



Hydrogeological Assessment
1763 County Road 19, PEC, ON



Prepared for:

Mr. Sorin Tudor
1763 County Road 19,
PEC, ON K0K 1T0

Prepared by:

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File: ASC-1025 101r
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1.0 INTRODUCTION

1.1 Initiation and Objective

ASC Environmental Inc. (ASC) was retained by *Sorin Tudor* (Client) to conduct a hydrogeological assessment in support of a land severance application in accordance with The County of Prince Edward provision for consent. The subject property encompasses approximately 20.6 hectares located along the east side of County Road 19, Prince Edward, Ontario. The proposed severed lot encompasses approximately 0.9 hectares with 90 metres of road frontage along the south side of County Road 19. A site location plan is shown on Drawing No. 1 in Appendix A.

The purpose of the hydrogeological study was to assess the viability of one dug well (TW1) to support the proposed severance. The study evaluated whether groundwater quality and quantity are sufficient to support the residential development without adversely impacting upon existing neighbouring wells.

One (1) newly dug well (MECP Tag #A372065) was advanced on June 27, 2025, on the severed portion of the subject property by Q-Logic Water Ltd. (Well Contractor's Licence # 7717).

1.2 Scope of Work

The agreed scope of work included the following efforts:

- Reviewing available Ministry of Environment, Conservation and Parks (MECP) well water records and historical data for the local area.
- Undertake a six-hour pumping test (with recovery) on the recently dug well located on the proposed severed parcel.
- Monitor water levels in available neighbouring adjacent wells during pumping.
- Collect a well water sample following zero chlorine residual and in the final hour of the pumping test (approximate 6.5-hour mark).
- Submit well water samples to a certified laboratory for the required suite of parameters, as indicated in the MECP D-5-5 Procedure.
- Prepare a hydrogeological assessment, in reference with the MECP D-5-5 Guideline and The County of Prince Edward's Comprehensive Zoning By-law, as amended, including assessment of water quality, water quantity, potential well interference, and evaluation of nutrient attenuation in support of the proposed severance.
- Additional work included extension of the scheduled six-hour pumping test in the effort of reaching zero chlorine residual prior to sample collection.



2.0 BACKGROUND

2.1 Site Information

The subject property is an approximate 20.6-hectare parcel of land with approximately 390 metres of frontage along the south side of County Road 19 in Prince Edward County. The proposed severed lot encompasses approximately 0.9 hectares with 90 metres of road frontage along the south side of County Road 19. The property is located approximately 3.0 kilometres north of the Village of Consecon. A site layout plan may be found in Drawing No. 2 in Appendix A.

Ground cover generally consists of open grass fields with coniferous and deciduous trees scattered across the property. Surrounding land use within a 500-metre radius consists primarily of rural residential, agricultural, and vacant forested areas.

2.2 Surficial Soil Conditions

The physiographic area is described as Limestone plains. The surficial geology consists of thin soil overlying Paleozoic bedrock. ^[1]

Review of local well records showed an overburden thickness of 0 to 1.2 m, overlying limestone bedrock. Records reported the local overburden consisted of topsoil, loam, clay, and gravel.

2.3 Background Geology

Bedrock geology in the study area consists of a stratigraphic sequence of Paleozoic bedrock comprised of limestone, dolostone, shale, arkose, sandstone from the Ottawa Group; Simcoe group and Shadow Lake Formations. ^[2]

2.4 Local Hydrogeology

Fourteen (14) water well summary records of local wells (within a 500-metre radius of the subject property) were available for review from the MECP online database (see Appendix C). Review of the well records identified six (6) drilled wells intended for domestic household water supply and eight (8) abandoned or incomplete drilled wells due to insufficient water supply. The drilled wells were advanced to depths of approximately 13.4 to 36.6 metres below ground surface (mbgs) and completed within the limestone bedrock. Water was encountered at depths ranging from 3.0 to 30.5 mbgs. Copies of the well records identified in the MECP database can be seen in Appendix C.

Groundwater flow is typically through fractures and joints within the shallow limestone bedrock. Water is typically encountered in fractures and bedding planes in the bedrock formation.

^[1] Chapman, L.J. and Putnam, D.F. 1972. Physiography of Southern Ontario. Map 2227.

^[2] Ontario Geological Survey. 1991: Bedrock Geology of Ontario, Southern Sheet. Map. 2544.



3.0 WELL CONSTRUCTION

Q Logic Water LTD. (Well Contractor's Licence # 7717) advanced TW1 on June 27, 2025. The well was dug for the purpose of domestic water supply in support of the proposed land severance. The well location is shown in Drawing No. 2 in Appendix A and the well record is included in Appendix B.

The well record for TW1 indicated that the annular space between the concrete casing and native materials was sealed with non-toxic caulking to a depth of approximately 3.0 m below ground surface. The well record for TW1 shows that the concrete casing extends to a depth of approximately 4.7 m. The well casing extends above ground surface approximately 0.63 m.

The well record for TW1 indicated topsoil from surface to 0.3 m, underlain by shale to a depth of 1.5 m, and completed in the limestone bedrock at a depth of 4.7 mbgs. Water was reportedly encountered at a depth of approximately 2.4 m in the limestone bedrock. The well record is in Appendix B.

Visual observations during field work indicated that the well was constructed and maintained to prevent surface water and other foreign materials from entering the well. The height of the casing above grade meets Ontario's Revised Regulation (RRO) 903, Wells, amended to Ontario Regulation (O Reg) 372/07, under the *Ontario Water Resources Act*. The test well location is shown on Drawing No. 2 in Appendix A.

No sources of potential contamination were evident during the site work on the subject property.

We understand that water will be supplied using submersible pump. Pump installation shall be undertaken in accordance with RRO 903 (Section 17).

Copy of the test well record is attached in Appendix B.



4.0 WATER QUANTITY

4.1 Background

The quantity of groundwater available for the test well was initially investigated through one (1) scheduled 6-hour pumping test in reference with MECP Procedure D-5-5 and The County of Prince Edward's Comprehensive Zoning By-law, as amended. Referencing Government of Canada precipitation data (Belleville weather station), in the fourteen (14) days in June leading up to the pumping test, the area received approximately 3.0 mm of rainfall. On this basis, the pumping test was not undertaken during a period of heavy precipitation. Precipitation data can be found in Appendix F.

Referencing MECP D-5-5 guidelines, the minimum pumping rate per person based on peak demand is 3.75 L/min. Therefore, considering a 3-bedroom home (3 + 1), the minimum pumping rate required would be 15 L/min (3.75 L/min * 4). On this basis, the test well could be pumped at rate 15 L/min for purposes of assessing peak demand and long term well yield. The pumping test was conducted at a rate of 15 L/min for approximately 5.5 hours and subsequently increased to a rate of 30 L/min to 48 L/min for an additional 70 minutes in an effort to pump the remaining chlorine residual.

Bedrock hydrogeological values of transmissivity were calculated from the pumping data by the Jacob method, which assumes the heterogeneous limestone bedrock aquifer is analogous to a homogeneous, confined, porous media aquifer of infinite horizontal extent. Recognizing that the limestone bedrock water bearing unit is likely unconfined, the Jacob method sufficiently estimates the aquifer parameters to assess well hydrogeological conditions.

4.2 Test Well TW1

Test well TW1 is approximately 5.57 metres deep (from top of casing). Prior to the initiation of pumping the static water level was measured to be approximately 2.19 metres from the top of the casing. The water in the well was pumped at a rate of 15 litres/min for a total of 335 minutes, yielding approximately 5,025 litres of water. In an effort to reach zero chlorine residual prior to the sampling event, the pumping rate was subsequently increased to approximately 30 L/min for a total of 40 minutes, then further increased to a rate of approximately 48 L/min for 25 minutes, yielding approximately 2,400 litres of water. In total, approximately 7,425 litres of water were yielded from TW1 in 400 minutes of pumping. Maximum drawdown was manually measured at approximately 0.29 metres over the duration of the test. At the completion of the pumping test, approximately 91% of the total well supply was remaining. Specific capacity calculated over the final 60 minutes of the pumping test was found to be approximately 600 litres/minute/metre. A plot of drawdown versus time shows a logarithmic relationship (see Figure 1 in Appendix D).



Section 4.3.1 of the Ministry of Environment, Conservation and Parks (MECP) (*previously known as the Ministry of Environment*) D-5-5 Procedure, Technical Guideline for Private Wells: Water Supply Assessment requires that water level recovery must be monitored in the test well for the lesser of 95% recovery or 24 hours. Total drawdown over the period of pumping was measured at approximately 0.29 m. Maximum observed recovery was 80% and occurred approximately 10.5-hours following pump shut down. Review of the drawdown and recovery data identified additional drawdown following the 10.5-hour recovery measurement. ASC is of the opinion that recovery measurements in TW1 were subject to daily atmospheric water level fluctuations. Based on the minimal measured drawdown (0.29 m), well supply remaining following pump shut down (91%), and TW1's ability to recover to 80% (i.e. within 0.05 m of the initial static level) 10.5-hours following pump shutdown, the well is sufficiently able to meet peak usage periods, recover and meet the daily requirement for the proposed severance.

The transmissivity (T) after approximately 100 minutes of pumping was calculated to be $2.46 \times 10^{-4} \text{ m}^2/\text{s}$. Hydraulic Conductivity ($K = T/b$), where $b = 3.38 \text{ m}$ (represents approximate aquifer thickness at time of pumping), was determined to be $K = 3.02 \times 10^{-5} \text{ m/s}$. The test well recovery and transmissivity data may be found in Appendix D.

As indicated above and based on the considered number of bedrooms expected (3 + 1), a minimum pumping rate of 15 L/min is required with a resulting water requirement of 1800 litres/day during peak demand. Peak demand (at pumping rate of 15 L/min) was reached approximately 120 minutes into the pumping test, with a measured drawdown of approximately 0.12 m. Additional drawdown recorded over the remainder of the pumping test was 0.17 m. This indicates that the well sufficiently met "peak demand" conditions.

Based on the observations from the drawdown versus time relationship, it is concluded that the long-term yield of TW1 is sufficient to meet normal domestic requirements in reference with the MECP Procedure D-5-5 and The County of Prince Edward's Comprehensive Zoning By-law, as amended.

Drawdown and recovery measurements obtained during the pumping test are presented in Appendix D.



5.0 INTERFERENCE

The effects of interference were monitored during pumping of test well TW1. Neighbouring observation wells were utilized during pumping to assess potential interference. Observation well locations are shown on Drawing No. 2.

5.1 Test Well TW1

Three (3) observation wells, located at 1763 County Road 19 (OW1), 1760 County Road 19 (OW2), and 1734 County Road 19 (OW3) were utilized to assess potential interference during the TW1 pumping test. The observation wells were located approximately 90, 180 and 120 metres horizontal distance from the subject test well. See Table 1 below, for observation well information.

Water levels measured in the observation wells during the TW1 pumping test did not show a positive response during pumping of the test well on June 25, 2025.

Table 1. Test Well – TW1 Neighbouring wells involved in hydrogeological assessment at the subject property.

Observation Well ID	Well type	Observation Well Address	Distance from Test Well (m)
OW1	Dug	1763 County Road 19	90
OW2	Dug	1760 County Road 19	180
OW3	Drilled	1734 County Road 19	120

5.2 Discussion of Results

Potential water quantity problems resulting from mutual well interference are not expected for the test well TW1. A maximum drawdown of 0.02 m was measured in OW3, located approximately 120 metres horizontal distance from the test well. Water level recovery was measured in OW3 during the pumping test. ASC personnel attribute the measured drawdown in OW3 to homeowner water usage during pumping.

In summary, water levels measured in the observation wells during the TW1 pumping test did not show a positive response during pumping of the test well on June 25, 2025. Potential water quantity problems resulting from mutual well interference are not expected for the test well TW1.

On this basis, ASC is of the opinion that the associated measured drawdown is an appropriate estimation of the influence. Based on the observation well measurements during pumping, the adjacent domestic water supply wells will not be significantly influenced by the proposed second detached dwelling unit. Copies of the residential water level measurements recorded during the pumping test are presented in Appendix D.



6.0 WATER QUALITY

A well water sample was collected from the test well on June 25, 2025, during the final hour of the pumping test and stored in a cooler with ice and transported to a Canadian Association of Laboratory Accreditation (CALA) certified laboratory in Kingston, Ontario. Chemical and bacteriological parameter analyses were undertaken in accordance with the MECP Procedure D-5-5 and compared to the Ontario Drinking Water Quality Objectives (ODWO).

Results of analyses for the test well (TW1) are presented in the following section.

