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**VERMICULITE OCCURRENCES IN CAVENDISH TOWNSHIP
SOUTHEASTERN ONTARIO**

Quat. # 2.2715

Frederick T. Archibald

December 31, 1993.



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Cavendish Vermiculite Occurrence

Summary-

. In the previous program, five vermiculite bearing zones were delineated within a marble complex. These zones were between 500-1100 meters in length and 25-125 meters in width. The values averaged from 3 to 38 percent vermiculite by volume. Anomalies B and C were found to have the greatest tonnage and grade potential. Consequently, the area surrounding the marble complex was staked.

The objective of the 1993 program, run between June and November, was to:

- 1) delineate the extent of the marble complex by geological survey.
- 2) detail till sampling from 1.0 to 2.0 meters depth; over an area of approximately 150 meters X 300 meters.
- 3) till sampling of a second marble complex some 3.2 kilometers to the north.

The marble complex contact was delineated. It averages 800 meters width by 1300 meters length. In the south, the complex pinches out into three sections.

Anomalies B and C, previously thought to be separate anomalies, are in actuality the same zone which has been separated by a shallow swamp (organic layer). Some 523 till samples were taken over an area of some 152.0 meters X 290.0 meters to delineate a section of this anomaly. These holes were taken to a depth of approximately 1.0 to 2.0 meters. This area is in the centre of the marble complex. The holes were spaced at 8.0 meter spacings on lines at 15.0 meters apart. This same detailed area, using OPAP OP93-143, was used to delineate the same zone to a depth of 6.0 meters.

The North Marble Complex, some 2400 meters X 2800 meters in diameter, was sampled with 686 till samples. The sampling was done with samples 8 meters apart on lines at 100 meters apart. Some 176 samples contained vermiculite; and some 22 of these contained over 10% vermiculite by volume.

It is estimated that this vermiculite bearing zone covers an area of 350 meters width by 900 meters length, and there is a potential for another 1,616,000 cubic meters of vermiculite at the same grade (to a depth of 6.0 meters).

This program warrants further exploration and a possible marketing study upon the results of the next phase. This main zone should be tested in detail over the rest of the 350 meter X 900 meter area; both by drilling and till sampling. A bulk sample should be taken across the width of the anomaly. From this, a sample for metallurgical testing can be taken. Dependent upon the results of this next phase, the next step can be approached for marketing strategies.

Introduction-

The program indicated significant vermiculite values within a marble complex in southern Cavendish Township; now called the South Complex. Within this complex it was indicated that there are five vermiculite zones. Two of these, trends B and C, are the location site of the present survey; and are within the Main Zone.

The exploration was used to delineate two vermiculite-bearing marble complexes. One of these was already delineated but needed to be detailed; and the other was a new zone never explored.

This program consisted of:

linecutting and flagging

geological survey

till sampling (1209 samples) to depths of 2.0 meters

laboratory studies

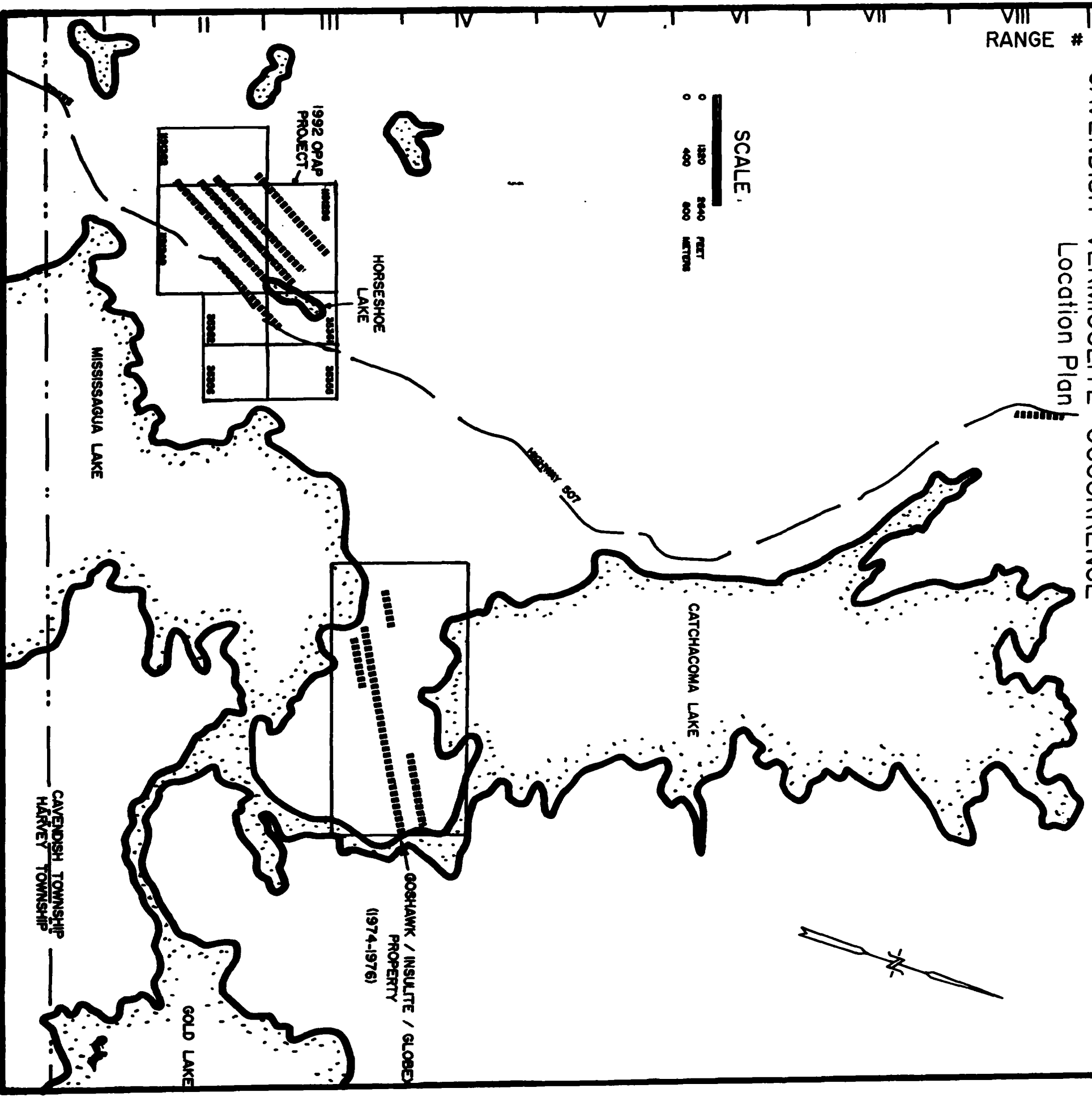
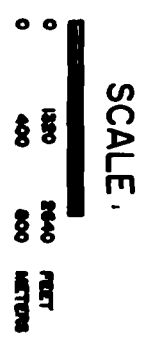
A total of forty-two days was spent on this project; twenty-four of which were spent linecutting, sampling, and geological surveying. A total of 1234 till samples were taken; some 523 from the Main Zone complex. and some 686 from the North Zone complex. Twenty five samples were taken from previously sampled locations but at greater depths.

A total of \$10,898.28 was spent on this project during 1993; of which \$6,698.28 was expenses.

CAVENDISH VERMICULITE OCCURRENCE

Location Plan

VIII RANGE #



LOCATION PLAN
 G. Trubshaw

Location & Access-

The South Marble Complex is located on the west side of Highway #507, some twelve kilometers north of the highway which joins Buckhorn to Bobcaygeon. The property is approximately nineteen kilometers northwest of Buckhorn. It is also some fifty-six kilometers northwest of Peterborough.

The North Marble Complex is approximately 3.2 kilometers north of the Main Zone.

The Main Zone is located some 180 meters west of Highway #507. It can be accessed by a cut trail from the highway (to the south of Horseshoe Lake). The trail-road is located 2.2 kilometers north of the Harvey Township- Cavendish Township boundary line.

The North Marble Complex is located some 400 meters northwest of Catchacoma Lake. The road into the property from Highway #507 is the next road north of the Buckhorn Marina turnoff. It is some 400 meters west along this road from Highway #507 to the east boundary of the marble complex.

A) Geological Survey-

This area is surrounded by amphibolite and biotite gneisses; which make up the Anstruher granite batholith. Intercalated with the granite units are limestone and marble (altered limestone) units. Within Cavendish Township are three main marble complexes; which will be termed North Complex (Picard Lake), South Complex (Horseshoe Lake), and East Complex (south end of Catchacoma Lake). Several amphibolite dykes and quartz monzonite dykes cut all of the other units. Vermiculite is formed from weathered limestone and amphibolites, and is found primarily in the marble-dolomite units and the amphibolite units in close proximity with the marbles.

The geological survey was run in May. During the previous program, the northern, western, and eastern limits of the marble complex were delineated. This survey was used to delineate the southern limits of the marble complex.

The marble complex pinched out to the south, and the southern contact lies under a swamp area. Mapping of the outcrops to the south of the swamp indicated only granitic and amphibolitic gneisses. On the north edge of the swamp are three marble wedges. Only the central wedge has vermiculite values; the values extending over width of 38.0 meters. A total of nine samples with spacings of 8.0 meters were taken (to the north of the open swamp).

The marble complex is approximately 900 meters in length and 800 meters in width on average. The main vermiculite-bearing zone (at the Anomaly B and Anomaly C locations) is 350 meters wide and has been tested over a length of 260 meters.

The results of the geological survey are on Plate 3.

B) Till Sampling Program- North Marble Complex-

After reviewing the OGS Preliminary Maps of Cavendish Township (Maps P.2420 and P.2421), it was indicated that another marble complex was located some 3.2 kilometers north of the Main Zone (and to the south of Picard Lake). It is indicated that this zone is some 600 meters in width and 1000 meters in length.

Lines were cut and flagged at 100 meters apart, with stations every 8.0 meters on the lines. A total of 6400 meters of lines were traversed during the program (including 800 meters of base line).

The area was mapped, and some 686 samples were taken during the survey. The sampling was done during June and July of 1993.

A total of 176 samples (25.7 percent) indicated vermiculite values. Of these, some twenty-five samples (3.6% of the total), returned significant values (indicating over 5-10% vermiculite content by volume).

A total of five anomalous trends were observed during the survey; two of which lie at the contact areas.

It was also observed that the vermiculite values for the most part are superficial and lie within the weathered parts of the marble complex. At depth, the marble was observed to be unweathered and unaltered; and vermiculite values diminished quickly.

The only area where substantial weathering was observed was on the northeast side of the complex; but this alone will not substantiate viable tonnages.

See Plate 2.

C) Till Sampling Program- Main Zone (South Marble Complex)-

The sampling was done between July and November of 1993. Lines were cut and flagged at 15.0 meters between lines and 8.0 meters between stations on the lines. A total of approximately 6100 meters of lines were used during the survey (including 300 meters of base line). The grid was laid out over the area where anomalies B and C were outlined by the previous program.

The eastern contact of the vermiculite zone within the marble complex was located during the survey. The vermiculite zones are still open on length (north and south- for some 200 meters and 450 meters respectively), and to the west (for some 200 meters).

Some 523 samples were taken during the survey; and at least twenty-five were retaken at depths from 1.0 meters to 2.0 meters. Of these samples, some 354 (67.7%) indicated vermiculite values, and 122 (23.3%) indicated values over 5-10% vermiculite by volume. Within the vermiculite bearing zone, some 34.5 percent of the total indicated values above 5-10% vermiculite by volume.

Sampling at depth (in twenty five areas) indicated higher vermiculite values. All of these locations indicated values above 5% vermiculite by volume.

Vermiculite values increased in areas where green mica was observed in the samples. Also, when lower density material was observed, vermiculite values increased.

Although values as high as 76.3% vermiculite were encountered, the overall average within the vermiculite-bearing zone is 10.6% vermiculite. This value increases with depth. Drilling below the 1.5 meter depth indicated an average value of 23.4% vermiculite to a depth of 6.0 meters. Values continue with depth.

Drilling and sampling have indicated values to depths of 6.0 to 7.0 meters, and that these values continue with depth. Numerous amphibolite dykes cut the marble complex; and vermiculite values are also found within the amphibolites.

See Plate 1 for results.

Conclusions-

Several vermiculite-bearing zones were delineated in both the North Marble Complex and the South Marble Complex. An area with significant vermiculite values was delineated in both areas; although there is no tonnage potential in the North Marble Complex (surficial deposits indications).

An area covering the central portions of the South Marble Complex was delineated for 150 meters X 290 meters. It is indicated that this anomaly could possibly extend over an area of 350 meters X 900 meters.

Recommendations-

The main zone is continuous to the north and south, and also to the west. Sampling should be continued at 15 meter intervals between samplings on lines at 30 meters apart. This will be done over an area of 350 meters by 900 meters. Due to the fact that there is swamp to the west, till sampling will have to be done using hand auguring and drill techniques combined. Approximately 550 to 600 holes will cover the untested portion of this grid.

If results prove satisfactory, then a bulk sampling program is recommended. This would be done using a backhoe to trench across the width of the anomaly; some 350 meters in length.

A metallurgical test is needed, and the material from the bulk test can be used. This sample can be evaluated by Lakefield Labs in near-by Lakefield.

December 31, 1993.
Toronto, Ontario.



F.T. Archibald, B.Sc. Geologist.

