

August 19, 2024

#### PH4600-LET.01.REV.04

Premier Bus Lines Inc. 135 Cardevco Road Ottawa, Ontario K0A 1L0

Attention: Eric Hochgeschurz

Subject: Hydrogeological Assessment and Terrain Analysis

135 Cardevco Road Ottawa (Carp), Ontario

## **Consulting Engineers**

9 Auriga Drive Ottawa, Ontario K2E 7T9 Tel: (613) 226-7381

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Materials Testing
Building Science
Rural Development Design
Retaining Wall Design
Noise and Vibration Studies

patersongroup.ca

## INTRODUCTION

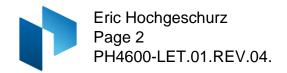
Further to your request, Paterson has conducted a Hydrogeological Assessment and Terrain Analysis in support of a Site Plan Control Application for the proposed commercial building addition located at 135 Cardevco Road in Ottawa (Carp), Ontario.

The purpose of this work has been to determine the suitability of the water supply aquifer underlying the site to support the Site Plan Application for a proposed building addition.

The Subject Site consists of a 0.20 ha lot and is currently occupied by a commercial building with associated private infrastructure. The ground surface generally slopes towards the north-east while the general groundwater flow is likely towards the south towards the local watercourse.

The Subject Site is bordered on all sides by commercial properties and fronts onto Cardevco Road to the northeast. The subject site itself and the surrounding commercial areas are zoned RG4 for Rural General Industrial Subzone 4 (GeoOttawa).

A Hydrogeological pre-consultation was completed with a City of Ottawa Hydrogeologist on August 31, 2022. The City Hydrogeologist suggested that additional sampling be completed during the 8-hour pumping test for Petroleum Hydrocarbons (PHC's) in addition to the standard Subdivision Package suite of parameters, trace metals and Volatile Organic Compounds (VOC's) required by the City of Ottawa Hydrogeological and Terrain Analysis Guidelines (HTAG).



#### **DESCRIPTION OF SUBJECT SITE**

The subject site is an approximately 0.20 ha lot and is currently occupied by a one story commercial building. The Site Plan application is for a proposed building addition. A portion of the existing building is to be demolished and replaced with a new addition which will be smaller than the existing building. Please refer to Figure-1 Key Plan and Arbaum Architects Drawing A-010, Demolition / New Site Plan dated June 13, 2023 attached for the proposed site location and site layout.

The subject site is currently serviced by an onsite sewage system and a existing private drilled well. A new sewage system is proposed to be located in the same location as the old sewage system. Paterson has completed a replacement sewage system design for the proposed development, due to the nitrate reduction required a part of the Nitrate Impact Assessment (NIA). A septic flow calculation was completed and resulted in a total daily water demand calculation of 876 L/day. Please refer to Paterson Drawing PH4600-1(rev.04) – Sewage System Layout Plan dated August 2024 attached for specific details of the new sewage system.

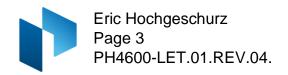
The existing well, hereafter referred to as Test Well 1 (TW1) is the well which is currently servicing the existing building and will continue to service the building following the completion of the proposed building addition. The property owner will need to ensure that protective measures are taken to protect the wellhead, such as the use of a barrier, when constructing the proposed building addition.

The suitability of the aquifer to supply the subject site was assessed using the methodology provided in City of Ottawa Hydrogeological and Terrain Analysis Guidelines (HTAG).

Based on available Ontario Geological Survey (OGS) mapping (GRS005), the subject site is within an area of potential karst. According to the WWR for TW1, bedrock is located at approximately 4.9 m below ground surface (bgs). TW1 has well casing extending to a depth of 6.7 m bgs, and an aquifer intercept of 25 m. Based on the depth of the aquifer intercept and the geochemistry encountered within the aquifer (see table 2a and 2b, below), there is no evidence of surficial impacts on the aquifer. Furthermore, the well has been in use for over a decade with no evidence of surficial impacts, therefore, it is not anticipated that there is karst within the subject site.

#### MISSISSIPPI-RIDEAU SOURCE PROTECTION PLAN

The Mississippi-Rideau Source Protection Plan (MRSPP) provides guidance as to which policies apply to a given property, municipality or specific activity and if there are specific designations that apply to the area. The subject site and surrounding areas have been designated as a Significant Groundwater Recharge Area (SGRA), Highly Vulnerable Aquifer (HVA), and Intake Protection Zone (IPZ) Zone 3 within the MRSPP, and are identified as three of four groundwater related vulnerable areas identified within the Clean



Water Act (2006). The four vulnerable areas consist of SGRA, HVA, IPZ and wellhead protection area (WHPA).

Based upon the designation of an SGRA, IPZ Zone 3 and HVA, the MRSPP provides a list of activities that are prohibited, managed or encouraged to change dependent upon the vulnerable area type. The subject site is mapped to be in IPZ zone 3 (Source Protection Atlas), however has an IPZ score of less than 8 (MRSPP). There is no prohibition of land uses on the subject site based upon its existing usage.

Therefore, there are no related requirements for an HVA, an IPZ with a score of less than 8 or SGRA at this location.

## FIELDWORK PROGRAM

### **Well Inspection**

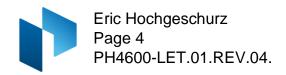
A visual inspection of TW1 was performed by Paterson personnel which confirmed that the well casing and cap are in good condition. The final grading around the well will be sufficiently graded to direct surface water away from the wellhead (as required by O.Reg 903) at the time of the new sewage system installation. The stickup was measured to be 0.51 m above ground surface. Based on a visual inspection by Paterson personnel, the well was deemed to be in good condition.

## **Well Testing**

As a means to demonstrate the adequacy of the aquifer underlying the subject lands, with respect to water quality and quantity, the existing drilled well (TW1) on the subject site was tested. TW1 has a Water Well Record (WWR) Well ID of A134668. TW1 has a 152.4 mm diameter steel casing that extends to 6.7 m below ground surface (bgs) with a 0.51 m stick up. The well itself extends to a depth of 30.5 m bgs. Based on available geological mapping, the drift thickness at TW1 varies from 5 to 10 m. Refer to Paterson Drawing PH4600-1(rev.4) – Sewage System Layout Plan, attached, for the approximate location of TW1.

As a means to evaluate the water supply aquifer intercepted by the well, the well was subjected to an 8-hour constant rate pumping test. The pumping test was conducted on September 22, 2022 under the full-time supervision of Paterson personnel. Prior to the pumping test the well was disinfected as per the MECP Disinfection Instruction Sheet (attached), and a data-logger was installed to monitor the background groundwater levels.

The existing submersible pump was used for the 8-hour pumping test. A licensed water well technician (Air Rock) completed the necessary plumbing related activities. The discharge line was placed at a sufficient distance to ensure that the discharge water was being directed away from the well as well as any septic systems in the area. Upon completion of the test, the system was returned to its normal configuration.



The pumping test was carried out at a pumping rate of 27 L/min for a duration of 8 hours. During the pumping test, the pumping rate was periodically measured using the timed volume correlation method. The pumping rate was maintained within 5% of the selected pumping rate. The static water level was recorded manually and an electric datalogger (VanEssen TD-Diver) was installed in the test well prior to the start of the pumping test.

The selected rate of 27 L/min provides approximately 14.8 times the maximum total daily design volume of 876 L/day for the septic system during the 8-hour pumping test. The total daily design sanitary sewage flows (TDDSSF) were calculated as per the Ontario Building Code Section 8.2.1.3. The detailed calculations can be found in Paterson's Drawing PH4600-2(rev.4) - Sewage System Details and Notes, attached to this report. The rate was determined to be representative of a flow rate which would be in excess of what the development would require.

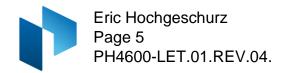
The data logger recorded water levels at 30 second intervals. In addition, manual water level readings were taken at periodic intervals during the test.

Recovery data was collected from the well following the completion of the pumping. The well was noted to have achieved 95% recovery approximately 21 minutes after the completion of pumping.

Groundwater samples were collected at 4 hours and 8 hours after the start of pumping. Prior to collection of the groundwater samples, the free chlorine residual was verified as non-detectable. The water samples were submitted for comprehensive testing of bacteriological, chemical, and physical water quality parameters consistent with the standard "Subdivision Supply" suite of parameters plus trace metals, VOCs, and PHCs.

All samples were collected unfiltered and unchlorinated and were placed directly into clean bottles supplied by the analytical laboratory. Samples were placed immediately into a cooler with ice and were transported directly to Environmental Testing Canada Inc.(Eurofins) laboratory in Ottawa. All samples were received by the laboratory within 24 hours of collection.

A series of field tests of the pumped water were carried out at the well head during the 8 hour pumping test. The parameters tested at the well head included: pH, total dissolved solids, conductivity, turbidity, true colour, and temperature. Calibration / confirmation of calibration of all field-testing equipment was performed in Paterson's laboratory the day prior to the pumping test. Values are then confirmed again onsite prior to the start of the pumping test.



# **Aquifer Analysis**

## **Water Quantity**

Pumping test data was analyzed using AQTESOLV Pro Version 4 aquifer analysis software package by HydroSOLVE Inc. Drawdown data was measured using an electronic water level tape and an electronic datalogger unit.

Table 1: SUMMARY OF WATER SUPPLY	Table 1: SUMMARY OF WATER SUPPLY AQUIFER CHARACTERISTICS OF TW1					
AQUIFER PARAMETER	RESULT OF ANALYSIS					
Transmissivity (m²/day)	17.2					
Pumping Rate (L/min)	27					
Pre-test Static Water Level (m)	2.3					
Post-test Static Water Level (m)	Max – 4.3, End – 3.7					
Available Drawdown (m)	28.2					
% Drawdown During Pumping Test (%)	7					
Specific Capacity (L/min/m drawdown)	13.5					

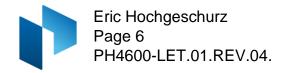
The drawdown data was analyzed using the Theis and Cooper Jacob methods of analysis. Aquifer transmissivity is estimated to be 17.2 m<sup>2</sup>/day. Refer to the Theis and Cooper Jacob methods of analysis data sheets attached to this report.

As demonstrated by the measured values, the water level in the well was increasing variably as the pumping test was performed. As the water level increased variably during the constant pumping portion of the test, it is expected that the aquifer which TW1 accesses is connected with other wells in the area. The water level variations occurred within the expected commercial operating hours in the immediate surrounding vicinity of the subject site.

The pumping test results show that TW1 has a high yield to support the water demands that may be required. Overall maximum drawdown at a constant pumping rate for a period of 8 hours was approximately 4.3 m at approximately 2 hours into the pumping test (7% of the available drawdown). The final drawdown at the end of the 8 hour pumping test was 3.7 m (5 % of the available drawdown) 95% recovery was achieved approximately 21 minutes after the end of pumping.

The total volume of water pumped during the 8-hour pumping event was approximately 12,960 L. This is approximately 14.8 times the maximum total daily design volume of water (876 L/d) required to support the Site Plan Control Application.

The suitability of the aquifer to supply the proposed Site Plan Application for the proposed commercial modification was assessed using the methodology provided in the City of Ottawa Hydrogeological and Terrain Analysis Guidelines (HTAG).



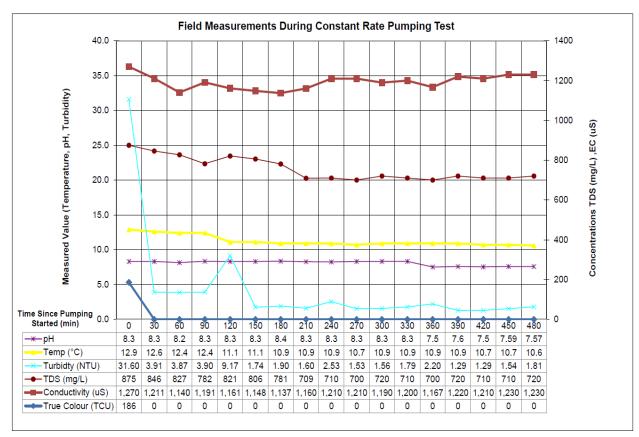
Based on the information summarized in Table 1, it is readily apparent that the water supply well has intercepted an adequately strong water supply aquifer which has sufficient quantity to service the proposed Site Plan Control Application.

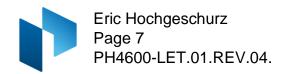
Given the analyses presented and summarized above, it is our opinion that there is an adequate supply of water to support the proposed Site Plan Control Application. Available water well records (WWR) of the neighboring properties on the MECP Well Record mapping website indicated that the wells were screened in limestone. Surrounding WWR's are attached to this report.

## **Water Quality**

#### Field Data

Turbidity, electrical conductivity, total dissolved solids (TDS), pH, true color and temperature were measured at the wellhead during the pumping test. The measurements and time intervals for each of these parameters are summarized on the graphical representation below. In addition, a HACH Pocket Colorimeter II chlorine reader was used to measure the free chlorine residual level. No chlorine residual was detected in the discharge water prior to the collection of the water samples.





### Laboratory Data

The Subdivision Package suite of parameters and trace metals laboratory water quality obtained from the pumping test of TW1 is provided in Table 2a and 2b below and the laboratory analyses reports can be found attached. VOC and PHC laboratory analytical testing were completed and measured to be non-detect in the sample results. All laboratory test results can be found attached to this report.

TABLE 2a: GROUNDWATER MICROBIOLOGY & GENERAL GEOCHEMISTRY							
		OD	WS	TW1			
PARAMETER	UNITS	LIMIT	TYPE	GW1 (4 hr) 2022-09-22	GW2 (8 hr) 2022-09-22		
MICROBIOLOGICAL							
Escherichia Coli (E.Coli)	ct/100mL	0	MAC	0	0		
Total Coliforms	ct/100mL	0	MAC	0	0		
GENERAL CHEMICAL - HEA	LTH RELATE	D					
Fluoride (F)	mg/L	1.5	MAC	0.41	0.42		
Ammonia (N-NH <sub>3</sub> )	mg/L	-	-	0.14	0.13		
Nitrite (N-NO <sub>2</sub> )	mg/L	1	MAC	<0.10	<0.10		
Nitrate (N-NO <sub>3</sub> )	mg/L	10	MAC	<0.10	<0.10		
Total Kjeldahl Nitrogen	mg/L	-	-	0.36	0.19		
Turbidity (Field)	NTU	1.0 (5.0)	MAC/AO	2.53	1.81		
Turbidity (Laboratory)	NTU	1.0 (5.0)	MAC/AO	13.2	11.6		
GENERAL CHEMICAL - AES	THETIC REL	ATED					
Alkalinity (as CaCO3)	mg/L	30-500	OG	287	289		
Chloride (CI)	mg/L	250	AO	185	191		
Colour (Apparent)	TCU	5	AO	90	86		
Colour (Field - True)	TCU	5	AO	0	0		
Conductivity	uS/cm	-	-	1,160	1,180		
Dissolved Organic Carbon	mg/L	5	AO	3.50	3.20		
Hardness (as CaCO3)	mg/L	100	OG	457	462		
Ion Balance	unitless	-	-	1.01	1.01		
pН	unitless	6.5-8.5	AO	8.15	8.15		
Phenols	mg/L	-	-	<0.001	<0.001		
Sulphate (SO <sub>4</sub> )	mg/L	500	AO	75	75		
Sulphide (S <sub>2</sub> )	mg/L	0.05	AO	0.02	0.02		
Tannin & Lignin	mg/L	-	-	1.30	1.20		
Total Dissolved Solids	mg/L	500	AO	754	767		

1. ODWS identifies the following types of parameters:

MAC = Maximum Allowable Concentration

AO = Aesthetic Objective

OG = Operational Guideline

2. Shaded Concentration Indicates an Exceedance of the ODWS Objective

TABLE 2b: GROUNDWATER GEOCHEMISTRY - METALS									
		OD	WS	TV	TW1				
PARAMETER	UNITS	LIMIT	TYPE GW1 (4 hr) 2022-09-22  OG <0.01 IMAC <0.0005 IMAC <0.001 MAC 0.58  - <0.0005 IMAC <0.0001 - 127 MAC <0.0001 - 127 MAC <0.0001 - <0.0002 AO <0.001 AO 1.34 MAC <0.001 - 34 AO 0.13 MAC <0.0001 - 34 AO 0.13 MAC <0.005 - 34 AO 0.13 MAC <0.005 - <0.005 - <0.005 - <0.005 - <0.005 - <0.005 - <0.001 AO 79	GW2 (8 hr) 2022-09-22					
Volatiles	•			•					
Aluminum (AI)	mg/L	0.1			<0.01				
Antimony (Sb)	mg/L	0.006	IMAC	<0.0005	<0.0005				
Arsenic (As)	mg/L	0.01			<0.001				
Barium (Ba)	mg/L	1.0	MAC	0.58	0.59				
Beryllium (Be)	mg/L	-	-	< 0.0005	< 0.0005				
Boron (B)	mg/L	5.0	IMAC	0.02	0.02				
Cadmium (Cd)	mg/L	0.005	MAC	< 0.0001	<0.0001				
Calcium (Ca)	mg/L	-	-	127	129				
Chromium (Cr)	mg/L	0.05	MAC	< 0.001	<0.001				
Cobalt (Co)	mg/L	-	-	<0.0002	<0.0002				
Copper (Cu)	mg/L	1.0	AO	< 0.001	<0.001				
Iron (Fe)	mg/L	0.3	AO	1.34	1.21				
Lead (Pb)	mg/L	0.01	MAC	< 0.001	<0.001				
Magnesium (Mg)	mg/L	-	-	34	34				
Manganese (Mn)	mg/L	0.05	AO	0.13	0.13				
Mercury (Hg)	mg/L	0.001	MAC	< 0.0001	<0.0001				
Molybdenum (Mo)	mg/L	-	-	< 0.005	<0.005				
Nickle (Ni)	mg/L	-	-	< 0.005	< 0.005				
Potassium (K)	mg/L	-	-	3	3				
Selenium (Se)	mg/L	0.05	MAC	<0.001	<0.001				
Silver (Ag)	mg/L	-	-	< 0.0001	<0.0001				
Sodium (Na)	mg/L	200	AO	79	82				
Strontium (Sr)	mg/L	-	-	0.72	0.724				
Thallium (TI)	mg/L	-	-	< 0.0001	<0.0001				
Uranium (U)	mg/L	0.02	MAC	<0.001	<0.001				
Vanadium (V)	mg/L	-	-	<0.001	<0.001				
Zinc (Zn)	mg/L	5.0	AO	< 0.01	<0.01				

1. ODWS identifies the following types of parameters:

MAC = Maximum Acceptable Concentration

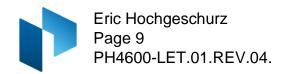
IMAC = Interim Maximum Acceptable Concentration

AO = Aesthetic Objective

OG = Operational Guideline

2. Shaded Concentration Indicates an Exceedance of the ODWS Objective

The bacteriological test results (Certificate of Analysis – Report No. 1986671) indicated that the test samples at the 4 and 8 hour interval were non-detect (0 ct/100 mL) for E.Coli and Total Coliforms.



The water quality of the subject water supply well meets all the Ontario Drinking Water Standards maximum acceptable concentrations (MAC). Furthermore, the water meets all of the Aesthetic Objectives (AO) and Operational Guidelines (OG) with the exception of the following.

Hardness (as CaCO <sub>3</sub> )
Total Dissolved Solids (TDS)
Iron (Fe)
Manganese (Mn)

Exceedances of the above parameters are not uncommon of the water supply in the subject aquifer. Each of these groundwater parameters are discussed in detail below.

Should any water treatment be desired by the owner, it is recommended that a water treatment specialist be retained to ensure that water treatment occurs in a safe manner.

#### Hardness as CaCO<sub>3</sub>

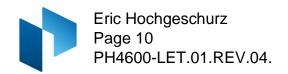
Hardness, expressed as calcium carbonate, is an operation guideline and does not appear in the ODWS. Rather, it appears in the Technical Support Documents for Ontario Drinking Water Standards, Objectives and Guidelines as a parameter with an operational guideline at 100 mg/L. At the measured concentrations of 457 and 462 mg/L, the water is considered to be hard, however, it is below the reasonable treatable limit of 500 mg/L specified in Table 3 of the MOECC guidance document Procedure D-5-5 (1996).

The Langelier calculation provided an LSI of 1.0. Based on the evaluation of the result, the water is super saturated and tends to precipitate a scale layer of calcium carbonate (scale forming but non-corrosive). Based on the range of stability in the positive direction, there are no mitigative measures needed. See Langelier Saturation Index Calculation attached for calculation details.

It is recommended that water hardness be treated using conventional technologies such as water softening or reverse osmosis, if desired by the owner. Without treating hardness, scaling can occur which can result in discolouration and residue buildup on water fixtures, or reduction in boiler efficiency due to scale build-up. According to Health Canada's *Guidelines for Canadian Drinking Water Quality - Summary Tables* "Although hardness may have significant aesthetic effects, a guideline has not been established because public acceptance of hardness may vary considerably according to the local conditions; major contributors to hardness (calcium and magnesium) are not of direct public health concern".

#### **Total Dissolved Solids (TDS)**

TDS refers to the concentration of inorganic substances dissolved in water. The main constituents are typically chloride, sulphates, calcium, magnesium, and bicarbonates. The TDS concentration of 767 mg/L exceeds the Aesthetic Objective of 500 mg/L. At concentrations above 500 mg/L, some consumers may find the taste objectionable,



however, as the objective is an aesthetic objective, no treatment is required. It is recommended that a point of use reverse osmosis unit be installed, if the owner desires, for drinking purposes. As such, no taste problems will occur when the system is used.

The Langelier calculation provided an LSI of 1.0. Based on the evaluation of the result, the water is super saturated and tends to precipitate a scale layer of calcium carbonate (scale forming but non-corrosive). Based on the range of stability in the positive direction, there are no mitigative measures needed. See Langelier Saturation Index Calculation attached for calculation details.

#### Iron

Concentrations of iron above 0.3 mg/L can contribute to staining of fixtures and a metallic taste at higher concentrations. Precipitation of iron can promote the growth of iron bacteria in pipes. The concentration of iron in the groundwater in TW1 was measured to be 1.21 and 1.31 mg/L. The concentration of iron in the groundwater in the test well is considered to be reasonably treatable in accordance with Procedure D-5-5. It is recommended that a water softener or manganese greensand filter be used to reduce the levels of iron and reduce the potential for excessive precipitate occurring in the water supply system, if desired by the property owner. If treatment is not used, negative impacts such as discolouration of water fixtures, precipitation of iron and staining may occur.

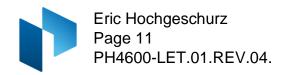
### Manganese

The manganese concentration results from the laboratory test samples yielded a value of 0.13 mg/L in the onsite well, which is above the aesthetic objectives in the ODWSOG of 0.05 mg/L. The Health Canada Federal Drinking Water Guidelines have suggested a health related MAC of 0.12 mg/L due to potential adverse effects on the central nervous system primarily in infants due to chronic exposure, however this guideline has not been implemented by Ontario as of the writing of this report. Furthermore, this is a commercial development that is not raising infants.

According to the Guidelines for Canadian Drinking Water Quality: Guideline Technical Document – Manganese, section 3: "Specific guidance related to the implementation of drinking water guidelines should be obtained from the appropriate drinking water authority in the affected jurisdiction.". The applicable regulations which apply to the development approval process for this site are the HTAG and MECP Procedure D-5-5, which does not have a MAC for manganese.

Procedure D-5-5 gives a maximum concentration considered reasonably treatable for manganese as 1.0 mg/L. It is recommended that a reverse osmosis system, ion exchange / water softeners and / or an oxidizing filter be used to reduce the manganese concentration, if desired by the owner.

As the concentration of manganese is elevated above the Health Canada Federal Drinking Water Guidelines, a notice regarding the elevated levels of manganese in the



aquifer accessed by TW1 is recommended to be registered on title so that future owners are made aware.

#### Colour

Colour may occur in drinking water for several reasons. It may be due to organic substances from the decay of vegetation, or the presence of metals such as iron, manganese, and copper, which are abundant in nature. The provincial aesthetic objective for colour in drinking water is 5 True Colour Units (TCU). The federal (Health Canada) guideline aesthetic objective limit for colour is 15 TCU (Guidelines for Canadian Drinking Water Quality, Health Canada June 2019). Procedure D-5-5 gives a maximum concentration considered reasonably treatable for colour as 7 TCU. As colour is a strictly aesthetic parameter, a manganese greensand filter or a carbon filter can be used to reduced manganese from the water supply, if desired by the owner.

During the field pumping test, a DR900 colorimeter was used to measure true colour in the groundwater at regular intervals. True colour in the groundwater was measured as 0 TCU which is below the aesthetic guidelines of 15 TCU. The elevated apparent colour levels detected in the lab samples is attributed to the precipitation of iron and manganese out of the groundwater.

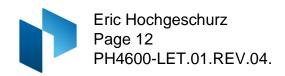
## **Turbidity**

Turbidity, which is generally an aesthetic parameter, was detected in the laboratory test samples at values of 13.2 and 11.6 NTU in the 4 and 8 hours tests, respectively. Field testing detected the samples at values of 2.53 and 1.81 NTU in the 4 and 8 hour field tests, respectively. Continued pumping showed a decrease towards the end of the test. It is expected that continued use of the well would further reduce turbidity values. The elevated turbidity in the laboratory analyzed samples is attributed to the precipitation of iron and manganese. Therefore, it is anticipated that turbidity levels will also decrease due to treatment of other constituents, if treatment is desired by the owner.

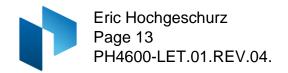
During the pumping test, a Hanna Instruments HI98703 Fast Tracker Turbidity Meter was used to measure the turbidity in the groundwater at regular intervals. The ODWS maximum acceptable concentration for turbidity in drinking water entering the distribution system is 1 NTU. The Aesthetic Objective for turbidity in drinking water reaching the consumer is 5 NTU. The field test parameters are below the 5 NTU objective. As turbidity was detected above 1 NTU, particular care must be taken during testing to ensure that the bacteria requirements of Table 1 are met. The bacteriological test results indicated that the test samples at the 4 and 8 hour interval were non-detect (0 ct/100 mL) for E.Coli and Total Coliforms.

#### Sodium

Sodium (Na), an aesthetic parameter, was detected in the laboratory test sample at concentrations of 79 and 83 mg/L, which does not exceed the ODWS aesthetic objective of 200 mg/L. Although sodium is not toxic and no maximum acceptable concentration has



been set, concentrations above 20 mg/L require that the Medical Officer of Health be notified of the water quality results, so that this information may be passed on to local physicians for use in treatment of those requiring a sodium-restricted diet. It should be noted that some water treatment technologies, such as water softeners, can increase the sodium concentration so care should be given if such treatment technologies are used.



# **Terrain Analysis**

## **Surficial Geology**

A series of test pits were put down on the subject parcel to delineate the subsurface soil conditions as part of the Geotechnical Investigation (Paterson Report PG6018-1.REV.04 dated November 24, 2023). On November 12, 2021 five (5) test pits were excavated on the property for the design of the proposed building addition and its associated infrastructure. The test pits were advanced to a maximum depth of 3.5 m below ground surface (bgs). Two test pits were excavated within the vicinity of the proposed southern warehouse addition, whereas the other three test pits were excavated adjacent to the exterior footings of the northern portion of the existing warehouse The locations of the test pits on the property are delineated on the Test Hole Location Plan, drawing PG6018-1, attached.

The test pit locations were recorded and the subsurface conditions, including the soil morphology and depth to the groundwater table (if encountered), were carefully observed and recorded. The soils encountered were classified texturally in the field, and later reviewed in the laboratory.

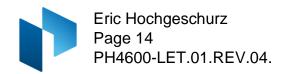
Generally, the subsurface profile at the test hole locations were observed to consist of asphalt or topsoil overlying a fill layer consisting of crushed stone and brown silty sand with gravel, occasional cobbles and trace asphalt. A brown silty sand was noted to be underlying the fill layer in all test hole locations, except for TP5-21 which consisted of a brown silty sand with gravel, cobbles and boulders (glacial till). Refusal to excavation was encountered in TP5-21 at a depth of 2.2 m bgs. Groundwater was encountered at TP4-21 at 2.0 m bgs, and at TP5-21 at 1.9 m bgs.

It should be noted that groundwater levels can fluctuate both seasonally and in conjunction with precipitation events. Therefore, the groundwater levels could vary at the time of construction.

Reference should be made to the test pit logs appended to this report for the details of the soil profiles encountered at each test hole location. The client should be aware that any information pertaining to soils are furnished as a matter of general information only and borehole descriptions are not to be interpreted as descriptive of conditions at locations other than those described by the boreholes themselves.

# Hydrogeological Sensitivity of the Site

The subject site currently consists of a commercial building, associated infrastructure and private servicing. The subject site is serviced by a private well and septic system. The subject site is currently occupied by a one-storey commercial building which fronts onto Cardevco Road. The subject site is bordered to the north, east and west by developed commercial properties and to the south by Cardevco Road followed by additional



developed commercial properties. All surrounding properties are on private services. The adjacent properties are serviced by private wells and septic systems.

The overburden at the test hole locations generally consists of a fill overlying a brown silty sand. Refusal to excavation was only encountered in TP5-21 at a depth of 2.2 m bgs. According to available geological mapping, the drift thickness within the site varies from 5 to 10 m bgs.

According to the geotechnical field investigation, the overburden thickness was observed to be greater than 2 m. As the proposed site does not have bedrock within 2 m of the ground surface, the site is not considered hydrogeologically sensitive. Separation distances are not required to be increased between the septic components and the onsite well.

To corroborate our position in this matter, the water quality of the bedrock aquifer targeted by the onsite drilled potable supply well shows no indication of surface water or surface impacts from sewage system effluent.

### **Conceptual Lot Development Plan**

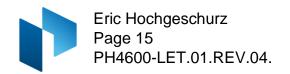
It is proposed to demolish a portion of the existing one-storey commercial building and add an addition in part of its place. The location of the existing and proposed structures can be found on the attached Arbaum Architects Drawing A-010, Demolition / New Site Plan dated June 13, 2023. The proposed private servicing is outlined in Paterson drawing PH4600-1(REV.04) — Sewage System Layout Plan, attached. It illustrates that the proposed design layout is adequate to accommodate the associated private services and meet all the regulated separation criteria. Please note that the proposed design layout is not meant to restrict the location of the proposed buildings or private services. The design will be reviewed by the Ottawa Septic System Office (OSSO) and will be constructed in accordance with the required regulations. The OSSO requires inspections during construction in order to ensure compliance.

#### **Proposed Sewage System**

Paterson has completed a replacement sewage system design for the proposed development due to Site Plan requirements related to the Nitrate Impact Assessment (NIA). A septic flow value was calculated for the proposed building addition and resulted in a total daily design sewage flow (TDDSF) of 876 L/day. Refer to the Paterson Drawing PH4600-1(rev.4) and Paterson Drawing PH4600-2(rev.4) attached for more specific details. The approved OSSO septic permit has been included in the Site Plan application submission package. The septic flow values were calculated in accordance with the OBC and are as follows:

Office space with an area of 90 m <sup>2</sup> : 726 L/day
Number of employees in the garage (2 employees x 75 L/day) = 150 L/day

The resulting total daily design sanitary sewage flow (TDDSSF) is 876 L/day.



### **Predictive Nitrate Impact Assessment**

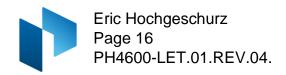
In order to demonstrate that private services would adequately support the proposed commercial development, a predictive nitrate impact assessment for the subject site was completed. The values shown in the Predictive Nitrate Impact Assessment attached to this report are summarized below.

	Site area	0.20 ha
	Impervious area (%)	47 %
	Daily sewage flow	0.876 m <sup>3</sup> /d
	Concentration of nitrate in effluent (Value based on typical effluent concentration)	40 mg/L
	Concentration of nitrate in effluent with treatment (Value based on nitrate reduction system (Ecoflo ECDn Series) with 53.8	18.44 mg/L 39 % nitrate reduction)
	Surplus Water (The surplus water value was estimated based on Environment Canada values with a soil type comprised of fine sandy loam (Urban Lawns) and sources.)	
• •	Combined infiltration factor based on: Topography infiltration factor Soil texture infiltration factor Cover infiltration factor	0.70 0.20 0.40 0.10

The topography infiltration factor of 0.20 is based upon a rolling land with an average slope of 2.8 to 3.8 m/km. The soil texture infiltration factor was based upon an "open sandy loam" with a value of 0.4 which is a reasonable generalization based upon the site investigations and available geological mapping. The "cover infiltration factor" was calculated at 0.1 based upon the minimum value for cultivated land.

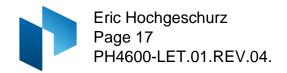
The calculation for a conventional septic system results in a predicted nitrate concentration of 21.10 mg/L nitrate for the subject site, using a value of 40 mg/L nitrate concentration within the effluent. This value was based upon a daily sewage flow of 876 L/day. It is expected that the actual usage should be lower.

An existing approved tertiary treatment system capable of reducing the nitrate loading in the effluent is the Rewatec Ecoflo brand and is called the Ecoflo Coco Filter ECDn Model Series. The Ecoflo system has passed the NSF/ANSI Standard 245 (American/International Testing Standard) with a nitrate reduction value of 53.89% for influent Total Nitrogen. This would reduce the nitrate concentration in the effluent from 40 mg/L down to an average of 18.44 mg/L, resulting in a predicted nitrate concentration of 9.73 mg/L, for a TDDSSF of 876 L/day. Please refer to the Predictive Nitrate Impact



Assessment Calculations attached to this report for further details. An Ecoflo system has been included in the new septic design for the property, as shown in the attached Paterson drawing, PH4600-1(Rev.04).

Based on the results of the predicted nitrate impact assessment, it is our opinion that the property can adequately support the proposed building addition without having an adverse impact on the underlying bedrock aquifer, provided that a Rewatec Ecoflo ECDn Model Series is used in the septic system.



## **CONCLUSIONS**

Based on the information contained within the body of this report the following conclusions can be drawn:

- 1. The water supply aquifer intercepted by the existing well is considered to be adequate to support the water quantity demands for the proposed building addition.
- Based on a visual inspection performed by Paterson personnel, the well casing, stickup, and well cap are in compliance with O.Reg 903. The final grading around the well will be sufficiently graded to direct surface water away from the wellhead at the time of the new sewage system installation.
- 3. The preferred water supply intercepted by TW1 contains a water supply that is potable, and contains only elevated concentrations of hardness, TDS, iron, and manganese. The noted parameters can be treated with current readily available water conditioning equipment.
- 4. Elevated concentrations of manganese were encountered in the water supply intercepted by TW1. Although only regulated for aesthetic reasons in Ontario (AO of 0.05 mg/L), the federal government of Canada has a MAC of 0.12 mg/L due to potential adverse effects on the central nervous system primarily in infants due to chronic exposure. This guideline has not been implemented by Ontario as of the writing of this report as the concentration of manganese is elevated above the Health Canada Federal Drinking Water Guidelines, a notice regarding the elevated levels of manganese in the aquifer accessed by TW1 is recommended to be registered on title so that future owners are made aware.
- 5. If desired by the property owner, a residential grade water softener can be used to facilitate the reduction of the hardness concentration and reduce scaling. If a water softener is used for the proposed development, the owner should be made aware that additional sodium will be added to the water to reduce hardness. If desired, a point-of-use reverse osmosis system can be used to provide a drinking tap source without increasing sodium levels.
- 6. The sodium concentration was measured to be above the 20 mg/L reporting limit and, as such, the Medical Officer of Health for the City of Ottawa should be informed to assist area physicians in the treatment of local residents on sodium reduced diets. It should be noted that some water treatment equipment may further increase the sodium concentration.
- 7. The predicted nitrate concentrations at the property boundary is calculated to be below the required 10 mg/L threshold when a standard denitrification system such as the Rewatec Ecoflo system is used.

- - 8. A Sewage System Permit and Building Permit need to be issued prior to the commencement of construction on the proposed warehouse addition or the proposed septic system.
  - The owner will need to ensure that protective measures are taken to protect the wellhead, such as the use of a barrier, when constructing the proposed building addition.
  - 10. The results of the Hydrogeological Assessment and Terrain Analysis have provided satisfactory evidence that the subject site can support the proposed building addition with respect to water quality, quantity and sewage system placement.

We trust that the current submission satisfies your immediate requirements.

Best Regards,

Paterson Group Inc.

