

DIAMOND DRILL CORE RECORD

LOCATION	Mt. Black E.L. 1/62 Murchison Rover Grid	Footage	Direction	Dip.	Depth	Direction	Dip.	COLLAR DIP.	-50°	TOTAL DEPTH	140.8m
OBJECTIVE	To follow-up Sn mineralisation on the western contact of the Farrell Slates by MRP 212, drilled 200m to the north.				0m	101°	-58.5°	DIRECTION	90° AMG	HOLE SIZE HQ	39m, NQ 47m, BQ rest
RESULT	Very weak Sn mineralisation is associated with sulphide and fluorite bearing sediments below their contact with intermediate volcanics.				56m		-56.5°	R.L.	171.3m	COMMENCED	21.10.'80
					98m		-55.5°	COORDINATES		COMPLETED	6.11.'80
					140m		-54°	Grid 5,374,100N 384,435E		LOGGED BY	I.R. McDonald
								AMG 5,374,104.18N 384,449.97E			

METRE		ROCK DESCRIPTION	MINERALISATION	Sample No.	From	To	Core Rec'd	Sample Length	Pb	Zn	Cu	Assay Data per ppm					CORE REC'D	
FROM	TO											Ag	Mn	Fe%	As	Sn	RUN	SHORT
0	32.6	Glacial Overburden																
		0-18 Recovery restricted to pebbles of quartzite.																
		18-18.4 Quartzite pebbles with sand & gravel inflow into hole.		38337C	32.6	35.0	2.6	2.4	10	180	5	0.5	2000	5.7%	20	X		
		18.4-21 Quartzite pebbles		3390	35.0	40.0	5.0	5.0	5	175	5	X	1800	6.2	5	X		
		21-31.5 F-mg sand, possible fluviglacial channel		339C	40.0	42.4	2.4	2.4	5	95	5	X	1450	3.0	X	6		
		31.5-32.6 Pebbles of quartzite & occasional Intermediate Volcanics		38340C	42.4	45.0	2.6	2.6	5	85	5	X	1450	2.95	X	10		
32.6	33	Broken scree of Intermediate Volcanics with minor solid core of grey-green fg massive Intermediate andesite lava. Weakly chloritised with thin carbonate veinlets.		3410	45.0	47.3	2.3	2.3	X	100	5	X	1450	3.45	X	X		
				342C	47.3	51.2	3.9	3.9	5	60	X	0.5	1200	2.10	X	X		
				343C	51.2	55.8	4.6	4.6	5	130	X	X	1800	4.6	X	X		
				344C	55.8	60.0	4.2	4.2	5	97	5	0.5	1500	3.35	X	6		
				345C	60.0	62.65	2.65	2.65	10	90	X	X	1700	3.0	X	X		
				346C	62.65	64.5	1.85	1.85	5	125	X	X	1650	4.4	12	X		
				347C	64.5	67.7	3.1	3.2	X	125	X	0.5	1550	4.2	12	X		
				348C	67.7	72.6	4.8	4.8	5	125	X	0.5	1900	4.2	1	X		
				349C	72.6	75.0	2.5	2.5	5	135	5	0.5	1850	4.5	X	X		
				38350C	75.0	79.6	4.6	4.6	5	135	5	1.0	1900	4.2	X	X		
				351C	79.6	83.5	3.9	3.9	5	160	5	0.5	2100	5.1	X	X		
				352C	83.5	88.0	4.5	4.5	X	230	5	X	1900	7.1	X	X		
				353C	88.0	91.4	3.4	3.4	X	215	5	X	1300	7.1	X	X		
				354C	91.4	95.0	3.6	3.5	5	125	5	X	1700	3.65	X	X		
				355C	95.0	98.1	3.1	3.1	5	125	5	0.5	1450	4.0	X	X		
				355C	98.1	99.1	1.7	1.7	10	225	5	0.5	2050	6.6	1	X		
				357C	99.1	103.8	4.0	4.0	X	190	5	X	1950	6.25	1	X		
				358C	103.8	106.8	5.0	5.0	5	120	5	0.5	1650	3.7	1	X		
				359C	106.8	110.25	1.45	1.45	345	420	10	0.5	11000	11.5	41	85		
				38301S	110.25	111.25	1.0	1.0	450	1000	5	1.0	12000	5.8	34	X		
				302S	111.25	111.55	0.3	0.3	95	210	30	1.0	5700	9.7	190	50		
				303S	111.55	112.4	0.85	0.85	240	490	X	1.0	4250	4.15	170	400		
				304S	112.4	112.75	0.35	0.35	1000	1400	45	2.5	15000	12.0	150	X		
				305S	112.75	113.0	0.25	0.25	340	2900	280	4.0	2000	7.25	180	30		
				306S	113.0	113.25	0.25	0.25	4350	420	3300	110.0	1500	16.0	60000	0.63%	(By XRF)	
				307S	113.25	114.0	0.75	0.75	540	2300	245	4.0	900	4.60	3600	5		
				308S	114.0	115.0	1.0	1.0	350	190	160	2.5	515	3.5	570	30		
				309S	115.0	115.8	0.6	0.6	160	100	120	1.5	545	4.05	270	X		
33	42.4	Green f-mg porphyritic, vitric, lithic, crystal tuff. Intermediate trachy-andesite, Weakly chloritised & carbonated. Quartz-carbonate veins common with carbonate often removed by solution. Carbonate very white suggesting calcite. Limonite staining on joints decreases downwards. Phenocrysts are feldspar; liths are fg feldspathic, possibly trachytic. Clots & irregular veinlets of chlorite may represent shale liths but are more likely devitrified glass. Rare chloritic patches have fiamme like shape suggesting some ashflow component.																
		33-34.7 Core fairly broken.																
		36.4-37.2 " " "																
		40.5-42.4 Decreasing grainsize with increasing quartz-carbonate veining & carbonation of the groundmass.																
		Lower contact weakly brecciated against carbonate-(quartz) veins at 65°.																

