October 13, 2022



PH4600-LET.01

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

Attention: Eric Hochgeschurz

Subject: **Hydrogeological Assessment and Terrain Analysis**

135 Cardevco Road Ottawa (Carp), Ontario

Consulting Engineers

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

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INTRODUCTION

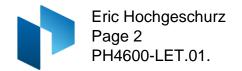
Further to your request, Paterson has conducted a Hydrogeological Assessment and Terrain Analysis in support of a Site Plan Control Application for the proposed commercial building renovation located at 135 Cardevco Road in Ottawa (Carp), Ontario.

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 renovation.

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 renovation. 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 Jan 21, 2022 attached for the proposed site location and site layout.

The subject site is currently serviced by an onsite sewage system and a 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 1,026 L/day. Please refer to Paterson Drawing PH4600-1(rev.01) – Sewage System Layout Plan dated October 2022 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 renovation.

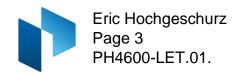
The suitability of the aquifer to supply the subject site was assessed using the methodology provided in City of Ottawa Hydrogeological and Terrain Analysis Guidelines (HTAG).

FIELDWORK PROGRAM

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.1) – 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 pump rate was maintained within 5% of the selected pump 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 8.5 times the maximum total daily design volume for the septic system during the 8 hour pumping test. 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.

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 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 Pump 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 m²/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.

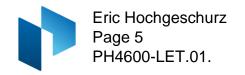
The pumping test results show that TW1 has a high yield to support the water demands that may be required. Overall maximum drawdown at a constant pumping rate for a period of 8 hours was approximately 4.3 m at approximately 2 hours into the pumping test (7% of the available drawdown). The final drawdown 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 8.5 times the maximum total daily design volume of water 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

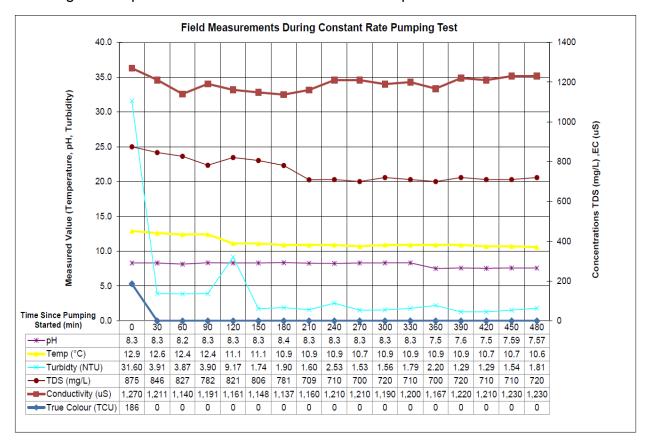


mapping website indicated that the wells were screened in limestone. Surrounding WWR's are attached to this report.

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					
		ODWS		TV	V1
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 ₃)	mg/L	-	-	0.14	0.13
Nitrite (N-NO ₂)	mg/L	1	MAC	<0.10	<0.10
Nitrate (N-NO ₃)	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 - AESTHETIC RELATED					
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 ₄)	mg/L	500	AO	75	75
Sulphide (S ₂)	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					
		ODWS		V1	
PARAMETER	UNITS	LIMIT	TYPE	GW1 (4 hr) 2022-09-22	GW2 (8 hr) 2022-09-22
Volatiles	•	•	•	•	
Aluminum (Al)	mg/L	0.1	OG	<0.01	<0.01
Antimony (Sb)	mg/L	0.006	IMAC	<0.0005	<0.0005
Arsenic (As)	mg/L	0.01	IMAC	< 0.001	<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

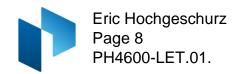
IMAC = Interim Maximum Acceptable Concentration

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 ₃)
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.

Hardness as CaCO₃

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 hardness concentration can be treated using conventional softening technologies.

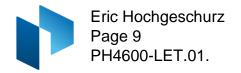
Total Dissolved Solids (TDS)

TDS refers to the concentration of inorganic substances dissolved in water. The main constituents are typically chloride, sulphates, calcium, magnesium, and bicarbonates. There are various levels of the constituents at a low level and it is not anticipated that they will cause an issue with taste. A point of use reverse osmosis unit may 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 an iron filter be used to reduce the levels of iron and reduce the potential for excessive precipitate occurring in the water supply system, if desired.



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. Procedure D-5-5 gives a maximum concentration considered reasonably treatable for manganese as 1.0 mg/L. A conventional water softener or manganese greensand filter can be used to reduce the levels of manganese, if desired.

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, it can be reduced from the water supply, if desired, through the use of a manganese greensand treatment.

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 colour levels detected in the lab samples is attributed to the precipitation of iron and manganese out of the groundwater.

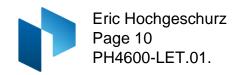
Turbidity

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.

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.

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.

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 dated November 30, 2021). On November 12, 2021 five (5) test pits were excavated on the property for the design of the proposed renovation 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 expansion, 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.

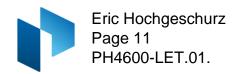
Generally, the subsurface profile at the test hole locations were observed to consist of asphalt or topsoil overlying a fill layer consisting of crushed stone and brown silty sand with gravel, occasional cobbles and trace asphalt. A brown silty sand was noted to be underlying the fill layer in all test 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 private well is not used for drinking. The subject site is currently occupied by a one-story 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.

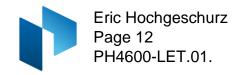
Conceptual Lot Development Plan

It is proposed to renovate the existing building one story commercial building. The location of the existing and proposed structures can be found on the attached Arbaum Architects Drawing A-010, Demolition / New Site Plan dated Jan 21, 2022. The proposed private servicing is outlined in Paterson drawing PH4600-1(rev.01) – 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 renovation and resulted in a total daily design sewage flow (TDDSF) of 1,026 L/day. A Design Swage flow rate of 1,500 L/day was used for design purposes. Refer to the Paterson Drawing PH4600-1(rev.1) and Paterson Drawing PH4600-2(rev.1) 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 ² x 75 L/day per 9.3 m ² = 726 L/day
Number of loading bays (2 x 150 L/day) = 300 L/day



The resulting total daily design sewage flow (TDDSF) is 1,026 L/day, however a design sewage flow rate of 1,500 L/day was used for the OSSO application.

Predictive Nitrate Impact Assessment

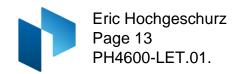
In order to demonstrate that private services would adequately support the proposed commercial development, a predictive nitrate impact assessment for the subject site was completed. The values shown in the Predictive Nitrate Impact Assessment attached to this report are summarized below.

	Site area	0.20 ha
	Impervious area (%)	47 %
	Daily sewage flow	1.026 m ³ /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 (WaterNOX-LS) with 70% nitrate	12 mg/L ate 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:	0.70
•	Topography infiltration factor	0.20
•	Soil texture infiltration factor	0.40
•	Cover infiltration factor	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 22.67 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 1,026 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 Waterloo Biofilter brand. The system has an available nitrate reduction of 25 to 35% based upon the standard single pass system and 50 to 65% based upon a



double pass re-circulation system. With the addition of the WaterNOx-LS system, greater than 70% total nitrogen removal can be achieved. This would reduce the nitrate concentration in the effluent from 40 mg/L down to as low as 12 mg/L. Provided the value of 22.67 mg/L of nitrates for the fully sized system, a 70% reduction would provide a value of 6.8 mg/L. A WaterNOx-LS system has been included in the new septic design for the property, as shown in the attached Paterson drawing, PH4600-1(rev.01).

Based on the results of the predicted nitrate impact assessment, it is our opinion that the property can adequately support the proposed renovation without having an adverse impact on the underlying bedrock aquifer.

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 renovation.
- 2. As TW1 currently provides potable water to the existing building, the client is familiar with the quality of the groundwater.
- 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. A residential grade water softener is recommended to facilitate the reduction of the hardness concentration. 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.
- 5. If desired, the client can use an iron filter to treat the potential iron values.
- 6. If desired, the client can use manganese greensand treatment to treat the potential colour values.
- 7. 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.
- 8. The site is not considered hydrogeologically sensitive.

- 9. 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 Waterloo Biofilter WaterNOx-LS system is used.
- 10. 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.
- 11. The results of the Hydrogeological Assessment and Terrain Analysis have provided satisfactory evidence that the subject site can support the proposed renovation 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.

ERIK ARDLEY PRACTISING MEMBER 3667

Alexander Schopf, PhD, EIT

Erik Ardley, P.Geo

Attachments:

1/01/	Plan
 n u	PIAN

- Arbaum Architects Drawing A-010, Demolition / New Site Plan dated Jan 21, 2022
- 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
- □ Paterson Drawing PG6018-1 Test Hole Location Plan
- ☐ Paterson Drawing PH4600-1(rev.1) Sewage System Layout Plan
- ☐ Paterson Drawing PH4600-2(rev.1) Sewage System Details and Notes

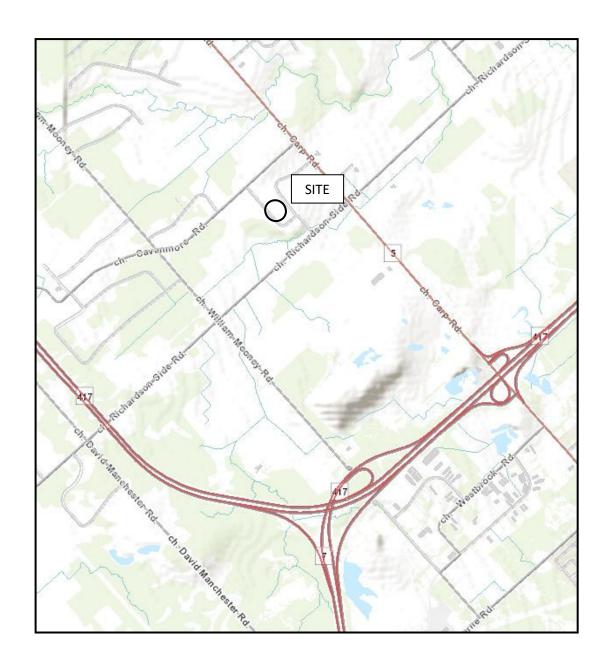
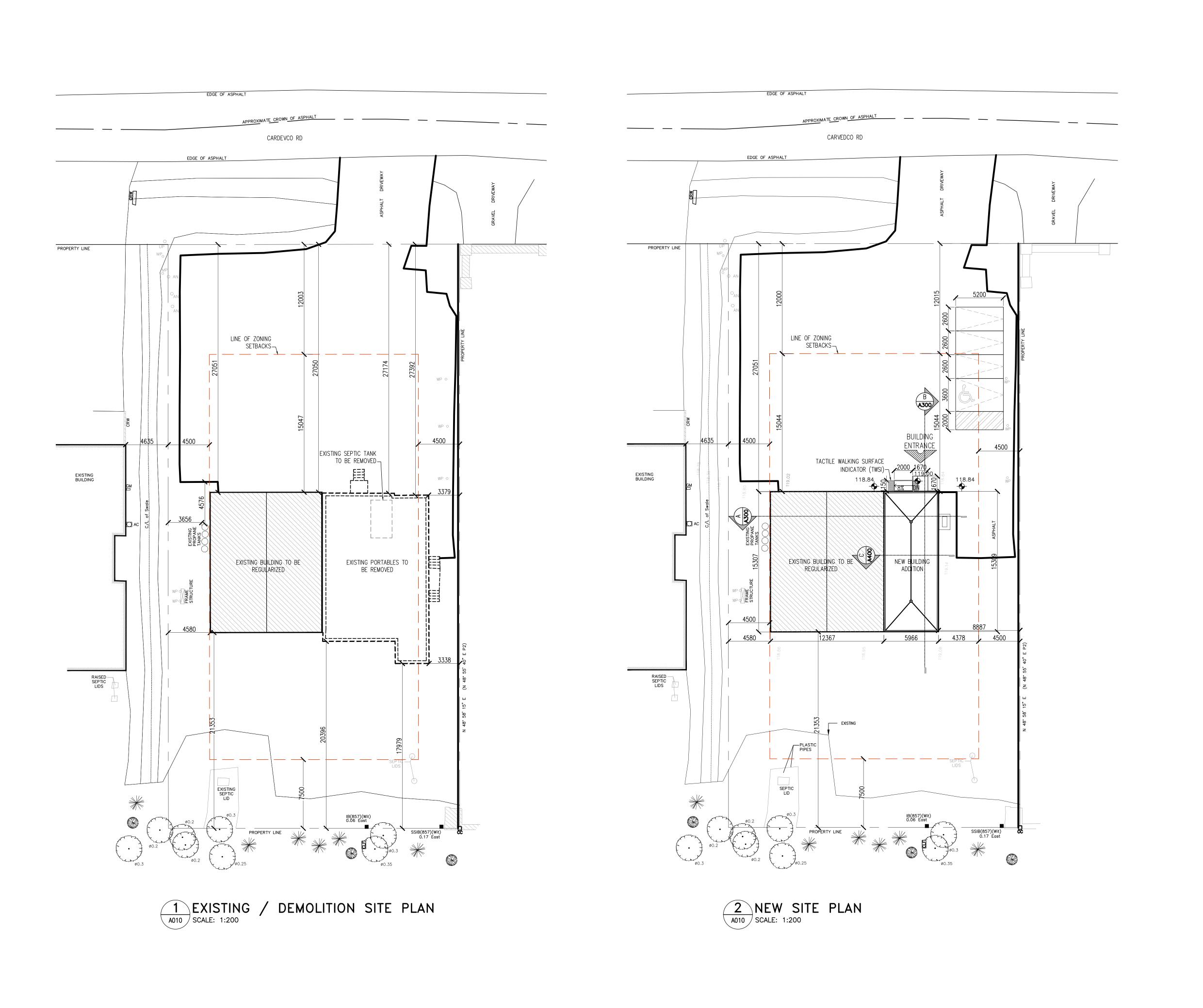


FIGURE 1 KEY PLAN

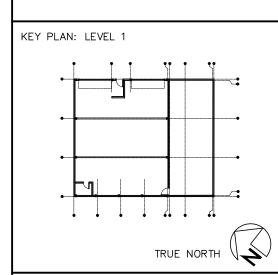
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CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ANY OMISSIONS OR DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
DO NOT SCALE DRAWINGS.

REVISIONS			
NO.	DESCRIPTION	DATE	
1	PRELIMINARY DESIGN	2021-06-25	
2	CLIENT REVIEW 1	2021-07-14	
3	ISSUED FOR PERMIT	2022-01-24	
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CARDEVCO WAREHOUSE

ADDRESS: 135 CARDEVCO ROAD, CARP ON, K2K 3B8

DEMOLITION/ NEW SITE PLAN

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A-010

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

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0506E (2007/12)

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SIGNATURE OF CONTRACTOR

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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			. 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 F	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 VI	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 _{yr} 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
			-					
						<u>. </u>		
31 1					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 CONCRETE	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		TX 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	JICE	50	876
	S AIR PERCUSSION	☐ DIGGING ☐ OTHER		ILLERS REMARKS				
1	al Water Supply	well contractor's licence number 1558	ΙΙ≿	DATA	155	8 SE		9 *3-61
ADDRESS	90 Stittsville		SE ON			OR		
NAME OF W	VELL TECHNICIAN	WELL TECHNICIAN'S LICENCE NUMBER	1 ::	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	ENVIRONMENT 1. PRINT ONLY IN 2. CHECK ⊠ CORR	SPACES PROVIDED	1527799	11C1P CON. 5005 CON.	1 03
COUNTY OR DIST	RICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CAN HUNTLEY	TRACT, SURVEY, ETC	25-27
		s // ()	CARDEUCO	~14	· · · · · · · · · · · · · · · · · · ·
		MING RC.	ELEVATION RC. BASIN		
1 2	M 10 12 L(OG OF OVERBURDEN AND BEDRO	CK MATERIALS ISEE INSTRUC	CTIONS)	
GENERAL COL	OUR COMMON MATERIAL	OTHER MATERIALS	GENERAL DES	CRIPTION FROM	FEET
BROW	in Fill		PAC	KED O	3'
BROW	N Sand	BouldERS	hoose	3	8'
BROW	U GRAVEL	Boulders	Lous	E 8	13'
GREY	& IMESTONE		MED	/3	50'
	. 49	,			
			3		
					
