



**Hydrogeology and Geotechnical Study with  
Functional Servicing Evaluation  
1874 County Road 12 (The Dune Lookout)  
Prince Edward County, Ontario**



Prepared for:

**Sean McKinney**  
c/o Re/Max Quinte Ltd.  
106 N. Front Street  
Belleville, ON  
K8P 3B4

Submitted by:

**The Greer Galloway Group Inc.**  
1620 Wallbridge Loyalist Road  
Belleville, Ontario  
K8N 4Z5

July 2024



**G R E E R  
G A L L O W A Y**  
CONSULTING  
ENGINEERS

July 2, 2024

Project 22-3-7758

Sean McKinney  
c/o Re/Max Quinte Ltd.  
106 N. Front Street  
Belleville, ON  
K8P 3B4

Via email: sean@remaxquinte.com

**Hydrogeology and Geotechnical Study with Functional Servicing Evaluation  
Supporting Proposed Development at 1874 County Road 12 in Prince  
Edward County, Ontario**

Dear Sean,

We are pleased to submit this report in support of the proposed resort development (The Dune Lookout) at 1874 County Road 12 in Prince Edward County, Ontario.

The tested well on the property was found to have adequate yield for the proposed development, and no interference between the two wells on-site was observed. Water quality was found to be acceptable, and the lot is considered suitable for construction of a sewage system capable of servicing the proposed development.

We trust that this report is complete and sufficient for your requirements. Please don't hesitate to contact us if you have any questions about the report or our conclusions.

Yours very truly,

**THE GREER GALLOWAY GROUP INC.  
CONSULTING ENGINEERS**

Kirby Magee-Dittburner, E.I.T.  
Junior Hydrogeologist

1620 Wallbridge Loyalist Road

R.R. #5

Belleville, Ontario

K8N 4Z5

Telephone

(613) 966-3068



Consulting  
Engineers  
of Ontario



Professional Engineers  
Ontario

---

## Table of Contents

|  |           |
|--|-----------|
| <b>1. INTRODUCTION .....</b>                     | <b>3</b>  |
| <b>2. INVESTIGATION METHODS.....</b>             | <b>3</b>  |
| 2.1 Well Records Search and Survey.....          | 3         |
| 2.2 Water Supply Assessment .....                | 3         |
| 2.3 Water Quality Assessment .....               | 4         |
| <b>3. DISCUSSION .....</b>                       | <b>4</b>  |
| 3.1 Site Description.....                        | 4         |
| 3.2 Climate and Water Balance.....               | 5         |
| 3.3 Geology .....                                | 5         |
| 3.4 Hydrogeology.....                            | 6         |
| 3.5 Water Servicing .....                        | 7         |
| 3.5.1 Water Availability .....                   | 7         |
| 3.5.2 Water Quality .....                        | 8         |
| 3.5.3 Potential for Well Interference .....      | 9         |
| 3.6 Onsite Sewage Treatment.....                 | 9         |
| 3.6.1 Overview .....                             | 9         |
| 3.6.2 Environmental Impact.....                  | 10        |
| <b>3.7 Firefighting Water Requirements .....</b> | <b>11</b> |
| 3.8 Electrical Servicing .....                   | 11        |
| 3.9 Geotechnical Considerations.....             | 13        |
| 3.9.1 Site Preparation and Grading .....         | 13        |
| 3.9.2 Foundations .....                          | 14        |
| <b>4. SUMMARY .....</b>                          | <b>14</b> |
| <b>5. REFERENCES .....</b>                       | <b>16</b> |

**Drawings (appended after text)**

Drawing 1: Site plan showing property location

Drawing 2: Site plan showing well locations

**Tables**

Table 1: Estimated infiltration factors

Table 2: Summary of well depths and yields within a 300 m radius of the property

Table 3: Summary of projected water usage

Table 4: Summary of analytical results

Table 5: Pre-development phosphorus contributions

Table 6: Post-development phosphorus contributions

**Appendices**

APPENDIX A MECP Water Well Records

APPENDIX B Hydrographs

APPENDIX C Laboratory Certificate of Analysis

APPENDIX D Grain Size Distribution Analysis

---

# 1. Introduction

The Greer Galloway Group (Greer Galloway) was retained by Mr. Sean McKinney to complete a Functional Servicing Report including Hydrogeological and Geotechnical component in support of a proposed resort development located at 1874 County Road 12 in Prince Edward County, Ontario.

The purpose of the work was to assess the soil and groundwater conditions at the site to demonstrate that the proposed development may be supported by a Large Subsurface Sewage Disposal System (LSSDS) and the existing groundwater well in accordance with Provincial standards and without significantly impacting surrounding private water sources.

## 2. Investigation Methods

The assessment was carried out in general accordance with the Ministry of the Environment, Conservation, and Parks (MECP) procedure D-5-5 (Private Well: Well Assessment) and Design Guidelines for Sewage Works Chapter 22: Large Subsurface Sewage Disposal Systems.

The investigation included a review of water well records, a review of available geologic and hydrogeologic information for the area, an inventory of water supply wells within a reasonable distance of the subject property, a pumping test on the existing well on the subject property along with chemical and bacteriological analysis, and monitoring water level responses in observation wells prior, during, and after the pumping test. The investigation methods are described further in the following subsections.

### 2.1 Well Records Search and Survey

Information about nearby wells was obtained from available MECP water well records on the MECP wells database using a search radius of 300 m from the subject property. MECP Water Well Record sheets for the searched area are provided in Appendix A.

In July 2023, a door-to-door well survey was carried out for neighbouring homeowners within a 300 m radius of the subject property. A total of 5 homeowners were successfully contacted during the survey.

### 2.2 Water Supply Assessment

The water supply assessment was based on a pumping test of the drilled well on the western side of the property. The well is a 150 mm diameter drilled well with a depth of approximately 13.3 m below ground surface (bgs) and a measured static water level of 5.65 m bgs at the time of testing. The well extends 0.28 m above ground surface and is located adjacent to a small shed containing a pressure tank and pump shutoff switch. It is recommended that the well casing be extended to 0.40 m above ground surface to bring the well into compliance with O.Reg. 903.

The 6-hour pumping test was performed on September 19, 2023, using a submersible pump with the discharge routed through a flow restriction valve corresponding to the desired pumping rate. Pumped water was discharged approximately 30 m downgradient of the tested well.

Data-logging pressure transducers (Solinst Model 3001) were installed in the tested well and in the eastern well on the property currently servicing the existing residence. The dataloggers were

synchronized prior to the testing and were set to record at 10-second intervals in the tested well and at 20-second intervals in the monitoring well. Hydrographs are provided in Appendix B.

## 2.3 Water Quality Assessment

A groundwater sample was obtained during the last hour of the pumping test after confirming with a handheld free chlorine colorimeter that the concentration of free chlorine was below the detection limit of the device. The sample was placed into a variety of laboratory-prepared sample containers that were sealed, placed into a cooler with ice packs to maintain a temperature of approximately 4 °C, and transported to Caduceon Laboratories in Kingston, Ontario. Analytical parameters included E. coli and Total Coliform bacteria and a variety of additional parameters including Alkalinity, pH, Conductivity, Colour, Turbidity, Fluoride, Chloride, Nitrite and Nitrate, Sulphate, TKN, Ammonia, Organic Nitrogen, DOC, Tannins and Lignins, Hardness, Calcium, Iron, Magnesium, Manganese, Potassium, Silica, Sodium, and Zinc (refer to the Laboratory Certificate of Analysis in Appendix C).

# 3. Discussion

## 3.1 Site Description

The subject property covers an area of approximately 4.3 ha and is located at the northwest side of County Road 12 in Prince Edward County, Ontario. The property is bordered to the west by West Lake. Local land use is Rural. Maps of the property and its surroundings are provided in Drawings 1 and 2 (appended after text).

Under the property's former occupancy, it contained three cottages and 18 trailers. Each of the cottages was connected to its own septic system, and the 18 trailers all shared a septic system and a water supply well connected to a washroom on the western side of the property. The trailers and cottages will be (or already have been) removed at the time of the writing of this report, and existing septic systems will be decommissioned. A 3-bedroom dwelling is on the eastern side of the property, serviced by its own water supply well. The dwelling and the two wells on the property are being retained.

The current plan for the property is for the owner to develop it into a lakeside resort with twenty 2-bedroom cottages, a storage building, a guest clubhouse, and the existing 3-bedroom dwelling on the property being converted into a multi-purpose building containing a bike café, office/reception for the resort, and a residential unit. Water for the resort will be provided from the western well on the property. A large sewage disposal system will be designed and constructed in the northeast corner of the property.

Topography of the property is relatively flat and slopes gently towards West Lake to the west-northwest. Drainage is predominately in a northwestern direction, following local topography. The elevation of the property is about 83 m above mean sea level (mASL) at the eastern edge of the property and about 79 mASL at the western edge of the property, above a sandy scarp at the edge of the shoreline. West Lake is the only major surface water body identified in the vicinity of the subject property.

Municipal servicing is not available in the area, so drinking water and sewage servicing must be provided by individual water supply wells and septic systems.

## 3.2 Climate and Water Balance

The area is characterized by mild winters and relatively cool humid summers. Snow typically occurs during 5 months of the year from December to April. Annual precipitation is approximately 950 mm at the Mountainview station (Environment Canada, 2020) with an average annual evapotranspiration (ET) of roughly 480 mm based on the site location (Statistics Canada, 2017).

Mapping shows primarily thin surficial soils classified as thin soils over Paleozoic bedrock in the Surficial Geology of Southern Ontario (OGS, 2011). Infiltration factors for the area were calculated as per the Ontario Ministry of the Environment 1995 Hydrogeological Technical Information Requirements for Land Development Applications.

It is based on three sub-factors which are:

- Topography sub-factor
- Soil sub-factor
- Cover sub-factor

Table 1 presents infiltration factors based on the details of the ground cover factors for the area under current conditions:

**Table 1: Estimated infiltration factors**

| Site Characteristic                  | Infiltration Factor |
|--------------------------------------|---------------------|
| <u>Topography</u>                    |                     |
| <b>Flat Land</b>                     | <b>0.3</b>          |
| Rolling Land                         | 0.2                 |
| Hilly Land                           | 0.1                 |
| <u>Soils</u>                         |                     |
| Tight impervious clay                | 0.1                 |
| Medium combinations of clay and loam | 0.2                 |
| <b>Open Sandy loam</b>               | <b>0.4</b>          |
| <u>Cover</u>                         |                     |
| <b>Cultivated Land</b>               | <b>0.1</b>          |
| Woodland                             | 0.2                 |
| Sum of Infiltration Factors          | <b>0.8</b>          |

Given an average annual moisture surplus (P-ET) of approximately 470 mm, and an infiltration factor of 0.8, we estimate an average annual infiltration of about 375 mm, or roughly 10,301 L/day per hectare for the purposes of MECP Guideline D-5-4 nitrate dilution calculations. We note that we have used the more current guidance from Chapter 22 of the 2008 Design Guidelines for Sewage Works (MECP, 2008) for nitrate loading. This guideline calls for the use of a standard 250 mm for annual groundwater recharge.

## 3.3 Geology

The Ontario Soil Report #10 classifies soils in this area as Brighton sandy loam and gravel. The Brighton series is formed from coarse sand and well-sorted outwash materials. Underlying soils are calcareous sand and gravel with generally good drainage.

The Ontario Geological Survey (2011) has described the bedrock as interbedded limestone and shale belonging to the Lindsay Formation of the Simcoe Group. Well records in the vicinity of the subject property indicate that bedrock occurs at depths of between 4.3 m and 14.6 m, with a median depth to bedrock of 11.3 m.

### 3.4 Hydrogeology

A search of the Ministry of Environment, Conservation and Parks (MECP) Well Record Database returned 37 wells within a 300 m radius of the site (see Drawing 2, appended). Of the 37 wells identified, one of them was abandoned for an unspecified reason, and 1 was a modification of an existing well. The remaining 35 Well Records are summarized in Table 2. The well records suggest the groundwater table in the area is encountered mostly within the overburden, with a median well yield of 26.5 L/min. The subject lands are located outside any mapped WHPA.

**Table 2: Summary of well depths and yields within a 300 m radius of the property**

| Well Number | Water Found (m) | Static Level (m) | Yield (L/min) | Overburden Depth (m) | Hole Depth (m) | Water Type | Aquifer    |
|-------------|-----------------|------------------|---------------|----------------------|----------------|------------|------------|
| 5301150     | 8.5             | 6.4              | 11.4          | 9.1                  | 9.1            | Fresh      | Overburden |
| 5301151     | 13.7            | 4.6              | 11.4          | 12.2                 | 15.2           | Fresh      | Overburden |
| 5301152     | 15.2            | 6.4              | 11.4          | 14.6                 | 16.8           | Fresh      | Overburden |
| 5301153     | 13.7            | 5.5              | 11.4          | 12.2                 | 15.24          | Fresh      | Overburden |
| 5301156     | 13.7            | 6.7              | 18.9          | 12.2                 | 15.24          | Fresh      | Overburden |
| 5301157     | 12.2            | 4.3              | 18.9          | 12.2                 | 12.2           | Fresh      | Overburden |
| 5301158     | 12.2            | 4.3              | 18.9          | 12.2                 | 12.2           | Fresh      | Overburden |
| 5301159     | Dry             | Dry              | Dry           | 4.3                  | 19.8           | Dry        | Bedrock    |
| 5301972     | 16.8            | 6.1              | 22.7          | 10.4                 | 18.3           | Fresh      | Overburden |
| 5302041     | 14.0            | 3.6              | 18.9          | 13.4                 | 14.0           | Fresh      | Overburden |
| 5302046     | 10.7            | 0.3              | 11.4          | 7.9                  | 12.2           | Fresh      | Overburden |
| 5302188     | 11.3            | 3.6              | 18.9          | 11.3                 | 11.3           | Fresh      | Overburden |
| 5302265     | 9.1             | 1.8              | 18.9          | 8.8                  | 9.4            | Fresh      | Overburden |
| 5302365     | 12.2            | 6.4              | 11.4          | 10.7                 | 15.2           | Fresh      | Overburden |
| 5302491     | 13.7            | 7.9              | -             | 6.1                  | 14.3           | Fresh      | Bedrock    |
| 5302526     | 12.2            | 5.2              | 18.9          | 4.9                  | 13.7           | Fresh      | Overburden |
| 5302693     | 15.8            | 6.7              | 11.4          | 12.2                 | 17.7           | Fresh      | Overburden |
| 5303411     | 12.2            | 3.0              | 94.6          | 12.2                 | 12.2           | Fresh      | Overburden |
| 5303789     | 12.8            | 3.6              | 132.5         | 12.8                 | 15.2           | Fresh      | Overburden |
| 5304019     | 13.4            | 4.6              | 151.4         | 13.4                 | 15.5           | Fresh      | Overburden |
| 5304188     | 12.5            | 3.6              | 151.4         | 12.5                 | 13.7           | Fresh      | Overburden |
| 5304189     | 12.5            | 3.6              | 151.4         | 12.5                 | 13.7           | Fresh      | Overburden |
| 5304201     | 10.7            | 4.6              | 113.6         | 10.7                 | 11.3           | Fresh      | Overburden |
| 5304397     | Multiple        | 5.8              | 30.3          | 8.2                  | 22.2           | Fresh      | Overburden |
| 5304498     | Multiple        | 3.6              | 113.6         | 9.1                  | 12.8           | Fresh      | Overburden |
| 5304575     | 13.1            | 6.7              | 113.6         | 11.9                 | 15.2           | Fresh      | Overburden |
| 5304742     | 11.6            | 4.9              | 113.6         | 11.6                 | 11.6           | Fresh      | Overburden |
| 5305226     | Multiple        | 6.1              | 18.9          | 11.9                 | 19.8           | Fresh      | Overburden |
| 5305585     | 11.0            | 4.6              | 113.6         | 11.0                 | 11.0           | Fresh      | Overburden |
| 5305912     | Dry             | Dry              | Dry           | 7.6                  | 15.8           | Dry        | Bedrock    |
| 5305913     | 7.0             | 6.1              | 113.6         | 5.8                  | 24.4           | Fresh      | Bedrock    |
| 5306332     | 11.6            | 4.9              | 113.6         | 11.6                 | 11.6           | Fresh      | Overburden |
| 5306424     | 11.0            | 3.6              | 94.6          | 10.7                 | 13.1           | Fresh      | Overburden |

|         |      |     |      |      |      |          |            |
|---------|------|-----|------|------|------|----------|------------|
| 5307327 | 12.7 | 5.5 | 70   | 6    | 12.7 | Untested | Overburden |
| 7129937 | 19.8 | 7.3 | 37.8 | 10.0 | 10.0 | Fresh    | Overburden |

Based on the recorded static levels, the dominant local groundwater flow direction is in a northwestern direction towards West Lake.

A hydraulic conductivity value was estimated using the Dupuit-Forchheimer formula for unconfined aquifers:

$$K = \frac{Q \ln(R_2/R_1)}{\pi(H_2^2 - H_1^2)}$$

Where,

- K = Horizontal hydraulic conductivity (m/sec)
- Q = Flow rate at quasi-steady state (m<sup>3</sup>/sec)
- R<sub>1</sub> = Radius of pumping well (m)
- R<sub>2</sub> = Distance to monitoring well (m)
- H<sub>1</sub> = Head in pumping well (m)
- H<sub>2</sub> = Head in monitoring well (m)

Based on an aquifer thickness of 25 m and a theoretical radius of influence of 146 m, the estimated hydraulic conductivity value for the tested well is 5.1x10<sup>-4</sup> m/s. This value is within the expected range for sandy loam aquifers with gravel.

## 3.5 Water Servicing

### 3.5.1 Water Availability

The 6-hour pumping test on the western well on the subject property took place on September 19, 2023 at 9:20 AM, following 3 days of little to no precipitation. The static water level was observed to be about 5 cm deeper than the measured static water level in August of 2022 (described in Preliminary Report for 1874 County Road 12, dated November 30, 2022), suggesting that the water table elevation was typical for the season and had not yet experienced significant fall recharge. A brief description of the test results is provided below along with a conclusion regarding the suitability of the well yield to meet anticipated water demands.

The static water level was recorded as 5.65 m bgs prior to starting the pump at 9:20 AM. The well was chlorinated to a free chlorine concentration of approximately 10 mg/L. Pumping was carried out over an approximately 6-hour period (365 minutes) and was stopped at 3:35 PM. Throughout the test, the flow rate was maintained at 32 L/min. On four occasions throughout the pumping test, the pump became clogged with fine sand being pulled into the well and was briefly stopped (under 30 seconds each time) before being restarted. When the source of the problem was identified, the pump was raised above the bottom of the well approximately 2 m. The final water level reading prior to stopping the pump was 5.70 m bgs, for a maximum drawdown of 0.05 m. Recovery was observed to occur within 1-2 minutes following the end of the test.

Projected “worst case” water usage was estimated based on the Ontario Building Code (OBC) Tables 8.2.1.3.A and 8.2.1.3.B: Sewage System Design Flows.

**Table 3: Summary of Sewage System Design Flows**

| Item  | Item in OBC Table   | Unit Flow (L/day) | Total (L/day) |
|---|---|-------------------|---------------|
| 20 x 2-bedroom tourist cabins/cottages            | 2-Bedroom Dwelling  | 1,100             | 22,000        |
| 1 x 3-bedroom dwelling (upper floor)              | 3-Bedroom Dwelling  | 1,600             | 1,600         |
| 1 x bike café/office/reception (lower floor)      | Food outlet (excluding delicatessen, bakery, and meat department) per 9.25 m <sup>2</sup> of floor space, | 40                | 900           |
|   | v) per water closet   | 950               | 2,850         |
| 1 x Guest clubhouse (64 guests assumed)           | Public Parks with bathhouse, showers, and toilets   | 50 per guest      | 3,200         |
| <b>Total estimated Sewage System Design Flows</b> |   |                   | <b>30,550</b> |

The 32 L/min pumping rate corresponds to a daily flow of 46,000 L, which is significantly higher than the projected Sewage System Design Flows for the development. Given the sustainable pumping rate observed and the rapid recovery of the water column, we conclude that there is sufficient water availability to support the proposed development.

### 3.5.2 Water Quality

A groundwater sample was obtained during the last hour of the pumping test, after confirming with a handheld free chlorine colorimeter that the remaining free chlorine concentration was below the detection limit of the instrument. The sample was analyzed at Caduceon Laboratories Ltd. in Kingston, Ontario. Key results are summarized in Tables 4, with exceedances being formatted in bold. The full results of this testing are included with the Laboratory Certificates of Analysis in Appendix C.

**Table 4: Summary of Key Analytical Results**

| Parameter   | Units     | RL    | September 19, 2023 | October 3, 2023 | ODWS                    |
|---|-----------|-------|--------------------|-----------------|-------------------------|
| <b><u>Bacteriological Parameters</u></b>  |           |       |                    |                 |                         |
| Total Coliform  | cfu/100mL | 1     | 0                  | 0               | 0 (5)                   |
| E coli  | cfu/100mL | 1     | 0                  | 0               | 0                       |
| Fecal Coliform  | cfu/100mL | 1     | 0                  | 0               | N/A                     |
| Background  | cfu/100mL | 1     | 0                  | -               | N/A                     |
| <b><u>Physical/Chemical parameters with Health-related Criteria</u></b>                   |           |       |                    |                 |                         |
| Turbidity   | NTU       | 0.1   | 1.2                | -               | 5                       |
| Nitrite (N)   | mg/L      | 0.1   | <0.05              | -               | 1                       |
| Nitrate (N)   | mg/L      | 0.1   | 8.27               | 5.01            | 10                      |
| Fluoride  | mg/L      | 0.1   | 0.1                | -               | 2.4                     |
| <b><u>Physical/Chemical parameters with Aesthetic Criteria/Operational Guidelines</u></b> |           |       |                    |                 |                         |
| Alkalinity (as CaCO <sub>3</sub> )  | mg/L      | 5     | 263                | -               | 500 <sup>OG</sup>       |
| pH @25°C  | pH Units  | -     | 7.97               | -               | 6.5 – 8.5 <sup>OG</sup> |
| Colour  | TCU       | 2     | <2                 | -               | 5 <sup>OG</sup>         |
| Chloride  | mg/L      | 0.5   | 78.2               | -               | 250 <sup>AO</sup>       |
| Sulphate  | mg/L      | 1     | 17                 | -               | 500 <sup>AO</sup>       |
| Dissolved Organic Carbon  | mg/L      | 0.2   | 1.4                | -               | 5 <sup>AO</sup>         |
| Sulphide  | mg/L      | 0.01  | <0.01              | -               | 0.05 <sup>AO</sup>      |
| Hardness (as CaCO <sub>3</sub> )  | mg/L      | 1     | <b>277</b>         | -               | 100 <sup>OG</sup>       |
| Iron  | mg/L      | 0.005 | 0.019              | -               | 0.3 <sup>AO</sup>       |
| Manganese   | mg/L      | 0.001 | <0.001             | -               | 0.05 <sup>AO</sup>      |
| Sodium  | mg/L      | 0.2   | 37.3               | -               | 200 <sup>AO</sup>       |

The sample taken from the western well at the end of the pumping test was not found to have any health-related exceedances, but it exceeded the 20 mg/L threshold above which municipal systems are required to advise the local Medical Officer of Health, as it may be relevant for people on sodium-restricted diets. A resample for Nitrate and bacterial parameters was collected, and these results were also found to be within ODWS limits. A slight aesthetic exceedance for Hardness was observed, though this is not a health risk and is readily treatable.

The groundwater was found to be moderately hard (which is typical for water obtained from limestone bedrock aquifers), but of generally good quality. According to the results of neighbour surveys and observations during the pumping test, the groundwater is free of any objectionable odour, taste, or colour. Some residents report small amounts of fine sand making it through their in-home water treatment systems.

Water takings for the project would be classified as a small drinking water system under O. Reg. 319/08. It is likely that the well would be considered as groundwater under the direct influence of surface water (GUDI), and water treatment equipment must be capable of achieving, at all times, primary disinfection including at least 99 per cent removal or inactivation of *Cryptosporidium* oocysts, at least 99.9 per cent removal or inactivation of *Giardia* cysts, and at least 99.99 per cent removal or inactivation of viruses by the time water enters the distribution system. The necessary treatment may be achieved in accordance with the Procedure for Disinfection of Drinking Water in Ontario using a combination of filtration, ultraviolet disinfection, and chlorine injection with the optional use of either reverse osmosis or activated carbon filtration, if necessary, to achieve aesthetic criteria (i.e., taste, colour).

### 3.5.3 Potential for Well Interference

The radius of influence ( $r$ , metres) between a pumped well and the neighbouring properties may be estimated using the estimated value for  $Q$  (i.e., the average amount pumped per day in litres) and the average recharge ( $R$ , mm per year) to the aquifer according to:

$$Q = \frac{R\pi r^2}{365}$$

This calculation yields a zone of influence distance of about 119 m based on a shallow drilled well, pumping at a rate of 30,550 L/day over the course of a year.

During the pumping test, the eastern well on the property (1874 County Road 12), located approximately 70 m southeast of the pumped well, was monitored for interference. No response to the pumping test was observed in this well, despite it being in the theoretical radius of influence and pumping at a flow rate significantly exceeding the projected requirement of the development. Well interference is not anticipated to be a concern for the development.

## 3.6 Onsite Sewage Treatment

### 3.6.1 Overview

The estimated daily sewage design flow exceeds the 10,000 L/day level that triggers an Environmental Compliance Approval (ECA) under Section 53 of the Ontario Water Resources Act. The primary

objective with respect to sanitary servicing is therefore the ability to meet MECP standards regarding system design and environmental impact.