APPENDIX

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CAVENDISH VERMICULITE

* - Visible vermiculite

** - Very visible vermiculite

<u>Location</u>	<u>Description</u>	<u>Special Remarks</u>
Scotts Road & Highway	Brown, Amphibolite	*
Scotts Rd & Highway	Weathered amphibolite., dark brown	**
0.7 km N baldwin Marina	Beige dolomite	*
0.7 km N Baldwin Marina	Beige, weathered dolomite	*
0.7 km N Baldwin Marina	Beige dolomite, weathered, coarse	**
0.8 km N Baldwin Marina	Beige, weathered, coarse dolomite	**
0.8 km N Baldwin Marina west side	Beige, weathered, coarse, dolomite	**
Cav./Harv. Township Line	Dark brown amph., coarse, weathered, coarse flakes	**
Cav./Harv. Township Line	Weathered amph., green layers	*
Cav./Harv. Township Line	Weathered amph. gniss, coarse	**
L0S 1425W	Amphibolite gneiss	
L0S 125W	Amphibolite gneiss, black, mica rich	
L0S 475W	Amph., iron formation, rock	
L2S 175W	Amph. gniess, mafic rich	
L5S 0+50W	Brown/green flake, weathered dolomite	*
L6S BL A	Red, dolomite, weathered, amph. gneiss	
L6S 0+50W	Amph. rock, weathered, iron stain gneiss	
L6S 450W	brown,sand,green mica flakes, fine verm.dolom.	*
L6S 475W	brown sand, mixed with organics, fine mica	
L6S 500W	fine beige sand,mica rich, low verm.,dolomite	*
L6S 525W	beige sand-silt,green mica, dolomite	
L6S 550W	brown sand, mica rich,dolomite	
L6S 575W	beige-brown sand,mica rich,marble frag.	
L6S 600W	brown sand, marble fragments	
L6S 625W	beige-weathered marble, low/fine verm.	*
L6S 650W	dark brown/organic rich,sand (dolomite)	
L6S 675W	sand/marble fragments,mica/verm. rich	*
L6S 725W	sand with mica(silver),brown, marble	
L6S 775W	orange/brown,sand (marble)-mica/verm.	*
L6S 850W	orange/beige sand, marble frag.,low mica	
L7S 0+25W	Rusty, dolomite	
L7S 0+50W	beige, dolomite	
L7S 0+75W	beige, dolomite	
L7S 100W	beige, dolomite	
L7S 125W	beige, sand, dolomite	*

L7S 150W	beige, coarse sand, dolomite	
L7S 625W	weathered marble,coarse,beige	
L7S 650W	beige/brown,weathered marble,coarse,mica	
L7S 675W	beige, weathered marble	
L7S 700W	beige, weathered marble	
L7S 725W	beige, marble, mica rich	*
L7S 750W	beige, weathered marble/dolomite	
L7S 775W	sand/silt, beige, mica rich	
L7S 800W	fine grained, beige sand, marble	*
L7S 825W	brown sand/organics,green mica, low verm.	*
L7S 850W	weathered marble, brown/beige, high mica	
L7S 875W	weathered marble, high mica, beige	
L7S 900W	beige marble, green mica rich,low verm.	*
L7S 925W	weathered marble, beige/brown, low mica	
L7S 950W	brown/orange sand,low verm.,marble	*
L7S 975W	weathered marble,beige/brown, silver mica	
L7S 1000W	sand with organics,marble fragments	
L7S 175W	beige, coarse sand, dolomite	
L8S 0+75W	Calcite/marble, coarse, grainy, rock	
L8S 100W	Buff, marble, grainy, rock, epidote rich	
L8S 125W	Green, weathered dolomite, flake	*
L8S 150W	Pink/green, marble, rock, coarse	**
L8S 200W	Beige, weathered, dolomite, gritty	
L8S 225W	Iron stain dolomite, beige, coarse, grainy	*
L8S 250W	Coarse, weathered dolomite	
L8S 475W	beige sand, weathered marble	
L8S 500W	beige sand, weathered marble	
L8S 525W	beige sand, weathered marble	
L8S 550W	beige sand, weathered marble	
L8S 575W	beige sand, weathered marble	
L8S 700W	sand/silt,beige/brown,low mica,marble	
L8S 725W	coarse sand, beige,marble, mica rich	
L8S 750W	coarse sand, marble,mica rich	
L8S 775W	beige sand, weathered marble, low verm.	*
L8S 800W	orange/beige sand, mica rich,amphibolite	*
L8S 825W	beige sand, marble, low mica content	*
L8S 850W	fine sand, marble, beige	
L8S 875W	fine sand, marble, beige colour	
L8S 900W	fine brown sand, mica rich,amphibolite	
L8S 925W	fine sand with marble fragments	

L9S 150W	Beige, weathered, fine	*
L9S 175W	Coarse weathered dolomite, beige	
L9S 225W	Beige marble, green sheets, rock	
L9S 400W	Buff, marble, grainy, rock	
L9S 450W	Buff, marble, grainy	
L9S 525W	Brown, weathered, green flakes	***
L9S 550W	Brown, green flakes, weathered	**
L9S 575W	Brown, weathered, green flakes, coarse	***
L9S 600W	Marble, white/buff, rock	
L9S 625W	brown, weathered marble with green mica	*
L9S 650W	brown, weathered marble with green mica	**
L9S 675W	brown, weathered marble, mica rich	**
L9S 775W	beige, weathered, low mica, marble	
L9S 800W	sand, weathered marble, mica rich	
L9S 825W	medium sand, weath. marble, beige, low vern *	
L9S 850W	fine sand, weathered marble, mica rich	*
L9S 875W	beige, weathered marble, mica rich	**
L9S 900W	coarse weathered marble, buff/beige	**
L9S 925W	weathered marble, beige/buff, fine vern	**
L10S 125W	Brown, iron formation, dolomite, rock	
	weathered amph. (flakes), brown	
L10S 150N	Brown, iron formation, dolomite, rock	
	weathered amph. (flakes), brown	
L10S 175W	brown, weathered dolomite	
L10S 200W	brown, weathered dolomite	
L10S 225W	Brown/green flake, weathered	*
L10S 250W	Beige, dolomite, massive, iron formation, rock	
L10S 400W	Buff marble, rock, massive	
L10S 425W	Beige, marble, grainy, rock	
L10S 450W	Marble/calcite, red stain, rock	
L10S 475W	Beige/pink dolomite, grainy	
L10S 500W	Buff marble, rock, massive	
L10S 500W	Marble, red splotches, massive, rock	
L10S 525W	Beige dolomite, weathered, coarse, grainy	
L10S 575W	Marble, green layers/flakes (50%)	**
L10S 600W	beige marble, weathered	
L10S 625W	Pink & beige, fine marble, massive	
L10S 800W	coarse marble, beige, mica rich	*
L10S 825W	coarse beige marble, mica rich	

L10S 850W	fine sand, beige, low mica	
└10S 875W	orange, fine sand, marble, low mica	
└10S 900W	coarse, beige, marble, low mica	

L10S 925W	coarse, beige , marble, mica rich	*
L10S 950W	fine sand, beige, low mica, marble	
L11S 200W	Beige, weathered dolomite	**
L11S 225W	Beige/pink, green flakes, marble	*
L11S 250W	beige/pink, green flakes, marble	*
L11S 275W	beige, coarse, marble/dolomite	
L11S 325W	beige, marble/dolomite	
L11S 350W	beige, marble/dolomite, green flakes	**
L11S 375W	beige, marble/dolomite	*
L11S 400W	beige, marble/dolomite, mica rich	*
L11S 425W	beige, marble/dolomite	*
L11S 450W	beige colour, coarse weathered marble	
L11S 475W	beige, weathered marble/dolomite	
L11S 500W	weathered marble	
L11S 525W	brown/beige, weathered marble	
L11S 550W	beige, weathered marble	
L11S 575W	beige colour, marble/dolomite	
L11S 600W	beige/buff, marble/dolomite	
L11S 625W	weathered marble, beige/buff colour	
L11S 650W	weathered marble, beige/buff colour	
L11S 675W	beige/buff, marble/dolomite	*
L11S 700W	beige/buff, dolomite/marble	*
L11S 725W	beige/buff, marble/dolomite	*
L11S 775W	beige, weathered dolomite/marble	
L11S 825W	beige, weathered dolomite/marble	
L11S 850W	beige, weathered dolomite/marble	
L11S 900W	coarse, beige, marble, mica rich,marble	
L11S 925W	fine sand, orange colour, low mica,amph.	
L12S 150W	Marble, weathered, granular	*
L12S 150W A	Marble, rock, red/buff	
L12S 175 A	Beige, weathered, marble, rock	
L12S 200W A	Pink, marble, rock	
L12S 225W A	Buff, marble rock, granular	**
L12S 250W A	Rusty, weathered, marble rock	*
L12S 275W	rusty, weathered marble/dolomite, beige	
L12S 300W A	Beige, weathered dolomite	

L12S 325W	Pink dolomite, green layers	**
L12S 325 A	Brown/green, rock	*
L12S 340W	Beige/green splotches, rock	
L12S 350W A	Pink/beige marble, green	*
L12S 350W	Buff, marble, rock	
L12S 375W	Pink marble, green layers	
L12S 400W	Brown dolomite, weathered	*
L12S 425W A	Beige marble, rock	*
L12S 425W	Buff, marble, rock	
L12S 450W A	Red/brown, weathered, dolomite	
L12S 450W	Buff, marble rock	
L12S 475W A	Beige, fine weathered dolomite	*
L12S 475W	Marble, weathered, rock	
L12S 500W	Buff, marble, rock	
L12S 525W	Buff/pink, marble, rock	
L12S 525W A	Buff/green marble, layers, rock	
L12S 550W A	Beige, fine weathered dolomite, fine, rock	
L12S 575W A	Beige/buff, red layers, calcite layers, rock	
L12S 600W	Buff/pink, marble, rock	
L12S 625W A	Brown dolomite, green layers	*
L12S 625W	Buff, marble, rock	
L12S 650W	Buf, marble, green tinge, massive	
L12S 650W A	Dark brown/green, amph.	*
L12S 675W A	Pink, marble, rock, green layers	*
L12S 750W	Buff/pink, marble rock	
L12S 775W	Buff, marble, fine grain	
L12S 825W	Weathered, brown, weathered amphibolite	
L13S 175W	Marble, rock, red/buff	
L13S 200W	Brown marble/dolomite with organics	
L13S 225W	brown/beige, marble/dolomite	
L13S 250W	Marble, green layers, marble	
L13S 275W	Green layers, marble/dolomite	
L13S 325W	Brown soil, marble/dolomite	*

L13S 350W	weathered marble, beige colour	
L13S 375W	Sandstone (altered marble)	
L13S 425W	Green layer, altered marble	
L13S 450W	Pink, marble, green layers, rock(marble)	
L13S 475W	Buff, marble, rock(marble)	
L13S 525W	Marble, weathered, rock(marble)	
L13S 550W	Buff, marble, rock, green epidote	
L13S 575W	Marble rock, rock/buff	*
L13S 600W	White, marble rock	
L13S 625W	white/buff, rock, marble	
L13S 650W	white/buff, marble rock	
L13S 675W	beige/buff, marble/dolomite, weathered	*
L13S 700W	Marble, green layers	
L13S 725W	marble with green mica layers	
L13S 750W	marble, buff/pink colour, massive	
L13S 775W	Buff/pink marble, rock, massive	
L13S 800W	buff/pink colour, marble/dolomite	
L13S 825W	marble, buff colour, massive	
L13S 850W	White, marble rock	
L14S 250W	Fine, green flakes (marble/dolomite)	*
L14S 275W	Buff/pink marble, weathered	
L14S 300W	buff/pink marble	
L14S 325W	Buff/pink marble	
L14S 350W	buff/pink marble/ weathered	
L14S 375W	Marble/dolomite, beige colour	
L14S 400W	Marble/dolomite, weathered, beige/buff	
L14S 425W	marble/dolomite, beige colour	
L14S 450W	Buff, marble, rock	
L14S 475W	Marble, beige colour, weathered	
L14S 500W	brown/green mica flakes, pink marble	**
L14S 525W	Brown/green flakes, weathered, amphibolite	*
L14S 550W	rusty, mica rich, amphibolite	
L14S 575W	green mica, weathered marble	*
L14S 600W	weathered marble, beige	
L14S 625W	Marble, weathered, beige	
L14S 650W	Marble, buff colour, massive	
L14S 675W	Buff, marble, rock	
L14S 700W	Sandstone (altered marble), green layer, rock	
L14S 725W	Beige, marble, fine, rock	

L14S 750W	marble, massive/unweathered	
L14S 775W	marble, mica rich, beige/buff colour	*
L14S 800W	Marble, buff/pink colour	
L14S 825W	Buff/pink, marble, rock	
L15S 450W	Brown, mica rich, amphibolite	
L15S 475W	Amphibolite, mica rich, black colour, rusty	
L15S 500W	Buff, marble, rock	
L15S 525W	Marble, weathered	
L15S 550W	Buff, marble, rock	

L15S 575W	Buff, marble, rock	
L15S 600W	marble, coarse/weathered, beige colour	*
L15S 625W	Buff/pink marble, rock, massive	*
L15S 650W	beige/buff colour, weathered dolomite	*
L15S 675W	Buff, marble, rock	
L15S 700W	Buff, marble, rock	
L15S 725W	Buff, marble, rock	
L15S 750W	Buff, marble, rock	
L15S 775W	Buff, marble rock, granular	
L15S 800W	Marble, coarse grained, beige colour	
L15S 825W	Marble, beige, coarse grained	
L15S 850W	Buff/pink marble, rock, massive	
L15S 875W	Marble, weathered	
L16S 475W	Amphibolite	
L16S 500W	Amphibolite, rusty, mica rich, brown/black	
L16S 525W	Beige, marble, rock, calcite	
L16S 550W	Beige, calcite/marble, rock	
L16S 600W	Chert rich (marble), massive	
L16S 625W	Buff, marble, rock	
L16S 650W	Dark brown marble, weathered	**
L16S 675W	Buff, marble, grainy, rock	
L16S 700W	Weathered, amph. schist (mafic rich)	
L16S 725W	Buff/pink, marble, rock	
L16S 750W	Pink/buff marble, rock, brown splotches	
L16S 775W	Buff, marble, grainy, rock	
L16S 800W	Buff, marble, rock	
L16S 825W	buff, weathered marble	*
L16S 850W	Weathered marble, buff colour	
L16S 875W	Brown marble, iron formation, rock	

L16S 900W	Granite, rock	
L17S 650W	Amphibolite, rusty	
L17S 675W	Amphibolite, rusty, mica rich, brown/black	
L17S 700W	Buff, marble, rock	
L17S 750W	Buff/red, coarse, marble, rock	
L17S 825W	Marble, massive, iron formation, rock	
L17S 725W	Marble, coarse, buff/green, epidote	
L17S 775W	Brown, weathered, amph. gneiss	
L18S 825W	beige, weathered dolomite, green mica, verm	**
1	Green flakes, fine, dolomite/marble, -70 SW	*
2	beige, dolomite/marble, -70 SW	*
3	Green, flake, coarse dolomite, lenses to 1"	*
4	Green flake, dolomite, -45 SW dip	*
5	Green flakes, dolomite, -80 SW dip	*
6	Green flake, dolomite, -70 SW dip	**
7	Green flakes, dolomite, -70 SW dip	*
8	Soil, brown, dolomite with organics	**
9	Rock, green layers, dolomite, -70 SW dip	*
10	Fine sand, dolomite, green mica flakes	**
11	Soil, sand and organics, dolomitic	*
12	Fine dolomite, red/brown colour, low mica	**
13	Green flakes, dolomite/marble, -80 SW dip	**
14	Rock, green layers, dolomite, at old pit	*
15	Green flakes, dolomite	**
16	Green flakes, coarse marble, -85 SW dip	**
17	Green flakes, dolomite/marble, -85 SW dip	**
18	Weathered, rock, dolomite, coarse, pink/green	
19	Green flakes, coarse dolomite, -70 SW dip	**
20	beige weathered dolomite, pebbly, -70 SW dip	**
21	beige weathered dolomite, -70 SW dip	*
22	Marble, buff/beige, coarse, -75 SW dip	
23	Green, fine marble/dolomite, beige, coarse	**
24	Rock, marble	
25	Green flakes, dolomite, beige/purple/green	*
26	weathered dolomite/marble, beige, coarse	*
27	Soil dolomite and organics, beige/coarse	*
28	Soil, dolomite and organics, beige/coarse	*
29	Soil, dolomite and organics, beige/coarse	*
30	marble, beige colour	*