August 19, 2024 ERIK ARDLEY PRACTISING MEMBER 3667

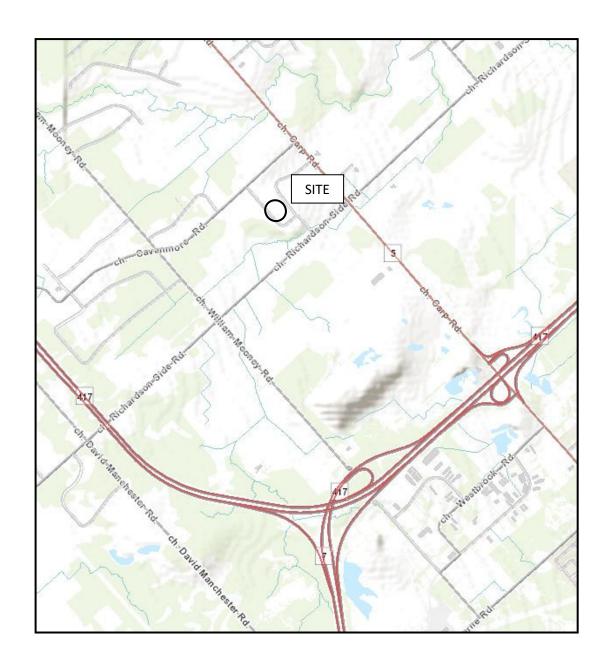
Alexander Schopf, PhD, EIT

Erik Ardley, P.Geo

#### Attachments:

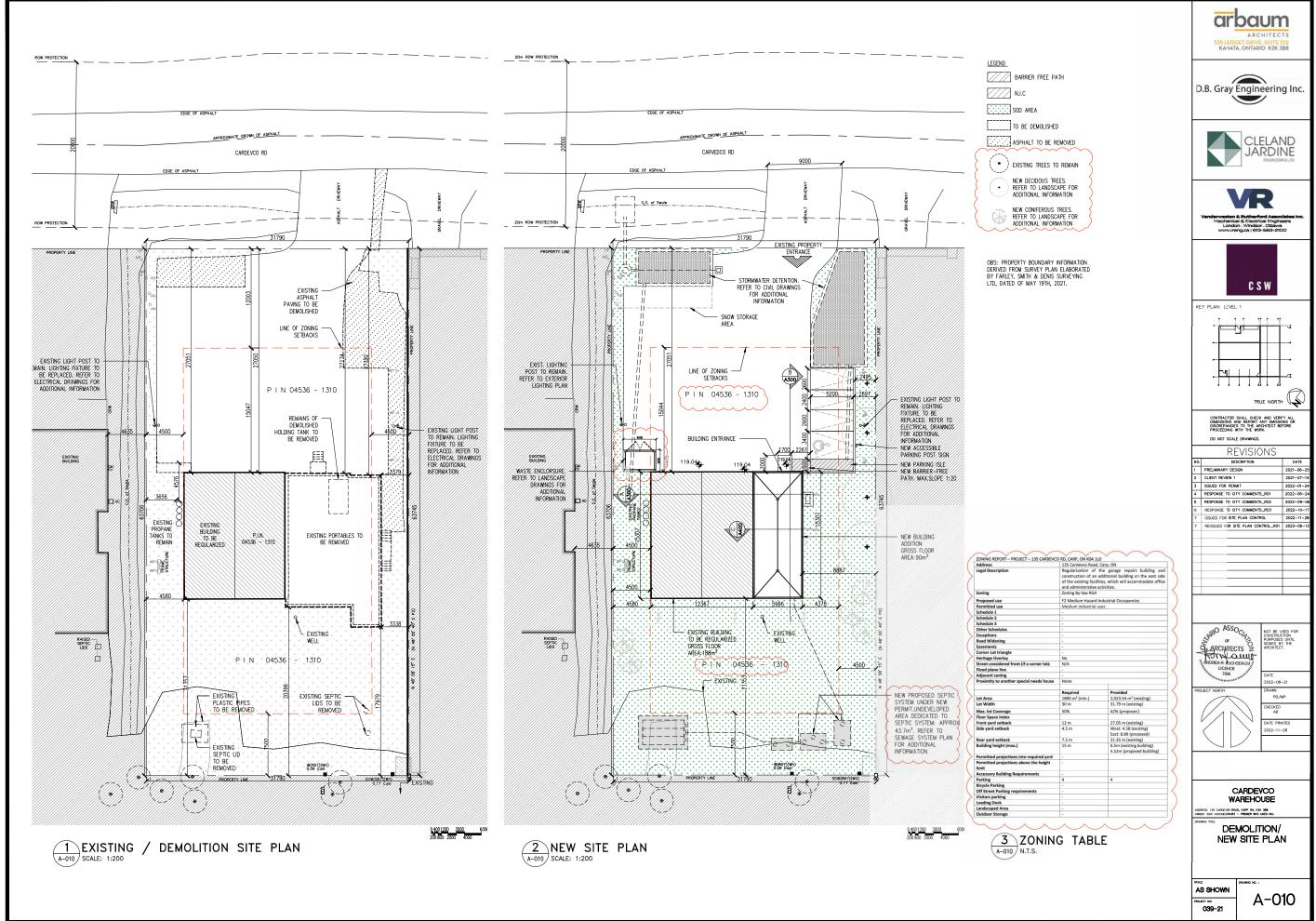
	17.	DI
ш	ĸev	Plan

- ☐ Arbaum Architects Drawing A-010, Demolition / New Site Plan dated June 13, 2023
- MECP Water Well Records
- Eurofins Certificate of Analysis
- Paterson Test Pit Logs
- AQTESOLV Pumping Test Analysis Reports
- Nitrate Impact Assessment Calculations
- ☐ Langelier Saturation Index (LSI) Calculation
- □ MECP Disinfection Instruction Sheet
- NSF Standard 245: Ecoflo Coco Filter ECDn Model Series
- ☐ Paterson Drawing PG6018-1 Test Hole Location Plan
- ☐ Paterson Drawing PH4600-1(rev.4) Sewage System Layout Plan
- ☐ Paterson Drawing PH4600-2(rev.4) Sewage System Details and Notes



# FIGURE 1 KEY PLAN

patersongroup -



TW1 Well Tag No. (F'and Sticker and/or Print Below) Well Record Ministry of Ontario Tag#: A134668 Regulation 903 Ontario Water Resources Act the Environment Page Imperial Measurements recorded in: Well Owner's Information Last Name / Organization E-mail Address irst Name ☐ Well Constructed by Well Owner HOLDINGS Telephone No. (inc. area code) Mailing Address (Street Numb Province Municipality KOA 1406132237839 Car 145 Cardevco Well Location Address of Well Location (Street Number/Name) Township 135 Cardevco Road
County/District/Municipality 23 Carp. City/Town/Village Province Postal Code Carp Municipal Plan and Sublot Number KOA 140 OHawa UTM Coordinates Zone Ontario , Easting Part NAD 8 3 1 8 42 32 5 4 50 15 930 23 RP Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (m/ft From General Description Other Materials Clay/Sand/stones black Results of Well Yield Testing Annular Space Recovery Type of Sealant Used (Material and Type) After test of well yield, water was: Draw Down Depth Set at (m/ft) Volume Placed (m³/ft³) Clear and sand free Time | Water Level | Time | Water Level From To Fother, specify Cloudy (min) (m/ft) (m/ft) (min) 0.044 2 Bags cement Statio If pumping discontinued, give reason: Level Bags quick grout 0.088 45.1 1 20.8 Pump intake set at (m/ft) 2 15.9 35.2 75 3 3 Pumping rate (I/min / GPM) Well Use Method of Construction 32.9 22.9 ☐ Commercia ☐ Not used Cable Tool Diamond Public Domestic ☐ Dewatering Rotary (Conventional) ☐ Jetting Municipal hrs+ 35.4 Rotary (Reverse) Livestock ☐ Test Hole ☐ Monitoring Driving Final water level end of pumping (m/ft) Boring ☐ Irrigation Cooling & Air Conditioning □ Digging 10 ☐ Industrial 11 ☐ Air percussion Other, specify Other, specify 15 535 15 If flowing give rate (I/min / GPM) 8 Status of Well **Construction Record - Casing** 20 20 56.1 Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel) Wall Thickness Depth (m/ft) **☑** Water Supply Recommended pump depth (m/ft) Diamete ☐ Replacement Well 25 56.8 From 80 To (cm/in) (cm/in) ☐ Test Hole Recommended pump rate (I/min / GPM) 30 63. 30 Recharge Well Steel 0 22 15 gpm.
Well production (I/min / GPM) Dewatering Well 40 67.4 40 Observation and/or Monitorina Hole 15 gpm 50 11.1 ☐ Alteration Disinfected? (Construction) 60 67.4 11.05 Yes Abandoned. Insufficient Supply Map of Well Location Construction Record - Screen Abandoned, Poor Water Quality Please provide a map below following instructions on the back Outside Depth (m/ft) Material Slot No. Abandoned, other, (cm/in) specify Other, specify 135 Water Details **Hole Diameter** Diameter (cm/in) Depth (m/ft) Water found at Depth Kind of Water: Fresh Juntested Cardevco From (m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Thontested 25/4cm (m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested D, y'from building Well Contractor and Well Technician Information Business Name of Well Contractor Well Contractor's Licence No HALL + SONS 2558 Comments wilfhallItdo bellnet.ca Well owner's Date Package Delivered Ministry Use Only information package delivered 2012 0809 Bus.Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name) 6/1327824933 Well Technician's Licence No. | Signature of z 154051 Date Work Completed L Yes 0809 Contractor Date Submitted SEP 1 1 2012 20120809 8

Ministry's Copy

0506E (2007/12)

© Queen's Printer for Ontario, 2007



MINISTRY OF THE ENVIRONMENT COPY

# 

1	Env	rironment		Ally Ally About? Ill	Minni M. AP AM.		M. AK 111111 AP	draw Arab	r Meady Minit
O	ntario		SPACES PROVIDED	[11]	1520138	15005	L SON		டங்க
1000	UNTY OR DISTRICT	Z. CHECK (25) CORI	RECT BOX WHERE APPLICABLE TOWNSHIP, BOROUGH, CIT	Y. TOWN, VILLAGE	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	COM. BLOCK, TRACT, SURVE	7 75 7	-1484 T.29-	1 1 21 21 24 1.01 25-27
	the state of	ik chotte	ond was	CARLE	TON				6
			,	HUNTLE	Y MANOR	DRIVE	DATE COMPLETE	() (50)	ω:sa 
				RC.	ELEVATION 1	ANC BASIN CODE	11	114	1141481
<u> </u>	2	112 12	12 16	24 215	215	343 34			
-		MICOST	DG OF OVERBURDEN	AND BEDRO	CK MATERIALS	SEE INSTRUCTIONS!		DEPTH	P.P. P.V.
-	NERAL COLOUR	COMMON MATERIAL	OTHER MAI	FERTALS	G	ENERAL DESCRIPTION	=======================================	FIR CHVI	10
F	3-REY	CAAP	SAMD	Bour	ER'S	MACKED		0'	16'
(	FREY	G-RAVEL						16	341
ļ		***************************************							
-		***************************************					•		
	·								
ļ									
ļ									
ļ					***************************************				
ļ									
L			***************************************	***************************************					
.3								<u> </u>	
3 2		1445			43		<u> </u>	<u> </u>	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
14		TER RECORD	51 CASING & C	DPEN HOLE R	ECORD 2	SIZE(S) OF OPENING S (SLOT NO.)	1-3:3 CHAMETER	-	ENGTH 39-40
	TER FOUND VT - FEET O-13 F (7)	KIND OF WATER  FRESH 3 M SULPHUR	DIAM MATERIAL INCHES	MALL D THICKNESS INCHES FRO		MATERIAL AND TYPE		INCHES   FO TOP REEN	# EECT   3:0
	<b>)</b> 2   10	SALTY 4 [] MINERAL	19-1), 1 OKSTEEL 12 2 GALVANIZED	1.88 0	2 / 3 / 6				FEET
	' LJ	FRESH * [] SWUPHUR ** SALTY * [] MINERAL	CONCRETE  OPEN HOLE		61		& SEALING	RECO	RID
		FRESH <sup>3</sup> [] SULPHUR <sup>2,4</sup> Salty <sup>4</sup> [] Mineral	17-46   I STEEL 19 E E GALVANIZED			ROW TO	ATERIAL AND TYPE		T GROUT KER, ETC.)
	130-154 1 E	FRESH 3 (2) SULPHUR 25 SALTY 6 (2) MINERAL			27-36	10-13 14-17			·
		FRESH 3 [] SULPHUR	# E GALVANIZED # E CONCRETE			18-21 22-25 26-29 26-29 20-31 80			
<u></u>		SALTY # [] MENERAL	• [] OPEN HOLE						
71	тимена техтивті 1. ВЕриме		11-14 DURATION OF PU	17-18		LOCATION OF	= WELL		
	STAYIC LEVEL	MAYER LIEVEL 2.5 KMD-04F WATER LE		PUMPING	IN DIAGRAM LOT LINE	BELOW SHOW DISTANCES INDICATE NORTH BY ARE		ROAD AN	D
12	119 - 227	PLINIPING  2 (2-2):0 95 NELNIUMES  2 (6-2):0  2 (6-2):0	30 MINUTES   4.5 MINUTES   4.5 MINUTES   12-31   12-3	RECOVERY  60 MINUTES 85-37		<u> </u>			į
9	FEET FEET	FEET PURP INTAKE S	1 15 seet 1 .55 se	er Total					
PUMPIN	GIVE RATE	S Pat		a [] choupy					
ä	RIECON IN IEN DIED PUIN	PUMP	43-45 RECOMMENDED PUMPING	4/5-49					į
<u> </u>	1584 SHALLOW 10-53	C) DEEP   SETTING	/5 FEET RATE	GPVI GPVI	1				
	FIMAL	1 [JF WATER SUPPLY	s [] ABAMDONED, INSUFI			, r		<u> </u>	/
	STATUS OF WELL	2 [] OBSERVATION WELL 3 [] TEST HOLE 4 [] RECHARGE WELL	6 [] ABANDONED POPER I P [] UNIFINISHED	GUURLITY	00	1.00	see to 1 R	Ti	
<u> </u>	5.5-	SE 1 ISK DOMESTIC	s [] COMMERCIAL		V		. 4	1	4/
	WATTER	4 III STOCK 3 III ERREGATION	6 [] MUNICIPAL 7 [] PUBLIC SUPPLY						3/ [
	USE	• El INDUSTRIAL El OTHER	■ COOLING OF AIR CONDIT		<b>\</b>		66-3	KYI (	§ /
	METHOD	1 [] CABLE TOOL	● □ BORING		0.0	****	/	\/ \	7
	OF:	2 [] ROTARY (CONVENT) 3 [] ROTARY (REVIERSE) 4 [][6 ROTARY (AIR)	■ [] JETTING		7 50	KMONTERS	/	1	
<u> </u>	DRILLING	5 [] AIR PERCUSSION	5 [] DRIVING		EPRITEILISERS REIN AIRIKS	100 July 100	,	1	
	NAME OF WELL C			NOE NUMBER	> SOURCE	is contraictor 59-62 on	E DEC VED	() M	61 82
TOF	17 KAUA Address	THAGA GE SON	WELL DRULLING	<u> </u>	DATE OF INSPECTION	IMSPECTOR			, 44h
PAC	NAME OF DRILLE	THE SOURCE CAPACITES	TON PLACE	NOE NUMBER	GD REMARKS				<u>,</u>
CONTRACTOR	signature of of	R4 1 1919	1nv51)	3 6 5 5		DET .	CSS.S	3	
	S IGHNIATURE OF CO	PER CHARGE RIGHTS AND	PASTERNISSION DATE  DAY NO	9 583			U33.3	, 0	<b>₩</b>
		THE ENVIRONMEN			**	***************************************	ECHIM N	//) (15/16:	I77 FORM ?

S e	linistry He f the nvironment	INTLEY MADOR	₹ WA	TE	The C	Ontario WI	Water Reso	Urces Act	CO	RD
Ontario		BOX WHERE APPLICABLE	11		5202		BLOCK, TRACT, SUF	14 IS		22 23 24 LOT 25-27
Ottaw	va-Carleton	1	est Carl		-Hunt	1	Conc.	3		6
owner (SURNAME Pri-T	ec Construction Lt	d. Box 1309	0; Kanat	a, 0	ntario.	K2K 1	<b>X</b> 3	DATE COMP DAY 16	но <u>10</u>	v85 <u></u>
21	ZONE EASTING	NORTHING		RC.	ELEVATION	] <u>*</u> c	BASIN CODE	1 1 1	111	l l l l
	LOG	OF OVERBURDEN	AND BED	ROCK	MATERIA	LS (SEE )	NSTRUCTIONS)			4
GENERAL COLO	UR COMMON MATERIAL	OTHER MAT	TERIALS			GENER	AL DESCRIPTION		DEPTH FROM	· FEET
Brown	Sand	Boulders							0	10
Gray	Limestone				Medi	um Sof	t		10	200
Gray			€thik tre						200	230
31   1   32   10   41   W	VATER RECORD			با لي			54 51 OF OPENING	65 31-33 DIAME	FER 34-38   U	75 10 LENGTH 39-40
WATER FOUND AT - FEET	KIND OF WATER	INSIDE MATERIAL	WALL THICKNESS	DEPT	H - FEET	Z (SLOT	RIAL AND TYPE		INCHES	FEET
	1  FRESH 3  SULPHUR 14 == 1 2  SALTY 4  MINERAL	10-11 1 X STEEL 12	INCHES	FROM	13-16	SC MATE			OF SCREEN	FEET
	FRESH 3 SULPHUR 19 6	1 GALVANIZED CONCRETE DOPEN HOLE	/188	0	22	61	PLUGGI	NG & SEAL	ING RECO	RD
20-23	FRESH 3 SULPHUR 24			22	200	DEPTH FROM	SET AT - FEET	MATERIAL AND		NT GROUT, ACKER, ETC.)
25-28		8   CONCRETE   CONCRET	1 11	200	27-30		14-17 1-21 22-25 -29 30-33 8			·
71 PUMPING TEST		11-14 DURATION OF PU		7		L	OCATION	OF WEL		
STATIC LEVEL  11  8  IF FLOWING. GIVE RATE	76-28 150 FEET 150 FEET 150 FEET 38-41 PUMP INTAKE SET GPM.	20 MINUTES 25-31 45 MINUTES 25-31 32- 150 FEET MATER AT END	PUMPING RECOVERY  60 MINUTES 34 35- EET 150 FE	37 ET 12	LOT L		OW SHOW DISTANDICATE NORTH BY		FROM ROAD A	# <b>5</b> )
FINAL STATUS OF WELL WATER USE	S   CONTROL	S ABANDONED, INSUE S ABANDONED POOR TOUNFINISHED  COMMERCIAL MUNICIPAL PUBLIC SUPPLY COOLING OR AIR CONDI 9 NOT	FFICIENT SUPPL' QUALITY		Old Albrowto	7 - So,	 76'2"/	-230°	*	
OF DRILLIN	IG POTARY (REVERSE) ROTARY (AIR) ROTARY (AIR) ROTARY (AIR)	B   JETTING 9   DRIVING			RILLERS REMAR		=			
I 1	ell contractor tal Water Supply L	i e	1558	_     <u>&gt;</u>	DATA			2 DATE RECEIVED	01	86
BOX	490; Stittsville, (			100	1	CTION	INSPECTOR			
NAME OF DR	iller / B. Moore	Lit	CENCE NUMBER	~     =	REMARKS	<b>X</b>			**	
SIGNATURE)	KOLDMOOL)	SUBMISSION DATE	10,8		5				cc.	60

SIGNATURE OF CONTRACTOR

DA

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506—4—77 FORM 7



Or	ntario	1. PRINT ONLY IN 2. CHECK 🗵 CORR	SPACES PROVIDED 11 1 1 1	521169 MUNICIP	COM.	22 23 24
COL	O++ aug	Carloton	Wost Carleton Huntl	con. BLOCK. TRA	Conc. 3	6 Eot 25-27
			Boyce Ave.; Ott	cawa, Ont. K2B 6J2	DAY 11	ер 48-53 мо <b>12</b> ук. <b>86</b>
ļ			HING RC	ELEVATION RC BASIN CODI	1 1 1 1 1	
Ė	2	L(	OG OF OVERBURDEN AND BEDROC		NS)	
GE	NERAL COLOUR	MOST	OTHER MATERIALS	GENERAL DESCRI	PTION	DEPTH - FEET FROM TO
L	Brown	Sand, Gravel	& Boulders			8 0
$\vdash$	Gray	Limestone		Layered		8 15
$\vdash$	Gray	Limestone		Medium Soft		15 380
$\vdash$						
				N. T. V.		
$\vdash$						
上	uas - ·					
3	1					
3	2 10	14 75	32	SIZE IS I OF DPENIN	65 G 31-33 DIAMETER	75 80 34-38 LENGTH 39-40
w/	ATER FOUND AT - FEET	TER RECORD		PTH - FEET		INCHES FEET
-	OCE 10-13 1	FRESH 3 O SULPHUR 14	INCHES INCHES FROM	TO MATERIAL AND TY		PTH TO TOP 41-44 30 SCREEN FEET
$\vdash$	15-18 1	FRESH 3 SULPHUR 19  SALTY 4 MINERAL	64 CONCRETE 10 OPEN HOLE	) 22 61 PL	JGGING & SEALIN	G RECORD
-	20-23 1	FRESH 3 SULPHUR 24  SALTY 4 MINERAL	17-18 · 🗆 STEEL 19 6 2 🖂 GALVANIZED 22	20-23 DEPTH SET AT - FEE	MATERIAL AND TYP	E (CEMENT GROUT LEAD PACKER, ETC.)
$\vdash$	25-28 1	FRESH 3 SULPHUR 29	3 ☐ CONCRETE 4 ☐ OPEN HOLE  24-25 1 ☐ STEEL 26	27-30 18-21	14-17	
$\vdash$	30-33   [	FRESH 3 SULPHUR 34 10	6 2 GALVANIZED 275	380	10-33 80	
E	PUMPING TEST ME		OPEN HOLE  11:14 DURATION OF PUMPING	LOCATI	ON OF WELL	
71	1 PUMP	2 SAILER WATER LEVEL 25	1 GPM 2 15-16 17-18 HOURS MINS	IN DIAGRAM BELOW SHOW		M ROAD AND
TEST	LEVEL	PUMPING 22-24 15 MINUTES	2 RECOVERY  30 MINUTES 45 MINUTES 60 MINUTES	LOT LINE. INDICATE NOR	ITH BY ARROW.	) <i>(</i>
		175 PEET 150 PEE	175 FEET 175 FEET 175 FEET	Counc	Side K	<u>d</u>
PUMPING	GIVE RATE	GPM.	FEET 1 CLEAR 2 X CLOUDY	10		<b>,</b>
2	☐ SHALLOW	PUMP	300 FEET RECOMMENDED 46-49 PUMPING 5 GPM	*		
<b> </b>	10-53	54 ; • WATER SUPPLY	5 ABANDONED, INSUFFICIENT SUPPLY	$\mathcal{Q}$		
1	FINAL STATUS OF WELL	2 DOBSERVATION WELL				
-		4   RECHARGE WELL	S COMMERCIAL		a Hess	
	WATER USE	2 STOCK 3 RRIGATION 4 INDUSTRIAL	6 MUNICIPAL 7 PUBLIC SUPPLY 8 COOLING OR AIR CONDITIONING		adapter	
	-	0 OTHER	9 NOT USED	Old a	pitless odapter	21
	METHOD OF	CABLE TOOL 27 CONVENT CONVENT		Ju fl	LI LIZITA	<u> </u>
	DRILLING	4   ROTARY (AIR) 5   AIR PERCUSSION	9 DRIVING	DRILLERS REMARKS		04681
<u></u>	NAME OF WELL		LICENCE NUMBER	DATA 58 CONTRACTOR	59-62 DATE RECEIVED 0	50287"
CONTRACTOR	ADDRESS	tal Water Suppl		<u> </u>	PECTOR	
YE A	NAME OF DRILL		e. Ont. KOA 360	REMAPKS		
100	SIGNATURE OF	iller/J. Moore	SUBMISSION DATE	OFFICE		
L		Twany	DAY // MO CO YRUG			M NO. 0506-4-77 FORM 7



Ontario  1. PRINT ONLY IN SPACES PROVIDED  2. CHECK CORRECT BOX WHERE APPLICABLE	1522376 NUNICIP CON 1522374
COUNTY OR DISTRICT TOWNSHIP, BOROUGH, CITY, TOWN VILLE  OTTALIA PADIETANI LISET (ARLE	
THE THE PARTY OF T	DATE COMPLETED 48-55
Box 13090	RC ELEVATION RC MAIN CODE II III IV
1 2 10 12 17 18 24	25 26 30 Sin 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
MOST	DROCK MATERIALS (SEE INSTRUCTIONS)  GENERAL DESCRIPTION  DEPTH - FEET
COMMON MATERIAL	FROM TO
BROWN SAND STONE	9' 70'
GREY BLACK LINESTONE	70' 130'
31	
32 10 10 15 21 32	43 54 54 55 55 60 75 80 Size-5; OF OPENING 31-33 DIAMETER 34-38 LENGTH 39-40
41 WATER RECORD 51 CASING & OPEN HO WATER FOUND KIND OF WATER INSIDE WALL	DLE RECORD Z (SLOT NO )
AT - FEET DIAM MATERIAL THICKNESS INCHES INCHES	FRUM TO C MATERIAL AND TYPE DEPTH TO TOP 41-44 30
	O' 22' 61 PLUGGING & SEALING RECORD
20-23     FRESH 3   SULPHUR 24   17-18   1   STEEL   19	20' 130   DEPTH SET AT - FEET   MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER. ETC.)
2 SALTY 4 MINERALS 3 CONCRETE 4 COPEN HOLE 5 PLASTIC	10-13 14-17
2   SALTY 4   MINERALS   24-25   1   STEEL   26	27-30 18-21 22-25
Z SALTY 6 GAS 5 PLASTIC	
	LOCATION OF WELL MISS
STATIC WATER LEVEL 25 1 PUMPING LEVEL PHILIPPING 2 RECOVERY	IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND
$I \vdash I  Q  I  Q \land  I  Q \land  $	35-37
1 FEET DU FEET 80 FEET	" OLD ALMONIE ROAD IN
FEET 0 FE	Sem Sex 15
SHALLOW DEEP SETTING 100 FEET RATE	<del> </del>
FINAL 14 , WATER SUPPLY ABANDONED, INSUFFICIENT SUP	A WENSUM THE MAN THE M
STATUS  2 OBSERVATION WELL  3 TEST HOLE  7 UNFINISHED  4 RECHARGE WELL  9 DEWATERING	N N N N N N N N N N N N N N N N N N N
55-56 , DOMESTIC 5 COMMERCIAL 2 STOCK 6 MUNICIPAL	9
WATER    IRRIGATION   DUBLIC SUPPLY  USE   INDUSTRIAL   COOLING OR AIR CONDITIONING	
OTHER 9 NOT USED	
METHOD    Contact   Conventional   C	
CONSTRUCTION 4 PROTARY (AIR) 9 DRIVING DIGGING OTHER	DRILLERS REMARKS
NAME OF WELL CONTRACTOR / WELL CONTRACT LICENCE NUMBE	FOR'S DATA SE CONTRACTOR 59-62 DATE RECEIVED 63-68 80
ADDRESS ADDRESS OF A STATE OF A S	DATE OF INSPECTION INSPECTOR
ADDRESS  AR2 CARLETON PLACE  NAME OF WELL TECHNICIAN  AUANACH  SIGNATURE OF FECHNICIAN/CONTRACTOR  SIGNATURE OF FECHNICIAN/CONTRACTOR  SIGNATURE OF FECHNICIAN/CONTRACTOR  SUBMISSION DATE	
SIGNATURE OF FECHNICIAN/CONTRACTOR SUBMISSION DATE	OFFICE TO THE TOTAL TOTA
Mechael haverade DAY 7 NO 06 YE	
MINISTRY OF THE ENVIRONMENT COPY	FORM NO. 0506 (11/86) FORM 9



Ontario	1. PRINT ONLY IN 2. CHECK 🔀 CORF	SPACES PROVIDED  RECT BOX WHERE APPLICABLE  1 2	<b>1522</b> 59	36 NUNICIP CON.		22 23 74
COUNTY OR DISTRICT	wa-Carleton	township, Borough city, town, villaction - H		CON. BLOCK TRACT, SURVEY, ETC	LC	or 25-27 6
				DATE CO	4 07	ss 88
		VIA KOULE II	RC. ELEVATION	JON ILO	MO	1V
- F	10 12	OG OF OVERBURDEN AND BED	POCK MATERIALS	30 31		47
GENERAL COLOUR	MOST	OTHER MATERIALS	HOCK WATERIALS	GENERAL DESCRIPTION	DEPTH -	
Brown	Clay	****	Pacl		FROM	то 6
Gray	Clay	Boulders	Pacl		6	9
Gray	Clay	Sand & Gravel	Pacl	ked	9	16
Gray	Limestone	Brown layers	Medi	ium	16	125
<u> </u>						
31			باللسبال			
32	14 15	32	1 43 1	54 554 554 555 555 555 555 555 555 555		75 80
WATER FOUND	TER RECORD	51 CASING & OPEN HOL	DEPTH - FEET	Z ISLOT NO )	METER 34-38 LEI	NGTH <b>39-40</b>
AT - FEET	FRESH 3 SULPHUR	DIAM MATERIAL THICKNESS INCHES		MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN	41-44 30
15-10	6 □ GAS	6 1 2 GALVANIZED 3 CONCRETE 4 OPEN HOLE	0 22	61 PLUGGING & SEA	LING RECOR	FEET
118 2	SALTY 6 GAS	4 5 □ PLASTIC 19 19 1 □ STEEL	20-23	DEPTH SET AT - FEET MATERIAL A	CEMEN	GROUT
2	SALTY 6 GAS  FRESH 3 SULPHUR	6 2 GALVANIZED 3 CONCRETE 4 POPEN HOLE 5 PLASTIC	22 125	10-13 14-17		
1 [	SALTY 6 GAS	24-25 1 □ STEEL 2 □ GALYANIZED 3 □ CONCRETE	27-30	18-21 22-25		
1 1 1	FRESH 3 □ SULPHUR 34 □ MINERALS □ SALTY 6 □ GAS	4 OPEN HOLE 5 DPLASTIC		26-29 30-33 80		
71 PUMPING TEST NE	THOD 10 PUMPING RATI	00 0 15-16 1	-18	LOCATION OF WE	LL	
STATIC LEVEL	WATER LEVEL 25	LEVELS DURING	LOT LINE	RAM BELOW SHOW DISTANCES OF WEL E INDICATE NORTH BY ARROW.	L FROM ROAD AN	D
TEST 3	1 22-24 15 MINUTES 26-	30 MINUTES 45 MINUTES 60 MINUTE 28 29-31 32-34 33	on Core	1.4h. 0.		
	T 20 FEET 20 FE	<del></del>	42	H line		
IF FLOWING. GIVE RATE  RECOMMENDED PU	GPM  JMP TYPE RECOMMENDE	FEET 1	ıy		<b></b>	
SHALLON	N DEEP SETTING	60 FEET PUMPING RATE 5 G	РМ	9 4 90	·	
	\$4 1 _ WATER SUPPLY	\$ ABANDONED, INSUFFICIENT SUPPL	<del> </del>	506"\ /44'6" pit	less,	
FINAL STATUS	2 OBSERVATION WES	•		4	adapter.	
OF WELL	RECHARGE WELL  55-56  1 D DOMESTIC	9 DEWATERING 5 COMMERCIAL		3		
WATER	2 STOCK 3 IRRIGATION	6 MUNICIPAL 7 PUBLIC SUPPLY	Carc.3.	3		
USE	4 🗍 INDUSTRIAL  OTHER	□ COOLING OR AIR CONDITIONING     □ NOT USED		C#5		
METHOD	57 1 CABLE TOOL 2 ROTARY (CONVEN					**************************************
OF CONSTRUCTI		DRIVING			382	189
NAME OF WELL	AIR PERCUSSION	☐ DIGGING ☐ OTHER		SR CONTRACTOR 59-62 DATE RECEIV	VEO	63-68 80
1 1 .	al Water Supply	Ltd. licence Number 1558	SOURCE OF INSPECT	1558 SE	P 0 1 1988	3
Box 49	90; Stittsville		SE SE			
S. Mil	ller	WELL TECHNICIAN LICENCE NUMBER	S D REMARKS			
SIGNATURE OF	TECHNICIAN/CONTRACTOR	SUBMISSION DATE  DAY HO YR.	OFFICE		css.	ES
MINISTE	Y OF THE ENVIRO	<del></del>	<del></del>	. F	ORM NO. 0506 (11	/86) FORM 9



The Ontario Water Resources Act

# WATER WELL RECORD

Ontario	/ironment 1. PRINT ONLY IN		1523221	MUNICIP. CON.	O.N   10.31
COUNTY OR DISTRICT		TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	СО	N. BLOCK THACT, SURVEY ETC	22 23 74 LOT 25-27
()-rri	Un ('DDIET	W // JEST CA.	RLETOU	# 5	MBLETED 49.53
		R# 2	Canp	DAY	9 no 9 v88
			C. ELEVATION / RC	BASIN CODE	
	L	OG OF OVERBURDEN AND BEDR	· · · · · · · · · · · · · · · · · · ·		
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENI	ERAL DESCRIPTION	DEPTH - FEET FROM TO
BROWN	3 Tousoil		Pa	4CKED	0 1'
BROWN	SAND		F	NE	1 10
BROWN	SAND	BOULDERS GAAL	SEL LOOS	SE	10 16
GREY	LIMESTONE	BLOCKLIMESTONE &	JUGATZ) 1	LED, HARD	16 45
		*			
}					
<u> </u>					
31					
32	1 14 15	322	1 43	54	75 80
<u> </u>	TER RECORD	51 CASING & OPEN HOLE	RECORD SIZ (SIZ	EIST OF OPENING 31-33 DIA	METER: 34-38 LENGTH 39-40
WATER FOUND AT - FEET	KIND OF WATER  FRESH 3 SULPHUR	INSIDE DIAM MATERIAL THICKNESS INCHES	NOM TO MA	TERIAL AND TYPE	DEPTH TO TOP 41-44 30 OF SCREEN
76 "	SALTY 4 MINERALS 6 GAS	10 STEEL 12 188 CONCRETE 12 188	) 19" ("		FEET
4//	FRESH 3 SULPHUR 4 MINERALS 6 GAS	4 OPEN HOLE 5 PLASTIC  19		PLUGGING & SEA	CEMENT CROUT
	☐ FRESH 3 ☐ SULPHUR 24 ☐ 4 ☐ MINERALS ☐ GAS	2 □ GALVANIZED 3 □ CÓNCRETE 4 BOPEN HOLE	9 45	M 10	ND TYPE LEAD PACKER ETC.)
	☐ FRESH 3 ☐ SULPHUR 29 ☐ SALTY 4 ☐ MINERALS ☐ SALTY 6 ☐ GAS	5 □ PLASTIC  24-25 1 □ STEEL	27.30	) / 9 CEM	EUT SKOW
	☐ FRESH 3 ☐ SULPHUR 34 8 4 ☐ MINERALS ☐ SALTY 6 ☐ GAS	2 GALVANIZED 3 CONCRETE 4 COPEN HOLE 5 COPLASTIC		26-29 30-33 80	
71 PUMPING TEST ME				LOCATION OF WE	LL
1 D PUMP	2 ☐ BAILER WATER LEVEL 25	15-16 17-18 MINS 1 PUMPING	IN DIAGRAM BE	LOW SHOW DISTANCES OF WEL	L FROM ROAD AND
LEVEL 19-2	PUMPING 22-24 IS MINUTES	RECOVERY		NDICATE NORTH BY ARROW.	
		ET ZOFEET ZOFEET	1	P REQ#5	
IF FLOWING GIVE RATE  RECOMMENDED PL	38-81 PUMP INTAKE	SET AT WATER AT END OF TEST 42			
RECOMMENDED PL					MA
50-53		JO 722   1000		ANEWAY	
FINAL	S4  1 WATER SUPPLY 2 DESERVATION WEI	■ BANDONED, INSUFFICIENT SUPPLY     ■ BANDONED POOR QUALITY			
STATUS OF WELL	3 TEST HOLE 4 RECHARGE WELL	7 UNFINISHED 9 DEWATERING		1 +4	0use
	DOMESTIC 2 STOCK	5 COMMERCIAL 6 MUNICIPAL			
WATER	3   IRRIGATION 4   INDUSTRIAL	7 ☐ PUBLIC SUPPLY  ■ ☐ COOLING OR AIR CONDITIONING			
	57	• □ NOT USED		d	
METHOD OF	1 GABLE TOOL 2 ROTARY (CONVENT 3 ROTARY (REVERSE			MS' -XK-U	39003
CONSTRUCTI		DRIVING OTHER	DRILLERS REMARKS	(F)	39003
NAME OF WELL	- 1	WELL CONTRACTOR'S	DATA SO		
ADDRESS	DY WALL	NGCONTD 5222	DATE OF INSPECTION	522 JAN	0 9 1989
HAME DE WE	DOX WAY	CARA WELL TECHNICIAN'S	O ACHAPKS		
ADDRESS ON THE APPROXIMATION OF WELL	SISSON TECHNICIAN CONTRACTOR,	LICENCE NUMBER 7-0/90  SUBMISSION DATE	WDE		
$\mathbf{x}$	. //100	DAY MO YR	-   -   -   -   -   -   -   -   -		css.Es
MINISTE	RY OF THE ENVIRO	NIMENT COPY			FORM NO. 0506 (11/86) FORM 9



