

**HYDROGEOLOGICAL ASSESSMENT  
PROPOSED SUBDIVISION  
SOUTH SHORE CADEN ESTATES INC.  
PART OF LOT 1, CONCESSION 1ND  
TOWNSHIP OF SEVERN (ORILLIA)**

**Prepared For:  
SOUTH SHORE CADEN ESTATES INC.**

Project 2019-21  
November 15, 2019

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**HYDROGEOLOGICAL ASSESSMENT  
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**1.0 INTRODUCTION**

It is proposed to develop a 23-Lot residential subdivision on a 12.2ha parcel of land located in Part of Lot 1, Concession 1ND, Geographic Township of Orillia, within the western periphery of the Community of Marchmont. Figure 1 shows the location and proposed layout of the proposed development.

It is proposed to service the subdivision with individual water wells and private subsurface sewage disposal systems.

This hydrogeological assessment has been prepared to summarize the geological and hydrogeological setting of the site, subsurface conditions, sewage system suitability, sewage impact potential and potable groundwater potential for the development.

**2.0 SITE SETTING, GEOLOGY AND HYDROGEOLOGY**

The subject lands are located on a rectangular parcel located on the north side of Division Road West, generally between the intersections of Dunford Drive to the west and Carriage Court to the east. Frontage along Division Road West is about 470m, and the depth of the site is about 270m. The western half of the lands are cleared and mainly in fallow, and the eastern half of the lands are mainly forested. A hydro easement crosses the northwest corner of the site. Lands surrounding the site are forested to the north, residential to the east, a mix of residential and forested lands to the south and commercial properties to the west. The site exhibits a rolling topography, with an overall slope to the east, and total site relief is in the range of 12 metres.

The proposed development is located within the Simcoe Uplands physiographic Region of southern Ontario, an area characterized by a series of broad, rolling till plains separated by steep-sided, flat-floored valleys. The Ontario Geological Survey Open File Map 200 "Quaternary Geology of the Eastern Half of the Barrie and Elmvale Map Areas" describes the upper soils across the site as stony silty sand to sand glacial till.

According to the records of wells in the general area and the 2005 North Simcoe Municipal Groundwater Study, the overburden is approximately 40 to 55 metres thick in the vicinity of Marchmont, depending on relative land surface elevation. Local well records report the upper overburden to consist primarily of a surficial granular deposit overlying a relatively deep, fine-grained deposit described as hardpan or clay. An

intermediate depth granular deposit and a lower overburden granular deposit are commonly reported in local well records.

The bedrock beneath the site consists of limestone, minor dolostone and shale of the Middle Ordovician Simcoe Group of rock.

Local wells are typically completed in one of four aquifers. Several shallow dug/bored wells are reported to be completed in the upper granular deposit at depths of up to 9m, many of these wells deeper than the granular deposit to allow for in-well storage. A small number of local wells are reported to be completed in a intermediate depth aquifer at depths of 15 to 24m. Most wells are locally completed in a deep overburden aquifer atop the bedrock at a common depth range of 30 to 40m. A smaller number of wells are completed in the bedrock aquifer. The bedrock is known generally to yield lower quantities of often aesthetically poorer water.

### 3.0 LOCAL WATER WELLS

To establish well yield and basic water quality probabilities, up-to-date Ministry of the Environment, Conservation and Parks (MECP) records for water wells located within approximately 500 metres of the proposed development were reviewed. The MECP water well record database contains the records for 55 water wells within the review area, not including geotechnical/environmental well records or well upgrade/abandonment records. Copies of the MECP well records for the 55 water wells located within 500m of the proposed development are included in the appendix.

The following summarizes the reported well record information within the review area.

Number of well records:	55
Drilled Construction:	37
Dug/Bored Construction:	18, mostly completed by a local contractor prior to 1974
Sandpoint Construction:	0
Unknown Construction:	0
Completed in Overburden:	50 (91%)
Completed in Bedrock:	5 (9%)

The following summarizes the reported well performance data:

	Maximum	Minimum	Average
Well Depth (m)	85	6.1	37.2
Test Rate (L/min)	114	9	36
Test Period (Hours)	36	0.4	4.4

Reported Water Quality:

Fresh:	48 or 87% (no objectionable tastes or odours)
Sulphurous:	none
Mineralized/Saline:	1 or 2%
Quality Not Reported:	6 or 11% (becoming common for recent wells, as contractors increasingly refrain from reporting "fresh" quality without chemical analysis confirmation)
Dry Well:	none

The average well within about 500 metres of the proposed development is of drilled construction, completed in the lower overburden aquifer to a depth of 37.2 metres and yields 36 litres of fresh-quality water per minute over an average period of 4.4 hours. This average yield exceeds the maximum water demand of a normal four bedroom home specified by the MECP (i.e. 18L/min without inline storage).

It should be noted that the above summary and analysis is based solely on information contained in the MECP water well record database as reported by drilling contractors and is not subject to quality control, however the overall analytical summary is favourable.

#### 4.0 GROUNDWATER SUPPLY

##### 4.1 Test Well Construction - Test Well 1:

The following information was derived from the well record completed by the drilling contractor, Lone Star Drilling Services Ltd. Figure 1 shows the location of TW1. A copy of the water well record for TW1 is included in the appendix.

##### Contractor's Log of Formations Penetrated

<u>Depth (m)</u>	<u>Materials</u>
0 - 0.3	black topsoil
0.3 - 3.4	brown clay
3.4 - 15.8	blue clay with rocks, hard
15.8 - 18.0	blue clay, soft
18.0 - 21.0	blue clay, medium
21.0 - 22.3	blue sand, medium
22.3 - 24.1	blue sand, coarse

Water was reported to have been located in the coarse blue sand at a depth of 22.3m below grade.

Casing Record:

Total Length:	23.2m
Setting:	0.6m above grade to 22.6m below grade
Diameter:	15.88cm ID
Wall Thickness:	0.48cm
Material:	steel
Well Screen:	12.7cm OD (5 inch telescopic), 10-slot stainless steel screen set from 22.6m to 24.1m
Annular Seal:	Bentonite - grade to 6.1m

4.2 Pumping Test - Test Well 1:

Test Well 1 was subjected to a 6 hour pumping test at a rate of 14 L/min on August 22, 2019, beginning at 11:30am. Water levels were observed in the test well on a regular basis during pumping and for an 848 minute period of recovery after pumping ceased. Water levels were also observed on a regular basis in nearby OW1, located about 200m southwest of TW1. Water levels were observed using an electronic water level meter. Pumping rates were controlled by an in-line valve and confirmed using a calibrated container. Water was discharged from the well about 20m to the south.

Figure 2 is a semi-logarithmic plot of the test results showing the drawdown of the water level in TW1 versus the elapsed time from the start of pumping and residual drawdown versus the ratio of time from the start of pumping to the time from the end of pumping (ratio  $t/t'$ ). The raw pumping test data are included in the appendix.

The water level in Test Well 1 lowered 1.19m during the first minute of pumping, and assumed a steepening downward trend with minor fluctuations due to pumping rate corrections. After about ten minutes of pumping, a relatively stable, steep downward water level trend was established. After about sixty minutes, the downward trend of the of the water level began to slowly moderate, and continued to moderate until the conclusion of the pumping test.

The final water level in the well was 18.99m below grade. Final drawdown was 13.72m, which represents 79 percent of available drawdown (17.3m) in the well above the top of the well screen.

Following the conclusion of pumping, the water level rose to 5.88m below the original static water level (57% recovery) within 30 minutes of the conclusion of the pumping test, but recovered to 0.20m below the original static water level (98% recovery) after 848 minutes of recovery.

A total of about 5,040 litres of water were pumped from the well during the 6 hour pumping test. The Ontario Building Code recommends a design flow of 1,600L/day for a 3-bedroom home and 2,000L/day for a 4-bedroom home, and TW1 is more than capable of supplying these yields.

#### 4.3 Interference Observations:

During the TW1 well testing program, water levels were observed on a regular basis in OW1 (MECP Well No. 57-7671), located approximately 200m southwest of TW1. OW1 is a 7.3m deep bored well, and is likely completed in the upper overburden aquifer, to a shallower depth than TW1. Attempts were made to obtain permission to observe other local wells completed in the same aquifer setting as TW1 (i.e. the intermediate-depth overburden aquifer), however only one other off-site well was made available for observation (due to other properties' access limitations, buried casings or inability to obtain observation permission) at 3978 Dunford Drive. This unrecorded drilled well was determined to have a static water level of 34m below grade and, based on other well record data in the vicinity, will be completed in the bedrock aquifer and was not observed as this well will be hydraulically isolated from TW1 by more than 40m of overburden deposits.

During the TW1 pumping test, the water level in OW1 lowered 0.06m by the conclusion of testing. OW1 was in occasional use, supplying the domestic requirements of the commercial office on the property immediately to the west. Figure 3 illustrates the water level observations at OW1. The observation data are included in the appendix.

There were no complaints of water level interference reported during the drilling program or the well testing period.

#### 4.4 Well Testing Summary and Discussion:

The following provides a summary of the well testing results:

	Test Well 1
Date of Test	August 22, 2019
Static Water Level (m below grade)	5.27
Final Water Level Drawdown (m)	13.72
Final Pumping Water Level (m below grade)	18.99
Pumping Rate (L/min)	14
Duration	6 hours
Specific Capacity (L/min/m)	1.0
Available Drawdown Above Well Screen (m)	3.6
Percent Available Drawdown Used	79%
Coefficient of Transmissivity (m <sup>2</sup> /day)	0.6
Safe Yield (L/min)	14L/min

- Notes:
1. The coefficient of transmissivity was calculated using the Cooper and Jacob modified non-equilibrium method using an assumed drawdown of 8.5m/log cycle for TW1 (based on an extrapolation of the drawdown trend between 7 and 20 minutes). A coefficient of storage was not determined as the minor water level change at OW1 was more likely a result of domestic withdrawals from OW1.

The above analysis indicates that TW1 is capable of supplying the normal domestic requirements of a 4-Bedroom home (2,000L/day, per Ontario Building Code), however MECP Procedure D-5-5 recommends that a water supply be capable of supplying 18.75L/min for a period of 120 minutes each day. In-line storage, such as an over-sized pressure tank, can be utilized to meet such peak demand if so required.

As discussed above, available information indicates that there are upwards of four aquifers (three overburden and one bedrock) present in the area, and TW1 has been completed in the intermediate-depth overburden aquifer. Based on known local conditions and the well record survey detailed in Section 3.0, it is anticipated that future on-site water wells will mainly be completed either in the intermediate or lower overburden aquifers, with a smaller number in the bedrock aquifer. As such, off-site interference potential and impact potential to each aquifer will be reduced.



#### 4.5 Groundwater Quality:

Samples of water were collected from TW1 at the conclusion of the pumping test and were subjected to general chemistry and bacteriological analyses. The samples were collected in laboratory-supplied bottles, stored in ice-packed coolers and submitted to Bureau Veritas Laboratories for analysis under chain of custody.

The TW1 samples were reported to contain a Total Coliform count of 8CFU/100mL, no detectable E. Coli bacteria, and an acceptably low level of background bacteria (12 CFU/100mL). Low levels of Total Coliform bacteria in the water from newly-drilled water wells are not uncommon due to residual effects from the disruption of the drilling process, and in a properly-constructed well such as TW1, will diminish in a short period of time. Prior to placing TW1 into service and after duty pump installation, the well will be required to be re-disinfected. It is recommended that the well be re-sampled for bacteriological analysis after that time.

The water from TW1 was slightly alkaline with a pH value of 8.25. The water from TW1 is moderately hard, with a hardness value of 200mg/L as CaCO<sub>3</sub>. The values are typical for groundwater in southern Ontario.

All chemical parameters determined were at acceptable levels under the current Ontario Drinking Water Quality Standards. Chemical parameters indicative of potential surface water influence (i.e. sodium, chloride, dissolved organic carbon, nitrite, nitrate) were all at non-detectable to low levels in the water from TW1.

A copy of the laboratory analytical results is included in the appendix.

### 5.0 SUBSURFACE ASSESSMENT

#### 5.1 Test Pits:

To characterize soil and shallow groundwater conditions, six exploratory test pits were completed using excavating equipment within accessible portions of the subject lands on August 22, 2019. The test pits were completed to depths of 1.67 to 2.13m below grade. The soil profiles were logged and representative soil samples were collected for classification and further analysis. Figure 1 shows the approximate test pit locations.

Six representative soil samples were subjected to an analysis of grain size to provide estimates of soil permeability. The following summarizes the results of the analyses:

Sample	Depth (m)	Grain Size Distribution				Estimated Coefficient of Permeability (cm/sec)	Estimated T-time (minutes/cm)
		Clay %	Silt %	Sand %	Gravel %		
TP1 S1	0.5	3	23	69	5	$1 \times 10^{-4}$	15
TP2 S2	1.2	15	46	35	4	$8 \times 10^{-6}$	35
TP3 S3	0.5	3	8	89	0	$2 \times 10^{-3}$	12
TP4 S4	1.2	15	44	41	0	$1 \times 10^{-5}$	35
TP6 S5	0.5	11	27	62	0	$1 \times 10^{-5}$	30

Note: The above coefficients of permeability and T-times are estimates based on field observation, grain-size analysis, experience with similar soils and guidelines published under the Ontario Building Code.

Copies of the grain-size curves and logs of the test pits are included in the appendix.

In summary, the upper native soil profile consists mainly of a fine sand to silty fine sand, which exhibits a percolation rate in the range of 12min/cm to 30min/cm, depending on silt content. The upper sand is underlain by a silt and sand with some clay glacial till which exhibits a percolation rate in the range of 35min/cm.

## 5.2 Watertable:

The following provides a summary of observed emergent groundwater and observed evidence of seasonally-elevated watertable conditions in the test pit soil profiles (i.e. soil discoloration and/or mottling):

	<u>Emergent Groundwater</u>	<u>Seasonal Watertable</u>
Test Pit 1	dry to 1.67m	None
Test Pit 2	dry to 1.83m	None
Test Pit 3	0.61m	0.61m
Test Pit 4	0.76m	0.76m
Test Pit 5	1.22m	1.22m
Test Pit 6	1.52m	1.52m

### 5.3 Preliminary Sewage System Design:

To support individual subsurface sewage disposal systems, the proposed lots must be physically large enough to allow the installation of sewage disposal systems under the current requirements of the Ontario Building Code. For a Class 4 subsurface sewage disposal system to operate effectively, the leaching bed must be located in soil with a percolation rate (T-time) of between 1 and 50 minutes per centimetre and the base of the absorption trenches must be situated at least 0.9m above the high ground water table, bedrock or a soil with a permeability of greater than 50 minutes per centimetre. To achieve a normal, in-ground installation, the high groundwater table, rock or soil with a permeability of greater than 50 min/cm must be situated at least 1.5 to 1.8 metres below grade.

In the western  $\frac{1}{3}$  upland portion of the site, based on low watertable conditions, fully in-ground tile beds are considered viable. Over the remaining lower portions of the site, partially raised tile beds will be required due to observed emergent groundwater and evidence of seasonally elevated watertable conditions in the soil profile. In the central  $\frac{1}{3}$  of the site, the bases of tile bed trenches should be set no lower than 0.29m above current grade. In the eastern  $\frac{1}{3}$  of the site, the bases of tile bed trenches should be set no lower than 0.32m below current grade.

For preliminary site design purposes, a conservative soil T-time of 35min/cm is recommended, this based on the permeability of the underlying silt and sand glacial till.

Lot and sewage system envelope-specific test pits are recommended at sewage system/building permit stage, at the time of building permit application on each particular lot.

### 5.4 Sewage Impact Assessment:

Under the current Ministry of the Environment, Conservation and Parks (MECP) "Technical Guideline For Individual On-Site Sewage Systems : Water Quality Impact Risk Assessment" (Procedure D-5-4), each proposed development of five lots or greater utilizing individual on-site sewage systems requires an assessment of groundwater impact potential. The purpose of the assessment is to ensure that the discharge from the individual on-site sewage systems will have a minimal effect on groundwater and the present or potential use of adjacent properties. Following the determination of background shallow groundwater nitrate levels, the assessment involves a three-step process, with the need to advance to the next step dependant on the requirements of the previous step. Where the background nitrate content of shallow groundwater exceeds 10 mg/L, additional development cannot normally be supported.

The nitrate content of groundwater samples collected from TW1 was non-detectable.

Under Step 1 of the guideline, for developments where the lot size for each private residence within the development is one hectare or larger (with no lots being less than 0.8ha in area), the risk that the limits imposed by the guideline may be exceeded is

considered acceptable with no additional hydrogeologic assessment. As the proposed lots are less than 0.8ha in area, Step 1 of the guideline does not apply.

Step 2 of the guideline is applicable where groundwater resources can be confidently demonstrated to be hydraulically isolated from potential sewage pathways. As an upper overburden aquifer is present in the vicinity (but not recommended for potable groundwater purposes), Step 2 of the guideline does not apply.

Under Step 3 of the guideline, a mass-balance calculation is used to determine the minimum size of the proposed lots. Under the current MECP guideline only infiltrating precipitation and the volume of water contained in the sewage may be considered as dilutants for the nitrate contained in septic effluent. To establish the infiltration rate, the percentage of the local water surplus which may infiltrate is calculated using the Rational Method approach. According to the available information, the uppermost soil profile consists fine sand to silty fine sand (infiltration factor 30%), the overall relief is rolling to hilly (as defined by MECP) (infiltration factor 15%) and the cover will be a mix of cleared areas and woodland (infiltration factor 15%), all resulting in an infiltration factor of 60%. According to the 2015 Severn Sound Source Protection Area Approved Assessment Report, the water surplus for the North River sub-watershed is 405mm per year (978mm/year precipitation, 573mm/year actual evapotranspiration). As such, the annual infiltration rate will be 243mm (60% of 405mm), representing 25% of average annual precipitation in the sub-watershed (978mm/year). The infiltration rate is reduced by a factor of 10% over the entire property area to account for future impervious surfaces due to urbanization of the property, to 219mm/year. Based on a total site area of 12.2ha, annual infiltration will be  $2.67 \times 10^7$  L/year.

The following mass-balance formula is used to calculate the impact of the proposed development under the MECP guideline:

$$Q_T C_T = Q_S C_S + Q_P C_P$$

Where:

$Q_T$  = Sum of  $Q_S$  and  $Q_P$

$C_T$  = Maximum nitrate concentration (10mg/L)

$Q_S$  = Volume of sewage (1000 L/day/lot, per MECP guideline)

$C_S$  = Nitrate content of sewage (40 mg/L)

$Q_P$  = Infiltration ( $2.67 \times 10^7$  L/year)

$C_P$  = Nitrate content of shallow groundwater (effectively zero)

Therefore:

$$(Q_S + 2.67 \times 10^7 \text{ L/year}) \times 10 \text{ mg/L} = (Q_S \times 40 \text{ mg/L}) + (2.67 \times 10^7 \text{ L/year} \times 0 \text{ mg/L})$$

$$Q_S = 8.9 \times 10^6 \text{ L/year}$$

Based on the MECP-prescribed daily average sewage volume of 1,000L/day/lot (for the purposes of impact assessment), a total of 24.4 lots are supportable under the MECP guideline. As such, the current proposal for the development of 23 lots is considered acceptable under the criteria of MECP Procedure D-5-4.

