PASMINCO EXPLORATION

DIAMOND DRILL HOLE LOGGING

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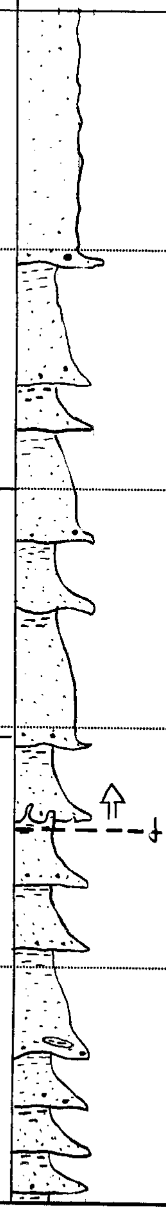
Hole_ID	WSP14	Project	
Hole_Type	DDH	Tenement_No.	
Year	2006	Prospect	
Geologist	AWKN	Date	16/1/06

Depth	Lithology Code	Lithology Colour	Comments	Alteration (Up to 3 codes w. intensities (1-3))	Mineralisation (Up to 3 codes with %)	Structure	Veining	Faults		Graphic Log
5										
10		bn-gy 10.0	Well bedded lgt gy. greywacke/lithicwacke interbedded with dk. gy. shale.			6.7 So = 30° to LCA. 8.7 So = 30° to LCA.	Qz+Cb (1)		Ox (3) broken 10.0	
15	SSGW/ SSSH		Greywacke beds to 5m thick; shale beds <1cm to 30cm thick. Scattered shale clasts in greywacke. Lithicwacke/greywacke beds fine up-hole; at 16.9m flame structures ⇒ uphole facing. Typical greywacke sequence.		14.4 Py+Sl? Vn+beds	12.5 So = 35° to LCA.	12.7		Ox (1) broken 15.2	
20		Lgt-dk gy	At 12.5m two 0.5cm thick gy-green ash volcaniclastic interbeds.		15.2 Py (tr) in Qz-Cb vein.	16.1 So = 40° to LCA.	Qz+Cb (2)	17.0/200/40/Rv		
25						21.8 So = 15° to LCA	23.2 Qz+Cb (1)			



PASMINCO EXPLORATION **DIAMOND DRILL HOLE LOGGING**

Hole_ID	WSP14	Project	
Hole_Type	DDH	Tenement_No.	
Year	2006	Prospect	
Geologist	AMEN	Date	16/1/06

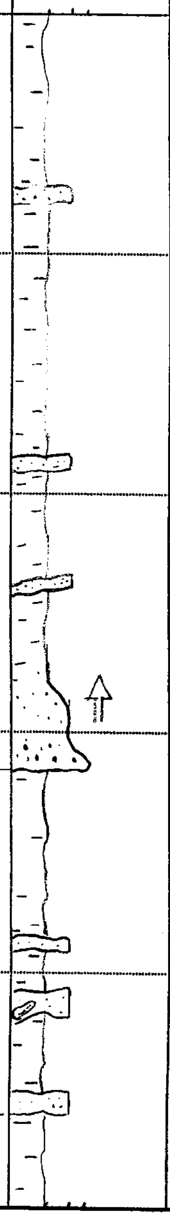
Depth	Lithology			Alteration	Mineralisation	Structure	Veining	Faults		Graphic Log	
	Code	Colour	Comments	Up to 3 codes w. intensities (1-3)	Up to 3 codes with %						
30						26.2m β_0 = 30° to LCA.	Qz+Cb (1)				
							30.1				
35						34.4 β_0: 35° to LCA.					
40	SSGW/ SSSH	Lgt-dk grey	Interbedded greywacke and shale as per previous page. Thickness of shale units is increasing downhole.		P_g (f_1) in late veins + minor clots/ framboids + on joint planes	36.7 β_0 = 35° to LCA	Qz+Cb (2)				
45					<1%	42.6m β_0 = 40° to LCA. 44.4 β_0 = 30° to LCA.					
50	SSSH	dk grey	49.2 Shale/siltstone with minor interbedded greywacke/sandstone		P_g (<0.5%) Scattered fracture fill to 0.2cm diameter in greywacke beds!	49.7 β_0 = 40° to LCA.					HQ

PASMINCO EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	LVSP14	Project	
Hole_Type	DDH	Tenement_No.	
Year	2006	Prospect	
Geologist	AMcN	Date	17/1/06

Depth	Lithology Code	Lithology Colour	Comments	Alteration (Up to 3 codes w. intensities (1-3))	Mineralisation (Up to 3 codes with %)	Structure	Veining	Faults		Graphic Log	
					Py (<0.5%) 53.0	52.4 So = 40° to L.C.A.	Qz+cl(2)				NQ
55						55.0 So = 40° to L.C.A.	55.9				
	SSSH	dk gy	Shale/siltstone with minor interbedded lgt. gy greywacke/sandstone (beds <50cm thick).		Py (0.5%) in veins, clots - framboids and concentrated in SSSH/SSGW beds.						
60						60.1 So = 40° to L.C.A.	Qz+cl (1) ± Py				
		64.0			64.0	63.0 So = 30° to LCA.	64.0				
65	SSGW	lgt gy 65.9	well graded greywacke/lithicwacke; clasts in lithicwacke include ?volcanogenic material + ?chert.				Qz+cl (2)				
	SSSH	dk gy 69.3	Massive to weakly bedded siltstone/shale.		Py (tr) in veins + as clots/framboids	65.9 CT = 30° to LCA	65.9		Contact abrupt & conformable		
70						69.9 So = 35° to LCA.	Qz+cl(1) ± Py				
	SSSH/SSGW	lgt-dk gy 73.2	Interbedded dk gy shale/siltstone and lgt grey greywacke. Unit ≈ 80% shale. Greywacke beds 1-15cm thick. Thickest include irregular shale clasts			73.2 CT = 40° to LCA.			Contact abrupt & conformable		
75	SISH	dk gy	Massive to weakly bedded siltstone/shale								

