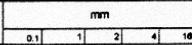
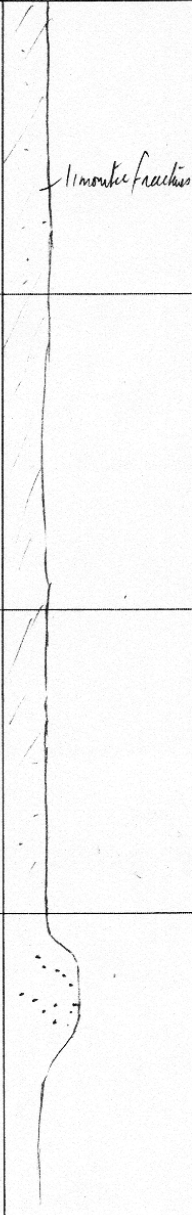


DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	M511	Project	1151 Canaan
Hole Type	DIAMOND	Tenement No	EL6/98
Year	1999	Prospect	Beatrice
Geologist	KPD	Date	29/10/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
0									
5							<p>0.0 - 33.0m - Pink grey felspathic siltstone → mudstone (ashy volcanic). The unit is moderately sericite altered. Some green spots to 2-3mm are interpreted as chlorite. predominate locally.</p>	<p>mod. Se</p>	
10									
15									
20								<p>chl spots</p>	

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Queensland
Hole Type	DIAMOND	Tenement No	EL6498
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	29/10/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
20						mm 0.1 1 2 4 16			
25							23.0 - 24.8m the core is badly broken and minor pyrite development at 23.7 and 24.8m.	↑ mod Ser mod chl spotty	
30								↓ /50 (10)	
35	072 918						33.0 - 51.4m. mottled green (spotted) and pink green fine grained volcanic. Chlorite spots to 2-3mm are common throughout the unit and the intensity + percentage increases towards the base of unit.	↑ mod- Strong chlorite alt?	
40	919 920 921 922						From 38 - 41.8m Feathery, rounded of pale yellow sphalerite are common. From 39 - 44m clots of dark red sphalerite/galena and pyrite to 8mm are common.	yellow sp	

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS11	Project	Quartz
Hole Type	DIAMOND	Tenement No	648
Year	1999	Prospect	KEBRIK
Geologist	KPD	Date	29/10/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
40		072				mm 0.1 1 2 4 16			
		923							
		924							
		925							
		926						mod- strong chlorite	
45		927						alt?	
		928							
50		929							
		930					51.4-60.8m.		
		931					Mottled Dark green-pale yellow chlorite altered ashy volcanic. The unit is dominantly chlorite altered but locally it is sericite altered with detrital spots to 2-3mm. The unit is cut by		
55		932					irregular tension gashes filled with carbonate from 51.4-57.4m but became base metal rich from 57.4 to 60.8m. The majority of base metal is galena with Chalcopyrite and minor sphalerite. From 59.1-59.4m a breccia vein is intersected, 91% banded carbonate/sphalerite/galena	chl ₄	
		933						Sericite in bands.	
		906	88	3500	3250		Ag Au.		
		907	2290	12900	7450		32 0.19		
		908	2430	22500	25500		13 2.6		
60							27 1.7		

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Quacosta
Hole Type	DIAMOND	Tenement No	EL6698
Year	1999	Prospect	BEATRICE
Geologist	KM	Date	3/11/99

Depth	Lithology	Cu	Pb	Zn	Graphic Log					Comments	Alteration	Mineralisation
					mm	Ag	Am	1	2			
60	Code 6.0											
	909 61.0	3540	3700	1560		28	3.2			60.8-62.6m.		
	910 61.8	1350	3050	3150		19.7	2.5			Orange quartz sericite altered ash volcanic,	Se ₂	
	911 62.6m	1270	2150	3700		34	2.3			cut by a network of gal/sph (8%) minor chalcocite veins.	chl ₂	
	912 63.5m	1545	1370	1300		46	0.9			62.6-63.5m As at 57.4-60.8m		
	934 64.5									63.5-71.8m Pale green chlorite		
65	935									altered ash volcanic		
	936									from 70.0-71m a series of quartz-carbonate ± chalcocite ± galena ± sphalerite veins and veinlets for 10mm-150mm.	chl ₂	
	937											
70	938											
	939 71.8m									71.8-97.3m.		
	941									Mottled yellow-green moderately sericite altered felspathic sandstone. Mottled appearance is due to less altered wisps of sandstone to 3+mm.	Se ₃	95, ch, scop, gal!
75	942										chl ₂ /bl ₂	
	943											
	944										So (74)	
80												

