

Great Gull Lake Resources - Gullbridge Project 2001

DDH - SW-04

Down Hole Surveys (Tropari):

License #:	Collar Easting:	2+48	Logged by:	Victor French /	132 /50 @ ~79 m
Property:	Collar Northing:	25+13		Chad Wells	
	Hole Azimuth:	130 deg.	Date:		
	Hole Inclination:	50	Start	Nov. 24/00	
	Total Depth:	80.77	Finish	Nov. 25/00	

<u>Depth</u>	<u>Description</u>
(from)	(to)
1.5	7.83
	<u>Quartz Chlorite Schist (Metasediment?)</u>
	Dark grey to green variably colored schist, fine grained laminations of interbanded chlorite & quartz as well as minor sericite and possible biotite. Unit also contains short section of more massive light green siliceous intervals interpreted as interbedded chert. Overall unit contains more siliceous felsic rocks than seen in similar unit of quartz-chlorite schist. Small (2-3 mm) anhedral grains, porphyroblasts of cordierite occur locally, generally ellipsoidal conforming to a moderate to strong fabric, 70 deg. t.c.a. likewise contact between chert beds and schist occur @ ~70-75 deg. t.c.a. Minor patchy white quartz veins occur irregularly throughout. Only minor sulphide <1% occurs as discrete patches or laminations, pyrite exclusive.
	<u>Metavolcanic</u>
7.83	18.13
	Medium to dark grey, green in part, variable section of interbedded mafic and possibly felsic volcanics that have been moderately metamorphosed. Unit has a fabric developed locally, at 70-75 deg. t.c.a. Lithology ranges from a medium green fine to medium grained hornblende rich mafic volcanic to and aphanitic dark grey (bluish felsic). The weak foliation is generally observed in the mafic horizons, as aligned mafic mineralogy. Locally, sections of cordierite -rich metamorphosed metavolcanics occur for 10's of cm's, chlorite alteration and a weak magnetic character seems consistent the cordierite presence. Only minor fractures occur, generally ~70 deg. t.c.a, & chlorite coated. Rare sulphide disseminations are observed over the 1st m of unit, but overall lacks <1% pyrite, non-prospective. Gradational upper and lower contacts with a deformed quartz chlorite schist.
	<u>Chlorite - quartz Schist</u>
18.13	21.42
	Grey to dark green deformed chlorite-quartz schist as described above. A consistent fabric ~70 deg. t.c.a is observed throughout, but is variably contorted, small parasitic folds are common. Lithology is also much more cordierite rich (>10%) than the schist described above. Sulphide have increased significantly to 3-5%(19.8 m -lct), occurring as fine to medium grained, disseminated laminations conforming to fabric. Pyrite is typically associated with the more chloritized section of unit. No apparent magnetic character, throughout unit or proximal

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<u>Depth</u>	<u>Description</u>
(from) (to) cont...	sulphide as noted nearby. Fabric does not appear as irregular and contorted in mineralized sections. Minor broken sections of core, fracture high angle t.c.a. Lower contact is ~perpendicular to core axis.
	<u>Metasediment (felsic Volcanic?)</u>
21.42 22.56	Light to medium grey siliceous section of core with irregular large mottled patches of milky white quartz, often associated with light green sericite and dark green chlorite alteration. Locally folds of the alteration minerals can be seen folding around quartz patches, strong deformation. However, overall unit is quite massive with only a weak locally developed fabric consistent with the sericitic intervals. Gradational contact with a more typical coarser banded quartz-chlorite schist.
	<u>Quartz-Chlorite Schist</u>
22.56 22.66	As above.
	<u>Metavolcanic (cordierite-rich)</u>
22.66 25.21	Light to locally dark grey interval of altered felsic volcanics or possible sediment. Overall unit is quite siliceous with 10-15% cordierite porphyroblasts throughout, generally conforming to a a disguised but intense fabric, 70-75 deg. t.c.a. Chlorite and possible sericite alteration occurs as bands or laminations locally. Unit is non magnetic but does contain 3-5% disseminated medium grained pyrite that is observed as laminations consistent to fabric. This section of core is also highly broken and rubbly with some local indications of clay like fault gouge. A sizable fault zone occurs from 22.86-23.47, fracture planes appear to measure 55-60 deg. t.c.a. An abrupt lower contact @65 deg. t.c.a, that appears to have had some structural movement along. Final 50-60 cm prior lower contact unit becomes progressively siliceous and cordierite rich with a lack of sulphide mineralization.