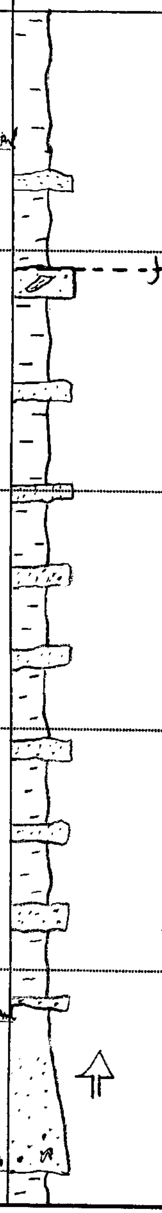


PASMINCO EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WSP14	Project	
Hole_Type	DDH	Tenement_No.	
Year	2006	Prospect	
Geologist	AMW	Date	17/1/06

Depth	Lithology Code	Lithology Colour	Comments	Alteration (Up to 3 codes w. intensities (1-3))	Mineralisation (Up to 3 codes with %)	Structure	Veining	Faults		Graphic Log
	SSSH	Dk gy 77.8	Massive to weakly bedded siltstone/shale. Competent rock.				Q2+cb (1) ± Py 79.7		77.8 Contact gradational over 20cm	
80					Py (<0.5%) diss, in veins, on joint planes, as framboids & clots.	81.4 So = 40° to L.C.A.	Q2+cb (2) ± Py 84.1	80.9/0.2/30°/pug.		
85	SSGW/ SSSH	lst-dk grey	Interbedded dk grey shale/siltstone and light grey lithwacke/greywacke units, 5cm with irregular shale clasts.			88.1 So = 35° to L.C.A.	Q2+cb (1) ± Py			
90					94.9	95.0 So = 40° to L.C.A.	91.9 Q2+cb (2)			
95		96.3		96.3	96.3 Py (0.5%)		96.3		96.3 Contact gradational over 10cm.	
	CFSI/ CFSA	gy-bn 99.5	Graded unit - silty top grades to sandstone base. Volcaniclastic sandstone ie Fd >> Q2-phyric, with minor lithics (<0.5cm diameter) and possibly pumice	Q2Se(1) pervasive		99.5 σ = 35° to L.C.A.	Q2+Cb (tr)		99.5 Contact abrupt & conformable	
100	CFSI									



PASMINCO EXPLORATION **DIAMOND DRILL HOLE LOGGING**

Hole_ID	WDP14	Project	
Hole_Type	DDH	Tenement_No.	
Year	2006	Prospect	
Geologist	AMcN	Date	17/1/06

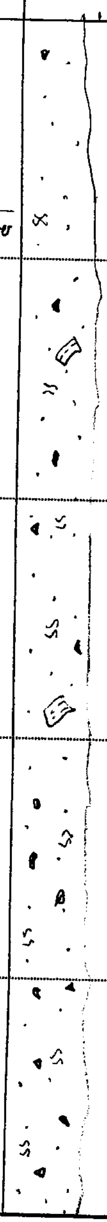
Depth	Lithology Code	Lithology Colour	Comments	Alteration Up to 3 codes w. intensities (1-3)	Mineralisation Up to 3 codes with %	Structure	Veining	Faults		Graphic Log
105				QzSe (1)	P_g (tr) on joint planes & in late veins.	103.2 β_o = 50° to C.A.	Qz+Cb (tr)			
110				105.4 Qz Se (1) pervasive Cl (1)	110.0	109.6 β_o = 40° to C.A.	105.0			
115	CFSZ	khaki-brn-green	Well banded to massive fine grained sheared-rich with volcaniclastic. Gradually coarsens down-hole with fd. xtals appearing at 115.4m. at 110-110.2 is a chloritic basaltic dyke - with sharp contacts to CFSS (although blurred by a Cl-rich alteration selvedge.	patchy & banded	Py (tr); Sp+Ga (tr) diss. 110.1	114.1 β_o = 20° to C.A.	Qz+Cb (2) ± Cl.			
120				115.9 Qz Se (1) pervasive	P_g (tr) predominantly in late veins.					
125	CFSA	green-grey	122.5 Massive crystal (fd >> Qz-phyric) - rich volcaniclastic sandstone with possible pumice and P.T.O.					122.5 Contact is gradational over 40 cm.		