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Desert
Hole Type	DIAMOND	Tenement No	ELGAP
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	3/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation	
	Code	Colour								
80										
	945						80.2 - 81.1 - carbonate - quartz galena pyrite veins (5%)			
	946	81.1								
	947									
85										
	948									
	949									
	950									
90										
	951						92.1m - 97.3m - siliceous quartz to 5mm with varying proportions of galena and sphalerite.		5mm	
	952									20/26/97 2mm
95										chl ₃ Spotty
	953						97.3 - 103.8m Green with dark green bluish spots, ash volcanic.			
	954	97.3								5mm sph ₆
	955									So/30
100										

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS11	Project	Queens to
Hole Type	DIAMOND	Tenement No	6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	3/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
100						mm 0.1 1 2 4 16			
	956							chl ₃ spky.	
			103.8				103.8-128m.		
105	957						Pale pink ashy volcanic, locally granit, well bedded with So // to VCA.	Se ₂	
	958								
	959								
110			110.3m				110.3-110.4m pug fault, From 110.3-128m the unit is cut by 3-5mm ch/95 veins.		So/005
	961								
	962								
115	963								
	964								
	965								So/015
120									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Quensta
Hole Type	DIAMOND	Tenement No	EL648
Year	1999	Prospect	SEAFRICE
Geologist	KPD	Date	3/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
120						mm 0.1 1 2 4 10			
		966							
		967							
125		968					From 124-128 pale brown hornfels? 5x5 to 15mm.	So ₂	
		969							
		970					180-1472m pinkish green to pink variably white and K-feldspar altered with pumice grit/sandstone		disseminated black sulfide 3mm or less blk sphalerite
130		971							
		972						Ch ₃	
		973						K ₁	
135		974							
		975						K ₁	25% qtz/cb/ K-feldspar veining
		976						Ch ₂	
140									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	
Hole Type	DIAMOND	Tenement No	EL 6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	2/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
140						mm 0.1 1 2 4 10			
		977							
		978							
145									
		979					147.2 - 149.9m. Well bedded pale brown archy volcanic	chl ₄	S ₁ /023
		981						Se ₂	
150		913 150.1	61	1455	360		149.9 - 151.6m semi-massive		
		914 150.4	1675	+10%	4.85%		Sulfide in chlorite altered feldspathic sandstone. Sulfide is dominantly galena and forms an anastomosing network, from 150.1 - 150.9m galena/sulfides (30%), 150.9 - 151.6m galena (10%) sphalerite (3%), pyrite (5%).	chl ₄	
		915 151.7	940	7.65%	5.45%				
		916 153	62	1460	1130				
		982							
155		983	1547				151.6 - 185.3m pink and green variably altered lithic pumice mass flows	K ₄	
		984							
		985						chl ₂	
160		986							

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Quadrant
Hole Type	DIAMOND	Tenement No	EL 6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	3/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
160									
165								chl ₃ chl ₅ pyroxene	
170									
175								chl ₃ K ₂	
180									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS11	Project	Quensto
Hole Type	DIAMOND	Tenement No	EL648
Year	1999	Prospect	BEATRICE
Geologist	KCP	Date	3/11/99

10/51

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
180									
			182.0m						
			183.6m						
185									
			185.2m						
190							<p>185.3m - 197.0m. faulted fine ash volcanic, badly broken core and localized pyz zones at 191-191.2m, 192-193.1m, 95 thin the Ipat Creek Fault? Fractures/crush zones at 190m and 196m are at a low angle (<20°) to the core</p>		
195									
200							<p>197.0 - 200.0m lithic sandstone → cobbles → conglomerate. Lithic clasts are predominantly pink rhyolite clasts, green wispy sericite, altered permian limestone.</p>		

K4

Miss Py.