31	Marble, weathered	
32	beige, marble, pebbly texture, -70 SW dip	*
33	weathered dolomite, pebbly, -70 SW dip	
34	marble/dolomite, beige, weathered	*
35	marble/dolomite, beige/red, weathered	*
36	beige/buff, marble layers, red splotches, -70	*
37	Beige, marble, coarse, granular, weathered	
38	beige-green/coarse marble, -75 SW dip	*
39	Green flakes, coarse marble, -80 SW dip	**
40	Marble dyke beige/green layers, -60 SW dip	*
41	beige dolomite, coarse/pebbly, -60 SW dip	*
42	Weathered marble, coarse, granular, pink, -65	
43	Marble, rock, massive, buff colour	
44	Marble, rock, semi-massive, -50 SW dip	
45	Marble, weathered, -45 SW dip	
46	beige/pebbly, massive marble, -50 SW dip	*
47	beige/red, weathered marble, -55 SW dip	*
48	Marble, beige/red/green layer, granular, -60 dip	
49	Brown weathered dolomite, green flakes coarse, green splotches	**
50	Marble, green splotches, weathered	
51	Marble, rock, beige, pebbly textured	
52	Sand, red/brown colour @ edge of amphibolite	*

Cavendish Till Sampling Program- Main Zone

<u>Sample Location</u>	<u>Initial Weight (gm)</u>	<u>Vermiculite (gm)</u>	<u>%Vermiculite</u>
L200N-300W	173.0	4.0	2.31
L200N-325W	162.0	13.0	8.02
L200N-350W	141.0	8.0	5.67
L200N-375W	158.0	2.0	1.27
L200N-400W	155.0	5.0	3.22
L200N-425W			
L200N-450W	120.0	58.0	48.33
L200N-475W	180.0	13.0	7.22
L150N-300E	109.0	30.0	27.52
L150N-275E	140.0	36.0	25.71
L150N-225E	164.0	2.0	1.21
L150N-200E	110.0	20.0	18.18
L150N-325W	146.0	1.0	0.70
L150N-350W	97.0	3.0	3.10
L150N-375W	895.0	50.0	5.58
L150N-400W	870.0	170.0	19.54
L150N-425W	140.0	2.0	1.42
L150N-450W	164.0	13.0	7.92
L150N-475W	187.0	19.0	10.16
L100N-300E	114.0	12.0	10.53
L100N-275E	217.0	4.0	1.84
L100N-250E	92.0	11.0	11.95
L100N-225E	186.0	11.0	5.91
L100N-200E			
L100N-175E	134.0	9.0	6.71
L100N-150E	236.0	21.0	8.89
L100N-050E	137.0	26.0	18.97
L100N-025E			
L100N-BL	175.0	10.0	5.71
L100N-025W	87.0	13.0	14.94
L100N-050W	133.0	39.0	29.32
L100N-075W	133.0	74.0	55.64
L100N-100W	200.0	42.0	21.00
L100N-125E	231.0	31.0	13.42
L100N-150W	181.0	15.0	12.06
L100N-175W	126.0	5.0	3.97
L100N-200W	155.0	44.0	28.39

<u>Sample Location</u>	<u>Initial Weight (gm)</u>	<u>Vermiculite (gm)</u>	<u>%Vermiculite</u>
L100N-225W	141.0	25.0	17.73
L100N-325W	180.0	12.0	6.66
L100N-350W	174.0	10.0	5.75
L100N-375W	116.0	30.0	23.30
L100N-400W	98.0	23.0	23.46
L100N-425W	122.0	10.0	8.19
L100N-450W	97.0	5.0	5.15
L100N-475W	89.0	31.0	34.83
L100N-500W	261.0	15.0	5.74
L100N-525W			
L100N-550W	260.0	17.0	6.53
L100N-575W	154.0	33.0	21.42
L50N-175E	125.0	17.0	13.60
L50N-150E	142.0	17.0	11.97
L50N-125E			
L50N-100E	157.0	29.0	18.47
L50N-075E	165.0	15.0	9.10
L50N-050E	88.0	13.0	14.77
L50N-025E	122.0	16.0	13.11
L50N-BL	130.0	17.0	13.07
L50N-025W	104.0	18.0	17.30
L50N-050W	119.0	12.5	10.50
L50N-150W	118.0	18.0	15.25
L50N-175W	144.0	22.0	15.27
L50N-200W			
L50N-250W	139.0	24.0	17.27
L50N-400W	150.0	10.0	6.66
L50N-425W	90.0	10.0	11.11
L50N-450W	190.0	13.0	6.84
L50N-475W	93.0	12.0	12.90
L50N-500W	119.0	24.0	20.01
L50N-525W	189.0	20.0	20.00
L50N-525W	89.0	8.0	9.00
L50N-550W	127.0	31.0	24.40

<u>Sample Location</u>	<u>Initial Weight (gm)</u>	<u>Vermiculite (gm)</u>	<u>%Vermiculite</u>
L00-325E	113.0	7.0	6.19
L00-BL	181.0	2.0	1.10
L00-025W	132.0	9.0	6.81
L00-025W	162.0	30.0	18.51
L00-050W	147.0	10.0	6.80
L00-050W	160.0	8.5	5.31
L00-075W	196.0	5.0	2.55
L00-075W	77.0	5.0	6.49
L00-075W	160.0	6.0	3.75
L00-100W	93.0	19.0	20.43
L00-125W	113.0	8.0	7.07
L00-150W	118.0	18.0	15.25
L00-175W	166.0	4.0	2.40
L00-200W	163.0	54.0	33.12
L00-225W	136.0	0.5	0.40
L00-250W	143.0	2.0	1.40
L00-275W	151.0	1.0	0.66
L00-300W	153.0	10.0	6.53
L00-300W	122.0	5.0	4.10
L00-325W	161.0	2.0	1.24
L00-350W	131.0	11.0	8.40
L00-375W	170	2.0	1.18
L00-400W	122.0	2.0	1.64
L00-425W	74.0	5.0	6.75
L00-450W	183.0	8.0	4.37
L00-475W	150	10.0	6.66
L00-475W	93.0	10.0	10.75
L00-500W	113.0	12.0	10.61
L00-525W	103.0	3.0	2.91
L00-550W	164.0	2.0	1.22
L00-550W	108.0	10.0	9.25
L00-550W	108.0	10.0	11.23
L00-575W	124.0	17.0	13.71
L00-600W	103.0	16.0	15.53
L50S-025W	145.0	0.5	0.30
L50S-050W			
L50S-075W			
L50S-100W	139.0	1.0	0.70
L50S-125W			

<u>Sample Location</u>	<u>Initial Weight (gm)</u>	<u>Vermiculite (gm)</u>	<u>%Vermiculite</u>
L50S-150W			
L50S-175W	154.0	45.0	29.22
L50S-200W	154.0	32.0	20.78
L50S-225W			
L50S-250W			
L50S-275W			
L50S-300W			
L50S-325W			
L50S-350W			
L50S-375W	137.0	2.0	1.46
L50S-400W	168.0	13.0	7.73
L50S-425W	162.0	0.5	0.30
L50S-450W	171.0	10.0	5.84
L50S-475W	239.0	5.0	2.11
L50S-500W	97.0	7.0	7.21
L50S-525W			
L50S-550W			
L50S-575W			
L50S-600W	155.0	18.0	11.61
L50S-625W	146.0	1.0	0.70
L100S-100E	96.0	5.0	5.21
L100S-025W	169.0	20.0	11.83
L100S-050W			
L100S-075W			
L100S-100W	218.0	5.0	2.29
L100S-125W			
L100S-150W			
L100S-175W			
L100S-200W			
L100S-225W			
L100S-250W			
L100S-275W	141.0	17.0	12.06
L100S-300W	116.0	25.0	21.55
L100S-325W	109.0	7.0	6.42
L100S-350W	142.0	16.0	11.26
L100S-375W			
L100S-400W	189.0	7.0	3.70
L100S-425W			
L100S-450W	146.0	8.0	5.47

<u>Sample Location</u>	<u>Initial Weight (gm)</u>	<u>Vermiculite (gm)</u>	<u>%Vermiculite</u>
L100S-475W	175.0	10.0	5.71
L100S-500W			
L100S-525W			
L100S-550W	119.0	24.0	20.01
L100S-575W	139.0	2.0	1.43
L100S-600W	210.0	18.0	8.57
L150S-200W	150.0	17.0	11.33
L150S-225W	149.0	3.0	2.01
L150S-250W	146.0	7.0	4.79
L150S-275W	178.0	13.0	7.30
L150S-300W	202.0	3.0	1.49
L150S-325W	124.0	17.5	14.11
L150S-350W			
L150S-375W			
L150S-400W	116.0	3.0	2.58
L150S-425W	153.0	1.0	0.65
L150S-450W			
L150S-475W			
L150S-500W			
L150S-525W	159.0	11.0	6.92
L150S-550W	188.0	11.0	5.85
L150S-575W	136.0	9.0	6.61
L150S-600W	155.0	0.5	0.30
L150S-625W	123.0	15.0	12.20
L200S-300W	200.0	7.0	3.50
L200S-325W	145.0	14.0	9.66
L200S-350W			
L200S-375W			
L200S-400W	165.0	23.0	13.93
L200S-425W	141.0	1.0	0.70
L200S-450W			
L200S-475W	183.0	25.0	13.66
L200S-500W			
L200S-525W	179.0	2.0	1.12
L250S-350W	160.0	4.0	2.50
L250S-375W	126.0	5.0	3.97

<u>Sample Location</u>	<u>Initial Weight (gm)</u>	<u>Vermiculite (gm)</u>	<u>%Vermiculite</u>
L250S-375W	97.0	13.0	13.40
L250S-400W	134.0	5.0	3.73
L250S-400W	125.0	6.0	4.80
L250S-425W	136.0	0.5	0.36
L250S-450W	104.0	18.0	17.31
L250S-475W	122.0	8.0	6.55
L250S-500W	166.0	10.0	6.02
L250S-500W	134.0	22.0	16.41
L250S-525W			
L250S-550W	140.0	3.0	2.14
L250S-575W	140.0	9.0	6.43
L250S-600W	204.0	9.0	4.41
L300S-150W	181.0	4.0	2.20
L300S-175W	105.0	4.0	3.80
L300S-200W	153.0	0.5	0.30
L300S-375W	142.0	10.0	7.04
L300S-400W	176.0	12.0	6.82
L300S-425W	144.0	1.0	0.69
L300S-450W	154.0	1.0	0.65
L300S-450W	149.0	3.0	2.01
L300S-475W	143.0	9.0	6.29
L300S-500W	190.0	9.0	4.73
L300S-500W	480.0	6.0	1.25
L300S-525W	830.0	30.0	3.61
L300S-550W	160.0	4.0	2.50
L350S-150W	162.0	1.0	0.61
L350S-175W	177.0	4.0	2.25
L350S-200W	148.0	2.0	1.35
L350S-225W	153.0	2.0	1.31
L350S-250W	154.0	3.0	1.95
L350S-275W			
L350S-300W			
L350S-325W			
L350S-350W			
L350S-375W			
L350S-400W	143.0	14.0	9.79
L350S-425W	168.0	20.0	11.90

<u>Sample Location</u>	<u>Initial Weight (gm)</u>	<u>Vermiculite (gm)</u>	<u>%Vermiculite</u>
L350S-450W	107.0	3.0	2.80
L350S-475W	79.0	11.0	13.92
L350S-500W	620.0	20.0	3.23
L350S-525W	176.0	6.0	3.41
L350S-550W	234.0	18.0	7.69
L350S-575W	163.0	2.0	1.23
L350S-600W	153.0	12.0	7.84
L400S-450W	89.0	31.0	34.83
L400S-450W	121.0	10.0	8.26
L400S-475W	820.0	230.0	28.04
L400S-500W	153.0	3.0	1.96
L400S-525W	163.0	16.0	9.81
L400S-550W	110.0	17.0	15.45
L400S-575W	154.0	9.0	5.84
L400S-600W	128.0	8.0	6.25
L400S-625W	145.0	80.0	55.17
L400S-650W	340.0	100.0	29.41
L450S-475W	89.0	10.0	11.23
L450S-500W			
L450S-525W	164.0	3.0	1.83
L450S-550W			
L450S-575W	88.0	7.0	7.95
L450S-600W	84.0	30.0	35.71
L450S-625W	117.0	6.0	5.12
L450S-650W	70.0	9.0	12.86
L450S-650W	160.0	10.0	6.25
L450S-675W	161.0	7.0	4.34
L450S-700W	81.0	6.0	7.40
L450S-725W	144.0	10.0	6.94
L500S-550W	139.0	4.0	2.87
L500S-575W	109.0	4.0	3.67
L500S-600W	125.0	9.0	7.20
L500S-625W	470.0	40.0	8.51
L500S-650W	69.0	9.0	13.04
L500S-675W	157.0	4.0	2.55

<u>Sample Location</u>	<u>Initial Weight (gm)</u>	<u>Vermiculite (gm)</u>	<u>%Vermiculite</u>
L500S-700W	139.0	3.0	2.15
L500S-725W	181.0	6.0	3.31
L550S-550W	136.0	5.0	3.67
L550S-575W	980.0	250.0	25.51
L550S-575W	180.0	24.0	13.33
L550S-625W	159.0	5.0	3.17
L550S-650W			
L550S-675W			
L550S-700W	1025.0	460.0	44.88
L550S-725W	148.0	7.0	4.73
L550S-750W	167.0	3.0	1.80
L600S-550W	146.0	5.0	3.42
L600S-575W	159.0	116.0	72.96
L600S-600W	146.0	23.0	15.75
L600S-625W	173.0	1.0	0.57
L600S-650W	179.0	11.0	6.14
L600S-675W			
L600S-700W			
L600S-725W			
L600S-750W	172.0	26.0	15.11
L600S-775W	440.0	20.0	4.55
L650S-725W	172.0	3.0	1.74
L650S-750W	97.0	3.0	3.10
L650S-775W			
L650S-800W	82.0	7.0	8.53
L650S-825W	152.0	2.0	1.32
L650S-850W	146.0	10.0	6.85
L650S-875W	135.0	103.0	76.30
L650S-900W	135.0	4.0	2.96
L650S-900W	120.0	1.0	0.83
L650S-925W	106.0	3.0	2.83
L650S-950W			
L650S-975W	188.0	11.0	5.85
L650S-1000W			
L650S-1025W			
L650S-1050W	160.0	19.0	11.87

AUTHOR OF REPORTS: Frederick Thomas Archibald

Field studies done by: Frederick Thomas Archibald

Lab Studies done by: Frederick Thomas Archibald

In % Vermiculite column; if no value then value less than 0.5% by volume

If sample missing then no analyses done due to insignificant values
either by field investigation (visual) or by lab investigation
(exfoliation by muffle furnace or by propane torch).