Ontario	1. PRINT ONLY IN 2. CHECK 🗵 CORR	SPACES PROVIDED  ECT BOX WHERE APPLICABLE	15	52382	20 1500		0,11,	103
COUNTY OR DISTRICT	T	TOWNSHIP, BOROUGH, CITY, TOWN VILLAGE West Carleton			CON BLOCK, TRACT, SU	RVEY ETC		LOT 25-27
		. #3 Carp,Onta	rio	KOA 1I		DATE CO	11 MO 08	····ss <sub>yr</sub> 89
		ing RoarpyOrice		LEVATION	RC. BASIN CODE	1	i	ıv
	M 10 12	OG OF OVERBURDEN AND BEDRO		MATERIAL	S (SEE INSTRUCTIONS)			47
GENERAL COLOUR	MOST	OTHER MATERIALS		VIATERIAL	GENERAL DESCRIPTION		DEPTH FROM	- FEET
	COMMON MATERIAL	Stones			Loose		O	6
Brown	Sand	Boulders			Packed		6	20
Gray Gray	Limestone	Black Layers	-		Medium Soft		20	260
1								
			-					
						<u>.                                      </u>		
31   11					لىللىنيا لىل	با لبلن		
32	14 15	32	43	<u> </u>	<u> </u>	يا لنك		75 80
	ATER RECORD	51 CASING & OPEN HOLE		ORD	SIZE(S) OF OPENING (SLOT NO)	31-33 01/	AMETER 34-38	LENGTH 39-40
WATER FOUND AT - FEET	KIND OF WATER  FRESH 3 SULPHUR	DIAM MATERIAL THICKNESS INCHES	ROM:	то	MATERIAL AND TYPE		DEPTH TO TOP OF SCREEN	41-44 30
4.4	SALTY 4 MINERALS 6 GAS	6 1/4 2 STEEL 3 GALVANIZED 3 GONCRETE	0	22"		UNC 9 CE	ALING RECO	FEET
110 '	SALTY 6 GAS	4 □ OPEN HOLE 5 □ PLASTIC 19 17-18 1 □ STEEL	-	20-23	DEPTH SET AT - FEET	MATERIAL	AND TYPE (CEME	ENT GROUT
2	SALTY 6 GAS	5 7/8 4 GONCRETE 4 GONCRETE 5 PLASTIC	22	260	FROM TO 10-13 14-17			CRER. ETC.
I I	SALTY 6 GAS	24-25 1 STEEL 26 26 2 GALVANIZED		27-30	Grouted	C	ement	
	FRESH 3 SULPHUR 34 MINERALS SALTY 6 GAS	3 □ CONCRETE 4 □ OPEN HOLE 5 □ PLASTIC			26-29 30-33	80		
71 PUMPING TEST		n 15-16 17-18			LOCATION	OF WE	LL	
STATIC	P 2 BAILER  WATER LEVEL 25 END OF WATER	Z GPMHOURSMINS  LEVELS DURING		IN DIAG	GRAM BELOW SHOW DISTA		LL FROM ROAD A	IND
TEST 19-	PUMPING	30 MINUTES 45 MINUTES 60 MINUTES						
	EET 325EET 120FE							
ON A FILOWING. GIVE RATE RECOMMENDED	GPM	FEET 1 CLEAR 2 2 CLOUDY						
☐ SHALL	PUMP TYPE RECOMMENDE PUMP OW DEEP SETTING	D 43-45 RECOMMENDED 46-49 PUMPING 250 FEET RATE 2 GPM			(A)		-	
50-53			]		/3		(K)	
FINAL STATUS	WATER SUPPLY Description we Test hole	\$ \[ ABANDONED INSUFFICIENT SUPPLY \] LL \[ 6 \[ D ABANDONED POOR QUALITY \] 7 \[ D UNFINISHED			ardevco		Carp Ro	
OF WELL	L 4   RECHARGE WELL	DEWATERING	41		Š		3	
WATER	DOMESTIC STOCK	COMMERCIAL     MUNICIPAL     PUBLIC SUPPLY		TF 75'	¬   -			
USE	4   INDUSTRIAL   OTHER	COOLING OR AIR CONDITIONING  NOT USED		98'				
METHO	57 1 G CABLE TOOL	■ BORING	11			- L.>	21	
OF CONSTRUC	3   ROTARY (REVERS			- K	lichardson	JICKE 1	50	876
	S AIR PERCUSSION	☐ DIGGING ☐ OTHER		ILLERS REMARKS				
1	al Water Supply	well contractor's licence number 1558	ΙΙ≿	DATA SOURCE	155	8 SE		9 *3-61
ADDRESS	90 Stittsville		SE ON			OR		
NAME OF W	VELL TECHNICIAN	WELL TECHNICIAN'S LICENCE NUMBER	112	REMARKS				
SIGNATURE	OF TECHNICIAN/CONTRACTOR	SUBMISSION DATE  DAY // MO 08 YRS9	OFFICE					^
	Y OF THE ENVIRON		تا ك			- 1.00-	FORM NO. 0506 (	11/86) FORM



Ontario  1. PRINT ONLY IN 2 CHECK 🗵 CORI	SPACES PROVIDED	1527799 NUNICIP COM.	P.N
COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CAN BLOCK TRACT, SURVEY ETC	LOT 25-27
	s // ()	DATE COM  DAY  DAY  DAY  DAY  DAY  DAY  DAY  DA	
	HING RC.	ELEVATION RC. BASIN CODE II	
1 2 M 10 12	OG OF OVERBURDEN AND BEDRO	CK MATERIALS (SEE INSTRUCTIONS)	, A7
GENERAL COLOUR MOST	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM TO
Brown Fill		PACKED	0 3'
BROWN SAND.	Boulders	hoose	3' 8'
BROWN GRAVER	Boulders	Louse	8 13
GREY GIMESTONE		MED	/3 50
.4	,		
		}	
31			
32 10 14 15 21	32	54 65 51ZE: S1 OF OPENING 31:33 DIAM	75 80 ETER 34-38 LENGTH 39-40
WATER RECORD  WATER FOUND AT - FEET  KIND OF WATER	DIAM MATERIAL THICKNESS	DEPTH - FEET	INCHES FEET
35 P-13   D FRESH 3   SULPHUR 14   MINERALS   6   GAS	INCHES INCHES FRO	OM TO OMATERIAL AND TYPE	DEFTH TO TOP 41-44 30 OF SCREEN
15-10 1 FRESH 3 SULPHUR 19 2 SALTY 6 GAS	GANANIZED 3 GANANIZED 4 GOPEN HOLE 5 PLASTIC	61 PLUGGING & SEA	LING RECORD
20-23 1   FRESH 3   SULPHUR 24   MINERALS 6   GAS	6 1 0 STEEL 19 2 GALVANIZED 3 CONCRETE 3 CONCRETE 4 COPEN HOLE	DEPTH SET AT FEET MATERIAL AN	ID TYPE (CEMENT GROUT LEAD PACKER ETC.)
25-28 1 FRESH 3 SULPHUR 29 4 MINERALS 5 GOGAS	24-25 1 DSTEEL 26	2 50 010-13 204-17 Cemer	NT GAOUT.
30-33 1 FRESH 3 SULPHUR 34 4 MINERALS 2 SALTY 6 GAS	2 GALVANIZED 3 GONCRETE 4 GOPEN HOLE 5 DPLASTIC	26-29 30-33 40	
71 PUNTING TEST METHOD 10 PUMPING RAI	E 11-16 DURATION OF PUMPING 15-16 17-18	LOCATION OF WEL	.L
STATIC WATER LEVEL 25 STATIC END OF WATER	GPM HOURS MINS LEVELS DURING  PRECOVERY	IN DIAGRAM BELOW SHOW DISTANCES OF WELL LOT LINE INDICATE NORTH BY ARROW.	. FROM ROAD AND
19-21 PUMPING 19-21 20, 22-24 15 MINUTES 26-	30 MINUTES 45 MINUTES 60 MINUTES		
FEET FEET FEET FUMP INTAKE	SET FEET FEET FEET SET AT WATER AT END OF TEST 42	IS	15-4   - X
FEET FEET FI  IF FLOWING. 38-81 PUMP INTAKE GIVE RATE  GPM  RECOMMENDED PUMP TYPE  PUMP PUMP PUMP	FEET 1 FCLEAR 2 CLOUDY  D 43-45 RECOMMENDED 46-49 PUMPING	VASO	
Shallow Deep Setting	FEET RATE GPM	ARD.	
FINAL 1 WATER SUPPLY 2 OBSERVATION WE	S ABANDONED, INSUFFICIENT SUPPLY	<u> </u>	
STATUS  OF WELL  OF WELL  OF WELL	, UNFINISHED  DEWATERING	GARAGE.	793
SS-SS 1 DOMESTIC 2 STOCK WATER STOCK	S OMMERCIAL MUNICIPAL		
USE 4 INDUSTRIAL OTHER	7  PUBLIC SUPPLY  4  COOLING OR AIR CONDITIONING  9  NOT USED		
METHOD CABLE TOOL	■ BORING		
OF 3 GROTARY (REVERS			110552
s Cair PERCUSSION	☐ DIGGING ☐ OTHER	DRILLERS REMARKS  DATA SB CONTRACTOR 59-62 DATE RECEIVE	
	ING INC. 5222		R 0 5 1994
W NATE OF VELL RECHNICIAN ARA	WELL TECHNICIAN'S	U O REMARKS	
ADDRESS JOX 317 AR HOLE OF VELL SECHNICIAN AR SIGNATURE OF FECHNICIAN CONTRACTOR	SUBMISSION DATE	O F I C E	
1. 1//	DAY MO YR	<u> </u>	CC. CS
MINISTRY OF THE ENVIRO	DNMENT COPY	. F	ORM NO. 0506 (11/86) FORM 9

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

1529797

11

Municipality	Con.	
15005	CON	50 1
		22 21 24

County or District  21  General colour  Brown  Brown  Gray  Gray	Most common materia  Sandy 6661  Sandy Clay  Sand & Gray  Limestone	d	Address  R.R. #  KOA 1L  OVERBURDEN	Northing  18  NAND BED  er materials	ton - I	Prook R	Rd. Carp	Basin Code  Ontario  Basin Code  Ontario  Ontari	ate	yay 12mont	25 27  6  48-53  h 97/year  10  10  10  44  9  12  75
Water found at - feet  10-13	Fresh   3   Sulphur   29     Salty   4   Minerals     Gas   Sulphur   34   Minerals     Salty   6   Gas     Fresh   3   Sulphur   34   Minerals     Salty   6   Gas     Bailer   Pumping rate     Bailer   Water level     20   Water level     21   Water level     22   24   15 minutes   3     23   3     24   3     25   3     26   3     27   28   3     28   3     29   3     4   Minerals   3     50   6     70   70   70     70   70   70     70   70	17-18 6 24-25 11-14 25 GPM during + [ 10 minutes 29-3	Material    Steel   12   Galvanized   Galvan	Wall thickness inches	E RECOR Depth From O	75 22.30 In diagran	61 Sizes of a Sizes of	pening 31-3  pening 31-3  pening 31-3  PLUGGING Annular space -feet Material -fee	& SEALING and type (Centing -	34-38 Length ches Depth at top of Abandonmer nent grout, ben Cement	feet screen 41-44 feet feet (3)
Cable to Cab	rate 38-41   Pump intake set GPM   Recommended pump setting	feet 43-45 30 feet 49-45 30 feet 49-45 49-	water at end of te t	5 GPM  Shed bement well  gg gg  tor's Licence No.  1A6  1A6  an's Licence No.	Dal	ta urce te of inspection	58 Contracct	33' st 159 558 Inspector	Right   1   1   1   1   1   1   1   1   1		998

2-MINISTRY OF ENVIRONMENT & ENERGY COPY



Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

1530340

Municipality	Con.			
				-
115005	CON	 . 1		. –
	COM			بوا
	11		an na	~

0506 (07/94) Front Form 9

			L	2	•	-		10	14	15	.:	22 23 24
County or District			Township/I	Borough/City/T	own/Villaç	je		Con	block trac	t survey,	etc. Lo	ot 25-27
	-		Address	West Ca	rleto	n – Hun	tley		3 Date			48-53
			154 0-	lonnado	DASA	None	n_Coto	rio T	con 7.15	nleted	May 10	nonth 😋 🗘 year
21	1		134 CC	Northing		RC Elev	vation	RC Basir	Code		iii	10
2	T 10	12 12 12 12 12 12 12 12 12 12 12 12 12 1	VERBURDEI	N AND REDI	POCK M	ATFRIALS		ructions)				47
General colour	Most common materia			er materials				neral descr	iption		D	epth – feet
General Colour	most definition that are		<u>,</u>				<u> </u>				_	
Brown	Sand		Bould	<b>lers &amp;</b> G	ravel							11'6"
					·	-				<u>.</u>		
	_											
								_				
					<del></del>							
		1 1		<u> </u>	1 i	.     .	1,11		,   ,   .		.     .	
31		<u> </u>		<del>                                     </del>	1   <del>     </del> 1	.     .   .	└ <del>─</del>		<u></u> 	』 <u>└</u> .	 ,	⊔ لــــــــــــــــــــــــــــــــــــ
32 10 14 15		51	CASING &	OPEN HOL	F RECO	RD	Size	es of opening	31-33	65 Diarneter	34-38 Lei	75 80 ngth 39-40
Water found	R RECORD  Kind of water	Inside diam	Material	Wall thickness	Dep	th - feet	Sid Sid	ot No.)		2 ir	nches	6 6 e feet
at – feet	Fresh <sup>3</sup> Sulphur <sup>14</sup>	inches	☐ Steel 12	inches	From	To 13-16	SCHEEN Mar	terial and typ	е		Depth at to	p of screen 30
2 [] 8	Salty 6 Gas	3	☐ Galvanized ☐ Concrete ☐ Open hole				1 1 1	ravel	Packed			5 feet
1 ' 🗆 '	Fresh <sup>3</sup> ☐ Sulphur <sup>19</sup> ☐ Salty <sup>6</sup> ☐ Gas	5	Plastic		0	11'6"	61		JGGING &			
20-23 1 🔲	Fresh 3 Sulphur 24	2	☐ Steel ☐ Galvanized ☐ Concrete				Depth s	☐ Annu set at – feet	T -		☐ Abandor	bentonite, etc.)
	Salty 6 Gas Sulphur 29	4	☐ Open hole ☐ Plastic				From	13 14-1	7			,
2 🛚	Salty 6 Gas		☐ Steel <sup>26</sup> ☐ Galvanized			27-30			- I	el Pac	cked	
30-33	Fresh 3 Sulphur 34 60 Salty 6 Gas	4	☐ Concrete ☐ Open hole ☐ Plastic				3	29 30-3	3 80 Hole	Frind		
		31-14			\				_ <u></u>			
71 Pumping test met		GPM	Duration of pump			h t'	h-alass		ON OF WE		ad and lo	t line
	ater level d of pumping	during 「□	Pumping 2	Recovery		in diagra Indicate	north by a	irrow.	rices of we	11 11011110	au anu ic	it iii io.
<u>⊢</u> 19-21	22-24 15 minutes 26-28 3	10 minutes 29-31	45 minutes 32-34	60 minutes 35-37								
If flowing give rate	feet feet	feet	feet	feet	1							
If flowing give rate	e <sup>38-41</sup> Pump intake set GPM	at feet	Water at end of to	☐ Cloudy	]							
1 – 1	pump setting	43-45	Recommended pump rate	46-49								
☐ Shallow	□ Deep	feet_		GPM	]							
FINAL STATUS		incufficient o	upply 9 🖂 Upfini	shed								
1 ☐ Water supp 2 ☐ Observation 3 ☐ Test hole	n well <sup>6</sup> 🗌 Abandoned	, poor quality	□ Repla	cement well								
<sup>3</sup> ☐ Test hole <sup>4</sup> ♣ Recharge v	well 8 Dewatering											
WATER USE	55-56	1	9 ☐ Not u	sed	]							
1 Domestic 2 Stock 3 Irrigation	5 ☐ Commercia 6 ☐ Municipal 7 ☐ Public supp	ly	□ Other									
4 🗌 Industrial	B Cooling & a	ir conditioning	3									
METHOD OF CO	ONSTRUCTION 57				7[							
1  Cable tool 2  Rotary (co	nventional) 6 🝊 Boring	ion	9 ☐ Drivir 10 ☐ Diggi								194	767
3 ☐ Rotary (rev	verse)		Outer									
Name of Well Contra			Well Contrac	tor's Licence No		ata	58 Contr	acctor	59-4			63-68
		.a	1558			ource		155	8	DEC	08	1998
	Water Supply Lt					ate of inspecti	ion	Inspe	CTOF			
Name of Well Techn	490 Stittsvil	.le,Ont	ario K2S	ian's Licence No	MINISTRY USE	Remarks						
S. MIller	- Combosto		T0097	date	Hist I					CS	SS. E	ES9
Signature of Technic	cian/Contractor		Judinission		.  ∰							

2 - MINISTER OF ENVIRONMENT & ENERGY COPY

Print only in spaces provided. 1530341 Mark correct box with a checkmark, where applicable. 15005 11 Con block tract survey, Township/Borough/City/Town/Village County or District 3 West Carleton - Huntley 48-53 Date completed 21day 10 montt98 year Colonnade Rd Nepean Ontario K2R 7J5 21 LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions) Depth - feet General description Other materials Most common materia General colour From То 11'6 Brown Boulders & Gravel Sand 31 CASING & OPEN HOLE RECORD Diameter Lenath 51 WATER RECORD Wall thickness inches Depth - feet Inside Water found 6'6" 2 inches Kind of water From at - fe Depth at top of screen Material and type ☐ Sulphur ☐ Minerals ☐ Gas 1 Fresh 3
2 Salty 6 Steel
Galvanized
Concrete
Copen hole
Plastic Gravel Packed Fresh 4
2 Salty 6 ☐ Sulphur ☐ Minerals ☐ Gas 11'6" **PLUGGING & SEALING RECORD** Steel '
Galvanized
Concrete
Copen hole
Plastic Steel Abandonment Annular space 3 Sulphur
4 Minerals
6 Gas ¹ ☐ Fresh Material and type (Cement grout, bentonite, etc.) 2 🗌 Salty ☐ Sulphur ☐ Minerals ☐ Gas ¹ ☐ Fresh 11'6" 1 Steel 2 Galvanized
2 Galvanized
3 Concrete
4 Open hole
5 Plastic Gravel Packed Hole Plug ¹ 🔲 Fresh 2 Salty Duration of pumping Pumping test method Pumping rate LOCATION OF WELL ☐ Pump 2 ☐ Bailer In diagram below show distances of well from road and lot line. Water level 1 🗆 Pumping Static level Water levels during Indicate north by arrow. end of pumping 45 minutes 32-34 15 minutes 26-28 30 minutes 29-31 PUMPING TEST Water at end of test Pump intake set at If flowing give rate ☐ Clear ☐ Cloudy GPM Recommended pump rate 43-45 Recommended pump type ☐ Shallow ☐ Deep GPM **FINAL STATUS OF WELL** □ Abandoned, insufficient supply □ Unfinished
□ Abandoned, poor quality □ Replacement well
□ Abandoned (Other) ☐ Water supply☐ Observation well☐ Test hole☐ Recharge well☐ 8 Dewatering 55-56 WATER USE 9 Not used Domestic
Stock
Irrigation 4 | Industrial METHOD OF CONSTRUCTION 9 Driving
10 Digging
11 Other ... 194770 Well Contractor's Licence No Name of Well Contractor ONLY DEC 0 8 1998 Capital Water Supply Ltd. 1558 Date of inspection

USE

MINISTRY (

**10097** 

23mo 10 yr

2 - MINISTER OF ENVIRONMEN & ENERGY COPY

P.O. Box 490 Stittsville, Ontario K2S 1A6
Name of Well Technician's Licence

MTILer of Technician/Contracto

0506 (07/94) Front Form 9

CSS. ES9

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

1530342

Municipality

Con.

CON.

11

15005

County or District	<b>1</b>			orough/City/To		untley		Con bloo	k tract surve	y, etc. Lot	25-27 <b>6</b>
				onnade		epean.(	Ontario			1day 10 mg	onth <b>98</b> ear
21	T M	12	17	Northing	اللل	RC Eleva	tion RC	Basin Code			17
1 2	10		VERBURDEN	AND BEDF	OCK MA			ctions)		Der	oth feet
General colour	Most common materi	al	Othe	r materials			Gener	al description		From	To
Brown	Sand		Bould	ers & G	ravel					0	11'6'
41 W/Water found at – feet 10–13 1 2 15–18 1 2 20–23 1 2 25–28 1 2 2 30–33 1		17-18 1 2 3 4 5 5 1 2 4-25 1 2 3 4 4 5 5 1 4 5 5 1 4 5 5 1 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Plastic  Steel  Galvanized  Concrete  Open hole  Plastic	DPEN HOLE Wall thickness inches	RECORI Depth- From		(Slot N Materia	PLUGG Annular spa at - teet To M 14-17 22-5	keđ ING & SEALII	Depth at top  S  NG RECOR  Abandonm ement grout, be	feet of screen 41-44 feet
Pumping test	method <sup>10</sup> Pumping rate		Duration of pumpin				L	OCATION (	OF WELL		
1 Pump 2	Bailer 25	GPM .	Hours .	Recovery	1	In diagram	n below sho	w distances	of well from re	oad and lot	line.
Static level  19-21  Static level  19-21  Feet  If flowing give  Recommende  Shallow  50-53	end of pumping  22-24  15 minutes 28-28  1eet 1eet Pump intake se GPM ed pump type Recommended pump setting	30 minutes 29-31 feet t at feet 43-45	45 minutes 32-34 feet Water at end of tes	60 minutes 35-37 feet		Indicate n	orth by arro	w.			
FINAL STAT	supply 5 Abandoner ation well 6 Abandoner le 7 Abandoner ge well 8 Dewatering	i, poor quality i (Other)	oply <sup>9</sup> □ Unfinish 10 □ Replace	ned ement well							
WATER USE  1	6 ☐ Municipal on 7 ☐ Public sup	ply	9 Not use								
ı □ Cable	(conventional) 6 🗍 Boring (reverse) 7 🗍 Diamond	sion	9 Driving 10 Digging 11 Other	J						1947	768
Name of Well Co	ntractor	.td.	Well Contracto	or's Licence No.	ONIC Date		58 Contracc	to 5 5 8	59-62 Date re	ceived	1998

Capital Water Supply Ltd.

Address

Name of Well Technician Supply Ltd.

Name of Well Technician Supply Ltd.

Supply Ltd.

TOO97

Signature of Technician/Contractor

Supply Ltd.

Supply Ltd.

TOO97

Submission date

day23 mo 10 yr 98

Submission date

day23 mo 10 yr 98



0506 (07/94) Front Form 9

County or District			Township/E	Borough/City/			_	Con b	lock tract	survey,	etc. Lot	25-27
Othern Co	- I okon		Address	West (	Carleto	n – Aus	ntley		Date	nloted		6 48-53
			54 Col	Northing	Rd Ne	pean O	ntario K	Basin C	ode comp	21	day 10 mo	onth <b>98</b> ear iv
2	M 10	LOG OF OV	17	18 AND RED		TERIALS (	see instructi	ons)	1 1 1			47
General colour	Most common mater			er materials	HOOK MA	TEMALO (	General		on		Der	th – feet To
Bro⊌n	Sand		Boul	lders &	Gravel						0	11'0
BLOWN	<b>J</b>											
											-	
				i 1 1	i I	11.1.1		11.		+ , , ,		. 1 . 1 1
31										65		1 1
10 14 41 WAT	TER RECORD	51	CASING &	OPEN HOL	E RECORI		Sizes of o	pening	31-33	Diameter	34-38 Leng	
Water found at - feet	Kind of water	Inside diam inches	Material	thickness inches	From	To 13-16	Material a	ınd type		٠,	Ches 61 Depth at top	of screen 3
2	Salty 6 Gas	2 🖸	Galvanized Concrete				Grave	el Pa	cked		5	feet
15-18 1 2	Fresh 3 Sulphur 19 4 Minerals Salty 6 Gas	17-18 1	Open hole Plastic		0	11,16	61	PLUG			G RECOF	
	Fresh 3  Sulphur 24  Minerals  Salty 6 Gas	3 🗆	Galvanized Concrete Open hole				Depth set at -					entonite, etc.
25-28 1 2	Fresh 3  Sulphur 29 Salty 4  Minerals Gas	24-25 1	Plastic Steel			27-30	110-13	14-17 <b>3</b> 22-25	Grave.	l Paci	ked	
	Fresh 3  Sulphur 34 60 Salty 6 Gas	3 [	Galvanized Concrete Open hole				38-29	30-33	Hole 1	Plug		
Pumping test m			Plastic	ing	\ 1			OATIO	N OF WEI			
Pump 2	□ Bailer 25	GPM	Hours		<b> </b>	In diagran	n below show	distanc			ad and lot	line.
Static level	end of pumping water levels		5 minutes	60 minutes	-	Indicate n	orth by arrow.					
19-21 UL (5 feet	feet feet	feet	feet	feet	<u> </u>							
If flowing give r	GPM	feet	Vater at end of te	Cloudy								
	d pump type Recommended pump setting		lecommended ump rate	GPM								
FINAL STATU	S OF WELL 54				<u> </u>							
1 ☐ Water su 2 ☐ Observat	ipply 5 Abandone tion well 6 Abandone		ply <sup>9</sup> ☐ Unfinis 10 ☐ Repla	shed cement well								
3												
WATER USE	55-56	al	9 🔲 Not us									
2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industria			10 ∐ Otner		·							
	CONSTRUCTION 57				$\parallel$							
□ Cable to	ool <sup>5</sup> ☐ Air percus [conventional] <sup>6</sup> ☐ Boring	sion	9 ☐ Drivin 10 ☐ Diggir 11 ☐ Other							•	194 <sup>°</sup>	769
4 🗍 Rotary (	(air) 8 Diamond	<del></del>	J Ouler									
	itractor		Well Contrac	tor's Licence N	Data sou		58 Contracctor			Date rece		63-68
Name of Well Con					11= 1			9	<u> </u>	\$ 1 Em 2 "	. 11 74 1	VUX '

2 - MINISTER OF ENVIRONMENT & ENERGY COPY

**Environment** 

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

1531132 11

Municipality	Con.	
15005	COK	03

CSS.ES0

0506 (11/98) Front Form 9

•		1 2		15 14 15		22 23 5
County or District	1	Township/Borough/City/Tov	vn/Village	Con block tract surv	ey, etc. Lo	nt <sup>१६</sup> श
Ottawa Owner's surname	Carleton e First Name	West Carleton Address	- Huntley	3		6 49 59
	c Construction Ltd.	P.O. Box 13090	Kanata, Ontario	K2K 1X3 completed	5 day 6n	nonth ()(Ba
21	Zone Eas		RC Elevation RC	Basin Code ii	1 + + +	iv Lili
* **	Te 2	OVERBURDEN AND BEDRO	CK MATERIALS (see instruct	ions)		47
General colour	Most common material	Other materials	T	al description		h - feet
General colour	Most common material				From	То
Brown	Sandy & Gravel		Loos	ie	0	3
Brown	Clay		Pack	red	3	15
Gray	Sandy Clay	Stones	Loos	se	15	27
Gray	Limestone		Medi	um Hard	27	33
Gray	Limestone		Badl	ey Broken	33	40
1	Limestone			um Hard	40	75
Gray	Linescone		REGI	CON LIGITAL		
		<u>w</u> -				<del></del>
					-	
11_14						
						1
31						
32	4 15		43 54	35		111
Water found	R RECORD 51	CASING & OPEN HOLE RE	10011	of opening 31-33 Diamete		
at - feet	Kind of water diam inches	Material thickness inches	Prom To Materia	al and type	Depth at top	of screen
33-40	Salty 5 Gas 6 1/4	Steel  Galvanized  Concrete	o   31°     8			feet
15-18	Fresh Suphur 9	4  Open hole 5  Plastic	61	PLUGGING & SEALIN	C PECOPI	
20-23	Salty 6 Gas 17-18	1 Steel 2 Galvanized	26-23	☐ Annular space	☐ Abandonm	
2 [	Salty 5 Gas	3 Concrete	31 75 Depth set From	To Material and type (0	Cement grout, be	entonite, etc.)
25-28 1 E	☐ Fresh	5 Plastic	27-30	0 Grouted -	Cement	(5)
30-33	Fresh <sup>3</sup> Sulphur <sup>34</sup> <sup>60</sup>	2 Galvanized 3 Concrete	26:29	30-33 80		
2 [	☐ Salty 5 ☐ Gas	4  Open hole 5  Plastic	2023	30.55		
Pumping test n		Duration of pumping 15-18 17-18 Mins	LC	CATION OF WELL		
Pump 2		Pumping 2 Recovery		ow distances of well from	road and lo	ot line:
Static level	end of pumping valer levels during to the pend of pumping 22:24 15 minutes 30 minutes 30 minutes 34:31	45 minutes 32-34 60 minutes 35-37	Indicate north by arro	ow.		
5		1				•
15 160 m	39-41	Water at end of test				
Recommended	GPM feet pump type Recommended 43-45	Clear Cloudy  Recommended	300 Z			
☐ Shallow	pump setting  pomp setting	pump rate	OSSIE VIOL	[3		
50-53	* * * * * * * * * * * * * * * * * * * *		Cardenco / Lawyra	Wescar		
FINAL STATU		upply <sup>9</sup> Unfinished	1500 Et	Ca		
3  Test hole	7   Abandoned (Other)	10 ☐ Replacement well	/20-	7	Ø	P.tles
<sup>1</sup> ☐ Recharge				25	N0	6,4/es
WATER USE  1 Domestic 2 Stock	55-56  5	9 ☐ Not use		ē	Buil	80,16
3  Irrigation	7 Public supply	10 <b>Other</b>				
4 🗌 Industrial	8 Cooling & air conditioning		Ø	Lo	+ 18	
METHOD OF (	CONSTRUCTION 57	<sup>9</sup> □ Driving	a Caranno	re Rd		
<sup>2</sup> ☐ Rotary (or <sup>3</sup> ☐ Rotary (re	onventional) <sup>6</sup> 🗗 Boring	10 Digging			000	
4 Rotary (a		·	19		208	<u> </u>
Name of Well Cont	ractor	Well Contractor's Licence No.	➤ Data 58 Contractor	59-62 Date red	ceived	63-68 80
Capital	Water Supply Ltd.	1558	Source  Date of inspection	558 JU	N 202	2000
Address -			ш	Inspector		
P.O. Bo	ox 490 Ktittsville,Ox	Well Technician's Licence No.	RING Remarks Remarks	1		
S. Mill	ler inin/Contractor	TOO97 Submission date	TSI		C	SS.ES
Signature of Technic	ICIAI D'OTT PACIO	dou 6 mg 1 vr 90	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\		J.	~120

2 - MINISTRY OF THE ENVIRONMENT COPY

day 6 mo 4 yr **9**0



Ministry of the Environment

2 - MINISTRY OF THE ENVIRONMENT COPY

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

1532398

Municipality	Con.  CO N	1	1 1	1031
40	15			20 20 01

County or District		Township/Borough/City	/Town/Village		Con block to	ract survey, etc.	Lot 25-27	
	Carleton	West Carlet		tley	3		6	
		Address 357 William M	Mooney Rd.	, Carp ON.	KOA 1LO	Date completed 01 day	O1 180 Sal	
21	Ĭ M	Northing	RC	Elevation RC	Basin Code		iv	
1 2		F OVERBURDEN AND BEDI	ROCK MATERIA	LS (see instruct	ions)		4:	
General colour	Most common material	Other materials		Genera	al description	De From	pth - feet To	
Brown	sand					~ O	8	
Brown	sandy clay	stones				8	16	
Grey	limestone				FF-10-14.	16	125	
							_	
-								
	N. L	3 64 308 3						
	Note: Casir	g was left 12" ab	oce ground	l level at	time of da	cilling.		
31	<u>                                     </u>		11			. 1 1 1 1 .		
32								
41 WATE	ER RECORD 51	CASING & OPEN HOLE	RECORD  Depth - feet		opening 31-33	Diameter 34-38 Lei	75 angth 39-40	
Water found at - feet	Kind of water diam inches	Material thickness inches	From To	W Material	and type	inches Depth at to	feet	
2	Salty 6 Gas	1 1 Steel 12 .188 2 Galvanized 3 Concrete	0 21	<del>စ</del> ီ   ၁၄	,,		41-44 feet	
117 <sup>5-18</sup> iNOTes ESTEMPHUR 19 4 □ Open hole 5 □ Plastic 5 □ Plastic				61	PLUGGING &	SEALING RECOR	D .	
20-23 1		1  Steel 19 2  Galvanized 3  Concrete		Denth set	Annular space	☐ Abandon		
25-28 1   Fresh 3   Sulphur 29   5   F		4 ☐ Open hole 5 ☐ Plastic	21 6 To Material and type (Cement grout 21 6 To O O O O O O O O O O O O O O O O O O			(3)		
30.33	Sairy 6 Gas Sulphur 34 60	1  Steet 26 2  Galvanized 3  Concrete		18-21	22-25		(0)	
	Salty 6 Gas	4 ☐ Open hole 5 ☐ Plastic		26-29	30-33 80			
71 Pumping test m				LO	CATION OF WE	:LL	· · · · · · · · · · · · · · · · · · ·	
Statis Israel V	Vator lovel 25	Pumping 2 ☐ Recovery		agram below show		rell from road and le	ot line.	
19-21	22-24 15 minutes 30 minutes 29-3	1	A	•		`\\\\		
28 4 frager feet	60   115   90   feat   38-41   Pump intake set at	et   75   60   6eet   Water at end of test   42	4					
Recommended p	GPM fe		100	William	Mooney	RN		
☐ Shallow	N Deep pump setting 100 fe	pump rate 5						
FINAL STATUS	S OF WELL 54		ά	1	4	i		
1 Water sup 2 Observation	ply 5 ☐ Abandoned, insufficient on well 6 ☐ Abandoned, poor quality		chardso	1 ,	40'71 28	'   		
3 ☐ Test hole 4 ☐ Recharge	7 ☐ Abandoned (Other) well 8 ☐ Dewatering		💆			i		
WATER USE	55-56 5 Commercial	9 ☐ Not use	1	'		•		
2 Stock 3 Irrigation 4 Industrial	6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditionir	10 Dther	M	*	357	1		
		9				1		
1 Cable tool 2 Rotary (co		<sup>9</sup> ☐ Driving <sup>10</sup> ☐ Digging						
3 ☐ Rotary (re-	verse) <sup>7</sup> ☐ Diamond	11 Other				230	271	
Name of Well Contra	actor	Well Contractor's Licence No.	IData	58   Contractor	E0 e7	2   Date received	63-68 80	
Capital W	ater Supply Ltd.	1558	source	15			2001	
Address Box 490	Stittsville, ON/ K2	s la6	Date of inspe	ection A	Inspecto			
Name of Well Techn	ician	Well Technician's Licence No.	Remarks				EQ4	
S. Mill Signature of Technic		T0097 Submission date	ATISINIA Remarks			<i></i>	ة الخساء	
Borane	selle	day 05 mo 10 yr 01	2					

Ministry of the Environment

# The Ontario Water Resources Act WATER WELL RECORD

Print only in spaces provided.

Mark correct box with a checkmark, where applicable.