Fault 008

Fault 008

K3

abundant limestone

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole_ID	M511	Project	Quanghan
Hole_Type	DIAMOND	Tenement No	EL 6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	3/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
200							<p>clastic predominates in the coarse section</p>		
205								<p>at₃/cb/cd/</p>	<p>K₃ vein</p>
210									
215									<p>Se₄ of pumice.</p>
220									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

12/31

Hole ID	MS11	Project	Queensland
Hole Type	DIAMOND	Tenement No	EL 6/98
Year	1999	Prospect	BEATRICE
Geologist	RPJ	Date	3/1/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
220									
225									
230							We orientated -68.5° → 316 AMG. So 57 → 265		
235									
240									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	12/51 Ducanthe
Hole Type	DIAMOND	Tenement No	6/98
Year	1999	Prospect	BEARICUS
Geologist	KPD	Date	

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
240							243m	↑	
245									Se ₂
250								↓	
255							← 20cm limestone breccia		
260									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

14/51

Hole ID	MS 11	Project	Quartzite
Hole Type	DIAMOND	Tenement No	EL668
Year	1999	Prospect	BETHRICE
Geologist	KPD	Date	

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
260							<p>K feldspar altered muscovite to 274.6m</p>		
265								<p>Ch₂</p> <p>K</p>	
270									
275							<p>274.6--292.2m Pink and green K-feldspar and chlorite altered like sandstone/volcanic.</p>	<p>K₃</p> <p>Al₃</p>	
280									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS11	Project	15/31 Queensboro
Hole Type	DIAMOND	Tenement No	6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	2/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
280									
285									
290									
295							<p>292.2 - 314.3m Mottled pink and green strongly K-feldspar altered clasts and selective beds, chlorite altered lithic sandstone - siltstone.</p>	K ₃ Chl ₃	
300							<p>The unit is cut by a series of 5-20mm wide quartz-chlorite-carbonate veins.</p> <p>There are clear distinct pink rhyolitic clasts but there is also more indistinct "clasts" which are probably alteration domains rather than clasts.</p>	Chl ₄	

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole_ID	MS 11	Project	Quenda
Hole_Type	DIAMOND	Tenement No	EL6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
300									
305							<p>305 - 314.3 - abundant quartz, chlorite, feldspar veins typically 4-5mm wide.</p>	K ₁	<p>OP5 phy-cll-feld</p>
310									
315							<p>314.3 - 343.0m - Variably chloritic and K-feldspar altered ashy volcanic -> lithic grit.</p>	<p>chl₄</p> <p>K₃</p> <p>chl₃</p>	
320									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Queensland
Hole Type	DIAMOND	Tenement No	EL6498
Year	1999	Prospect	BEARICE
Geologist	KPD	Date	4/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
320						mm 0.1 1 2 4 10			
								K ₃	
335								cl ₃	
							From 331.0-335.8m are veins of 5-100mm quartz-carbonate-chlorite vein are intersected.	Ch ₁	
330								K ₁₋₂	
335									
340									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

18/31

Hole ID	M5 11	Project	Diamond Star
Hole Type	DIAMOND	Tenement No	EL6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	4/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
340							gradational contact.		
345							<p>343.0 - 355.3m.</p> <p>lithic pumice sandstone/grit.</p> <p>Lithic clasts are light grey - pink rhyolite clasts, pumice is flattened and dark green sericite altered</p>	Se-pumice A	
350								Se ₁	
355							<p>355.3 - 381.5m</p> <p>Coarse grained limestone, rhyolite lithic pumice conglomerate. Numerous limestone clasts to 30mm and pumice typically 3-10mm but up to 30mm.</p>		
360									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Queensland
Hole Type	DIAMOND	Tenement No	EL6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	4/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
360									
365									
370							<p>So₄ 45 → 223°</p>		
375									
380									

369.3m So:

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS11	Project	Queenston
Hole Type	DIAMOND	Tenement No	EL 6/99
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	4/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
380									
385							<p>3815 - 398.8m. pink - green fine - coarse grained lithic pumice sandstone → siltstone etc. Dominant K-feldspar alteration is invaded with green chlorite alteration (eg. 384.2) and has a pseudo breccia appearance.</p>	SO ₄	
390								K ₂	
395							<p>From 397 - 405.6m 5-10cm calcite veinlets are intersected with 3-4 veins/metre.</p>	Cl ₂	
400									/

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS11	Project	Quaranta ^{21/31}
Hole Type	DIAMOND	Tenement No	EL6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	4/11/99.