6.1 Test Well TW1

Bacteriological parameter analyses met the MECP Procedure D-5-5 and ODWO for Fecal Coliform (0 cfu/100ml), E. Coli (0 cfu/100ml), and Total Coliform (0 cfu/100ml) in the sample collected on June 25, 2025.

Elevated health parameter sodium was detected in the groundwater sample collected on June 25, 2025. The health-related limit for sodium is 20 mg/L and the aesthetic objective is 200 mg/L. The sample result for TW1 showed a sodium concentration of 48.2 mg/L. The health-related limit for sodium is a “warning level” and where this level is exceeded the local Medical Health Officer shall be notified in order to alert individuals with relevant medical conditions. The measured sodium concentration in the test well is within the aesthetic objective of 200 mg/L.

The health-related limit for Turbidity is 1 NTU (Nephelometric Turbidity Unit) and the ODWO level is 5 NTU. The laboratory sample result collected on June 25, 2025, showed 3.2 NTU. We believe that handling time prior to analyses may have resulted in precipitation in solution for the laboratory analyses result. We believe turbidity will not be a concern with well development. As a precaution, filtration is effective to manage turbidity.

Remaining health related parameters (nitrite, and nitrate) met the MECP Procedure D-5-5 and ODWO.

The operational guideline for hardness is 80-100 mg/L and the ODWO level is 500 mg/L. Sample analyses for TW1 identified hardness of 254 mg/L. The ODWO level for Total Dissolved Solids (TDS) is 500 mg/L. The level for TDS was measured at 356 mg/L. Hardness and TDS in water usually occur when elevated concentrations of calcium, magnesium, and chlorides are present in water. Elevated concentrations of hardness and TDS may result in scale build-up and mineral deposits on hot water heaters and plumbing fixtures, corrosion or encrustation of metal fixtures or appliances. Hard water can be readily treated through ion exchange water softening.



The ODWO concentration for Dissolved Organic Carbon (DOC) is 5.0 mg/L and the maximum concentration considered reasonably treatable is 10.0 mg/L. Sample analyses collected on June 25, 2025, showed a concentration of 6.0 mg/L. Elevated concentrations of DOC can be readily treated through carbon filter treatment systems.

The ODWO concentration for Manganese is 0.05 mg/L and the maximum concentration considered reasonably treatable is 1.0 mg/L. Sample analyses identified a concentration of 0.123 mg/L for Manganese. Elevated concentrations of Manganese may cause staining of plumbing fixtures and laundry. Manganese can be readily treated through ion exchange water softeners or greensand filters.

To ensure safe drinking water is provided to future residents, we recommend contracting a professional water quality specialist to confirm health related and aesthetic treatment options. At a minimum, we recommend disinfection (i.e. UV light) of the water source to ensure bacteriological free groundwater for consumption purposes.

Results of laboratory sample analyses are presented in Appendix E.



7.0 SEWAGE SYSTEM SERVICES

ASC understands that the proposed dwelling on the severed lands is likely to consist of one (1) 3-bedroom rural residential dwelling with associated private well and septic service. As per the Ontario Building Code (OBC), the design daily sewage flow for a 3-bedroom dwelling would be approximately 1,600 litres per day.

At the time of this assessment, ASC understands no existing sewage disposal system is present on the proposed severed lands. Furthermore, considering site conditions, ASC understands that the proposed 3-bedroom dwelling is most likely to be serviced with a raised bed Class 4 Sewage System. The OBC Minimum Clearance Distances for Class 4 Sewage Systems have been considered and indicated on the attached Wastewater System Concept Plan, see Figure 3 Appendix A. With the horizontal constraints applied, there exists a suitable area of approximately 5,644 m² in which a Class 4 Leaching Bed wastewater treatment system could be completed. Considering a design sewage flow of 1,600 litres per day and assuming imported septic sand with a percolation rate of 10 minutes/cm, a conventional leaching bed approximately 128 m² in area would be a viable option to service the proposed 3-bedroom residential unit on the severed lands.

On this basis, the proposed severed lands have sufficient space to accommodate a viable septic system. To ensure the most optimal septic design is undertaken at the subject property, we recommend contracting a professional septic design specialist to confirm servicing options for the subject property.

Groundwater samples were collected from the existing on-site dug well. Well water chemistry results from test well TW1 showed Nitrate (0.43 mg/L) and Nitrite (<0.05 mg/l) concentrations, below MECP health related parameters. As part of the assessment for the residential development a Nitrate Assessment was undertaken in reference with The County of Prince Edward's Comprehensive Zoning By-law (Servicing Report), as amended, and with reference to the MECP Procedure *D-5-4 Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment* guidelines.

In the case of Nitrate, the Ontario Drinking Water Standard of 10 mg/L of Nitrate-Nitrogen is used as an indicator of groundwater impact potential. Nitrate attenuation at the down gradient boundary would be calculated as follows:



Nitrate Attenuation

A_p – Pervious Area of attenuation zone, m.

Note there are no impervious areas on the attenuation zone, ASC understands structures will shed water to the ground surface with subsequent infiltration.

i – infiltration, m/year

I – Available infiltration, L/day

C – Concentration of Nitrate at the Downgradient Receptor

C_{BK} – Background Concentration of Nitrate = 0.43 mg/L (TW1)

N_L = Additional Nitrate Loading, g

$$I = \frac{(A_p)(i) \left(1000 \frac{L}{m^3}\right)}{365 \frac{days}{year}}$$

$$I = \frac{(9000)(0.25) \left(1000 \frac{L}{m^3}\right)}{365 \frac{days}{year}}$$

$$I = 6164.38$$

$$C = C_{BK} + \frac{40g_L}{1000L + I}$$

$$C = 0.43mg/L + \frac{40}{1000L + 6164.38}$$

$$C = 0.43 \text{ mg/L} + 5.58 \text{ mg/L}$$

$$C = 6.01 \text{ mg/L}$$

Based on the above assessment a Nitrate concentration at the down gradient receptor has been calculated to be less than 10 mg/L. Therefore, on this basis the Nitrate loading will be sufficiently attenuated at the down gradient receptor, meeting the requirement of D-5-4 and Section 3.0 of the PEC Servicing Report Guideline.

8.0 CONCLUSIONS AND RECOMMENDATIONS

- Based on the considered number of bedrooms expected (3 + 1), a minimum pumping rate of 15 L/min is required with a resulting water requirement of 1,800 litres/day during peak demand. Peak demand (15 L/min) was reached approximately 120 minutes into the pumping test, with a measured drawdown of approximately 0.12 m. Additional drawdown recorded over the remainder of the pumping test was 0.17 m. This indicates that the well sufficiently met “peak demand” conditions.
- The water in the well was pumped at a rate of 15 litres/min for a total of 335 minutes, yielding approximately 5,025 litres of water. In an effort to reach zero chlorine residual prior to the sampling event, the pumping rate was subsequently increased to approximately 30 L/min for a total of 40 minutes, then further increased to a rate of approximately 48 L/min for 25 minutes, yielding approximately 2,400 litres of water. In total, approximately 7,425 litres of water were yielded from TW1 in 400 minutes of pumping. Maximum drawdown was manually measured at approximately 0.29 metres over the duration of the test. At the completion of the pumping test, approximately 91% of the total well supply was remaining indicating the well is sufficiently able to supply peak usage periods and meet the daily requirement for the proposed severance.
- Bacteriological parameter analyses in the sample collected on June 25, 2025, met the MECP Procedure D-5-5 and ODWO for Fecal Coliform (0 cfu/100ml), E. Coli (0 cfu/100ml), and Total Coliform (0 cfu/100ml).
- Elevated health parameter sodium was detected in the groundwater sample collected on June 25, 2025. The health-related limit for sodium is 20 mg/L and the aesthetic objective is 200 mg/L. The sample result for TW1 showed a sodium concentration of 48.2 mg/L. The health-related limit for sodium is a “warning level” and where this level is exceeded the local Medical Health Officer shall be notified in order to alert individuals with relevant medical conditions. The measured sodium concentration in the test well is within the aesthetic objective of 200 mg/L.
- The health-related limit for Turbidity is 1 NTU (Nephelometric Turbidity Unit) and the ODWO level is 5 NTU. The laboratory sample result collected on June 25, 2025, showed 3.2 NTU. We believe that handling time prior to analyses may have resulted in precipitation in solution for the laboratory analyses result. We believe turbidity will not be a concern with well development. As a precaution, filtration is effective to manage turbidity.
- Remaining health related parameters (nitrite, and nitrate) met the MECP Procedure D-5-5 and ODWO.
- Results of the groundwater identified elevated aesthetic parameter hardness, TDS, DOC and manganese in the test well. These are readily treatable.



- To ensure safe drinking water is provided to future residents, we recommend contracting a professional water quality specialist to confirm health related and aesthetic treatment options. At a minimum, we recommend disinfection (i.e. UV light) of the water source to ensure bacteriological free groundwater for consumption purposes.
- Based on results of the pumping tests and monitoring results of neighbouring residential well water supplies, water quantity problems resulting from mutual well interference is not expected.
- Based on field observation and visual inspection by ASC personnel, TW1 appears to meet the present requirements of O. Reg 903 in order to ensure continued good quality groundwater for consumption purposes.
- No land and water use conflicts were identified in an evaluation of the surrounding properties within 500 metres of the subject property. Surrounding land use within a 500-metre radius consists primarily of rural residential, agricultural, and forested lands.
- Based on the nutrient assessment, a Nitrate concentration at the down gradient receptor has been calculated to be less than 10 mg/L. Therefore, on this basis the Nitrate loading will be sufficiently attenuated at the down gradient receptor, meeting the requirement of D-5-4 and Section 3.0 of the PEC Servicing Report Guideline.
- Reviewing the existing site and local lithology, and taking local hydrogeological characteristics into account, well construction details and the results from groundwater chemistry; the limestone bedrock groundwater resource has not been significantly impacted from surface infiltration sources. Results indicate that sufficient long-term water supply to support the proposed severance.



9.0 LIMITATIONS

ASC Environmental (ASC) was retained by Mr. *Sorin Tudor* (Client) to undertake a Hydrogeological Assessment in support of a proposed land severance at the subject property, located at 1763 County Road 19, Consecon, Ontario.

The scope of work for this assessment included:

- Undertaking a minimum six-hour pumping test, with recovery on the test well.
- Monitoring adjacent residential wells during pumping, to assess potential interference.
- Collection of well water samples, following field confirmation of zero residual chlorine and within the last hour of the pumping test.
- Submission of samples to a certified laboratory for the required suite of parameters.
- Additional well development and associated water sampling for bacteriological parameters.
- Preparation of a hydrogeological assessment report, addressing well construction, water quality and quantity, and potential interference.

The findings reported in this document are based on the tasks completed by ASC under the mutually agreed upon scope of work. Professional judgement, experience with similar investigations, and available data collected within the scope of work form the basis for this report. ASC has prepared this report using information understood to be factual and correct and shall not be responsible for conditions arising from information or facts that were inaccurate, concealed, or not fully disclosed at the time of investigation.

ASC Environmental Inc. makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and these interpretations may change over time.

The nature of the investigation makes it possible that contrary conditions may be identified due to seasonal or meteorological changes that are beyond the control of ASC. Groundwater sampling results are current at the time of sampling only, seasonal conditions and future changes to the property may influence groundwater quality. The passage of time affects the information provided in the report. Environmental conditions of a Site can change. Opinions relating to the Site conditions are based upon information that existed at the time that the conclusions were formulated. ASC does not certify or warrant the future environmental/hydrogeological status of the property.

This document has been prepared by ASC Environmental Inc. for the sole use of Mr. *Sorin Tudor* and *assignees* to assess hydrogeological conditions related to the subject property. Unauthorized reuse of this document for other purposes, or by any other party,



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ASC Environmental Inc. will not be responsible for any consequential or indirect damages. ASC Environmental Inc. will only be liable for damages resulting from negligence of ASC Environmental Inc. ASC Environmental Inc. will not be liable for any losses or damage if the Client has failed, within a period of two years following the date upon which the claim is discovered (Claim Period), to commence legal proceedings against ASC Environmental Inc. to recover such losses or damage unless the laws of the jurisdiction which govern the Claim Period which is applicable to such claim provides that the application Claim Period is greater than two years and cannot be abridged by the contract between the Client and ASC Environmental Inc., in which case the Claim Period shall be deemed to be extended by the shortest additional period which results in this provision being legally enforceable.

Yours truly,
ASC Environmental Inc.



