.															
						Cpy is often near Qtz veins but not usually in them.																
				Structure:		* Fault 14 → 15m is mainly a partially healed Bx w/ gouge + Cpy + Py matrix																
						U.C. & L.C. @ 45°																
						* DMAF: 24.50 → 26.72m & 31.85 → 33.80m Contacts are partially assymilated & blocky except one @ 20cm Gouge + Shearing @ 45°. Fairly typical DMAF: Light cream → tan colour w/ Plag + hbld + Bio. phenos. Plag → ser. Bio → Klay ± carb, yellow buff colour. Py in fractures w/ grey envelopes. Dykes are Blocky with w → m carb. healed fractures.													
						* Shear Zone starts ~ 24.50 m w/ clay alt'd, fractured, sheared, ± faulting + gouge. This is the same material described above. Strongest shearing @ 30° → 40° & a L.C. of the SHZN @ 25°.													
						* 35° SH @ 21.50m																
						* Lower PRHM (47.25 → 63.09) is solid competent rock w/ no strong structure.																

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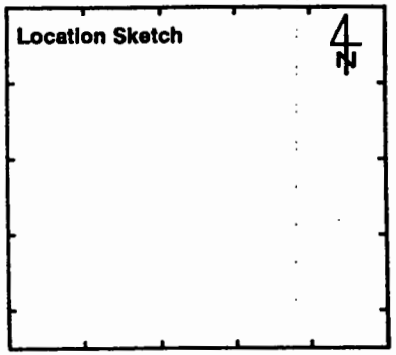
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 240

Location Sketch

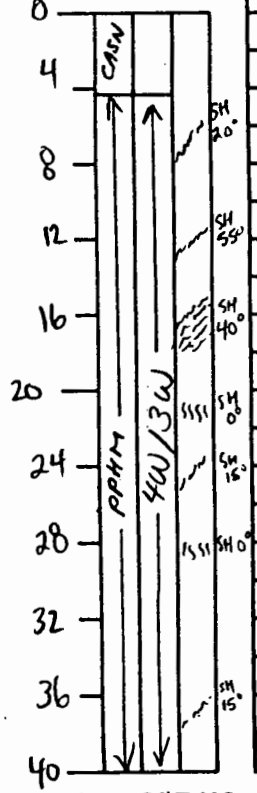


Grid Northing (m):	99850 N
Grid Easting (m):	50100 E
Elevation (m):	
Total Length (m):	406.91m
Casing Depth (m):	4.27 m
Reduction Depth:	NQ @ 337.72 m
Collar Core Size:	HQ

Date Started:	Oct 29/95
Date Completed:	Nov 2/95.
Logged By:	T. Fraser
Date Logged:	Oct 30/95
Data Entry:	
Entry Date:	
Casing (In/Out):	Out

Survey	Depth	Azimuth	Dip
SS	152.4	184.0°	-61°
SS	309.1	18.5°	-61°
		↑ magnetite in potassic altered zone.	

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	tr sph	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	0	4.27	CASN																				
	4.27	71.85	PPHM	4	W	3	W	0.5	3.5	0	1.0	TR	?	0	W	VW	0	TR	W	VW	0	0	M

Lithology - Pale grey to locally buff-coloured Main Phase plagioclase hornblende porphyry. The unit resembles Late Phase, but on closer inspection trace quartz veins and disseminated mineralization indicate more Main Phase affinity. The unit is moderately porphyritic with plagioclase and hornblende phenocrysts. Plagioclase phenocrysts comprise 25-35%, 1-2 mm pale green to white grains. Hornblende phenocrysts are pale beige to cream coloured and appear shreddy. Hornblendes comprise 5-10%, 1-4 mm sized euhedral phenocrysts. The groundmass is pale grey, aphanitic.

Alteration/Mineralization - The plagioclase phenocrysts are weakly sericite altered to locally very weak to weakly argillic altered (kaolinite). Hornblende phenos are altered to probable carbonate-sericite-(biotite?). The unit is cut by weak to very weak pyrite veins and very weak white carbonate veins. Trace grey quartz veins cut the lithology and contain disseminated chalcopyrite and pyrite. Trace disseminated fine grained chalcopyrite. There are rare quartz-carbonate-pyrite veins. Locally red hematite is disseminated (up to 2%) and the unit is very weakly hematite-stained at the beginning of the hole. Trace carbonate-splalerite-pyrite veins.

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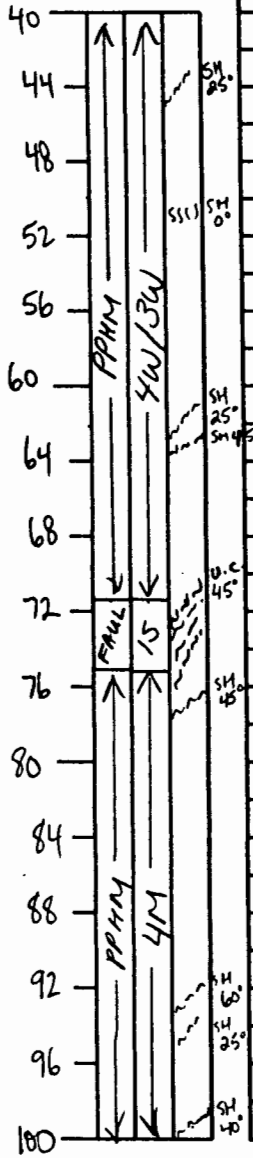
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 240
Logged By: I. Fraser
Date: Oct 30/95



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	#sph	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			Structure -	6.00 m Shear 0° to core axis.																			
				6.60 - 7.07 m gouge/shear 5-15° to c.A.																			
				7.55 - 7.60 m shear/gouge @ 20°.																			
				11.90 - 12.00 m gouge																			
				12.29 - 12.38 m shear/gouge 55°.																			
				15.50 - 15.61 m shear/gouge																			
				16.10 - 17.87 m healed gouge with shears @ 40°.																			
				20.00 m gouge seam 0° to c.A.																			
				20.72 - 22.25 m broken with shears 0° to c.A.																			
				24.69 - 25.05 m shear/gouge @ 15°.																			
				28.69 - 28.85 m shear 0° to c.A.																			
				37.10 m gouge seam @ 15-20°																			
				42.73 - 43.05 m shear/gouge @ 25°																			
				44.17 - 44.33 m sheared @ 25°																			
				51.30 - 51.50 m shear 0° to c.A.																			
				62.55 - 62.75 m healed gouge @ 25°																			
				62.88 - 62.98 m healed gouge @ 45°																			
				70.45 - 70.48 m shear @ 25°																			
				@ 71.85 m upper contact fault @ 45°.																			
	71.85	74.85	FAUL	1	S	-	-	0.6	6	0	0	TR	S	0	W	0	0	WS	W	TR	0	0	W

Lithology - The original host rock has been strongly altered and it is difficult to identify the lithology. However, several small slives appear to be plagioclase phyric and are probably Main Phase material which is above and below the shear/fault. The unit is dark brown to black and contains silicified fragments of host rock 1-3 cm in diameter. The fault is healed and contains minor to trace gouge. Shears throughout the unit are approximately 10-30°. Both upper and lower contacts are distinct and sharp.

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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 240
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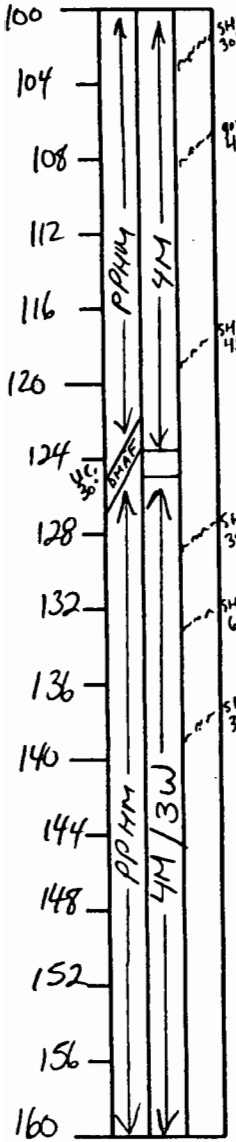
Date: Oct 30/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
				Alteration/Mineralization - The unit is strongly biotite altered. Biotite alteration appears to follow shears and is disseminated - dark brown to black in colour. There are weak quartz veins and silicified fragments. Pyrite is finely disseminated throughout, along with occassionally blebby chalcopyrite. Trace chalcopyrite - pyrite veinlets. Trace carbonate Hebs. Trace disseminated 1mm sphalerite grains															
				Structure - @ 74.85m lower contact FAULT @ 10° to core axis.																		
	74.85	123.45	PPHM	4	M	-	-	1.2	4	0	1.0	0	0	M	W	0	Ws	W	VW	0	0	W
				Lithology - same as interval 4.27 - 74.85m																		
				Alteration/Mineralization - The unit is very well - mineralized, containing finely disseminated chalcopyrite throughout. Quartz veins are occasionally slang to somewhat obscured and contain disseminated chalcopyrite and pyrite. Trace to very weak quartz - carbonate - chalcopyrite - pyrite veins. Locally, the unit may have a silicified groundmass. Plagioclase phenocrysts are weakly to moderately sericitized and locally weakly Karlinite altered. Very weak to locally moderate intensity white carbonate veins. Locally fine grained red hematite is disseminated (up to 5%), but probably averages <1.0%. Pyrite is disseminated and in weak to locally moderate veins. Trace chalcopyrite - pyrite veins.															
				Structure - 76.95m Shear @ 45°.																		
				92.67m gouge seam @ 60°																		
				93.90 - 94.13m Shear @ 25°																		
				94.70 - 95.62m Sheared 0 - 40°																		
				98.96 - 99.01m Shear/gouge @ 40°.																		
				102.32 - 102.47m Shear @ 30°																		
				107.63 - 107.66m Healed gouge @ 45°																		

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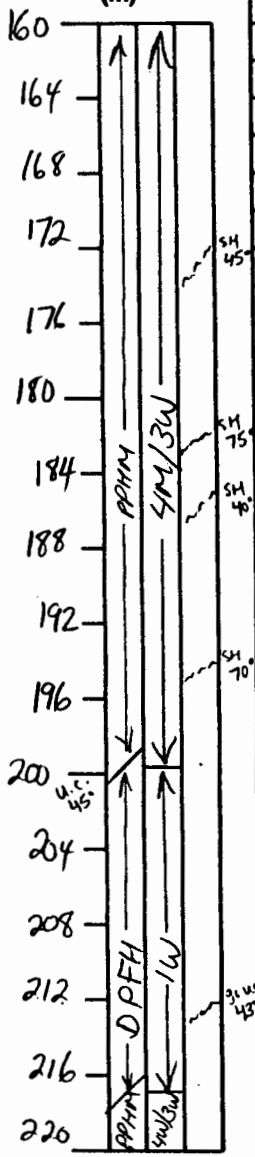
DRILL HOLE NO. 95 - 240
Logged By: T. Fraser
Date: Oct 30/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				112.02 - 112.12 m gouge																		
				113.55 m gouge																		
				118.06 m Shear @ 45°																		
				@ 123.45 m upper contact DMAF @ 30° to CA.																		
	123.45	124.90	DMAF	—	—	—	—	0	0.5	0	0	0	0	W	0	0	TR	TR	W	0	0	VW
				Lithology - Pale Buff/Tan to pale grey pyroxene-biotite phyric mafic dike. Biotite phenocrysts are medium brown to tan coloured and appear sheddy textured. Biotite phenos range from 1-4mm in length, and comprise 10-15%. Pyroxene phenocrysts are euhedral, comprise 5-10%. Generally pyroxene phenocrysts are pale apple green and range from 1-3 mm. The groundmass is aphanitic to a somewhat sugary texture locally and is tan to grey in colour.																
				Alteration/Mineralization - Pyroxene phenocrysts are weakly to moderately sericite altered. The dike is cut by carbonate and carbonate-quartz veins. The qtz-carbonate veins are late unmineralized and open-space filling. Trace pyrite veinlets.																
				structure - @ 124.90 m lower contact DMAF is irregular.																		
	124.90	199.75	PPHM	4	M	3	W	0.75	3.5	0	2	0	0	W	M	0	VW-W	W	VW	0	0	W
				Lithology - Grey to buff-greenish and locally brown-coloured Main Phase plagioclase hornblende porphyry. The unit is highly porphyritic containing approximately 30% subhedral 1-3 mm sized plagioclase phenocrysts. Plagioclase grains vary in colour from pale blue-green to white/grey. Hornblende phenos comprise 10-15% 1-2 mm subhedral grains beige in colour. Occassionally mafic phenos are up to 4-5 mm in length. The groundmass is grey/brown in colour and is plagioclase-rich.																

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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 240
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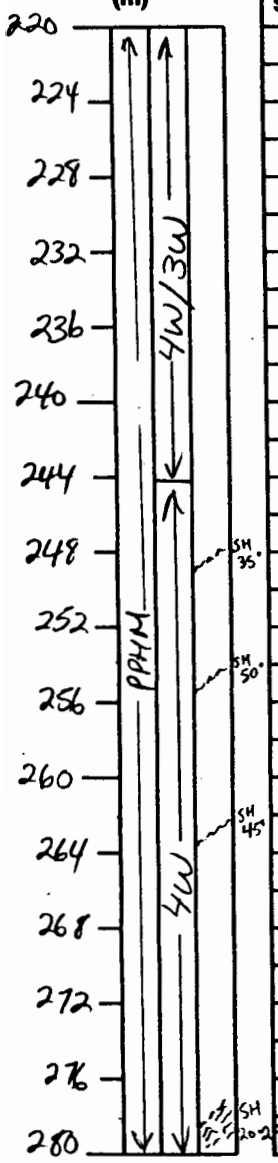
Date: Oct 31/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.

Alteration/Mineralization - Plagioclase phenocrysts are weakly sericitized and locally are moderately to strongly clay altered (dominantly Kaolinite). Locally red hematite is disseminated up to 5-10% but probably averages 1-2% in small sections. Short intervals are weakly hematite stained. Hornblende phenos are sericite-pyrite-carbonate altered. Pyrite is finely disseminated and present as weak to moderate veinlets. Trace quartz-carbonate-chalcopyrite-pyrite veins and weak quartz-chalcopyrite-pyrite veins. Locally chalcopyrite is finely disseminated. Very weak to trace white carbonate veins. Trace chalcopyrite veinlets.

Structure - 128.65m Shear @ 35°
132.95 - 133.35 m Shear @ 60°
138.53m Shear @ 32°.
173.80m Shear/gouge @ 45°
181.97 - 182.19 m Shear @ 75°
185.80 m gouge @ 40°
185.98 - 186.84 m gouge 75°
187.70 m gouge 65°
194.52 m Shear @ 70°.

@ 199.75 m upper contact of DPFH @ 45° to C.A.

