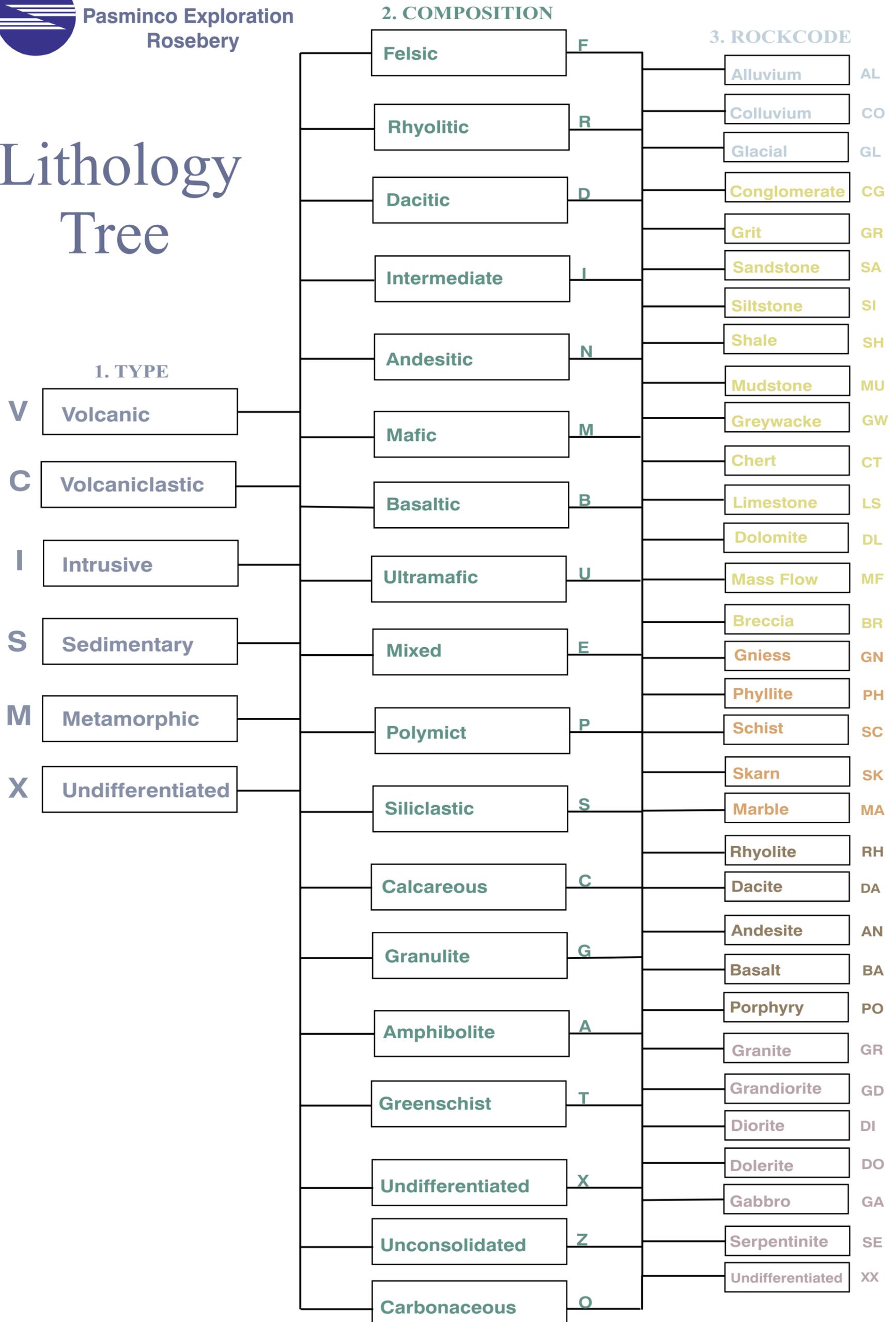




Lithology Tree



Hole_ID CP 348 Project *Dundas*
 Hole_Type *DBH* Tenement No. *EL 2198*
 Year *2000* Prospect *Chatterlain*
 Geologist *Colin Bell* Date *5-6-2000*

Depth	Lithology		Comments	Alteration Up to 3 codes w. intensities (1-3)	Mineralisation Up to 3 codes with %	Structure	Veining	Faults	Graphic Log
	Code	Colour							
0m									
5	SPL		glacial sediments, dark gr volcaniclastic fragments, Over-egl boulders and Over sandstone Cm Plk						
10									
15			Over Cgl/sandstone, boulders up to 400mm Re P:						
20			Deeply weathered volcaniclastic sandstone supporting coarse Cgl clasts. Re P:						
25m									

Hole ID	CP548	Project	
Hole Type	DDH	Tenant No.	
Year		Prospect	
Geologist	CED	Date	