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METRE		ROCK DESCRIPTION	MINERALISATION	Sample No.	From	To	Core Rec'd	Sample Length	Pb	Zn	Cu	Assay Data per ppm					CORE REC'D					
FROM	TO											Ag	Mn	Fe%	As	Sr	UN	SHORT				
42.4	47.3	Grey-green, fg weakly porphyritic lithic crystal tuff. Intermediate andesite. Strongly carbonated, weakly silicified, with quartz-carbonate veins. Some wispy textures suggest ashflow origins but may be due to weak cleavage. 47.1-47.3 Weakly chloritised. Lower contact gradational.		383105	115.8	116.7	0.9	0.9	110	130	95	1.5	500	3.45	250	1.1						
				3115	116.7	117.8	1.1	1.1	50	420	50	1.0	950	3.05	57	X						
				3125	117.8	118.65	0.95	0.85	130	200	50	0.5	2700	3.75	53	26						
				3135	118.65	119.3	0.65	0.65	50	75	120	1.5	2500	4.5	43	X						
				3145	119.3	120.35	1.05	1.05	150	420	390	6.0	1000	6.55	2300	0.0						
				3155	120.35	121.3	0.95	0.95	35	60	125	1.0	1100	3.65	250	440						
				3165	121.3	121.9	0.6	0.6	10	55	65	0.5	1450	5.5	500	200						
				3175	121.9	122.65	0.75	0.75	30	50	305	0.5	1650	4.5	2300	230						
				3185	122.65	123.65	1.0	1.0	40	50	325	2.0	1200	2.8	4700	0.27%						
								3195	123.65	124.6	0.95	0.95	25	40	25	0.5	1100	4.9	300	56		
								383205	124.6	125.7	1.1	1.1	30	40	90	0.5	1900	5.9	250	X		
				47.3	47.8	Pale grey fg strongly silicified Intermediate volcanic centred on a quartz vein at 47.4-47.5. Lower contact gradational.		3215	125.7	126.5	0.8	0.8	5	30	25	0.5	3300	4.5	350	200		
3225	126.5	127.2	0.7					0.7	30	85	30	1.0	3300	6.2	210	300						
3235	127.2	127.8	0.6					0.6	40	20	145	1.5	1800	3.2	380	35						
383245	127.8	128.45	0.65					0.65	200	20	230	3.0	1350	3.85	250	X						
								383255	128.45	129.35	0.9	0.9	55	45	330	1.5	2450	9.0	2000	4		
47.8	51.2	Grey-green, fg silicified & carbonated, lithic crystal tuff. Intermediate andesite. Weakly chloritised with quartz-carbonate veins. Carbonate is all white suggesting calcite. 50.2-50.7 Chloritic breccia zone healed by cg quartz-carbonate clots and veins. 51.0-51.2 Zone of increasing silicification ending in quartz vein forming lower contact at 50°.		383265	129.35	129.8	0.45	0.45	50	60	30	X	12000	8.4	480	14						
				3275	129.8	130.8	1.0	1.0	270	350	30	0.5	5050	4.5	300	X						
				3285	130.8	131.8	1.0	1.0	750	430	294	5.5	1650	8.3	320	X						
				3295	131.8	132.8	1.0	1.0	540	800	180	5.0	2450	6.15	2500	X						
				3305	132.8	133.8	1.0	1.0	40	150	130	0.5	3000	5.85	290	X						
				3315	133.8	134.3	0.5	0.5	360	710	355	2.5	1600	9.6	380	X						
				3325	134.3	135.1	0.8	0.8	490	620	190	3.0	800	4.45	140	8						
				3335	135.1	135.9	0.8	0.8	5100	700	110	22.5	1000	5.0	140	12						
				3345	135.9	136.6	0.7	0.7	950	1300	140	13.0	1100	6.25	390	48						
				3355	136.6	136.75	0.15	0.15	2100	270	755	53.0	535	5.45	200	X						
				3365	136.75	137.75	1.0	1.0	70	395	20	0.5	2300	3.0	140	X						
								3600	137.75	140.8	3.05	3.05	255	70	15	1.0	2250	3.5	100	22		
51.20	51.6	Green fg massive Intermediate andesite lava or minor intrusive, with quartz-carbonate veins. Lower contact irregular approx. 30°																				
51.6	51.75	Green m-cg porphyritic with fg chloritised groundmass, crystal lithic tuff, Intermediate andesite with quartz-carbonate veins & clots. Lower contact diffuse & quartz veined.																				
51.75	53.2	Grey-green, fg strongly silicified and weakly chloritised, crystal lithic tuff, Intermediate andesite. Strong quartz-carbonate veins, especially from 52.2-52.65.																				
53.2	55.8	Green, fg weakly porphyritic Intermediate andesite lava with carbonate-quartz vns. Carbonate is cream coloured suggesting an ankerite or siderite content. 54.9-55.3 Very fg & very strongly chloritised																				

