DRILL HOLE LOG

HOLE No. 79B-4
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COORDINATES 0 + 97N - 4 + 34E, 4 + 50E
ELEVATION 5185'
DIP -50°
AZIMUTH 270°

CORE SIZE BQ
HOLE STARTED 31/08/79
HOLE COMPLETED 02/09/79
LOGGED BY M.P. Phillips

FOOTAGE	DESCRIPTION	WO_3% (ppm)	ppb Au	ppm Sn
0				
10	Approximate start of coring			
	Kqm* QUARTZ MONZONITE: sheared and bleached, biotite to chlorite; fair pervasive limonite.			
	Contact ground - 30°? KTqfp* DARK GREEN DYKE: brown weathering green dyke; tan greenish matrix with diffuse chlorite? spotting and 1-2 mm feldspar phenocrysts. Fractures low angle to core axis 1/6"-12" with clay and weak limonite.			
20	Contact broken - 30° Kqm* QUARTZ MONZONITE: light coloured, minor chlorite (<1%) very fine grained- chilled margin; pink- white phenocrysts? feldspar in a very fine grained-aphanitic matrix? looks sheared.	(45)	T	1
30	Transition to normal — Light grey fine-medium grained, 5-7% biotite and chloritized biotite speckling fractures 1/6"-12" with weak clay, carbonate and minor limonite. Towards bottom chlorite on fractures.	(14)	T	1
	Strong chlorite fracture — White grey, mixed chilled, prominent chlorite clots up to 20 mm.			
40	? - Xenolith- foliated, chlorite in feldspar matrix - fair disseminated scheelite. White, very fine grained to aphanitic, trace weak chlorite speckling, rare diffuse narrow band with chlorite moderate to strong. Fair disseminated weak fracture scheelite.	0.05	T	
	Transition — Light grey, fine-medium grained, greenish colour due to 1-2 mm 5-7% chlorite. Matrix looks foliated, probable chill zone.			
50		(13)	T	1
60	BIOTITE DOLOMITE MARBLE			

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FOOTAGE	DESCRIPTION	WO_3% (ppm)	ppb Au	ppm Sn
60	Pggi* GREY AND GREEN INTERBANDED SCHIST AND GNEISS			
	Irregular 45°-90°			
	Fault contact parallels core 62.2-70° contact wollastonite band Pcss* BANDED SKARN AND CALC-SILICATE GNEISS: dark green and pale green banded pyroxene skarn with wollastonite-vesuvianite and pink garnets. Pyroxene, weak vesuvianite< garnet. Scheelite 63-69.3' - minor, <1/2%.	0.05	30	
	wollastonite band			
	wollastonite band: greenish light grey, moderately hard wollastonite interbanded with fine grained pale-dark green vesuvianite skarn. Vesuvianite low 1-2%.			
70	Pggi* GREY AND GREEN INTERBANDED SCHIST AND GNEISS: biotite and pyroxene interbanded siliceous dolomitic marble and schist. Dark grey to dark grey-green; well foliated with narrow bands rarely up to 1.5' of biotite quartzite; rock fairly soft. Weak carbonate and limonite along fractures 1-2/ft. A few 1/5-10' narrow <0.1' quartz monzonite sills.			
80	Pbmcs* BIOTITE MARBLE AND SCHIST: siliceous biotite dolomitic marble and quartz schists locally grading to biotite gneiss.	(1)	T	1
90				
100		(2)	T	1
110				
	Sheared, weak quartz veining; core broken.			
120				