The above assessment approach, conducted in accordance with MECP Guidelines, does not consider sewage dilution by groundwater flow-through nor does it consider denitrification processes in the subsurface. As such, the assessment will over-estimate the actual degree of groundwater impact of the proposed lots, this considered a safety factor.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

1. Based on regional hydrogeological information available for this assessment and local water well records, upwards of four regional overburden aquifers are likely present beneath the site and the likelihood of obtaining an adequate potable groundwater supply on the proposed subdivision is favourable.
2. The on-site test well, completed in the intermediate-depth overburden aquifer, has a safe yield of 14L/min, which exceeds MECP daily yield requirements for residential wells, and is suitable for domestic use. In-line storage (such as over-sized pressure tanks) may be required to meet peak water demand.
3. Regional hydrogeologic information indicates that the lower overburden and bedrock aquifers are also viable in the area. These deeper aquifers present alternative sources of potable groundwater for the on-site lots. Adequate water supplies can be obtained on each proposed lot from either of the intermediate or deep overburden aquifers or the bedrock aquifer.
4. Only drilled wells completed in accordance with Ontario Regulation 903 to either of the intermediate or deep overburden aquifers or the bedrock aquifer are recommended.
5. The bacteriological quality of water from properly constructed drilled wells will be acceptable. Due to low levels of Total Coliform bacteria in the water from newly-drilled TW1, prior to placing TW1 into service and after duty pump installation, the well will be required to be re-disinfected. It is recommended that the well be re-sampled for bacteriological analysis after that time.
6. The chemical quality of water from properly constructed drilled wells will be acceptable.
7. Based on an acceptable rate of recovery after testing, observed aquifer response during testing, and the likelihood that on-site wells will be divided between three aquifers, off-site interference potential is considered low. Widely-spaced drilled wells in normal domestic use represent an acceptable water supply with a low risk of disruptive water level interference.
8. Based on observed watertable conditions, in the western  $\frac{1}{3}$  upland portion of the site, fully in-ground tile beds are considered viable. Over the remaining lower portions of the site, partially raised tile beds will be required due to observed emergent groundwater and evidence of seasonally elevated watertable

conditions in the soil profile. In the central  $\frac{1}{3}$  of the site, the bases of tile bed trenches should be set no lower than 0.29m above current grade. In the eastern  $\frac{1}{3}$  of the site, the bases of tile bed trenches should be set no lower than 0.32m below current grade.

9. For preliminary site design purposes, a conservative soil T-time of 35min/cm is recommended, this based on the permeability of the underlying silt and sand glacial till.
10. Lot and sewage system envelope-specific test pits are recommended at sewage system/building permit stage, at the time of building permit application on each particular lot.
11. Under MECP Procedure D-5-4, the impact of the currently proposed 23 lot subdivision will be acceptable using conventional subsurface sewage disposal systems.
12. From a groundwater supply and sewage disposal/impact perspectives, the proposed development of 23 single detached residential lots serviced by individual on-site wells and individual on-site sewage services, is considered appropriate, safe and viable subject to the conclusions, limitations and recommendations outlined in this report.

**IAN D. WILSON ASSOCIATES LIMITED**

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November 1, 2019



## **FIGURES AND APPENDIX**



**MARTINDALE DR.**

**DIVISION ROAD WEST**

**DUNFORD DR.**

APPROXIMATE LOCATIONS OF TW1, OW1 AND TEST PITS  
 SOUTH SHORE CADEN ESTATES INC. SUBDIVISION  
 MARCHMONT, ON

SCALE 1:2,260 (approx.)

FIGURE 1



South Shore Caden Estates Inc. - TW1 Pumping Test

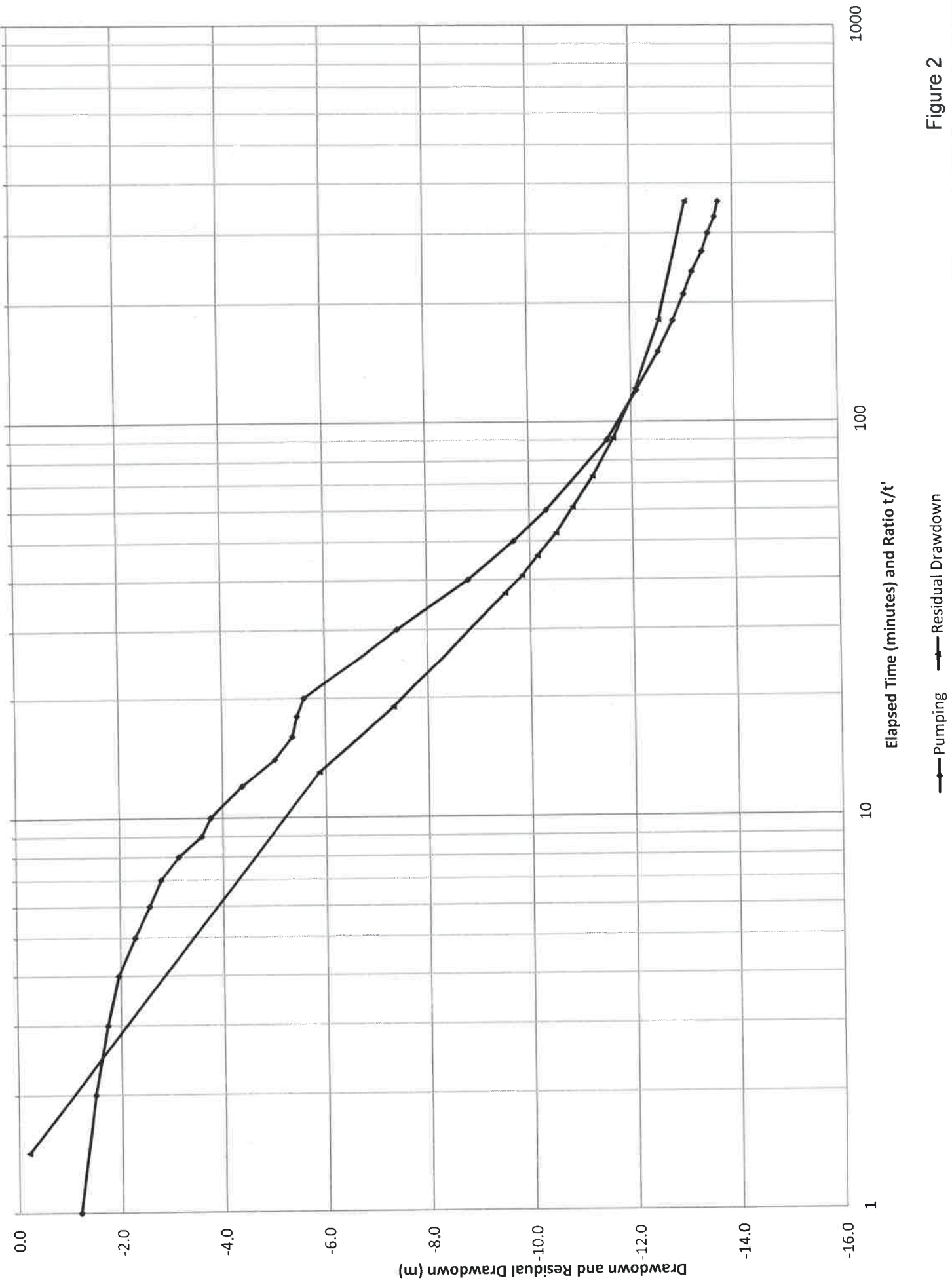


Figure 2

South Shore Caden Estates Inc. - OW1 Observations During TW1 Pumping Test

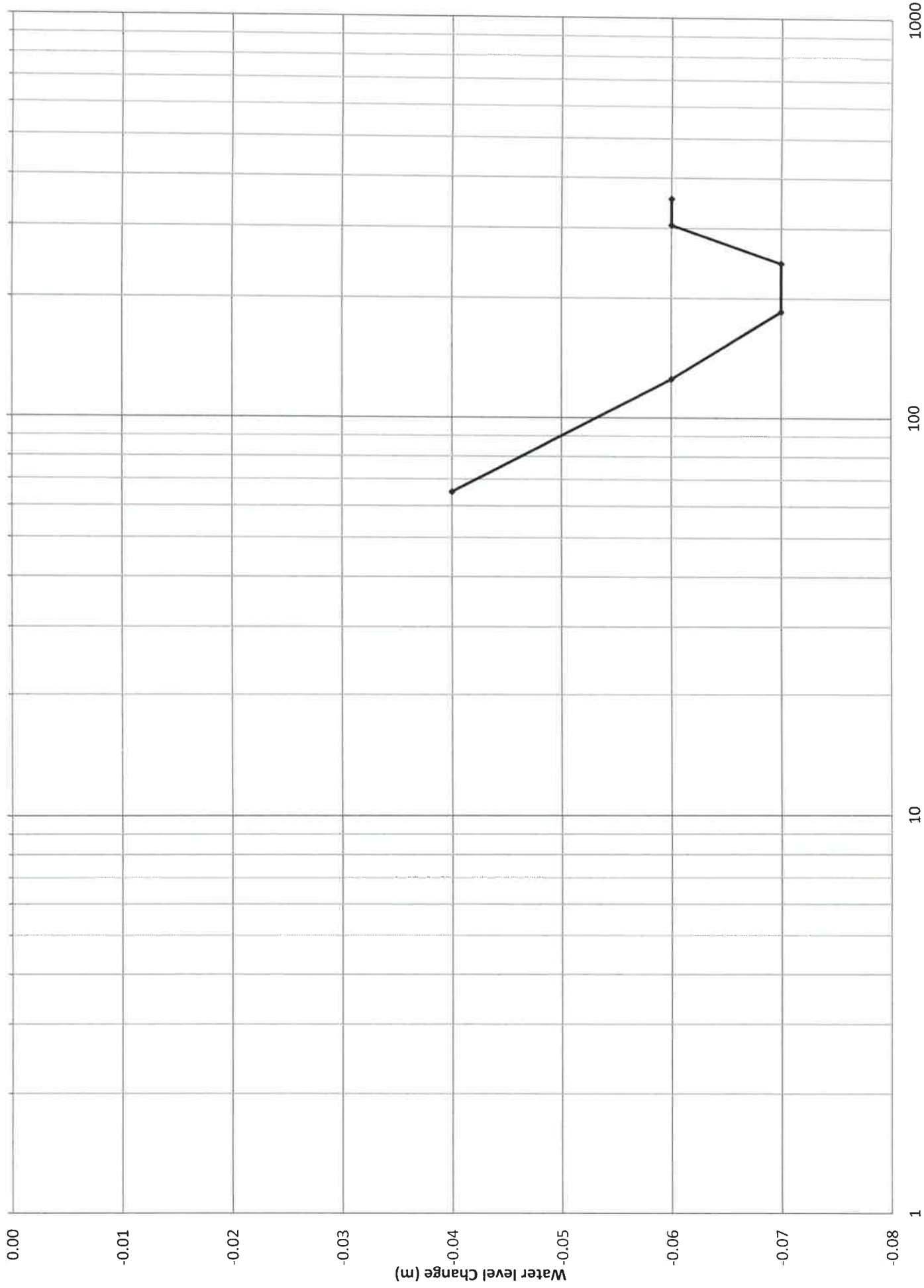


Figure 3

**Pumping Test Data**  
**South Shore Caden Estates Inc.**  
**TW1**

Date of Test: 22-Aug-19  
 Static Water Level: 6.61m below top of casing  
 Measuring Point Elevation: 1.34m above grade  
 Pumping Rate: 14L/min

Note: \* Recovery shown as ratio t/t'

Elapsed Time (min.)*	Recovery Elapsed Time (min.)	Pumping Water Level (m btoc)	Water Level Drawdown (m)	Recovery Water Level (m btoc)	Residual Drawdown (m)
0		6.61	0.00		
1		7.80	-1.19		
2		8.10	-1.49		
3		8.35	-1.74		
4		8.57	-1.96		
5		8.89	-2.28		
6		9.18	-2.57		
7		9.40	-2.79		
8		9.75	-3.14		
9		10.20	-3.59		
10		10.37	-3.76		
12		10.99	-4.38		
14		11.63	-5.02		
16		11.97	-5.36		
18		12.06	-5.45		
20		12.20	-5.59		
30		14.02	-7.41		
40		15.41	-8.80		
50		16.30	-9.69		
60		16.94	-10.33		
90		18.14	-11.53		
120		18.72	-12.11		
150		19.15	-12.54		
180		19.44	-12.83		
210		19.66	-13.05		
240		19.82	-13.21		
270		20.02	-13.41		
300		20.13	-13.52		
330		20.26	-13.65		
360		20.33	-13.72		
361	1			19.69	-13.08
181	2			19.17	-12.56
121	3			18.70	-12.09
91	4			18.26	-11.65

73	5			17.85	-11.24
61	6			17.46	-10.85
52.4	7			17.13	-10.52
46	8			16.76	-10.15
41	9			16.46	-9.85
37	10			16.13	-9.52
19	20			13.94	-7.33
13	30			12.49	-5.88
1.4	848			6.81	-0.20

**Observation Well Data**  
**South Shore Caden Estates inc.**

**OW1 Water Levels During TW1 Pumping Test**

Elapsed Time (min.)	Water Level (m btoc)	Water Level Change (m)
-20	1.44	0.00
65	1.48	-0.04
125	1.50	-0.06
185	1.51	-0.07
245	1.51	-0.07
305	1.50	-0.06
355	1.50	-0.06

## TEST PIT LOGS

Completed August 22, 2019

### Test Pit 1

<u>Depth (m)</u>	<u>Materials</u>
0 - 0.31	dark brown TOPSOIL
0.31 - 0.58	red-brown, lightly compact, dry silty fine SAND with traces of clay and gravel (estimated percolation rate 15 min/cm)
0.58 - 1.67	grey-brown, compact, dry sandy SILT and SAND till with some clay and traces of gravel, stony (estimated percolation rate 35 min/cm)

- No emergent groundwater or soil mottling.
  - Sample 1 - 0.5m
    - Clay = 3%
    - Silt = 23%
    - Sand = 69%
    - Gravel = 5%
- 

### Test Pit 2

<u>Depth (m)</u>	<u>Materials</u>
0 - 0.31	dark brown TOPSOIL
0.31 - 0.64	red-brown, lightly compact, dry silty fine SAND with traces of clay and gravel (estimated percolation rate 15 min/cm)
0.64 - 1.82	grey-brown, compact, dry sandy SILT and SAND till with some clay and traces of gravel, stony (estimated percolation rate 35 min/cm)

- No emergent groundwater or soil mottling.
  - Sample 2 - 1.2m
    - Clay = 15%
    - Silt = 46%
    - Sand = 35%
    - Gravel = 4%
- 

### Test Pit 3

<u>Depth (m)</u>	<u>Materials</u>
0 - 0.31	dark brown TOPSOIL
0.31 - 0.89	red-brown, lightly compact, dry to wet fine SAND with traces of silt and clay (estimated percolation rate 12 min/cm)
0.89 - 1.98	grey-brown, compact, wet sandy SILT and SAND till with some clay, stony (estimated percolation rate 35 min/cm)

- Emergent groundwater and soil mottling below 0.61m.
- Sample 3 - 0.5m
  - Clay = 3%
  - Silt = 8%
  - Sand = 89%
  - Gravel = 0%

**TEST PIT LOGS****Completed August 22, 2019****Test Pit 4**

<u>Depth (m)</u>	<u>Materials</u>
0 - 0.25	dark brown TOPSOIL
0.25 - 0.81	red-brown, lightly compact, dry to wet fine SAND with traces of silt and clay (estimated percolation rate 12 min/cm)
0.81 - 1.82	grey-brown, compact, wet sandy SILT and SAND till with some clay, stony (estimated percolation rate 35 min/cm)

- Emergent groundwater and soil mottling below 0.76m.
  - Sample 4 - 1.2m
    - Clay = 15%
    - Silt = 44%
    - Sand = 41%
    - Gravel = 0%
- 

**Test Pit 5**

<u>Depth (m)</u>	<u>Materials</u>
0 - 0.35	dark brown TOPSOIL
0.35 - 1.42	red-brown, lightly compact, dry to wet silty fine SAND with some clay (estimated percolation rate 30 min/cm)
1.42 - 2.13	grey-brown, compact, wet sandy SILT and SAND till with some clay, stony (estimated percolation rate 35 min/cm)

- Emergent groundwater and soil mottling below 1.22m.
- 

**Test Pit 6**

<u>Depth (m)</u>	<u>Materials</u>
0 - 0.25	dark brown TOPSOIL
0.25 - 0.78	red-brown, lightly compact, dry silty fine SAND with some clay (estimated percolation rate 30 min/cm)
0.78 - 1.82	grey-brown, compact, dry to wet sandy SILT and SAND till with some clay, stony (estimated percolation rate 35 min/cm)

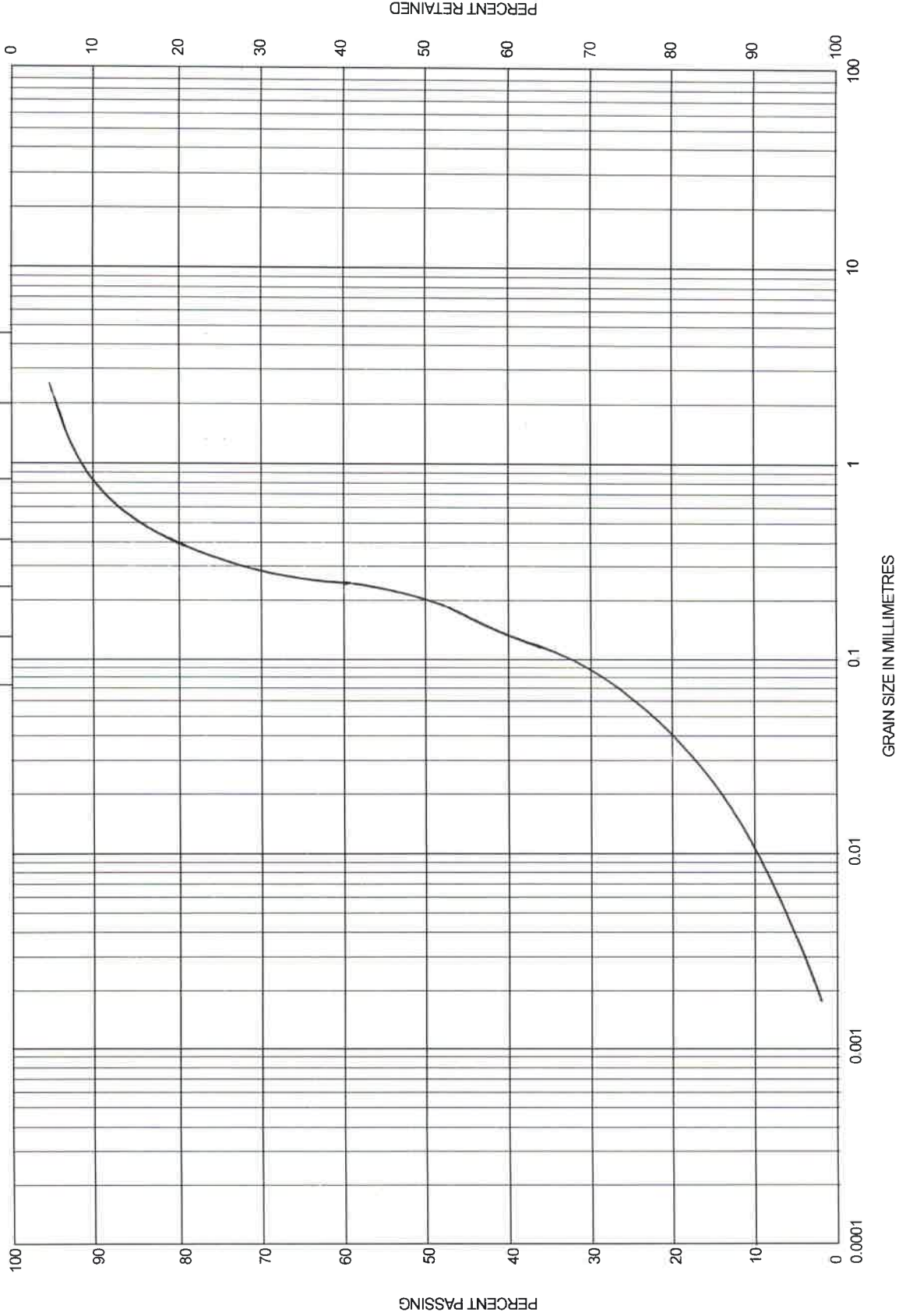
- Emergent groundwater and soil mottling below 1.52m.
- Sample 5 - 0.5m
  - Clay = 11%
  - Silt = 27%
  - Sand = 62%
  - Gravel = 0%