31	بينا ليليليل		سبا ليليليليا		
32	111111111111111111111111111111111111111		SIZE SI OF OP	ENING 31-33 DIAMETER 34-38 LE	75 10 NGTH 39-40
WATER FOUND AT - FEET	WATER RECORD KIND OF WATER	DIAM MATERIAL THICKNESS	DEPTH - FEET	INCHES	FEET
2< "	FRESH 3 SULPHUR 14 2 SALTY 4 MINERALS 6 GAS	INCHES INCHES F	TO SINGLE OF MATERIAL AN	OF SCREEN	41-44 30 FEET
N2,15-10	FRESH 3 SULPHUR 19 2 SALTY 4 MINERALS 6 GAS	3 CONCRETE 4 COPEN HOLE 5 PLASTIC		PLUGGING & SEALING RECOF	₹D
20-23	1 FRESH 3 SULPHUR 24 2 SALTY 4 MINERALS 6 GAS	6 1 STEEL 2 GALVANIZED 3 CONCRETE 2 DOPEN HOLE 2	20-23 DEPTH SET AT FROM		T GROUT KER, ETC)
25-20	1 FRESH 3 SULPHUR 29 2 SALTY 4 MINERALS 5 GAS	24-25 1 DSTEEL 26	2 50 010-13	O CEMENT GAOG	AT.
30-13	I FRESH 3 SULPHUR 34 L 4 MINERALS 2 SALTY 6 GAS	2 GALVANIZED 3 CONCRETE 4 OPEN HOLE 5 PLASTIC	26-29	30-33 60	
71 PUNTING TE		E 11-14 DURATION OF PUMPING	LOCA	ATION OF WELL	
STATI	. ENDOF WAIER	GPM HOURS MINS LEVELS DURING 1 D UMPING 2 RECOVERY		OW DISTANCES OF WELL FROM ROAD AN	. D
TEST	PUMPING 19-21 , 22-24 15 MINUTES 26-2	30 MINUTES 45 MINUTES 60 MINUTES			
Z IF FLOWING	FEET FEET FE			15 1-15-11 X 1	
U IF FLOWING GIVE RATE	GPM GPM PED PUMP TYPE RECOMMENDE	FEET 1 GCLEAR 2 CLOUDY D 43-45 RECOMMENDED 46-49 PUMPING	Vac		
50-53	ALLOW DEEP SETTING	FEET RATE GPM		7U.	< 1 H
FINA	A D ORCEDVATION WE	S ABANDONED, INSUFFICIENT SUPPLY LL G ABANDONED POOR QUALITY			7 7.4
STATE OF WE	JS TEST HOLE	UNFINISHED DEWATERING	GAF		401
WATE	ss-ss 1 Domestic	S O MUNICIPAL			
USE	3 - INNIONITOR	7 PUBLIC SUPPLY 1 COOLING OR AIR CONDITIONING 2 NOT USED		· · · · · · · · · · · · · · · · · · ·	
METH	S7 1 CABLE TOOL				
OF	ICTION 4 ROTARY (REVERS			417	552
NAME OF	s DAIR PERCUSSION	☐ DIGGING ☐ OTHER	DRITLERS REMARKS		0002
1 1 1 1 /	ALLEY DRILL	ING INC 5222	SOURCE 52	22 APR 0 5 1994	
A NAME OF	MAG 37 MARP	WELL TECHNICIAN'S	M GEMARKS		
CONTRACTOR SERBER	BISSADA RE OF TECHNICAS/ CONTRACTOR	SUBMISSION DATE	OFFICE		
	. ///	DAY MO YR	9	FORM NO. 0506 (11	(86) EOP** 0
MINÏ	STRY OF THE ENVIRO	DNMENT COPY		FORM NO. 0506 (11	(RP) FORM 3

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Municipality	Con.		
15005	CON	1 1 1	03
		20	22 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 ons) description	ate	yay 12mont	25 27 6 48-53 h 97/year 10 10 10 47 10 10 10 10 10 10 10 10 10 1
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 22-24 15 minutes 3 22-28 3	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

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115005		-		
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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	lers & G	ravel							11'6"
					·	-				<u>.</u>		
	_											
								_				
												
		1 1		<u> </u>	1 i	. .	1,11		, , .		. .	
31		<u> </u>		 	1 1	. . .	└ ─		<u></u> 	』 <u>└</u> └└└─ ┃┃ ╷ ╷	 ,	⊔ لــــــــــــــــــــــــــــــــــــ
32 10 14 15		51	CASING &	OPEN HOL	F RECO	RD	Size	es of opening	31-33	65 Diameter	34-38 Lei	75 80 ngth 39-40
Water found	R RECORD Kind of water	Inside diam	Material Material	Wall thickness	Dep	th - feet	Sid Sid	ot No.)		2 ir	nches	6 6 e feet
at – feet	Fresh ³ Sulphur ¹⁴	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 ³ ☐ Sulphur ¹⁹ ☐ Salty ⁶ ☐ 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 Fresh 3 Sulphur 29	4	☐ Open hole ☐ Plastic				From	13 14-1	7			,
2 🛚	Salty 6 Gas		☐ Steel ²⁶ ☐ 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		<u> </u>	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 ³⁸⁻⁴¹ 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 ⁶ 🗌 Abandoned	, poor quality	□ Repla	cement well								
³ ☐ Test hole ⁴ ♣ 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

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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

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1530342

Municipality

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15005

County or District	7 h		•	orough/City/To		untley		Con bloo	k tract surve	y, etc. Lot	25-27 6 48-53
				onnade i		epean.(Ontario			1day 10 mo	onth 98 ear
21	Ţ M	12	17	Northing	اللل	RC Eleva	tion RC	Basin Code			10 47
1 2	10		VERBURDEN	AND BEDF	OCK MA			ctions)		Den	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 WA Water found at – feet 10-13 1 2 15-18 1 2 20-23 1 2 25-28 1 2 30-33 1	Interest Interest	17-18 1 2 3 4 5 5 1 24-25 1 2 2 3 4 4 5 5	Plastic Steel Galvanized Concrete Open hole Plastic	DPEN HOLE Wall thickness inches	ERECORI 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 D
Pumping test	method ¹⁰ Pumping rate	11-14	Duration of pumping	g ₁₇₋₁₈				OCATION (OF WELL		
Pump 2	Bailer 25	GPM	Hours .		ļ	In diagram	n below sho	w distances	of well from re	oad and lot i	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 1 feet 1 Pump intake se GPM	90 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 STATURE Water s 2 Observa 3 Test hold 4 Recharge	upply 5 ☐ Abandonec ation well 6 ☐ Abandonec e 7 ☐ Abandonec ge well 8 ☐ Dewatering	l, poor quality I (Other)	pply ⁹	ned ement well							
WATER USE 1 Domes 2 Stock 3 Irrigatic 4 Industr	on 6 Municipal 7 Public sup ial 8 Cooling &	oly	9 Not use								
ı ☐ Cable i	(conventional) 6 ☐ Boring (reverse) 7 ☐ Diamond	sion	9 Driving 10 Digging 11 Other	1						1947	768
Name of Well Co	ntractor	.td.	Well Contractor		Data sour		58 Contracc	to 5 5 8	s9-e2 Date re	ceived	1990

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



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County or District			Township/E	Borough/City/				Con	block tract	survey,	etc. Lot	
	n la han		Address	West (Carleto	n – Hu	ntley	L	Date)		6 48-53
	,		54 Col	Northing	Rd Ne	pean O	ntario K	Basin C	J5 com	preted 21	day 10 mc	onth 98 ear iv
21	M 10	10C OF OV	I III	18 AND RED		25 26 TERIALS (see instructi	ons)				47
General colour	Most common mater			er materials	HOOK MA	I E III A E O	General		ion		Der	oth – feet
Brown	Sand		Boul	lders &	Gravel						0	11'0
BLOWIT					.,							
												
				<u> </u>				1 1				. 1 . 1 1
31				<u> </u>								
10 10	TER RECORD	51	CASING &	OPEN HOL			Sizes of c		31-33	65 Diameter	34-38 Leng	75 8 th 39 4
Water found at - feet	Kind of water	Inside diam inches	Material	Wall thickness inches	Depth From	То	Material 8			٠,	ches 61	6 teel
10-13 1 2	☐ Fresh 3 ☐ Sulphur 14 ☐ Minerals ☐ Gas	2 [Steel ¹² Galvanized Concrete			13-16	Grave		cked_		5	feet
15-18 1 [2 [Fresh 3 Sulphur 19 Salty 6 Gas	5	Open hole Plastic		0	11,'6		PLUC	GING &		G RECOP	
20-23 1	☐ Fresh 3 ☐ Sulphur 24 ☐ Minerals ☐ Salty 6 ☐ Gas	3	∫ Steel ☐ Galvanized ☐ Concrete				Depth set at				Abandonn	
25-28 1	Fresh 3 Sulphur 29 Salty 4 Minerals	5	Open hole Plastic Steel 26			27-30	From 10-13 18-21	To 14-17 3 22-25	Grave	l Pac	ked	
30-33	Fresh 3 Sulphur 34 60	3	Galvanized Concrete Open hole				78-21 26-29		"Hole			
2 [4 ☐ Minerals ☐ Salty 6 ☐ Gas	5	Plastic		<u> </u>							
71 Pumping test r		GPM D	uration of pump Hours			lu diagram	LO n below show		N OF WE		ad and lot	line
Static level	Water level 25 Water level: end of pumping 22-24 15 minutes			☐ Recovery		In diagran	orth by arrow		Jes of Wei	i nom roe	au and lot	
TES	26-28	29-31	15 minutes 32-34 feet	35-37 feet								
feet If flowing give	rate 38-41 Pump intake so	et at V	Vater at end of te	- 46	1							
Recommende	d pump type Recommended pump setting	1 43-45 F	Recommended oump rate	46-49								
☐ Shallow 50-53	□ Deep	feet		GPM	<u>-</u>							
FINAL STATU	upply 5 Abandone	d, insufficient supp	ply ⁹ ☐ Unfinis	shed								
2 ☐ Observa 3 ☐ Test hole 4 ♣ Recharg	e ⁷ 🗌 Abandone	d (Other)	C Nepia	ocinent wen								
WATER USE	55-56				-							
1 ☐ Domest 2 ☐ Stock 3 ☐ Irrigation	6 ☐ Municipal		9 ☐ Not us 10 ☐ Other	sed 	.							
4 🗌 Industria	al 8 ☐ Cooling &											
1 ☐ Cable to		sion	9 🗋 Drivin								40-	700
2	(conventional) 6 Boring (reverse) 7 Diamond (air) 8 Jetting		¹º ☐ Diggir ¹¹ ☐ Other	ng ·	.						194	169
_			Well Contract	tor's Licence N			58 Contracctor			Date rece	eived	63-68
Name of Well Cor					ONLY	rce	7 7		4 2	DFC	:081	I

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Environment

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Municipality	Con.				
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0506 (11/98) Front Form 9

	, man a and an ann, man appro	1 3	1331132	15 14 15	ZDN	22 23 3
County or District	1	Township/Borough/City/T		Con block tract surve	y, etc. Lo	_
Ottawa Owner's surname	Carleton e 28.47 First Name	West Carleto Address	n - Huntley	Date		<u>6</u> 48.50
Pri-Te	c Construction Ltd.	P.O. Box 1309	O Kanata, Ontario	K2K 1X3 completed Basin Code ii	5 day 6r	month ()@ai
21	U T L L	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	24 29 25 30	31	1111	
	LOG C	F OVERBURDEN AND BEDR	OCK MATERIALS (see instructi	ons)		
General colour	Most common material	Other materials	General	description	From	th - feet To
Brown	Sandy & Grave		Loose	<u> </u>	0	3_
Brown	Clay		Packe	∍ d	3	15
Gray	Sandy Clay	Stones	Loose	2	15	27
Gray	Limestone		Medi	m Hard	27	33
Gray	Limestone			ey Broken	33	40
Gray	Limestone			um Hard	40	75
GLay	L'INESCORE.		NSOL	MI INCLU	1	
		- 18-4				
				- A A A A A A A A A A A A A A A A A A A		
31 , , ,	<u> </u>	.				1 1 1
32			;			
	R RECORD 51	CASING & OPEN HOLE F	RECORD Sizes of (Slot No	opening 31.33 Diameter	34-38 Len	gth 39-40
Water found at - feet	Kind of water Inside	Material thickness	From To		Depth at top	feet
33–40 ² E	☐ Fresh 3 ☐ Sulphur 4 ☐ Minerals ☐ 6 1	1 Steel	0 31 ¹⁶ 8	and type	Deptir at top	feet
15-18 ₁	Fresh 19	3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic		51 U G G N G G G G G G G G G G G G G G G G	DE0084	
20.22	Salty 6 Gas 17-11			PLUGGING & SEALING Annular space	Abandonr	
2 0	Salty 5 Gas	3 ☐ Concrete 4 🙀 Open hole 5 ☐ Plastic	31 75 Depth set a	To Material and type (C	ement grout, b	entonite, etc.)
	☐ Fresh	¹ □ Steel 26	27:30 10:13 30 18:21	0 Grouted -	Cement	(5) —
30-33	Fresh ³ Sulphur ³⁴ 60	2	26-29	30-33 80		
2 [☐ Salty ₆ ☐ Gas	5 🗍 Plastic				
71 Pumping test n		Duration of pumping 15-16 17-18 PM1. Hours Mins		CATION OF WELL		
. Static level V	Water level 25 Water levels during	¹ ★ Pumping ² ☐ Recovery	In diagram below should be arrown to the second sec	w distances of well from w.	road and k	ot line:
If flowing give r	22.24 15 minutes 30 minute	45 minutes 60 minutes 35:37				V
15'90"	38-41	feet 50 feet 25 feet Water at end of test				
If flowing give r	GPM	feet □ Clear 🙀 Cloudy	0.0			
Recommended p	pump setting	pump rate	de la constantina	3		
50-53	* Deep 30	5 GrW	Cox)es		
FINAL STATUS 1		nt supply ⁹ Unfinished	Cordenco Frank	escar		
² ☐ Observati ³ ☐ Test hole ⁴ ☐ Recharge	7 Abandoned (Other)	lity 10 ☐ Replacement well	120	7	Ø	Pitles
	55-56			5	70	, P, 4/es
WATER USE 1		9	,	6	Buil	19,00
3 ☐ Irrigation 4 ☐ Industrial	7 🔲 Public supply	_				
METHOD OF	CONSTRUCTION 57		2 Cavanno	10	: 18	
1 ☐ Cable too	ol ⁵ Air percussion conventional) ⁶ Boring	⁹ ☐ Driving ¹⁰ ☐ Dìgging	Carannos	C KCI		
3 ☐ Rotary (re	everse) 7 Diamond	Other	J		208	554
		Well Control of Linear Mark	Data 58 Contractor	59-62 Date rec		63-68 80
Name of Well Control	_{ractor} I Water Supply Ltd.	Well Contractor's Licence No.	Data 58 Contractor			2000
Address			ш Ракс от торестол	Inspector		
P.O. Bo	ox 490 Ktittsville,		Remarks			
S. Mill Signature of Techni		TOO97 Submission date	Remarks		C	SS.ES
Sollin	of a company	day 6 mg 4 yr 90	\$			

day 6 mo 4

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Municipality	Con.	1 1031

County or District Ottawa (Township/Borough/City/1 West Carlet		ley	Con block	tract survey, etc.	Lot 25-27
		Address 357 William Me	***************************************		KOA 1LO	Date completed 01 day	10 01 48-53 month year
21	M 10 12	Northing	RC	Elevation RC	Basin Code	J J J	
		OVERBURDEN AND BEDRO	OCK MATERIAL	S (see instructi	ons)		A7
General colour	Most common material	Other materials		Genera	I description	Fro	
Brown	sand	-				0	8
Brown	sandy clay	stones				16	16 125
Grey	limestone				- 10.51	10	123
		<u> </u>					
	Note: Casing	was left 12" abo	ce ground	level at	time of d	drilling.	
31	<u> </u>						
32	15 21	1 32	43	1111		1 65	75 80
Water found	R RECORD 51 Kind of water diam	CASING & OPEN HOLE R Wall Material thickness	Depth - feet	Sizes of (Slot No.			Length 39-40 feet
	Fresh 3 Sulphur 14 inches	inches 12 .188	From To 21 • 6	(Slot No.	and type		at top of screen
117 ⁵⁻¹⁸ 1NC	Thes Test phur 19	2 Galvanized 3 Concrete 4 Open hole			····		feet
2 [Sarry 6 Gas 17-18	5 ☐ Plastic 1 ☐ Steel 2 ☐ Galvanized	20-	-23 X	Annular space	SEALING REC	ORD adonment
2 🗆	Salty 6 Gas Salty 6 Gas 6 6 6 6 6 6 6 6 6	. 🗆 🗅	21'6" 125		To Materia	al and type (Cement gro	
2 2	Salty 6 Gas	1 Steel 26 2 Galvanized 3 Concrete	27-	30 21 6 18-21	0 Grou	uted-cement	: (3)
1 L	Color 4 Minerals	GONCRETE GOPEN Hole GOPEN Hole		26-29	30-33 80		
Pumping test m	1 ' -	Duration of pumping 15-16 17-18 Hours Mins		LOC	CATION OF W	/ELL	
Static loval W	/ater level 25 Water levels during 1	¶Pumping 2 ☐ Recovery	In diag	gram below show te north by arrov	v distances of v.	well from road ar	d lot line.
19-21 US 28 4 4 11 US 28 4 4 11 US 28 1 1 US 28 1 4 11 US 28 1 1 US 28 1 1 US 28 1 1 US 28 1 US	22-24 15 minutes 26-28 30 minutes 29-31 90 115	45 minutes 32-34 60 minutes 35-37 60	8				
28 4 fragrent of feet If flowing give ra	te feet feet feet Pump intake set at	feet feet Water at end of test	1	.			
Hecommended po	numn setting 100	Clear Cloudy Recommended 46-49 pump rate 5	100	Villiam	Moonec	1 RV	
☐ Shallow 50-53	E Deep point setting 100 feet	Э дрм	<u> </u>				
FINAL STATUS 1 Water supp 2 Observation			300	! 	כ איר יסן	8' 8'	
² ☐ Observatio ³ ☐ Test hole ⁴ ☐ Recharge	7 Abandoned (Other)	10 Replacement well	hard	ے ا	<u> </u>	- 	
WATER USE	55-56		8			•	
1 Stock 2 Stock 3 Irrigation	5	9	(A)	*	357	•	
4 🗆 Industrial	8 Cooling & air conditioning		"			1	
METHOD OF C 1 □ Cable tool 2 □ Rotary (co	5 M2 Air percussion 5 M2 Air percussion 6 G Boring	⁹ ☐ Driving ¹⁰ ☐ Digging					
3 ☐ Rotary (rev	verse) 7 ☐ Diamond	11 Other				23	0271
Name of Well Contra	ictor	Well Contractor's Licence No.	> Data	58 Contractor	59	-62 Date received	63-68 80
Capital Wa	ater Supply Ltd.	1558	Date of inspec	15	58 In 5ect 8	NOV 27	2001
Box 490, Name of Well Techn	Stittsville, ON/ K2S	Nell Technician's Licence No.	Hemarks				
S. Mille Signature of Technic	er	TOO97 Submission date	AT SININ Hemarks			G.	3.E91
Signature of echnic	//	day 05 mo / 0 yr 0	Z Z				07/00) 5
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Ministry of the Environment