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FOOTAGE	DESCRIPTION	WO_3% (ppm)	ppb Au	ppm Sn
120	Pbmcs BIOTITE MARBLE AND SCHIST continued			
	Pggi* GREY AND GREEN INTERBANDED SCHIST AND GNEISS: alternating bands 0.1 to 0.5' of biotite dolomitic marble and pale green pyroxene bands, soft to hard silicified, pale green pyroxene and garnets partly or totally replaced by biotite-chlorite. Trace scheelite.	(27)	T	2
	←Transition			
130	Pcss* Banded Skarn: pale-medium green, banded, pale green pyroxene garnet-vesuvianite-wollastonite skarn with narrow <0.1' wisps. Bands of biotite dolomite marble; garnet generally totally to biotite and minor vesuvianite. Transition- banded mainly light green with a few narrow (<0.1') wollastonite and dark green massive skarn sections. Fair garnet > vesuvianite. Disseminated weak-fair scheelite.	0.07	T	
	Garnet=vesuvianite=20% 20-30% wollastonite Transitional			
	Fair fracture > disseminated scheelite.			
	Psk* DARK GREEN MASSIVE SKARN: dark green pyroxene, massive up to 15 mm garnet > vesuvianite - 10% total; minor carbonate veinlets.	0.08	T	
140	Disseminated scheelite <1/2-1% very fine.	0.07	20	
	Pcss* BANDED SKARN AND CALC-SILICATE GNEISS: banded pyroxene wollastonite vesuvianite skarn.			
	Pggi* GREY AND GREEN INTERBANDED SCHIST AND GNEISS: faintly banded pale to medium green pyroxene with lenses and wisps of biotite dolomite marble; fair garnet to black mineral; fairly hard, doesn't look like biotite.	(65)	T	2
150	Traces scheelite			
	Pcss* BANDED SKARN AND CALC-SILICATE GNEISS: fine banded pale green garnet vesuvianite, pale green pyroxene skarn with irregular 0.2-1' bands of wollastonite vesuvianite > garnet.			
	Pbmcs* BIOTITE MARBLE AND SCHIST: grey biotite dolomitic marble with minor garnets.	(65)	T	1
160				
	Pcss* BANDED SKARN AND CALC-SILICATE SCHIST: banded pyroxene-wollastonite-vesuvianite with biotite bands.			
170	Quartz veinlets with scheelite and disseminated scheelite=1%.	0.05	T	
	Pggi* GREY AND GREEN INTERBANDED SCHIST AND GNEISS: dark green foliated; minor pink garnets; 178-185' numerous irregular and diffuse white-pale green siliceous and hard pale pyroxene bands with biotite? pseudomorphs after garnet to 184'.			
180				

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FOOTAGE	DESCRIPTION	WO_3% (ppm)	ppb Au	ppm Sn
180	Pggi* continued — GREY AND GREEN INTERBANDED SCHIST AND GNEISS continued	(1)	T	1
	pink garnets 1-2mm diameter become common 1-2%. — BIOTITE MARBLE AND SCHIST: dark grey siliceous biotite schist and dolomitic marble with minor pale pyroxene bands. Pbmcs*			
190	0.7'- 50° & 20° contacts to foliation - Biotite Quartz Monzonite: white, very fine grained occasional clot of chlorite.	(3)	T	1
200	Contact irregular - 60° — Kqm* — QUARTZ MONZONITE: biotite chloritized, fine-medium grained white, large fractured phenocrysts of feldspar, quartz flooded, very fine grained; <0.1' xenoliths of biotite dolomite marble.			
	- 0.2' biotite dolomite marble.			
	30° contact to foliation Transition up to 3mm chlorite ex garnet and parting of pale green pyroxene. — BANDED SKARN AND CALC-SILICATE SCHIST: irregular light to dark green, generally ganded, occasionally massive; pale skarn light coloured pyroxene vesuvianite < garnet; minor wollastonite and weak silica veining; dark bands garnetized marble.	0.12	T	
210	Pcss*			
	10-30° - 0.5' fault-weak	0.05	10	
	Massive garnet in chlorite matrix.			
	30° contact to foliation 30° contact to foliation — Quartz monzonite- white, coarse grained	0.04	T	
220	Pggi* — GREY AND GREEN INTERBANDED SCHIST AND GNEISS: foliated; fair-moderate foliation and veinlet silicification with scheelite Scheelite fracture > disseminated < 1/2%.			
	Pale green banded skarn with 3 mm biotite chlorite ex garnet.	0.05	T	
	40° contact to foliation 30° contact to foliation — Pegmatite-quartz, orthoclase and feldspar.			
230	Pcss* — BANDED SKARN AND CALC-SILICATE SCHIST: pale green banded with chlorite (undigested biotite marble) streaks to 5 mm garnets with biotite rims and pink garnet streaks minor to 10 mm vesuvianite. Scheelite disseminated < fracture and quartz veined.	0.06	10	
	Transition — GREY AND GREEN INTERBANDED SCHIST AND GNEISS: grey and green interbanded biotite schist and marble with pale green pyroxene bands. Scheelite minor, fracture and disseminated.	0.19	T	
	Strong quartz veining scheelite strong. Pggi*			
	Weak skarn- garnet biotite porphyroblasts to 5 mm rock fairly soft.			
240				

