

**Hydrogeological Assessment
Proposed Severance on Lot 12 – Stinson Block
Consecon, Ontario**



Prepared for:

Margaret Wright
82 Edward Drive
Consecon, ON
K0K 1T0

Submitted by:

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

September 2023



G R E E R
G A L L O W A Y
C O N S U L T I N G
E N G I N E E R S

1620 Wallbridge Loyalist Road

R.R. #5

Belleville, Ontario

K8N 4Z5

Telephone

(613) 966-3068

September 26, 2023

Project 23-3-4080

Margaret Wright
82 Edward Drive
Consecon, Ontario
K0K 1T0

Via email: margaretatwellers@gmail.com

**Hydrogeological Assessment for Proposed Single-Lot Severance on
Stinson Block Lot 12 in Consecon, Ontario.**

Dear Margaret,

We are pleased to submit this hydrogeological assessment in support of your proposed single-lot severance in Consecon, Ontario. The tested drilled well on the property was found to have adequate yield for normal usage, with acceptable water quality. No negative impacts to neighbouring private water supplies are expected.

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

Table of Contents

1. INTRODUCTION	2
2. INVESTIGATION METHODS.....	2
2.1 Well Records Search and Survey.....	2
2.2 Water Supply Assessment	2
2.3 Water Quality Assessment	3
3. SUMMARIZED FINDINGS	3
3.1 Site Description.....	3
3.2 Climate and Water Balance	3
3.3 Geology	4
3.4 Hydrogeology.....	4
3.5 Water Availability	5
3.6 Water Quality	5
3.7 Potential for Well Interference	6
3.8 Onsite Sewage Treatment.....	7
4. SUMMARY	7
5. REFERENCES	9

Drawings (appended after text)

Drawing 1: Site Plan Showing Project 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 analytical results

Table 4: Minimum clearances for distribution piping

Appendices

APPENDIX A MECP Water Well Records

APPENDIX B Hydrographs

APPENDIX C Laboratory Certificate of Analysis

1. Introduction

The Greer Galloway Group (Greer Galloway) was retained by Margaret Wright to complete a hydrogeological assessment supporting a proposed single-lot severance from the property at the northeastern corner of Stinson Block Road and Edward Drive in Consecon, Ontario.

The purpose of the work was to assess the soil and groundwater conditions at the site to demonstrate that the existing water supply well and a private sewage system will be suitable for supporting residential development on the proposed severance 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) procedures D-5-4 (Individual On-Site Sewage Systems) and D-5-5 (Private Well: Well Assessment).

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 wells within a 300 m radius of the subject property. A total of four 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 (A303826) on the northern half of the proposed severance, approximately 85 m south of Glen Lane and 90 m east of Edward Drive. The well is a 0.15 m diameter drilled well with a measured depth of 11.29 m below ground surface (bgs) and a measured static water level of 4.00 m bgs at the time of testing. The well record for this well indicates driller-reported recommended pumping rate of 19 L/min.

The 6-hour pumping test was performed on July 24, 2023 using a submersible pump with the discharge routed through a flow restriction valve corresponding to the desired pumping rate. Discharge water was directed away from the pumped well a distance of approximately 30 m downgradient of the well.

Data-logging pressure transducers (Solinst Model 3001) were installed in the tested well and in neighbouring wells at 82 Edward Drive and 9 Glen Lane. All 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 wells. Hydrographs created from the captured data are provided in Appendix B.

2.3 Water Quality Assessment

A groundwater sample was obtained during the last hour of the pumping test. 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. Summarized Findings

3.1 Site Description

The subject property covers an area of approximately 7.8 ha and is located at the northeastern corner of Edward Drive and Stinson Block Road near Consecon, Ontario. Ms. Wright wishes to sever off the western 4.8 ha, retaining the eastern 3.0 ha. Both the proposed severance and retained lands are undeveloped land covered by field grasses. Local land use is Rural (RU1). Maps of the property and its surroundings are provided in Drawings 1 and 2 (appended after text).

Topography of the property declines gently towards the north. Drainage is predominately in a northern direction, following local topography towards Weller's Bay (Lake Ontario) approximately 100 m to the north. The elevation of the property is about 85 m above mean sea level (mASL) at the southern edge of the property and about 81 mASL at the northern edge of the property.

Wellers Bay is the only major surface water body identified within 500 m of the subject property. Municipal servicing is not available in the area, so drinking water and sewage servicing must be handled 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 weather 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 organic deposits 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 subject property under current conditions.

Table 1: Estimated infiltration factors

Site Characteristic	Infiltration Factor
Topography	
Flat Land	0.3
Rolling Land	0.2
Hilly Land	0.1
Soils	
Tight impervious clay	0.1
Medium combinations of clay and loam	0.2
Open Sandy loam	0.4
Cover	
Cultivated Land	0.1
Woodland	0.2
Sum of Infiltration Factors	0.6

Given an average annual moisture surplus (P-ET) of approximately 470 mm, we estimate an average annual infiltration of about 282 mm for the subject property. We note that this number is taken from guidelines published by the MECP (Guideline D-5-4) for the purposes of nitrate loading calculations and the resulting recharge estimate may not reflect real conditions. More current guidelines (Design Guidelines for Sewage Works, 2008) call for the use of a default value of 250 mm/a.

3.3 Geology

The Ontario Soil Report No.10 classifies soils in this area as Hillier Clay Loam. Surficial soils are stony, reddish-brown clay loam containing an abundance of limestone fragments. Soils of this type are undulating to rolling in topography and overly limestone bedrock interbedded with shale partings.

The Ontario Geological Survey (2011) has described the bedrock as Ordovician nodular to black laminated 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 1.8 and 6.1 m, with a median depth to bedrock of 3.4 m.

3.4 Hydrogeology

A search of the Ministry of Environment, Conservation and Parks (MECP) Well Record Database returned 15 wells within a 300 m radius of the site (see Drawing 2, appended). Of the 15 wells identified, 2 of them were abandoned wells, one for insufficient supply and the other for poor quality. The remaining 13 Well Records are summarized in Table 2. The well records suggest the groundwater table in the area is encountered primarily within the overburden, with a median well yield of 23 lpm. The subject lands are located outside any mapped WHPA.

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

Well Number	Water Found (m)	Static Level (m)	Yield (L/min)	Overburden Depth (m)	Hole Depth (m)	Water Type	Aquifer
5301463	5.5	2.4	38	3.0	9.8	Fresh	Bedrock

Well Number	Water Found (m)	Static Level (m)	Yield (L/min)	Overburden Depth (m)	Hole Depth (m)	Water Type	Aquifer
5301464	5.2	0.6	11	2.1	6.4	Fresh	Overburden
5301467	7.6	2.7	11	3.4	8.8	Fresh	Bedrock
5301468	8.2	2.7	19	2.4	9.1	Fresh	Bedrock
5301469	6.7	1.5	23	1.8	7.6	Fresh	Bedrock
5302137	18.3	4.9	19	3.6	21.0	Fresh	Bedrock
5302240	9.1	2.4	11	3.4	11.0	Fresh	Overburden
5303076	12.5	1.8	23	3.0	13.7	Fresh	Overburden
5305651	Multiple	5.5	114	0.9	16.7	Fresh	Bedrock
5306824	7.6	1.8	38	4.6	12.1	Gas	Overburden
A013920	18.3	1.5	27	5.3	13.7	Fresh	Overburden
A065518	2.5	2.5	45	> 4.7	4.7	Fresh	Overburden
A148361	6.1	2.6	3	6.1	21.3	Untested	Overburden

Based on the recorded static levels and the topographic setting, the dominant local groundwater flow direction is in a northern direction towards Wellers Bay.

3.5 Water Availability

A pumping test was performed on the drilled water supply well A303826 at 11:57 on July 24, 2023, following 3 days of no precipitation. The static level was measured as 4.00 m bgs prior to commencing the pumping test.

Pumping was carried out over an approximately 7-hour period (408 minutes), ending at 18:45 on the same day. The flow rate was set at 12 L/min at the beginning of the test and was increased to 18 L/min after 100 minutes. The final water level reading before the test was stopped was 8.95 m bgs, indicating a maximum drawdown of 4.95 m (68% of the initial water column). A volume of approximately 6,700 L was pumped from the well, and full recovery of the water column was observed approximately 3 hours following the end of the test.

According to MECP Guideline D-5-5, the per-person requirement is 450 L/day (though recent data shows that actual per-person usage in Ontario is approximately 225 L/day), with peak demand occurring for a period of 120 minutes each day. Based on a 4-bedroom household with an occupancy of 5 persons, this is equivalent to a peak demand of 18.7 L/min. The well was able to sustain continuous pumping for approximately 5 hours at a rate comparable to the estimated peak demand. 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 severance. The tested yield is considered to be representative, and the well is expected to be able to meet normal residential water demand even during the dry summer months.

3.6 Water Quality

A groundwater sample was obtained from the tested well at the end of the pumping test and was analyzed at Caduceon Laboratories Ltd. in Kingston, Ontario for selected parameters. Key results are

summarized in Table 3, with exceedances being formatted in bold. The full results of this testing are included with the Laboratory Certificates of Analysis in Appendix C.