PASMINCO EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WSP 14	Project	
Hole_Type	DDH	Tenement_No.	
Year	2006	Prospect	
Geologist	AMN	Date	23/1/06

Depth	Lithology Code	Lithology Colour	Comments	Alteration (Up to 3 codes w. intensities (1-3))	Mineralisation (Up to 3 codes with %)	Structure	Veining	Faults		Graphic Log	
	CFSN	grey-green	Massive crystal-rich (Feld >> Qz-phyric) Volcaniclastic Sandstone.	Qz Se (1) Pervasive							
130			129.0	129.0			Qz+cb (2) ± cl		129.0 Contact gradational over 1.0m.		
135							135.0				
140	CFBR	Mottled gy-green	Massive volcaniclastic breccia. matrix supported sub-angular to angular clasts of: - black shale - fine grained, siliceous, grey-brown Volcanics	Qz Se (1) Pervasive cl (1) patchy	Py (tr) disseminated		Qz+cb (1)				— 137.2 Start ball-mark orientations
145			- Chloritic feld > Qz-phyric pumice - feldspar > Qtz xtals (Qz xtals to 5mm diameter) - Tuff cream to lgt bn ?Limestone. Clasts <2cm diameter, and predominantly <1cm diameter.								
150											



PASMINCO EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WDP14	Project	
Hole_Type	DDH	Tenement_No.	
Year	2006	Prospect	
Geologist	Amy N	Date	23/1/06

Depth	Lithology		Comments	Alteration	Mineralisation	Structure	Veining	Faults		Graphic Log	
	Code	Colour		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %						
					150.4		158.4				
155											
					Py (tr) disseminated		Q2+cb (2) ± Po				
160					Po (tr) in late Q2-cb veins.						
	CFBX	Mottled green-grey	Massive Volcaniclastic breccia ("coarse lithic") as described previously	Q2Se (1) pervasive Cl (1) patchy							
165					164.3		164.3				
					Py (tr) disseminated		Q2+cb (1)				
170											
							173.7 Q2+cl±cl (1)				
175											

PASMINCO EXPLORATION **DIAMOND DRILL HOLE LOGGING**

Hole_ID	WJ114	Project	
Hole_Type	DDH	Tenement_No.	
Year	2006	Prospect	
Geologist	AMcN	Date	23/1/06

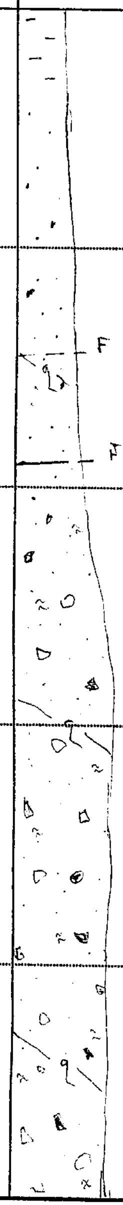
Depth	Lithology			Alteration	Mineralisation	Structure	Veining	Faults		Graphic Log	
	Code	Colour	Comments	Up to 3 codes w. intensities (1-3)	Up to 3 codes with %						
190											
	CFBR	Mottled grey-green	as described above		Py (tr) disseminated + late veins. tr Sl + Po in late veins.						
195				Qz Se (1) pervasive Cl (1) patchy	197.0 Py (0.5%) disseminated, vein & or joint plane.		Qz+Cl ±Cl (2) tr Py, Po, Sl.				
		193.2			Sl (tr) as clots or clasts? <0.5cm diameter 193.2		193.2		193.2 Abrupt & marked by a thin vein - ? conformable		Orientations: 193.4m ← S_0 = 45° to 230° Mag. 194.0 S_0 = 40° to 234°
	CSSH/ CFSI	dk grey-brn/green	Interbedded, on a scale of <0.5cm to 10cm; dark grey siltstone/shale and brown-green volcaniclastic siltstone (with Qz + feldspar xtals from 197.1 - 198.3m). Some minor graded beds indicate whole facing.		Py (tr) in Veins.		Qz+Cl + Py (2) 197.1 Qz+Cl (3)				194.6m S_0 47° to 329° 195.1m S_0 45° to 334°
200		198.8		198.8			198.8		198.8 Contact grad. over 20cm.		
	CFSI	khaki	Massive to weakly banded ?shard-rich volcaniclastic siltstone	Qz (1) pervasive			Qz+Cl (2)				

PASMINCO EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WSP 14	Project	White Spur.
Hole_Type	DD	Tenement_No.	
Year	2005	Prospect	
Geologist	Mick Svioka	Date	13/5/06

Depth	Lithology Code	Lithology Colour	Comments	Alteration (Up to 3 codes w. intensities (1-3))	Mineralisation (Up to 3 codes with %)	Structure	Veining	Faults		Graphic Log
200	CFSI	Khaki	198.6 - 201.8m As above							
205			201.8m - 241.7m MASSIVE, GRADED PUMICE MASS FLOW Yellowish grey to greenish grey, massive, weakly foliated, moderately to poorly sorted,	qtz ser (1)	–		201.8 qtz (1)			
210			polymict, variably qtz & fsp phyric, volcaniclastic mass flow / epiclastic. Broadly graded Comprises. 1/ Fine grained volcaniclastic sdst with scattered fine to medium qtz & lithic grains to ~ 211m	ser (1)	–			207.7m F? 209.2m F?		
215	CFMF	yell gr - gr grey	2/ From 211m, rapidly grades to a coarse to very coarse grained polymict epiclastic / volcaniclastic mass flow. Comprises scattered to locally abundant qtz & fsp crystals (typically 1-2mm) & angular to subangular lithic fragments	ser (1)	–					
220			typically 1-2 cm to 220m but increasing to commonly up to 5cm from 220m. Variably pumiceous Minor qtz veining, typically planar up to 2cm.	ser (1)	py rare trace					
225			Rare trace disseminated pyrite. Small fault @ 207.7m & 209.2m	ser (1)	–					