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METRE		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA							CORE REC'D		
FROM	TO							Sample Length	Pb%	Zn%	Cu%	Ag - g/t	Au - g/t	Fe%	RUN	SHORT	
55.9	55.1	Grey-green, mg porphyritic crystal lithic tuff. Intermediate andesite, weakly chloritised. Contacts diffuse.															
56.1	62.65	Green, generally fg, crystal lithic tuff Intermediate andesite chloritised & silicified with quartz-carbonate veins. Rare liths of trachytic to rhyolitic composition reach 35mm across. Some patches are very strongly silicified and quartz veined. Carbonate in veins is all white suggesting calcite. Lower contact fairly sharp at 70.	Traces of sphalerite on some quartz-carbonate veins.														
62.65	64.5	Green, fg, carbonate-quartz veined Intermediate andesite lava. Carbonate largely dissolved out of veins leaving a vuggy appearance. 63.1-64.4 Core broken & oxidised with brown limonite staining on joints and vein cavities. Where present carbonate is cream coloured suggesting ankerite or siderite.															
64.5	72.5	Green, mottled in places, fg autobrecciated andesite lava. Weakly chloritised veins and clots 65.8-67.7 Oxidised with limonite staining and carbonate dissolved out of veins and clots giving a vuggy appearance. Core recovery 90%.															
72.5	79.6	Green, fg, generally massive, Intermediate andesite lava. Weakly chloritised & silicified. Quartz-carbonate veins. Rare thin bands of autobreccia in places. Carbonate is all white suggesting calcite. Lower contact diffuse through a 10cm zone of strongly silicified volcanic.															
79.6	98.1	White/green, mg porphyritic, with fg ground-mass. Lithic crystal Intermediate andesite lapilli tuff. Lithic fragments range upto 50mm but comprises less than 10% of the rock. Rock is chloritised and weakly silicified.															