Cavendish Vermiculite- North Marble ComplexSampling Program

<u>Sample Coordinate</u>	<u>Description</u>	<u>% Vermiculite(visual)</u>
L1S-025E	coarse marble-beige(contact area)	
L1S-050E	coarse marble-beige	-2%
L1S-075E	coarse marble-beige	+5%
L1S-100E	coarse marble-beige	
L1S-150E	coarse marble-beige-mica rich	
L1S-175E	coarse marble-beige-mica rich	
L1S-200S	orange-red-amphibolite-mica rich	
L1S-225S	orange-red-amphibolite-mica rich	
L1S-250S	orange-red-amphibolite-mica rich	
L1S-275S	orange-red-amphibolite-mica rich	
L1S-300E	brown marble-mica rich	
L1S-325E	coarse marble (2.0 meter depth)	
L1S-350E	quartz monzonite	
L1S-375E	beige marble- mica rich	
L1S-400E	beige marble- mica rich	
L1S-425E	beige marble- mica rich	
L1S-450E	beige marble- mica rich	
L1S-475E	beige marble- mica rich	
L1S-500E	beige marble- mica rich	
L1S-525E	brown marble with organics	1-5%
L1S-550E	beige marble	1-5%
L1S-575E	beige marble	
L1S-600E	beige marble	
L1S-625E	beige marble- mica rich	1-5%
L1S-650E	beige marble- mica rich	-2%
L1S-675E	beige marble	
L1S-700E	brown amphibolite- mica rich	
L1S-725E	beige-orange-amphibolitic	
L1S-750E	beige-orange-amphibolitic	
L1S-775E	beige-orange-amphibolitic	
L1S-800E	beige-orange sand	
L1S-825E	beige - orange sand	
L1S-850E	brown sand + organics	
L1S-875 to 900E	swamp	
L1S-925E	orange sand (marble)	
L1S-950E	orange marble sand, mica rich	1-2%
L1S-975E	orange marble sand, mica rich	1-2%
L1S-1000E	coarse marble- beige	1-5%
L1S-1025E	coarse marble- beige	+5%
L1S-1050E	mica rich silt	1-5%
L1S-1075E	orange sand- mica rich	1-5%

L1S-1100E	brown sand	
L1S-1125E	brown sand	
L1S-1150E	brown sand- mica rich	
L1S-1175E	coarse marble, beige (contact area)	+5%
L2S-700W	beige marble- mica rich	+5%
L2S-675W	beige marble-mica rich	+5%
L2S-650W	beige marble	
L2S-625W	beige marble	
L2S-600W	beige marble	
L2S-575W	beige marble	
L2S-550W	beige marble	
L2S-525W	beige marble	
L2S-500W	beige marble	
L2S-475W	beige marble	
L2S-450W	beige marble	
L2S-425W	beige marble	
L2S-400W	beige marble	
L2S-375W	beige marble	
L2S-350W	beige marble	
L2S-325W	beige marble	
L2S-300W	beige marble	
L2S-275W	beige marble	
L2S-250W	beige marble-mica rich	1-5%
L2S-225W	beige marble	
L2S-200W	beige marble	
L2S-175W	beige marble	
L2S-150W	beige marble	
L2S-125W	beige marble	
L2S-100W	beige marble	
L2S-075W	beige marble	
L2S-050W	beige marble	
L2S-025W	beige marble	
L2S-BL	beige marble	
L2S-025E	beige marble	
L2S-050E	beige marble	
L2S-075E	beige marble-mica rich	1-5%
L2S-100E	beige marble-mica rich	1-5%
L2S-125E	beige marble-mica rich	1-5%
L2S-150E	beige marble-mica rich	1-5%
L2S-175E	beige marble	
L2S-200E	beige marble	
L2S-225E	beige marble	
L2S-250E	beige marble- mica rich	1-5%

L3S-300W	coarse marble- mica rich	1-5%
L3S-275W	coarse marble- mica rich	1-5%
L3S-250W	coarse marble- mica rich	1-5%
L3S-225W	coarse marble- mica rich	1-5%
L3S-200W	orange- beige sand (marble)	
L3S-175W	orange- beige sand (marble)	
L3S-150W	orange- beige sand (marble)	
L3S-125W	orange- beige sand (marble)	
L3S-100W	orange- beige sand (marble)	
L3S-075W	orange- beige sand (marble)	
L3S-050W	orange- beige sand (marble)	
L3S-025W	orange- beige sand (marble)	
L3S-BL	orange- beige sand (marble)	
L3S-025E	orange sand	
L3S-050E	orange sand	
L3S-075E	orange-brown sand	
L3S-100E	brown sand- amphibolitic (mica rich)	
L3S-125E	brown sand- amphibolitic (mica rich)	
L3S-150E	brown sand- amphibolitic (mica rich)	
L3S-175E	brown sand- amphibolitic (mica rich)	
L3S-200E	brown sand- amphibolitic (mica rich)	
L3S-225E	brown sand- amphibolitic (mica rich)	
L3S-250E	brown sand- amphibolitic (mica rich)	
L3S-275E	beige sand (marble)	
L3S-300E	beige sand (marble)	
L3S-325E	orange sand	
L3S-350E	beige silt (marble)	
L3S-375E	orange sand	
L3S-400E	orange-brown sand	
L3S-425E	brown sand- amphibolitic	
L3S-450E	coarse marble- beige	+10%
L3S-475E	brown sand-mica rich	
L3S-500E	orange sand	
L3S-525E	beige marble	
L3S-550E	beige marble	
L3S-575E	beige marble- mica rich	
L3S-600E	orange sand- mica rich	1-5%
L3S-625E	orange sand- mica rich	
L3S-650E	orange sand- mica rich	
L3S-675E	orange amphibolitic- mica rich	
L3S-700E	brown-beige sand	
L3S-725E	brown-beige sand	
L3S-750E	brown-beige sand	
L3S-775E	coarse marble	1-5%
L3S-800E	coarse marble	1-5%
L3S-825E	coarse marble	-1%

L3S850E	beige-grey silt	-1%
L3S-875E	coarse marble	-2%
L3S-900E	coarse marble	+10%
L3S-925E	brown granite (sand)	
L3S-950E	orange-brown sand (granitic)	
L3S-975E	orange-brown sand (granitic)	
L4S-1125W	beige marble , mica rich	+5%
L4S-1100W	beige marble , mica rich	1-2%
L4S-1075W	beige marble , mica rich	1-5%
L4S-1050W	beige-orange marble , mica rich	1-5%
L4S-1025W	beige marble , mica rich	1-5%
L4S-1000W	beige-orange marble , mica rich	1-2%
L4S-975W	beige marble , mica rich	1-5%
L4S-950W	coarse beige marble	1-5%
L4S-925W	orange marble (sand)	
L4S-900W	orange marble (sand)	
L4S-875W	orange marble (sand)	
L4S-850W	brown marble sand- mica rich	
L4S-825W	brown marble sand- mica rich	
L4S-800W	brown marble sand- mica rich	
L4S-775W	orange-brown marble sand	
L4S-750W	orange-brown marble sand	
L4S-725W	brown marble, mica rich	
L4S-700W	brown marble, mica rich	
L4S-675W	brown marble, mica rich	
L4S-650W	brown marble, mica rich	
L4S-625W	brown marble, mica rich	
L4S-600W	organics-brown sand(marble)-	
L4S-575W	organics-brown sand(marble)-mica rich	
L4S-550W	organics-brown sand(marble)-mica rich	
L4S-525W	fine marble	+5%
L4S-500W	orange-brown marble sand	
L4S-475W	orange-brown marble sand	
L4S-450W	orange sand (marble)	
L4S-425W	beige silt	
L4S-400W	beige marble	
L4S-375W	brown marble- mica rich	1-5%
L4S-350W	brown sand	
L4S-325W	brown organics	
L4S-300W	brown organics	
L4S-275W	brown organics	
L4S-250W	orange sand	
L4S-225W	orange sand	
L4S-200W	brown sand	

L4S-175W	beige marble	
L4S-150W	beige marble- mica rich	1-5%
L4S-125W	coarse marble- beige	
L4S-100W	beige-brown marble- mica rich	
L4S-075W	beige-brown marble	
L4S-050W	beige-brown marble	
L4S-025W	beige-brown marble	
L4S-BL	beige-brown marble	
L4S-025E	beige marble	
L4S-050E	beige marble	
L4S-075E	beige marble	
L4S-100E	beige marble	
L4S-125E	beige-orange sand- mica rich	
L4S-150E	orange-beige sand	
L4S-175E	beige marble- mica rich	
L4S-200E	orange-yellow sand (marble)	
L4S-225E	orange-yellow sand (marble)	
L4S-250E	orange-yellow sand (marble)	
L4S-275E	orange-yellow sand (marble)	
L4S-300E	orange-yellow sand (marble)	
L4S-325E	orange-yellow marble	
L4S-350E	orange sand- mica rich	
L4S-375E	orange sand- mica rich	
L4S-400E	orange sand- mica rich	
L4S-425E	orange sand- mica rich	
L4S-450E	orange sand- mica rich	
L4S-475E	orange sand- mica rich	
L4S-500E	brown sand- mica rich	
L4S-525E	brown sand- mica rich	
L4S-550E	brown sand- mica rich	
L4S-575E	brown sand- mica rich	
L4S-600E	beige-brown sand-silt	
L4S-625E	beige-brown marble	
L4S-650E	brown sand	
L4S-675E	brown sand- mica rich	
L4S-700E	brown sand- mica rich	1-5%
L4S-725E	brown sand- mica rich	-2%
L4S-750E	orange-brown sand (marble)- mica rich	-2%
L4S-775E	orange-brown sand (marble)- mica rich	1-5%
L4S-800E	orange-brown sand (marble)- mica rich	1-5%
L4S-825E	orange-brown sand (marble)- mica rich	-2%
L4S-850E	orange-brown sand (marble)- mica rich	-2%
L4S-875E	orange-brown sand (marble)- mica rich	1-5%
L4S-900E	orange-brown sand (marble)- mica rich	-2%
L4S-925E	orange sand- granitic	

L5S-1075W	brown marble, mica rich	
L5S-1050W	brown marble, mica rich	
L5S-1025W	brown marble, mica rich	1-2%
L5S-1000W	brown marble, mica rich	1-2%
L5S-975W	brown marble, mica rich	
L5S-950W	brown marble, mica rich	
L5S-925W	brown marble, mica rich	1-5%
L5S-900W	brown sand (Marble), mica rich	
L5S-875W	brown sand (Marble), mica rich	
L5S-850W	brown sand (Marble), mica rich	
L5S-825W	brown sand (Marble), mica rich	
L5S-800W	brown marble	
L5S-775W	organics	
L5S-750W	beige-brown marble (fine)	
L5S-725W	beige-brown marble (fine)	
L5S-700W	beige-brown marble	
L5S-675W	beige-brown marble	
L5S-650W	beige-brown marble	
L5S-625W	beige-brown marble	
L5S-600W	beige-brown marble	
L5S-575W	beige-brown marble	
L5S-550W	beige-brown marble	
L5S-525W	beige-brown marble	
L5S-500W	beige marble-mica rich	+5%
L5S-475W	beige marble	
L5S-450W	beige marble	
L5S-425W	coarse marble	
L5S-400W	coarse marble	-2%
L5S-375W	brown amphibolite with mica	1-5%
L5S-350W	beige marble with mica	-2%
L5S-325W	beige marble with mica	1-5%
L5S-300W	beige marble + mica	
L5S-275W	beige marble + mica	
L5S-250W	orange marble	
L5S-225W	orange marble	
L5S-200W	orange marble	
L5S-175W	brown marble, mica rich	1-5%
L5S-150W	orange-brown amphibolite	
L5S-125W	orange-brown amphibolite	
L5S-100W	orange-brown amphibolite	
L5S-075W	amphibolite + mica	
L5S-050W	beige marble with mica	+5%
L5S-025W	silt- grey/beige	-2%
L5S-BL	silt- grey/beige	-2%
L5S-025E	beige marble	-2%

L5S050E	beige marble	1-5%
L5S-075E	brown amphibolitic- mica rich	
L5S-100E	orange-beige sand	
L5S-125E	orange-beige sand	
L5S-150E	orange-beige sand	
L5S-175E	orange-beige sand	
L5S-200E	orange-beige sand	
L5S-225E	beige-brown sand- mica rich	
L5S-250E	beige marble	
L5S-275 to 400E	swamp	
L5S-425E	beige marble	
L5S-450E	beige marble	
L5S-475E	orange sand	
L5S-500E	orange sand	
L5S-525E	orange sand	
L5S-550E	orange sand	
L5S-575E	orange-beige marble	
L5S-600E	orange-beige marble-fine	
L5S-625E	beige marble-mica rich	1-5%
L5S-650E	orange marble-fine	
L5S-675E	organics	
L5S-700E	brown marble-mica rich	
L5S-725E	brown marble-mica rich	1-5%
L5S-750E	brown marble-mica rich	-1%
L5S-775E	orange sand (marble)	
L5S-800E	orange sand (marble)	
L5S-825E	orange sand (marble)	
L5S-850E	orange sand (marble)	
L5S-875E	orange sand (marble)	
L5S-900E	orange sand (marble)	
L5S-925E	orange sand (marble)	
L5S-950E	orange sand (marble)	
L5S-975E	orange sand (marble)	
L5S-1000E	coarse marble, beige	
L5S-1025E	coarse marble, beige	
L5S-1050E	brown-beige marble, fine	
L5S-1075E	brown-beige marble, fine	
L5S-1100E	brown-beige marble, fine	
L5S-1125E	beige marble	1-5%
L5S-1150E	silt-beige	
L5S-1175E	silt + organics	
L5S-1200E	organics with mica	
L6S-1225W	coarse marble- mica rich	
L6S-1200W	brown sand- mica rich (granitic)	