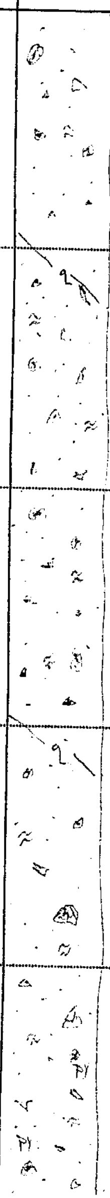


PASMINCO EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WSP 14	Project	White Sun
Hole_Type	DDH	Tenement_No.	
Year	2006	Prospect	
Geologist	Mick Shirka	Date	12/5/06

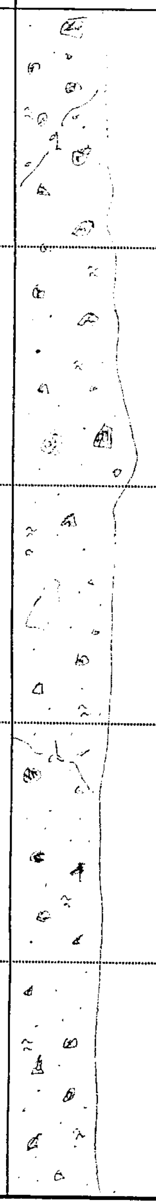
Depth	Lithology Code	Lithology Colour	Comments	Alteration (Up to 3 codes w. intensities (1-3))	Mineralisation (Up to 3 codes with %)	Structure	Veining	Faults		Graphic Log
225–230			201.8 - 291.7m Poorly Sorted, Massive, Polymict Pumice Flow. Yellowish grey to greenish grey, massive, weakly foliated, poorly sorted, polymict volcaniclastic mass flow	225.0 ser (1)	–		qtz (1)			
230–235			Similar to above. Comprises scattered to locally abundant qtz +/- fsp crystals, typically 1-2 mm with subangular to angular siliceous lithics & pumice clasts in a weak, sericite altered matrix	ser (1)	–		qtz (1)			
235–240	CFMF	yell. gy - gn gy	Sporadic planar qtz veins. Minor sulphide (pyrite) clasts 1 mm 2 mm	ser (1)	–		–			
240–245			Competent to moderately broken core (2 - 8 bpm).	ser (1)			qtz 1			
245–250				ser (1)	pyrite		qtz 1			



PASMINCO EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WSP 14	Project	
Hole_Type	DDH	Tenement_No.	
Year	2004	Prospect	
Geologist	Matt [illegible]	Date	12/5/04

Depth	Lithology Code	Lithology Colour	Comments	Alteration (Up to 3 codes w. intensities (1-3))	Mineralisation (Up to 3 codes with %)	Structure	Veining	Faults		Graphic Log	
250–255			201.8 - 201.?m Porphyry Series?, [illegible], Massive Mass [illegible]; Whitish grey to greenish grey, massive, weakly foliated, poorly sorted, volcaniclastic polymict mass flow or epiclastic bx	se, 1	–		qtz (1)				
255–260			As described above. Siliceous lithic clasts typically 1-5 cm, locally up to 25 cm. Variably qtz +/- fsp phyric.	se, 1	–		qtz-carb (1)				
260–265	CFMF	yell gy - [illegible] gy	Moderately competent core ([illegible] bpm)	se, 1	–		–				
265–270			No sulphides observed	se, 1	–		cb (1)				
270–275				se, 1	–		–				

ZINIFEX ROSEBERY MINE
SURFACE EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID WSP 14	Project
Hole_Type DDH	Tenement_No.
Year 2005	Prospect
Geologist MICH SKIRMA	Date 14 / 5 /2006

Depth	Lithology			Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log	
275	Code	Colour	Comments	Up to 3 codes w. intensities (1-3)	Up to 3 codes with %					
			201.8 - 291.7m MASSIVE VOLCANICLASTIC MASS FLOW							
			As above. Yellowish grey to olive grey, massive, weakly foliated, poorly sorted polymict volcaniclastic mass flow to epiclastic breccia. Weakly qtz - fsp phyric.	ser (1)	py: trace		qtz - cb (1)			
280										
	CFMF	yell gy - olive grey	Comprises angular to subangular clasts of siliceous volcanics, volcaniclastics & pumice in a weakly sericite altered matrix. Clast size generally 1-4 cm, decreasing gradationally from ~285m.	ser (1)	py: trace		qtz - cb (1)			
285										
			Trace py as small blebs & disseminations. Minor qtz - cb veinlets & small veins. Gradational lower contact.	ser (1)	py: trace		qtz - cb (1)			
290										
			291.7 - 300.8m QTZ PHYRIC VOLCANICLASTIC SANDSTONE							
			Greenish grey to olive grey, massive, weakly foliated, medium grained to coarse grained, qtz phyric, volcaniclastic sandstone.	ser (1)	-		qtz - cb (1)			
295										
	CFSA	yr gy - olive gy	Comprises scattered qtz & siliceous lithic grains, typically < 2mm, in a weakly sericite altered matrix. Minor qtz - cb veinlets. Rare trace disseminated pyrite. Gradational lower contact.	ser (1)	py: trace		qtz - cb (1)			
300										