Depth	Lithology	Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
	Code		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %				
25	Bx Bf							
	SPCL							
29.2	Bx Or	Deeply weathered, poorly sorted, somewhat supported, 2-3 mm angular vitals feldspars + Qtz. Mass flow coarse sandstone. Grading not evident due to deep weathering.						
	SPSA							
	Bx Wk							
		35-8 Limestone coning on joint/fault planes.						
		36 Porphyritic texture due to blocky grains 5-5 mm of mainly detrital feldspars and occasional elongate/rounded lithic fragments in a fine groundmass. Resorbed volcanics.						
45.4	Gx Wk	444 Fine/medium grained feldspar + Qtz sandstone moderately sorted in a weak supported matrix. Medium to coarse grained, feldspars up to 5 mm, elongate + blocky lithic mudstone + sandstone fragments up to 10 mm, poorly sorted, grading not evident, quartz rare. Mass flow and flow volcanics.						

Hole ID	CP 348	Project	Demands
Hole Type	DTH	Tenement No.	2196
Year	2000	Prospect	CHATELAIN
Geologist	COLIN DELL	Date	5-6-2000

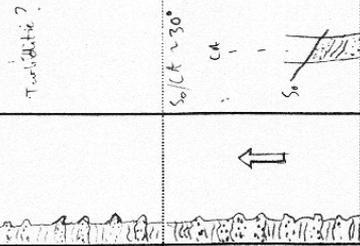
Depth	Lithology Code Colour	Comments	Alteration Up to 3 codes w. intensities (1-3)	Mineralisation Up to 3 codes with %	Structure	Veining	Faults	Graphic Log
50	SFSA Cr	Coarse lithic fragment to within 50cm of base of unit						0.5 4 16 24
55	SFSA	Medium to coarse grained volcanoclastic derived sandstone. Some massive with occasional <1cm thick beds of coarse poorly sorted sandstone with angular fragments. Feldspar >> qtz.		tr pr SS-7m				
60	SFSA			tr pr S9m				
65	SSSI Cr Gy	fine grained siltstone + interbedded w/ gravel sandstone. moderately chlorite/sericitic. beds ~ 5-10cm true thickness						~ 30° S/C/L
70		beds < 5cm true thickness are intense folding micro (< 3mm displacement) faults						0.08-6 minor bedding folding micro to 1cm scale qtz CO veins
75	SSSA 7416	< 0.5m. fine grained sandstone >> than siltstone + shale. beds ~ 1cm - 10cm in thickness and highly disrupted beds, possibly bedding relationships.						

Hole ID	CP 348	Project	DUMONS
Hole Type	DDH	Tenement No.	EL 2196
Year	2000	Prospect	COMBERLAIN
Geologist	C.P.	Date	

Depth	Lithology		Comments	Alteration Up to 3 codes w. intensities (1-3)	Mineralisation Up to 3 codes with %	Structure	Veining	Faults	Graphic Log
	Code	Colour							
75									0.5 1 4 16 64
80									
80.5	SSBA		Beds 0.5m to 5m dominated by fine-medium grained, fine to thin sandstone. Graded bedding + moderate sorting is visible.						
85	SSS1 CS1 SSBT	Grey	Interbedded siltstone/shale + fine grained sandstone beds 1-5mm 85.3 to 85.6 disrupted folded bedding + folded, micro faulted quartz veins to 5mm thickness in upper zone (fine storage). Transitional change to medium grained (K10) quartz sandstone. Large (up to 15cm wide) quartz veins cut by 0.5-1cm (Oolitic?) veins which are cut by later fine semi-transparent quartz veins. Coarser based units, > 10% larger, sub-rounded 1-2mm quartz, > 10% feldspar.	permissive ZS: CO2 trpy ± trSe.					↑ Graded bedding @ 83m indicates forcing up hole. 15° SW/CA
90									
95	SSA SSM/SH Gy	Bn Gy Gy	Medium grained sandstone (K10) ± Qtz. Thinly laminated sandstone + minor shale, intensely deformed / disrupted bedding.	qs. S: CO 2					F@ 93.1 10 Bn F@ 94m. Pn over ~40cm
100	SSS#	Gy/Bl.	Transitional change to interbedded shale/siltstone/sandstone beds.						F@ 20° to CA Change HQ to NA @ 98.5m.

