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File: PH4407-LET.01.REV.05.

Dymech Engineering Inc.
1359 Coker Street,
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Attention: **Mat Main**

Subject: **Hydrogeological Assessment and Terrain Analysis**
1353 Coker Street
Ottawa (Greely), Ontario

HYDROGEOLOGICAL ASSESSMENT

INTRODUCTION

Further to your request, Paterson Group (Paterson) conducted a Hydrogeological Assessment and Terrain Analysis in support of a site plan application for the proposed warehouse addition to be located at 1353 Coker Street in Ottawa (Greely), Ontario. Please refer to Figure 1 - Key Plan attached for the site location.

The purpose of this work has been to determine the suitability of the water supply aquifer underlying the subject site to service the proposed development in support of a site plan application.

The subject site is an approximately 0.27 hectare (ha) parcel. The ground surface across the site is relatively flat, with a general downslope direction to the south. The general overburden groundwater flow direction is assumed to be south towards the Osgoode Gardens Cedar Acres municipal drain.

The subject site is bordered to the north, east and west by developed commercial properties and to the south by Coker Street followed by additional developed commercial properties. The subject site and all of the neighboring land parcels are zoned RG3 (Rural General Industrial Zone subzone 3).

A Hydrogeological and Terrain Analysis Pre-consultation was completed with a City of Ottawa Hydrogeologist on November 11, 2021, where it was determined that as the

application is for Site Plan application, that nitrate reduction technologies would be allowed in support of the Sewage System Impact Assessment (Terrain Analysis).

DESCRIPTION OF SUBJECT SITE

The subject site is an approximately 0.27 ha lot and is currently occupied by a one storey commercial building. The Site Plan application is for a proposed warehouse addition. Please refer to D.B. Grey Engineering Inc. Drawing A-002 - New Site Plan + Notes attached for proposed site layout. The subject site is currently serviced by an onsite sewage system and a private drilled well, and a new sewage system is proposed to be located in the same location as the old sewage system.

The existing well, hereafter referred to as Test Well 1 (TW1) is the well which will be servicing both the proposed building addition and the existing development.

Paterson has completed a replacement sewage system design for the proposed development. A septic flow value of 1,900 L/day was used for the existing building and a septic flow value of 1,700 L/day was calculated for the proposed building addition. This results in a total daily water demand calculation of 3,600 L/day.

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).

Karst Mapping

Available Karst mapping (OGS GRS005) was reviewed as part of this assessment. The available mapping does not indicate the presence of any inferred or potential karstic features. Furthermore, no indication of karstic features were observed during the site visits completed by Paterson personnel.

FIELDWORK PROGRAM

As a means to demonstrate the adequacy of the aquifer underlying the subject lands, with respect to water quality and quantity, the onsite water supply well tested. A WWR was not available for the well, however Paterson field staff measured the well while the existing submersible pump was removed for the constant rate pumping test. The well, referred to as TW1, was measured to have a 150 mm diameter steel casing extending to a depth of 16.1 m below the ground surface (bgs). The total depth of the well was measured to be 22.1 m bgs. Based upon available geological mapping, the drift thickness at TW1 varies from 5 to 10 m bgs. Refer to Paterson Drawing PH4407-3 for the location of TW1.

As a means to evaluate the water supply aquifer intercepted by the well, the well was subjected to a 8 hour constant rate pumping test. The pumping test was conducted on February 3, 2022 under the full-time supervision of Paterson personnel.

A submersible pump was provided by Air Rock for the 8 hour pumping test. A licensed water well technician was retained to complete the necessary plumbing related activities. The existing pump was removed from the well by a licensed well technician, and a rented submersible pump was used for the pumping test. A discharge hose assembly with a gate valve was connected to the rented pump. The discharge line was placed at a sufficient distance to ensure that the discharge water was being directed away from the well. Upon completion of the test, the pump was removed, the existing pump was re-installed, and the well was disinfected by Air Rock.

The pumping test was carried out at a pumping rate of approximately 19 L/min for a duration of 8 hours, after which the pumping rate was reduced to 9 L/min for a half hour in an attempt to lower turbidity levels. 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 electronic datalogger (VanEssen TD-Diver) was installed in the test well prior to the start of the pumping test. A 19 L/min pumping rate was chosen. This rate provides approximately three times the maximum total daily design volume for the septic system during the 8 hour pumping test. Combined with the unknown nature of the available well water quantity prior to the 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 100 % recovery in less than one minute after the completion of the pumping test.

Groundwater samples were collected at 4 hours and 8.5 hours after the start of pumping. Prior to collection of the groundwater samples, the free chlorine residual was verified to be 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, and Volatile Organic Compounds (VOC’s).

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 the Eurofins 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 8.5 hour pumping test. The parameters tested at the well head included: pH, total dissolved solids, conductivity, turbidity, apparent colour and temperature.

The generator which powered the rented submersible pump for the pumping test temporarily failed at approximately the 6 hour mark of the pumping test, however Paterson

was able to quickly restart the generator to finish the 8 hour test. Due to the spike in the data from the generator failure, the data collected from the first 6 hours of the pumping test was used in support of this study, however the data from all 8.5 hours is included in this report.

The turbidity level recorded during the field program was higher than the maximum of 5 NTU (field measurement of approximately 6.5 NTU) during the 8 hour constant rate pumping test. After 8 hours of constant rate pumping at 19 L/min, the pumping rate was lowered to 9 L/min for a half hour. The recorded field turbidity after lowering the rate was on the order of 3.4 NTU.

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 (m^2/day)	367
Pumping Rate (L/min)	19
Pre-test Static Water Level (m)	3.2
Maximum Drawdown (m)	1.9
Available Drawdown (m)	18.95
% Drawdown During Pumping Test	5
Specific Capacity (L/min/m drawdown)	10

The drawdown data was analyzed using the Theis and Cooper Jacob methods of analysis. Aquifer transmissivity is estimated to be approximately 367 m^2/day.

The pumping test results show that TW1 has a high yield to support the water demands for the proposed development. Overall, maximum drawdown at a constant pumping rate for a period of 8 hrs was approximately 1.9 m (5 % of the available drawdown). 95% recovery was achieved in less than one minute after the end of pumping. The water level was observed to be rising during the constant rate pumping test, with the measured drawdown at the end of the pumping test recorded at 1.0 m.

The total volume of water pumped during the 8 hour pumping event was approximately 9,120 L. This is approximately three times the maximum total daily design volume of water required to support the development as part of the site plan application (approximately 3,600 L/day).

Observations from dataloggers placed in TW1 prior to the pumping test indicated that TW1 is hydraulically connected to other water supply wells. The aquifer drawdown recorded outside of the pumping test period is generally on the order of 0.5 m. The recovery from the observed drawdown was very quick, typically on the order of one minute. Groundwater quantity issues are not expected due to the minimal volume of daily water takings required by the proposed development.

The suitability of the aquifer to supply the proposed development was assessed using the methodology provided in 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 development under typical usage.

Given the analyses presented and summarized above, it is our opinion that there is an adequate supply of water to service the proposed development in addition to the neighboring lots whose wells may intercept a similar aquifer.

Available water well records (WWR's) of the neighbouring properties on the MECP Well Record mapping website indicated that the wells have generally been screened in either a limestone or underlying sandstone bedrock unit. However, two (2) wells are recorded to be screened in gravel with casing extending to a minium of 11.6 m. Surrounding WWR's are attached to this report.

Of the two WWR's noted to be screened in gravel, one of the WWR's is mislocated (WWR ID 1507222) and the other WWR (WWR ID 1532070) is noted to have a 10.4 m thick grey clay with some stones layer as well as 17.4 m of steel casing separating the "screened" portion of the well from the ground surface. Additionally, the WWR with ID 1532070 is located up and cross gradient from the subject site, as general shallow groundwater flow direction is assumed to be south towards the Osgoode Gardens Cedar Acres Municipal Drain. Due to the isolation provided by the 17.4 m of steel casing, the wells location being up and cross gradient from the subject site, and the surrounding lots in closer proximity to the WWR's location containing private sewage systems, mitigation measures are not needed.

Water Quality

TW1 is currently supplying the existing building on site, as such the client is familiar with the water quality which TW1 provides.

Field Data

Turbidity, electrical conductivity, total dissolved solids (TDS), pH, apparent colour 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 laboratory water quality obtained from the pumping test of TW1 is provided in Table 2a 2b, and 2c below and the laboratory analyses reports can be found attached.

TABLE 2a: GROUNDWATER MICROBIOLOGY & GENERAL GEOCHEMISTRY					
PARAMETER	UNITS	ODWS		TW1	
		LIMIT	TYPE	GW1 (4 hr) 2022-02-03	GW2 (8.5 hr) 2022-02-03
MICROBIOLOGICAL					
Escherichia Coli (E.Coli)	ct/100mL	0	MAC	0	0
Total Coliforms	ct/100mL	0	MAC	0	0
GENERAL CHEMICAL - HEALTH RELATED					
Fluoride (F)	mg/L	1.5	MAC	0.16	0.15
Ammonia ($N\text{-}NH_3$)	mg/L	-	-	<0.010	<0.010
Nitrite ($N\text{-}NO_2$)	mg/L	1	MAC	<0.10	<0.10
Nitrate ($N\text{-}NO_3$)	mg/L	10	MAC	<0.10	<0.10
Total Kjeldahl Nitrogen	mg/L	-	-	0.210	0.402
Turbidity (Field)	NTU	1.0 (5.0)	MAC/AO	9.41	3.41
Turbidity (Laboratory)	NTU	1.0 (5.0)	MAC/AO	4.9	2.2
GENERAL CHEMICAL - AESTHETIC RELATED					
Alkalinity (as CaCO3)	mg/L	30-500	OG	246	244
Chloride (Cl)	mg/L	250	AO	97	96
Colour	TCU	5	AO	67	28
Colour (Field - Apparent)	TCU	5	AO	11	5
Conductivity	uS/cm	-	-	848	840
Dissolved Organic Carbon	mg/L	5	AO	2.4	2.5
Hardness (as CaCO3)	mg/L	100	OG	384	380
Ion Balance	unitless	-	-	0.98	0.98
pH	unitless	6.5-8.5	AO	8.02	8.07
Phenols	mg/L	-	-	<0.001	<0.001
Sulphate (SO_4)	mg/L	500	AO	70	70
Sulphide (S_2^-)	mg/L	0.05	AO		<0.02
Tannin & Lignin	mg/L	-	-	0.9	0.9
Total Dissolved Solids	mg/L	500	AO	551	546

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					
PARAMETER	UNITS	ODWS		TW1	
		LIMIT	TYPE	GW1 (4 hr) 2022-02-03	GW2 (8.5 hr) 2022-02-03
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	0.40	0.40
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	-	-	101	101
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	0.008	0.003
Iron (Fe)	mg/L	0.3	AO	0.58	0.46
Lead (Pb)	mg/L	0.01	MAC	<0.001	<0.001
Magnesium (Mg)	mg/L	-	-	32	31
Manganese (Mn)	mg/L	0.05	AO	0.03	0.03
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	-	-	2	2
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	28	28
Strontium (Sr)	mg/L	-	-	0.306	0.293
Thallium (Tl)	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

TABLE 2c: GROUNDWATER GEOCHEMISTRY - VOLATILES					
PARAMETER	UNITS	ODWS		TW1	
		LIMIT	TYPE	GW1 (4 hr) 2022-02-03	GW2 (8.5 hr) 2022-02-03
VOCs Surrogates					
1,2-dichloroethane-d4	%	-	-	110	120
4-bromofluorobenzene	%	-	-	82	73
Toluene-d8	%	-	-	119	103
Volatiles					
1,1,1,2-tetrachloroethane	µg/L	-	-	<0.5	<0.5
1,1,1-trichloroethane	µg/L	-	-	<0.4	<0.4
1,1,2,2-tetrachloroethane	µg/L	-	-	<0.5	<0.5
1,1,2-trichloroethane	µg/L	-	-	<0.4	<0.4
1,1-dichloroethane	µg/L	-	-	<0.4	<0.4
1,1-dichloroethylene	µg/L	14.0	MAC	<0.5	<0.5
1,2-dichlorobenzene	µg/L	200.0	MAC	<0.4	<0.4
1,2-dichloroethane	µg/L	5.0	IMAC	<0.2	<0.2
1,2-dichloropropane	µg/L	-	-	<0.5	<0.5
1,3,5-trimethylbenzene	µg/L	-	-	<0.3	<0.3
1,3-dichlorobenzene	µg/L	-	-	<0.4	<0.4
1,3-Dichloropropylene (cis+trans)	µg/L	-	-	<0.3	<0.3
1,4-dichlorobenzene	µg/L	5.0	MAC	<0.4	<0.4
Acetone	µg/L	-	-	<30	<30
Benzene	µg/L	1.0	MAC	<0.5	<0.5
Bromodichloromethane	µg/L	-	-	<0.3	<0.3
Bromoform	µg/L	-	-	<0.4	<0.4
Bromomethane	µg/L	-	-	<0.5	<0.5
c-1,2-Dichloroethylene	µg/L	-	-	<0.4	<0.4
c-1,3-Dichloropropylene	µg/L	-	-	<0.2	<0.2
Carbon Tetrachloride	µg/L	2.0	MAC	<0.2	<0.2
Chloroethane	µg/L	-	-	<0.2	<0.2
Chloroform	µg/L	-	-	<0.5	<0.5
Dibromochloromethane	µg/L	-	-	<0.3	<0.3
Dichlorodifluoromethane	µg/L	-	-	<0.5	<0.5
Dichloromethane	µg/L	50	MAC	<4.0	<4.0
Ethylbenzene	µg/L	140	MAC	<0.5	<0.5
Ethylene Dibromide	µg/L	-	-	<0.2	<0.2
Hexane	µg/L	-	-	<5	<5
m/p-xylene	µg/L	-	-	<0.4	<0.4
Methyl Ethyl Ketone (MEK)	µg/L	-	-	<10	<10
Methyl Isobutyl Ketone (MIBK)	µg/L	-	-	<10	<10
Methyl Tert Butyl Ether (MTBE)	µg/L	15	AO	<2	<2
Monochlorobenzene	µg/L	80	MAC	<0.5	<0.5
o-xylene	µg/L	-	-	<0.4	<0.4
Styrene	µg/L	-	-	<0.5	<0.5
t-1,2-Dichloroethylene	µg/L	-	-	<0.4	<0.4
t-1,3-Dichloropropylene	µg/L	-	-	<0.2	<0.2
Tetrachloroethylene	µg/L	10	MAC	<0.3	<0.3
Toluene	µg/L	60	MAC	<0.4	<0.4
Trichloroethylene	µg/L	5	MAC	<0.3	<0.3
Trichlorofluoromethane	µg/L	-	-	<0.5	<0.5
Vinyl Chloride	µg/L	1	MAC	<0.2	<0.2
Xylene; total	µg/L	90	MAC	<0.5	<0.5

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 from TW1 at 1353 Coker Street (Certificate of Analysis - Report No. 1971215) indicated that the test samples at the 4 and 8.5 hour interval were non-detect (0 ct/100 mL) for E.Coli and Total Coliforms.