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FOOTAGE	DESCRIPTION	WO_3% (ppm)	ppb Au	ppm Sn
240	Highly fractured and fine quartz-carbonate veinlets Strong scheelite 1-3%. Pggi* GREY AND GREEN INTERBANDED SCHIST AND GNEISS continued Marble- 239.5'246.5'	0.07	T	
	Intense silicification or quartz monzonite; strong scheelite 1-3%.	0.64	T	
		0.02	10	
	Pcss* BANDED SKARN AND CALC-SILICATE SCHIST: weak banded, pale-medium green; pyroxene with up to 0.5' bands with vesuvianite and garnet, coarse porphyroblasts, and occasional irregular zone with biotite-chlorite ex garnet porphyroblasts; weak to fair fine quartz veining and silicification. Occasional<0.5' bands of silicified biotite dolomite marble.	0.08	T	
250		0.05	T	
	Psk* DARK GREEN MASSIVE SKARN: dark green massive diffuse coarse pyroxene garnet-fair> vesuvianite.	0.11	40	
260	Pggi* GREY AND GREEN INTERBANDED SCHIST AND GNEISS			
	Psk* DARK GREEN MASSIVE SKARN: dark green, pyroxene, massive to weakly banded; vesuvianite > garnet 3:1 porphyroblasts vesuvianite to 10 mm; garnet to 5mm.	0.08	T	
270		0.04	T	
	Pcss* BANDED SKARN AND CALC-SILICATE SCHIST: banded pyroxene-biotite skarn with pyrrhotite; alternating silicified marble with 3 mm porphyroblasts of garnet; bands of massive pyroxene skarn and light grey banded skarn.	0.95	900	
	Contact irregular- 50° parallel to banding			
	Kqm* QUARTZ MONZONITE: porphyritic phenocrysts to 15 mm; up to 10% biotite speckled.			
280		(4)	T	1
290				

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FOOTAGE	DESCRIPTION	WO_3% (ppm)	ppb Au	ppm Sn
300	Kqm* QUARTZ MONZONITE continued			
310		(13)	T	1
320		(14)	T	1
330	White, very fine grained — 45° contact parallels foliation			
340	PDmcs* BIOTITE MARBLE AND SCHIST: siliceous biotite schist, marble and altered equivalent. Dark green, tending to mottled biotite appears to have gone completely to chlorite; fine porphyroblasts of garnet totally to chlorite?? Occasional < 0.1' siliceous bands; minor quartz and carbonate veining. Foliation tending to gneissic. Appears to be biotite with minor chloritization, fine garnets porphyroblasts completely or partially rimmed by biotite, garnets <1 mm. Bleached, some dark and light green mottled banding; 1/2" pegmatite at 346.3'; strong chlorite on fracture at bottom contact.	(13)	20	1
350	Diffuse contact Bleached Band: porphyroblasts of garnet to chlorite- 1-2 mm quartz segregation; chlorite fracture and wisps of biotite? to chlorite. Diffuse contact			
360				

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FOOTAGE	DESCRIPTION	WO_3% (ppm)	ppb Au	ppm Sn
360	Pbmcs* BIOTITE MARBLE AND SCHIST continued change from mottled stripy to more even texture. 361' - orange fluorescent mineral abundant - thin section.			
370		(14)	T	1
	Fair white quartz veining and segregations. Contact 40°			
380	Kqm* QUARTZ MONZONITE: minor limonite on fractures. In places, mafic-low to free; highly fractured 12/ft carbonate and clay on fractures; weak pervasive clay alteration. Porphyritic feldspars to 15 mm; 10-15% biotite; fractures 4/ft; weak clay-carbonate on fractures.			
	Contact 70° parallels foliation 'Bleaching' - biotite to chlorite; some dark green fine lenses and specks appear to be dark green talc?	(70)	T	1
390	BIOTITE MARBLE AND SCHIST: dark grey green well foliated tending to gneissic texture; 20-40% biotite; may be fine garnets <1 mm to biotite Pbmcs*			
	Contact 60° parallels foliation Porphyritic biotite quartz monzonite Contact irregular 50° parallels foliation.			
400	Trace to minor garnets (<1mm) most appear to have gone to biotite Minor (<1/4%) pyrite.			
	30° to foliation fracture with envelope and wings of strong brown biotite; note cuts with quartz band parallel to foliation.	(14)	T	1
410	Quartz veining with coarse biotite at bottom contact 0.2'			
	Biotite coarser along distinct foliation planes; general increase in milky white quartz segregations, lighter colour, distinct marble and biotite layers.			
	Bleach envelopes along foliation fractures and rarely quartz veins			
	Biotite Dolomitic Marble: dark green, more even colour than normal marble, not as prominent foliation; due to biotite not as coarse and distributed throughout. Occasional up to 0.1' brown biotite band; quartz segregations and silicification stronger.			
420				