	199.75	216.70	DPFH	1	W	-	-	<0.3	1	0	0	0	W	VW	0	0	0	TR	W	0	0	VW

Lithology - The plagioclase Hornblende porphyry dike varies in colour from buff to pale orange to dark brick red/brown. The lithology is highly porphyritic, containing prominant mafic phenocrysts. Hornblende phenos vary in colour from beige/tan to pale green to dark green. Hornblendes comprise 15-20% euhedral phenos from <1mm - 1cm in length. Plagioclase phenos are indistinct and

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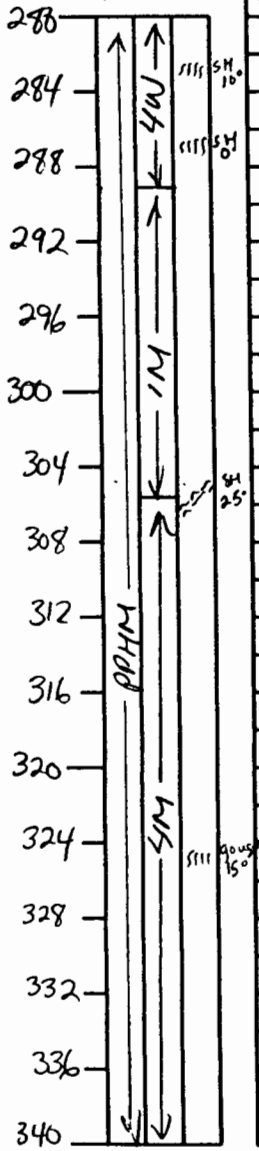
Date: Oct 31/95



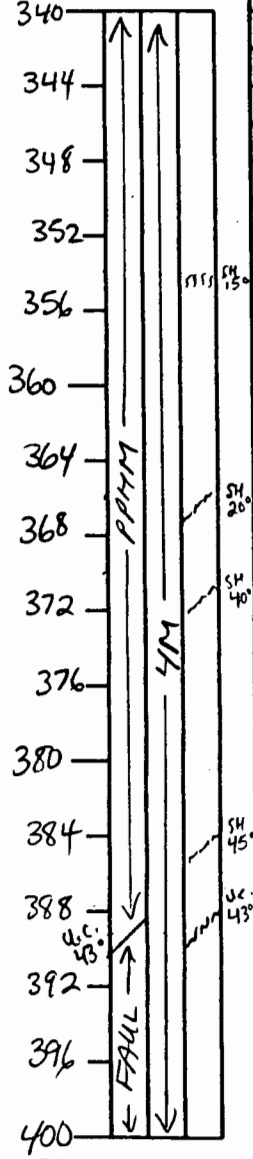
P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
				conspicuous. 20% subhedral 1-2 mm phenos. generally pale green in colour. The groundmass is generally aphanitic - beige/brown to orange in colour.																		
				Alteration/Mineralization - Hornblende phenos are carbonate-sericite-pyrite altered. Plagioclase phenocrysts are very weakly sericite altered and locally are hematite stained. The groundmass is locally weakly Kspar altered. Pyrite is finely disseminated throughout as well as trace pyrite veinlets. Carbonate veins are weak to moderate in intensity.																
				Structure - 212.77m gouge seam @ 43°. @ 216.70m the lower contact of DPFK is gradational with PPHM?																		
	216.70	244.20	PPHM	4	W	3	W	1.0	4	0	0.5	0	0	W	vW	0	W>	vW.	W	0	0	W
				Lithology - same as interval 124.90 - 199.75m																		
				Alteration/Mineralization - same as interval 124.90 - 199.75m but the unit contains abundant mineralization. The lithology is cut by weak quartz stockwork which carries disseminated chalcopyrite and pyrite. Trace quartz-carbonate-chalcopyrite-pyrite veins. Weak carbonate veins. Disseminated fine grained chalcopyrite and pyrite. Pyrite is also found as very weak to weak veins. Locally 1-2% red hematite is disseminated.																
				Structure - none.																		
	244.20	289.00	PPHM	4	W	-	-	0.9	4.5	0	2	0	0	M	W	0	vW→W	W	vW	0	0	W
				lithology - same as interval 124.90 - 199.75m but the lithology is medium green to brownish in colour.																		

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 240
Logged By: T. Fraser
Date: Nov 1/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.

Alteration / Mineralization - Hornblende phenocrysts are carbonate - sericite - pyrite altered. Plagioclase phenos are moderately sericitized to to weak Kaolinized. Locally quartz vein intensity increases to weak. Quartz stockwork contains disseminated chalcopyrite-pyrite. Trace chalcopyrite and CPY-Hematite-quartz blebs. Locally up to 5-10% blebby red Hematite. Trace chalcopyrite veins. Trace quartz - carbonate - CPY-PY veins. Weak pyrite veins and disseminated mineralization.

Structure - 244.20 - 244.70 m carbonate breccia
248.20 - 248.26 m Shear @ 35°
254.93 - 255.00 m Shear @ 50°
257.88 - 257.91 m gouge
262.95 - 263.22 m Shear / Healed gouge @ 45°
263.87 - 264.00 m
278.25 - 279.50 m Shear @ 20-25°
279.50 m Shear 0° to CA.
282.65 - 282.75 m Shear @ 10°
286.70 - 287.78 m Shear 0° to CA.
@ 289.00 potassic alteration begins (gradational contact)

	289.00	305.90	PHM	I	M	—	—	0.5	6	0	TR	0	M	rW	0	0	VW→W	W→M	TR	0	0	W

Lithology - Dark brick red plagioclase hornblende porphyry. The plagioclase phenocrysts are subhedral and have a bluish look to them. Phenocrysts average 1-2 mm in length and are orange hematite stained. Plagioclase phenocrysts comprise approximately 30%. Mafic phenocrysts are obscured and likely represent < 5% by volume. The lithology has a granular appearance. The groundmass is orange-brown in colour.

Alteration / Mineralization - The unit has a moderately Kspar altered groundmass. Plagioclase phenos are very weakly sericite altered

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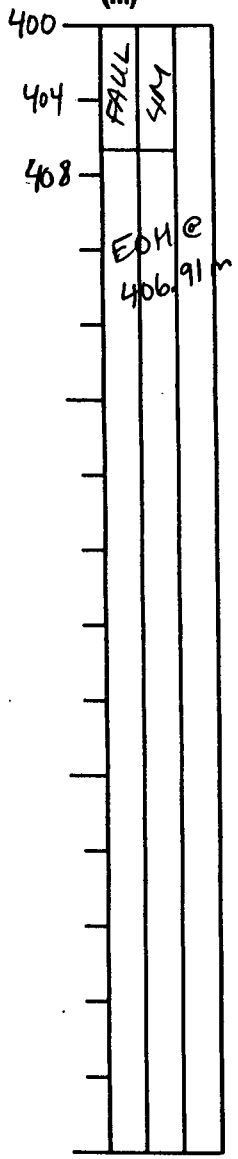

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
				but are orange hematitic stained. Pyrite is finely disseminated and present as weak to moderate veins. Chalcopyrite is finely disseminated. Quartz veins contain finely disseminated chalcopyrite - pyrite. Quartz vein intensity increases downward. Trace carbonate veins.																		
				Structure - 305.90 - 306.10 m Shear / minor gouge @ 25°																		
				@ 305.90 m - gradational lower contact - as alteration changes.																		
	305.90	388.92	PPHM	4	M	-	-	1.2	5	0	TR	0	0	M	W	0	MS	M	TR	0	TR	W
				Lithology - Grey-green Plagioclase hornblende porphyry → Main Phase. Plagioclase phenocrysts comprise 20-30% subhedral 1-3 mm. Plag phenos are apple green to opaque white. Hornblende phenos are beige/brown and are euhedral - 1-2 mm. Mafics comprise 5-8%. The unit is moderately porphyritic but primary texture is somewhat obscured locally. The groundmass is beige/grey and appears granular in texture.																	
				Alteration/Mineralization - Plagioclase phenocrysts are moderately sericitized and hornblendes are sericite-carbonate altered. Trace to 1-2% red Hematite is disseminated locally. Locally the unit is opaque white and is dominated by moderately clay altered plagioclase. Quartz veins are grey and vary from 2 mm - 1 cm in width. Vein boundaries are distinct. Quartz veins carry disseminated chalcopyrite and pyrite. Chalcopyrite is finely disseminated. Locally hematite stained. Pyrite is also disseminated and occurs as moderate veinlets. Trace hematite veins and carbonate veins.																	
				Structure - 325.60 m gouge 15°																		
				335.60 m Shear/gouge																		
				337.70 - 337.90 m Shear/gouge																		

DRILL HOLE NO. 95 - 240

Reduced to NQ-core @ 337.72 m

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 240
Logged By: T. Fraser
Date: Nov 2/95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
					339.13 - 339.50 m gouge / shear.																	
					346.85 - 347.02 m shear																	
					354.45 - 354.65 m sheared PPHM @ 15°.																	
					354.79 - 355.05 m sheared																	
					366.43 - 366.65 m shear @ 20°.																	
					371.67 - 371.73 m shear @ 40°																	
					385.13 - 385.33 m shear @ 45°																	
					386.27 - 386.78 m shear @ 30°																	
	388.92	406.91	FAUL	4	M	-	-	0.3	4	0	0	0	0	M	VW	0	TR	W	TR	0	0	M

Lithology - Medium grey-coloured Main Phase which is sheared and contains minor gouge. PPHM is fairly typical with approximately 30% subhedral fresh plagioclase phenocrysts → 1-2mm in length. Plagioclase phenocrysts are sericitized and indistinct. Mafic phenocrysts are rare but <2mm. Shears throughout vary from 20-45°.

Alteration/Mineralization - Pyrite is disseminated throughout as well as occurring as wisps / veins. Trace quartz-pyrite ± chalcopyrite veins. Trace white carbonate veins. Plagioclase phenos are moderately sericitized. The unit contains very weak clay alteration with gouge.

Structure - none. but upper contact is sharp @ 388.92m @ 43°

EOH @ 406.91 m

DRILL HOLE NO. 95 - 240

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 241

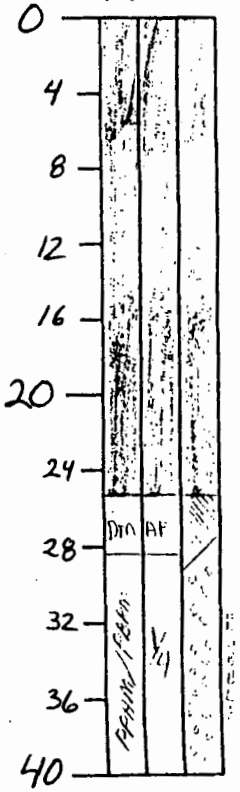
Location Sketch

Grid Northing (m):	99 150
Grid Easting (m):	48 850
Elevation (m):	
Total Length (m):	404.47 m
Casing Depth (m):	(25.30)(
Reduction Depth:	
Collar Core Size:	NQ

Date Started:	Oct. 31/95
Date Completed:	Nov. 4/95
Logged By:	B. Thurston
Date Logged:	Nov. 1/95
Data Entry:	
Entry Date:	
Casing (In/Out):	IN; Lost 160'

Survey	Depth	Azimuth	Dip
1	154.53	79°	-61°
2	306.93	82.5°	-60.5°
3	404.47	63.5	-61
	↑	⇒	
	Hard to read		

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	0.00	25.30	CASN																				
P	25.30	28.20	DMAF					o	T	o	?		W		m	m	o	o	o	o	T	o	o	S
				Typical DMAF: Pale green to purple w upto 5mm Biotite phen's, hbld. phen's, plag. phen's. Carb. fracture filling.																				
				* L.C. Blocky ?°																				
P	28.20	98.50	PPHM	1	m	4	w	.30	2	o	T	T	o	W	m	w	o	T	o	o	o	o	I
				Lithology: Extremely blocky, only rubble left but up section fragments are observed in the PPHM :. is it PPHM or PBRM. This core may be blocky & have poor recovery because (1) Gyp/Anhydrite fractures/veins were dissolved (2) poss. brecciation of rocks has something to do w it but unlikely because w usually have good solid recovery in breccia. (3) Something other than Gyp. eg. Carb? has filled fractures & been dissolved as noted by pieces of rock that aren't totally rounded.																				
				- Core is pinkish orange to light green, porphyritic w plag & occasionally mafic phen's. Core is same as the solid unit that will be described next.																				
				Alt'n: Potassic → diss Hem ± Hbg; Mag on Fractures & as veinlets; K-Sp pervasive Strong Sericite alt'n of phen's & matrix. Calcite Trace to Not observed.																				
				Mnz: Py diss. Cpy also diss. especially on SHear structures & down section.																				

DRILL HOLE NO. 95 - 241

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GEOLOGIC DRILL LOG

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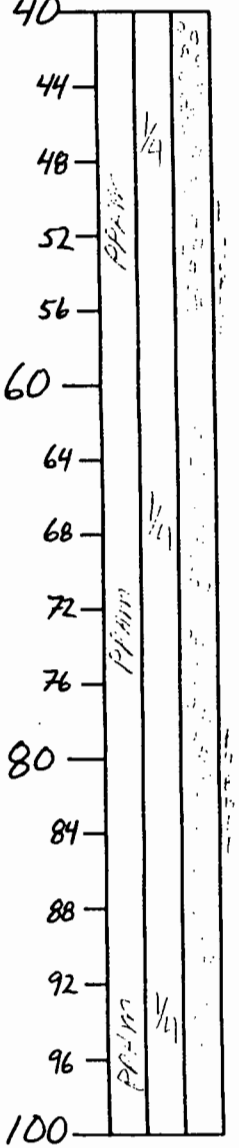
DRILL HOLE NO. 95 - 241
Logged By: B. Thurston
Date: Nov. 2/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	MAC	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Structure: * only Rubble, rounded fragments of rock.																			
				* 100m in 2 boxes.																			
				* Possible gouge in places but impossible to tell.																			
S	98.50	119.50	PPHM	1	m	4	w	.75	3.5	o	T		o	o	S	m	w	o	w-m	vw	o	m	o	w-m
P	119.50	120.60	DQCA					o	T						m	m				vw			vw
				Lithology: This area is mainly porphyritic w/ strongly sericitized pkg. phenos + K-sp. is strong pervasive and in areas this alteration has wiped out the porphyritic texture giving the section the appearence of the Volcanic unit, but there is no banding & the fine grain nature is patchy & in splotches.																			
				- Core is light → med. green mixed w/ pale orange → pink sections.																			
				- White & Pink Gypsum veins are observed cutting the core & each other. Qtz Stk-wrk is also cut by the Gypsum veins. Qtz is in veins 2mm → >2cm.																			
				- small patches usually 2 → 5cm seem brecciated (sheared shearing) w/ Volcanic beds as matrix? possibly potassic alt'n.																			
				Alt'n: K-spar strong pervasive, trace He, possible mag? trace. Sericite is strong both in matrix & phenos. Calcite is not observed.																			
				Min'z: Py occurs mainly diss & in Qtz vein cores & fractures, and less as vein Cpy is diss 80% & is often in Qtz veins. Cpy is assoc. often w/ Py but is most often observed by itself.																			
				Structure: * Solid core.																			
				* fractures on gypsum veins.																			
				* No significant structure.																			
				* u.c. of DQCA @ 40°; L.C. @ 40° Typical DQCA w/ < 1% carb. Amyg duals Light buff to green colour w/ grey envelopes on carb fractures.																			

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GEOLOGIC DRILL LOG

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DRILL HOLE NO. 95 - 241
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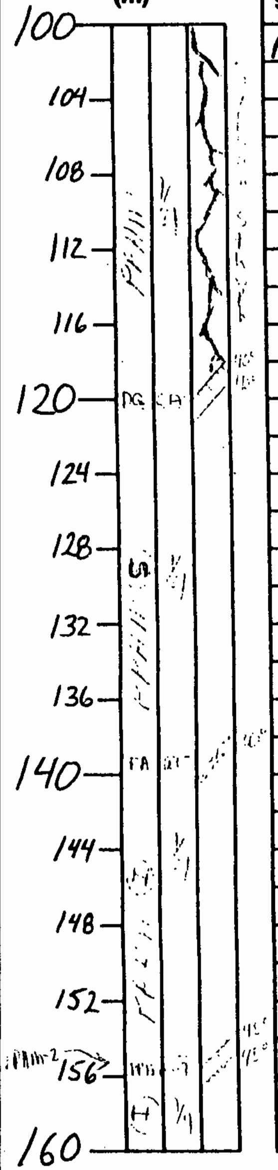
Date: Nov. 2/95

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	~~MAG~~ MAG	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	120.60	163.00	PPHM	1	m	4	W	2	4	0	T	T/0	0	S	S	W	T	S-I	0	T	0	0	m-w

Lithology: PPHM - Porphyritic sericitized plag. pheno's in a strongly potassic matrix. Mainly a medium Green-Grey colour w̄ an orange patches. Up-section there is Volc.sed looking rock for ~1m w̄ fragments? alt'n?.
- Qtz stockwork is strong to 136m & Intense to 163m.
- Trace Carb. only as fract. filling. No Gypsum veins.

Minz: Strong Cpy diss in matrix & in Qtz veins. In the Qtz veins Cpy is on micro fractures throughout not just the core. Qtz veins are generally 7 2cm up to 60cm long of Qtz. Py is in qtz veins & diss in matrix ~ equal. Trace moly observed diss in matrix. He diss Trace in matrix. Tourmaline diss. very trace as rosetts.

Alt'n: Strong K-spar pervasive, Strong sericitization & clay alt'n b/w large Qtz veins. Trace to very weak calcite in strong potassic areas.

Structure:
* Core is broken up due to intense Qtz veining.
* 139 → 139.7m is a 25° → 32° Fault.
* Small 30° → 35° <1cm gouge filled Fractures.
* L.C. w̄ PPHM-2 @ 40° over 35cm SH + gouge.
* 155 → 156m is PPHM-2 w̄ U.C. & L.C. @ 45° sheared w̄ gouge. No Qtz in that me

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	163.00	167.40	PPHM-2	1	m	4	m	<.3	1.5	0	0	0	0	m	S	W	0	0	0	T	T	0	m-v

Lithology: Porphyritic (Plag + Mafic pheno's) rock. Not an exellent example of PPHM-2. The mafic pheno's are strongly alt'd (clay ± Carb) buff coloured & are almost gone, unlike the fresher looking PPHM-2 where the mafics are preserved. Is this PPHM w̄ no Qtz veining? Strong sheared contacts lean to the PPHM-2 theory. Good sericitized plag pheno's. K-sp pervasive. Rock alternates b/w pale orange & pale green colour. Py is only diss & not patchy. No or little diss. Cpy. Carb on Fractures. Possible Gyp. on Fractures.