Table 3: Summary of Key Analytical Results

Parameter	Unit	ODWS Objective (From D-5-5)	Sample ID GW1 (July 24 2023)	Sample ID Resample (August 8 2023)
E. Coli	Count / 100 mL	0	0	0
Total Coliforms	Count / 100 mL	0	0	1
Fecal Coliforms	Count / 100 mL	0	0	0
Turbidity	NTU	1	0.6	-
Hardness	mg/L as CaCO ₃	500	227	-
Nitrate (as N)	mg/L	10.0	<0.05	-
Nitrite (as N)	mg/L	1.0	< 0.05	-
pH	-	6.5 - 8.5	7.89	-
Sulphate	mg/L	500	4	-
Chloride	mg/L	250	4.5	-
Colour	TCU	5	< 2	-
Dissolved Organic Carbon (DOC)	mg/L	5	1.6	-
Iron (Fe)	mg/L	0.3	0.075	-
Manganese	mg/L	0.05	0.004	-
Sodium	mg/L	20	49.8	-

The sample taken from A303826 at the end of the pumping test was found to have no health-related exceedances, though Sodium was found to exceed the 20 mg/L “warning” threshold at which municipal systems are required to advise the local Medical Officer of Health, as it may be relevant for people on sodium-restricted diets.

After receiving the results of the initial sample, a resample for bacteriological parameters was taken because the absence of any background bacteria in the initial sample suggested the potential effect of residual chlorination. The resample was taken after verifying that the concentration of free chlorine was below the detection limit of our handheld free chlorine colorimeter. The results of the resample confirmed acceptable bacteriological results.

The water was found to be moderately hard, which is typical of water from wells sourcing limestone aquifers, but of generally good quality. Neighbours that were contacted during the homeowner survey reported that they were generally satisfied with the quality and quantity of their well water.

3.7 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 radius of influence of less than 30 m based on a shallow drilled well, pumping at a rate of 1,125 L/day (5 people x 225 L/day) over the course of a year for A303826.

During the pumping test, the water supply wells at 82 Edward Drive and 9 Glen Lane were monitored for well interference. No response to the pumping test was observed in either of the monitoring wells.

We note that the fractured bedrock aquifer does not behave in the same way as an ideal porous media. Localized zones of higher permeability soils will be associated with a locally greater radius of influence, while lower permeability zones will have a correspondingly reduced radius of influence. However, even accounting for these effects, well interference is not anticipated to be a problem at the subject property.

3.8 Onsite Sewage Treatment

Neither municipal water supply nor sewage servicing is available at the property. As such, servicing for the proposed severances will be private water supply wells and private individual septic systems.

Site conditions are considered suitable for the construction of a private septic system. Any such system must be constructed in accordance with Section 8 of the Ontario Building Code and must meet the setback distances outlined in Table 6.

Because the proposed severances both have areas greater than 1 ha, risk to neighbouring water sources from nitrate-rich sewage effluent is considered low under MECP Guideline D-5-4 section 5.5.

Table 4: Minimum clearances for distribution piping

Object	Minimum Setback (m)
Structure	5
Well with a watertight casing to a depth of 6 m	15
Any other well	30
Pond	15
Stream	15
Property Line	3

4. Summary

The purpose of the work was to determine soil and groundwater conditions at the site and to demonstrate that the proposed severance can be serviced by groundwater and an individual septic system in accordance with Provincial standards without adversely affecting surrounding private water sources.

Our assessment found the following:

1. The existing well (A303826) has sufficient yield to meet normal water demand from a 3-4 bedroom residential dwelling. Neighbouring residences are serviced by existing water supply wells, none of which have reported concerns about their water quantity.
2. Well testing did not demonstrate any potential for adverse impacts to surrounding wells or to natural ecological features. Well interference is not anticipated to be a concern based on the results of this assessment.
3. Results of water quality testing showed no health-related exceedances of ODWS limits. The well is considered suitable as a potable water supply, though ultraviolet sterilization (as a minimum) is still recommended as in-home water treatment.

4. Because the area of the proposed severance is greater than 1 ha, the lot is considered large enough to meet MECP Guideline D-5-4 requirements with respect to Nitrate in groundwater leaving the property. The risk of impacting neighbouring water sources with nitrate-rich sewage effluent is considered to be low.

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

https://climate.weather.gc.ca/climate_normals/results_1981_2010_e.html?stnID=4859&autofwd=1

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

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>



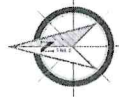
GREER GALLOWAY
CONSULTING ENGINEERS
PETERBOROUGH
KINGSTON
1620 WALLBRIDGE LOYALIST ROAD
BELLEVILLE, ONTARIO, K8N 4Z5
PHONE: 613-986-3082
FAX: 613-986-3087

NOTES:

1) Base drawing and information obtained from Google Earth.

LEGEND:

● Property Location



PROJECT 231486:

HYDROGEOLOGICAL ASSESSMENT
PART OF STINSON BLOCK LOT 12
CONSECON, ONTARIO

DRAWING 1:

SITE PLAN SHOWING PROPERTY LOCATION



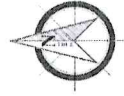
GREER GALLOWAY CONSULTING ENGINEERS
 PETERBOROUGH
 1620 WALLBRIDGE LOYALIST ROAD
 BELLEVILLE, ONTARIO, M9N 4Z3
 PHONE: 613-988-3085
 FAX: 613-988-3087

NOTES:

1) Data accuracy and information obtained from Private Edwards County GIS: <http://www.edwardscountycanada.ca/gis/>

LEGEND:

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



PROJECT 234488:
 HYDROGEOLOGICAL ASSESSMENT
 PART OF STINSON BLOCK LOT 12
 CONSECON, ONTARIO

DRAWING 2:

SITE PLAN SHOWING WELL LOCATION



Appendix A

MECP Water Well Records



30N13-2

GROUND WATER
OCT 10 1961
53 No
ONTARIO WATER
RESOURCES COMMISSION

UTM 18Z 295012E

Stinson Blk
57R 48 73071N

The Ontario Water Resources Commission Act

Elev. 190.279

WATER WELL RECORD

Basin 29 Prince Edward

Township, Village, Town or City Hillier

Con. Stinson Blk. Lot 10

Date completed 17 June 1961
(day month year)

Address Consecon P.R.3

Casing and Screen Record

Inside diameter of casing 6 1/4"
 Total length of casing 7 1/2"
 Type of screen —
 Length of screen —
 Depth to top of screen —
 Diameter of finished hole 6 1/4"

Pumping Test

Static level 2'
 Test-pumping rate 10 G.P.M.
 Pumping level 15'
 Duration of test pumping 1 hr.
 Water clear or cloudy at end of test Clear
 Recommended pumping rate 3 G.P.M.
 with pump setting of 18 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
Clay gravel	0	6		
grey limestone	6	21	17'	fresh

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

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

Drilling or Boring Firm S.H. McClemon & son

Address Wellington Ont

Licence Number 265

Name of Driller or Borer Wm Blackman

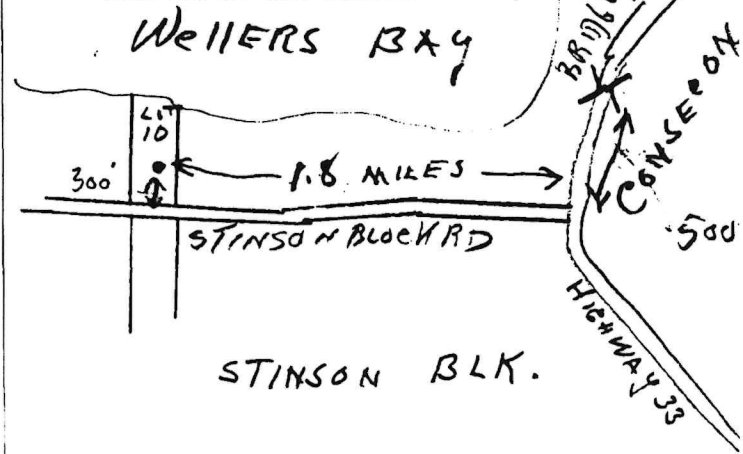
Address Wellington

Date July S.H. McClemon
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5930 1

Location of Well

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



STINSON BLK.



30N13R

GROUND WATER BRANCH
SEP 53 No 1467
1953
ONTARIO WATER RESOURCES COMMISSION

UTM 18Z 294741E
5R 4873001N

The Ontario Water Resources Commission Act

Elev. 4R 0278

WATER WELL RECORD

Basin 24
County or District Prince Edward

Township, Village, Town or City Hillier

Con. STINSON BLOCK Lot 10

Date completed July 16, 1963.

(day month year)

Address 643 Glencairn Ave. Toronto 19, Ont.

Casing and Screen Record

Inside diameter of casing 6 1/4
Total length of casing 11 1/2 ft.
Type of screen -
Length of screen -
Depth to top of screen -
Diameter of finished hole 6 1/4

Pumping Test

Static level 9 ft.
Test-pumping rate 15 G.P.M.
Pumping level empty
Duration of test pumping 1 hr.
Water clear or cloudy at end of test clear
Recommended pumping rate 3 G.P.M.
with pump setting of 26 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record

From ft.

To ft.

Depth(s) at which water(s) found

Kind of water (fresh, salty, sulphur)

clay gravel
greylimestone

0

11

25 ft.

fresh

11

29

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

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

Drilling or Boring Firm L.H. McClennon & Son

Address Wellington, Ont.

Licence Number 843

Name of Driller or Borer Ken McClennon

Address Wellington, Ont.

Date July 30, 1963.