A test pit was constructed in a location in the northeastern portion of the property that had been identified as suitable position for a future Class 4 Septic System. The soil was logged as fine to medium grained sand in the field. The test pit was excavated to a depth of 1.5 metres below surface. No groundwater or bedrock were intersected.

A sample was sent to the Terraspec Soil laboratory for Grain Size Analysis and was determined to have T-time of 7 minutes per centimetre. The grain size distribution suggests USCS classification of SM-SP. Based on  $T = 7 \text{ min/cm}$ , the estimated design daily sewage flow would require 1,070 lineal metres of tile based on  $L = QT/200$ . The identified tilefield location is 42 m by 60 m in area and would be large enough to accommodate the required length of tile.

### 3.6.2 Environmental Impact

Testing of the sample collected during the pumping test revealed an elevated Nitrate concentration (8.27 mg/L), though the resample collected in early October was found to have a concentration of only 5.01 mg/L. These elevated levels are likely the result of septic systems on-site and agricultural runoff from the farm immediately upgradient of the subject property.

Nitrate-rich sewage effluent will travel in a northwestern direction towards West Lake. No wells were identified in the projected path of the nitrate plume, and the residents in the houses to the northwest of the subject property source their water directly from West Lake. Since the receiving body is West Lake, calculations of Nitrate concentration at the property boundary based on Chapter 22 of the MECP's Design Guidelines for Sewage Works are not applicable in this case.

Though the well on the subject property is located outside of the anticipated effluent plume for the proposed system, tertiary treatment is still recommended to ensure that the well servicing the development is not contaminated in the event of unforeseen groundwater flow patterns.

In general, the addition of nutrients from sewage effluent into surface water bodies has the potential to cause surface water impacts by contributing to eutrophication. West Lake is not considered to be particularly sensitive to these impacts, but care should still be taken to minimize aesthetic impacts for the benefit of the many residential and rental properties bordering West Lake in the immediate vicinity of the subject property. Total Phosphorus (TP) is the relevant parameter of concern for this kind of assessment.

Annual per capita phosphorus contributions are estimated as 0.66 kg per person per year (Paterson et al., 2006). The phosphorus contributions of the property based on its previous usage and its proposed usage are summarized in Tables 5 and 6. Note that the proposed clubhouse building and storage building do not contribute to occupancy, so they are not included in this calculation.

**Table 5: Pre-development phosphorus contributions**

| Occupied dwelling  | Unit Occupancy | Number on Property | Percentage of year occupied | Equivalent Occupancy | Phosphorus Contribution (kg/yr) |
|--------------------|----------------|--------------------|-----------------------------|----------------------|---------------------------------|
| Trailer            | 2              | 18                 | 50%                         | 18                   | 11.9                            |
| 2-Bedroom Cottage  | 3              | 3                  | 100%                        | 9                    | 5.9                             |
| 3-Bedroom Dwelling | 4              | 1                  | 100%                        | 4                    | 2.6                             |
| Total              |                | -                  |                             | <b>31</b>            | <b>20.4</b>                     |

**Table 6: Post-development phosphorus contributions**

| Occupied dwelling       | Unit Occupancy | Number on Property | Percentage of year occupied | Equivalent Occupancy | Phosphorus Contribution (kg/yr) |
|-------------------------|----------------|--------------------|-----------------------------|----------------------|---------------------------------|
| 2-Bedroom Cabin         | 3              | 20                 | 50%                         | 30                   | 19.8                            |
| Dwelling/Reception/Café | 4              | 1                  | 100%                        | 4                    | 2.6                             |
| Total                   |                | -                  |                             | <b>32</b>            | <b>22.4</b>                     |

Annual TP contributions from the subject property prior to the removal of the cottages and trailers is estimated to have been 20.4 kg. The annual raw TP output from the proposed development is expected to be 22.4 kg, before treatment.

Phosphorus reduction is likely to be required by the MECP. This may take the form of tertiary treatment systems such as the Waterloo EC-P (Commercial) system or through the use of imported iron and alumina-rich soils for the LSSDS, or through some combination of the two. Based on the marginal projected increase in phosphorous loading, it should be straightforward to achieve a net reduction compared to existing permitted conditions.

### 3.7 Firefighting Water Requirements

There are two types of buildings proposed for the site, bungalow villas, and a clubhouse. The buildings are distributed throughout the property. This assessment is based on OFM guideline OFM-TG-03-1999 (Fire Protection Water Supply Guideline for Part 3 in the OBC) and NFPA 1142 (Standard on Water Supplies for Suburban and Rural Fire Fighting).

The development proposal is for multiple buildings on a single property. In that case NFPA 1142 indicates the water to be stored shall be the water required to protect the most significant structure by hazard classification and size. The reception and office building is the most significant structure in the review package owing to size and occupancy. Building design is on-going; the following assumptions are based on the designs to this point:

- Building area – 1570 sq ft (145.8 m<sup>2</sup>)
- Ceiling height – 3 m each floor
- Construction – Combustible with no fire separations and resistance ratings
- Occupancies – Assembly (Group D)

The building area is 209 m<sup>2</sup> and is not an F-3 occupancy

Under *OFM-TG-03-1999 Fire Protection Water Supply Guideline for Part 3 in the Ontario Building Code* there are four (4) categories of buildings to consider for the amount of fire protection required:

- 1) Buildings not requiring on-site fire protection water supply;
- 2) Sprinklered buildings;
- 3) Buildings requiring on-site fire protection water supply; and
- 4) Additions to existing buildings.

The category selection is based on an elimination basis. The building is not served by municipal water or a conforming transportable water supply according to the requirements of Category 1. In accordance with the OBC (3.2.2.66), the building does not require sprinklers and does not fall in Category 2. The

building is new construction and does not fall in Category 4. Therefore, the building will require an on-site fire protection water supply under category 3.

The equation for fire protection water quantity is:

$$Q = K V S_{Tot} \text{ (Equation 1)}$$

Where,

Q = Minimum supply of water in litres (L)

K = Water supply coefficient

V = Total building volume in cubic metres

$S_{Tot}$  = Total of spatial coefficient values from property line and building exposures

As a building containing a Group D occupancy (Business and personal services) with combustible construction without fire-rated separations and in accordance with Table 1 of the OFM document, **the value of K is 23.**

The total floor area of the building is 209 m<sup>2</sup>.

The entire building is a single storey with an average ceiling height of 3 m (9.8 ft).

**The building volume (V) is 627 m<sup>3</sup>.**

The  $S_{Tot}$  equation is :

$$S_{Tot} = 1.0 + [(S_{Side1}) + (S_{Side2}) + (S_{Side3}) + \dots + (S_{SideN})]$$

Where N is the number of exposures to be accounted. Exposures which affect the S value are as follows:

- 8.7 m to storage
- 6.3 m to road

**The final value of  $S_{Tot}$  is 1.5**

**Using the derived values in Equation 1, Q = 21,632 litres.**

Following the procedure from *OFM-TG-03-1999* a minimum volume flow for 30 minutes is required. According to Table 2, because  $Q < 108,000$  L, the building is less than 600m<sup>2</sup>, and is not an F-1 occupancy, the flow to be maintained is 1800 L/min. At a 30 minute draw, **the minimum prescribed water supply is 54,000 L.**

The development is multiple buildings on a single property. In that case NFPA 1142 indicates the water to be stored is the water required to protect the most significant structure. Based on the above assessment and the OFM Guideline, the volume of on-site water available for fire suppression should not be less than 54,000 litres (14,265 US Gal). Commercial water storage systems for this application are available in 20,256 L (5,350 US Gal) capacities. Three connected tanks will provide the required water storage. A dry hydrant connection to the tanks will be required for emergency services access. An alternative solution is a dry hydrant design with a water intake extended into West Lake.

Under the requirements of *OFM-TG-03-1999 Fire Protection Water Supply Guideline for Part 3 in the Ontario Building Code* a fire protection water volume of at least 54,000 litres shall be made available at 1847 County Road 12, Hallowell, Prince Edward County, ON, to meet the requirements of the Ontario Building Code to protect the clubhouse and associated structures.

### 3.8 Electrical Servicing

The property is served by a single-phase Hydro One primary line running along Country Road 12. Two residential buildings on this property adjacent County Road 12 have secondary utility service fed from overhead single-phase 120/240V transformers. The remainder of the property has a network of overhead distribution providing service to existing RV-trailers. Changing from RV-trailers to cabins will require upgrades to the electrical distribution. Given the depth of the property from Country Road 12, the electrical upgrades will require the installation of private primary lines to serve new 120/240V stepdown transformers. A three-phase primary line runs along the east side of Country Road 12 and dead-ends near the northeast corner of the property. Thus three-phase service is within easy reach of this property if it were required.

### 3.9 Geotechnical Considerations

On January 31, 2024, seven test pits were excavated on the subject property in the area corresponding to the proposed location of the sewage disposal system. Representative samples were collected from all test pits, and grain size analyses were performed by Terraspec Engineering on selected samples. The soils were found to be compact poorly-graded silty sand (USCS classification SM or SP-SM) in all test pits. Locations of the test pits are marked on Drawing 2 (appended after text), and the full results of the grain size distribution analysis are provided in Appendix D.

The undisturbed silty sand at the subject site has sufficient bearing capacity to support light wood frame construction, though a deeper foundation may be required for larger structures. The purpose of these recommendations is to support a preliminary design, and they will need to be updated as the design of the development progresses.

#### 3.9.1 Site Preparation and Grading

The stripping of surface soils will be required to prepare the land for construction of the proposed development. It is expected that the recovered topsoil will be suitable only for general landscaping purposes owing to their fine texture and organic content although material from deeper excavations may be suitable for re-use as trench backfill.

Prior to the placement of fill beneath floor slabs, the exposed surface should be inspected by a geotechnical engineer. Any fill required to raise grades must be free-draining granular material free of organic, frozen, overly wet, or otherwise deleterious material. Fill should be placed in lifts not exceeding 300 mm in thickness and compacted to 100% of standard Proctor maximum dry density (SPMDD) beneath floor slabs. Bulk fill in landscaped areas may be compacted to a lesser degree (recommended minimum 90% SPMDD).

Temporary excavations to conventional depths for installation of underground pipes at this site must comply with Ontario Regulation 213/91 (Construction Projects) under the Occupational Health and Safety Act (OHSA). The native soils are considered to be Type 2 soils where above the water table,

and excavations may be cut with vertical sides to a depth of 1.2 m and then sloped no steeper than 1H:1V beyond the 1.2 m depth if required. Below the water table, these soils would be considered Type 4, and would require support.

### 3.9.2 Foundations

House footings on native mineral soils or engineered fill may be sized using a net allowable bearing pressure of 100 kPa at serviceability limit states (SLS) and exterior footings must be provided with a minimum of a 1.5 m of earth cover upon final grading for frost protection. All founding surfaces must be inspected by qualified geotechnical personnel prior to placing concrete.

Based on the geological setting, we recommend that Site Class D (Table 4.1.8.4A of the Ontario Building Code) design properties be used to design for earthquake loads.

## 4. Summary

The purpose of the work was to determine soil and groundwater conditions at the site and to demonstrate that the proposed development can be serviced by groundwater and a large subsurface sewage disposal system in accordance with Provincial standards without adversely affecting surrounding private water sources.

Our assessment found the following:

1. The western well on the property has sufficient yield to meet normal water demand for the proposed development, though additional water storage is recommended to ensure availability during times of peak demand. Neighbouring residences are serviced by existing water supply wells, none of which have reported concerns about their water quantity. The well casing should be extended to be at least 40 cm above ground level.
2. Well testing did not demonstrate any observable impact to neighbouring wells or surrounding natural features.
3. Water quality testing did not reveal any health-related issues with the groundwater. The well is considered suitable as a potable water supply, though treatment will be required.
4. Water takings for the project would be classified as a small drinking water system under O. Reg. 319/08. It is likely that the well would be considered as groundwater under the direct influence of surface water (GUDI), and water treatment for the proposed development must be capable of providing the degree of treatment.
5. Phosphorus-reducing tertiary treatment is recommended for the proposed development to avoid adding to surface water eutrophication. With treatment, phosphorus contributions are expected to be lower than under the previous land usage.
6. Three interconnected 20,256-litre storage tanks will provide enough storage to meet the 54,000 litres required by the Ontario Building Code for the purpose of firefighting. An alternative solution is a dry hydrant design with a water intake extended into West Lake.

7. Changing from RV-trailers to cabins will require upgrades to the electrical distribution involving the installation of private primary lines to serve new 120/240V stepdown transformers. Three-phase service is available at the subject property, if required.

We trust that this report will satisfy your current requirements. If you have any questions about our assessment or our conclusions, please don't hesitate to contact us.

All of which is respectfully submitted.

**THE GREER GALLOWAY GROUP INC.  
CONSULTING ENGINEERS**



Kirby Magee-Dittburner, E.I.T.  
Junior Hydrogeologist



Charles Mitz, M.Eng., Ph.D., P.Geo  
Senior Project Manager

## 5. References

Environment Canada, 2020: Canadian Climate Normals 1981-2010 Station Data. Temperature and Precipitation Graph for 1981 to 2010 Canadian Climate Normals: Mountainview.

Experimental Farms Service, 1947: Soil Map of Prince Edward County, Ontario. Soil Survey Report No. 10, Scale 1:63 360.

Jowett et al., 2016: Removal of Sewage Phosphorus by Adsorption and Mineral Precipitation, with Recovery as Fertilizing Soil Amendment. Submitted to Water Science Technology, May 2016.

MECP (Ministry of Environment Conservation and Parks) 1996: D-5-5 Private Wells: Water Supply Assessment, updated March 15, 2016.

MECP (Ministry of Environment Conservation and Parks) 1996: D-5-4 Individual On-Site Sewage Systems: Water Quality Impact Risk Assessment, updated April 14, 2016.

MECP (Ministry of Environment Conservation and Parks) 2008: Design Guidelines For Sewage Works, updated May 6, 2023.

Ontario Geological Survey 2011. Surficial geology of Southern Ontario; Ontario Geological Survey, Miscellaneous Release--Data 128-REV

Stats Canada, 2017 <https://www150.statcan.gc.ca/n1/pub/16-201-x/2017000/sec-2/m-c/m-c-2.5-eng.htm>



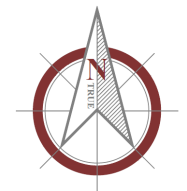
GREER GALLOWAY  
CONSULTING ENGINEERS  
PETERBOROUGH  
BELLEVILLE  
KINGSTON  
1620 WALLBRIDGE LOYALIST ROAD  
BELLEVILLE, ONTARIO, K8N 4Z5  
PHONE: 613-966-3068  
FAX: 613-966-3087

**NOTES:**

- 1) Base drawing and information obtained from Google Earth.

**LEGEND:**

- Property Location



PROJECT 2237758:

HYDROGEOLOGY AND GEOTECHNICAL STUDY  
WITH FUNCTIONAL SERVICING EVALUATION  
1874 COUNTY ROAD 12  
PRINCE EDWARD COUNTY, ONTARIO

DRAWING 1:

SITE PLAN SHOWING PROPERTY LOCATION



Scale as shown



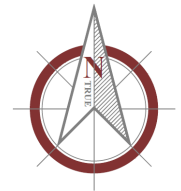
GREER GALLOWAY  
CONSULTING ENGINEERS  
PETERBOROUGH  
BELLEVILLE  
KINGSTON  
1620 WALLBRIDGE LOYALIST ROAD  
BELLEVILLE, ONTARIO, K8N 4Z5  
PHONE: 613-966-3068  
FAX: 613-966-3087

**NOTES:**

- 1) Base drawing and information obtained from Prince Edward County GIS:  
<https://apps.vertigisstudio.com/web/?app=26a6fd531d74ea383b8019301f9a71c>
- 2) Setback distances are met. Septic beds not to scale.

**LEGEND:**

- Property boundary
- Septic System Location
- Test Well
- Monitoring Well
- MECP Well Record
- Test Pit
- Class 4 Septic Bed

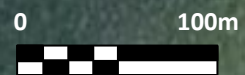


PROJECT 2237758:

HYDROGEOLOGY AND GEOTECHNICAL STUDY  
WITH FUNCTIONAL SERVICING EVALUATION  
1874 COUNTY ROAD 12  
PRINCE EDWARD COUNTY, ONTARIO

DRAWING 2:

SITE PLAN SHOWING WELL LOCATION



Scale as shown



Appendix A

# MECP Water Well Records

UTM W 4 18 2 3 1 1 8 2 6 7 E



30N147

GROUND WATER DIVISION  
53 No 1149  
OCT 25 1962  
ONTARIO WATER RESOURCES COMMISSION

45 R 4 8 6 5 3 0 1 1 N

The Ontario Water Resources Commission Act

Elev. 9 R 0 2 8 0

# WATER WELL RECORD

Basin 24 PARCELS EDWD.

Township, Village, Town or City HOLLISWELL

County or District SS. W.L. Lot 4

Date completed 10 JULY 62  
(day month year)

Address RPT PICTON

### Casing and Screen Record

Inside diameter of casing 6 1/4  
Total length of casing PULLED  
Type of screen -  
Length of screen -  
Depth to top of screen -  
Diameter of finished hole -

### Pumping Test

Static level .....  
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) |
|-------------------------------|-----------|-----------|----------------------------------|---------------------------------------|
| <u>SAND + GRAVEL</u>          | <u>0</u>  | <u>17</u> |                                  |                                       |
| <u>CLAY + SILT</u>            | <u>17</u> | <u>78</u> |                                  |                                       |
|                               |           |           |                                  |                                       |
|                               |           |           |                                  |                                       |
|                               |           |           |                                  |                                       |
|                               |           |           |                                  |                                       |
|                               |           |           |                                  |                                       |
|                               |           |           |                                  |                                       |

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

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

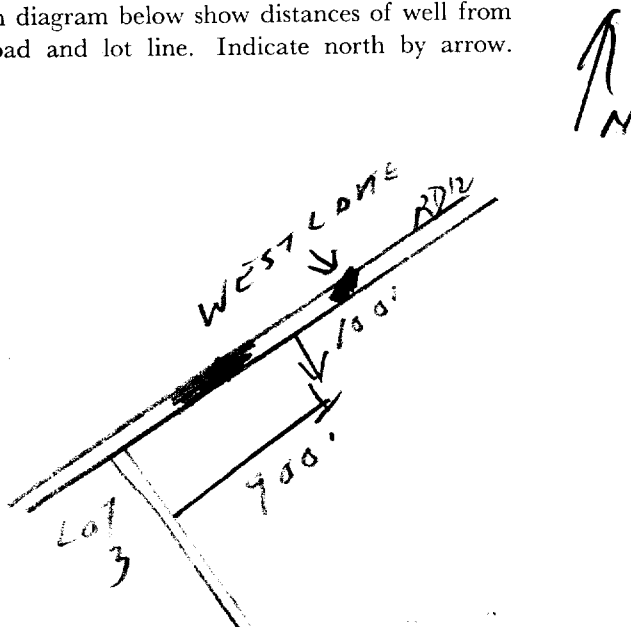
Drilling or Boring Firm A & B BOSTON  
Address BLOOMFIELD

Licence Number 470  
Name of Driller or Borer SAME

Date OCT 16/62  
[Signature]  
(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.







30 N 147

UTM 1182 31181028E  
West 5R 4865197N  
Elev. 54R 10258

53 No. 1151  
WATER RESOURCES DIVISION  
AUG 11 1964  
ONTARIO WATER RESOURCES COMMISSION

# WATER WELL RECORD

Basin 24 Prince Edward Township, Village, Town or City Hollowell  
County or District  
Date completed 19 May 64  
Address 520 First Ave Rochester NY

### Casing and Screen Record

Inside diameter of casing 6 1/4"  
Total length of casing 40'  
Type of screen  
Length of screen  
Depth to top of screen  
Diameter of finished hole 6"

### Pumping Test

Static level 15'  
Test-pumping rate 3 G.P.M.  
Pumping level 20'  
Duration of test pumping 1/2 hr  
Water clear or cloudy at end of test clear  
Recommended pumping rate 3 G.P.M.  
with pump setting of 46 feet below ground surface

### Well Log

#### Overburden and Bedrock Record

Soft Gravel  
Limestone

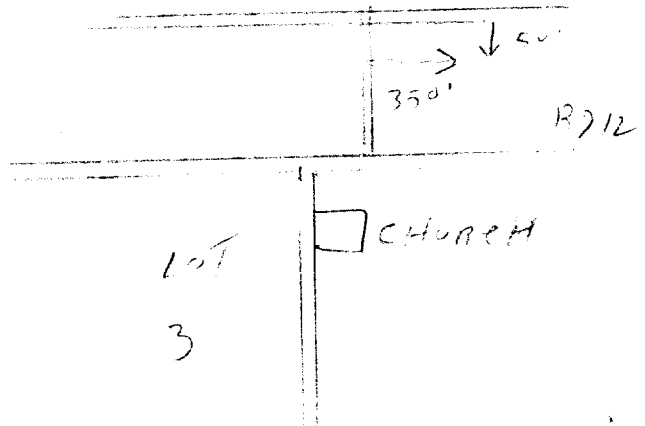
### Water Record

|  | From ft. | To ft. | Depth(s) at which water(s) found | Kind of water (fresh, salty, sulphur) |
|--|----------|--------|----------------------------------|---------------------------------------|
|  | 0        | 40     | 45                               | fresh                                 |
|  | 40       | 50     |                                  |                                       |
|  |          |        |                                  |                                       |
|  |          |        |                                  |                                       |
|  |          |        |                                  |                                       |
|  |          |        |                                  |                                       |
|  |          |        |                                  |                                       |
|  |          |        |                                  |                                       |
|  |          |        |                                  |                                       |

For what purpose(s) is the water to be used? Cottage  
Is well on upland, in valley, or on hillside? upland  
Drilling or Boring Firm T. G. L. Tolston  
Address Bloomfield  
Licence Number 1301  
Name of Driller or Borer T. G. L. Tolston  
Address Bloomfield  
Date Aug 5/64  
(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.



WATER - WELL RECORD



30N147

53 No 1153

JAN 10 1968

UTM 18Z 318087E

15R 4865313N

Elev. 51.4 10.265

The Ontario Water Resources Commission Act

# WATER WELL RECORD

ONTARIO WATER RESOURCES COMMISSION

Basin 29 PRINCE EDWARD Township, Village, Town or City HOLLOWELL

Con. S.S. of W.L. Lot 4 Date completed 4 10 65 (day month year)

Address TORONTO ONT.

### Casing and Screen Record

### Pumping Test

Inside diameter of casing 6 1/4"  
 Total length of casing 401  
 Type of screen  
 Length of screen  
 Depth to top of screen  
 Diameter of finished hole 6"

Static level 18'  
 Test-pumping rate 5 G.P.M.  
 Pumping level 38  
 Duration of test pumping 1/2 hr  
 Water clear or cloudy at end of test clear  
 Recommended pumping rate 3 G.P.M.  
 with pump setting of 48' 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)

SAND  
LIMESTONE

0  
40

40  
50

45

fresh

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

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

Drilling or Boring Firm RALPH HOLSTON

Address 13 BLOOMFIELD ONT.

Licence Number 1656

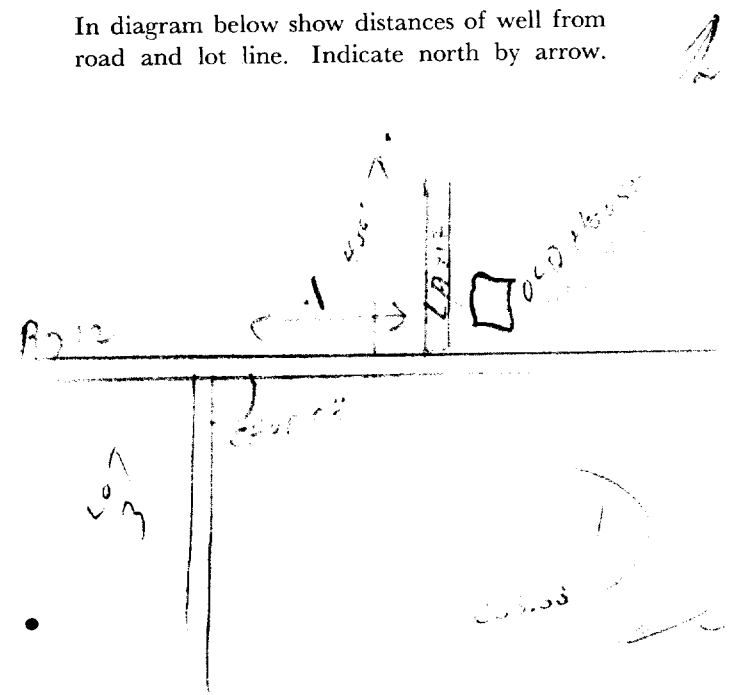
Name of Driller or Borer SAME

Date Jan 4/68

(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.