Structure * U.C. 40° 35cm sh / L.C. Questionable 3cm Breccia @ 45°.

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DRILL HOLE NO. 95 - 241
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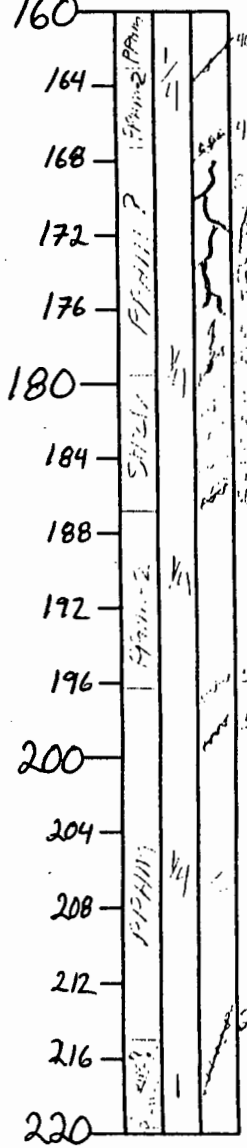
Date: Nov. 2/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Structure:			*	only difference to rock type after contact? is Qtz veining &															
				blurred / less pronounced plag phenos that blend into groundmass.																			
P	167.40	179.40	PPHM?	1	m	4	m	.45	1.3	o	T	o	o	m	S	W	T	T-W	T	T	W	o	W
				Lithology: This unit is similar to unit 98.50 → 119.50m but also has characteristics of above unit. Qtz in this unit is trace as veins and in silicified areas Qtz is more as Flooding & looks sheared? into irregular forms. Cpy still increases as Qtz increases but Cpy is low in this unit. Mainly light green colour to core w/ grey selvages on Qtz veins & fractures. Gypsum Veins locally Moderate (white).																
				Alt'n: Same as all previous units. Slightly more clay altered as we become closer to SHZN.																			
				Min: Cpy still dominantly diss. & some. and along fractures.																			
				Structure: * Small breccia zones.																			
				• L.C w/ SHZN 1m 5° SH to a 28° SA																			
P	179.40	186.80	SHZN	1	m	4	m	.60	1.7	o	T	o	o	m	S	S	o	W-m	o	T	o	o	S
				Lithology: Same material as described above w/ strong clay alt'n & shing.																			
				Structure: Strong shing b/w 35° & 50° mainly 50° but no really strong shears. L.C. 50° < 1cm weak Qtz becoming more veins than Qtz flooding or irregular Qtz blebs.																			
				Min: Cpy still strongest where Qtz is strongest.																			
P	186.80	196.05	PPHM-2	1	m	4	m	.40	1	o	W	T	o	m	S	W	T	T-W	e	W	o	o	W-M
				Lithology: Same PPHM-2 unit as 163 → 167m. Mainly Pink/Orange to Pale green w/ pronounced or prominent plag (sericitized) phenos. Mafic phenos are quite altd. Diss. Hematite (0.5mm diss's) locally may be 0.5%. This looks more like PPHM-2 but is still strongly altered.																
				Alt'n: Strong Sericitization & K-sp. pervasive. Weak clay alt'n. Still no calcite. Carb. as veins > fracture filling.																

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

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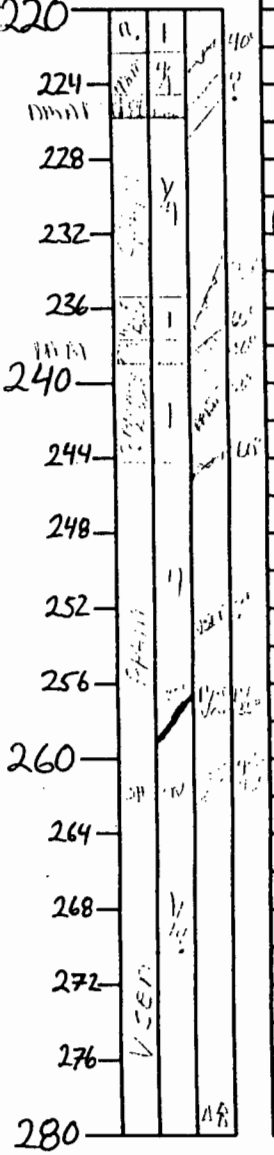
Date: Nov. 3/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Alt. Typ	Alt. Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Minz:			Cpy is assoc w/ the few Qtz veins that are observed. These Qtz veins have define vein boundaries w/ Sulphide cores. Py diss ~ 8.0%.																
				Structure:		v	Weak shearing throughout upper section just after SHZN.																
						v	L.C. @ 50° SH followed by Strong Qtz ~2m into next section to a 5cm																35°→45° SH.
P	196.05	214.90	PPHM	1	m	4	w	.90	2.5	o	T	T	vW	m	m	m	T	m	o	W	o	o	W
				Lithology:			This unit is Mainly PPHM w/ patches/sections up to 50cm that resemble Vseds. These small sections are not typical VSEDS, but are very fine grain to aphanitic pale green to buff colour irregular patches that look like they could be the result of alteration? The overall unit itself has a very fine (0.5→1mm) porphyritic texture preserved in both matics & plag. phen's. Not a typical PPHM porphyry. Qtz veins / Stk WRK are of 2 - types ① irregular vein boundaries on Qtz veins that resemble Qtz flooding & ② fairly sharp vein boundaries on Qtz veins w/ usually a carb. core on Py interstitial. Carb. occurs ~ 1→2% as veins & fracture fillings.														
				Altn:			Overall core looks splotchy. Areas of strong potassic (K-spt+Bio+Mag+Hk) are orange to brown. Most core is strongly ser ± clay altered and is pale light green to pinkish buff colour.														
				Minz:			Py is diss. and occurs as very fine grain patches which look dark grey ± ser.																
							Cpy is mainly as diss.'s in and around Qtz veins & in these dark Py patches. Cpy occurs as very, very fine diss.'s in matrix.																
							No to trace calcite diss, but weak in fractures.																
				Structure:		v	entire unit is solid & competent but looks like healed shearing throughout? possibly alteration?																
						v	lots small 35°→45° shears.																
						v	L.C. w/ PPHM-Z? Dyke? is @ 45° but Strong shearing starting @ 212.20 m @ 35°→45°												

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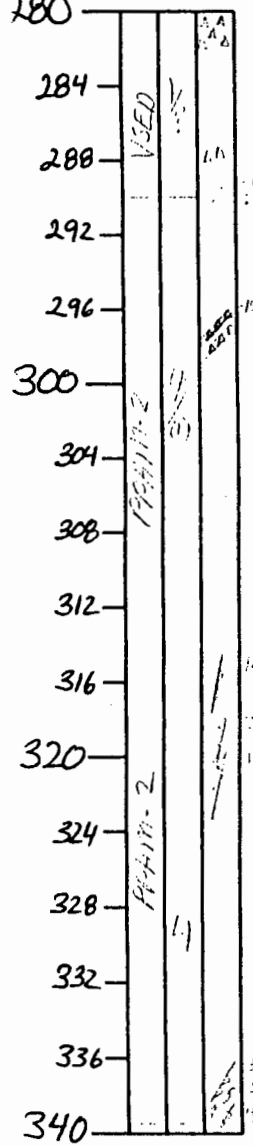
Date: Nov. 3/95

Graphic Log (m)



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
P	214.90	222.25	DYKE?	1	S	4	T	<.30	1.5	o	<.5	o	o	S	m	w	o	o	o	vw	o	o	w
				Lithology:				Very orange colour to core. Nc. Qtz stkwrk. Carb. only as fracture filling but calcite is weak pervasive. Remnant Porphyritic texture observed by preserved sericitized plagioclase pheno's +/- blebs and altered (chloritized, Ank + clay) mafics, pale buff col. Relatively homogeneous core. Py on fractures are highlighted by diss. pyrite envelopes.													
				Structure:				* Solid core.															
								* L.C. is partially assymilated but fairly sharp @ 40°.															
P	222.25	224.60	PPHM	1	m	4	w	1.20	3.5	o	T	w	w	m	m	w	o	m-s	T	T	o	o	vw
P	224.60	225.50	DMAF	1	s			o	T	o	stain	s	m	m	m	w	o	o	o	T	o	o	T
P	225.50	235.50	PPHM	1	m	4	w	0.90	2.5	o	T	w	w	m	m	w	T	m	T	T	o	o	w
				Lithology:				This is the same unit as described before the dyke? @ 214 → 222m. Some sections are very orange in colour & overall the phenocryst s.z has increased to ~ 1mm.													
				Structure:				* DYKE → DMAF * cuts this unit but both u.c. & L.c. are assym close to 90°.															
								* L.C. @ sharp 0.5cm Black Shear @ 20°															
								Typical DMAF w/ lrg Pheno's up to 1cm of Bio, Plag, alt'd Mafic? w/ strong pervasive magnetite & Hem staining.															
P	235.50	237.80	DYKE?	1	m	4	w	<.30	1.5	o	o	o	o	m	m	o	o	T	T	o	o	o	vw
				Lithology:				Same description as 214 → 222 DYKE? Orange colour tapers off ½ way through dyke to a pale green. Sulphide (Py) patches near end of dyke.													
				Structure:				* U.C. @ 20°, L.C. w/ DMAF @ 65°															
								* Strong 20° 0.5cm Black SH.															
P	237.80	238.80	DMAF	-	-	-	-	o	T	o	o	o	?	o	s	s	o	o	o	w	o	o	w
				Lithology:				Originally this dyke was thought a DACA because of it's pale buff colour, fine grain nature, & apparent carb amygdules. The amygdules													

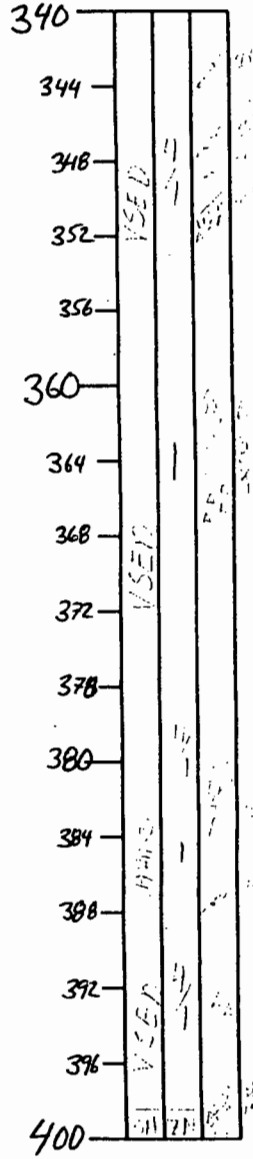
RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 241
Logged By: B. Thurston
Date: Nov. 3/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Alt. Typ	Alt. Int.	Mineralization Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
				Dyke cont'd:			ave	actually clay+carb alt'd pheno's. Remnant Bio clusters the same as																
				DMAF up section are observed. Plag + Mafic pheno's are strongly altered &																				
				ratty.																				
				Structure:		*	L.C. @ 50°.																	
P	238.80	240.25	DYKE?	1	m	4	w	<.30	1.5	o	o	o	o	m	m	m	o	o	T	T	o	o	vW	
				Same as above DMAF.																				
				Structure:		*	L.C. w PPHM @ 18° SH.																	
P	240.25	240.90	PPHM	1	W	4	w	1.2	5	o	o	o	o	w	m	w	o	m	o	W	o	o	W	
				Lithology:			described same as unit at the end of this DYKE? @ 242.10 → 262m * L.C. @ 55° → 60° SH																	
P	240.90	242.10	DYKE?	1	m	4	w	<.30	1.5	o	o	o	o	m	m	m	o	o	T	T	o	o	vW	
				Same as Above DMAF.																				
P	242.10	260.90	PPHM	4	M			1.2	3.5	o	T	mod c	o	T	S	m	T	m	vW	T	o	o	m	
				Lithology:			Once again, same unit from 196 → 214m. except for the alteration.																	
				PPHM w inter-mixed sections of VSEDS.																				
				Alt'n:			Strong sericitization of pheno's & matrix. Py diss. Lack of Potassic alt'n																	
						*	Once again as in last PPHM unit the pheno's (plag & mafic) are larger																	
				(1 → 2mm) than unit 196 → 214m.																				
				Min'z:			Cpy diss 80% in matrix, grey sulphide patches & in & around Qtz veins.																	
						*	70cm Massive Sulphide Vein @ 258.3m w																	
				(~65% Py & 25% Cpy & 10% Qtz ± carb.)																				
				Structure:		*	VSED ~1.5m but assym. contacts : ?°																	
						*	U.C. w VSED from 260.90 → 262m, Strong SH'ing or Faulting @ 40° → 45°																	
						*	60 → 80cm Dyke material? assymilated @ ~256m.																	
P	260.90	289.73	VSED	1	W	4	?	.80	2.7	o	T	To	o	W	S	m	T	vW	vW	W	o	o	W-M	
				Lithology:			Buff to orange(Pale) to beige colour to core. Looks mottley on a large																	
				±m.inz.			scale like possibly due to alteration. Very fine grain nature to																	
							patchy VSEDs. Small scale mottled appearance to core is due to Py+Ser.																	

DRILL HOLE NO. 95 - 241

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 241
Logged By: B. Thurston
Date: Nov 3/95

Graphic Log (m)

400
404
408
412
416
420

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt Int.	Alt Typ	Alt Int.	Mineralization Cp	Py	Bn	Hm	mag	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
							blebs or patches. Pyrite diss's, patches, fractures also give the core a brecciated/																
							mottled appearence. Small, very fine (0.5mm) plagioclase (sericitized) phenos? occurs																
							throughout. Qtz Stk-wrk is Trace to weak almost entirely as <1cm																
							veins w/ sharp vein boundaries. Carb. veins/fracture filling accounts																
							for 1→2%. He usually occurs in Qtz veins. Tourmaline is diss in fracts/																
							Qtz vein envelopes & occasionally in matrix. Cpy is diss. in matrix 75% in																
							w/ Py & by itself. Cpy is also in Qtz veins. Mag the down section w/ K-sp.																
				Alt'n:			Strong clay & Ser. throughout. K-sp is weak pervasive & patchy.																
				Structure:			* Entire unit is possibly headed shearing.																
							* Breccia 278.90 → 281.80m																
							* L.C. @ 287.73 @ 3° assymilated shape.																
P	289.73	339.40	PPHM-2	4	m	1	T	<.15	Tr	0	1→2	T	0	vW	S	m	0	0	0	W	0	0	vW
				Lithology: & Alt'n:				Typical PPHM-2. Fresh looking, good porphyritic texture preserved in both															
								euhedral laths, buff coloured, carb & clay alt'd mafics & euhedral → subhedral, sometimes														
								zoned, sericitized light green plag. phenos. 1→2% He diss as specks,															
								black to black rel, 0.2mm → 1mm in dia. Magnetite occurs in areas															
								where the core is brown in colour, plag phenos are larger & ghost-like and															
								the overall appearance of the rock is like DPEH. Matrix in this area															
								has only very weak K-sp. Carb. is 2→3% as veins & fracture															
								filling's. The larger veins are Pink & usually 10→15°. Trace Py															
								diss. No Cpy on Qtz observed. Strong Sericitization of Phenos &															
								matrix.															
				Structure:			* Strong Sh'ing @ 13° from 316 → 318m + baked carb. Bx on Sh.																
							* Aquamarine phen's? @ u.c. & L.C. for ~ 1→2m into dyke.																
P	339.40	383.00	VSED	1	S	4	W	.66	3-7	0	T	T	T	m	m	W	T	vW	vW	vW	0	0	W-m
P	383.00	387.00	PPHM-2	1	S			0	T	0	2	vW	0	S	m	W	0	0	0	rW	0	0	W-m
P	387.00	402.30	VSED	4	m	1	W	.36	3	0	T	0	0	W	S	m	T	T-W	W	vW	0	0	W-m
				Lithology:			VSED's similar to last VSED description however Alt'n is stronger																