L.H. McClennon

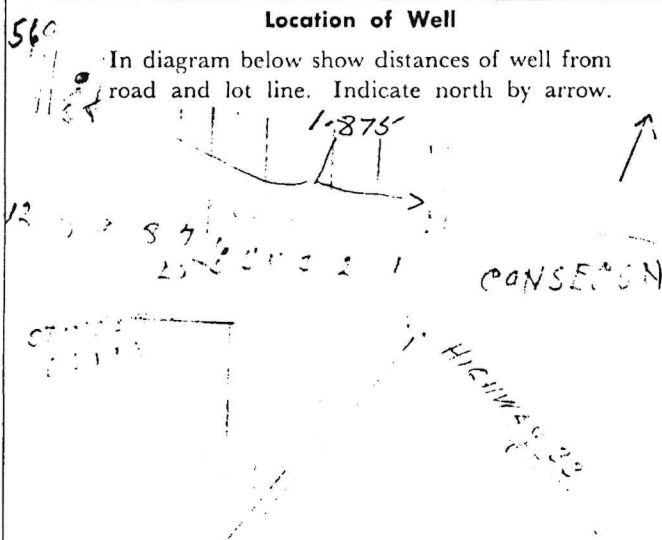
(Signature of Licensed Drilling or Boring Contractor)

Form 7 10M-62-1152

OWRC COPY

Location of Well

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



07



UTM 118 Z 21948918 E

30N 13R

53 No 1468

Stinson 483132166 N The Ontario Water Resources Commission Act

Elev. 157 06260

WATER WELL RECORD

Basin 214 Prince Edward Township, Village, Town or City Hillier

Con. Stinson Block Lot 10 Date completed June 26, 1965
(day month year)

Address 4 Weeks Ave., Toronto, Ont.

Casing and Screen Record

Inside diameter of casing 6 1/2"

Total length of casing 8 ft.

Type of screen

Length of screen

Depth to top of screen

Diameter of finished hole 6 1/2"

Pumping Test

Static level 9 ft.

Test-pumping rate 5 G.P.M.

Pumping level 20 ft.

Duration of test pumping 1 hr.

Water clear or cloudy at end of test clear

Recommended pumping rate 5 G.P.M.

with pump setting of 27 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
<u>clay gravel</u>	<u>0</u>	<u>8</u>	<u>27 ft.</u>	<u>fresh</u>
<u>grey limestone</u>	<u>8</u>	<u>30</u>		

For what purpose(s) is the water to be used? cottage 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 1688

Name of Driller or Borer L.H. McClennon

Address Wellington, Ont.

Date June 30, 1965

L.H. McClennon

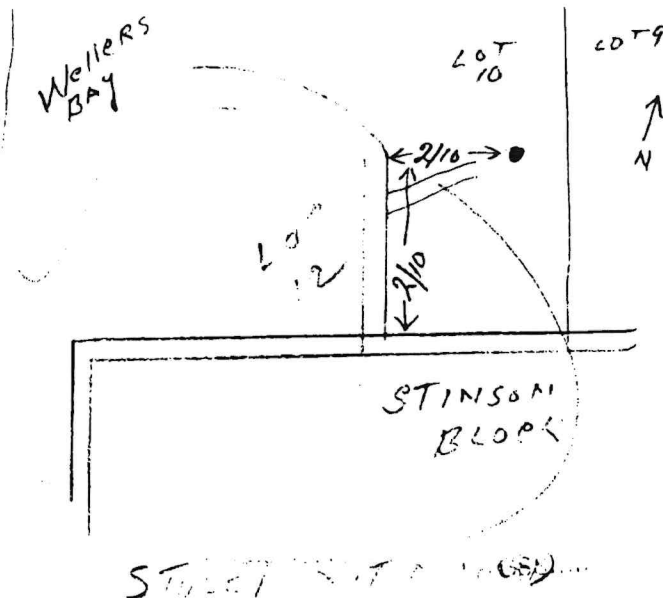
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

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





UTM | 18 | 294847 | E

30N13R

53 No 1469

157R, 448736249N

The Ontario Water Resources Commission Act

Elev. 57 90260

WATER WELL RECORD

Basin 24 Prince Edward

Township, Village, Town or City Hillier

Con. Stinson Block Lot 10

Date completed June 30, 1965

(day month year)

Address RR#3, Consecon, Ont.

Casing and Screen Record

Inside diameter of casing 8"

Total length of casing 6 ft.

Type of screen

Length of screen

Depth to top of screen

Diameter of finished hole 8"

Pumping Test

Static level 5 ft.

Test-pumping rate 10 G.P.M.

Pumping level 15 ft.

Duration of test pumping 2 hr.

Water clear or cloudy at end of test clear

Recommended pumping rate 6 G.P.M.

with pump setting of 22 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
clay gravel	0	6	22 ft.	fresh
brown limestone	6	25		

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

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

Drilling or Boring Firm L.H. McClennon & Son

Address Wellington, Ont.

Licence Number 1688

Name of Driller or Borer Ken McClennon

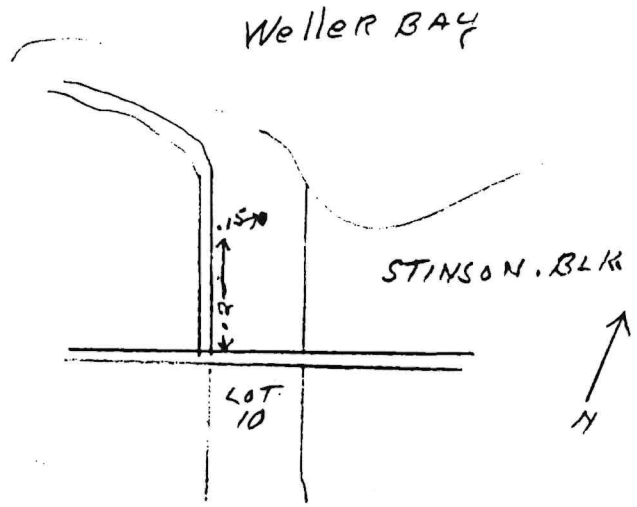
Address Wellington, Ont.

Date June 30, 1965

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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





Ontario

WRL

MINISTRY OF THE ENVIRONMENT The Ontario Water Resources Act WATER WELL RECORD

30W/13H

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

11 5303076

MUNICIPALITY 53004 COM 5B

COUNTY OR DISTRICT PRINCE EDWARD

TOWNSHIP, PARISH, CITY, TOWN, VILLAGE Millier

CON. BLOCK, TRACT, SURVEY, ETC. Stinson Blk

LOT 25-27 010

DATE COMPLETED 46-53 DAY 28 NO. 10 YR. 74
ADDRESS 86 PUPPALAVE BAY RIDGES, CONT.
THING 873312 RC 4 ELEVATION 0250 RC 4 BASIN CODE 24

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
Brown	clay	gravel	packed	0	9
Grey	limestone		layered	9	25

31 00097605111 0045915
32

41 WATER RECORD

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

51 CASING & OPEN HOLE RECORD

MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
		FROM	TO
STEEL	1.88	0	0010
GALVANIZED CONCRETE		10	0045
STEEL			
GALVANIZED CONCRETE			
STEEL			
GALVANIZED CONCRETE			
STEEL			
GALVANIZED CONCRETE			
STEEL			
GALVANIZED CONCRETE			
STEEL			
GALVANIZED CONCRETE			
STEEL			
GALVANIZED CONCRETE			
STEEL			
GALVANIZED CONCRETE			
STEEL			
GALVANIZED CONCRETE			
STEEL			
GALVANIZED CONCRETE			

SCREEN

SIZE (SI OF OPENING (SLOT NO.))	DIAMETER	LENGTH

MATERIAL AND TYPE

DEPTH TO TOP OF SCREEN

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE	(CEMENT GROUT, LEAD PACKER, ETC.)
10-15		
18-21		
26-29		

71 PUMPING TEST

PUMPING TEST METHOD 1 A/R BAILER

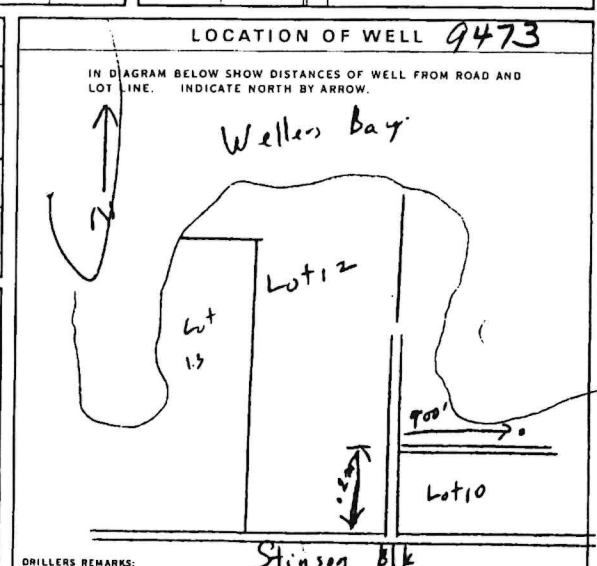
PUMPING RATE 0006 GPM

DURATION OF PUMPING 01 15-16 HOURS 00 17-18 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	1 <input checked="" type="checkbox"/> PUMPING	2 <input checked="" type="checkbox"/> RECOVERY
006	045	15 MINUTES 088		
		30 MINUTES 006		
		45 MINUTES 006		
		60 MINUTES 006		

RECOMMENDED PUMP TYPE 6 DEEP

RECOMMENDED PUMPING RATE 0006 GPM



FINAL STATUS OF WELL

1 WATER SUPPLY 5 ABANDONED, INSUFFICIENT YIELD
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 OTHER 10 NOT USED

METHOD OF DRILLING 4

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 MCKENNON DRILLING LTD LICENCE NUMBER 3516

ADDRESS WELLINGTON ONT.