Tanner Cook, B.A.
Environmental Technical Specialist

Reviewed by:





Thomas Asma, B.ASc., P. Eng. QP_{ESA}
Project Engineer

APPENDIX A
Drawing No. 1 - 3



ASC Environmental Inc.
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Kingston, ON K7M 3E3
Tel: (613) 634-5596



LEGEND	
	SUBJECT PROPERTY LOCATION
	APPROXIMATE LOCATION OF SUBJECT PROPERTY


DRAWING TITLE
Site Location Plan

FIGURE NO. 01	DRAWN BY T. Cook
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PROJECT
Hydrogeological Assessment

CLIENT
Sorin Tudor

LOCATION
1763 County Road 19, Prince Edward County, ON

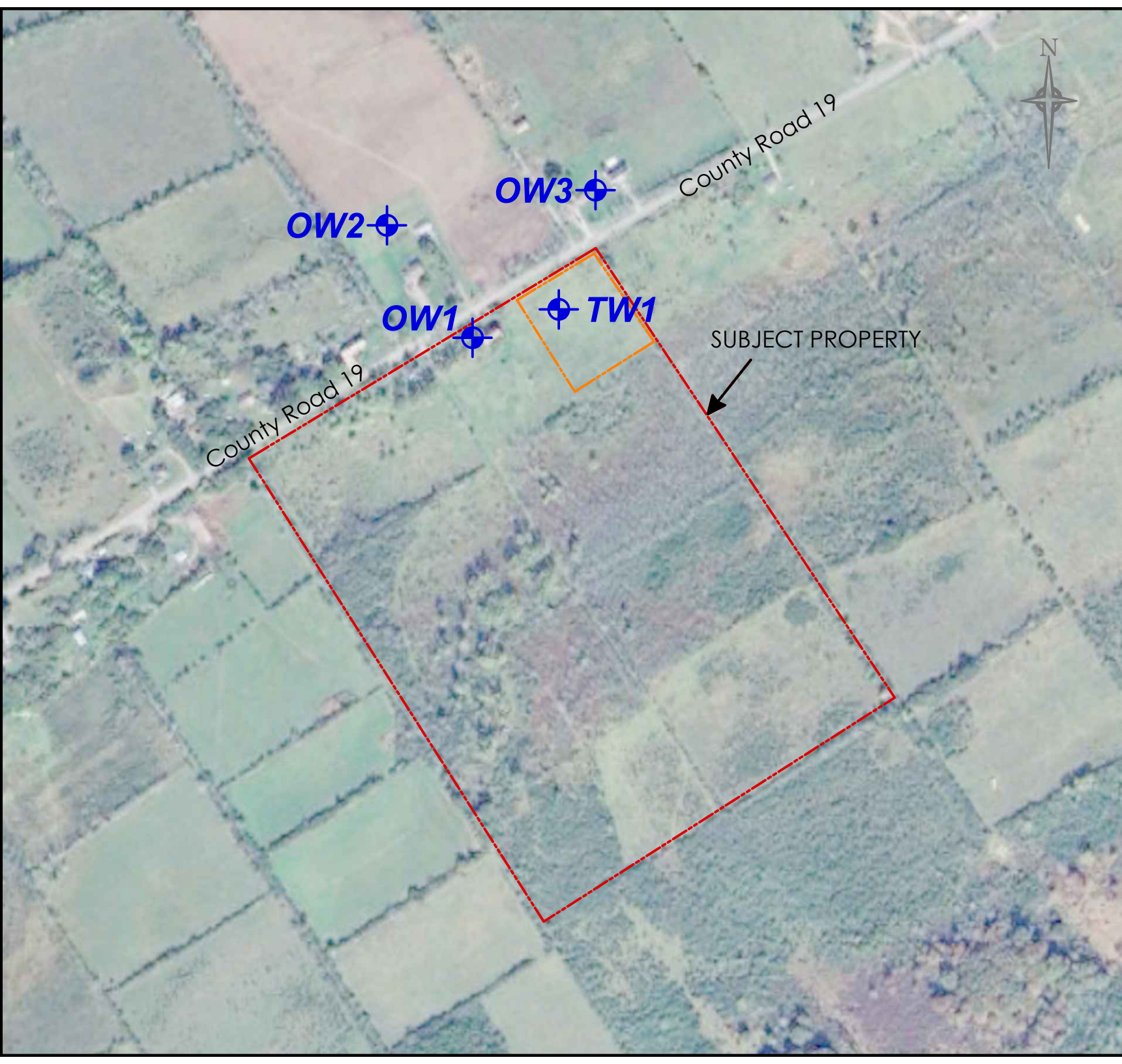
PROJECT NO. ASC-1025	SCALE: 
--------------------------------	--

DATE
13-Aug-2025







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Kingston, ON, K7M 3E3

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www.ascenvironmental.ca



LEGEND

-  APPROXIMATE LOCATION OF SUBJECT PROPERTY
-  APPROXIMATE SEVERED PROPERTY BOUNDARY
-  **TW1** APPROXIMATE LOCATION OF TEST WELL
-  **OW1** APPROXIMATE LOCATION OF NEIGHBOURING OBSERVATION WELLS


DRAWING TITLE
Site Layout Plan

FIGURE NO. 02	DRAWN BY J.Braznick
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PROJECT
Hydrogeological Assessment

CLIENT
Sorin Tudor

LOCATION
1763 County Road 19, PEC, ON

PROJECT NO. ASC-1025	SCALE: 
DATE 13-Aug-2025	

ASC ENVIRONMENTAL

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LEGEND	
	APPROXIMATE SUBJECT PROPERTY BOUNDARY
	APPROXIMATE SEVERED PROPERTY BOUNDARY
	APPROXIMATE 3 METRE PROPERTY LINE SETBACK PER OBC
	APPROXIMATE 30 METRE DUG WELL SETBACK PER OBC
	APPROXIMATE AREA AVAILABLE FOR CLASS 4 SEWAGE SYSTEM
	APPROXIMATE LOCATION OF TEST WELL
	APPROXIMATE LOCATION OF OBSERVATION WELL

DRAWING TITLE
Wastewater System Concept Plan

FIGURE NO. 03	DRAWN BY T. Cook
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PROJECT
Hydrogeological Assessment

CLIENT
Sorin Tudor

LOCATION
1763 County Road 19, PEC, ON

PROJECT NO. ASC-1025	SCALE:
--------------------------------	-------------------

DATE
13-Aug-2025



1305 Princess St
Kingston, ON, K7M 3E3

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APPENDIX B
Test Well Record



ASC Environmental Inc.
1305 Princess Street,
Kingston, ON K7M 3E3
Tel: (613) 634-5596

Measurements recorded in: Metric Imperial

Well Owner's Information

First Name: SORIN, Last Name/Organization: TUDOR, E-mail Address: Sorin.atudor3@gmail.com, Mailing Address: 1763 COUNTY ROAD 19, Municipality: CONSECON, Province: ONTARIO, Postal Code: K0K1T0, Telephone No.: 647-231-0006

Well Location

Address of Well Location: 1763 COUNTY ROAD 19, Township: CONSECON, Lot: , Concession: , County/District/Municipality: PRINCE EDWARD COUNTY, City/Town/Village: CONSECON, Province: Ontario, Postal Code: K0K1T0, UTM Coordinates: NAD 18131829801114878047

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

Table with 5 columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From To. Rows include: BROWN TOPSOIL (0-1), GREY SHALE (1-5), GREY LIMESTONE (5-15.5), LOOSE, HARD PACKED.

Annular Space table with 3 columns: Depth Set at (m/ft) From To, Type of Sealant Used (Material and Type), Volume Placed (m³/ft³). Row: 0-10 NON TOXIC CAULKING.

Method of Construction and Well Use checkboxes. Method of Construction includes Cable Tool, Rotary, Boring, etc. Well Use includes Public, Commercial, Domestic, etc.

Construction Record - Casing table with 4 columns: Inside Diameter (cm/in), Open Hole OR Material, Wall Thickness (cm/in), Depth (m/ft) From To. Row: 36 CONCRETE 4 +2.5 -15.5.

Construction Record - Screen table with 4 columns: Outside Diameter (cm/in), Material, Slot No., Depth (m/ft) From To.

Water Details and Hole Diameter sections. Water found at Depth: 8 (m/ft), Kind of Water: Fresh, Untested. Hole Diameter: Depth (m/ft) From To, Diameter (cm/in).

Well Contractor and Well Technician Information. Business Name: Q-LOGIC WATER LTD, License No.: 7717, Business Address: 352 MARSH ROAD, Municipality: BELLEVILLE.

Well Technician and Date Submitted. Bus. Telephone No.: 613-885-8696, Name of Well Technician: QUIGLEY, JAMIE, Signature: [Signature], Date Submitted: 20250627.

Results of Well Yield Testing table. Includes Draw Down and Recovery columns with Time (min) and Water Level (m/ft). Handwritten notes: 'TEST COMPLETE', 'Pump intake set at 17', 'Pumping rate 90', 'Duration of pumping 1 hrs + 0 min', 'Final water level end of pumping 15.7', 'Recommended pump depth 17', 'Recommended pump rate 10 gpm pump', 'Well production 26 GPM', 'Disinfected? Yes'. Large handwritten note: 'THIS IS A DUG WELL WITH A FLOW RATE OF 26 GPM OR APPROX RESERVE OF 20000L'.

Map of Well Location section. Includes a hand-drawn map showing a 'DUG WELL' at 'APPROX 60 FT' depth, with a 'FENCE' and 'COUNTY ROAD 19' nearby. Text: 'SEE UTM COORDINATES FOR MORE ACCURATE LOCATION'. Comments section is empty.

APPENDIX C
MECP Water Well Summary Records



ASC Environmental Inc.
1305 Princess Street,
Kingston, ON K7M 3E3
Tel: (613) 634-5596



UTM 18Z 297706E

5R 4877742N

3104A

53 No 384

Elev. 6R 03220

The Ontario Water Resources Commission Act

WATER WELL RECORD

Basin 24 County or District Prince Edward Township, Village, Town or City Ameliasburg

Con. 3 Lot 102 Date completed 31 Aug. 1964 (day month year)

Address R.R. 1 Carrying Place

Casing and Screen Record

Inside diameter of casing 6 1/4"

Total length of casing 4'

Type of screen None

Length of screen

Depth to top of screen

Diameter of finished hole 6"

Pumping Test

Static level Dry

Test-pumping rate G.P.M.

Pumping level

Duration of test pumping Dry

Water clear or cloudy at end of test

Recommended pumping rate G.P.M.

with pump setting of feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Loam	0	3		
Limestone	3	120	DRY	

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

DRY

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

Drilling or Boring Firm H.E. Jones & Son

Address R.R. 2 Trenton

Licence Number 1429

Name of Driller or Borer G.M. Jones

Address

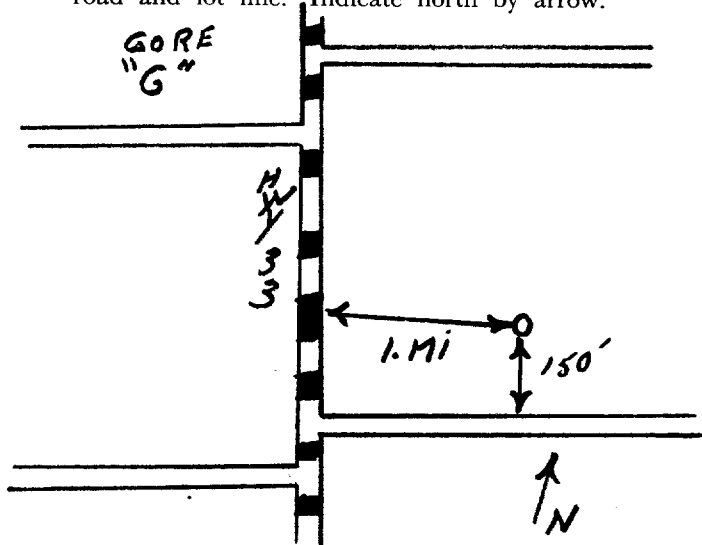
Date Jan. 12, 1964

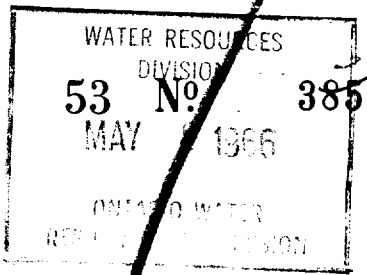
G.M. Jones

(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.