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 241
Logged By: B. Thurston
Date: Nov. 7/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	mag	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
			Lithology: Alt'n Min:		potassic, w to aphanitic. Most core is orangy-brown in colour. More than diss. and fractures or veins. Qtz veins are usually only 1→3mm wide w Py + Carb. coves. cpy is diss > in Qtz veins. ~1m breccia w frag ments of angular Qtz (veins?) pieces. The alteration is potassic w trace Hg; K-spar; chl. and biotite. Some areas up section & down section are more strongly sericitized w only trace potassic. No Calcite. Carb. veining is mainly as fracture filling. Tourmaline & Moly are diss. < 1%; moly is usually in Qtz veins. Cpy is mainly diss & assoc w py.														Very fine grain ly occurs as blebs 1→4mm					
			Structure:	x	PPHM clay alt'd & SH'd is assymilated/rafted @ contacts w PPHM-2 @ ~339m											@ 350m & @ 398.5→402m w PPHM-2 @					
				x	PPHM-2 Dyke cuts @ u.c. 25° sharp 1cm SH @ L.c. 45° assym																	
					This is a Typical PPHM-2 similar to the beginning of PPHM-2 unit @ 291m. Alt'n is strong potassic w pervasive K-sp, diss. Hg + Mag. Trace Py, No Cpy.																	
				x	398.5→402.30m is a shear zone w u.c. a 20cm grange w u.c. of grange @ 38° sharp & L.c. @ 15° sharp. Middle shearing @ 25° throughout. Multiple shearing + very strong clay alt'n. Trace Qtz veins assym w cpy. Strong Carb. Fracture filling ~ 4%.																	
P.	402.30	404.47	PPHM-2?	1	S			o	1.5	o	7	o	o	S	m	w	o	o	o	T	o	W	w.m
			Lithology:		Strong potassic alt'n w 5→10% Hematite gives core a dark red to orange colour. Mafics seen chloritized, plag is orange but Not potassic. 1.5% diss. py. No cpy. Trace calcite in Carb fracture fillings. We Mag vn.																	
			Structure:	K	SHZN & assym. u.c. w Useds. Solid & competent core into dyke.																	
				U	this is different than most PPHM-2?																	
																	FIN						

DRILL HOLE NO. 95 - 241

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

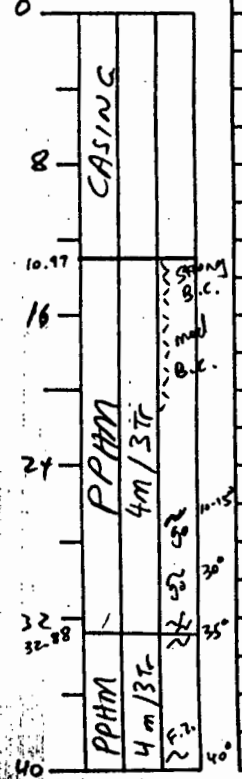
DRILL HOLE NO. 95 - 242

Location Sketch

Grid Northing (m):	100 100	Date Started:	NOV 03 '95
Grid Easting (m):	49 800	Date Completed:	NOV 06 '95
Elevation (m):		Logged By:	IAN FOREMAN
Total Length (m):	398.07m	Date Logged:	NOV 04 '95
Casing Depth (m):		Data Entry:	
Reduction Depth:	—	Entry Date:	
Collar Core Size:	HQ	Casing (In/Out):	OUT

Survey	Depth	Azimuth	Dip
S.S.	154.53	178.5°	-63°
S.S.	303.89	181.5°	-64°
S.S.	396.24	180.0°	-64.5°

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	0.0	10.97	CASN																			
	10.97	32.88	PPHM	4	M	3	Tr	0.3	2.5	/	1.0	/	/	M	M	/	/	/	Tr	/	/	M

4TH+MIN:

The unit is grey to light brownish grey and does not have a well preserved porphyritic texture. A majority of the feldspars are difficult to differentiate from the ground mass. The feldspars are <1-3mm, sub-euhedral and light brownish grey to cream. It is assumed that there is 15-20% although only <10 are visible. The hornblendes are buff to sandy brown, <1-2mm, sub to euhedral and make up 15% of the rock.

Locally the unit has an optaxitic appearance due to alteration.

No quartz veins were noted but there is trace carbonate as 1-8mm veins.

The unit is weakly mineralized with 0.3% chalcopyrite occuring primarily as fracture fill and rarely as fg'd disseminations. 2-3% Pyrite occurs throughout as fg'd disseminations, 1-4 mm blebs as well as fracture fill. Trace to 2% Sphalerite occurs as fg'd disseminated 1-3mm blebs as well as fracture

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG
AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
Logged By: Ian Foreman
Date: Nov 4 '95

Graphic Log (m): 40, 44, 52, 60, 68, 76, 84, 89.86, 92, 100 — PPHM 4M/3Tr; FAUL 4M; PPHM 4m/3Tr; Strong B.C.

P S	Interval From	To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	10.97	32.88	CONT'D																					
	32.88	89.86	PPHM	4	M	3	Tr	.15	3	/	1.5		/	/	M	M	/	VW	/	W	/	/	W	

(10.97–32.88, cont'd)

fill.

LC:

Fault Zone between 31.90-32.88m @ 35°

ALTERATION:

Moderate Qtz-Ank-Ser +/- Kao alt'n throughout all. Trace milled Qtz-Ank-Ser-Kao alteration in the form of 2-5mm sericite +/- pyrite blebs.

STRUCTURE:

- 10.97-15.90m → Strongly bkn <1-8cm angular to subrounded core to gouge and limonite staining on fractures
- 15.90-21.10m → Moderately bkn 1-10cm angular core with gouge
- 27.84-28.24m → 3-8mm gouge on slip @ 10-15°
- 29.08m → 3-5mm gouge on slip @ 30°
- 29.91-30.07m → cemented gouge in Fault Zone @ 45°
- 31.90-32.88m → cemented gouge in Fault Zone @ 35°

(32.88–89.86, PPHM)

LITH + MIN:

The unit is dark grey to brownish grey with 5-30cm patches which are green to reddish brown. Generally, the porphyritic texture is poorly preserved but locally it can be very prominent or absent all together. Locally the feldspars are difficult to distinguish from the groundmass; they are 1-3mm, subhedral to euhedral, clear to brownish grey (rarely translucent green) and are assumed to make up 15-20% of the rock although, at times, only <10% can be seen. The hornblendes are <1-3mm sub to euhedral buff to cream laths that make up 15% of the rock. Rare hornblende >4mm occur throughout the unit.

Trace to weak quartz stockwork composed of 2mm to 1.5cm weakly to moderately well mineralized white to grey quartz

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GEOLOGIC DRILL LOG

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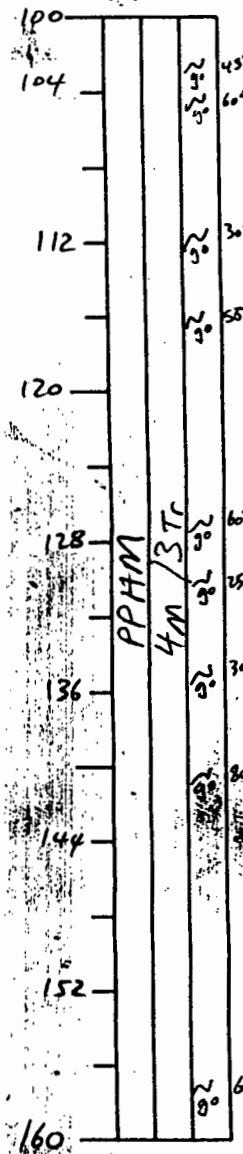
DRILL HOLE NO. 95 - 242
Logged By: IAN FOREMAN
Date: NOV 4TH 95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	32.88	89.86	CONT'D																			

veins. NO gypsum veining and Weak carbonate as veins and fracture fill.

0.3-0.6% chalcopyrite occurs throughout the unit. The amount of CPY is deceptive due to the majority occurring as fg'd disseminations and irregular <2mm blebs. The CPY is commonly occurs with pyrite making it that much harder to spot. CPY also occurs in the quartz veins, as fracture fill and on slip surfaces. 5% pyrite occurs as fg'd disseminations and 1-5mm blebs throughout the ground mass as well as in veins and as fracture fill. 1-2% hematite occurs throughout the unit in the same manner as pyrite. Rare carbonate veins contain blebs of sphalerite and molybdenite.

L.C:

Shear with Fault Zone @ 30°

ALTERATION:

Moderate Qtz-Ank-Ser ± Kao alteration throughout as the Pl. feldspars are altered to sericite ± Ank (as in the groundmass) and the hornblendes are partially replaced by Ank-Ser and Kao. Locally the unit is mottled as a result of mottled Qtz-Ser. Ank-Kao alteration.

Locally the core is very bad as a result of the unit being possibly Silicified.

STRUCTURE:

- 39.89-40.40m → cemented gouge in Fault zone @ 40°
- 54.97-55.16m → strongly broken core with gouge.
- 61.15m → gouge on Slip @ 20°
- 67.47m → gouge on Slip @ 40°
- 76.97m → 1cm cemented gouge on Slip @ 40°
- 79.44m → 2cm cemented gouge and rubble @ 25°
- 83.75m → gouge on Slip @ 25°

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
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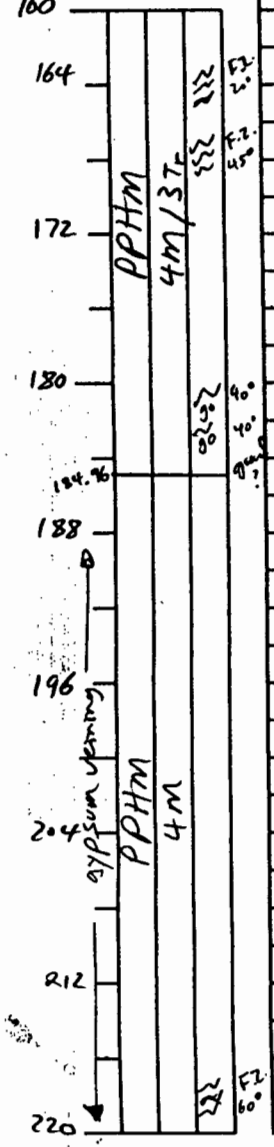
Date: Nov 4 '95



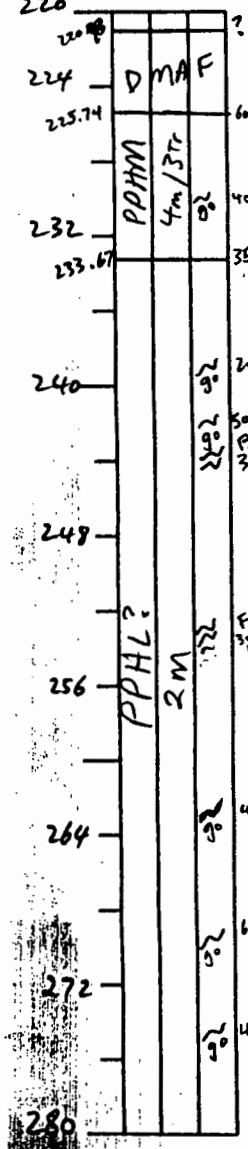
PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	32.88	89.86	CONT'D		- 84.82 m			→	1cm. gouge on			Slip @ 20°										
					- 84.92 m			→	6cm core w/ gouge													
					- 85.05 - 85.69 m			→	mod bkn 26cm grey			core w/ gouge										
					- 87.48 m			→	gouge on			Slip @ 50°										
	89.86	95.17	FAUL	4	m			0.6	3.5	/	1.5	/	/	m	m	/	Tr	/	Tr	/	/	m
					LITH+MIN+ALT:																	
					5-20cm sections of cemented gouge and rubble surrounding blocks																	
					of dark grey to brownish grey PPHM which is described between																	
					32.88 and 89.86m. 10-15% of the fault is mod to strongly bkn																	
					<1-3cm angular core w/ abundant gouge.																	
					L.C:																	
					sharp c/a end of fault zone @ 30°																	
					STRUCTURE:																	
					- Trend through the fault zone is @ 30°																	
	95.17	184.96	PPHM	4	m	3	Tr	0.8	3.5	/	1.5	/	/	m	m	/	w	/	w	/	/	w
					LITH+MIN+ALT:																	
					This is the continuation of the dark grey to brownish grey																	
					main phase unit that is above the fault and is described																	
					between 32.88 and 89.86m. Quartz stockwork is locally moderate.																	
					The mineralization is the same except that locally over																	
					5-15 cm sections it is very strong. A majority of the chalcopyrite																	
					occurs as fg'd disseminations which make grade estimation																	
					difficult.																	
					L.C:																	
					indistinct - muted by 1st gypsum vein. Possibly @																	
					STRUCTURE:																	
					- 103.12 - 103.27m → cemented gouge @ 45°																	
					- 105.44 m → 2mm gouge on Slip @ 60°																	

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
Logged By: JAN FORSMAN
Date: NOV 4TH '95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	95.17	184.96	CONT'D		- 106.18 - 106.28m → gouge on parallel sl. pse 30°																	
					- 111.97 - 112.08m → pyrite rich cemented gouge and rubble @ 25°																	
					- 116.92m → 3mm gouge on slip @ 55°																	
					- 127.83m → gouge on slip @ 60°																	
					- 131.38m → gouge on slip @ 25°																	
					- 132.23m → 3-8mm gouge on slip @ 35°																	
					- 135.73m → 1cm gouge on slip @ 30°																	
					- 141.03m → gouge on slip @ 80°																	
					- 157.18m → gouge on slip @ 65°																	
					- 164.90 - 165.17m → Fault zone @ 20°																	
					- 169.77 - 170.15m → Fault zone @ 45°																	
					- 182.63m → 3-8mm gouge on slip @ 40°																	
					- 182.99m → 2mm gouge on slip @ 40°																	
	184.96	220.98	PPHM	4	M			0.8	3.5	/	Tr	/	/	m	m	Tr	w	/	vw	m	/	w

LITH + MIN:

dark grey to brownish grey. The top of the unit is very similar to the above Main phase but it grades into a coarser grained unit.

15-20% green to translucent brownish grey 1-4mm subhedral feldspars and 15% white to buff <1-3mm subhedral, typically lath shaped, hornblendes. A majority of the feldspars do not have distinct edges and apparently grade into the groundmass.

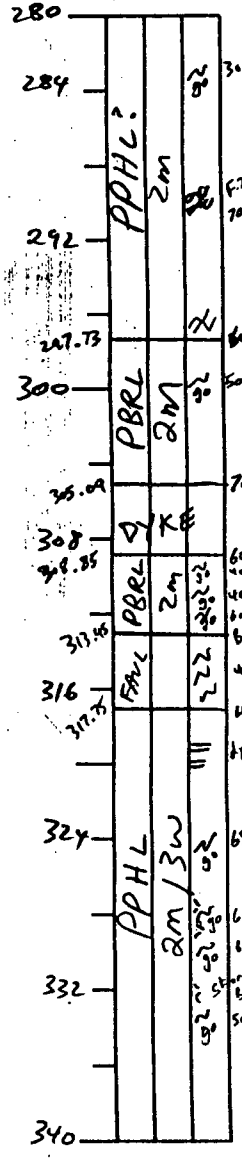
This unit is strongly cross-cut by fractures and veins. The weak quartz stockwork is made up of irregularly spaced grey and white moderate to poorly mineralized quartz veins. Moderate gypsum veining as 1mm-2cm straight and irregular white and orange gypsum veins. Trace to weak carbonate as fracture fill and veins.

RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
Logged By: IAN FOREMAN
Date: NOV 5 '95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	184.96	220.98	CONT'D		0.7-0.9% Chalcopyrite is throughout predominately as very fine grained disseminations and ≤2mm irregular blebs. Chalcopyrite also occurs as fracture fill and in quartz veins. 3-5% pyrite as fg. dissem and 1-4mm blebs throughout the ground-mass as well as fracture fill and in veins.															
					L.C: @ end of run so angle is unknown.																	
					ALTERATION: Moderate Qtz-Ank-Ser +/- Kao alteration throughout. Fine grained Tourmaline in fractures and within 0.5cm of the fractures.																	
					STRUCTURES: -218.08 - 218.25m Fault zone @ 60°																	
	220.98	225.74	DMAF	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	W	-	-	W
					LITHOLOGY: Amygdaloidal mafic dyke with <5% 2-8mm rounded carbonate amygdules. 5-8% 2-4mm subhedral biotites 5-8% dark green subhedral 2-4mm grains which are either pseudomorphed biotites or are possibly pyroxenes 3-5% cream 1-6mm euhedral hornblende. This dyke has <1% 0.5-4cm angular dark green xenoliths.																	
					L.C: Sharp @ 60°																	
	225.74	233.67	PATM	4	M	3	TR	0.75	3.5	/	TR	—	—	M	M	TR	W	/	VW	M	/	W
					LITH + MIN: This is a continuation of the brownish grey matrix phase above the dyke and is described between 184.96 and																	

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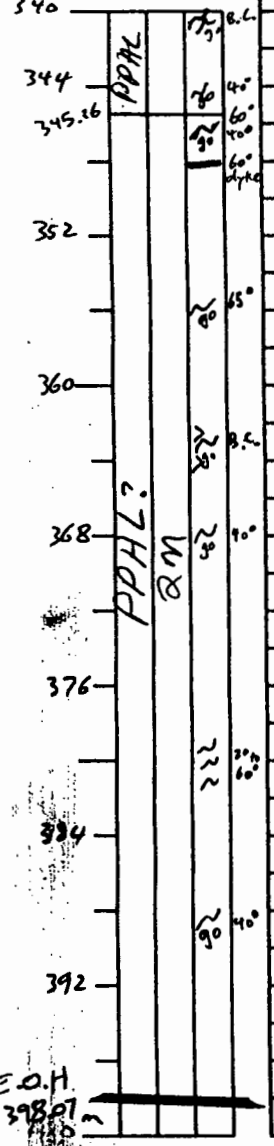
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
Logged By: Ian Forrest
Date: Nov 5 '95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
	225.74	233.67	CONT'D		220.98 metres																	

L.C:

Sharp in Shear @ 35°

ALTERATION:

The alteration is similar to the brownish grey matrix phase above the dyke except that this portion of the unit has 5-10cm sections of mottled Qtz-Ab-Ser-Kao alteration.