30N147

GROUND WATER BRANCH  
 53 No. 1156  
 AUG 8 1962  
 ONTARIO WATER RESOURCES COMMISSION

UTM 118Z 318241E  
 5R 4865538N  
 Elev. 54R 0273

The Ontario Water Resources Commission Act

# WATER WELL RECORD

Basin 24 PRINCE ED Township, Village, Town or City HALLOWELL  
 County or District  
 Con. S.S. W.L. Lot 5 Date completed 1 JUNE 62  
 (day month year)  
 Address PICTON RR#1

### Casing and Screen Record

Inside diameter of casing 6 1/4  
 Total length of casing 40  
 Type of screen -  
 Length of screen -  
 Depth to top of screen -  
 Diameter of finished hole 6

### Pumping Test

Static level 22  
 Test-pumping rate 30 G.P.M.  
 Pumping level 30  
 Duration of test pumping 1/2 hr  
 Water clear or cloudy at end of test CLEAR  
 Recommended pumping rate 5 G.P.M.  
 with pump setting of 40 feet below ground surface

### Well Log

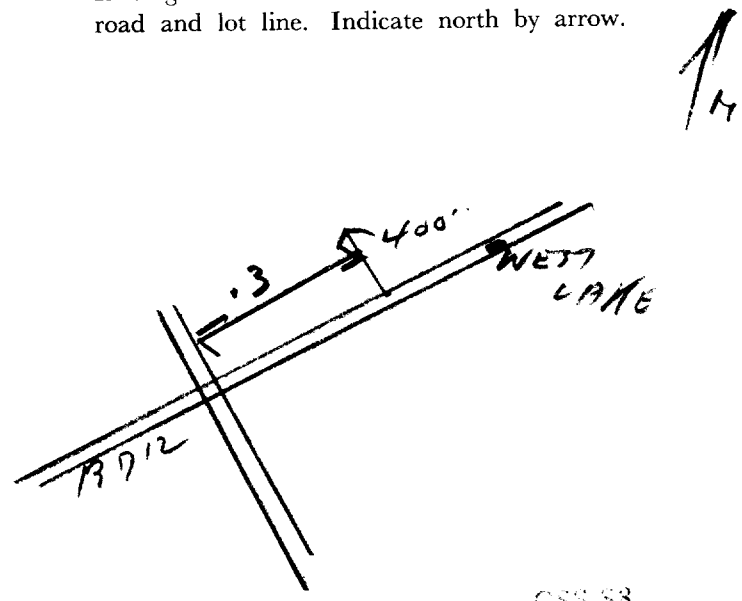
### Water Record

| Overburden and Bedrock Record | From ft. | To ft. | Depth(s) at which water(s) found | Kind of water (fresh, salty, sulphur) |
|-------------------------------|----------|--------|----------------------------------|---------------------------------------|
| GRAVEL                        | 0        | 40     |                                  |                                       |
| Limestone                     | 40       | 50     | 45                               | FRESH                                 |

For what purpose(s) is the water to be used? COTTAGE  
 Is well on upland, in valley, or on hillside?  
 Drilling or Boring Firm A & B BOLSTON  
 Address DECONFIELD  
 Licence Number 470  
 Name of Driller or Borer RALPH BOLSTON  
 Address  
 Date JULY 10/62  
 (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.





30N147

53 No. 1158  
~~August 8/62~~

DNM 1182 31183317E

5R 4865479N

The Ontario Water Resources Commission Act

Elev. 9R 0279

# WATER WELL RECORD

Basin 24 PRINCE ED  
County or District

Township, Village, Town or City HALLOWELL

Con. S.S.W.L. Lot 5

Date completed 9 JUNE 62  
(day month year)

Address RRI PICTON

### Casing and Screen Record

Inside diameter of casing 6 1/4  
 Total length of casing 40  
 Type of screen -  
 Length of screen -  
 Depth to top of screen -  
 Diameter of finished hole 6

### Pumping Test

Static level 14  
 Test-pumping rate 30 G.P.M.  
 Pumping level 22  
 Duration of test pumping 1/2 HR  
 Water clear or cloudy at end of test CLEAN  
 Recommended pumping rate 5 G.P.M.  
 with pump setting of 30 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) |
|-------------------------------|----------|--------|----------------------------------|---------------------------------------|
| COARSE GRAVEL                 | 0        | 40     | 40                               | FRESH                                 |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |

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

Is well on upland, in valley, or on hillside? 6

Drilling or Boring Firm A J R BOLSTON

Address BLOOMFIELD

Licence Number 470

Name of Driller or Borer RALPH BOLSTON

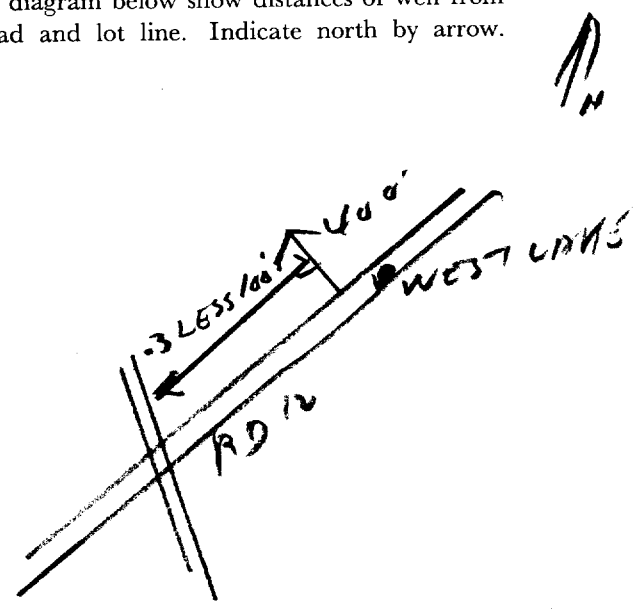
Address

Date JULY 20/62

(Signature of Licensed Drilling or Boring Contractor)

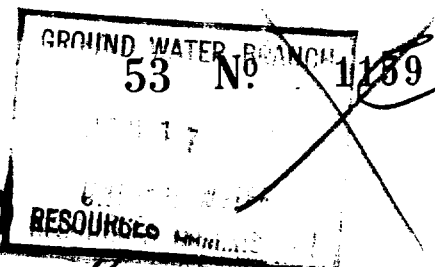
### Location of Well

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





30N147



UND 1182 31181379E

West 51 4.8 6.5 4.6 5.1 N

The Ontario Water Resources Commission Act

Side 270

Basin 29 R Ed

Con. S S A W L Lot # 5 W C

Township, Village, Town or City HOLLOWELL  
Date completed 22 11 63 (day month year)  
Address R R 1 PICTON

# WATER WELL RECORD

## Casing and Screen Record

Inside diameter of casing 6.74"  
Total length of casing 14'  
Type of screen  
Length of screen  
Depth to top of screen  
Diameter of finished hole 6"

## Pumping Test

Static level  
Test-pumping rate G.P.M.  
Pumping level Dry Well  
Duration of test pumping  
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) |
|-------------------------------|----------|--------|----------------------------------|---------------------------------------|
| Sand                          | 0        | 14     |                                  |                                       |
| limestone                     | 14       | 65     |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |

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 H & R Rolston

Address Bloomfield

Licence Number 919

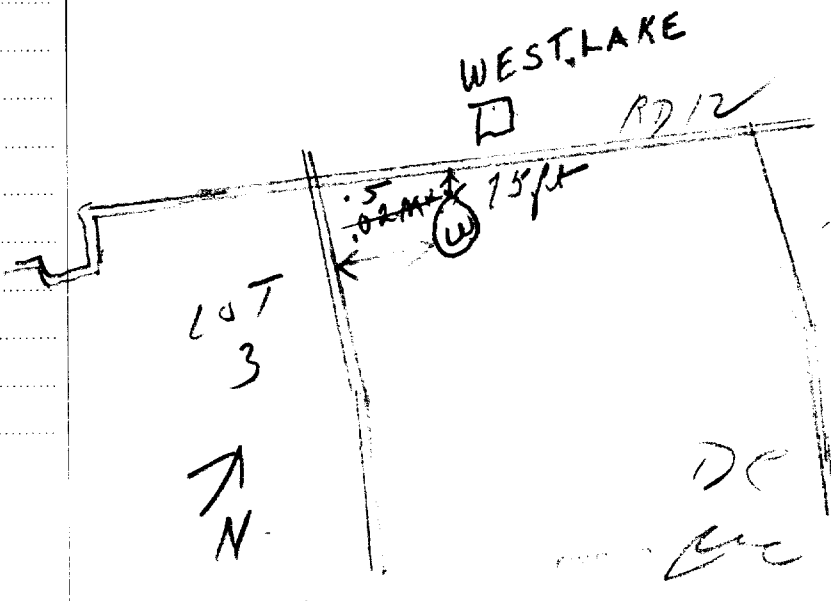
Name of Driller or Borer Same

Date June 13/64

(Signature of Licensed Drilling or Boring Contractor) Ralph Rolston

## Location of Well

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



182 210350  
 9R 1065440  
 9R 0280  
 21

S.S. of W.L.  
 Lot 5  
 CODED



5301972

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

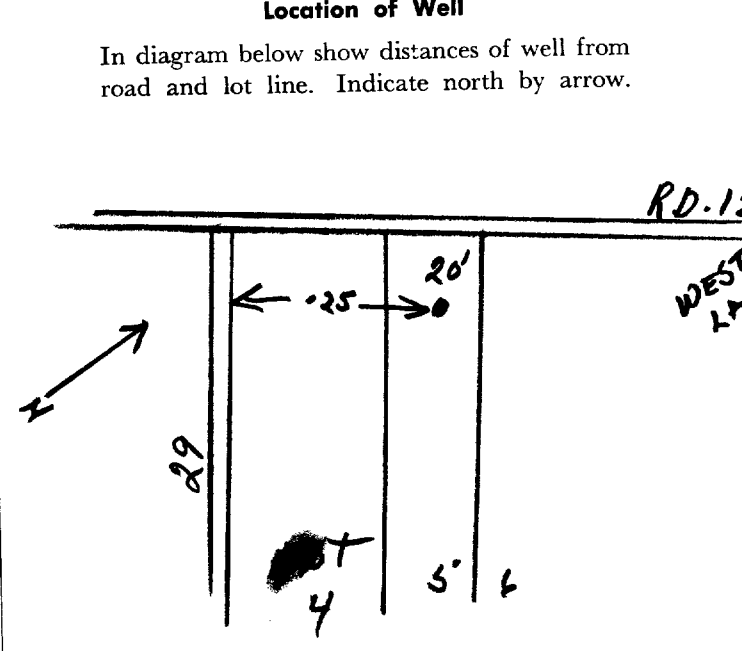
County or District Prince Edward Township, Village, Town or City Hallowell  
 Con. South side West Lake LOT 5 Date completed Feb 7, 1969  
 (day month year)  
 Address RR#1, Picton, Ont.

**Casing and Screen Record**  
 Inside diameter of casing 8"  
 Total length of casing 34 ft.  
 Type of screen .....  
 Length of screen .....  
 Depth to top of screen .....  
 Diameter of finished hole 8"

**Pumping Test**  
 Static level 20 ft.  
 Test-pumping rate 20 G.P.M.  
 Pumping level empty  
 Duration of test pumping 1 hr.  
 Water clear or cloudy at end of test clear  
 Recommended pumping rate 6 G.P.M.  
 with pump setting of 57 feet below ground surface

| Well Log              | Water Record                  |           |               |                                  |
|-----------------------|-------------------------------|-----------|---------------|----------------------------------|
|                       | Overburden and Bedrock Record | From ft.  | To ft.        | Depth(s) at which water(s) found |
| <u>fine sand</u>      | <u>0</u>                      | <u>8</u>  |               |                                  |
| <u>clay</u>           | <u>8</u>                      | <u>34</u> | <u>55 ft.</u> | <u>fresh</u>                     |
| <u>grey limestone</u> | <u>34</u>                     | <u>60</u> |               |                                  |
|                       |                               |           |               |                                  |
|                       |                               |           |               |                                  |
|                       |                               |           |               |                                  |
|                       |                               |           |               |                                  |
|                       |                               |           |               |                                  |

For what purpose(s) is the water to be used? household use  
 Is well on upland, in valley, or on hillside? level ground  
 Drilling or Boring Firm L.H. McClennon & Son  
 Address Wellington, Ont.  
 Licence Number 3378  
 Name of Driller or Borer Ken McClennon  
 Address Wellington, Ont.  
 Date Feb. 28 1969  
*L.H. McClennon*  
 (Signature of Licensed Drilling or Boring Contractor)



STM 1182 31810410 WLR5 CODED



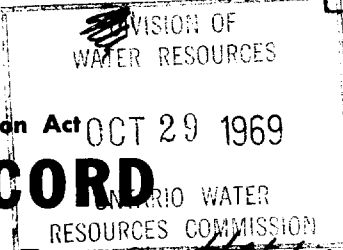
5302041

4R AB165200 Lot 4 Water management in Ontario

The Ontario Water Resources Commission Act OCT 29 1969

lev. 5R 0240

# WATER WELL RECORD



asin 24 PRINCE EDWARD County or District

Township, Village, Town or City HOLLOWELL

Con SSWL Rd Lot 4

Date completed 29 5 69 (day month year)

Address RPI PICTON

## Casing and Screen Record

Inside diameter of casing 6 1/4"  
 Total length of casing 44'  
 Type of screen  
 Length of screen  
 Depth to top of screen  
 Diameter of finished hole 6"

## Pumping Test

Static level 12'  
 Test-pumping rate 20 G.P.M.  
 Pumping level 29  
 Duration of test pumping 1/2 hr.  
 Water clear or cloudy at end of test CLEAR  
 Recommended pumping rate 5 G.P.M.  
 with pump setting of 43 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) |
|-------------------------------|----------|--------|----------------------------------|---------------------------------------|
| SAND                          | 0        | 44     | 46                               | FRESH                                 |
| LIMESTONE                     | 44       | 46     |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |
|                               |          |        |                                  |                                       |

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

## Location of Well

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

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

Drilling or Boring Firm RALPH ROLSTON

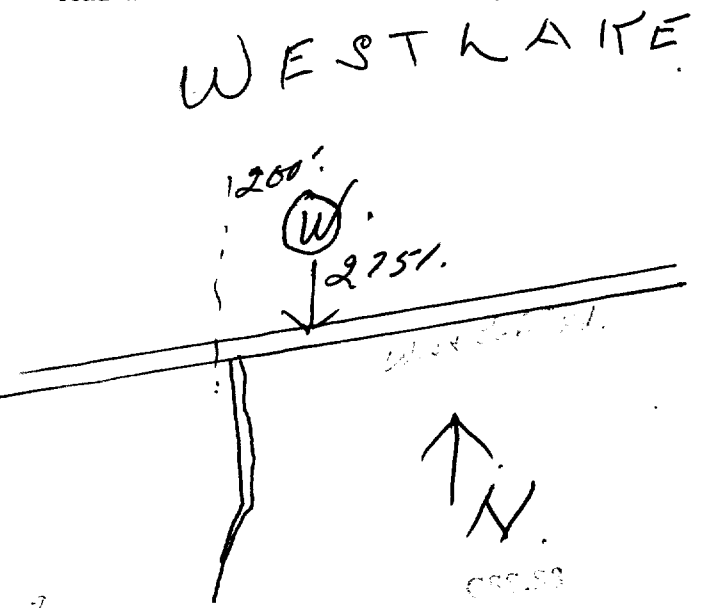
Address 33 LOOMFIELD

Licence Number 323

Name of Driller or Borer SAME

Date June 19/69

(Signature of Licensed Drilling or Boring Contractor)









189

5302491 53003 J.P.N. 0.1

2. CHECK  CORRECT BOX WHERE APPLICABLE

COUNTY OR DISTRICT: Prince Edward  
 TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Hallowell  
 BLOCK, TRACT, SURVEY, E.T.C.: S.S. West Lake  
 LOT: 3  
 DATE COMPLETED: 48-53  
 DAY: 16 MO: 10 YR: 66  
 RC: 65.000  
 ELEVATION: 4  
 BASIN CODE: 6

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

| GENERAL COLOUR | MOST COMMON MATERIAL | OTHER MATERIALS    | GENERAL DESCRIPTION | DEPTH - FEET |    |
|----------------|----------------------|--------------------|---------------------|--------------|----|
|                |                      |                    |                     | FROM         | TO |
|                |                      | approx. overburden |                     |              |    |
|                |                      |                    | Clay & Sand         | 0            | 20 |
|                |                      |                    | Limestone           | 20           | 47 |

31  
32

**41 WATER RECORD**

| WATER FOUND AT - FEET | KIND OF WATER                             |                                |                                  |                                  |
|-----------------------|---|--------------------------------|----------------------------------|----------------------------------|
| 10-13<br>45           | <input checked="" type="checkbox"/> FRESH | <input type="checkbox"/> SALTY | <input type="checkbox"/> SULPHUR | <input type="checkbox"/> MINERAL |
| 15-16                 | <input type="checkbox"/> FRESH            | <input type="checkbox"/> SALTY | <input type="checkbox"/> SULPHUR | <input type="checkbox"/> MINERAL |
| 20-23                 | <input type="checkbox"/> FRESH            | <input type="checkbox"/> SALTY | <input type="checkbox"/> SULPHUR | <input type="checkbox"/> MINERAL |
| 25-28                 | <input type="checkbox"/> FRESH            | <input type="checkbox"/> SALTY | <input type="checkbox"/> SULPHUR | <input type="checkbox"/> MINERAL |
| 30-33                 | <input type="checkbox"/> FRESH            | <input type="checkbox"/> SALTY | <input type="checkbox"/> SULPHUR | <input type="checkbox"/> MINERAL |

**51 CASING & OPEN HOLE RECORD**

| INSIDE DIAM. INCHES | MATERIAL   | WALL THICKNESS INCHES | DEPTH - FEET |    |
|---------------------|--|-----------------------|--------------|----|
|                     |  |                       | FROM         | TO |
| 10-11<br>30         | <input type="checkbox"/> STEEL<br><input type="checkbox"/> GALVANIZED<br><input checked="" type="checkbox"/> CONCRETE<br><input type="checkbox"/> OPEN HOLE            | 12                    | 0            | 20 |
| 17-18<br>6          | <input checked="" type="checkbox"/> STEEL<br><input type="checkbox"/> GALVANIZED<br><input type="checkbox"/> CONCRETE<br><input checked="" type="checkbox"/> OPEN HOLE | 19                    | 20           | 47 |
| 24-25               | <input type="checkbox"/> STEEL<br><input type="checkbox"/> GALVANIZED<br><input type="checkbox"/> CONCRETE<br><input type="checkbox"/> OPEN HOLE                       | 26                    |              |    |

**SCREEN**

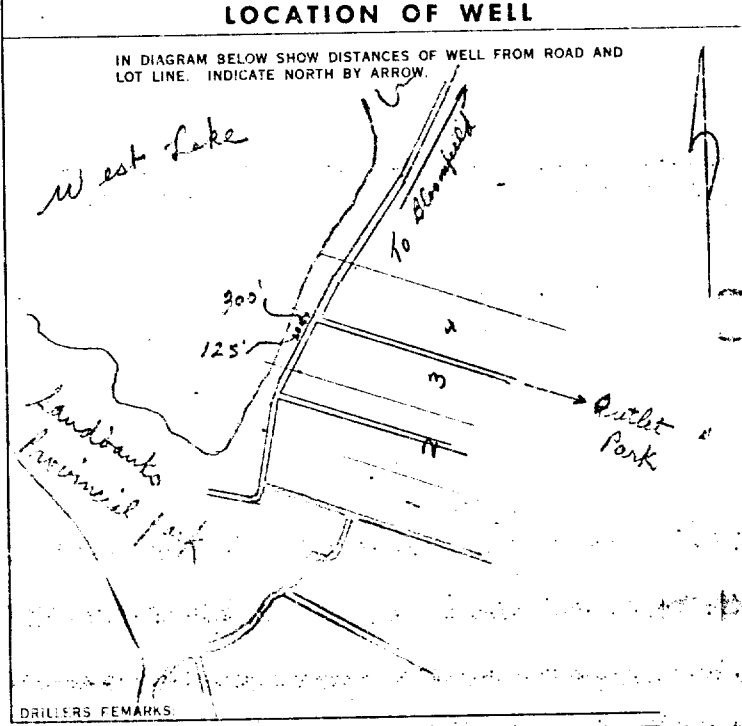
| SIZE(S) OF OPENING (SLOT NO.) | DIAMETER INCHES | LENGTH FEET |
|-------------------------------|-----------------|-------------|
|                               |                 |             |

**61 PLUGGING & SEALING RECORD**

| DEPTH SET AT - FEET | MATERIAL AND TYPE | (CEMENT GROUT, LEAD PACKER, ETC.) |
|---------------------|-------------------|-----------------------------------|
| 10-13               |                   |                                   |
| 18-21               |                   |                                   |
| 26-29               |                   |                                   |

**71 PUMPING TEST**

| PUMPING TEST METHOD   | PUMPING RATE               | DURATION OF PUMPING  |
|---|----------------------------|--|
| <input type="checkbox"/> PUMP<br><input type="checkbox"/> BAILER  | GPM                        | 15-16 HOURS<br>17-18 MINS.   |
| STATIC LEVEL  | WATER LEVEL END OF PUMPING | WATER LEVELS DURING  |
| 19-21<br>26.00  | 22-24                      | 15 MINUTES 26-28<br>30 MINUTES 29-31<br>45 MINUTES 32-34<br>60 MINUTES 35-37 |
| IF FLOWING, GIVE RATE   | PUMP INTAKE SET AT         | WATER AT END OF TEST   |
|   | GPM                        | 1 CLEAR<br>2 CLOUDY  |
| RECOMMENDED PUMP TYPE   | RECOMMENDED PUMP SETTING   | RECOMMENDED PUMPING RATE   |
| <input type="checkbox"/> SHALLOW<br><input type="checkbox"/> DEEP | FEET                       | GPM  |



**FINAL STATUS OF WELL**

54

|  |   |
|--|---|
| <input checked="" type="checkbox"/> WATER SUPPLY | <input type="checkbox"/> ABANDONED, INSUFFICIENT SUPPLY |
| <input type="checkbox"/> OBSERVATION WELL        | <input type="checkbox"/> ABANDONED, POOR QUALITY        |
| <input type="checkbox"/> TEST HOLE               | <input type="checkbox"/> UNFINISHED                     |
| <input type="checkbox"/> RECHARGE WELL           |   |

**WATER USE**

55-56

|   |  |
|---|--|
| <input type="checkbox"/> DOMESTIC         | <input type="checkbox"/> COMMERCIAL                  |
| <input checked="" type="checkbox"/> STOCK | <input type="checkbox"/> MUNICIPAL                   |
| <input type="checkbox"/> IRRIGATION       | <input type="checkbox"/> PUBLIC SUPPLY               |
| <input type="checkbox"/> INDUSTRIAL       | <input type="checkbox"/> COOLING OR AIR CONDITIONING |
| <input type="checkbox"/> OTHER            | <input type="checkbox"/> NOT USED                    |

**METHOD OF DRILLING**

57

|  |                                  |
|--|----------------------------------|
| <input checked="" type="checkbox"/> CABLE TOOL | <input type="checkbox"/> BORING  |
| <input type="checkbox"/> ROTARY (CONVENTIONAL) | <input type="checkbox"/> DIAMOND |
| <input type="checkbox"/> ROTARY (REVERSE)      | <input type="checkbox"/> JETTING |
| <input type="checkbox"/> ROTARY (AIR)          | <input type="checkbox"/> DRIVING |
| <input type="checkbox"/> AIR PERCUSSION        |                                  |

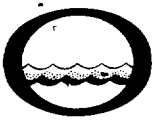
not known

**CONTRACTOR**

|                          |                      |
|--------------------------|----------------------|
| NAME OF WELL CONTRACTOR  | LICENCE NUMBER       |
| ADDRESS                  |                      |
| NAME OF DRILLER OR BORER | LICENCE NUMBER       |
| SIGNATURE OF CONTRACTOR  | SUBMISSION DATE      |
|                          | DAY: 16 MO: 1 YR: 67 |

**OFFICE USE ONLY**

|                    |   |               |
|--------------------|---|---------------|
| DATA SOURCE        | CONTRACTOR  | DATE RECEIVED |
| DATE OF INSPECTION | INSPECTOR   |               |
| REMARKS:           | This record was created for the purpose of giving the well an O.W.R.C. well No. |               |



# The Ontario Water Resources Commission Act WATER WELL RECORD

30N/14F

Water management in Ontario

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

11

5302526  
5302526

MUNICIP. 53003

CON. WL SS

COUNTY OR DISTRICT: PRINCE EDWARD TOWNSHIP: HALLOWELL  
 OWNER (SURNAME FIRST): CHRIST CHURCH P.R.I. PICTON  
 ADDRESS: S.S. OF WEST LAKE #004  
 DATE COMPLETED: DAY 15 MO 05 YR 72  
 ZONE: U 18 EASTING: 318110 NORTHING: 4865120 RC: 4 ELEVATION: 0296 BASIN CODE: 24

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

| GENERAL COLOUR | MOST COMMON MATERIAL | OTHER MATERIALS | GENERAL DESCRIPTION | DEPTH - FEET |    |
|----------------|----------------------|-----------------|---------------------|--------------|----|
|                |                      |                 |                     | FROM         | TO |
| WHITE          | SAND                 |                 |                     | 0            | 16 |
|                |                      | LIMESTONE       | HARD                | 16           | 45 |