NAME OF DRILLER OR OPERATOR Kenneth M'Clennan LICENCE NUMBER

SIGNATURE OF CONTRACTOR Kenneth M'Clennan SUBMISSION DATE

OFFICE USE ONLY

DATA SOURCE 1 CONTRACTOR 3516 DATE RECEIVED 25/13/75

DATE OF INSPECTION INSPECTOR km

REMARKS

WI

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

11 5305651 5300A

COUNTY OR DISTRICT: [Redacted] TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: Hillier CON. BLOCK TRACT SURVEY ETC: Stinson Block LOT: 11
DATE COMPLETED: 48-53 DAY: 10 MO: 6 YR: 91
RR# 3 Consec, Ontario

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
	Clay			0	3
	Shale			3	15
	limestone			15	55

31 32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
10-13 4.7	<input checked="" type="checkbox"/> FRESH <input type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
15-18 4.7	<input checked="" type="checkbox"/> FRESH <input type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
20-23	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
25-28	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS
30-33	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY <input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET
10-11	<input checked="" type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC		13-14
17-18	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC	1.88	20-23
34-25	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC		27-30

SCREEN

SIZE'S OF OPENING (SLOT NO.): 31-33 DIAMETER: 34-38 LENGTH: 39-40
MATERIAL AND TYPE: DEPTH TO TOP OF SCREEN: 41-44 30 FEET

61 PLUGGING & SEALING RECORD

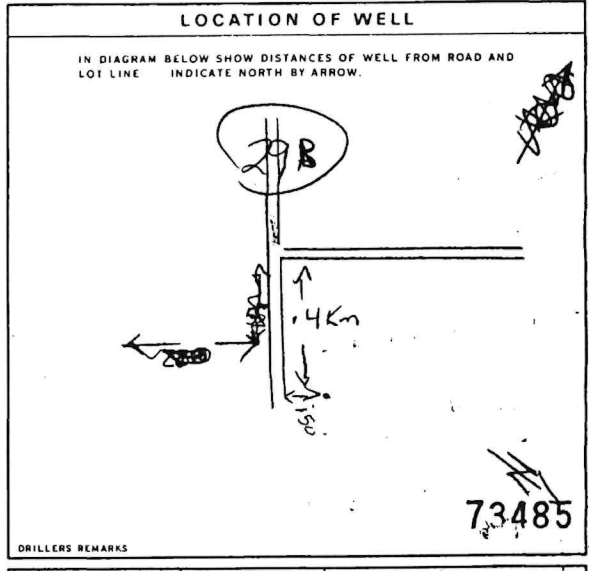
DEPTH SET AT - FEET	MATERIAL AND TYPE	CEMENT GROUT LEAD PACKER ETC.
30-33 18-21	20	cement grout
44-49		

71 PUMPING TEST

PUMPING TEST METHOD: PUMP BAILER
PUMPING RATE: 30 GPM
DURATION OF PUMPING: 1 HOURS
PUMPING: PUMPING RECOVERY

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING
18 FEET	30 FEET	15 MINUTES: 30 FEET 30 MINUTES: 30 FEET 45 MINUTES: 30 FEET 60 MINUTES: 30 FEET

IF FLOWING, GIVE RATE: 30 GPM
PUMP INTAKE SET AT: 30 FEET
WATER AT END OF TEST: CLEAR CLOUDY
RECOMMENDED PUMP TYPE: SHALLOW DEEP
RECOMMENDED PUMP SETTING: 30 FEET
RECOMMENDED PUMPING RATE: 30 GPM



FINAL STATUS OF WELL

WATER SUPPLY ABANDONED, INSUFFICIENT SUPPLY
 OBSERVATION WELL ABANDONED POOR QUALITY
 TEST HOLE UNFINISHED
 RECHARGE WELL DEWATERING

WATER USE

DOMESTIC COMMERCIAL
 STOCK MUNICIPAL
 IRRIGATION PUBLIC SUPPLY
 INDUSTRIAL COOLING OR AIR CONDITIONING
 OTHER NOT USED

METHOD OF CONSTRUCTION

CABLE TOOL BORING
 ROTARY (CONVENTIONAL) DIAMOND
 ROTARY (REVERSE) JETTING
 ROTARY (AIR) DRIVING
 AIR PERCUSSION DIGGING OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR: Superior Well Drilling
ADDRESS: 17 Parker St Belleville Ont
NAME OF WELL TECHNICIAN: Kennedy
SIGNATURE OF TECHNICIAN/CONTRACTOR: [Signature]
WELL CONTRACTOR'S LICENCE NUMBER: 6028
WELL TECHNICIAN'S LICENCE NUMBER: 100047
SUBMISSION DATE: DAY: _____ MO: _____ YR: _____

OFFICE USE ONLY

DATE RECEIVED: 6028 OCT 21 1991
DATE OF INSPECTION: _____ INSPECTOR: _____
REMARKS: _____
CSS.ES



Ministry of the Environment

8

The Ontario Water Resources Act
WATER WELL RECORD

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

11

5306824

Municipality: 53004 SB
Con. _____

County or District: **PEC**
Township/Borough/City/Town/Village: **Hillier**
Con. block tract survey, etc.: **Stingson Block** Lot: **10**
Address: **Trenton**
Date completed: **25** day **05** month **01** year

21
Northings: _____
Elevations: _____
Basin Code: _____

General colour	Most common material	Other materials	General description	Depth - feet	
				From	To
	Soil			0	2 1/2
	shale			2 1/2	6
	Limestone			6	40

31
32

41 WATER RECORD

Water found at - feet	Kind of water
18-25	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input checked="" type="checkbox"/> Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
6	1 <input checked="" type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic	188	0	15

SCREEN

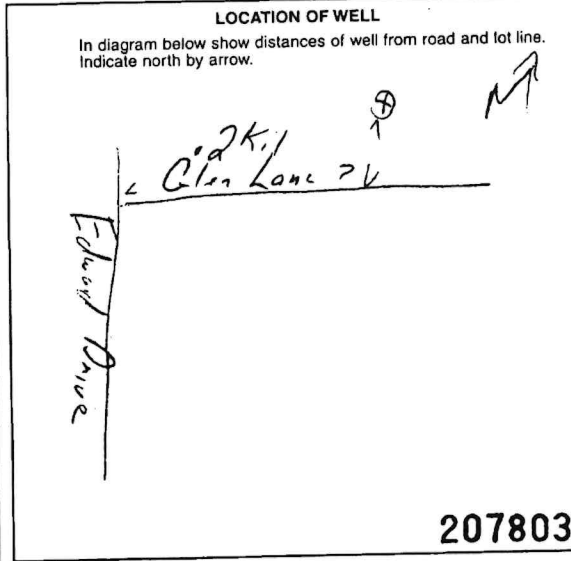
Sizes of opening (Slot No.)	Diameter inches	Length feet

61 PLUGGING & SEALING RECORD

Depth set at - feet	Material and type (Cement grout, bentonite, etc.)
0-15	Cement

71 PUMPING TEST

Pumping test method: <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Bailor	Pumping rate: 10 GPM	Duration of pumping: 1 Hours
Static level: 6 feet	Water level end of pumping: 20 feet	Water levels during:
		15 minutes: 10 feet
		30 minutes: 9 1/2 feet
		45 minutes: 9 feet
		60 minutes: 8 1/2 feet



FINAL STATUS OF WELL

1 Water supply
2 Observation well
3 Test hole
4 Recharge well

5 Abandoned, insufficient supply
6 Abandoned, poor quality
7 Abandoned (Other)
8 Dewatering

9 Unfinished
10 Replacement well

WATER USE

1 Domestic
2 Stock
3 Irrigation
4 Industrial

5 Commercial
6 Municipal
7 Public supply
8 Cooling & air conditioning

9 Not use
10 Other

METHOD OF CONSTRUCTION

1 Cable tool
2 Rotary (conventional)
3 Rotary (reverse)
4 Rotary (air)

5 Air percussion
6 Boring
7 Diamond
8 Jetting

9 Driving
10 Digging
11 Other

Name of Well Contractor: **Ed Campbell**
Well Contractor's Licence No.: **1519**
Address: **Newburgh**
Name of Well Technician: **Ed Campbell**
Well Technician's Licence No.: **70099**
Signature of Technician/Contractor: **Ed Campbell**
Submission date: **25 05 01**

MINISTRY USE ONLY

Data source: **1519**
Date received: **JUL 23 2001**
Date of inspection: _____
Inspector: _____
Remarks: _____



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

11

5306957

Municipality: 53004 SB
Con: SB

County or District: Prince Edward
 Township/Borough/City/Town/Village: Hillier
 Address: RR #3 Concession
 Date completed: day 67 month 05 year 2002

21

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)					
General colour	Most common material	Other materials	General description	Depth - feet	
				From	To
black	Topsoil			0	1
brown	Clay & stones			1	8'
brown	shale			8'	10'
GREY	Limestone			10'	50'