# GRAIN SIZE DISTRIBUTION CHART

PROJECT / SAMPLE South Shore Caden Estates Inc. - Test Pit 1, Sample 1


 HYDROMETER ANALYSIS
 


 SIEVE NUMBER (US STANDARD SIEVE SIZES)

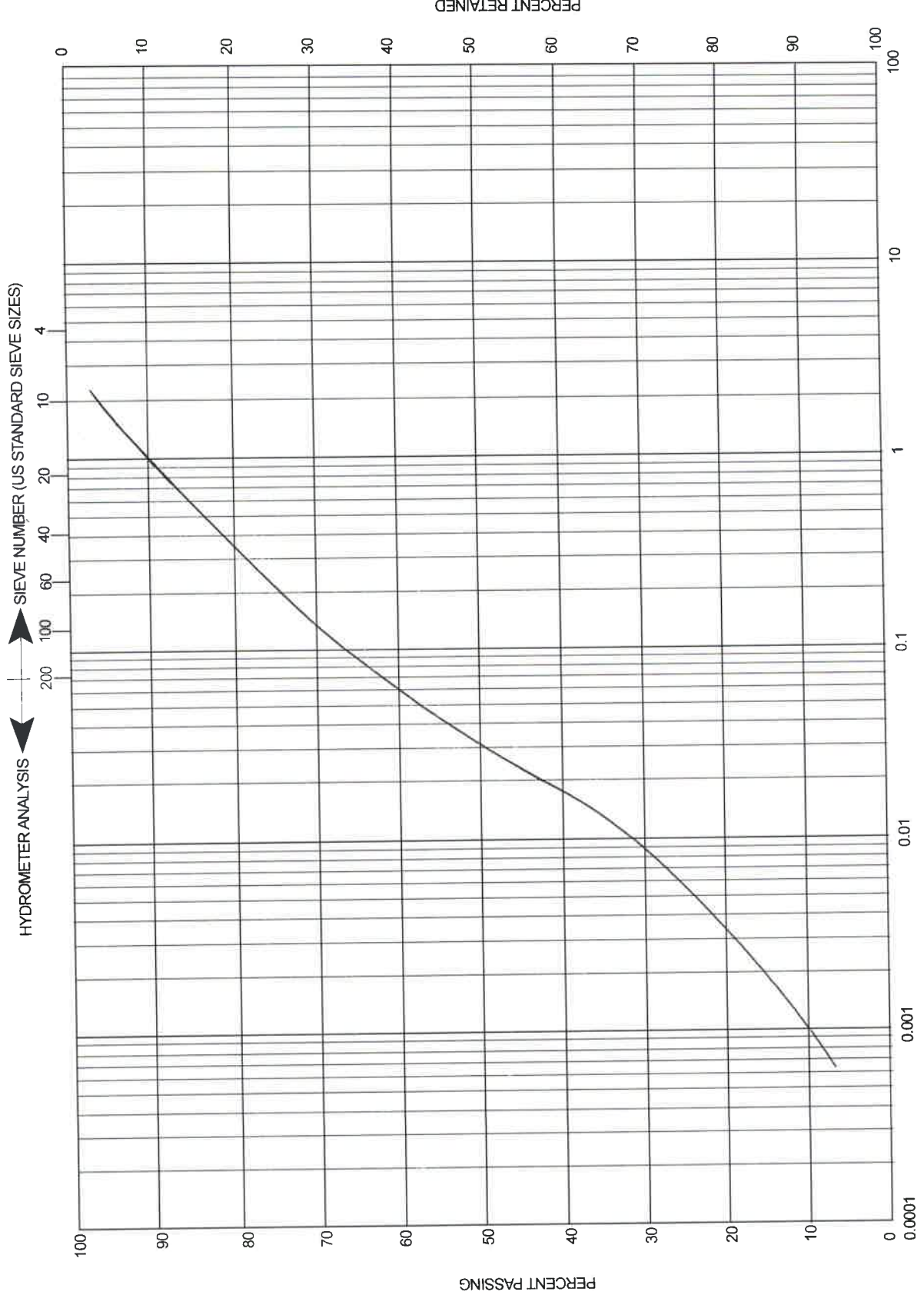


CLAY SIZE	SILT SIZE	SAND SIZE	GRAVEL SIZE	COBBLE SIZE
-----------	-----------	-----------	-------------	-------------



# GRAIN SIZE DISTRIBUTION CHART

PROJECT / SAMPLE South Shore Caden Estates Inc. - Test Pit 2, Sample 2



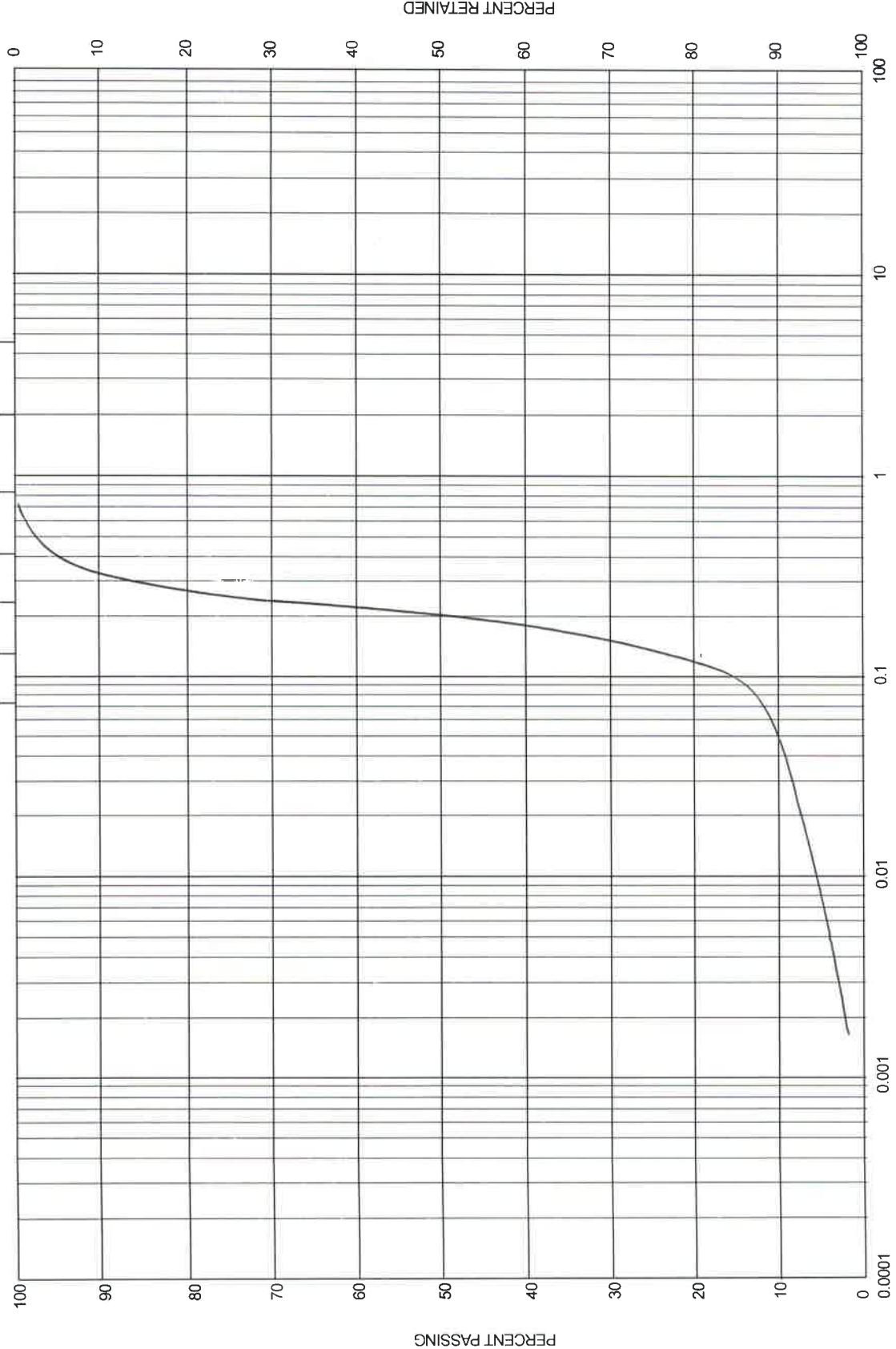
CLAY SIZE	SILT SIZE	SAND SIZE	GRAVEL SIZE	COBBLE SIZE
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# GRAIN SIZE DISTRIBUTION CHART

PROJECT / SAMPLE    South Shore Caden Estates Inc. - Test Pit 3, Sample 3


 HYDROMETER ANALYSIS
 


 SIEVE NUMBER (US STANDARD SIEVE SIZES)



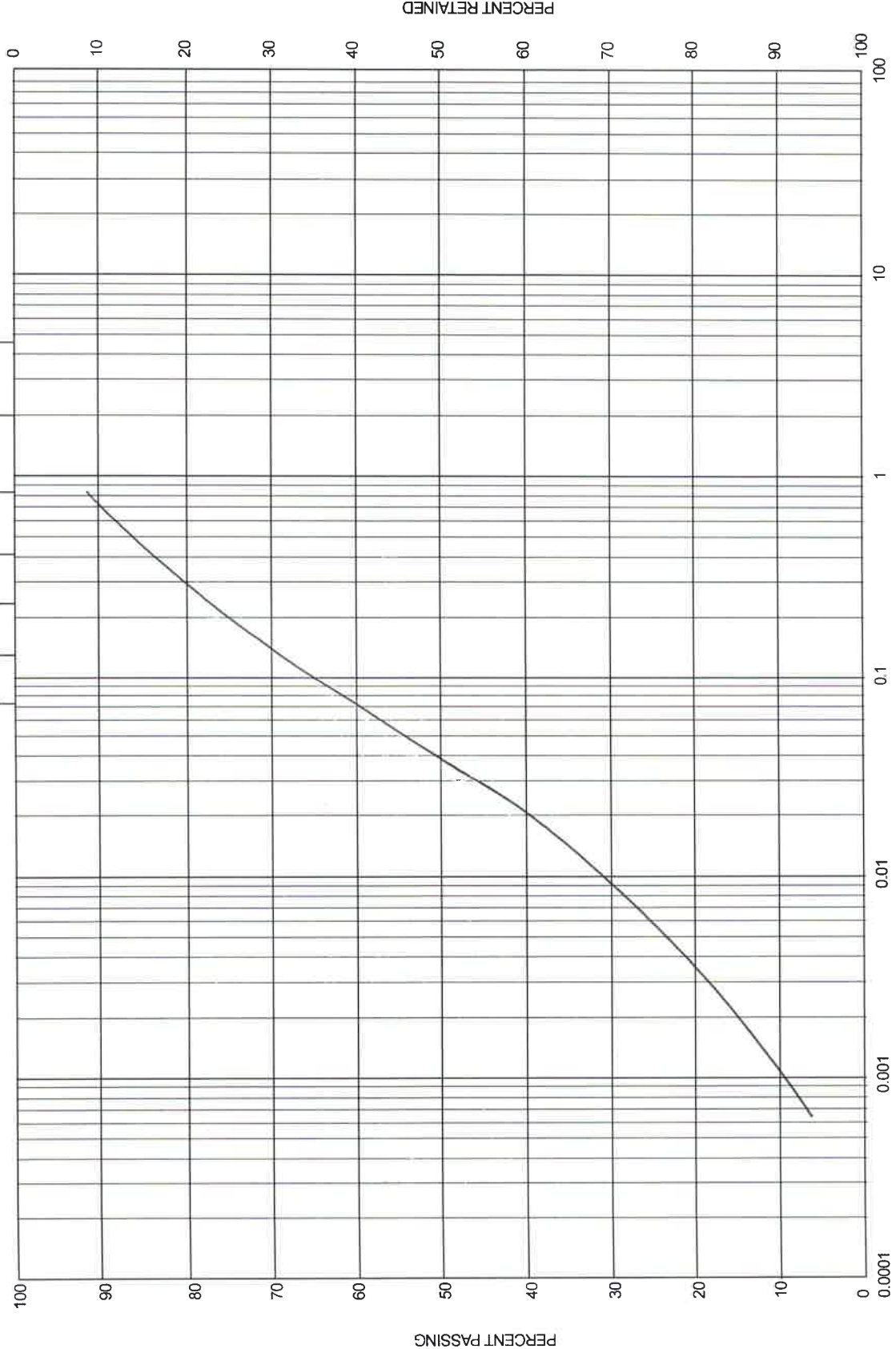
CLAY SIZE	SILT SIZE	SAND SIZE	GRAVEL SIZE	COBBLE SIZE
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# GRAIN SIZE DISTRIBUTION CHART

PROJECT / SAMPLE    South Shore Caden Estates Inc. - Test Pit 4, Sample 4

HYDROMETER ANALYSIS    ◀
 

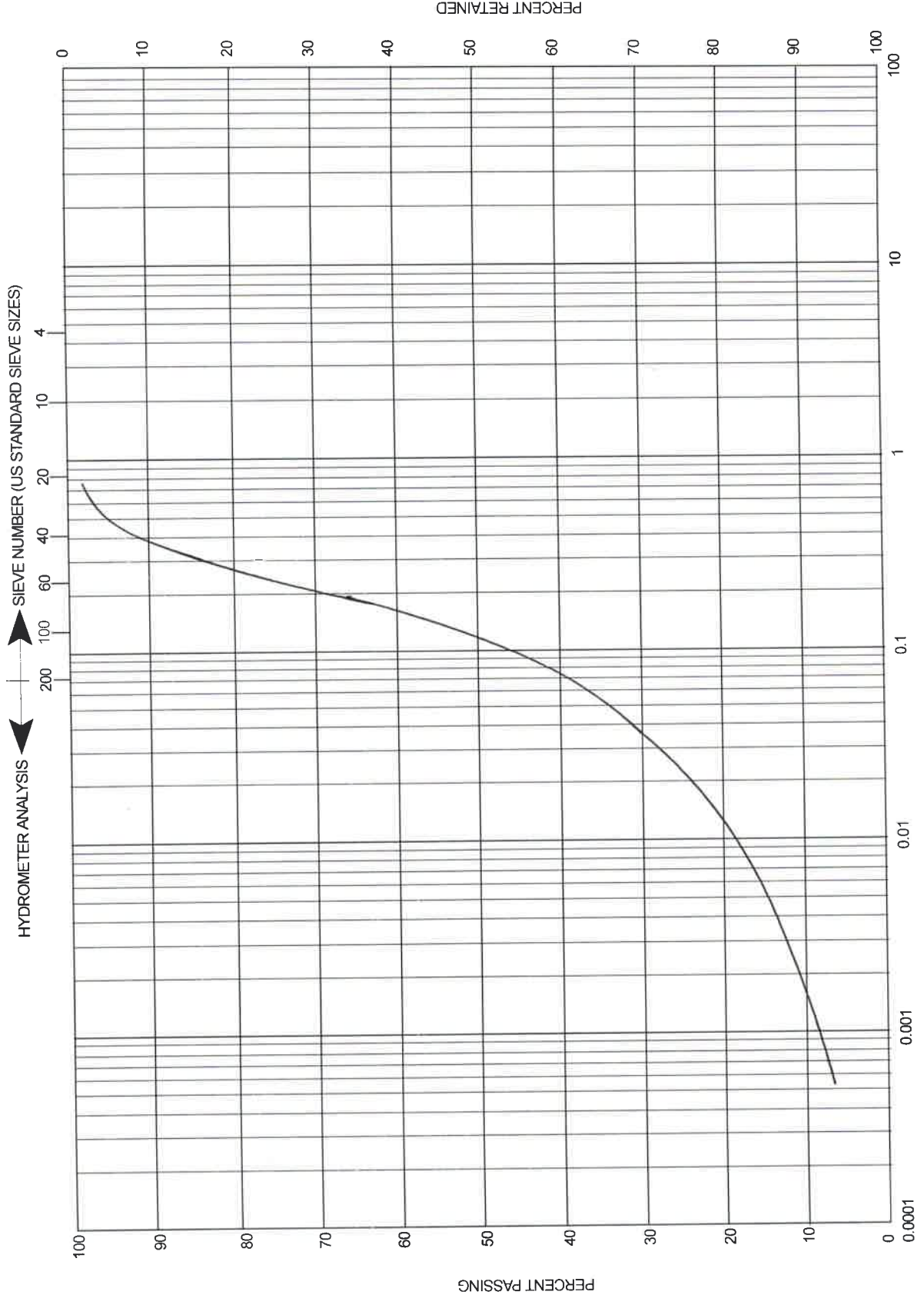
 ▶    SIEVE NUMBER (US STANDARD SIEVE SIZES)



CLAY SIZE	SILT SIZE	SAND SIZE
GRAVEL SIZE	COBBLE SIZE	COBBLE SIZE

# GRAIN SIZE DISTRIBUTION CHART

PROJECT / SAMPLE    South Shore Caden Estates Inc. - Test Pit 6, Sample 5



CLAY SIZE	SILT SIZE	SAND SIZE
GRAVEL SIZE	GRAVEL SIZE	COBBLE SIZE



Site Location: MARCHMONT

Your C.O.C. #: n/a

**Attention: Geoff Rether**

Ian D Wilson Associates Ltd  
PO Box 299  
76722 Airport Rd  
Clinton, ON  
CANADA NOM 1LO

Report Date: 2019/08/28

Report #: R5857619

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BV LABS JOB #: B9N5854**

**Received: 2019/08/23, 10:37**

Sample Matrix: Water

# Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Reference
Alkalinity	1	N/A	2019/08/27	CAM SOP-00448	SM 23 2320 B m
Carbonate, Bicarbonate and Hydroxide	1	N/A	2019/08/27	CAM SOP-00102	APHA 4500-CO2 D
Chloride by Automated Colourimetry	1	N/A	2019/08/27	CAM SOP-00463	SM 4500-Cl E m
Colour	1	N/A	2019/08/26	CAM SOP-00412	SM 23 2120C m
Conductivity	1	N/A	2019/08/27	CAM SOP-00414	SM 23 2510 m
Dissolved Organic Carbon (DOC) (1)	1	N/A	2019/08/26	CAM SOP-00446	SM 23 5310 B m
Hardness (calculated as CaCO3)	1	N/A	2019/08/26	CAM SOP 00102/00408/00447	SM 2340 B
Lab Filtered Metals by ICPMS	1	2019/08/24	2019/08/26	CAM SOP-00447	EPA 6020B m
Ion Balance (% Difference)	1	N/A	2019/08/28		
Anion and Cation Sum	1	N/A	2019/08/27		
Total Coliforms/ E. coli, CFU/100mL	1	N/A	2019/08/23	CAM SOP-00551	MOE E3407
Total Ammonia-N	1	N/A	2019/08/27	CAM SOP-00441	USGS I-2522-90 m
Nitrate (NO3) and Nitrite (NO2) in Water (2)	1	N/A	2019/08/26	CAM SOP-00440	SM 23 4500-NO3I/NO2B
pH	1	2019/08/24	2019/08/27	CAM SOP-00413	SM 4500H+ B m
Orthophosphate	1	N/A	2019/08/26	CAM SOP-00461	EPA 365.1 m
Sat. pH and Langelier Index (@ 20C)	1	N/A	2019/08/28		
Sat. pH and Langelier Index (@ 4C)	1	N/A	2019/08/28		
Sulphate by Automated Colourimetry	1	N/A	2019/08/26	CAM SOP-00464	EPA 375.4 m
Total Dissolved Solids (TDS calc)	1	N/A	2019/08/28		
Turbidity	1	N/A	2019/08/26	CAM SOP-00417	SM 23 2130 B m

**Remarks:**

Bureau Veritas Laboratories are accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by BV Labs are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in BV Labs profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and BV Labs in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.