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METRE		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA						CORE REC'D			
FROM	TO							Sample Length	Pb%	Zn%	Cu%	Ag - g/t	Au - g/t	Fe%	RUN	SHORT	
		79.6-83.5 Quartz-carbonate veins abundant 83.5-91.4 Very few veins. 91.4-98.1 Scattered quartz-carbonate veins. In all cases carbonate is white suggesting calcite.															
98.1	99.8	Green, fg, generally massive Intermediate andesite lava, chloritised with some porphyritic bands. 98.1-98.25 Breccia zone, possibly a flow top breccia. 98.25-98.5 Mg porphyritic. 98.9-99.1 Mg porphyritic. 99.3-99.8 Quartz-carbonate veins.															
99.8	108.8	Grey-green, fg, weakly porphyritic auto-brecciated Intermediate andesite lava, chloritised, silicified with quartz-tourmaline veins. 103.8-108.8 Increased quartz-carbonate veining. Lower contact sharp 50°.															
108.8	109.8	Green, fg, massive Intermediate andesite lava, chloritised, weakly silicified. 109.1-109.8 Core very broken - possible fault or shear zone.															
109.8	111.25	Pale green, fg, strongly veined and brecciated Intermediate andesite lava. Silicified & chloritised. Quartz-carbonate veins anneal breccias. Carbonate is cream coloured suggesting ankerite or siderite.	Minor disseminated limonite after sulphides in veins.														
111.25	111.55	Dark green, fg massive Intermediate andesite lava, chloritised. Minor carbonate veinlets.	1-2% fg disseminated pyrite														
111.55	112.75	Pale green, fg, brecciated Intermediate andesite lava. Chloritised and silicified. Quartz-carbonate veins anneal textures. Carbonate is cream coloured suggesting ankerite or siderite. 112.4-112.75 Increased chlorite.	2-3% fg disseminated pyrite with rare stringers of pyrite and sphalerite.														

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METRE		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA							CORE REC'D		
FROM	TO							Sample Length	Pb%	Zn%	Cu%	Ag - g/t	Au - g/t	Fe%	RUN	SHORT	
112.75	113.0	Breccia zone. Grey silicified Intermediate volcanic annealed by quartz veins.	3-4% pyrite as disseminations, blebs and stringers														
113.0	113.25	Near massive sulphides. Gangue of fractured quartz & fg chloritic material. Work banding at approximately 65°.	60% pyrite, arsenopyrite, chalcopyrite & minor pyrrhotite and ?cassiterite.														
113.25	127.2	Essentially of dark grey siltstone sequence, consisting of intimately interbedded fg tuffaceous wacke, siltstone, and dark grey to black chloritic shale, with bands and irregular blebs of white fg cherty siliceous material. Plastic slump structures are common. Some strongly contorted banding looks tectonic in origin. A weak cleavage persists throughout at 40-50°	113.25-114 3% pyrite as disseminations & stringers.														
		114.2-115 Strongly contorted banding emphasised by siliceous "cherty" bands.	114-114.5 5-7% Pyrite as disseminations & stringers.														
		115.9-116.1 Banding subparallel in fg tuffaceous wacke.	114.5-115.9 Variable 2-5% pyrite with minor pyrrhotite in stringers & veinlets.														
		116.1-117.1 Weak bedding approx 45°	115.9-116.1 5% pyrite with minor pyrrhotite disseminations & stringers														
		117.1-117.4 Tight crenulated folds. Main axis approx. 75°	116.1-117.5 2-3% disseminated & stringer pyrite & pyrrhotite														
		117.5-117.8 Quartz veins	117.5-117.8 4-5% Pyrite associated with the quartz veins.														
		117.8-118.65 Carbonate-minor quartz veins Carbonate is cream to yellow suggesting ankerite or siderite.	117.8-118.25 >1% disseminated pyrite.														
		118.65-118.7 Anastomosing quartz veins	118.25-118.65 2-3% pyrite in stringers.														
		118.9-119.1 Sub-parallel banding in shale around a block of fg tuffaceous wacke.	118.65-118.7 5-7% pyrite associated with the quartz veins.														
		120.35-123.65 White "cherty" quartz nodules upto 5mm across	118.7-119.3 3-4% disseminated pyrite & pyrrhotite														
		120.8-120.85 White quartz vein at 65°	119.3-120.35 5% pyrite with subordinate pyrrhotite in stringers														
			120.35-120.8 3% pyrite & minor pyrrhotite in stringers.														
			120.8-120.85 5% pyrite associated with the quartz vein.														