DTM 18z 297932E
 Con 5# 4877849N
 Elev. 5102 0320

3104A

The Ontario Water Resources Commission Act

WATER WELL RECORD

Basin 24
 County or District Prince Edward Township, Ameliasburg
 Con. 2 Lot 103 Date completed 21 4 1966
 (day month year)
 Address Carrying Place R.R. 1

Casing and Screen Record

Inside diameter of casing 6 1/2"
 Total length of casing 4'
 Type of screen none
 Length of screen none
 Depth to top of screen none
 Diameter of finished hole 6"

Pumping Test

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

Well Log

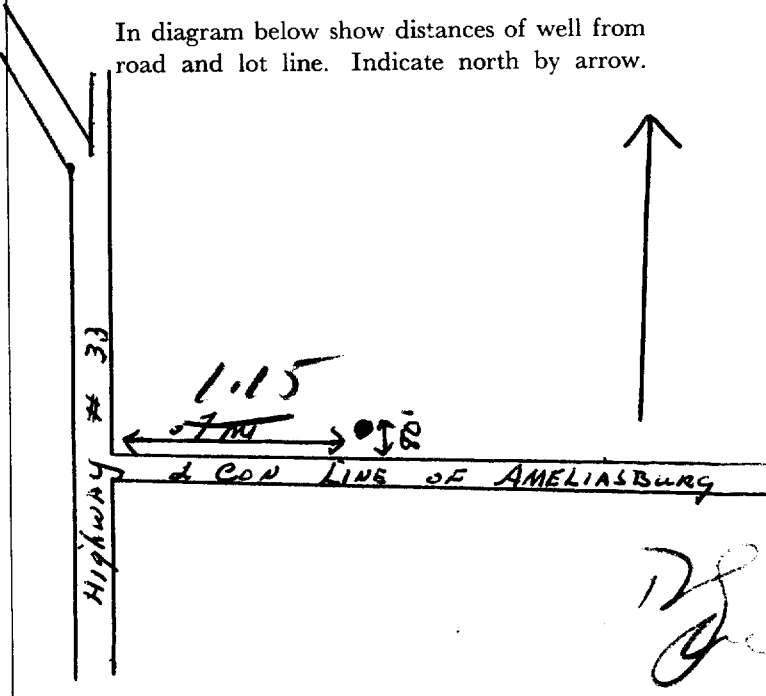
Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>Clay & Gravel</u>	<u>0'</u>	<u>4'</u>		
<u>Soft Limestone</u>	<u>4'</u>	<u>135'</u>	<u>dry</u>	<u>dry</u>

For what purpose(s) is the water to be used? Domestic (farm)
 Is well on upland, in valley, or on hillside? upland
 Drilling or Boring Firm Thos Donaldson
Cloverleaf Dr.
 Address Belleville 5
 Licence Number 1990
 Name of Driller or Borer Flora Donaldson
 Address Belleville R.R. 5
 Date April 30th. 1966
Thos Donaldson
 (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.



UTM 18z 297930E



31C4A

WATER RESOURCES DIVISION
 53 No 386
 MAY 8 1966
 ONTARIO WATER RESOURCES COMMISSION

CON 5E 4877855N

The Ontario Water Resources Commission Act

WATER WELL RECORD

Elev. 374 1020 320

Basin 24 County or District Prince Edward Township, Village, Town or City Ameliasburg

Con. 2 Lot 102 Date completed 22 4 1966 (day month year)

Address Carrying Place R.R. 1

Casing and Screen Record

Inside diameter of casing 6 1/2"
 Total length of casing 4'
 Type of screen none
 Length of screen none
 Depth to top of screen none
 Diameter of finished hole 6"

Pumping Test

Static level 6'
 Test-pumping rate 3 G.P.M.
 Pumping level dry
 Duration of test pumping 2 hrs
 Water clear or cloudy at end of test clear
 Recommended pumping rate 2 G.P.M.
 with pump setting of 46' feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record

	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Clay & Gravel	0'	4'		
Brown Limestone	4'	25'		
Soft Grey Limestone	25'	50'	12'	Fresh

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

Domestic

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

Drilling or Boring Firm Thos Donaldson

Cloverleaf Dr.

Address Belleville 5

Licence Number 1990

Name of Driller or Borer Florn Donaldson

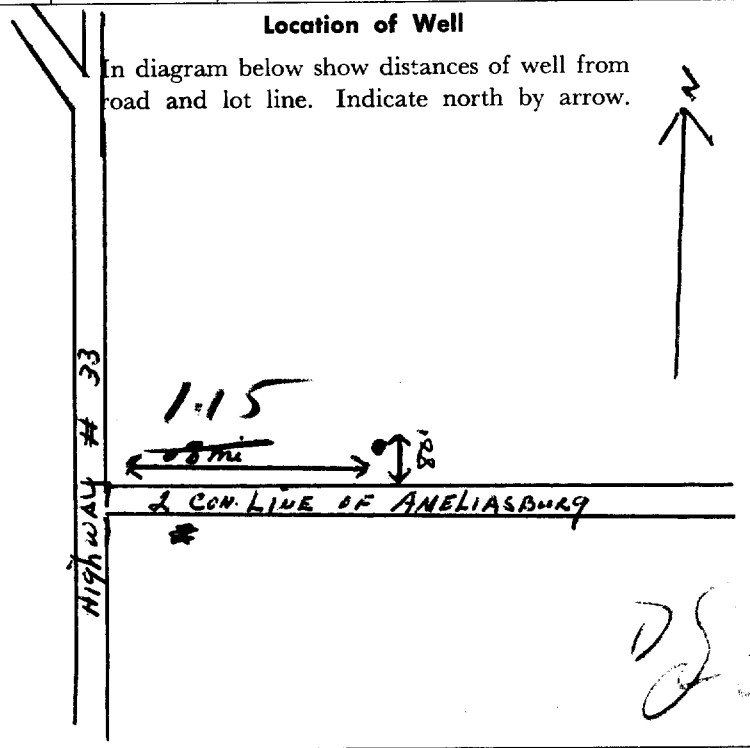
Address Belleville R.R. 5

Date April 30th. 1966

Thos Donaldson
(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.





Ontario

MINISTRY OF THE ENVIRONMENT
The Ontario Water Resources Act

WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

11

5302870

MUNICIP.

CON.

COUNTY OR DISTRICT: Prince Edward TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Hamletburg BLOCK, TRACT, SURVEY, ETC.: 3

OWNER (SURNAME FIRST): [REDACTED] ADDRESS: RR#1 Consecor Ontario DATE COMPLETED: 10/2

DAY: 14 MONTH: 10 YEAR: 74

21

ZONE EASTING NORTHING RC ELEVATION RC BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
<u>Brown</u>			<u>Top Soil</u>	<u>0</u>	<u>1</u>
<u>Grey</u>			<u>Shale Rocks</u>	<u>1</u>	<u>4</u>
<u>Grey</u>			<u>Limestone</u>	<u>6</u>	<u>65</u>

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13 <u>11-40</u>	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
15-18	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
20-23	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE		<u>0</u>	<u>10</u>
17-18	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	<u>188</u>		<u>20-23</u>
24-25	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE			<u>27-30</u>

SCREEN

SIZES OF OPENING (SLOT NO.)	DIAMETER	LENGTH
31-33	34-36	38-40
MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN 41-44

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE	CEMENT SHOT LEAD PACKER, ETC.
FROM TO		
10-13	14-17	
18-21	22-25	
28-29	30-33	30

71 PUMPING TEST

PUMPING TEST METHOD: 1 PUMP 2 BAUER

PUMPING RATE: 1 GPM

DURATION OF PUMPING: 15-16 HOURS 17-18 MINS: 6

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING PUMPING					
10-13	14-17	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES	75 MINUTES	90 MINUTES
<u>9</u> FEET	<u>65</u> FEET	<u>65</u> FEET	<u>65</u> FEET	<u>65</u> FEET	<u>65</u> FEET	<u>65</u> FEET	<u>65</u> FEET

IF FLOWING, GIVE RATE: 63 GPM

PUMP INTAKE SET AT: 63 FEET

WATER AT END OF TEST: 42 FEET

RECOMMENDED PUMP TYPE: 1 SHALLOW 2 DEEP

RECOMMENDED PUMP SETTING: 63 FEET

RECOMMENDED PUMPING RATE: 1 GPM

LOCATION OF WELL

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

33 Highway

1 mile

30 ft

3d line

FINAL STATUS OF WELL

1 WATER SUPPLY 6 ABANDONED, INSUFFICIENT SUPPLY
2 OBSERVATION WELL 7 ABANDONED, POOR QUALITY
3 TEST HOLE 8 UNFINISHED
4 RECHARGE WELL

WATER USE

1 DOMESTIC 5 COMMERCIAL
2 STOCK 6 MUNICIPAL
3 IRRIGATION 7 PUBLIC SUPPLY
4 INDUSTRIAL 8 COOLING OR AIR CONDITIONING
9 OTHER 9 NOT USED

METHOD OF DRILLING

1 CABLE TOOL 6 BORING
2 ROTARY (CONVENTIONAL) 7 DIAMOND
3 ROTARY (REVERSE) 8 JETTING
4 ROTARY (AIR) 9 DRIVING
5 AIR PERCUSSION

CONTRACTOR

NAME OF WELL CONTRACTOR: Ken Clark Well Drilling PHONE NUMBER: 2553

ADDRESS: RR#1 Consecor Ontario

NAME OF DRILLER OR BORER: [REDACTED] LICENCE NUMBER: [REDACTED]

SIGNATURE OF CONTRACTOR: Kenneth Clark SUBMISSION DATE: DAY 15 MO. Oct YR 74

OFFICE USE ONLY

DATA SOURCE: [REDACTED] CONTRACTOR: [REDACTED] DATE RECEIVED: 10/20/74

DATE OF INSPECTION: [REDACTED] INSPECTOR: [REDACTED]

REMARKS: [REDACTED]

P

WI

CSS, ES



Ontario

WATER WELL RECORD

31e/4a

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

11 | 5302870 | 53001 | CON. CAN | 02

COUNTY OR DISTRICT: Prince Edward | TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Ameliasburg | CON., BLOCK, TRACT, SURVEY, ETC.: 2

OWNER (SURNAME FIRST): [Redacted] | ADDRESS: RR#1 Consecon Ontario | DATE COMPLETED: DAY 14 MO. 09 YR. 74

7844 | 4 | 335 | 4 | 24 | MAR 02, 1977 | 250 | 47

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown			Top Soil	0	1
Grey			Shale Rock	1	6
Grey			Limestone	6	65

31 | 0001602 | 0000217 | 0065215

32 | [Scale]

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER			
0-13	1 <input checked="" type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL
15-18	1 <input checked="" type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL
20-23	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL
25-28	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL
30-33	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11	1 <input checked="" type="checkbox"/> STEEL	188	0	00/0
17-18	1 <input type="checkbox"/> STEEL			20-23
24-25	1 <input type="checkbox"/> STEEL			27-30

SCREEN

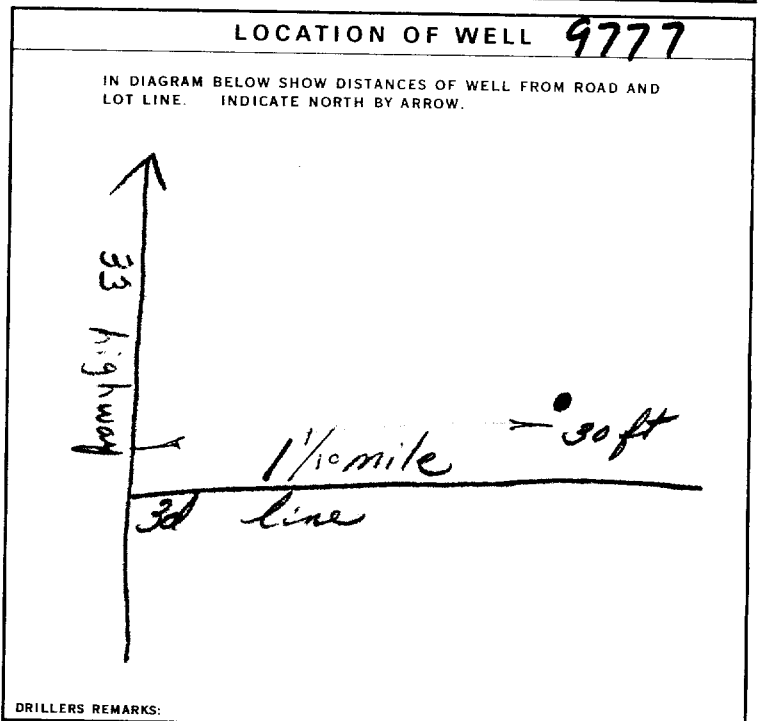
SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	INCHES	FEET
		DEPTH TO TOP OF SCREEN
		FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET		MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
FROM	TO	
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