31 09/16/28 004515

#### 41 WATER RECORD

| WATER FOUND AT - FEET | KIND OF WATER                               |                                    |    |  |
|-----------------------|---|------------------------------------|----|--|
| 10-13                 | 1 <input checked="" type="checkbox"/> FRESH | 3 <input type="checkbox"/> SULPHUR | 14 |  |
|                       | 2 <input type="checkbox"/> SALTY            | 4 <input type="checkbox"/> MINERAL |    |  |
| 15-18                 | 1 <input type="checkbox"/> FRESH            | 3 <input type="checkbox"/> SULPHUR | 19 |  |
|                       | 2 <input type="checkbox"/> SALTY            | 4 <input type="checkbox"/> MINERAL |    |  |
| 20-23                 | 1 <input type="checkbox"/> FRESH            | 3 <input type="checkbox"/> SULPHUR | 24 |  |
|                       | 2 <input type="checkbox"/> SALTY            | 4 <input type="checkbox"/> MINERAL |    |  |
| 25-28                 | 1 <input type="checkbox"/> FRESH            | 3 <input type="checkbox"/> SULPHUR | 29 |  |
|                       | 2 <input type="checkbox"/> SALTY            | 4 <input type="checkbox"/> MINERAL |    |  |
| 30-33                 | 1 <input type="checkbox"/> FRESH            | 3 <input type="checkbox"/> SULPHUR | 34 |  |
|                       | 2 <input type="checkbox"/> SALTY            | 4 <input type="checkbox"/> MINERAL | 80 |  |

#### 51 CASING & OPEN HOLE RECORD

| INSIDE DIA. INCHES | MATERIAL                                    | WALL THICKNESS INCHES | DEPTH - FEET |       |
|--------------------|---|-----------------------|--------------|-------|
|                    |   |                       | FROM         | TO    |
| 10-11              | 1 <input checked="" type="checkbox"/> STEEL | 0.0188                | 0            | 16    |
|                    | 2 <input type="checkbox"/> GALVANIZED       |                       |              |       |
|                    | 3 <input type="checkbox"/> CONCRETE         |                       |              |       |
|                    | 4 <input type="checkbox"/> OPEN HOLE        |                       |              |       |
| 17-18              | 1 <input type="checkbox"/> STEEL            |                       |              | 20-23 |
|                    | 2 <input type="checkbox"/> GALVANIZED       |                       |              |       |
|                    | 3 <input type="checkbox"/> CONCRETE         |                       |              |       |
|                    | 4 <input type="checkbox"/> OPEN HOLE        |                       |              |       |
| 24-25              | 1 <input type="checkbox"/> STEEL            |                       |              | 27-30 |
|                    | 2 <input type="checkbox"/> GALVANIZED       |                       |              |       |
|                    | 3 <input type="checkbox"/> CONCRETE         |                       |              |       |
|                    | 4 <input type="checkbox"/> OPEN HOLE        |                       |              |       |

#### SCREEN

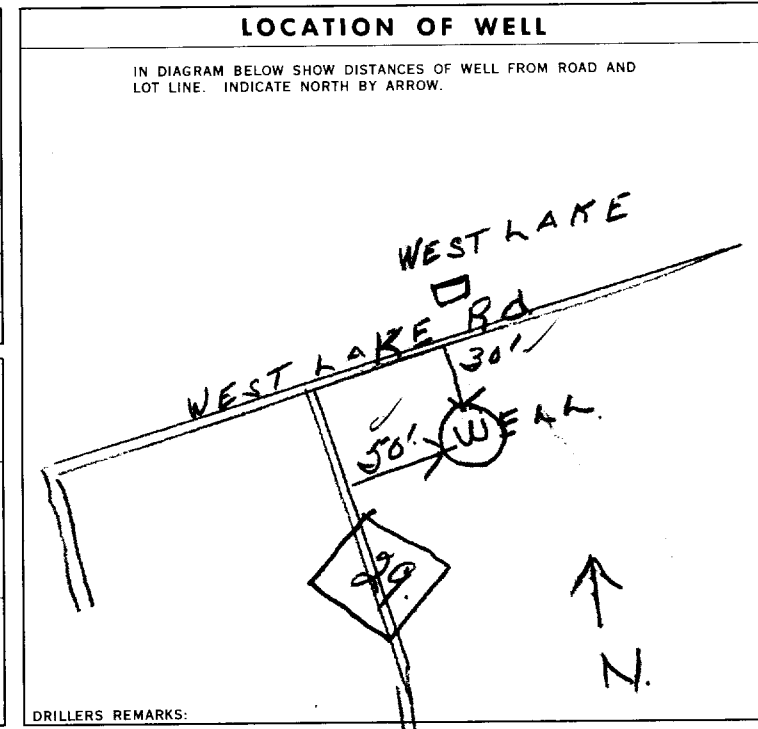
| SIZE(S) OF OPENING (SLOT NO.) | DIAMETER | LENGTH                 |
|-------------------------------|----------|------------------------|
|                               | 31-33    | 34-38                  |
| MATERIAL AND TYPE             |          | DEPTH TO TOP OF SCREEN |
|                               |          | INCHES 41-44           |
|                               |          | FEET 80                |

#### 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 <input type="checkbox"/> PUMP    | 2 <input checked="" type="checkbox"/> BAILER |
| PUMPING RATE               | 0020 GPM                           | DURATION OF PUMPING                          |
|                            |                                    | 15-16 HOURS 20                               |
|                            |                                    | 17-18 MINS.                                  |
| STATIC LEVEL               | 017 FEET                           | WATER LEVELS DURING PUMPING                  |
| WATER LEVEL END OF PUMPING | 029 FEET                           | 15 MINUTES 030 FEET                          |
|                            |                                    | 30 MINUTES 024 FEET                          |
|                            |                                    | 45 MINUTES 026 FEET                          |
|                            |                                    | 60 MINUTES 026 FEET                          |
| RECOMMENDED PUMP TYPE      | 1 <input type="checkbox"/> SHALLOW | 2 <input checked="" type="checkbox"/> DEEP   |
| RECOMMENDED PUMP SETTING   | 042 FEET                           | RECOMMENDED PUMPING RATE                     |
|                            |                                    | 0005 GPM                                     |



#### FINAL STATUS OF WELL

|  |   |
|--|---|
| 1 <input checked="" type="checkbox"/> WATER SUPPLY | 5 <input 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           |   |

#### WATER USE

|  |  |
|--|--|
| 1 <input checked="" 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 |
| 9 <input type="checkbox"/> OTHER               | 9 <input type="checkbox"/> NOT USED                    |

#### METHOD OF DRILLING

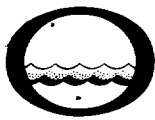
|  |                                    |
|--|------------------------------------|
| 1 <input checked="" type="checkbox"/> CABLE TOOL | 6 <input type="checkbox"/> BORING  |
| 2 <input type="checkbox"/> ROTARY (CONVENTIONAL) | 7 <input type="checkbox"/> DIAMOND |
| 3 <input type="checkbox"/> ROTARY (REVERSE)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

#### CONTRACTOR

NAME OF WELL CONTRACTOR: RALPH ROLSTON LICENCE NUMBER: 4630  
 ADDRESS: BROMEN FELD ONT  
 NAME OF DRILLER OR BORER: SAME LICENCE NUMBER:  
 SIGNATURE OF CONTRACTOR: [Signature] SUBMISSION DATE: DAY 3 MO 7 YR 72

#### OFFICE USE ONLY

DATA SOURCE: 1 CONTRACTOR: 58 4630 DATE RECEIVED: 59-62 281172  
 DATE OF INSPECTION: INSPECTOR: [Signature]  
 REMARKS: P [Signature]  
 WI



# WATER WELL RECORD

30N/14W

Water management in Ontario 1. PRINT ONLY IN SPACES PROVIDED

2. CHECK  CORRECT BOX WHERE APPLICABLE

11 5302693 MUNICIPAL 53003 CON. WL SS  
 COUNTY OR DISTRICT PRINCE EDWARD TOWNSHIP HALLOWELL CON. BLOCK, TRACT, SURVEY, ETC. Come S.S. West Lake LOT 004  
 DATE COMPLETED 48-53 DAY 10 MO. 10 YR. 73  
 HING 865433 RC. 4 ELEVATION 275 RC. 4 BASIN CODE 24 MAR 03, 1977 263

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

| GENERAL COLOUR | MOST COMMON MATERIAL | OTHER MATERIALS | GENERAL DESCRIPTION | DEPTH - FEET |    |
|----------------|----------------------|-----------------|---------------------|--------------|----|
|                |                      |                 |                     | FROM         | TO |
| WHITE SAND     |                      |                 |                     | 0            | 40 |
| GREY LIMESTONE |                      |                 |                     | 40           | 58 |

31 0040128 0058215  
 32

#### 41 WATER RECORD

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

#### 51 CASING & OPEN HOLE RECORD

| INSIDE DIAM. INCHES | MATERIAL                                  | WALL THICKNESS INCHES | DEPTH - FEET |      |
|---------------------|---|-----------------------|--------------|------|
|                     |   |                       | FROM         | TO   |
| 6 7/8               | <input checked="" type="checkbox"/> STEEL | 0.188                 | 0            | 40   |
| 6 1/2               | <input type="checkbox"/> GALVANIZED       |                       |              | 0040 |
| 6 1/8               | <input type="checkbox"/> CONCRETE         |                       |              |      |
| 6 1/4               | <input type="checkbox"/> OPEN HOLE        |                       |              |      |

#### SCREEN

| SIZE(S) OF OPENING (SLOT NO.) | DIAMETER | LENGTH |
|-------------------------------|----------|--------|
|                               |          |        |

#### 61 PLUGGING & SEALING RECORD

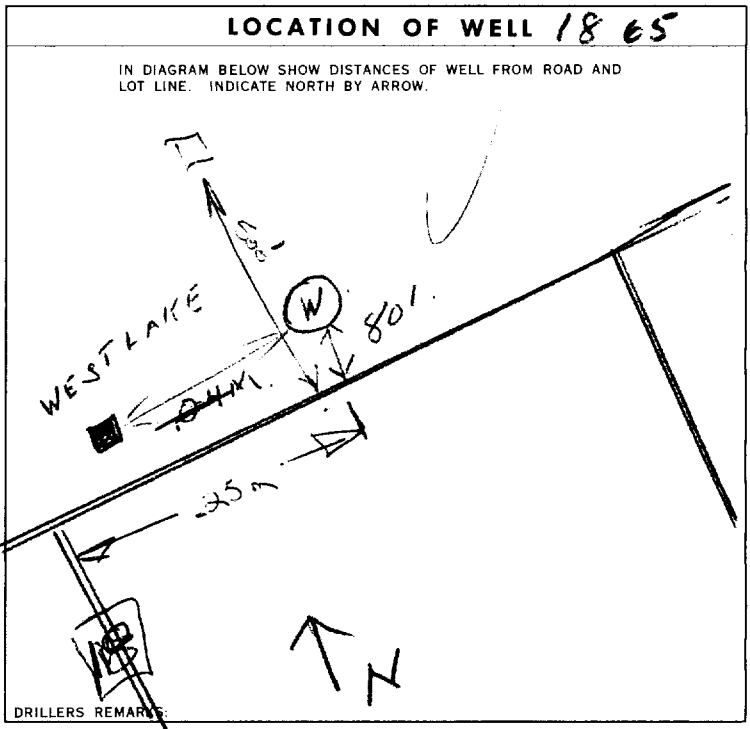
| DEPTH SET AT - FEET | MATERIAL AND TYPE |
|---------------------|-------------------|
| 10-13               |                   |
| 18-21               |                   |
| 26-29               |                   |

#### 71 PUMPING TEST

| PUMPING TEST METHOD  | PUMPING RATE | DURATION OF PUMPING |
|--|--------------|---------------------|
| <input type="checkbox"/> PUMP <input checked="" type="checkbox"/> BAILER | 0030 GPM     | 01 HOURS 45 MINS.   |

| STATIC LEVEL | WATER LEVEL END OF PUMPING | WATER LEVELS DURING |                     |                     |                     |
|--------------|----------------------------|---------------------|---------------------|---------------------|---------------------|
| 022 FEET     | 036 FEET                   | 15 MINUTES 026 FEET | 30 MINUTES 030 FEET | 45 MINUTES 035 FEET | 60 MINUTES 035 FEET |

IF FLOWING: GIVE RATE \_\_\_\_\_ GPM  
 PUMP INTAKE SET AT \_\_\_\_\_ FEET  
 RECOMMENDED PUMP TYPE:  SHALLOW  DEEP  
 RECOMMENDED PUMP SETTING: 055 FEET  
 RECOMMENDED PUMP RATE: 0003 GPM.



#### FINAL STATUS OF WELL

1 WATER SUPPLY

#### WATER USE

1 DOMESTIC

#### METHOD OF DRILLING

1 CABLE TOOL

#### CONTRACTOR

NAME OF WELL CONTRACTOR: RALPH H. POLSTON  
 ADDRESS: 13 Loomfield  
 NAME OF DRILLER OR BORER: SAME  
 SIGNATURE OF CONTRACTOR: [Signature]  
 SUBMISSION DATE: DAY 1 MO. 12 YR. 73

#### OFFICE USE ONLY

DATA SOURCE: 1  
 CONTRACTOR: 4630  
 DATE RECEIVED: 24 12 73  
 DATE OF INSPECTION: \_\_\_\_\_  
 INSPECTOR: [Signature]  
 REMARKS: \_\_\_\_\_  
 WI





# WATER WELL RECORD

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

(11)

5303789

MUNICIPALITY 53.003

CON. WL SS

COUNTY PRINCE EDWARD TOWNSHIP, HALLOWELL CON. SOUTH SIDE WEST LAKE 004 LOT 25-27

27 STATION P TORONTO M55-256 DATE COMPLETED 48-53  
DA 07 MO 06 YR 78

865440 RC 4 ELEVATION 0270 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          | SAND                 |                 | FINE                | 0            | 39 |
| BLACK          | GRAVEL               |                 | COARSE              | 39           | 42 |
| GREY           | LIMESTONE            |                 |                     | 42           | 50 |

(31) 0039608 0042831 0050215

(41) WATER RECORD

| WATER FOUND AT SET | KIND OF WATER                               |                                    |                                  |                                    |
|--------------------|---|------------------------------------|----------------------------------|------------------------------------|
| 0042               | 1 <input checked="" type="checkbox"/> FRESH | 3 <input type="checkbox"/> SULPHUR | 2 <input type="checkbox"/> SALTY | 4 <input type="checkbox"/> MINERAL |
| 0048               | 1 <input checked="" type="checkbox"/> FRESH | 3 <input type="checkbox"/> SULPHUR | 2 <input type="checkbox"/> SALTY | 4 <input type="checkbox"/> MINERAL |
|                    | 1 <input type="checkbox"/> FRESH            | 3 <input type="checkbox"/> SULPHUR | 2 <input type="checkbox"/> SALTY | 4 <input type="checkbox"/> MINERAL |
|                    | 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   |
| 06                 | 1 <input checked="" type="checkbox"/> STEEL | 188                   | 42           | 0042 |
|                    | 2 <input type="checkbox"/> GALVANIZED       |                       |              |      |
|                    | 3 <input type="checkbox"/> CONCRETE         |                       |              |      |
|                    | 4 <input type="checkbox"/> OPEN HOLE        |                       |              |      |
| 06                 | 1 <input type="checkbox"/> STEEL            |                       | 42           | 0050 |
|                    | 2 <input type="checkbox"/> GALVANIZED       |                       |              |      |
|                    | 3 <input type="checkbox"/> CONCRETE         |                       |              |      |
|                    | 4 <input type="checkbox"/> OPEN HOLE        |                       |              |      |

(61) PLUGGING & SEALING RECORD

| DEPTH SET AT - FEET | MATERIAL AND TYPE | (CEMENT GROUT LEAD PACKER, ETC.) |
|---------------------|-------------------|----------------------------------|
| 10-13               |                   |                                  |
| 18-21               |                   |                                  |
| 26-29               |                   |                                  |

(71) PUMPING TEST

PUMPING TEST METHOD: 1  PUMP 2  BAILER

PUMPING RATE: 0045 GPM

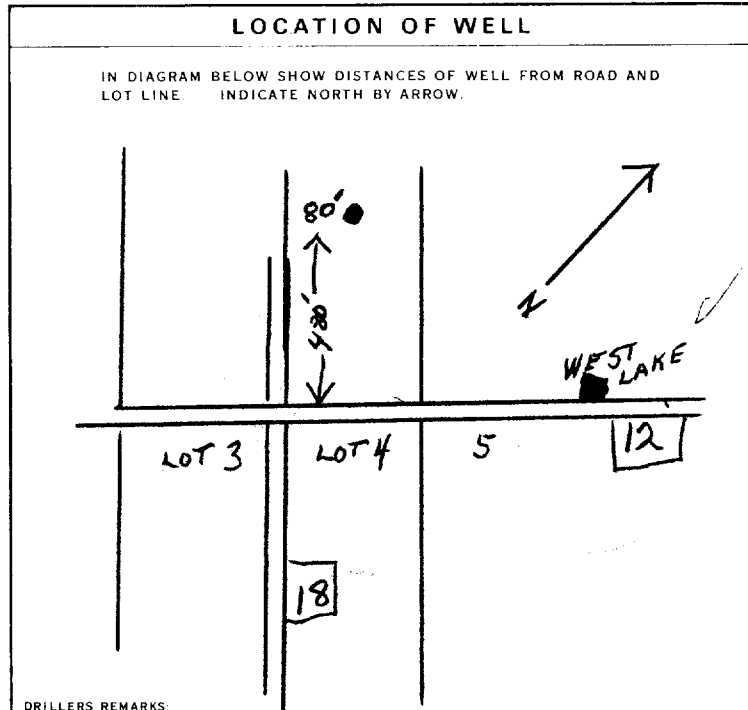
DURATION OF PUMPING: 01 HOURS 00 MINS

| STATIC LEVEL | WATER LEVEL END OF PUMPING | WATER LEVELS DURING |                 |                 |                 |
|--------------|----------------------------|---------------------|-----------------|-----------------|-----------------|
| 012          | 025                        | 15 MINUTES: 012     | 30 MINUTES: 012 | 45 MINUTES: 012 | 60 MINUTES: 012 |

RECOMMENDED PUMP TYPE:  SHALLOW  DEEP

RECOMMENDED PUMP SETTING: 047 FEET

RECOMMENDED PUMPING RATE: 0035 GPM



FINAL STATUS OF WELL: 1  WATER SUPPLY

WATER USE: 1  DOMESTIC

METHOD OF DRILLING: 4  ROTARY (AIR)

CONTRACTOR: McLENNAN DRILLING LTD, 3516 WELINGTON ONT

DRILLER OR BORER: KEN McLENNAN

SIGNATURE OF CONTRACTOR: [Signature]

SUBMISSION DATE: DAY \_\_\_\_\_ MO. \_\_\_\_\_ YR. \_\_\_\_\_

OFFICE USE ONLY

DATA SOURCE: 1

CONTRACTOR: 3516

DATE RECEIVED: 20 03 79

DATE OF INSPECTION: \_\_\_\_\_

INSPECTOR: [Signature]

REMARKS: \_\_\_\_\_



Ministry  
of the  
Environment  
Ontario

The Ontario Water Resources Act

# WATER WELL RECORD

3001145

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

11

5304019

MUNICIPALITY 530,03

CORPORATION W.L.S.S.

COUNTY OR DISTRICT: [redacted] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **Wellowell** CON. BLOCK, TRACT, SURVEY, ETC: **I.W.L.S.S.** LOT 25-27: **004**

DATE COMPLETED 48-53: DAY **08** MO **05** YR. **80**

DATE: **05/19/80** RC: **4** ELEVATION: **626.0** RC: **4** BASIN CODE: **24**

| GENERAL COLOUR | MOST COMMON MATERIAL | OTHER MATERIALS | GENERAL DESCRIPTION | DEPTH - FEET |    |
|----------------|----------------------|-----------------|---------------------|--------------|----|
|                |                      |                 |                     | FROM         | TO |
| brown          | sand                 |                 | loose               | 0            | 4  |
| brown          | sand                 | gravel          | loose               | 4            | 30 |
| brown          | sand                 | gravel          | coarse loose        | 30           | 33 |
| brown          | sand                 | gravel          | fine                | 33           | 36 |
| grey           | clay                 |                 | packed              | 36           | 42 |
| grey           | limestone            |                 | hard                | 42           | 51 |

31: [redacted] 32: [redacted]

**41 WATER RECORD**

| WATER FOUND AT - FEET | KIND OF WATER   |
|-----------------------|---|
| 10-13<br><b>0044</b>  | 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL |
| 15-18                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 20-23                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 25-28                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 30-33                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>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<br><b>6 1/2</b> | 1 <input checked="" type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE | <b>188</b>            | 0            | <b>0044</b><br><b>43'6"</b> |
| 17-18<br><b>6 1/2</b> | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input checked="" type="checkbox"/> OPEN HOLE |                       | <b>43'6"</b> | <b>0051</b>                 |
| 24-25                 | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE            |                       |              |                             |

**SCREEN**

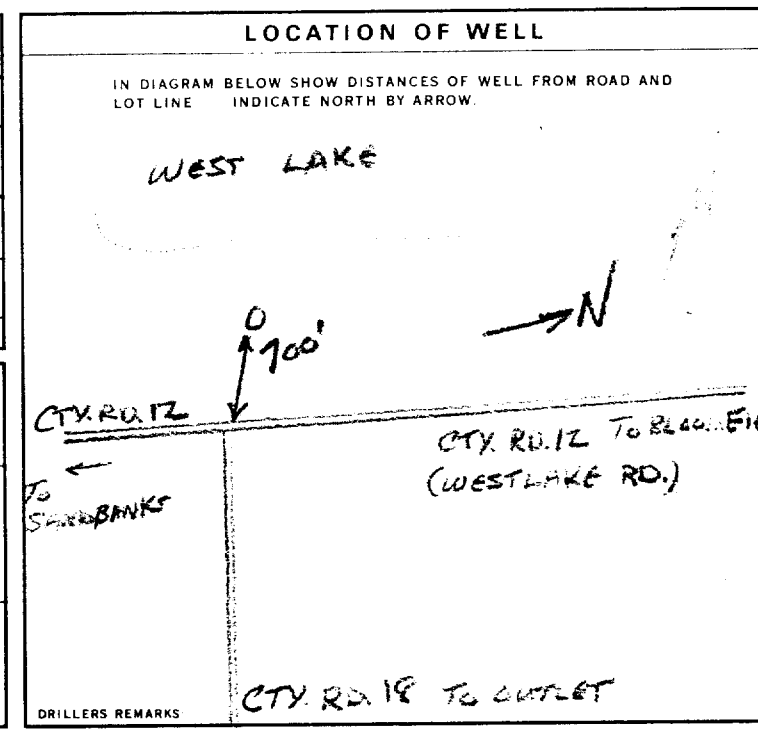
| SIZE (S) OF OPENING (SLOT NO.) | DIAMETER | LENGTH                 |
|--------------------------------|----------|------------------------|
|                                | INCHES   | FEET                   |
| MATERIAL AND TYPE              |          | DEPTH TO TOP OF SCREEN |
|                                |          | 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  | PUMPING RATE               | DURATION OF PUMPING  |
|--|----------------------------|--|
| 1 <input type="checkbox"/> PUMP 2 <input checked="" type="checkbox"/> BAILER | <b>0040</b> GPM            | 15-16 HOURS 30 17-18 MINS  |
| STATIC LEVEL   | WATER LEVEL END OF PUMPING | WATER LEVELS DURING  |
| 19-21  | 22-24                      | 15 MINUTES 26-28 30 MINUTES 29-31 45 MINUTES 32-34 60 MINUTES 35-37                |
| <b>015</b> FEET  | <b>018</b> FEET            | <b>015</b> FEET <b>015</b> FEET <b>015</b> FEET <b>015</b> FEET                    |
| IF FLOWING, GIVE RATE  | PUMP INTAKE SET AT         | WATER AT END OF TEST   |
|  | GPM                        | FEET 1 <input checked="" type="checkbox"/> CLEAR 2 <input type="checkbox"/> CLOUDY |
| RECOMMENDED PUMP TYPE  | RECOMMENDED PUMP SETTING   | RECOMMENDED PUMPING RATE   |
| <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP    | <b>048</b> FEET            | <b>0040</b> GPM  |



**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

**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 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: **CHALK WELL DRILLING LTD.** LICENCE NUMBER: **1507**

ADDRESS: **R.R.#6 Napanee**

NAME OF DRILLER OR BORER: **George R. Chalk** LICENCE NUMBER: **1559**

SIGNATURE OF CONTRACTOR: [Signature] SUBMISSION DATE: DAY **8** MO **5** YR. **80**

CHALK WELL DRILLING LTD.