Site Location: MARCHMONT  
Your C.O.C. #: n/a

**Attention: Geoff Rether**

Ian D Wilson Associates Ltd  
PO Box 299  
76722 Airport Rd  
Clinton, ON  
CANADA N0M 1L0

**Report Date: 2019/08/28**  
Report #: R5857619  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BV LABS JOB #: B9N5854**

**Received: 2019/08/23, 10:37**

BV Labs liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. BV Labs has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by BV Labs, unless otherwise agreed in writing. BV Labs is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by BV Labs, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.

(2) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.

Encryption Key



Bureau Veritas Laboratories

28 Aug 2019 11:54:07

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Ashton Gibson, Project Manager

Email: Ashton.Gibson@bvlabs.com

Phone# (905)817-5765

=====

This report has been generated and distributed using a secure automated process.

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.



BUREAU  
VERITAS

BV Labs Job #: B9N5854  
Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
Site Location: MARCHMONT  
Sampler Initials: GR

### RCAP - COMPREHENSIVE (LAB FILTERED)

BV Labs ID		KPH840		
Sampling Date		2019/08/22 17:15		
COC Number		n/a		
	UNITS	MM-TW1	RDL	QC Batch
<b>Calculated Parameters</b>				
Anion Sum	me/L	4.29	N/A	6296820
Bicarb. Alkalinity (calc. as CaCO3)	mg/L	180	1.0	6296108
Calculated TDS	mg/L	230	1.0	6296824
Carb. Alkalinity (calc. as CaCO3)	mg/L	2.9	1.0	6296108
Cation Sum	me/L	4.38	N/A	6296820
Hardness (CaCO3)	mg/L	200	1.0	6297104
Ion Balance (% Difference)	%	1.01	N/A	6296110
Langelier Index (@ 20C)	N/A	0.690		6296821
Langelier Index (@ 4C)	N/A	0.441		6296822
Saturation pH (@ 20C)	N/A	7.56		6296821
Saturation pH (@ 4C)	N/A	7.80		6296822
<b>Inorganics</b>				
Total Ammonia-N	mg/L	ND	0.050	6300237
Conductivity	umho/cm	390	1.0	6298360
Dissolved Organic Carbon	mg/L	ND	0.50	6298352
Orthophosphate (P)	mg/L	ND	0.010	6298604
pH	pH	8.25		6298361
Dissolved Sulphate (SO4)	mg/L	21	1.0	6298603
Alkalinity (Total as CaCO3)	mg/L	180	1.0	6298358
Dissolved Chloride (Cl-)	mg/L	8.4	1.0	6298602
Nitrite (N)	mg/L	ND	0.010	6298353
Nitrate (N)	mg/L	ND	0.10	6298353
<b>Metals</b>				
Dissolved Aluminum (Al)	ug/L	ND	5.0	6296955
Dissolved Antimony (Sb)	ug/L	ND	0.50	6296955
Dissolved Arsenic (As)	ug/L	ND	1.0	6296955
Dissolved Barium (Ba)	ug/L	120	2.0	6296955
Dissolved Beryllium (Be)	ug/L	ND	0.50	6296955
Dissolved Boron (B)	ug/L	14	10	6296955
Dissolved Cadmium (Cd)	ug/L	ND	0.10	6296955
Dissolved Calcium (Ca)	ug/L	38000	200	6296955
Dissolved Chromium (Cr)	ug/L	ND	5.0	6296955
Dissolved Cobalt (Co)	ug/L	ND	0.50	6296955
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable ND = Not detected				



BV Labs Job #: B9N5854  
 Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
 Site Location: MARCHMONT  
 Sampler Initials: GR

**RCAP - COMPREHENSIVE (LAB FILTERED)**

<b>BV Labs ID</b>		KPH840		
<b>Sampling Date</b>		2019/08/22 17:15		
<b>COC Number</b>		n/a		
	<b>UNITS</b>	<b>MM-TW1</b>	<b>RDL</b>	<b>QC Batch</b>
Dissolved Copper (Cu)	ug/L	ND	1.0	6296955
Dissolved Iron (Fe)	ug/L	ND	100	6296955
Dissolved Lead (Pb)	ug/L	ND	0.50	6296955
Dissolved Magnesium (Mg)	ug/L	25000	50	6296955
Dissolved Manganese (Mn)	ug/L	16	2.0	6296955
Dissolved Molybdenum (Mo)	ug/L	1.0	0.50	6296955
Dissolved Nickel (Ni)	ug/L	ND	1.0	6296955
Dissolved Phosphorus (P)	ug/L	ND	100	6296955
Dissolved Potassium (K)	ug/L	1400	200	6296955
Dissolved Selenium (Se)	ug/L	ND	2.0	6296955
Dissolved Silicon (Si)	ug/L	7900	50	6296955
Dissolved Silver (Ag)	ug/L	ND	0.10	6296955
Dissolved Sodium (Na)	ug/L	9000	100	6296955
Dissolved Strontium (Sr)	ug/L	450	1.0	6296955
Dissolved Thallium (Tl)	ug/L	ND	0.050	6296955
Dissolved Titanium (Ti)	ug/L	ND	5.0	6296955
Dissolved Uranium (U)	ug/L	2.6	0.10	6296955
Dissolved Vanadium (V)	ug/L	ND	0.50	6296955
Dissolved Zinc (Zn)	ug/L	ND	5.0	6296955
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				





**BUREAU  
VERITAS**

BV Labs Job #: B9N5854  
Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
Site Location: MARCHMONT  
Sampler Initials: GR

### RESULTS OF ANALYSES OF WATER

<b>BV Labs ID</b>		KPH840		
<b>Sampling Date</b>		2019/08/22 17:15		
<b>COC Number</b>		n/a		
	<b>UNITS</b>	<b>MM-TW1</b>	<b>RDL</b>	<b>QC Batch</b>
<b>Inorganics</b>				
Colour	TCU	ND	2	6298401
Turbidity	NTU	1.8	0.1	6298417
RDL = Reportable Detection Limit QC Batch = Quality Control Batch ND = Not detected				



**BUREAU  
VERITAS**

BV Labs Job #: B9N5854  
Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
Site Location: MARCHMONT  
Sampler Initials: GR

### MICROBIOLOGY (WATER)

<b>BV Labs ID</b>		KPH840	
<b>Sampling Date</b>		2019/08/22 17:15	
<b>COC Number</b>		n/a	
	<b>UNITS</b>	<b>MM-TW1</b>	<b>QC Batch</b>
<b>Microbiological</b>			
Background	CFU/100mL	12	6298046
Total Coliforms	CFU/100mL	8	6298046
Escherichia coli	CFU/100mL	0	6298046
QC Batch = Quality Control Batch			



BV Labs Job #: B9N5854  
 Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
 Site Location: MARCHMONT  
 Sampler Initials: GR

**TEST SUMMARY**

**BV Labs ID:** KPH840  
**Sample ID:** MM-TW1  
**Matrix:** Water

**Collected:** 2019/08/22  
**Shipped:**  
**Received:** 2019/08/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	6298358	N/A	2019/08/27	Surinder Rai
Carbonate, Bicarbonate and Hydroxide	CALC	6296108	N/A	2019/08/27	Automated Statchk
Chloride by Automated Colourimetry	KONE	6298602	N/A	2019/08/27	Deonarine Ramnarine
Colour	SPEC	6298401	N/A	2019/08/26	Christine Pham
Conductivity	AT	6298360	N/A	2019/08/27	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	6298352	N/A	2019/08/26	Mandeep Kaur
Hardness (calculated as CaCO3)		6297104	N/A	2019/08/26	Automated Statchk
Lab Filtered Metals by ICPMS	ICP/MS	6296955	2019/08/24	2019/08/26	John Bowman
Ion Balance (% Difference)	CALC	6296110	N/A	2019/08/28	Automated Statchk
Anion and Cation Sum	CALC	6296820	N/A	2019/08/27	Automated Statchk
Total Coliforms/ E. coli, CFU/100mL	PL	6298046	N/A	2019/08/23	Farhana Rahman
Total Ammonia-N	LACH/NH4	6300237	N/A	2019/08/27	Mazin Wakai
Nitrate (NO3) and Nitrite (NO2) in Water	LACH	6298353	N/A	2019/08/26	Amanpreet Sappal
pH	AT	6298361	2019/08/24	2019/08/27	Surinder Rai
Orthophosphate	KONE	6298604	N/A	2019/08/26	Alina Dobreanu
Sat. pH and Langelier Index (@ 20C)	CALC	6296821	N/A	2019/08/28	Automated Statchk
Sat. pH and Langelier Index (@ 4C)	CALC	6296822	N/A	2019/08/28	Automated Statchk
Sulphate by Automated Colourimetry	KONE	6298603	N/A	2019/08/26	Alina Dobreanu
Total Dissolved Solids (TDS calc)	CALC	6296824	N/A	2019/08/28	Automated Statchk
Turbidity	AT	6298417	N/A	2019/08/26	Kazzandra Adeva



**BUREAU  
VERITAS**

BV Labs Job #: B9N5854  
Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
Site Location: MARCHMONT  
Sampler Initials: GR

### GENERAL COMMENTS

Results relate only to the items tested.



BUREAU VERITAS

BV Labs Job #: B9N5854  
Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
Site Location: MARCHMONT  
Sampler Initials: GR

### QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6296955	JBW	Matrix Spike	Dissolved Aluminum (Al)	2019/08/26		99	%	80 - 120
			Dissolved Antimony (Sb)	2019/08/26		104	%	80 - 120
			Dissolved Arsenic (As)	2019/08/26		99	%	80 - 120
			Dissolved Barium (Ba)	2019/08/26		96	%	80 - 120
			Dissolved Beryllium (Be)	2019/08/26		102	%	80 - 120
			Dissolved Boron (B)	2019/08/26		95	%	80 - 120
			Dissolved Cadmium (Cd)	2019/08/26		102	%	80 - 120
			Dissolved Calcium (Ca)	2019/08/26		NC	%	80 - 120
			Dissolved Chromium (Cr)	2019/08/26		94	%	80 - 120
			Dissolved Cobalt (Co)	2019/08/26		96	%	80 - 120
			Dissolved Copper (Cu)	2019/08/26		100	%	80 - 120
			Dissolved Iron (Fe)	2019/08/26		100	%	80 - 120
			Dissolved Lead (Pb)	2019/08/26		98	%	80 - 120
			Dissolved Magnesium (Mg)	2019/08/26		NC	%	80 - 120
			Dissolved Manganese (Mn)	2019/08/26		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2019/08/26		102	%	80 - 120
			Dissolved Nickel (Ni)	2019/08/26		95	%	80 - 120
			Dissolved Phosphorus (P)	2019/08/26		106	%	80 - 120
			Dissolved Potassium (K)	2019/08/26		100	%	80 - 120
			Dissolved Selenium (Se)	2019/08/26		99	%	80 - 120
			Dissolved Silicon (Si)	2019/08/26		94	%	80 - 120
			Dissolved Silver (Ag)	2019/08/26		91	%	80 - 120
			Dissolved Sodium (Na)	2019/08/26		NC	%	80 - 120
			Dissolved Strontium (Sr)	2019/08/26		NC	%	80 - 120
			Dissolved Thallium (Tl)	2019/08/26		100	%	80 - 120
			Dissolved Titanium (Ti)	2019/08/26		99	%	80 - 120
			Dissolved Uranium (U)	2019/08/26		95	%	80 - 120
			Dissolved Vanadium (V)	2019/08/26		99	%	80 - 120
Dissolved Zinc (Zn)	2019/08/26		99	%	80 - 120			
6296955	JBW	Spiked Blank	Dissolved Aluminum (Al)	2019/08/26		103	%	80 - 120
			Dissolved Antimony (Sb)	2019/08/26		103	%	80 - 120
			Dissolved Arsenic (As)	2019/08/26		102	%	80 - 120
			Dissolved Barium (Ba)	2019/08/26		101	%	80 - 120
			Dissolved Beryllium (Be)	2019/08/26		103	%	80 - 120
			Dissolved Boron (B)	2019/08/26		99	%	80 - 120
			Dissolved Cadmium (Cd)	2019/08/26		103	%	80 - 120
			Dissolved Calcium (Ca)	2019/08/26		102	%	80 - 120
			Dissolved Chromium (Cr)	2019/08/26		100	%	80 - 120
			Dissolved Cobalt (Co)	2019/08/26		101	%	80 - 120
			Dissolved Copper (Cu)	2019/08/26		103	%	80 - 120
			Dissolved Iron (Fe)	2019/08/26		103	%	80 - 120
			Dissolved Lead (Pb)	2019/08/26		99	%	80 - 120
			Dissolved Magnesium (Mg)	2019/08/26		102	%	80 - 120
			Dissolved Manganese (Mn)	2019/08/26		102	%	80 - 120
			Dissolved Molybdenum (Mo)	2019/08/26		105	%	80 - 120
			Dissolved Nickel (Ni)	2019/08/26		100	%	80 - 120
			Dissolved Phosphorus (P)	2019/08/26		115	%	80 - 120
			Dissolved Potassium (K)	2019/08/26		102	%	80 - 120
			Dissolved Selenium (Se)	2019/08/26		101	%	80 - 120
			Dissolved Silicon (Si)	2019/08/26		103	%	80 - 120
			Dissolved Silver (Ag)	2019/08/26		100	%	80 - 120
			Dissolved Sodium (Na)	2019/08/26		97	%	80 - 120



BUREAU  
VERITAS

BV Labs Job #: B9N5854  
Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
Site Location: MARCHMONT  
Sampler Initials: GR

### QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits	
6296955	JBW	Method Blank	Dissolved Strontium (Sr)	2019/08/26		101	%	80 - 120	
			Dissolved Thallium (Tl)	2019/08/26		101	%	80 - 120	
			Dissolved Titanium (Ti)	2019/08/26		103	%	80 - 120	
			Dissolved Uranium (U)	2019/08/26		99	%	80 - 120	
			Dissolved Vanadium (V)	2019/08/26		100	%	80 - 120	
			Dissolved Zinc (Zn)	2019/08/26		104	%	80 - 120	
			Dissolved Aluminum (Al)	2019/08/26		ND, RDL=5.0		ug/L	
			Dissolved Antimony (Sb)	2019/08/26		ND, RDL=0.50		ug/L	
			Dissolved Arsenic (As)	2019/08/26		ND, RDL=1.0		ug/L	
			Dissolved Barium (Ba)	2019/08/26		ND, RDL=2.0		ug/L	
			Dissolved Beryllium (Be)	2019/08/26		ND, RDL=0.50		ug/L	
			Dissolved Boron (B)	2019/08/26		ND, RDL=10		ug/L	
			Dissolved Cadmium (Cd)	2019/08/26		ND, RDL=0.10		ug/L	
			Dissolved Calcium (Ca)	2019/08/26		ND, RDL=200		ug/L	
			Dissolved Chromium (Cr)	2019/08/26		ND, RDL=5.0		ug/L	
			Dissolved Cobalt (Co)	2019/08/26		ND, RDL=0.50		ug/L	
			Dissolved Copper (Cu)	2019/08/26		ND, RDL=1.0		ug/L	
			Dissolved Iron (Fe)	2019/08/26		ND, RDL=100		ug/L	
			Dissolved Lead (Pb)	2019/08/26		ND, RDL=0.50		ug/L	
			Dissolved Magnesium (Mg)	2019/08/26		ND, RDL=50		ug/L	
			Dissolved Manganese (Mn)	2019/08/26		ND, RDL=2.0		ug/L	
			Dissolved Molybdenum (Mo)	2019/08/26		ND, RDL=0.50		ug/L	
			Dissolved Nickel (Ni)	2019/08/26		ND, RDL=1.0		ug/L	
			Dissolved Phosphorus (P)	2019/08/26		ND, RDL=100		ug/L	
			Dissolved Potassium (K)	2019/08/26		ND, RDL=200		ug/L	
			Dissolved Selenium (Se)	2019/08/26		ND, RDL=2.0		ug/L	
			Dissolved Silicon (Si)	2019/08/26		ND, RDL=50		ug/L	
			Dissolved Silver (Ag)	2019/08/26		ND, RDL=0.10		ug/L	
			Dissolved Sodium (Na)	2019/08/26		ND, RDL=100		ug/L	



BUREAU VERITAS

BV Labs Job #: B9N5854  
Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
Site Location: MARCHMONT  
Sampler Initials: GR