STRUCTURE:

-230.81m → gouge on Slip @ 40°

	233.67	297.73	PPHL?	2	m			Tr	3.0	/	/		/	/	m	w	Tr	/	/	w	m	/	w

LITH + MIN:

The unit is typically light to dark grey and has a poorly to moderately well preserved porphyritic texture. Locally the unit appears aphanitic due to alteration.

15-20% light translucent grey to cream 1-3mm subh to euhedral plagioclase and 10-15% cream to buff <1-3mm euhedral to subhedral lath shaped hornblendes. Rare hornblendes are >4mm.

No quartz veins and moderate white gypsum veining throughout.

Trace to weak carbonate as fracture fill and veins.

Trace chalcopyrite @ 260.0 meters. No other chalcopyrite was noted. 3.0% pyrite as fg'd dissemination, 1-4mm irregular blebs as well as fracture fill and in rare veins.

L.C:

At the end of fault zone @ 60°

ALTERATION

Moderate phyllic (Qtz-Ser-Py) alteration throughout. V.fg'd Tourmaline in fractures and locally within 1cm of the fractures.

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
Logged By: IAN Foreman
Date: Nov 5 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Mineralization Typ	Mineralization Int.	Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	233.67	297.73	CONT'D		STRUCTURE:																	
					- 239.27m → gouge around gypsum vein @ 20°																	
					- 242.81m → gouge on Slip @ 50°																	
					- 242.38 – 242.69m → Fault zone w cemented gouge @ 30°																	
					- 244.14 – 245.89m → Fault zone w intermitent cemented gouge @ various angles. Zone starts and ends @ 25°																	
					- 253.15 – 254.60m → Fault zone w intermitent cemented gouge @ various angles. Zone Starts @ 30° and ends @ 15°																	
					- 263.17m → gouge on Slip @ 45°																	
					- 270.88m → 2-4mm gouge on slip @ 60°																	
					- 275.94m → 2-4mm gouge on Slip @ 40°																	
					- 283.60m → gouge on Slip @ 30°																	
					- 290.78 – 291.72m → Fault zone with cemented gouge @ 70°																	
					- 296.65 – 297.73m → Fault zone with cemented gouge @ 60° Centre of fault is brx w sphard galena on fractures.																	
	297.73	305.09	PBRL	2	m			—	2.5	—	—	—	—	m	w	—	—	—	Tr	—	—	w
					LITH+ MIN: pale grey "washy" appearance with light grey fragments surrounded by light grey matrix. The fragments range from 3mm – 5cm and are typically subrounded to subangular. A majority of the fragments have a poorly preserved porphyritic texture and are probably late stage. Trace bright green v. rigid dots (malachite?) Also throughout are 0.5-2cm angular to subrounded patches of orange brown of coloured (stained?) groundmass. The matrix of the breccia is porphyritic with 15-30% <1-3mm sub-euhedral cream to pale grey feldspars and 10-20% <1-3mm sub-euhedral, typically bath stained, buff to grey hornblendes. Trace carbonate as veins and irregular structure fill. No																			

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Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
Logged By: Tom Foreman
Date: Nov 5 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	297.73	305.09	CONT'D																			

quartz veining as gypsum veining.
2.5% pyrite occurs throughout as fg'd disseminations and 1-8 mm irregular blebs as well as fracture fill.
L.C.:
sharp with dyke @ 70°
ALTERATION:
Moderate phyllic (Qtz-Ser-Py) alteration throughout
STRUCTURE:
-300.20m → 2-3mm gouge on break @ 50°

	305.09	308.85	DYKE	2	m	-	-	/	2.0	/	/		/	/	m	w	/	/	/	Tr	/	/	w

LITHOLOGY:
A porphyritic grey to green dyke with chilled margins.
10-15% white to creamy grey blebby 1-3mm feldspars and 15-20% <1-4mm subh to euhedral lath shaped, buff to cream hornblende Phenocrysts are surrounded by an aphanitic matrix
This does resemble late phase.
Trace 1-3mm carbonate veining
2% pyrite as fg'd disseminations and 1-3 mm irregular blebs throughout.
L.C.:
sharp @ 60°

	308.85	313.45	PBRL	2	m			/	2.5	/	/		/	/	m	w	/	/	/	VW	Tr	/	w

LITH + MIN + ALT:
This is a continuation of the late phase breccia that is above the porphyritic dyke and is described between 297.73 and 305.09m except this portion has trace clear gypsum veins
L.C.:
contact with fault zone is in btm core.

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
Logged By: Ian Forema
Date: Nov 6 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	308.85	313.45	CONT'D		STRUCTURE:																	
					- 309.10 m		→		cemented gouge					@	40°							
					- 310.53 m		→		gouge on slip					@	40°							
					- 311.72 m		→		1cm cemented			gouge		on	slip	@ 60°						
	313.45	317.75	FAUL	2	m			Tr?	2.5	/	/	/	/	M	W	/	Tr	/	Tr	/	/	M
					LITHOLOGY:																	
					5 to 20 cm zones of cemented gouge, rubble and/or mud-strongly																	
					bkn core separate 10-30cm sections of pale greenish grey latite																	
					phase. Rare quartz fragments are contained within the																	
					cemented gouge.																	
					Trace chalcopyrite possibly occurs within these fragmented																	
					quartz veins. Sphalerite and galena in a calcrete 316.77m																	
					L.C:																	
					Slip @ 40°																	
					ALTERATION																	
					The alteration is assumed to be the same as the																	
					surrounding units (Moderate phyllic - Qtz-Ser-Py)																	
					STRUCTURE:																	
					- Trend of the major type of the gouge is 40°																	
	317.75	345.26	FPHL	2	m	3	W	/	3	/	/	/	/	VW	W	/	/	/	VW	/	/	W
					LITH+ MIN:																	
					The unit is pale greenish grey and does not have a																	
					well preserved porphyritic texture. The feldspars are																	
					difficult to distinguish as they blend in with the ground-																	
					mass. 10% (assumed to be 15-20%) pale grey to translucent,																	
					green 1-3mm anhedral to euhedral feldspars and 15%																	
					buff to pale green <1-3mm, rarely >4mm, sub to euhedral																	
					hornblendes.																	

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
Logged By: IAN FOREMAN
Date: NOV 6 '95

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	317.75	345.26	CONT'D																					

The unit has a blotchy appearence due to 5% 2-13mm rounded sericite blebs.

No quartz or gypsum veins but very weak carbonate as both veins and fracture fill. No chalcopyrite was noted through the unit. 3.0% pyrite occurs primarily as f'g'd disseminations and 1-8mm irregular and rounded blebs throughout the groundmass. Pyrite also occurs in carb veins and as fracture fill. Sphalerite occurs as a 2-3mm ribbon in a 2cm carbonate vein 336.5m.

Two light grey aphanitic dykes (or same dyke?) crosscut the core @ ~30° and sub parallel to the core axis. The 1st contains a 1x4cm quartz fragment.

LC:

Sharp @ 60°

ALTERATION:

Moderate phyllic (Qtz-Ser-Py) alteration throughout with patches of weak mottled phyllic alteration indicated by the sericite +/- pyrite blebs.

STRUCTURE:

- 318.70 - 319.13m → 1-5cm light grey aphanitic dyke subparallel to C.A.
- 319.50 - 319.71m → light grey aphanitic dyke @ 15°
- 321.18m → 1cm gouge and rubble @ 60°
- 325.10m → gouge on two parallel slips @ 65°
- 328.50 - 328.67m → cemented gouge and bkn core w/ slip @ 60°
- 329.31 - 329.39m → gouge in bkn core w/ slip @ 60°
- 331.65 - 331.84m → strongly bkn core between slips @ 35°
- 337.65m → 4cm cemented gouge @ 50°
- 340.46 - 340.96m → strongly bkn ang core w/ rubble and trace gouge
- 344.0 - 344.27m → cemented gouge and 0.5-4cm fragments @ 40°

DRILL HOLE NO. 95 - 242

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 242
Logged By: ~~Ian~~ Foreman
Date: Nov 6 '95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	345.26	398.07	PPHL?	2	m			Tr	4	/	/	/	/	M	W	/	Tr	/	VW	/	/	W

LITH + MIN:

The unit is grey to greenish grey and has a moderately well preserved porphyritic texture throughout. Locally, the texture is absent due to alteration.

15-20% 1-3mm anhedral to subhedral cream to translucent greenish grey feldspars and 15-20% 1-3mm, rarely >4mm, buff to dark greenish brown sub to euhedral lath shaped hornblendes. The groundmass is aphanitic and locally has a mottled appearence. No gypsum veins and <5 white 2-6mm quartz veins around 386.0m efeis. Trace to weak carbonate as veins and irregular fracture fill.

4%, possibly greater, pyrite occurs primarily as disseminations and 1-8mm rounded and irregular blebs as well as fracture fill. Trace chalcopyrite was noted in one carbonate vein.

L.C:

E.O.H.

ALTERATION:

Moderate phyllic (Qtz-Ser-Py) alteration throughout.

STRUCTURE:

- 346.15m → 2-3cm gouge and rubble @ 40°
- 348.49 - 348.52 → light grey aphanitic dyke @ 60°
- 349.80m → 2-3mm gouge @ 65°
- 356.03m → 1cm gouge @ 65°
- 363.83 - 363.92m → Strongly bkn core w gouge
- 367.89 - 368.01m → remented gouge @ 40°
- 380.09 - 381.31m → 5-10cm sheared zones and re-cemented gouge @ 20-60°
- 388.94 - 389.23m → cemented gouge @ 40°

DRILL HOLE NO. 95 - 242
398.07 - 398.07m E.O.H

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

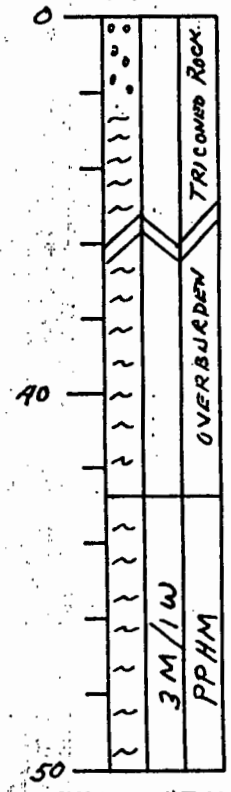
DRILL HOLE NO. 95 - 243

Location Sketch

Grid Northing (m):	99 200	Date Started:	NOV 4, 95
Grid Easting (m):	48 900	Date Completed:	NOV 9, 95
Elevation (m):		Logged By:	J. DEIGHTON
Total Length (m):	340.16	Date Logged:	NOV 5 - NOV 9/95
Casing Depth (m):	79.25	Data Entry:	
Reduction Depth:		Entry Date:	
Collar Core Size:	NQ	Casing (In/Out):	

Survey	Depth	Azimuth	Dip
0	0	090	-60
1	203.30	080.5	-59
2	306.93	081.5	-59

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	0		OVER.		OVERBURDEN.				TRICONED TO 42.67 m				NOT ALL OVERBURDEN!									
	42.67	92.80	PPHM	3.	M	1	W	.5	3-5				W	S	S		VW	W	VW			I
	(36.95)	(	FAULT?																			
				MAIN PHASE HORNBLENDE - FELDSPAR PORPHYRY. IN A RUBBLE ZONE OF VERY SMALL FRAGMENTS RECOVERED. APPROXIMATELY 3.5 m OF RUBBLE ROCK RECOVERED FROM ± 50 m OF CORING. FRAGMENTS OF ROCK INDICATE THAT THE ROCK IS VEINED BY QUARTZ AND PYRITE - CHALCOPYRITE BY SERICITE AND PYRITE AND IN PLACES MOLYBDENITE IS NOTED. THE ROCK ALSO SHOWS A SLIGHTLY PINKISH COLOUR IN PLACES INDICATING THAT THE FORMATION IS SLIGHTLY POTASSIC IN PLACES. THE ROCK IS HIGHLY ALTERED TO SERICITE AND CLAY MINERALS. THROUGHOUT. THE ROCK CONTAINS BETWEEN 3 AND 5 % PYRITE THROUGHOUT. STRUCTURE IN THIS SECTION IS IMPOSSIBLE TO IDENTIFY. (CONTINUED ON PAGE 2)																					
			NOTE -	ASSAYS TO 117.04 m ARE VIRTUALLY MEANINGLESS BECAUSE OF THE POOR CORE RECOVERY. EXPERIENCE TELLS US THAT PORTIONS OF THE ABOVE ZONE SHOULD HAVE ORE INTERSECTIONS OF ORE GRADE MATERIAL																	

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By: J. DEIGHTON
Date: NOV 6/85

Graphic Log (m): 50 – 60 – 70 – 80; 3M/1W; PPHM

MOLYBDENITE BORNITE OR COVELLITE OR POSSIBLY STAINED PYRITE (DOUBTFUL) OR CHALCOPYRITE STARTING TO TURN TO CASSIDERITE NOTED IN SOME SECTIONS OF THE RUBBLE PIECES. SOME RUNS OF THE CORE HAVE GREATER RECOVERY THAN OTHER SECTIONS; THESE POOR TO ALMOST NIL RECOVERY SECTIONS MIGHT POSSIBLY BE SHEAR ZONES. SECTIONS WITH STRONGER COPPER VALUES AND PRESENCE OF MOLYBDENITE ARE GREYISH IN COLOR AND HAVE IDENTIFIABLE QUARTZ VEINS.

P S	From	To	Rock Code	Alt. Typ	Int.	Typ	Int.	Cp	Py	Bn	Hm		Bi	Kf	Ms	Cy	To	Qz	Py	Cb	A:	H:	Fr.
	92.80	93.80	PPHM₂	2	S	1	W								S	S				VW			S

LIGHT BROWNISH HORNBLENDE FELDSPAR PORPHYRY WITH HORNBLENDE AND FELDSPAR PHENOCRYSTS UP TO 3 mm IN SIZE. ALL PHENOCRYSTS AND MATRIX COMPLETELY ALTERED TO SERICITE AND CLAY MINERALS. THIS IS AN EXTREMELY CROWDED PORPHYRY. NO SULPHIDE MINERALS WERE SEEN IN THIS PORPHYRY AND NO QUARTZ VEINS WERE NOTED. ONLY THE VERY OCCASIONAL CARBONATE VEIN WAS SEEN. SHEARS PROBABLY MAKE UP CONTACTS OF DYKE BUT COULD NOT BE IDENTIFIED.

P S	From	To	Rock Code	Alt. Typ	Int.	Typ	Int.	Cp	Py	Bn	Hm		Bi	Kf	Ms	Cy	To	Qz	Py	Cb	A:	H:	Fr.
	93.80	117.04	PPHM	3	M	1	W	<.5	3					W	S	S		M-W	W	VW			I

RUBBLE ZONE OF MAIN PHASE HORNBLENDE - FELDSPAR PORPHYRY. CORE PIECES ARE NOT AS RUBBLY AS ABOVE IN PPHM SECTION AT START OF HOLE BUT IS STILL WELL BROKEN AND CORE HAS BEEN LOST IN ALMOST EVERY DRILLED SECTION. QUARTZ VEINING IS GENERALLY WEAK TO MODERATE WITH THE OCCASIONAL SECTION CONTAINING STRONGER QUARTZ VEINING. PORPHYRY IS COMPLETELY ALTERED TO SERICITE AND CLAY MINERALS AND SOME SERICITE VEIN FRACTURES & PYRITE VEINS OCCUR.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By: ______
Date: ______

Graphic Log (m): 80 – 90 – 100 – 110; 3M/1W PPHM; 2S/1W PPHM2; 3M/1W PPHM

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm	
	117.04	138.25	PPHM	1	M	2	M	<.5	2		TR	
	138.25	139.60	DGCA	2	S			–	–	–	.	
	139.60	156.75	PPHM	1	M	2	M	<.5	2		TR	

Interval From	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
117.04		M	M	M	TR.	TR.	TR.	TR	TR.		M
138.25			S	S				W			M.
139.60		M	M	M	TR	W	W	VW	VW		M-S

117.04 – 138.25: LIGHT PINKISH BROWN HORNBLENDE - FELDSPAR PORPHYRY WITH PHENOCRYSTS OF HORNBLENDE AND FELDSPAR UP TO 3 mm IN SIZE IN APHANITIC MATRIX. MATRIX EQUALS APPROXIMATELY 30 % OF MASS. ALL PHENOCRYSTS AND MATRIX COMPLETELY ALTERED TO SERICITE AND CLAY MINERALS. SOME OF SERICITE ALTERS TO LIGHT APPLE GREEN COLOR. VEINING BY ANYTHING IN THIS SECTION IS IN ONLY TRACE AMOUNTS. BE IT QUARTZ, CARBONATE OR GYPSUM. GYPSUM IS THE LOWEST AMOUNT OF VEINING. FRACTURING IS MODERATE THROUGHOUT SECTION. PYRITE IS ALSO IN LOW CONCENTRATION IN SECTION. MINOR LARGE FRACTURES ARE NOTED TO OCCUR BUT ARE ONLY 1-3 mm THICK. TRACES OF HEMATITE PROBABLY ALTERED FROM PYRITE OCCUR THROUGHOUT AS DOES TRACES OF TOURMALINE

138.25 – 139.60: DYKE OF CARBONATE FILLED AMYGDULES FROM 2 mm TO ALMOST 1 cm IN SIZE. DYKE LIGHT GREEN APHANITIC GROUNDMASS. UPPER CONTACT 50° TO C.A. LOWER CONTACT 63° TO C.A. DYKE IS CUT BY SEVERAL CARBONATE VEINS.