**OFFICE USE ONLY**

DATA SOURCE: [redacted] CONTRACTOR: **1507** DATE RECEIVED: **220181**

DATE OF INSPECTION: [redacted] INSPECTOR: [redacted]

REMARKS: [Signature]

5304188

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

CITY OR DISTRICT: **Prince Edward** TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **Hallowell** CON. BLOCK TRACT SURVEY ETC.: **WISS** LOT: **25-27**  
 ADDRESS: **West Lake** DATE COMPLETED: DAY **18** MO **5** YR **82**

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

| GENERAL COLOUR | MOST COMMON MATERIAL | OTHER MATERIALS | GENERAL DESCRIPTION | DEPTH - FEET |    |
|----------------|----------------------|-----------------|---------------------|--------------|----|
|                |                      |                 |                     | FROM         | TO |
| brown          | sand                 |                 | loose               | 0            | 6  |
| brown          | sand                 | gravel          | loose               | 6            | 38 |
| grey           | limestone            |                 | loose               | 38           | 40 |
| grey           | limestone            |                 | hard                | 40           | 45 |

**1 WATER RECORD**

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

**51 CASING & OPEN HOLE RECORD**

| INSIDE DIAM. INCHES | MATERIAL  | WALL THICKNESS INCHES | DEPTH - FEET |    |
|---------------------|---|-----------------------|--------------|----|
|                     |   |                       | FR. M.       | TO |
| 6 1/2               | <input checked="" type="checkbox"/> STEEL<br><input type="checkbox"/> GALVANIZED<br><input type="checkbox"/> CONCRETE<br><input type="checkbox"/> OPEN HOLE   | .188                  | 0            | 41 |
| 6 1/2               | <input type="checkbox"/> STEEL<br><input type="checkbox"/> GALVANIZED<br><input type="checkbox"/> CONCRETE<br><input checked="" type="checkbox"/> OPEN HOLE<br><input type="checkbox"/> STEEL<br><input type="checkbox"/> GALVANIZED<br><input type="checkbox"/> CONCRETE<br><input type="checkbox"/> OPEN HOLE |                       | 41           | 45 |

**SCREEN**

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

**51 PLUGGING & SEALING RECORD**

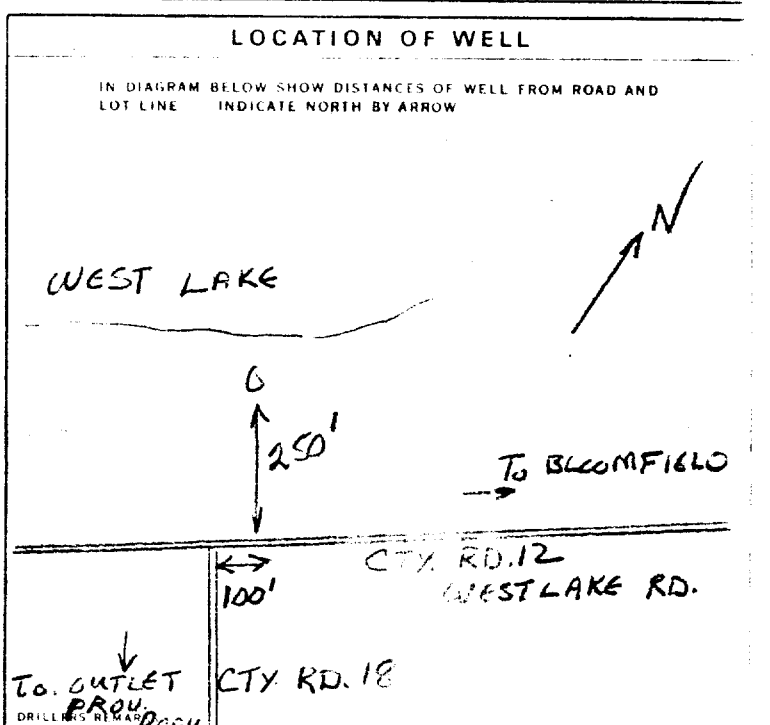
| DEPTH SET AT - FEET | MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.) |
|---------------------|---|
| FR. M.              | TO  |
| 10-17               | 18-17   |
| 18-21               | 22-25   |
| 26-27               | 27-30   |

**PUMPING TEST METHOD**  PUMP  BAILER

**PUMPING RATE** 40 GPM **DURATION OF PUMPING** 1 HOURS 30 MIN.

| STATIC LEVEL | WATER LEVEL END OF PUMPING | WATER LEVELS DURING |            |            |            |  |
|--------------|----------------------------|---------------------|------------|------------|------------|--|
|              |                            | 15 MINUTES          | 30 MINUTES | 45 MINUTES | 60 MINUTES |  |
| 12 FEET      | 18 FEET                    | 12 FEET             | 12 FEET    | 12 FEET    | 12 FEET    |  |

**RECOMMENDED PUMP TYPE**  SHALLOW  DEEP **RECOMMENDED PUMP SETTING** 40 FEET **RECOMMENDED PUMPING RATE** 40 GPM



**FINAL STATUS OF WELL**

|  |  |
|--|--|
| <input checked="" type="checkbox"/> WATER SUPPLY | <input type="checkbox"/> ABANDONED - INSUFFICIENT SUPPLY |
| <input type="checkbox"/> OBSERVATION WELL        | <input type="checkbox"/> ABANDONED - POOR QUALITY        |
| <input type="checkbox"/> TEST HOLE               | <input type="checkbox"/> UNFINISHED                      |
| <input type="checkbox"/> RECHARGE WELL           |  |

**WATER USE**

|  |  |
|--|--|
| <input checked="" type="checkbox"/> DOMESTIC | <input type="checkbox"/> COMMERCIAL                  |
| <input type="checkbox"/> STOCK               | <input type="checkbox"/> MUNICIPAL                   |
| <input type="checkbox"/> IRRIGATION          | <input type="checkbox"/> PUBLIC SUPPLY               |
| <input type="checkbox"/> INDUSTRIAL          | <input type="checkbox"/> COOLING OR AIR CONDITIONING |
| <input type="checkbox"/> OTHER               | <input type="checkbox"/> NOT USED                    |

**METHOD OF DRILLING**

|  |                                  |
|--|----------------------------------|
| <input checked="" type="checkbox"/> CABLE TOOL | <input type="checkbox"/> BORING  |
| <input type="checkbox"/> ROTARY (CONVENTIONAL) | <input type="checkbox"/> DIAMOND |
| <input type="checkbox"/> ROTARY (REVERSE)      | <input type="checkbox"/> JETTING |
| <input type="checkbox"/> ROTARY (AIR)          | <input type="checkbox"/> DRIVING |
| <input type="checkbox"/> AIR PERCUSSION        |                                  |

**NAME OF WELL CONTRACTOR** CHALK WELL DRILLING LTD. **LICENCE NUMBER** 1507

**ADDRESS** R.R.#6 Napanee

**NAME OF DRILLER OR BORER** R. Ian Chalk **LICENCE NUMBER** 1576

**SIGNATURE OF CONTRACTOR** **SUBMISSION DATE** DAY 18 MO 5 YR 82

**OFFICE USE ONLY**

**DATE OF INSPECTION** 20 01 83

**REMARKS**

# WATER WELL RECORD

30 N 14 F

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

11

5304188

MUNICIPALITY 53003

CON. WL 55

COUNTY OR DISTRICT: [REDACTED] TOWNSHIP BOROUGH CITY TOWN VILLAGE: **Hallowell** CON. BLOCK TRACT SURVEY ETC: **WLSS** LOT: **004**

DATE COMPLETED: 48-53: **4** DAY: **18** MO: **05** YR: **82**

DEPTH: **65.199** RC: **4** ELEVATION: **0270** 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          | sand                 |                 | loose               | 0            | 6  |
| brown          | sand                 | gravel          | loose               | 6            | 38 |
| grey           | limestone            |                 | loose               | 38           | 40 |
| grey           | limestone            |                 | hard                | 40           | 45 |

31: 000662877, 00386281177, 004021577, 004521578

#### 41 WATER RECORD

| WATER FOUND AT - FEET | KIND OF WATER   |
|-----------------------|---|
| 0041                  | 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL |
| 15-18                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 20-23                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 25-28                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 30-33                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |

#### 51 CASING & OPEN HOLE RECORD

| INSIDE DIAM. INCHES | MATERIAL  | WALL THICKNESS INCHES | DEPTH - FEET |
|---------------------|---|-----------------------|--------------|
| 06 5/8              | 1 <input checked="" type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE | .188                  | 0 0041       |
| 06 5/8              | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input checked="" type="checkbox"/> OPEN HOLE |                       | 41 0045      |

#### SCREEN RECORD

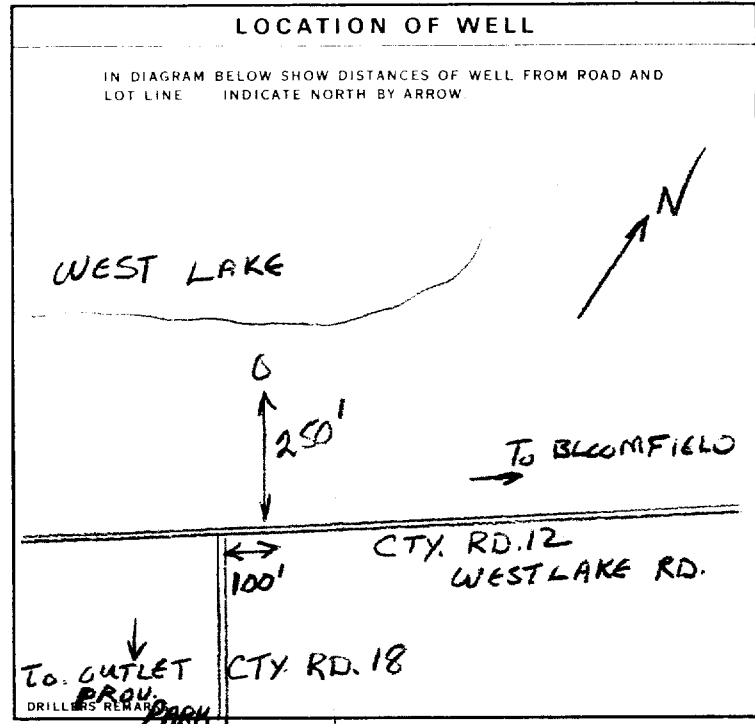
| SIZE/ST. OF OPENING | DIAMETER | LENGTH |
|---------------------|----------|--------|
| 31-33               | 34-38    | 39-40  |

#### 61 PLUGGING & SEALING RECORD

| DEPTH SET AT - FEET | MATERIAL AND TYPE | CEMENT GROUT LEAD PACKER ETC. |
|---------------------|-------------------|-------------------------------|
| 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 checked="" type="checkbox"/> BAILER | 0040 GPM                   | 01 15-16 HOURS 30 17-18 MINS.  |
| STATIC LEVEL   | WATER LEVEL END OF PUMPING | WATER LEVELS DURING  |
| 012 FEET   | 018 FEET                   | 15 MINUTES: 012 FEET, 30 MINUTES: 012 FEET, 45 MINUTES: 012 FEET, 60 MINUTES: 012 FEET |
| RECOMMENDED PUMP TYPE  | RECOMMENDED PUMP SETTING   | RECOMMENDED PUMPING RATE   |
| <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP    | 040 FEET                   | 0040 GPM   |



#### 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

#### WATER USE

01 1  DOMESTIC 5  COMMERCIAL  
2  STOCK 6  MUNICIPAL  
3  IRRIGATION 7  PUBLIC SUPPLY  
4  INDUSTRIAL 8  COOLING OR AIR CONDITIONING  
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: **CHALK WELL DRILLING LTD.** LICENCE NUMBER: **1507**

ADDRESS: **R.R.#6 Napanee**

NAME OF DRILLER OR BORER: **R. Ian Chalk** LICENCE NUMBER: **1576**

SIGNATURE OF CONTRACTOR: [Signature] SUBMISSION DATE: DAY **18** MO. **5** YR. **82**

#### OFFICE USE ONLY

DATA SOURCE: **1** CONTRACTOR: **1507** DATE RECEIVED: **20 01 83**

DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

REMARKS: [Signature]

# WATER WELL RECORD

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

11

5304189

MUNICIP 53.003

CON. WL 55

COUNTY OR DISTRICT: [REDACTED] TOWNSHIP, BOROUGH CITY TOWN VILLAGE: **Hallowell** CON. BLOCK TRACT SURVEY ETC: **004**  
**West Lake** DATE COMPLETED: **W.L.S.S. 4**  
 DAY **15** MO **05** YR **82**  
 I II III IV  
 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

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

| GENERAL COLOUR | MOST COMMON MATERIAL | OTHER MATERIALS | GENERAL DESCRIPTION | DEPTH - FEET |    |
|----------------|----------------------|-----------------|---------------------|--------------|----|
|                |                      |                 |                     | FROM         | TO |
| brown          | sand                 |                 | loose               | 0            | 5  |
| brown          | sand                 | gravel          | loose               | 5            | 40 |
| grey           | limestone            |                 | hard                | 40           | 45 |

31 000562877 00406281177 004521573  
 32

**41 WATER RECORD**

| WATER FOUND AT - FEET | KIND OF WATER   |
|-----------------------|---|
| 10-13<br>0041         | 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL |
| 15-18                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 20-23                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 25-28                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 30-33                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |

**51 CASING & OPEN HOLE RECORD**

| INSIDE DIAM. INCHES | MATERIAL  | WALL THICKNESS INCHES | DEPTH - FEET |
|---------------------|---|-----------------------|--------------|
| 10-11<br>06<br>57   | 1 <input checked="" type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE | .188                  | 0            |
| 17-18<br>06<br>57   | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input checked="" type="checkbox"/> OPEN HOLE |                       | 41'4" 0045   |
| 24-25               | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE            |                       | 27-30        |

**SCREEN**

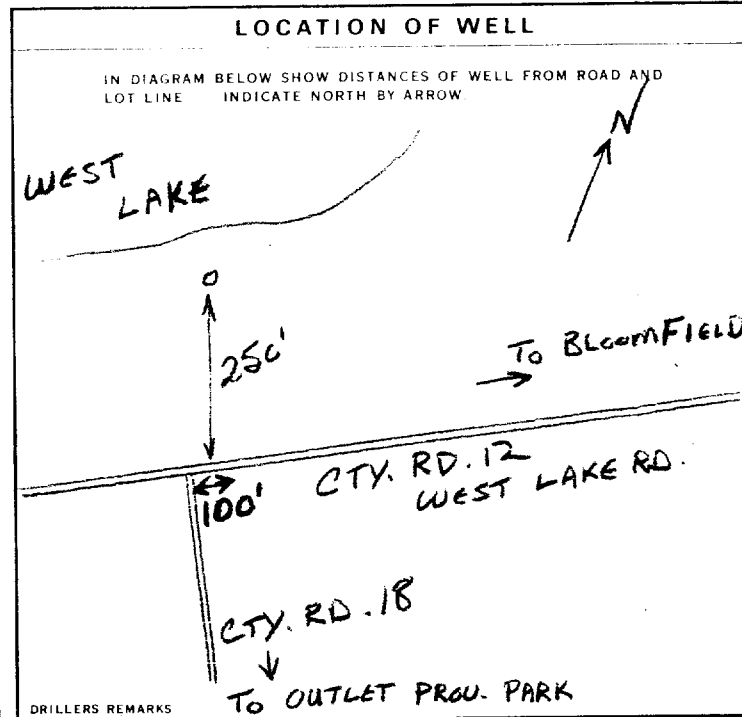
| SIZE(S) OF OPENING (SLOT NO.) | DIAMETER | LENGTH                       |
|-------------------------------|----------|------------------------------|
| 31-33                         | 34-38    | 39-40                        |
| MATERIAL AND TYPE             |          | DEPTH TO TOP OF SCREEN 41-48 |
|                               |          | FEET 10                      |

**61 PLUGGING & SEALING RECORD**

| DEPTH SET AT | FEET  | MATERIAL AND TYPE | CEMENT GROUT LEAD PACKER ETC. |
|--------------|-------|-------------------|-------------------------------|
| 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 checked="" type="checkbox"/> BAILER | 0040 GPM                   | 01 15-16 HOURS 30 17-18 MIN.  |
| STATIC LEVEL   | WATER LEVEL END OF PUMPING | WATER LEVELS DURING   |
| 19-21<br>012 FEET  | 22-24<br>018 FEET          | 15 MINUTES 26-28<br>012 FEET  |
|  |                            | 30 MINUTES 29-31<br>012 FEET  |
|  |                            | 45 MINUTES 32-34<br>012 FEET  |
|  |                            | 60 MINUTES 35-37<br>012 FEET  |
| IF FLOWING GIVE RATE   | PUMP INTAKE SET AT         | WATER AT END OF TEST  |
|  | GPM                        | 1 <input checked="" type="checkbox"/> CLEAR 2 <input type="checkbox"/> CLOUDY |
| RECOMMENDED PUMP TYPE  | RECOMMENDED PUMP SETTING   | RECOMMENDED PUMPING RATE  |
| <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP    | 43-45<br>040 FEET          | 46-49<br>0040 GPM   |



**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

**WATER USE** 01 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** 1  CABLE TOOL 5  BORING  
 2  ROTARY (CONVENTIONAL) 6  DIAMOND  
 3  ROTARY (REVERSE) 7  JETTING  
 4  ROTARY (AIR) 8  DRIVING  
 5  AIR PERCUSSION

**CONTRACTOR**

NAME OF WELL CONTRACTOR: **CHALK WELL DRILLING LTD.** LICENCE NUMBER: **1507**  
 ADDRESS: **R.R.#6 Napanee**  
 NAME OF DRILLER OR BORER: **R. Ian Chalk** LICENCE NUMBER: **1576**  
 SIGNATURE OF CONTRACTOR: [Signature] SUBMISSION DATE: DAY **15** MO **5** YR **82**  
**CHALK WELL DRILLING LTD.**

**OFFICE USE ONLY**

DATA SOURCE: **1** CONTRACTOR: **1507** RECEIVED: **20 01 83**  
 DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_  
 REMARKS: [Signature]

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

11 5304201 53.003 WL SS  
 COUNTY OR DISTRICT: [REDACTED] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Hallowell CON. BLOCK TRACT, SURVEY, ETC: [REDACTED] LOT: 0037  
 DATE COMPLETED: 02 MO 12 YR 82  
 NG: 65099 RC: A ELEVATION: 0260 RC: A 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          | sand                 | gravel          | loose               | 0            | 10 |
| brown          | hardpan              | gravel          | hard packed         | 10           | 34 |
|                | gravel               |                 | coarse              | 34           | 35 |

31 010628 1177 0034614 1179 0035 31 0037 00  
 32

41 WATER RECORD

| WATER FOUND AT - FEET | KIND OF WATER   |
|-----------------------|---|
| 10-13                 | 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL |
| 15-18                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 20-23                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 25-28                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 30-33                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>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         |
| 06 6 1/2           | 1 <input checked="" type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE | .188                  | 0            | 0035 36'6" |
| 06 6 1/2           | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input checked="" type="checkbox"/> OPEN HOLE |                       | 36'6"        | 0037 35'   |

SCREEN

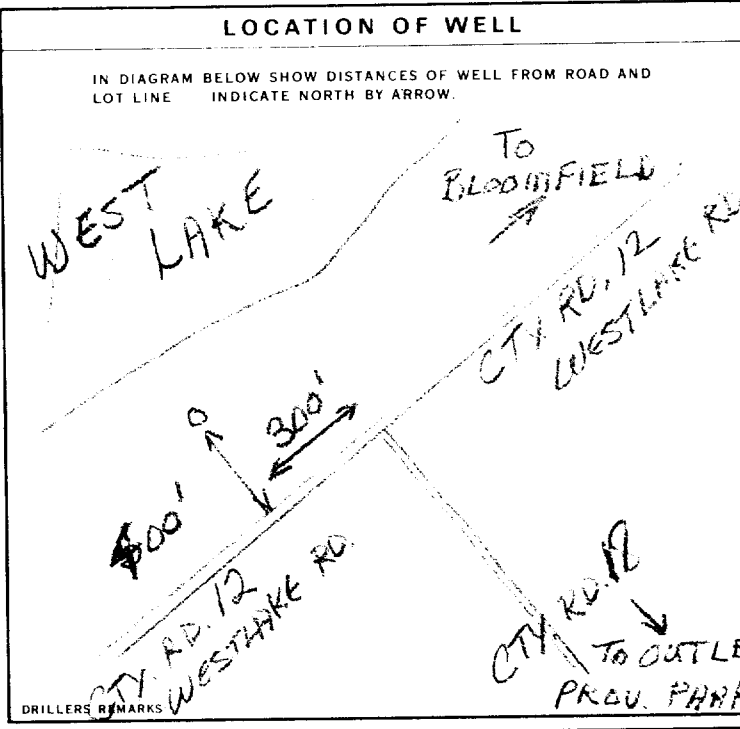
| SIZE(S) OF OPENING (SLOT NO.) | DIAMETER | LENGTH                 |
|-------------------------------|----------|------------------------|
|                               | INCHES   | FEET                   |
|                               |          | DEPTH TO TOP OF SCREEN |
|                               |          | 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 80      |                   |                                  |

71 PUMPING TEST

| PUMPING TEST METHOD  | PUMPING RATE               | DURATION OF PUMPING   |
|--|----------------------------|---|
| 1 <input type="checkbox"/> PUMP 2 <input checked="" type="checkbox"/> BAILER | 0030 GPM                   | 02 15-16 HOURS 00 17-18 MINS  |
| STATIC LEVEL   | WATER LEVEL END OF PUMPING | WATER LEVELS DURING   |
| 19-21  | 22-24                      | 15 MINUTES 26-28 30 MINUTES 29-31 45 MINUTES 32-34 60 MINUTES 35-37 |
| 015 FEET   | 025 FEET                   | 015 FEET 015 FEET 015 FEET 015 FEET                                 |
| IF FLOWING, GIVE RATE  | PUMP INTAKE SET AT         | WATER AT END OF TEST  |
|  | GPM                        | FEET  |
| RECOMMENDED PUMP TYPE  | RECOMMENDED PUMP SETTING   | RECOMMENDED PUMPING RATE  |
| <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP    | 030 FEET                   | 0030 GPM  |



FINAL STATUS OF WELL: 1  WATER SUPPLY

WATER USE: 01

METHOD OF DRILLING: 1  CABLE TOOL

CONTRACTOR: CHALK WELL DRILLING LTD. LICENCE NUMBER: 1507

NAME OF DRILLER OR BORER: R. Ian Chalk LICENCE NUMBER: 1576

SUBMISSION DATE: 2 12 82

OFFICE USE ONLY

DATA SOURCE: 1 1507 CONTRACTOR: 1507 RECEIVED: 20 01 83

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

REMARKS: [REDACTED]

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

11

5304397

MUNICIPALITY 53003

CON. NO. WL SS

COUNTY OR DISTRICT: Prince Edward  
TOWNSHIP, BOROUGH CITY, TOWN VILLAGE: Hallowell  
CON. BLOCK TRACT SURVEY ETC: I.W.L.S.S.  
LOT: 5  
DATE COMPLETED: 48-53  
DAY: 13 MO: 1 YR: 84  
R.R. #1 Picton

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

| GENERAL COLOUR | MOST COMMON MATERIAL | OTHER MATERIALS | GENERAL DESCRIPTION | DEPTH - FEET |    |
|----------------|----------------------|-----------------|---------------------|--------------|----|
|                |                      |                 |                     | FROM         | TO |
| brown          | sand                 | gravel          | loose               | 0            | 22 |
| gray           | shale                |                 | loose               | 22           | 26 |
| gray           | limestone            |                 | hard                | 26           | 73 |

31  
32

**41 WATER RECORD**

| WATER FOUND AT - FEET | KIND OF WATER   |
|-----------------------|---|
| 26                    | 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL |
| 70                    | 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>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 |
| 6 1/2              | 1 <input checked="" type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE | .188                  | 0            | 27 |
| 6 1/2              | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input checked="" type="checkbox"/> OPEN HOLE |                       | 27           | 73 |

**SCREEN**

| SIZE(S) OF OPENING (SLOT NO. 1) | DIAMETER INCHES | LENGTH FEET |
|---------------------------------|-----------------|-------------|
|                                 |                 |             |

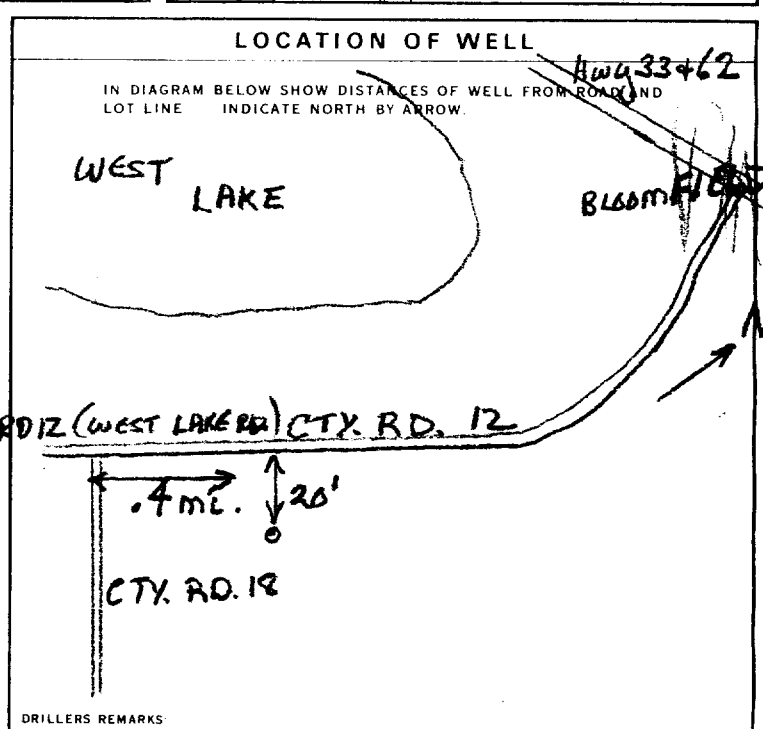
**61 PLUGGING & SEALING RECORD**

| DEPTH SET AT - FEET | MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.) |
|---------------------|---|
| 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 checked="" type="checkbox"/> BAILER | 8 GPM        | 15-16 HOURS 15 MINS |

| STATIC LEVEL | WATER LEVEL END OF PUMPING | WATER LEVELS DURING |            |            |            |       |  |
|--------------|----------------------------|---------------------|------------|------------|------------|-------|--|
| 19 FEET      | 68 FEET                    | 15 MINUTES          | 30 MINUTES | 45 MINUTES | 60 MINUTES | 35-37 |  |
|              |                            | 24 FEET             | 19 FEET    | 19 FEET    | 19 FEET    |       |  |



**FINAL STATUS OF WELL**

|  |   |
|--|---|
| 1 <input checked="" type="checkbox"/> WATER SUPPLY | 5 <input 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"/> REC-HARGE WELL          |   |