Volatile Organic Compounds (VOC's) were not detected in the groundwater samples taken from TW1.

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)
- ❏ Colour
- ❏ Iron

Exceedances of the above parameters are not uncommon of the water supply in the subject aquifer. As TW1 currently supplies potable water to the existing building, the client is familiar with the quality of the groundwater. Each of these groundwater parameters are discussed in detail below.

Hardness as $CaCO_3$

Hardness, expressed as calcium carbonate, an operational guideline, does not appear in the Ontario Drinking Water Standards, Objectives and Gudielines (ODWSOG). Rather, it appears in the Technical Support Documents for Ontario Drinking Water Standards, Objectives and Guidelines as a parameter with an operational guideline of 100 mg/L. At the measured concentration of 384, and 380 mg/L in the test wells, the water is considered to be very 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 water softener technologies.

TDS

Total dissolved solids (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 Saturation Index (Langelier, 1936) is used to predict the calcium carbonate stability of water. It indicates whether the calcium carbonate will precipitate, dissolve, or be in equilibrium with water. The Langelier calculation provided an LSI of 0.8. 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 LSI of 0.8, a high

amount of scaling is not anticipated, and, as the water is super-saturated corrosion is unlikely to occur. Based on the range of stability in the positive direction, there are no mitigative measures needed for corrosion or scaling. If taste concerns or scaling concerns arise, then a reverse osmosis unit can be installed. See Langelier Saturation Index Calculation attached for calculation details.

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.

A Hach DR900 colorimeter was used to measure field colour (apparent colour) in the groundwater during the constant rate pumping test. Apparent colour in the groundwater was measured to be 5 TCU at the end of the pumping test. The elevated colour levels detected in the lab samples is attributed to the precipitation of iron out of the groundwater.

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 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.

Turbidity

Turbidity, which is a health-related and aesthetic parameter, was detected in the laboratory test samples at value of 4.9 NTU at the 4 hour portion of the test, and 2.2 NTU at the endpoint of the pumping test of the test well. Continued pumping showed a decrease towards the end of the test, and was especially noted when the pumping rate was reduced to 9 L/min. It is expected further development of the well would further reduce turbidity values.

The ODWSOG maximum acceptable concentration for turbidity, as a health-related parameter, in drinking water entering the distribution system is 1 NTU. The 1 NTU Guideline comes with a note that indicates that if turbidity is present, particular care must be taken during testing to ensure that the bacteria requirements of Table 1 are met. The bacteriological sample results indicated that E.Coli and Total Coliforms were not present in the groundwater, which satisfies the ODWO of 1 NTU.

The Aesthetic Objective for turbidity in drinking water reaching the consumer is 5 NTU. The maximum concentration considered reasonably treatable (MCCRT) for Turbidity is 5 NTU. The field and laboratory results are below the aesthetic objective and MCCRT. Additionally, precipitation of iron, magnesium, and calcium can contribute to laboratory turbidity meaning the actual value is likely lower than the reported values. Finally, as the well is likely to be developed further, it is likely that turbidity values would also be decreased in the future.

TW1 is currently supplying the existing building on site, as such the client is familiar with the water quality which TW1 provides. No treatment for elevated turbidity is proposed.

Sodium

Sodium (Na), an aesthetic parameter, was detected in the laboratory test samples at a concentration of 28 mg/L in both tests, which does not exceed the ODWSOG aesthetic objective of 200 mg/L. It should be noted that sodium in drinking water can be increased by treatment methods for other parameters such as hardness. Sodium has a MCCRT 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 PG6052-1.REV.05. dated November 24, 2023). On December 17, 2021 four (4) test pits were excavated on the property for the design of the proposed warehouse addition and its associated infrastructure. The location of the test pits on the property are delineated on the Test Hole Location Plan, Drawing No. PG6052-1, attached.

The test hole 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.

The test pits were advanced to a maximum depth of 3.2 m below ground surface (bgs). Bedrock was not encountered during the test pit program. Based upon available geological mapping, the drift thickness across the site varies from 5 to 10 m bgs

According to the test pit logs, the subsurface profile consisted of a fill of varying compositions extending to depths of 0.6 to 0.8 m bgs generally underlain by a brown silty sand. The underlying brown silty sand layer was not seen in TP2-21. Underlaying the brown silty sand was a stiff to very stiff grey silty clay. Groundwater was observed at depths between 0.4 to 1.0 m bgs in the test pits.

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 be interpreted as descriptive of conditions at locations other than those described by the boreholes themselves.

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

Hydrogeological Sensitivity of the Site

The subject site is currently occupied by a one storey commercial building which fronts onto Coker Street. The subject site is bordered to the north, east and west by developed commercial properties and to the south by Coker Street 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 ground surface across the site is relatively flat, with a general downslope direction to the south. The general overburden groundwater flow direction is assumed to be south

towards the Osgoode Gardens Cedar Acres municipal drain. The regional groundwater flow is considered to be in an southeasterly direction, towards the North Castor River.

The overburden generally consists of a fill overlying a brown silty sand which is underlain by a grey silty clay. Bedrock was not encountered during the field program. 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.

Available Karst mapping was reviewed as part of this assessment and does not indicate the presence of any inferred or potential karstic features.

As the proposed site does not have bedrock within 2.0 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 add a warehouse to the existing site which is currently occupied by a one storey commercial building. The location of the existing and proposed structures can be found on the attached PH4407 - 3 - Water Well location 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 and is designed to demonstrate that the minimum separation distances can be achieved.

Proposed Sewage System

Paterson has completed a replacement sewage system design for the proposed development. A septic flow value of 1,900 L/day was used for the existing building and a septic flow value of 1,700 L/day was calculated for the proposed building addition. This results in a total daily design sewage flow (TDDSF) of 3,600 L/day. A tertiery treatment system has also been proposed, consisting of the Waterloo Biofilter plus the WaterNOx-LS system, to ensure the nitrate has reached acceptable concentrations by the property boundary. Refer to the approved OSSO Septic Permit attached for more specific details. Please note that once the Site Plan application has been approved, the existing sewage system will be removed at the time of construction and the new one (OSSO permit #22-059) will be installed. The septic flow values were calculated in accordance with the OBC and are as follows:

Existing Building:

- ❏ Factory (no showers) with 6 employees = 6 x 76 L/day = 450 L/day OR
- ❏ Number of water closets = 2 x 950 L/day = 1,900 L/day

Proposed Building Addition:

- ❏ Warehouse with 5 bay door = 5 x 150 l/day = 750 L/day; AND
- ❏ Number of water closets = 1 x 950 L/day = 950 L/day

Combined Existing Building and Proposed Building Addition:

- ❏ Existing Building (1,900 L/day) + Proposed Building Addition (1,700 L/day) = 3,600 L/day.

PREDICTIVE NITRATE IMPACT ASSESSMENT

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

- ❏ Site area — 0.27 Ha
- ❏ Impervious area % — 77 %
- ❏ Daily sewage flow — 3.6 m^3
- ❏ Concentration of nitrate in effluent — 40 mg/L
  (Value based on typical effluent concentration)
- ❏ Concentration of nitrate in effluent with treatment — 4 mg/L
  (Value based on tertiary treatment system with 90% nitrate reduction)
- ❏ Surplus Water — 379 mm/year
  (The surplus water value was estimated based on Environment Canada Climate Office values with a soil type comprised of fine sandy loam (Urban Lawns) and anthropogenic sources.)
- ❏ Combined infiltration factor based on: — 0.70
  - Topography infiltration factor — 0.30
  - Soil texture infiltration factor — 0.30
  - Cover infiltration factor — 0.10

The topography infiltration factor of 0.30 is based upon a flat land with average slope of <0.6 m / km for the proposed development.

The soil texture infiltration factor was based upon an average of "open sandy loam" with a value of 0.4 and "medium combinations of clay and loam" with a value of 0.2 which is a reasonable generalization based upon the site investigations and available geological mapping.

The "vegetative cover infiltration factor" was calculated as 0.1 based upon the minimum value for cultivated land.

The calculation for a conventional sewage system results in a predicted nitrate concentration of 35.56 mg/L nitrate concentration for the subject site, using a value of 40 mg/L nitrate concentration within the effluent. This value was based upon using a septic flow value of 3,600 L/day for the daily sewage flow. It is expected that the actual usage should be lower.

An existing approved tertiary treatment system technology 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 system, 90 to 95% total nitrogen removal can be achieved. This would reduce the nitrate concentration in the effluent from 40 mg/L down to as low as 4 mg/L. Provided the value of 35.56 mg/L of nitrates for the fully sized system, a 90% reduction would provide a value of 3.6 mg/L at the property boundary.

A WaterNOx system has been included in the new septic design for the property, as shown in the attached Paterson drawing, PH4407-1-REV.02. The approved OSSO septic permit (OSSO file number 22-059) for the septic system design is attached to this report.

The WaterNox-LS system is a tertiary nitrate reduction technology which has demonstrated through third party verification (see attached) that it can achieve greater than 90% total nitrogen removal which is greater than the 72% nitrate reduction required to attain a predictive nitrate concentration of less than 10 mg/L at the property boundary. The third party review was done by the Bureau de Normalisation du Quebec (BNQ) which is a certification program that is accredited by the Standards Council of Canada. Furthermore, based on the regional geography and WWR records in the area, there is sufficient vertical and horizontal separation between the leaching bed/property boundary and neighbouring water wells such that any impacts are anticipated to be negligible.

Based on the results of the predicted nitrate impact assessment, it is our opinion that the proposed property can adequately support the proposed commercial development 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 warehouse addition.

2. As TW1 currently provides potable water to the existing building, the client is familiar with the quality of the groundwater.

3. The preferred water supply aquifer intercepted by the test wells contains a water supply that is potable, and contains only elevated concentrations of Hardness, TDS, Colour, and Iron. All of the parameters can be treated with current readily available water conditioning equipment.

4. The sodium concentrations were 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.

5. 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.

6. If desired, the client can use point-of-use reverse osmosis to reduce total dissolved solids values.

7. If desired, the client can use a iron filter to treat the potential iron values.

8. If desired, the client can use a carbon filter to treat the potential colour values.

9. Any private water supply wells (drilled) and the onsite sewage system components (i.e treatment units, distribution piping, and holding tanks) must have a minium of 15 m horizontal separation as per the Ontario Building Code 8.2.1.6 (2012). The current approved design has been certified by the OSSO to meet the required setbacks.

10. 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 proposed Waterloo Biofilter WaterNOx system is used.

11. The subject site is sufficient in size to accommodate a new sewage system and meet all the regulatory separation criteria

12. 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.

13. The results of the Hydrogeological Assessment and Terrain Analysis have provided satisfactory evidence that the subject site can support the proposed warehouse addition with respect to water quality, quantity and sewage system placement.

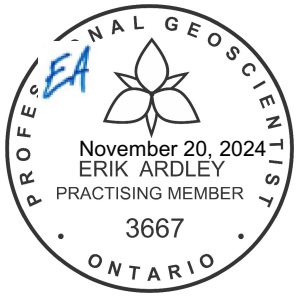
We trust that this satisfies your present requirements. Should you have any questions regarding this submission, please do not hesitate to contact the undersigned.

Yours truly,

PATERSON GROUP INC.

Erik Ardley, P.Geo.

Michael S. Killam, P.Eng.



Attachments:

- Figure 1 - Key Plan
- MECP Water Well Records
- Eurofins Certificate of Analysis
- Paterson Test Pit Logs
- AQTESOLV - Pumping Test Analysis Reports
- Nitrate Impact Assessment Calculations
- Langelier Saturation Index Calculation
- Waterloo Biofilter report - WaterNOx-LS Third Party Testing Summary
- D.B. Grey Engineering Inc. Drawing A-002 - New Site Plan + Notes
- Paterson Drawing PG6052-1 - Test Hole Location Plan
- Paterson Drawing PH4407-1(Rev.03) - Sewage System Layout Plan
- Paterson Drawing PH4356-3 - Water Well Location Plan
- PH4407-MEMO.05 - Response to City of Ottawa Review Comments, dated October 8,2024
- Approved OSSO Septic Permit

FIGURE 1

KEY PLAN

316/50

GROUND WATER BRANCH
NOV 14 1961
No. 7222

UTM 18 Z 415416610 E
5116112171 0 N

The Ontario Water Resources Commission Act

WATER WELL RECORD

Elev. 053212

Basin 25

County or District Carleton

Township, Village, Town or City Osgoode

Con. 4 Lot PT 5

Date completed 21 (day) Aug (month) 61 (year)

[redacted]

Address RR-1- Osgoode

Casing and Screen Record

Inside diameter of casing 2

Total length of casing 38

Type of screen —

Length of screen —

Depth to top of screen —

Diameter of finished hole 2

Pumping Test

Static level 1

Test-pumping rate 12 G.P.M.