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Strontium (Sr)	2019/08/26	ND, RDL=1.0		ug/L	
			Dissolved Thallium (Tl)	2019/08/26	ND, RDL=0.050		ug/L	
			Dissolved Titanium (Ti)	2019/08/26	ND, RDL=5.0		ug/L	
			Dissolved Uranium (U)	2019/08/26	ND, RDL=0.10		ug/L	
			Dissolved Vanadium (V)	2019/08/26	ND, RDL=0.50		ug/L	
			Dissolved Zinc (Zn)	2019/08/26	ND, RDL=5.0		ug/L	
6296955	JBW	RPD	Dissolved Antimony (Sb)	2019/08/26	NC		%	20
			Dissolved Arsenic (As)	2019/08/26	NC		%	20
			Dissolved Barium (Ba)	2019/08/26	1.8		%	20
			Dissolved Beryllium (Be)	2019/08/26	NC		%	20
			Dissolved Boron (B)	2019/08/26	0.66		%	20
			Dissolved Cadmium (Cd)	2019/08/26	NC		%	20
			Dissolved Chromium (Cr)	2019/08/26	NC		%	20
			Dissolved Cobalt (Co)	2019/08/26	1.7		%	20
			Dissolved Copper (Cu)	2019/08/26	NC		%	20
			Dissolved Lead (Pb)	2019/08/26	NC		%	20
			Dissolved Molybdenum (Mo)	2019/08/26	4.0		%	20
			Dissolved Nickel (Ni)	2019/08/26	7.2		%	20
			Dissolved Selenium (Se)	2019/08/26	NC		%	20
			Dissolved Silver (Ag)	2019/08/26	NC		%	20
			Dissolved Sodium (Na)	2019/08/26	2.1		%	20
			Dissolved Thallium (Tl)	2019/08/26	NC		%	20
			Dissolved Uranium (U)	2019/08/26	1.3		%	20
			Dissolved Vanadium (V)	2019/08/26	NC		%	20
			Dissolved Zinc (Zn)	2019/08/26	NC		%	20
6298352	KRM	Matrix Spike	Dissolved Organic Carbon	2019/08/26		91	%	80 - 120
6298352	KRM	Spiked Blank	Dissolved Organic Carbon	2019/08/26		98	%	80 - 120
6298352	KRM	Method Blank	Dissolved Organic Carbon	2019/08/26	ND, RDL=0.50		mg/L	
6298352	KRM	RPD	Dissolved Organic Carbon	2019/08/26	0.81		%	20
6298353	ASP	Matrix Spike	Nitrite (N)	2019/08/26		103	%	80 - 120
			Nitrate (N)	2019/08/26		99	%	80 - 120
6298353	ASP	Spiked Blank	Nitrite (N)	2019/08/26		104	%	80 - 120
			Nitrate (N)	2019/08/26		101	%	80 - 120
6298353	ASP	Method Blank	Nitrite (N)	2019/08/26	ND, RDL=0.010		mg/L	
			Nitrate (N)	2019/08/26	ND, RDL=0.10		mg/L	
6298353	ASP	RPD	Nitrite (N)	2019/08/26	NC		%	20
			Nitrate (N)	2019/08/26	0.0066		%	20
6298358	SAU	Spiked Blank	Alkalinity (Total as CaCO3)	2019/08/26		95	%	85 - 115
6298358	SAU	Method Blank	Alkalinity (Total as CaCO3)	2019/08/26	ND, RDL=1.0		mg/L	
6298358	SAU	RPD	Alkalinity (Total as CaCO3)	2019/08/26	1.7		%	20
6298360	SAU	Spiked Blank	Conductivity	2019/08/26		101	%	85 - 115
6298360	SAU	Method Blank	Conductivity	2019/08/26	ND, RDL=1.0		umho/cm	



BUREAU VERITAS

BV Labs Job #: B9N5854  
Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
Site Location: MARCHMONT  
Sampler Initials: GR

QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
6298360	SAU	RPD	Conductivity	2019/08/26	0.96		%	25
6298361	SAU	Spiked Blank	pH	2019/08/26		102	%	98 - 103
6298361	SAU	RPD	pH	2019/08/26	0.63		%	N/A
6298401	CP	Spiked Blank	Colour	2019/08/26		100	%	80 - 120
6298401	CP	Method Blank	Colour	2019/08/26	ND,RDL=2		TCU	
6298401	CP	RPD	Colour	2019/08/26	NC		%	25
6298417	KAD	Spiked Blank	Turbidity	2019/08/26		108	%	85 - 115
6298417	KAD	Method Blank	Turbidity	2019/08/26	ND, RDL=0.1		NTU	
6298417	KAD	RPD	Turbidity	2019/08/26	0.79		%	20
6298602	DRM	Matrix Spike	Dissolved Chloride (Cl-)	2019/08/27		111	%	80 - 120
6298602	DRM	Spiked Blank	Dissolved Chloride (Cl-)	2019/08/27		102	%	80 - 120
6298602	DRM	Method Blank	Dissolved Chloride (Cl-)	2019/08/27	ND, RDL=1.0		mg/L	
6298602	DRM	RPD	Dissolved Chloride (Cl-)	2019/08/27	0.98		%	20
6298603	ADB	Matrix Spike	Dissolved Sulphate (SO4)	2019/08/26		NC	%	75 - 125
6298603	ADB	Spiked Blank	Dissolved Sulphate (SO4)	2019/08/26		101	%	80 - 120
6298603	ADB	Method Blank	Dissolved Sulphate (SO4)	2019/08/26	ND, RDL=1.0		mg/L	
6298603	ADB	RPD	Dissolved Sulphate (SO4)	2019/08/26	0.27		%	20
6298604	ADB	Matrix Spike	Orthophosphate (P)	2019/08/26		109	%	75 - 125
6298604	ADB	Spiked Blank	Orthophosphate (P)	2019/08/26		100	%	80 - 120
6298604	ADB	Method Blank	Orthophosphate (P)	2019/08/26	ND, RDL=0.010		mg/L	
6298604	ADB	RPD	Orthophosphate (P)	2019/08/26	NC		%	25
6300237	MT4	Matrix Spike	Total Ammonia-N	2019/08/27		100	%	75 - 125
6300237	MT4	Spiked Blank	Total Ammonia-N	2019/08/27		99	%	80 - 120
6300237	MT4	Method Blank	Total Ammonia-N	2019/08/27	ND, RDL=0.050		mg/L	
6300237	MT4	RPD	Total Ammonia-N	2019/08/27	NC		%	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).





BV Labs Job #: B9N5854  
Report Date: 2019/08/28

Ian D Wilson Associates Ltd  
Site Location: MARCHMONT  
Sampler Initials: GR

### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

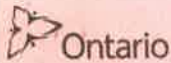
\_\_\_\_\_  
Anastassia Hamanov, Scientific Specialist

\_\_\_\_\_  
Farhana Rahman

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BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

**RECORD OF TW1 AND LOCAL  
WELL RECORDS WITHIN 500m**



Measurements recorded in:  Metric  Imperial

Page \_\_\_ of \_\_\_

A256076

Well Owner's Information

First Name, Last Name / Organization, E-mail Address, Mailing Address, Municipality, Province, Postal Code, Telephone No.

Well Location

Address of Well Location, Township, Lot, Concession, City/Town/Village, Province, Postal Code, UTM Coordinates

Overburden and Bedrock Materials/Abandonment Sealing Record

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (mft) From, To

Annular Space: Depth Set at, Type of Sealant Used, Volume Placed

Method of Construction, Well Use: Cable Tool, Rotary, Boring, etc.

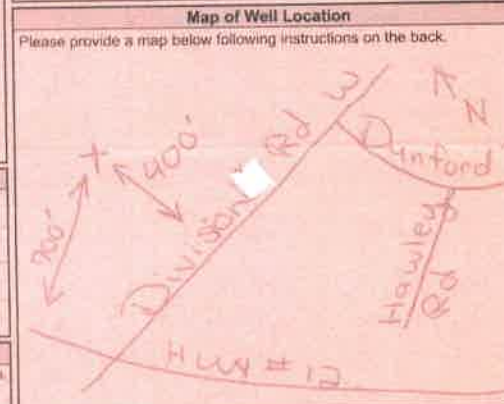
Construction Record - Casing: Inside Diameter, Material, Slot No., Depth

Construction Record - Screen: Outside Diameter, Material, Slot No., Depth

Water Details, Hole Diameter: Water found at Depth, Kind of Water, Depth, Diameter

Well Contractor and Well Technician Information: Business Name, Licence No., Address

Results of Well Yield Testing: Draw Down, Recovery, Pump intake set at, Pumping rate, Duration of pumping, Final water level end of pumping

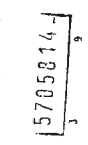


Comments:

Ministry Use Only: Audit No., Date Package Delivered, Date Work Completed



31D/12E c.B.



Cons. XIV  
Dist. 1

JTM 1172 6117171910  
14R 4941415810 CODED  
15R 081215

The Ontario Water Resources Commission Act

# WATER WELL RECORD

Township/Village, Town or City: Madoc  
County or District: Simcoe  
Con.: XIV Lot: 1  
Date completed: 18 (day) 68 (month) 68 (year)

Well # RR# 2 Drilling Out

**Casing and Screen Record**  
Inside diameter of casing: 3 3/8 in  
Total length of casing: well till  
Type of screen: well till  
Length of screen: 56 in  
Depth to top of screen: 56 in  
Diameter of finished hole: 5 in

**Pumping Test**  
Static level: 20 G.P.M.  
Test-pumping rate: 2  
Pumping level: ---  
Duration of test pumping: ---  
Water clear or cloudy at end of test: clear  
Recommended pumping rate: 2 G.P.M.  
with pump setting of: 20 feet below ground surface

**Well Log**

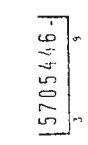
Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>Green clay</u>	<u>0</u>	<u>3 1/2</u>	<u>20 ft.</u>	<u>fresh</u>
<u>Large Stones</u>				

For what purpose(s) is the water to be used? house  
Is well on upland, in valley, or on hillside? upland  
Drilling or Boring Firm: Well Drilling RR# 5 LLC  
Address: Barrie Ont.  
Licence Number: 136  
Name of Driller or Borer: B Roth  
Address: same  
Date: Nov. 20/68  
(Signature of Licensed Drilling or Boring Contractor)

**Location of Well**  
In diagram below show distances of well from road and lot line. Indicate north by arrow.  
MEADONTE 150' 0" NORTH  
#11 Highway  
Basin Lake  
NORTH

Form 7  
OWRC COPY  
PRICES FORMERS  
Red Brick House

31D/12E B



JTM 1172 6117171910  
14R 4941415810 CODED  
15R 081215

The Ontario Water Resources Commission Act

# WATER WELL RECORD

Township/Village, Town or City: Madoc  
County or District: Simcoe  
Con.: XIV Lot: 1  
Date completed: 18 (day) 68 (month) 68 (year)

Well # R.R. ORILLIA

**Casing and Screen Record**  
Inside diameter of casing: 6 7/8 in  
Total length of casing: 187'  
Type of screen: steel pipe  
Length of screen: 3'  
Depth to top of screen: 182'  
Diameter of finished hole: 5 in

**Pumping Test**  
Static level: 77' G.P.M.  
Test-pumping rate: 10'  
Pumping level: 100'  
Duration of test pumping: 3 hrs  
Water clear or cloudy at end of test: clear  
Recommended pumping rate: 5' G.P.M.  
with pump setting of: 100' feet below ground surface

**Well Log**

Overburden and Bedrock Record	From ft.	To ft.	Depth (s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>top sand</u>	<u>0</u>	<u>2'</u>	<u>100'</u>	<u>fresh</u>
<u>clay stones</u>	<u>2</u>	<u>100'</u>	<u>186'</u>	
<u>sandy gravel sand layers</u>	<u>100'</u>	<u>170'</u>	<u>190'</u>	

For what purpose(s) is the water to be used? Domestic  
Is well on upland, in valley, or on hillside? upland  
Drilling or Boring Firm: Pitkinham  
Address: Pitkinham  
Licence Number: 2751  
Name of Driller or Borer: J.C. Miller  
Address: same  
Date: Nov 11/68  
(Signature of Licensed Drilling or Boring Contractor)

**Location of Well**  
In diagram below show distances of well from road and lot line. Indicate north by arrow.  
MEADONTE 150' 0" NORTH  
LOT 1 50' 400'  
CTH 20 22  
ORO

Form 7  
OWRC COPY

31 D/12 E J.B

5706241



JIM 11/17/79 1010

14R 419 41 6510

15R 1081715

# WATER WELL RECORD

Region of Ontario  
County or District: Simcoe  
Town or City: Georgetown  
Village: Georgetown  
Date completed: 11 April 69  
Commission: RR# 2, Orlilla Ont.

### Casing and Screen Record

Inside diameter of casing: 30 in  
Total length of casing: 52 1/2 G.P.M.  
Type of screen: well tile  
Length of screen: \_\_\_\_\_  
Depth to top of screen: \_\_\_\_\_  
Diameter of finished hole: 36 in  
Pumping Test  
Static level: 35 ft.  
Test-pumping rate: 5 G.P.M.  
Pumping level: \_\_\_\_\_  
Duration of test pumping: \_\_\_\_\_  
Water clear or cloudy at end of test: clear  
Recommended pumping rate: 2 G.P.M.  
with pump setting of 45 feet below ground surface

### Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record
<u>Brown stony clay large stones</u>	<u>0</u>	<u>27</u>	<u>35 ft. fresh</u>
<u>Grey stony clay large stones</u>	<u>27</u>	<u>50</u>	<u>Bottom</u>

For what purpose(s) is the water to be used? house

Is well on upland, in valley, or on hillside? upland

Drilling or Boring Firm: Roth Logging RR# 5, Barrie Ont.

Name of Driller or Borer: R. Roth

Address: 16 St. B. Roth

Signature of Licensed Drilling or Boring Contractor: Same

Date: April 15, 1969

Location of Well: Hiway #12, 1/2 mile S. of Georgetown, Ont.

# WATER WELL RECORD

The Ontario Water Resources Commission Act

31 D/12 E

5706810

11  
14R 419 41 6510

# WATER WELL RECORD

Region of Ontario  
County or District: Simcoe  
Town or City: Georgetown  
Village: Georgetown  
Date completed: 10 April 69  
Commission: RR# 2, Orlilla Ont.

### LOG OF OVERBURDEN AND BEDROCK MATERIALS

GENERAL COLOR	DEPTH	GENERAL DESCRIPTION	DEPTH TO TOP OF SCREEN	DEPTH TO BOTTOM OF SCREEN
<u>Brown clay</u>	<u>0</u>	<u>stony</u>	<u>0</u>	<u>30</u>
<u>Grey gravel stony</u>	<u>30</u>	<u>base</u>	<u>30</u>	<u>42</u>

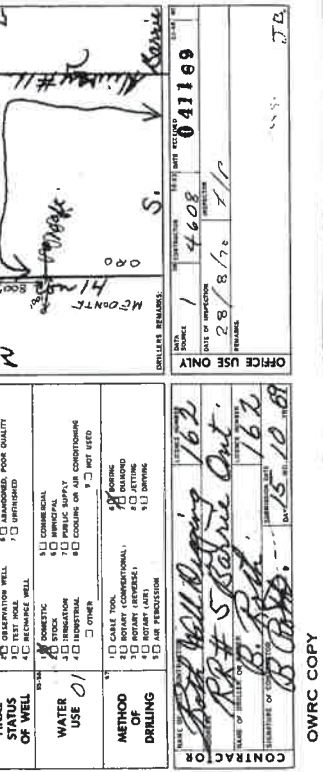
### CHASING & OPEN HOLE RECORD

DEPTH SET AT FEET	DATE	TIME	WIND	TEMPERATURE	WATER LEVEL	WATER TEMPERATURE	WIND DIRECTION	WIND VELOCITY	WIND FORCE	WIND STATE	WIND DIRECTION	WIND VELOCITY	WIND FORCE	WIND STATE
<u>0</u>	<u>10:00</u>	<u>0000</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

### PUMPING TEST

RECORDED PUMP RATE: 0.002 G.P.M.  
PUMPING TEST: 0.002 G.P.M.  
WATER SUPPLY: 0  
WATER LEVEL: 0  
WATER TEMPERATURE: 0  
WIND DIRECTION: 0  
WIND VELOCITY: 0  
WIND FORCE: 0  
WIND STATE: 0

### LOCATION OF WELL



### OFFICE USE ONLY

DATE OF RECORD: 28/8/69  
DATE OF PUMPING TEST: 1/10/69  
DATE OF RECORDING: 15/10/69  
DATE OF PUMPING TEST: 15/10/69  
DATE OF RECORDING: 15/10/69  
DATE OF PUMPING TEST: 15/10/69  
DATE OF RECORDING: 15/10/69



# WATER WELL RECORD

The Ontario Water Resources Commission Act

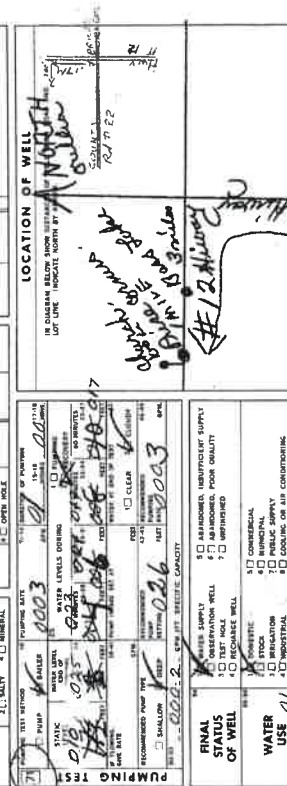
Well ID Number: 5706890  
 Well Audit Number: 5706890  
 Well Tag Number: 5706890

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

DEPTH - FEET	GENERAL DESCRIPTION
0 - 25	hard sand
25 - 27 1/2	heavy gravel small stones, pebbles

WATER RECORD

DATE	TIME	WELL NUMBER	WATER LEVEL (FT)	WATER TEMPERATURE (°C)	WATER QUALITY
02/25	08:00	25	0	25	



PLUGGING & SEALING RECORD

DEPTH (M)	DATE	TYPE OF SEALANT	VOLUME (L)
0	02/25	Concrete	100

CONTRACTOR INFORMATION

Contractor Name: R.P.H. Barrie Ont.  
 Signature: R.P.H.  
 Date: 31 Dec 1989

Well Contractor's Licence Number: 4608

## Well ID

Well ID Number: 570671  
 Well Audit Number:  
 Well Tag Number:

This table contains information from the original well record and any subsequent updates.

## Well Location

Address of Well Location: ORILLIA TOWNSHIP  
 Lot: 001  
 Concession: ND 01  
 County/District/Municipality: SIMCOE  
 City/Town/Village:  
 Province: ON  
 Postal Code: n/a  
 UTM Coordinates: NAD83 — Zone 17  
 Easting: 618174.60  
 Northing: 4942064.00  
 Municipal Plan and Sublot Number:  
 Other:

## Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	CLAY	STNS		0 ft	15 ft
GREY	CLAY	STNS		15 ft	24 ft

## Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed

## Method of Construction & Well Use

Method of Construction: Well Use: Domestic  
 Boring

## Status of Well

Water Supply

## Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
30 inch	CONCRETE		24 ft

## Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

## Well Contractor and Well Technician Information

Well Contractor's Licence Number: 4608

OWRC COPY





3/10/25

# WATER WELL RECORD



The Ontario Water Resources Commission Act

Water Management in Ontario: 1. PRINT ONLY IN SPACES PROVIDED 2. CHECK CORRECT BOX WHERE APPLICABLE

COUNTY DISTRICT: Simcoe MUNICIPALITY: Windsor CITY, TOWN, VILLAGE: Windsor DATE RECEIVED: 01/14/25

WELL NUMBER: 5708633 DATE OF INSTALLATION: 10/28/23

OWNER: St. Lawrence CONTRACTOR: H. Hanners

ADDRESS: 10 University Ave. 2nd Fl. CITY: Windsor ON: N6A 1K7

**LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)**

GENERAL COLOR	MOIST COMMON MATERIAL	OTHER MATERIALS	DEPTH - FEET
FROM	TO		
brown sand	clay, boulders		0 48
grey clay	sand, boulders		48 63
light grey clay	silt, gravel, boulders		63 177
brown gravel			174 232

**31 CASING & OPEN HOLE RECORD**

WELL DEPTH: 232 FEET

WELL TYPE: 6

WATER RECORD: 232

PLUGGING & SEALING RECORD: 232

**LOCATION OF WELL**

IN OREGON BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.