**WATER USE**

|  |  |
|--|--|
| 1 <input checked="" 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 |
| 9 <input type="checkbox"/> OTHER               | 9 <input type="checkbox"/> NOT USED                    |

**METHOD OF DRILLING**

|  |                                    |
|--|------------------------------------|
| 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        |                                    |

**CONTRACTOR**

NAME OF WELL CONTRACTOR: CHALK WELL DRILLING LTD. LICENCE NUMBER: 1507  
ADDRESS: R.R. #6 Napanee  
NAME OF SALESMAN OR REPRESENTATIVE: R. Ian Chalk LICENCE NUMBER: 1576  
SIGNATURE OF CONTRACTOR: [Signature]  
SUBMISSION DATE: DAY 13 NO. 1 YR. 84

**DRILLERS REMARKS**

DATE RECEIVED: 240185  
CONTRACTOR: 1507  
INSPECTOR: [Signature]  
REMARKS: [Signature]

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

11

5304498

MUNICIPALITY: \_\_\_\_\_ CON. BLOCK, TRACT, SURVEY, ETC. \_\_\_\_\_ LOT 25-27 \_\_\_\_\_

COUNTY OR DISTRICT: **Prince Edward** TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **Hallowell** CON. BLOCK, TRACT, SURVEY, ETC.: **W.L.S.S. 3** LOT 25-27: **3**

R.R.#1 Picton DATE COMPLETED: DAY **4** MO. **9** YR. **85**

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

| GENERAL COLOUR | MOST COMMON MATERIAL | OTHER MATERIALS | GENERAL DESCRIPTION | DEPTH - FEET |    |
|----------------|----------------------|-----------------|---------------------|--------------|----|
|                |                      |                 |                     | FROM         | TO |
| brown          | topsoil              |                 | loose               | 0            | 1  |
| brown          | sand                 |                 | loose               | 1            | 10 |
| brown          | sand                 | gravel          | loose               | 10           | 26 |
| grey           | shale                |                 | loose               | 26           | 28 |
| grey           | limestone            |                 | hard                | 28           | 42 |

31 \_\_\_\_\_ 32 \_\_\_\_\_

**41 WATER RECORD**

| WATER FOUND AT - FEET | KIND OF WATER   |
|-----------------------|---|
| 34                    | 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL |
| 37                    | 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL |
|                       | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
|                       | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
|                       | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>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 |
| 6 1/4              | 1 <input checked="" type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE | .188                  | 0            | 30 |
| 6 1/4              | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input checked="" type="checkbox"/> OPEN HOLE |                       | 30           | 42 |
|                    | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE            |                       | 27-30        |    |

**SCREEN**

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

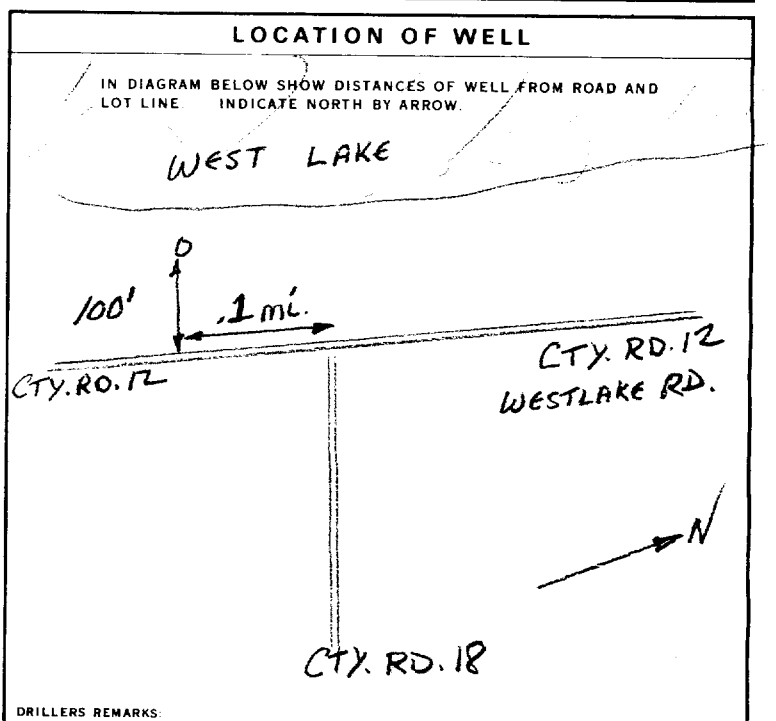
MATERIAL AND TYPE \_\_\_\_\_ DEPTH TO TOP OF SCREEN \_\_\_\_\_ FEET

**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 |   |
| 28-29               | 30-33 |   |

**71 PUMPING TEST**

| PUMPING TEST METHOD  | PUMPING RATE               | DURATION OF PUMPING   |
|--|----------------------------|---|
| 1 <input type="checkbox"/> PUMP 2 <input checked="" type="checkbox"/> BAILER | 30 GPM                     | 1 15-16 HOURS 30 17-18 MINS   |
| STATIC LEVEL   | WATER LEVEL END OF PUMPING | WATER LEVELS DURING   |
| 12 FEET  | 20 FEET                    | 15 MINUTES: 12 FEET 30 MINUTES: 12 FEET 45 MINUTES: 12 FEET 60 MINUTES: 12 FEET |
| IF FLOWING, GIVE RATE  | PUMP INTAKE SET AT         | WATER AT END OF TEST  |
|  | 39 FEET                    | 1 <input checked="" type="checkbox"/> CLEAR 2 <input type="checkbox"/> CLOUDY   |
| RECOMMENDED PUMP TYPE  | RECOMMENDED PUMP SETTING   | RECOMMENDED PUMPING RATE  |
| <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP    | 39 FEET                    | 30 GPM  |



**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

**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 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: **CHALK WELL DRILLING LTD.** LICENCE NUMBER: **1507**

ADDRESS: **R.R.#6 Napanee**

NAME OF DRILLER OR BORER: **R. Ian Chalk** LICENCE NUMBER: **1576**

SIGNATURE OF CONTRACTOR: **CHALK WELL DRILLING LTD.** SUBMISSION DATE: DAY **4** MO. **9** YR. **85**

**DATA SOURCE** 58 CONTRACTOR 59-62 DATA SOURCE ID: **220186** 63-68

DATE OF INSPECTION \_\_\_\_\_ INSPECTOR \_\_\_\_\_

REMARKS \_\_\_\_\_

CSS-ES

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

11 5304575

COUNTY OR DISTRICT: **Prince Edward** TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: **Hallowell** CON. BLOCK, TRACT, SURVEY, ETC: **W.L.S.S.** LOT: **4**  
R.R.#1 **Pictou** DATE COMPLETED: DAY **11** MO **6** YR **86**

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

| GENERAL COLOUR | MOST COMMON MATERIAL | OTHER MATERIALS | GENERAL DESCRIPTION | DEPTH - FEET |    |
|----------------|----------------------|-----------------|---------------------|--------------|----|
|                |                      |                 |                     | FROM         | TO |
| brown          | sand                 |                 | loose               | 0            | 5  |
| brown          | sand                 | clay            | packed              | 5            | 36 |
| brown          | sand                 | fine gravel     | loose               | 36           | 38 |
| brown          | limestone            |                 | hard                | 38           | 50 |

31 32

**41 WATER RECORD**

| WATER FOUND AT - FEET | KIND OF WATER   |
|-----------------------|---|
| 10-13<br><b>43</b>    | 1 <input checked="" type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL |
| 15-18                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 20-23                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 25-28                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>2 <input type="checkbox"/> SALTY 4 <input type="checkbox"/> MINERAL            |
| 30-33                 | 1 <input type="checkbox"/> FRESH 3 <input type="checkbox"/> SULPHUR<br>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    |
| 6 1/2              | 1 <input checked="" type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE | .188                  | 0            | 39    |
| 6 1/2              | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input checked="" type="checkbox"/> OPEN HOLE |                       | 39           | 50    |
| 24-25              | 1 <input type="checkbox"/> STEEL<br>2 <input type="checkbox"/> GALVANIZED<br>3 <input type="checkbox"/> CONCRETE<br>4 <input type="checkbox"/> OPEN HOLE            |                       |              | 27-30 |

**SCREEN**

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

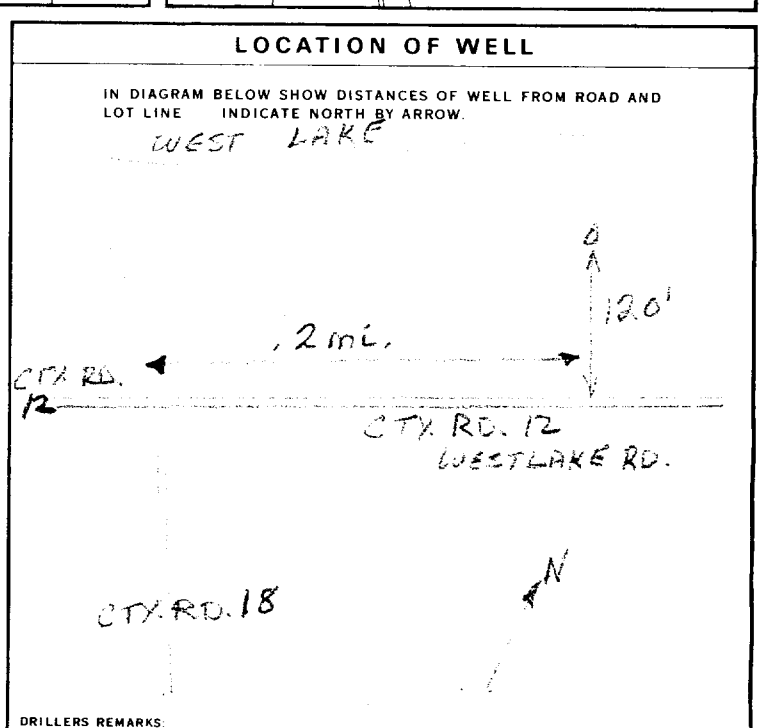
MATERIAL AND TYPE: \_\_\_\_\_ DEPTH TO TOP OF SCREEN: 41-44 FEET

**61 PLUGGING & SEALING RECORD**

| DEPTH SET AT - FEET | MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.) |
|---------------------|---|
| 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 checked="" type="checkbox"/> BAILER                                | 30 GPM                              | 1 15-16 HOURS 15 17-18 MINS  |
| STATIC LEVEL: 22 FEET   | WATER LEVEL END OF PUMPING: 30 FEET | WATER LEVELS DURING:   |
|   |                                     | 15 MINUTES: 30 FEET 26-28<br>30 MINUTES: 30 FEET 29-31<br>45 MINUTES: 30 FEET 32-34<br>60 MINUTES: 30 FEET 35-37 |
| IF FLOWING, GIVE RATE: _____ GPM  | PUMP INTAKE SET AT: 45 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: _____     | RECOMMENDED PUMPING RATE: 30 GPM   |



**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

**WATER USE**

1  DOMESTIC 5  COMMERCIAL  
2  STOCK 6  MUNICIPAL  
3  IRRIGATION 7  PUBLIC SUPPLY  
4  INDUSTRIAL 8  COOLING OR AIR CONDITIONING  
9  OTHER

**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: **CHALK WELL DRILLING LTD.** LICENCE NUMBER: **1507**  
ADDRESS: **R.R.#6 Napanee**  
NAME OF DRILLER OR BORER: **R. Ian Chalk** LICENCE NUMBER: **t-0047**  
SIGNATURE OF CONTRACTOR: \_\_\_\_\_ SUBMISSION DATE: DAY **11** NO. **6** YR. **86**

**OFFICE USE ONLY**

DATA SOURCE: \_\_\_\_\_ CONTRACTOR: \_\_\_\_\_ DATE RECEIVED: **300187**  
DATE OF INSPECTION: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_  
REMARKS: \_\_\_\_\_











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

11

5306332

Municipality 53003 Con. ML SS

|  |  |   |                                   |
|--|--|---|-----------------------------------|
| County or District                           | Township/Borough/City/Town/Village<br><b>Hallowell</b> | Con block tract survey, etc.<br><b>W.L.S.S.</b> | Lot<br><b>5</b>                   |
| Address<br><b>R. R. # 1, Picton, Ontario</b> |  | Date completed                                  | <b>02 05 96</b><br>day month year |

Northings: 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

| LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions) |                      |                 |                     |              |    |
|--|----------------------|-----------------|---------------------|--------------|----|
| General colour   | Most common material | Other materials | General description | Depth - feet |    |
|  |                      |                 |                     | From         | To |
| Brown  | Sand                 |                 | Loose               | 0            | 4  |
| Brown  | Sand                 | Gravel          | Loose               | 4            | 28 |
| Brown  | Sand                 |                 | Fine                | 28           | 36 |
| Brown  | Gravel               |                 | Coarse              | 36           | 38 |

31  
32

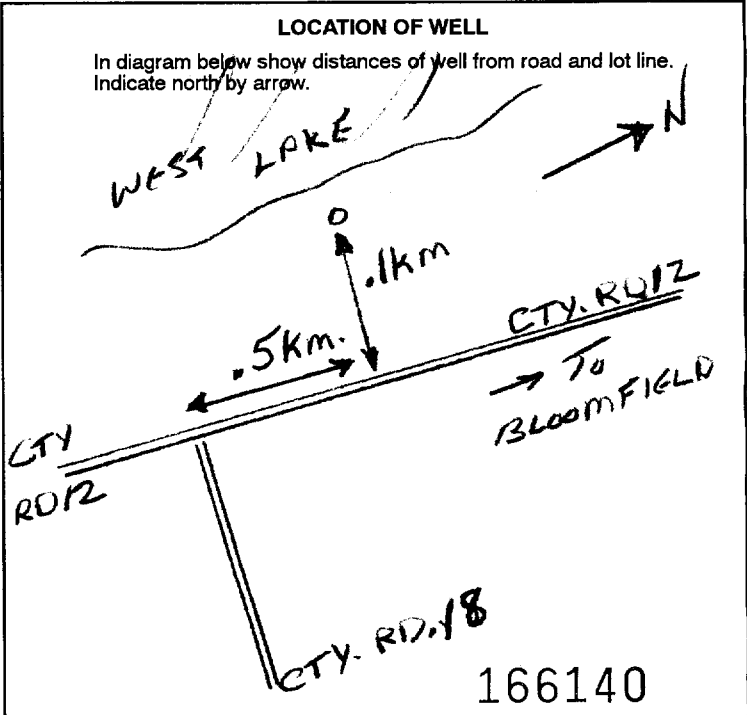
| WATER RECORD          |  |
|-----------------------|--|
| Water found at - feet | Kind of water  |
| 38                    | <input checked="" type="checkbox"/> Fresh<br><input type="checkbox"/> Salty<br><input type="checkbox"/> Sulphur<br><input type="checkbox"/> Minerals<br><input type="checkbox"/> Gas |

| CASING & OPEN HOLE RECORD |          |                       |              |        |
|---------------------------|----------|-----------------------|--------------|--------|
| Inside diam inches        | Material | Wall thickness inches | Depth - feet |        |
|                           |          |                       | From         | To     |
| 6 1/2"                    | Steel    | .188                  | 0            | 39' 6" |

| SCREEN | Sizes of opening (Slot No.) | Diameter inches | Length feet |
|--------|-----------------------------|-----------------|-------------|
|        |                             |                 |             |

| PLUGGING & SEALING RECORD |   |
|---------------------------|---|
| Depth set at - feet       | Material and type (Cement grout, bentonite, etc.) |
| 12                        | Cement  |

| PUMPING TEST   |                            |
|--|----------------------------|
| Pumping test method  | Pumping rate               |
| <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Bailer                 | 30 GPM                     |
| Static level   | Water level end of pumping |
| 16 feet  | 25 feet                    |
| Water levels during  | Duration of pumping        |
| 15 minutes: 25 feet<br>30 minutes: 25 feet<br>45 minutes: 25 feet<br>60 minutes: 25 feet | 3 Hours 0 Mins             |



| FINAL STATUS OF WELL                             |   |
|--|---|
| <input checked="" type="checkbox"/> Water supply | <input type="checkbox"/> Abandoned, insufficient supply |
| <input type="checkbox"/> Observation well        | <input type="checkbox"/> Abandoned, poor quality        |
| <input type="checkbox"/> Test hole               | <input type="checkbox"/> Abandoned (Other)              |
| <input type="checkbox"/> Recharge well           | <input type="checkbox"/> Dewatering                     |
| <input type="checkbox"/> Unfinished              | <input type="checkbox"/> Replacement well               |

| WATER USE                                    |   |
|--|---|
| <input checked="" type="checkbox"/> Domestic | <input type="checkbox"/> Commercial                 |
| <input type="checkbox"/> Stock               | <input type="checkbox"/> Municipal                  |
| <input type="checkbox"/> Irrigation          | <input type="checkbox"/> Public supply              |
| <input type="checkbox"/> Industrial          | <input type="checkbox"/> Cooling & air conditioning |
| <input type="checkbox"/> Not used            | <input type="checkbox"/> Other                      |

| METHOD OF CONSTRUCTION                         |   |
|--|---|
| <input checked="" type="checkbox"/> Cable tool | <input type="checkbox"/> Air percussion |
| <input type="checkbox"/> Rotary (conventional) | <input type="checkbox"/> Boring         |
| <input type="checkbox"/> Rotary (reverse)      | <input type="checkbox"/> Diamond        |
| <input type="checkbox"/> Rotary (air)          | <input type="checkbox"/> Jetting        |
| <input type="checkbox"/> Driving               | <input type="checkbox"/> Digging        |
| <input type="checkbox"/> Other                 | <input type="checkbox"/> Other          |

|   |  |
|---|--|
| Name of Well Contractor<br><b>CHALK WELL DRILLING LTD.</b>            | Well Contractor's Licence No.<br><b>1507</b>   |
| Address<br><b>R. R. # 6, Napanee, Ontario</b>                         |  |
| Name of Well Technician<br><b>R. Ian Chalk</b>                        | Well Technician's Licence No.<br><b>T-0047</b> |
| Signature of Technician/Contractor<br><b>CHALK WELL DRILLING LTD.</b> |  |
| Submission date<br><b>02 09 96</b>                                    |  |

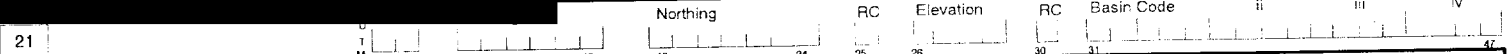
|                   |                    |             |                    |
|-------------------|--------------------|-------------|--------------------|
| MINISTRY USE ONLY | Data source        | Contractor  | Date received      |
|                   |                    | <b>1507</b> | <b>FEB 13 1997</b> |
|                   | Date of inspection | Inspector   |                    |
| Remarks           |                    |             |                    |
| <b>CSS. S</b>     |                    |             |                    |

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

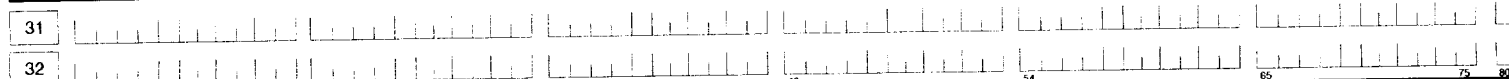
5306424

Municipality 53003 Con. WL SS 01  
10 14 15 22 23 24

County or District [Redacted] Township/Borough/City/Town/Village **Hallowell** Con block tract survey, etc. **I SWWL** Lot **3**  
Address **R. R. # 1, Picton, Ontario** Date completed **13 10 97**  
RC Elevation RC Basin Code ii iii iv



| LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions) |                      |                 |                     |              |    |
|--|----------------------|-----------------|---------------------|--------------|----|
| General colour   | Most common material | Other materials | General description | Depth - feet |    |
|  |                      |                 |                     | From         | To |
| Brown  | Sand                 |                 | Loose               | 0            | 3  |
| Brown  | Sand & Gravel        | Small stone     | Packed              | 3            | 15 |
| Brown  | Sand & Gravel        |                 | Packed              | 15           | 33 |
| Grey   | Limestone            |                 | Hard                | 33           | 43 |



**41 WATER RECORD**

| Water found at - feet | Kind of water   |   |                                |                              |
|-----------------------|---|---|--------------------------------|------------------------------|
| 10-13<br><b>36</b>    | <input checked="" type="checkbox"/> Fresh<br><input checked="" type="checkbox"/> Unfiltered | <input type="checkbox"/> Sulphur<br><input type="checkbox"/> Minerals                                 | <input type="checkbox"/> Salty | <input type="checkbox"/> Gas |
| 15-18                 | <input type="checkbox"/> Fresh<br><input type="checkbox"/> Salty                            | <input type="checkbox"/> Sulphur<br><input type="checkbox"/> Minerals<br><input type="checkbox"/> Gas | <input type="checkbox"/> Salty | <input type="checkbox"/> Gas |
| 20-23                 | <input type="checkbox"/> Fresh<br><input type="checkbox"/> Salty                            | <input type="checkbox"/> Sulphur<br><input type="checkbox"/> Minerals<br><input type="checkbox"/> Gas | <input type="checkbox"/> Salty | <input type="checkbox"/> Gas |
| 25-28                 | <input type="checkbox"/> Fresh<br><input type="checkbox"/> Salty                            | <input type="checkbox"/> Sulphur<br><input type="checkbox"/> Minerals<br><input type="checkbox"/> Gas | <input type="checkbox"/> Salty | <input type="checkbox"/> Gas |
| 30-33                 | <input type="checkbox"/> Fresh<br><input type="checkbox"/> Salty                            | <input type="checkbox"/> Sulphur<br><input type="checkbox"/> Minerals<br><input type="checkbox"/> Gas | <input type="checkbox"/> Salty | <input type="checkbox"/> Gas |

**51 CASING & OPEN HOLE RECORD**

| Inside diam inches     | Material  | Wall thickness inches | Depth - feet |           |
|------------------------|---|-----------------------|--------------|-----------|
|                        |   |                       | From         | To        |
| 10-11<br><b>6 1/2"</b> | <input checked="" type="checkbox"/> Steel<br><input type="checkbox"/> Galvanized<br><input type="checkbox"/> Concrete<br><input type="checkbox"/> Open hole<br><input type="checkbox"/> Plastic | <b>.188</b>           | <b>0</b>     | <b>35</b> |
| 17-18<br><b>6"</b>     | <input type="checkbox"/> Steel<br><input checked="" type="checkbox"/> Galvanized<br><input type="checkbox"/> Concrete<br><input type="checkbox"/> Open hole<br><input type="checkbox"/> Plastic |                       | <b>34</b>    | <b>43</b> |
| 24-25                  | <input type="checkbox"/> Steel<br><input type="checkbox"/> Galvanized<br><input type="checkbox"/> Concrete<br><input type="checkbox"/> Open hole<br><input type="checkbox"/> Plastic            |                       |              |           |

**SCREEN**

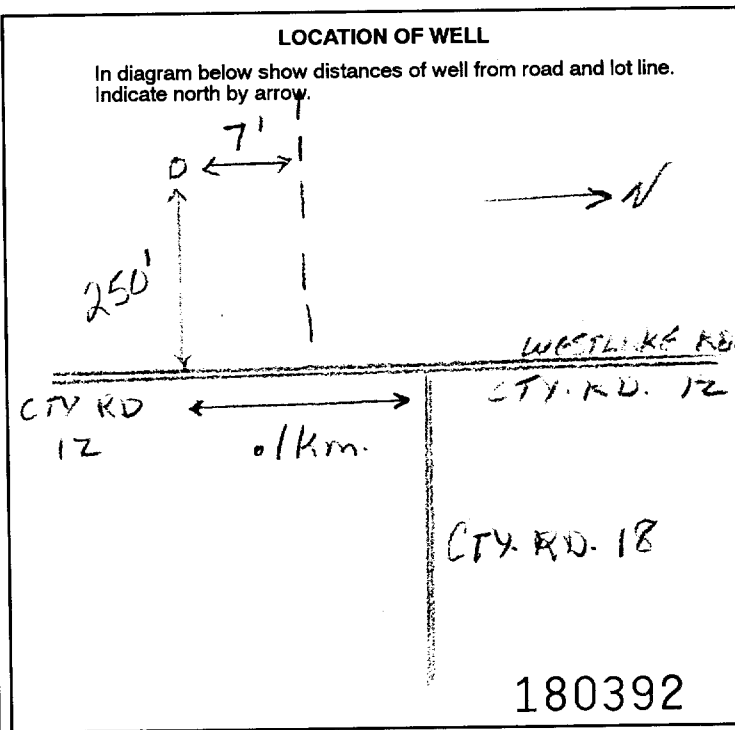
| Sizes of opening (Slot No.) | Diameter inches | Length feet                 |
|-----------------------------|-----------------|-----------------------------|
|                             |                 |                             |
| Material and type           |                 | Depth at top of screen feet |

**61 PLUGGING & SEALING RECORD**

| Depth set at - feet |                    | Material and type (Cement grout, bentonite, etc.) |
|---------------------|--------------------|---|
| From                | To                 |   |
| 10-13<br><b>8</b>   | 14-17<br><b>12</b> | <b>Cement</b>                                     |
| 18-21               | 22-25              |   |
| 26-29               | 30-33              |   |

**71 PUMPING TEST**

| Pumping test method  | Pumping rate GPM         | Duration of pumping  |
|--|--------------------------|--|
| <input type="checkbox"/> Pump<br><input checked="" type="checkbox"/> Bailer  | <b>25</b>                | <b>2</b> Hours   |
| Static level   | Water level during       | Water levels during  |
| 19-21<br><b>12</b> feet  | 22-24<br><b>18</b> feet  | 15 minutes<br><b>18</b> feet   |
|  |                          | 30 minutes<br><b>18</b> feet   |
|  |                          | 45 minutes<br><b>18</b> feet   |
|  |                          | 60 minutes<br><b>18</b> feet   |
| If flowing give rate GPM   | Pump intake set at feet  | Water at end of test   |
|  |                          | <input type="checkbox"/> Clear<br><input checked="" type="checkbox"/> Cloudy |
| Recommended pump type  | Recommended pump setting | Recommended pump rate  |
| <input type="checkbox"/> Shallow<br><input checked="" type="checkbox"/> Deep | <b>39</b> feet           | <b>25</b> GPM  |



**FINAL STATUS OF WELL**

|  |   |   |
|--|---|---|
| <input checked="" type="checkbox"/> Water supply | <input type="checkbox"/> Abandoned, insufficient supply | <input type="checkbox"/> Unfinished       |
| <input type="checkbox"/> Observation well        | <input type="checkbox"/> Abandoned, poor quality        | <input type="checkbox"/> Replacement well |
| <input type="checkbox"/> Test hole               | <input type="checkbox"/> Abandoned (Other)              |   |
| <input type="checkbox"/> Recharge well           | <input type="checkbox"/> Dewatering                     |   |

**WATER USE**

|                                     |   |                                   |
|-------------------------------------|---|-----------------------------------|
| <input type="checkbox"/> Domestic   | <input type="checkbox"/> Commercial                 | <input type="checkbox"/> Not used |
| <input type="checkbox"/> Stock      | <input type="checkbox"/> Municipal                  | <input type="checkbox"/> Other    |
| <input type="checkbox"/> Irrigation | <input type="checkbox"/> Public supply              |                                   |
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Cooling & air conditioning |                                   |

**METHOD OF CONSTRUCTION**

|  |   |                                  |
|--|---|----------------------------------|
| <input checked="" type="checkbox"/> Cable tool | <input type="checkbox"/> Air percussion | <input type="checkbox"/> Driving |
| <input type="checkbox"/> Rotary (conventional) | <input type="checkbox"/> Boring         | <input type="checkbox"/> Digging |
| <input type="checkbox"/> Rotary (reverse)      | <input type="checkbox"/> Diamond        | <input type="checkbox"/> Other   |
| <input type="checkbox"/> Rotary (air)          | <input type="checkbox"/> Jetting        |                                  |

|   |  |                                      |
|---|--|--------------------------------------|
| Name of Well Contractor<br><b>CHALK WELL DRILLING LTD.</b>            | Well Contractor's Licence No.<br><b>1507</b>   | Date received<br><b>JAN 0 5 1998</b> |
| Address<br><b>R. R. # 6, Napanee, Ontario</b>                         |  | Inspector                            |
| Name of Well Technician<br><b>R. Ian Chalk</b>                        | Well Technician's Licence No.<br><b>T-0047</b> | Remarks                              |
| Signature of Technician/Contractor<br><b>CHALK WELL DRILLING LTD.</b> |  |                                      |
| Submission date<br>day <b>13</b> mo <b>10</b> yr <b>97</b>            |  |                                      |



|        |                 |               |
|--------|-----------------|---------------|
| Well # | <b>A 016262</b> | (umber below) |
|        | <b>A 016262</b> |               |

Instructions for Completing Form

- For use in the Province of Ontario only. This document is a permanent legal document. Please retain for future reference.
- All Sections must be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- All metre measurements shall be reported to 1/10<sup>th</sup> of a metre.
- Please print clearly in blue or black ink only.