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(from) (to)	
25.21 28.79	<u>Mafic (diabase) Dike</u> Black, massive, homogenous interval of a mafic intrusive body. Locally porphyritic towards middle of body, also trace disseminated sulphide locally. Most notable feature of interval is the abundance of fracturing reflecting a fault zone presence, likely due to the brittle behavior of a rock of this character. Fault gouge @ 28.0 & 28.25 m. Upper contact is ~65 deg. t.c.a, whereas lower contact is ~80 deg. t.c.a.
28.79 33.4	<u>Quartz-Chlorite+Sericite+ biotite</u> Medium grey to green, strongly deformed quartz chlorite schist as described elsewhere in stratigraphy. Sericite and biotite appears to have significantly increased compared to schist intersected up hole. Fabric is measurable and consistent locally @65-70 deg. t.c.a, however overall fabric is contorted and folded throughout, in fact late small (~2 cm) quartz veins can be observed cutting fold axis of fabric in one location. Unit alternates from more quartz chloritic sections to increasing sericite & biotite (more felsic). Core is highly broken and rubbly over short intervals, due to a proximal fault (@29.83 m - clay like fault gouge), fractures are typically high angle and chlorite coated. Minor to trace (1-2%) disseminated sulphide generally aligned in laminations occurs throughout. Only pyrite is evident, neither po or mgt is associated with the pyrite (non-magnetic). The oxide (mgt) and sulphide(py) association is not definitive, but most observations correlate the two. Lower diffuse contact with a cordierite rich metavolcanic.
33.4 35.6	<u>Metavolcanic (cordierite-rich)</u> Cordierite-rich interval of metamorphosed volcanic rock, up to 20-25% of mineralogy is dominated by remnant porphyroblasts of cordierite. The anhedral porphyroblasts appear to be replaced by a secondary fine grained yellowish brown mineral aggregate possibly mica (sericite + biotite?), then surrounded by a dark green halo of chlorite alteration. Minor 1-2% disseminated/laminated pyrite occurs throughout. Laminations conform to a strong well developed fabric @70-75 deg. t.c.a. Irregular lower contact with dark to light grey siliceous rock.

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Down Hole Surveys (Tropari):

132 /50 @ ~79 m

<u>Depth</u>	<u>Description</u>
(from) (to)	<u>Quartz Vein (Silica Alteration)</u>
35.6 35.84	Milky white to dark grey silica staggering contact between Metavolcanic above and silicified, well mineralized volcanics. Minor dark black chlorite is associated with the silicified zone.
	<u>Silicified Volcanic (alteration)</u>
35.84 37.2	Dark grey to increasingly buff mineralized interval of altered (silicified) volcanics. Well developed fabric observed as alternating band of silica and sulphide (2-5 mm). The silica is progressively buff in coloration and simply may reflect a coloration resulting in the silicification of the original volcanic protolith. Deformation trends 70-75 deg. t.c.a. as measured throughout the hole. Sulphide appear to be predominantly pyrite mixed with abundant dark magnetite, sulphide is typically medium grained disseminations that collectively form laminations. Dark chlorite also appears to be interbanded with the alternating silica - sulphide laminations. Sulphide makes up ~20% of unit with some laminations forming massive sulphide bands up to 8 cm thick. Progressively sulphide increases with silica alteration until massive accumulations initiate consistently @ 37.2 m.
	<u>Massive Sulphide</u>
37.2 38.8	Sizable section of semi-massive to predominantly massive sulphide apparently hosted in a dark grey silicified volcanic (equivalent to the chlorite schist host in SW-03). The sulphide is predominantly pyrite with trace po, no chalcopyrite is evident. Wispy magnetite veinlets and thicker (5-10 cm) bands are common. Sulphide is medium grained and generally blotchy (sugary, likely recrystallized). In less massive section anhedral blotches of sulphide conform to a 70-75 deg. fabric, likewise upper and lower contact are 70-75 deg. t.c.a. Both contact are rigid but are staggered by 20-25% sulphide rich zones adjacent contacts. Sulphide does appear to have a low base metal tenor.

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<u>Depth</u>	<u>Description</u>
(from) (to)	
38.8 40.5	<u>Chloritized Volcanic</u> Dark green to black intensely chloritized lithology with abundant >25% blotchy disseminated sulphide. Unit is interpreted to be the same host to all the mineralization, simply varies in appearance in different alteration zonations. The dark chlorite appears to be intermingled with magnetite considering the strong magnetic character. The pyrite generally occurs as 1-5 mm anhedral-subhedral grains, (sugary) disseminated throughout surrounded by a black gangue interpreted as a mixture of chlorite, oxide (mgt), and v.f.g. sulphide. Broken rubbly sections of core in this interval suggest a fault presence within interval.
40.5 47	<u>Chlorite Schist (Variable Cordierite)</u> Dark green to grey highly deformed schist that contains abundant chlorite, common quartz, minor sericite and biotite locally. A variably contorted fabric is present in the first .5 m of unit but progressively develops into a weak to moderate foliation in a cordierite rich metavolcanic. Cordierite grains are typically anhedral Porphyroblasts as described above, and elongate in a preferred orientation consistent with 75 deg. fabric. Typically ~1% disseminated/laminated pyrite with rare cpy occurs throughout, however, locally sulphide enriches to 5-7 % over 10's of cm's. Subjective lower contact.
47 52.17	<u>Metavolcanic</u> Predominantly dark to medium greyish green unit with a maroon component, interpreted as an altered felsic volcanic with variable section of more intense alteration. Initial ~1 m of unit contains large anhedral (5-10 mm) white to pale green grains, presumably altered cordierite porphyroblasts surrounded by a dark green chloritized section with strong magnetic character. Possibly comparably to the Fe-Mg alteration zones mentioned in other holes in area. Progressively unit develops into a more typical metavolcanic (likely felsic) with a weak fabric and magnetism. Large 5-10 mm, dark green to black, ghost like, anhedral cordierite porphyroblasts are relatively common throughout (5-10% of mode). Unit does have a weak to moderate fabric fairly consistent @70-75 deg, t.c.a. Sulphide does occur as fine grained disseminations and laminations, generally ~1%, increasing