Hole_ID	CP 348
Hole_Type	Tenement No.
Year	Prospect
Geologist	CFD
	Date

Depth	Lithology	Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
	Code		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %				
100								
	SSSH							
101.5	SSSI	Dominantly 0.5-1cm beds of siltstone, minor shale - some 3mm beds of poorly sorted fine to medium volcaniclastic (1/16 to 1/8) sandstone.						
105								
105.2	SSSI/SH	Interbedded siltstone + shale to 1cm - average 4.75mm, ~5-10% 0.5-1cm thick beds of volcaniclastic medium sandstone. Unit distinguished by increase in shale + sandstone units.						
110								
110.7								
	SSSI	Dominantly siltstone, minor shale - one fine to medium sandstone - ~85-90% siltstone.						
112.7	SSSI/SH	Interbedded siltstone, shale, + minor fine volc. sandstone						
	SSSI	>90% finely laminated siltstone beds to 15mm thick, ~5% 1-3mm shale beds, ~5% 3-5mm beds of fine grained thin/volcaniclastic sandstone.						
119								
122.7	SFSH/S	Fine grained beds 10-15mm thick sandstone, minor thin 2-5mm beds of siltstone - lesser shale. From 123.3m to 125.4m beds are strongly folded and micro faulted/brecciated.						
125								



123
Fr Br p1, p4.
-124

Hole ID	CP 348	Project	
Hole Type		Tenement No.	
Year		Prospect	
Geologist	CEP	Date	

Depth	Lithology	Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
125	Code Colour		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %				mm 0.5 1 4 16
129.3	SFSA GyB1	Ar bed thickness 4mm. shale ~140%						
130.5	SFSA GmGy	Medium fine-medium grained, moderately sorted, moderately foliated, volcanoclastic sandstone. Qtz = feldspar > 1.4 times.						143.7 m. Vn Orientation 88/220°
135								
137.5	SFSA	Medium coarse grained volcanoclastic sandstone moderately sorted, subrounded 1-3mm Qtz, matrix, porphyroclast supported, feldspar + ilite is > Qtz. Well generally coarse dominated						
141.0								
144.5	Gy	@ 148.3 there is 20cm of folded, interbedded shale, siltstone. (large slip up east or soft sediment deformation)	142.5 Passive 15 CO alt. 144.5	143.7 Vn P, 150, 90, 50 4.5%		143.7 5cm Ba CO m		146.4 m. Vn Orientation 15°/156°
150.0						146.4 5cm Mn Si CO m		149.0 10cm Mn Si CO m

Hole_ID	CP 348	Project
Hole_Type	Prospect	Tenement_No.
Year		Prospect
Geologist	CFD	Date

Depth	Lithology	Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
	Code		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %				Scale 0 1 2 3 4 5 6
150	SFSA Gy	Coarse basal partides quartz contact with underlying shales @ 155.7 At 164.5m minor shale/siltstone unit ~ 20m thick represents fold closure.						
155-3	SSMS1 B1Gy	2-3mm thick, interbedded shales with minor siltstone. Close to contact with quartzite beds are disrupted by micro faulting and veining. Appears to be bedding parallel slip.						
162-3	SESAS1 GnB1	Layers up to 200m consisting of 10-50mm beds of fine grained quartz-feldspar-litic calc-schistite, interbedded with 20-30cm thick layers composed entirely of 2-3mm beds of calc + very minor quartzite.						
	SFSA1 B1	3-5mm beds of shale with minor 1-3mm beds of siltstone finely laminated, minor bedding disruption - crossbedding (?) or more likely bedding parallel slip. Rare beds siltstone thick of fine quartz-feldspar sandstone.						
173	SFSA GnBn	10-30mm beds of fine grained quartz-feldspar-litic volcanic-derived sandstone. Fragmented beds.						

PASMINCO EXPLORATION

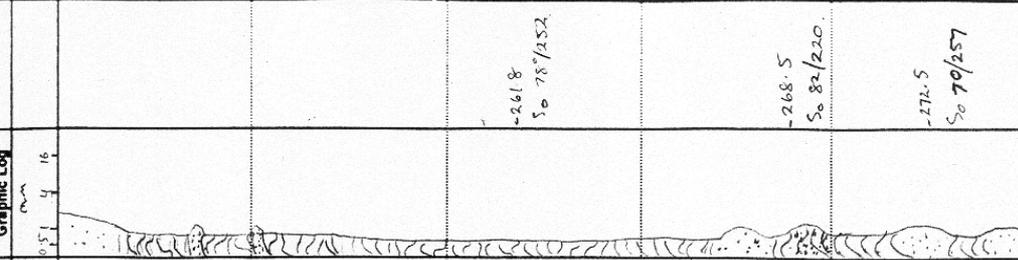
DIAMOND DRILL HOLE LOGGING

Input

Hole ID	CP 548	Project	
Hole Type		Tenement No.	
Year		Prospect	
Geologist	C.F.D.	Date	