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
400							398.8 - 440.3m. (Sens. of exp. and downhole grad. siltst. & pumice sil. (to 70% in coarse section) sandstone/siltstone → siltstone.		
405									
410								S _{CL} pumice	
415									
420									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Queenston
Hole Type	DIAMOND	Tenement No	EL 6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	4/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
420									
425							<p>joined orientations at 428.3-434.3m with approx 10° error ✓</p> <ul style="list-style-type: none"> 427.2m: 74 → 201° = contact, 428.8m: S₀ 44 → 304° 429.9m: 38 → 350° = contact, 432.1m: S₀ 31 → 284° 432.1m: S₀ 34 → 294° 		
430									
435									
440									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Queensdown
Hole Type	DIAMOND	Tenement No	EL 6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	5/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
440							<p>440.3-486.6m. Grey green homogeneous feldspar phytic volcanic, the entire unit is mottled with 20% 2-3mm clots of white mica. Locally bedded.</p>	<p>white mica</p>	
445							<p>444.5m S₀: 61° → 210°</p>	<p>Seg</p>	<p>clots</p>
450									
455									
460									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Queensdown
Hole Type	DIAMOND	Tenement No	EL 6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	5/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
460									
465									
470									
475									
480									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Queenston
Hole Type	DIAMOND	Tenement No	EL 6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	5/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
480						mm 0.1 1 2 4 16			
485							486.6m - 495.9m. Pale green-grey-brown fine grained, massive ashly volcanic.		
490							From 490-494 a series of quartz-feldspar-chlorite veins to 15cm are intersected.		
495							495.9-551m. series of uphole? being graded sandstone-schistose. Coarse bases are feldspar (>2mm) rich with rare lithics to 15mm.		
500									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Ansartha
Hole Type	DIAMOND	Tenement No	EL668
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	5/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
500									
505									
510									
515							From 513-513.6m quartz-chlorite veins with minor galena are intersected		qtz-chl - gal
520							From 517.6-521.8m massive magnetite veins to 25mm are intersected.	mt ₄	0.20 25mm magnetite vein

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Quibara
Hole Type	DIAMOND	Tenement No	EL 648
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	5/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
520						mm 0.1 1 2 4 16			
								mta.	
525									
530									
535									
540									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Queenston ^{48/31}
Hole Type	DIAMOND	Tenement No	6/98
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	5/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralization
	Code	Colour							
540							From 539.6 - 546.2m: a series of 50-150mm quartz-feldspar clonite veins are intersected.		
545									
550									
555							551.0 - 573 m: Uniform, monotonous patchily K-feldspar altered white sandstones and siltstones	K ₃ patchy.	
560									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS 11	Project	Bucaranga
Hole Type	DIAMOND	Tenement No	EL 6/58
Year	1999	Prospect	BEATRICE
Geologist	KPD	Date	16/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
560									
565								K ₂	
570								Palky	
575							<p><u>573-598-2m</u></p> <p>Pale green volcanic with patchy K-feldspar alteration. Small chlorite patches to 3-4mm (are possibly rimmed) have 1-2mm rim of K-feldspar.</p> <p> K-Spr.</p> <p>2-4mm carbonate veins ± quartz</p>	10cm 9/10 - ch1 4/9	
580									

DIAMOND DRILL HOLE LOG

PASMINCO EXPLORATION

Hole ID	MS11	Project	Queensferry
Hole Type		Tenement No	6/98
Year		Prospect	BEATRICE
Geologist		Date	16/11/99

Depth	Lithology		Cu	Pb	Zn	Graphic Log	Comments	Alteration	Mineralisation
	Code	Colour							
580							are very common in the interval 586.5-594.0m and are typically at an angle of 30° to VCA		
585									 al ₃ -cl ₁ -Kfs veinlet
590									
595									
600							598.4-602.3m (604) Sericite altered volcanic, coarse shaly lithic breccia from 600.4-601.3m with subrounded to rounded clasts to 4.5mm		Se ₂