**PUMPING TEST**

FINAL STATUS OF WELL: 1

WATER USE: 0

METHOD OF DRILLING: 1

CONTRACTOR: H. HANNERS

DATE OF RECORD: 1/14/25

3/10/25

# WATER WELL RECORD



The Ontario Water Resources Commission Act

Water Management in Ontario: 1. PRINT ONLY IN SPACES PROVIDED 2. CHECK CORRECT BOX WHERE APPLICABLE

COUNTY DISTRICT: Simcoe MUNICIPALITY: Windsor CITY, TOWN, VILLAGE: Windsor DATE RECEIVED: 01/28/23

WELL NUMBER: 5708300 DATE OF INSTALLATION: 08/28/23

OWNER: St. Lawrence CONTRACTOR: H. Hanners

ADDRESS: 10 University Ave. 2nd Fl. CITY: Windsor ON: N6A 1K7

**LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)**

GENERAL COLOR	MOIST COMMON MATERIAL	OTHER MATERIALS	DEPTH - FEET
FROM	TO		
Brown clay	stone		0 12
Grey	"		12 27

**31 CASING & OPEN HOLE RECORD**

WELL DEPTH: 27 FEET

WELL TYPE: 6

WATER RECORD: 27

PLUGGING & SEALING RECORD: 27

**LOCATION OF WELL**

IN OREGON BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.

**PUMPING TEST**

FINAL STATUS OF WELL: 1

WATER USE: 0

METHOD OF DRILLING: 1

CONTRACTOR: H. HANNERS

DATE OF RECORD: 1/14/25

OWRC COPY

OWRC COPY

3/10/25

# WATER WELL RECORD



The Ontario Water Resources Commission Act

When completed in Ontario: 1. PRINT ONLY IN SPACES PROVIDED  
2. CHECK  CORRECT FOR SPACES APPLICABLE

PROJECT: Medonte COUNTY: 11 DISTRICT: 14 DATE COMPLETED: 15-09-22

WELL NO.: 5709108 DATE OF INSTALLATION: 15-09-22

OWNER: 2 Parkhurst Crs. CONTRACTOR: 14

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

DEPTH - FEET	GENERAL DESCRIPTION	OTHER MATERIALS
0 - 90	Brown Clay	frag. shales
90 - 20	Sandy Sand	Wisco Clay + shales

31 WATER RECORD

32 CASING & OPEN HOLE RECORD

33 PLUGGING & SEALING RECORD

34 PUMPING TEST

35 LOCATION OF WELL

FINAL STATUS OF WELL

WATER USE

METHOD OF DRILLING

CONTRACTOR: 14 DATE OF INSTALLATION: 15-09-22

OFFICE USE ONLY: 1 DATE RECEIVED: 250922

OWRC COPY

3/10/25

# WATER WELL RECORD



The Ontario Water Resources Commission Act

When completed in Ontario: 1. PRINT ONLY IN SPACES PROVIDED  
2. CHECK  CORRECT FOR SPACES APPLICABLE

PROJECT: Medonte COUNTY: 11 DISTRICT: 14 DATE COMPLETED: 27-07-22

WELL NO.: 5703042 DATE OF INSTALLATION: 27-07-22

OWNER: 3 Dillia Dr. CONTRACTOR: 14

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

DEPTH - FEET	GENERAL DESCRIPTION	OTHER MATERIALS
0 - 22 1/2	Brown Clay mixed with sand	
		Dark grey. beds

31 WATER RECORD

32 CASING & OPEN HOLE RECORD

33 PLUGGING & SEALING RECORD

34 PUMPING TEST

35 LOCATION OF WELL

FINAL STATUS OF WELL

WATER USE

METHOD OF DRILLING

CONTRACTOR: 14 DATE OF INSTALLATION: 13-09-22

OFFICE USE ONLY: 1 DATE RECEIVED: 130922

OWRC COPY







**WATER WELL RECORD**

31012E

1. PRINT ONLY IN SPACES PROVIDED  
2. CHANGE OR CORRECT AND RE-APPLICABLE

COUNTY OF DISTRICT: **Simcoe**  
TOWNSHIP: **MEBONIE**  
CITY, VILLAGE OR PLACE: **MEBONIE**  
CONTRACT NUMBER: **5711553**  
WELL IDENTIFIED BY: **57007 CAN 14**  
DATE OF TEST: **31-10-74**

OWNER: **SIMCOE**  
ADDRESS: **1400 BURNBURY RD. INC. RR #2 ORILLIA, ONT.**  
DATE OF CONSTRUCTION: **1974**  
DATE OF RECORD: **31-10-74**

LOT NO.: **14**  
SECTION: **1**  
TOWNSHIP: **XIV**  
RANGE: **10**  
EASTING: **001**

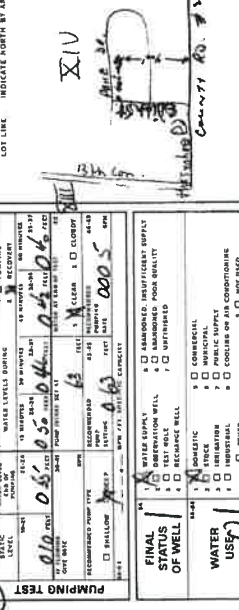
LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS):  
GENERAL COLOUR: **BLACK TOPSOIL**  
COMPOUND MATERIAL: **BROWN CLAY**  
OTHER MATERIALS: **HARD WITH BOULDERS**

DEPTH (FEET)	GENERAL DESCRIPTION	DEPTH (FEET)
0	BLACK TOPSOIL	0
1	BROWN CLAY	1
2	HARD WITH BOULDERS	2
3	HARD WITH BOULDERS	3
4	HARD WITH BOULDERS	4
5	HARD WITH BOULDERS	5
6	HARD WITH BOULDERS	6
7	HARD WITH BOULDERS	7
8	HARD WITH BOULDERS	8
9	HARD WITH BOULDERS	9
10	HARD WITH BOULDERS	10
11	HARD WITH BOULDERS	11
12	HARD WITH BOULDERS	12
13	HARD WITH BOULDERS	13
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26	HARD WITH BOULDERS	26
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31	HARD WITH BOULDERS	31
32	HARD WITH BOULDERS	32
33	HARD WITH BOULDERS	33
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44	HARD WITH BOULDERS	44
45	HARD WITH BOULDERS	45
46	HARD WITH BOULDERS	46
47	HARD WITH BOULDERS	47
48	HARD WITH BOULDERS	48
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81	HARD WITH BOULDERS	81
82	HARD WITH BOULDERS	82
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86	HARD WITH BOULDERS	86
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89	HARD WITH BOULDERS	89
90	HARD WITH BOULDERS	90
91	HARD WITH BOULDERS	91
92	HARD WITH BOULDERS	92
93	HARD WITH BOULDERS	93
94	HARD WITH BOULDERS	94
95	HARD WITH BOULDERS	95
96	HARD WITH BOULDERS	96
97	HARD WITH BOULDERS	97
98	HARD WITH BOULDERS	98
99	HARD WITH BOULDERS	99
100	HARD WITH BOULDERS	100

31 WATER RECORD  
32 CASING & OPEN HOLE RECORD  
33 PLUGGING & SEALING RECORD

31 WATER RECORD  
32 CASING & OPEN HOLE RECORD  
33 PLUGGING & SEALING RECORD

LOCATION OF WELL 1741  
IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW



FINAL STATUS OF WELL: **1**  
WATER USE: **1**  
METHOD OF DRILLING: **6**

CONTRACTOR: **BARRETT & BARRIE ONT**  
DATE OF WELL CONSTRUCTION: **31-10-74**  
DATE OF RECORD: **31-10-74**

**WATER WELL RECORD**

31012E

1. PRINT ONLY IN SPACES PROVIDED  
2. CHANGE OR CORRECT AND RE-APPLICABLE

COUNTY OF DISTRICT: **Simcoe**  
TOWNSHIP: **MEBONIE**  
CITY, VILLAGE OR PLACE: **MEBONIE**  
CONTRACT NUMBER: **5711553**  
WELL IDENTIFIED BY: **57007 CAN 14**  
DATE OF TEST: **31-10-74**

OWNER: **SIMCOE**  
ADDRESS: **1400 BURNBURY RD. INC. RR #2 ORILLIA, ONT.**  
DATE OF CONSTRUCTION: **1974**  
DATE OF RECORD: **31-10-74**

LOT NO.: **14**  
SECTION: **1**  
TOWNSHIP: **XIV**  
RANGE: **10**  
EASTING: **001**

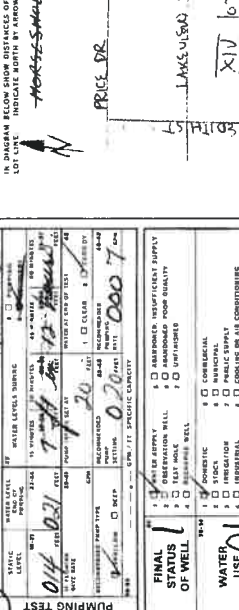
LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS):  
GENERAL COLOUR: **BLACK TOPSOIL**  
COMPOUND MATERIAL: **BROWN CLAY**  
OTHER MATERIALS: **HARD WITH BOULDERS**

DEPTH (FEET)	GENERAL DESCRIPTION	DEPTH (FEET)
0	BLACK TOPSOIL	0
1	BROWN CLAY	1
2	HARD WITH BOULDERS	2
3	HARD WITH BOULDERS	3
4	HARD WITH BOULDERS	4
5	HARD WITH BOULDERS	5
6	HARD WITH BOULDERS	6
7	HARD WITH BOULDERS	7
8	HARD WITH BOULDERS	8
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92	HARD WITH BOULDERS	92
93	HARD WITH BOULDERS	93
94	HARD WITH BOULDERS	94
95	HARD WITH BOULDERS	95
96	HARD WITH BOULDERS	96
97	HARD WITH BOULDERS	97
98	HARD WITH BOULDERS	98
99	HARD WITH BOULDERS	99
100	HARD WITH BOULDERS	100

31 WATER RECORD  
32 CASING & OPEN HOLE RECORD  
33 PLUGGING & SEALING RECORD

31 WATER RECORD  
32 CASING & OPEN HOLE RECORD  
33 PLUGGING & SEALING RECORD

LOCATION OF WELL 1741  
IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW



FINAL STATUS OF WELL: **1**  
WATER USE: **1**  
METHOD OF DRILLING: **6**

CONTRACTOR: **BARRETT & BARRIE ONT**  
DATE OF WELL CONSTRUCTION: **31-10-74**  
DATE OF RECORD: **31-10-74**

# WATER WELL RECORD 31D12E

1. THIS ONLY IN TRACES PROVINCE  
2. CHECK FOR CORRECT BOX NUMBER APPLICABLE

ONTARIO  
COUNTY OF DISTRICT  
TOWNSHIP OF  
RURAL PARISH OF  
SECTION  
RANGE  
TOWNSHIP  
RANGE  
SECTION  
RANGE  
TOWNSHIP  
RANGE  
SECTION

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOR	NOT COMMON MATERIAL	OTHER MATERIALS	DEPTH - FEET
LOAM			0
HARD PAN WITH MIXTURE OF LAYERS AND STONES			6
GRAY CLAY			19
COARSE LAYER OF GRAVEL			149
FINE SAND AND WATER BUT NOT TROUGH			150
COARSE SAND AND LAYERS OF LIME STONE			154
BROWN SHARP SAND			165
VERY COARSE GRAVEL AND CLEAN SAND			179
			183

NOTE - SEPT. 75 - *Replaced with water control*  
 board on top of water control  
 186 and set of water control

31 WATER RECORD

DEPTH - FEET	DEPTH - FEET	DEPTH - FEET
0	1	5
19	20	91
149	142	181
150	181	208
154	181	208
165	181	208
179	181	208
183	181	208

32 CASING & OPEN HOLE RECORD

DEPTH - FEET	DEPTH - FEET	DEPTH - FEET
0	188	0
188	0	209

33 PLUGGING & SEALING RECORD

DEPTH - FEET	DEPTH - FEET	DEPTH - FEET
0	188	0
188	0	209

34 LOCATION OF WELL

35 PUMPING TEST

DEPTH - FEET	DEPTH - FEET	DEPTH - FEET
0	188	0
188	0	209

36 FINAL STATUS OF WELL

37 WATER USE

38 METHOD OF DRILLING

39 CONTRACTOR

40 OFFICE USE ONLY

# WATER WELL RECORD 31D12E

1. THIS ONLY IN TRACES PROVINCE  
2. CHECK FOR CORRECT BOX NUMBER APPLICABLE

ONTARIO  
COUNTY OF DISTRICT  
TOWNSHIP OF  
RURAL PARISH OF  
SECTION  
RANGE  
TOWNSHIP  
RANGE  
SECTION

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOR	NOT COMMON MATERIAL	OTHER MATERIALS	DEPTH - FEET
LOAM			0
HARD PAN WITH MIXTURE OF LAYERS AND STONES			6
GRAY CLAY			19
COARSE LAYER OF GRAVEL			149
FINE SAND AND WATER BUT NOT TROUGH			150
COARSE SAND AND LAYERS OF LIME STONE			154
BROWN SHARP SAND			165
VERY COARSE GRAVEL AND CLEAN SAND			179
			183

NOTE - SEPT. 75 - *Replaced with water control*  
 board on top of water control  
 186 and set of water control

31 WATER RECORD

DEPTH - FEET	DEPTH - FEET	DEPTH - FEET
0	188	0
188	0	209

32 CASING & OPEN HOLE RECORD

DEPTH - FEET	DEPTH - FEET	DEPTH - FEET
0	188	0
188	0	209

33 PLUGGING & SEALING RECORD

DEPTH - FEET	DEPTH - FEET	DEPTH - FEET
0	188	0
188	0	209

34 LOCATION OF WELL

35 PUMPING TEST

DEPTH - FEET	DEPTH - FEET	DEPTH - FEET
0	188	0
188	0	209

36 FINAL STATUS OF WELL

37 WATER USE

38 METHOD OF DRILLING

39 CONTRACTOR

40 OFFICE USE ONLY



1 PRINT ONLY IN SPACES PROVIDED  
2 CHECK  CORRECTLY PRINTABLE  
3 CHECK  CORRECT COPY WHEN APPLICABLE

COMPANY OR DISTRICT: **SINCO**  
CITY/TOWN/VILLAGE: **Orillia**  
COUNTY: **Simcoe**  
PROVINCE: **ONT.**  
DATE RECEIVED: **1976**  
WELL NO.: **17**  
METER NO.: **57009 RD**  
METER SERIAL NO.: **5713685**  
METER TYPE: **11**  
METER MAKE: **W.I. S.B.**  
METER MODEL: **08**  
METER SIZE: **76**

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	DEPTH, FEET	GENERAL DESCRIPTION
brown	0 - 27	Sand & gravel
gray	27 - 68	clay
gray	68 - 79	med. sand & gravel
gray	79 - 129	clay
gray	129 - 131	layered silty sand
		clay-hard

31 **WATER RECORD**

WATER TYPE: **1**  PUMP **2**  WELL

WATER LEVEL: **0.130**

WATER LEVEL BURNING: **0.130**

WATER LEVEL TYPE: **0.130**

WATER LEVEL DATE: **01/30/76**

WATER LEVEL TIME: **013**

WATER LEVEL LOCATION: **013**

WATER LEVEL METHOD: **013**

WATER LEVEL NOTES: **013**

32 **CASING & OPEN HOLE RECORD**

WATER RECORD: **0.130**

WATER LEVEL: **0.130**

WATER LEVEL BURNING: **0.130**

WATER LEVEL TYPE: **0.130**

WATER LEVEL DATE: **01/30/76**

WATER LEVEL TIME: **013**

WATER LEVEL LOCATION: **013**

WATER LEVEL METHOD: **013**

WATER LEVEL NOTES: **013**

33 **PLUGGING & SEALING RECORD**

WATER RECORD: **0.130**

WATER LEVEL: **0.130**

WATER LEVEL BURNING: **0.130**

WATER LEVEL TYPE: **0.130**

WATER LEVEL DATE: **01/30/76**

WATER LEVEL TIME: **013**

WATER LEVEL LOCATION: **013**

WATER LEVEL METHOD: **013**

WATER LEVEL NOTES: **013**

34 **LOCATION OF WELL**

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE - INDICATE NORTH BY ARROW

35 **PUMPING TEST**

FINAL STATUS OF WELL: **0**

WATER USE: **0**

METHOD OF DRILLING: **0**

CONTRACTOR: **P. & B. Wells Inc.**

DATE OF WELL INSTALLATION: **1976**

WELL NO.: **17**

METER NO.: **57009 RD**

METER SERIAL NO.: **5713685**

METER TYPE: **11**

METER MAKE: **W.I. S.B.**

METER MODEL: **08**

METER SIZE: **76**

1 PRINT ONLY IN SPACES PROVIDED  
2 CHECK  CORRECTLY PRINTABLE  
3 CHECK  CORRECT COPY WHEN APPLICABLE

COMPANY OR DISTRICT: **SINCO**  
CITY/TOWN/VILLAGE: **Orillia**  
COUNTY: **Simcoe**  
PROVINCE: **ONT.**  
DATE RECEIVED: **1976**  
WELL NO.: **17**  
METER NO.: **57009 RD**  
METER SERIAL NO.: **5713685**  
METER TYPE: **11**  
METER MAKE: **W.I. S.B.**  
METER MODEL: **08**  
METER SIZE: **76**

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	DEPTH, FEET	GENERAL DESCRIPTION
gray	0 - 27	Sand & gravel
gray	27 - 68	clay
gray	68 - 79	med. sand & gravel
gray	79 - 129	clay
gray	129 - 131	layered silty sand
		clay-hard

31 **WATER RECORD**

WATER TYPE: **1**  PUMP **2**  WELL

WATER LEVEL: **0.130**

WATER LEVEL BURNING: **0.130**

WATER LEVEL TYPE: **0.130**

WATER LEVEL DATE: **01/30/76**

WATER LEVEL TIME: **013**

WATER LEVEL LOCATION: **013**

WATER LEVEL METHOD: **013**

WATER LEVEL NOTES: **013**

32 **CASING & OPEN HOLE RECORD**

WATER RECORD: **0.130**

WATER LEVEL: **0.130**

WATER LEVEL BURNING: **0.130**

WATER LEVEL TYPE: **0.130**

WATER LEVEL DATE: **01/30/76**

WATER LEVEL TIME: **013**

WATER LEVEL LOCATION: **013**

WATER LEVEL METHOD: **013**

WATER LEVEL NOTES: **013**

33 **PLUGGING & SEALING RECORD**

WATER RECORD: **0.130**

WATER LEVEL: **0.130**

WATER LEVEL BURNING: **0.130**

WATER LEVEL TYPE: **0.130**

WATER LEVEL DATE: **01/30/76**

WATER LEVEL TIME: **013**

WATER LEVEL LOCATION: **013**

WATER LEVEL METHOD: **013**

WATER LEVEL NOTES: **013**

34 **LOCATION OF WELL**

IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE - INDICATE NORTH BY ARROW