Well Owner's Information and Location of Well Information

|     |              |     |           |           |     |           |
|-----|--------------|-----|-----------|-----------|-----|-----------|
| MUN | <b>53003</b> | CON | <b>W/</b> | <b>66</b> | LOT | <b>05</b> |
|-----|--------------|-----|-----------|-----------|-----|-----------|

Prince Edward

Hallowell

V.L.S.S.

|  |                     |                   |                  |                                   |                 |
|--|---------------------|-------------------|------------------|-----------------------------------|-----------------|
| RR#/Street Number/Name   | <b>45 Hook Lane</b> | City/Town/Village | <b>West Lake</b> | Site/Compartment/Block/Tract etc. |                 |
| GPS Reading  | NAD                 | Zone              | Easting          | Northing                          | Unit Make/Model |
|  | <b>83</b>           | <b>18</b>         | <b>318289</b>    | <b>4865921</b>                    | <b>Magellan</b> |
| Mode of Operation: <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify _____ |                     |                   |                  |                                   |                 |

Log of Overburden and Bedrock Materials (see instructions)

| General Colour | Most common material | Other Materials | General Description | Depth From | Metres To |
|----------------|----------------------|-----------------|---------------------|------------|-----------|
| Brown          | Sand                 |                 | Loose               | 0          | 1.5       |
| Brown          | Sand                 | Gravel, Clay    | Packed              | 1.5        | 7.2       |
| Grey           | Sand                 | Gravel          | Packed              | 7.2        | 11.5      |
| Grey           | Gravel               | Sand            | Packed              | 11.5       | 12.4      |
| Grey           | Gravel               |                 | Packed Coarse       | 12.4       | 12.7      |

| Hole Diameter   |                                  |                                   |
|---|----------------------------------|-----------------------------------|
| Depth From  | Metres To                        | Diameter Centimetres              |
| 0   | 6                                | 20.3                              |
| 6   | 12.7                             | 15.3                              |
| Water Record  |                                  |                                   |
| Water found at  | Kind of Water                    |                                   |
| 12.7 m  | Untreated                        |                                   |
| <input type="checkbox"/> Gas  | <input type="checkbox"/> Sulphur | <input type="checkbox"/> Minerals |
| <input type="checkbox"/> Other:   | <input type="checkbox"/> Salty   | <input type="checkbox"/> Fresh    |
| <input type="checkbox"/> m  | <input type="checkbox"/> Fresh   | <input type="checkbox"/> Sulphur  |
| <input type="checkbox"/> Gas  | <input type="checkbox"/> Salty   | <input type="checkbox"/> Minerals |
| <input type="checkbox"/> Other:   | <input type="checkbox"/> Fresh   | <input type="checkbox"/> Sulphur  |
| <input type="checkbox"/> Gas  | <input type="checkbox"/> Salty   | <input type="checkbox"/> Minerals |
| <input type="checkbox"/> Other:   | <input type="checkbox"/> Fresh   | <input type="checkbox"/> Sulphur  |
| After test of well yield, water was   |                                  |                                   |
| <input checked="" type="checkbox"/> Clear and sediment free                     |                                  |                                   |
| <input type="checkbox"/> Other, specify _____                                   |                                  |                                   |
| Chlorinated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |                                  |                                   |

| Construction Record     |  |                            |            |           |  |
|-------------------------|--|----------------------------|------------|-----------|--|
| Inside diam centimetres | Material   | Wall thickness centimetres | Depth From | Metres To |  |
| 15.8                    | <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass<br><input type="checkbox"/> Plastic <input type="checkbox"/> Concrete<br><input type="checkbox"/> Galvanized | .40                        | 0          | 12.3      |  |
| Screen                  |  |                            |            |           |  |
|                         | <input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass<br><input type="checkbox"/> Plastic <input type="checkbox"/> Concrete<br><input type="checkbox"/> Galvanized            | Slot No.                   |            |           |  |
| No Casing or Screen     |  |                            |            |           |  |
|                         | <input type="checkbox"/> Open hole   |                            |            |           |  |

| Test of Well Yield                        |               |                    |          |                    |
|---|---------------|--------------------|----------|--------------------|
| Pumping test method                       | Draw Down     |                    | Recovery |                    |
|   | Time min      | Water Level Metres | Time min | Water Level Metres |
| <b>Pump</b>                               |               |                    |          |                    |
| Pump intake set at (metres)               | 11.8          | Static Level 5.5   |          | 6.4                |
| Pumping rate - (litres/min)               | 30            | 1 6.4              | 1        | 5.5                |
| Duration of pumping                       | 1 hrs + 0 min | 2 6.4              | 2        | 5.5                |
| Final water level end of pumping (metres) | 6.4           | 3 6.4              | 3        | 5.5                |
| Recommended pump type                     |               | 4 6.4              | 4        | 5.5                |
| Recommended pump depth                    | 11.8 metres   | 5 6.4              | 5        | 5.5                |
| Recommended pump rate (litres/min)        | 30            | 10 6.4             | 10       | 5.5                |
| If flowing give rate - (litres/min)       |               | 15 6.4             | 15       | 5.5                |
| If pumping discontinued, give reason.     |               | 20 6.4             | 20       | 5.5                |
|   |               | 25 6.4             | 25       | 5.5                |
|   |               | 30 6.4             | 30       | 5.5                |
|   |               | 40 6.4             | 40       | 5.5                |
|   |               | 50 6.4             | 50       | 5.5                |
|   |               | 60 6.4             | 60       | 5.5                |

| Plugging and Sealing Record                      |   |   |   |
|--|---|---|---|
| Depth set at - From                              | Metres To   | Material and type (bentonite slurry, neat cement slurry) etc. | Volume Placed (cubic metres)                |
| 6  | 0   | Bentonite   | .18   |
| Method of Construction                           |   |   |   |
| <input checked="" type="checkbox"/> Cable Tool   | <input type="checkbox"/> Rotary (air)                   | <input type="checkbox"/> Diamond                              | <input type="checkbox"/> Digging            |
| <input type="checkbox"/> Rotary (conventional)   | <input type="checkbox"/> Air percussion                 | <input type="checkbox"/> Jetting                              | <input type="checkbox"/> Other              |
| <input type="checkbox"/> Rotary (reverse)        | <input type="checkbox"/> Boring                         | <input type="checkbox"/> Driving                              |   |
| Water Use  |   |   |   |
| <input checked="" type="checkbox"/> Domestic     | <input type="checkbox"/> Industrial                     | <input type="checkbox"/> Public Supply                        | <input type="checkbox"/> Other              |
| <input type="checkbox"/> Stock                   | <input type="checkbox"/> Commercial                     | <input type="checkbox"/> Not used                             |   |
| <input type="checkbox"/> Irrigation              | <input type="checkbox"/> Municipal                      | <input type="checkbox"/> Cooling & air conditioning           |   |
| Final Status of Well                             |   |   |   |
| <input checked="" type="checkbox"/> Water Supply | <input type="checkbox"/> Recharge well                  | <input type="checkbox"/> Unfinished                           | <input type="checkbox"/> Abandoned, (Other) |
| <input type="checkbox"/> Observation well        | <input type="checkbox"/> Abandoned, insufficient supply | <input type="checkbox"/> Dewatering                           |   |
| <input type="checkbox"/> Test Hole               | <input type="checkbox"/> Abandoned, poor quality        | <input type="checkbox"/> Replacement well                     |   |

| Location of Well  |                |                     |
|---|----------------|---------------------|
| In diagram below show distances of well from road, lot line, and building. Indicate north by arrow. |                |                     |
|   |                |                     |
| Audit No.   | <b>Z 16367</b> | Date Well Completed |
|   |                | 2004 09 22          |
| Was the well owner's information package delivered?   |                | Date Delivered      |
| <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                 |                | 2004 09 22          |

| Well Contractor/Technician Information            |                               |
|---|-------------------------------|
| Name of Well Contractor                           | Well Contractor's Licence No. |
| <b>CHALK WELL DRILLING LTD.</b>                   | <b>1507</b>                   |
| Business Address (street name, number, city etc.) |                               |
| <b>R. R. # 6, Napanee, Ontario</b>                |                               |
| Name of Well Technician (last name, first name)   | Well Technician's Licence No. |
| <b>R. Ian Chalk</b>                               | <b>7-0047</b>                 |
| Signature of Technician/Contractor                | Date Submitted                |
| <b>CHALK WELL DRILLING LTD.</b>                   | 2003 09 22                    |

| Ministry Use Only  |                    |
|--------------------|--------------------|
| Data Source        | Contractor         |
|                    | <b>1507</b>        |
| Date Received      | Date of Inspection |
| <b>OCT 26 2004</b> |                    |
| Remarks            | Well Record Number |
|                    | <b>5307327</b>     |

Measurements recorded in:  Metric  Imperial

A081964

Well Location

Address of Well Location (Street Number/Name) DREW HANE Township HALLOWELL Lot Part 5 Concession 55WL  
 County/District/Municipality PRINCE EDWARD City/Town/Village WEST LAKE Province Ontario Postal Code K0K2T0  
 UTM Coordinates Zone Easting Northing Municipal Plan and Sublot Number  
 NAD 83 18 318278 4865833

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 | Depth (m/ft) To |
|----------------|----------------------|-----------------|---------------------|-------------------|-----------------|
| BROWN          | SAND                 |                 | SOFT                | 0                 | 10              |
| BROWN          | SAND                 | GRAVEL, STONES  | PERSE               | 10                | 25              |
| BROWN          | SAND                 |                 | SOFT                | 25                | 33              |

Annular Space

| Depth Set at (m/ft) From | Depth Set at (m/ft) To | Type of Sealant Used (Material and Type) | Volume Placed (m <sup>3</sup> /ft <sup>3</sup> ) |
|--------------------------|------------------------|--|--|
| 0                        | 20                     | QuikBroot                                | 25 ft <sup>3</sup>                               |

Results of Well Yield Testing

| Time (min)   | Draw Down          |            | Recovery           |            |
|--------------|--------------------|------------|--------------------|------------|
|              | Water Level (m/ft) | Time (min) | Water Level (m/ft) | Time (min) |
| Static Level | 24'                |            | 30'1"              |            |
| 1            | 27 1/2"            | 1          | 29'                |            |
| 2            | 29 1/4"            | 2          | 28 1/2"            |            |
| 3            | 30 1"              | 3          | 27'                |            |
| 4            |                    | 4          | 26 1/4"            |            |
| 5            |                    | 5          | 25 1/2"            |            |
| 10           |                    | 10         | 24 1/3"            |            |
| 15           |                    | 15         | 24'                |            |
| 20           |                    | 20         |                    |            |
| 25           |                    | 25         |                    |            |
| 30           |                    | 30         |                    |            |
| 40           |                    | 40         |                    |            |
| 50           |                    | 50         |                    |            |
| 60           | 30 1"              | 60         | 24'                |            |

After test of well yield, water was:  
 Clear and sand free  
 Other, specify \_\_\_\_\_  
 If pumping discontinued, give reason: \_\_\_\_\_  
 Pump intake set at (m/ft) 62'  
 Pumping rate (l/min / GPM) 10  
 Duration of pumping 1 hrs + \_\_\_\_\_ min  
 Final water level end of pumping (m/ft) 30 1"  
 If flowing give rate (l/min / GPM) \_\_\_\_\_  
 Recommended pump depth (m/ft) 62'  
 Recommended pump rate (l/min / GPM) 10  
 Well production (l/min / GPM) 10  
 Disinfected?  Yes  No

Method of Construction

|  |                                  |   |   |                                     |
|--|----------------------------------|---|---|-------------------------------------|
| <input checked="" type="checkbox"/> Cable Tool | <input type="checkbox"/> Diamond | <input type="checkbox"/> Public               | <input type="checkbox"/> Commercial                 | <input type="checkbox"/> Not used   |
| <input type="checkbox"/> Rotary (Conventional) | <input type="checkbox"/> Jetting | <input checked="" type="checkbox"/> Domestic  | <input type="checkbox"/> Municipal                  | <input type="checkbox"/> Dewatering |
| <input type="checkbox"/> Rotary (Reverse)      | <input type="checkbox"/> Driving | <input type="checkbox"/> Livestock            | <input type="checkbox"/> Test Hole                  | <input type="checkbox"/> Monitoring |
| <input type="checkbox"/> Boring                | <input type="checkbox"/> Digging | <input type="checkbox"/> Irrigation           | <input type="checkbox"/> Cooling & Air Conditioning |                                     |
| <input type="checkbox"/> Air percussion        |                                  | <input type="checkbox"/> Industrial           |   |                                     |
| <input type="checkbox"/> Other, specify _____  |                                  | <input type="checkbox"/> 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 1/8                   | STEEL  | 1.88                   | 0            | 33 | <input checked="" type="checkbox"/> Water Supply<br><input type="checkbox"/> Replacement Well<br><input type="checkbox"/> Test Hole<br><input type="checkbox"/> Recharge Well<br><input type="checkbox"/> Dewatering Well<br><input type="checkbox"/> Observation and/or Monitoring Hole<br><input type="checkbox"/> Alteration (Construction)<br><input type="checkbox"/> Abandoned, Insufficient Supply<br><input type="checkbox"/> Abandoned, Poor Water Quality<br><input type="checkbox"/> Abandoned, other, specify _____<br><input type="checkbox"/> Other, specify _____ |

Construction Record - Screen

| Outside Diameter (cm/in) | Material (Plastic, Galvanized, Steel) | Slot No. | Depth (m/ft) |    |
|--------------------------|---------------------------------------|----------|--------------|----|
|                          |                                       |          | From         | To |
|                          |                                       |          |              |    |

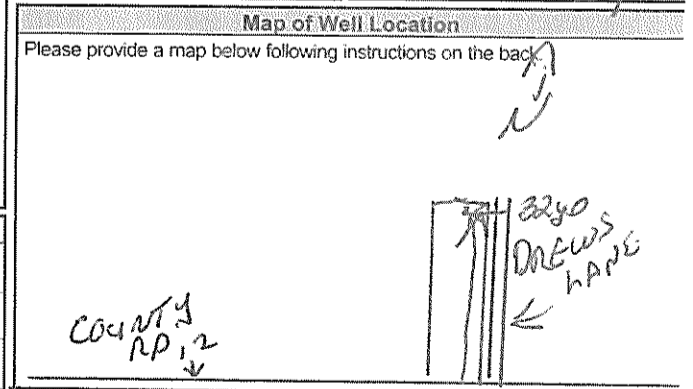
Water Details

| Water found at Depth (m/ft)   | Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested | Hole Diameter     |                 |
|---|---|-------------------|-----------------|
|   |   | Depth (m/ft) From | Depth (m/ft) To |
| 65' (m/ft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____ |   |                   |                 |
|   |   | 0                 | 20              |
|   |   | 20                | 65              |

Well Contractor and Well Technician Information

Business Name of Well Contractor PRINCE EDWARD WELL DRILLERS Well Contractor's Licence No. 6005  
 Business Address (Street Number/Name) K0K3 PRCTON Municipality \_\_\_\_\_  
 Province ONT Postal Code K0K2T0 Business E-mail Address \_\_\_\_\_

Bus Telephone No. (inc. area code) 6134765457 Name of Well Technician (Last Name, First Name) McKEE GLENDON  
 Well Technician's Licence No. 21828 Signature of Technician and/or Contractor Glendon McKeel Date Submitted 20090826



Comments: Approx 100y old

Well owner's information package delivered  Yes  No

Date Package Delivered 20090801  
 Date Work Completed 20090826

Ministry Use Only  
 Audit No. Z 94025  
SEP 22 2009  
 Received \_\_\_\_\_

Measurements recorded in:  Metric  Imperial

|   |                        |                                    |                                  |                              |
|---|------------------------|------------------------------------|----------------------------------|------------------------------|
| Address of Well Location (Street Number/Name)<br><b>1919 County Road 12</b> |                        | Township<br><b>Hallowell</b>       | Lot<br><b>3</b>                  | Concession<br><b>SSWL PT</b> |
| County/District/Municipality<br><b>Prince Edward</b>                        |                        | City/Town/Village<br><b>Picton</b> | Province<br><b>Ontario</b>       | Postal Code<br><b>K0K2T0</b> |
| UTM Coordinates Zone  | Easting                | Northing                           | Municipal Plan and Sublot Number |                              |
| NAD 83  | <b>183180724865264</b> |                                    |                                  |                              |

**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 |
|                | Well was upgraded, casing extended and construction meets 903 Regulation. |                 |                     |              |    |

| Annular Space       |  |  |
|---------------------|--|--|
| Depth Set at (m/ft) | Type of Sealant Used (Material and Type) | Volume Placed (m <sup>3</sup> /ft <sup>3</sup> ) |
| From: 0 To: 288"    | Bentonite chips                          | 35   |

| Method of Construction  | Well Use   |
|---|--|
| <input type="checkbox"/> Cable Tool<br><input type="checkbox"/> Rotary (Conventional)<br><input type="checkbox"/> Rotary (Reverse)<br><input type="checkbox"/> Boring<br><input type="checkbox"/> Air percussion<br><input type="checkbox"/> Other, specify | <input type="checkbox"/> Diamond<br><input type="checkbox"/> Jetting<br><input type="checkbox"/> Driving<br><input type="checkbox"/> Digging<br><input type="checkbox"/> Public<br><input type="checkbox"/> Commercial<br><input type="checkbox"/> Domestic<br><input type="checkbox"/> Livestock<br><input type="checkbox"/> Irrigation<br><input type="checkbox"/> Industrial<br><input type="checkbox"/> Other, specify |

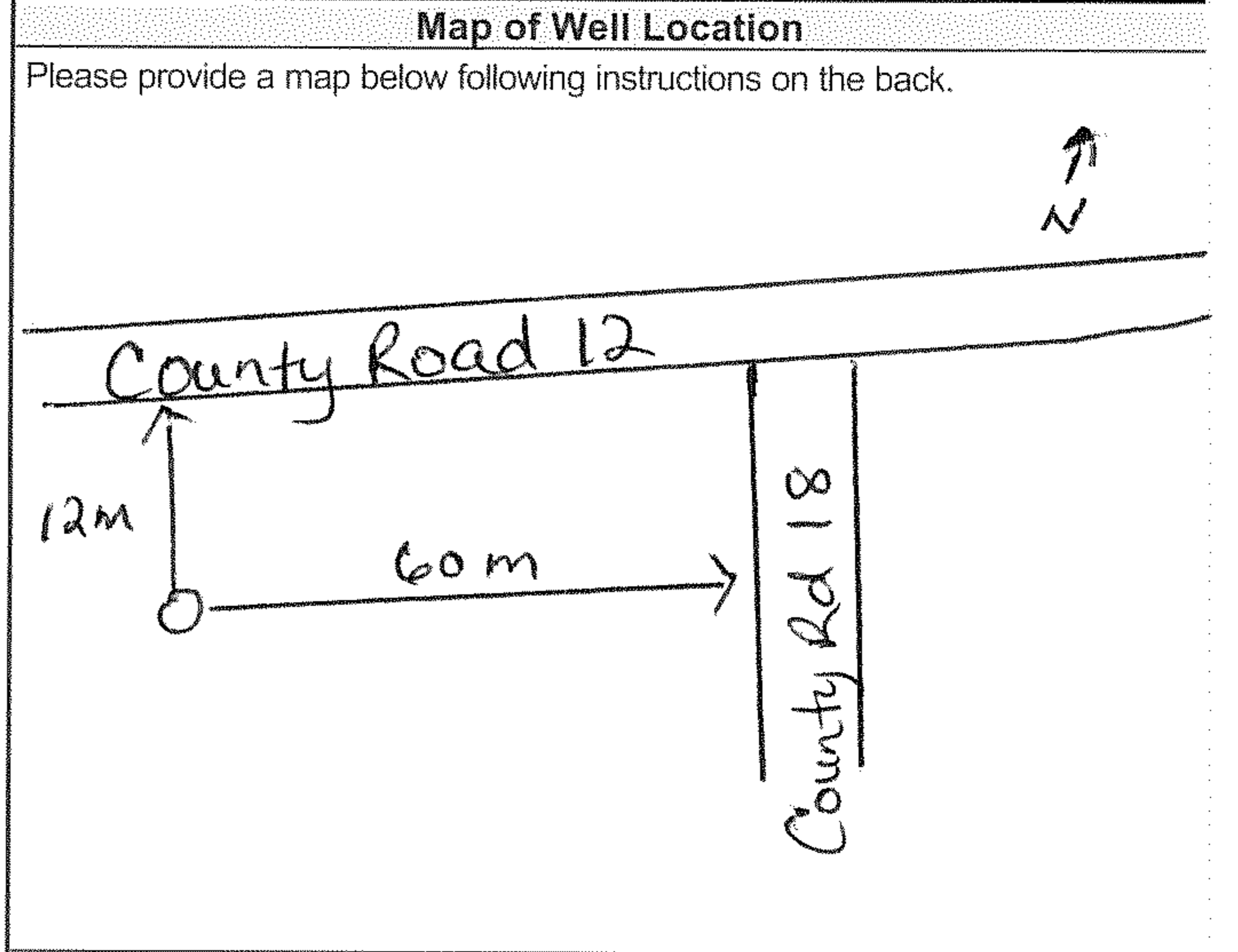
| Construction Record - Casing |  |                        |              | Status of Well |  |
|------------------------------|--|------------------------|--------------|----------------|--|
| Inside Diameter (cm/in)      | Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel) | Wall Thickness (cm/in) | Depth (m/ft) |                | <input checked="" type="checkbox"/> Water Supply<br><input type="checkbox"/> Replacement Well<br><input type="checkbox"/> Test Hole<br><input type="checkbox"/> Recharge Well<br><input type="checkbox"/> Dewatering Well<br><input type="checkbox"/> Observation and/or Monitoring Hole<br><input type="checkbox"/> Alteration (Construction)<br><input type="checkbox"/> Abandoned, Insufficient Supply<br><input type="checkbox"/> Abandoned, Poor Water Quality<br><input type="checkbox"/> Abandoned, other, specify<br><input type="checkbox"/> Other, specify |
|                              |  |                        | From         | To             |  |
| 6"                           | PVC  | .188                   | -288         | +16"           |  |

| Construction Record - Screen |                                       |          |              | Status of Well |
|------------------------------|---------------------------------------|----------|--------------|----------------|
| Outside Diameter (cm/in)     | Material (Plastic, Galvanized, Steel) | Slot No. | Depth (m/ft) |                |
|                              |                                       |          |              |                |

| Water Details  |   | Hole Diameter     |                     |
|--|---|-------------------|---------------------|
| Water found at Depth (m/ft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify | Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested | Depth (m/ft) From | Diameter (cm/in) To |
|  |   |                   |                     |

| Well Contractor and Well Technician Information                              |   |  |  |
|--|---|--|--|
| Business Name of Well Contractor<br><b>Well Busters Canada Inc.</b>          |   | Well Contractor's Licence No.<br><b>7329</b>           |  |
| Business Address (Street Number/Name)<br><b>673 Wallbridge-Loyalist Road</b> |   | Municipality<br><b>Belleville</b>                      |  |
| Province<br><b>ON</b>  | Postal Code<br><b>K8N4Z5</b>  | Business E-mail Address<br><b>info@wellbusters.com</b> |  |
| Bus. Telephone No. (inc. area code)<br><b>6139681471</b>                     | Name of Well Technician (Last Name, First Name)<br><b>Hitchon Stewart</b> |  |  |
| Well Technician's Licence No.<br><b>1041</b>                                 | Signature of Technician and/or Contractor<br><i>[Signature]</i>           | Date Submitted<br><b>20140630</b>                      |  |

| Results of Well Yield Testing   |              |                    |            |                    |
|---|--------------|--------------------|------------|--------------------|
| After test of well yield, water was:<br><input type="checkbox"/> Clear and sand free<br><input type="checkbox"/> Other, specify | Draw Down    |                    | Recovery   |                    |
|   | Time (min)   | Water Level (m/ft) | Time (min) | Water Level (m/ft) |
| If pumping discontinued, give reason:   | Static Level | 7.78               |            | 7.79               |
|   | 1            | 7.79               | 1          | 7.78               |
| Pump intake set at (m/ft)   | 2            | 7.79               | 2          |                    |
| Pumping rate (l/min / GPM)<br><b>5 GPM</b>  | 3            | 7.79               | 3          |                    |
| Duration of pumping<br>1 hrs + min  | 4            | 7.79               | 4          |                    |
| Final water level end of pumping (m/ft)<br><b>7.79 m</b>  | 5            | 7.79               | 5          |                    |
| If flowing give rate (l/min / GPM)  | 10           | 7.79               | 10         |                    |
|   | 15           | 7.79               | 15         |                    |
|   | 20           | 7.79               | 20         |                    |
| Recommended pump depth (m/ft)   | 25           | 7.79               | 25         |                    |
| Recommended pump rate (l/min / GPM)   | 30           | 7.79               | 30         |                    |
| Well production (l/min / GPM)   | 40           | 7.79               | 40         |                    |
| Disinfected?<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No   | 50           | 7.79               | 50         |                    |
|   | 60           | 7.79               | 60         |                    |



|   |   |
|---|---|
| Comments:<br><b>Well Depth 14.33 meters</b>   |   |
| Well owner's information package delivered<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | Date Package Delivered<br><b>20140626</b><br>Date Work Completed<br><b>20140626</b> |
| <b>Ministry Use Only</b><br>Audit No. <b>Z183458</b><br>Received <b>JUL 04 2014</b>                               |   |