139.60 – 156.75: BUFF BROWN TO SLIGHTLY PINKISH HORNBLENDE - FELDSPAR PORPHYRY SIMILAR TO THAT DESCRIBED FROM 117.04 - 138.25 m. PORPHYRY COMPLETELY ALTERED TO SERICITE AND CLAY MINERALS. AND CONTAINS ~2% PYRITE AND CONTAINS LESS THAN .1 % COPPER AS CHALCOPYRITE OCCURRING AS MINOR DISSEMINATIONS AND IN THE WEAK QUARTZ VEINING OCCURRING THROUGHOUT SECTION. THIS SECTION ALSO CONTAINS WEAK HEMATITE STAINING PROBABLY ALTERATION FROM PYRITE. TRACES OF TOURMALINE OCCUR AS DISSEMINATIONS. V.W. CARBONATE AND GYPSUM VEINS OCCUR THROUGHOUT.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOHOLE NO. 95 - [illegible]
Logged By:
Date:

Graphic Log (m)

110 — 3M/1W PPHM
120
130 — 1M/2M PPHM
140 — 2-3 DOCA

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	156.75	162.60	FPHM	3	M			1	3		Tr				S	S		W-M	W	VW	Tr		M.
	162.60	165.3	FAlt	3	S	2	W	<1	3						S	S		VW		VW	M.		S

156.75 – 162.60: Light to medium grey hornblende-feldspar porphyry with phenocrysts of hornblende and feldspar up to 3 mm in size that are completely altered to clay and sericite. Some sericite light to dark apple green in color. Moderate quartz veining occurs [illegible] with some minor pyrite - pyrite - [illegible] veins and traces of gypsum veining with some carbonate veins. Pyrite increases to 3-4% of the rock and chalcopyrite occurs up to 1% of the core.

156.75 – 156.9. Shearing 30 to 45° to CA

157.6 – 158.25 Shearing and stressed [illegible] 30 to possibly 40° to CA.

160.0 – 160.63 Shearing 30 to 45° to CA

162.60 – 165.3: Shearing in FPHM. [illegible] phase porphyry composed mainly of gouge with [illegible] fragments size from [illegible] to 1 cm in size. Phenocrysts [illegible] [illegible] in clay matrix. Shear veinlets by gypsum veins up to 2 mm in width. [illegible] [illegible] [illegible] [illegible] in shear zone.

DRILL HOLE NO. 95 -

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - [illegible]
Logged By:
Date:

Graphic Log (m): 140 – 170 (1M/2M, PPHM; 3M; 2S/3W, FAUL; 3W/2S, PPHM)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	165.3	182.00	PFHM.	3	W	2	S	~1	5						S	S		W-M	W	W	W		M.
				DARK GREY HORNBLENDE FELDSPAR PORPHYRY PHENOCRYSTS UP TO 3mm IN SIZE COMPLETELY ALTERED TO SERICITE AND CLAY MINERALS. CHALCOPYRITE OCCURS AS DISSEMINATIONS AND IN QUARTZ VEINS AND PYRITE OCCURS SIMILARLY WITH CONTENT OF PYRITE ~3% OF ROCK. THE PORPHYRY IS COMPLETELY ALTERED TO CLAY AND SERICITE.																			
	182.00	188.65	PPHM.	1	M	2	M.	1	3					M	M	M		M	M-S	VW	W		M
				PINKISH BROWN PORPHYRITIC HORNBLENDE - FELDSPAR PORPHYRY WITH WEAK TO MODERATE GYPSUM VEINING. SECTION OTHERWISE SIMILAR TO SECTION FROM 139.60 - 156.75 m. QUARTZ VEINING IS MODERATE AND PYRITE AND CARBONATE VEINING ARE WEAK. SOME SERICITE - PYRITE FRACTURES ARE FAIRLY STRONG IN PLACES																			
	188.65	194.45	FAUL.	[illegible]	[illegible]			[illegible]	[illegible]						[illegible]	[illegible]		W		S	S		M
				SHEARING AND [illegible] [illegible] TO 60° TO CA IN PRIMARY MAIN PHASE PORPHYRY [illegible] [illegible] [illegible] [illegible] [illegible] SOME [illegible] [illegible] PYRITE [illegible] [illegible] [illegible] [illegible] GYPSUM [illegible] [illegible] [illegible] [illegible] [illegible]																			

DRILL HOLE NO. 95 -

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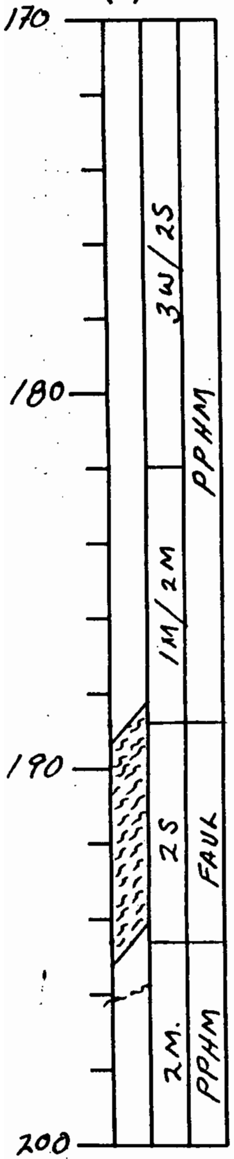
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By:
Date:

Graphic Log (m)



P S	Interval From	To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	194.45	207.65	PPHM	2	M										M	M		W					M	
	207.65	214.70	V SEDS	3	W			1	3-4		<1				S	S		W	W	M			M	

LIGHT GREY. [illegible] FELDSPAR PORPHYRY [illegible] TO [illegible]
[illegible] [illegible] QUARTZ - SERICITE
GYPSUM VEINING [illegible] . SOME PLACES THE
PORPHYRY TAKES ON A SLIGHTLY CHEERFUL TINGE. SOME NAUROW) STRESS
ZONES AND SHEAR ZONES OCCUR AND [illegible] BRECCIATED CONTACT. BRECCIATED
SECTIONS ARE VERY WEAK ARGILLIC

196.0 SHEAR GOUGE 75° TO CA.

200.85 - 201.80 STRESSED AND SHEARED 55° TO CA.

203.[illegible] - [illegible] SHEAR ZONE 60° TO CA.
206 - 207.65 BRECCIA OR RAMPS IN CRYSTAL TUFF OR MAIN PHASE? MAY BE V. SEDS ??

GENERALLY LIGHT GREEN TO BUFF BEDDED ARENITIC TO FINE GRAINED SEDIMENTS OF VOLCANIC COMPOSITION. WITH WEAK STREAKY AND SPECKLED HEMATITE STAINING. CUT BY WEAK QUARTZ VEIN STOCKWORK AND SOME MODERATE CARBONATE VEIN STOCKWORK. THE VOLCANIC SEDIMENTS ARE COMPLETELY ALTERED TO SERICITE AND OR CLAY MINERALS? PYRITE CONTENT VARIES BETWEEN 3 AND 4 %, WHILE CHALCOPYRITE OCCURS IN VEINS QUARTZ AND DISSEMINATED IRREGULARLY THROUGHOUT SEDIMENTS. PY MAINLY DISSEMINATED BUT MINOR CONSTITUENT OF QUARTZ VEINS.

DRILL HOLE NO. 95 -

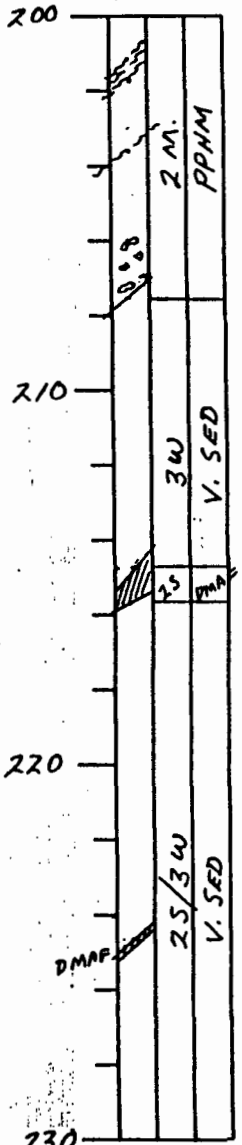
RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By: _____
Date: _____

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	214.7	215.8	DMAF	2	S									S	S				W			M.
	215.8	243.6	V. SEDS	2	S	3	W	1	3-7		Tr		S	S			W	W	M.			M.

PURPLE TO BUFF COLOURED MAFIC DYKE. BUFF COLOUR FROM BLEACHING BY CIRCULATING WATERS AND CARBONATE AS BUFF COLOURED NEAR STRONG QUARTZ VEINS. MAFIC PHENOCRYSTS FROM 3 mm TO 1 cm IN HEIGHT ARE RADIATING CLUSTERS. MAFICS PARTIALLY BIOTITES OR HORNBLENDES THAT WEATHER TO A RUSTY COLOUR. COLOUR AND MINERAL PHENOCRYSTS 5-10% OF ROCK MASS FORMING IRREGULARLY IN APHANITIC GROUNDMASS.

GENERALLY A LIGHT GREEN OR SLIGHTLY PURPLISH COLOR. APHANITIC CONTAINING WEAK TO MODERATE CARBONATE VEIN STOCKWORK. MINOR HEMATITE STAINING OCCURS IN PATCHES THROUGHOUT THE SEDIMENTARY PACKAGE. PYRITE VARIES FROM 3 TO 7% IN THE SEDIMENTS WITH STRONG PATCHES OF PYRITE. CHALCOPYRITE OCCURS IN QUARTZ VEINS AND AS DISSEMINATIONS IN THE SEDIMENTS. SOMETIMES AT QUITE LARGE VALUES UP TO 3-4 mm AMAL. MINOR MOLYBDENITE IS NOTED IN QUARTZ VEINS AND IN SEDIMENTS ADJACENT TO QUARTZ VEINS.

BIT MAY VARY TO A BUFF OR LIGHT GREY AND

224.25 - 224.45 DMAF DYKE 45° TO CA LOWER CONTACT, 70° TO CA. UPPER CONTACT

232.45 - 232.60 BRECCIA ZONE ~30° TO CA.

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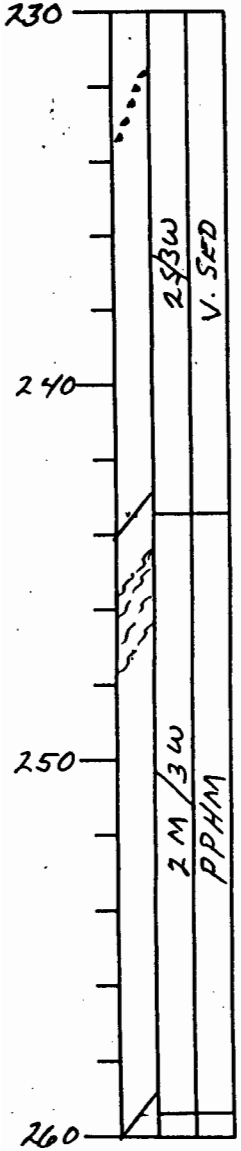
AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By: _____
Date: _____



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	243.6	259.60	PPHM	2	M	3	W	<1	3		TR			S	S	TR.	W	W	M			M

LIGHT GREY TO SLIGHTLY BUFF COARSE HORNBLENDE - FELDSPAR PORPHYRY OF THE MAIN PHASE VARIETY. COMPLETELY ALTERED TO SERICITE AND CLAY MINERALS WITH WEAK QUARTZ VEINING AND MODERATE CARBONATE VEINING. TRACES OF HEMATITE ALTERATION - STAINING OCCUR LOCALLY. MOLYBDENITE WAS NOTED IN SOME QUARTZ VEINS. PYRITE OCCURS MAINLY AS DISSEMINATIONS BUT CAN ALSO OCCUR IN QUARTZ VEINS. AND V. OCCASIONALLY IN CARBONATE VEINS. CHALCOPYRITE OCCURS AS DISSEMINATIONS AND IN QUARTZ VEINS. AS DISSEMINATION THE CHALCOPYRITE OCCURS MOST STRONGLY ADJACENT TO THE QUARTZ VEINS. TRACES OF TOURMALINE OCCUR VERY LOCALLY.

245.15 TO 247.85. SHEAR ZONE WITH GOUGE UP TO 20 cm IN WIDTH. SMALLER SHEARS 45° TO CA. AND ROCK FRAGMENTS OCCUR BETWEEN THE MAJOR SHEARS.

	259.60	261.67	V. SEDS	2	S			<1	3		TR.			S	S		W	W	M			M.

GENERALLY A LIGHT GREEN BUT MAY VARY IN COLOUR TO BUFF TO LIGHT GREY BUT MAY CONTAIN SMALL PATCHES OF BRIGHT GREEN COLOUR. (SERICITE ZONE GREEN COLOUR) MINOR HEMATITE STAINING NOTED LOCALLY. QUARTZ VEINING IS VERY WEAK WHILE CARBONATE VEINING IS MODERATE. PYRITE OCCURS IN CONCENTRATIONS AROUND 3 % MAINLY AS DISSEMINATIONS. CHALCOPYRITE OCCURS IN QUARTZ VEINS AND AS DISSEMINATIONS. MoS2 WAS NOTED IN QUARTZ VEINS. BUT IS MINOR CONSTITUANT.

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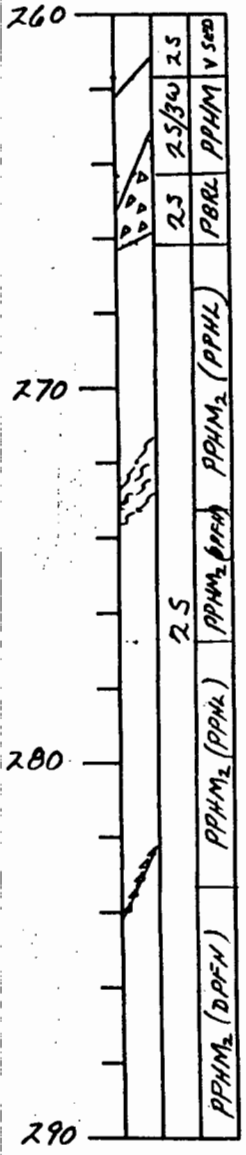
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By: _____
Date: _____

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	266.67	269.26	PPHM	2	S	3	W	<1	3						S	S		W	W	M			M	
				SAME AS FROM 243.6 – 259.60 m OF THIS HOLE. (SEE ABOVE FOR DESCRIPTION)																				
	269.26	266.20	PBRL?	2	S			<1	A						S	S				M			W	
				DARK GREY IN COLOR OF MATRIX TO ALMOST BLACKISH IN COLOR. MATRIX COMPOSED OF ROCK FLOUR AND PYRITE. ROCK FLOUR EXTENSIVELY ALTERED TO SERICITE. FRAGMENTS ARE OF LATE AND MAIN PHASE PORPHYRY ROUNDED TO SEMI-ROUNDED AND FROM mm TO 4 cm IN DIAMETER. SOME QUARTZ VEIN FRAGMENTS OCCUR. UPPER CONTACT 30° TO CA. LOWER CONTACT 55° TO CA.																				
	266.20	273.20	PPHM2 (PPHL)	2	S				2						S	S			TR	W			M	
				LIGHT GREY TO ALMOST BUFF-BROWNISH COLOR. PORPHYRITIC HORNBLENDE FELDSPAR PORPHYRY. PHENOCRYSTS 2-4 mm IN SIZE. PORPHYRY COMPOSED ALTERED TO SERICITE AND CLAY MINERALS. PYRITE OCCURS AS DISSEMINATION UP TO 2%, WEAK NARROW CARBONATE VEINS OCCUR THROUGHOUT																				
				272.70 – 273.20 SHEAR ZONE 15 cm GOUGE AND SUBSEQUENT NARROW GOUGE ZONES 45 TO 60° TO CA.																				