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METRE		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA						CORE REC'D			
FROM	TO							Sample Weight	Pb%	Zn%	Cu%	Ag - g/t	Au - g/t	Fe%	RUN	SHORT	
			120.85-122.65 3-5% pyrite & pyrrhotite in stringers especially associated with zones rich in white quartz nodules.														
			122.65-123.65 3-4% pyrrhotite & pyrite in disseminations & stringers associated with cherty nodules & scattered fg green fluorite.														
		123.65-125.7 Core fairly broken	123.65-127.2 2-5% very fg disseminated pyrite & thin stringers of pyrite & irregular blebs of pyrrhotite.														
		125.7-125.8 Crushed core, probable fault or shear zone.															
		125.8-127.1 Core fairly broken.															
		126.6-126.7 Strongly contorted banding with white cherty bands & cream carbonate clots.															
		127.1-127.2 Crushed core with puggy clay, probable fault or shear zone.															
127.2	128.45	Pale grey to cream bleached altered siltstone, sericitised with contorted banding. Core fairly broken.	127.2-128.45 3-4% pyrite and pyrrhotite in stringers														
128.45	129.35	Grey, fg siliceous siltstone with thin bands of m-cg tuffaceous fragments.	128.45-129.35 5-7% pyrite and pyrrhotite in stringer and bands.														
129.35	130.7	Dark grey to green, fg tuffaceous wacke to siltstone. Weak banding contorted but averages 70-80	129.35-131 1% fg disseminated pyrite with minor pyrrhotite.														
		129.35-129.6 Strong breccia annealed with quartz veins & clots.															
130.7	130.8	Strongly broken dark green chloritic siltstone. Probable fault or shear zone.															
130.8	136.6	Medium to dark grey interbedded fg tuffaceous wacke & siltstone.	131-131.5 4-5% stringer of pyrite & pyrrhotite														
		131.5-131.7 Core very broken.	131.5-131.7 1-2% fg disseminated pyrite & pyrrhotite														
			131.7-131.8 10% pyrite in large stringers														

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METRE		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA							CORE REC'D		
FROM	TO							Sample Length	Pb%	Zn%	Cu%	Ag - g/t	Au - g/t	Fe%	RUN	SHORT	
			131.8-134.3 2-5% pyrite & pyrrhotite in irregular stringers.														
		132.4-132.8 Core very broken with a crushed zone at 132.6															
		133.3-133.8 White quartz veins & nodules															
		133.8-134.3 Zone of broken & crushed core, probably a fault or shear zone.															
		134.3-135.1 Zone of quartz veins sub-parallel to core. Largest vein upto 10mm wide.	134.3-135.1 4-5% pyrite & pyrrhotite in blebs & stringers associated with quartz veins.														
		136.4-136.6 Crushed core, probable fault or shear zone.	135.1-136.6 2-3% pyrite & pyrrhotite in stringers														
136.6	136.75	White massive quartz vein. Contacts irregular.	136.6-136.75 10% pyrite & pyrrhotite in quartz vn.														
136.75	140.8	Dominantly grey siltstone interbedded with grey fg volcanic wacke & dark grey shale. Thin quartz-carbonate veins parallel a weak cleavage at 45-60°. Minor folding & micro-faulting occurs in the wacke bands. Shale bands show plastic slump structures.	136.75-140.8 >1% pyrite associated with quartz carbonate vns.														

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