

DIAMOND DRILL RECORD

HOLE NUMBER : SD 18A

LOGGED BY : D. Kilpatrick

004

INTERVAL (m)		RECOVERY		DESCRIPTION	FORM	% Sn.											
FROM	TO	m	%			FROM	TO	TOTAL	ACID SOL.	% Cu.	% Al.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% G.C.
0	62.8	54.6	87	<p>MICACEOUS HORNFELS</p> <p>Banded soft, grey micaceous quartz-chiastolite-siltstone and occasional mudstone, leached and sericitized. Sulphides, mostly pyrite, become common with fine to coarse grained material always in fissures.</p> <p>Leaching appears to have removed softer minerals of up to 4mm diameter(?) immature volcanic sediment). Abundant fine grained sericite. The core is very broken with numerous fracture planes of random orientation.</p> <p>Banding averages 0.5 - 2.0cm width and each is separated by thin (<1mm) lamellae of secondary mica; banding is a function of grain size and proportion of silica.</p> <p>Chiastolite is usually not prominent but may be more abundant than recognised; possibly retrogressed to sericite. Chiastolite becomes more noticeably abundant toward the base (54m - 62.8m). Banding in this horizon is more obvious with a coarser grain size. Pyrite is more common.</p> <p>B.C.A. 5m 27°, 10m 23°, 15m 37°, 20m 30°, 25m 35°, 30m 33°, 35m 25°, 40m 18°, 45m 32°, 50m 28°, 55m 34°, 60m 30°.</p> <p>Gradational contact to</p>													
62.8	123.5	52.2	87	<p>GRAPHITIC CHIASTOLITE HORNFELS</p> <p>Black to dark grey banded rock of graphite in a quartz-clay matrix with abundant chiastolite, as disseminated grains (<2mm).</p> <p>Occasional graphite-poor, quartz-clay horizon, eg. 71.3 - 73.2m.</p> <p>Graphite becomes less dominant with depth. Pyrite veining is abundant (especially 80m - 90m) and sometimes occurs as radiating crystals.</p> <p>Light grey, chiastolite hornfels and pyrite with rare (?) sphalerite between 85m - 91m.</p> <p>712.0 - 122.9m; Altered interbanded yellow and dark grey clays - very soft. The core is very broken (RQD = 0-20%). Bedding to core axis angle at 65m 40°, 70m 27°, 75m 32°, 85m 32°, 90m 28°, 95m 26°, 100m 30°, 110m 37°, 115m 40°, 120m 34°.</p>													
123.5	126.2	2.3	85	<p>SULPHIDIC (?) MAFIC HORIZON</p> <p>Mineralized core of dense, altered, possibly mafic material, poorly banded with wavy and undulating interbands of sulphides and altered (?) pyroxenes and clays - non carbonaceous. Sulphides are mostly massive sphalerite with minor chalcopyrite. Bedding to core axis angle at 125m is 47°.</p>		123.5	124.5	0.11	0.01	0.15	<0.1	7.0	<0.01	1.76	.001	5	<0.01
						124.5	125.5	0.12	0.01	0.84	<0.1	8.6	<0.01	2.62	.003	14	<0.01
						125.5	126.5	0.06	0.02	0.05	<0.1	2.9	<0.01	2.59	.002	2	<0.01