DRILL HOLE NO. 95 - [ ]

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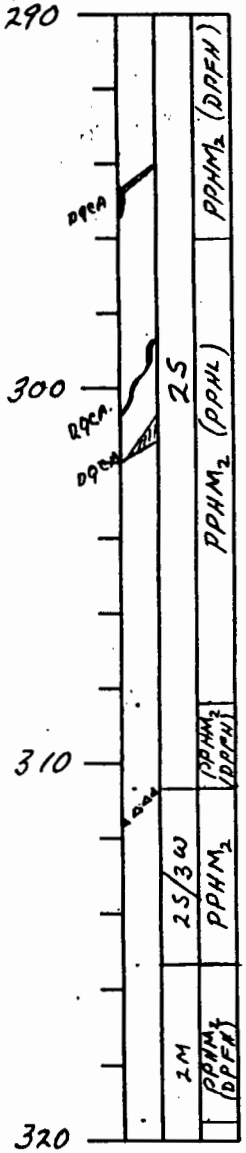
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By: _____
Date: _____

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bl	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
	273.20	276.85	PPHM2 (DPFH)	2	S						T			S	S				M			W

VARIOUS COLORED DYKE FROM LIGHT GREY AND BROWNISH - BUFF TO LIGHT PURPLISH COLORS. PATCHY AND IRREGULAR MINERALS TO COLORS. . UPPER CONTACT IS IRREGULAR AT ~30° TO CA LOWER CONTACT AT 30° TO CA. PHENOCRYSTS OF HORNBLENDE AND FELDSPARS UP TO .6 cm IN LENGTH. GOOD DEVELOPMENT OF PHENOCRYSTS WITH ~ 5 - 10 % OF ROCK PHENOCRYSTS IN APHANITIC MATRIX. THE ROCK IS COMPLETELY ALTERED TO SERICITE AND OR CLAY MINERALS. VERY LITTLE OF THE ORIGINAL POTASSIC COMPOSITION OF MATRIX IS LEFT. ORIGINAL SPECKS OF HEMATITE ARE SEEN THROUGHOUT.

	276.85	283.35	PPHM2 (PPHL)	2	S				2					S	S				M			W

LATE PHASE PORPHYRY AS DESCRIBED PREVIOUSLY FROM 266.20 - 273.20 M.

283.10 - 283.35 BASIC IN ZONE 30° TO CA FORMS LOWER CONTACT OF PPHL WITH THE FOLLOWING LARGE DYKE OF DPFH.

	283.35	296.00	PPHM2 (DPFH)	2	S				0					S	S				M+1			M.

VARIOUS COLORED DYKE FROM BUFF TO LIGHT GREY - GREENISH BROWNISH, PURPLISH AND DARK GREEN COLORS. TEXTURE AND VARY FROM APHANITIC TO VERY PORPHYRITIC WITH FELDSPAR AND HORNBLENDE PHENOCRYSTS UP TO 5 mm LONG. ROCK IS COMPLETELY ALTERED TO SERICITE AND CLAY MINERALS. SPOTS OF LIGHT APPLE GREEN SERICITE OCCUR THROUGHOUT. MENTION COLORED SECTIONS

DRILL HOLE NO. 95 - _____

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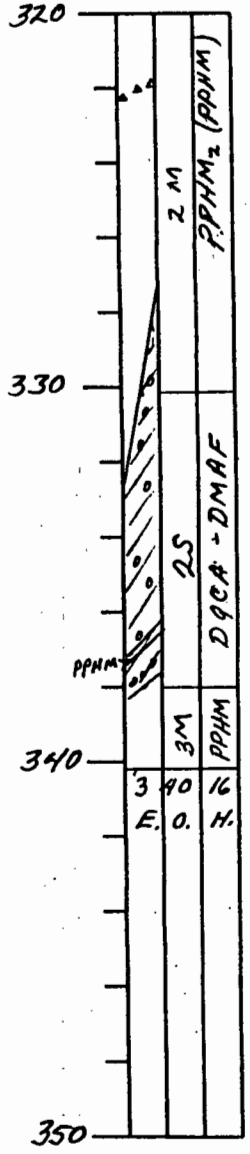
GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By: _____
Date: _____

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Alt. Typ	Alt. Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bl	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				OF THE PORPHYRY. THIS PHASE OF PPHM OR PPHM GRADES INTO ONE ANOTHER IN THIS SECTION AND DO NOT HAVE CHILLED CONTACTS. POSITIONS OF WHICH HAVE INCLUSIONS OF ONE IN THE OTHER WHAT KNOWS LIKE LATE PHASE IN LATE PHASE OF PPHM IN PPHM																
				294.4 - 294.59 CONTACTS 45° AND 60° TO CA. - DQCA DYKE LIGHT BUFF TO CREAM COLOR. 1-2 mm AMYGDULES (UPPER - LOWER) SOME CHILLING ALONG MARGINS																	
				299.9 0 CM SLICE OF CORE 1/8 PORTION ALONG EDGE IS LIGHT CREAM COLORED AMYGDULAR DQCA DYKE. IRREGULAR CONTACT.																	
	296.00	308.40	PPHM (PPHL)	2	S			LL	1						S	S		VW		W			M.
				LIGHT TO MEDIUM GRAY TO VERY SLIGHTLY PINKISH GREEN FINE GRAINED HORNBLENDE - FELDSPAR PORPHYRY COMPLETELY ALTERED TO SERICITE & CHLORITE MINERALS CONTAINING THE OCCASIONAL QUARTZ VEIN AND MORE GENERALLY RUSTY CARBONATE VEINS. THE PORPHYRY CONTAINS SPOTTY OF FAIRLY FINE GRAINED SERICITE. THE UNIT CONTAINS APPROXIMATELY 1% PYRITE ALTHOUGH SOME ZONES MAY CONTAIN NO SULPHIDES. THE VEIN VUGGY OCCASIONAL SPOTS OF CHALCOPYRITE IS ALSO NOTED. BOTH SULPHIDES OCCUR AS DISSEMINATIONS MAINLY BUT MAY ALSO BE FOUND IN THE QUARTZ VEINS.																	
				301.45 - 301.80 CHILLING BANDING. - DQCA DYKE LIGHT GREY TO BUFF WITH CHILLED MARGINS UPPER CONTACT 70° TO CA LOWER CONTACT 45° TO CA.																	
				299.9 - 1 CM DQCA DYKE IRREGULAR & CRACKY IN SHAPE APPROXIMATELY 30° TO CA																	

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By: ____________
Date: ____________

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	308.40	310.60	PPHM2 (DPFH)	2	S						/				S	S				VW			W
	310.60	315.50	PPHM2	2	S	3	W	<1	2						S	S		W		W			
	315.50	319.4	PPHM2 (DPFH)	2	M						/				M	M				M			M

308.40–310.60: DPFH LIKE PPHM2 - LIGHT BROWN TO PURPLISH HORNBLENDE FELDSPAR PORPHYRY WITH PHENOCRYST UP TO 6 MM IN LENGHT AND UP TO 2 MM IN WIDTH. SOME PHENOCRYSTS APPEAR TO BE ALIGNED IN SECTIONS OF THE DPFH LIKE PORPHYRY. MINOR DISSEMINATED HEMATITE OCCURS LOCALLY IN THE PORPHYRY. VERY WEAK CARBONATE VEINING IS PRESENT. CONTACTS TO OTHER PHASES OF PPHM2 ARE GRADATIONAL.

310.60–315.50: LIGHT GREEN GREY APHANITIC TO FINE GRAINED HORNBLENDE - FELDSPAR PORPHYRY COMPLETELY ALTERED TO CLAY AND SERICITE MINERALS. EXCEPT FOR V. SMALL PATCHY AREAS OF WEAK SILICIFICATION (PERVASIVE). WEAK QUARTZ VEINS OCCUR IN SECTION AND WEAK CARBONATE VEINS OCCUR. PYRITE IS DISSEMINATED IN THE CORE BUT IS [illegible] IN ABUNDANCE. OCCASIONAL SPECKS OF DISSEMINATED CHALCOPYRITE ALSO OCCUR THROUGHOUT USUALLY IN SECTIONS WITH HEAVIER PYRITE. BOTH CHALCOPYRITE AND PYRITE MAY OCCUR IN QUARTZ VEINS.

311.00 - 311.40 BRECCIATED ZONE WITH [illegible] 5-6% DISSEMINATED PYRITE IN [illegible] ZONE 45° TO C.A.

315.50–319.4: DPFH LIKE PPHM2 MAIN PHASE. CONTACTS [illegible] UNIT IRREGULAR AND FADE INTO ABOVE AND UNIT BELOW ALTHOUGH THERE IS A [illegible] CONTACT WITH [illegible] [illegible] QUARTZ VEINS AT 45° TO C.A. UNIT IS DARK.

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GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 243
Logged By:
Date:

Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Int.	Typ	Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
	318.40	330.10	PPHM / PPHM?	2	M			<1	2						m	m.		VW		W			M	

PREDOMINANTLY [illegible] - GREENISH TO LIGHT GREEN AND/OR BROWN - BUFF COLOUR. LARGE PHENOCRYSTS OF HORNBLENDE AND/OR FELDSPARS OCCUR WITHIN THE MATRIX. PHENOCRYSTS ARE UP TO 6 mm IN SIZE. ALL PHENOCRYSTS AND MATRIX ARE COMPLETELY ALTERED TO CLAY MINERALS AND SERICITE. OCCASIONAL SPECKS OF SULFIDE/CARBONATE ARE FOUND WITHIN THE SECTION. SOME BIOTITE (PRIMARY?) MAY ALSO BE PRESENT.

LIGHT TO DARK GREY HORNBLENDE - FELDSPAR PORPHYRY. COMPLETELY ALTERED TO SERICITE AND CLAY MINERALS. IN SPOTS THE PORPHYRY TAKES ON A SLIGHT APPEARANCE OF BEING SLIGHTLY DPFH LIKE BUT DOES NOT HAVE THE COLOR OF DPFH LIKE MATERIAL. GENERALLY THE PORPHYRY IS A CROWDED PORPHYRY WITH PHENOCRYSTS UP TO 3 mm IN SIZE. IN DPFH LIKE OR SIMILAR LOOKING PIECES THE PHENOCRYSTS ARE UP TO 6 mm IN SIZE AND ARE NOT CROWDED. V. WEAK QUARTZ VEINING OCCURS ALONG WITH WEAK CARBONATE VEINING. TOWARDS THE END OF THE SECTION THE PORPHYRY MAY CONTAIN AN OCCASIONAL SPECK OF BIOTITE? (SOME DARK MINERAL). DISSEMINATED PYRITE AND CHALCOPYRITE OCCUR IN LOCAL PATCHES. BUT NOT IN DPFH LIKE LOOKING ROCKS. OCCASIONAL CPY & PY OCCUR IN THE WEAK QUARTZ VEINS.

324.00 - 324.15 BRECCIA ZONE 70° TO CA WITH OPPOSING CONTACTS.

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DRILL HOLE NO. 95 - 243
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Date: _____

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alt. Int.	Alt. Typ	Alt. Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	330.10	338.00	DQCA (DMAF)	2	S									S	S				W			W
				PURPLE TO RUST COLOURED APHANITIC MAFIC DYKE WITH CALCITE - QUARTZ? FILLED ALONG RULED FRACS FROM MM TO 1/2 cm IN SIZE. THE DYKE IS CONTACT WITH CARBONATE VEINS AND WEAK FRACTURES IS BLEACHED FROM THE DARK PURPLE COLOUR TO A BUFF TO LIGHT GREY BROWN COLOUR. THE DYKE IS ALTERED TO SOFT SO IS PERVASIVELY ALTERED TO CLAY AND SERICITE MINERALS. THE DYKE CONTAINS NO SULPHIDES. THE UPPER CONTACT IS HEALED TO THE UNIT ABOVE AND HAS AN WEAK UNDULATING CONTACT. THE LOWER CONTACT IS A SHEAR ZONE AT 17° TO CA. UPPER CONTACT 5° TO 10° TO C.A. OCCASIONAL SMALL 1-2mm MAFIC PHENOCRYSTS ARE NOTED IN THE DYKE. THE DYKE IS SHEARED AT LOWER ANGLES TO THE CORE 5°-10° TO CA. FROM 332 TO 334m.																			
				337.45 - 337.6 m INCLUSION PROBABLY SHEAR ELONGATED QC PPHM. IN THE DYKE																	
	338.00	340.16	PPHM	3	M.			1	2-4					S	S		W-M	W	M			M
				DARK GREY HORNBLENDE FELDSPAR PORPHYRY OF THE MAIN PHASE. PORPHYRY IS COMPLETELY ALTERED TO SERICITE AND CLAY MINERALS. THE PHENOCRYSTS ARE BLEACHED AND FROM 2-3 mm IN SIZE. THE PORPHYRY IS WEAKLY TO MODERATELY VEINED BY QUARTZ AND MODERATELY VEINED BY CARBONATE. IT IS ALSO WEAKLY VEINED BY PYRITE. CHALCOPYRITE & PYRITE OCCUR AS DISSEMINATIONS AND IN QUARTZ VEINS. PYRITE ALSO OCCURS IN NARROW 1-2 mm VEINS.																			
		340.16	E.O.H.			HOLE SHUT DOWN AS RODS STICKING AND CORE BARREL STUCK.																	

DRILL HOLE NO. 95 - [ ]

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British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

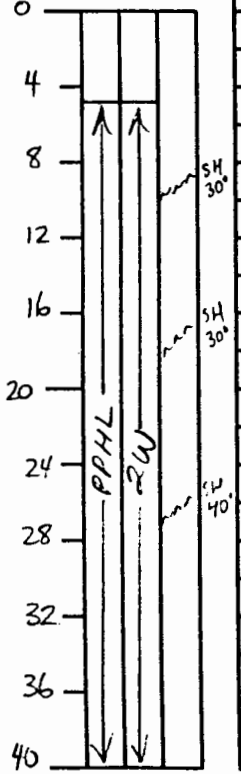
DRILL HOLE NO. 95 - 244

Location Sketch

Grid Northing (m):	100 050 N	Date Started:	Nov 6/95
Grid Easting (m):	50450 E	Date Completed:	Nov 8/95
Elevation (m):		Logged By:	T. Fraser
Total Length (m):	300.53 m	Date Logged:	Nov 7/95
Casing Depth (m):	4.87	Data Entry:	
Reduction Depth:	—	Entry Date:	
Collar Core Size:	HQ	Casing (In/Out):	Out.

Survey	Depth	Azimuth	Dip
SS	152.4	180.5°	-62°
SS	285.3	184°	-62°

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
	0	4.87	CASN																			
	4.87	71.15	PPHL	2	W	—	—	<0.3	6	0	0	0	0	VW	W	TR	0	W	TR	0	0	VW

Lithology - Highly porphyritic buff to pale grey Late Phase plagioclase hornblende porphyry. Plagioclase phenocrysts are subhedral, cream to white in colour. Plagioclase phenocrysts comprise 35-40% and vary from 1mm - 4mm in size. Hornblende phenocrysts comprise approximately 5-8% shreddy but euhedral grains up to 6-8 mm in length. The groundmass is pale grey and aphanitic. This unit appears to have fairly typical Late Phase characteristics. There are small (1cm - 10cm) dark grey PBRL veins cutting the unit.

Alteration/Mineralization - Plagioclase phenocrysts are weakly clay altered and very weakly sericite altered. Hornblende phenos appear to be carbonate-sericite-pyrite altered. Pyrite is blebby and disseminated throughout. There are weak pyrite veins and trace to locally weak white carbonate veins. Very thin (mm-sized) black tourmaline (?) veinlets are throughout. Trace Chalcopyrite blebs.

Structure - 8.00 - 8.23 m healed gouge.
9.65 m gouge/shear @ 36°
17.50 - 17.60 m black shear @ 30°.