Pumping level 20

Duration of test pumping 3 hr

Water clear or cloudy at end of test clear

Recommended pumping rate 6 G.P.M.

with pump setting of 20 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Sandy Clay	0	10	39	fresh
sand	10	25		
Gravel + sand	25	36		
Gravel	36	39		

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

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

Drilling or Boring Firm J.R. Conette

Address 1510 Base line RD Ottawa

Licence Number 246

Name of Driller or Borer

Address Same

Date Sept 16-61

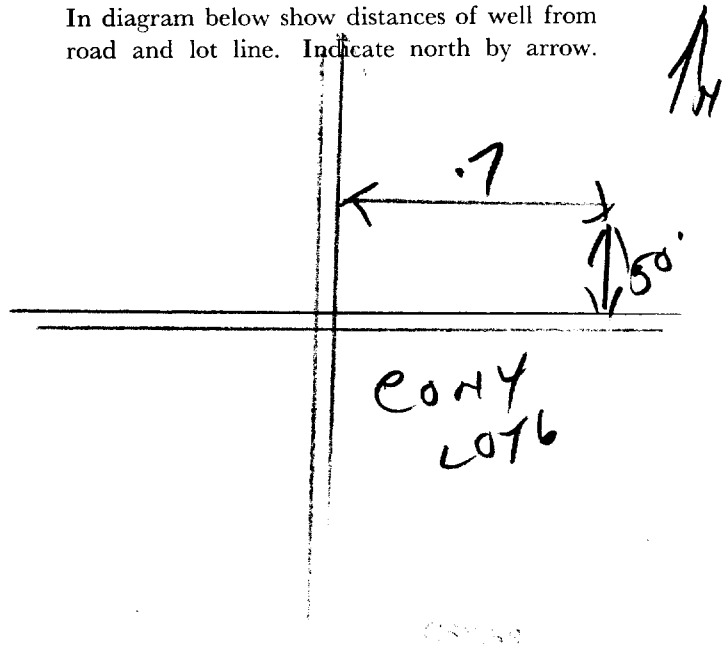
J.R. Conette
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M Sets 60-5930

OWRC COPY

Location of Well

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



316/50

1342

UTM 1/18 Z 4/5/5/1/8/0 E

Co 5 R IV 5/0/1/1/6/1/9 N

Elev Lot # R 5/0/3/2/5

Basin 2/5

The Ontario Water Resources Commission Act

WATER WELL RECORD

WATER RESOURCES DIVISION
SEP 29 1965
ONTARIO WATER RESOURCES COMMISSION

15 No. 7224 C

County or District Carleton .... Township, Village, Town or City Osgoode

Con. IV .... Lot 5 .... Date completed 26 (day) July (month) 1965 (year)

[redacted]dress RR 2 Osgoode

Casing and Screen Record		Pumping Test	
Inside diameter of casing	6 1/4	Static level	20'
Total length of casing	18'	Test-pumping rate	5 G.P.M.
Type of screen	—	Pumping level	65'
Length of screen	—	Duration of test pumping	1/2 hr
Depth to top of screen	—	Water clear or cloudy at end of test	cloudy
Diameter of finished hole	6"	Recommended pumping rate	5 G.P.M.
		with pump setting of	65 feet below ground surface

Well Log: Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
sand & boulders	0	15		
grey limestone	15	68	55-68	fresh

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

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

Drilling or Boring Firm McLean Water Supply Ltd

Address 1532 Raven Ave Ottawa 3

Licence Number 1686

Name of Driller or Borer H. Sally

Address

Date July 26/65

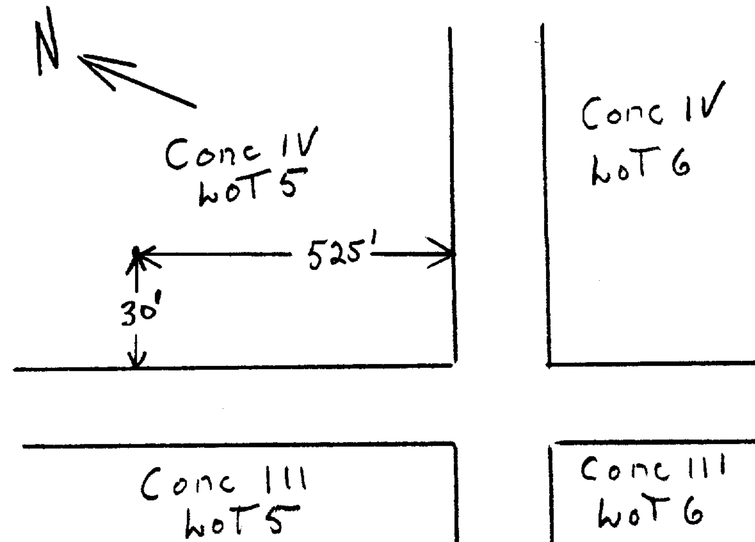
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

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



TM | 1 | 8 | Z | 4 | 5 | 5 | 3 | 6 | 0 |

| 4 | R | 5 | 0 | 1 | 1 | 7 | 7 | 0 |

ev. | 5 | R | 0 | 3 | 2 | 5 |

sin | 2 | 5 | | | |

3/6/59 B

1509840

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Carleton

Township, Village, Town or City Osgoode

Con. 5 Lot 6

Date completed 20 (day) June (month) 1968 (year)

[redacted] dress Manotick

Casing and Screen Record

Inside diameter of casing 4 inch

Total length of casing 13

Type of screen

Length of screen

Depth to top of screen

Diameter of finished hole 4 inch

Pumping Test

Static level 20

Test-pumping rate 10 G.P.M.

Pumping level 22

Duration of test pumping 30 min

Water clear or cloudy at end of test cloudy

Recommended pumping rate 5 G.P.M.

with pump setting of 35 feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Sandy soil	0	3	42	fresh
hard pan and stone	3	13		
hard grey limestone	13	42		

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

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

Drilling or Boring Firm Maurice Cayen

Address Carlsman Ont

Licence Number 2911

Name of Driller or Borer

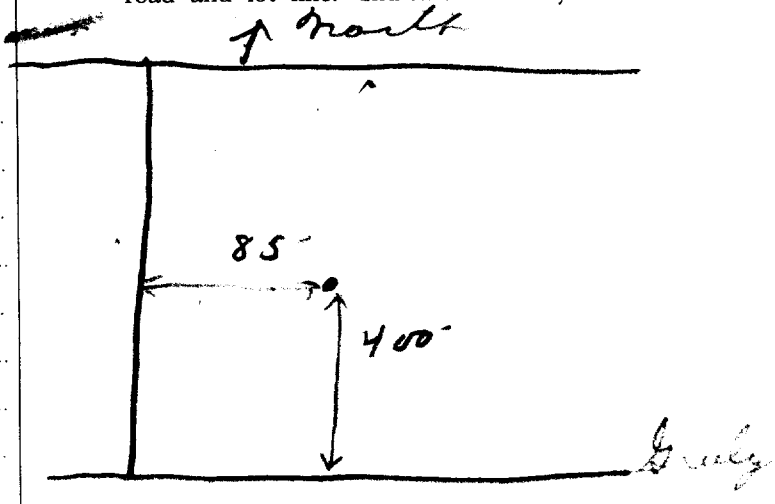
Address

Date 20 June 1968

Maurice Cayen
(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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



Form 7 15M-60-4138

OWRC COPY

The Ontario Water Resources Commission Act

WATER WELL RECORD

Water management in Ontario

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11 (1 2) — 1510585 (3) — MUNICIP. 15009 (10–14) — CON. 04 (15–22 23 24)

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON., BLOCK, TRACT, SURVEY, ETC.	LOT (25-27)
CARLETON	OSGOODE	4	006 ~~NORTH~~

OWNER (SURNAME FIRST) (28-47) [redacted] — ADDRESS: 463 RIVERDALE AVE. OTTAWA, — DATE COMPLETED (48-53): DAY 14 MO. 05 YR. 70

21 (1 2) — UTM: ZONE 18 (10) — EASTING 455300 (12–17) — NORTHING 5011590 (18–25) — ELEVATION 0322 (26–29) — RC. 54 (30) — BASIN CODE 25 (31–32) — (II) (III) (IV) (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH – FEET FROM	DEPTH – FEET TO
	SAND	LOAM		0	5
	GRAVEL	BOULDERS SAND		5	17
GREY	LIMESTONE			17	108

31: 0005 0209 0017 1111309 0108215T

32: (1 2) (10) (14 15) (21) (32) (43) (54) (65) (75) (80)

41 WATER RECORD

WATER FOUND AT – FEET (10-13)	KIND OF WATER (14)
~~105~~ 105	1 ☒ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
(15-18)	(19) 1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
(20-23)	(24) 1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
(25-28)	(29) 1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL
(30-33)	(34) (80) 1 ☐ FRESH 3 ☐ SULPHUR 2 ☐ SALTY 4 ☐ MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH – FEET FROM	DEPTH – FEET TO
(10-11) 06 ~~6~~ 4	(12) 1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE	188	0	(13-16) 0022 ~~22~~
(17-18) 06 ~~6~~ 4	(19) 1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE		22	(20-23) 0108 ~~108~~
(24-25)	(26) 1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE			(27-30)

SCREEN

SIZE(S) OF OPENING (SLOT NO.) (31-33)	DIAMETER (34-38) INCHES	LENGTH (39-40) FEET
MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN (41-44) FEET	(80)

~~61~~ PLUGGING & SEALING RECORD

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

PUMPING TEST

71

PUMPING TEST METHOD (10)	PUMPING RATE (11-14)	DURATION OF PUMPING
1 ☐ PUMP 2 ☒ BAILER	0010 GPM.	01 (15-16) HOURS 00 (17-18) MINS.

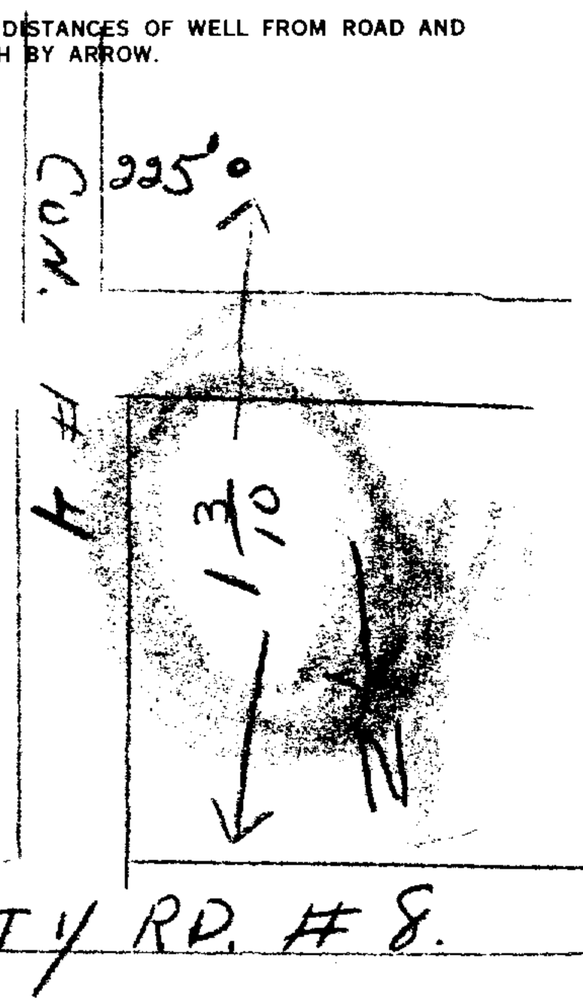
STATIC LEVEL (19-21)	WATER LEVEL END OF PUMPING (22-24)	(25) WATER LEVELS DURING: 1 ☐ PUMPING 2 ☒ RECOVERY	15 MINUTES (26-28)	30 MINUTES (29-31)	45 MINUTES (32-34)	60 MINUTES (35-37)
015 FEET	030 FEET		018 FEET	017 FEET	016 FEET	015 FEET

IF FLOWING, GIVE RATE (38-41) GPM.	PUMP INTAKE SET AT FEET	WATER AT END OF TEST (42) 1 ☐ CLEAR 2 ☒ CLOUDY
RECOMMENDED PUMP TYPE ☐ SHALLOW ☒ DEEP	RECOMMENDED PUMP SETTING (43-45) 050 FEET	RECOMMENDED PUMPING RATE (46-49) 0008 GPM.

(50-53) 000.7 GPM./FT. SPECIFIC CAPACITY

LOCATION OF WELL

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



DRILLERS REMARKS:

FINAL STATUS OF WELL (54)

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

WATER USE (55-56) 01

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

METHOD OF DRILLING (57)

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

CONTRACTOR

NAME OF WELL CONTRACTOR: MCLEAN WATER SUPPLY LTD — LICENCE NUMBER: 3504

ADDRESS: 1532 RAVEN AVE. OTTAWA 3,

NAME OF DRILLER OR BORER: M. MALLON — LICENCE NUMBER:

SIGNATURE OF CONTRACTOR: G.P. Mallon — SUBMISSION DATE: DAY 19 MO. 5 YR. 70

OFFICE USE ONLY

DATA SOURCE (58): 1 — CONTRACTOR (59-62): 3504 — DATE RECEIVED (63-68): 280570 (80)

DATE OF INSPECTION — INSPECTOR: G F C/G

REMARKS:

OWRC COPY

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Ontario

The Ontario Water Resources Act

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11 — 1522346 — MUNICIP 15009 — CON.