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FROM	TO	m	%			FROM	TO	TOTAL	ACID SOL	% Cu	% As	% S	% Pb	% Zn	% Bi	g/Ag	% WO ₃	
126.2	128.5	2.3	100	GRAPHITIC CHIASTOLITE HORNFELS Black and dark grey mostly fine-grained, banded siltstone (sub-conchoidal fracture) with fine quartz and clay interbeds. Pyrite occurs on fracture planes and within veins.														
128.5	147.6	17.2	90	(?) MAFIC HORIZON Altered, coarse-grained, crystalline, grey, mostly poorly banded core of intermediate or basic material. Chiasolite is present, especially obvious at upper section where crystals are up to 15mm long. These tend to be localised in distinct bands. Other finer grained chiasolite occurs throughout. Some horizons are very leached and pitted. Pits often contain hard, crystalline, resinous, non-calcareous, brown or yellow-green mineral ((?)epidote). These also occur on fracture planes. 138.1 - 139.4m Horizon of leached, fine-grained, banded, pale green-grey, hard material with minor sphalerite. Serpentine alteration is common. 139.7m; Graphite vein - pure graphite 0.5cm wide. B.C.A. 130m 30°, 135m 26°, 140m 35°, 145m 37°, Sharp contact at...		137.4	138.4	0.04	0.01	<0.01	<0.1	0.2	<0.01	0.12	.005	1	<0.01	
						138.4	139.2	0.04	<0.01	<0.01	<0.1	<0.1	<0.01	0.11	.005	1	0.01	
						139.2	140.2	0.04	<0.01	0.05	1.4	0.9	<0.01	0.46	.002	1	0.05	
147.6	160.2	10.8	87	GRAPHITIC CHIASTOLITE HORNFELS Fine and coarse grained, dark grey to black, very broken core containing minor sphalerite and pyrite and arsenopyrite (especially at upper contact) 151.2-152.0m (?) Calc-silicate horizon; contains quartz, feldspars, (orthoclase and microcline or plagioclase), and possible altered garnets or amphiboles in nodules (0.5cm wide) and is strongly altered. B.C.A. at 150m 37°, 155m 32°, 160m 39°.		151.2	152.0	0.03	0.01	0.03	0.1	0.5	<0.01	0.32	.032	<1	0.11	
160.2	163.7	3.5	100	CALC - SILICATE HORIZON Altered quartz, feldspar, calc-silicate rock of pale green-grey and grey colours, with a distorted appearance and widely ranging grainsize. The core is irregularly banded, blotchy and is chloritized. Sulphides include pyrrhotite, pyrite and arsenopyrite. Carbonate veining is abundant. Very competent core.		160.0	161.0	0.02	<0.01	0.04	6.3	0.7	<0.01	0.32	.002	2	<0.01	
						161.0	162.0	0.02	0.01	<0.01	<0.1	0.1	<0.01	0.15	.003	1	<0.01	
						162.0	163.0	0.03	<0.01	<0.01	<0.1	0.1	<0.01	0.08	.005	1	0.02	
						163.0	163.7	0.02	<0.01	0.02	<0.1	0.3	<0.01	0.04	.003	<1	<0.01	
163.7	169.5	34.8	100	CARBONATE ROCK Strongly banded grey and dark-grey core of interlaminated dark siliceous hornfels and chert and paler calcareous skarn and abundant calcite veining (av. width 0.8cm). The core is strongly serpentinised throughout.		163.7	165.0	0.01	0.01	0.03	<0.1	0.4	<0.01	0.1	.004	1	<0.01	
						165.0	166.0	<0.01	<0.01	0.01	<0.1	0.7	<0.01	0.11	.007	1	<0.01	
						166.0	167.0	<0.01	0.01	0.01	<0.1	1.1	<0.01	0.22	.004	<1	<0.01	
						167.0	168.0	<0.01	0.01	0.01	<0.1	0.9	<0.01	0.22	.006	<1	<0.01	