L6S-1175W	quartz monzonite- mica rich	
L6S-1150W	orange sand	
L6S-1125W	beige marble	
L6S-1100W	amphibolite- rusty, mica rich	
L6S-1075W	granite	
L6S-775W to 1050W	swamp + organics	
L6S-750W	orange-brown- granite	
L6S-725W	brown sand- granite	
L6S-700W	brown sand- granite	
L6S-675W	coarse marble	+10%
L6S-650W	orange-brown sand- amphibolite	
L6S-625W	orange-brown sand- amphibolite	
L6S-600W	orange-brown sand- amphibolite	
L6S-575W	orange-brown sand- amphibolite	
L6S-550W	beige marble-mica rich	
L6S-525W	beige marble-mica rich	
L6S-500W	beige marble-mica rich	
L6S-475W	beige marble-mica rich	
L6S-450W	beige marble-mica rich	
L6S-425W	orange marble	
L6S-400W	organics with yellow sand	
L6S-375W	beige marble	
L6S-350W	brown marble	
L6S-325W	brown marble	
L6S-300W	brown marble	
L6S-275W	brown marble	
L6S-250W	organics	
L6S-225W	orange marble	
L6S-200W	orange marble	
L6S-175W	coarse marble	
L6S-150W	organics	
L6S-125W	organics + beige marble sand	
L6S-100W	brown marble	
L6S-075W	brown marble + mica	
L6S-050W	beige marble	1-5%
L6S-025W	organics- dark brown	
L6S-BL	silt	
L6S-025E	organics + brown sand	
L6S-050E	organics	
L6S-075E	orange marble	
L6S-100E	orange marble	
L6S-125E	orange marble	
L6S-150E	coarse beige marble-mica rich	1-5%
L6S-175E	coarse beige marble-mica rich	1-5%
L6S-200E	coarse beige marble-mica rich	1-5%
L6S-225E	coarse marble-beige	1-5%

L6S-250E	orange-beige marble	
L6S-275E	orange-beige marble	
L6S-300E	brown marble- mica rich	
L6S-325E	coarse marble-beige	1-5%
L6S-350E	coarse marble-beige	1-5%
L6S-375E	brown marble	
L6S-400E	brown marble	
L6S-425E	brown marble-mica rich	
L6S-450E	beige marble	
L6S-475E	beige marble	
L6S-500E	beige marble	
L6S-525E	beige marble	
L6S-550E	coarse marble-beige colour	1-5%
L6S-575E	coarse marble-beige colour	1-5%
L6S-600E	beige marble	+5%
L6S-625E	beige marble	
L6S-650E	orange marble	
L6S-675E	beige marble	
L6S-700E	orange marble	
L6S-725E	beige marble (2.0 meter depth)	1-5%
L6S-750E	orange marble sand	
L6S-775E	brown marble sand	
L6S-800E	coarse marble-beige	
L6S-825E	coarse marble-beige	
L6S-850E	coarse marble-beige	
L6S-875E	coarse marble-beige	1-5%
L6S-900E	coarse marble-beige	+5%
L6S-925E	coarse marble-beige	
L6S-950E	coarse marble-beige	
L6S-975E	coarse marble-beige	
L6S-1000E	coarse marble-beige	1-5%
L6S-1025E	beige-coarse grained marble	1-5%
L6S-1050E	beige-coarse grained marble	+5%
L6S-1075E	beige-coarse grained marble	1-5%
L6S-1100E	beige-coarse grained marble	1-5%
L6S-1125E	beige-coarse grained marble	
L6S-1150E	granite-quartz monzonite	
L6S-1175E	beige marble with mica	
L6S-1200E	beige marble with mica	1-5%
L6S-1225E	coarse marble	-2%
L6S-1250E	coarse marble	-2%
L6S-1275E	coarse marble	-2%
L6S-1300E	coarse marble	+5%
L6S-1325E	coarse marble	+5%
L6S-1350E	coarse marble	+10%

L7S-1175W	brown-beige sand- granite	
L7S-1150-1025W	swamp + organics	
L7S-1000W	brown sand- amphibolite	
L7S-975W	brown sand- amphibolite	
L7S-950W	beige marble- coarse	1-5%
L7S-925W	organics	
L7S-900W	orange marble	
L7S-875W	orange sand- mica rich	1-5%
L7S-850W	orange sand- mica rich	1-5%
L7S-825W	orange sand- mica rich	1-5%
L7S-800W	beige marble	
L7S-775W to 725W	swamp	
L7S-700W	brown amphibolite	
L7S-675W	orange sand	
L7S-650W	brown amphibolite- mica rich	-2%
L7S-625W	brown amphibolite- mica rich	-2%
L7S-600W	brown amphibolite- mica rich	-2%
L7S-575W	brown amphibolite- mica rich	-2%
L7S-550W	brown amphibolite- mica rich	1-5%
L7S-525W	beige marble	
L7S-500W	beige marble	
L7S-475W	beige marble	
L7S-450W	brown-orange amphibolite	
L7S-425W	organics + mica	
L7S-400W	orange sand	
L7S-375W	orange-brown amphibolitic	
L7S-350W	coarse marble	
L7S-325W	orange-brown amphibolitic	
L7S-300W	orange sand	
L7S-275W	brown organics	
L7S-250W	brown organics	
L7S-225W	brown amphibolite- mica rich	
L7S-200W	brown amphibolite- mica rich	
L7S-175W	orange sand	
L7S-150W	orange sand	
L7S-125W	orange marble- mica rich	
L7S-100W	orange marble- mica rich	
L7S-075W	beige marble	
L7S-050W	beige marble	
L7S-025W	brown marble- mica rich	
L7S-BL	brown marble- mica rich	
L7S-025E	brown marble- mica rich	
L7S-050E	brown marble- mica rich	1-5%
L7S-075E	brown marble- mica rich	1-5%
L7S-100E	brown marble- mica rich	1-5%

L7S-125E	brown marble- mica rich	
L7S-150E	brown marble- mica rich	
L7S-175E	brown sand	
L7S-200E	brown marble (fine), mica rich	
L7S-225E	brown marble (fine), mica rich	
L7S-250E	brown marble (fine), mica rich	
L7S-275E	brown marble (fine), mica rich	
L7S-300E	orange sand	
L7S-325E	orange sand	
L7S-350E	orange marble sand- mica rich	
L7S-375E	orange marble sand- mica rich	
L7S-400E	orange marble sand- mica rich	
L7S-425E	orange-brown amphibolite	
L7S-450E	orange-brown amphibolite	
L7S-475E	orange-brown amphibolite	
L7S-500E	orange-brown amphibolite	
L7S-525E	orange-brown sand	
L7S-550E	orange-brown sand	
L7S-575E	orange-brown sand	
L7S-600E	orange-brown sand	
L7S-625E	orange-brown sand	
L7S-650E	orange marble-mica rich	1-5%
L7S-675E	orange sand - mica rich	
L7S-700E	orange sand	
L7S-725E	orange sand	
L7S-750E	orange sand	
L7S-775E	orange sand	
L7S-775-875E	swamp (organics)	
L7S-875E	brown sand-mica rich	+5%
L7S-900E	beige marble	
L7S-925E-1225E	organics (swamp)	
L7S-1225E	orange sand	
L7S-1250E	orange marble - mica rich	1-5%
L7S-1275E	brown sand- mica rich	+5%
L7S-1300E	orange marble- mica rich	-2%
L7S-1325E	coarse marble	+10%
L7S-1350E	orange sand (granite)	
L7S-1375E	orange sand (granite)	
L8S-850W	orange sand- mica rich (granitic)	
L8S-825W	orange sand- mica rich (granitic)	
L8S-800W	orange sand- mica rich (granitic)	
L8S-775W	orange-yellow sand (marble)	
L8S-750W	orange-yellow sand (marble)	
L8S-725W	orange-yellow sand (marble)	

L8S-700W	silt- beige colour	
L8S-675W-650W	swamp	
L8S-625W	coarse marble- rusty, mica rich	
L8S-600W	coarse marble- rusty, mica rich	
L8S-575W	coarse marble- rusty, mica rich	
L8S-550W	coarse marble- rusty, mica rich	
L8S-525W	coarse marble- rusty, mica rich	
L8S-500W	orange-beige marble- mica rich	
L8S-475W	orange-brown sand- amphibolitic	
L8S-450W	orange-brown sand- amphibolitic	
L8S-425W	orange-brown sand- amphibolitic	
L8S-400W	orange-brown sand- amphibolitic	
L8S-375W	red/brown amphibolitic	1-5%
L8S-350W	brown sand- with organics	
L8S-325W	beige marble	
L8S-300W	beige marble	
L8S-275W	organics	
L8S-250W	brown amphibolite- mica rich	
L8S-225W	orange sand	
L8S-200W	orange amphibolite- mica rich	
L8S-175W	orange amphibolite- mica rich	
L8S-150W	orange-yellow marble	
L8S-125W	orange-yellow marble	
L8S-100W	brown-beige marble- mica rich	
L8S-075W	brown amphibolite- mica rich	
L8S-050W	orange marble	
L8S-025W	orange marble	
L8S-BL	orange marble sand	
L8S-025E	orange marble sand	
L8S-050E	orange marble sand	+5%
L8S-075E	beige-brown marble	
L8S-100E	orange marble	
L8S-125E	beige-brown marble	
L8S-150E	brown amphibolite- mica rich	1-5%
L8S-175E	brown amphibolite	
L8S-200E	amphibolite	
L8S-225E	orange marble	
L8S-250E	orange marble	
L8S-275E	orange-beige marble	-2%
L8S-300E	orange-beige marble	
L8S-325E	orange-beige marble	
L8S-350E	orange-beige marble	
L8S-375E	orange-beige marble	
L8S-400E	orange-beige marble- mica rich	
L8S-425E	orange-beige marble- mica rich	
L8S-450E	orange-beige marble- mica rich	1-5%

L8S-475E	rusty amphibolite- mica rich	
L8S-500E	orange marble	
L8S-525E	orange marble	
L8S-550E	orange marble- mica rich	
L8S-575E	beige marble-mica rich	
L8S-600E	beige marble-mica rich	1-5%
L8S-625E	beige marble-mica rich	
L8S-650E	beige marble-mica rich	
L8S-675E	beige marble, mica rich	
L8S-700E	beige marble-mica rich	
L8S-725E	beige-orange marble	
L8S-750E	beige-orange marble	
L8S-775E	beige-orange marble	
L8S-800E	beige-orange marble	
L8S-825E	beige marble, mica rich	1-5%
L8S-850E	beige marble, mica rich	-2%
L8S-875E	beige marble, mica rich	-2%
L8S-900E	beige marble-mica rich	1-5%
L8S-925E	orange-brown marble	
L8S-950E	orange-brown marble	
L8S-975E	orange-brown marble	
L8S-1000E	orange-brown marble	
L8S-1025E	brown marble-mica rich	-2%
L8S-1050E	brown marble-mica rich	-2%
L8S-1075E	brown marble-mica rich	1-5%
L8S-1100E	brown marble-mica rich	
L8S-1125E	brown marble-mica rich	
L8S-1150E	brown marble-mica rich	
L8S-1175E	beige-yellow marble	
L8S-1200E	coarse marble-beige	1-5%
L8S-1225E	coarse marble-beige	1-5%
L8S-1250E	coarse marble-beige	1-5%

L9S-550W	beige-orange marble (sand)	
L9S-525W	beige-orange sand	
L9S-500W	beige-orange marble (sand)	1-5%
L9S-475W	orange sand	
L9S-450W	beige-orange marble (sand)	
L9S-425W	brown sand(amphibolitic)	
L9S-400W	brown sand	
L9S-375W	beige marble	
L9S-350W	beige marble	
L9S-325W	beige marble	
L9S-300W	beige marble	
L9S-275W	beige marble	

L9S-250W	beige marble	
L9S-225W	beige marble	
L9S-200W	beige marble	
L9S-175W	organics	
L9S-150W	orange sand	
L9S-125W	brown sand	
L9S-100W	brown sand + organics	
L9S-075W	brown sand- amphibolitic	
L9S-050W	orange- brown sand- amphibolitic	
L9S-025W	fine marble- beige, mica rich	
L9S-BL	beige marble, mica rich	
L9S-025E	beige marble, mica rich	
L9S-050E	beige marble	
L9S-075E	beige-brown marble with amphibolite	-2%
L9S-100E	brown marble + amphibolite, mica rich	1-5%
L9S-125E	amphibolite	
L9S-150E	orange marble	
L9S-175E	granite + quartz monzonite (dyke)	
L9S-200E	brown amphibolite- mica rich	1-5%
L9S-625E	dark brown amphibolite-mica rich	+10%
L9S-650E	orange-rusty marble + amphibolite	
L9S-675E	orange-rusty sand	
L9S-700E	orange-rusty sand	
L9S-725E	beige marble-mica rich	1-5%
L9S-750E	beige marble-mica rich	
L9S-775E	beige marble-mica rich	
L9S-800E	orange-rusty marble	
L9S-825E	dark brown amphibolite	1-5%
L9S-850E	dark brown amphibolite	1-5%
L9S-875E	dark brown amphibolite	+5%
L9S-900E	orange marble	
L9S-925E	rusty marble	
L9S-950E	orange-beige marble	
L9S-975E	orange-beige marble	
L9S-1000E	orange-beige marble	
L9S-1025E	orange-beige marble	
L9S-1050E	orange-beige marble	
L9S-1075E	orange-beige marble	1-5%
L9S-1100E	coarse marble (beige)	+5%
L9S-1125E	coarse marble (beige)	+5%
L9S-1150E	beige marble	1-5%
L9S-1175E	coarse marble	1-5%
L9S-1200E	orange-yellow marble	
L9S-1225E	brown sand	
L9S-1250E	brown sand- mica rich (amphibolitic)	
L9S-1275E	brown sand- mica rich (amphibolitic)	

L9S-1300E	brown sand- mica rich (amphibolitic)
L9S-1325E	brown sand- mica rich (amphibolitic)
L9S-1350E	brown sand- mica rich (amphibolitic)
L9S-1375E	coarse marble
L9S-1400E	beige marble
L9S-1425E	beige marble
L9S-1450E	beige marble
L9S-1475E	beige marble
L9S-1500E	beige marble
L9S-1525E	organics
L9S-1550E	orange sand- granitic
L9S-1575E	beige sand- mica rich
L9S-1600E	organics- dark brown