PUMPING TEST METHOD: 1 <input type="checkbox"/> PUMP, 2 <input checked="" type="checkbox"/> BAILER	PUMPING RATE: 0001 GPM	DURATION OF PUMPING: 06 HOURS, 00 MINS
STATIC LEVEL: 009 FEET	WATER LEVEL END OF PUMPING: 065 FEET	WATER LEVELS DURING PUMPING:
		15 MINUTES: 065 FEET, 30 MINUTES: 065 FEET, 45 MINUTES: 065 FEET, 60 MINUTES: 065 FEET
IF FLOWING, GIVE RATE: 000.0 GPM	PUMP INTAKE SET AT: 63 FEET	WATER AT END OF TEST: 1 <input checked="" type="checkbox"/> CLEAR, 2 <input type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE: <input checked="" type="checkbox"/> SHALLOW, <input checked="" type="checkbox"/> DEEP	RECOMMENDED PUMP SETTING: 063 FEET	RECOMMENDED PUMPING RATE: 0001 GPM



FINAL STATUS OF WELL

1 WATER SUPPLY, 2 OBSERVATION WELL, 3 TEST HOLE, 4 RECHARGE WELL, 5 ABANDONED, INSUFFICIENT SUPPLY, 6 ABANDONED, POOR QUALITY, 7 UNFINISHED

WATER USE

1 DOMESTIC, 2 STOCK, 3 IRRIGATION, 4 INDUSTRIAL, 5 COMMERCIAL, 6 MUNICIPAL, 7 PUBLIC SUPPLY, 8 COOLING OR AIR CONDITIONING, 9 NOT USED

METHOD OF DRILLING

1 CABLE TOOL, 2 ROTARY (CONVENTIONAL), 3 ROTARY (REVERSE), 4 ROTARY (AIR), 5 AIR PERCUSSION, 6 BORING, 7 DIAMOND, 8 JETTING, 9 DRIVING

CONTRACTOR

NAME OF WELL CONTRACTOR: Ken Hare Well Drilling | LICENCE NUMBER: 2553

ADDRESS: RR#1 Consecon Ontario

NAME OF DRILLER OR BORER: Kenneth Hare | LICENCE NUMBER: [Blank]

SIGNATURE OF CONTRACTOR: [Signature] | SUBMISSION DATE: DAY 15 MO. Oct YR. 74

OFFICE USE ONLY

DATA SOURCE: [Blank] | CONTRACTOR: 2553 | DATE RECEIVED: 10 10 74

DATE OF INSPECTION: [Blank] | REMARKS: [Blank]

P: [Blank] | WI: [Blank]



Ontario

WATER WELL RECORD

31C/4a

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

11 5302990

MUNICIP. 53001 CON. C/N 0.2

COUNTY OR DISTRICT: PRINCE EDWARD TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Ameliasburgh CON., BLOCK, TRACT, SURVEY, ETC.: 2

DATE COMPLETED: DAY 29 MO 06 YR. 74

WELL #1 CONSECON ONT.

WELL NO. 77760 RC 4 ELEVATION 0320 RC 4 BASIN CODE 24

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	clay	gravel	packed layered	0	3
Grey	limestone		layered cemented	3	125

31 00036051179 01252157460

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER			
10-13	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL
15-18	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL
20-23	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL
25-28	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL
30-33	1 <input type="checkbox"/> FRESH	3 <input type="checkbox"/> SULPHUR	2 <input type="checkbox"/> SALTY	4 <input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
08"	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE	1.88	0	50
17-18	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input checked="" type="checkbox"/> OPEN HOLE			
24-25	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE			

SCREEN

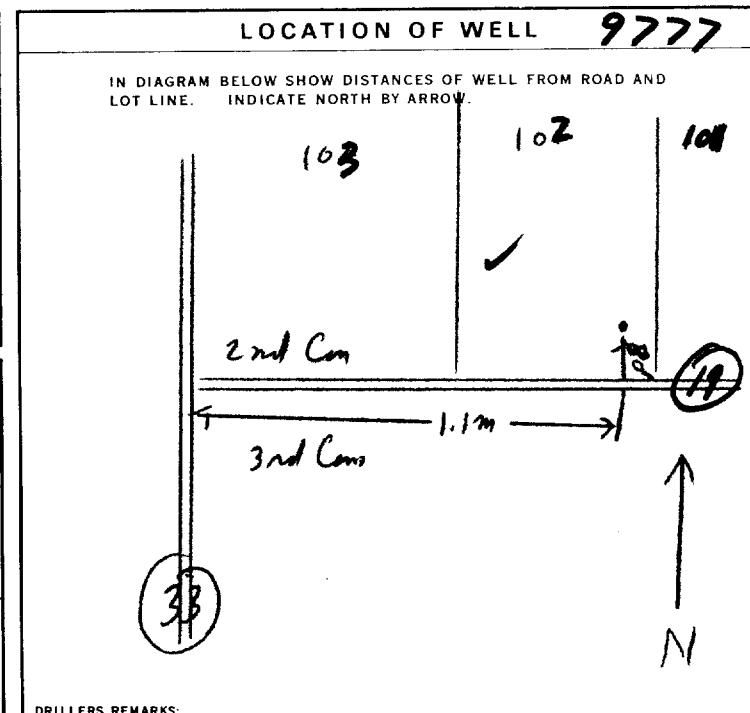
SIZE(S) OF OPENING (SLOT NO.)	DIAMETER INCHES	LENGTH FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET		MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
FROM	TO	
10-13	14-17	
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 <input type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER	GPM.	15-16 HOURS 17-18 MINS
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
19-21 FEET	22-24 FEET	5 MINUTES 27-31 FEET 30 MINUTES 32-34 FEET 45 MINUTES 35-37 FEET 60 MINUTES
IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
GPM	FEET	1 <input type="checkbox"/> CLEAR 2 <input type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
1 <input type="checkbox"/> SHALLOW 2 <input type="checkbox"/> DEEP	FEET	GPM



FINAL STATUS OF WELL

5 1 WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY
 2 OBSERVATION WELL 6 ABANDONED, POOR QUALITY
 3 TEST HOLE 7 UNFINISHED
 4 RECHARGE WELL

WATER USE

55-56 1 DOMESTIC 5 COMMERCIAL
 2 STOCK 6 MUNICIPAL
 3 IRRIGATION 7 PUBLIC SUPPLY
 4 INDUSTRIAL 8 COOLING OR AIR CONDITIONING
 OTHER 9 NOT USED

METHOD OF DRILLING

57 1 CABLE TOOL 6 BORING
 2 ROTARY (CONVENTIONAL) 7 DIAMOND
 3 ROTARY (REVERSE) 8 JETTING
 4 ROTARY (AIR) 9 DRIVING
 5 AIR PERCUSSION

CONTRACTOR

NAME OF WELL CONTRACTOR: M'CLENNON DRILLING LTD LICENCE NUMBER: 3576
 ADDRESS: WELLINGTON ONT.
 NAME OF DRILLER OR BORER: Kenneth M'Clennon
 SIGNATURE OF CONTRACTOR: Kenneth M'Clennon SUBMISSION DATE: DAY ____ MO ____ YR ____

OFFICE USE ONLY

DATA SOURCE: 1 CONTRACTOR: 3516 DATE RECEIVED: 040275
 DATE OF INSPECTION: INSPECTOR: A. J.
 REMARKS: P. J. W.



Ministry
of the
Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK CORRECT BOX WHERE APPLICABLE

11

5305717

MUNICIP 53001

CON. CON.

02

COUNTY OR DISTRICT: [REDACTED] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **CLIASBURG** CON. BLOCK, TRACT, SURVEY, ETC: **CON 2** LOT 25-27: **102**

DATE COMPLETED: DAY **14** MO **12** YR **91**

#1 CONSEC CON

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	CLAY	STONES		0	5
GREY	SHALE		BROKEN	5	11
GREY	LIMESTONE		BROKEN	11	90

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER		
10-13	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	14
15-18	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	19
20-23	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	24
25-28	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	29
30-33	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	34

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	12		13-16
17-18	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	19		20-23
24-25	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	21		27-30

CASING REMOVED

SCREEN

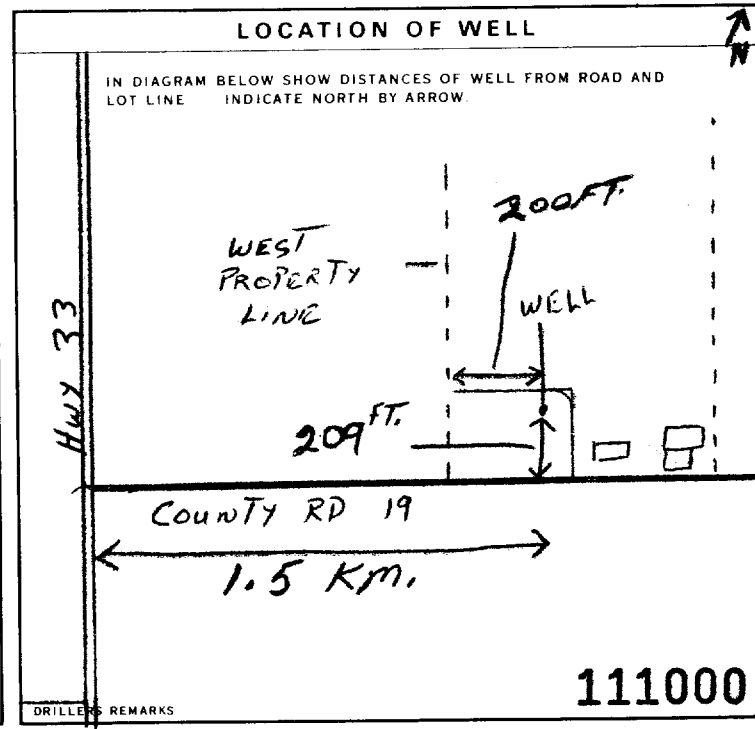
SIZE (S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
31-33	34-38	39-40
INCHES		FEET
MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN
		41-44
		FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER ETC.)
FROM TO	
10-13 14-17	
18-21 22-25	
26-29 30-33 80	

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 <input type="checkbox"/> PUMP 2 <input type="checkbox"/> BAILER	GPM	15-16 HOURS 17-18 MINS
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
19-21	22-24	1 <input type="checkbox"/> PUMPING 2 <input type="checkbox"/> RECOVERY
FEET	FEET	15 MINUTES 20-22 30 MINUTE 23-25 45 MINUTE 26-28 60 MINUTE 29-31
IF FLOWING GIVE RATE	PUMP INTAKE SET	WATER AT END OF TEST
GPM	GPM	FEET 1 <input type="checkbox"/> CLEAR 2 <input type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
<input type="checkbox"/> SHALLOW <input type="checkbox"/> DEEP	FEET	46-49 GPM



FINAL STATUS OF WELL

1 <input type="checkbox"/> WATER SUPPLY	5 <input checked="" type="checkbox"/> ABANDONED, INSUFFICIENT SUPPLY
2 <input type="checkbox"/> OBSERVATION WELL	6 <input type="checkbox"/> ABANDONED POOR QUALITY
3 <input type="checkbox"/> TEST HOLE	7 <input type="checkbox"/> UNFINISHED
4 <input type="checkbox"/> RECHARGE WELL	<input type="checkbox"/> DEWATERING

WATER USE

1 <input type="checkbox"/> DOMESTIC	5 <input type="checkbox"/> COMMERCIAL
2 <input type="checkbox"/> STOCK	6 <input type="checkbox"/> MUNICIPAL
3 <input type="checkbox"/> IRRIGATION	7 <input type="checkbox"/> PUBLIC SUPPLY
4 <input type="checkbox"/> INDUSTRIAL	8 <input type="checkbox"/> COOLING OR AIR CONDITIONING
<input type="checkbox"/> OTHER	9 <input type="checkbox"/> NOT USED

METHOD OF CONSTRUCTION

1 <input checked="" type="checkbox"/> CABLE TOOL	6 <input type="checkbox"/> BORING
2 <input type="checkbox"/> ROTARY (CONVENTIONAL)	7 <input type="checkbox"/> DIAMOND
3 <input type="checkbox"/> ROTARY (REVERSE)	8 <input type="checkbox"/> JETTING
4 <input type="checkbox"/> ROTARY (AIR)	9 <input type="checkbox"/> DRIVING
5 <input type="checkbox"/> AIR PERCUSSION	<input type="checkbox"/> DIGGING <input type="checkbox"/> OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: **WELL MANISE DONALDSON DRILLING 1805**

WELL CONTRACTOR'S LICENCE NUMBER: **1805**

ADDRESS: **RR #5 BELLEVILLE ONT.**

NAME OF WELL TECHNICIAN: **KEN DONALDSON**

WELL TECHNICIAN'S LICENCE NUMBER: **T-0019**

SIGNATURE OF TECHNICIAN/CONTRACTOR: **Ken Donaldson**

SUBMISSION DATE: DAY **16** MO **12** YR **91**

OFFICE USE ONLY

DATA SOURCE: **CONTRACTOR 58-62** **1805** DATE RECEIVED: **59-62** **JAN 10 1992**

DATE OF INSPECTION: _____ INSPECTOR: _____

REMARKS: _____

CSS.ES

1. PRINT ONLY IN SPACES PROVIDED
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11 5305718 MUNICIP. 53,001 CON. 102

COUNTY OR DISTRICT: [REDACTED] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **LIASBURG** CON. BLOCK, TRACT, SURVEY ETC: **CON. 2** LOT: **12**

DATE COMPLETED: DAY **23** MO **12** YR **91**

#1 CONSECON

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)					
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	CLAY	STONE		0	4
GREY	SHALE		BROKEN	4	10
GREY	LIMESTONE			10	44

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS
28	1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS
25-28	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS
30-33	1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR 2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/4	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	.188	0	10
6	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC		10	44

SCREEN

SIZE (S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	INCHES	FEET

MATERIAL AND TYPE: _____ DEPTH TO TOP OF SCREEN: _____

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE	(CEMENT GROUT LEAD PACKER, ETC.)
FROM	TO	
10-13	14-17	
18-21	22-25	
26-29	30-33	60

71 PUMPING TEST

PUMPING TEST METHOD: 1 PUMP 2 BAILER

PUMPING RATE: **4** GPM

DURATION OF PUMPING: 1 15-16 HOURS 2 17-18 MINS.