<u>1532402</u>

Municipality	COn.	1	ı		0	3
10 14	15		 	20	- 22	~

0506 (07/00) Front Form 9

Ottawa ( Owner's surname Gracey (	Carleton		leton - Righ	ntley Ontario KC	Con block trace 3		6 48-53
21	Zone	Easting Northing	RC	Elevation RC	Basin Code	ZJOAYIO III	iv
1 2		DF OVERBURDEN AND BED	ROCK MATERIA	LS (see instructio	31 ms)		4
General colour	Most common material	Other materials		General o	description	Dept From	h - feet To
Brown	SAnd & Gravel					0	6
Gray	Limestone					6	75
			1				
				·····			
31   1   1   32   1   1   1			بالبينا ك				البلا
10 14	4 15 21 51 51	CASING & OPEN HOLE	DECORD:	Sizes of or	pening 31-33	65 Diameter 34-38 Leng	75 B
Water found at - feet	Kind of water Inside		Depth - feet		Jenning 57-55	Diameter 34-38 Leng inches	ju⊓ 39-40 feet
10-13 1	Fresh 3 Sulphur 14 inches 5 19/1	4 1 X Steel 12 .188	From To <b>22.</b>	(Slot No.)  Material ar	nd type	Depth at top	of screen
45.40	Salty Pas Tresh 3 Sulphur 19	2 Galvanized 3 Concrete 4 Open hole		🖺			feet
20.22	Salty   4   Minerals	[ I Gleen	20	1.23	LUGGING & SE Annular space	ALING RECORD  Abandonm	
2	Salty 6 Gas	2 Galvanized 3 Concrete 4 Copen hole	22.5 75	Depth set at -	feet	type (Cement grout, be	70.0
	] Fresh 3 ☐ Sulphur 29 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐	5 Plastic  1 Steel  26			0 Groute	3 - Cement	(3)
	Fresh 3 Sulphur 34 60	2 Galvanized 3 Concrete 4 Open hole		18-21	30-33 80		
2	Salty 6 Gas	5   Plastic					
71 Pumping test me	□ Bailer 25 GP	5 to 10 to 17 to			ATION OF WEL		
	na oi pumping į	1 ■ Pumping 2 □ Recovery	In day	gram below show ate north by arrow.	distances of wel	from road and lot	line.
19-21 er	22-24 15 minutes 26-28 30 minutes 29	45 minutes 32-34 60 minutes 35-37					
4 2 Teet  If flowing give ra	20.11	beet         50         feet         20         feet           Water at end of test         42		d = 100			
Recommended pu	ump type Recommended 1 43-	eet ☐ Clear <b>X</b> Cloudy  45 Recommended 46-49	- Car	devco #142	T		
Shallow	Deep pump setting 50 fe	pump rate 5 GPM	•	#142	1		
FINAL STATUS	S OF WELL 54			<del></del>			
Water supp  2 ☐ Observation 3 ☐ Test hole	ply 5 ☐ Abandoned, insufficient on well 6 ☐ Abandoned, poor qualit 7 ☐ Abandoned (Other)			į	29'		\
⁴ ☐ Recharge v					<b>₩</b>	20	. /
WATER USE  Of Domestic	55-56 5 Commercial	9 ☐ Not use			_ 6	cosper	
2 ☐ Stock 3 ☐ Irrigation 4 ☐ Industrial	6 ☐ Municipal 7 ☐ Public supply 8 ☐ Cooling & air conditioni	10 🗀 Other	-	•		12 x 2 x	
		.3	"			Cordenico	
METHOD OF C  1 □ Cable tool 2 □ Rotary (con	5 1 Air percussion overtional) 6 1 Boring	<sup>9</sup> ☐ Driving <sup>10</sup> ☐ Digging	·				
3 ☐ Rotary (cor Rotary (rev	verse) <sup>7</sup> ☐ Diamond	11 Other				2380	005
Name of Well Contra	actor	Well Contractors Linear Ma	Data	Eo [Contractor	-a as 11		·
	Water Supply Ltd.	Well Contractor's Licence No.	source	58 Contractor		NOV 28 70	63-68 80
Address P.O. Box		Ontario K2S 1A6	Date of inspec	ction In:	spector		
Name of Well Technic	ician	Well Technician's Licence No.					
S. Mille: Signature of Technici		T0097 Submission date	Remarks			088	381
Moran	na	day 24 mo 10 yr 01	Σ				

Ministry of the Environment

## The Ontario Water Resources Act WATER WELL RECORD

0506 (07/00) Front Form 9

	Environment						
Print only in space Mark correct box	ces provided. x with a checkmark, where applicable.	11 2	1532	757	Municipality Cor	ŻN	22 23 24
County or District		Township/Borough/City/	Town/Village	T	Con block tract surve	v. etc. L	ot <sup>25-27</sup>
Ottawa C	arleton	West Carlet	-	ey	3		6
Owner's surname		Address	n n #2 .	Car Oatario	Date KOA 1LO Domplete 2	D. 1	02
	Construction Zone Easting	111 Manion Rd. Northing		Elevation RC	Basin Code ii	oay 🛂	month 2year
21	W 10 12	17 18	24 25 2	6 30	31	1111	47
	LOG OF OVE	ERBURDEN AND BEDR	OCK MATERIALS	S (see instruction	ns)	Den	th - feet
General colour	Most common material	Other materials		General de	escription	From	To
Brown &	red Sand					0	13
Gray	Sand & gravel					13	16
Gray	Limestone					16	60
				····			
					·		
	Note; Cas	ing was left l	foot above	ground lev	vel		
	at	time of drilli	ng				
31				حبا لبلتا		لىللى	ا لىلىـ
32	4 15		43	للللا	65	لبللب	
41 WATE	ER RECORD 51 CA	SING & OPEN HOLE F	RECORD	Sizes of op-		34-38 Len	
Water found at - feet	Kind of water Inside diam inches	Material Wall thickness inches	Depth - feet From To			inches	feet
27 2	Salty 6 Gas   2 D	Steel 12 Galvanized Concrete 188	0 22:	Material and	и туре	Depth at top	feet
51 15-18 1 E	□ Fresh <sup>3</sup> □ Sulphur <sup>19</sup>	Open hole Plastic		61 <b>P</b>	LUGGING & SEALING	BECOR	
20-23	☐ Fresh Sulpnur 24 2 ☐	Steel 19 Galvanized	20-2	21	nnular space	☐ Abandonr	
25.00	Safty 6 Gas	Concrete Open hole Plastic	22.5 60	From	To Material and type (Ce	ement grout, b	entonite, etc.)
1	Salty 6 Grant 24-25 1 Grant Salty 6 Grant Sa	Steel 26	27-3	21.5	0 Grouted - C	ement	(4)
	☐ Fresh 3 ☐ Sulphur 34 60	Galvanized Concrete Open hole		26-29	30-33   80		
2 [		Plastic		2023			
Pumping test m	1	ration of pumping 15-16 17-18 Mins		LOCA	TION OF WELL		
Pump 2 Static level	Water level 25				distances of well from r	oad and lo	tine.
19-21	ena or pumping	minutes 60 minutes 35-37	Indicat	e north by arrow.			
5 4'3%et	05 55 40	40 25		Co	ro Rd		
4 3 eet  If flowing give n	20.11	ter at end of test 42			_		
Recommended	GPM feet pump type Recommended 43-45 R	☐ Clear ☐ Cloudy ecommended 46-49		Co	TO Rd		
☐ Shallow	Deep pump setting p	ump rate 5 GPM			500.		
50-53			1	1	Ros		1
FINAL STATU	pply 5 Abandoned, insufficient supply	9 ☐ Unfinished		\	ardeuco		RA
<sup>2</sup> Observation Ob	7  Abandoned (Other)	10 ☐ Replacement well		$\setminus$ c	asdevco		6
<sup>4</sup> ☐ Recharge	e well 8 Dewatering			1			18
WATER USE  1	55-56 5 ☐ Commercial	9 ☐ Not use		1	, , , , , , , , , , , , , , , , , , ,		Richardson
2 ☐ Stock 3 ☐ Irrigation	6 ☐ Municipal 7 ☐ Public supply	10 Cther		1	offless 1		1 25
4 🔲 Industrial	8 🗀 Cooling & air conditioning			1 &	Building		\(\frac{1}{2}\)
	CONSTRUCTION 57			1 2	of side		1
1 ☐ Cable tool 2 ☐ Rotary (co	onventional) <sup>6</sup> The Boring	9 Driving 10 Digging		1 0	pittess souldings		
<sup>3</sup> ☐ Rotary (re <sup>4</sup> ☐ Rotary (ai		11 Other				238	136
Name: 2722 C C		Mall Control of the C	IData .	co I Combinant	59-62   Date rece		
Name of Well Contr		Well Contractor's Licence No.	Data source	58 Contractor		06 2	2002
Address	Water Supply Ltd.	1558	Date of inspect		spector	<del> </del>	,
P.O. Bo	x 490 Stittsville,Ontar	vio K2S1A6 Well Technician's Licence No.	Remarks				

T0097

	State Sun Silver						,		4. 1 <u>. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.</u>	
(8) Or		/linistry of ne Enviror			Place sticker and prin	nt number below)	Regu	ulation 903 O	Well R Intario Water Res	Record
				A035			1 1			of
1 '	for Completing the Province of	_	only This docu			I document. P	J leas <b>e</b> retai	in for future i		
<ul> <li>All Section</li> </ul>	ons <b>must</b> be com	pleted in t	full to avoid dela	vs in proces	ssing. Further i	nstructions and	d explanatio	ons are availa	able on the back o	of this form.
<ul> <li>All metre</li> </ul>	e measurements	s shall be	reported to 1/1	10 <sup>th</sup> of a me	tre.	vveii iviariagei		linistry Use C		
	rint clearly in blue 's Information			formation	MUN	C	ON NC		LOT	
First Name		Last Nam			Mailing Addres		er/Name, R	R,Lot,Conces	sion)	
Gold Have: County/District/	n Construct: /Municipality	ion	Township/City/T	own/Village	Box 72059	ovince Posta	al Code		one Number (includ	de area code
Ottawa Car	rleton II Location (County/	District/Mu	Kana Kana	ta	Township	ntario K2K	2P4	613 Lot	724 8627 Concession	
Ottawa Car	rleton	Districtivia	morpanty)		West Car	Leton - Hu	intley		5	3
RR#/Street Nur Wescar La					City/Town/Vi	гр			ment/Block/Tract e	
GPS Reading	NAD Zon 8 3 18	4 - 44 - 10		orthing <b>01</b> 58 13	Unit Make/M <b>Garmin</b>	odel Mode	of Operation		rentiated 🔏 Ave	eraged
Log of Over	burden and Be	drock Ma	aterials (see in	structions					Depth	Metres
General Colour	Most common	material	Other	Materials	,		al Descriptio	n	From	То
Brown	Sand	9 ()		<u> </u>			Ory Vet		0 1.21	1.21
Brown		& Grave					oose.		1.82	9.14
Brown	Clay Spend	& Boulo	lars				wor		9.14	10.66
Gray Gray	Limes		**************************************						10.66	19.81
			7							1.
Hole	Diameter		Co	nstruction F	Record		11	Test	of Well Yield	
	letres Diameter To Centimetres	Inside	Material	Wall	Depth	Metres	11 ' -	test method T		Recovery ne Water Leve
	To Centimetres 22.75	diam centimetres	Material	thicknes centimetr	_	То		r	min Metres mir tatic	I
	0.81 15.39			Casing			(metres) Pumping	12.19	evel .91 1 1.39 1	1.35
****	23.07	15.86	Steel Fibregla	I AQ	+ .45	11.27	(litres/min	) 54.6	1 1.39	
	r Record		Galvanized				11 -1	of pumping + min	2 1.46 2	1.32
Water found at Metres _	Kind of Water  Fresh Sulphur		Steel Fibregla			3	Final water	er level end	3 1.52 3	1.22
	Salty Minerals		Galvanized	7 (1 - 40) 21			Recomme	ended pump	4 1.56 4	1.23
18, 28	Fresh Sulphur		Steel Fibregi	1 ' '			type.	allow <b>.≭</b> \Deep ended pump	5 <b>1.60</b> 5	1.20
Gas Other:No	Salty Minerals		Galvanized				depth. 1	<b>2.1 9</b> etres		
	Fresh Sulphur	Outside		Screen			rate 45		10 <b>1.70</b> 10	
Other:		diam	Steel Fibregl	1.1	). 		If flowing	give rate -	20 1 82 20	97
After test of wel	Il yield, water was ediment free		Galvanized					g discontin-	25 <b>1.84</b> 25 30 <b>1.86</b> 30	
Other, speci	ify		N	o Casing or	Screen			·	40 1.86 40	
Chlorinated 🔏	Yes No	15.39	Open hole		11,27	19,81	][	<u> </u>	50     1     88     50       60     1     88     60	-74
	Plugging and Se	ealing Rec	ord 🗷 An	nular space	Abandonment			Location of		1. 11.11
Depth set at - M	letres Material and typ	pe (bentonite	slurry, neat cement sl	lurry) etc.	/olume Placed (cubic metres)	In diagram belo		inces of well from	m road, lot line, and t	bullaing.
11.27	O Grouted	- Bent	onite Saur	ry .	42m3	197			. •	l
	·					1			1	1
						1				
							*	n ng	1	) L S
Cable Tool	Rotary		Construction Diamon	d	Digging				1 000	7 1000000000000000000000000000000000000
Rotary (conv	rentional) 🎽 Air per		☐ Jetting ☐ Driving		Other		Wesc	ar	خور کی	25
Rotary (rever	rse) Boring	Wat	er Use			1			U 47	0
Domestic Stock	☐ Industr		☐ Public S		Other					·
	Municip	oal		& air condition	ing	Audit No. <b>Z</b>	4697	7 A Date	Well Completed 2006	∫ 5   30
Irrigation		/ell	Unfinish		bandoned, (Other)	Was the well of	wner's inform		Delivered YYYY	MM DD
Irrigation  Water Suppl	T 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					package delive			2006	6   1
Irrigation	well Abandoned Abandoned	, poor quality				1.1	1 1	Ministry Use	Uniy	
☐ Irrigation  Water Suppl ☐ Observation ☐ Test Hole	well Abandoned Abandoned Well Cor	, poor quality	Replace	ation	tor's Licence No.	Data Source		Cont	tractor.	)
Water Suppl Observation Test Hole	well Abandoned Abandoned Well Cor	, poor quality ntractor/Te	chnician Inform	ation	tor's Licence No.			Date	1558	<b>7</b> *
Water Suppl Observation Test Hole Name of Well C	well Abandoned Abandoned Well Cor contractor Water Suppl ss (street name, num	, poor quality  tractor/Te  v I.td  ber, city etc.)	chnician Inform	Well Contract		Date Received	1 7 20	Date	1558 of Inspection YYYY	<b>7</b> *
Water Suppl Observation Test Hole Name of Well C Canital Business Addres Box 490 Name of Well Test	well Abandoned Well Cor contractor Water Suppl ss (street name, num Stittavill echnician (last name,	, poor quality  tractor/Te  v I.td  ber, city etc.)	chnician Inform	Well Contract 1558  Well Technic	ian's Licence No.		1** 7 20	Date	1558	7 1
☐ Irrigation ☐ Water Suppl ☐ Observation ☐ Test Hole  Name of Well C Canital Business Addres Box 490 Name of Well Test Signaura Test Test	well Abandoned Abandoned Well Cor contractor Water Suppl ss (street name, num	, poor quality  tractor/Te  v I.td  ber, city etc.)	chnician Inform	Well Contract 1558  Well Technic T0097  Date Submitted	ian's Licence No.	Date Received	1 7 20	DD Date	1558 of Inspection YYYY	/ MM DD

(9	Or	ntario	Minist	ry of nvironment	Well T	A 04	19	80	number below)	Regulation 9	03 On			ecord ources Act
Inc	structions	s for Complet	ina Fo	rm		A041	.980	0				p	age _	of
•	For use All Section Question All metr	in the <b>Province</b> ons <b>must</b> be co	of On omplete mpletir ots sha	itario only. Thi ed in full to avo ng this applicat all be reported	id delay ion can	s in process be directed	ing. to the	Further e Wat	er instructions ar er Well Manage	Please retain for fut d explanations are a ment Coordinator a	vailabl t 416-	le on the ba -235-6203 ly		this form.
		's Informatio			Vell Inf		- 11	MUN		ON DD 1 at Co			LOT	
	st Name	Fdoe	Last	Name		,			ess (Street Numb B <b>car Lane</b>	er/Name, RR,Lot,Co	icessi	on)		
Ott	awa Car	Edge t/Municipality r1eton Il Location (Cour	tv/Distri		o/City/To Carp	wn/Village	owns		Province Post		3 83	ne Number ( 36 1751 Conce		e area code)
Ott	awa Car	rleton		og mamoipanty /					<b>Carleton -</b> Willage		6		3	
1 <u>32</u> GF	Wescar S Reading	NAD Z 8 3 13		Easting <b>42</b>  32  09	50	rthing	Uh	Car	Model Mod	e of Operation: ☐ ∪	ndifferen	ent/Block/Trantiated	Avera	
		rburden and Most commo			See ins	<del> </del>		·	Conor	al Description		Dep	th	Metres
	neral Colour								Gener	ar Description		Fro		То
Bro		Sandy				ones	$\dashv$					0		3.65
Gra	аў	Sandy	-			cones	$\dashv$					3.		7.31
Gra	зу	Limes	one		De	ar <b>t</b> Layer	:s		Me	dium		7.	31	52.72
	****						-+	<u> </u>						
-														
	Hole	Diameter			Con	struction Re	cord			To		Well Yield		
	Depth M From	letres Diamete To Centimetre		ide Mate	erial	Wall		Depth	Metres	Pumping test metho	~—	raw Down e Water Level		ecovery Water Level
<u> </u>			-II "	am Mate netres	, i ci	thickness centimetres		From	То	submersible	min	Metres	min	Metres
10		.22 22.75				Casing				Pump intake set at (metres) 45 71	Station Leve			
-8	3.22 52.	.72 15.23	15.	00 ====	Fibreglas	***O	+	.49	8,22	Pumping rate - (litres/min) 40.95	. 1	6.69	1	15.19
	Wate	r Record	-{	Plastic Galvaniz	Concrete ed					Duration of pumping	2	8.11	2	13.06
Wa	ater found Metres	/ Kind of Water	1		Fibreglas	S	$\dashv \dagger$	- :		hrs + m	nin			
	50.59	Fresh Sulphu			Concrete					of pumping 19	3	9.27	3	11.41
		Salty Mineral	-	Galvaniz	ed ∏Fibreglas	•				Recommended pum	p 4	10.30	4	10.37
Ĺ	m	Fresh 💹 Sulphu	11	<u>                                   </u>	☐ Concrete					Shallow De Recommended pum		11.21	5	9.56
	」Gas □ Other:	Salty Minera	-	Galvaniz	ed					depth.30.47metro	es			9.30
į	_ =	Fresh Sulphu				Screen	$\dashv$	+		Recommended pum rate.	.   10	14.50 15.72	10	6.88
	│Gas │ │Other: ──	Salty Minera	1	am 🗀 🗀	☐Fibreglas ☐Concrete					If flowing give rate -	20	16.33	20	5.83 5.47
	ter test of we	Il yield, water was		Galvaniz			Ш			(litres/min) If pumping discontin-	25 30	<del>10+31</del>	30	5.34
- 1 -	Other, spec		╢		No	Casing or So	creer	n		ued, give reason.	40	AU-16	40	5.25 5.19
Ch	nlorinated 🗶	Yes No	15.	23 🛣 Open ho	le		$\Box$	8.2	2 52.72	]	50	17.50	50	5.17
			ال_		D 0	Jan Andrea III	Aban	donmer		Location	60	11100	60	5.17
D	epth set at - M	Plugging and letres Material and		tonite slurry, neat c		ny) etc Vol	ume F	Placed	In diagram belo	w show distances of we			and bu	ilding.
		То	-			(Cu		etres)	Indicate north t	by arrow.	ے	<del></del>		188 189
9.	22 (	0 Groute	1 — E	entonite :	PIGLL	.44	2m3	· · · · ·						
									1					5.de
						4			]  1					10
									and the second s			1		Richardson
F	Cable Tool	Rota	Constituted the same	d of Construc	<b>tion</b> Diamond	A company of the comp		igging		<u> </u>		Corder	رون	お
Ь	Rotary (conv				Jetting		-	ther		132		COSO I	>*	ğ
	Rotary (reve	rse) Borin	g	Water Use	Driving		-			escar		C. 25.	7	な
X	Domestic	☐ Indu	trial		Public Su	pply	╗	ther	7  "			~	•	(Se
	Stock Irrigation	☐ Com ☐ Muni	nercial cipal		Not used Cooling &	air conditioning	,		Audit No.	47000	Date We	ell Completed		MM DD
			Fin	al Status of We	II					47066	Date De	200	6	8 30
K	Water Suppl			and the second of the second	Unfinishe Dewaterir		ndorje	ed, (Othe	er) Was the well of package delive	WHE S IIIO LICION	Jale De	200	YYY	MM DD 8 31
E	Test Hole	Abandon	d, poor d	quality 🔲	Replacem	ent well	4			Ministry (	Jse Oı			<u> </u>
N:	ame of Well C		ntract	or/Technician		<b>tion</b> Well Contractor	's Lice	ence No	Data Source		Contrac		5 8	) <del>V</del>
		Water Supp ess (street name, nu	ly Lt	:d.		1558	_		Date Receive	7×2806mm DD	Date of	Inspection		MM DD
		ss (street name, nu Stittsvil			146				Date Received					טט וייייי
Na	ame of Well T	echnician (last nam	, first na	ime)		Well Technician	's Lic	ence No	Remarks		Nell Re	ecord Number		
Si	gnature of Te	Stephen dr/lician/Contractor				Date Submitted YY		MM D			•			
X	506E (09/03)	monar	-	Contractor's C	opv 🗔	200 Ministry's Cop		8 3 Well 0	<b>1</b>	Cett	o formi	ule est disp	onible	en français
US				Contractor a C	~~1 🗀	он, о оор	1		= =-FJ			•		-

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 of Questions regarding completing this application can be directed to the Water Well Help Desk (Toll Free) at 1-888-396-9355.   All metre measurements shall be reported to 1/10" of a metre.   Ministry Use Only		linistry of well Ta	nd Number (Place sticker and nri A 053904	nt number below)	Regulation 903 Ontari	Well Record
For use in the Province of Ontatio 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. Purther instructions and explanations are available on the back of this form  Ousstions regarding completing this application can be directed to the Water Woll Help Desk (Toll Free) at 1-888-398-9355.  All metre measurements shall be reported to 1/10° of a metre.  Please print closely in blue or black int kin kin.  Well Owner's Information and Location of Well Information  MUN CON Ministry Use Only  Well Owner's Information and Location of Well Information  MUN CON Ministry Use Only  Well Owner's Information and Location of Well Information  MUN CON Ministry Use Only  Well Owner's Information and Location of Well Information  MUN CON Ministry Use Only  Well Owner's Information and Location of Well Information  MUN CON Ministry Use Only  Information Information  Information Information  MUN CON Ministry Use Only  Information Information  Information I	In the state of the Committee		<b>A</b>	<u> </u>		page <u>/</u> of _
A II Sections must be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of the form Cuestions regarding completing this application can be directed to the Water Well Help Desk (Toll Free) at 1-889-396-995-995-995-995-995-995-995-995-995-9	For use in the <b>Province of</b>	- I <b>f Ontario</b> only. This docum	nent is a permanent lega	I document. Ple	ı ease retain for future refer	ence.
**All metre measurements shall be reported to 1/10* of a metre.  **Please print clearly in blue or black ink only.**  **Please print clearly in blue or black ink only.**  **Well Owner's Information and Location of Well Information  **District Comparison of Medical	<ul> <li>All Sections must be comp</li> </ul>	pleted in full to avoid delay:	s in processing. Further i	nstructions and	l explanations are available c	on the back of this form.
Well Owner's Information and Location of Weil Information  Well Owner's Information and Location of Weil Information  Well Owner's Information and Location of Weil Information  Ohy Compartment Substitution  Ohy Compa	<ul> <li>All metre measurements</li> </ul>	shall be reported to 1/10	) <sup>th</sup> of a metre.			
Hard Steel Number Name    Carry Committings   Carry Committee   Ca			ormation MUN	CC		LOT
Construction Record	Well Owner 3 information a	and Looddon of Woman				
Construction Record						
Construction Record						
Construction Record	OTTAWA. E	シナソ	west-	CArh	cton 10-11-12	27-30
Construction Record		7		-	Site/Compartment/	Block/Tract etc. 356 - 4R - 767
Test of Well Yield   Construction	GPS Reading NAD Zone	e Easting Nort	thing Unit Make/M	odel // Mode	of Operation: Undifferentiat	ted Averaged
General Colour Most common material Other Materials General Description Depth Metres From Io III.5.    Continued of Process				c//AN	C / V4 Differentiated	, specily
Hole Diameter   Construction Record   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Draw Down   Recovery   Test of Well Yield   Pumping test method   Test of Well Yield   Test of Well Yield   Pumping test method   Test of Well Yield   Test of Well Yield   Pumping test method   Test of Well Yield   Test of Well				General	Description	
Hole Diameter	Brown SAM	vel. CAM	ve /-Boulders	2	oose.	0 11.51
Hole Diameter	Grey Limes	tone.			Land.	11.51 22,7
Depth   Metres   Diameter   From   To   Centimetres   Ce						
Depth   Metres   Diameter   From   To   Centimetres   Ce						
Depth   Metres   Diameter   From   To   Centimetres   Ce						
Depth   Metres   Diameter   From   To   Centimetres   Ce						
Depth   Metres   Diameter   From   To   Centimetres   Ce						
Depth   Metres   Diameter   From   To   Centimetres   Ce						
Inside   Inside   Material   Water Level   Time	Hole Diameter	Con	struction Record		Test of We	II Yield
Casing   C		I Motorial		Metres	Tr diriping toot mounds	
Casing   C		ularii		То	Submenciblein	Metres min Metres
Water Record   Water Gold at Metres   Kind of Water   Galwanized   G	0 6.06 20.32		Casing		(metres) 19,69 Level	
Galvanized   Gal				1151	Pumping rate - 1 5 (litres/min)	1 14,10
Steel   Fibreglass   Plastic   Concrete   Galvanized   Final water level end of pumping / Interest   Recommended pump   4	Water Record		0,75	11171	Duration of pumping 2	15/ 2 11.79
Plastic   Concrete   Galvanized   Concrete   Galvanized   Concrete   Galvanized   Concrete   Conc		Steel Fibreglass	S		Final water level end 2	7/5 3 9.26
Cher:					of pumping / Thetres	
Gas Salty Minerals Galvanized    Chher: Gas Salty Minerals Galvanized	1.		s		Itype I I I I I I I I I I I I I I I I I I I	(17.F) 4 7,56
Recommended pump   10					Recommended pump 5	2,27 5 6,24
Gas   Salty   Minerals   Other:   After test of well yield, water was   Plastic   Concrete   Galvanized   Steel   Fibreglass   Slot No.   If flowing give rate   20 / 4, 4/ 20   After test of well yield, water was   Galvanized   Minerals   Other, specify   No Casing or Screen   No Casin		Galvanized	Screen		Becommended pump 10	10 16 10 4.67
After test of well yield, water was Galvanized    Other, specify	Gas Salty Minerals				rate. (litres/min) 15	2,3/ 15 3,40
Chlorinated Yes No  Plugging and Sealing Record Annular space Abandonment Depth set at - Metres Naterial and type (bentonite slurry, neat cement slurry) etc.  O 6,06  Comment Galvanized  No Casing or Screen  If pumping discontinued, give reason.  If pu		diam 🗀 📥			<del>       </del>	
Chlorinated Yes No  Plugging and Sealing Record Annular space Abandonment Depth set at - Metres From To Material and type (bentonite slurry, neat cement slurry) etc.  No Casing or Screen    40   77, 79   40     50   77, 60   50     60   77, 60   60     11, 51   32, 72     50   77, 60   50     60   77, 60   60     11, 51   32, 72     12, 13, 14, 15, 15, 15, 15, 15, 15, 15, 15, 15, 15	Lefear and sediment free				If pumping discontinued, give reason.	7, 77 30
Chlorinated Yes No 5,55 Open hole 7,57 22.72 60 Fugging and Sealing Record Abandonment Depth set at - Metres From To Material and type (bentonite slurry, neat cement slurry) etc. Volume Placed (cubic metres) In diagram below show distances of well from road, lot line, and building. Indicate north by arrow.	Other, specify					
Depth set at - Metres   Material and type (bentonite slurry, neat cement slurry) etc.   Volume Placed (cubic metres)	Chlorinated Yes No	75,55 Open hole	11,51	22.72		(())
6.06 Cem ew t Greats 120kg.  Indicate north by arrow.		aling Record Annul				
	From To Waterial and type					, lot line, and building.
Puna Pl	8 6,06 Ceme	·w + Occurs	120hs			
Puna PA		·				k
Puna DA			,			$\lambda$
					CURP	Rd/
Method of Construction    Control   Construction			□ Diagles		44 d	1
□ Cable Tool     □ Afotary (air)     □ Diamond     □ Digging       □ Rotary (conventional)     □ Air percussion     □ Jetting     □ Other				90	32	3
Rotary (reverse) Boring Driving  Water Use	Rotary (reverse) Boring			عور	can Ban	Ŋ
		ıl Public Sup	oply 🔲 Other	) Je	<b>6</b>	7
Stock Inrigation Inrig		. =	air conditioning	Audit No.	71 C 2 A Date Well C	Completed
Final Status of Well 2 1 1034 2006 // 20		Final Status of Well			11004	2006 11 20
I Madidoned, (Other)     Was the well owner 3 information   1111 Inc.		<u>=</u>		was the well ow package delivere	niera inicinigacii	_ , , , , , , , , , , , , , , , , , , ,
Test Hole Abandoned, poor quality Replacement well  Well Contractor/Technician Information Ministry Use Only					Ministry Use Only	
Name of Well Contractor Well Contractor Data Source Contractor Contractor	Name of Well Contractor	, [V	Well Contractor's Licence No.	Data Source	Contractor	6006
JATI-WATER Well- Utilling 6006	Business Address (street name, number	er, city etc.)	6006	Date Received	5	
Name of Well Technician (last name, first name)    Well Technician's Licence No.   Remarks   Well Record Number	P 98-5	+ ///ben+		-		d Number
Dornar Louis Telis	Desnovers	Louis	7-625			
Signature of Technicien/Contractor  Date Submitted YYYY MM DD  2006 // 24	1 2	2	2006 1/ 24			
0506E (08/2006) Ministry's Copy Cette formule est disponible en frança				,	Cette formule	est disponible en frança

Ministry of Well Record the Environment Regulation 903 Ontario Water Resources Act Metric Measurements recorded in: mperial Page of Address of Well Location (Street Number/Name) Concession City/Town/Village Province Postal Code Ontario UTM Coordinates Zone Municipal Plan and SubJot Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (mkft) General Colour Most Common Material Other Materials General Description From **Annular Space** Results of Well Yield Testing Depth Set at (m/ft) Type of Sealant Used Volume Placed After test of well yield, water was: Draw Down Recovery To (Material and Type)  $(m^3/ft^3)$ Olegrand sand free Water Level Time Time Water Level (min) (m/ft) (min) (m/ft)Static If pumping discontinued, give reason: Level 1 Pump intake set at (mft) 2 3 3 Pumping te (I/min(-GPM) Method of Construction Well Use Cable Tool 4 Diamond Public Commercial Not used Duration of pumping Rotary (Conventional) Jetting Domestic Dewatering Municipal hrs + O min Rotary (Reverse) Driving Livestock Monitoring Test Hole Boring Final water level end of pumping (m/ft) Digging Irrigation Cooling & Air Conditioning 10 Air percussion Industrial Other, specify Other, specify If flowing give rate (I/min-7 GPM) 15 15 Construction Record - Casing Status of Well 20 Inside Depth (m/ft) Water Supply Open Hole OR Material Wall Recommended pump depth (m/ft) Diameter (Galvanized, Fibreglass, Thickness Replacement Well 25 From To (cm/in) Concrete, Plastic, Steel) (cm/in) Test Hole Recharge Well 30 30 (I/min / **(G**PM) Dewatering Well 40 Observation and/or Well production (/min / GPM) Monitoring Hole 50 50 Alteration Qisinfected? (Construction) 60 60 Abandoned, **⊘**Yes No Insufficient Supply Construction Record - Screen Map of Well Location Abandoned, Poor Outside Please provide a map below following instructions on the back. Depth (m/ft) Water Quality Material Diameter Slot No. (Plastic, Galvanized, Steel) Abandoned, other, From To (cm/in) specify Other, specify **Water Details Hole Diameter** Water found at Depth Kind of Water: Depth (m/ft) Fresh Untested Diameter From (cm/in) To 5 5 (m(ft)) Gas Other, specify 01 Water found at Depth Kind of Water: Fresh Untested Other, specify Gas Water found at Depth Kind of Water: 🗌 Fresh 🔀 ntested Gas Other, specify Well Contractor and Well Technician Information Business Name of Well Contractor Well Contractor's Licence No. n**es**s Address (Street Number/Name) Municipality Comments: Postal Code Business E-mail Address Well owner's **Date Package Delivered** Ministry Use Only information Name of Well Technician (Last Name, First Name) Audit No. 7 package delivered Date Work Completed **P**es gnature of Technician and/or Contractor Date Submitted No 0506E (12/2007) © Queen's Printer for Ontario, 2007 Ministry's Copy

0506E (12/2007)

Imperial

Well Record

Regulation 903 Ontario Water Resources Act

© Queen's Printer for Ontario, 2007

ane	of	

Address of Well Location (Street Number/Name)	Township	Lot	Concession	
County/District/Municipality	City/Town/Village	a rem	Province P	ostal Code
Ottoma Cor leton	Mustainal Dian and Subla	ot Number	Ontario	
NAD 8 3 September 2016   September 2016	Municipal Plan and Sublo	-356 Block	Other Pala	
Overburden and Bedrock Materials/Abandonment Sealin				Depth (m/ft)
General Colour Most Common Material	Other Materials	General Description	Fre	om 16
Grand himasch	~ ~		15	5 60
Grey various	es C			5 00
0, 1, 0	(0)			
AN AVC-85	68 1ax3	Populto of We	III Viold Teeting	
Depth Set at (m/ft)  Type of Sealant Used	Volume Placed	After test of well yield, water was:	Draw Down	Recovery
From To (Material and Type)  19' O Nest Cerrent S	$\frac{(m^3/ft^3)}{7.8}$	☐ Chear and said free ☐ Other, specify	(min) (m/ft) (r	ime Water Level min) (m/ft)
The state of the s	m, y 1, 3	If pumping discontinued, give reason:	Static Level 5	81
			164	166
		Pump intake set at (m/ft)	266	2615"
Method of Construction	Well Use	Pumping rate (Wmin (GPM)	36'8	3 614
□ Cable Tool       □ Diamond       □ Public       □         □ Rotary (Conventional)       □ Jetting       □ Domestic       □	Commercial Not used  Municipal Dewatering	Duration of pumping	46'9"	465
Rotary (Reverse) Driving Livestock	Test Hole	hrs + min  Final water level end of pumping (m/ft)	5 7	5 6 2
Air percussion	Cooling & Air Conditioning	8'1"	104/3	10 5 8 "
Other, specify Other, specify Other	Status of Well	If flowing give rate (I/min-/ GPM)		10 5 6
Inside Open Hole OR Material Wall Depth (m)	Panlacement Well	Recommended pump depth (m/h)	7.00	25
(cm/in) Concrete, Plastic, Steel) (cm/in) From	Test Hole	Recommended pump rate	1 (4	30
6" Steel .188" +2" 1	Recharge Well  Dewatering Well	(I/min/GPM)		40
	Observation and/or Monitoring Hole	Well production (I/min (GPM)	70 7	50
	Alteration (Construction)	Disinfected?	0/1/4	60 17
Construction Record - Screen	Abandoned, Insufficient Supply Abandoned, Poor	7	ell Location	
Outside Material Depth (m	/ft) Water Quality	Please provide a map below following	instructions on the back	ζ.
(cm/in) (Plastic, Galvanized, Steel) From	To Specify		7	
	Other, specify	1		1
Water Details	Hole Diameter	135//		Carp
Water found at Depth Kind of Water: Fresh Untested	Depth (m/ft) Diameter From To (cm/in)	2 153 Corde	)	1, 1
Water found at Depth Kind of Water: Fresh Untested	0 60 6	C 7/ at 100	100	Kead
(A)/ft) Gas Other, specify	0	1 Con ac	1	
Water found at Depth Kind of Water: Fresh Intested  (n/ft) Gas Other, specify		1 Rose	2	
Well Contractor and Well Technician Ir				
AT RESOLUTION DRILLINGS	Well Contractor's Licence No.			1
Business Address (Street Number/Name)	Municipality	Comments:		
Province Postal Code Business E-mail Address	C 11 . C 41			
Bus.Telephone No. (inc. area code) Name of Well Technician (Last	Name, First Name)	Well owner's Date Package Delivered information	Ministry Audit No. Z	Use Only
6138382170 PURCE	JC SHAMIS	package delivered Date Work Completed		94/21
Well Technician's Licence No. Signature of Technician and/or Contra	ctor Date Submitted	Yes Date Work Completed	AUG 0 6	2009