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Liard Mining Division
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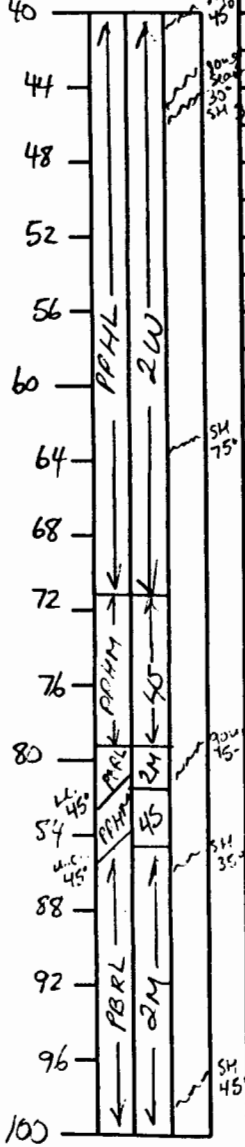
DRILL HOLE NO. 95 - 244
Logged By: I. Fraser
Date: Nov 7/95



P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				18.70m - 10cm grey brecciated vein @ 20°.																		
				26.60 - 26.70m shear @ 40°																		
				40.13 - 40.16m shear/gouge @ 45°																		
				41.76 - 41.95m broken with gouge																		
				44.10m gouge seam @ 30°.																		
				44.75 - 45.05m shear @ 35°																		
				56.20 - 56.95m shear with gouge																		
				62.88 - 62.93m shear @ 75°																		
			@	71.15m gradational contact with PPHM.																		
	71.15	79.30	PPHM	4	S	—	—	0.5	5	0	TR	O	O	S	W	O	S→I	M	TR	O	O	W

Lithology - The host rock is Main Phase plagioclase hornblende porphyry. The unit is medium green to yellow in colour and cut by strong to intense grey quartz veins. The PPHM host unit contains 15-20% subhedral quartz grains, but there were probably more - these have been destroyed by strong to intense alteration. No hornblende phenocrysts were visible - again, probably obliterated by alteration. Not much host rock remains - it is cut by so many veins.

Alteration/Mineralization - The unit is very distinctive since it has undergone strong to intense sericite-carbonate alteration of the Main Phase. Plagioclase phenocrysts are highly sericitized. The groundmass is carbonate-sericite altered. Strong to intense quartz veins cut PPHM. The majority of quartz veins are banded/laminated with pyrite and chalcopyrite. The host rock contains disseminated and blebby pyrite. Quartz-cpy-py veins average 1.5cm but there is one 60cm Qtz-cpy-py vein. Trace red hematite is disseminated in the host groundmass. There are moderate pyrite veins and trace white carbonate veins which cut quartz. Locally there is weak kaolinite-altered plagioclase

Structure - @ 79.30m upper contact with PBRL is broken

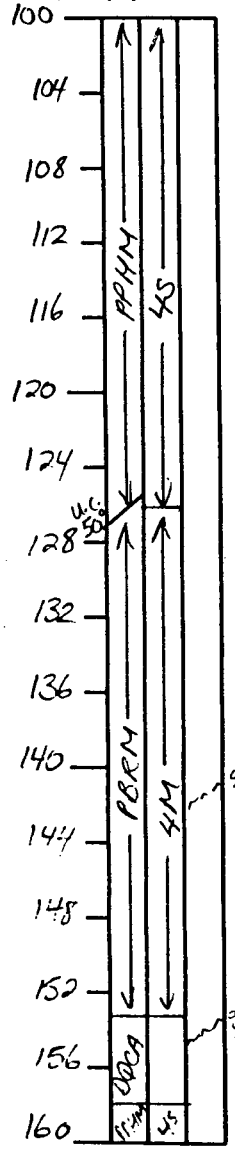
RED - CHRIS PROJECT
Liard Mining Division
British Columbia, Canada

GEOLOGIC DRILL LOG

AMERICAN BULLION MINERALS LTD.

DRILL HOLE NO. 95 - 244
Logged By: I. Fraser
Date: NOV 7/95

Graphic Log (m)



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
	79.30	81.54	PBRL	2	M	–	–	0.3	8	0	0	0	0	vW	W	0	0	TR	0	0	0	vW

Lithology – Pale grey Late Phase breccia dike. The unit is clast-supported and contains angular to subrounded Late Phase fragments. Clasts vary from <0.5cm to 3.5cm in diameter. Most clasts are highly porphyritic and contain plagioclase and hornblende phenocrysts similar in abundances and alteration as interval 4.87 – 71.15m. The matrix is pale grey and appears intrusive (contains plagioclase phenocrysts ?). Clasts comprise 50%. Green fragments may be mafic-altered (?).

Alteration/Mineralization – The unit appears to have weak to moderate phyllic alteration. Pyrite is disseminated throughout the matrix and is present as trace veinlets. The unit is late and contains no quartz veins. Plagioclase phenocrysts are weakly to moderately clay (Kaolinite) altered. Hornblende phenos are sericite – carbonate ± pyrite altered.

Structure – 80.00m gouge seam @ 15–20° to C.A.
@ 81.54m lower contact of PBRL is @ 45°

	81.54	84.57	PPHM	4	S	–	–	1.8	6	0	TR	0	0	S	W	0	S→I	M	TR	0	0	vW

Lithology – Same as interval 71.15 – 79.30m

Alteration/Mineralization – same as interval 71.15 – 79.30m

Structure – @ 84.57m upper contact of PBRL @ 45°

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DRILL HOLE NO. 95 - 244
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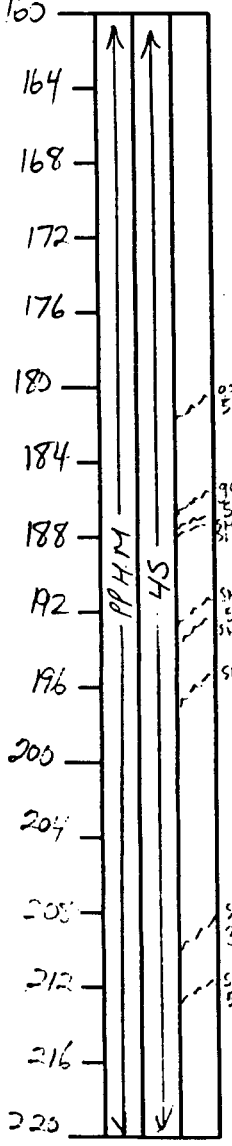

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	84.57	100.22	PBRL	2	M	—	—	0.4	8	0	0	0	0	vW	M	0	TR	TR	TR	0	0	vW

Lithology - Same as interval 79.30 - 81.54m but the clast size tends to be somewhat larger (up to 6 cm).

Alteration/Mineralization - same as interval 79.30 - 81.54m but there is trace disseminated chalcopyrite in the matrix of the breccia. Trace quartz - chalcopyrite - pyrite bearing fragments. There are rare unmineralized grey quartz veins. Pyrite is disseminated and blebby throughout the matrix. Trace pyrite and carbonate veins.

Structure - 86.00 - 86.30m PPHM fragment within the Late Phase breccia - it is mineralized and similar in characteristics/alteration to interval 71.15 - 79.30m
85.70m Shear @ 35°
98.00m Shear @ 45°
@ 100.22m lower contact of PBRL @ 60° to C.A.

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
	100.22	126.14	PPHM	4	S	—	—	4.0	6	0	TR	0	0	S	W	0	I	M	W	0	0	M

Lithology - Same as interval 71.15 - 79.30 m but there is only minimal host rock left.

Alteration/Mineralization - Same as interval 71.15 - 79.30m but the banded/laminated quartz veins are considerably larger in width. The largest vein cuts main phase material from 100.22 → 103.60m (a 3.38 meter vein). Quartz veins are very well mineralized and contain disseminated pyrite and chalcopyrite. Quartz veins are cut by moderate pyrite veins and chalcopyrite - pyrite veins. The carbonate veins cut mineralization. The PPHM host is strongly sericite - carbonate altered and contains disseminated red hematite and blebby pyrite.

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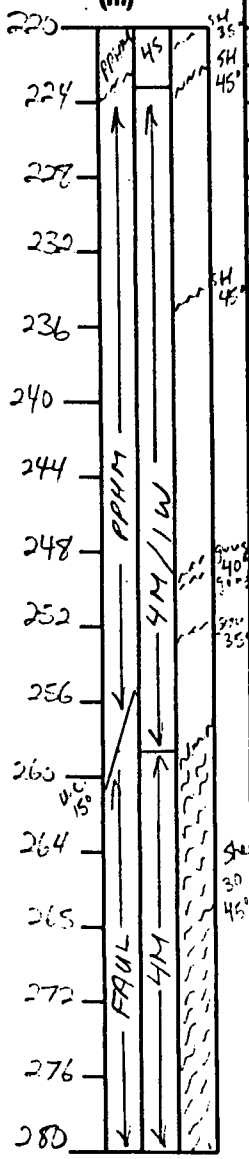

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Structure - 114.00 - 114.90 m sheared and broken																		
				115.95 - 116.05 m gouge																		
				116.80 - 116.90 m shear/broken.																		
				@ 126.14m upper contact of PBRM @ 50°.																		
	126.14	153.23	PBRM	4	M	—	—	0.9	4	0	0	0	0	vW	M	0	Ws	TR	TR	0	0	vW
				Lithology - The unit is a clast supported breccia with spectacular angular 1cm - 10 cm fragments of Main Phase material. The Main Phase fragments are plagioclase and hornblende phyric - containing approximately 35% subhedral white to grey plagioclase phenocrysts 2 mm in length. Hornblende phenocrysts are turbidal beige 2-3 mm in length and comprise 5-8% by volume. The Main Phase fragments are cut by grey quartz veins. The matrix consists of grey fine grained material and is moderately to weakly mineralized. The unit is grey there are approx 5-10% green/yellow altered fragments.																
				Alteration/Mineralization - Plagioclase phenocrysts are moderately Kaolinite altered and occasionally very weakly sericite altered. Hornblende phenocrysts are carbonate-Sericite-pyrite altered. The PPHM fragments display typical alteration type 4. Quartz veins contain disseminated pyrite and trace chalcopyrite. The matrix contains blebby pyrite and trace chalcopyrite blebs. Thin white carbonate blebs rout the breccia. Quartz veins are usually fracturated/brecciated. Several quartz vein fragments were noted.																
				Structure - 141.79 m gouge @ 40°																		
				145.44 - 148.78 m Shear/broken																		
				@ 153.23 m the upper contact of DDCA is broken																		

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DRILL HOLE NO. 95 - 244
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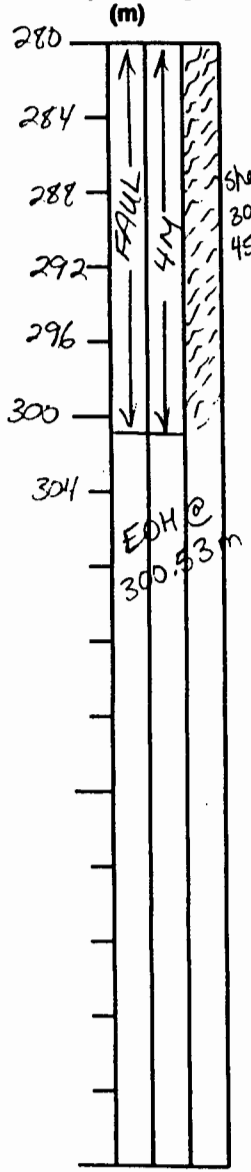
Date: Nov 8/95



PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Mineralization Py	Mineralization Bn	Mineralization Hm	Alteration Mineralogy Bi	Alteration Mineralogy Kf	Alteration Mineralogy Ms	Alteration Mineralogy Cy	Alteration Mineralogy To	Structure - Veining Qz	Structure - Veining Py	Structure - Veining Cb	Structure - Veining A:	Structure - Veining H:	Structure - Veining Fr.
	153.23	158.02	DQCA	–	–	–	–	–	0.5	–	–	–	–	–	–	–	–	TR	W	–	–	VW

Lithology - Olive green to dark brown aphanitic DQCA dike. The groundmass has a granular texture and varies in colour from brown/purple to olive green/tan. The dike contains 2-5% white carbonate amygdules. Amygdules vary from 1mm - 0.5cm. The dike is cut by pyrite veinlets and weak carbonate veins. Essentially the dike is fresh and unaltered.

Structure - 154.85m gouge seam @ 40°.

@ 158.02m the lower contact of DQCA is broken

	158.02	223.40	PPHM	4	S	–	–	0.5	4.5	0	3	0	0	S	VW	0	WS	W→M	TR	0	(Hem) TR	VW

Lithology - The unit varies from pale/medium green to brownish yellow. The entire lithology varies in colour considerably - depending on the intensity of alteration. In some places the unit's primary texture has been obliterated whereas some texture exists locally - illustrating a moderately porphyritic Main Phase unit. Plagioclase phenocysts comprise 25-35% subhedral green, 1-3mm grains. Hornblende phenocysts are obliterated locally but generally comprise 8-10% beige to cream coloured, euhedral 1-2mm phenos.

Alteration/Mineralization - The unit is generally strongly sericite-carbonate altered. Plagioclase phenocysts are weakly to moderately sericitized. Occassionally plagioclase phenocysts are Kaolinite altered. Hornblende phenos are sericite-carbonate-pyrite altered. Red hematite is disseminated throughout the Main Phase unit and comprises 3-5%.

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DRILL HOLE NO. 95 - 244
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Date: Nov 8/95

Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization * Cp	Py	Bn	Hm	MAG	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				The unit is cut by weak to occassionally moderate grey quartz veins. Quartz veins contain red hematite, pyrite and finely disseminated chalcopyrite. There are weak to moderate pyrite veins and trace carbonate veins. Pyrite is finely disseminated																			
				Structure – 158.70-159.50m DYKE - broken contacts.																			
				181.57m gouge 55° to C.A.																			
				186.12-186.47m shear/clay slips @ 55° to C.A.																			
				187.90m 10cm shear @ 60°																			
				188.26m shear @ 45°																			
				192.00m shear @ 50°																			
				193.00m shear 25-30°																			
				196.00m shear @ 40°																			
				209.55m - 209.63m shear @ 30°																			
				212.10 - 212.20m shear @ 55°																			
				212.88 - 213.13m shear/gouge																			
				217.20 - 217.25m gouge/shear																			
				221.00m shear @ 35°																			
				223.05 - 223.40m shear/gouge @ 45°.																			
	223.40	258.50	PPHM	4	M	1	W	0.4	2	0	2	Ti?	TR	W	vW	0	0	vWs	TR	TR	0	TR (Hem)	vW
				Lithology – The unit varies from pale green to medium brown/orange in colour. The groundmass of the unit is green to orange. Plagioclase phenocrysts vary from 25-30%, 1-3 mm. Most plagioclase phenos are pale green. Hornblende phenocrysts comprise 3-5% and average 1mm in diameter. Mafics are beige coloured. The unit is moderately porphyritic in nature.																			

DRILL HOLE NO. 95 - 244

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Graphic Log (m)

PS	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm	Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.
				Alteration/Mineralization - The groundmass of the PPHM unit is weakly Kspar altered. Some of the hornblende phenocrysts appear to be biotite altered. There are very weak quartz veins which contain red hematite, pyrite and chalcopyrite. Red hematite is locally disseminated (up to 3%) and occurs as trace veins. Trace quartz carbonate veins. Pyrite is disseminated. There is possible magnetite associated with hematite veins. Plagioclase phenocrysts are weakly to very weakly sericite altered.															
				Structure - 234.60 - 234.65m shear @ 45°																	
				246.27 - 246.43m shear DOCA @ 50°																	
				249.02 - 249.05m gouge @ 40°																	
				249.80 - 249.92m gouge @ 30°																	
				252.50 - 252.67m gouge @ 35°																	
				252.95 - 253.37m gouge @ 45°																	
				@ 258.50m upper contact of fault @ 15°																	
	258.50	300.53	FAUL	4	M	—	—	0.3	3	0	TR	0	0	W	W	0	TR	VW	TR	0	0	M
				The unit is dominately highly sheared Main Phase plagioclase hornblende porphyry. The fault is commonly healed shears with gouge and clay slips. Fragments of PPHM vary from <0.5cm to 10cm, along with several large blocks of relatively unfaulted material. Dips throughout vary from 30 - 45° and are marked by clay slips and slickensides.															
				Alteration/Mineralization - The main Phase unit has weak sericite altered plagioclase phenocrysts. Clay/kaolinite alteration is common. Pyrite is finely disseminated throughout. There are trace quartz - pyrite veins and occasional pyrite blebs.															

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Graphic Log (m)

P S	Interval From	Interval To	Rock Code	Alteration Facies Typ	Alteration Facies Int.	Alteration Facies Typ	Alteration Facies Int.	Mineralization Cp	Py	Bn	Hm		Alteration Mineralogy Bi	Kf	Ms	Cy	To	Structure - Veining Qz	Py	Cb	A:	H:	Fr.	
				Weak to very weak pyrite veins are truncated by fault brecciation. There are trace white carbonate veins. Trace chalcopyrite is finely disseminated. Trace disseminated red hematite.																					
			Structure - none																					
	EOH @ 300.53 m																							

DRILL HOLE NO. 95 - 244