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC	LOT
OTTAWA-CARLETON	TWP. OF OSGOODE	CONCESSION 4	5

OWNER (SURNAME FIRST)	ADDRESS	DATE COMPLETED
DONWEL CONSTRUCTION	6979 SHADOW RIDGE, GREELY, ONT.	DAY 18 MO 04 YR 88

21 — UTM ZONE — EASTING — NORTHING — RC — ELEVATION — RC — BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	8
GREY	SAND, GRAVEL	BOULDERS		8	56
GREY	LIMESTONE	SHALE		56	176

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
95	1 ☒ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY — 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6¼"	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	63
6"	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE 5 ☐ PLASTIC		63	176
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

MATERIAL AND TYPE	DEPTH TO TOP OF SCREEN (FEET)

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER ETC.)
0	63	CEMENT GROUT
		BENTONITE SLURRY
		(PRESSURE GROUTED)

71 PUMPING TEST

PUMPING TEST METHOD (1) ☒ PUMP (ANC) 2 ☐ BAILER — PUMPING RATE 20 GPM — DURATION OF PUMPING 1 HOURS 30 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING
10 FEET	115 FEET

WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY

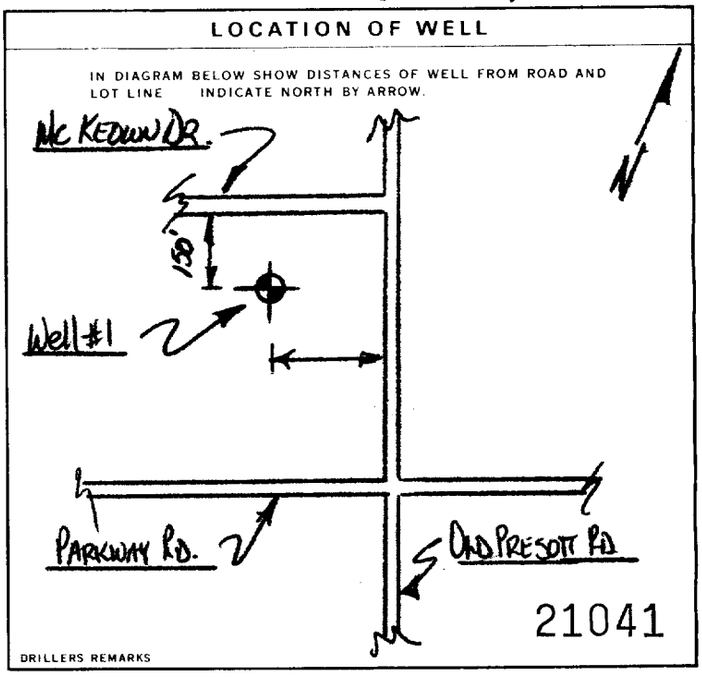
15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
115 FEET	115 FEET	115 FEET	115 FEET

IF FLOWING, GIVE RATE — GPM — PUMP INTAKE SET AT 115 FEET — WATER AT END OF TEST 1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE ☐ SHALLOW ☒ DEEP — RECOMMENDED PUMP SETTING 115 FEET — RECOMMENDED PUMPING RATE to 20 GPM

LOCATION OF WELL

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



21041

DRILLERS REMARKS

FINAL STATUS OF WELL
1 ☒ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☐ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED; 9 ☐ DEWATERING

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

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

CONTRACTOR

NAME OF WELL CONTRACTOR: STANTON DRILLING INC — WELL CONTRACTOR'S LICENCE NUMBER: 4875

ADDRESS: BOX 429, GREELY, ONT.

NAME OF WELL TECHNICIAN: PETER JA STANTON — WELL TECHNICIAN'S LICENCE NUMBER: T-0086

SIGNATURE OF TECHNICIAN/CONTRACTOR — SUBMISSION DATE: DAY 26 MO 04 YR 88

MINISTRY OF THE ENVIRONMENT COPY

OFFICE USE ONLY

DATA SOURCE — CONTRACTOR: 4875 — DATE RECEIVED: JUN 21 1988

DATE OF INSPECTION — INSPECTOR

REMARKS: CSS, ES

FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

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11 1522347 MUNICIP 15009 CON.

COUNTY OR DISTRICT: OTTAWA-CARLETON
TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE: TWP. OF OSGOODE
CON., BLOCK, TRACT, SURVEY, ETC: CONCESSION 4
LOT: 5
OWNER (SURNAME FIRST): DONWEL CONSTRUCTION
ADDRESS: 6979 SHADOW RIDGE, GREELY, ONT.
DATE COMPLETED: DAY 18 MO 04 YR 88

21 ZONE EASTING NORTHING RC ELEVATION RC BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	9
GREY	SAND & GRAVEL	BOULDERS		9	57
GREY	LIMESTONE	SHALE		57	62

31
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
60	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6¼"	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	59
6"	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE 5 ☐ PLASTIC		59	62
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

MATERIAL AND TYPE | DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
0	59	CEMENT GROUT &
		BENTONITE SLURRY
		(PRESSURE GROUTED)

71 PUMPING TEST

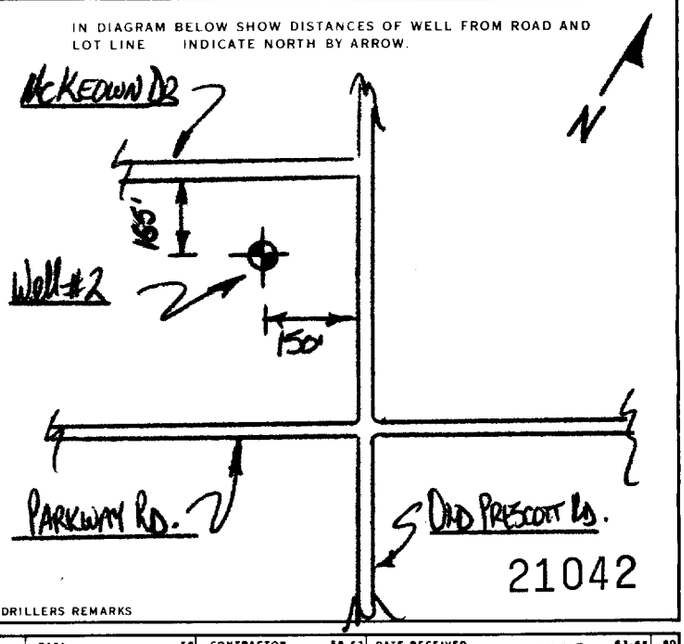
PUMPING TEST METHOD: 1 ☒ PUMP 2 ☐ BAILER — AIR
PUMPING RATE: 40+ GPM
DURATION OF PUMPING: 0 HOURS 45 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING: 1 ☒ PUMPING 2 ☐ RECOVERY	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
10 FEET	40 FEET		40 FEET	40 FEET	40 FEET	— FEET

IF FLOWING, GIVE RATE: — GPM
PUMP INTAKE SET AT: 40 FEET
WATER AT END OF TEST: 1 ☒ CLEAR 2 ☐ CLOUDY
RECOMMENDED PUMP TYPE: ☐ SHALLOW ☒ DEEP
RECOMMENDED PUMP SETTING: 40 FEET
RECOMMENDED PUMPING RATE: 40 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

FINAL STATUS OF WELL

1 ☐ WATER SUPPLY 2 ☐ OBSERVATION WELL 3 ☐ TEST HOLE 4 ☒ RECHARGE WELL 5 ☐ ABANDONED, INSUFFICIENT SUPPLY 6 ☐ ABANDONED, POOR QUALITY 7 ☐ UNFINISHED 9 ☐ DEWATERING

WATER USE

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

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: STANTON DRILLING INC.
WELL CONTRACTOR'S LICENCE NUMBER: 4875
ADDRESS: BOX 429, GREELY, ONT.
NAME OF WELL TECHNICIAN: PETER VAN STANTON
WELL TECHNICIAN'S LICENCE NUMBER: 7-0086
SIGNATURE OF TECHNICIAN/CONTRACTOR:
SUBMISSION DATE: DAY 26 MO 04 YR 88

OFFICE USE ONLY

DATA SOURCE | CONTRACTOR 4875 | DATE RECEIVED JUN 21 1988
DATE OF INSPECTION | INSPECTOR
REMARKS

CSS/GS

MINISTRY OF THE ENVIRONMENT COPY

FORM NO. 0506 (11/86) FORM 9

Ministry of the Environment
Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
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11 — 1522348 — MUNICIP 15009 — CON.

COUNTY OR DISTRICT	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE	CON. BLOCK, TRACT, SURVEY, ETC.	LOT
OTTAWA-CARLETON	TWP. OF OSGOODE	CONCESSION 4	5

OWNER (SURNAME FIRST)	ADDRESS	DATE COMPLETED
DONWIZ CONSTRUCTION	6979 SHADOW RIDGE, GREELY.	DAY 19 MO 04 YR 88.

21 — UTM ZONE — EASTING — NORTHING — RC — ELEVATION — RC — BASIN CODE

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET FROM	DEPTH - FEET TO
BROWN	SAND			0	9
GREY	SAND & GRAVEL	BOULDERS		9	57
GREY	LIMESTONE	SHALE		57	62

31 — 32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER
60	1 ☒ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS
	1 ☐ FRESH 2 ☐ SALTY 3 ☐ SULPHUR 4 ☐ MINERALS 6 ☐ GAS

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET FROM	DEPTH - FEET TO
6¼"	1 ☒ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC	.188	0	59
6"	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☒ OPEN HOLE 5 ☐ PLASTIC		59	62
	1 ☐ STEEL 2 ☐ GALVANIZED 3 ☐ CONCRETE 4 ☐ OPEN HOLE 5 ☐ PLASTIC			

SCREEN

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

MATERIAL AND TYPE — DEPTH TO TOP OF SCREEN FEET

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET FROM	DEPTH SET AT - FEET TO	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
0	59	CEMENT GROUT &
		BENTONITE SLURRY
		(PRESSURE GROUTED)

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
1 ☒ PUMP 2 ☐ BAILER	40+ GPM	1 HOURS 0 MINS

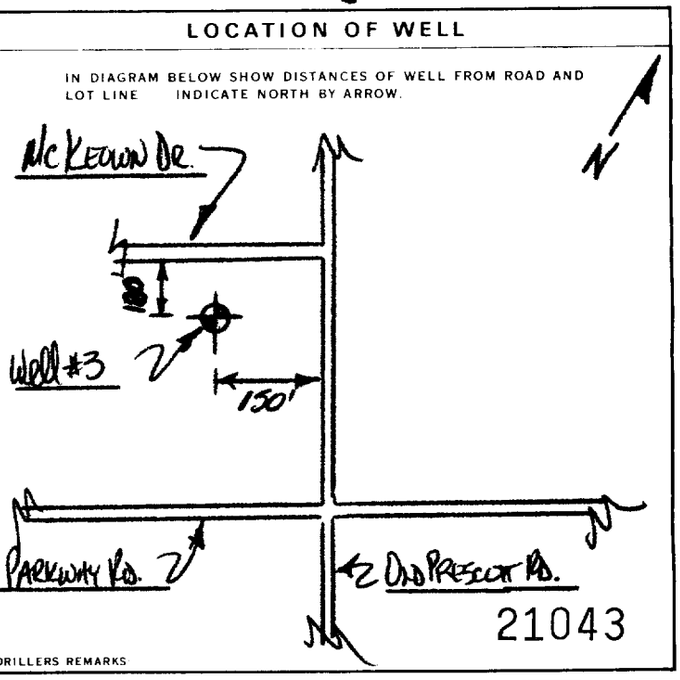
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
10 FEET	40 FEET	1 ☒ PUMPING 2 ☐ RECOVERY	40 FEET	40 FEET	40 FEET	40 FEET

IF FLOWING, GIVE RATE	PUMP INTAKE SET AT	WATER AT END OF TEST
— GPM	40 FEET	1 ☒ CLEAR 2 ☐ CLOUDY

RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
☐ SHALLOW ☒ DEEP	40 FEET	40 GPM

LOCATION OF WELL

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



DRILLERS REMARKS

FINAL STATUS OF WELL

54 — 1 ☐ WATER SUPPLY; 2 ☐ OBSERVATION WELL; 3 ☐ TEST HOLE; 4 ☒ RECHARGE WELL; 5 ☐ ABANDONED, INSUFFICIENT SUPPLY; 6 ☐ ABANDONED, POOR QUALITY; 7 ☐ UNFINISHED; 9 ☐ DEWATERING

WATER USE

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

METHOD OF CONSTRUCTION

57 — 1 ☐ CABLE TOOL; 2 ☒ ROTARY (CONVENTIONAL); 3 ☐ ROTARY (REVERSE); 4 ☐ ROTARY (AIR); 5 ☒ AIR PERCUSSION; 6 ☐ BORING; 7 ☐ DIAMOND; 8 ☐ JETTING; 9 ☐ DRIVING; ☐ DIGGING; ☐ OTHER

CONTRACTOR

NAME OF WELL CONTRACTOR	WELL CONTRACTOR'S LICENCE NUMBER
STANTON DRILLING INC	4875

ADDRESS: BOX 429, GREELY, ONT.

NAME OF WELL TECHNICIAN	WELL TECHNICIAN'S LICENCE NUMBER
PETER VAN STANTON	7006.

SIGNATURE OF TECHNICIAN/CONTRACTOR — SUBMISSION DATE: DAY 26 MO 04 YR 88.

OFFICE USE ONLY

DATA SOURCE	CONTRACTOR	DATE RECEIVED
	4875	JUN 21 1988

DATE OF INSPECTION — INSPECTOR

REMARKS

CSS, ES

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FORM NO. 0506 (11/86) FORM 9

Ministry of Environment and Energy
Ontario

The Ontario Water Resources Act
WATER WELL RECORD

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Mark correct box with a checkmark, where applicable.