The Ontario Water Resources Act WATER WELL RECORD

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Municipality	Con.			· ^2
15005	CON	1	$\perp \perp$	03

0506 (07/00) Front Form 9

County or District Ottawa (Owner's surname Gracey (Carleton		leton - High	ntley Ontario K	3	Date completed 2		6 48-53
21	Zone	Easting Northing	RC	Elevation RC	Basin Code		Juay IO III	iv
1 2		DF OVERBURDEN AND BED	ROCK MATERIA	LS (see instruction	ons)		1 1 1	4
General colour	Most common material	Other materials			description	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Depth From	ı - feet To
Brown	SAnd & Gravel						0	6
Gray	Limestone						6	75
			i		•			
					100			
						-		
21								
31								44!
10 14	4 15 21 51 51		RECORD	Sizes of o	pening 31-3	Diameter	34-38 Lengti	75 B h 39-40
Water found at - feet	Kind of water Inside diam inches	Material thickness	Depth - feet From To	(Slot No.) Material a		ir	iches	feet
	Fresh 3 Sulphur 14 5 10/11		0 22.	Material a	nd type		Depth at top o	41-44
15-18 1	Fresh 3 Sulphur 19	3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic						feet
20.22	Salty 6 Gas 17-18		21	0-23	Annular space		RECORD Abandonme	ent
	Salty 6 Gas Sulphur 29	3 ☐ Concrete 4 ☑ Open hole 5 ☐ Plastic	22.5 75	Prom 10.13	To Materia	al and type (Cen	nent grout, ber	itonite, etc.)
2	Salty 6 ☐ Gas		21	7-30 21 18-21		ted - C	ement (3)
	Fresh ³ ☐ Sulphur ³⁴ 60 4 ☐ Minerals Salty 6 ☐ Gas	3		26-29	30-33 80			-
Pumping test me			L		L_L			
71 1 12 Pump 2 [Bailer 25 GP	M 15-16 17-18 Hours Mins	In da	LOC. gram below show	ATION OF W distances of		ad and lot l	line.
	water levels during Water levels during 22-24 15 minutes 26-28 30 minutes 29-	1 Pumping 2 □ Recovery 2 □ Recovery 45 minutes 32-34 60 minutes 35-37	Indica	ate north by arrow.				
U 4 2 %eet	20 70 70	31 32-34 35-37 seet 50 feet 20 feet						
4 2 Teet If flowing give ra	ate 38-41 Pump intake set at	Water at end of test 42 eet ☐ Clear ☐ Cloudy	Car	devou			_	
Recommended pu	ump type Recommended 1 43-	45 Recommended 46-49 pump rate		devco #142				
50-53	50 fe	eet 5 GPM		= 14		1	Ì	
FINAL STATUS	ply 5 Abandoned, insufficient	t supply 9 ☐ Unfinished		<u>F</u>	729'	1		
² ☐ Observation ³ ☐ Test hole ⁴ ☐ Recharge w	n well 6 ☐ Abandoned, poor qualit 7 ☐ Abandoned (Other)					i	_	_ \
WATER USE	55-56				6	1	devico	'
② ☐ Domestic 2 ☐ Stock	5 🔲 Commercial 6 🔲 Municipal	9 Not use				Cox	ک ک	
3 ☐ Irrigation 4 ☐ Industrial	 Public supply Cooling & air conditioning 	ng	1	•		۱ 3	Jan La	
	ONSTRUCTION 57					,	Sa	
 □ Cable tool □ Rotary (cor □ Rotary (rev 		9 Driving 10 Digging 11 Other					000	
Rotary (air)							2380	105
Name of Well Contra		Well Contractor's Licence No.	Data source	58 Contractor		62 Date receiv	_	63-68 80
Capital Address	Water Supply Ltd.	1558	O Date of insper	I 5	58	NOV	28 20	m_L
P.O. Box Name of Well Techni	490 Stittsville, 0	Ontario K2S 1A6 Well Technician's Licence No.	Bemarks					
S. Mille	r 1	TOO97	ALLS Remarks				250	
Signature of Technici	ian/Contractor	Submission date day 24 mo 10 yr 01	W				CHS E	351

Ministry of the

The Ontario Water Resources Act WATER WELL RECORD

0506 (07/00) Front Form 9

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Mark correct box with a checkmark, where applicable.	11 2	1532757	Municipality Cor	_ _
County or District	Township/Borough/City/Tow	vn∕Village	Con block tract surve	y, etc. Lot 25-27
Ottawa Carleton	West Carletor	•	3	6
Owner's surname 28-47 First Name	Address	D D #2 Car Ontar	Date	48-53 D
Gracey Construction	lll Manion Rd. Northing	R.R. #2 Car,Ontar		9 day 4 month 2year
21 U U U U U U U U U U U U U U U U U U U	17 18	24 25 26 30	31	47
LOG OF OVE	RBURDEN AND BEDROC	CK MATERIALS (see instruct	tions)	Depth - feet
General colour Most common material	Other materials	Gener	al description	From To
Brown & red Sand			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0 13
Gray Sand & gravel				13 16
Gray Limestone				16 60
Note; Casi	ng was left 1 fo	oot above ground 1	level	
lat t	ime of drilling			
31				
32 10 14 15 21		43 54	65	75 80 34-38 Length 39-40
Water found Kind of water Inside	SING & OPEN HOLE REC		· ·	34-38 Length 39-40 inches feet
at - feet such that inches inches	IIIGIES	Depth - feet From To C 22:-65 Materia	al and type	Depth at top of screen 41-44
27 2 Salty 6 Gas	Steel 12 Galvanized Concrete	0 22:5 9		feet
15-18 1 Fresh 3 Sulphur 19 4 C	Open hole	61	PLUGGING & SEALING	RECORD
20-23 1 Fresh 3 Sulphur 24 17-18 1 S	alvanized	20.22	Annular space	☐ Abandonment
2 U Safty 6 Gas 6	Concrete Open hole 2	2.5 60 From	To Material and type (Ce	ement grout, bentonite, etc.)
2 Salty 6 Gee 24-25 1 S	20	27-30 21.5 18-21	O Grouted - C	Cement (4)
30-33	Concrete Open hole	26-29	30-33 80	Ja
2 Salty 6 Gas 5 F	Plastic			
Pumping test method 10 Pumping rate 11-14 Dura	ation of pumping 15-16 17-18 Hours Mins	LC	CATION OF WELL	
Static lovel Water level 25 Water levels during \$100 Burns		In diagram below sho Indicate north by arro	ow distances of well from r	oad and lot line.
Static level end of pumping Wrater levels during Water lev	inutes 32-34 60 minutes 35-37	•		
25 feet 55 feet 40 feet 4	10 feet 25 feet		larp Rd	
If flowing give rate 38-41 Pump intake set at Water	er at end of test □ Clear Cloudy		Cardenco	
nump setting	commended 46-49 mp rate		in dell	l
Shallow Deep purify Scaring 40 feet	5 GPM		Z COCK	1.
FINAL STATUS OF WELL 54			40.	88
	9 Unfinished 10 Replacement well	\		ì
3 ☐ Test hole 7 ☐ Abandoned (Other) 4 ☐ Recharge well 8 ☐ Dewatering			Cardenco	Richardson
WATER USE 55-56		: i		18
	9 Not use	1	11.65	1 C C C
3 ☐ Irrigation 7 ☐ Public supply 4 ☐ Industrial 8 ☐ Cooling & air conditioning		1	& Pities	\ \{ \}
METHOD OF CONSTRUCTION 57		1	No Built Le	100
¹ ☐ Cable tool 5 🙀 Air percussion	⁹ Driving 10 Digging	1	Ophless No Building No Building	
3 Gotary (reverse) 7 Diamond 4 Rotary (air) 8 Jetting	Other		<i>~</i> − ,	238136
	Voll Contracted a Linear No.	Data 58 Contractor	59-62 Date rece	-
Capital Water Supply Ltd.	Vell Contractor's Licence No. 1558	source 1	558 MAY	. .
P.O. Box 490 Stittsville.Ontar	111	Date of inspection	Inspector	
1				700 50
1 3 2 2	Submission date	Remarks	•	CSS.ES
Koman 1	ay30 mo 4 yr02	∑		

(R) On		Ministry of	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		Place sticker and pri	nt number below)			Well R	
		ne Environme	71K	A0353			† Reg	gulation 903 Onta		ources Act
1.	for Completing	_	lv. This docume			I document.	l Please reta	ain for future refe	-	01
All Section Questions	ns must be com	pleted in full pleting this ar	to avoid delays oplication can b	in processe directed	sing. Further i to the Water	nstructions a	ınd explanat	ions are available rdinator at 416-2	on the back of	this form.
• All metre	measurements int clearly in blue	s shall be rep	orted to 1/10	of a met	re.			Ministry Use Only		<u> </u>
Well Owner's	s Information	and Locatio		rmation	MUN MUN		CON Dor/Name F	RR,Lot,Concession	LOT	
	Construct:				Box 72059	9				
County/District/I	leton		wnship/City/Tow Kanata				stal Code 2K 2F4	613 72	Number (included 8627	e area code
Address of Well Ottawa Car	Location (County/	District/Munici	pality)		Township West Car	leton - H	duntley	Lot 6	Concession	3
RR#/Street Nun Wescar Lar	nber/Name		de la		City/Town/Vi	illage		Site/Compartmen	t/Block/Tract et	ic.
GPS Reading	NAD Zone 8 3 18	1 4	North	ning 58 13	Unit Make/M Garmin		de of Operat	ion: Undifferenti	the state of the s	aged
-	ourden and Be	drock Mate	rials (see inst	ructions)			15		Depth	Metres
General Colour	Most common	material	Other Ma	terials		Gene	eral Descripti	on	From	To 1.21
Brown Brown	Sand Sand	& Gravel					Wet		1.21	1.82
Brown	Clay						Loose		1.82	9.14
Gray	Sand	& Boulder	's	-					9,14	10.66
Gray	Limes	tone							10.66	14.91
			:							
Hole D	lameter		Cons	truction R	ecord		$\neg \vdash$	Test of W	/ell Yield	1
Depth Me	etres Diameter	Inside	Material	Wall	Depth	Metres		,	w Down F Water Level Time	Recovery
	To Centimetres 22.75	diam centimetres	Material	thickness centimetre	_	То		min take set at - Static	Metres min	1
	.81 15.39			Casing				12.19 Level		1.35
		12 04	Steel Fibreglass Plastic Concrete	.48	+ .45	11.27	(litres/mi	n) 54.6		1.32
Water found at Metres	Record Kind of Water		Galvanized Steel Fibreglass				hr	s + min		
13.71	Fresh Sulphur		Plastic Concrete				of pump	ter level end 3 ing 1 . 87 metres	1.52 3	1.22
Other:			Galvanized Steel Fibreglass				Recomm	nended pump 4	1.56 4	1.23
Gas []	Fresh Sulphur Salty Minerals		Plastic Concrete				Recomm	nended pump 5	1.60 5	1.20
	Fresh Sulphur		Galvanizeu	Screen			Recomn	nended pump 10	1.70 10	
Gas Cther:	Salty Minerals	│	Steel Fibreglass	Slot No.				give rate - 20	1.79 15 1.82 20	
After test of well Clear and se	yield, water was diment free		Plastic Concrete Galvanized				If pumpir	res/min) 25 ng discontin- 30	1 84 25 1 86 30	.96
Other, specif	у			Casing or S	Screen		ueld, give	40 50	1.86 40	.93
Chlorinated 🔏	Yes 🗌 No	15.39	Open hole		11.27	19.81	_ _	60	1.88 50 1.88 60	
Depth set at - Me	Plugging and Se		Annula y, neat cement slurry	V	Abandonment	In diagram be	elow show dist	Location of We ances of well from roa		uilding.
	o Iviatoriai ana ty		ite Saurry		ubic metres)	Indicate north				
11.20	OLVATOR	AP COME OF STREET				1				ŀ
									0	, 8
Cable Tool	Rotary	Method of Co	nstruction		Digging	\			1 esco	3
Rotary (conve	entional) 🎽 Air per		☐ Jetting ☐ Driving		Other		Wes	car	050	Pardes Co
Rotary (revers		Water l	Jse			Π			7	0
Domestic Stock	☐ Industri ☐ Comme	ercial	☐ Public Sup		Other			Dete Well	I Completed	
Irrigation	Municip	oal Final Status		air conditionin		Audit No. Z		74	2006	<u> </u>
Water Supply Observation	vell 🗌 Abandoned	, insufficient supp		,	andoned, (Other)	Was the we package deli	II owner's infon vered?	mation Date Deli Yes No	2006	MM DD
Test Hole		, poor quality htractor/Techr	Replaceme nician Informati	on				Ministry Use On		·
Name of Well Co		v lad.	V	Vell Contracto	or's Licence No.	Data Source			1558	
	water Supples (street name, num		o K2s 146			Date Receive	E 1 7 2	Date of Ir	nspection YYYY	MM DD
Name of Well Te	Stittsvill echnician (last name, Stephen	first name)		T0007	ın's Licence No.	Remarks		Well Rec	ord Number	
	Stephen Unician/Contractor		Di	ate Submitted					· i · · · · · · · · · · · · · · · · · ·	
0506E (09/03)		Contra	ctor's Copy 🔲 N			vner's Copy		Cette formu	le est disponibl	e en frança