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INTERVAL (m)	RECOVERY	DESCRIPTION	FORM.	% Sn.											
				FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	% Ag.	% Au.
		Some hornfels units appear in the upper zones becoming rare with depth. A fine grained blue-grey (?) manganese mineral occurs commonly throughout, on joint surfaces. Some horizons contain abundant disseminated sulphides mainly pyrrhotite and a black, finely crystalline, non-magnetic, submetallic mineral. (0.5cm) and magnetite. Some localised tourmalinization and also some recrystallised calcite horizons. The calcite may all be secondary from a primary dolomitic matrix. 186.7m - Pyrrhotite-bearing, calcareous intrusive - contains 10-20% pyrrhotite. Cuts sharply across main foliation. Other similar bands occur but are generally sub-parallel to the foliation. Magnetite becomes common below 196m where it occurs in localised veins or occasionally inter-laminated with the host.		168.0	169.0	0.01	0.01	0.01	<0.1	0.9	<0.01	0.01	.005	<1	<0.01
		B.C.A. 165m 40°, 170m 15°, 175m 30°, 180m 20°, 185m 36°, 190m 27°, 195m 35°.		169.0	170.0	0.01	0.02	0.01	<0.1	0.8	<0.01	<0.01	.006	<1	<0.01
				170.0	171.0	0.01	0.02	0.01	<0.1	0.6	<0.01	<0.01	.005	<1	<0.01
				171.0	172.0	0.01	0.01	0.01	<0.1	1.0	<0.01	0.01	.006	<1	<0.01
				172.0	173.0	0.01	0.01	0.01	<0.1	1.6	<0.01	0.01	.007	<1	<0.01
				173.0	174.0	0.01	0.01	0.01	<0.1	0.6	<0.01	0.01	.007	<1	<0.01
				174.0	175.0	0.01	0.01	0.01	<0.1	1.1	<0.01	<0.01	.008	<1	<0.01
				175.0	176.0	0.01	0.02	0.01	<0.1	0.6	<0.01	0.15	.008	<1	<0.01
				176.0	177.0	0.01	0.01	0.01	<0.1	0.1	<0.01	0.12	.008	<1	<0.01
				177.0	178.0	0.01	0.01	0.01	<0.1	0.1	<0.01	0.08	.008	<1	<0.01
				178	179	0.01	0.01	0.01	<0.1	0.4	<0.01	0.01	.009	<1	<0.01
				179	180	0.01	0.01	0.01	<0.1	0.3	<0.01	0.01	.009	<1	<0.01
				180	181	0.01	0.01	0.01	<0.1	0.3	<0.01	0.01	.009	<1	<0.01
				181	182	0.01	0.01	0.01	<0.1	0.2	<0.01	0.01	.008	<1	<0.01
				182	183	0.01	0.01	0.01	<0.1	0.9	<0.01	0.01	.009	<1	<0.01
				183	184	0.01	0.01	0.01	<0.1	1.0	<0.01	0.01	.011	<1	<0.01
192.5	236.2	37.1	98	184	185	0.01	0.01	0.01	<0.1	0.4	<0.01	0.01	.008	<1	<0.01
				185	186	0.01	0.01	0.01	<0.1	0.9	<0.01	0.01	.007	<1	<0.01
				186	187	0.01	0.01	0.01	<0.1	1.0	<0.01	0.01	.008	<1	<0.01
				187	188	0.01	0.01	0.01	<0.1	0.7	<0.01	0.01	.008	<1	<0.01
				188	189	0.01	0.01	0.01	<0.1	0.9	<0.01	0.01	.008	<1	<0.01
				189	190	0.01	0.01	0.01	<0.1	0.8	<0.01	0.01	.008	<1	<0.01
				190	191	0.01	0.01	0.01	<0.1	0.9	<0.01	0.01	.008	<1	<0.01
				191	192	0.01	0.01	0.01	<0.1	0.5	<0.01	0.01	.006	<1	<0.01
				192	193	0.01	0.01	0.01	<0.1	1.4	<0.01	0.01	.005	<1	<0.01
				193	194	0.01	0.01	0.01	<0.1	1.2	<0.01	0.01	.005	<1	<0.01
				194	195	0.01	0.01	0.01	<0.1	0.6	<0.01	0.01	.005	<1	<0.01
				195	196	0.01	0.01	0.01	<0.1	0.3	<0.01	0.01	.005	<1	<0.01
				196	197	0.01	0.01	0.01	<0.1	0.3	<0.01	0.01	.003	<1	<0.01
				197	198	0.01	0.01	0.01	<0.1	1.4	<0.01	0.57	.004	<1	<0.01
				198	198.5	0.01	0.01	0.01	<0.1	2.6	<0.01	0.27	.002	<1	<0.01
				199	0.01	0.01	0.01	<0.1	1.4	<0.01	1.93	.005	<1	<0.01	
				200	0.01	0.01	0.01	<0.1	0.3	<0.01	0.53	.003	<1	<0.01	
				201	0.04	0.04	0.02	<0.1	0.2	<0.01	0.50	.002	<1	<0.01	
				202	0.01	0.02	0.01	<0.1	1.8	<0.01	2.75	.003	<1	<0.01	
236.2	259.8	21.7	.92	202	203	0.03	0.03	0.01	<0.1	0.6	<0.01	1.18	.002	<1	<0.01
				203	204	0.08	0.07	0.01	<0.1	1.7	<0.01	2.78	.003	<1	<0.01
				204	205	0.33	0.33	0.06	0.2	0.9	<0.01	1.05	.004	<1	<0.01
				205	206	0.26	0.27	0.04	0.1	0.2	<0.01	0.12	.004	<1	<0.01
				206	207	0.14	0.15	0.03	<0.1	0.2	<0.01	0.12	.003	<1	<0.01
				207	208	0.53	0.58	0.02	<0.1	0.1	<0.01	0.07	.005	<1	<0.01