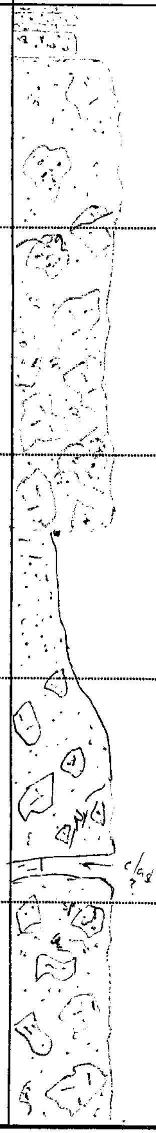
Hole_ID WSP 14	Project WHITE SPUR
Hole_Type DDH	Tenement_No.
Year 2005	Prospect
Geologist mick SKARKA	Date 14 / 5 /2006

Depth	Lithology			Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log	
	Code	Colour	Comments	Up to 3 codes w. intensities (1-3)	Up to 3 codes with %					
300	CFSA	gn gy	291.7 - 300.8m as above.							
			300.8 - 323.7m. VOLCANICLASTIC SANDSTONE							
			Greenish grey to light olive grey, massive to weakly bedded, weakly foliated, generally fine grained to medium grained, variably qtz-fsp phyric, volcaniclastic sandstone.	qtz-ser (1)	py: trace		qtz-cb (1)			
305										
			Where bedding is defined, typically thin beds (< 2cm) with diffuse boundaries.							
			Scattered qtz-fsp grains typically < 1mm & scattered siliceous lithic grains typically < 1mm in a weakly qtz-ser altered matrix.	qtz-ser (1)	-		qtz-cb (1)			
310										
	CFSA	gn gy - olive gy	Occ. qtz-cb veinlets & small veins. Moderate veining from 315.2m.							
			Trace pyrite, typically on fracture surfaces & as sporadic disseminations.	qtz-ser (1)	py: trace		qtz-cb (1)			
315										
			Broken core 317.0 - 319.0m.				315.2 qtz-cb (2).			
			Sharp broken bases noted.	qtz-ser (1)	-					
320										
				qtz-ser (1)	py: trace		qtz-cb (2)			
	CFSA CSC	olive gy	323.7 - 326.2m INTERBEDDED VOLC SDST & SLST							
325			Olive grey, interbedded, coarse grained qtz phyric volcaniclastic (cont.)							

ZINIFEX ROSEBERY MINE
SURFACE EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WST 14	Project	Wave Star
Hole_Type	DDH	Tenement_No.	
Year	2005	Prospect	
Geologist	Mick Skirka	Date	14 / 5/2006

Depth	Lithology Code	Lithology Colour	Comments	Alteration (Up to 3 codes w. intensities (1-3))	Mineralisation (Up to 3 codes with %)	Structure	Veining	Faults	Graphic Log	
325	CFSA - CBSI	olive gy	323.7 - 326.2m (cont) INTERBEDDED VOLC SDST & SLST sandstone & volcaniclastic siltstone. sdst: slst ~ 80:20							Broken core
330	CFBR	1. olive gy - gr gy	326.2 - 336.5m. CLAST SUPPORTED VOLCANICLASTIC BRECCIA. Light olive grey to greenish grey, massive, poorly sorted, volcaniclastic breccia clast supported comprising siliceous volcanic/volcaniclastic clasts & pumice fragments, variably fsp - qtz phyric, in a qtz-sericite altered matrix	qtz-ser (1)	py: trace		qtz (1)			
335			Minor qtz veins with larger vein (vein) @ 331.[illegible] m. Trace py as small blebs & disseminations, typically assoc. with veining	qtz-ser (1)	py: trace		qtz (1)			
			Sharp broken lower contact.							
340			336.5 - 354.1m VOLCANICLASTIC BRECCIA / MASS FLOW. Olive grey to dark grey, massive, very poorly sorted, polymict, sedimentary breccia to volcaniclastic mass flow. Comprises:	qtz-ser (1)	-		qtz (1)			
345	CFMF	olive grey - dk gy	1/. 336.5 - 339.0m: Fine grained to medium grained volcaniclastic sandstone, rapidly grading downhole to: 2/ Matrix supported volcaniclastic breccia &/or mass flow, consisting of qtz-fsp phyric volcanic clasts & dark grey laminated siltstone clasts (beds ?)	qtz-ser (1)	sph: trace. py: <1%		qtz (1)			
350			Generally matrix supported with minor clast supported domains. Rare trace sph as small blebs assoc with veinlets. Trace pyrite as small blebs associated with veining. Minor qtz veining.	qtz-ser (1)	sph: trace py: <1%		qtz (1)			

ZINIFEX ROSEBERY MINE
SURFACE EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID WSP 14	Project WHITE SPUR
Hole_Type DDH	Tenement_No.
Year 2005	Prospect
Geologist MICK SKIRKA	Date 14/5/2006