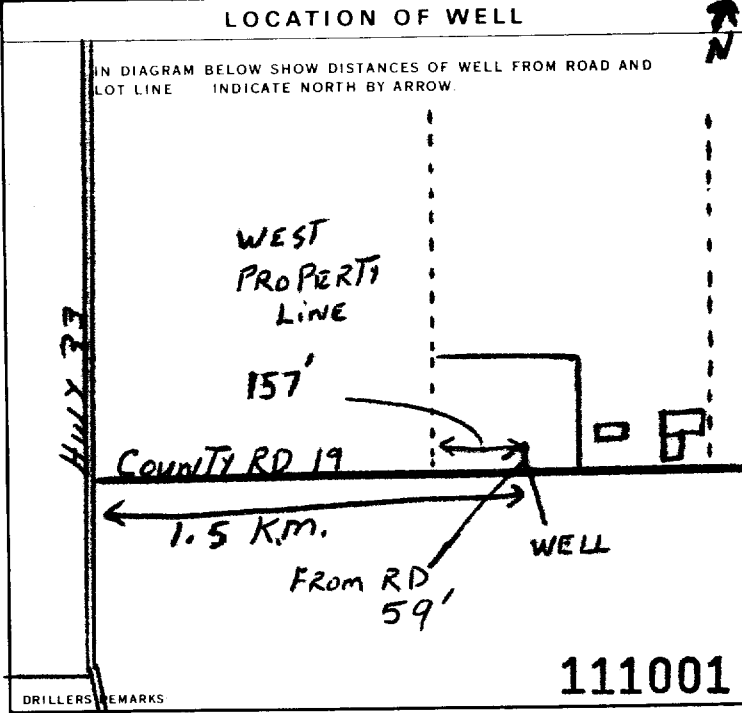
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING				
19-21 FEET	22-24 FEET	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES	
8	41	26-28	29-31	32-34	35-37	

IF FLOWING GIVE RATE: _____ PUMP INTAKE SET AT: **42** FEET WATER AT END OF TEST: 1 CLEAR 2 CLOUDY

RECOMMENDED PUMP TYPE: SHALLOW DEEP

RECOMMENDED PUMP SETTING: **42** FEET

RECOMMENDED PUMPING RATE: **4** GPM



84 FINAL STATUS OF WELL

1 WATER SUPPLY 5 ABANDONED, INSUFFICIENT SUPPLY
2 OBSERVATION WELL 6 ABANDONED, POOR QUALITY
3 TEST HOLE 7 UNFINISHED
4 RECHARGE WELL 8 DEWATERING

85-86 WATER USE

1 DOMESTIC 5 COMMERCIAL
2 STOCK 6 MUNICIPAL
3 IRRIGATION 7 PUBLIC SUPPLY
4 INDUSTRIAL 8 COOLING OR AIR CONDITIONING
9 OTHER 9 NOT USED

87 METHOD OF CONSTRUCTION

1 CABLE TOOL 6 BORING
2 ROTARY (CONVENTIONAL) 7 DIAMOND
3 ROTARY (REVERSE) 8 JETTING
4 ROTARY (AIR) 9 DRIVING
5 AIR PERCUSSION 10 DIGGING 11 OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: **MANSE DONALDSON DRILLING**

WELL CONTRACTOR'S LICENCE NUMBER: **1805**

ADDRESS: **RR #5 BELLEVILLE**

NAME OF WELL TECHNICIAN: **KEN DONALDSON**

WELL TECHNICIAN'S LICENCE NUMBER: **T-0019**

SIGNATURE OF TECHNICIAN/CONTRACTOR: *Ken Donaldson*

SUBMISSION DATE: DAY **23** MO **12** YR **91**

OFFICE USE ONLY

DATE RECEIVED: **JAN 10 1992**

CONTRACTOR: **1805**

DATE OF INSPECTION: _____ INSPECTOR: _____

REMARKS: _____

CSS.ES



5305883

MUNICIPALITY: 53001 CON. NO.: 02

1. PRINT ONLY IN SPACES PROVIDED
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11

COUNTY OR DISTRICT: [Redacted] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Ameliasburg CON. BLOCK, TRACT, SURVEY ETC: 2 LOT: 22-27 Part 105
DATE COMPLETED: DAY 19 MO 11 YR 92
WELL NO.: #3 Carrying Place

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown			clay loam	0	2
Grey			shale limestone	2	5
Grey			lime stone	5	70

31
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER		
22	1 <input checked="" type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	14
62	1 <input checked="" type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	19
55	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input checked="" type="checkbox"/> GAS	24
	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	29
	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	34-40

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/4	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	188	0	22
	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC			20-23
	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC			27-30

SCREEN

SIZE(S) OF OPENING (SLOT NO.)	DIAMETER	LENGTH
	INCHES	FEET
		41-44
		30

MATERIAL AND TYPE: _____ DEPTH TO TOP OF SCREEN: _____

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE	(CEMENT GROUT LEAD PACKER ETC.)
FROM TO		
10-13	14-17	
18-21	22-25	
26-29	30-33	80

71 PUMPING TEST

PUMPING TEST METHOD: 1 PUMP 2 BAILER
PUMPING RATE: 6 GPM DURATION OF PUMPING: 2 HOURS 17-18 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
19-21	22-24	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
22 FEET	68 FEET	55 FEET	40 FEET	25 FEET	22 FEET

IF FLOWING GIVE RATE: _____ PUMP INTAKE SET AT: 68 FEET WATER AT END OF TEST: _____
RECOMMENDED PUMP TYPE: SHALLOW DEEP
RECOMMENDED PUMP SETTING: 68 FEET RECOMMENDED PUMPING RATE: 5 GPM

LOCATION OF WELL

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

119422

FINAL STATUS OF WELL

1 WATER SUPPLY 5 ABANDONED - INSUFFICIENT SUPPLY
2 OBSERVATION WELL 6 ABANDONED - POOR QUALITY
3 TEST HOLE 7 UNFINISHED
4 RECHARGE WELL DEWATERING

WATER USE

1 DOMESTIC 5 COMMERCIAL
2 STOCK 6 MUNICIPAL
3 IRRIGATION 7 PUBLIC SUPPLY
4 INDUSTRIAL 8 COOLING OR AIR CONDITIONING
 OTHER 9 NOT USED

METHOD OF CONSTRUCTION

1 CABLE TOOL 6 BORING
2 ROTARY (CONVENTIONAL) 7 DIAMOND
3 ROTARY (REVERSE) 8 JETTING
4 ROTARY (AIR) 9 DRIVING
5 AIR PERCUSSION DIGGING OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: Ken Hare
ADDRESS: Box 901 Campbellford Ont.
WELL CONTRACTOR'S LICENCE NUMBER: 2553

NAME OF WELL TECHNICIAN: Greg Hare
WELL TECHNICIAN'S LICENCE NUMBER: T-6593
SIGNATURE OF TECHNICIAN/CONTRACTOR: Greg Hare
SUBMISSION DATE: DAY 22 MO 1 YR 93

OFFICE USE ONLY

DATA SOURCE: 58 CONTRACTOR: 59-62 DATE RECEIVED: 63-68 80
2553 JAN 27 1993

DATE OF INSPECTION: _____ INSPECTOR: _____

REMARKS: _____

CS.S.ES

APPENDIX D
Test Well Drawdown and Recovery Data



ASC Environmental Inc.
1305 Princess Street,
Kingston, ON K7M 3E3
Tel: (613) 634-5596

Table 1. Water Quality Field Measurements.



		Field Water Quality Analysis			Test Well:		TW1	
		Project No.:	ASC-1025	Date:	25-Jun-25			
		Client:	Sorin Tudor	Recorded By:	T.C.			
		Location:	1763 County Road 19, Prince Edward County, ON					
		Started pumping 15 L/min at 9:05 am, subsequently increased to 30 L/min and 48 L/min at 2:40pm and 3:20pm, respectively						
Pumping Test Elapsed Time (min)	Odour	Temperature (°C)	pH	Conductivity (µS)	Total Dissolved Solids (ppm)	Turbidity NTU	Chlorine (Total) (mg/L)	
5	Chlorine	16.5	8.41	908	455	24	150	
30	Chlorine	16.0	8.25	846	410	19	100	
60	Chlorine	16.1	8.03	792	396	15	100	
90	Chlorine	16.2	7.99	784	390	12	50-100	
120	Chlorine	16.4	7.71	820	411	6	50	
150	Chlorine	18.0	7.61	817	408	5	25	
180	None	17.9	7.58	815	407	3	25	
210	None	17.7	7.57	786	375	8	>2.2	
240	None	17.2	7.55	730	365	10	>2.2	
270	None	17.4	7.57	738	369	10	>2.2	
300	None	16.3	7.47	722	355	10	>2.2	
330	None	15.8	7.44	649	345	10	>2.2	
355	None	-	-	-	-	8	1.80	
370	None	-	-	-	-	8	1.70	
385	None	-	-	-	-	-	0.31	
390	None	17.6	7.38	668	333	0	0.23	
400	None	PUMP OFF						
Notes	1. Test well water circulated at 150 ppm chlorine residual for 70 minutes prior to pumping 2. Water was primarily clear with no odour							
Field Analysis Equipment								
Chlorine :		Hach DR 900 Colorimeter						
Temp./pH/Cond./TDS :		Hanna Instruments HI98129						
Turbidity :		Hach DR 900 Colorimeter						

Table 2. Test Well drawdown during pumping test.