31

32

41 WATER RECORD

Water found at - feet	Kind of water					
10-11	1 <input type="checkbox"/> Fresh	2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur	4 <input type="checkbox"/> Minerals	5 <input type="checkbox"/> Gas	6 <input type="checkbox"/> Other
15-18	1 <input type="checkbox"/> Fresh	2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur	4 <input type="checkbox"/> Minerals	5 <input type="checkbox"/> Gas	6 <input type="checkbox"/> Other
20-23	1 <input type="checkbox"/> Fresh	2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur	4 <input type="checkbox"/> Minerals	5 <input type="checkbox"/> Gas	6 <input type="checkbox"/> Other
25-28	1 <input type="checkbox"/> Fresh	2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur	4 <input type="checkbox"/> Minerals	5 <input type="checkbox"/> Gas	6 <input type="checkbox"/> Other
30-33	1 <input type="checkbox"/> Fresh	2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur	4 <input type="checkbox"/> Minerals	5 <input type="checkbox"/> Gas	6 <input type="checkbox"/> Other

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
10-11	1 <input type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic			11-16
17-18	1 <input type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic			20-23
24-25	1 <input type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic			27-30

SCREEN

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

Material and type: _____
 Depth at top of screen: _____ feet

61 PLUGGING & SEALING RECORD

Annular space Abandonment

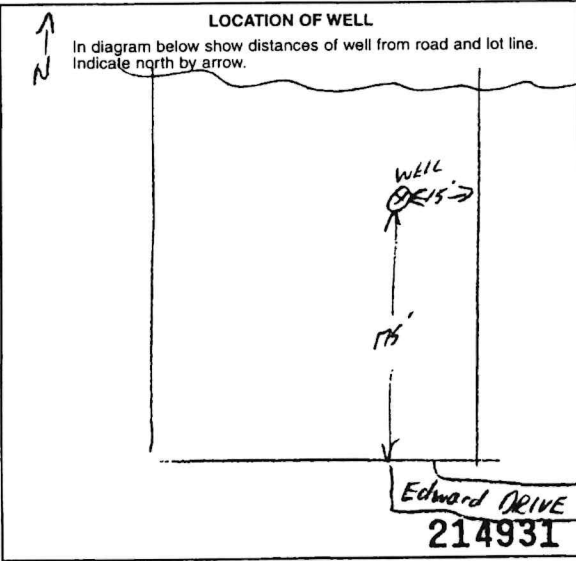
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)
From	To	
0	50	CONCRETE
19-21	22-23	
26-29	30-33	

71 PUMPING TEST

Pumping test method	Pumping rate GPM	Duration of pumping Hours	Minutes
1 <input type="checkbox"/> Pump 2 <input type="checkbox"/> Bailor			

Static level	Water level end of pumping	Water levels during	Water at end of test
19-21	22-24	15 minutes 25-26 30 minutes 29-31 45 minutes 32-34 60 minutes 35-37	42

If flowing give rate: _____ GPM
 Recommended pump type: Shallow Deep
 Recommended pump setting: _____ feet
 Recommended pump rate: _____ GPM



FINAL STATUS OF WELL

1 Water supply
 2 Observation well
 3 Test hole
 4 Recharge well
 5 Abandoned, insufficient supply
 6 Abandoned, poor quality
 7 Abandoned (Other)
 8 Dewatering
 9 Unfinished
 10 Replacement well

WATER USE

1 Domestic
 2 Stock
 3 Irrigation
 4 Industrial
 5 Commercial
 6 Municipal
 7 Public supply
 8 Cooling & air conditioning
 9 Not use
 10 Other

METHOD OF CONSTRUCTION

1 Cable tool
 2 Rotary (conventional)
 3 Rotary (reverse)
 4 Rotary (air)
 5 Air percussion
 6 Boring
 7 Diamond
 8 Jetting
 9 Driving
 10 Digging
 11 Other

Name of Well Contractor: ALEXANDER WELL DRILLING
 Well Contractor's Licence No.: 6663
 Address: RR #2 Carrying Place
 Name of Well Technician: DAVE ALEXANDER
 Well Technician's Licence No.: T-532
 Signature of Technician/Contractor: [Signature]
 Submission date: day 17 month 05 year 2002

MINISTRY USE ONLY

Data source: 6663
 Date received: JUN 06 2002
 Date of inspection: _____
 Inspector: _____
 Remarks: _____

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

11

5306958

Municipality 53004

Con. SB

County or District: PRINCE EDWARD
 Township/Borough/City/Town/Village: Hillier
 Address: RR# 3 Carsecon
 Date completed: 13 day 15 month 02 year
 Block/tract survey, etc.: Stinson Rpt. P+L+12
 Lot: P+L+12

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)					
General colour	Most common material	Other materials	General description	Depth - feet	
				From	To
<u>black</u>	<u>Topsoil</u>			<u>0</u>	<u>1'</u>
<u>brown</u>	<u>Clay & STONES</u>			<u>1'</u>	<u>8'</u>
<u>brown</u>	<u>Shale</u>			<u>8'</u>	<u>10'</u>
<u>GREY</u>	<u>Limestone</u>			<u>10'</u>	<u>65'</u>

41 WATER RECORD

Water found at - feet	Kind of water
1-3	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals <input type="checkbox"/> Gas
15-18	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals <input type="checkbox"/> Gas
20-23	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals <input type="checkbox"/> Gas
25-28	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals <input type="checkbox"/> Gas
33-33	<input type="checkbox"/> Fresh <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals <input type="checkbox"/> Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
10-11	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic			
17-18	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic			20-21
24-25	<input type="checkbox"/> Steel <input type="checkbox"/> Galvanized <input type="checkbox"/> Concrete <input type="checkbox"/> Open hole <input type="checkbox"/> Plastic			27-30

SCREEN

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

Material and type: _____
 Depth at top of screen: _____ feet

61 PLUGGING & SEALING RECORD

Annular space Abandonment

Depth set at - feet		Material and type (Cement grout, bentonite, etc.)
From	To	
<u>0</u>	<u>65'</u>	<u>CONCRETE</u>

71 PUMPING TEST

Pumping test method	Pumping rate GPM	Duration of pumping Hours Mins
<input type="checkbox"/> Pump <input type="checkbox"/> Bailer		

Static level	Water level end of pumping	Water levels during
15-21	32-23	15 minutes 18-28, 30 minutes 29-31, 45 minutes 32-34, 60 minutes 35-37

If flowing give rate: _____ GPM
 Pump intake set at: _____ feet
 Water at end of test: Clear Cloudy
 Recommended pump type: Shallow Deep
 Recommended pump setting: _____ feet
 Recommended pump rate: _____ GPM

FINAL STATUS OF WELL

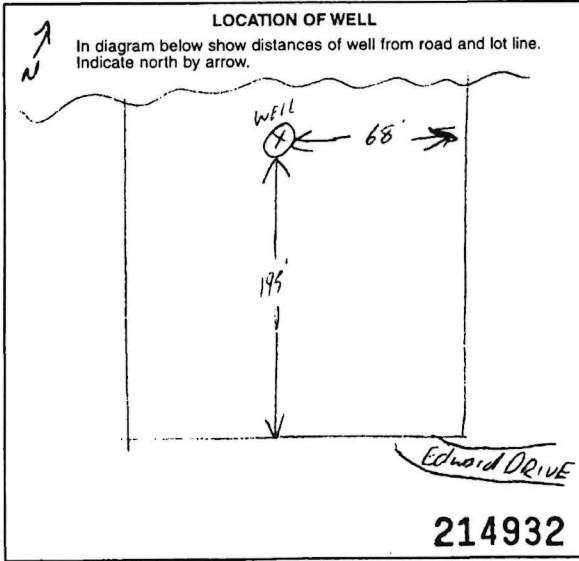
Water supply Abandoned, insufficient supply Unfinished
 Observation well Abandoned, poor quality Replacement well
 Test hole Abandoned (Other)
 Recharge well Dewatering

WATER USE

Domestic Commercial Not use
 Stock Municipal Other
 Irrigation Public supply
 Industrial Cooling & air conditioning

METHOD OF CONSTRUCTION

Cable tool Air percussion Driving
 Rotary (conventional) Boring Digging
 Rotary (reverse) Diamond Other
 Rotary (air) Jetting



Name of Well Contractor: ALEXANDER WELL DRILLING Well Contractor's Licence No.: 6663
 Address: RR# 3 Carrying Place
 Name of Well Technician: DAVE ALEXANDER Well Technician's Licence No.: T-532
 Signature of Technician/Contractor: _____ Submission date: 17 mo 02 yr

MINISTRY USE ONLY

Data source: 6663 Date received: JUN 06 2002
 Date of inspection: _____ Inspector: _____
 Remarks: _____

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 1/10th of a metre.
- Please print clearly in blue or black ink only.