11 (1 2) **1529728**

Municipality (10–14) 15009 Con. (15–22) CON (23–24) C4

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25–27)
[redacted]	Osgoode	4	5
	Address: P.O. Box 124 Greely, Ontario K4P 1N4	Date completed (44–53): 23 day 10 month 97 year	

21 (1 2) | T M (10) | (12–17) | Northing (18–24) | RC (25) | Elevation (26–30) | RC (31) | Basin Code (i ii iii iv) (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth – feet From	Depth – feet To
Brown	Soil		Loose Fill	0	4
Brown	Clay		Packed	4	9
Gray	Clay		Sticky	9	34
Gray	Sand, Gravel, & Boulders			34	51
Gray	Limestone		Layered	51	62
Gray	Limestone		Medium	62	76

31 (10 14 15 21 32 43 54 65 75 80)

32 (10 14 15 21 32 43 54 65 75 80)

41 WATER RECORD

Water found at – feet	Kind of water
56–62	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas — NOT TESTED
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth – feet From	Depth – feet To
6 1/4	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	0	54
6 1/8	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		54	76
	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			

SCREEN

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

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at – feet From	Depth set at – feet To	Material and type (Cement grout, bentonite, etc.)
52	34	Bentonite (6)
34	0	Cement (10)

71 PUMPING TEST

Pumping test method: 1 ☒ Pump 2 ☐ Bailer
Pumping rate: 50 GPM
Duration of pumping: 1 Hours ..... Mins

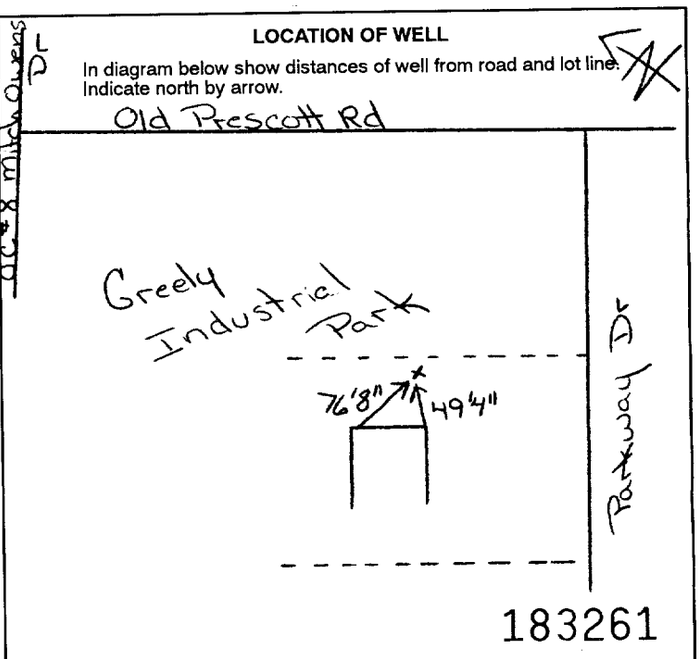
Static level	Water level end of pumping	Water levels during: 1 ☒ Pumping 2 ☒ Recovery — 15 minutes	30 minutes	45 minutes	60 minutes
5'8" feet	20 feet	7'6" feet	6'1" feet	5'8" feet	5'8" feet

If flowing give rate: GPM
Pump intake set at: feet
Water at end of test: ☐ Clear ☒ Cloudy

Recommended pump type: ☐ Shallow ☒ Deep
Recommended pump setting: 35 feet
Recommended pump rate: 5 GPM

LOCATION OF WELL

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



183261

FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF CONSTRUCTION

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

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558
Address: P.O. Box 490 Stittsville, Ontario K2S 1A6	
Name of Well Technician: S. Miller	Well Technician's Licence No.: T0097
Signature of Technician/Contractor	Submission date: day 24 mo 10 yr 97

MINISTRY USE ONLY

Data source	Contractor: 1558	Date received: DEC 22 1997
Date of inspection	Inspector	
Remarks		

0506 (07/94) Front Form 9

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Ontario Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD

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

11 — **1531816**

Municipality: 15009 Con.: CON 04 Part of

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot
Ottawa Carleton	Osgoode	4	3&4
[redacted]	Address: Greely, Ont		Date completed: 07 (day) 02 (month) 01 (year)

21 — Northing — RC — Elevation — RC — Basin Code

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
	Sand	boulders		0	35
grey	limestone			35	142
grey	Sandstone			142	240

31

32

41 WATER RECORD

Water found at - feet	Kind of water
89	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas — NOT
237	1 ☑ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas — TESTED
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4	☑ Steel	188	0	44
8 3/4	☑ Open hole		0	42
6	☑ Open hole		42	240

SCREEN

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

61 PLUGGING & SEALING RECORD

☑ Annular space ☐ Abandonment

Depth set at - feet From	To	Material and type (Cement grout, bentonite, etc.)
2	44	~~Cement Grout~~ Bentonite

71 PUMPING TEST

Pumping test method: ☑ Pump ☐ Bailer — Pumping rate: 5 GPM — Duration of pumping: 1 Hours Mins

Water levels during: ☐ Pumping ☑ Recovery

Static level	Water level end of pumping	15 minutes	30 minutes	45 minutes	60 minutes
35 feet	220 feet	160 feet	101 feet	41 feet	35 feet

If flowing give rate: GPM — Pump intake set at: feet — Water at end of test: ☐ Clear ☑ Cloudy

Recommended pump type: ☐ Shallow ☑ Deep — Recommended pump setting: 220 feet — Recommended pump rate: 5 GPM

FINAL STATUS OF WELL

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

WATER USE

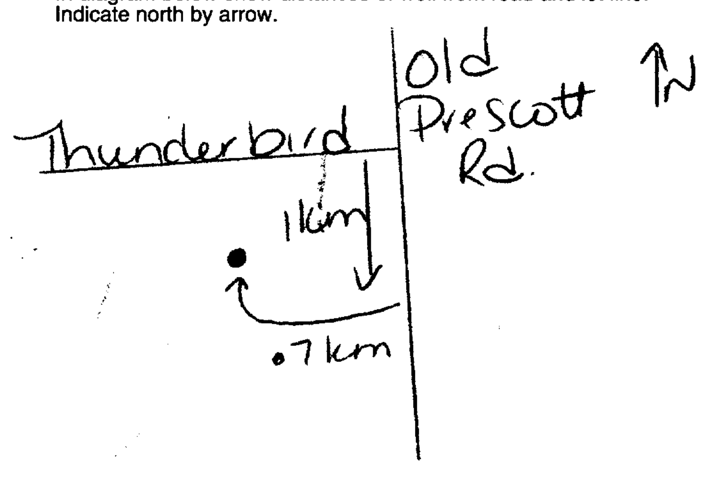
☑ Domestic ☐ Stock ☐ Irrigation ☐ Industrial ☐ Commercial ☐ Municipal ☐ Public supply ☐ Cooling & air conditioning ☐ Not use ☐ Other

METHOD OF CONSTRUCTION

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

LOCATION OF WELL

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



229481

Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co Ltd	1119
Address: RR#2 Jasper, Ont	
Name of Well Technician: Shannon Purcell	Well Technician's Licence No.: T2122
Signature of Technician/Contractor	Submission date: 28 02 01

MINISTRY USE ONLY — Data source — Contractor 1119 — Date received APR 18 2001 — Date of inspection — Inspector — Remarks — CSS.ES1

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Ontario **Ministry of the Environment**

The Ontario Water Resources Act
WATER WELL RECORD

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

11 **1531817** Municipality 15009 Con. CON 04 Part 33

County or District	Township/Borough/City/Town/Village	Con	block	tract	survey, etc.	Lot
Ottawa Carleton	Osgoode	4				3 & 4

Owner's surname	First Name	Address	Date completed (day / month / year)
Sunset Lakes		Greely, ONT	08 / 02 / 01

21 Zone | Easting | Northing | RC | Elevation | RC | Basin Code | ii | iii | iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
	sand	boulders		0	44
grey	limestone			44	80

31

32

41 WATER RECORD

Water found at - feet	Kind of water
69	1 ☒ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐
73	1 ☒ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐
	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	188	0	53
8 3/4	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		0	51
6	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		51	80

SCREEN

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

Material and type | Depth at top of screen feet

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
2	53	Cement Grout
		Bentonite

71 PUMPING TEST

Pumping test method: 1 ☒ Pump 2 ☐ Bailer | Pumping rate: 45 GPM | Duration of pumping: 1 Hours Mins

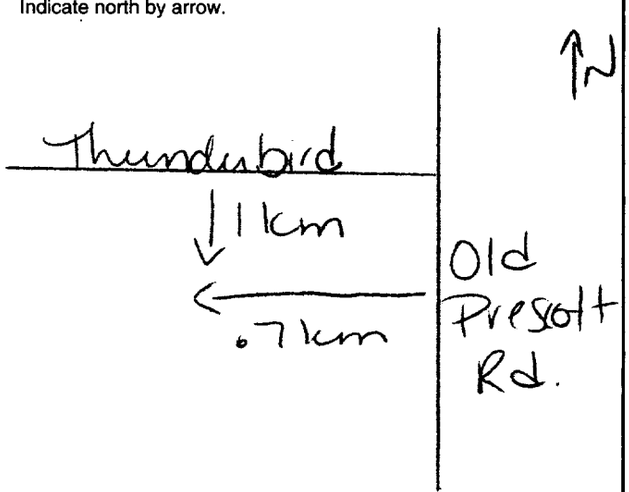
Static level	Water level end of pumping	Water levels during: 1 ☐ Pumping 2 ☒ Recovery			
		15 minutes	30 minutes	45 minutes	60 minutes
12 feet	70 feet	12 feet	12 feet	12 feet	12 feet

If flowing give rate: GPM | Pump intake set at: feet | Water at end of test: ☐ Clear ☒ Cloudy

Recommended pump type: ☐ Shallow ☒ Deep | Recommended pump setting: 70 feet | Recommended pump rate: 12 GPM

LOCATION OF WELL

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



Sunset Lakes Test #2. 229482

FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF CONSTRUCTION

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

Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Ltd	1119
Address: RR#2 Jasper Ont	
Name of Well Technician: Shannon Purcell	Well Technician's Licence No.: T2122
Signature of Technician/Contractor	Submission date: 28 / 02 / 01 (day / mo / yr)

MINISTRY USE ONLY

Data source	Contractor	Date received
	1119	APR 18 2001
Date of inspection	Inspector	
Remarks		CSS.ES1

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Ontario **Ministry of the Environment**

The Ontario Water Resources Act
WATER WELL RECORD

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Mark correct box with a checkmark, where applicable.

11 (1 2) **1532070** Municipality 15009 (10 14) Con. (15 22 23 24)

County or District	Township/Borough/City/Town/Village	Con	block	tract	survey, etc.	Lot (25-27)
Ottawa Carleton	Osgoode					

Address: Greely Lane Greely ONT

Date completed (48-53): 06 day 12 month 2000 year

21 (1 2) UTM (10) Northing (12 17) (18 24) RC (25) Elevation (26) RC (30) Basin Code (31 47) ii iii iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	Sand	with some Stones		0	5'
Grey	Clay	with some stones		5'	39'
Grey	Gravel	Course		39'	60'

31 (10 14 15 21)

32 (32 43 54 65 75 80)

41 WATER RECORD

Water found at - feet	Kind of water
55 (13-15)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐
(15-18) untested	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐
20-23	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐
25-28	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐
30-33	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 5 ☐ Gas 6 ☐

60

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
10-11: 8	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic (12)		0	20 (13-16)
17-18: 6	1 ☒ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic (19)	.188	+2'	57 (20-23)
24-25: 6	1 ☐ Steel 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic (26)		57'	60' (27-30)

SCREEN

Sizes of opening (Slot No.) (31-33)	Diameter (34-38)	Length (39-40)
35 slot	5" inches	4' feet

Material and type	Depth at top of screen (41-44)	
Stainless steel	55' feet	30

61 PLUGGING & SEALING RECORD

☐ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
20 (13)	0 (14-17)	8 bags high early
18-21	22-25	
26-29	30-33 (80)	

71 PUMPING TEST

Pumping test method (10): 1 ☒ Pump 2 ☐ Bailer

Pumping rate (11-14): 10 GPM

Duration of pumping (15-16): 1 Hours (17-18): 0 Mins

25 Water levels during: 1 ☒ Pumping 2 ☐ Recovery

Static level (19-21)	Water level end of pumping (22-24)	15 minutes (26-28)	30 minutes (29-31)	45 minutes (32-34)	60 minutes (35-37)
12' feet	16' feet	13 feet	13 feet	14 feet	16 feet

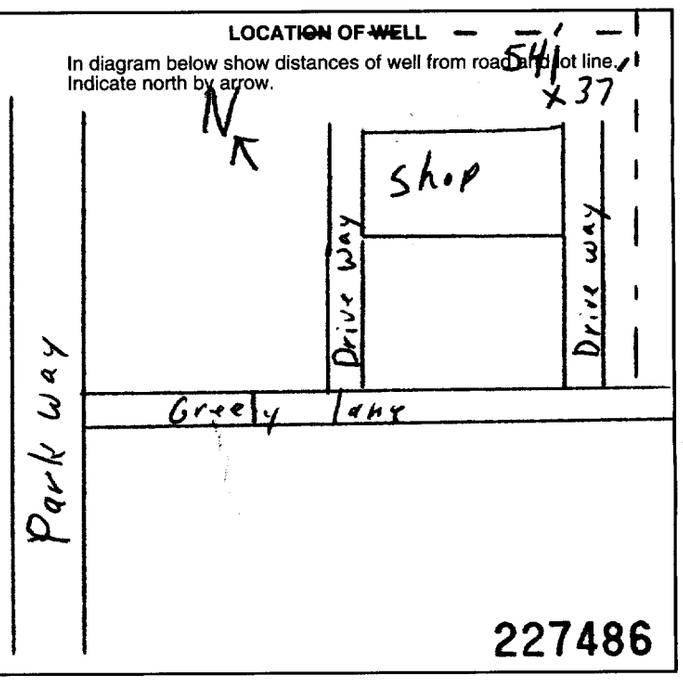
If flowing give rate (38-41)	Pump intake set at	Water at end of test (42)
GPM	30' feet	☒ Clear ☐ Cloudy

Recommended pump type	Recommended pump setting (43-45)	Recommended pump rate (46-49)
☐ Shallow ☒ Deep	30 feet	10 GPM

50-53

LOCATION OF WELL

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



227486

FINAL STATUS OF WELL (54)

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

WATER USE (55-56)

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

METHOD OF CONSTRUCTION (57)

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

Name of Well Contractor	Well Contractor's Licence No.
Olympic Drilling Co. Ltd.	4006
Address: 2320 Scrivens RD. Metcalfe ONT.	
Name of Well Technician: Wayne Renwick	Well Technician's Licence No.: 327
Signature of Technician/Contractor: Wayne Renwick	Submission date: day mo yr

MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68) (80)
	4006	JUL 17 2001
Date of inspection	Inspector	
Remarks		

CSS.ES1

0506 (07/00) Front Form 9

2 - MINISTRY OF THE ENVIRONMENT COPY

Ontario Ministry of the Environment

The Ontario Water Resources Act
WATER WELL RECORD

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

11 (1 2) **1533428** Municipality (10 14) 15009 Con. (15 22 23 24) CON OH

County or District	Township/Borough/City/Town/Village	Con block tract survey, etc.	Lot (25-27)
Ottawa Carleton	Osgoode	4	5

Address: 1545 River Road Maontick, Ontario K4M 1B4

Date completed (48-53): 27 day 11 month 02 year

21 (1 2) UTM (10) Northing (12 17) (18 24) RC (25) Elevation (26) RC (30) Basin Code (31) (i) (ii) (iii) (iv) (47)