Cavendish Township-

May 27	Geological mapping claim 1191249- south section
28	Geological mapping claim qq91249 west section
June 14	lines & sampling Picard/Clear Lake complex L1S & L2S
15	lines & sampling Picard/Clear Lake L3S & L4S
16	lines and sampling Picard Lake area L5S & 6S
17	lines and sampling Picard Lake area L 7S & 8S
18	lines and sampling Picard Laske area L9S
19	sampling perimeters Picard Lake area
20	sampling Picard Lake area- base line area
21	sampling Picard Lake area- perimeters /line extensions
22	sampling main zone and lines- Hopseshoe Lake (B1 to 2S)
23	sampling Horseshoe Lake & lines (3S to 5S)
24	sampling Horseshoe Lake & lines (5S-6S)
25	sampling Horseshoe Lake & lines (L1N-2N)
July 8	Sampling and line cutting 1191295 Horseshoe Lake area
9	sampling south side Horseshoe Lake area
10	exfoliation of samples
24	sampling Horseshoe Lake area 1191295
25	sampling Horseshoe Lake area 1191295
26	exfoliation of samples
31	exfoliation of samples
Aug. 1	sampling main grid Line 400 to 450 south
2	exfoliation of samples
Oct. 22	extension sampling of Horseshoe Lake (west side)
23	extension sampling Horseshoe lake (south side)
Nov. 24	extension sampling & drill supervision
25	extension sampling & drill supervision
26	extension sampling & drill supervision
Dec. 7	exfoliation of samples
8	exfoliation of samples
9	exfoliation of samples
10	sample exfoliation
11	sample exfoliation
12	exfoliation of samples
13	exfoliation of samples
14-17	report preparation

TOTAL of 39 days (field and office) spent

Expenses for F.T.Archibald

June 21	LabEquip- used equip purchase (oven for exfol.)	914.25
25	Poplar Pines cabins	482.72
25	assistant in field (R. Bolduc) 2.5 days	240.00
25	assistant in field (R. Bolduc) 7 days	700.00
30	assistant (R.Bolduc) 2 days	200.00
July 2	D. Abram (8 days assistant)	765.50
Oct.22	meals	29.00
22	meal	5.70
22	gas	11.00
Nov. 2	Queens University	1850.00
24	groceries	5.70
24	groceries	5.41
24	gas	28.00
Dec. 8	assistant for exfoliation (4 days)	400.00
20	assisstant for exfoliation (2 days)	200.00
	Mileage @ 30 cents/km.-- 2870 km.-----	<u>861.00</u>

TOTAL EXPENSES----- \$6,698.28

Consent
 WELCOME TO PETRO-CANADA
 BIENVENUE A PETRO-CANADA

PETRO-CANADA
 232 MAIN ST
 BURLINGTON
 ONTARIO L7R 1A9

ISSUE NO: 08586490
 1993-11-24 0004105 08115

PRODUCT PRODUIT	LITRES LITRES	PRICE PRIX	AMOUNT MONTANT
UNLEADED PB	50.7	5.125	26.00
		TOTAL	26.00

TAXES INCL. TAXES INCL.

SALES TAX SALES TAX

INVOICE FACTURE: 147081 OPEN: A
 MASTERCARD 019 1000 1000 100
 AUTHORIZATION: AUTHORIZATION: 1000 100

THANK YOU

RECEIPT

0000009145

F.T. Archibald

ROYAL BANK OF CANADA
 20 KING STREET WEST BRANCH
 TORONTO, ONTARIO M5H 1C4



100
 DOLLARS

Mr. Kenneth A. Gaulton

\$ 914.25
 JUNE 21 1993
 019

PAY LABEQUIP LTD

FREDERICK T. ARCHIBALD
 1 ROYAL BIRKDALE LANE
 THORNHILL, ONTARIO L3T 1V1

F.T. ARCHIBALD CONSULTING LTD.
 100 ADELAIDE ST. WEST, SUITE 702
 TORONTO, ONT. M5H 1S3

090

JULY 2 1993

PAY TO
 THE ORDER OF

F. ARCHIBALD

Seven Hundred & Sixty-Five 50/100 \$ 765.50
 DOLLARS



ROYAL BANK OF CANADA
 20 KING STREET WEST BRANCH
 TORONTO, ONTARIO M5H 1C4

F.T. ARCHIBALD CONSULTING LTD.

FOR 11579

PER

F.T. Archibald

00000090 060120003

17006142

0000076550

CAJ...NOV15/93

BRUNNEN
S.C. - 7

10/22/93 8:10AM
00042854 LISA E

UNIVERSITY COLLEGE

SPECIAL STK	\$4.95	CASH	\$5.70
ST	\$4.95		
PSTB%	\$0.40		
GST	\$0.35		
#ATTN	\$5.70		
CASH	\$5.70		
CHKG	\$0.00		
SUNDANER RESTAURANT			
AND SALDON			
878-8551			

4/2/94 56/42/11

11/22/93 08:10 AM
400 42854
BRUNNEN S.C. - 7
UNIVERSITY COLLEGE

CUSTOMER COPY
COPIE DU CLIENT

4527 025 218 408

DO NOT WRITE ABOVE THIS LINE - NE RIEN ÉCRIRE AU-DESSUS DE CETTE LIGNE

AUTHORIZATION NUMERALS & AUTOMATION	
AMOUNT DE NOTE	2780
DATE	10/22/93
TERMINAL	32

878 5

AMOUNT	2780
TIP	259
TOTAL	3168

COMPANION WILL PAY TO THE ORDER OF THE CASHIER AND
MAY BE USED FOR THE PURCHASE OF MERCHANDISE AT THE
MERCHANT'S OPTION. THIS CARD IS NOT VALID FOR
CASH. IS OBTAINED BY CARDHOLDERS ONLY.
IS NOT VALID FOR THE PURCHASE OF MERCHANDISE AT THE
MERCHANT'S OPTION. THIS CARD IS NOT VALID FOR
CASH. IS OBTAINED BY CARDHOLDERS ONLY.

MR FREDERICK T MCGIBAL

CHARGE BILLS DRAFT
CHARGER FACTURE



Frederick T McGibal

CARDHOLDER'S SIGNATURE TO VALIDATE

AN 57980

29.09

CUSTOMER'S RECEIPT



Concordia



DEPARTMENT OF MINING ENGINEERING
GOODWIN HALL

Queen's University
Kingston, Canada
K7L 3N6
Tel 613 545-2230
Fax 613 545-6597

Billing Invoice

To: F.T. Archibald Consulting Ltd.
100 Adelaide St. West - Suite 702
Toronto, Ontario M5H 1S3

From: Department of Mining Engineering
Goodwin Hall
Queen's University
Kingston, Ontario K7L 3N6
(Attention: J. F. Archibald)

Date: November 2, 1993

Re: Performance of grade classification tests on as-received vermiculite samples

Please find enclosed a billing request for completion of eighteen (18) grade classification tests upon as-received vermiculite specimens.

Billing is being requested in the amount of \$100/sample plus \$50 for sample preparation and handling. Total billing, therefore, is requested in the amount of \$1850 and may be made payable to Queen's University (Account # 362-989).

Note - According to the special nature of the University, NO G.S.T. billing is required.



F. T. Archibald Consulting Ltd.

702 - 100 ADELAIDE STREET WEST
TORONTO, ONTARIO, CANADA
M5H 1S3
416-363-5054
FAX 416-363-5228

For Services Rendered- Cavendish Vermiculite sampling
North Complex and Main Complex

July 25	2.5 days-----	\$240.00
25	7.0 days-----	700.00
30	2.0 days-----	<u>200.00</u>
	TOTAL-----	<u>\$1140.00</u>
	TOTAL PAID (by cash from F.T. Archibald)	

with thanks,

Roger Bolduc

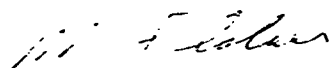
Roger Bolduc
32 Rue Desmarais
Duparquet, Que.

F. T. Archibald Consulting Ltd.

702 - 100 ADELAIDE STREET WEST
TORONTO, ONTARIO, CANADA
M5H 1S3
416-363-5054
FAX 416-363-5226

December 19, 1993

For services rendered exfoliating samples
from Cavendish vermiculite occurrence - equivalent
6 days----- \$600.00



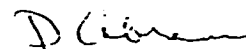
Mike Flotner
33 Kirby St.
Newmarket, Ontario

F. T. Archibald Consulting Ltd.

702 - 100 ADELAIDE STREET WEST
TORONTO, ONTARIO, CANADA
M5H 1S3
416-363-5054
FAX 416-363-5228

July 2, 1993

For Services re: Cavendish Township Property
(by cheque # 0090)



D. Abram
c/o Little Falls Cabins
Severn Bridge, Ont.

F.T. ARCHIBALD CONSULTING LTD.
100 ADELAIDE ST. WEST, SUITE 702
TORONTO, ONT. M5H 1S3

0123
NOV. 4 1993

PAY TO THE ORDER OF
QUEEN'S UNIVERSITY

— One Thousand - Eight Hundred & Fifty ¹⁰⁰ \$ 1850.00

DOLLARS

F.T. ARCHIBALD CONSULTING LTD.

ROYAL BANK OF CANADA
20 KING STREET WEST BRANCH
TORONTO, ONTARIO M5H 1C4

FOR [Signature] PER

#000123# 06012003# 1706142# #000185000#

F.T. ARCHIBALD CONSULTING LTD.
100 ADELAIDE ST. WEST, SUITE 702
TORONTO, ONT. M5H 1S3

0084
JUNE 24 1993

PAY TO THE ORDER OF
Cash RIGER BOLDIC

— Two Hundred & Forty ¹⁰⁰ \$ 240.00

DOLLARS

F.T. ARCHIBALD CONSULTING LTD.

ROYAL BANK OF CANADA
20 KING STREET WEST BRANCH
TORONTO, ONTARIO M5H 1C4

FOR [Signature] PER [Signature]

#000084# 06012003# 1706142# #000024000#

F.T. ARCHIBALD CONSULTING LTD.
100 ADELAIDE ST. WEST, SUITE 702
TORONTO, ONT. M5H 1S3

0086
JUNE 23 1993

PAY TO THE ORDER OF
POPULAR PINES RESORT

— Four Hundred & Eighty-Two ¹⁰⁰ \$ 482.72

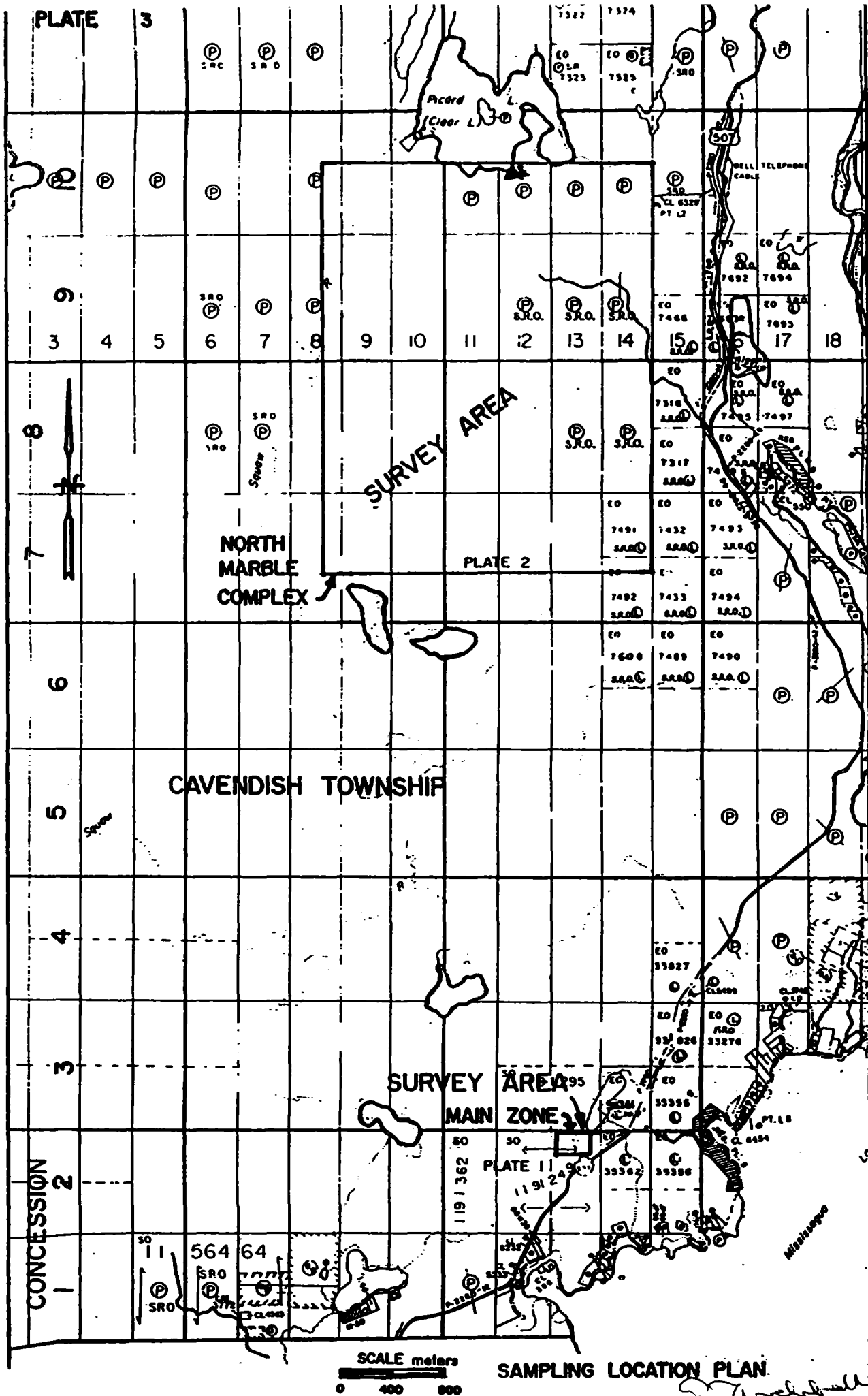
DOLLARS

F.T. ARCHIBALD CONSULTING LTD.