Appendix B

# Hydrographs

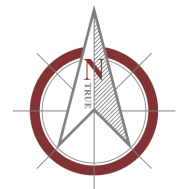


GREER GALLOWAY  
CONSULTING ENGINEERS  
PETERBOROUGH  
BELLEVILLE  
KINGSTON  
1620 WALLBRIDGE LOYALIST ROAD  
BELLEVILLE, ONTARIO, K8N 4Z5  
PHONE: 613-966-3068  
FAX: 613-966-3087

**NOTES:**

- 1) Testing carried out on September 19, 2023.
- 2) On-site pressure and temperature data collected using a Solinst Model 3001 datalogger transducer.
- 3) Water level data is not corrected for fluctuations in barometric pressure.

**Key Plan:**

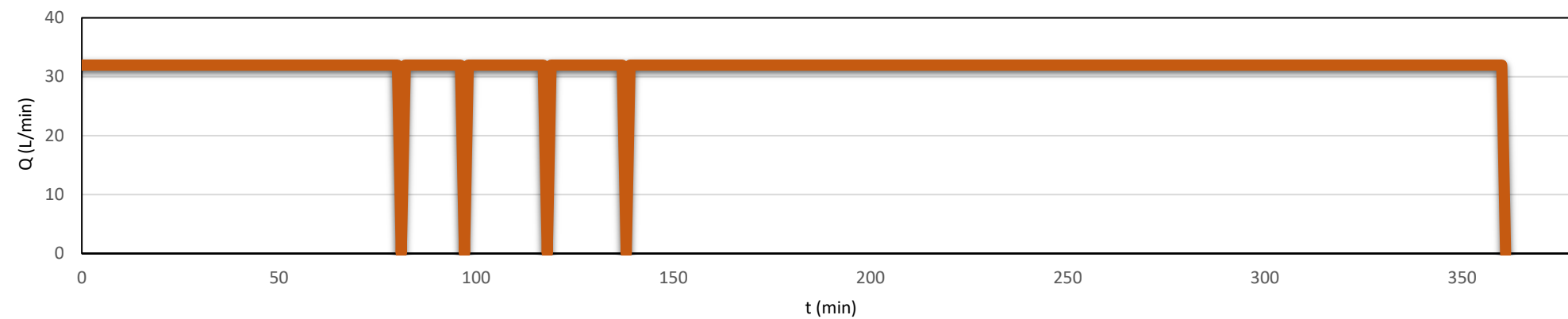
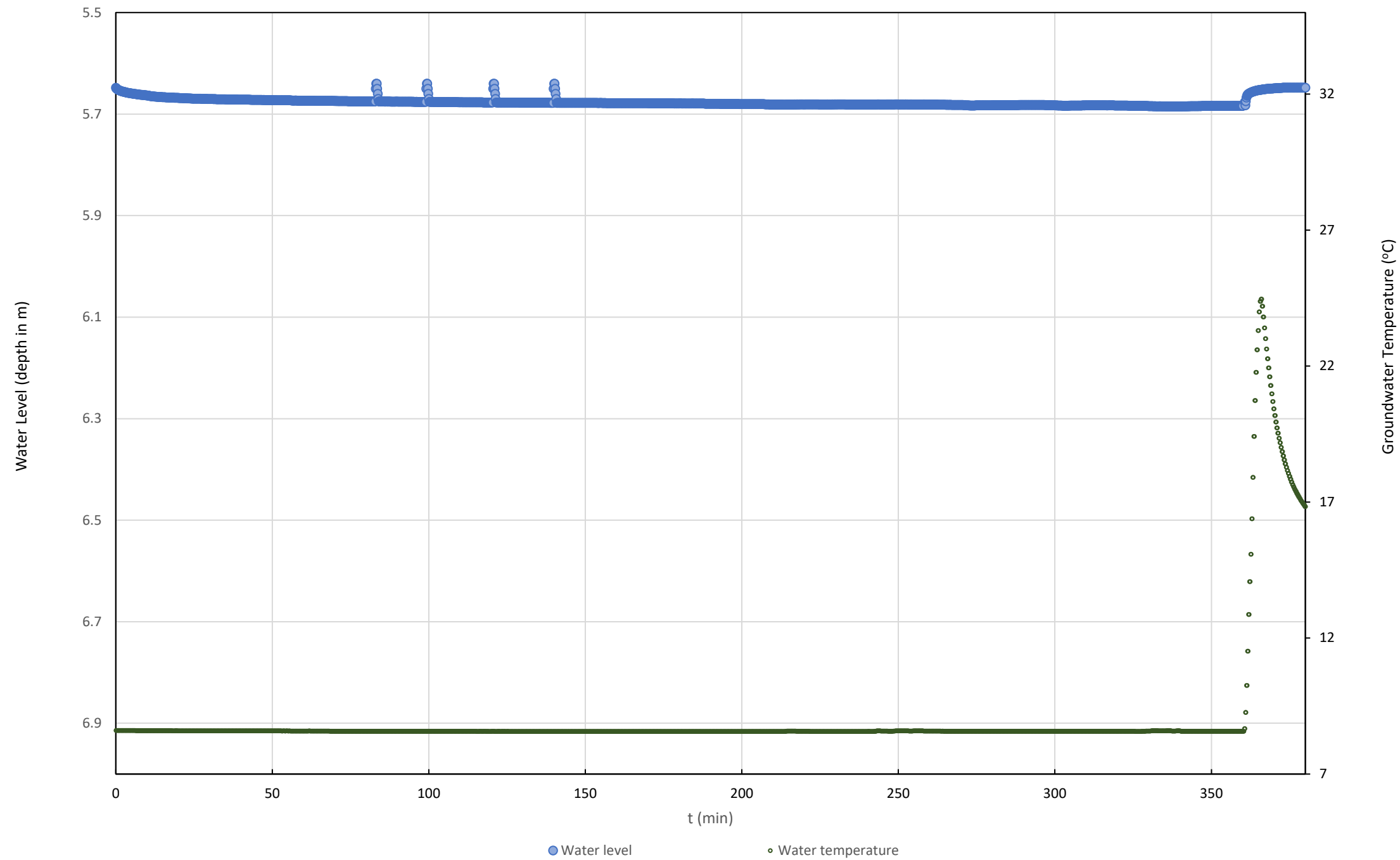


PROJECT 2237758:

**HYDROGEOLOGY AND GEOTECHNICAL STUDY  
WITH FUNCTIONAL SERVICING EVALUATION  
1874 COUNTY ROAD 12  
PRINCE EDWARD COUNTY, ONTARIO**

FIGURE 1:

**WELL HYDROGRAPH – A368689 (TW 1)  
JULY 31, 2023 – AUGUST 1, 2023**

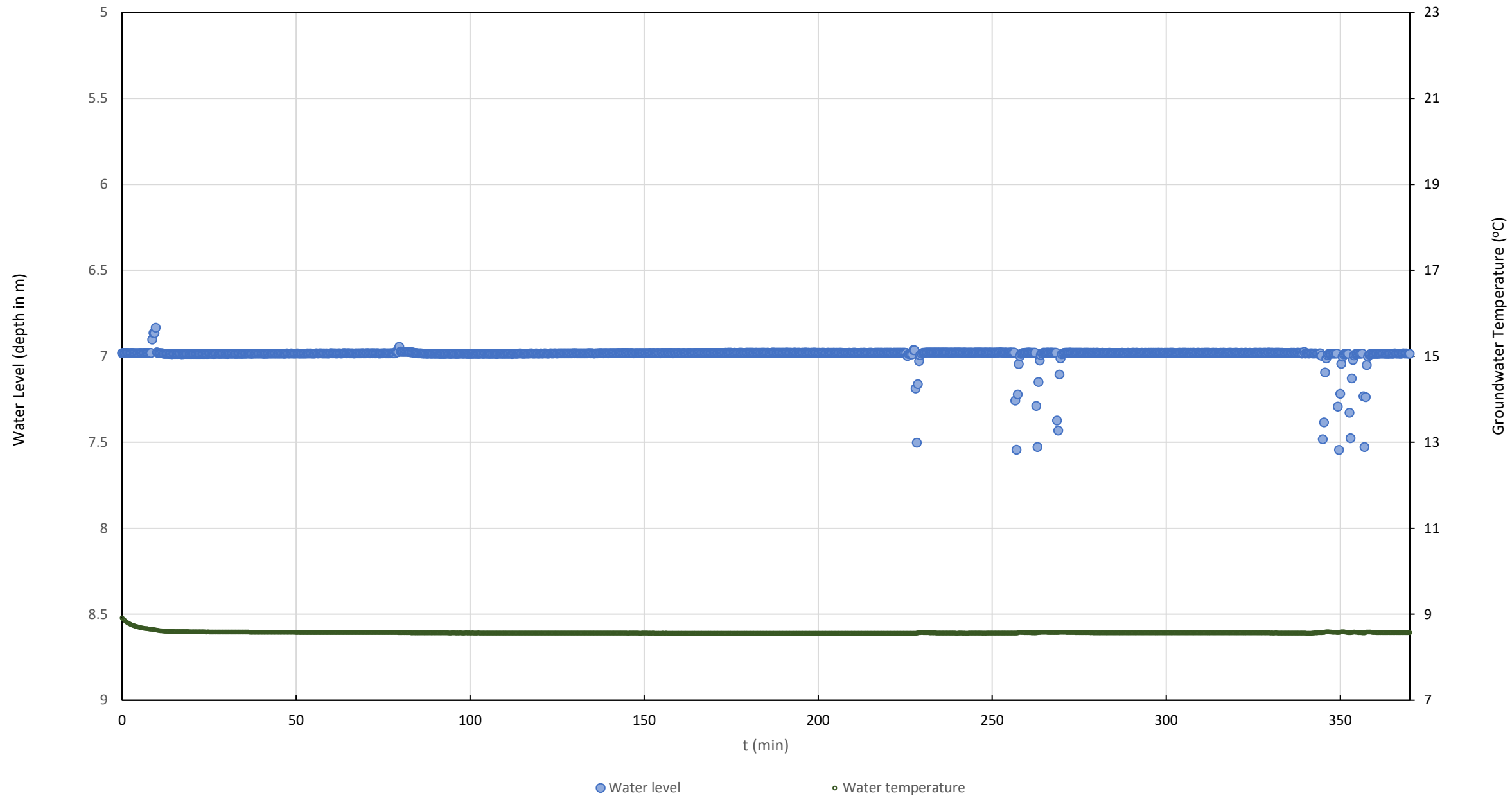




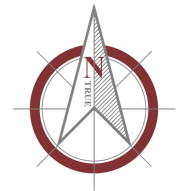
GREER GALLOWAY  
CONSULTING ENGINEERS  
PETERBOROUGH  
BELLEVILLE  
KINGSTON  
1620 WALLBRIDGE LOYALIST ROAD  
BELLEVILLE, ONTARIO, K8N 4Z5  
PHONE: 613-966-3068  
FAX: 613-966-3087

**NOTES:**

- 1) Testing carried out on September 19, 2023
- 2) On-site pressure and temperature data collected using a Solinst Model 3001 datalogger transducer.
- 3) Water level data is not corrected for fluctuations in barometric pressure.

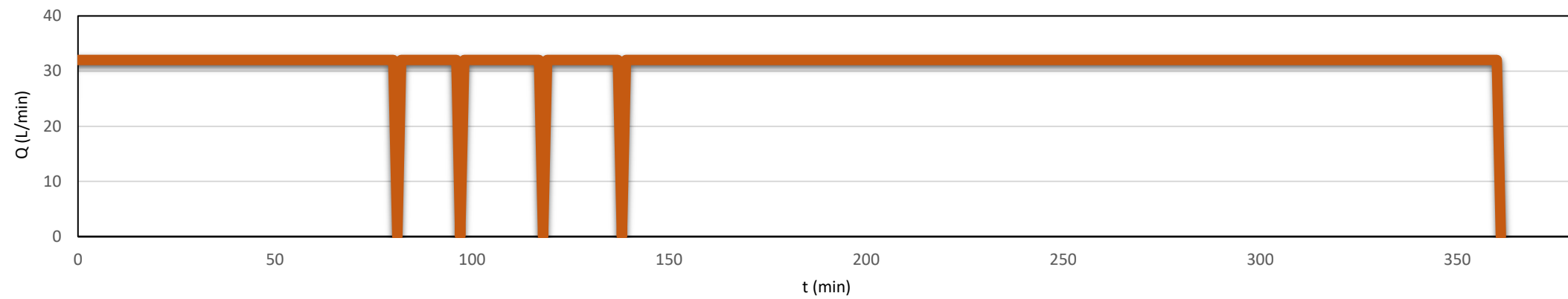


**Key Plan:**



PROJECT 2237758:  
HYDROGEOLOGY AND GEOTECHNICAL STUDY  
WITH FUNCTIONAL SERVICING EVALUATION  
1874 COUNTY ROAD 12  
PRINCE EDWARD COUNTY, ONTARIO

FIGURE 2:  
WELL HYDROGRAPH – A368655 (TW 2)  
JULY 31, 2023 – AUGUST 1, 2023



Appendix C

# Laboratory Certificates of Analysis

**C.O.C.: G-GGG**

**REPORT No: 23-025367 - Rev. 0**

**Report To:**

The Greer Galloway Group  
 1620 Wallbridge-Loyalist Road, RR #5  
 Belleville, ON K8N 4Z5

**CADUCEON Environmental Laboratories**

285 Dalton Ave  
 Kingston, ON K7K 6Z1

**Attention: Kirby Magee-Dittburner**

DATE RECEIVED: 2023-Sep-19  
 DATE REPORTED: 2023-Oct-04  
 SAMPLE MATRIX: Ground Water

CUSTOMER PROJECT: West Lake Resort  
 P.O. NUMBER: 2237758

| Analyses                      | Qty | Site Analyzed | Authorized | Date Analyzed | Lab Method               | Reference Method         |
|-------------------------------|-----|---------------|------------|---------------|--------------------------|--------------------------|
| Anions (Liquid)               | 1   | OTTAWA        | VKASYAN    | 2023-Sep-21   | A-IC-01                  | SM 4110B                 |
| Colour (Liquid)               | 1   | OTTAWA        | MDON       | 2023-Sep-22   | A-COL-01                 | SM 2120C                 |
| Cond/pH/Alk Auto (Liquid)     | 1   | OTTAWA        | SBOUDREAU  | 2023-Sep-21   | COND-02/PH-02/A<br>LK-02 | SM 2510B/4500H/<br>2320B |
| Coliforms - DC Media (Liquid) | 1   | KINGSTON      | BBURTCH    | 2023-Sep-20   | ECTC-001                 | MECP E3407               |
| DOC/DIC (Liquid)              | 1   | OTTAWA        | VKASYAN    | 2023-Sep-21   | C-OC-01                  | EPA 415.2                |
| Fecal Coliforms (Liquid)      | 1   | KINGSTON      | BBURTCH    | 2023-Sep-20   | FC-001                   | SM 9222D                 |
| ICP/MS (Liquid)               | 1   | OTTAWA        | AOZKAYMAK  | 2023-Sep-25   | D-ICPMS-01               | EPA 200.8                |
| Hardness (Liquid)             | 1   | OTTAWA        | NHOGAN     | 2023-Sep-22   | D-ICP-01                 | SM 3120B                 |
| Sulphide (Liquid)             | 1   | KINGSTON      | EHINCH     | 2023-Sep-21   | H2S-001                  | SM 4500-S2               |
| TP & TKN (Liquid)             | 1   | KINGSTON      | KDIBBITS   | 2023-Sep-29   | TPTKN-001                | MECP E3516.2             |
| Turbidity (Liquid)            | 1   | OTTAWA        | MDON       | 2023-Sep-22   | 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 \*



**Michelle Dubien**  
**Data Specialist**

| Parameter                  | Units         | R.L.  | Client I.D.    |
|----------------------------|---------------|-------|----------------|
|                            |               |       | TW             |
|                            |               |       | Sample I.D.    |
|                            |               |       | 23-025367-1    |
|                            |               |       | Date Collected |
|                            |               |       | 2023-09-19     |
|                            |               |       |                |
| Total Coliform (DC Media)  | CFU/100mL     | 1     | 0              |
| E coli (DC Media)          | CFU/100mL     | 1     | 0              |
| Background (DC Media)      | CFU/100mL     | 1     | 0              |
| Fecal Coliform             | CFU/100mL     | 1     | 0              |
| Alkalinity(CaCO3) to pH4.5 | mg/L          | 5     | 263            |
| pH @25°C                   | pH units      | -     | 7.97           |
| Conductivity @25°C         | uS/cm         | 1     | 731            |
| Colour                     | TCU           | 2     | <2             |
| Turbidity                  | NTU           | 0.1   | 1.2            |
| Fluoride                   | mg/L          | 0.1   | <0.1           |
| Chloride                   | mg/L          | 0.5   | 78.2           |
| Nitrate (N)                | mg/L          | 0.05  | 8.27           |
| Nitrite (N)                | mg/L          | 0.05  | <0.05          |
| Sulphate                   | mg/L          | 1     | 17             |
| Phosphorus (Total)         | mg/L          | 0.01  | <0.01          |
| Total Kjeldahl Nitrogen    | mg/L          | 0.1   | 0.2            |
| Dissolved Organic Carbon   | mg/L          | 0.2   | 1.4            |
| Sulphide                   | mg/L          | 0.01  | <0.01          |
| Hardness (as CaCO3)        | mg/L as CaCO3 | 0.02  | 277            |
| Calcium                    | mg/L          | 0.02  | 86.8           |
| Iron                       | mg/L          | 0.005 | 0.019          |



**Michelle Dubien**  
**Data Specialist**

|                  |              |                |             |
|------------------|--------------|----------------|-------------|
|                  |              | Client I.D.    | TW          |
|                  |              | Sample I.D.    | 23-025367-1 |
|                  |              | Date Collected | 2023-09-19  |
| <b>Parameter</b> | <b>Units</b> | <b>R.L.</b>    | <b>-</b>    |
| Magnesium        | mg/L         | 0.02           | 14.6        |
| Manganese        | mg/L         | 0.001          | <0.001      |
| Sodium           | mg/L         | 0.2            | 37.3        |
| Lead             | mg/L         | 0.00002        | <0.00002    |



**Michelle Dubien**  
**Data Specialist**

**C.O.C.: G**

**REPORT No: 23-027360 - Rev. 0**

**Report To:**

The Greer Galloway Group  
 1620 Wallbridge-Loyalist Road, RR #5  
 Belleville, ON K8N 4Z5

**CADUCEON Environmental Laboratories**

285 Dalton Ave  
 Kingston, ON K7K 6Z1

**Attention: Kirby Magee-Dittburner**

DATE RECEIVED: 2023-Oct-05  
 DATE REPORTED: 2023-Oct-13  
 SAMPLE MATRIX: Ground Water

CUSTOMER PROJECT: West Lake Resort (Dunas Lookou  
 P.O. NUMBER: PO#2237758

| Analyses                      | Qty | Site Analyzed | Authorized | Date Analyzed | Lab Method | Reference Method |
|-------------------------------|-----|---------------|------------|---------------|------------|------------------|
| Anions (Liquid)               | 1   | OTTAWA        | PCURIEL    | 2023-Oct-12   | A-IC-01    | SM 4110B         |
| Coliforms - DC Media (Liquid) | 1   | KINGSTON      | BBURTCH    | 2023-Oct-05   | ECTC-001   | MECP E3407       |
| Fecal Coliforms (Liquid)      | 1   | KINGSTON      | BBURTCH    | 2023-Oct-05   | FC-001     | SM 9222D         |

R.L. = Reporting Limit

NC = Not Calculated

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

| Client I.D. | Sample I.D. | Date Collected | Parameter                 |                   |                |             |
|-------------|-------------|----------------|---------------------------|-------------------|----------------|-------------|
|             |             |                | Total Coliform (DC Media) | E coli (DC Media) | Fecal Coliform | Nitrate (N) |
|             |             |                | Units                     | Units             | Units          | Units       |
|             |             |                | R.L.                      | R.L.              | R.L.           | R.L.        |
|             |             |                | -                         | -                 | -              | -           |
| Resample    | 23-027360-1 | 2023-Oct-03    | 0                         | 0                 | 0              | 5.01        |



**Michelle Dubien**  
**Data Specialist**

Appendix D

# Grain Size Distribution Analysis

**terraspec engineering inc.  
geotechnical engineers ■ materials testing**

**973 Crawford Drive  
Peterborough, Ontario  
K9J 3X1**

**Phone: (705) 743-7880  
Fax: (705) 743-9592**

**SITE REPORT**

**To:** The Greer Galloway Group Inc.

1 Page

**From:** Shane Galloway

**Re: Grain Size Analysis  
22-3-7758**

**Date:** March 25, 2024

Test pit soil samples from March 20, 2024, The Dune Lookout.

| <u>Sieve</u> | 1A               | 1B    | 4A    | 4B      | 7A      | 7B      |                |
|--------------|------------------|-------|-------|---------|---------|---------|----------------|
|              | <u>% Passing</u> |       |       |         |         |         |                |
| 19.0mm       | 100              | 100   | 100   | 100     | 100     | 100     | grain size     |
| 13.2mm       | 100              | 100   | 98.6  | 100     | 100     | 100     |                |
| 9.50mm       | 100              | 100   | 95.9  | 100     | 100     | 100     |                |
| 4.75mm       | 100              | 100   | 91.6  | 98.5    | 99.7    | 100     |                |
| 2.36mm       | 100              | 100   | 89.0  | 98.2    | 99.5    | 99.9    |                |
| 1.18mm       | 100              | 100   | 85.2  | 97.8    | 99.1    | 99.9    |                |
| 600um        | 99.9             | 100   | 78.7  | 97.4    | 98.7    | 99.8    |                |
| 300um        | 98.8             | 99.9  | 67.3  | 95.5    | 92.5    | 96.7    |                |
| 150um        | 65.4             | 76.8  | 39.3  | 49.2    | 36.1    | 42.0    |                |
| 75um         | 18.4             | 19.9  | 19.1  | 10.5    | 9.0     | 9.2     |                |
| ASTM         | SM               | SM    | SM    | SP-SM   | SP-SM   | SP-SM   | classification |
| description  | si sa            | si sa | si sa | sa w si | sa w si | sa w si | description    |
| min/cm       | 13               | 13    | 12    | 8       | 7       | 7       | est. T time    |