Ontai Measurements re	Ministry Ministry the Env	of ironment tric 🔲 Imperia	Well Ta	ag No. (Place A	09396	5 egulatio	n 903 0 DO		Vater Res	decord
Well Owner's I										
First Name $\mathcal{D}_{\epsilon}$	DOREN	st Name / Organiz どくとらい	ATION	)	E-mail Address	,				Constructed ell Owner
Mailing Address (S	itreet Number/Name	9)		Municipality (	Province	Postal Code		Telephon	e No. (inc.	area code)
Well Location	EXAF	LANE	<u> </u>	CIKY	0,0				<u> </u>	
Address of Well Lo	ocation (Street Numb	per/Name)		Township		Lot		Concess	ion	1144411414141414141414141414141414141414
County/District/Mu	AL LANE			City/Town/Yifane	y 4 ********** 4	-	Provir	nce	Postal	Code
				CAKY			Ont		***************************************	
NAD 8 3	Zone Easting 32	80 Sol	5733	Municipal Plan and Sul	olot Number	N 2	Other			
	<u> </u>		Sealing Rec	ord (see instructions on t						1 (6)
General Colour	Most Common	n Material		her Materials	Ger	neral Description	1		From	th ( <i>m/ft</i> )
6/10	COAL		61	AVEC	Loc		***************************************		$\frac{O}{122}$	1-22
DEN	(117)		500	·	50F	<u> </u>			1-22	= -2
6P1	((147		26	<u>[[]</u>	\$ E /			- 9	277	J- 27
							***************************************			
Depth Set at (m/f	<del>(1)</del> T	Annular Space ype of Sealant Us		Volume Placed	After test of well yield	Results of W		d Testin aw Down		ecovery
From To	(A	Material and Type		(m³/ft³)	☐ Clear and sand ☐ Other, specify	,		Water Le		Water Level (m/ft)
0 0.2	CONCRET				If pumping discontin	ued, give reason:	Static	<u> </u>	(111111)	(mily
0.3 0.9	1 BENTO				_   ` ` ` `		Level 1		1	
0-713-7	9 5AN	9			Pump intake set at	(m/ft)	2		2	ALF-MATTER MATTER AND ADDRESS OF THE ALF-MATTER AND ADDRESS OF THE
					Pumping rate (I/min	/CBM	3		3	
Method of  ☐ Cable Tool	Construction  Diamond	Public	Well U	***************************************	Fullipling rate (villa)	7 GFW)	4		4	
Rotary (Convention	onal) 🗌 Jetting	☐ Domestic	Munici	pal Dewatering	ا معما	g min	5		5	
☐ Rotary (Reverse) ☐ Boring	Digging	Livestock	Test H	ole Monitoring g & Air Conditioning	Final water level end				10	
Air percussion	DIRECT DUG	☐ Industrial☐ Other, <i>spe</i>	oify		If flowing give rate	Warin / COM	15		15	······································
	Construction Rec	ord - Casing		Status of Well	in nowing give rate (	i/min / GPM)	20		20	
Diameter (Galva		Thickness	epth ( <i>m/ft)</i>	☐ Water Supply ☐ Replacement Well	Recommended pur	mp depth (m/ft)	25		25	
	ete, Plastic, Steel)	(cm/in) From		Test Hole	Recommended pur	np rate	30		30	
4-0% 86	MIC :	400 0	1-22	Dewatering Well	(l/min / GPM)		II			
				Observation and/or Monitoring Hote	Well production (I/m	nin / GPM)	40		40	
				Afteration (Construction)	Disinfected?		50		50	
	HANA 1474 AND			Abandoned, Insufficient Supply	Yes No	unatuminako 2022an arriskoa es2020a.	60	2000 2000 0000	60	N1-029/A329-00 (1070000000000000
Outside	Construction Rec		epth ( <i>m/ft</i> )	Abandoned, Poor Water Quality	Please provide a ma	Map of W up below following			e back.	
Diameter (cm/in) (Plastic	, Galvanized, Steel)	Slot No. From	1 1	Abandoned, other, specify		E				
9-82-14	MSTC	10 12	25,7	7				_		
				Other, specify						
	Water Detail		····	Hole Diameter		1 -		+		
	pth Kind of Water:		sted Dep From	oth ( <i>m/ft</i> ) Diameter To ( <i>cm/in</i> )		/ -	1			9
	Bas Other, <i>specif</i> pth Kind of Water: [		sted (	5-79 8,29	1 > )	12/4	J. 1	2		
	Sas Other, specif					100	رب ح	`\		
	pth Kind of Water: [ ∃as ☐ Other, <i>specif</i>					1 000	gog.	7		
	Well Contractor a					1	الر			
Business Name of \	well contractor	dine	<u> </u>	ell Contractor's Licence No		W				
Business Address (	Street Number/Name	~~~~		unicipality	Comments:					
#2-147 Province	Postal Code	Business E-mail		achmonol	4				•	
(0)	WBUCC		N		Well owner's Date	Package Delivere	ed		istry Use	Only
Bus. Telephone No. (	inc. area code), Name	e of Well Technici			information package delivered	MMYYY	0 0	Audit No.	100	175
Well Technician's Lice	nce No. Signature of	Technician and/c		ate Submitted	Yes Date	Work Completed	, 4	$\vdash$	ens we had	- I W
131115	17 6		- Q	0100901	□ No   10	1/10011	61911	Redelad	nar	'*'n

Ontari			g No. (Place Sticker a	-	]	n 002 (	_		Record		
Measurements reco	rded in: Metric 🔲 Impe	rial A09	3964 A	nnone (				rio Water Resources Act Page of			
Well Owner's In	A					10	v(r				
P. DONE	Last Name / Orga	^		E-mail Address					Constructed eli Owner		
Mailing Address (Stre			Aunicipality	Province	Postal Code	e	Telephon	e No. (inc.	area code)		
Well Location	LIN UFFUE		<b>Дитр</b>					<u>                                     </u>			
Address of Well Loca	ition (Street Number/Name)	1	ownship		Lot		Concess	ion			
County/District/Muni		C	City/Town/Village			Provi		Postal	Code		
UTM Coordinates Zo	nga, Easting – 2 @ a. Northir	9	Municipal Plan and Suble	ot Number		Ont	ario				
NAD 8 3	8 127 48850	15730	abbr - versionen andresson and various designation of the	nach Nacharlanda (Nacharlanda (	and Street and Edition (Chaptile of Superior Chaptile	Marine de Artes de Propo	141112444000000000000000000000000000000	neally source was constituted in	an was a substant a war war.		
Overburden and B General Colour	edrock Materials/Abandonme Most Common Material	<del></del>	rd (see instructions on the er Materials	1	eral Descriptio	n			th ( <i>m/ft)</i>		
BKN	FILL	Gene	VEC	600	E.			From	1-2		
BRN	BCLAY	570	: T	SOFT	-			1. ZZ	7.4		
SRY	CLAY	SILT		SOFT	-/435	7	Ü	2.44	5		
					/						
THE REAL PROPERTY OF THE PERSON OF THE PERSO							***************************************				
									***************************************		
	Annular Spa	ce			Results of W	ell Yie	ld Testin	ıg	1		
Depth Set at (m/ft) From To	Type of Sealant (Material and Ty		Volume Placed (m³/ft³)	After test of well yield,  Clear and sand			aw Down Water Le		ecovery Water Level		
0 0,3	CONCRETE.			Other, specify		(min)	(m/ft)		(m/ft)		
0.3 0.6	BENTONITÉ SAND.	•		If pumping discontinue	ed, give reason:	Level					
3.61 5.4	SAND.			Pump intake set at (i	m/ft)	1		1			
				<u> </u>		2		2			
Method of C		Well Us		Pumping rate (I/min /	GPM)	3		3 4			
Cable Tool Rotary (Convention			al Dewatering	Duration of pumping		5		5			
☐ Rotary (Reverse) ☐ Boring	☐ Driving ☐ Livestoo ☐ Digging ☐ Irrigation	y	le	hrs + Final water level end o	min of pumping <i>(m/fi</i>			10			
☐ Air percussion ☐ Other, specify	CECT PUSH   Industria		_			15		15	,		
	onstruction Record - Casing		Status of Well	If flowing give rate (I/	min / GPM)	20		20	***************************************		
Diameter (Galvani	ole OR Material Wall zed, Fibreglass, Thickness	Depth ( <i>m/ft)</i>	☐ Water Supply ☐ Replacement Well	Recommended pum	p depth (m/ft)	25		25			
(cm/in) Concrete	e, Plastic, Šteel) (cm/in) F		Test Hole	Recommended pum	p rate	30	***************************************	30			
9-0) /4	1 /e0 E	0.47	Dewatering Well Observation and/or			40		40			
			Monitoring Hole  Alteration	Well production (I/mii	n/GPM)	50		50			
			(Construction)  Abandoned,	Disinfected?  Yes No		60		60			
	Construction Record - Screen		Insufficient Supply  Abandoned, Poor		Map of W	/eli Lo	ation				
Diameter (Plastic C	Material Slot No.	Depth ( <i>m/ft)</i> rom To	Water Quality Abandoned, other,	Please provide a map	below following	instruct	ions on th	e back.	4		
(cm/in) ( asilo, )	1511C 10 0.	915,4	specify		\$	VE.			1		
4-07 pu	1010 100	11 3 7	Other, specify	1	<b>←→</b>	15	J.		N		
	Water Details		ole Diameter			<u>رچ</u> /			14		
	Kind of Water: Fresh Ur		th (m/ft) Diameter To (cm/in)			7	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Ū			
	s Other, <i>specify</i> Kind of Water: Fresh Ur		5-49 8-25	T L	62			-	1		
(m/ft) 🔲 Gas	Other, specify										
•	h Kind of Water: ☐ Fresh ☐ Ur s ☐ Other, <i>specify</i>	rested									
V	Vell Contractor and Well Tec										
Business Name of We	of Sampline	We	Il Contractor's Licence No.								
Business Address (St	reet Number/Name)			Comments:							
#2-147 W	OST Blaver Olec Postal Gode Business E-m		<u>cchmanall</u>								
$-\infty$	. area code) Name of Well Techn	ician (Last Name	First Namo	information	Package Deliver	ed	Audit No	ilstry Use			
Rue Telephone No. #	co marer inscite ut vveli secci	wini (Lastivalii),	i not redilic)	package 🗸 🗸	Ly ly balant	.m. 1 .m.		. 100	11777		
Bus. Telephone No. (inc GOS DOLL DOLL) Well Technician's Licence	934 Robinson	Trave	5	delivered	!Y  Y  M  M] Vork Completed			100	17 1 1		

Ministry of Well Tag No. (Place Sticker and/or Print Below) Well Record the Environment Regulation 903 Ontario Water Resources Act A 093962 APR 5 96 7 easurements recorded in: Metric Imperial Well Owner's Information Last Name / Organization E-mail Address ☐ Well Constructed DOR EN Ing Address (Street Number/Name) by Well Owner EXCAVATION Municipality Postal Code Telephone No. (inc. area code) Province Ол WESTEAR CABP Well Location Lot Concession Address of Well Location (Street Number/Name) Township 7 WOORK LAUC County/District/Municipality City/Town/Village Postal Code Province Ontario UTM Coordinates | Zone | Easting | 29 | Northing | NAD | 8 | 3 | 8 | 4 | 4 | 3 | 2 | 9 | 5 | 6 | 5 | Plan and Sublot Number Other Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (m/ft, General Colour Most Common Material Other Materials General Description From MACKET GRAVEC Results of Well Yield Testing Annular Space After test of well yield, water was: Draw Down Recovery Type of Sealant Used Depth Set at (m/ft) Volume Placed (m³/ft³) Clear and sand free Time Water Level Water Level (min) (m/ft) Other, specify (m/ft) (min) CONCRETE Static If pumping discontinued, give reason: BENTONIE. Leve 1 1 Pump intake set at (m/ft) 2 2 3 3 Pumping rate (I/min / GPM) Method of Construction Well Use 4 4 Cable Tool Diamond Public Commercial ☐ Not used Duration of pumping ☐ Rotary (Conventional) ☐ Jetting ☐ Domestic Municipal ☐ Dewatering hrs + 5 5 min Driving Rotary (Reverse) Livestock Test Hole Monitoring Boring Digging ☐ Irrigation Cooling & Air Conditioning Final water level end of pumping (m/ft) 10 10 Air percussion ☐ Industrial Air percussion
Other, specify/UECC PUSH Other, specify 15 15 If flowing give rate (Vmin / GPM) Construction Record - Casing Status of Well 20 20 Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel) Depth (m/ft) Wall Water Supply Recommended pump depth (m/ft) Thickness Replacement Well 25 25 То (cm/in) (cm/in) Test Hole Recommended pump rate CASTIC Recharge Well 30 30 10 1.22 (l/min / GPM) Dewatering Well 40 40 Observation and/or Well production (I/min / GPM) Monitoring Hole 50 50 ☐ Alteration Disinfected? (Construction) Yes No Abandoned, Insufficient Supply Map of Well Location Construction Record - Screen Abandoned, Poor Outside Water Quality Please provide a map below following instructions on the back. Depth (m/ft) Diameter Abandoned, other, (Plasti From То Garage (cm/in) specify Other, specify ïŀ Water Details Hole Diameter Diamete (cm/in) Depth (m/ft) Water found at Depth Kind of Water: Fresh Untested N From To (m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested Other, specify (m/ft) Gas Well Contractor and Well Technician Information Business Name of Well (~ Comments: Well owner's Date Package Delivered Ministry Use Only information Audit No. Z 100176 of Well Technician (Last Name, First Name) package delivered YYYYMMO ontractor Date 6 Date Work Completed Yes MAR 0 1 2010 401/0/0/12/ATTRECO 20102909 ☐ No

Ont	Ministry of the Environment	Well Tag No.	(Place Sticker aı			,	Well R	ecord
Measurements		rial A09	3972	A 0939	<b>372</b>	903 Ontario ⊿Na∩Pa	<i>Water Resc</i> ge	ources Act of
Well Owner's	s Information Last Name / Orga			E-mail Address		Juaz		
D. DOR	IEN EMAUS	TION			Deatel Cada	( ***	1	l Owner
	S(Street Number/Name)	Municip Ch	RO	Province	Postal Code	l elepho	ne No. (inc. a	rea code)
	Location (Street Number/Name)	Townsh	nip		Lot	Conces	sion	
County/District/	CAP CANE  Municipality	City/To	wn/Village			Province	Postal	Code
UTM Coordinates	s Zone Easting 10 4 Northin	g / A A Municip	e   pal Plan and Sublot	Number		Ontario Other		
NAD   8   3		15737	naganiyani			na consultation de la consultation	0.0016/03/25/25/25/26/26	nor-maleoneana/a
General Colour		Other Ma	·····		l Description		Depth From	n ( <i>m/ft)</i> To
DEN	Fui	GRAVEL		(2005	£.		0	1.2
PASI	CING	SILT.		5017.	1 = 1		1.20	24
514	547	0/4-		3011/	WC 1	£	<i>Z-:</i> ZZ	0.,
								, TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
1						**************************************		
	Annular Spa	PAT STANDARD AND A DESCRIPTION OF THE PROPERTY OF THE PARTY OF THE PAR				Il Yield Testi		
Depth Set at (	m/ft) Type of Sealant To (Material and Ty		olume Placed (m³/ft³)	After test of well yield, wa		1	evel Time V	covery Vater Level
	<del>- 11</del>			Other, specify	give reason:	(min) (m/ft	) (min)	(m/ft)
0 0		_				Level 1	1	
0.3 0.				Pump intake set at (m/f	t)	2	2	
	of Construction	Well Use		Pumping rate (I/min / GF	РМ)	3	3	
Cable Tool	Diamond Public	Commercial  Municipal	☐ Not used ☐ Dewatering	Duration of pumping		4	4	***************************************
☐ Rotary (Revers		k 📑 Test Hole	Monitoring	hrs + mir Final water level end of p	ŀ	5	5	
Air percussion Other, specify	Industria	1		If flowing give rate (//min		15	10	·
	Construction Record - Casing		tatus of Well			20	20	
Diameter (Ga	pen Hole OR Material Wall alvanized, Fibreglass, Thickness encrete, Plastic, Steel) (cm/in)	rom   To   🗆 R	eplacement Well	Recommended pump d	epth (m/ft)	25	25	
4.03 1	PLASTIC 368 C	1-22 OR	echarge Well	Recommended pump ra (I/min / GPM)	ate	30	30	
			lewatering Well  bservation and/or  lonitoring Hole	Well production (I/min /	GРM)	40	40	
			Iteration	Disinfected?		50	50	
			bandoned, sufficient Supply	Yes No	Man af Wa	60 Location	60	Veril (1900) (1900)
Outside Diameter (Diameter	Construction Record - Screen  Material Office Cohesized Stoot  Slot No.	Depth (m/ft)		Please provide a map be			ne back,	
(cm/in) (Plas	stic, Galvanized, Steel) Slot No. F		bandoned, other, pecify			5		17
9.05 10	10 /.	5.// 0.0	ther, specify			Caret		\
	Water Details		ameter	社	(17)	12	° 24,	
	Depth Kind of Water: Fresh Ur Gas Other, specify		Diameter (cm/in)				N. O	
Water found at I	Depth Kind of Water: Fresh Ur	tested 0 5.	77 825	<u> </u>	<u> </u>	20N		1
Water found at I	☐Gas ☐ Other, <i>specify</i> Depth Kind of Water: ☐ Fresh ☐ Ur	tested		1 m				
(m/ft) [	Gas Other, specify	Inician Information			2,50	И		
- l l-	of Well Contractor		argtor's Licence No.					
Bysiness Addres	No. of the second secon	Municipal	ity 1/1	Comments:		***************************************		•
라)~[4] Province	Signature (Single Investment) (CR)    Postal Code   Business E-m	EEN INCT	imandh					
ON	J LUBICG		\	information	kage Delivered	Audit No	nistry Use	Only
1905)6	o. (inc. area code) Name of Well Techn	Trouis	[]	Data Mor	Y M M t		z 100	
	icence No. Signature of Technician and	I/or Contractor Date Subn	nitted Solidas	Yes	0011	A Received		2010

Well Record Well Tag No. (Place Sticker and/or Print Below) Ministry of Regulation 903 Ontario Water Resources Act A 693972 the Environment Page ) Metric | Imperial Measurements recorded in: Well Owner's Information Last Name / Organization F-mail Address □ Well Constructed 1278439 Ontario Limited by Well Owner Postal Code Mailing Address (Street Number/Name) Province Municipality ottawa KIZCILWZ ON Well Location Concession Address of Well Location (Street Number/Name) Lot Township 117 Wescar Ln City/Town/Village

Carp

Municipal/Plan and Sublot Number Postal Code Province County/District/Municipality Ontario UTM Coordinates Zone Easting Northing NAD 8 3 1 8 4 23 28 0 50 1 57 54 Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (m/ft) General Description Other Materials Most Common Material Results of Well Yield Testing Annular Space After test of well yield, water was: Draw Down Recovery Volume Placed Type of Sealant Used (Material and Type) Depth Set at (m/ft) Time Water Level  $(m^3/ft^3)$ Clear and sand free Time Water Level From (min) (m/ft) Other, specify (m/ft) (min) Concrete 0 .31 Static If pumping discontinued, give reason Level Benseal .31 1.83 1 1 Grout Slurry 1.83 Pump intake set at (m/ft) 2 2 3 3 Pumping rate (I/min / GPM) Method of Construction Well Use 4 4 Diamond ■ Not used Public Commercial Duration of pumping Minicipal ☐ Dewatering

Monitoring Jetting Domestic Rotary (Conventional) 5 5 hrs + Test Hole Rotary (Reverse) Driving Livestock Final water level end of pumping (m/ft) Boring □ Digging ☐ Irrigation Cooling & Air Conditioning 10 Industrial Air percussion 15 15 Other, specify Other, specify If flowing give rate (I/min / GPM) Status of Well Construction Record - Casing 20 Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel) Wall Thicknes Depth (m/ft) ☐ Water Supply Recommended pump depth (m/ft) Diameter 25 25 Test Hole From (cm/in) (cm/in) Recommended pump rate (l/min / GPM) 30 30 Recharge Well PVC 368 4.03 Dewatering Well 40 40 Observation and/or Monitoring Hole Well production (Vmin / GPM) 50 50 Alteration Disinfected? (Construction) 60 60 Yes No Abandoned, Insufficient Supply Map of Well Location Construction Record - Screen Abandoned, Poor Water Quality Abandoned, other, Please provide a map below following instructions on the back. Depth (m/ft) Outside Material (Plastic, Galvanized, Steel) Slot No. wescar In not needed pr 4.82 10 Other, specify 30m Hole Diameter Water Details Diamete (cm/in) Depth (m/ft) Water found at Depth Kind of Water: Fresh Untested From (m/ft) Gas Other, specify 230m 20.32 1.83 D Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify Well Contractor and Well Technician Information Business Name of Well Contractor

Strate Sor C Sampling

Business Address (Street Number/Name) Comments west Beard 2-147 Province Business E-mail Addre L 4BI C6 W records a stock Soil com no. area code) Name of Well Technician (Last Name, First Name) Well owner's information Ministry Use Only Date Package Delivered Y Y Y W M D C package delivered Date Work Completed Yes MAY 0 3 2010 201001168 ☐ No BB, 1796 Ministry's Copy

Or Measuremen	ntario	1	ironment	perial	A	No. (Place		d/or Print Below	Regulation 12	903 Qr	-	ter Reso	ecord ources Act
Well Own	er's Inforr	mation				THE STATE OF	1000000						
First Name		La	st Name / Or		41			E-mail Addr	ess			_	onstructed II Owner
12781			) ntario	) Lin	nited	veisinelika		Province	Postal Code	Т	elephone		area code)
Mailing Addr	ess (Street	Number/Nam	ave		M	unicipality	11	ON	K2C1	(11)			111
	ort	ona 1	412	ADD 200		Ollan	u	0,7	11001	WZ		FEET ST.	
Well Locat		(Street Num	hor/Nama)		T	ownship			Lot	(	Concessio	n	
Address of V		Car L				Ownormp							
County/Distr	and the last control of th				С	ity/Town/Vil	llage			Provinc		Postal	Code
						Carp				Onta	rio		
UTM Coordin	nates Zone	Easting		thing		lunicipal Pla	an and Sublo	t Number		Other			
NAD :	8 3 1 8	4232	180 50		739								
Overburde	n and Bedr	rock Materia	ls/Abandor	ment Sea	ling Reco	rd (see instr	ructions on the	back of this form)				Deni	th ( <i>m/ft</i> )
General Co	lour	Most Comm	on Material		Oth	er Materials	5		General Description			From	То
				300									
						1000000				11 345 1	177 41		
			Annular				Di d	After test of well	Results of Wo	_	aw Down		ecovery
Depth Se From	et at (m/ft)		Type of Sea (Material and				ne Placed m³/ft³)	Clear and			Water Le	-	Water Level
	723	0	1	u 1990)		1	,,,,	Other, spe		(min)	(m/ft)	(min)	(m/ft)
0	.31	Concre						If pumping disc	ontinued, give reason:	Static			
.31	1-83	Beng	seal t Slur							Level		1	
		Grand	+ 41.							1		1	
1.83		Grow	Jur	7				Pump intake s	et at (m/ft)	2		2	
										3		3	
Meth	nod of Con	struction			Well Us	50		Pumping rate (	1/min / GPM)	-			
Cable To		Diamono	l Put	olic	Comme	ercial [	Not used	Duration of nu		4		4	
Rotary (C	Conventional)		☐ Doi		Municip		Dewatering	Duration of pu	min	5		5	
Rotary (F	Reverse)	Driving	Live		Cooling	le L & Air Condi	Monitoring	-	el end of pumping (m/ft)	1		10	
☐ Boring ☐ Air percu	esion	Digging	☐ Irrig		☐ Cooling	a Air Condi	ttorning	Tilles Wester Tove	a one or hearthwild from	10		10	
Other, sp				er, specify				If flowing give	rate (l/min / GPM)	15		15	
	Con	struction R	ecord - Cas	ing		Statu	s of Well			20		20	
Inside	Open Hole	OR Material	Wall		h (m/ft)	☐ Water	Supply	Recommende	d pump depth (m/ft)	-			
Diameter (cm/in)		d, Fibreglass, Plastic, Steel)	Thickness (cm/in)	From	То	The second second second	cement Well			25		25	
-	0.					☐ Test H	arge Well	Recommende (I/min / GPM)	d pump rate	30		30	
3.45	PVZ	-	.356				itering Well	(I/MIN / GPW)		40		40	
						-	rvation and/or	Well productio	n (Vmin / GPM)	40		40	
						Monitor Altera	oring Hole			50		50	
						(Cons	struction)	Disinfected?	No	60		60	
						Aban	doned, licient Supply	Tes					
	Co	onstruction F	Record - Scre			Aban	doned, Poor	Diago provido	Map of V a map below following			e back	. ^
Outside Diameter		aterial	Slot No.		th ( <i>m/ft</i> )		r Quality doned, other,	Please provide	а ттар веюм толочите	ginsade	GOTIS OIT U	C DOON.	1 11
(cm/in)	(Mastic, Gai	Ivanized, Steel)		From	То	speci	fy . I		wescar	Ln			11
4.21	PV	7	IB			The state of the s	needed						-
11.0-1						Other	r, specify		1				10
								1					13
	4	Water De			-	Hole Diam pth (m/ft)	Diameter		135m				1
74		Kind of Wate		Unteste	From	To	(cm/in)		100				1
		Other, sp Kind of Wate		Hintocto		1.83	20.32		0				-7
		200		onteste		1.03	100		01-	-			
		Other, sp Kind of Wate		Unteste	d					240	m		
		Other, sp											
(1)		ell Contract		Technici	an Inform	ation							
Business N	Name of Wel		or und reel	TOTALICI			or's Licence No.						
Clar.	L. 4:	1 (500	uplin	a		72	41						
		eet Number/N	lame)	1	, N	lunicipality	111	Comments:					
Business A	Address (Stre	occurrent in our in		c n	ol D	ichm	anditil						
Business A	Address (Stre	10	cerve	rcre	Cr ( F	W P G	THE PERSON NAMED IN						
Business A 2-14 Province	17 W	10	Busines	s E-mail Ad	dress								
2-14	17 W	es+B	Busines	s E-mail Ac	sast	radas	cil.com	Well owner's	Date Package Delive	red	_	nistry Us	e Only
Province OW	17 W	ostal Code 4 B I C area code) N	Busines    White   Busines   Busines	s E-mail Ac	dress	radas	cil.com	information package		red DDD	Min Audit No	SALES AND DESCRIPTION OF THE PARTY NAMED IN	785
Province OW	17 W	es+B ostal Code 4BLC area code) N	Busines  6 WM lame of Well  Muci	s E-mail Ac	dress Sask (Last Name	Sectas First Nam	cilocor	information package delivered		DD	_	SALES AND DESCRIPTION OF THE PARTY NAMED IN	785
Province OW	17 W	ostal Code 4 B I C area code) N	Busines  6 WM lame of Well  Muci	s E-mail Ac	dress (Last Name Life Contractor D	Sectas First Nam	cilocov e)	information package	YYYYWM	D D	_	111 AY 0	785 3 2010

Well Record Well Tag No. (Place Sticker and/or Print Below) Ministry of Regulation 903 Ontario Water Resources Act the Environment A 093965 Page 3 of 4 Measurements recorded in: Metric Imperial Well Owner's Information Last Name / Organization E-mail Address □ Well Constructed V2784139 Ontario limited by Well Owner V525 OF TO CO Postal Code Telephone No. (inc. area code) Municipality Province ottawa Ave K2CIW2 ON Well Location Address of Well Location (Street Number/Name) Concession Township 117 Wescor Ln City/Town/Village
Corp
Municipal Plan and Sublot Number County/District/Municipality Province Postal Code Ontario UTM Coordinates | Zone | Easting | Northing | NAD | 8 | 3 | 118 | 4 | 2 | 3 | 2 | 7 | 8 | 5 | 0 | 7 | 5 | 7 | 4 | 3 Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (m/ft General Description General Colour Most Common Material Other Materials From Results of Well Yield Testing Annular Space Volume Placed (m³/ft³) After test of well yield, water was: Draw Down Recovery Type of Sealant Used (Material and Type) Depth Set at (m/ft) Water Level Time Water Level Clear and sand free From (min) (m/ft) Other, specify (m/ft) Concrete .31 0 If pumping discontinued, give reason: Level Benseal 1.83 .31 1 1 Grant Slurry 1.83 Pump intake set at (m/ft) 2 2 3 3 Pumping rate (I/min / GPM) Well Use Method of Construction 4 4 Public Cable Tool ☐ Diamond Commercial Not used Duration of pumping Rotary (Conventional) Jetting ☐ Domestic Municipal ☐ Dewatering 5 5 hrs + min Driving Rotary (Reverse) Livestock Test Hole ■ Monitoring Final water level end of pumping (m/ft) Boring Digging ☐ Irrigation Cooling & Air Conditioning 10 10 Air percussion Industrial Other, specify Other, specify 15 15 If flowing give rate (I/min / GPM) Construction Record - Casing Status of Well 20 20 Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel) Wall Thicknes Depth (m/ft) Inside ■ Water Supply Recommended pump depth (m/ft) Diamete (cm/in) Replacement Well 25 25 From (cm/in) Test Hole Recommended pump rate (Vmin / GPM) 30 30 .368 Recharge Well PUL 4.03 Dewatering Well 40 40 Observation and/or Well production (I/min / GPM) Monitoring Hole 50 50 Alteration Disinfected? (Construction) Yes No 60 Abandoned, Insufficient Supply Map of Well Location Construction Record - Screen Abandoned, Poor Water Quality
Abandoned, other, Please provide a map below following instructions on the back Outside Depth (m/ft) Material (Plastic, Galvanized, Steel) Diameter (cm/in) Slot No. wescar in not needed PVZ ID 4.82 Other, specify 25m Hole Diameter Water Details Depth (m/ft) Diameter Water found at Depth Kind of Water: Fresh Untested 240m (cm/in) (m/ft) Gas Other, specify @ C 1.83 Water found at Depth Kind of Water: Fresh Untested 20.32 (m/ft) Gas Other, specify
Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify Well Contractor and Well Technician Information Business Name of Well Contractor Stata Sail Sampling Comments 2147 west Beave Creek Ds-Province Postal Code Business E-mail Address L 4B I C6 wicco ds 6 Statesoil con no. area code) Name of Well Technician (Last Name, First Name) Ministry Use Only Well owner's information Date Package Delivered package delivered YYYYMMDI 90576 49304 Muit Mike
Well Technician's Licence No. Signature of Technician and/or Contractor Date Submitted Yes MAY 8 3 2010 3448 20100369 20100331 0506E (2007/12) Ministry's Copy

Well Tag No. (Place Sticker and/or Print Below) Well Record Ministry of A093964 Regulation 903 Ontario Water Resources Act the Environment Page 4 Measurements recorded in: Metric | Imperial Well Owner's Information Last Name / Organization E-mail Address ☐ Well Constructed First Name ontaria 1278439 Limited by Well Owner Postal Code Telephone No. (inc. area code) Province Mailing Address (Street Number/Name) Municipality K2CIW2 ottana ON 1525 ortona Ave Well Location Concession Address of Well Location (Street Number/Name) Township 117 Wescar In Postal Code Province City/Town/Village County/District/Municipality Carp Municipal Plan and Sublot Number Ontario Other UTM Coordinates Zone Easting NAD 8 3 1 8 4 2 3 2 7 6 50 1 57 59 Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form) Depth (m/ft) From To Most Common Material General Description General Colour Results of Well Yield Testing Annular Space Recovery Type of Sealant Used After test of well yield, water was Draw Down Depth Set at (m/ft) Volume Placed (Material and Type) Clear and sand free Time Water Level Time Water Level (min) (m/ft) Other, specify (m/ft) (min) Concrete .31 Static If pumping discontinued, give reason: Level .31 Benseal 1 1.83 Grout Slarry Pump intake set at (m/ft) 2 3 3 Pumping rate (I/min / GPM) Well Use Method of Construction 4 4 Commercial Cable Tool ☐ Public ■ Not used Diamond Duration of pumping Dewatering Monitoring Municipal lest Hole Rotary (Conventional) ☐ Jetting ☐ Driving Domestic 5 hrs + min Livestock Rotary (Reverse) ☐ Boring
☐ Air percussion Cooling & Air Conditioning Final water level end of pumping (m/ft) Digging Irrigation 10 10 ☐ Industrial Other, specify Other, specify 15 15 If flowing give rate (I/min / GPM) Construction Record - Casing Status of Well 20 Open Hole OR Material Depth (m/ft) ☐ Water Supply Recommended pump depth (m/ft) Inside Wall (Galvanized, Fibreglass, Concrete, Plastic, Steel) Thickness Replacement Well 25 25 (cm/in) Test Hole Recommended pump rate (I/min / GPM) 30 30 PUL Recharge Well 4.03 .368 Dewatering Well 40 Observation and/or Well production (I/min / GPM) Monitoring Hole 50 50 Alteration (Construction) Disinfected? 60 60 Yes No Abandoned, Insufficient Supply Map of Well Location Construction Record - Screen Abandoned, Poor Water Quality
Abandoned, other, Please provide a map below following instructions on the back. Outside Depth (m/ft) Material (Plastic, Galvanized, Steel) Diamete (cm/in) From not needed Wescar 4.82 PVC 10 Other, specify Hole Diameter Water Details 25 m Water found at Depth Kind of Water: Fresh Untested Diameter (cm/in) Depth (m/ft) 250 m (m/ft) Gas Other, specify 20.32 0 1.83 Water found at Depth Kind of Water: Fresh Untested Ø 6 (m/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Untested (m/ft) Gas Other, specify Well Contractor and Well Technician Information Strada Soil Sampling
Business Address (Street Number/Name) 2-147 west Beaver-creek Dr Business E-mail Addr L |4 |B | C/6 w records (ask over Soil-con no. area code) Name of Well Technician (Last Name, First Name) Well owner's information Date Package Delivered Ministry Use Only z111783 YYYYMMDD package delivered 905 76 49 304 Mccis Mike
Well Technician's Licence No. Signature of Jechnician and/or Contractor Date Submitted Date Work Completed Yes MAY 0 3 2010 20100331 ☐ No 20100319 BB, 1296 Ministry's Copy