ROYAL BANK OF CANADA
20 KING STREET WEST BRANCH
TORONTO, ONTARIO M5H 1C4

FOR [Signature] 93-144 PER [Signature]

#000086# 06012003# 1706142# #000048272#



Ministry of Northern Development and Mines

Report of Work Conducted After Recording Claim

Mining Act

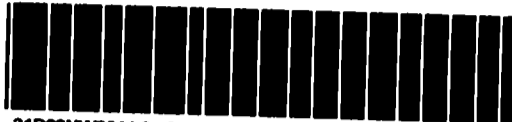
RES. GEO. TWEED Transaction Number

W9490.00050

2.15539

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, 100 Queen Street West, Toronto, Ontario, PSE 6A6, telephone (705) 670-7264

- Instructions: - Please type or print and submit in duplicate. - Refer to the Mining Act and Regulations for required Recorder. - A separate copy of this form must be completed for each claim. - Technical reports and maps must accompany this form in duplicate. - A sketch, showing the claims the work is assigned to, must accompany this form.

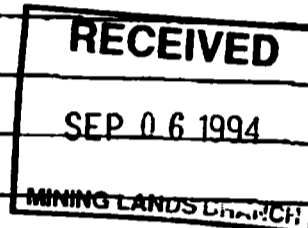


900

Recorded Holder(s) Alan Archibald Client No. A 51431 /02 780 Address 74 Conley St. Thornhill, Ontario L4J 2X5 Telephone No. 905-660-1554 Mining Division Southern Ontario Township/Area Cavendish M or G Plan No. M 72 Dates Work Performed From: JUNE 11/93 To: DEC 3/1993

Work Performed (Check One Work Group Only)

Table with columns Work Group and Type. Includes categories like Geotechnical Survey, Physical Work, Rehabilitation, Assays, and Assignment from Reserve. Handwritten entry: GEOLOGICAL Till Sampling.



Total Assessment Work Claimed on the Attached Statement of Costs \$ 27,990.20 6500

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Table with columns Name and Address. Entry: F.T. Archibald, 70-100 Adelaide St. West, Toronto, Ontario M5H 1S3

(Attach a schedule if necessary)

Verification of Beneficial Interest - See Note No. 1 on reverse side

Verify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under beneficial interest in the current recorded holder. Date: July 18, 1994. Recorded Holder or Agent (Signature): [Signature]

Verification of Work Report

Verify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after completion and annexed report is true.

Name and Address of Person Certifying: F.T. Archibald. Phone No. 6-363-5054. Date: July 18, 1994. Certified By (Signature): [Signature]

Office Use Only

Office Use Only section containing Date Recorded (July 20/94), Mining Recorder (Signature), Date Approved (July 18/94), Date Notice for Amendments Sent, and a RECEIVED stamp dated JUL 20 1994.

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units
2.15539	1191249	4
	1191295	2
2 group-6 units		
Total Number of Claims TWO		

Value of Assessment Work Done on the Claim	Value Applied to this Claim
5200.00	5200.00 0
1300.00	1300.00 0
Total Value Work Done 6500.00 0	
Total Value Work Applied 6500.00 0	

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 SEP 06 1994
 MINING CLAIMS BRANCH

Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
-----	-5200.00
-----	-1300.00
Total Assigned From	
Total Reserve 6500	

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to prioritize the deletion of credits. Please mark (✓) one of the following:

1. Credits are to be cut back starting with the claim listed last, working backwards.
2. Credits are to be cut back equally over all claims contained in this report of work.
3. Credits are to be cut back as prioritized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.	Signature <i>Autentically</i>	Date JULY 10 1994
---	----------------------------------	----------------------



Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des mines

Statement of Costs
for Assessment Credit

État des coûts aux fins
du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction

W9490.00050.

2.155 39

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4^e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre	2505.50	2505.50
	Field Supervision Supervision sur le terrain	6300	8805.50
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert- conseil	Type assaying	1850	
			1850
Supplies Used Fournitures utilisées	Type Labequip oven	914.25	
			914.25
Equipment Rental Location de matériel	Type		
Total Direct Costs Total des coûts directs			11569.75

2. Indirect Costs/Coûts indirects

** Note: When claiming Rehabilitation work indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type gas	39.00	
	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;"> <p>RECEIVED</p> <p>SEP 06 1994</p> <p>MINING LANDS BRANCH</p> </div>		
			39.00
Food and Lodging Nourriture et hébergement	R & B	528.53	528.53
Mobilization and Demobilization Mobilisation et démobilisation	30¢ X 2870	861.00	861.00
Sub Total of Indirect Costs Total partiel des coûts indirects			1428.53
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)			1428.53
Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs)			12998.28
Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)			12998.28

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note: Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
	x 0.50 =

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale demandée
	x 0,50 =

Certification Verifying Statement of Costs

hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown in the accompanying Report of Work form.

that as Agent I am authorized
(Recorded Holder, Agent, Position in Company)

to make this certification

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ je suis autorisé
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature: [Signature] Date: JUL 18 1994



Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Geoscience Approvals Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

November 7, 1994

Our File: 2.15539
Transaction #: W9490.00050

Telephone: (705) 670-5853
Fax: (705) 670-5863

Mining Recorder
Ministry of Northern Development
and Mines
MacDonald Block
Room M2-17
900 Bay Street
Toronto, Ontario
M7A 1C3

Dear Sir/Madam:

**Subject: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIMS
SO.1191249 & 1191295 IN CAVENDISH TOWNSHIP**

The deficiencies in the original submission have been rectified.

Assessment work credits have been approved as outlined on the report of work form for the submission. The credits have been approved under Section 13, Geochemical, Mining Act Regulations.

The approval date is November 1, 1994.

If you have any questions regarding this correspondence, please contact Lucille Jerome at (705) 670-5861.

ORIGINAL SIGNED BY:

A handwritten signature in cursive script, appearing to read "Ron C. Gashinski".

Ron C. Gashinski
Senior Manager, Mining Lands Section
Mining and Land Management Branch
Mines and Minerals Division

LJ/jl
Enclosures:

cc: Resident Geologist
Tweed, Ontario

Assessment Files Library
Sudbury, Ontario

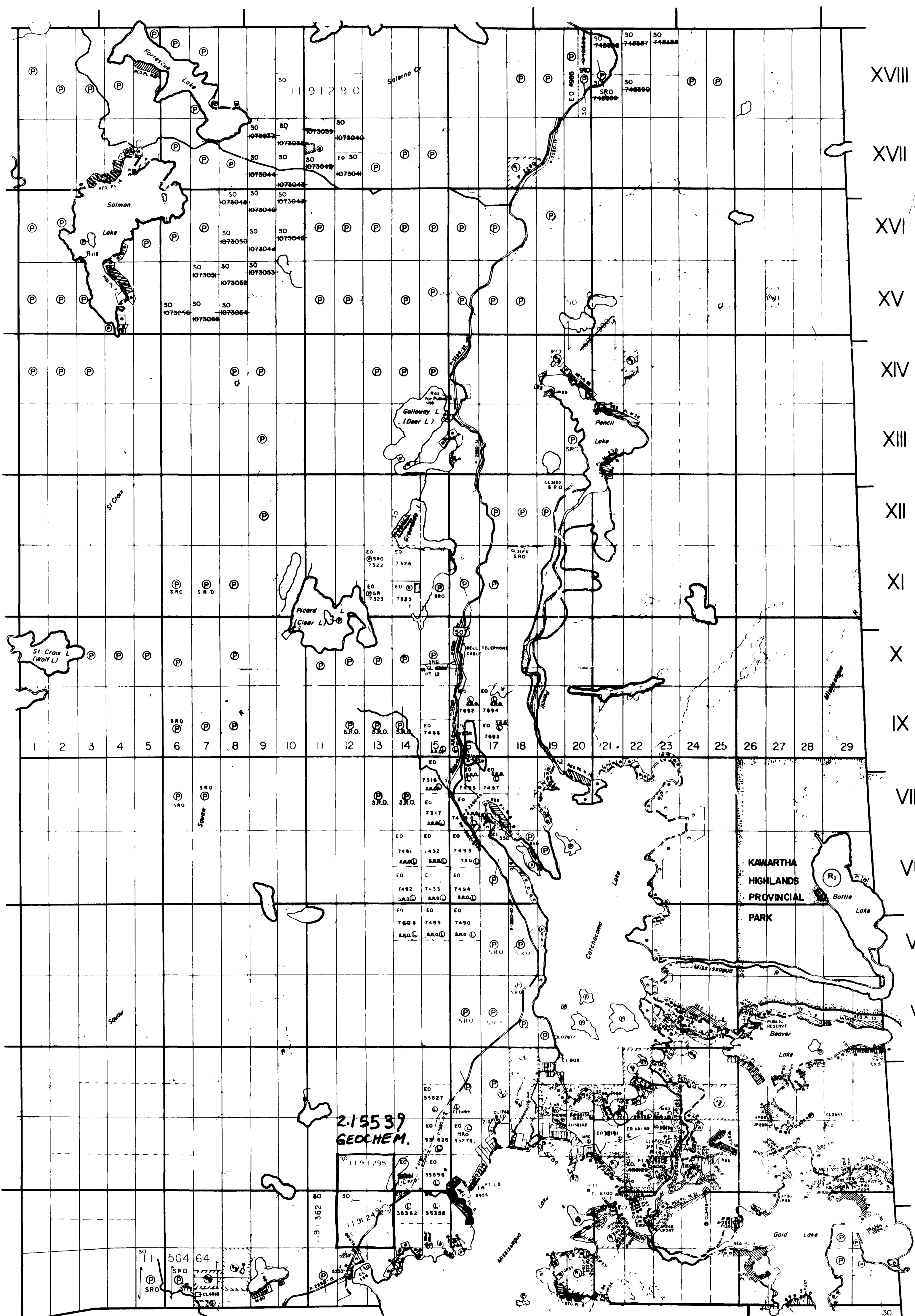
XVIII
XVII
XVI
XV
XIV
XIII
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XI
X
IX
VIII
VII
VI
V
IV
III
II
I

Anstruther Twp. (M-45)

Galway Twp. (M-94)

Harvey Twp. (M-101)

Burleigh Twp. (M-62)



LEGEND

- RECEIVED
SEP 06 1994
MINING LANDS BRANCH
- PATENTED LAND (P)
 - CROWN LAND SALE (CS)
 - LEASE (L)
 - LOCATED LAND (Loc)
 - LICENSE OF OCCUPATION (LO)
 - MINING RIGHTS ONLY (MRO)
 - SURFACE RIGHTS ONLY (SRO)
 - ROADS (—)
 - IMPROVED ROADS (—)
 - KING'S HIGHWAYS (—)
 - RAILWAYS (—)
 - POWER LINES (—)
 - MARSH OR MUSKEG (—)
 - MINES (—)
 - CANCELLED (C)
 - PATENTED FOR S.R.O. (—)

NOTES

This Map Is Not To Be Used
- FOR SURVEY PURPOSES -

400' Surface Rights Reservation along the shores of all lakes and rivers.

For status of summer resort locations & islands please contact Ministry of Natural Resources.

Original shoreline shown thus —
FR1 shoreline shown thus —
Patents Map shoreline shown thus —

Area shown thus — reserved for proposed Provincial Park, withdrawn from staking Sec 34(d) of Min and Nat File 160708

Mining Claims staked in this Twp subject to Sec 118 of Mining Act

- SAND & GRAVEL**
- (1) Gravel File 154616
 - (2) Gravel " 21547
 - (3) M.N.R. Gravel Pit 76 File 21538
 - (4) Gravel File 40832
 - (5) Gravel " " "
 - (6) Gravel " 73125
 - (7) QUARRY PERMIT
- (8) M.N.R. Gravel Pit No 138 File 152744
 - (9) Gravel File 104960
 - (10) Gravel File 40832

Areas withdrawn from staking under Section 3 of the Mining Act

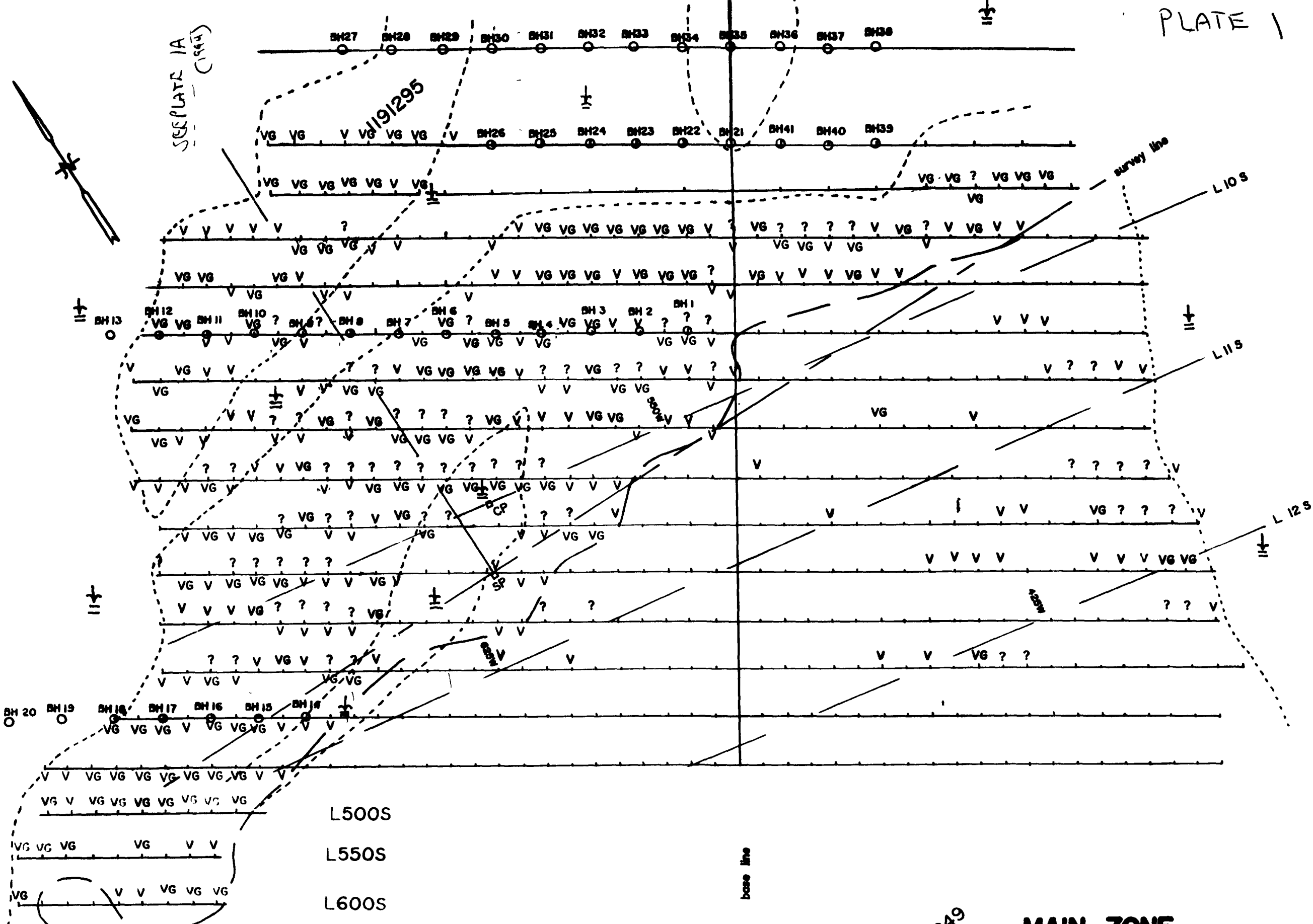
File	Date	Disposition
W 67/74	7598 v 4	19/12/74 S.R.B.M.R.
W 3/77	34261	1/1/77 S.R.B.M.R.
W 50/83	160708	27/8/83 S.R.B.M.R.
W 11/83	73118	30/9/83 S.R.B.M.R.
W 67/74	7598 v 4	19/12/74 MRO

DATE OF ISSUE
JUL 25 1984
SOUTHERN ONTARIO
MINING DIVISION

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.