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Depth
(from) (to)
cont...

Description

to 3-5 % over short intervals (ie. 50.5 for ~25 cm). Lower contact is an irregular ~45 deg. t.c.a. Unit contains an altered chert/jasper horizon @ 49.85 m, haloed by strong epidote alteration, thin bed conforms to fabric, no oxide or sulphide associated with chert.

Quartz Chlorite Alteration

52.17 53.1 White to dark grey zone of an highly contorted quartz rich section containing common dark green to black chlorite alteration. Parasitic folding and crenulated laminations characterized this strongly deformed zone. Trace to minor sulphide is present as disseminations and blebs throughout.. Interpreted as the felsic metavolcanic above that was initially flooded by a quartz veins, subsequent deformation broke up the quartz veins giving it its' variable appearance consistent with alteration.

Metavolcanic (felsic)

53.1 62.15 Dark to medium grey to green in part unit very similar to the felsic metavolcanic described above. Locally unit is quite enriched in elongated anhedral porphyroblasts of cordierite , as well unit is predominantly weakly magnetic but locally contains sizable interval strongly magnetic. generally consistent with darker colored sections interpreted to be possibly more mafic in composition and thus containing more magnetite and chlorite alteration. A fabric (70 deg.) is identifiable but weak in comparison to that observed in other parts of stratigraphy. Thin altered green beds of chert occur throughout as does discrete milky white quartz patches, re-worked veins. Sulphide is typically less than 1%, but when mineralization does occur it is characterized as 1-2 cm laminations conforming to fabric. Lower contact is 60-65 deg. t.c.a.

Chert

62.15 62.6 Mint green chert bed, hard and very siliceous with minor quartz flooding. Minor sulphide (pyrite) occurs as 1-2 % euhedral disseminated crystals, no magnetism associated with sulphide or trace epidote & chlorite alteration. Contact are 60-65 deg. t.c.a.

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<u>Depth</u>	<u>Metavolcanic (mafic)</u>
(from) (to)	
62.6 67.05	Darker grey to green unit of a weakly deformed volcanic that has been strongly metamorphosed as indicated by the cordierite porphyroblasts (as described up hole). Overall lithology has become more magnetic and darker in coloration compared to the metavolcanic immediately above. Also progressing down through unit fabric becomes a little stronger consistent with an apparent increase in chlorite alteration coupled with trace biotite. Erratic mottled patches of of strong quartz chlorite mineralogy occurs locally. Fabric is consistent @70-75 deg. t.c.a. Trace disseminated sulphide, pyrite, throughout, < 1%.
67.05 74.7	<u>Metavolcanic / Quartz-chlorite schist</u> Similar to above except unit has become progressively deformed. As well the irregular quartz-chlorite patches observed above have increased as did presence of 2-3 cm band of mixed oxide-sulphide mineralogy. Obviously unit has become quite magnetic with variable presence of magnetite. Consistent with these observations and alternating banding appearance of alternating laminations of chlorite and quartz suggest a volcanic protolith that has been subsequently deformed and altered to form a quartz chlorite schist unit. Epidote alteration has also appeared often containing wispy veinlets of magnetite. Fabric is generally developed ~65-70 deg. t.c.a, but proceeding down hole becomes nearly parallel t.c.a., suggesting possible intersection of an irregular fold, then fabric becomes quite contorted and irregular with little consistency. Overall unit is quite deformed and strongly magnetic, sulphide are present but less than 1%. Toward gradational lower contact ghost like anhedral grains of cordierite are observed, apparently surrounded by an undulating matrix of quartz-sericite-chlorite schist.
74.7 80.77	<u>In less massive section anhedral blotches of sulphide conform</u> Very similar to the dark grey to green mafic metavolcanic described above with an exceptional increase in cordierite porphyroblasts. A weak fabric characterized by very fine grained chlorite-quartz mineralogy is evident. Unit is weakly to strongly (local) magnetic, and can be most simply described as a cordierite rich section of mafic metavolcanic, that is not as strongly deformed as the quartz-chlorite schist also described above. Trace disseminated pyrite locally.

Total Depth: 80.77 m (265 ft); 25/11/00 @ 4:00 pm