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FOOTAGE	DESCRIPTION	WO_3% (ppm)	ppb Au	ppm Sn
420	Pbmcs* — BIOTITE MARBLE AND SCHIST continued: silicified marble strong silicification along foliation; dark grey green and khaki bleached banded; occasional quartz and quartz feldspar crack filling; minor up to 0.2' white quartz segregations; fine foliation; higher pyrite than usual. Mottled and irregular stripy light and dark green minor fine garnets often rimmed by biotite chlorite mottling - chloritization.	(70)	T	1
	0.1' coarse garnet moderate pyrrhotite and magnetite			
	Silicification parallels foliation and strong khaki bleaching, minor along fracture.			
430	Contact lost - 80°?			
	Kqm* — QUARTZ MONZONITE: rusty colour (biotite to clay and limonite) fine to medium grained. Trachytoid feldspar phenocrysts to 30 mm, moderate to crowded in a coarse quartz (high) feldspar matrix. Weak mafics (<1%) to chlorite. Fractures 1/ft fair weathering.	(15)	T	1
	Minor 0.1' white quartz veining.			
	Pbmcs* — BIOTITE MARBLE AND SCHIST: xenolith ? bleached, light grey, foliated with foliation 0-20°, cut by minor yellow siderite filled fractures. Few remnant black (chlorite) ex garnet specks.			
440	25° fault contact			
	Kap* — WHITE APLITE: light colour, yellowish brown tinged very fine grained, soft highly altered cut by milky quartz veins, feldspar (kspar?) veinlets and weak pervasive quartz-feldspar veinlets and bands of porphyritic mafic free quartz monzonite. In places quartz phenocrysts fairly common, moderate-strong fracturing with clay and carbonate. Kspar altered - phyllic alteration and sericite in rock (alteration of felspars) noted. Minor tourmaline in coarse quartz feldspar veinlet.	(15)	T	1
	25° fault - 0.1' gouge			
450	25° fault - weak			
	altered phenocrysts of kspar.	(15)	T	1
	Aplite becomes coarser from very fine to fine-medium; feldspars altered to moderately soft yellow white clay; strong argillic alteration.			
460	Xenoliths of highly silicified marble.			
	45° fault contact — White hard, myrmakytic quartz feldspar high quartz content, weak foliation carbonate along fractures. Fair carbonate veinlets.	0.13	T	
470				
	45° contact	0.04	T	
	Pbmcs* — BIOTITE MARBLE AND SCHIST: marble - dolomitic becoming limy towards bottom, dark green massive to weakly banded; weak <1 mm garnet phenocrysts; pinkish tinge suggests massive garnets.			
	70° contact			
	Kap* — WHITE APLITE: white, foliated weakly myrmakytic feldspar and quartz, quartz content high.	0.48	T	
480				

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480	Kap* WHITE APLITE continued: white, moderately soft aphanitic intrusive with chlorite speckling.			
	Psk* dark green marble, massive to weakly banded with faint garnet bands. DARK GREEN MASSIVE SKARN: massive to finely banded with A zone textures, pale green pyroxene, wispy mottled texture, pyrite and pyrrhotite in fractures and quartz veins.	0.04	20	
		045	10	
490	Banded pyroxene, garnet, vesuvianite, skarn with pyrrhotite, pyrite, highly altered equivalent of biotite marble.	1.45	20	
	Kqm* QUARTZ MONZONITE: greenish chloritized biotite quartz monzonite, aplite and milky quartz veins up to 0.2' feldspars soft clay and carbonate.			
	Calcite - fluorite? filled fracture.			
500	Porphyritic phenocrysts of feldspar up to 20 mm common; variable mafic - nil to high usually chloritized; highly fractured 4-6/ft with clay carbonate.	(40)	T	1
510	Plagioclase feldspars altered to clay-carbonate. Low-nil mafics			
520	Normal porphyritic biotite quartz monzonite; fair-moderate calcite-clay filled fractures 4/ft.	(13)	10	1
530				
	End of Hole			
537				