Depth	Lithology			Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
	Code	Colour	Comments	Up to 3 codes w. Intensities (1-3)	Up to 3 codes with %				
350	CFMF	olive gy - dk gy	336.5 - 354.1m. VOLCANICLASTIC BRECCIA / MASS FLOW As above Massive, poorly sorted, polymict sedimentary breccia / mass flow Sharp, irregular lower contact	qtz-ser (1)	py: tr		qtz (1)		
355	SSS1	dk gy.	354.1 - 356.5m. SILTSTONE Med-dk grey, massive, siltstone. Possibly a large clast in breccia unit (?) Irregular lower contact disrupted by cleavage.	-	354.1 py: ~1% assoc with veining				
360	CFSA	l. gy	356.5 - 364.6m INTERBEDDED SLST & C.G VOLC SDST Mixed interval of light grey to medium grey, moderately bedded, coarse grained volcaniclastic sdst/breccia & volcaniclastic siltstone. Varies from laminated to semi-massive Coarse grained beds comprise angular siliceous lithics	ser (1)	py: trace		qtz-cb (1)		
365	SSS1	med gy	typically ~1cm. Also coarse grained lsp pyrite, pumiceous sdst with lsp & pumice clasts ~1-3mm. Moderately broken core Weak sericitic alteration Minor qtz-cb veining. Trace pyrite as diss in c.g beds & assoc with veining	ser (1)	py: trace.		qtz-cb (1)		
370	CFMF	l gy - med gy	364.6 - 372.7m PUMICEOUS MASS FLOW / BRECCIA Light grey to med grey, massive, moderately bedded, poorly sorted volcaniclastic mass flow to pumice breccia. Generally matrix supported with muddy matrix Angular/irregular lobe pumice clasts typically 1-2cm in muddy matrix	-	py: < 1%		qtz (1)		
375	SSSH	blk	Minor qtz veins with larger veins (to 1cm) @ 368.8m & 369.9m Trace to locally minor pyrite as blebs & diss 372.7 - 384.8m: PYRITIC BLACK SHALE Dark grey to blk, weakly laminated, blk shale Pyrite as l.g blebs & large ovoids (1 to 3cm)	-	372.7m py: 2-5%		372.7 cb (1)		

ZINIFEX ROSEBERY MINE
SURFACE EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID WSP 14	Project WHITE SPUR
Hole_Type DDH	Tenement_No.
Year 2005	Prospect
Geologist MICK SKIPAKA	Date 14/5/06

Depth	Lithology		Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log
	Code	Colour		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %				
375									
			372.7 - 384.8m PYRITIC BLACK SHALE						
			Dark grey to blk, weakly laminated pyritic black slate.	-	py · 3-5%		cb (1)		
			As above						
			Contains minor pyrite as lg blebs & ovoids (to 3cm)						
380	SSSH	blk	Minor cb veins & stringers.						
			Rare trace sph as small diss assoc. with qtz-cb veins near lower contact						
				-	py : 3-5%.		cb (1) qtz-cb (1)		
			Sharp conformable lower contact.						
385									
	CFSA	yell gy mt gy	384.8 - 385.8 FINE GRAINED VOLCANICLASTIC SDST	qtz-ser (1)					
	CFSA	l gy	385.8 - 388.2 PUMICEOUS SANDSTONE		py: 1%		386.0m		F
			Light grey, massive, lsp phyric, coarse grained pumiceous volcaniclastic sandstone. Clasts typically < 1cm.	ser (1)	ga: rare trace		qtz (2)	387.1m, 0.1m, 40° to tca.	
							388.2		
	CSS1	l gy dk gy	388.2 - 390.7m LAMINATED VOLCANICLASTIC SILTSTONE				qtz (1)		
390			Light grey to dk grey, generally well laminated, siliceous vole slst to v.f.g sdst. Minor qtz veining. Trace py & rare sph. Gradational lower contact.						
							390.4		
	CFBA	l.gy red gy	390.7 - 396.2m VOLCANICLASTIC BRECCIA				qtz (2)		
			Light grey to medium grey, generally massive, poorly sorted, matrix supported volcaniclastic breccia / mass flow. Minor laminated fine vole sdst intervals (distal?)	Ser (1)	py: trace.		393.0		
395			Bleached volcanic clasts typically 1-2 cm, locally to 5 cm. Sericite altered pumice fragments. Minor qtz veining				qtz (1)		
			Trace diss py.						
			396.2 - 400.5m PYRITIC BLACK SHALE						
	SSSH	blk dk grey	Dark grey to black, very weakly laminated, moderately foliated, pyritic blk shale. Py. Similar to blk shale interval above. Minor qtz veinlets	-	py: 2-4%		qtz (1)		
400									

ZINIFEX ROSEBERY MINE
SURFACE EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WSP 14	Project	WARM SPR
Hole_Type	DDH	Tenement_No.	
Year	2005	Prospect	
Geologist	GERALD PURVIS	Date	16/5/2006