♥ Ontario	Ministry of the Environment	A 0415	980	number below) Well Record Regulation 903 Ontario Water Resources Ad				
Instructions for Complete	ting Form	A04198	0				page _	of
All Sections must be cQuestions regarding co	e of Ontario only. This ompleted in full to avoic mpleting this applicationts shall be reported to lue or black ink only.	I delays in processing on can be directed to	. Further ii	nstructions and	l explanations are av	ailable on 416-235	the back of	this form.
Well Owner's Informatio	n and Location of W		MUN	S (Street Number	r/Name, RR,Lot,Cond	cession)	LOT	
Mortgage Edge County/District/Municipality		14	4 Wesca	ar Lane	<u> </u>		imbor (includ	
Ottawa Carleton	(City/Town/Village Carp	0	l l	1L0 613	3 836		e area code)
Address of Well Location (Cour Ottawa Carleton	ty/District/Municipality)	Tow	Nest Ca	arleton -	Huntley 6	5	Concession	
RR#/Street Number/Name 132 Wescar Lane GPS Reading NAD z	Zone Easting 42 32 09		ty/Town/Vil Carp Init Make/M Garmin		of Operation; Unc	artment/Bl differentiated ferentiated, s		
Log of Overburden and	Bedrock Materials (s	ee instructions)			Description		Depth	Metres
General Colour Most commo	r .	Other Materials		Genera	Description		From	3.65
Brown Sandy Gray Sandy		Stones Stones	-				0 3.65	7.31
Gray Limes	-	Dark Layers		Med	ium		7.31	52.72
							_	
			1					
Hole Diameter		Construction Reco	rid		Tes	st of Well	Yield	
Depth Metres Diamete	Inside	Wall	Depth	Metres	Pumping test method	Draw [ecovery Water Level
6 8.22 22.75	centimetres	thickness centimetres	From	То	submersible Pump intake set at -		letres min	Metres
8.22 52.72 15.23		Casing			(metres) 45 71	Level 4	.49	
	15.86 Steel F	\$ TO	.45	8.22	(litres/min) 40.95 Duration of pumping	0	.09	15.19
Water Record Water found Kind of Water at Metres	Galvanized Steel F				3hrs + mir	n		13.06
50 59 Fresh Sulphu	Plastic C				Final water level end of pumping 19 mores	3 9	.27 3	11.41
Other not tested	Steel F	Fibreglass			Recommended pump type. Shallow Deep	- 10	. 30 ⁴	10.37
m Fresh Sulphu Gas Salty Minera Other:	III Diactic (Recommended pump depth 30.47 metres	5 11	.21 5	9.56
m Fresh Sulphu	ur l	Screen			Recommended pump	10 14		6.88
Gas Salty Minera Other:	diam Steel	Fibreglass Slot No.		-	rate. (ffice / h.h.) If flowing give rate -		33 20	5.83 5.47
After test of well yield, water was Clear and sediment free	Galvanized	1.5			(litres/min) If pumping discontinued, give reason.	25 16	57 25 72 30	5.34 5.25
Other, specify		No Casing or Scre			ded, give reason.	-	88 40 50 50	5.19 5.17
Chlorinated X Yes No	15.23 S Open hole		8.22	52.72		60 17	. 63 60	5.17
	Sealing Record type (bentonite slurry, neat cen	nent slumy) etc Volume	ndonment Placed	In diagram belov	Location v show distances of well to		lot line, and bu	ilding.
From To	d - Bentonite S	Cubic	netres)	Indicate north by	arrow.	4	-	Rd
0,22								le 6
								5.6
						June Same		
☐ Cable Tool X Rota	Method of Construction		Digging	1	LJ !		deveo	Richardson
	ercussion Je	etting	Other	1	132	Co	CO'	ğ
	Water Use			W	escar		Ros	2
Stock Com	mercial N	ublic Supply ot used ooling & air conditioning	Other	A	- Di	ate Well- Co	moleted	-
☐ Irrigation ☐ Mun	Final Status of Well				4/066	ate Delivere	2006	8 30
	ed, insufficient supply	ewatering	ned, (Other)	Was the well ov package delivered	VITELS INIONLIAUOIT.	are Delivere	^d 2006	MM DD 8 31
	ed, poor quality R ontractor/Technician In		ν .	Det- C	Ministry Us	se Only ontractor		18
Name of Well Contractor Capital Water Supp Business Address (street name, no	ly Ltd.	Well Contractor's Li	cence No.	Data Source			15	
Box 490 Stittsvil	le Ontario K2S	1.46	3	Date Received	7112000 33		ction YYYY	MM DD
Name of Well Technician (last nam	e, firšt name)	Well Technician's L	icence No.	Remarks	W	/ell Record	Number	
Miller: Stephen Signalure di Technician/Contracto		Date Submitted YYYYY	MM DD 8 31			• •		
0506E (09/03)	Contractor's Cop			ner's Copy 🔲	Cette	formule e	st disponible	en français

প্ত Or		Ministry of he Environment	Well Tag	A 05:	3904		Regulation 903 Ontar		
Instructions	s for Completin	ng Form		1405	390	4		page _	<u>2</u> of <u>3</u>
For use i All Section	in the Province ons must be con	of Ontario only. T	void delavs i	in processin	a. Further i	nstructions and	ease retain for future refer I explanations are available c esk (Toll Free) at 1-888-3	on the back of	this form.
QuestionAll metro	ns regarding com r e measurement	npleting this applic i s shall be report	cation can b ed to 1/10 th	of a metre.	o the wate	er weil neip D			
<u>_</u>		e or black ink only			MUN	CC	Ministry Use Only	LOT	
Well Owner	r's Information	and Location of	Well Infor	mation	WOIV				
	A 1	シンメン			uec +	- Carl	e four 10-11-12	27	- 50
RR#/Street Nu		1			City/T <u>ow</u> n/Vi	illage	Site/Compartment/	/Block/Tract et	C.
GPS Reading	NESCAR NAD Zor		Northi	na	クァッ Unit Make/M	todel Mode	of Operation: Undifferential	356 - 4/R ted Lawer	
0	8 3 /4	9 423350	50	15890	MAG	clan	UTM Differentiated	, specify	
Log of Over General Colour		edrock Materials	Other Mate			General	I Description	Depth	Metres
					///) m a a c	From	11.51
Brown	Limes	vel.	(MRU	e 1-B	ouplers		10056	0	22,72
Grey	him es	ton't					r n v Q ·	11.51	KALIA
Hole	Diameter		Const	ruction Reco	ord		Test of We	·	
	Metres Diameter To Centimetres	Inside	aterial	Wall thickness	Depth	Metres			Recovery Water Level
From		diam (Micentimetres	atoriai	centimetres	From	То	Submenciblein	Metres min	Metres
0 6	.06 20.32			Casing				3,40	17.40
		11/2 /20	Fibreglass	4 44 0		11 100 1	Pumping rate - 1 4 (litres/min) 5 \$ 50	5,24 1	14,10
Wate	r Record	Plastic		0.48	U	11.51	Duration of pumping 2	15/ 2	11.79
Water found at Metres	Kind of Water	Steel	Fibreglass				hrs min Final water level end 3		6 3/
10,60 Gas	Fresh Sulphur Salty Minerals		Concrete				of pumping / 2 40 metres	7, 15 3	9.26
Other:		Galvar	Fibreglass				Recommended pump 4 type.	7.7£ 4	7,56
Gas G	Fresh Sulphur Salty Minerals		Concrete				Recommended pump 5	P, 27 5	4.24
Other:		Galvar	nized				depth./9.69 metres		44
Gas	Fresh Sulphur Salty Minerals	Outside Start		Screen			Recommended pump rate. (fitres/min) 10	10,/6 10 12,3/15	3,40
Other:		diam Later	Fibreglass	Slot No.			If flowing give rate - 20	4,41 20	1
After test of well	II yield, water was ediment free	Galva					(litres/min) 25 / If pumping discontin- 30 /	7.77 30	
Other, speci	ify		No Ca	asing or Scre	en		ued, give reason.	7, 79 40	
Chlorinated -	Yes No	15,55 Open	hole		11.51	22.72	50 /	7, fO 50	
	Plugging and Se		Annular	enaco 🗆 At	andonment		Location of Well	7717 6	
Depth set at - M	letres Material and ty	pe (bentonite slurry, nea		etc Volum	ne Placed		v show distances of well from road		uilding.
1	06 Cem			(cubic	metres)	Indicate north by	arrow.		
0 610	vo cem	ew i va	ur)	//	"5°				
								· /	4
								/ /r	4
							CURP	Rd/	۱ ۱
Cable Tool	4 Hotary	Method of Constru	Diamond	Г	Digging	0.4	caa Rd Se	2	
Rotary (conv	entional) 🔲 Air per	-	Jetting		Other	90	7, 32	3	3
Rotary (rever	rse) Boring	Water Use	Driving			يعور.	caa isa	1	
Domestic	Industri		Public Supply	у 🗆	Other	>	6		7
Stock	∠ Comme Municip		☐ Not used ☐ Cooling & air	conditioning		Audit No.	71COA Date Well C	Completed	MM DD
		Final Status of W			1 (011 - 1)		ITUUT	2006	1/1 20
✓ Water Suppl		ell	Unfinished Dewatering	∟ Abando	oned, (Other)	Was the well ow package delivere	VIII 3 IIIIOII II GAOII	2006	MM DD 20
Test Hole	Abandoned,	poor quality [htractor/Techniciar	Replacement				Ministry Use Only		
Name of Well C	ontractor	4 .	We	Il Contractor's L		Data Source	Contractor	600	6
Business Address	ss (street name, num	ber city etc.)	9	600	6	Date-Received		pection yyyy	MM DD
Pusiness Address	5P - S	7/1/	en+	010			8 Zuyo		
	echnician (last name,	<i>.</i>	ڑا ہے	Technician's	<- I	Remarks	Well Recor	d Number	
Signature of Tec	chnician/Contractor	1	Date	Submitted YYYY	MM DD				
0506E (08/2006	un de	-		2006 Minist	ry's Copy	, L	Cette formule	est disponible	en français
,				14111112	. y a copy	,			-

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 🔀 Intested 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

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ane	of	

Address of Well Location (Street Number/Name)	Township	Lot	Concession	
County/District/Municipality	City/Town/Village	a rem	Province Po	stal Code
Ottawa-Car leton	Carp		Ontario	
NAD 8 3 September 2016 September 201	Municipal Plan and Sublo	-356 Block	Other 2	
Overburden and Bedrock Materials/Abandonment Sealing		back of this form)		Donth (14/ft)
General Colour Most Common Material	Other Materials	General Description	From	Depth (n/ft)
Sand			0	15
Oncy himes	me		()	60
				_
	\circ			
PLAN 4R-83	68 lat 3	46		
Annular Space		Results of We After test of well yield, water was:	Draw Down	Recovery
Depth Set at (m/ft) Type of Sealant Used From To (Material and Type)	Volume Placed (m³/ft³)	Chear and sadd free	Time Water Level Tir	ne Water Level
19' 0 Nest Coments	Mry 7,8	If pumping discontinued, give reason:	(min) (m/ft) (m. Static 1 / 1	$\frac{(m/ft)}{}$
	<i>f</i>		1 6'4"	1 / ' / '
		Pump intake set at (m/ft)	2/1/4	66
		Dumaning rate (Venin (CP)(1)	00	3/14"
	Well Use Commercial Not used	Pumping rate (Wmin (GPM))	1000	1/124
Rotary (Conventional) Jetting Domestic	Municipal Dewatering	Duration of pumping hrs +	0 1	1/2"
Rotary (Reverse) Driving Livestock Digging Irrigation	Test Hole	Final water level end of pumping (m/ft)	1	05/04
Air percussion Industrial Other, specify Other, specify		If flowing give rate (I/min-/ GPM)	10a	5 (/(1
Construction Record - Casing	Status of Well			0
Inside Open Hole OR Material Wall Depth (m. Diameter (Galvanized, Fibreglass, Com/in) Concrete, Plastic, Steel) (cm/in) From	Water Supply To Replacement Well	Recommended pump depth (m/ħ)	25 7/7" 2	5
(cm/in) Concrete, Plastic, Steel) (cm/in) From	Test Hole Recharge Well	Recommended pump rate (I/min/ GPM)	30 7 7 3	0
1 4 00 10- 191	☐ Dewatering Well ☐ Observation and/or	50	40 7 34 4	0
o springe	Monitoring Hole Alteration	Well production (I/min (GPM)	50 8' 5	0
	(Construction) Abandoned.	Disinfected?	60 811" 6	0 17
Construction Record - Screen	Insufficient Supply Abandoned, Poor		ell Location	- X.
Outside Diameter (cm/in) (Plastic, Galvanized, Steel) Slot No. From	/ft) Water Quality To Abandoned, other,	Please provide a map below following	instructions on the back.	
(cm/in) (Plastic, Galvaritzed, Steel) From	specify			
	Other, specify			
Water Details	Hole Diameter	135//		Carp
Water found at Depth Kind of Water: Fresh Muntested	Depth (m/ft) Diameter From To (cm/in)	2 153 Corde		10
Water found at Depth Kind of Water: Fresh Untested	0 60 6"	1 ande	1/00	Kead
(n/ft) Gas Other, specify Water found at Depth Kind of Water: Fresh Wintested		1 Con ac	1	
(n/ft) Gas Other, specify		1 Koos	2	
Well Contractor and Well Technician I				
Business Name of Well Contractor AT PROCEDE DRILLING	Well Contractor's Licence No.			1
Business Address (Street Number/Name)	Municipality	Comments:		
Province Postal Code Business E-mail Addres	() A 41			
Bus.Telephone No. (inc. area code) Name of Well Technician (Las	Name First Name)	Well owner's Date Package Delivered information	Ministry Audit No. Z	
6138382170 PUKCE	JC SHAMIS	package delivered Date Work Completed		34721
Well Technician's Licence No. Signature of Technician and/or Contra	actor Date Submitted	Yes Date Work Completed	AUG 0 6	2009

Ontar Measurements rec	Ministry of the Environ		Well Ta	ag No. (Place A	09396	egulatio	n 903 (Vater Res	ecord
Well Owner's li		/ O i - 4				,			1937-194-194	
First Name D	DOREN EX	ime / Organizati くとみりみ	T10N)	E-mail Address					Constructed ell Owner
Mailing Address (S	(reet Number/Name)	•		Municipality	Province /	Postal Code		Telephon	e No. (inc.	area code)
Well Location	EXAP (-ANE.		CIKP	1 0,10	1 1 1 1			<u> </u>	
Address of Well Lo	cation (Street Number/N	lame)	2/1/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2/2	Township		Lot	100000000000000000000000000000000000000	Concess	ion	
County/District/Mui	TE LONE			City/Town/Yiflage	ψ A.™®®	-	Provir	nce	Postal	Code
				CAKY			Ont			
NAD 8 3	one Easting 3, 18 2	Northing 5	733	Municipal Plan and Sub	olot Number	* /	Other			
	Bedrock Materials/Ab		ealing Rec			,*)				1-7-60
General Colour	Most Common Ma	aterial		her Materials	Gene	ral Description	1		From	th (<i>m/ft</i>)
10 / L	FIC		61	AVEC	Loc	50 \	***************************************		$\frac{O}{122}$	1-22
DEN	CIN		500	7	50F1				1-22	2-2
6PY	(184		210	<u>CI</u>	4027		***************************************	- 9	277	J- 27
	71-14-14-14-14-14-14-14-14-14-14-14-14-14									
103/2/688409841109661/2/6/2/4/6/5/6/6/102	rearest terescontact and the second a	misse forms a desirable single (see			Torocky used Sollin weigh and my side and make	- Control of Control o	· · · · · · · · · · · · · · · · · · ·	104 : 015017		er West House Management
Depth Set at (m/ft	Type (nular Space of Sealant Used		Volume Placed	After test of well yield,			aw Down		ecovery
From To		rial and Type)		(m³/ft³)	☐ Clear and sand fi☐ Other, specify	ree	Time (min)	Water Le	vel Time (min)	Water Level (m/ft)
0 0 D	CONCRETE				If pumping discontinue	d, give reason:	Static Level			
0.20.91	9 SAND)			- "		1		1	
2-11 7-1	2 SHALL	<u>'</u>			Pump intake set at (n	n/ft)	2		2	
BROWN PROCESSAND AND A STREET A			Well U	1	Pumping rate (//min /	GPM)	3		3	
Cable Tool	Construction Diamond	☐ Public	Comme	***************************************			4		4	
☐ Rotary (Convention ☐ Rotary (Reverse)		☐ Domestic ☐ Livestock	Municip		⁻	nin	5		5	
☐ Boring ☐ Air percussion ✓		☐ Irrigation ☐ Industrial	Cooling	& Air Conditioning	Final water level end o	f pumping <i>(m/ft)</i>	10		10	
ther, specify 1/		Other, specify	······		If flowing give rate (I/n	nin / GPM)	15		15	
	Construction Record Hole OR Material Wa		oth (<i>m/ft</i>)	Status of Well	Recommended pump	denth (m/ff)	20		20	
Diameter (Galva	nized, Fibreglass, Thickrete, Plastic, Steel) (cm/	ness	То	Replacement Well	Treconninenced pump	deptil (<i>lilili)</i>	25		25	
4.03 86	ASTIC 31	80	1-22	☐ Test Hole ☐ Recharge Well	Recommended pump (l/min / GPM)	rate	30		30	
1 2 7 0		-0 -		Dewatering Well Observation and/or	Well production (I/min	(CDM)	40		40	
				Monitoring Hole Afteration		7 GPM)	50		50	
				(Construction)	Disinfected?		60		60	
	Construction Record -	-Screen		Insufficient Supply Abandoned, Poor		Map of W	ell Loc	ation		
Outside Diameter	Material Slot	No. Dep	oth (<i>m/ft</i>)	Water Quality Abandoned, other,	Please provide a map	below following	instruct	ions on the	e back.	
(cm/in) (Flastic,	Galvanized, Steet)	From	To	specify		E				
1-0x 14	15TE /2) IU	- 3: 11	Other, specify				7		
					_	1 4				
Water found at Der	Water Details oth Kind of Water:	resh Unteste		Hole Diameter oth (m/ft) Diameter	<u> </u>			1		8
(m/ft) [] G	as Other, specify		From	To (cm/in)	1> 1	14	17			1
,	oth Kind of Water: Fr as Other, specify	resh Unteste	d	5-79 8,29	4 (3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N N	W.		
	oth Kind of Water: Fr	resh Unteste	d		_[1 200		l,		
	as Other, specify		- many on - annother			工一人	-1 -1	_}		
Business Name of V	Well Contractor and Vell Contractor	vveii i ecnnici		ition elf-Contractor's Licence No.	<u>iii.</u>			- *		
grada S	Street Number/Name)	ing	, , , , , , , , , , , , , , , , , , ,	nicipality 4 1	Comments:	[N				
Business Address (S	Street Number(Name)	el Cres		unicipality LCMMML0	Comments:					
ソレンハウィー	Postal Code Bus	siness E-mail Ad				·				
Province	The fill of the				LIMET	notice of Park		\$255595000 = - · · · · ·	destruction and re-	S. 100 Sept 99/20 Reserve
$\mathcal{O}(\mathcal{N})$	nc. area code), Name of V	Well Technician	(Last Name,	First Name)	information	ackage Delivere	, [Audit No.	istry Use	Alver escriptions
$\mathcal{O}(\mathcal{O})$	nc. area code), Name of \	IMECIN -	Truis	7	information package delivered	ackage Delivere Y Y M M Vork Completed	, [Audit No.	····	Alver escriptions