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
Brown	Sandy Soil			0	4
Gray	Sand & Gravel		Wet	4	12
Gray	Sandy Clay			12	30
Gray	Sand, Gravel	Boulders	Wet	30	58
Gray	Limestone			58	160
Gray & White	SAndstone			160	223

31 (10 14 15 21) (32 43 54 65 75 80)

32

41 WATER RECORD

Water found at - feet	Kind of water
(10-13) 216	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (14)
(15-18) NOT TESTED	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (19)
(20-23)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (24)
(25-28)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (29)
(30-33)	1 ☐ Fresh 2 ☐ Salty 3 ☐ Sulphur 4 ☐ Minerals 6 ☐ Gas (34) (60)

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4	1 ☒ Steel (12) 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic	.188	+ 1.5	65 (16)
5 7/8 (17-18)	1 ☐ Steel (19) 2 ☐ Galvanized 3 ☐ Concrete 4 ☒ Open hole 5 ☐ Plastic		65	223 (20-23)
(24-25)	1 ☐ Steel (26) 2 ☐ Galvanized 3 ☐ Concrete 4 ☐ Open hole 5 ☐ Plastic			(27-30)

SCREEN

Sizes of opening (Slot No.) (31-33)	Diameter (34-38) inches	Length (39-40) feet
Material and type	Depth at top of screen (41-44) feet	(30)

61 PLUGGING & SEALING RECORD

☒ Annular space ☐ Abandonment

Depth set at - feet From	Depth set at - feet To	Material and type (Cement grout, bentonite, etc.)
(10-13) 64	(14-17) 0	Grouted - Cement (1)
(18-21)	(22-25)	Bentonite (3)
(26-29)	(30-33)	(80)

71 PUMPING TEST

Pumping test method (10)	Pumping rate (11-14)	Duration of pumping (15-16) Hours (17-18) Mins
1 ☒ Pump air 2 ☐ Bailer	10 GPM	1 Hours Mins

Static level (19-21)	Water level end of pumping (22-24)	Water levels during (25) 1 ☒ Pumping 2 ☐ Recovery			
		15 minutes (26-28)	30 minutes (29-31)	45 minutes (32-34)	60 minutes (35-37)
34'6" feet	75 feet	220 feet	175 feet	150 feet	75 feet

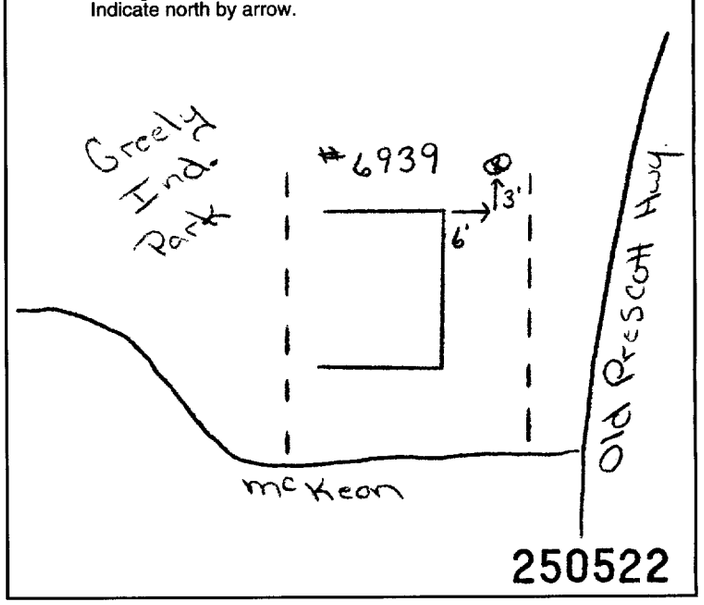
If flowing give rate (38-41)	Pump intake set at	Water at end of test (42)	
GPM	feet	☐ Clear	☒ Cloudy

Recommended pump type	Recommended pump setting (43-45)	Recommended pump rate (46-49)
☐ Shallow ☒ Deep	150 feet	5 GPM

(50-53)

LOCATION OF WELL

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



250522

FINAL STATUS OF WELL (54)

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

WATER USE (55-56)

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

METHOD OF CONSTRUCTION (57)

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

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd	1558
Address: P.O. Box 490 Stittsville, Ontario K2S 1A6	
Name of Well Technician: S. Miller	Well Technician's Licence No.: T0097
Signature of Technician/Contractor	Submission date: day 29 mo 11 yr 02

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MINISTRY USE ONLY

Data source (58)	Contractor (59-62)	Date received (63-68) (80)
	1558	DEC 17 2002
Date of inspection	Inspector	
Remarks: CCS.EC2		

0506 (07/00) Front Form 9

Ontario **Ministry of the Environment**

The Ontario Water Resources Act
WATER WELL RECORD

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

11 — **1533469**

Municipality 15009 Con CON 05
Plan 4M389 Sublot 11

County or District	Township/Borough/City/Town/Village	Con	block	tract	survey, etc.	Lot
Ottawa Carleton	Osgoode	5				4

Address: Greely, Ont

Date completed: 13 12 02 (day month year)

21 — UTM — Northing — RC — Elevation — RC — Basin Code — ii — iii — iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet From	Depth - feet To
	Sand	gravel + boulders		0	62
grey	Limestone			62	188
grey	Sandy Limestone			188	227
White	grey Sandstone			227	333

31

32

41 WATER RECORD

Water found at - feet	Kind of water
330	2 Salty
185	2 Salty

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet From	Depth - feet To
6 1/4	1 Steel	188	0	70
8 3/4	5 Open hole		0	68
6	5 Open hole		68	333

SCREEN

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

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

61 PLUGGING & SEALING RECORD

☑ Annular space ☐ Abandonment

Depth set at - feet From	To	Material and type (Cement grout, bentonite, etc.)
2	30	bentonite

71 PUMPING TEST

Pumping test method: 1 ☑ Pump 2 ☐ Bailer

Pumping rate: 9 GPM — Duration of pumping: 1 Hours ... Mins

25 Water levels during: 1 ☐ Pumping ☑ Recovery

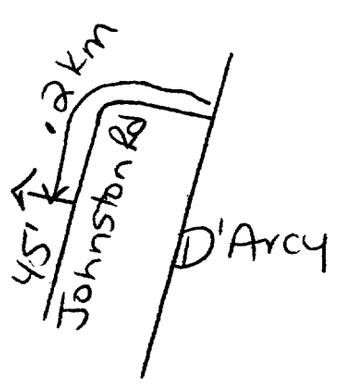
Static level	Water level end of pumping	15 minutes	30 minutes	45 minutes	60 minutes
50 feet	160 feet	50 feet	50 feet	50 feet	50 feet

If flowing give rate: GPM — Pump intake set at: feet — Water at end of test: ☐ Clear ☑ Cloudy

Recommended pump type: ☐ Shallow ☑ Deep — Recommended pump setting: 160 feet — Recommended pump rate: 9 GPM

LOCATION OF WELL

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



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FINAL STATUS OF WELL

54

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

WATER USE

55-56

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

METHOD OF CONSTRUCTION

57

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

Name of Well Contractor	Well Contractor's Licence No.
A1 Rock Drilling Ltd	1119
Address: RR#1 Richmond, Ont	
Name of Well Technician: Shannon Purcell	Well Technician's Licence No.: T2122
Signature of Technician/Contractor	Submission date: 18 12 02 (day mo yr)

MINISTRY USE ONLY

Data source	Contractor	Date received
	1119	DEC 23 2002
Date of inspection	Inspector	
Remarks: CSS.EC2		

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Ontario Ministry of the Environment

Well Tag Number A 004862

A 004862

Well Record

Regulation 903 Ontario Water Resources Act

page 1 of 3

Instructions for Completing Form

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

Ministry Use Only

MUN 15009 CON CON 04 LOT 06

Well Owner's Information and Location of Well Information

[redacted]

Address of Well Location (County/District/Municipality): Ottawa Carleton

Township: OSG0006

Lot: 6

Concession: 4

RR#/Street Number/Name:

City/Town/Village: Greely

Site/Compartment/Block/Tract etc.:

GPS Reading: NAD 83 | Zone: 18 | Easting: 455214 | Northing: 5011633 | Unit Make/Model: Magellan | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Clay			0	10.06
grey	sandstone			10.06	15.24
grey	limestone			15.24	41.76

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	41.76	15.24

Water Record

Water found at ___ Metres | Kind of Water

41.1 m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: Not tested

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was ☒ Clear and sediment free ☐ Other, specify Not tested

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam (centimetres)	Material	Wall thickness (centimetres)	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.478	0	18.9
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam ___	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No. ___		
No Casing or Screen				
	☒ Open hole		18.3	41.76

Test of Well Yield See Attached.

Pumping test method: Submersible

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	2.66		9.85
1	5.66	1	8.18
2	8.26	2	7.40
3		3	
4	12.78	4	6.32
6	16.34	6	5.52
8	18.37	8	4.96
10	19.98	10	4.60
16	22.82	16	3.89
20	24.14	20	3.67
25	19.42	25	3.87
30	15.98	30	3.47
40	11.66	40	3.19
50	10.32	50	3.10
60	9.94	60	3.04

Pump intake set at - (metres): 9.85

Pumping rate (litres/min): 84 + 30

Duration of pumping: 6 hrs + ___ min

Final water level end of pumping: 9.8 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 39.6 metres

Recommended pump rate: 36 (litres/min)

If flowing give rate - (litres/min): —

If pumping discontinued, give reason: —

Plugging and Sealing Record ☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
18.3	0	Cement grout slurry	250 gallons

Method of Construction

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

Water Use

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

Final Status of Well

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

Well Contractor/Technician Information

Name of Well Contractor: Air Rock Drilling Ltd — Well Contractor's Licence No.: 1119

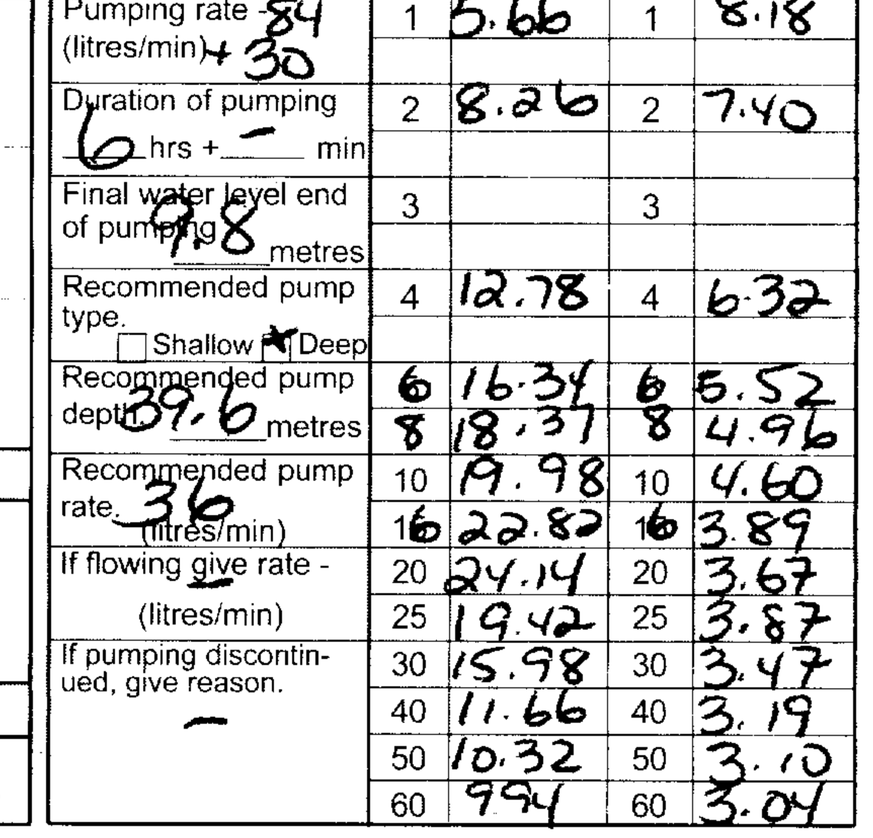
Business Address (street name, number, city etc.): RR#1 Richmond, Ont

Name of Well Technician (last name, first name): Shannon Purcell — Well Technician's Licence No.: T2122

Signature of Technician/Contractor: x [signature] — Date Submitted: 2004 03 22

Location of Well

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



Audit No. Z 04877

Date Well Completed: 2004 02 17

Was the well owner's information package delivered? ☐ Yes ☒ No

Date Delivered: NA

Ministry Use Only

Data Source: ___ Contractor: 1119

Date Received: MAR 31 2004 — Date of Inspection: ___

Remarks: CSNS — Well Record Number: 1534585

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☒ Well Owner's Copy ☐ *Cette formule est disponible en français*

Ontario Ministry of the Environment

Well Tag (Number below): A 033794

A033794

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

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- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

City of Barrie

RR#/Street Number/Name: 6976 South Village drive

City/Town/Village: Creely

Site/Compartment/Block/Tract etc.:

GPS Reading: NAD 83 | Zone 18 | Easting 435034 E | Northing 5012414

Unit Make/Model: Magellan

Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
brown	topsoil		soft	0	1.02
grey	Sand	layers of clay	soft	1.02	10.36
grey	Sand - Gravel		packed	10.36	14.93
grey	gravel		Packed	14.93	16.45
grey	limestone		layered	16.45	30.48

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	17.37	21.23
17.37	30.48	15.55

Water Record

Water found at ___ Metres / Kind of Water

30 m	☒ Fresh	☐ Sulphur	
☐ Gas	☐ Salty	☐ Minerals	
☐ Other:			
___ m	☐ Fresh	☐ Sulphur	
☐ Gas	☐ Salty	☐ Minerals	
☐ Other:			
___ m	☐ Fresh	☐ Sulphur	
☐ Gas	☐ Salty	☐ Minerals	
☐ Other:			

After test of well yield, water was
☐ Clear and sediment free
☐ Other, specify

Chlorinated ☐ Yes ☐ No

Construction Record

Inside diam (centimetres)	Material	Wall thickness (centimetres)	Depth From	Depth To (Metres)
Casing				
15.55	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	0.48	+0.60	17.37
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☐ Open hole		17.37	30.48

Test of Well Yield

Pumping test method: 3 H.P. sub

Pump intake set at - (metres) 24

Pumping rate - (litres/min) 38

Duration of pumping 1 hrs + 0 min

Final water level end of pumping 5.49 metres

Recommended pump type. ☐ Shallow ☒ Deep

Recommended pump depth. 24 metres

Recommended pump rate. 40 (litres/min)

If flowing give rate - (litres/min)

If pumping discontinued, give reason.