Ministry Use Only

MUN	CON	LOT
-----	-----	-----



Address of Well Location (County/District/Municipality) **PRINCE Edward** Township **Hillier** Lot **11** Concession

RR#/Street Number/Name **RR#3** City/Town/Village **Consecon** Site/Compartment/Block/Tract etc. **PAR 10**

GPS Reading NAD **83** Zone **18** Easting **294634** Northing **4873463** Unit Make/Model **McGellan** Mode of Operation: Undifferentiated Averaged Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Metres To
Black	TOPSOIL			0	0.30
BROWN	Clay			0.30	3.66
GREY	Clay			3.66	4.88
GREY	LIMESTONE			4.88	13.72

Hole Diameter

Depth From	Metres	Diameter Centimetres
0	5.27	15.86
5.27	13.72	15.55

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
15.86	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	0.61	0.61	5.27
	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	48	6600e	ground

Test of Well Yield

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Submersible				
Pump intake set at (metres)	11.59			
Pumping rate (litres/min)	1	2.47	1	4.66
Duration of pumping (hrs + min)	2	2.83	2	4.30
Final water level end of pump (metres)	3	3.20	3	4.05
Recommended pump type	4	3.38	4	3.78
Recommended pump depth (metres)	5	3.47	5	3.56
Recommended pump rate (litres/min)	10	4.05	10	2.86
	15	4.48	15	2.25
If flowing give rate (litres/min)	20	4.72	20	2.22
	25	4.91	25	2.04
If pumping discontinued, give reason.	30	4.91	30	2.01
	40	5.18	40	1.83
	50	5.27	50	1.79
	60	5.33	60	1.67

Water Record

Water found at **10.3** m Kind of Water Fresh Sulphur Gas Salty Minerals Other: **unkn**

m Fresh Sulphur Gas Salty Minerals Other:

After test of well yield, water was Clear and sediment free Other: **Cloudy - NOT SEDIMENT FREE**

Chlorinated Yes No

Screen

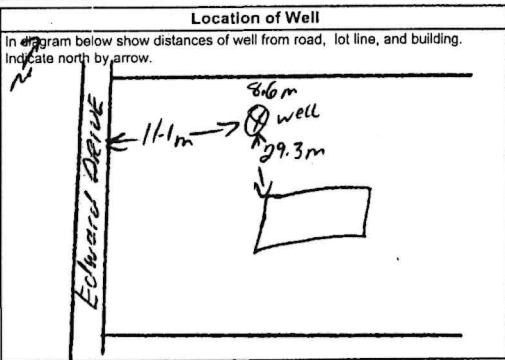
Outside diam	Material	Slot No.
15.55	<input checked="" type="checkbox"/> Open hole	

No Casing or Screen

Depth From	Metres To
5.27	13.72

Plugging and Sealing Record Annular space Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	5.27	CONCRETE	



Method of Construction

Cable Tool Rotary (air) Diamond Digging Rotary (conventional) Air percussion Jetting Other Rotary (reverse) Boring Driving

Water Use

Domestic Industrial Public Supply Other Stock Commercial Not used Irrigation Municipal Cooling & air conditioning

Final Status of Well

Water Supply Recharge well Unfinished Abandoned, (Other) Observation well Abandoned, insufficient supply Dewatering Test Hole Abandoned, poor quality Replacement well

Audit No. **Z 13988** Date Well Completed **06 08 19**

Was the well owner's information package delivered? Yes No Date Delivered **06 08 23**

Well Contractor/Technician Information

Name of Well Contractor **ALEXANDER WELL DRILLING** Well Contractor's Licence No. **6663**

Business Address (street name, number, city etc.) **RR#2 Carrying Place**

Name of Well Technician (last name, first name) **ALEXANDER DAVE** Well Technician's Licence No. **7-532**

Signature of Technician/Contractor **DAVE** Date Submitted **06 08 23**

Ministry Use Only

Data Source Contractor **6663**

Date Received **SEP 2 6 2006** Date of Inspection **06 08 23**

Remarks Well Record Number

Address of Well Location (Street Number Name, RR) **94 EDWARDS ST.** Township **HILTIAN** Lot **172** Concession **STINSON BLOCK**
 County/District/Municipality **PRINCE EDWARD** City/Town/Village **CONSECON** Province **Ontario** Postal Code **K0K1T0**
 UTM Coordinates Zone Easting Northing GPS Unit Make Model Mode of Operation: Undifferentiated Averaged
 NAD 83 | 18 294 623 488 219 | CAOMIN | FETTER | Differentiated, specify _____

Overburden and Bedrock Materials (see instructions on the back of this form)

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres)	
				From	To
Brown	TOPSOIL			0	0.5
Brown	CLAY	STONE		0.5	1.5
Blue	CLAY	STONE		1.5	4.73

Annular Space/Abandonment Sealing Record

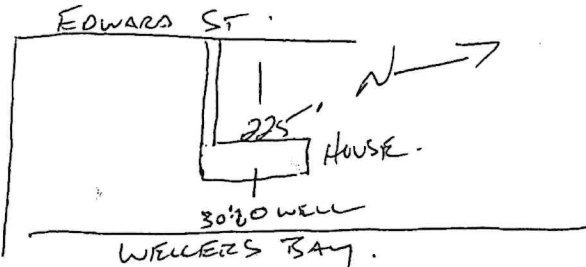
Depth Set at (Metres) From	Depth Set at (Metres) To	Type of Sealant Used (Material and Type)	Volume Placed (Cubic Metres)
0	3	NON TOXIC CAULKING	

Method of Construction: Cable Tool Diamond Jetting Rotary (Conventional) Rotary (Reverse) Rotary (Air) Air percussion Other, specify _____
 Digging Boring

Water Use: Public Commercial Not used Domestic Municipal Dewatering Livestock Test Hole Monitoring Irrigation Industrial Cooling & Air Conditioning Other, specify _____

Status of Well: Water Supply Replacement Well Test Hole Recharge Well Dewatering Well Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify _____ Observation and/or Monitoring Well Alteration (Construction) Other, specify _____

Location of Well: Please provide a map below showing:
 - all property boundaries, and measurements sufficient to locate the well in relation to fixed points,
 - an arrow indicating the North direction
 - detailed drawings can be provided as attachments no larger than legal size (8.5" by 14")
 - digital pictures of inside of well can also be provided



Date Well Completed (yyyy/mm/dd) **07 11 07** Was the well owner's information package delivered? Yes No Date the Well Record and Package Delivered to Well Owner (yyyy/mm/dd) **07 11 07**

Well Contractor and Well Technician Information
 Business Name of Well Contractor **LOGIC WATER WELL SOLUTIONS** Well Contractor's Licence No. **615124**
 Business Address (Street No./Name, number, RR) **PO BOX 3033 227 BELLAIR** Municipality **PRINCE EDWARD**

Province **ONT** Postal Code **K9M 4Z7** Business E-mail Address _____

Bus. Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name) **613 822 7474 Kim Oulvey**

Well Technician's Licence No. **118150** Signature of Technician **[Signature]** Date Submitted (yyyy/mm/dd) **07 11 07**

Results of Well Yield Testing

Check box if after test of well yield, water was:	Draw Down		Recovery	
	Time (Min)	Water Level (Metres)	Time (Min)	Water Level (Metres)
<input checked="" type="checkbox"/> Clear and sand free				
<input type="checkbox"/> Cannot develop to sand-free state				
If pumping discontinued, give reason:	1	THIS IS A		
Pumping test method COAS PUMP	2		2	
Pump intake set at (Metres) 4.7	3	DUG	3	WELL
Pumping rate (Litres/min) 45	4	WITH		A RESERVOIR
Duration of pumping 1 hrs + 0 min	5	OF	10	1000 GALS
Final water level end of pumping (Metres) 4.0	10	AND A FEW	15	
Recommended pump type <input checked="" type="checkbox"/> Shallow <input type="checkbox"/> Deep	15	RATE	20	2000
Recommended pump depth 4.7 Metres	25		25	GPM
Recommended pump rate (Litres/min) 45	30		30	
If flowing give rate (Litres/min) 25	40		40	
	50		50	
	60		60	

Water Details

Water found at Depth (Metres)	Kind of Water
12.5	<input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals
	<input type="checkbox"/> Gas
	<input type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals
	<input type="checkbox"/> Gas
	<input type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals
	<input type="checkbox"/> Gas

Casing Used: Galvanized Steel Fibreglass Plastic Concrete
 Screen Used: Galvanized Steel Fibreglass Plastic Concrete

No Casing and Screen Used: Open Hole
 Disinfected? Yes No

Ministry Use Only
 Audit No. **262793** Well Contractor No. _____

Date Received (yyyy/mm/dd) **NOV 22 2007** Date of Inspection (yyyy/mm/dd) _____

Remarks _____



Address of Well Location (Street Number/Name) 107 Edward Dr. Township Hillier Lot 12 Concession Stinson Block

Overburden and Bedrock Materials/Abandonment Sealing Record table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From, To

Annular Space table with columns: Depth Set at (m/ft) From, To, Type of Sealant Used, Volume Placed (m³/ft³)

Method of Construction and Well Use checkboxes including Cable Tool, Rotary, Boring, Air percussion, Public, Domestic, Livestock, Irrigation, Industrial, etc.

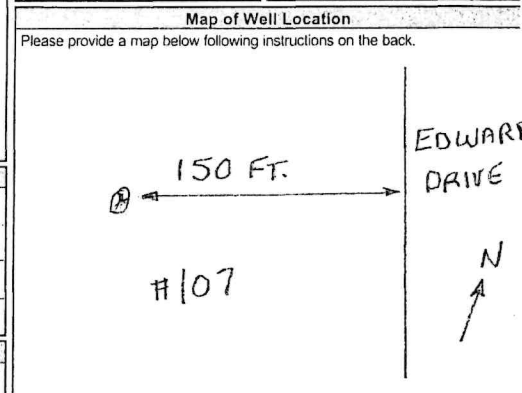
Construction Record - Casing table with columns: Inside Diameter (cm/in), Open Hole OR Material, Wall Thickness (cm/in), Depth (m/ft) From, To, Status of Well

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

Water Details and Hole Diameter tables with columns: Water found at Depth (m/ft), Kind of Water, Hole Diameter (m/ft) From, To, Diameter (cm/in)

Well Contractor and Well Technician Information section including Business Name (Chalk Well Drilling Ltd.), Address (31 Johnsons Side Rd.), and Technician Name (Kevin Chalk)

Results of Well Yield Testing table with columns: Draw Down (Time, Water Level), Recovery (Time, Water Level), Pumping rate, Duration of pumping, Final water level end of pumping, If flowing give rate, Recommended pump depth, Recommended pump rate, Well production