Ontari			g No. (Place Sticker a	-]	n 002 (_		Record
Measurements reco	rded in: Metric 🗌 Impe	rial A09	3964 A	09396	4	17			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		Дитр					<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	8 127 488 50	15730	abbr - versionen andresson and various and somewhile	nach Nacharlanda (Nacharlanda (and Strand and Edition (Colored Strands and Sec.). Sec.	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		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) 10	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	←→	15	J.		N
	Water Details		ole Diameter			<u>رچ</u> /			14
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Business Address (St	reet Number/Name)			Comments:					
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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

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Measurements	_/ _	ial A0939	72	A 093972	→903 Ontario • ✓ 🗗 ¬) Pa	Water Resources Act ge of
Well Owner'	s Information Last Name / Organ			E-mail Address	1002	T T T T T T T T T T T T T T T T T T T
D. DOR	EN EMPUS	TION			- da la	Well Constructed by Well Owner
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Well Location	Location (Street Number/Name)	Township		Lot	Conces	sion
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0.9/ 5.			P	ump intake set at (m/ft)	2	2
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Cable Tool Rotary (Conve	· •	: Municipal 🔲 t	Jewatering	uration of pumping hrs + min	5	5
☐ Rotary (Revers	☐ Digging ☐ Irrigation	Cooling & Air Condition	Monitoring	inal water level end of pumping (r		10
Air percussion Other, specify	DINET PUSH Industrial Other, sp			flowing give rate (I/min / GPM)	15	15
Inside On	Construction Record - Casing	Depth (m/ft) Water St	of Well	ecommended pump depth (m/f	20	20
Diameter (Ga	alvanized, Fibreglass, Thickness	om To Replace	ment Well		25	25
4.03 1	14501 .368 C	- Calminated	e Well	ecommended pump rate fmin / GPM)	30	30
		Dobservat	ion and/or	/ell production (I/min / GPM)	40	40
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		☐ Abandon Insufficie	nt Supply	Yes No	60 Well Location	60
Outside Diameter (Diameter	Construction Record - Screen Material Stock Slot No	Depth (m/ft) Abandon Water Q	uality Pi	lease provide a map below follow		ne back,
(cm/in) (Plas	stic, Galvanized, Steel) Siot No. Fi	om To Abandon specify	ea, other,		15	.1 7
4.05 10	1800 10 1.0	Other, sp	pecify		10%	\ <i>N</i>
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	Gas Other, specify	rested		1m =	>	
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Buşiness Name o	Well Contractor and Well Tech of Well Contractor	inician Information Well Contractor's L	icence No.			
Bysiness Addres	s (Street Number/Name)	Municipality	/	omments:		
4)-147 Province	West Beauti Ch	eek Municipality NChMo	nolli			
ON	Desire Code Business E-ma	an Address	l w	rell owner's Date Package Delivi		nistry Use Only
Bus.Telephone No	o. (inc. area code) Name of Well Techni	cian (Last Name, First Name)	pa	ackage Y Y Y M	1860650000000	ž 100178
	icence No. Signature of Technician and	or Contractor Date Submitted	! !	Yes Date Work Comple		AR 0 1 2010
	-		IN THE STATE OF TH		THE WAR DOWN THE PROPERTY OF CO.	**********************************

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

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Overburde	n and Bedr	ock Materia				rd (see instr	uctions on the	back of this form)					
General Col	ACTION SAN ASS	Most Comm	C33/9V 20 C33 Z 3 T 7 P P			er Materials			General Description			From	th (<i>m/ft</i>)
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			Annular	Space	RESIDENCE OF THE PARTY OF THE P			DESCRIPTION OF THE PROPERTY OF	Results of W	ell Yiel	d Testing	3	
Depth Se	et at (m/ft)		Type of Seal				e Placed	The second secon	yield, water was:	Dr	aw Down	R	ecovery
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.31	1-83	Band	0.1					ir pumping disco	ontinued, give reason:	Level			
A STATE OF THE PARTY OF THE PAR	1-05	1 -0 5	t al							1		1	
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										3		3	
Meth	nod of Con	struction			Well U	se		Pumping rate (I/min / GPM)				
Cable To	ool	Diamono	Put	olic	Comm		Not used	Duration of pur	mping	4		4	
	Conventional)	☐ Jetting ☐ Driving	☐ Dor		Municip Test He		Dewatering Monitoring	hrs +	min	5		5	
Rotary (F	(everse)	Digging	☐ Irrig		_	& Air Condi		Final water leve	end of pumping (m/ft)	10		10	
Air percu			Ind							45		45	
Other, sp				er, specify		-		If flowing give r	rate (I/min / GPM)	15		15	
	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	on Material	I comment of the comm		h (<i>m/lt</i>)	Statu Water	s of Well	Recommende	d pump depth (m/ft)	20		20	
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(cm/in)		Plastic, Steel)	(cm/in)	FIOIII	10	☐ Test I		Recommende	d pump rate	30		30	
3.45	PVZ		.356				arge Well tering Well	(I/min / GPM)		30		30	
							vation and/or	Well productio	n (Vmin / GPM)	40		40	
						Monitor Altera	oring Hole			50		50	
						(Cons	struction)	Disinfected?		60		60	
						Aban	doned, icient Supply	Yes					
	Co	onstruction F	Record - Scre			Aban	doned, Poor	Please novide	Map of V a map below following			e back.	. Λ
Outside Diameter		aterial Ivanized, Steel)	Slot No.	From	th (<i>m/ft</i>)		r Quality doned, other,	I locate provide					1 1
(cm/in)				FIGH	10	speci	needel		wescar	Ln			1 1
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Business N	Name of Wel		or and well	rechnici			r's Licence No.						
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Business A	Address (Stre	eet Number/N		1	, 1	Municipality	111	Comments:					
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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 8 G (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

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The second second	trict/Municipality	1	1	City/Town/Village	er	6	Province	Postal	Code
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Overburde General Co	en and Bedrock Mate	erials/Abandonmen mmon Material		ord (see instructions on ther Materials		ral Description	n		th (m/ft)
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					Pump intake set at (7301).	2 //	2	2,57
Moth	hod of Construction	Charles on Assessment	Well U	lea Milateria	Purnping rate (Vmin)		3 4	3	253
Cable To	ool Diamo	ond Public	Comm	ercial Not used	Duration of pumping	Lagra).	4 11	4	2.50
Rotary (F		g Livestock	Munici	lole	6 hrs + 0	min	5 11	5	249
Boring Air percu		☐ Industrial		g & Air Conditioning	Final water level end	86').	10 X.49	10	2.48
Other, sp		Record - Casing	cify	Status of Well	If flowing give rate of	min / GPM)	15 7,23	15	"
Inside Diameter	Open Hole OR Materia (Galvanized, Fibreglass	l Wall	Depth (m/ft)	Water Supply	Recommended pum	p depth (nvft)	20 7,07	20	"
(cmvin)	Concrete, Plastic, Steel) (cm/in) Fro	m To	Replacement Wei	Recommended pum	(30°).	25 7.60	25	"
1000	TREKATET	0.40 40.6	0 6023	Recharge Well Dewatering Well	45 pm (10gpm)	40 264	30	717
				Observation and/o Monitoring Hole	Well-production with	Dish.).	50 11	50	"
				(Construction)	Disinfected?	/	60 11	60	2.46
	Construction	Record - Screen	160	Abandoned, Insufficient Supply Abandoned, Poor		Map of W	Vell Location		14.
Outside Diameter	Material (Plastic, Galvanized, Stee	Slot Na	Depth (m/ft)	Water Quality Abandoned, other	Please provide a map	below following	instructions on the	e back.	7
(cm/in)		-7		specify	1	7			7
				Other, specify			L	7	
	Water D	Details	REAL PROPERTY.	Hole Diameter			114	ZDE	DINC
110	nd at Depth Kind of Wa		sted De From	pth (m/ft) Diamete To (cm/in)					
Waler toun	d at Depth Kind of Wa	iter: Fresh Vunte	sted 8,23	35.08 B.ZA	9				
1 40 6	n/ft) Gas Other, s and at Depth Kind of Wa	The state of the s	sted				- WELL		
J/ (m	v/ft) Gas Other, s				13/40	SCAR "	No.		
Business Na	ame of Well Contractor	ctor and Well Techr		ation /ell Contractor's Licence N	1	97			
	ddress (Street Number/	TO SHOULD BE SHO	N	lunicipality	Comments:		_		
1571	TUE ARCITES.	DE, OOXXI	9 1	MENTAM					
Province	KOAZ	O Skaner	anlling	e Med set		ackage Deliver	ed Mir	nistry Use	Only
Bu Telepho	one No (inc area code)	Name of Well Technic	an (Last Name	First Name)	information package delivered	1102	Audit No	102	951
Well Technici	ian's Licence No. Signate	Alar Joyle Ar Alar	or Contractor D	Submitted 012	Yes Date V	Vork Completed	23 ADD	053	2011
0506E (12/200	07)	MINISTOS		Ministry's Co		11400	© Que	, , ,	r Ontario; 2007

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

Well Record

Oritai	the Environ	ment	A11	7442 Regula	tion 903 Ontario		/
Measurements red	corded in: Metric	[Imperial			Pa	ge_/_	of
A 11 (181 W)				, d	Cooree	eion	
Address of Well Le	sation (Street Number/)	Name)	Township HUNTE	er Lot 6	Conces	3	
County/District/Mu	nicipality	CARLEON.	City/Town/Village		Province	Postal	Code
UTM Coordinates 2		, Northing	Municipal Plan and Sub	lot Number	Ontario	ron	1110.
NAD 8 3	16 42322	45015755					
Overburden and General Colour	Bedrock Materials/Al Most Common M		ecord (see instructions on the Other Materials	e back of this form) General Descrip	ation		oth (m/ft)
Ren. 4 Kory	58	CAU	Other Materials	General Bessin	CON	1 A	1.99
Coper	774	3001	GRAVEZ, BOY	Ners		289	707
624	NIMES TONG	SHAZ	E , and			7.02	3508
- NCI	Muchae	3,712				1100	(1151)
							1000
D. # 2.1.1/. /		nnular Space			f Well Yield Testi		anaurani.
Depth Set at (m/i		of Sealant Used erial and Type)	Volume Placed (m³/ft³)	After test of well yield, water was: Clear and sand free		evel Time	Water Level
OND BLOG	Bookly	Denotonite,	000	Other, specify If pumping discontinued, give reas	(min) (m/l	t) (min)	(m/ft)
	great	sealant.		DA.	Level 17	0 1	262
	/	1		Pump intake set at (m/ft)	100	7. 2	190
				120 Am (40')	2/0/0	7	100
Method of	Construction	Well	Use	Pumping rate (I/min / GPM)	3/19) 3	1075
Cable Tool Rotary (Conventi	Diamond onal) Jetting		nmercial Not used	Duration of pumping	4 1,77	4	0100
Rotary (Reverse)	Driving	Livestock Tes	t Hole	hrs + min Final water level evid of pumping	5 dell	5	6,71
Boring Air percussion	Digging	Industrial	ning & Air Conditioning	2.11 (6.91)	10 200	7 10	1.00
Other, specify	Construction Record	Other, specify	Status of Well	If flowing give rate (Vmin / GPM)	15 700	15	1.04
Inside Open	Hole OR Material V	Vall Depth (m/ft)	Water Supply	Recommended pump depth (m	20 Roll	20	.85
		kness (rom To	Replacement Well Test Hole	Widm (40').	25 260	25	182
15.88 JE	el 4589 0.4	18 t. 46 8.6	Recharge Well	Recommended pump rate	30 200	30	1.81
			Observation and/or	Well production (I/mip/ GPM)	40009	5 40	681
			Monitoring Hole Alteration	Disinfected?	m 50 20/4	50	68/
		44	(Construction)	Yes No	60 %//	60	681
O. Lida	Construction Record	101	Insufficient Supply Abandoned, Poor	Map o	of Well Location	the back	1
Outside Diameter (cm/in) (Plastic	Material ; Galvanized, Steel) Slo	bt No. Depth (m/ft) From To	Water Quality Abandoned, other,	W Prease provide a map below follow	Willig Illiau dedolls off	TIO DOCK.	A.
			specify		1- 11.		/N
			Other, specify		h Wesca	<u>P</u>	W
	Water Details		Hole Diameter				
IPI	pth Kind of Water:	Fresh Untested	Depth (m/ft) Diameter	Wall 7			K
	Gas Other, specify_opth Kind of Water: F	1)/	9 35/18 15,74				3
27 (m/ft) □ (Gas Other, specify	1		123 Kloscar			1 3
31	opth Kind of Water; Face Gas Other, specify	Fresh V Untested					BIL
		d Well Technician Infor	mation				19
Business Name of	Well Contractor	16/11	Well Contractor's Licence No			,	1
Business Address	(Street Number/Name)	ADOLLET NO	Municipality 144	Comments:			M
Province	12+HUC	ARCHES DR	HUMMIN				
ON	KUAZXO:	Stinkn anling	epa.net.	Well owner's Date Package De	1 10	inistry Use	e Only
Bus Telephone No.	(inc. area code) Name of	f Well Technician (Last Na	me, First Name)	information package delivered 20110	Audit N	132	976
Well Technician's Lice	ence No. Signature of The	chincian and Contracto	Date Submitted	Yes Date Work Compl	eted	IUL 0 8	3 2011
0508E (2007/12) ©	Queen's Printer for Ontano, 20	107	XCHOCOG	No Schille	Receive		
(E00/11E) 01	and the contract of the contra	THE RESERVE OF THE PARTY OF THE	Ministry's Con	V			