Method of Construction  Manual States of West Prince Construction  M		ntario the B	stry of Environment	Well Ta	ag No. (Г'	104867	Regulatio	n 903 Ontario V	Vater Res	
Well Location  Construction and Budget Number Name)  Construction and Budget Number Name Name Name Name Name Name Name Name			SERVICE CONTRACTOR				381253131313131	Pag	je	of
Well Location  Formula Signal Number Marked  Formula Signal Number Marked  Consists of Well Year of Signal Number Marked  Consists of Well Year of Signal Number Marked  Consists of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  Consists of Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Year of Signal Number Marked  On Horizon Well Year of Well Yea	100		Last Name / Organiza	tion HOL	MAGS S	BATES CON	T. MEM	T		
Annulus Space  Open Data at (crit)  Open Data at (c	141	WESCAR								
Contraction and Boardon Management Stating Record Less through a large and the formation of the formation and stating and the formation an	Address of	Well Location (Street N	lumber/Name)	BRUNER	Township #1041	TIEV		Concess	ion 3	
UNIT Concentration and Bedrock Mariental Abandonomens Sealing Record (see annuations on the peace of the form)  Overhander and Bedrock Mariental Abandonomens Sealing Record (see annuations on the peace of the form)  Overhander and Bedrock Mariental Abandonomens Sealing Record (see annuations on the peace of the form)  Overhander and Bedrock Mariental Abandonomens Sealing Record (see annuations on the peace of the form)  Overhander and Bedrock Mariental Abandonomens Sealing Record (see annuations on the peace of the form)  Overhander Annualist Seace  Overha	The State of the S	trict/Municipality	16 0000	1	City/Town/Village	,			Postal	Code
GREY CLAY  CARD CONTROL STAND  CARD CONTROL ST	NAD	inates Zone Easting 8 3 8 423	3212 50/s	5770	/				2843	(.
Annual Space Type of Goulant Nadd (1975)  Dogth Solid (Inft)  Type of Goulant Nadd (1975)  Dogth Solid (Inft)  Type of Goulant Nadd (1975)  Dogth Solid (Inft)  Dogth Solid (Inft)  Type of Goulant Nadd (1975)  Type of Go				17.20.20.00.00.00			neral Descriptio	n		th (m/ft)
Anusiar Space    Court	GREY	CLAY				. 1			0,00	4.61
Annuir Space  Cresh Sat at (mth)  Type of Seutent Used  Will Use  Well Contraction  Rear and served with year and search of more in the contraction of more interest on the co	CALL	INCL	22	5/N1), CH 5/N41 E	invec, Bour	DERS			737	200
Annular Space   Results of Well Yield Testing   Property   Prope	CACI	Macsic		NO ICC					1,00	(1151)
Retary (Converted on Purpose of Public Construction   Public Con			Type of Sealant Use	ed for the same of	(m³/ft³)	After test of well yield	d, water was:	Time Water Le	evel Time	Water Level
Method of Construction	Colo	8,23 Banto	my good he	grey	430		ued, give reason	Static 147	3	(initity)
Method of Construction		+ Oette	de.	,		NA	•	1 245	1	261
Method of Construction   Dulamond   Public   Commercial   Not used   Duration of purplic   Public   Commercial   Duration of purplic   Public   Duration of purplic   Duration						Pump intake set at	(730').		2	257
Construction Record - Screen  Construction Record - Screen  Outside Guarders (Construction Record - Screen  Construction Record - Screen  Outside Guarders (Construction Record - Screen  Material Construction Record - Screen  Construction Record - Screen  Material Construction Record - Screen  Outside Guarders (Construction Record - Screen  Material Construction Record - Screen  Material Construction Record - Screen  Outside Guarders (Construction Record - Screen  Material Construction Record - Screen  Outside Guarders (Construction Record - Screen  Material Construction Record - Screen  Outside Guarders (Construction Record - Screen  Outside Guar						54/pm/	12am)	1	3	155
Boding Digging   Digging   Imgation   Cooling & Air Conditioning   Paral syster legal end of surroins offin   10 / 74   10 / 78   10 / 74   10 / 7	Rotary (C	Conventional)	Domestic	Munici	ipal Dewate	ring Duration of pumpin		-44	5	249
Construction Record - Casing Inside Open Hole OR Material (Genvanized, Eproglasse) (Corrier) (Corrote, Peters, Casis) (Corrier) (Corrote) (Corrote	Boring	Diggin	g Irrigation		C C	nig .	of pumping (m/fi	10 2.49	10	2.48
Depth (m/tt)   Dept		pecify	Other, spec	ify	De-to- SW-1		Vmin / GPM)	15 2.53	15	"
Concrete, Please, Steel   Cameri   From   To   Test Hole   Recharge Well   R		Open Hole OR Material	Wall D	epth (m/ft)	Water Supply	Recommended pur	np depth (ne/ft)	- 210		
Dewatering Well Dobervator and/or Montrong Hole Alteration Abandoned, Poor Water Details Water Quality Abandoned, Poor Water Quality Abandoned, Other, specify Other, specify Other, specify Other, specify Water Quality Abandoned, other, specify Other, specify Other, specify Water Quality Abandoned, other, specify Other, specify Other, specify Water Quality Abandoned, other, specify Other, specify Other, specify Water Quality Abandoned, other, specify Water Quality Abandoned, other, specify Other, specify Water Quality Abandoned, other, speci	(cm/in)	Concrete, Plastic, Steel)	(cm/in) From	1 0 m	☐ Test Hole	Recommended pur	mp/ate ^	1000		
Montoring Hole   Alteration   Construction   Alteration   Construction   Abandoned.   Poor   Map of Well Location   Construction   C	DOUD	orecon to	VITO 70.60	O coco	Dewatering Wei	401pm	(10gpm)	211		247
Construction Record - Screen  Outside Diameter Raterial Diameter (Plastic, Galvanized, Steel) Sixt No. From To Depth (Intit) Diameter (Intit)					Alteration	14501pml	hoppin).	50 //	50	"
Outside Diameter (Plastic, Galvanized, Steel) Six No. Prom To Septim (Invit) Abandoned, Poor Water Quality Abandoned, Poor (Plastic, Galvanized, Steel) Six No. Prom To Abandoned, other, specify Abandoned, other, specify Other, spec				4	Abandoned,	X Yes □ No			60	646.
Water Details  Water Details  Water Details  Water Details  Water found at Depth Kind of Water: Fresh Vuntested Promit To (com/in)  [m/fi] Gas Other, specify  Well' Contractor and Well Technician Information  Business Name of Well Contractor  Well Contractor and Well Technician Information  Business Name of Well Contractor  Well Contractor and Well Technician Information  Business Name of Well Contractor  Well Contractor and Well Technician Information  Business Name of Well Contractor  Well Contractor and Well Technician Information  Business Name of Well Contractor  Well Contractor and Well Technician Information  W			Di	pth (m/ft)	Abandoned, Po Water Quality	or lease provide a ma		g instructions on th	e back.	7
Water Details  Water Details  Water Squard at Depth Kind of Water: Fresh Vuntested Depth (m/tl) Gas Other, specify  Well of Squard Squa		(Plastic, Galvanized, Stee	H) Siot No. From	То		er,	4	CHOCKE		-5
Well Contractor and Well Technician Information  Business Address (Street Number/Name)  Province  Postal Code  Postal Code  Business E-mail Address  Province  Province  Postal Code  Business E-mail Address  Province  Postal Code  Business E-mail Address  Business Licence No.  Well Contractor and Well Technician Information  Business Address (Street Number/Name)  Well Contractor  Well Owner's  Information  Date Package Delivered  Information  Well owner's  Information  Date Work Completed  Yes  No  No  No  No  No  No  No  No  No  N		Water D	Details					4	ZA	TOTAL
Well Contractor and Well Technician Information  Business Address (Street Number/Name)  Province  Postal Code  Business E-mail Address  Business E-mail Address  Business E-mail Address  Business Address  Business E-mail A	110	d at Depth Kind of Wa	ter: Fresh Vuntes	ted De	pth (m/ft) Diame					
Well Contractor and Well Technician Information  Business Address (Street Number/Name)  Province  Postal Code  Business E-mail Address  Business E-mail Address  Well contractor and Well Technician Information  Business Address (Street Number/Name)  Well Contractor's Licence No  Municipality  Well owner's Date Package Delivered  Information  package delivered  Well owner's Date Package Delivered  Information  package delivered  Well owner's Date Package Delivered  Information  package delivered  I Yes  No  Date Work Completed  I Yes  Date Work Completed	Water toun	d at Depth Kind of Wa	ter: Fresh Untes	ted <b>8.23</b>	35.08 5.0	4. 2				
Well Contractor and Well Technician Information  Business Name of Well Contractor  Well Contractor's Licence No.  Well Contractor's Licence No.  Well Contractor's Licence No.  Well Contractor's Licence No.  Province  Postal Code  Business E-mail Address  Well owner's information  Well owner's information  Date Package Delivered information  Ministry Use Only  Audit No.  Z 102951  Well owner's information  Date Work Completed  Yes  No  No  No  No  No  No  No  No  No  N	Water foun	d at Depth Kind of War	ter: Fresh Untes	ted				Jone		
Business Address (Street Number/Name)  Province Postal Code Business E-mail Address  Business E-	) (m			cian Informa	ation	13/40	SCAR	1		
Province Postal Code Business E-mail Address   Business E-mail Address	Business Na	ame of Well Contractor	ING AC	W	Vell Contractor's Licence	No.	1	1		
Bus Telephone No. /inc. wee code) Name of Well Technician (Last Name First Name)  Well Technician's Licence No. Signatural All Technician evidor Contractor Date Submitted  No.	Business A		82, BOX 219	F	Junicipality HAM	Comments:				
Well Technician's Licence No. Signs and Afford Contractor and Submitted Types No. Date Work Completed Types No. Date Work Comp	BusTelepho	ong No vinc area code)	O Stanton	dulling	First Name)	information	Package Deliver			Only
0086. PHYMUNE X011 000 1011 02 2011	(al)	29066	DITTYCYA	15100		delivered	Work Completed	2	102	951
	00	86.14	EGNOSIO	- A	(011 OXX	50 DNO	0/1/02	RAPR	, , ,	

Well Tag No. " Chi-tras and/or Print Relow)

Well Record

Oritai	the Environ	nment		A117	442	Regulation	903 Ontario V		/
Measurements rec	orded in: Metric	[ Imperia	nl				Pag	e_/_	of
Address of Maley I o	antian If the at November 1	N	7	overchia 13		Lot	Concess	ion	
Address of Vyell Co	sation (Street Number/	Name)		ownship HUNTO	er	6	Concess	3	
County/District/Mur	nicipality 777	TCARL	PM1 °	ity/Town/Village			Province Ontario	Postal	Code
UTM Coordinates Z		Northing		lunicipal Plan and Subl	ot Number		Other	101	ine.
NAD   8   3	18 47322	4501	200						
General Colour	Most Common N			rd (see instructions on the er Materials	The state of the s	eral Description		Dep	oth (m/ft)
BROWNER	580		CLAN					0.00	289
CREV	774		300 S.G	RAVEZ, BOW	Was .			2.89	702
GRY	KINESTENE		SHATE					7.02	35.08
									(15')
	Α	nnular Spac	9			Results of We	all Yield Testin	na	
Depth Set at (m/f	Type	of Sealant U	sed	Volume Placed	After test of well yield	, water was:	Draw Down	R	ecovery
DAD 8/19	Ashalle	erial and Type	nt.	(m³/ft³)	Clear and sand Other, specify	пее	(min) (m/ft		Water Level (m/ft)
one one	Sold	Keal	ed.	coup	If pumping discontinu	ed, give reason:	Static Level / 7		4
	gra	Joera			NIN		1 /08	1	402
					Pump intake set at		2/010	2	1.48
Method of	Construction		Well Us	0	Pumping rate (I/min.		3 /190	) 3	1.45
Cable Tool	Diamond	Public	Comme	rcial Not used	Duration of pumping	(lugor)	4 1,99	4	6465
Rotary (Convention Rotary (Reverse)	the state of the s	Domestic Livestock	☐ Municipal		6hrs+0	min	5 200	5	191
Boring Air percussion	Digging	Irrigation Industrial	Cooling	& Air Conditioning	Final water level end	911)	10 200	10	1.86,
Other, specify		Other, spe	ecify		If flowing give rate ()		15 200	15	1.84
The second second second	Hole OR Material		Depth (m/ft)	Status of Well  Water Supply	Recommended pun	np/flepth (lm/ft)	20 2000	20	.83
		kness m/in) Fro	om To	Replacement Well	Bidm (	40').	25 2609	25	1.82
15.88 JA	el 4589 0.4	18 t. A	5 8.69	Recharge Well	Recommended pun (I/min / GBM)	//// )	30 200	30	1.81
				Dewatering Well Observation and/or	Well production (I/m	ig/ GPM)	402609	5 40	681
				Monitoring Hole  Alteration	Disinfected?	> lagon	1 50 20/L	50	18/
			4.1	(Construction)  Abandoned	Yes No		60 26/1	60	681
	Construction Record	THE RESERVE TO SERVE THE PARTY OF THE PARTY	U/A.	Insufficient Supply Abandoned, Poor	Diagramo ida a ma	Charles to the Control of the Contro	ell Location	no hook	1
Outside Diameter (cm/in) (Plastic	Material , Galvanized, Steel) Sli	ot No.	Depth (m/ft)	Water Quality Abandoned, other,	Please provide a ma	b pelow lollowing	instructions on t	ie back.	A.
				specify		1	. //-	,	IN
				Other, specify		147	Wesca	<u>_</u>	W
	Water Details	R Marie	Н	lole Diameter	1) 00				
(P)	pth Kind of Water:	Fresh X Unto	ested Dep	th (m/ft) Diameter (cm/in)	Wall	7			1
	pth Kind of Water:	Fresh Unt	ested 8069	35,CB 15,74	1 -	_			13
	pth Kind of Water:	Eroch Villat	octed		123 K	Bar			13
31	Gas Other, specify	Tosii Alono	ested			1	475		T B
Dusiness Name of	Well Contractor an	d Well Tech							113
Business Name of	W DRILLIA	16/11	2	1875				•	M
Business Address (	Street Number/Name)	ARCHE	5 de My	THE HAM	Comments:				10
Province	_	usiness E-ma		a had of					
But Tolorbon No.	KUHLKU.	Sting	anlinge	Einst Name	information	Package Delivere	Audit No	nistry Use	e Only
(4/3)6Z4	266 DV	ANIA	cian (Last Name,		package delivered Date	Work Completed	Z	132	976
Well Technician's Lice	ence No. Signature of The	chricish and	Contractor Da	2001100m	Yes Z	MAGA	1	UL 0 8	3 2011
0508E (2007/12) © 0	Queen's Printer for Ontano, 2	007		Ministry's Con	The state of the s	THE COURT	Receive		

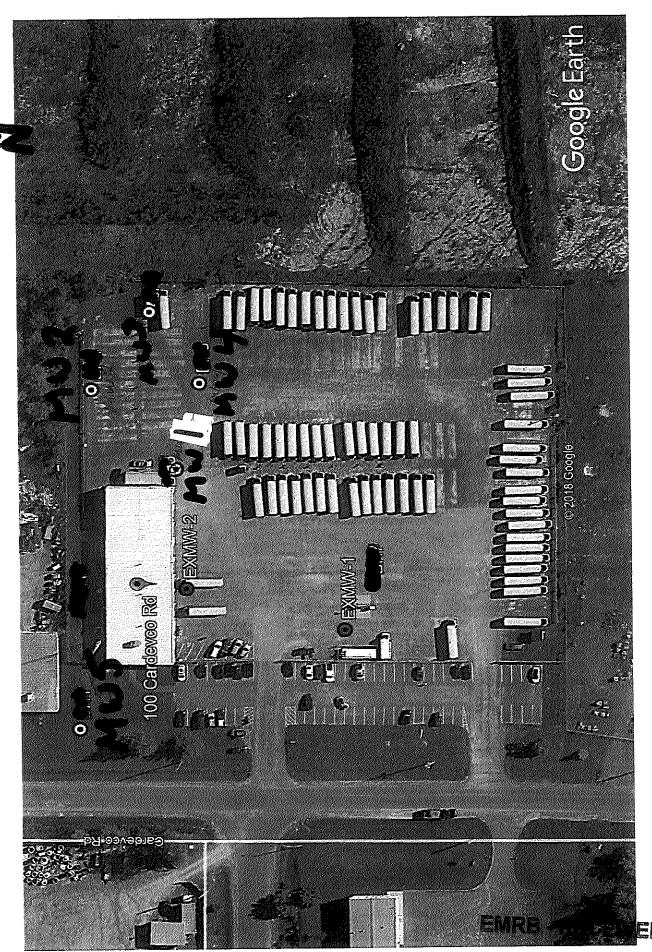
Ministry of

Tag#: A135308 int Below) We

Well Record

12.363530-07-16325281/01-5.2873345354545	er's Information	Loot Name / C								
First Name		Last Name / Or Akn	rganization nan Consti	ruction	E-mail Address				•	Constructe
-	ess (Street Number/Na Cardevco Roa			Municipality Carp	Province ON	Postal Code		Telephone N	,	
Well Locati	ion		1,00			4 2 2 4 2 2	114			
	ell Location (Street No Cardevco Roa			Township Vest Care		Lot §		Concession		
	ct/Municipality	T 1648		City/Town/Village	AL WITH		Provi	nce	Posta	al Code
Otta	wa-Carleton ates Zone , Easting		thing	Carp Municipal Plan and Su	blot Number	:	Ont	ario		
NAD 8		1	5015933	-		and the group of the		art 9 & 1	2	
	and Bedrock Mater	rials/Abandon		Record (see instructions on l	1					pth ( <i>m@ti)</i>
General Colo	our Most Com	mon Material	& Gravel	Other Materials		eral Description			From /	То
Grav &	Вгруп			Boulde			·····		11	11' ' 78'
	Brown								78	
	Brown						***************************************		93 ′	
									**************************************	
Depth Set a	at (mAT)	Annular S Type of Seala	1 * 1 * 1 * 1 * 1 * 1 * 1 * 1 * 1 * 1 *	Volume Placed	After test of well yield,	Results of We		ld Testing raw Down	E	Recovery
From 20	То	(Material and	Type)	(m³∰)	☐ Clear and sand t	ree		Water Level		
<u> </u>	O Neat	cement		15.8	Other, specify  If pumping discontinue		Static	7/8	9	19.7
							Level	13.7	1	7.6
					Pump intake set at (/	n.(tt)	2	14.2	2	7.6
					90		3	14.8	3	7.8
Method	d of Construction				- Dumning rate ///min /					
Cable Tool		d D Public		I Use	Pumping rate (I/min /	(EM)	4		4	
Rotary (Con	☐ Diamon	Dome	c Cor	mmercial Not used	Duration of pumping			15,1		7.6
Rotary (Con Rotary (Rev Boring	Diamon  ventional) Jetting  verse) Driving  Digging	Dome Livest	c Corestic Mur tock Tes tion Coc	mmercial Not used	Duration of pumping firs + 0 r Final water level end of	nin	4	15.1 15.4	4	7.6 7.6
☐ Rotary (Con ☐ Rotary (Rev ☐ Boring ☑Air percussion	Diamon  Diamon  Diamon  Diamon  Diamon  Diamon  Diamon  Diamon	Dome Livest Irrigat	c Corestic Mur tock Tes tion Coc	mmercial Not used nicipal Dewatering st Hole Monitoring	Duration of pumping  hrs + 0 r  Final water level end of	nin f pumping <i>(m/ft)</i>	5	15.1 15.4 17.3	4 5 10	7.6 7.6 7.6
Rotary (Con Rotary (Rev Boring Air percussion Other, speci	☐ Diamon  Inventional) ☐ Jetting Inverse) ☐ Driving Inverse ☐ Digging  Inverse ☐ Diamon	Dome Livest Inrigat Indust Other	c	mmercial Not used nicipal Dewatering st Hole Monitoring Dling & Air Conditioning	Duration of pumping  hrs + 0 r  Final water level end of  19.7 ''  If flowing give rate (//r	nin f pumping (m/ft) nin / GPM)	4 5 10	15.1 15.4 17.3 18.4	4 5 10 15	7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Boring Air percussic Other, speci	Diamon  Inventional) Diating  Inverse) Driving  Digging  On  Construction R  Open Hole OR Material Galvanized, Fibreglass,	Dome Livest Irrigat Indust Other.    Cecord - Casin Wall Thickness	c	mmercial Not used nicipal Dewatering st Hole Monitoring Dling & Air Conditioning  Status of Well Replacement Well	Duration of pumping  hrs + 0 r  Final water level end of 19.7"  If flowing give rate (I/I)  Recommended pump	nin f pumping (m/ft) nin / GPM)	4 5 10 15	15.1 15.4 17.3 18.4 19.5	4 5 10	7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Boring Air percussic Other, speci	Diamon Inventional) Diating Inverse) Driving Inverse Diagong	Dome Livest Irrigat Ir	Corporation	mmercial Not used nicipal Dewatering st Hole Monitoring Doling & Air Conditioning  Status of Well Replacement Well Test Hole	Duration of pumping hrs + 0 r Final water level end of 19.7" If flowing give rate (/// Recommended pump Recommended pump	nin  If pumping (m/ft)  nin / GPM)  In depth (m/fb)	4 5 10 15 20	15.1 15.4 17.3 18.4 19.5	4 5 10 15 20	7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Boring Air percussic Other, speci	Diamon Inventional) Diating Inverse) Driving Digging On Iffy Construction R Open Hole OR Material Galvanized, Fibreglass, Concrete, Plastic, Steel)	Dome Livest Irrigat Indust Other, Wall Thickness (cm/in)	Corporation	mmercial Not used nicipal Dewatering st Hole Monitoring Status of Well  Status of Well  Water Supply Replacement Well  Test Hole Recharge Well Dewatering Well	Duration of pumping hrs + 0 r Final water level end of 19.7" If flowing give rate (I/I) Recommended pump Recommended pump (I/min / CPM)	nin  f pumping (m/ft)  nin / GPM)  o depth (m/fb)  o rate	4 5 10 15 20 25	15.1 15.4 17.3 18.4 19.5 19.6	4 5 10 15 20 25	7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Boring Air percussic Other, speci	Diamon Inventional) Diating Inverse) Driving Inverse Diagong	Dome Livest Irrigat Ir	Corporation	mmercial	Duration of pumping  hrs + 0 r  Final water level end of 19.7"  If flowing give rate (I/I)  Recommended pump  Recommended pump  (I/min / GEM)  Well production (I/min	nin  f pumping (m/ft)  nin / GPM)  o depth (m/fb)  o rate	4 5 10 15 20 25 30 40	15.1 15.4 17.3 18.4 19.5 19.6 19.6	4 5 10 15 20 25 30 40	7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary (Rev Rotary (Rev Control Rotary (Rev Rotary (Re	Diamon Inventional) Diating Inverse) Driving Digging On Iffy Construction R Open Hole OR Material Galvanized, Fibreglass, Concrete, Plastic, Steel)	Dome Livest Irrigat Ir	Corporation	mmercial	Duration of pumping  I hrs + 0 r  Final water level end of 19.7"  If flowing give rate (I//  Recommended pump  (I/min / QPIM)  Well production (I/min 20 + Disinfected?	nin  f pumping (m/ft)  nin / GPM)  o depth (m/fb)  o rate	4 5 10 15 20 25 30 40 50	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7	4 5 10 15 20 25 30 40 50	7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary (Rev Rotary (Rev Control Rotary (Rev Rotary (Re	Diamon Inventional) Diating Inverse) Driving Digging On Iffy Construction R Open Hole OR Material Galvanized, Fibreglass, Concrete, Plastic, Steel)	Dome   Livest   Irrigat   Irrigat   Other	Cor	mmercial	Duration of pumping  I hrs + 0 r  Final water level end of 19.7"  If flowing give rate (I/r  Recommended pump (I/min / QPM)  Well production (I/min 20 + 20 + 20 + 20 + 20 + 20 + 20 + 20	nin  f pumping (m/ft)  nin / GPM)  o depth (m/fb)  o rate	4 5 10 15 20 25 30 40 50 60	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7	4 5 10 15 20 25 30 40	7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary	Diamon Inventional) Diating Inverse) Driving Digging On Iffy Construction R Open Hole OR Material Galvanized, Fibreglass, Concrete, Plastic, Steel Open Hole	Dome   Livest   Irrigat   Irrigat   Other	Cor	mmercial	Duration of pumping  I hrs + 0 r  Final water level end of 19.7"  If flowing give rate (I//  Recommended pump  (I/min / QPIM)  Well production (I/min 20 + Disinfected?	nin  f pumping (m/ft)  nin / GPM)  o depth (m/fb)  o rate  /GPM)  Map of We	4 5 10 15 20 25 30 40 50 60	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Boring Air percussic Other, speci	Diamon pventional) Diamon pventional) Diamon Disperse Driving Digging on Sify Construction R Quantized, Fibreglass, Concrete, Plastic, Steel Open Hole  Construction R Material Galvanized, Fibreglass, Concrete, Plastic, Steel Open Hole  Construction R Material	Dome Livest Inrigat Indust Other Record - Casin Wall Thickness (cm/in)	Cor	mmercial	Duration of pumping  hrs + r  Final water level end of 19.7"  If flowing give rate (//r  Recommended pump  Recommended pump  (//min / GEM)  Well production (//min  20 +	nin  f pumping (m/ft)  nin / GPM)  o depth (m/fb)  o rate  /GPM)  Map of We	4 5 10 15 20 25 30 40 50 60	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary	Diamon piventional) Diatting lerse) Diriving Digging on ify  Construction R Open Hole OR Material lastic, Galvanized, Steel	Dome Livest Indust Industrial	Cor	mmercial	Duration of pumping  hrs + r  Final water level end of 19.7"  If flowing give rate (//r  Recommended pump  Recommended pump  (//min / GEM)  Well production (//min  20 +	nin  if pumping (m/ti)  nin / GPM)  o depth (m/ti)  o rate  / GPM)  Map of We below following in	4 5 10 15 20 25 30 40 50 60 II Loc	15.1 15.4 17.3 18.4 19.5 19.6 19.7 19.7 19.7	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary	Diamon Diamon Diamon Diamon Diamon Disperse Diamon Diagong On Diamon Dia	Livest   Irrigat   Irrigat	Cor	mmercial	Duration of pumping  hrs + r  Final water level end of 19.7"  If flowing give rate (//r  Recommended pump  Recommended pump  (//min / GEM)  Well production (//min  20 +	nin  if pumping (m/ti)  nin / GPM)  o depth (m/ti)  o rate  / GPM)  Map of We below following in	4 5 10 15 20 25 30 40 50 60 II Loc	15.1 15.4 17.3 18.4 19.5 19.6 19.7 19.7 19.7	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary	Diamon prentional)   Diamon prentional)   Detting perse   Driving   Digging on ify   Diggin	Livest   Irrigat   Irrigat	Corposition	mmercial	Duration of pumping  hrs + r  Final water level end of 19.7"  If flowing give rate (//r  Recommended pump  Recommended pump  (//min / GEM)  Well production (//min  20 +	nin  if pumping (m/ti)  nin / GPM)  o depth (m/ti)  o rate  / GPM)  Map of We below following in	4 5 10 15 20 25 30 40 50 60 II Loc	15.1 15.4 17.3 18.4 19.5 19.6 19.7 19.7 19.7	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary	Diamon prentional)	Livest   Livest   Irrigat   Irrigat	Corposition	mmercial	Duration of pumping  I hrs + r  Final water level end of 19.7'  If flowing give rate (I//  Recommended pump (I/min / QPM)  Well production (I/min )  Disinfected?    Ves	nin  if pumping (m/ti)  nin / GPM)  o depth (m/ti)  o rate  / GPM)  Map of We below following in	4 5 10 15 20 25 30 40 50 60 II Loc	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary (Rotary (Ro	Diamon prentional)   Diamon prentional)   Detting perse   Driving   Digging on iffy   Domain   Digging on iffy   Digging on iffy	Livest   Livest   Irrigat   Irrigat	Cor	mmercial	Duration of pumping  I hrs + r  Final water level end of 19.7'  If flowing give rate (I//  Recommended pump (I/min / QPM)  Well production (I/min )  Disinfected?    Yes	nin  if pumping (m/ti)  nin / GPM)  o depth (m/ti)  o rate  / GPM)  Map of We below following in	4 5 10 15 20 25 30 40 50 60 II Loc	15.1 15.4 17.3 18.4 19.5 19.6 19.7 19.7 19.7	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary (Rotary (Ro	Diamon prentional)   Diating perse   Driving   Digging on iffy   D	ecord - Screen Slot No.  Slot No.  Slot Side Side Side Side Side Side Side Side	Corposition	mmercial   Not used nicipal   Dewatering st Hole   Monitoring oling & Air Conditioning      Status of Well   Mater Supply   Replacement Well   Test Hole   Recharge Well   Dewatering Well   Observation and/or Monitoring Hole   Alteration (Construction)   Abandoned, Insufficient Supply   Abandoned, Poor Water Quality   Abandoned, other, specify   Other, specify      Hole Diameter   Diameter   To   Confin	Duration of pumping  I hrs + r  Final water level end of 19.7'  If flowing give rate (/// 20	nin of pumping (m/ft) nin / GPM) of depth (m/fb) of rate  Map of We below following in	4 5 10 15 20 25 30 40 60 II Loc astruction	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7 19.7 ation	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Rotary (Con Rotary (Rev Rotary	Diamon Diamon Diamon Perse Driving Digging on iffy Digging on iffy Construction R Open Hole Plastic, Steel Open Hole Construction R Material lastic, Galvanized, Steel)  Water Det Mind of Water Det Depth Kind of Water Det Construction R Gas Other, spet Depth Kind of Water Det Construction R Gas Other, spet Depth Kind of Water Det Construction R Gas Other, spet Depth Kind of Water Depth Kind of Water Gas Other, spet Depth Kind of Water Depth Kind of Water Gas Other, spet Depth Kind of Water Gas Other Gas Othe	Livest   Irrigat   Irrigat	Corporation	mmercial   Not used nicipal   Dewatering st Hole   Monitoring poling & Air Conditioning      Status of Well   Mater Supply   Replacement Well   Test Hole   Recharge Well   Dewatering Well   Dewatering Hole   Alteration   Abandoned, Insufficient Supply   Abandoned, Poor Water Quality   Abandoned, other, specify   Diameter   Depth (m/ft)   Diameter   To   Diameter   C(m/in)   Sis(µs)   Sis(µs)     Mation   Well Contractor's Licence No.	Duration of pumping  I hrs + r  Final water level end of 19.7'  If flowing give rate (/// 20	nin  if pumping (m/ti)  nin / GPM)  o depth (m/ti)  o rate  / GPM)  Map of We below following in	4 5 10 15 20 25 30 40 60 II Loc astruction	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7 19.7 ation	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Outside Diameter (cm/in)	Diamon Diamon Diamon Prerse Driving Digging on iffy Digging Operation Research Depth Research De	Livest   Irrigat   Irrigat	Corestic   Murtock   Testion   Coorestic   Murtock   Testion   Coorestical   Coorest	mmercial   Not used nicipal   Dewatering st Hole   Monitoring oling & Air Conditioning      Status of Well   Mater Supply   Replacement Well   Test Hole   Recharge Well   Dewatering Well   Observation and/or Monitoring Hole   Alteration (Construction)   Abandoned, Insufficient Supply   Abandoned, other, specify   Other, specify      Hole Diameter   Diameter (cm/in)   To   Sis/Ibs/1	Duration of pumping     hrs + r Final water level end of 19.7'  If flowing give rate (/// Recommended pump	min f pumping (m/ft) min / GPM) o depth (m/ft) o rate  Map of We below following in	4 5 10 15 20 25 30 40 50 60 II Locastruction	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7 19.7 19.7 20	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Outside Diameter (cm/in)  Outside Diameter (cm/in)  Outside Diameter (cm/in)  Vater found at  93 (m/it) Vater found at  (m/it)  Vater found at  (m/it)  Vater found at  (m/it)  Vater found at  (m/it)  Vater found at  (m/it)  Vater found at  (m/it)  Vater found at  (m/it)  Vater found at  (m/it)  Vater found at  (m/it)  Vater found at  (m/it)	Diamon Diamon Diamon Prense Detring Digging on John Digging on	Livest   Irrigat   Irrigat	Corestic   Mur   Mur	mmercial   Not used nicipal   Dewatering st Hole   Monitoring oling & Air Conditioning      Status of Well   Mater Supply   Replacement Well   Test Hole   Recharge Well   Dewatering Well   Observation and/or Monitoring Hole   Alteration (Construction)   Abandoned, Insufficient Supply   Abandoned, other, specify   Other, specify   Other, specify      Hole Diameter Depth (m/ft)   Diameter (cm/in)   Diameter (cm/in)   Diameter (cm/in)   Other, specify   Diameter (cm/in)   Diameter (cm/i	Duration of pumping hrs +	min f pumping (m/ft) min / GPM) o depth (m/ft) o rate  Map of We below following in	4 5 10 15 20 25 30 40 50 60 II Locastruction	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7 19.7 19.7 20	4 5 10 15 20 25 30 40 50 60	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Outside Diameter (cm/in)  Vater found at 93 (m/ft)  Vater found at (m/ft)  Usiness Name  Air Rock  usiness Addre  ON	Diamon Diamon Diamon Prerse Detring Digging on iffy Digging on iffy Dopen Hole OR Material Digging Open Hole Or Material Digging Open Hole Open Ho	Livest   Irrigat   Irrigat	C Corestic Mur tock Tes tition Cor trial specify  Depth (m/ft)  From To  10  20 1 10  Depth (m/ft)  From To  Corested  Coreste	mmercial	Duration of pumping	min f pumping (m/ft) min / GPM) o depth (m/ft) o rate  Map of We below following in	4 5 10 15 20 25 30 40 50 60 II Loc astruction	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7 19.7 19.7  ation ons on the bar	4 5 10 15 20 25 30 40 50 60 Ck.	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Outside Diameter (cm/in)	Diamon Diamon Diamon Prerse Detring Digging on iffy Digging on Galvanized, Fibreglas, Concrete, Plastic, Steel Open Hole OR Material Depth Kind of Water Detries Depth Kind of Water Depth	Livest   Irrigat   Irrigat	Compession   Consession   Conse	mmercial   Not used nicipal   Dewatering st Hole   Monitoring oling & Air Conditioning      Status of Well   Mater Supply   Replacement Well   Test Hole   Recharge Well   Dewatering Well   Observation and/or Monitoring Hole   Alteration (Construction)   Abandoned, Insufficient Supply   Abandoned, Poor Water Quality   Abandoned, other, specify   Other, specify     Other, specify   Diameter (cm/in)     Abandoned, other, specify   Diameter (cm/in)     Other, specify   Diameter (m/it)   Diameter (	Duration of pumping	min f pumping (m/ft) min / GPM) o depth (m/ft) o depth (m/ft) o rate  Map of We below following in  Map of We below following in  CALLARDS  GPM SET A  ckage Delivered	4 5 10 15 20 25 30 40 50 60 II Loc astruction	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7 19.7 19.7  ation ons on the back	4 5 10 15 20 25 30 40 50 60 ck.	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6
Outside Diameter (cm/in)	Diamon Diamon Diamon Prerse Detring Digging on iffy Digging on Galvanized, Fibreal Depth Kind of Water Dett Depth Kind of Water Depth Kind of Wate	Livest   Irrigat   Irrigat	Compession   Consession   Conse	mmercial   Not used nicipal   Dewatering st Hole   Monitoring oling & Air Conditioning      Status of Well   Mater Supply   Replacement Well   Test Hole   Recharge Well   Dewatering Well   Observation and/or Monitoring Hole   Alteration (Construction)   Abandoned, Insufficient Supply   Abandoned, Poor Water Quality   Abandoned, other, specify   Other, specify     Other, specify   Diameter (cm/in)     Abandoned, other, specify   Diameter (cm/in)     Other, specify   Diameter (m/it)   Diameter (	Duration of pumping hrs +	min f pumping (m/ft) min / GPM) o depth (m/ft) o rate  Map of We below following in	4 5 10 15 20 25 30 40 50 60 II Loc astruction	15.1 15.4 17.3 18.4 19.5 19.6 19.6 19.7 19.7 19.7 19.7  ation ons on the back	4 5 10 15 20 25 30 40 50 60 ck.	7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6 7.6