Comments, Well owner's information package delivered, Date Package Delivered, Date Work Completed, and Ministry Use Only section with Audit No. 2171875 and date DEC 17 2013

Appendix B
Hydrographs

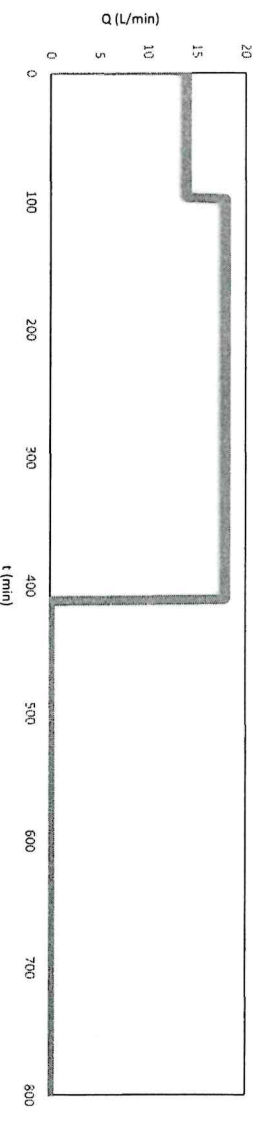
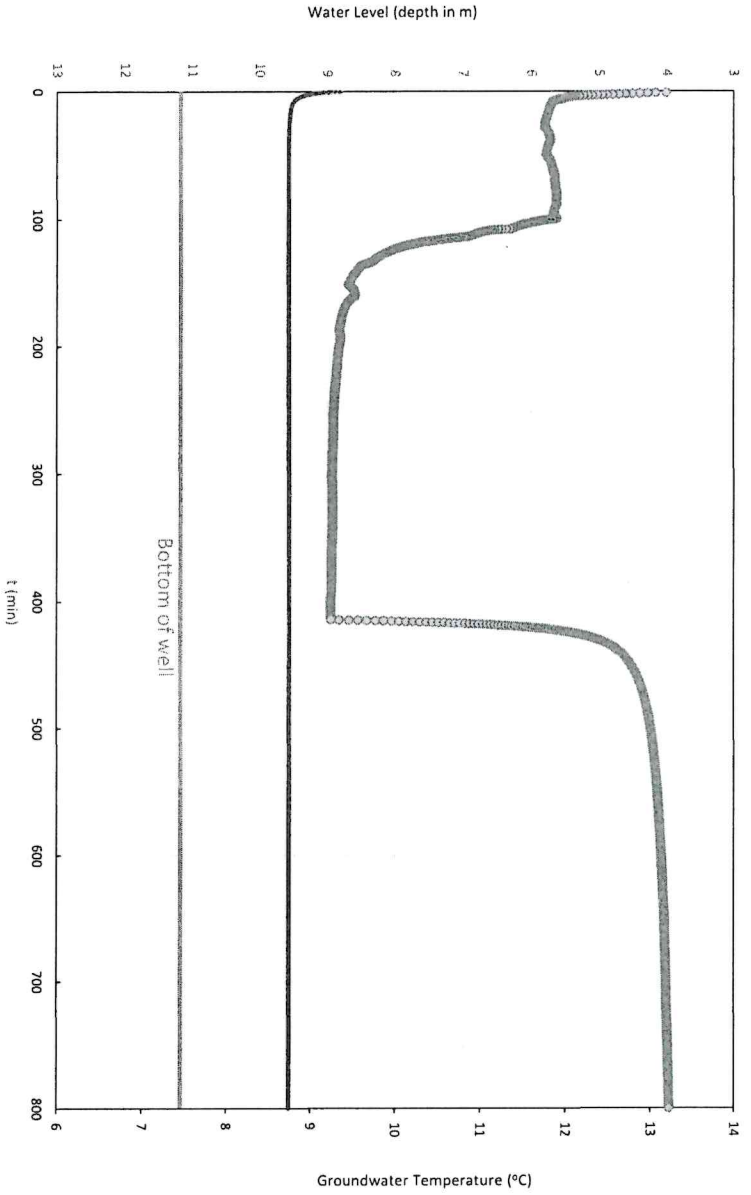


GREER GALLOWAY
 CONSULTING ENGINEERS
 PETERBOROUGH
 BRANTFORD
 KINGSTON
 1620 WALLBRIDGE Loyalist Road
 BELLEVILLE, ONTARIO, K8N 4Z5
 Phone: 613-966-3097
 Fax: 613-966-3097

NOTES:

- 1) Testing carried out on July 24, 2023
- 2) On-site pressure and temperature data collected during a 2001 test.
- 3) Water level data is not corrected for fluctuations in barometric pressure.

Key Plan:



PROJECT NAME:
 HYDROGEOLOGICAL ASSESSMENT
 PART OF STINSON BLOCK LOT 12
 CONSECOON, ONTARIO



FIGURE 11:
 WELL HYDROGRAPH - AD0326 (TW)
 JULY 24, 2023

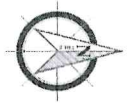
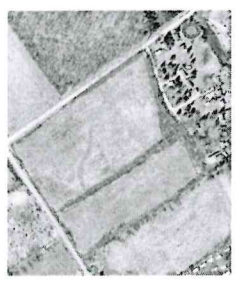


GREER GALLOWAY
 CONSULTING ENGINEERS
 PROFESSIONAL ENGINEERS
 1620 WALLBRIDGE LYNALST ROAD
 BELLEVILLE, ONTARIO, K8N 4Z8
 TEL: 613-986-3097
 FAX: 613-986-3097

NOTES:

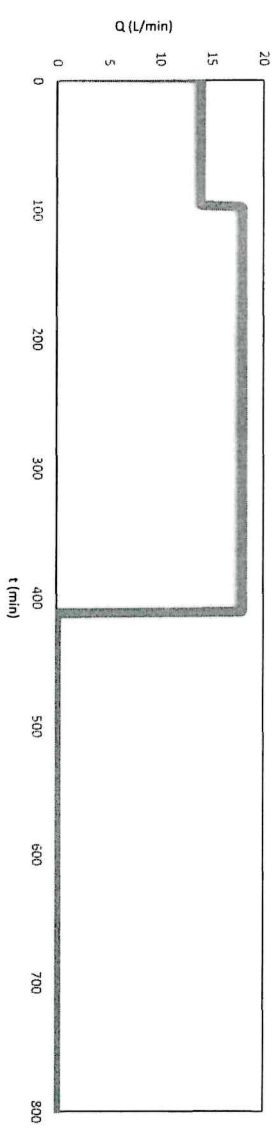
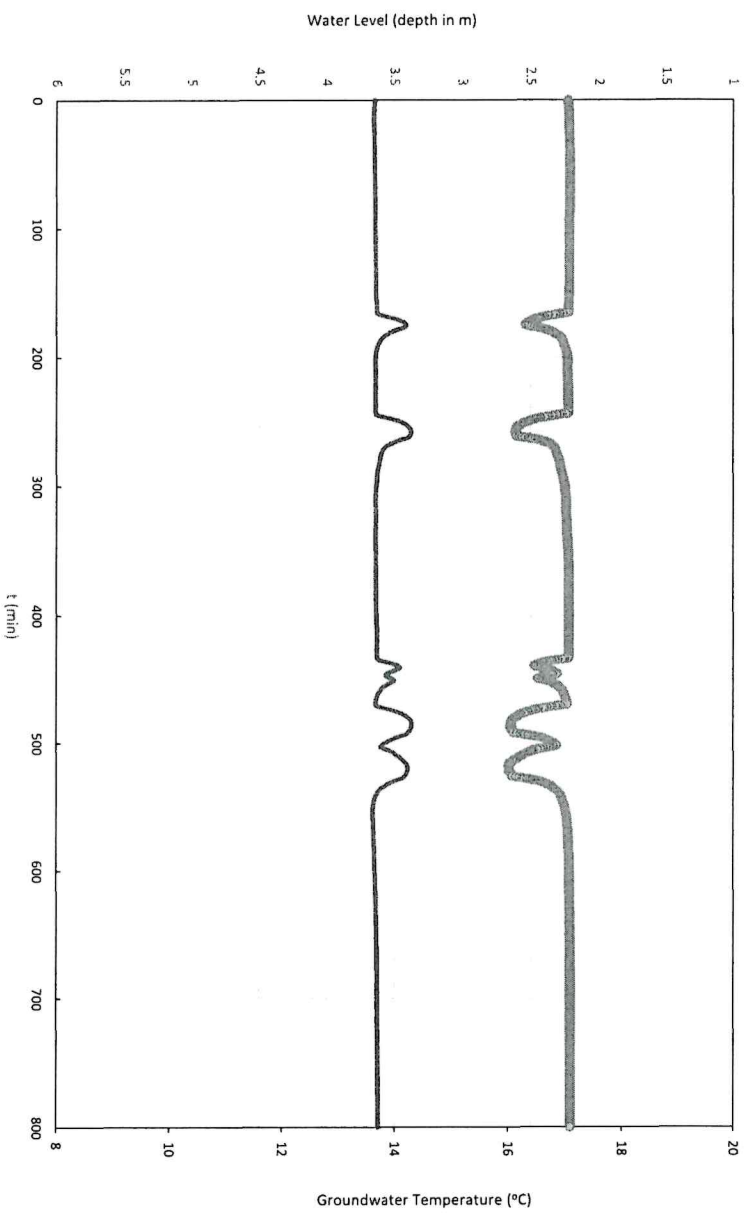
- 1) Testing carried out on July 24, 2023
- 2) On-site pressure and temperature data collected during a 200 L discharge test.
- 3) Water level data is not corrected for fluctuations in barometric pressure.