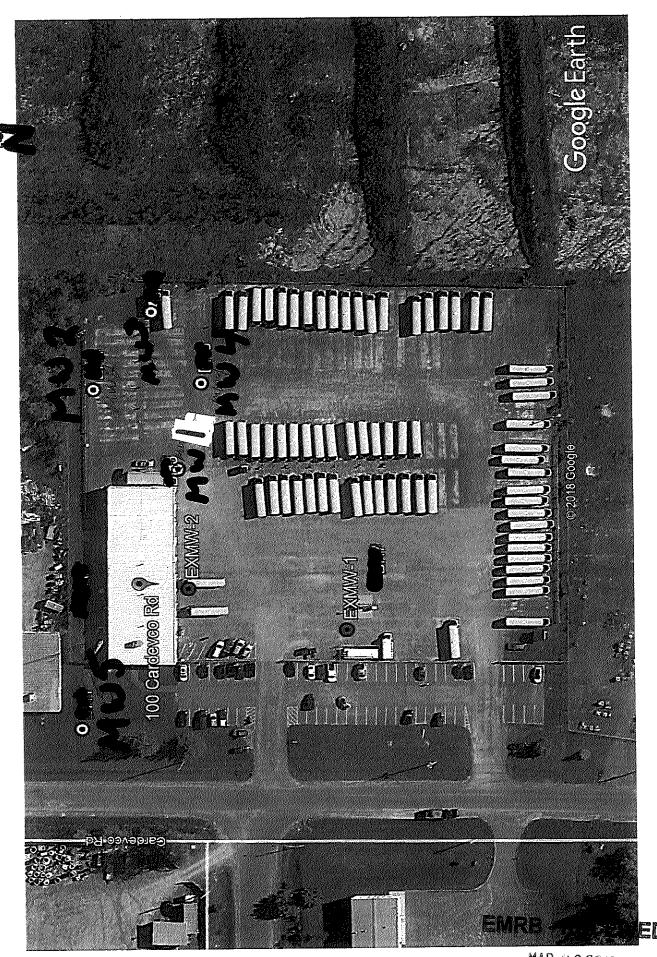
Ministry of

Tag#: A135308 int Below) We

Well Record

First Name	vner's Information				T	The state of the s		- 1		
	e	Last Name / Or	rganization Nan Construk	ction	E-mail Address				•	Constructe ell Owner
-	ddress (Street Number 3 Cardevco Ro	•		Municipality Carp	Province ON	Postal Code	1	Telephone N	•	
Well Loc	cation				<u> </u>	1 1 2 2 2				
	of Well Location (Street 3 Cardevco Ro			Township Vest Carleton		Lot G	and the second	Concession		
	istrict/Municipality	TWO EAS.		City/Town/Village			Provi	nce	Posta	al Code
<u>Ot</u>	ttawa-Carleton dinates Zone Easting	, Nort	thing	Carp Municipal Plan and Sublot I	Number	:	Ont	ario		
		1	5015933	4R8368	Authori	e en groue ingelên e		nt 9 & 1	2	
	den and Bedrock Ma	terials/Abandon	ment Sealing Rec	ord (see instructions on the ba						pth (<i>m(ft)</i>)
General C	Colour Most C	ommon Material	Ot S. Gravel	ther Materials	Genera	l Description		200	From /	To
Grau	/ & Brown			Boulders.			***************************************		11 '	11' ' 78'
	/ & Brown		·····			***************************************			78 '	
	/ & Brown	.,,		· ·		~	***************************************		93 ′	
		•			AND					
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				***************************************			·	
		A					31 (2)	J. T		
	Set at (m(ft))	Annular S Type of Seala	int Used		After test of well yield, wa		Dr	aw Down		Recovery
From 20 ′	To Nes	(Material and it cement	Type)		☐ Clear and sand free ☐ Other, specify			Water Level (m/ft)	Time (min)	Water Lev (m/ft)
				1 11	f pumping discontinued,		Static Level	7.8	9	19.7
		WARRANCE TO THE TOTAL THE			\sim		1	13.7	- 1	7.6
		***************************************	WWW.		Pump intake set at (m/ft		2	14.2	2	7.6
Moti	hod of Construction		Well U		90 Pumping rate (l/min / € €		3	14.8	3	7.8
Cable To	ool Diam	ond Public	c Comme	ercial Not used	20		4	15.1	4	7.6
☐ Rotary (0 ☐ Rotary (F	Conventional)	J //		Dar Dewatering	Ouration of pumping hrs + 0 min		5	15.4	5	7.6
☐ Boring Air percu	☐ Diggi	ng		g & Air Conditioning	inal water level end of po	umping (m/ft)	10	17.3	10	7.8
Other, sp			, specify	If	flowing give rate (l/min	/ GPM)	15	18.4	15	7.6
Inside	Construction Open Hole OR Materia	Record - Casin	Depth (m(ft))	Status of Well Water Supply	Recommended pump de	anth (n/B)	20	19.5	20	7.6
Diameter (cm(in)	(Galvanized, Fibreglass Concrete, Plastic, Stee	s. Thickness	From To	Replacement Well	seconmended pump de	abin (matr)	25	19.6	25	7.6
614"	Steel	188"	+2' 20'	15 IR	decommended pump ra	ite	30	19.6	30	7.6
5 15/16"	Open Hole		20 / 100	☐ Dewatering Well ☐ Observation and/or ☐ W	20 Vell production (I/min /	PM)	40	19.7	40	7.0
N 18/2"	and the same street the part of the part of		Define the property of the extraction of the con-	Monitoring Hole		Lucy 1				
J 116"		1 1		☐ Alteration	20+		50	19.7	50	7.6
J 116				(Construction)	20 + isinfected? ≾Yes ☐ No		50 60	19.7 19.7	60	7.6 7.6
	Construction	n Record - Screen		(Construction) Abandoned, Insufficient Supply Abandoned, Poor	isinfected? ∠Yes No	Map of We	60 II Loc	19 . 7	60	
Outside Diameter	Construction Material (Plastic, Galvanized, Ste	Clat Na	Depth (<i>m/ft</i>) From To	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other,	isinfected? Yes No		60 II Loc	19 . 7	60	
Outside	Material	Clat Na	Depth (m/ft)	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality	isinfected? ∠Yes No		60 II Loc	19 . 7	60	
Outside Diameter	Material	Clat Na	Depth (m/ft)	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other,	isinfected? ∠Yes No		60 II Loc	18.7	60	
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Ste	el) Slot No.	Depth (<i>m/ft</i>) From To	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify	isinfected? ∠Yes No	ow following in	60	ation ons on the bad	60 ck.	76
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Ste Water Depth Kind of Wa	Slot No. Details tter: Fresh	Depth (<i>m/ft</i>) From To	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify	isinfected? ∠Yes No	ow following in	60	ation ons on the bad	60 ck.	7.6
Outside Diameter (cm/in) Vater found 78 (m/	Material (Plastic, Galvanized, Ste	Slot No. Details tter: Fresh pepcify	Depth (<i>m/ft</i>) From To H Intested Dept From	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify Iole Diameter th (m/ft) Diameter To (cm/in)	isinfected? ∠Yes No	ow following in	60	ation ons on the bad	60 ck.	7.6
Outside Diameter (cm/in) /ater found /ater found (ater found (ate	Material (Plastic, Galvanized, Ste Water I d at Depth Gas Other, s d at Depth Kind of Wa (f) Gas Other, s	Slot No. Details ater: Fresh specify cher: Fresh specify	Depth (m/ft) From To H Intested Dept From Untested	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify Other, specify Diameter	isinfected? ∠Yes No	ow following in	60	18.7	60 ck.	7.6
Outside Diameter (cm/in) /ater founce 18 (mu) /ater founce 19 (mu) /ater founce /ater founce	Material (Plastic, Galvanized, Ste Water I d at Depth Kind of Water I Gas Other, sid at Depth Kind of Water I	Slot No. Details Iter: Fresh	Depth (m/ft) From To H Intested Dept From Untested	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify Other, specify Other Diameter	isinfected? Yes No lease provide a map belo	ow following in	60 III Loca	ation ons on the bar	60 CK.	CO
Outside Diameter (cm/in) Vater founc 78 (m/ Vater founc 93 (m/ Vater founc (m/	Material (Plastic, Galvanized, Ste Water E d at Depth Gas Other, s d at Depth Kind of Wa (fi) Gas Other, s d at Depth Will Gas Other, s Well Contract	Slot No. Details Inter: Fresh Fresh Inter:	Depth (m/ft) From To H Untested Dept From Untested Juntested 2	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify Other, specify Other, specify Diameter (cm/in) Diameter	isinfected? Yes No lease provide a map belo	ow following in	60 III Loca	ation ons on the bar	60 CK.	CO
Outside Diameter (cm/in) Vater found 93 (m/ Vater found (m/ vater found (m/	Material (Plastic, Galvanized, Ste Water L d at Depth Kind of Water L d at Depth Ki	Slot No. Details Inter: Fresh specify Inter: Fresh specify Inter: Fresh Lepecify	Depth (m/ft) From To H Untested Dept From Untested Juntested 2	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify Other, specify Other, specify Other, specify Other, specify Other, specify Other, specify Other, specify Other, specify Other, specify Other, specify	isinfected? Yes No lease provide a map belo	ow following in	60 III Loca	ation ons on the bar	60 CK.	CO
Outside Diameter (cm/in) Vater founc 93 (m/ Vater founc (m/ usiness Na Air Ro	Material (Plastic, Galvanized, Ste Water L d at Depth Gas Other, s d at Depth Kind of Wa (fi) Gas Other, s d at Depth Will Contract ame of Well Contractor	Details Inter: Fresh State: Fr	Depth (m/ft) From To H Intested Dept From Untested Juneated Chnician Informat Wei	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify Other, specify Other, specify Other Diameter (cm/in) Other Confin Other Confin	isinfected? XYes No Rease provide a map belo AKN RICH	ow following in	60 III Loc Instruction	19'77 ation ons on the bar CARI Ron SIDE	60 CK.	CO
Outside Diameter (cm/in) Vater founc 93 (m/ Vater founc (m/ vater founc (m/ usiness Ad 0000 Frovince	Material (Plastic, Galvanized, Ste Water E d at Depth Kind of Wa d Gas Other, s d at Depth Kind of Wa d Other, s d at Depth Well Contractor ook Orilling Co. Lt	Slot No. Details Inter: Fresh pecify Inter: Business E-resh	Depth (m/ft) From To H Untested Dept From Untested Untested Untested Wel Chnician Informat Wel Mui	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify Colle Diameter To (cm/in) Contractor's Licence No. 1119 Inicipality Richmond	isinfected? XYes No Rease provide a map belo	ow following in	60 III Loc Instruction	19'77 ation ons on the bar CARI Ron SIDE	60 CK.	CO
Outside Diameter (cm/in) Vater founc 93 (m/ Vater founc (m/	Material (Plastic, Galvanized, Ste Water I d at Depth Kind of Water I d at	Slot No. Details Inter: Fresh Inter: Fres	Depth (m/ft) From To H Intested Dept From Untested 21 Chnician Informat Wei Mui mail Address air-rock aymp	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify Colle Diameter To (cm/in) 100 5 is is Contractor's Licence No. 1119 Inicipality From and Weather Construction Weather	isinfected? Ves No lease provide a map below the second of the second	M SET A	60 III Locanstruction	19'7 ation ons on the bar Color Color Side Ministry	60 CK.	CO
Outside Diameter (cm/in) Vater founc 93 (m/ Vater founc (m/	Material (Plastic, Galvanized, Ste Water L d at Depth Kind of Wa with Gas Other, s Well Contractor ook Orilling Co. Lt ddress (Street Number/ Franktown Road, Postal Code KDA 27 ne No. (inc. area code)	Details Inter: Fresh State: Fr	Depth (m/ft) From To H Intested Dept From Untested Vel Chnician Informat Wel Mui mail Address air-rock symp	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify Iole Diameter Th (m/ft) Diameter (cm/in) I Contractor's Licence No. 1 19 Inicipality Richmond We info	isinfected? Ves No lease provide a map belo R CH comments: 1/2 HP - 10 GP comation ckage invered y 20	ow following in	60 III Locanstruction	19'7 ation ons on the bar CAL For Ministry Audit No.	ck.	7.6 CO
Outside Diameter (cm/in) Vater found 93 (m/ Vater found (m/ V	Material (Plastic, Galvanized, Ste Water L d at Depth Kind of Water L d at Depth Ki	Details Inter: Fresh State: Fr	Depth (m/ft) From To H Intested Dept From Untested Vel Chnician Informat Wel Mui mail Address air-rock symp nnician (Last Name, F	(Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify	isinfected? XYes No No lease provide a map below the second of the se	ow following in	T 90	19'7 ation ons on the bar CAL For Ministry Audit No.	60 Ck.	00 only 253

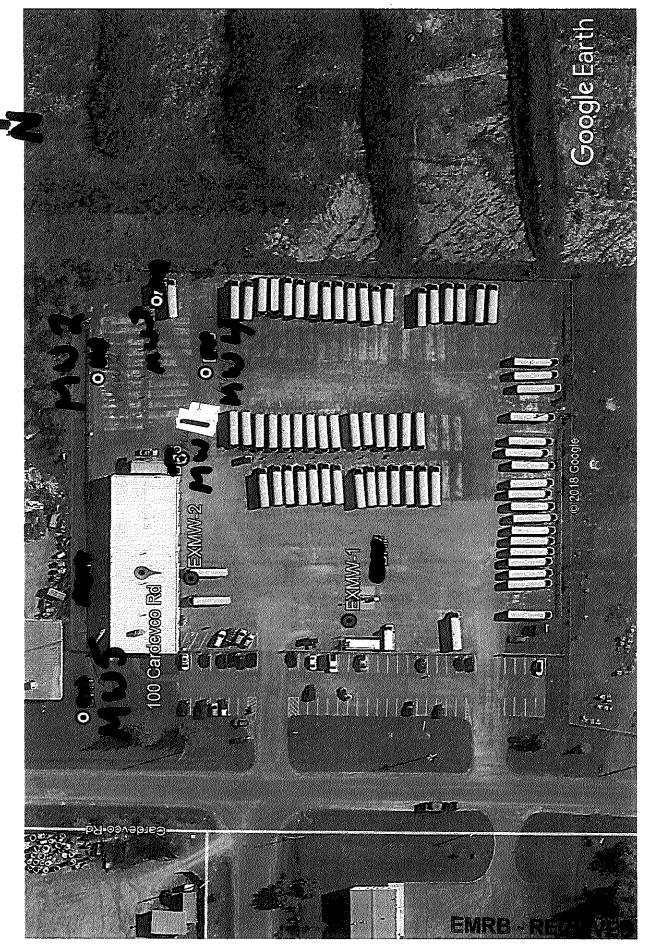
Ontario Ministry of the Environme and Climate Change	ΙΔ	•		Vell Record Vater Resources Act
Measurements recorded in: 🛮 Metric 🔲 Imperia	1 H261077 Ta	ng#:A261077 ***********************************	3157 Pag	eof
Well Owner's Information	zation a l	E-mail Address		☐ Well Constructed
First Name Last Name / Organiz	s lanada Irc.			by Well Owner
Mailing Address (Street Number/Name) 4243	Support of the state of the sta	Province Postal Code SC J741		e No. (inc. area code) 역구 이 토토 이 역
4243 THE MARCET LACASSE Well Location	GI O ISDITIEURO			
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 4 4 7 50 1	15952			
Overburden and Bedrock Materials/Abandonmen General Colour Most Common Material	it Sealing Record (see instructions on the Other Materials	back of this form) General Description	า	Depth (m/ft)
		dese		From To
BB 3and	of ave	S. A		31 1.22
95000 (ch) 500 d et a 2		/wered		1.22 G.L
2,730.		/		
Annular Spac	100	Results of W After test of well yield, water was:	/ell Yield Testi	
Depth Set at (m/ft) Type of Sealant U From To (Material and Type		☐ Clear and sand free	Time Water L	evel Time Water Level
0 .3) Concestelllush	min	Other, specify	Static) (min) (miny
. 31 2.74 benjense			Level 1	1
2.74 6.1 filter sind		Pump intake set at (m/ft)	2	2
			3	3
Method of Construction	Well Use	Pumping rate (I/min / GPM)	4	4
☐ Cable Tool ☐ Diamond ☐ Public ☐ Rotary (Conventional) ☐ Jetting ☐ Domestic	☐ Commercial ☐ Not used ☐ Municipal ☐ Dewatering	Duration of pumping	T	5
Rotary (Reverse) Driving Livestock	Test Hole Monitoring	hrs + min Final water level end of pumping (m/	5	
☐ Boring ☐ Digging ☐ Irrigation ☐ Industrial			10	10
Other, specify Other, sp		If flowing give rate (Vmin / GPM)	15	15
Inside Open Hole OR Material Wall	Depth (m/ft)	Recommended pump depth (m/ft)	20	20
Diameter (Galvanized, Fibreglass, Concrete, Plastic, Steel) Thickness (cm/in) Fi	rom To Replacement Well Test Hole	Recommended pump rate	25	25
5.20 PVC 1,390 C	Recharge Well Dewatering Well	(Vmin / GPM)	30	30
	Observation and/or	Well production (I/min / GPM)	40	40
	Monitoring Hole Alteration	Disinfected?	50	50
	(Construction) Abandoned,	Yes No	60	60
Construction Record - Screen	Insufficient Supply Abandoned, Poor	Map of N	Well Location	the back
Outside Material Slot No. F	Depth (m/ft) Water Quality From To □ Abandoned, other,	Triease provide a map below following	ig instructions on	210 32311
(cm/in) (*1331, 527, 525, 525, 525)	specify			
0,03/10	Other, specify			
Water Details	Hole Diameter		100	
Water found at Depth Kind of Water: Fresh Ur		9.0		
(m/ft) ☐ Gas ☐ Other, specify Water found at Depth Kind of Water: ☐ Fresh ☐ Ur				
(m/ft) Gas Other, specify	1.12 6.1 7.60			
Water found at Depth Kind of Water: Fresh Ur	ntested / / / / /			
(m/ft) Gas Other, specify Well Contractor and Well Tec	hnician Information			
Business Name of Well Contractor	Well Contractor's Licence No			
Business Address (Street Number/Name)	Municipality	Comments:	***************************************	
165 Shields Cook	Markham			
Province Postal Code Business E-n	nail Address (SESCIMASON COM			Ministry Use Only
Bus.Telephone No. (inc. area code) Name of Well Tech		information package y y y y M I		No. Z 229576
Well Technician's Licence No. Signature of Technician ar		Date Work Comple	ted .	MAR C 8 2019
THE TECHNICIAN SIGNATURE OF TECHNICIAN AND ADDRESS OF TECHNICIAN AND A	Y Y Y M M D I			ved
0506E (2014/11)	Ministry's Cop	у .	© C	lueen's Printer for Ontario, 2014



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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 8 Tulation	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 Storsborand	Province	Postal Code	Telephor	9770	
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		/ ゝ 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
	3 M2) V2 .				J. J. Cu				
		Annular Spac	of American man Leaf And Leaf and a second and a few many a second as a			\$51103 KF\$3369 KF\$3500 CF\$357X65953 ZAC 6513	ell Yield Testi	West of the second seco	
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 pur	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	AAAAAAA				
	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
490 ji 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

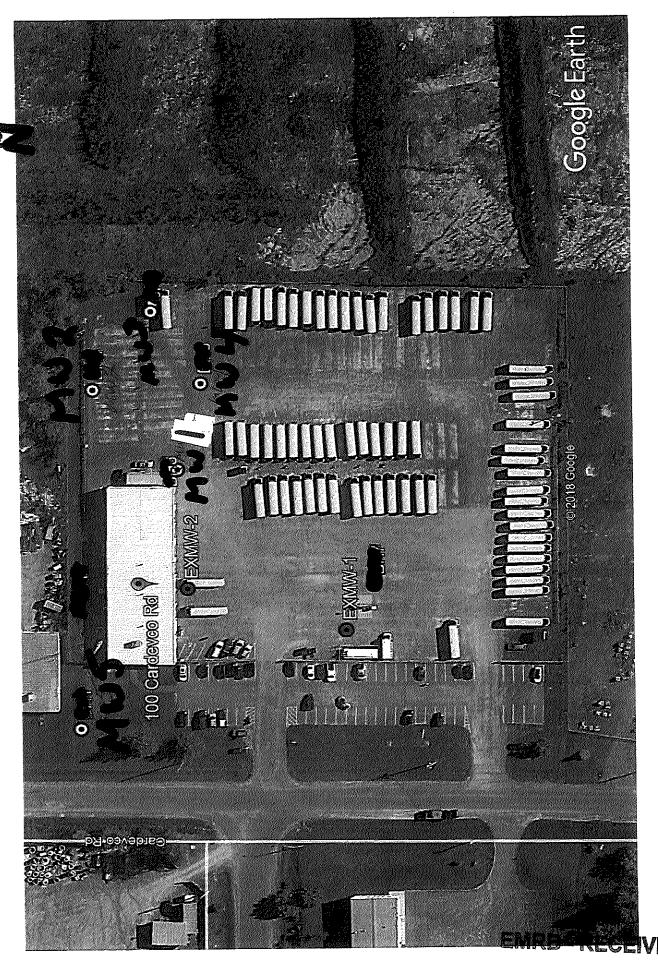


C-7241 2290199

MAR 08 2019

Or	ntario 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>Kalabangan dan banasan dan ba</u>
	Cardevio	<u>Rd</u>		H. (Taura 0 (1) a a a			Province		Postal	Codo
County/Distr	ict/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>					
						·*····································		-		

		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 (·m/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	iab below tollow	ang msuu	CHOIS ON	uie Dack	L-
(cm/in)	PUC-	10 1.83		specify						
6.07	J D	10 1.0)	/ / / /3	Other, specify				,		
							ıω			
Water found	Water D)etails ter: □Fresh □Untest	200 00 200 000 000 000 000 000 000	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
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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

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 m	.31 m	CONCRETE Monument	
.31 m	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

Inside Diameter	Open Hole or material	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

After test of well yield, water was	
f pumping discontinued, give reason	
Pump intake set at	
Pumping Rate	
Ouration of Pumping	
inal water level	
f flowing give rate	
Recommended pump depth	
Recommended pump rate	
Well Production	
	-

Draw Down & Recovery

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

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

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
Allions	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
	рН	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.