	Pumping Test - Drawdown			Test Well: TW1	
	Project No.:	ASC-1025	Date:	25-Jun-2025	
	Client:	Sorin Tudor	Recorded By:	T.C.	
	Location:	1763 County Road 19, Prince Edward County, ON			
Pumping Rate (Q) (L/min)	Elapsed Time (ET) (min)	Well Level (WL) (m)	Drawdown (DD) (m)		
15	0	2.19	0.00		
15	1	2.19	0.00		
15	2	2.19	0.00		
15	3	2.20	0.01		
15	4	2.20	0.01		
15	5	2.20	0.01		
15	6	2.20	0.01		
15	7	2.20	0.01		
15	8	2.20	0.01		
15	9	2.21	0.02		
15	10	2.21	0.02		
15	15	2.21	0.02		
15	20	2.22	0.03		
15	25	2.23	0.04		
15	30	2.23	0.04		
15	40	2.24	0.05		
15	50	2.25	0.06		
15	60	2.26	0.07		
15	70	2.27	0.08		
15	80	2.28	0.09		
15	90	2.29	0.10		
15	100	2.29	0.10		
15	115	2.30	0.11		
15	130	2.31	0.12		
15	150	2.32	0.13		
15	170	2.33	0.14		
15	190	2.34	0.15		
15	225	2.35	0.16		
20	250	2.35	0.16		
20	275	2.36	0.17		
20	300	2.37	0.18		
20	325	2.37	0.18		
20	350	2.40	0.21		
20	375	2.44	0.25		
20	400	2.48	0.29		
TW1	(m)		L/min	m ³ /day	
Δs_{0-1min}	2.19	Q_{0-1min}	15.00	21.6	
$\Delta s_{1-10min}$	0.01	$Q_{1-10min}$	15.00	21.6	
$\Delta s_{10-100min}$	0.45	$Q_{10-100min}$	15.00	21.6	
$\Delta s_{100-1000min}$	0.24	$Q_{100-1000min}$	19.75	28.4	
	m ² /day	m ² /s			
T_{0-1min}	1.80	2.09E-05			
$T_{1-10min}$	272.49	3.15E-03			
$T_{10-100min}$	8.82	1.02E-04			
$T_{100-1000min}$	21.28	2.46E-04			
Notes					
1			Δs	Drawdown over one Log Cycle based on Trend Line	
Q	Volumetric Flow Rate		L/min	Litres per Minute	
T	Coefficient of Transmissivity		gpm	Gallon per Minute	

ASC Environmental Inc.
ASC-1025, Sorin Tudor, 1763 County Road 19,
Prince Edward County, ON
Figure 1. TW1 Pumping Test Drawdown

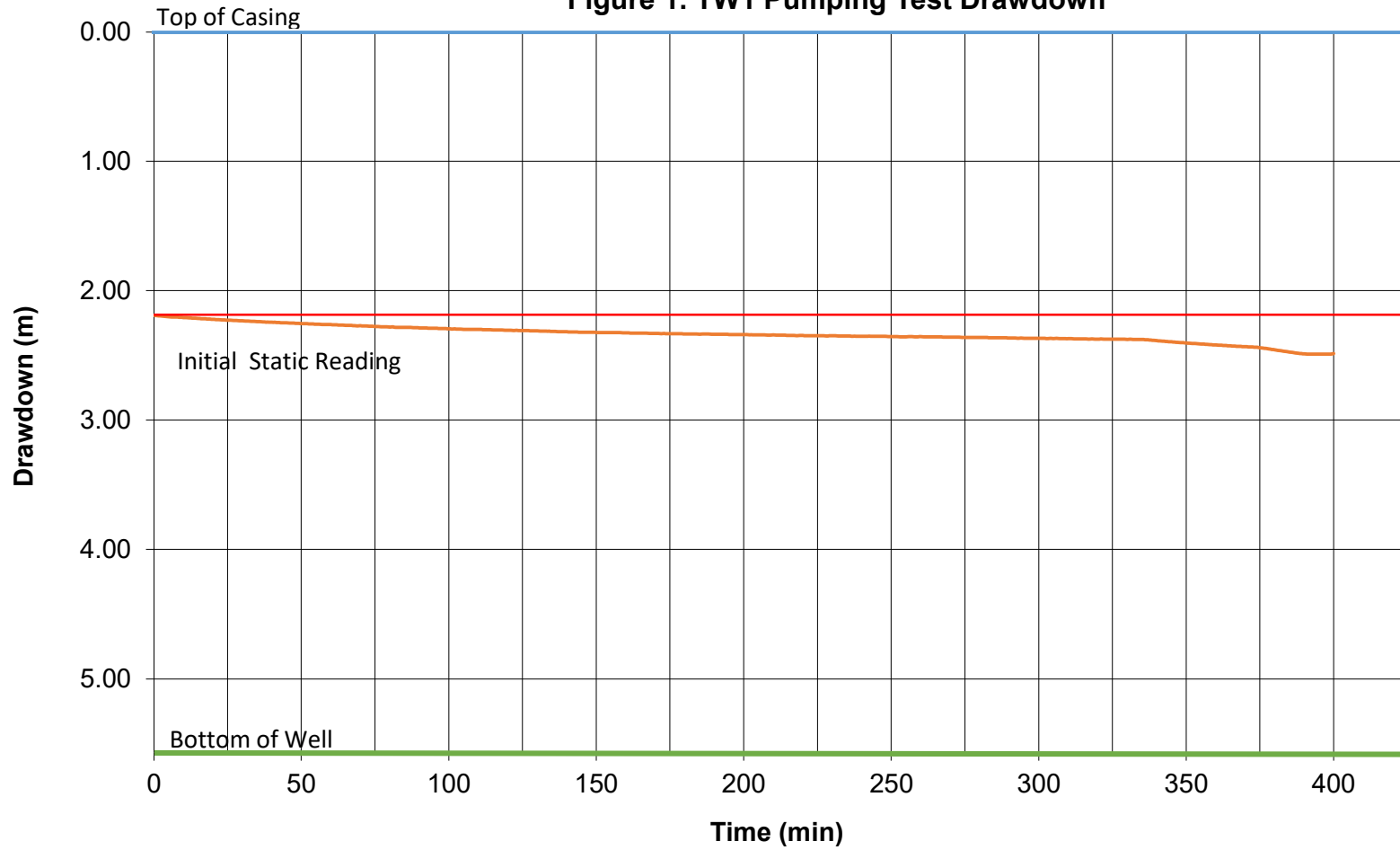



Table 3. Observation well drawdown during pumping test.										
		Pumping Test - Drawdown						Test Well:	TW1	
		Project No.:	ASC-1025				Date:	25-Jun-2025		
		Client:	Sorin Tudor				Pumping start time			
		Location:	1763 County Road 19, Prince Edward County, ON				9 5	AM		
1763 County Road 19 (OW1)					1760 County Road 19 (OW2)					
WL	WL	DD	Time	ET	WL	WL	DD	Time	ET	
(ft)	(m)	(m)	H:Min	(min)	(ft)	(m)	(m)	H:Min	(min)	
7.841	2.39	0.000	8 56	0	7.316	2.23	0.000	8 54	0	
7.841	2.39	0.000	10 10	65	7.316	2.23	0.000	10 11	66	
7.776	2.37	-0.020	11 12	127	7.316	2.23	0.000	11 13	128	
7.776	2.37	-0.020	12 10	185	7.316	2.23	0.000	12 11	186	
7.776	2.37	-0.020	13 11	246	7.316	2.23	0.000	13 13	248	
7.776	2.37	-0.020	14 11	306	7.316	2.23	0.000	14 13	308	
7.874	2.40	0.010	16 4	419	7.349	2.24	0.010	16 5	420	
1734 County Road 19 (OW3)					Distance to Observation Wells (metres)					
WL	WL	DD	Time	ET	1763 County Road 19 (OW1)				90	
(ft)	(m)	(m)	H:Min	(min)	1760 County Road 19 (OW2)				180	
7.546	2.30	0.000	8 50	0	1734 County Road 19 (OW3)				120	
7.612	2.32	0.020	10 14	69						
7.546	2.30	0.000	11 16	131						
7.513	2.29	-0.010	12 14	189						
7.513	2.29	-0.010	13 15	250						
7.513	2.29	-0.010	14 15	310						
7.579	2.31	0.010	16 8	423						

ASC Environmental Inc.
ASC-1025, Sorin Tudor, 1763 County Road 19,
Prince Edward County, ON
Figure 2. Pumping Test Influence on Neighbouring Wells
TW1 Pumping Test Zone of Influence