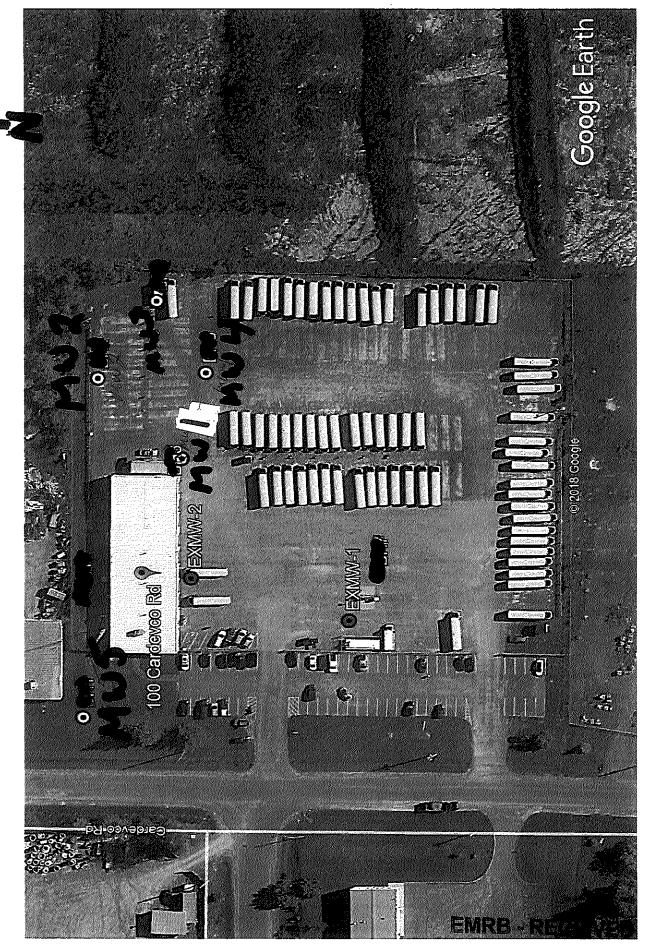
Ontario Ministry of the Environment and Climate Change	ΙΔ			Vell Record Vater Resources Act
Measurements recorded in: 🛮 Metric 🔲 Imperia	1261077 Ta	ng#:A261077 ***********************************	3157 Pag	e of
Well Owner's Information	ration a 3	E-mail Address		☐ Well Constructed
First Name   Last Name / Organiz	J Canada Irc.			by Well Owner
Mailing Address (Street Number/Name) 4243	Municipality,  Brossbriand	Province Postal Code  \$\int C \mathcal{J} \mathcal{T} \mathcal{I} \mathcal{I} i		e No. (inc. area code)
4243 TUE MATCET LACASSE  Well Location	GI O ISDITIONIX			
Address of Well Location (Street Number/Name)	Township	Lot	Concess	ion
160 120 Carde CG Rd County/District/Municipality	City/Town/Village		Province	Postal Code
UTM Coordinates   Zone , Easting , Northing	Municipal Plan and Sublo		Ontario Other	KOALLO
NAD   8   3 / 18 4 2 3 14 14 7 5 6 1	5952			
Overburden and Bedrock Materials/Abandonmen  General Colour   Most Common Material	t Sealing Record (see instructions on the Other Materials	back of this form)  General Description	n	Depth (m/ft)
		dense	uiww.	0 , 3/
BK9 3and	grave/	Se N		-31 1.22
BOOK Sond stone		/auzred		1.22 6.1
		3		
Annular Spac           Depth Set at (m/ft)         Type of Sealant U	The state of the s	After test of well yield, water was:	/ell Yield Testi Draw Dow	
From To (Material and Type	e) (rm³/ft³)	☐ Clear and sand free☐ Other, specify	Time Water L (min) (m/f	1 1
0 .3 Concrete/flush	professor (	If pumping discontinued, give reason	Static Level	
31 2.79 bentonte		**	1	1
2.14 6.1 filter smd		Pump intake set at (m/ft)	2	2
•		Pumping rate (I/min / GPM)	3	3
Method of Construction  □ Cable Tool □ Diamond □ Public	Well Use  ☐ Commercial ☐ Not used		4	4
☐ Rotary (Conventional) ☐ Jetting ☐ Domestic	: Municipal Dewatering	Duration of pumping hrs + min	5	5
☐ Rotary (Reverse)     ☐ Driving     ☐ Livestock       ☐ Boring     ☐ Digging     ☐ Irrigation	Cooling & Air Conditioning	Final water level end of pumping (m/	10	10
☐ Air percussion ☐ Industrial ☐ Other, specify ☐ Other, sp		If flowing give rate (Vmin / GPM)	15	15
Construction Record - Casing			20	20
Inside Open Hole OR Material Wall Diameter (Galvanized, Fibreglass, Thickness	Depth (m/ft) Water Supply rom To Replacement Well	Recommended pump depth (m/ft)	25	25
(CITUIN) Concrete, Plastic, Steet) (CITUIN)	☐ Test Hole ☐ Recharge Well	Recommended pump rate (Vmin / GPM)	30	30
5.20 PVL ,390 C	☐ Dewatering Well		40	40
	Observation and/or Monitoring Hole	Well production (I/min / GPM)	50	50
	Alteration (Construction)	Disinfected?  Yes No	60	60
Construction Record - Screen	Abandoned, Insufficient Supply		Well Location	
Outside Material Clash	Depth (m/ft) Abandoned, Poor Water Quality  Abandoned, other,	Please provide a map below following	ng instructions on	the back.
(cm/in) (Plastic, Galvanized, Steel)	specify			
6.03 PVC 10 3.	Other, specify			Ļ
			IVV	
Water Details  Water found at Depth Kind of Water: Fresh Un	Hole Diameter  tested Depth (m/ft) Diameter			
(m/ft) Gas Other, specify	From To (cm/in)			
Water found at Depth Kind of Water: ☐ Fresh ☐ Un  (m/ft) ☐ Gas ☐ Other, specify	111/1/1/1			
Water found at Depth Kind of Water: Fresh Ur	ntested 1.77 6 . 1.00	7		
(m/ft) Gas Other, specify				
Well Contractor and Well Tec Business Name of Well Contractor	Mell Contractor's Licence No			
Business Address (Street Number/Name)	Municipality	Comments:		
Business Address (Street Number/Name)	Markham			
Province Postal Code Business E-m	nail Address		rered	Ministry Use Only
Bus.Telephone No. (inc. area code) Name of Well Techi		information package		No. <b>Z</b> 229576
17166 1714 1017 111 111 1		delivered Date Work Comple		MAR C 8 2019
Well Technician's Licence No. Signature of Technician an	Ad/or Contractor Date Submitted  Y Y Y Y M M D			ved
0506E (2014/11)	Ministry's Cop	y	© C	Queen's Printer for Ontario, 2014



C-7241 Z229576

MAR U 8 2019

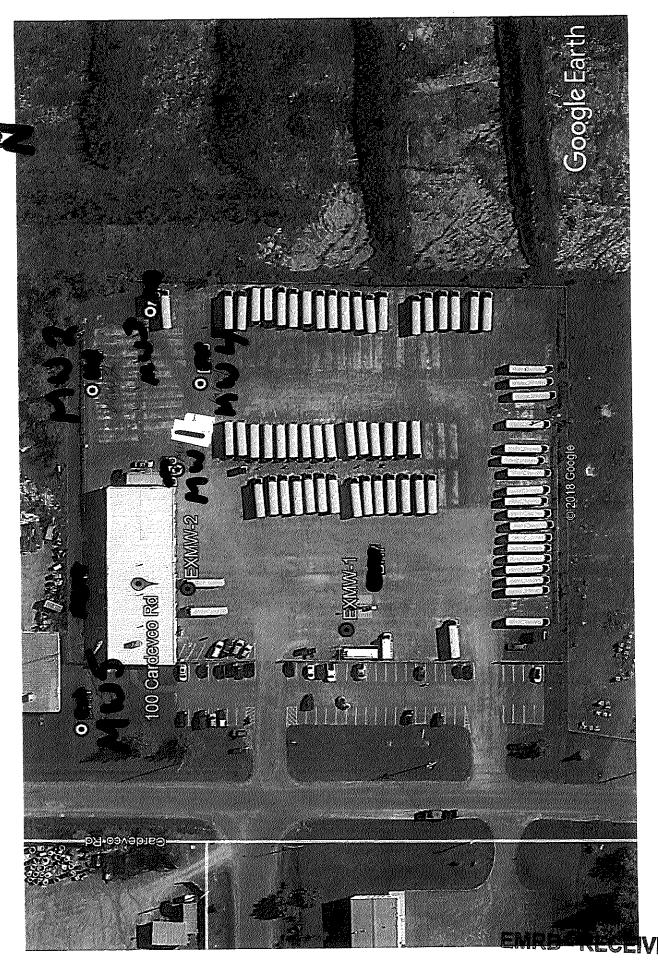
>Ont		of the Environme nate Change	nt Well Tag	g No. (Place Sticker an	d/or Print Below)	<u></u>		Vell R	
Measurements	··· /	_	1 A26	1678 Tag	g#:A26 🙃	7 <b>8 Tulation</b>	903 Ontario V		of
Well Owner's							257	T	
First Name	الم	astName/Organiz Iransdev	zation J Com	ada Inc-	E-mail Address			by Wel	onstructed Il Owner
	(Street Number/Nam Marce I La	e)	7	Municipality  Broisbrand	Province	Postal Code	Telephor	9 7 0 8	
Well Location									3371
Address of Well I	Location (Street Num 人 d いしょ Rd Junicipality	ber/Name)	T	Fownship		Lot	Conces	ion	
County/District/N	lunicipality			City/Town/Village	arD	·	Province Ontario	Postal	Code
UTM Coordinate		Northing	1982	Municipal Plan and Sublo	t Number	.,	Other		
NAD   8   3 Overburden ar		/ )  チ   リロー/ als/Abandonmen	ソ  リロス  it Sealing Reco	ord (see instructions on the	e back of this form)				
General Colour	Most Comm	on Material	Ott	ner Materials	Ger	neral Description		From	th ( <i>m/ft</i> )
GRY	graves	****	sono		dense			4	+ )/
GRY	5 and	<i>0</i>	graver		Junered Junered			-61	31
<del></del>	3 M2 ) V2 .				1 To Ca				
		Annular Spac	of American man Ladder Classification and an advantage community of			\$51103 KF\$3369 KF\$3500 CF\$357X65953 ZAC 6513	ell Yield Testi	Market Commence of the Commenc	
Depth Set at ( From	То	Type of Sealant U (Material and Type		Volume Placed (m³/ft³)	After test of well yiel	d free	Time Water L	evel Time \	
	S CONCE	ese plush	, mo mi		☐ Other, specify If pumping discontin		(min) (m/f	t)  (min)	(m/ft)
3		n whe					Level 1	1	
1.77 3	el Killer	300 d	μ		Pump intake set at (	(m/ft)	2 .	2	
	of Construction		Well Us		Pumping rate (l/min	/ GPM)	3	3	
Cable Tool	☐ Diamond	=	☐ Comme	ercial	Duration of pumping		4	4	
Rotary (Conve	se) 🔲 Driving	Domestic Livestock		ole	hrs +	min	5	5	
☐ Boring ☐ Air percussion		☐ Irrigation ☐ Industrial	-	g & Air Conditioning	Final water level end	of pumping (m/tt	10	10	
Other, specify	Construction R	_	эсіту	Status of Well	If flowing give rate (t	/min / GPM)	15	20	
Diameter (G	pen Hole OR Material alvanized, Fibreglass.	Wall Thickness	Depth (m/ft)	☐ Water Supply ☐ Replacement Well	Recommended pun	np depth (m/ft)	20	25	
(cm/in) Co	ncrete, Plastic, Steel)	(cm/in) Fro	om To	Test Hole Recharge Well	Recommended pun	np rate	30	30	
33 J.U P	V -	. ) [ 0	/, 3 ×	Dewatering Well Observation and/or	(l/min / GPM)		40	40	
				Monitoring Hole  Alteration	Well production (Vm.	in / GPM) 	50	50	
				(Construction)  Abandoned,	Disinfected?  Yes No		60	60	
	Construction R	ecord - Screen	J.	Insufficient Supply Abandoned, Poor	Please provide a n	~	ell Location	on the book	
Outside Diameter (cm/in) (Pla	Material stic, Galvanized, Steel)	Slot No.	Depth ( <i>m/ft)</i> om To	Water Quality Abandoned, other, specify	Fiease provide a n	nap below tollow	ing instructions	DIT THE DOCK	.*
6.03 F	VVC	10 13	3.1						
				Other, specify					
Water found at	Water De			Hole Diameter oth (m/ft) Diameter		M	1627		
(m/ft) [	☐Gas ☐Other, <i>spe</i>	ecify	From	To (cm/in)					
	Depth Kind of Water Gas ☐ Other, spe		tested J	3-17.62	AACOAM				
	Depth Kind of Water		tested	7 / / 68					
[/////9]		or and Well Tech	nician Informa	ntion					
Business Name	of Well Contractor	Carp	W	/ell Contractor's Licence No.					
Business Addre	ss (Street Number/N	ame)	M	lunicipality 1	Comments:		-		
Province	Postal Code	Business E-ma	ail Address	Markham Com				Page Marines	Opportunity of the Section Association and the section of the sect
	io. (inc. area code), Na	ame of Well Techni			information	e Package Delive	Audit i	linistry Use lo. Z2 Q	e Only 8199
1900 1914					delivered	Y Y Y M M e Work Complete		 3 8 0 AAA	207258 NOVEMBER 1950 1950
vveii rechnician's	Licence No. Signature	e or reconician and		ate Submitted	□ No 🖟	4 4 4 A A	b 8 Receiv	ed	
0506E (2014/11)	· ·			Ministry's Copy	-		© Q.	een's Printer fo	or Ontario, 2014



C-7241 2290199

MAR 08 2019

Or	<b>ntario</b> and CI	y of the Environment imate Change		No. (Place Sticker on	g#:A2610	82 ulation	903 On			ecord
		Metric	N + 01	UDA		J 5-2	3157	Page		of
Well Own	er's Information	Last Name / Organization	nn		E-mail Address				T Wall C	onstructed
		Transdev	Canad	a Inc.				_		ll Owner
	ess (Street Number/Na	me)	142	a Inc. unicipality brorsbriand	Province	Postal Code				area code)
Well Locat	rue Marcel	Lacasse	15	profsbriand	QC	J7L1	M4 5	(999	1706	3877
Address of V	Vell Location (Street Nu	ımber/Name)	To	wnship		Lot	C	oncessio	n	<u>Kalabang ang kalabang</u>
	Cardevio	<u>Rd</u>		H. (Taura 0 (1) a a a			Province		Postal	Codo
County/Distr	rict/Municipality		2	ty/Town/Village Hang (C	ecD		Onta		i i	4 ( L D
UTM Coordin	nates Zone Easting	3 7 6 5 0 / 5	G 25 M	unicipal Plan and Sublo	t Number		Other		<u> </u>	, (
NAD S	8 3 1 5 7 7 5	<u>기</u> 기(タンロー/) rials/Abandonment S	aling Recor	d (see instructions on the	a back of this form)					
General Co		nmon, Material		er Materials		neral Description	<u> </u>		Dept From	th (m/ft)
BRN	top so	- 2/			dense				0	.3/
BRN	sand sandsto	7.7	casel		soft lage-ed				.3/	1.22
BRN GRY	sund sto	JR			lage-ed				. 22	3 75
<u> </u>	5 (2) (0) (1)		•		<i>J</i>					
						·		-		
				<del></del>						
***************************************										
		Annular Space				Results of W	ell Yield	Testing		
Depth Set		Type of Sealant Used	l	Volume Placed	After test of well yield	d, water was:	Dra	w Down		ecovery
From		(Material and Type)		(m³/ft³)	☐ Clear and sand ☐ Other, specify	i free	Time (min)	Water Levi (m/ft)	el Time   ' (min)	Water Level (m/ft)
0	-)/ COM	1:12/			If pumping discontin	ued, give reason:	Static			
- 3/		tonite					1		1	
1.60	3.35 Lilo	ter sand			Pump intake set at (	/ft)			2	
		-					3		3	
Meth	od of Construction		Well Use	2	Pumping rate (Vmin )	(GPM)	-			
Cable Too	<u></u>	1 =	☐ Commercipa		Duration of pumping		4		4	·····
Rotary (R		· · · · · · · · · · · · · · · · · · ·	Test Hole		hrs +	min -	5		5	
☐ Boring ☐ Air percus	☐ Diggin	g Inigation Industrial	Cooling &	& Air Conditioning	Final water level end	d of pumping <i>(m/f</i>	10		10	
Other, spe		Other, specify			If flowing give rate (l	min / GPM)	15		15	
		Record - Casing		Status of Well			20		20	
Inside Diameter	Open Hole OR Material (Galvanized, Fibreglass,	, Thickness	pth ( <i>m/ft)</i>   To	Water Supply Beplacement Well	Recommended pur	np depth (m/ft)	25		25	
(cm/in)	Concrete, Plastic, Steel)	+ • • • • •	!	Test Hole Recharge Well	Recommended pur	np rate	30		30	
3, ×	PUC	390 0	1.83	- Dewatering Well	(I/min / GPM)		-		40	
				Observation and/or Monitoring Hole	Well production (I/mi	in / GPM)	40			
				Alteration (Construction)	Disinfected?		50		50	
				Abandoned,	Yes No		60	······	60	
	Construction	Record - Screen		Insufficient Supply Abandoned, Poor	Please provide a n	Map of V			the beat	
Outside Diameter	Material (Plastic, Galvanized, Stee	Clot No.	pth ( <i>m/ft)</i> To	Water Quality Abandoned, other,	Flease provide a fi	rab below roslow	ang msuu	CHOIS ON	uie Dack	<b>L-</b>
(cm/in)	PUC-	10 1.83		specify						
6.07	J- D	10 1.0)	/ / / /3	Other, specify				,		
							ıω			
Water found	Water D	<b>)etails</b> ter: □Fresh □Untest	200.00	lole Diameter h (m/ft) Diameter		N	ιW	)		
	n/ft) Gas Other, s		From	To (cm/in)		,				
	•	ter: Fresh Untest	ed 0	2.15 11.95						
	n/ft) ☐ Gas ☐ Other, s of at Deoth Kind of Wa	specify ter:	$\frac{1}{2}$ 2.13	3.33 7.62	_					
	u/ft)		_							
	NI ESTA PERSONAL PORTA (NA PROPERTIE ESTA PROPERTIE DE SE ESTA PE	ctor and Well Technic	tana ay tahun yan da ang bigada baga yan baga	particular mesek permetas a bera prakti para tanah barah mesek persebah						
Business M	ame of Well Contractor	Georp	We	II Contractor's Licence No. 7   2   4						
Business A	ddress (Street Number/	/Name)		ℓ / / / / / / / / / / / / / / / / / / /	Comments:					
165	Shields a	Coord		larkham	_					
Province	Postal Code	UZ wrecord	adress A	asoil con	Well owner's Date	e Package Delive	red	Min	istry Us	e Only
Bus. Telepho	one No. (inc. area code)	Name of Well Technicia	n (Last Name,	First Name)	information   v	Y Y Y M M		Audit No.		2863
19015	9191017191191				delivered	e Work Complete				
Well Technici	ian's Licence No.  Signati	ure of Technician and/or		te Submitted  Y  Y  Y  M  M  D  D		96901	611	M/ Received	4R C 8	LUI3
0506E (2014/	11)			Ministry's Copy			<u> 7.</u> ][		ı's Printer f	for Ontario, 2014



C-7241 Z302863 MAR 08 2019

## Map: Well records

This map allows you to search and view well record information from reported wells in Ontario.

Full dataset is available in the Open Data catalogue (https://data.ontario.ca/dataset/well-records).

Go Back to Map

#### Well ID

Well ID Number: 7344968 Well Audit Number: *Z317325* Well Tag Number: *A274753* 

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

#### **Well Location**

Address of Well Location	128 Cardevco Rd
Township	HUNTLEY TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	Carp
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 423430.00 Northing: 5015991.00
Municipal Plan and Sublot Number	

#### Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
GREY	GRVL	STNS	LOOS	0 m	.31 m
BRWN	SAND	STNS	SOFT	.31 m	.91 m
GREY	LMSN	SNDS	LYRD	.91 m	4.57 m

## Annular Space/Abandonment Sealing Record

Dept Fron		Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 m		.31 m	CONCRETE Monument	
.31 n	n	1.22 m	BENTONITE	
1.22	m	4.57 m	FILTER SAND	

#### Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	
	Monitoring and Test Hole

#### Status of Well

Monitoring and Test Hole

#### **Construction Record - Casing**

rial Depth From		Depth To
--------------------	--	-------------

4.03 cm	PLASTIC	0 m	1.52 m

#### **Construction Record - Screen**

Outside Diameter	Material	Depth From	Depth To
4.82 cm	PLASTIC	1.52 m	4.57 m

#### Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7241

### **Results of Well Yield Testing**

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
45		45	
50		50	
60		60	

#### **Water Details**

Water Found at Depth	Kind

#### **Hole Diameter**

Depth From	Depth To	Diameter
	4.57 m	7.62 cm
0 m		11.43 cm

Audit Number: Z317325

Date Well Completed: August 28, 2019

Date Well Record Received by MOE: October 09, 2019

#### Related

How to use a Ministry of the Environment map (https://www.ontario.ca/page/how-use-ministry-environment-map#wells)

Technical documentation: Metadata record (https://data.ontario.ca/dataset/well-records/resource/3031344e-e3f2-48d5-888c-c1deadfd2f77)

Updated: October 18, 2021 Published: March 20, 2014



### **Environment Testing**

Client: Paterson Group

9 Auriga Dr

Nepean, ON

K2E 7T9

Mr. Alex Schopf Attention:

PO#:

55854

Invoice to: Paterson Group Report Number: 1986671 Date Submitted: 2022-09-23 Date Reported: 2022-09-29 Project: PH4600 COC #: 900644

Group	Analyte	MRL	Units	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.  Guideline	1652758 Water 2022-09-22 GW1	1652759 Water 2022-09-22 GW2
Anions	Cl	1 1	mg/L	AO 250	185	191
7 (110110	F	0.10	mg/L	MAC 1.5	0.41	0.42
	N-NO2	0.10	mg/L	MAC 1.0	<0.10	<0.10
	N-NO3	0.10	mg/L	MAC 10.0	<0.10	<0.10
	SO4	1	mg/L	AO 500	75	75
General Chemistry	Alkalinity as CaCO3	5	mg/L	OG 30-500	287	289
	Colour (Apparent)	2	TCU	AO 5	90*	86*
	Conductivity	5	uS/cm		1160	1180
	DOC	0.5	mg/L	AO 5	3.5	3.2
	pН	1.00		6.5-8.5	8.15	8.15
	Phenols	0.001	mg/L		<0.001	<0.001
	S2-	0.01	mg/L	AO 0.05	0.02	0.02
	TDS (COND - CALC)	1	mg/L	AO 500	754*	767*
	Turbidity	0.1	NTU	AO 5	13.2*	11.6*
Hardness	Hardness as CaCO3	1	mg/L	OG 80-100	457*	462*
Hydrocarbons	F1 (C6-C10)	20	ug/L		<20	<20
	F1-BTEX (C6-C10)	20	ug/L		<20	<20
	F2 (C10-C16)	20	ug/L		<20	<20
	F3 (C16-C34)	50	ug/L		<50	<50
	F4 (C34-C50)	50	ug/L		<50	<50
Indices/Calc	Ion Balance	0.01			1.01	1.01
Metals	Ag	0.0001	mg/L		<0.0001	<0.0001
	Al	0.01	mg/L	OG 0.1	<0.01	<0.01
	As	0.001	mg/L	IMAC 0.01	<0.001	<0.001
	В	0.01	mg/L	IMAC 5.0	0.02	0.02

#### Guideline = ODWSOG

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

<sup>\* =</sup> Guideline Exceedence



### **Environment Testing**

Client: Paterson Group

9 Auriga Dr

Nepean, ON

K2E 7T9

Attention: Mr. Alex Schopf

PO#: 55854

Invoice to: Paterson Group

Report Number: 1986671
Date Submitted: 2022-09-23
Date Reported: 2022-09-29
Project: PH4600
COC #: 900644

				Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1652758 Water 2022-09-22 GW1	1652759 Water 2022-09-22 GW2
Group	Analyte	MRL	Units	Guideline		
Metals	Ва	0.01	mg/L	MAC 1.0	0.58	0.59
	Be	0.0005	mg/L		<0.0005	<0.0005
	Са	1	mg/L		127	129
	Cd	0.0001	mg/L	MAC 0.005	<0.0001	<0.0001
	Со	0.0002	mg/L		<0.0002	<0.0002
	Cr	0.001	mg/L	MAC 0.05	<0.001	<0.001
	Cu	0.001	mg/L	AO 1	<0.001	<0.001
	Fe	0.03	mg/L	AO 0.3	1.34*	1.21*
	Hg	0.0001	mg/L	MAC 0.001	<0.0001	<0.0001
	K	1	mg/L		3	3
	Mg	1	mg/L		34	34
	Mn	0.01	mg/L	AO 0.05	0.13*	0.13*
	Мо	0.005	mg/L		<0.005	<0.005
	Na	1	mg/L	AO 200	79	82
	Ni	0.005	mg/L		<0.005	<0.005
	Pb	0.001	mg/L	MAC 0.010	<0.001	<0.001
	Sb	0.0005	mg/L	IMAC 0.006	<0.0005	<0.0005
	Se	0.001	mg/L	MAC 0.05	<0.001	<0.001
	Sr	0.001	mg/L		0.720	0.724
	TI	0.0001	mg/L		<0.0001	<0.0001
	U	0.001	mg/L	MAC 0.02	<0.001	<0.001
	V	0.001	mg/L		<0.001	<0.001
	Zn	0.01	mg/L	AO 5	<0.01	<0.01
Microbiology	Escherichia Coli	0	ct/100mL	MAC 0	0	0
5,	Total Coliforms	0	ct/100mL	MAC 0	0	0

#### Guideline = ODWSOG

\* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



### **Environment Testing**

Client: Paterson Group

9 Auriga Dr

Nepean, ON K2E 7T9

Attention: Mr. Alex Schopf

PO#: 55854

Invoice to: Paterson Group

Report Number: 1986671
Date Submitted: 2022-09-23
Date Reported: 2022-09-29
Project: PH4600
COC #: 900644

				Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1652758 Water 2022-09-22 GW1	1652759 Water 2022-09-22 GW2
Group	Analyte	MRL	Units	Guideline		
Nutrients	N-NH3	0.020	mg/L		0.140	0.130
	Total Kjeldahl Nitrogen	0.100	mg/L		0.358	0.188
PHC Surrogate	Alpha-androstrane	0	%		101	103
Subcontract	Tannin & Lignin	0.1	mg/L		1.3	1.2
VOCs Surrogates	1,2-dichloroethane-d4	0	%		106	112
	4-bromofluorobenzene	0	%		82	82
	Toluene-d8	0	%		96	93
Volatiles	1,1,1,2-tetrachloroethane	0.5	ug/L		<0.5	<0.5
	1,1,1-trichloroethane	0.4	ug/L		<0.4	<0.4
	1,1,2,2-tetrachloroethane	0.5	ug/L		<0.5	<0.5
	1,1,2-trichloroethane	0.4	ug/L		<0.4	<0.4
	1,1-dichloroethane	0.4	ug/L		<0.4	<0.4
	1,1-dichloroethylene	0.5	ug/L	MAC 14	<0.5	<0.5
	1,2-dichlorobenzene	0.4	ug/L	MAC 200	<0.4	<0.4
	1,2-dichloroethane	0.5	ug/L	IMAC 5	<0.5	<0.5
	1,2-dichloropropane	0.5	ug/L		<0.5	<0.5
	1,3,5-trimethylbenzene	0.3	ug/L		<0.3	<0.3
	1,3-dichlorobenzene	0.4	ug/L		<0.4	<0.4
	1,3-Dichloropropylene (cis+trans)	0.05	ug/g		<0.05	<0.05
	1,4-dichlorobenzene	0.4	ug/L	MAC 5	<0.4	<0.4
	Acetone	30	ug/L		<30	<30
	Benzene	0.5	ug/L	MAC 1	<0.5	<0.5
	Bromodichloromethane	0.3	ug/L		<0.3	<0.3
	Bromoform	0.4	ug/L		<0.4	<0.4
	Bromomethane	0.5	ug/L		<0.5	<0.5

Guideline = ODWSOG

\* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range



### **Environment Testing**

Client: Paterson Group

9 Auriga Dr

Nepean, ON

K2E 7T9

Attention: Mr. Alex Schopf

PO#: 55854

Invoice to: Paterson Group

Report Number: 1986671
Date Submitted: 2022-09-23
Date Reported: 2022-09-29
Project: PH4600
COC #: 900644

				Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1652758 Water 2022-09-22 GW1	1652759 Water 2022-09-22 GW2
Group	Analyte	MRL	Units	Guideline		
Volatiles	c-1,2-Dichloroethylene	0.4	ug/L		<0.4	<0.4
	c-1,3-Dichloropropylene	0.5	ug/L		<0.5	<0.5
	Carbon Tetrachloride	0.2	ug/L	MAC 2	<0.2	<0.2
	Chloroethane	0.5	ug/L		<0.5	<0.5
	Chloroform	0.5	ug/L		<0.5	<0.5
	Dibromochloromethane	0.3	ug/L		<0.3	<0.3
	Dichlorodifluoromethane	0.5	ug/L		<0.5	<0.5
	Dichloromethane	4.0	ug/L	MAC 50	<4.0	<4.0
	Ethylbenzene	0.5	ug/L	MAC 140	<0.5	<0.5
	Ethylene Dibromide	0.2	ug/L		<0.2	<0.2
	Hexane	5	ug/L		<5	<5
	m/p-xylene	0.4	ug/L		<0.4	<0.4
	Methyl Ethyl Ketone (MEK)	10	ug/L		<10	<10
	Methyl Isobutyl Ketone (MIBK)	10	ug/L		<10	<10
	Methyl Tert Butyl Ether (MTBE)	2	ug/L	AO 15	<2	<2
	Monochlorobenzene	0.5	ug/L	MAC 80	<0.5	<0.5
	o-xylene	0.4	ug/L		<0.4	<0.4
	Styrene	0.5	ug/L		<0.5	<0.5
	t-1,2-Dichloroethylene	0.4	ug/L		<0.4	<0.4
	t-1,3-Dichloropropylene	0.5	ug/L		<0.5	<0.5
	Tetrachloroethylene	0.3	ug/L	MAC 10	<0.3	<0.3
	Toluene	0.4	ug/L	MAC 60	<0.4	<0.4
	Trichloroethylene	0.3	ug/L	MAC 5	<0.3	<0.3
	Trichlorofluoromethane	0.5	ug/L		<0.5	<0.5
	Vinyl Chloride	0.2	ug/L	MAC 1	<0.2	<0.2

#### Guideline = ODWSOG

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

<sup>\* =</sup> Guideline Exceedence



**Environment Testing** 

Client: Paterson Group

9 Auriga Dr

Nepean, ON

K2E 7T9

Mr. Alex Schopf Attention:

PO#: 55854

Invoice to: Paterson Group Report Number: 1986671 Date Submitted: 2022-09-23 Date Reported: 2022-09-29 Project: PH4600 COC #: 900644

				Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1652758 Water 2022-09-22 GW1	1652759 Water 2022-09-22 GW2
Group	Analyte	MRL	Units	Guideline		
Volatiles	Xylene; total	0.5	ug/L	MAC 90	<0.5	<0.5

Guideline = ODWSOG

\* = Guideline Exceedence

Results relate only to the parameters tested on the samples submitted. Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

## patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

**SOIL PROFILE AND TEST DATA** 

Geotechnical Investigation

Prop. Industrial Redevelopment - 135 C

Prop. Industrial Redevelopment - 135 Cardevco Road Carp, Ontario

**DATUM** Geodetic FILE NO. **PG6018 REMARKS** HOLE NO. TP 1-21 **BORINGS BY** Backhoe DATE November 12, 2021 **SAMPLE** Pen. Resist. Blows/0.3m Piezometer Construction STRATA PLOT **DEPTH** ELEV. **SOIL DESCRIPTION**  50 mm Dia. Cone (m) (m) RECOVERY N VALUE or RQD NUMBER Water Content % **GROUND SURFACE** 80 20 0+118.65Asphaltic concrete 0.09 G 1 FILL: Crushed stone 0.10 FILL: Brown silty sand with crushed G 2 stone, gravel, occasional cobbles <u>0.60</u> Rigid insulation 0.70 G 3 1+117.65 Compact to dense, brown SILTY SAND 1.80 End of Test Pit Bottom of thickened concrete slab encountered at 0.56m depth. Underside of 100mm dia. PVC drainage pipe at 0.56m depth. (TP dry upon completion) 40 60 80 100 Shear Strength (kPa) ▲ Undisturbed △ Remoulded

## patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

**SOIL PROFILE AND TEST DATA** 

Geotechnical Investigation

Prop. Industrial Redevelopment - 135 Cardevco Road Carp, Ontario

▲ Undisturbed

△ Remoulded

**DATUM** Geodetic FILE NO. **PG6018 REMARKS** HOLE NO. TP 2-21 **BORINGS BY** Backhoe DATE November 12, 2021 **SAMPLE** Pen. Resist. Blows/0.3m Piezometer Construction STRATA PLOT DEPTH ELEV. **SOIL DESCRIPTION**  50 mm Dia. Cone (m) (m) RECOVERY N VALUE or RQD NUMBER Water Content % **GROUND SURFACE** 80 0+118.67**TOPSOIL** 0.10 G 1 FILL: Brown silty sand with crushed stone, gravel and cobbles, trace asphalt 0.60 Rigid insulation 0.70 FILL: Crushed stone 2 1.00 1 + 117.67Compact to dense, brown SILTY SAND G 3 2+116.672.10 End of Test Pit Bottom of thickened concrete slab encountered at 0.56m depth. Underside of 100mm dia. PVC drainage pipe at 0.56m depth. (TP dry upon completion) 40 60 80 100 Shear Strength (kPa)

## patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

### **SOIL PROFILE AND TEST DATA**

Geotechnical Investigation
Prop. Industrial Redevelopment - 135 Cardevco Road
Carp, Ontario

**DATUM** Geodetic FILE NO. **PG6018 REMARKS** HOLE NO. TP 3-21 **BORINGS BY** Backhoe DATE November 12, 2021 **SAMPLE** Pen. Resist. Blows/0.3m Piezometer Construction STRATA PLOT **DEPTH** ELEV. **SOIL DESCRIPTION**  50 mm Dia. Cone (m) (m) RECOVERY N VALUE or RQD NUMBER Water Content % **GROUND SURFACE** 80 20 0+118.55**TOPSOIL** 0.12 **FILL:** Brown silty sand with crushed stone, gravel and cobbles, trace G 1 asphalt 0.60 Rigid insulation 0.70 1 + 117.55G 2 Compact to dense, brown SILTY SAND 1.60 End of Test Pit Bottom of thickened concrete slab encountered at 0.56m depth. Underside of 100mm dia. PVC drainage pipe at 0.56m depth. (TP dry upon completion) 40 60 80 100 Shear Strength (kPa) ▲ Undisturbed △ Remoulded

# patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

### **SOIL PROFILE AND TEST DATA**

Geotechnical Investigation Prop. Industrial Redevelopment - 135 Cardevco Road Carp, Ontario

<b>DATUM</b> Geodetic									FILE NO.	PG6018	
REMARKS									HOLE NO.	TP 4-21	
BORINGS BY Backhoe				D	ATE I	Novembe	r 12, 202	?1 		17 4-21	
SOIL DESCRIPTION	A PLOT			IPLE ≿	ы о	DEPTH (m)	ELEV. (m)		esist. Blow 0 mm Dia. (		Piezometer Construction
	STRATA	TYPE	NUMBER	% RECOVERY	N VALUE or RQD			0 <b>W</b>	/ater Conte		Piezon Constr
GROUND SURFACE				2	4	0-	118.77	20	40 60	80	
TOPSOIL 0.05 FILL: Crushed stone and gravel 0.20		X G	1								
FILL: Brown silty sand with gravel	$\bowtie$										
Compact to dense, brown SILTY SAND		X.G G X	3			2-	-117.77 -116.77				₹
End of Test Pit		-									
(Groundwater infiltration at 2.0m depth)											
								20 Shea ▲ Undistr	40 60 ar Strength urbed △ R	80 10 (kPa) emoulded	00

## patersongroup Consulting Engineers

**SOIL PROFILE AND TEST DATA** 

40

▲ Undisturbed

Shear Strength (kPa)

60

 $\triangle \ \ \text{Remoulded}$ 

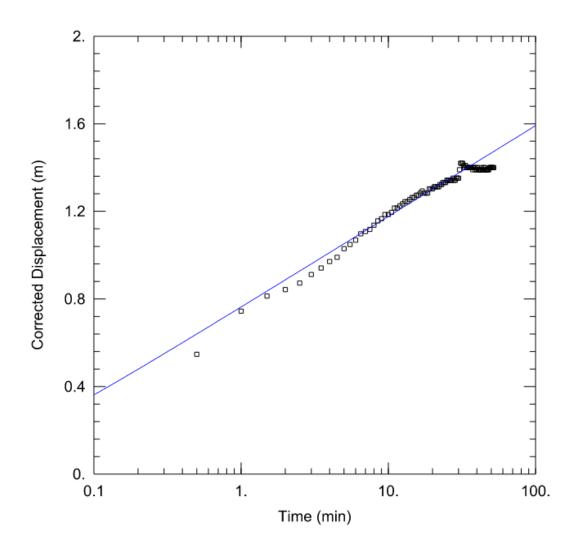
100

Geotechnical Investigation
Prop. Industrial Redevelopment - 135 Cardevco Road
Carp. Ontario

154 Colonnade Road South, Ottawa, Ontario K2E 7J5				Carp, Ontario						au	
DATUM Geodetic									FILE NO	D. PG6018	
REMARKS									HOLE N	IO. TP 5-21	
BORINGS BY Backhoe	1			D	ATE	Novembe	er 12, 202	21		17 3-21	1
SOIL DESCRIPTION	PLOT		SAN	/IPLE		DEPTH	ELEV.		Pen. Resist. Blows/0.3m  • 50 mm Dia. Cone		
	STRATA E	TYPE	NUMBER	% RECOVERY	VALUE r RQD	(m)	(m)			ontent %	Piezometer Construction
GROUND SURFACE	STF	Ţ	NON	RECC	N O r			20	40	60 80	<del> </del>
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\					0-	118.31	20	1		
Asphaltic concrete 0.05 FILL: Crushed stone 0.15		G G	1								
GLACIAL TILL: Very dense, brown silty sand with gravel, cobbles and boulders		∑ G	2			1-	-117.31				
2.20						2-	-116.31				<u>▼</u>
End of Test Pit		_									1
Practical refusal to excavation at 2.20m depth											
(Groundwater infiltration at 1.9m depth)											

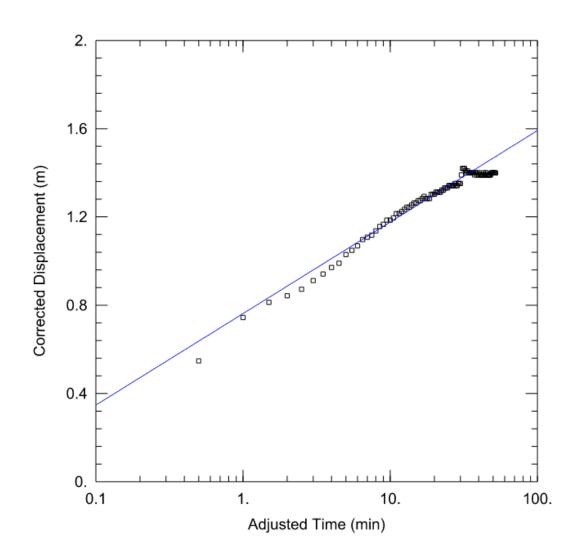
### **Pumping Test Analysis Report**

File No.	PH4600	Well ID:	TW1
Date:	Thursday, September 27	Solution Method:	Theis
Client:	Premier Bus Lines. Ltd	Transmissitivity (m2/day):	17.17
Site Address:	135 Cardevco Rd, Carp	Discharge Rate (L/min)	27
Project:	Site Plan Control Application	Analysis performed by:	AS



### **Pumping Test Analysis Report**

File No.	PH4600	Well ID:	TW1
Date:	Thursday, September 27	Solution Method:	Cooper-Jacob
Client:	Premier Bus Lines. Ltd	Transmissitivity (m2/day):	17.17
Site Address:	135 Cardevco Rd, Carp	Discharge Rate (L/min)	27
Project:	Site Plan Control Application	Analysis performed by:	AS



### **Pumping Test Analysis Report**

File No. PH4600

Date: Thursday, September 27
Client: Premier Bus Lines. Ltd
Site Address: 135 Cardevco Rd, Carp
Project: Site Plan Control Application

Summary Table:		
Solution Method:	Well ID:	Transmissitivity (m2/day):
Theis	TW1	17.17
Cooper-Jacob	TW1	17.17
Average:		17.17

patersongroup 135 Cardevco, Carp, ON

PREDICTIVE NITRATE IN	<b>ИРАСТ</b>	ASSESS	SEMENT
(Completed using the site	specific	sewage sy	vstem)
Infiltration Factors			
Topography		0.20	
Soil		0.40	
Cover		0.10	
Total		0.70	
Site Characteristics			
Area of Site :		2024	$m^2$
Total of roof areas:		277	$m^2$
Total area of paved driveway areas:		667	$m^2$
Roof + paved driveway areas		944	$m^2$
Impervious Area		944	$m^2$
Percent Impervious Area =		47	%
Infiltration Area =		1080	$m^2$
Septic Effluent			
Concentration of Effluent (Cs) =		18.44	mg/L
Daily Sewage Flow (Qs)=		0.876	$m^3$
See Notes below.			
Infiltration Calculation			
Nitrate concentration in precipitation (C <sub>i</sub> ) =		0	mg/L
Surplus Water (Environment Canada)		379	mm/yr
Factored Water Surplus =		265	mm/yr
Infiltration % due to stormwater management measures		-	%
Infiltration rate from stormwater management measures =		0	mm/yr
Infiltration Flow Entering the System (Q <sub>i</sub> ) =		1	m³/day
Mass Balance Model (MOEE, 1995)	0 1.0		
$C_{T} = (Q_{b}C_{b} + Q_{e}C_{e} + Q_{i}C_{i})/(Q_{b} + Q_{e} + Q_{i}) :$	= Cumulative		
Q <sub>b</sub> = flow entering the system across the upgradient area		0	m <sup>3</sup> /day
C <sub>b</sub> = background nitrate concentration		0	mg/L
Q <sub>e</sub> = flow entering the system from the septic drainfield		0.876	m <sup>3</sup> /day
C <sub>e</sub> = concentration of nitrates in the septic effluent		18.444	mg/L
$Q_i$ = flow entering the system from infiltration		1	m <sup>3</sup> /day
C <sub>i</sub> = Concentration of nitrates in the infiltrate	_	0	mg/L
	<b>C</b> <sub>T</sub> =	9.73	mg/L
Notes: Site characteristic values were measured as approximate		de contrata de la cita de	D-#- 0 FI-

Notes: Site characteristic values were measured as approximate values from the available site plan. Daily Sewage Flow volume was calculted by Paterson Group.