^{* =} Guideline Exceedence



Environment Testing

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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
	Ca	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
	Total Coliforms	0	ct/100mL	MAC 0	0	0

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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

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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

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
Volatiles	c-1,2-Dichloroethylene	0.4	ug/L		<0.4	<0.4
Volumoo	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.

^{* =} 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		
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.

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

REMARKS

BORINGS BY Backhoe

DATE November 12, 2021

FILE NO. PG6018

HOLE NO. TP 1-21

BORINGS BY Backhoe				D	ATE	Novembe	r 12, 202	TP 1-	21
SOIL DESCRIPTION	PLOT		SAN	IPLE	T	DEPTH	ELEV.	Pen. Resist. Blows/0.3r • 50 mm Dia. Cone	n ster
	STRATA	TYPE	NUMBER	% RECOVERY	N VALUE or RQD	(m)	(m)	O Water Content %	Piezometer
GROUND SURFACE Asphaltic concrete 0.09	\.\^.\^.			щ		0-	118.65	20 40 60 80	
FILL: Crushed stone 0.10	\^^^^ XXX	7 = G	1						
FILL: Brown silty sand with crushed stone, gravel, occasional cobbles		∑G	2						
0.60 Rigid insulation 0.70									
		∏ G	3				117.05		
Compact to dense, brown SILTY SAND		₹7				1-	-117.65		
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)									
								20 40 60 80 Shear Strength (kPa)	100
								▲ Undisturbed △ Remould	ed

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.

BORINGS BY Backhoe					OATE	Novembe	er 12, 202	21	HOLE NO.	P 2-21	
SOIL DESCRIPTION	PLOT		SAN	/IPLE		DEPTH	ELEV.		esist. Blows		ter
	STRATA 1	TYPE	NUMBER	% RECOVERY	N VALUE or RQD	(m)	(m)	0 V	Vater Conten	t %	Piezometer
GROUND SURFACE TOPSOIL 0.1	0			Н Н		0-	118.67	20	40 60	80	\vdash
FILL: Brown silty sand with crushed stone, gravel and cobbles, trace asphalt		G	1								
0.6 Rigid insulation 0.7		-									
FILL: Crushed stone	0	G	2			1 -	-117.67				
Compact to dense, brown SILTY SAND		G	3				-116.67				
2.1 End of Test Pit	0	+-				_	110.07				\downarrow
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)											
								20 Shea ▲ Undis	40 60 ar Strength (I turbed △ Rer		00

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

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

SOIL PROFILE AND TEST DATA

DATUM Geodetic									FILE N	o. PG6018	}
REMARKS									HOLE	NO. TP 3-21	
BORINGS BY Backhoe				D	ATE	Novembe	r 12, 202	21		17 3-21	1
SOIL DESCRIPTION	PLOT			/IPLE	63	DEPTH (m)	ELEV. (m)		en. Resist. Blows/0.3n ● 50 mm Dia. Cone		eter action
	STRATA	TYPE	NUMBER	% RECOVERY	N VALUE or RQD			0 V	/ater C	ontent %	Piezometer Construction
GROUND SURFACE	07			꿆	Z	0-	-118.55	20	40	60 80	
TOPSOIL <u>0.11</u>	2						110.00				
FILL: Brown silty sand with crushed stone, gravel and cobbles, trace asphalt		G	1								
Rigid insulation 0.60		- -									
- High Houding						1_	-117.55				
Compact to dense, brown SILTY SAND		G	2			'	117.33				
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)								20	40	60 80 1	
								Shea Δ Undist	ır Stren	igth (kPa) △ Remoulded	· 30

SOIL PROFILE AND TEST DATA

Geotechnical Investigation

Prop. Industrial Redevelopment - 135 Cardevco Road Carp, Ontario

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

FILE NO.

DATUM Geodetic									FILE	NO. P (G6018	
BORINGS BY Backhoe				_	ATE	Novembe	r 12 202	01	HOL	E NO. TP	4-21	
DONINGS BY DACKING	H		SAN	/IPLE	AIE	Novembe	1 12, 202		L Psist	. Blows/0		
SOIL DESCRIPTION	PLOT			Τ		DEPTH (m)	ELEV. (m)			Dia. Cor		eter
	STRATA	TYPE	NUMBER	% RECOVERY	N VALUE or RQD			O Water Content %			%	Piezometer
GROUND SURFACE	SI	H	NO	REC	N		110.77	20	40	60	80	<u>a</u> c
TOPSOIL0.05FILL: Crushed stone and gravel0.20		G	1			1 0-	-118.77					
FILL: Crushed stone and gravel 0.20 FILL: Brown silty sand with gravel		<u>.</u> G										
0.40		G	2									
						1-	-117.77					-
		G	3									
Compact to dense, brown SILTY		G	4									
							440.77					Σ
						2-	-116.77					1 *
						3-	-115.77					
3.50												
End of Test Pit												
(Groundwater infiltration at 2.0m depth)												
. /												
								20 Shea ▲ Undist		60 ength (kF △ Remo	Pa)	00

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

REMARKS

BORINGS BY Backhoe

PG6018

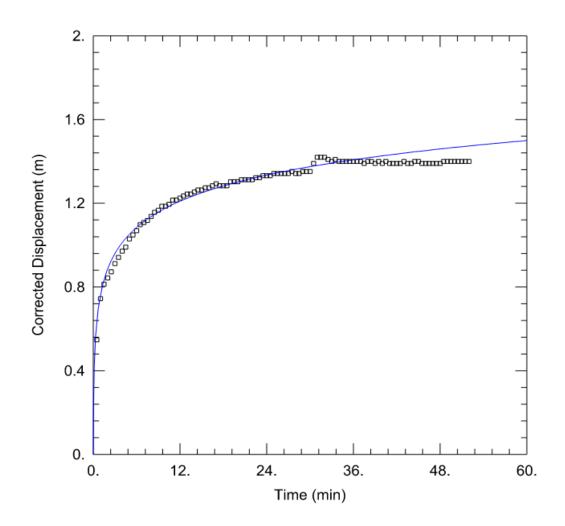
HOLE NO.

TP 5-21

BORINGS BY Backhoe					ATE	Novembe	er 12, 202	21 TP 5-21	
SOIL DESCRIPTION	PLOT		SAN	IPLE		DEPTH	ELEV.	Pen. Resist. Blows/0.3m • 50 mm Dia. Cone	iter:
GROUND SURFACE	STRATA 1	TYPE	NUMBER	» RECOVERY	N VALUE or RQD	(m)	(m)	O Water Content %	Piezometer
Asphaltic concrete 0.05 FILL: Crushed stone 0.15	5	G	1			- 0-	-118.31		
GLACIAL TILL: Very dense, brown silty sand with gravel, cobbles and boulders		∑ G	2			1-	-117.31		
end of Test Pit Practical refusal to excavation at 2.20m depth						2-	-116.31		Z
Groundwater infiltration at 1.9m epth)									
								20 40 60 80 10 Shear Strength (kPa) ▲ Undisturbed △ Remoulded	00

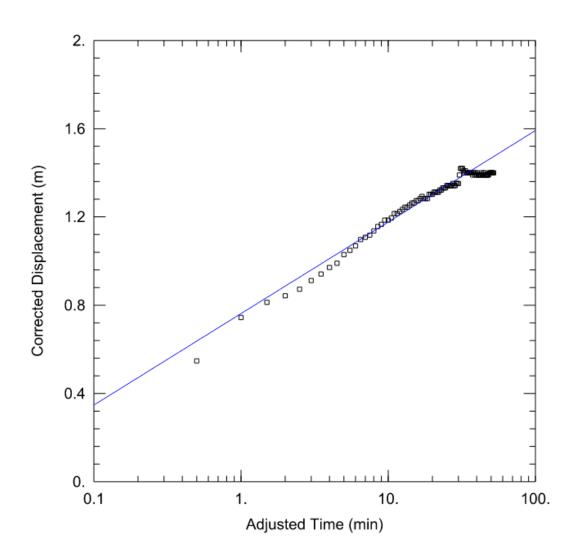
Pumping Test Analysis Report

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			

patersongroup135 Cardevco, Carp, ON

PREDICTIVE NITRATE IMP	ACT ASSESSE	MENT
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) =	12	mg/L
Daily Sewage Flow (Qs)=	1.026	m^3
See Notes below.		
Infiltration Calculation		
Nitrate concentration in precipitation $(C_i) =$	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 $(Q_i) =$	1	m³/day
Mass Balance Model (MOEE, 1995)		
$C_T = (Q_bC_b + Q_eC_e + Q_iC_i)/(Q_b + Q_e + Q_i) = Cur$	nulative Nitrate Concentration	
Q _b = flow entering the system across the upgradient area	0	m ³ /day
C _b = background nitrate concentration	0	mg/L
Q_e = flow entering the system from the septic drainfield	1.026	m ³ /day
C_e = concentration of nitrates in the septic effluent	12	mg/L
Q_i = flow entering the system from infiltration	1	m ³ /day
C_i = Concentration of nitrates in the infiltrate	0	mg/L
Ст	= 6.80	mg/L

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

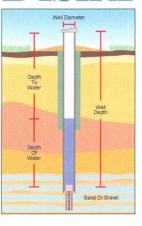
patersongroup

135 Cardevco Road PH4600

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

Langel	lier Saturation Index (LSI) Calc	ulation	(Langelier, 1936)	
	LSI = pH - pHs	A = (Log10 [TDS] - 1) / 10		
	pHs = (9.3 + A + B) - (C + D)	$B = -13.12 \times Log10$ (oC	+ 273) + 34.55	
	Where:	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 solid calcium carbonate (seriously corrosive).			

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 Bleach (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.