Depth	Lithology		Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log	
	Code	Colour		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %					
400			396.2 – 400.5m							
	CFBR	gy	400.5 – 402.1m VOLCANICLASTIC BRECCIA Grey foliated epiclastic bx with bleached silicified felsic lava clasts to 70mm (av ≈ 10mm), sericitic pumice & black shale frags, in sandy & shaley matrix. Mod foliated & stretched // bed.	sil (2) ser (1)	py: trace	S1 (1) after So 30°/LCA ↙contact 30° (So)				
	CFBR	DK gy-blk	402.1 – 403.35m FINE VOLCANICLASTIC BRECCIA WITH BLACK SHALE MATRIX. Lava & pumice clasts mostly <15mm in abundant black shale matrix & some black shale lumps.	sil (1) ser (1)	py: 1%	↙So 30°/LCA				
	SSSH	Blk	403.35 – 404.0m SILICIFIED BLACK SHALE	sil (2)	py: 2%	So 45°/LCA	qtz (1)			
405	CFBR	DK gy	404.0 – 405.6m VOLCANICLASTIC BRECCIA Foliated bx as at 400.5 – 402.1m except matrix mostly black shale.	sil (2) ser (1)	py: trace		qtz (1)			
			Some lava clasts are flow-banded.			↙So 40°/LCA				
	CFSA	gy	405.6 – 407.15m VOLCANICLASTIC SANDSTONE Hard upward-fining unit of bedded sandstone, v siliceous, siltstone at top and fine bx at base & small bleached silic lava frags.	sil (3) sil (1)	py: trace	So 45°/LCA ↙45°/LCA So	qtz (2) High angle qtz veins to 10mm @ 406.5m		qtz	
	CFBR / CFGR / SSSH	DK gy - blk	407.15 – 417.2m: FINE VOLCANICLASTIC BRECCIA/GRIT IN DOMINANT BLACK SHALE MATRIX, WITH BLACK SHALE BANDS TO 900mm Mixed sequence, fining uphole. At base bleached silic lava frags mostly 5-10mm (to 50mm) subordinate in black shale matrix. Clasts fine uphole, and bands and ripped-up lumps of black shale increase uphole. 900mm bedded silicified black shale at top of sequence. Occasional qtz-cb veins & veinlets to 15mm, mostly // So. Foliation increases in basal half of sequence.	sil (2)	py: 1%	So 45°/LCA So 30°/LCA				
410				sil (1)	py>po 1-2% dissem & stringers py: 1%	So 30°/LCA So/S1 30°/LCA	qtz-cb (1)		qtz-cb	Orientation: 410.5m So = 75° to 045° mag
415				sil (1) cb (1)		↙So/S1 40°/LCA	qtz-cb (2) qtz-cb (1)		FAULT? qtz-cb bx qtz-cb	
	SSSH	Blk	417.2 – 436.95m: PYRITIC BLACK SHALE Black shale with common dark grey silty to finely sandy sections. Marked increase in qtz-cb veining, esp above 420m	sil (2) sil (2)	1-2% py, dissem & veinlets. Minor sp in qtz-cb veinlets Minor py	Strong foliation some kinking	qtz-cb (3) veinlets, stockworks & bx-fill to 300mm	FAULT? Core fissile & broken S1 40°/LCA		
420			where veinlet stockworks cement bx shale intervals up to 300mm wide.		2% py dissem & tiny veinlets	So: 40°/LCA So: 35°/LCA	qtz-cb (1)		qtz-cb qtz xyk qtz-cb	Orientation: 423.1m So = 85° to 120° mag
425							qtz-cb (2) all angles			

ZINIFEX ROSEBERY MINE
SURFACE EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WSP 14	Project	WHITE SPUR
Hole_Type	DDH	Tenement_No.	
Year	2005	Prospect	
Geologist	GERALD PURVIS	Date	18/5/2006

Depth	Lithology		Comments	Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log	
425	Code	Colour		Up to 3 codes w. intensities (1-3)	Up to 3 codes with %					
	SSSH	Blk	BLACK PYRITIC SHALE (CONTINUED) Frequent sandy and silty sections containing fine volcanic(?) qtz xyl grains. Structurally deformed zone 427.1 – 432.15m marked by brittle faults and strong shearing foliation mildly crenulated in places. Abundant spidery qtz-cb veinlets.		py: 3% disseminations, in stringers & some in qtz-cb veins py: 5-7% disseminations & stringers py: 5% disseminations & stringers	S1: 25°/LCA Deformed Zone S1: 20° So/S1: 35°	qtz-cb (2) Broken qtz-cb veins	FAULT: Ruggy seams 30-40°/LCA Broken. Strong fol	F qtz-cb	
430			Foliation decreases below 433.4m		py: 2% mainly disseminations py: 1% py: 2%	S1: 30° S1: 35° S1: 40°	qtz-cb (1) 15mm qtz-cb 40° qtz-cb (2)	FAULT: 15°/LCA Broken + ruggy seams	qtz-cb F qtz-cb qtz-cb qtz-cb	
435					Mainly as fine disseminations	So: 40°/LCA Contact So/S1 40°/LCA				
	CSBR	Blk	436.95 – 437.9m: FINE VOLCANICLASTIC BRECCIA IN BLACK SHALE MATRIX. Siliceous volc frags to 15mm av < 10mm. Foliated	sev (1)	py: 1%	So/S1: 40°/LCA	qtz-cb (2)			
440	SSSH	Blk	437.9 – 440.4m: PYRITIC BLACK SHALE Minor gtose sandy interbeds. Broken 440 – 440.2m by fault 45°/LCA		py: 2-3% mainly disseminations, some veinlets	So/S1: 40°/LCA	qtz-cb (1)			Orientation 437.85m So/S1 = 86° to 076° mag
						Contact 40°/LCA (So)		FAULT in shale	F	
	CSSA	Gy	440.4 – 442.35m: GREY QUARTZO-FELDSPATHIC SANDSTONE Med gr volcaniclastic sst composed of grains of qtz, feld & lithics. Some silty/shaley sections		py: 1% disseminations py: < 1%	So: 40°/LCA Contact: So 40°	qtz-cb (1) 30mm qtz-cb vein 60°/LCA chl		qtz-cb-chl	
	CSSA	Dk-gy blk	442.35 – 444.2m: COARSE QUARTZO-FELDSPATHIC-LITHIC SANDSTONE WITH BLACK SHALE MATRIX. As above except coarser (grains av 2-3mm) + black shale matrix. Shale bands + lumps to 50mm		py: 2% disseminations py: 5%	So/S1: 35°/LCA Contact: So 45°	qtz-cb (1)			Orientation: 443.5m: So/S1 = 80° to 090° mag
445			442.35 – 447.9m: PYRITIC BLACK SHALE		py: 1-2% disseminations					
	SSSH	Blk	Moderately foliated & veined black shale with minor coarse sandy sections. Becoming grey and silty in basal metre.		5% py (some sooty bands) py: 1-2% py: minor	So/S1: 35°/LCA Contact So/S1 35°	qtz-cb (2) ± chl veinlets, often irreg & spidery			
		Dk gy								
450	CSSA	Pale gy	447.9 – 451.7m: ALTERED PYRITIC VOLCANICLASTIC SANDSTONE. Grey, hard, silicified & sericitised med gr sandstone composed of qtz, feld & lithics. More reworked than sandstones above. Significant sulphide content.	Sil (2) Ser (2)	10% py > sp? disseminations. Sp(?) is pale fawn (may be leucoxene)	S1: 35°/LCA	qtz-cb (1)	Small fault 45°/LCA	F py > sp? py > sp?	