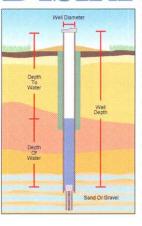
### patersongroup

### 135 Cardevco Road PH4600

TW1	inputs		
pН	8.15	A	0.19
TDS	767	В	2.37
Hardness	462	С	2.26
Alkalinity	289	D	2.46
Temp.	10.6		
		pHs =	7.133434026

Langel	ier Saturation Index (LSI)	Calculation	(La	angelier, 1936)	
	LSI = pH - pHs	A = (Log10 [TDS]	A = (Log10 [TDS] - 1) / 10		
	pHs = (9.3 + A + B) - (C + D)	B = -13.12 x Log1	B = -13.12 x Log10 (oC + 273) + 34.55		
	Where:	C = Log10 [Ca2+	C = Log10 [Ca2+ as CaCO3] - 0.4		
	D = Log10 [alkalinity as CaCO3]				
			LSI =	1.0	
LSI	Effect				
0.5 to 2	Water is super saturated and tends to precipitate a scale layer of calcium carbonate (scale forming but non-corrosive)				
0 to 0.5	Water is super saturated and tends to precipitate a scale layer of calcium carbonate (slightly scale forming and corrosive).				
0	Water is saturated (in equilibrium) with calcium carbonate. A scale layer of calcium carbonate is neither precipitated nor dissolved.				
0 to -0.5	Water is under saturated and tends to dissolve solid calcium carbonate (slightly corrosivebut non-scale forming).				
-0.5 to -2	Water is under saturated and tends to dissolve sol	id calcium carbonate (seriously co	rrosive).		

# Disinfection Instruction Sheet



If your drinking water continues to test positive on repeated submissions, consult your local health unit, which can help you interpret the results of your tests and provide you with advice on what measures you can take to safeguard your drinking water.

The first step in identifying the reason for repeated adverse water quality is to conduct a visual inspection of your well. Start with a close look at your well. The area around it should be

clear of any potential contaminant sources, such as pets, lawn care products, and gardens. Once you're satisfied that the area around your well is okay, take a good, close look at the well itself. If you have an older well, make sure that the cap and the sealant around the well casing isn't cracked or damaged. If it is, you need to fix or replace it right away. If the source of the problem can't be detected, consult a licensed well contractor right away to identify the source of the problem and eliminate it. You can save yourself a lot

a licensed well contractor right away to identify the source of the problem and eliminate it. You can save yourself a lot of money by doing this instead of rushing out to buy a home treatment device that may be expensive to install, operate, and maintain. And it may not eliminate the source of your trouble.

(If you have a cistern, please talk to your public health unit about disinfection requirements.)

- 1. Measure the diameter of the well.
- 2. Measure the well depth and the static or resting water level, then calculate the depth of water in the well.
- 3. Using the table on this sheet, measure out the amount of bleach needed. (The table gives the volume of bleach needed for different well sizes.) Then, pour the mixture into your well.
- 4. If possible, mix the water in the well. This can be accomplished by attaching a hose to a tap, running water from the well, through the hose and back into the well.
- 5. After adding chlorine to the well, remove or bypass any carbon filters that are in the system for water treatment. If you don't, these filters will remove the chlorine from the water, and any pipes beyond the filter will not get disinfected. Replace with new filters after chlorination to avoid reintroducing bacteria into the system.
- 6. Run water at every faucet in the house (and barn, if you have one) until a strong chlorine odour is detected. Be aware that your nose may lose its ability to detect chlorine.
- 7. If there is no chlorine smell or it is very weak, add more bleach to the well and repeat Step 6 above.

10. Let the chlorinated water

stand in the system for at

11. Clear chlorine from the well by running an outside hose to the ground surface.

Then, run clear water through

no longer smells of chlorine.

12. Avoid putting too much

chlorine into the septic system

because the bacteria needed

for septic decomposition may

13. Do not drink the water

without boiling it until test

results show the water is

safe to drink.

the faucets until the water

least 12 hours.

- 8. Drain the water heater and fill with chlorinated water.
- 9. Backflush the water softener and all water filters (except carbon filters).

Casing Di	ameter	Volume of Unscented Blead (5.25% solution)		
es	Inches	Millilitres		
	2	6		
	4	30		
	6	60		
	8	100		
	10	200		
	12	250		
	16	400		
	20	650		
	24	900		
	36	2000 (2 litres)		

**For example:** If you have 6 metres (20 feet) of water in your well and it has a casing diameter of 100 mm or 4 inches, you would add 60 mm or 2 fluid ounces of bleach.

48

Volume of Bleach to Add for Every 3 Me

\* For questions or more information on how to disinfect your well, contact your local health unit.

### For more information

### Ontario Government Ministry Abbreviations

Ministry of Health and Long-Term Care MOHLTC (also MOH)

Ministry of the Environment MOE (also MOEE)

Millimetr

50

100

150

200

250

 $\frac{300}{400}$ 

500 600

900

1200

Ontario Ministry of Agriculture and Food OMAF (also OMAFRA)

### Ontario Government Information Lines

MOE Public Information Centre: 1-800-565-4923

MOE Water Well Records: 1-888-396-9355

MOHLTC INFOline: 1-800-268-1154

OMAF Agricultural Information Contact Centre: 1-877-424-1300

### Ontario Government Web Sites

MOE: www.ene.gov.on.ca

MOHLTC: www.health.gov.on.ca

OMAF: www.gov.on.ca/omaf

### Publications available on-line

Health Canada: www.hc-sc.gc.ca

3600 (3.6 litres)

- ${\color{red} \bullet}\ A\ Guide\ to\ Well\ Water\ Treatment\ and\ Maintenance;$
- Water treatment devices for disinfection of drinking water.

### MOHLTC: www.health.gov.on.ca

- How to use water safely during a "Boil Water Advisory";
- E. coli Bacteria;
- List of Public Health Units in Ontario.

### OMAF: www.gov.on.ca/omaf

- Assessing the Potential for Ground Water Contamination on Your Farm, Publication 97-017;
- Best Management Practices: Water Wells, OMAFRA and Agriculture and Agri-Food Canada, 2003 (to order).

### MOE: www.ene.gov.on.ca

- Important Facts About Water Well Construction, Publication 3788;
- Water Wells and Groundwater Supplies: The Protection of Water Quality in Bored and Dug Wells, Information Sheet PIB 601b;
- Water Wells and Groundwater Supplies: The Protection of Water Quality in Drilled Wells, Information Sheet PIB 602b.



# WASTEWATER TECHNOLOGY

NSF/ANSI Standard 245 - Wastewater Treatment Systems – Nitrogen Reduction

**Final Report:** 

Premier Tech Aqua
Ecoflo Coco Filter ECDn Model Series

15/03/055/0030



NSF International
789 N. Dixboro Road
PO Box 130140
Ann Arbor, Michigan 48113-0140 USA

# Evaluation Report: Ecoflo Coco Filter ECDn Model Series Wastewater Treatment System

Under the provisions of NSF/ANSI Standard 245 Wastewater Treatment Systems – Nitrogen Reduction

### **EXECUTIVE SUMMARY**

Testing of the Ecoflo Coco Filter ECDn Model Series was conducted under the provisions of NSF/ANSI Standard 245 for Residential Wastewater Treatment Systems (April 2013 revision). NSF/ANSI Standard 245 was developed by the NSF Joint Committee on Wastewater Technology.

The performance evaluation was conducted at the NSF Wastewater Technology Testing Facility located in Waco, Texas, using wastewater diverted from the Waco municipal wastewater collection system, which serves predominantly residential development. The evaluation consisted of sixteen weeks of dosing at design flow, seven and one half weeks of stress testing and an additional two and one half weeks of dosing at design flow. The stress weeks were repeated due to sampling error and the test was extended for 35 weeks. Sampling started in the spring and continued through summer and fall, covering a range of operating temperatures.

Over the course of the evaluation, the average influent Total Nitrogen was 40.4 mg/L, ranging between 20.9 and 77.4 mg/L. The Ecoflo Coco Filter ECDn Model Series produced an average effluent Total Nitrogen of 18.6 mg/L, which resulted in a 53.89% reduction in the influent Total Nitrogen. The Ecoflo Coco Filter ECDn Model Series produced an effluent that successfully met the performance requirements established by NSF/ANSI Standard 245.

The Ecoflo Coco Filter ECDn Model Series produced an effluent that successfully met the performance requirements established by NSF/ANSI Standard 40 for Class I effluent:

The maximum 7-day arithmetic mean was 13 mg/L for CBOD<sub>5</sub> and 9 mg/L for total suspended solids, both below the allowed maximums of 40 and 45 mg/L, respectively. The maximum 30-day arithmetic mean was 5 mg/L for CBOD<sub>5</sub> and 5 mg/L for total suspended solids, both below the allowed maximums of 25 mg/L and 30 mg/L, respectively.

The effluent pH during the entire evaluation ranged between 6.6 and 7.3, within the required range of 6.0 to 9.0. The Ecoflo Coco Filter ECDn Model Series met the requirements for noise levels (less than 60 dbA at a distance of 20 feet), color, threshold odor, oily film and foam.

### **PREFACE**

Performance evaluation of nitrogen reduction for residential wastewater treatment systems is achieved within the provisions of NSF/ANSI Standard 245: Wastewater Treatment Systems – Nitrogen Reduction (April 2013), prepared by the NSF Joint Committee on Wastewater Technology and adopted by the NSF Board of Trustees.

Conformance with the Standard is recognized by issuance of the NSF Mark. This is not to be construed as an approval of the equipment, but a certification of the data provided by the test and an indication of compliance with the requirements expressed in the Standard.

Systems conforming to Standard 245 are classified as having met the requirements of the Standard. Permission to use the NSF Mark is granted only after the equipment has been tested and found to perform satisfactorily, and all other requirements of the Standard have been satisfied. Continued use of the Mark is dependent upon evidence of compliance with the Standard and NSF General and Program Specific Policies, as determined by periodic reinspection of the equipment at the factory, distributors and reports from the field.

NSF Standard 245 requires the testing laboratory to provide the manufacturer of a residential wastewater treatment system a report including significant data and appropriate commentary relative to the performance evaluation of the plant. NSF policy specifies provision of performance evaluation reports to appropriate state regulatory agencies at publication. Subsequent direct distribution of the report by NSF is made only at the specific request of or by permission of the manufacturer.

The following report contains results of the entire testing program, a description of the plant, its operation and key process control equipment, and a narrative summary of the test program, including test location, procedures and significant occurrences. The plant represented herein reflects the equipment authorized to bear the NSF Mark.

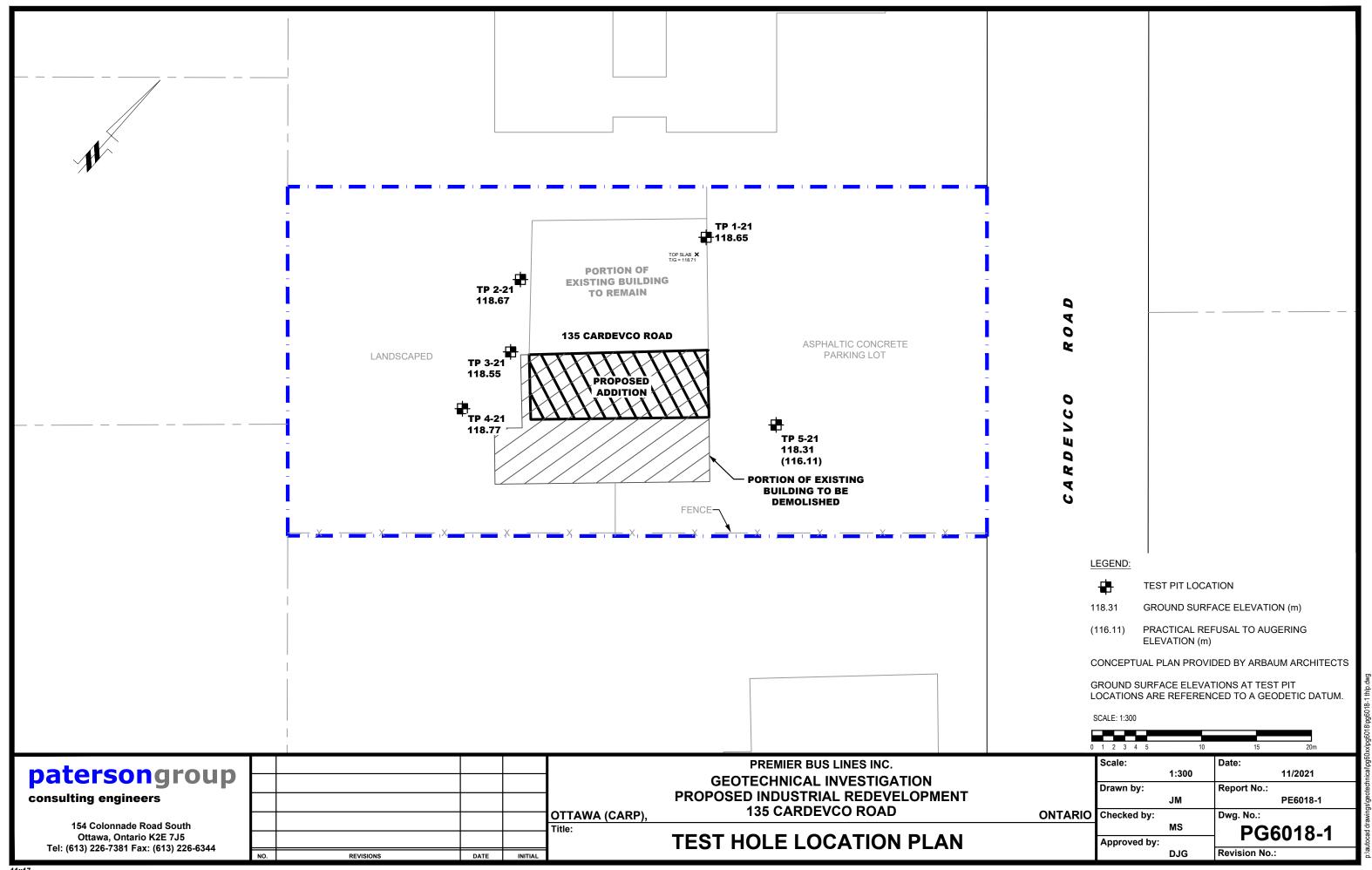
### **CERTIFICATION**

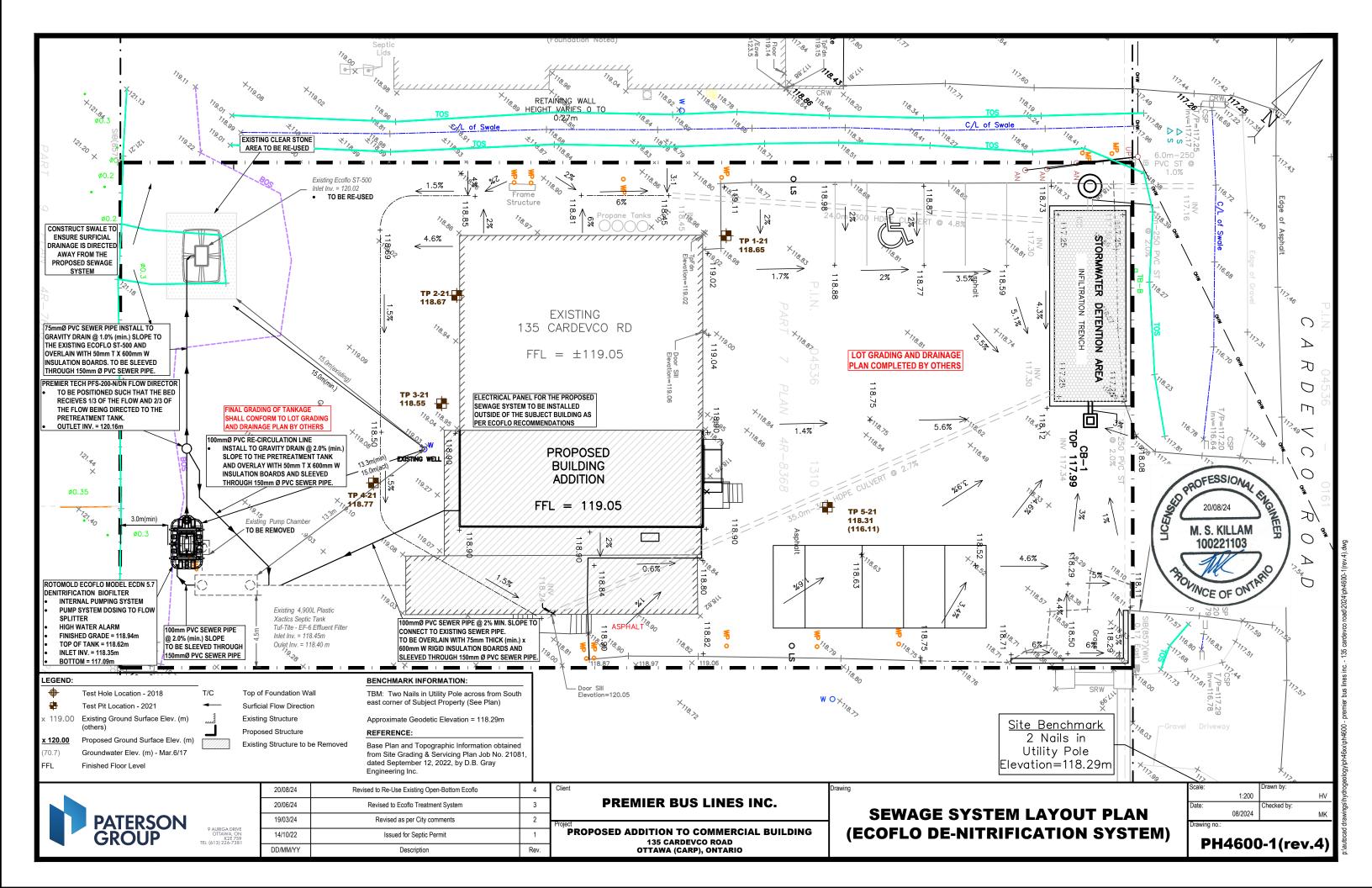
NSF International has determined by performance evaluation under the provisions of NSF/ANSI Standard 245 (revised April 2013) that the Model Number Ecoflo Coco Filter ECDn Model Series manufactured by Premier Tech Aqua has fulfilled the requirements of NSF/ANSI Standard 245. The Ecoflo Coco Filter ECDn Model Series has therefore been authorized to bear the NSF Mark so long as Manufacture continues to meet the requirements of Standard 245 and NSF General and Program Specific Policies.

General performance evaluation and stress tests were performed at the Wastewater Technology Site located at the NSF Wastewater Technology Testing Facility located in Waco, Texas. The raw wastewater used in the test was residential wastewater. The characteristics of the wastewater during the test are included in the tabulated data of this report.

The observations and analyses included in this report are certified to be correct and true copies of the data secured during the performance tests conducted by NSF on the wastewater treatment system described herein. The manufacturer has agreed to present the data in this certification in its entirety whenever it is used in advertising, prospectuses, bids or similar uses.

Jenny Oorbeck General Manager Sustainability Sharon Stiener Business Unit Manager Wastewater





SUBJECT DRAWING SHALL BE READ IN CONJUNCTION WITH PATERSON GROUP DRAWING PH4600-1(rev.4)

PROPOSED GRADING SHALL SUPPORT LOT GRADING AND DRAINAGE PLAN BY OTHERS.

AREA HAS BEEN ALTERED FROM THE ORIGINAL GRADE EXISTING 100mm Ø VENT TO SUPPORT THE INSTALLATION OF THE EXISTING PIPE TO BE REMOVED SEWAGE SYSTEM (O.S.S.O. PERMIT No 18-565) 38mmØ PVC SCH 40 FORCEMAIN TO BE REMOVED AND REPLACED WITH 75mmØ PVC SEWER PIPE INSTALLED AT 1.0% (min.) SLOPE FROM FLOW DIRECTOR AND SLEEVED THROUGH 150mmØ PVC SEWER PIPE INV= 120.02n NON-WOVEN GEOTEXTILE FABRIC CONSTRUCT SWALE TO DIRECT SURFACE WATER AROUND BED ·1·0·m √ 119.05 EXISTING WASHED SEPTIC STONE 7118.85 200mm EXISTING GRADE = 101.0 to 99.0m± EXISTING LEACHING BED SAND FILL (EST. T≤8 min/cm) SAND SUBGRADE

### **PROFILE**

### **NOTES:**

#### 1) ESTIMATE OF DAILY SEWAGE FLOW (Q)

THE PROPOSED SEWAGE SYSTEM REPLACEMENT, HAS BEEN DESIGNED TO SUIT THE NITRATE . REDUCTION REQUIREMENTS OF PROPOSED ADDITION/RENOVATION WORKS OF THE BUILDING. • THE DESIGN FLOW RATE HAS NOT BEEN INCREASED FROM THE EXISTING SEWAGE SYSTEM AS PER O.S.S.O. PERMIT No. 18-565, HOWEVER, BASED ON DISCUSSION WITH O.S.S.O. IT HAS BEEN DISCUSSED THAT A MORE ACCURATE METHOD OF FLOW RATE CALCULATION BE USED. THE BUILDING CONSISTS OF A MAINTENANCE GARAGE USAGE WHICH CAN BE CONSIDERED TO BE MOST SIMILAR TO FACTORY TYPE FLOWS. THE SEWAGE FLOW FOR THE EXISTING OCCUPANCY HAS BEEN CALCULATED AS FOLLOWS.

- No. OF EMPLOYEES = 2 x 75 L/DAY = 150 L/DAY
- OFFICE SPACE 90m2 = (90m2/9.3) x 75 L/DAY = 726 L/DAY

DESIGN SEWAGE FLOW RATE = 876 L/DAY

### 2) SOIL CONDITIONS

SOILS INFORMATION GATHERED BY PATERSON GROUP INC. ON SEPTEMBER 12, 2017 & NOVEMBER 4) TYPE 'A' DISPERSAL BED SIZING REQUIREMENTS 12. 2021

TH 1-18, ELE	V. 119.09m	TP 2-21, ELE	EV. 118.67m	TP 3-21, ELE	V. 118.55m
0-0.29 0.29-1.20	GRAVEL SAND, TRACE GRAVEL	0-0.10 0.10-0.60 0.60-0.70 0.70-1.00 1.00-2.10	TOPSOIL FILL: SISA, GRAVEL RIGID INSULATION FILL: CRUSHED STONE BROWN SILTY SAND	0-0.12 0.12-0.60 0.60-0.70 0.70-1.60	TOPSOIL FILL: SISA CRUSHED STONE RIGID INSULATION BROWN SILTY SAND
- TH DRY UPO	ON COMPLETION	- TP DRY UP	PON COMPLETION	- TP DRY UP	ON COMPLETION

### PRETREATMENT TANK

EXISTING 4.900 L PLASTIC XACTICS TANK c/w TUF-TITE EF-6 EFFLUENT FILTER SHALL BE PUMPED AND RE-USED

### 4) TREATMENT UNIT

- THE TREATMENT UNIT SHALL CONSIST OF AN ECOFLO MODEL ECDN5.7 DE-NITRIFICATION ROTOMOLD BIOFILTER, MAXIMUM TREATMENT CAPACITY = 1,755L/D.
- THE TREATMENT UNIT SHALL BE INSTALLED IN SERIES AND DOWNSTREAM FROM THE PRETREATMENT TANK
- CONNECT PRETREATMENT TANK TO TREATMENT UNIT WITH 100mm PVC SEWER PIPE INSTALLED AT 2.0% MINIMUM SLOPE.
- THE TREATMENT UNIT SHALL PRODUCE TERTIARY TREATMENT QUALITY EFFLUENT IN ACCORDANCE TO ITEM 3 OF TABLE 8.6.2.2.A OF THE ONTARIO BUILDING CODE.
- THE TREATMENT UNIT MUST BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS BY A CERTIFIED INSTALLER.
- THE TREATMENT UNIT SHALL BE BACKFILLED AND COMPACTED, IN LIFTS, WITH SELECT GRANULAR FILL. SUCH AS SAND OR CLEAR STONE
- THE TOP OF THE TREATMENT UNIT MUST EXTEND TO THE GROUND SURFACE.
- THE TREATMENT UNIT SHALL BE FOUIPPED WITH A SINGLE TIME OPERATED FEELLENT PLIMP WHICH WILL PUMP THE EFFLUENT TO A PREMIER TECH MODEL PFS-200N/DN SPLITTER VALVE. (DENITRIFICATION UNIT).

### 5) FLOW SPLITTER

- THE SPLITTER VALVE SHALL BE INSTALLED LEVEL ON A BED OF COMPACTED SAND.
- THE SPLITTER VALVE CONTAINS TWO (2) OUTLETS. ONE OUTLET RE-CIRCULATES 2/3 OF THE EFFLUENT TO THE PRIMARY CHAMBER OF THE TANK, VIA GRAVITY, USING A 100mmØ PVC SEWER PIPE. THE OTHER OUTLET DISCHARGES 1/3 OF THE EFFLUENT, VIA GRAVITY, USING A 75mmØ SEWER PIPE
- 75mmØ SEWER PIPE SHALL BE INSTALLED TO GRAVITY DRAIN @ 1.0% (min.) SLOPE TO THE EXISTING ECOFLO ST-500 AND SHALL BE OVERLAIN WITH 50mm T x 600mm W RIGID INSULATION •
- THE PUMP SHALL BE OPERATED BY A PREMIER TECH MODEL DCU 100 TIME DOSING CONTROL PANEL
- A 38mmØ SCH40 PVC FORCEMAIN SHALL BE USED TO CARRY THE EFFLUENT FROM THE PUMP CHAMBER (LOCATED WITHIN TREATMENT UNIT) TO THE FLOW SPLITTER.
- THE FORCEMAIN SHALL BE INSTALLED TO GRAVITY DRAIN TO TREATMENT UNIT
- FORCEMAIN SHALL BE INSTALLED ON A 150mm THICK LAYER OF COMPACTED SAND BEDDING. •
- ALL PIPING SHALL BE SLEEVED THROUGH A 150mm PVC SEWER PIPE

- STONE AREA REQUIRED = Q/50 = 876/75 =11.7m<sup>2</sup>
- EXISTING STONE AREA PROVIDED = 5.4m x 4.4 = 23.8m<sup>2</sup>
- SAND AREA REQUIRED = 876(12)/850 = 12.4m<sup>2</sup> SAND AREA PROVIDED = 5.4m x 4.4m = 23.8m<sup>2</sup> + NATIVE

#### **EXISTING TYPE 'A' BED**

- EXISTING ECOFLO ST-500 BIOFILTER AND EXISTING CLEAR STONE AREA SHALL BE RE-USED. AS THE TYPE 'A' BED FOR THE PROPOSED SYSTEM ALTERATIONS.
- THE FINAL LANDSCAPED GRADING SHALL DIRECT SURFACE WATER AWAY FROM THE
- ENSURE THAT SURFACE WATER IS DIRECTED AWAY FROM THE BIOFILTER.

### MINIMUM CLEARANCE DISTANCE FROM LEACHING BED

- 3.0m FROM ANY PROPERTY LINE
- 5.0m FROM ANY STRUCTURE; 5.0m TO ANY STRUCTURE WITHOUT PERIMETER DRAINAGE
- 15.0m FROM ANY DRILLED WELL; 31.1m TO ANY DUG OR SANDPOINT WELL

### 10) MINIMUM CLEARANCE DISTANCE FROM TANK(S)

- 1.5m FROM ANY STRUCTURE
- 13.3m FROM SUBJECT DRILLED WELL AND 15.0m FROM ANY OTHER DRILLED WELL (AS PER EXISTING)
- 3.0m FROM ANY PROPERTY LINE

### 11) GENERAL

- FLECTRICAL PANEL FOR TANKAGE SHALL BE LOCATED OUTSIDE OF SUBJECT BUILDING NEAREST THE TANKAGE AS RECOMMENDED BY ECOFLO.
- SNOW STORAGE SHALL NOT BE PLACED OVER THE SEWAGE SYSTEM COMPONENTS. THE SEWAGE SYSTEM HAS NOT BEEN DESIGNED TO SUPPORT TRAFFIC LOADING, AND AS SUCH, THE RISK OF ANY VEHICULAR TRAFFIC SHOULD BE MINIMIZED WITH THE INSTALLATION OF PROTECTIVE BOLLARDS.

EXISTING GRADING IN PROPOSED LEACHING BED

- THE BACKFILLING OF THE SEWAGE SYSTEM SHOULD MINIMIZE THE RISK OF OVER COMPACTION WITH THE USE RUBBER TRACKED EQUIPMENT AND BY AVOIDING THE CREATION OF ANY CONSTRUCTION ROUTES OR PATHWAYS OVER THE SYSTEM
- THE BACKWASH WATERS FROM ANY WATER TREATMENT UNIT. SUCH AS WATER SOFTENER SHOULD NOT DISCHARGE INTO THE SEWAGE SYSTEM
- THE SEWAGE SYSTEM HAS BEEN DESIGNED TO ACCEPT ONLY WATER FROM DOMESTIC TYPE
- FIXTURES NO FLOOR DRAINS, WASHWATER, ETC ARE TO BE DIRECTED TO SYSTEM. CONTRACTOR SHALL BE QUALIFIED AND REGISTERED UNDER PART 8 OF THE ONTARIO
- BUILDING CODE. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST BY-LAWS, CODES AND REGULATIONS.
- CONTRACTOR SHALL REVIEW DRAWINGS IN DETAIL AND SHALL INFORM THE CONSULTANT OF ANY ERRORS AND/OR OMISSIONS ON DESIGN DRAWINGS IMMEDIATELY.
- CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND PROTECT ALL EXISTING UNDERGROUND SERVICES
- CONTRACTOR SHALL VISIT THE SITE AND REVIEW ALL DOCUMENTATION TO BECOME FAMILIAR WITH THE SITE AND SUBSURFACE SOIL CONDITIONS TO DETERMINE SUITABLE METHODS OF
- THE FIRM OF PATERSON GROUP INC. HAS PROVIDED DESIGN SERVICES ONLY FOR THE SUBJECT SEWAGE SYSTEM. THE DESIGN HAS BEEN CARRIED OUT IN ACCORDANCE WITH THE MANUFACTURER'S GUIDELINES AND OUR INTERPRETATION OF PART 8 OF THE ONTARIO BUILDING CODE.
- IF THIS FIRM IS TO COMPLETE ANY CONSTRUCTION INSPECTION(S), ADDITIONAL FEES MAY BE APPLIED. CONFIRMATION OF PAYMENT WILL BE REQUIRED PRIOR TO THE INSPECTION.
- THE TEST HOLE INFORMATION PROVIDED. IS INTENDED TO BE USED FOR DESIGN PURPOSES ONLY, AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. IF DISCREPANCIES ARE FOUND DURING THE CONSTRUCTION PROCESS, IT IS THE CLIENT'S RESPONSIBILITY TO CONTACT THIS FIRM TO MAKE ANY NECESSARY COMMENTS OR REVISIONS. ADDITIONAL REVISIONS ARE NOT CONSIDERED PART OF THE DESIGN WORKS AND WILL BE CONSIDERED AS AN ADDITIONAL COST
- REFER TO PATERSON GROUP DRAWING No. PH4600-1(rev.3) FOR THE SEWAGE SYSTEM



20/08/24	Revised to Re-Use Existing Ecoflo	4
20/06/24	Revised to Ecoflo Treatment Unit	3
19/03/24	Issued for Preliminary Review	2
14/10/22	Issued for Septic Permit	1
26/09/22	Issued for Preliminary Review	0
DD/MM/YY	DESCRIPTION	REV.

Consultant



Client:

### PREMIER BUS LINES INC.

### PROPOSED ADDITION TO **COMMERCIAL BUILDING**

135 CARDEVCO ROAD OTTAWA (CARP), ONTARIO

Drawing

### **SEWAGE SYSTEM DETAIL & NOTES**

Scale:	Drawn by:
N.T.S.	HV
Date: 08/2024	Checked by: MK

PH4600-2(rev.4)

p:\autocad drawings\hydrogeology\ph46xx\ph4600 - premier bus lines inc. - 135 cardevco road\2024\ph4600-2(rev.4).dwg