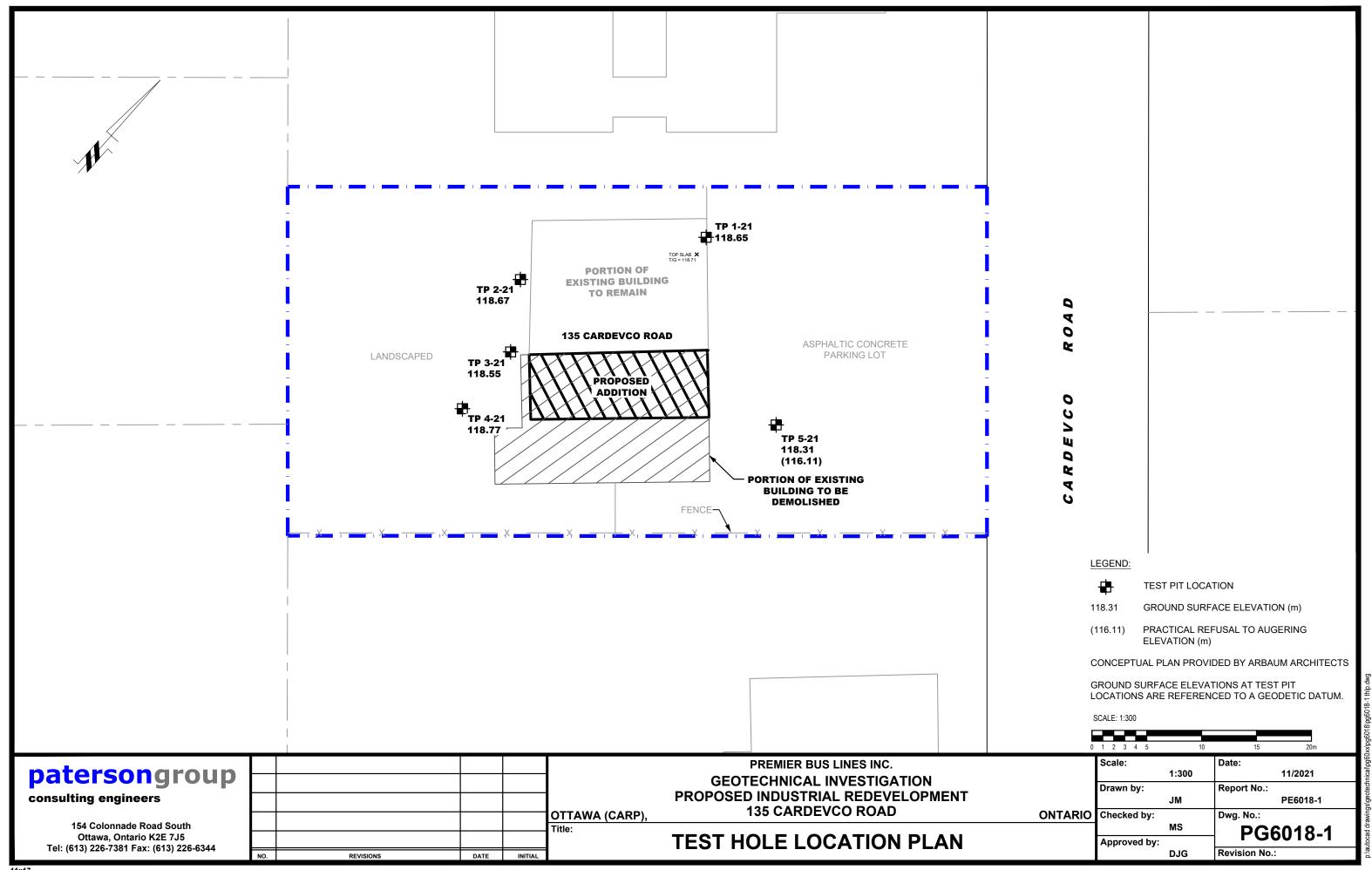
OMAF: www.gov.on.ca/omaf

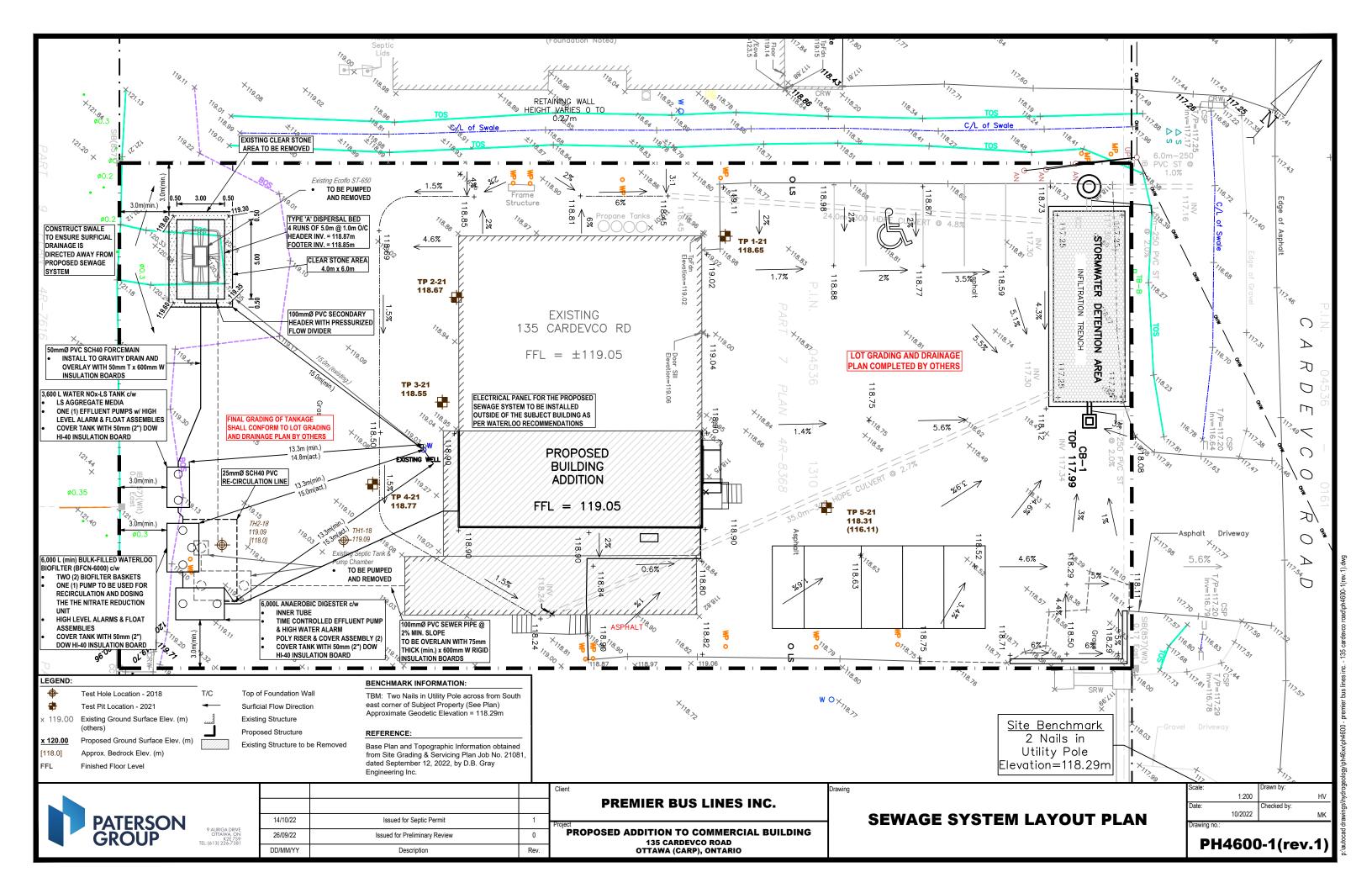
- Assessing the Potential for Ground Water Contamination on Your Farm, Publication 97-017;
- Best Management Practices: Water Wells, OMAFRA and Agriculture and Agri-Food Canada, 2003 (to order).

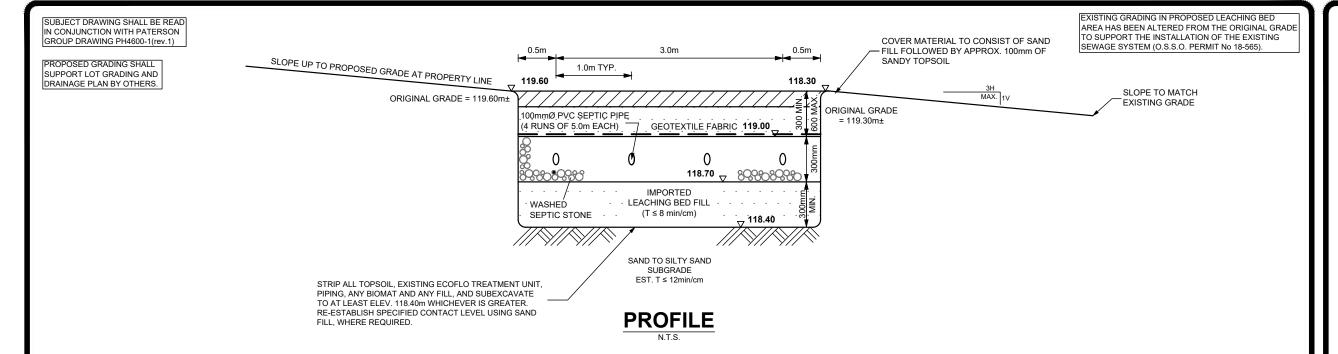
MOE: www.ene.gov.on.ca

- 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.









NOTES:

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. THE BUILDING CONSISTS OF A STORAGE/OFFICE TYPE USAGE. THE SEWAGE • FLOW FOR THE EXISTING OCCUPANCY HAS BEEN CALCULATED AS FOLLOWS

TP 3-21 FLEV 118 55m

- OFFICE SPACE = 90m² @ 75 L/DAY PER 9.3m² = 726 L/DAY **OR**
- NO. OF LOADING BAYS = 2 X 150 L/DAY = 300 L/DAY ESTIMATED SEWAGE FLOW = 1,026 L/DAY

DESIGN SEWAGE FLOW RATE = 1.500 L/DAY

2) SOIL CONDITIONS

TH 1-18 FLFV 119 09m

SOILS INFORMATION GATHERED BY PATERSON GROUP INC. ON SEPTEMBER 12, 2017 & NOVEMBER 12, 2021

TP 2-21 FLFV 118 67m

0-0.29 0.29-1.20	GRAVEL SAND, TRACE GRAVEL	0-0.10 0.10-0.60 0.60-0.70	TOPSOIL FILL: SISA, GRAVEL RIGID INSULATION	0-0.12 0.12-0.60 0.60-0.70	TOPSOIL FILL: SISA CRUSHED STONE RIGID INSULATION
		0.70-1.00 1.00-2.10	FILL: CRUSHED STONE BROWN SILTY SAND	0.70-1.60	BROWN SILTY SAND
- TH DRY UPON	COMPLETION	- TP DRY UPON	COMPLETION	- TP DRY UPON	COMPLETION

ANAEROBIC DIGESTER

- PLIMP AND REMOVE EXISTING SEPTIC TANK
- IT IS RECOMMENDED THAT A SINGLE-COMPARTMENT 6,000L WATERLOO ANAEROBIC DIGESTER MODEL ADIPC 6,000 BE INSTALLED. THE TANK SHALL BE BEDDED ON A LAYER OF OPSS GRANULAR 'A' OF AT LEAST 150mm IN THICKNESS AND COMPACTED TO AT •
- LEAST 95% OF SPMDD
- INLET PIPE OF DIGESTER SHALL BE EQUIPPED WITH A WATERLOO INNER TUBE
- ANAEROBIC DIGESTER SHALL BE EQUIPPED WITH AN INTERNAL PUMP CHAMBER. TANKS SHALL BE CONNECTED USING SCH 40 PVC SEWER PIPE WITH WATERTIGHT CONNECTIONS (i.e. STAINLESS STEEL LINK •
- SEALS OR OR APPROVED EQUAL) THE PUMP TANK SHALL BE EQUIPPED WITH A SIMPLEX TIME OPERATED PUMP SYSTEM. THE PUMPS (i.e. LITTLE GIANT 12E EFFLUENT PUMP)
- FORCEMAIN TO CONSIST OF 50mm@ PVC SCH 40 PIPE
- FORCEMAIN TO BE INSTALLED TO GRAVITY DRAIN TO THE TANK AND SHALL BE OVERLAIN WITH 50mm THICK BY 600mm WIDE 7)
- ALL PIPING TO BE GLUED.
- THE PUMP SHALL BE OPERATED BY A SIMPLEX CONTROL PANEL WITH TIMER CONTROL.
- A CONTROL SWITCH SHALL OVERRIDE THE TIMER TO MAINTAIN THE LIQUID LEVEL WITHIN THE WORKING CAPACITY OF THE TANK.

 ALL ELECTRICAL WORKS MUST BE CARRIED OUT BY A QUALIFIED ELECTRICAL CONTRACTOR IN ACCORDANCE TO THE LATEST.
- CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY ELECTRICAL PERMITS AND COORDINATE ALL ELECTRICAL INSPECTIONS
- THE DIGESTER TANK SHALL BE COVERED WITH 50mm (2") DOW HI-40 INSULATION BOARDS.
- FINAL GRADING SHALL BE SHAPED TO ENSURE THAT SURFACE WATER IS DIRECTED AWAY FROM ALL TANKS
- A POLYLOK RISER AND INSULATED COVER ASSEMBLY, WHICH EXTENDS TO THE GROUND SURFACE, SHALL BE INSTALLED OVER * THE EACH OF THE TANK OPENINGS
- ACCESS LIDS SHALL INCLUDE SAFETY DEVICES AS PER CSA B66-21.

TREATMENT UNIT

- THE TREATMENT UNIT SHALL CONSIST OF A 6,000L WATERLOO BIOFILTER MODEL BFCN6000 WASTEWATER TREATMENT UNIT. THE TREATMENT UNIT SHALL BE INSTALLED IN SERIES AND DOWNSTREAM FROM THE DIGESTER TANK
- A 50mmØ SCH 40 PVC FORCEMAIN SHALL BE USED TO CARRY THE EFFLUENT FROM THE PUMP TANK IN THE ANAEROBIC DIGESTER TO THE BULK FILLED BIOFILTER IN THE FIRST COMPARTMENT OF THE TREATMENT UNIT.
- FORCEMAIN SHALL BE INSTALLED TO GRAVITY DRAIN TO PUMP VAULT.
- THE FIRST COMPARTMENT OF THE BIOFILTER TANK SHALL BE BULK FILLED WITH THE BIOFILTER MEDIUM
- THE WASTEWATER FROM THE PUMP VAULT SHALL BE DOSED USING SPRAY NOZZLES OVER EACH OF THE BASKETS IN BIOFILTER •
- TANK.

 THE SECOND COMPARTMENT OF THE TREATMENT UNIT SHALL BE EQUIPPED WITH A SIMPLEX EFFLUENT PUMP. THE FINAL TREATED EFFLUENT COLLECTS ON THE FLOOR OF THE SECOND COMPARTMENT AND THE EFFLUENT PUMP (LITTLE GIANT 12E),

 9) DOSES THE NITRATE REDUCTION UNIT AS WELL AS THE RECIRCULATION RECIRCULATION.
- THE TREATMENT UNIT SHALL BE PROVIDED WITH A MINIMUM OF 510 mm SOIL COVER AND OVERLAIN WITH 50mm THICK HI
- A POLYLOK RISER AND CHARCOAL VENTED INSULATED COVER ASSEMBLY, WHICH EXTENDS TO THE GROUND SURFACE, SHALL BE INSTALLED OVER EACH OF THE TANK OPENINGS

WATER NOx-LS TANK

- INSTALL A NEW 3,600L CONCRETE, TWO-COMPARTMENT WATER NOx-LS TANK
- FIRST COMPARTMENT TO CONTAIN LIME-SULPHUR AGGREGATE MEDIA
- SECOND COMPARTMENT TO BE EQUIPPED WITH ONE (1) LITTLE GIANT 12E (OR EQUIVALENT) EFFLUENT PUMP AND OPERATIONAL AND HIGH-LEVEL ALARM FLOATS SET TO MANUFACTURER SPECIFICATIONS
- ACCESS LID TO TANK OPENING SHALL BE EXTENDED TO THE GROUND SURFACE. INSTALL RISER AND COVER TO SUIT

6) FORCEMAIN (TO TYPE 'A' DISPERSAL BED)

- A 50mmØ SCH 40 FORCEMAIN SHALL BE USED TO CARRY THE EFFLUENT FROM THE WATER NOX-LS TANK TO THE SECONDARY HEADER OF THE TYPE 'A' DISPERSAL BED.
- FORCEMAIN SHALL BE INSTALLED TO EITHER GRAVITY DRAIN BACK TO THE PUMP CHAMBER OR BURIED MIN. 1.8m BELOW GROUND SURFACE TO PROVIDE FROST PROTECT OF THE CHARGED LINE
- THE FORCEMAIN SHALL BE INSTALLED ON A 150mm THICK LAYER OF COMPACTED SAND OVERLAIN WITH 50mm T x 600mm W RIGID INSULATION BOARD IF NOT INSTALLED 1.8m B/G.
- OPERATIONAL FLOAT TETHER LENGTH SHALL BE SET TO MANUFACTURER SPECIFICATIONS. PUMP CHAMBER SHALL BE EQUIPPED WITH A HIGH-LEVEL ALARM FLOAT SET TO ALLOW RESPONSE TIME IN THE EVENT OF PUMP

TYPE 'A' DISPERSAL BED SIZING REQUIREMENTS

- STONE AREA REQUIRED = Q/50 = 1.500/75 = 20.0m USE 4 RUNS OF 5.0m EACH @ 1.0m o/c
- STONE AREA PROVIDED = 4.0m x 6.0 = 24.0m² SAND AREA REQUIRED = 1,900(12)/850 = 21.2m²
- SAND AREA PROVIDED = 4 0m x 6 0m = 24 0m²

TYPE 'A' DISPERSAL BED CONSTRUCTION GUIDELINES

- REMOVE ALL TOPSOIL/ ECOFLO TREATMENT UNIT/ PIPE/ STONE/ BIOMAT/ CONTAMINATED MATERIAL ASSOCIATED WITH EXISTING DISPOSAL FIELD AND SUBEXCAVATE TO AT LEAST ELEVATION 118.40m
- A MINIMUM THICKNESS OF 0.30m OF LEACHING BED SAND FILL, HAVING A PERCOLATION RATE OF NOT GREATER THAN 8 min/cm, SHALL BE INSTALLED BELOW OVER THE EXTENDED BASE AREA.
- LEACHING BED SAND FILL SHALL CONSIST OF UNIFORM SAND WITH GRADING LIMITS SIMILAR TO 100% PASSING 13.2mm SIEVE. LESS THAN 5% PASSING 0.075mm SIEVE AND HAVING A PERCOLATION RATE OF 6 TO 8 min/cm

- THE LEACHING BED FILL SHALL CONFORM TO THE REQUIREMENTS OF 8.7.7.1.(4).(a) OF THE OBC.
- THE DISTRIBUTION PIPES (4 RUNS OF 5.0m EACH) SHALL CONSIST OF 100mm@ PERFORATED PVC SEPTIC PIPE WHICH SHALL BE EMBEDDED IN A CONTINUOUS 300mm THICK LAYER OF WASHED SEPTIC STONE THE INVERT LEVEL OF THE DISTRIBUTION PIPES SHALL BE SET AT ELEVATION 118.87m AT THE HEADER AND ELEVATION 118.85m A
- THE FOOTER
- THE ENDS OF EACH RUN SHALL BE INTERCONNECTED WITH A SOLID PVC FOOTER PIPE.
- THE CLEAR STONE LAYER SHOULD BE COVERED WITH A NON-WOVEN GEOTEXTILE FABRIC. THE SURFACE OF THE BED SHOULD BE COVERED WITH PERMEABLE SAND FOLLOWED BY APPROXIMATELY 100mm OF SANDY TOPSOIL. THE BED AREA SHOULD BE VEGETATED.
- THE TOTAL THICKNESS OF THE COVER OVER THE CLEAR STONE SHOULD BE WITHIN A RANGE OF 0.3m TO 0.6m THE SIDES OF THE BED SHOULD BE SLOPED IN THE RANGE OF 3H:1V OR SHALLOWER.

MINIMUM CLEARANCE DISTANCE FROM LEACHING BED

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

- ELECTRICAL PANEL FOR TANKAGE SHALL BE LOCATED OUTSIDE OF SUBJECT BUILDING NEAREST THE TANKAGE AS RECOMMENDED BY WATERLOO.
- 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.
- THE BACKFILLING OF THE SEWAGE SYSTEM SHOULD MINIMIZE THE RISK OF OVER COMPACTION WITH THE USE RUBBER TRACKED FOUIPMENT AND BY AVOIDING THE CREATION OF ANY CONSTRUCTION ROLLTES OR PATHWAYS OVER THE SYSTEM
- THE BACKWASH WATERS FROM ANY WATER TREATMENT UNIT, SUCH AS WATER SOFTENER, SHOULD NOT DISCHARGE INTO TH 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 CONSTRUCTION. 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
- 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 RELIE LIPON FOR CONSTRUCTION PURPOSES. IF DISCREPANCIES ARE FOUND DURING THE CONSTRUCTION PROCESS. IT IS THE CLIENT RESPONSIBILITY TO CONTACT THIS FIRM TO MAKE ANY NECESSARY COMMENTS OR REVISIONS. ADDITIONAL REVISIONS ARE NO CONSIDERED PART OF THE DESIGN WORKS AND WILL BE CONSIDERED AS AN ADDITIONAL COST
- REFER TO PATERSON GROUP DRAWING No. PH4600-1(rev.1) FOR THE SEWAGE SYSTEM LAYOUT

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: N.T.S.	Drawn by: HV
Date: 10/2022	Checked by: MK

PH4600-2(rev.1)

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