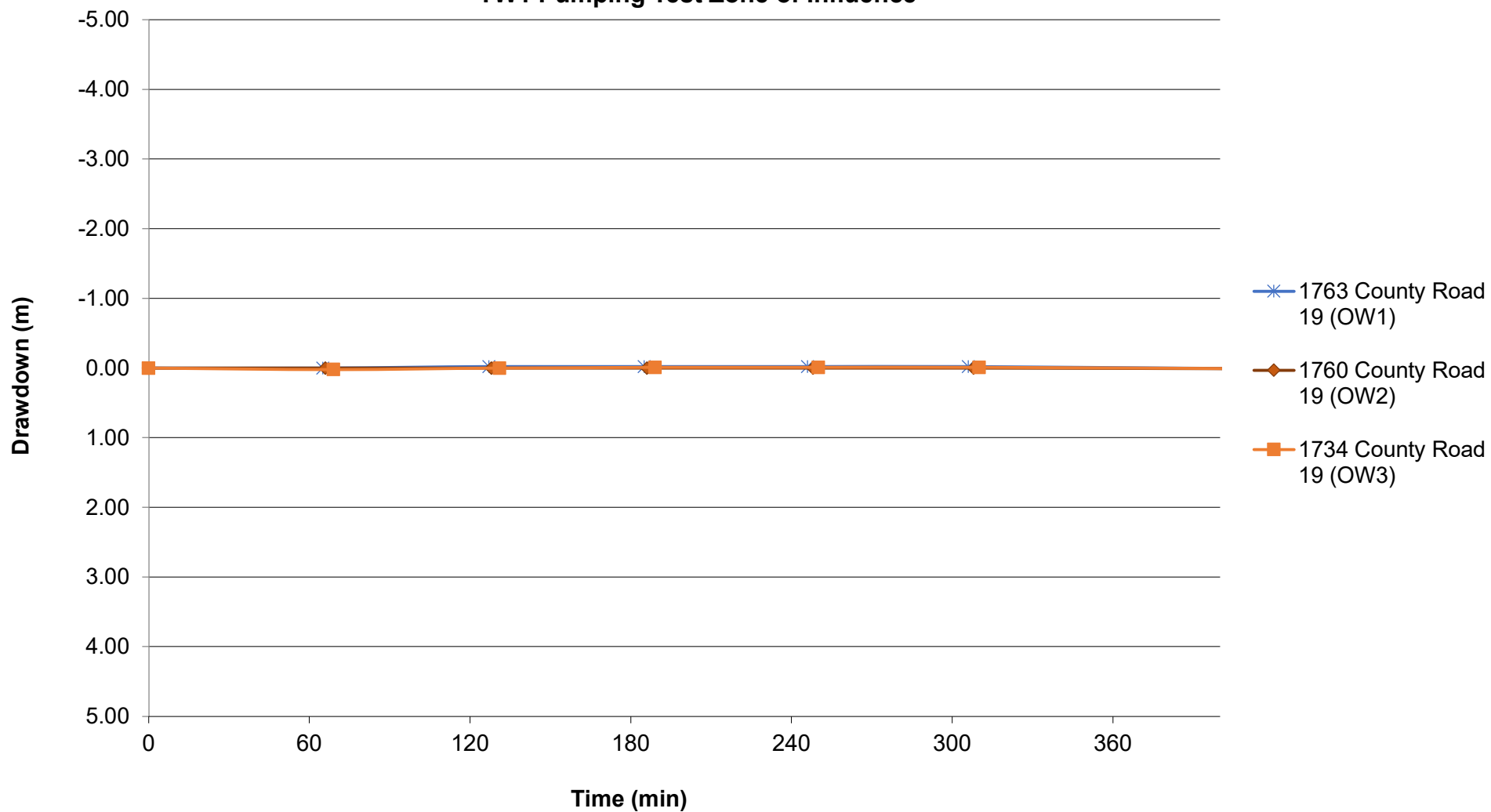

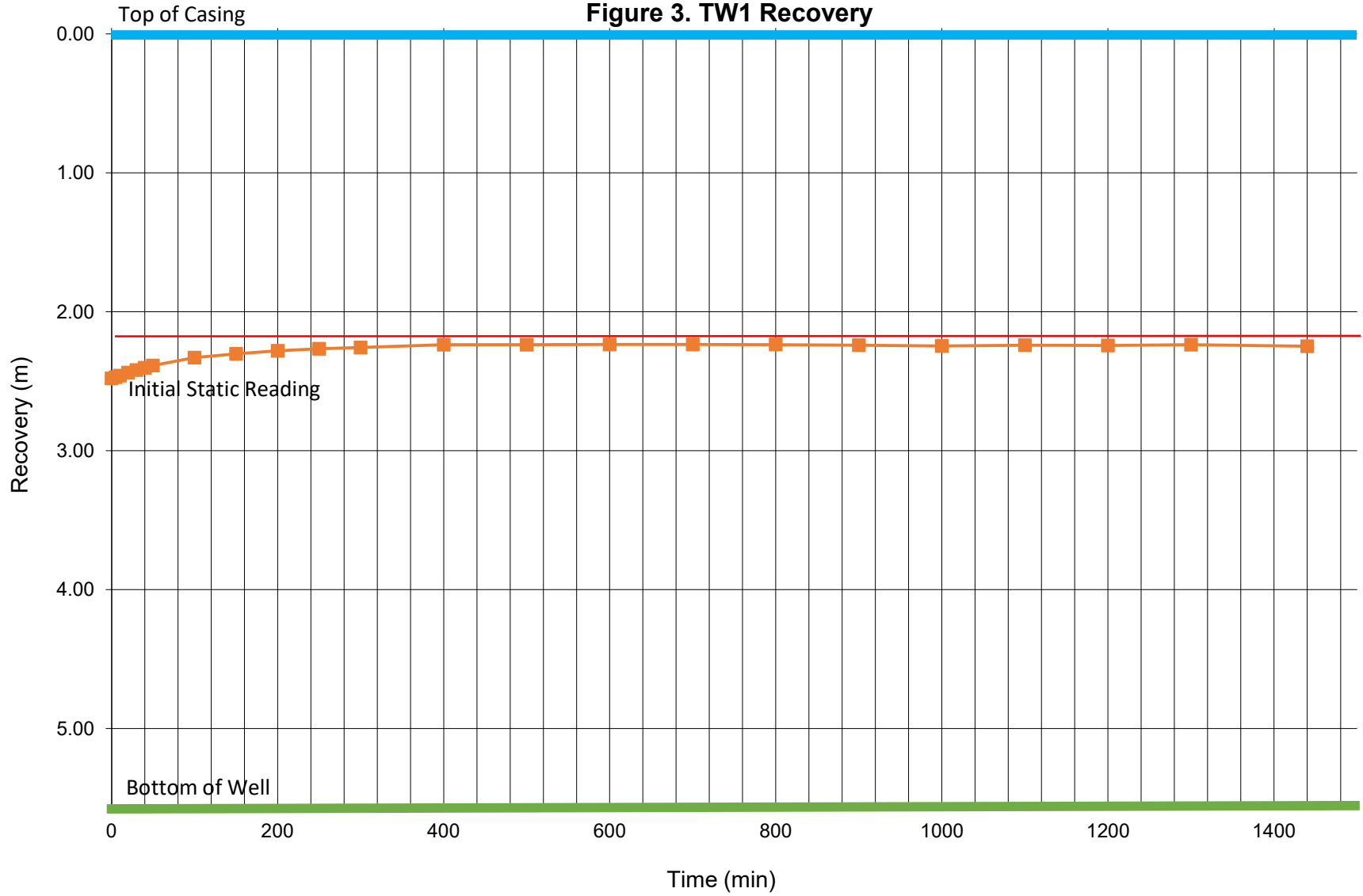


Table 4. Test well recovery after pumping test.

		Pumping Test - Recovery		Test Well:	TW1
		Project No.:	ASC-1025	Date:	25-Jun-25
		Client:	Sorin Tudor	Recorded By: T.C.	
		Location:	1763 County Road 19, Prince Edward County, ON		
Pumping	Elapsed Time (min)	Well Level (WL) (m)	Drawdown (m)		
0	0	2.48	0.29		
0	5	2.47	0.28		
0	10	2.46	0.27		
0	20	2.44	0.25		
0	30	2.42	0.23		
0	40	2.40	0.21		
0	50	2.39	0.20		
0	100	2.33	0.14		
0	150	2.30	0.11		
0	200	2.28	0.09		
0	250	2.27	0.08		
0	300	2.26	0.07		
0	400	2.24	0.05		
0	500	2.24	0.05		
0	600	2.24	0.05		
0	700	2.24	0.05		
0	800	2.24	0.05		
0	900	2.24	0.05		
0	1000	2.25	0.06		
0	1100	2.24	0.05		
0	1200	2.24	0.05		
0	1300	2.24	0.05		
0	1440	2.25	0.06		
WL at 95% Recovery =		2.20			

ASC Environmental Inc.
ASC-1025, Sorin Tudor, 1763 County Road 19,
Prince Edward County, ON
Figure 3. TW1 Recovery



APPENDIX E
Laboratory Analytical Certificates



ASC Environmental Inc.
1305 Princess Street,
Kingston, ON K7M 3E3
Tel: (613) 634-5596

C.O.C.: G113016

REPORT No: 25-018467 - Rev. 0

Report To:
 ASC Environmental
 1305 Princess St.
 Kingston, ON K7M 3E3

CADUCEON Environmental Laboratories
 285 Dalton Ave
 Kingston, ON K7K 6Z1

Attention: Tanner Cook

DATE RECEIVED: 2025-Jun-25
 DATE REPORTED: 2025-Jul-04
 SAMPLE MATRIX: Ground Water

CUSTOMER PROJECT: ASC-1025
 P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	LMACGREGOR	2025-Jun-27	A-IC-01	SM 4110B
Colour (Liquid)	1	OTTAWA	STAILLON	2025-Jun-30	A-COL-01	SM 2120C
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2025-Jun-26	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Coliforms - DC Media (Liquid)	1	KINGSTON	BBURTCH	2025-Jun-26	ECTC-001	MECP E3407
DOC (Liquid)	1	OTTAWA	ASCHNEIDER	2025-Jun-27	C-OC-01	EPA 415.2
Fecal Coliforms (Liquid)	1	KINGSTON	BBURTCH	2025-Jun-26	FC-001	SM 9222D
HPC MF (Liquid)	1	KINGSTON	BBURTCH	2025-Jun-26	HPC-001	SM 9215D
Ion Balance (Calc.)	1	OTTAWA	ASCHNEIDER		CP-028	MECP E3196
ICP/OES (Liquid)	1	OTTAWA	SGORMAN	2025-Jun-30	D-ICP-01	SM 3120B
Ammonia & o-Phosphate (Liquid)	1	KINGSTON	DCASSIDY	2025-Jul-03	NH3-001	SM 4500NH3
Phenols (Liquid)	1	KINGSTON	EHINCH	2025-Jun-30	PHEN-01	MECP E3179
Sulphide (Liquid)	1	KINGSTON	MWILSON	2025-Jun-26	H2S-001	SM 4500-S2
Tannins (Liquid)	1	KINGSTON	MWILSON	2025-Jul-03	TAN-001	SM 5550
TP & TKN (Liquid)	1	KINGSTON	YLIEN	2025-Jul-03	TPTKN-001	MECP E3516.2
Turbidity (Liquid)	1	OTTAWA	MMIRELLA	2025-Jun-26	A-TURB-01	SM 2130B

R.L. = Reporting Limit

NC = Not Calculated

Test methods may be modified from specified reference method unless indicated by an *



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Data Specialist

Parameter	Units	R.L.	Client I.D.
			TW1
			Sample I.D.
			25-018467-1
			Date Collected
			2025-06-25
			-
Total Coliform (DC Media)	CFU/100mL	1	0
E coli (DC Media)	CFU/100mL	1	0
Background (DC Media)	CFU/100mL	1	0
Heterotrophic Plate Count	CFU/1mL	10	120
Fecal Coliform	CFU/100mL	1	0
Alkalinity(CaCO3) to pH4.5	mg/L	5	305
TDS (Calc. from Cond.)	mg/L	3	356
Conductivity @25°C	uS/cm	1	685
pH @25°C	pH units	-	7.79
Colour	TCU	2	<2
Turbidity	NTU	0.1	3.2
Fluoride	mg/L	0.1	<0.1
Chloride	mg/L	0.5	33.1
Nitrate (N)	mg/L	0.05	0.43
Nitrite (N)	mg/L	0.05	<0.05
Sulphate	mg/L	1	12
Phosphorus (Total)	mg/L	0.01	0.02
Total Kjeldahl Nitrogen	mg/L	0.1	0.3
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	<0.05
Dissolved Organic Carbon	mg/L	0.8	6.0
Tannin & Lignin	mg/L	0.5	<0.5



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Data Specialist

Parameter	Units	R.L.	Client I.D.
			TW1
			Sample I.D.
			25-018467-1
			Date Collected
			2025-06-25
Parameter	Units	R.L.	
Sulphide	mg/L	0.01	<0.01
Phenolics	mg/L	0.001	0.001
Hardness (as CaCO ₃)	mg/L as CaCO ₃	0.02	254
Calcium	mg/L	0.02	83.2
Iron	mg/L	0.005	0.043
Magnesium	mg/L	0.02	11.2
Manganese	mg/L	0.001	0.123
Potassium	mg/L	0.1	8.3
Sodium	mg/L	0.2	48.2
Anion Sum	meq/L	-	7.31
Cation Sum	meq/L	-	7.39
% Difference	%	-	0.565
TDS (Ion Sum Calc)	mg/L	1	381
Conductivity Calc	µmho/cm	-	682



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Data Specialist

APPENDIX F
Precipitation Data



ASC Environmental Inc.
1305 Princess Street,
Kingston, ON K7M 3E3
Tel: (613) 634-5596



Government of Canada

Gouvernement du Canada

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Daily Data Report for June 2025

**BELLEVILLE
ONTARIO**
Current Station Operator: CCN

Latitude: 44°09'02.052" N
Longitude: 77°23'41.046" W
Elevation: 76.20 m
Climate ID: 6150689
WMO ID:
TC ID:

DAY	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days	Cool Deg Days	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's deg	Spd of Max Gust km/h
01 †	16.5	8.0	12.3	5.7	0.0	I	0.0	I	0		
02 †	20.0	8.0	14.0	4.0	0.0	0.0	0.0	0.0	0		
03 †	23.5	10.5	17.0	1.0	0.0	0.0	0.0	0.0	0		
04 †	28.5	14.5	21.5	0.0	3.5	0.0	0.0	0.0	0		
05 †	26.0	18.5	22.3	0.0	4.3	0.0	0.0	0.0	0		
06 †	25.5	17.0	21.3	0.0	3.3	0.0	0.0	0.0	0		
07 †	28.0	16.5	22.3	0.0	4.3	0.0	0.0	0.0	0		
08 †	24.5	12.0	18.3	0.0	0.3	1.2	0.0	1.2	0		
09 †	20.5	16.5	18.5	0.0	0.5	5.8	0.0	5.8	0		
10 †	22.0	16.0	19.0	0.0	1.0	0.0	0.0	0.0	0		
11 †	23.5	14.0	18.8	0.0	0.8	0.0	0.0	0.0	0		
12 †	25.0	15.5	20.3	0.0	2.3	0.0	0.0	0.0	0		
13 †	18.5	10.5	14.5	3.5	0.0	0.0	0.0	0.0	0		
14 †	23.5	13.5	18.5	0.0	0.5	0.0	0.0	0.0	0		
15 †	26.5	15.5	21.0	0.0	3.0	0.0	0.0	0.0	0		
16 †	25.5	12.5	19.0	0.0	1.0	0.0	0.0	0.0	0		
17 †	26.5	16.5	21.5	0.0	3.5	0.0	0.0	0.0	0		
18 †	28.0	19.5	23.8	0.0	5.8	I	0.0	I	0		
19 †	25.0	17.0	21.0	0.0	3.0	3.0	0.0	3.0	0		
20											
21 †	26.5	14.5	20.5	0.0	2.5	I	0.0	I	0		
22 †	34.0	22.5	28.3	0.0	10.3	0.0	0.0	0.0	0		
23 †	32.0	23.0	27.5	0.0	9.5	0.0	0.0	0.0	0		
24 †	35.0	21.0	28.0	0.0	10.0	I	0.0	I	0		

DAY	<u>Max Temp</u> °C	<u>Min Temp</u> °C	<u>Mean Temp</u> °C	<u>Heat Deg</u> Days	<u>Cool Deg</u> Days	<u>Total Rain</u> mm	<u>Total Snow</u> cm	<u>Total Precip</u> mm	<u>Snow on Grnd</u> cm	<u>Dir of Max Gust</u> 10's deg	<u>Spd of Max Gust</u> km/h
25 †	30.5	23.0	26.8	0.0	8.8	0.0	0.0	0.0	0		
26 †	23.5	19.0	21.3	0.0	3.3	0.0	0.0	0.0	0		
27 †	23.0	17.0	20.0	0.0	2.0	8.8	0.0	8.8	0		
28 †	30.0	19.5	24.8	0.0	6.8	0.0	0.0	0.0	0		
29 †	24.5	14.0	19.3	0.0	1.3	0.0	0.0	0.0	0		
30 †	31.0	16.0	23.5	0.0	5.5	5.6	0.0	5.6	0		
Sum				14.2 [^]	97.1 [^]	24.4 [^]	0.0 [^]	24.4 [^]			
Avg	25.8 [^]	15.9 [^]	20.9 [^]								
Xtrm	35.0 [^]	8.0 [^]				8.8 [^]	0.0 [^]	8.8 [^]		<u>M</u>	<u>M</u>
Summary, average and extreme values are based on the data above.											

Legend

- A = Accumulated
- C = Precipitation occurred, amount
- E = Estimated
- E = Accumulated and estimated
- L = Precipitation may or may not
- M = Missing
- N = Temperature missing but
- S = More than one occurrence
- T = Trace
- Y = Temperature missing but
- [empty] = Indicates an unobserved
- K = The value displayed is based
- V = Data that is not subject to

known to be > 0

review by the National Climate Archives

Date modified:

2025-06-10