Key Plan:



PROJECT NUMBER:
 HYDROGEOLOGICAL ASSESSMENT
 PART OF STINSON BLOCK LOT 12
 CONSECOON, ONTARIO

FIGURE 2:
 WELL HYDROGRAPH - 82 EDWARD STREET (NW)
 JULY 24, 2023

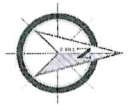
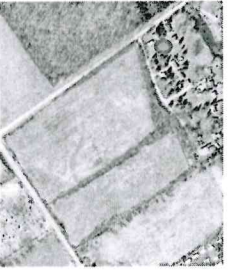


○ Water level
 ● Water temperature

NOTES:

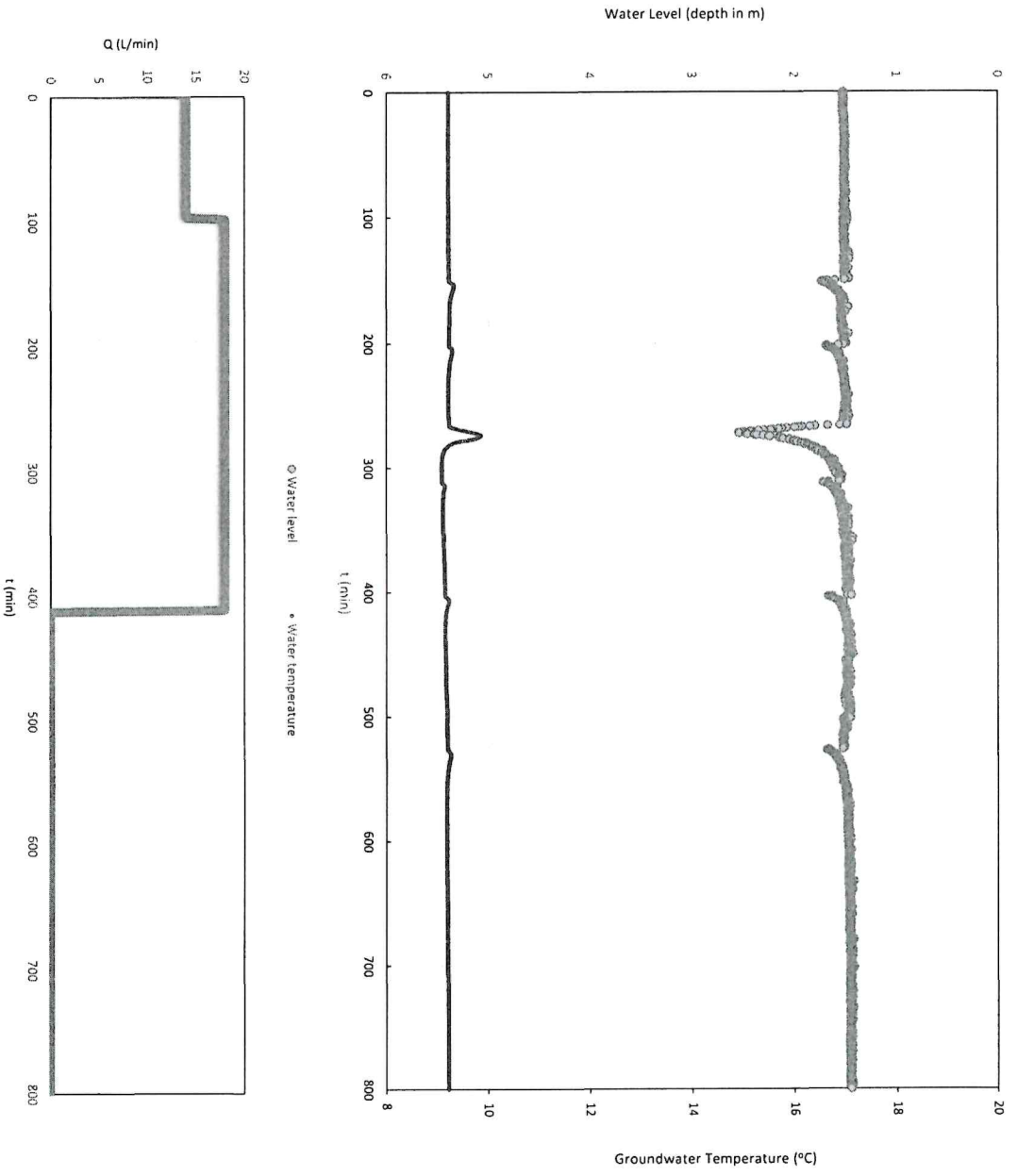
- 1) Testing carried out on July 24, 2023
- 2) On-site pressure and temperature data collected using a Solaris Model 3001 datalogger/pressure.
- 3) Water level data is not corrected for barometric atmospheric pressure.

Key Plan:



PROJECT 232448:
 HYDROGEOLOGICAL ASSESSMENT
 PART OF STINSON BLOCK LOT 12
 CONSECOON, ONTARIO

FIGURE 3:
 WELL HYDROGRAPH - 9 GLEN LANE (MW)
 JULY 24, 2023



Appendix C

Laboratory Certificates of Analysis

C.O.C.: Margaret Wright-Private

REPORT No: 23-018722 - 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-Jul-25
DATE REPORTED: 2023-Aug-03
SAMPLE MATRIX: Ground Water

CUSTOMER PROJECT: Margaret Wright
P.O. NUMBER: 2334080

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	PCURIEL	2023-Jul-28	A-IC-01	SM 4110B
Colour (Liquid)	1	OTTAWA	MDON	2023-Jul-27	A-COL-01	SM 2120C
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	MDON	2023-Jul-26	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Coliforms - DC Media (Liquid)	1	KINGSTON	BBURTCH	2023-Jul-25	ECTC-001	MECP E3407
DOC/DIC (Liquid)	1	OTTAWA	VKASYAN	2023-Jul-27	C-OC-01	EPA 415.2
Fecal Coliforms (Liquid)	1	KINGSTON	BBURTCH	2023-Jul-25	FC-001	SM 9222D
ICP/OES (Liquid)	1	OTTAWA	NHOGAN	2023-Jul-28	D-ICP-01	SM 3120B
Ammonia (Liquid)	1	KINGSTON	AMANIYA	2023-Jul-31	NH3-001	SM 4500NH3
Organic Nitrogen (Liquid)	1	KINGSTON	KDIBBITS	2023-Aug-01	TPTKN-001	MECP E3516.2
Tannins (Liquid)	1	KINGSTON	EHINCH	2023-Aug-02	TAN-001	SM 5550
TP & TKN (Liquid)	1	KINGSTON	KDIBBITS	2023-Jul-28	TPTKN-001	MECP E3516.2
Turbidity (Liquid)	1	OTTAWA	MDON	2023-Jul-27	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 *



Richard Lecompte
 Laboratory Supervisor

CADUCEON Environmental Laboratories Certificate of Analysis

Final Report
 REPORT No: 23-018722 - Rev. 0

Parameter	Units	R.L.	Client I.D.
			TW1
			Sample I.D.
			23-018722-1
			Date Collected
			2023-07-24
Parameter	Units	R.L.	
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	286
pH @25°C	pH units	-	7.89
Conductivity @25°C	uS/cm	1	636
Colour	TCU	2	<2
Turbidity	NTU	0.1	0.6
Fluoride	mg/L	0.1	0.2
Chloride	mg/L	0.5	4.5
Nitrate (N)	mg/L	0.05	<0.05
Nitrite (N)	mg/L	0.05	<0.05
Sulphate	mg/L	1	4
Total Kjeldahl Nitrogen	mg/L	0.1	0.7
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	0.59
Organic Nitrogen	mg/L	0.1	<0.1
Dissolved Organic Carbon	mg/L	0.2	1.6
Tannin & Lignin	mg/L	0.5	<0.5
Hardness (as CaCO3)	mg/L as CaCO3	0.02	227
Calcium	mg/L	0.02	53.7



Richard Lecompte
 Laboratory Supervisor

The analytical results reported herein refer to the samples as received. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

Parameter	Units	R.L.	Client I.D.
			TW1
			Sample I.D.
			23-018722-1
			Date Collected
			2023-07-24
Parameter	Units	R.L.	
Copper	mg/L	0.002	0.004
Iron	mg/L	0.005	0.075
Magnesium	mg/L	0.02	22.6
Manganese	mg/L	0.001	0.004
Potassium	mg/L	0.1	5.1
Silica	mg/L	2	8
Sodium	mg/L	0.2	49.8
Zinc	mg/L	0.005	0.009



Richard Lecompte
 Laboratory Supervisor

C.O.C.: Wright HydroG

REPORT No: 23-020567 - 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-Aug-09
DATE REPORTED: 2023-Aug-14
SAMPLE MATRIX: Ground Water

CUSTOMER PROJECT: Wright HydroG
P.O. NUMBER: 2334080

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Coliforms - DC Media (Liquid)	1	KINGSTON	BBURTCH	2023-Aug-09	ECTC-001	MECP E3407
Fecal Coliforms (Liquid)	1	KINGSTON	BBURTCH	2023-Aug-09	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
			Units	CFU/100mL	CFU/100mL	CFU/100mL
			R.L.	1	1	1
				-	-	-
Resample	23-020567-1	2023-Aug-08		1	0	0



Brandon Burtch
Microbiology Supervisor