	Draw Down Time (min)	Draw Down Water Level (Metres)	Recovery Time (min)	Recovery Water Level (Metres)
Static Level		4.61		5.49
1			1	
2			2	
3	5.21		3	
4			4	
5	5.21		5	4.69
10	5.36		10	4.61
15	5.36		15	
20	5.43		20	
25	5.45		25	
30	5.46		30	
40	5.48		40	
50	5.48		50	
60	5.49		60	

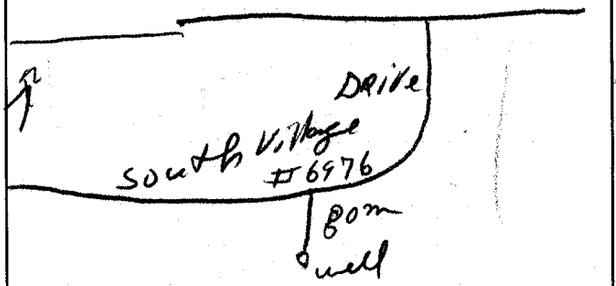
Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	16.38	cement grout	10 bags

Location of Well

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



Method of Construction

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

Water Use

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

Final Status of Well

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

Audit No. Z 28003

Date Well Completed YYYY 05 MM 09 DD 27

Was the well owner's information package delivered? ☐ Yes ☒ No

Date Delivered YYYY MM DD

Well Contractor/Technician Information

Name of Well Contractor: Gilles Bourgeois

Well Contractor's Licence No.: 1414

Business Address (street name, number, city etc.): 5th A Beeton Ont

Name of Well Technician (last name, first name): Claude Boucher

Well Technician's Licence No.: 3310

Signature of Technician/Contractor: X [signature]

Date Submitted YYYY 05 MM 09 DD 27

Ministry Use Only

Data Source

Contractor 1414

Date Received YYYY OCT 2 2005 MM DD

Date of Inspection YYYY MM DD

Remarks

Well Record Number

0506E (09/08) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐

Cette formule est disponible en français

Ontario Ministry of the Environment

Well Tag Number (Copy from tag and fill in below) A 022972

A022972

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

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- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

[redacted]

Address of Well Location (County/District/Municipality): Ottawa Carleton

Township: 039oode

Lot: 4

Concession: 4

RR#/Street Number/Name: #6958 South Village DR

City/Town/Village: Greely

Site/Compartment/Block/Tract etc.: PLAN 4M-1265 LOT

GPS Reading: NAD 83 | Zone 18 | Easting 454913 | Northing 5012338

Unit Make/Model: Magellan

Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To
	sand fill			0	1.2
	clay	sand		1.2	6.1
	sand	gravel		6.1	14.9
grey	limestone			14.9	24.4

Hole Diameter

Depth From	Depth To	Diameter Centimetres
0	24.4	14.91

Water Record

Water found at ___ Metres / Kind of Water

18.9 m	☐ Fresh	☐ Sulphur	
☐ Gas	☐ Salty	☐ Minerals	
☐ Other:	not tested		
22.2 m	☐ Fresh	☐ Sulphur	
☐ Gas	☐ Salty	☐ Minerals	
☐ Other:			
___ m	☐ Fresh	☐ Sulphur	
☐ Gas	☐ Salty	☐ Minerals	
☐ Other:			

After test of well yield, water was

☐ Clear and sediment free ☐ Not tested

☒ Other, specify cloudy

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	17.7
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		17.1	24.4

Test of Well Yield

Pumping test method: SubPump

Pump intake set at (metres): 21.33

Pumping rate (litres/min): 91

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 15.3 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 21.35 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason:

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	4.34		7.53
1	6.22	1	5.03
2	6.85	2	4.72
3	7.07	3	4.69
4	7.19	4	4.66
5	7.24	5	4.62
10	7.38	10	4.56
15	7.42	15	4.50
20	7.44	20	4.48
25	7.47	25	4.46
30	7.48	30	4.44
40	7.50	40	4.42
50	7.52	50	4.41
60	7.53	60	4.40

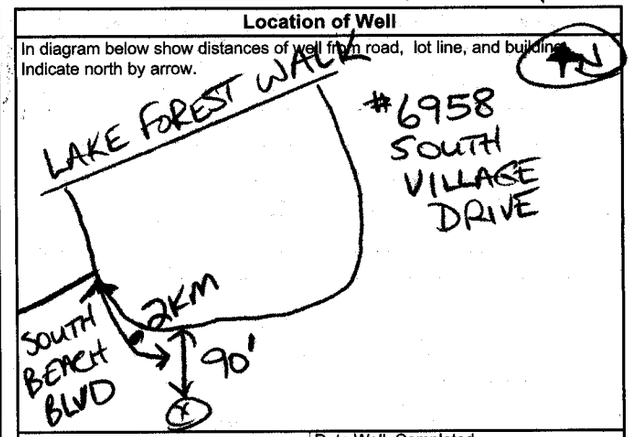
Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	Depth set at - Metres To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
17.1	14.0	neat cement slurry	.1816
14.0	0	bentonite slurry	.490

Location of Well

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



Method of Construction

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

Water Use

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

Final Status of Well

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

Well Contractor/Technician Information

Name of Well Contractor: Air Rock Drilling Co Ltd

Well Contractor's Licence No.: 1119

Business Address (street name, number, city etc.): RR#1 Richmond, Ont

Name of Well Technician (last name, first name): Purcell Shannon

Well Technician's Licence No.: T2122

Signature of Technician/Contractor: X

Date Submitted: 2005 11 04

Audit No.: Z 23315

Date Well Completed: 2005 10 18

Was the well owner's information package delivered? ☒ Yes ☐ No

Date Delivered: 2005 10 19

Ministry Use Only

Data Source:

Contractor: 1119

Date Received: NOV 14 2005

Date of Inspection:

Remarks:

Well Record Number:

0506E (09/03)

Contractor's Copy ☐ Ministry's Copy ☒ Well Owner's Copy ☐

Cette formule est disponible en français

Ontario Ministry of the Environment

Well Tag Number (F A028641

A028641

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

First Name: c/o manor Development

Mailing Address (Street Number/Name, RR, Lot, Concession): 6779 LAKES PARK DRIVE

County/District/Municipality: Ottawa Carleton

Township/City/Town/Village: GREELY

Province: Ontario

Postal Code: K4P 1P1

Telephone Number (include area code):

Address of Well Location (County/District/Municipality): Ottawa Carleton

Township: Osgoode

Lot: 4

Concession: 4

RR#/Street Number/Name: #6935 SOUTH VILLAGE DR

City/Town/Village: Greely

Site/Compartment/Block/Tract etc.: PLAN 4M-1265 9&25

GPS Reading: NAD 83 | Zone 18 | Easting 454843 | Northing 5012416

Unit Make/Model: Magellan

Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sand	gravel.		0	12.8
grey	limestone			12.8	29.6
grey	limestone	sandstone	mixed	29.6	54.9

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	54.9	15.07

Water Record

Water found at ___ Metres	Kind of Water
28.3 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: NOT
34.7 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: tested
50.6 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was
☐ Clear and sediment free
☒ Other, specify: not tested cloudy

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.86	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	15.2
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		14.6	54.9

Test of Well Yield

Pumping test method: Submpump

Pump intake set at - (metres) 51.8

Pumping rate - (litres/min) 30.28

Duration of pumping 1 hrs + ___ min

Final water level end of pumping 37.51 metres

Recommended pump type. ☐ Shallow ☒ Deep

Recommended pump depth 51.8 metres

Recommended pump rate. 30.28 (litres/min)

If flowing give rate - (litres/min)

If pumping discontinued, give reason.

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	11.13		
1	12.95	1	36.15
2	13.93	2	34.77
3	14.82	3	33.64
4	15.68	4	32.47
5	16.53	5	3053
10	20.15	10	27.20
15	22.80	15	24.10
20	25.44	20	21.90
25	27.62	25	20.14
30	29.37	30	18.24
40	32.73	40	16.58
50	35.22	50	14.98
60	37.51	60	14.11

Plugging and Sealing Record ☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
14.6	11.6	Cement Slurry	.1362
11.6	0	bentonite slurry	.490

Method of Construction

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

Water Use

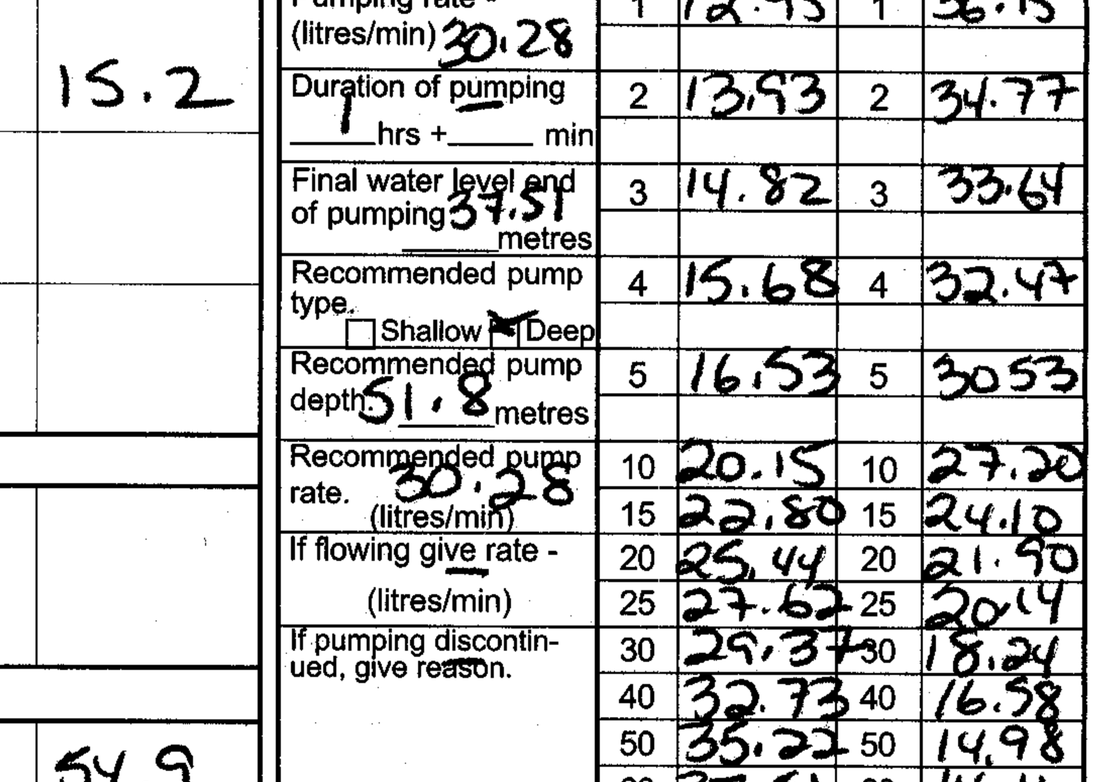
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

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

Location of Well

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



Well Contractor/Technician Information

Name of Well Contractor: Air Rock Drilling Ltd — Well Contractor's Licence No.: 1119

Business Address (street name, number, city etc.): RR#1 Richmond, Ont

Name of Well Technician (last name, first name): Durrell Shannon — Well Technician's Licence No.: T2122

Signature of Technician/Contractor: X [signature] — Date Submitted YYYY MM DD: 2005 11 04

Audit No. Z 23357 — Date Well Completed YYYY MM DD: 2005 09 30

Was the well owner's information package delivered? ☒ Yes ☐ No — Date Delivered YYYY MM DD: 2005 09 30

Ministry Use Only

Data Source — Contractor: 1119

Date Received NOV 14 2005 DD — Date of Inspection YYYY MM DD

Remarks — Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☒ Well Owner's Copy ☐ *Cette formule est disponible en français*

Ontario Ministry of the Environment

Well Tag Number: A028715

A028715

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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Ministry Use Only

[redacted]

Address of Well Location (County/District/Municipality): Ottawa Carleton

Township: Osgoode

Lot: 4

Concession: 4

RR#/Street Number/Name: #6945 South Village Dr

City/Town/Village: Greely

Site/Compartment/Block/Tract etc.: PLAN 4M-1265 5 L26

GPS Reading: NAD 8 3 | Zone 18 | Easting 454807 | Northing 5012421

Unit Make/Model: magellan

Mode of Operation: ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	sand	gravel.		0	11.6
grey	limestone			11.6	30.5
grey	sandstone			30.5	54.9

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	54.9	15.24

Water Record

Water found at Metres	Kind of Water
35.0 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: NOT
51.5 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: TESTED
___ m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was: ☐ Clear and sediment free ☐ Other, specify NOT TESTED cloudy

Chlorinated ☑ Yes ☐ No

Construction Record

Casing

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
15.88	☑ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	14.0
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			

Screen

Outside diam		Slot No.		
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			

No Casing or Screen

☑ Open hole — 13.4 — 54.9

Test of Well Yield

Pumping test method: Submp

Pump intake set at - (metres): 51.8

Pumping rate - (litres/min): 26.5

Duration of pumping: ___ hrs + ___ min

Final water level end of pumping: 35.42 metres

Recommended pump type: ☐ Shallow ☑ Deep

Recommended pump depth: 51.8 metres

Recommended pump rate: 26.5 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason.