ZINIFEX ROSEBERY MINE
SURFACE EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID	WSP 14	Project	WHITE SPUR
Hole_Type	DDH	Tenement_No.	
Year		Prospect	
Geologist	GERALD PURVIS	Date	19/5/2006

Depth	Lithology Code	Lithology Colour	Comments	Alteration (Up to 3 codes w. intensities (1-3))	Mineralisation (Up to 3 codes with %)	Structure	Veining	Faults	Graphic Log	
450	CSSA		ALTERED PYRITIC SANDSTONE (continued)	sil (2) ser (2)	5% py, minor sp 7% py > sp? 3% py	S1: 45°/LCA	qtz-cb (1)		py > sp?	
	CESH	DK gy	451.7 - 453.0m: FAULT (BROKEN ZONE). Badly broken zone of qtz-cb>chl veining in brecciated black shale & minor SST. Core loss (0.85m recovered)	Patchy sil (1)	1-2% py, dissem		qtz>cb: chl (3) stockworks	FAULT: Angle unknown	qtz-cb + chl F	Badly broken+veined.
	CESA	Blk	453.0 - 454.1m: SANDY BLACK SHALE Volcaniclastic fine feld-qtz-lithic sand in black shale matrix 50:50. Strong foliation	sil (1)	1-2% py, some lenses	S1: 35°/LCA Contact So/S1 40°	qtz>cb (2) veinlets			
455	CESC	Cream	454.1 - 455.2m: SEMI-MASSIVE PYRITE Lenses + bands of massive py + lesser lenses/irreg bands of disrupted grey silic marble or silica-barite in feld-qtz SST matrix	sil (3) ser (3)	30% py as massive lenses + bands 5 - 50mm // fol	Strong S1 35°/LCA Abrupt 40°/LCA			py (ba?)	Disrupted + deformed
	CFSA	l gn gy	455.2 - 459.1m. PUMICEOUS CRYSTAL SANDSTONE Light greenish grey, massive, weakly foliated, fsp phyric, pumiceous + shal sdst. Comprises abundant fsp phenocrysts, typically 1-2mm, & chloritised pumice fragments in a weak to moderately chlorite-sericite altered matrix Gradational lower contact.	chl-ser (2)	py 1% as diss.	457.1m CV 40° to lca	qtz (1)			Orientation of 455m (py bands) S1 = 85° to 045° mag
460			459.1 - 464.6m Pumice Breccia							
			Greenish grey, massive, weakly foliated, weakly fsp phyric pumice breccia. Comprises scattered clusters of fsp phenocrysts, typically 1-2mm, with abundant chloritised pumice fragments in a weak to moderately chlorite-sericite altered matrix. No obvious grading or internal structure	chl-ser (2)	py: < 1%	462.4m CV 45° to lca	cb (1)			
465	CFBR	gn gy	Minor to locally common, irregular cb & qtz-cb veins & veinlets. Veins oriented both sub // to min cleavage & at high < to min cleavage. Minor pyrite (<1%) as sporadic coarse grained (to 2mm) euhedral diss.	chl-ser (2)	py: < 1%		cb (1)			
470			Generally competent core (2-5 bpm)	chl-ser (2)	py: trace	470.8m CV 46° to lca	cb (2) qtz-cb (1)			
475										

ZINIFEX ROSEBERY MINE
SURFACE EXPLORATION

DIAMOND DRILL HOLE LOGGING

Hole_ID WSP 14	Project
Hole_Type DDH	Tenement_No.
Year 2006	Prospect
Geologist MICK SKIRKA	Date 26/5/06

Depth	Lithology			Alteration	Mineralisation	Structure	Veining	Faults	Graphic Log	
475	Code	Colour	Comments	Up to 3 codes w. intensities (1-3)	Up to 3 codes with %					
			459.1 - 494.6m. MASSIVE PUMICE BRECCIA							
				chl-ser (2)	py : rare trace		cb (1)			
480										
			As above. Greenish grey, massive, weakly foliated, weakly lap plyric pumice breccia. Comprises scattered clusters of lap phenocrysts, typically 1-2 mm with abundant chloritised, irregular pumice fragments. No obvious grading although chloritised pumice fragments typically aligned sub // to cleavage							
				chl-ser (2)	-	483.7m VN 40° to ca.	cb (1) qtz-cb (1)			
485	CFBR	gn gy.								
			Minor irregular cb & cb-qtz veins & veinlets. Rare trace dis py, decreasing downhole.	chl-ser (2)	-	487.0m CV 42° to ca.	qtz-cb (1) cb (1)			
490										
			Generally competent core (2.5 kpm)	chl-ser (2)	-		qtz-cb (1) cb (1)			
495										
			EOH @ 494.6m.							