35 **PUMPING TEST**

FINAL STATUS OF WELL: **0**

WATER USE: **0**

METHOD OF DRILLING: **0**

CONTRACTOR: **P. & B. Wells Inc.**

DATE OF WELL INSTALLATION: **1976**

WELL NO.: **17**

METER NO.: **57009 RD**

METER SERIAL NO.: **5713685**

METER TYPE: **11**

METER MAKE: **W.I. S.B.**

METER MODEL: **08**

METER SIZE: **76**

# WATER WELL RECORD

5717264  
 5720091  
 22 Bontocah Place, Rama, Ont. L6B2T6  
 08118  
 001

LOG OF OVERBURDEN AND BEDROCK MATERIALS

DEPTH (FEET)	GENERAL DESCRIPTION	STATE	FEET
0	top soil	0	3
3	brown sand,	30	30
30	grey clay	68	68
68	silt & clay	110	110
110	clay	134	134
134	silt	160	160
160	clay & silt	188	188
188	hardpan	188	188
188	fine sand & gravel	191	191

31 WATER RECORD  
 32 CASING & OPEN HOLE RECORD  
 33 PLUGGING & SEALING RECORD

34 LOCATION OF WELL  
 35 PUMPING TEST  
 36 FINAL STATUS OF WELL  
 37 WATER USE  
 38 METHOD OF DRILLING

CONTRACTOR: P & P Well Drilling  
 4245  
 Box 26, Longford Mills Ont. L0K1D  
 John Visdon  
 DATE OF WELL CONTRACT: 020297  
 DATE OF INSPECTION: 020297  
 OFFICE USE ONLY  
 CSSES

# WATER WELL RECORD

5717890  
 5720091  
 22 Bontocah Place, Rama, Ont. L6B2T6  
 08118  
 001

LOG OF OVERBURDEN AND BEDROCK MATERIALS

DEPTH (FEET)	GENERAL DESCRIPTION	STATE	FEET
0	top soil	0	3
3	brown sand,	30	30
30	grey clay	68	68
68	silt & clay	110	110
110	clay	134	134
134	silt	160	160
160	clay & silt	188	188
188	hardpan	188	188
188	fine sand & gravel	191	191

31 WATER RECORD  
 32 CASING & OPEN HOLE RECORD  
 33 PLUGGING & SEALING RECORD

34 LOCATION OF WELL  
 35 PUMPING TEST  
 36 FINAL STATUS OF WELL  
 37 WATER USE  
 38 METHOD OF DRILLING

CONTRACTOR: P & P Well Drilling  
 4245  
 Box 26, Longford Mills Ont. L0K1D  
 John Visdon  
 DATE OF WELL CONTRACT: 020282  
 DATE OF INSPECTION: 020282  
 OFFICE USE ONLY  
 CSSES



# WATER WELL RECORD

5717920  
Municipality: BRANDON  
City: BRANDON

1. PRINT ONLY IF SPACE PROVIDED  
2. CHECK  COMPLETE AND  CORRECTED AND WHERE APPLICABLE

CONTRACTOR: WATERWELL DRILLING  
ADDRESS: 1000  
CITY: BRANDON

DATE COMPLETED: 10-10-77

DATE OF RECORD: 10-10-77

CONTRACT NUMBER: 8479

WELL NUMBER: 133

WELL DEPTH: 133

WELL TYPE: 133

WELL STATUS: 133

WELL USE: 133

WELL METHOD: 133

WELL DRILLING: 133

WELL CONTRACTOR: WATERWELL DRILLING

WELL ADDRESS: 1000

WELL CITY: BRANDON

WELL DATE COMPLETED: 10-10-77

WELL DATE OF RECORD: 10-10-77

WELL CONTRACT NUMBER: 8479

WELL WELL NUMBER: 133

WELL WELL DEPTH: 133

WELL WELL TYPE: 133

WELL WELL STATUS: 133

WELL WELL USE: 133

WELL WELL METHOD: 133

WELL WELL DRILLING: 133

WELL WELL CONTRACTOR: WATERWELL DRILLING

WELL WELL ADDRESS: 1000

WELL WELL CITY: BRANDON

WELL WELL DATE COMPLETED: 10-10-77

WELL WELL DATE OF RECORD: 10-10-77

WELL WELL CONTRACT NUMBER: 8479

WELL WELL WELL NUMBER: 133

WELL WELL WELL DEPTH: 133

WELL WELL WELL TYPE: 133

WELL WELL WELL STATUS: 133

WELL WELL WELL USE: 133

WELL WELL WELL METHOD: 133

WELL WELL WELL DRILLING: 133

WELL WELL WELL CONTRACTOR: WATERWELL DRILLING

WELL WELL WELL ADDRESS: 1000

WELL WELL WELL CITY: BRANDON

WELL WELL WELL DATE COMPLETED: 10-10-77

# LOG OF OVERBURDEN AND BEDROCK MATERIALS

OTHER MATERIALS

DEPTH (FEET)	DESCRIPTION
0 - 100	Hard grey Boulder
100 - 133	Grey & Shaly
133 - 135	Shale

MISS 9-19

1000

1000

1000

1000

1000

1000

1000

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1000

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# WATER WELL RECORD

5719607  
Municipality: BRANDON  
City: BRANDON

1. PRINT ONLY IF SPACE PROVIDED  
2. CHECK  COMPLETE AND  CORRECTED AND WHERE APPLICABLE

CONTRACTOR: WATERWELL DRILLING  
ADDRESS: 1000  
CITY: BRANDON

DATE COMPLETED: 10-10-77

DATE OF RECORD: 10-10-77

CONTRACT NUMBER: 8479

WELL NUMBER: 133

WELL DEPTH: 133

WELL TYPE: 133

WELL STATUS: 133

WELL USE: 133

WELL METHOD: 133

WELL DRILLING: 133

WELL CONTRACTOR: WATERWELL DRILLING

WELL ADDRESS: 1000

WELL CITY: BRANDON

WELL DATE COMPLETED: 10-10-77

WELL DATE OF RECORD: 10-10-77

WELL CONTRACT NUMBER: 8479

WELL WELL NUMBER: 133

WELL WELL DEPTH: 133

WELL WELL TYPE: 133

WELL WELL STATUS: 133

WELL WELL USE: 133

WELL WELL METHOD: 133

WELL WELL DRILLING: 133

WELL WELL CONTRACTOR: WATERWELL DRILLING

WELL WELL ADDRESS: 1000

WELL WELL CITY: BRANDON

WELL WELL DATE COMPLETED: 10-10-77

WELL WELL DATE OF RECORD: 10-10-77

WELL WELL CONTRACT NUMBER: 8479

WELL WELL WELL NUMBER: 133

WELL WELL WELL DEPTH: 133

WELL WELL WELL TYPE: 133

WELL WELL WELL STATUS: 133

WELL WELL WELL USE: 133

WELL WELL WELL METHOD: 133

WELL WELL WELL DRILLING: 133

WELL WELL WELL CONTRACTOR: WATERWELL DRILLING

WELL WELL WELL ADDRESS: 1000

WELL WELL WELL CITY: BRANDON

WELL WELL WELL DATE COMPLETED: 10-10-77

# LOG OF OVERBURDEN AND BEDROCK MATERIALS

OTHER MATERIALS

DEPTH (FEET)	DESCRIPTION
0 - 18	Loam clay
18 - 49	Blue clay
49 - 50	Fine Blue Sand

Plan 1626 sub FEB 13 1981

1000

1000

1000

1000

1000

1000

1000

1000

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1000

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# WATER WELL RECORD

5719607  
Municipality: BRANDON  
City: BRANDON

1. PRINT ONLY IF SPACE PROVIDED  
2. CHECK  COMPLETE AND  CORRECTED AND WHERE APPLICABLE

CONTRACTOR: WATERWELL DRILLING  
ADDRESS: 1000  
CITY: BRANDON

DATE COMPLETED: 10-10-77

DATE OF RECORD: 10-10-77

CONTRACT NUMBER: 8479

WELL NUMBER: 133

WELL DEPTH: 133

WELL TYPE: 133

WELL STATUS: 133

WELL USE: 133

WELL METHOD: 133

WELL DRILLING: 133

WELL CONTRACTOR: WATERWELL DRILLING

WELL ADDRESS: 1000

WELL CITY: BRANDON

WELL DATE COMPLETED: 10-10-77

WELL DATE OF RECORD: 10-10-77

WELL CONTRACT NUMBER: 8479

WELL WELL NUMBER: 133

WELL WELL DEPTH: 133

WELL WELL TYPE: 133

WELL WELL STATUS: 133

WELL WELL USE: 133

WELL WELL METHOD: 133

WELL WELL DRILLING: 133

WELL WELL CONTRACTOR: WATERWELL DRILLING

WELL WELL ADDRESS: 1000

WELL WELL CITY: BRANDON

WELL WELL DATE COMPLETED: 10-10-77

WELL WELL DATE OF RECORD: 10-10-77

WELL WELL CONTRACT NUMBER: 8479

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WELL WELL WELL DEPTH: 133

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WELL WELL WELL METHOD: 133

WELL WELL WELL DRILLING: 133

WELL WELL WELL CONTRACTOR: WATERWELL DRILLING

WELL WELL WELL ADDRESS: 1000

WELL WELL WELL CITY: BRANDON

WELL WELL WELL DATE COMPLETED: 10-10-77

# LOG OF OVERBURDEN AND BEDROCK MATERIALS

OTHER MATERIALS

DEPTH (FEET)	DESCRIPTION
0 - 18	Loam clay
18 - 49	Blue clay
49 - 50	Fine Blue Sand

Plan 1626 sub FEB 13 1981

1000

1000

1000

1000

1000

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The Ontario Water Resources Act  
**WATER WELL RECORD**

Ministry of the Environment  
Ontario

1. PRINT ONLY IN SPACES PROVIDED  
2. CHECK  CORRECT FOR WATER CONTAMINANTS  
3. CHECK  CORRECT FOR WATER CONTAMINANTS

PROPERTY ADDRESS: RR#2 Orillia L3V-6H2  
CITY/TOWN/VILLAGE: Orillia  
COUNTY: Simcoe  
MUNICIPALITY: Orillia  
LOT: 14  
CONTRACT NO.: 5725824  
DATE COMPLETED: NOV 15 1989  
WELL NO.: 50600

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	DEPTH (FEET)	DESCRIPTION
Black	0 - 2	Top Soil
Brown	2 - 15	Sand
Grey	15 - 68	Stoney
Grey	68 - 77	Coarse Gravel

51. CASING & OPEN HOLE RECORD

WATER RECORD: 77  
CASING MATERIAL: 6" 2" Schedule 40  
CLOSURE: 2  
WATER LEVEL: 77  
WATER LEVEL DATE: 12/77

52. PLUGGING & SEALING RECORD

PLUG TYPE: 61  
MATERIAL: Stainless Steel  
DEPTH SET BY FEET: 70

7. PUMPING TEST

WELL TYPE:  SHALLOW  DEEP

WATER LEVEL: 77  
PUMP RATE: 40  
RECOVERY TIME: 76

FINAL STATUS OF WELL:  OBSERVATION WELL  
WATER USE:  DOMESTIC

LOCATION OF WELL

IN DIAGRAM SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.

CONTRACTOR: Vinson's Well Drilling  
WELL NO.: 5224  
DATE: OCT 10 1989

MINISTRY OF THE ENVIRONMENT COPY  
FORM NO. 0506/17/88 (FORM 8)

The Ontario Water Resources Act  
**WATER WELL RECORD**

Ministry of the Environment  
Ontario

1. PRINT ONLY IN SPACES PROVIDED  
2. CHECK  CORRECT FOR WATER CONTAMINANTS  
3. CHECK  CORRECT FOR WATER CONTAMINANTS

PROPERTY ADDRESS: RR#2 Orillia L3V-6H2  
CITY/TOWN/VILLAGE: Orillia  
COUNTY: Simcoe  
MUNICIPALITY: Orillia  
LOT: 14  
CONTRACT NO.: 5725824  
DATE COMPLETED: NOV 15 1989  
WELL NO.: 50600

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	DEPTH (FEET)	DESCRIPTION
Black	0 - 2	Top Soil
Brown	2 - 15	Sand
Grey	15 - 68	Stoney
Grey	68 - 77	Coarse Gravel

51. CASING & OPEN HOLE RECORD

WATER RECORD: 77  
CASING MATERIAL: 6" 2" Schedule 40  
CLOSURE: 2  
WATER LEVEL: 77  
WATER LEVEL DATE: 12/77

52. PLUGGING & SEALING RECORD

PLUG TYPE: 61  
MATERIAL: Stainless Steel  
DEPTH SET BY FEET: 70

7. PUMPING TEST

WELL TYPE:  SHALLOW  DEEP

WATER LEVEL: 77  
PUMP RATE: 40  
RECOVERY TIME: 76

FINAL STATUS OF WELL:  OBSERVATION WELL  
WATER USE:  DOMESTIC

LOCATION OF WELL

IN DIAGRAM SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.

CONTRACTOR: Vinson's Well Drilling  
WELL NO.: 5224  
DATE: OCT 10 1989

MINISTRY OF THE ENVIRONMENT COPY  
FORM NO. 0506/17/88 (FORM 8)

CONTRACT NO. 57293185

TOWNSHIP: Medonte COUNTY: Con. 14

DATE COMPLETED: NOV 11 1994

WELL NO. 5224

OWNER: 3085 Universal Dr. Mississauga Ont.

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

DEPTH (FEET)	GENERAL DESCRIPTION	DEPTH (FEET)
0	Top Soil	2
1	Brown Sand	35
11	Grey Clay	85
28	Grey Clay	168
136	Grey Clay	168
145	Grey Sand	168
152	Grey Sand	168

51 WATER RECORD

WATER LEVEL: 178

WELL DEPTH: 178

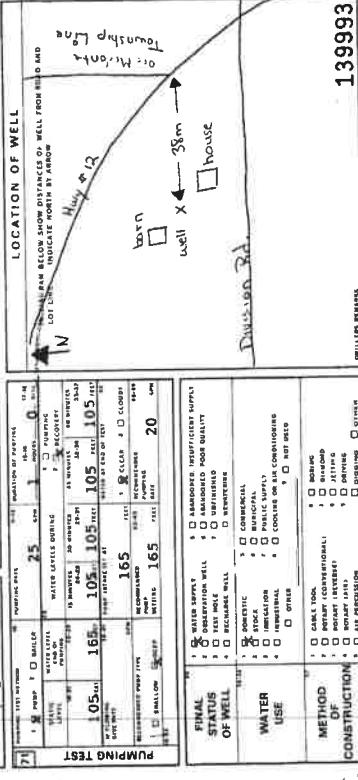
WATER TYPE: PLUGGING & SEALING RECORD

52 CASING & OPEN HOLE RECORD

WELL DEPTH: 178

WATER LEVEL: 178

WATER TYPE: PLUGGING & SEALING RECORD



FINAL STATUS OF WELL

WATER USE

METHOD OF CONSTRUCTION

CONTRACTOR: John Vinson

WELL NO. 5224

DATE: DEC 01 1994

OFFICE USE ONLY

DATE: 5224

DATE: DEC 01 1994

WELL NO. 5224

DATE: DEC 01 1994

CONTRACT NO. 5729835

TOWNSHIP: Orillia COUNTY: Con. 14

DATE COMPLETED: FEB 02 1993

WELL NO. 117007

OWNER: 650 R.R.#1, Fencelon Falls, Ontario

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

DEPTH (FEET)	GENERAL DESCRIPTION	DEPTH (FEET)
0	Top Soil	1
1	Brown Clay	11
11	Grey Clay	28
28	Grey Clay	136
136	Grey Clay	145
145	Grey Sand	152
152	Grey Sand	152

51 WATER RECORD

WATER LEVEL: 145-152

WELL DEPTH: 148

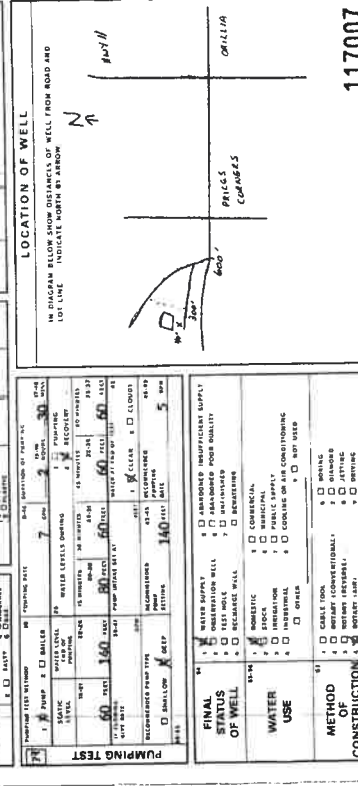
WATER TYPE: PLUGGING & SEALING RECORD

52 CASING & OPEN HOLE RECORD

WELL DEPTH: 148

WATER LEVEL: 145-152

WATER TYPE: PLUGGING & SEALING RECORD



FINAL STATUS OF WELL

WATER USE

METHOD OF CONSTRUCTION

CONTRACTOR: G. Hart & Sons Well Drilling Ltd.

WELL NO. 117007

DATE: FEB 02 1993

OFFICE USE ONLY

DATE: 2662

DATE: FEB 02 1993

WELL NO. 117007

DATE: FEB 02 1993



Print only in spaces provided.  
Mark correct box with a checkmark, where applicable.

11 5736113

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MND

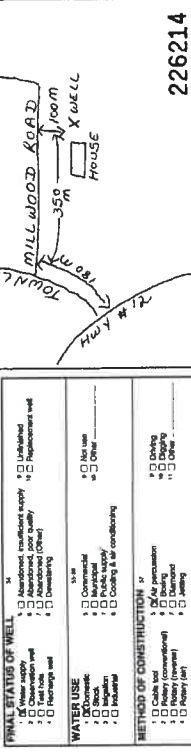
County of District: SIMCOE  
 Township/Village: SEVERN  
 Date completed: 12 06 07  
 Operator's name: GILL & GILL LTD  
 Address: BOX 102, ORILLIA, ONT L3V 6H9

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	Depth: feet	Remarks
BROWN	CLAY	STONE	0	25
BROWN	CLAY	SAND	25	35
GREY	CLAY		35	90
GREY	CLAY	GRAVEL	90	105
BROWN	CLAY	GRAVEL	105	150
BROWN	SAND	GRAVEL	150	155

31 WATER RECORD  
 Water found at: 155  
 Kind of water: 10  
 Depth at top of screen: 151  
 Material and type: STAINLESS STEEL  
 Plugging & Sealing Record: BENTONITE

71 PUMPING TEST  
 Static level: 85  
 Pumping level: 100  
 Final status of well: 10



MINISTRY USE ONLY  
 Name of Well Contractor: VINSON'S WELL DRILLING  
 Address: RR#2 COLDWATER, ONT L0K 1E0  
 Name of Well Technician: DAVE VINSON  
 Date of Installation: 30 06 01

11 5736116

5736116  
MND

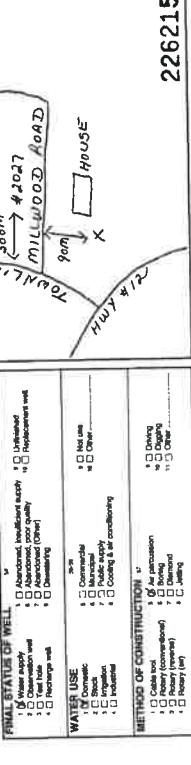
County of District: SIMCOE  
 Township/Village: SEVERN  
 Date completed: 14 06 07  
 Operator's name: GILL & GILL LTD  
 Address: BOX 102, ORILLIA, ONT L3V 6H9

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	Depth: feet	Remarks
BROWN	CLAY		0	25
BROWN	CLAY	SAND	25	28
GREY	CLAY		28	95
GREY	CLAY	GRAVEL	95	110
BROWN	CLAY	HARD PACKED GRAVEL	110	155
BROWN	SAND	GRAVEL	155	160

31 WATER RECORD  
 Water found at: 160  
 Kind of water: 10  
 Depth at top of screen: 155  
 Material and type: BENTONITE

71 PUMPING TEST  
 Static level: 88  
 Pumping level: 90  
 Final status of well: 10



MINISTRY USE ONLY  
 Name of Well Contractor: VINSON'S WELL DRILLING  
 Address: RR#2 COLDWATER, ONT L0K 1E0  
 Name of Well Technician: DAVE VINSON  
 Date of Installation: 30 06 01

Print only in spaces provided. Mark correct box with a checkmark, where applicable.