Depth	Lithology Code Colour	Comments	Alteration Up to 3 codes w. intensities (1-3)	Mineralisation Up to 3 codes with %	Structure	Veining	Faults	Graphic Log
226.	SSA/S1 Cx/Gn	Massive fine grained Qtz rich sandstone with minor amounts of siltstone. From 230.1 to 230.3 grades increase in size to 4-2mm. Flow structures at local contact with shale give uphole zoning.		trace Sp, Pb, Cu, Py in veins		229.7 to 231 Ae carbonate with carbonaceous Sp, Cu, Py.		
229.7	SSA/SS1 Bl/Gn	Interbedded shale-siltstone - minor very fine grained sandstone. @ 232.3 there is a 10-15cm bed of medium grained feldspathic siltstone.						<p>229.7 S. 57/252</p> <p>230.0 S. 52/234</p>
233.1	SFA	Coarse grained 3-5mm of subrounded Qtz + very minor feldspar. Matrix consists dominantly of milky Qtz and fine grained disseminated Pyrite. Pyrite is absent by 235.5m. Unit is semi massive and grades downward into fine sandstone.						

Hole ID	CP 348	Project	
Hole Type		Tenement No.	
Year		Prospect	
Geologist	CFD	Date	

Depth	Lithology	Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
	Code		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %				
250								0.5 4 16
	SFSA/ SSSH	Finely laminated shale with minor siltstone interbedded with 1.0 to coarse beds of volcanoclastic detrital sandstone, all beds are disrupted - soft sediment deformation.						
	SSSH	Dominated by thin beds of shale with minor 1-10cm thick beds of siltstone.						
								-266.5 So 78/252
	SFSA SSST	Fine to medium grained sandstone beds up to 30cm thick interbedded with poorly laminated siltstone and shale beds 5-15cm thick. All bedding is disrupted probably due to soft sediment deformation.						-268.5 So 82/220
								-272.5 So 70/257

Hole ID	CP 348	Project	
Hole Type		Tener	No.
Year		Project	Date
Geologist	CEP		

Depth	Lithology	Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
	Code		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %				
320								0.5 4 16
15.8	SFSA Cx	Medium grained fine-grained, siliceous sandstone, weakly laminated, moderately sorted, angular-sub-rounded grains				309.7 10cm malcon (Lidstone?)		320.7 320.7 320.7
15.8	SSSH B	Dominantly laminated silt. with minor siltstone.						
16.7	SFSA/SK Cx B1	Medium grained sandstone similar to one above but containing rip up clasts and thin fragmental beds of siltstone. Dominant, siltstone component decreases to a 5% of vol.						
20.7	SSA/SK B1 Cx B1	Unit dominated by thin laminae of shale with minor siltstone and rare beds 3 to 5 cm near top of unit of fine-medium sandstone						

325

Hole ID	CP 348	Project	
Hole Type		Tenament No.	
Year		Prospect	
Geologist	C.F.D.	Date	

Depth	Lithology	Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
	Code		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %				
325								0-5 1 4 16
326.2	SFSA	Q1						<p> Fine to medium grained well sorted grey-green sandstone beds 1-30cm thick give semi-regular appearance. Occasional beds of medium/coarse grained sandstone containing shale rip up clasts serve to uplift contact with shale unit. </p>
35.7	SFSA	Q1						<p> Repetitive layers of very coarse to coarse sandstone resulting turbidite sequence. Bedding containing sub rounded qtz clasts to 5-30mm, angular rip up clasts of shale and sandstone deposited in beds 10-15cm thick which are up to 10m. Towards base of unit clast size becomes coarser, (av 30mm) flattened, angular in a fine poorly sorted sand/loam matrix, with grading being less well developed. </p>
349	SSSH	B1						<p> Finely laminated (beds av 12mm) black shale with minor thin beds of siltstone. </p>

35.0

Hole ID	CP 348	Project	
Hole Type		Tenament No.	
Year		Prospect	
Geologist	C.F.D.	Date	

Depth	Lithology	Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
	Code		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %				m
425								0.5 1 4 16
	SFSA	Thin to medium grained, massive well-sorted quartz sandstone, rare elongate (flint) nodules in dip's bedding						
	SFSA B10g S1	Thinly laminated, interbedded shale and minor siltstone, rare thin beds of very fine grained sandstone with up to 5% of quartz. Shale is 75% of rock unit.						
						436.6 60m S.M.B. S.C.O. Va.		
						440.2-441.4 S. 15cm S.C.O. Ba. Br. Va.		
						441.6-2 5-10cm OS. 8cm Va. 447.3		

Hole_ID	CP 217C	Project	
Hole_Type		Tenent	No.
Year		Project	Date
Geologist	CFD		

Depth	Lithology Code Colour	Comments	Alteration Up to 3 codes w. intensity (1-3)	Mineralisation Up to 3 codes with %	Structure	Veining	Faults	Graphic Log
0.0								
1.0								
2.0								
3.0								
4.0								
5.0								
6.0								
7.0								
8.0								
9.0								
10.0								
11.0								
12.0								
13.0								
14.0								
15.0								
16.0								
17.0								
18.0								
19.0								
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48.0								
49.0								
50.0								

720

63

64

500