L300N
L200N
L150N
L100N
L050N
L00
L050S
L100S
L150S
L200S
L250S
L300S
L350S
L400S
L450S



SEE PLATE 1A
(1947)

LEGEND

- VG- significant anomaly
- V - minor anomaly
- ? - indicated at depth

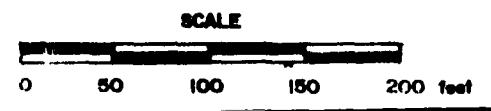
0 to 1 meter depth sample station
 1 to 2 meter depth line

210

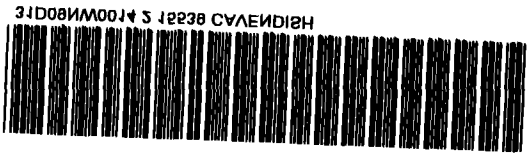


31D05NW0014 2 15539 CAVENDISH

1191249
MAIN ZONE
CAVENDISH VERMICULITE COMPLEX



350



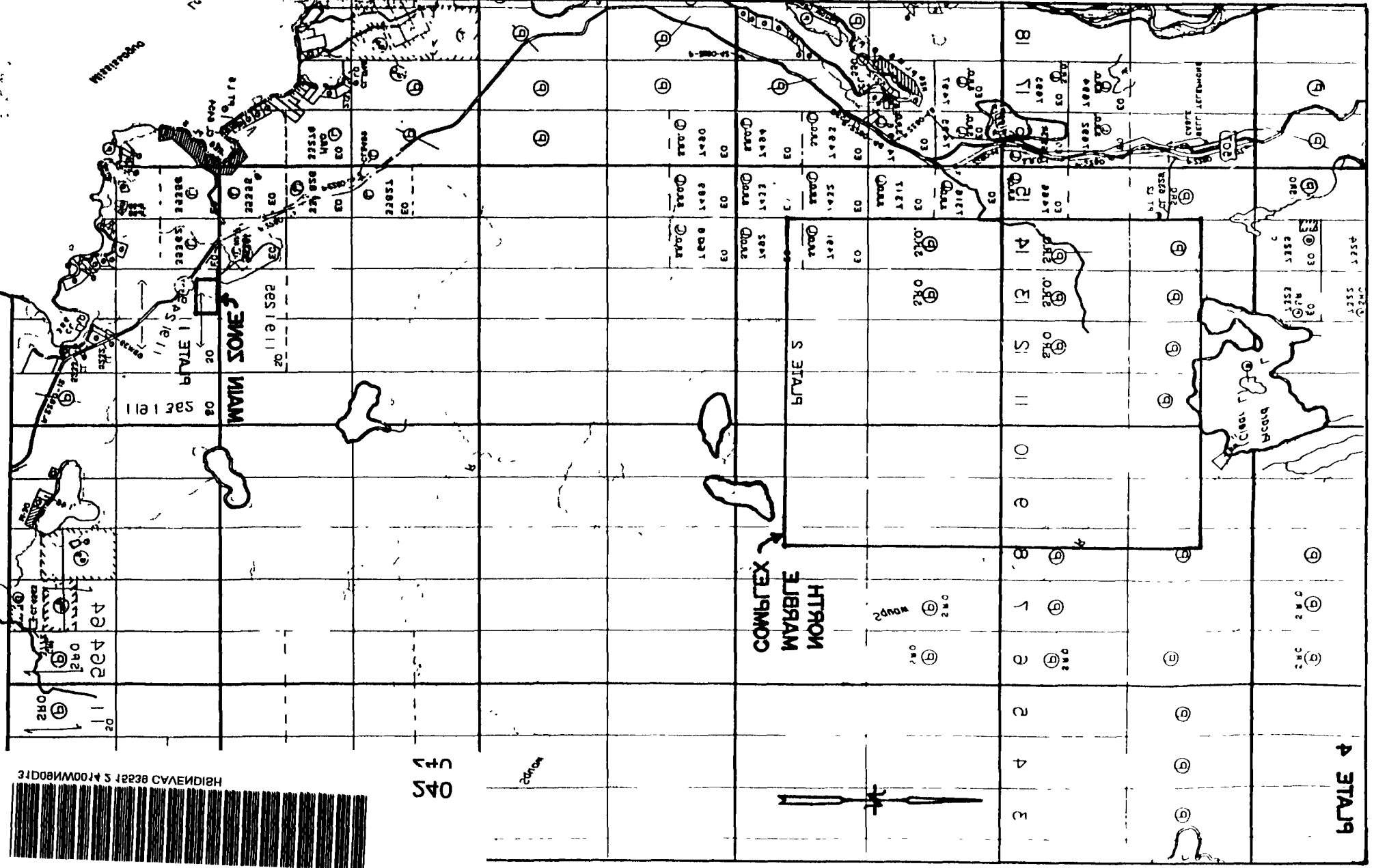
31D081W0014 5 12239 CVAENIDSH

045
CF2

SCALE meters

ЗАПЫЛКЕ ГОСАТОЛ ЫЛГУ ИАВЛЭ

Handwritten notes in the top right corner.



СТАГУ

1993 GRID

L200N

L150N

L100N

L050N

L00

L050S

L100S

L150S

L200S

L250S

L300S

L350S

L400S

L450S

L500S

L550S

L600S

LEGEND L650S

VG- significant anomaly

V - minor anomaly

? - indicated at depth

swamp
claim line

geological contact

SP survey post
CP claim post
O drillhole

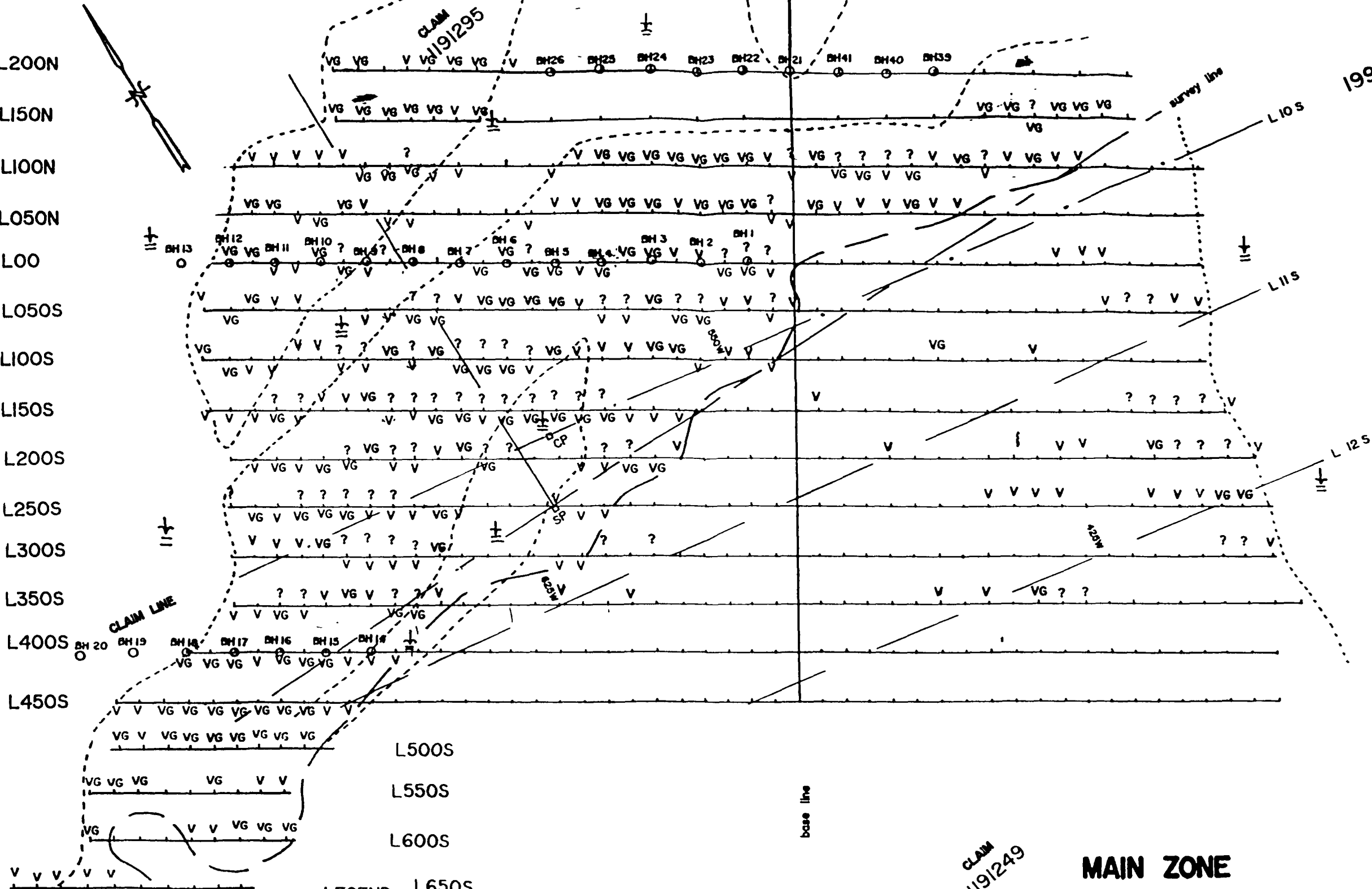
O to 1 meter depth sample station
| to 2 meter depth line

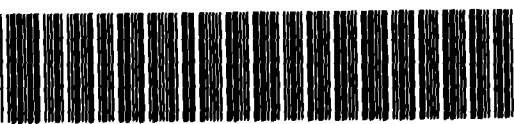
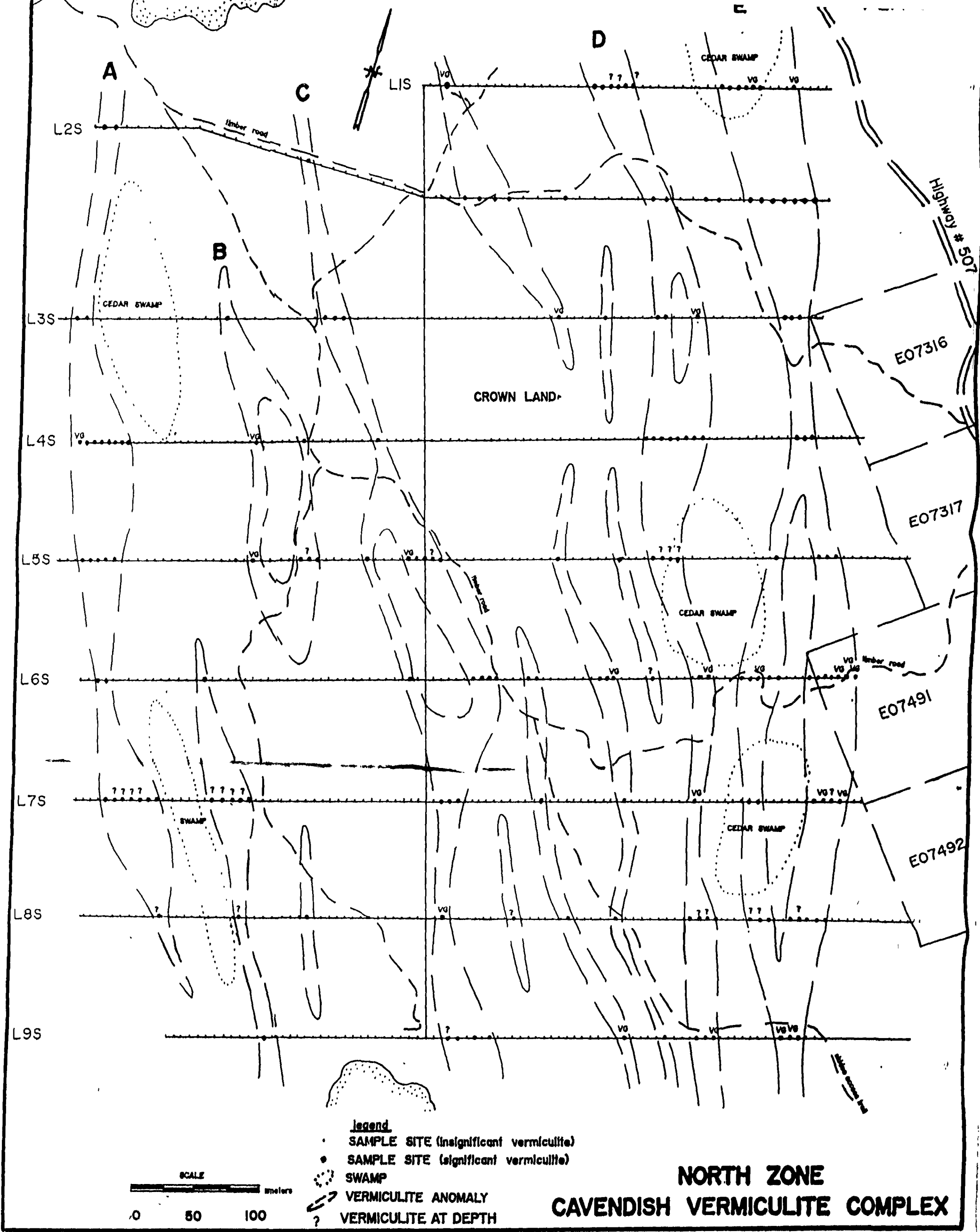
MAIN ZONE

CAVENDISH VERMICULITE COMPLEX

SCALE
0 50 100 METERS

J. Urshold





31D09NW0014 2 15539 CAVENDISH