5736341 11 57007 CON 14

County or District: SIMCOE  
 Name: ST LUKE'S ANGLICAN CHURCH  
 Address: 100 MEDWITE (MEDWITE) CHURCH PRICES CORNERS  
 Date completed: 01/01/01

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Other materials	Depth - feet	From	To
GREY CLAY	TOPSOIL	0	1	1
GREY CLAY	STONES	1	10	10
BROWN SAND	LAYERED SILT SAND	10	185	185
GREY CLAY	GRAVEL	185	190	190
	GRAVEL TIL	190	200	200
OLD CRIB WELL SEALED WITH BENTONITE BACKFILLED WITH CLAY - TOP STONES REMOVED 20 FEET BEHIND ST. LUKE'S HOUSE				

31 WATER RECORD

Kind of water	Depth - feet	From	To
1 Fresh	184	1	184
2 Salty	185	1	185
3 Other			

32 CASING & SEALING RECORD

Material and type	Depth - feet	From	To
1 Steel	188	1	184
2 Concrete	185	1	185
3 Other			

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.

71 PUMPING TEST

Flowing rate	Water level during test	Recovery
106	163	129
176	158	163

72 FINAL STATUS OF WELL

73 WATER USE

74 METHOD OF CONSTRUCTION

226659

5528 OCT 18 2001

226659

2 - MINISTRY OF THE ENVIRONMENT COPY

Well No: A 004337

Address: 1787 HAULEY RD  
 City/Town/Village: SEAVAN  
 County (District/Municipality): SIMCOE  
 NAD: 83  
 Zone: 17  
 Easting: 494179  
 Northing: 478312

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Other materials	Depth - feet	From	To
BROWN SAND	GRAVEL	0	15	0
GREY SAND	GRAVEL/CLAY	15	25	4.5
BROWN HARDPAN	STONE	25	60	7.6
GREY CLAY		60	100	18.2
GREY CLAY		100	198	48.7
GREY LIMESTONE	BEDROCK	198	200	60.3
				83.3

31 WATER RECORD

Kind of water	Depth - feet	From	To
1 Fresh	188	0	198
2 Salty			
3 Other			

32 CASING & SEALING RECORD

Material and type	Depth - feet	From	To
1 Steel	5	0	60
2 Concrete	188	0	198
3 Other			

LOCATION OF WELL

In diagram below show distances of well from road and lot line. Indicate north by arrow.

71 PUMPING TEST

Flowing rate	Water level during test	Recovery
106	163	129
176	158	163

72 FINAL STATUS OF WELL

73 WATER USE

74 METHOD OF CONSTRUCTION

04432

5224

APR 08 2001

CSS ESS

5738683





Well Location: **4043 DIBBY DRIVE SIMCOE**  
 Address of Well Location (Street/House/Name): **4043 DIBBY DRIVE SIMCOE**  
 Township: **SEVERN (SERRAIA) 2**  
 City/Town/Village: **SEVERN**  
 Municipality: **SEVERN**  
 UTM Coordinates: **NAD 83 171618.38 4941699**  
 Municipal Plan and Sublot Number: **08111A**  
 Other Materials: **BROWN SAND, GREY CLAY, STONES, SILT CLAY, 6824 SAND CLAY, 6824 SAND, 6824 CLAY, SILT**

Depth Set at (m): **0.6**  
 Volume Placed (litres): **3254.0**  
 Method of Construction:  Concrete,  Masonry,  Brick,  Other, specify: **Concrete**

Depth (m)	From	To	Material
1	0.6	1.6	18.21, 20.57
2	1.6	2.6	19.03, 19.70
3	2.6	3.6	17.54, 18.05
4	3.6	4.6	15.71, 15.57
5	4.6	5.6	20.97, 20.70
6	5.6	6.6	21.27, 21.40
7	6.6	7.6	21.46, 21.60

Water Found at Depth (m): **35.40**  
 Water Found at Depth (m): **26.35**  
 Water Found at Depth (m): **22.32**

Business Name of Well Contractor: **ALAN WELLS WATER SERVICES INC. 515 288**  
 Business Address: **4101 Hwy 93, HURON**  
 Business Phone: **519 330 6888**  
 Business Email: **alan@alanswell.com**  
 Business License No.: **201110150**  
 Business License Expiry: **10/11/10**

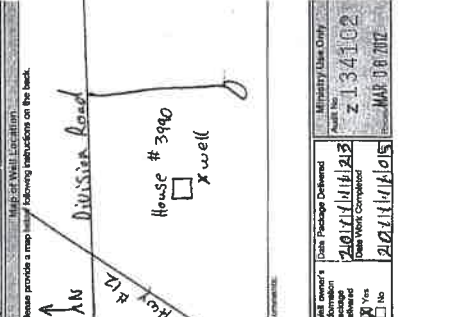
Well Location: **3900 Montclair cres**  
 Address of Well Location (Street/House/Name): **3900 Montclair cres**  
 Township: **SEVERN**  
 City/Town/Village: **SEVERN**  
 Municipality: **SEVERN**  
 UTM Coordinates: **NAD 83 171618.38 4941699**  
 Municipal Plan and Sublot Number: **08111A**  
 Other Materials: **clay, sand, stone, gravel**

Depth Set at (m): **0.25**  
 Volume Placed (litres): **304.0**  
 Method of Construction:  Concrete,  Masonry,  Brick,  Other, specify: **Concrete**

Depth (m)	From	To	Material
1	0.25	1.045	10.2
2	1.045	2.189	10.2
3	2.189	3.185	10.2
4	3.185	4.182	10.2
5	4.182	5.179	10.2
10	10.2	10.155	10.2
15	15.65	15.135	10.2
20	20.11	20.11	10.2
25	25.105	25.119	10.2
30	30.105	30.175	10.2
40	40.194	40.115	10.2
50	50.194	50.115	10.2
60	60.194	60.115	10.2

Water Found at Depth (m): **198**  
 Water Found at Depth (m): **0**  
 Water Found at Depth (m): **0**

Business Name of Well Contractor: **UNSWELL DRILLING**  
 Business Address: **3674 LANE 8N, HURON**  
 Business Phone: **519 330 6888**  
 Business Email: **unswell@unswell.com**  
 Business License No.: **512-214**  
 Business License Expiry: **10/11/10**





## Well Contractor and Well Technician Information

Well Contractor's Licence Number: 5528

### Results of Well Yield Testing

After test of well yield, water was CLOUDY  
 If pumping discontinued, give reason 49 m  
 Pump intake set at 24 LPM  
 Pumping Rate 1 h 0 m  
 Duration of Pumping 37.4 m  
 Final water level 49 m  
 If flowing give rate 25 LPM  
 Recommended pump depth 49 m  
 Recommended pump rate 25 LPM  
 Well Production Y  
 Disinfected? Y

### Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	16.21 m		
1	17.91 m		
2	18.32 m		
3	18.7 m		
4	19.49 m		
5	20.35 m		
10	24.2 m		
15	27.48 m		
20	29.38 m		
25	31.3 m		
30	33.1 m		
40	35.05 m		
45			
50	36.5 m		
60	37.4 m		

### Water Details

Water Found at Depth Kind  
 61 m Unstested

### Hole Diameter

Depth From	Depth To	Diameter
0 m	7 m	26 cm
7 m	56 m	22 cm
56 m	61.9 m	15 cm

Audit Number: Z212636

Date Well Completed: August 03, 2016

Date Well Record Received by MOE: August 19, 2016

Updated: June 28, 2018

Page 6/6

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Page

## Well ID

Well ID Number: 7285225  
 Well Audit Number: Z240130  
 Well Tag Number: A183890

This table contains information from the original well record and any subsequent updates.

## Well Location

Address of Well Location 12 BREANNA BLVD  
 Township ORO TOWNSHIP  
 Lot 001  
 Concession CON 14  
 County/District/Municipality SIMCOE  
 City/Town/Village PRICES CORNER  
 Province ON  
 Postal Code n/a  
 UTM Coordinates NAD83 - Zone 17  
Easting: 617873.00  
Northing: 4941666.00  
 Municipal Plan and Sublot Number   
 Other

## Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
GREY	TILL	STNS		0 m	47.2 m
GREY	SAND		HARD	47.2 m	48.8 m
GREY	TILL	STNS		48.8 m	60.7 m
GREY	LMSN			60.7 m	62.8 m

## Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 m	7 m	BENTONITE-400	

## Method of Construction & Well Use

Method of Construction Well Use  
 Rotary (Convent) Domestic

## Status of Well

Water Supply

## Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
15.5 cm	STEEL	-6 m	61.5 m
	OPEN HOLE	61.5 m	62.8 m

## Construction Record - Screen

Outside Diameter Material  
 Depth Depth  
 From From  
 To To

## Well Contractor and Well Technician Information

Well Contractor's Licence Number: 5528

### Results of Well Yield Testing

After test of well yield, water was CLEAR  
 If pumping discontinued, give reason  
 Pump intake set at 49 m  
 Pumping Rate 28 LPM  
 Duration of Pumping 1 h 0 m  
 Final water level 19 96 m  
 If flowing, give rate  
 Recommended pump depth 49 m  
 Recommended pump rate 28 LPM  
 Well Production  
 Disinfected? Y

### Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	17 05 m		
1	18 m	1	18.57 m
2	18.3 m	2	18.36 m
3	18.53 m	3	18.25 m
4	18.68 m	4	18.18 m
5	18.79 m	5	18.15 m
10	19.04 m	10	
15	19.2 m	15	
20	19.33 m	20	
25	19.43 m	25	
30	19.54 m	30	
40	19.68 m	40	
45		45	
50	19.81 m	50	
60	19.96 m	60	

### Water Details

Water Found at Depth Kind  
 Unstated

### Hole Diameter

Depth From	Depth To	Diameter
0 m	7 m	26 cm
7 m	61.7 m	22 cm
61.7 m	62.8 m	15 cm

Audit Number: 2240130

Date Well Completed: January 11, 2017

Date Well Record Received by MOE: April 13, 2017

Updated: June 28, 2018  
 ShareGata  
 Sharefacebook twitter Print  
 Page

## Well ID

Well ID Number: 7274447  
 Well Audit Number: 22189098  
 Well Tag Number: A210368

*This table contains information from the original well record and any subsequent updates.*

### Well Location

Address of Well Location 2073 HAWLEY ROAD  
 Township ORILLIA TOWNSHIP  
 Lot 001  
 Concession SD-01  
 County/District/Municipality SIMCOE  
 City/Town/Village Orillia  
 Province ON  
 Postal Code n/a  
 UTM Coordinates NAD83 - Zone 17  
 Easting: 615002.00  
 Northing: 4941895.00  
 Municipal Plan and Sublot Number  
 Other

### Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	SAND	CLAY		0 ft	18 ft
GREY	CLAY	GRVL		18 ft	75 ft
BRWN	HPAN	STNY		75 ft	192 ft
GREY	LMSN	ROCK		192 ft	220 ft

### Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 ft	25 ft	E-Z SEAL BENTONITE	

### Method of Construction & Well Use

Method of Construction Well Use  
 Air Percussion

### Status of Well

Water Supply

### Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
6 inch	STEEL	0 ft	194 ft

### Construction Record - Screen

Outside Diameter Material  
 Depth From To



## Well Contractor and Well Technician Information

Well Contractor's Licence Number: 5224

### Results of Well Yield Testing

After test of well yield, water was CLEAR  
 If pumping discontinued, give reason END OF TEST  
 Pump intake set at 190 ft  
 Pumping Rate 12 GPM  
 Duration of Pumping 2 h.0 m  
 Final water level 185 ft  
 If flowing give rate \_\_\_\_\_  
 Recommended pump depth 180 ft  
 Recommended pump rate 10 GPM  
 Well Production \_\_\_\_\_  
 Disinfected? Y

### Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	85.5 ft		
1	89.3 ft	1	178.8 ft
2	93.1 ft	2	172.6 ft
3	96.9 ft	3	166.4 ft
4	100.7 ft	4	161.1 ft
5	104.5 ft	5	155.8 ft
10	118 ft	10	129.3 ft
15	131.5 ft	15	114.8 ft
20	145 ft	20	100.3 ft
25	158.5 ft	25	93.2 ft
30	168.3 ft	30	87.5 ft
40	183.1 ft	40	85.5 ft
45		45	
50	185 ft	50	85.5 ft
60	185 ft	60	85.5 ft

### Water Details

Water Found at Depth Kind  
 220 ft Fresh

### Hole Diameter

Depth Diameter  
 From To  
 0 ft 220 ft 6 inch

Audit Number: Z239098

Date Well Completed:

Date Well Record Received by MOE: November 07, 2016

Updated: June 28, 2018

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Tags

A256076

Measurements recorded in:  Metric  Imperial

Page \_\_\_\_\_ of \_\_\_\_\_

**Well Owner's Information**

First Name \_\_\_\_\_ Last Name / Organization Earth Share Cedar Estates Inc rancheslocke@u.ca E-mail Address \_\_\_\_\_  Well Constructed by Well Owner

Mailing Address (Street Number/Name) 34 Grace Crescent Municipality Oro-Medonte Province Ontario Postal Code L6H 4P6 Telephone No. (inc. area code) 705 333 3470

**Well Location**

Address of Well Location (Street Number/Name) 2032 Division Road West Township Seven Lot Part 7 of 1 Concession \_\_\_\_\_

County/District/Municipality \_\_\_\_\_ City/Town/Village Oakville Province **Ontario** Postal Code H3V 0X7

UTM Coordinates: Zone \_\_\_\_\_ Easting \_\_\_\_\_ Northing \_\_\_\_\_ Municipal Plan and Sublot Number \_\_\_\_\_ Other \_\_\_\_\_

NAD: 83 176118231649191213 Part 5 R 41373

**Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)**

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft)	
				From	To
Black	Top Soil			0	1
Brown	Clay		Soft	1	11
Blue	Clay	Rocks	Hard	11	52
Blue	Small Clay		Soft	52	59
Blue	Clay		Medium	59	69
Blue	Sand		Medium	69	73
Blue	Sand		Coarse	73	79

**Annular Space**

Depth Set at (m/ft)	Type of Sealant Used (Material and Type)	Volume Placed (m <sup>3</sup> /ft <sup>3</sup> )
0 to 20	3/8 Bentonite	9

**Results of Well Yield Testing**

Time (min)	Water Level (m/ft)	Recovery	
		Time (min)	Water Level (m/ft)
Static Level	15		
1	25.1	1	51.9
2	26.9	2	50.2
3	28.5	3	48.9
4	30	4	47.6
5	31.5	5	46.4
10	37	10	42.3
15	41.3	15	38.7
20	43.3	20	36
25	44.9	25	33.9
30	48.1	30	32.2
40	49.8	40	29.5
50	53	50	27.9
60	54	60	26.5

After test of well yield, water was:  Clear and sand free  Other, specify \_\_\_\_\_

If pumping discontinued, give reason: \_\_\_\_\_

Pump intake set at (m/ft) 78

Pumping rate (l/min / GPM) 3.5

Duration of pumping 5 hrs + \_\_\_\_\_ min

Final water level end of pumping (m/ft) 60

If flowing give rate (l/min / GPM) \_\_\_\_\_

Recommended pump depth (m/ft) 70

Recommended pump rate (l/min / GPM) 3

Well production (l/min / GPM) 25

Disinfected?  Yes  No

**Method of Construction**

Cable Tool  Diamond  Public  Commercial  Not used

Rotary (Conventional)  Jetting  Domestic  Municipal  Dewatering

Rotary (Reverse)  Drilling  Livestock  Test Hole  Monitoring

Boring  Digging  Irrigation  Cooling & Air Conditioning

Air percussion  Industrial  Other, specify \_\_\_\_\_

Other, specify \_\_\_\_\_

**Construction Record - Casing**

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		Status of Well
			From	To	
6	Steel	.188	+2	74	<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned: Insufficient Supply <input type="checkbox"/> Abandoned: Poor Water Quality <input type="checkbox"/> Abandoned: other, specify _____ <input type="checkbox"/> Other, specify _____

**Construction Record - Screen**

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To
5	Steel	#10	74	79

**Water Details**

Water found at Depth (m/ft)	Kind of Water	Depth (m/ft)	To	Diameter (cm/in)
73	<input checked="" type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	0	20	12
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	20	74	6
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	74	79	5

**Well Contractor and Well Technician Information**

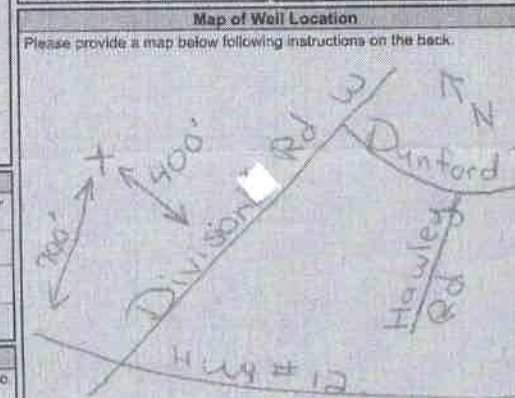
Business Name of Well Contractor Lane Star Drilling Services Ltd Well Contractor's Licence No. 716163

Business Address (Street Number/Name) PO Box 10043 Aurora Municipality Innisfil

Province Ontario Postal Code L4R 5H1 Business E-mail Address info@lanestar.com

Bus Telephone No. (inc. area code) \_\_\_\_\_ Names of Well Technician (Last Name, First Name) Thomas Stassen

Well Technician's Licence No. 410138 Signature of Technician and/or Contractor Thomas Stassen Date Submitted 2011 9 24 10



Comments: \_\_\_\_\_

Well owner's information package delivered <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered <u>2011 9 24 10</u>	Ministry Use Only Audit No. <u>2296701</u>
Date Work Completed <u>2011 9 24 10</u>	Received _____	