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FROM	TO	m	%			FROM	TO	TOTAL	ACID SOL.	% Cu.	% As.	% S.	% Pb.	% Zn.	% Bi.	g/t Ag	% Au.	
				Pyrite is occasional to common and other sulphides are rare.			209	0.53	0.56	0.03	<0.1	0.1	<0.01	0.01	.027	1	0.03	
				Stringers of granite have intruded the quartzite near the lower contact. The abundance of Ti-biotite increases towards the granite contact. B.C.A. 240m 28°, 245m 33°, 250m 26°, 255m 41°.			210	0.34	0.35	0.02	<0.1	0.4	<0.01	0.76	.023	1	0.02	
				Sharp contact to			211	0.12	0.13	0.01	<0.1	0.1	<0.01	0.28	.021	1	0.01	
							212.0	0.23	0.17	0.12	<0.1	4.5	<0.01	1.11	.021	<1	0.03	
							212.0	212.6	0.04	0.02	0.01	<0.1	0.2	<0.01	0.02	.026	2	0.01
							212.6	213	0.15	0.17	0.05	<0.1	1.1	<0.01	1.43	.026	2	0.01
259.8	286.3	26.2	99	GRANITE			214	0.08	0.09	0.16	<0.1	2.1	<0.01	1.14	.031	2	0.01	
				Medium grained quartz, feldspar, biotite, tourmaline rock of pale yellow colour due to alteration of feldspars. The rock is fine grained almost aplitic at the contact. Thin greissen veins are subparallel to the core axis. Sulphides are rare. The core is moderately broken.			215	0.40	0.26	0.33	<0.1	2.0	<0.01	0.08	.007	2	0.02	
							216	0.60	0.13	0.03	<0.1	0.3	<0.01	0.05	.007	43	0.03	
							217	0.60	0.23	0.45	<0.1	1.8	<0.01	0.44	.065	3	0.07	
							218	0.49	0.18	0.11	<0.1	1.8	<0.01	0.05	.021	1	0.02	
							219	0.48	0.29	0.28	<0.1	3.8	<0.01	0.05	.022	1	0.02	
							220	0.60	0.45	0.22	<0.1	3.9	<0.01	0.05	.019	<1	0.13	
				HOLE TERMINATED AT 286.3m			221	0.36	0.35	0.13	0.4	3.9	<0.01	0.09	.024	1	0.02	
							222	0.13	0.09	0.13	<0.1	5.6	<0.01	0.10	.022	<1	0.12	
							223	0.70	0.54	0.09	<0.1	1.9	<0.01	0.03	.016	2	0.11	
							223.0	223.6	0.43	0.31	0.14	<0.1	5.2	<0.01	0.02	.012	1	0.13
							223.6	224	0.15	0.15	0.03	<0.1	0.5	<0.01	0.03	.026	<1	0.13
							225	0.25	0.22	0.03	<0.1	0.8	<0.01	0.02	.018	<1	0.03	
							226	0.42	0.22	0.05	0.9	2.3	<0.01	1.10	.019	1	0.22	
							227	0.42	0.27	0.01	<0.1	<0.1	<0.01	0.02	.010	<1	0.03	
							228	0.08	0.06	0.03	<0.1	0.3	<0.01	0.02	.016	<1	0.03	
							228	229	0.07	0.05	0.22	<0.1	5.5	<0.01	0.03	.151	<1	0.03
							230	0.13	0.08	0.08	<0.1	1.0	<0.01	0.02	.013	<1	0.13	
							231	0.22	0.19	0.08	0.1	1.9	<0.01	0.03	.015	<1	0.13	
							232	0.01	0.04	0.01	<0.1	<0.1	<0.01	0.05	.003	<1	0.02	
							233	0.01	0.02	0.01	<0.1	<0.1	<0.01	<0.01	.001	<1	0.01	
							234	0.09	0.05	0.05	<0.1	2.0	<0.01	0.01	.017	<1	0.01	
							235	0.54	0.49	0.03	0.8	1.7	<0.01	0.02	.051	<1	0.22	
							236	0.02	0.03	0.06	<0.1	1.9	<0.01	0.05	.092	<1	0.02	
							237	0.02	0.02	0.06	<0.1	2.3	<0.01	0.03	.020	1	<0.01	
							237	238	0.01	0.02	0.07	0.2	3.5	<0.01	0.03	.020	1	0.03
							238	239	0.01	0.02	0.01	<0.1	0.6	<0.01	0.01	.050	<1	0.01
							239	240	0.01	0.02	0.02	<0.1	0.6	<0.01	0.04	.011	1	0.01

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