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	10.06		
1	11.83	1	22.80
2	12.58	2	22.03
3	13.12	3	20.04
4	13.66	4	19.38
5	14.19	5	18.12
10	16.65	10	13.46
15	18.44	15	11.28
20	19.92	20	10.39
25	21.05	25	10.18
30	22.04	30	10.15
40	23.52	40	10.13
50	24.63	50	10.11
60	25.42	60	10.08

Plugging and Sealing Record

☑ Annular space ☐ Abandonment

Depth set at - Metres From	Depth set at - Metres To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
13.4	10.4	neat cement slurry	.1362
10.4	0	Bentonite Slurry	.490

Method of Construction

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

Water Use

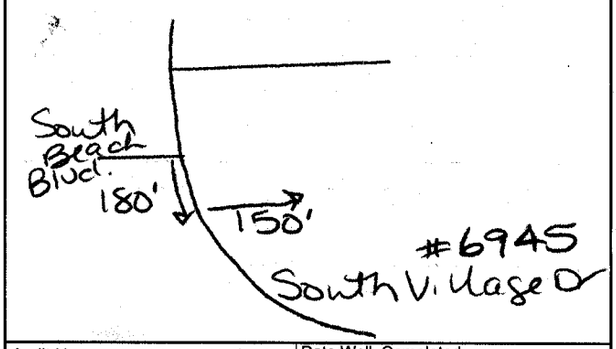
☑ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

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

Location of Well

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



Audit No. Z 23364

Date Well Completed: 2005 09 30

Was the well owner's information package delivered? ☑ Yes ☐ No

Date Delivered: 2005 10 03

Well Contractor/Technician Information

Name of Well Contractor: A1 Rock Drilling Ltd

Well Contractor's Licence No.: 1119

Business Address (street name, number, city etc.): RR#1 Richmond, Ont

Name of Well Technician (last name, first name): Purcell Shannon

Well Technician's Licence No.: 12122

Signature of Technician/Contractor: X

Date Submitted: 2005 10 04

Ministry Use Only

Data Source

Contractor: 1119

Date Received: NOV 14 2005

Date of Inspection: YYYY MM DD

Remarks

Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☑ Well Owner's Copy ☐ *Cette formule est disponible en français*

Ontario Ministry of the Environment

Well Tag A 036132 (or below) — A036132

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

Ottawa Carleton | Osgoode | 4 | 4

RR#/Street Number/Name: #6934 South Village Drive | City/Town/Village: Greely | Site/Compartment/Block/Tract etc.: Plan 4M-1265 S/L 14

GPS Reading | NAD: 83 | Zone: 18 | Easting: 454797 | Northing: 5012309 | Unit Make/Model: Magellan | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sand	gravel		0	12.19
	Grey	limestone		12.19	45.72

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	45.72	15.07

Water Record

Water found at Metres	Kind of Water	
43.88 m	☐ Fresh	☐ Sulphur
	☐ Salty	☐ Minerals
	☐ Other: NOT TESTED	
___ m	☐ Fresh	☐ Sulphur
	☐ Salty	☐ Minerals
	☐ Other:	
___ m	☐ Fresh	☐ Sulphur
	☐ Salty	☐ Minerals
	☐ Other:	

After test of well yield, water was: ☐ Clear and sediment free ☐ Other, specify NOT TESTED

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	14.63
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		14.02	45.72

Test of Well Yield

Pumping test method: Sub Pump

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Pump intake set at (metres) 39.62	Static Level	10.20		12.75
Pumping rate - (litres/min) 91	1	11.13	1	11.43
Duration of pumping 1 hrs + 0 min	2	11.46	2	11.25
Final water level end of pumping 12.75 metres	3	11.65	3	11.02
Recommended pump type. ☐ Shallow ☒ Deep	4	11.78	4	10.87
Recommended pump depth 39.62 metres	5	11.87	5	10.78
Recommended pump rate. 91 (litres/min)	10	12.09	10	10.49
	15	12.38	15	10.32
If flowing give rate - (litres/min)	20	12.50	20	10.25
	25	12.56	25	10.21
If pumping discontinued, give reason.	30	12.62	30	10.20
	40	12.68	40	
	50	12.71	50	
	60	12.75	60	

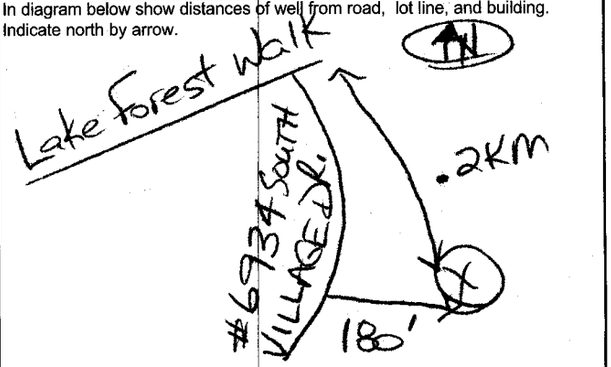
Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
14.02	10.97	Neat Cement Slurry	.1816
10.97	0	Bentonite Slurry	.363

Location of Well

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



Method of Construction

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

Water Use

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

Final Status of Well

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

Audit No. Z 39914 | Date Well Completed YYYY 2006 MM 03 DD 15

Was the well owner's information package delivered? ☒ Yes ☐ No | Date Delivered YYYY 2006 MM 03 DD 16

Well Contractor/Technician Information

Name of Well Contractor: HR Rock Drilling Co Ltd | Well Contractor's Licence No.: 1119

Business Address (street name, number, city etc.): RR #1 Richmond Ont K0A 2Z0

Name of Well Technician (last name, first name): Hogan Dan | Well Technician's Licence No.: T3058

Signature of Technician/Contractor: X [signature] | Date Submitted YYYY 2006 MM 04 DD 05

Ministry Use Only

Data Source | Contractor 1119

Date Received APR 12 2006 | Date of Inspection YYYY MM DD

Remarks | Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☒ Well Owner's Copy ☐

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Ontario Ministry of the Environment

Well Tag Number (Place sticker and print number below)
A 035399
A035399

Well Record
Regulation 903 Ontario Water Resources Act

page ___ of ___

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- Please print clearly in blue or black ink only.

Ministry Use Only
MUN | CON | LOT

Well Owner's Information and Location of Well Information

First Name	Last Name	Mailing Address (Street Number/Name, RR,Lot,Concession)
Savvy Custom Building		555 Legget Dr. P.O. Box 73010

County/District/Municipality	Township/City/Town/Village	Province	Postal Code	Telephone Number (include area code)
Ottawa Carleton	Kanata	Ontario	K2K 3C5	613

Address of Well Location (County/District/Municipality)	Township	Lot	Concession
Ottawa Carleton	Osgoode	3	4

RR#/Street Number/Name	City/Town/Village	Site/Compartment/Block/Tract etc.
Lot 23 South Village	Greely	

GPS Reading	NAD	Zone	Easting	Northing	Unit Make/Model	Mode of Operation:
	83	18	454882	5012433	Garmin	☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To
brown	sand			0	1.21
gray	sand & gravel		wet	1.21	3.04
gray	clay		packed	3.04	11.88
gray	sand & gravel			11.88	13.10
gray	limestone			13.10	48.76
gray &	white sandstone			48.76	95.09

Hole Diameter

Depth From	Depth To	Diameter Centimetres
0	14.93	21.75
14.93	95.09	15.23

Water Record

Water found at ___ Metres	Kind of Water
___ m	☐ Fresh ☐ Sulphur ☒ Gas ☐ Salty ☐ Minerals ☐ Other
94.48	
82.90	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other
NOT TESTED	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other

After test of well yield, water was
☒ Clear and sediment free
☐ Other, specify

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To
Casing				
15.86	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	0.48	+.45	14.93
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
15.23	☒ Open hole		14.93	95.09

Test of Well Yield

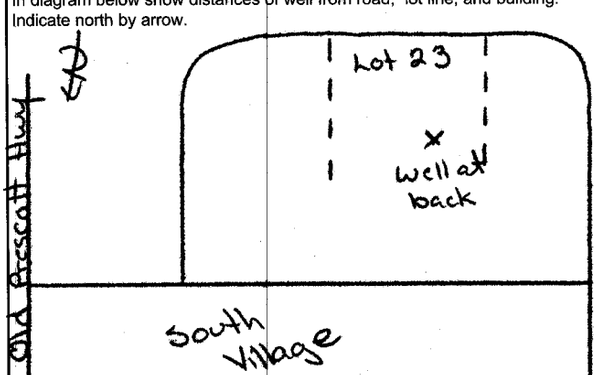
Pumping test method: submersible
Pump intake set at - (metres) 60.95
Pumping rate - (litres/min) 54.6
Duration of pumping 1 hrs + ___ min
Final water level end of pumping 10.34 metres
Recommended pump type, ☐ Shallow ☒ Deep
Recommended pump depth. 45.71 metres
Recommended pump rate. 45.5 (litres/min)
If flowing give rate - (litres/min)
If pumping discontinued, give reason.

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level				
1	10.32		1	10.21
2	10.32		2	10.22
3	10.33		3	10.22
4	10.33		4	10.23
5	10.33		5	10.22
10	10.33		10	10.222
15	10.33		15	10.22
20	10.34		20	10.22
25	10.34		25	10.20
30	10.34		30	10.19
40	10.34		40	10.19
50	10.34		50	10.19
60	10.34		60	10.19

Plugging and Sealing Record
☒ Annular space ☐ Abandonment

Depth set at - Metres From	Depth set at - Metres To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
14.93	0	Grouted Bentonite Slurry	1.38m3

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



Method of Construction
☐ Cable Tool ☐ Rotary (air) ☐ Diamond ☐ Digging
☐ Rotary (conventional) ☒ Air percussion mud ☐ Jetting ☐ Other
☐ Rotary (reverse) ☐ Boring ☐ Driving

Water Use
☐ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☒ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well
☐ Water Supply ☐ Recharge well ☐ Unfinished ☐ Abandoned, (Other)
☒ Observation well ☐ Abandoned, insufficient supply ☐ Dewatering
☐ Test Hole ☐ Abandoned, poor quality ☐ Replacement well

Audit No. Z 39272
Date Well Completed YYYY MM DD: 2006 03 30
Was the well owner's information package delivered? ☒ Yes ☐ No
Date Delivered YYYY MM DD: 2006 03 30

Well Contractor/Technician Information

Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558

Business Address (street name, number, city etc.): Box 490 Stittsville, Ontario K3S 1A6

Name of Well Technician (last name, first name)	Well Technician's Licence No.
Miller, Stephen	T0097

Signature of Technician/Contractor: X
Date Submitted YYYY MM DD: 2006 03 31

Ministry Use Only

Data Source	Contractor
	1558
Date Received YYYY MM DD: APR 19 2006	Date of Inspection YYYY MM DD
Remarks	Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐ *Cette formule est disponible en français*

Ontario Ministry of the Environment

Well Tag I A 036046 (below)

A036046

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

Ottawa-Carleton | Osgoode | 4 | 4

RR#/Street Number/Name: #6970 South Village Drive | City/Town/Village: Greely | Site/Compartment/Block/Tract etc: Plan 4M-1265 S/L 8

GPS Reading | NAD: 8 3 | Zone: 18 | Easting: 455003 | Northing: 5012390 | Unit Make/Model: Magellan | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sand & Boulders			0	15.85
	Dark Grey Limestone			15.85	24.69

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	24.69	15.23

Water Record

Water found at Metres	Kind of Water	
9.51 m	☐ Fresh ☒ NOT TESTED	☐ Sulphur
☐ Gas	☐ Salty	☐ Minerals
☐ Other:		
20.86 m	☐ Fresh	☐ Sulphur
☐ Gas	☐ Salty	☐ Minerals
☐ Other:		
___ m	☐ Fresh	☐ Sulphur
☐ Gas	☐ Salty	☐ Minerals
☐ Other:		

After test of well yield, water was: ☐ Clear and sediment free ☐ Other, specify ☒ NOT TESTED

Chlorinated ☐ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	18.29
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		17.68	24.69

Test of Well Yield

Pumping test method: SubPump

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	3.97		5.42	
1	5.04	1	4.26	
2	5.16	2	4.21	
3	5.19	3	4.16	
4	5.22	4	4.11	
5	5.24	5	4.08	
10	5.30	10	4.02	
15	5.33	15	3.99	
20	5.35	20	3.97	
25	5.37	25		
30	5.39	30		
40	5.40	40		
50	5.41	50		
60	5.42	60		

Pump intake set at (metres): 21.33

Pumping rate - (litres/min): 91

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 5.42 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 21.33 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason: ✓

Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
17.68	14.63	Neat Cement Slurry	.1816
14.63	0	Bentonite Slurry	.858

Method of Construction

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

Water Use

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

Final Status of Well

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

Well Contractor/Technician Information

Name of Well Contractor: AIR ROCK DRILLING CO LTD | Well Contractor's Licence No.: 1119

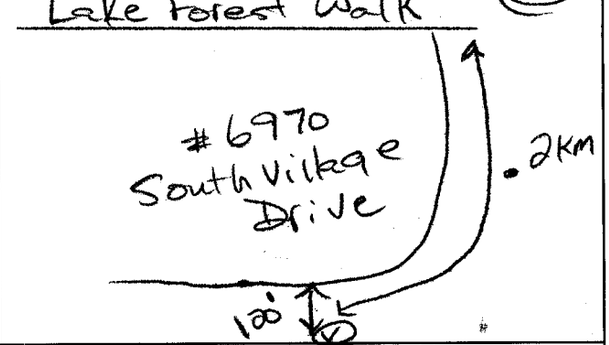
Business Address (street name, number, city etc.): RR#1 RICHMOND ONT K0A2Z0

Name of Well Technician (last name, first name): HOGAN DAN | Well Technician's Licence No.: 13058

Signature of Technician/Contractor: X [signature] | Date Submitted YYYY MM DD: 2006 06 07

Location of Well

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



Audit No. Z 39992 | Date Well Completed YYYY MM DD: 2006 04 19

Was the well owner's information package delivered? ☒ Yes ☐ No | Date Delivered YYYY MM DD: 2006 04 20

Ministry Use Only

Data Source | Contractor: 1119

Date Received YYYY MM DD: JUN 12 2006 | Date of Inspection YYYY MM DD

Remarks | Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐

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Ontario Ministry of the Environment

Well Tag A 043535 (number below)

A043535

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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Ministry Use Only

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Well Owner's Information and Location of Well Information

[redacted]

Ottawa - Carleton | OSgoode | 4 | 4

RR#/Street Number/Name: #1332 South Beach Blvd | City/Town/Village: Greely | Site/Compartment/Block/Tract etc.: Plan 4M-1265 S/L 111

GPS Reading | NAD: 83 | Zone: 18 | Easting: 454569 | Northing: 5012144 | Unit Make/Model: Magellan | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sand			0	13.10
	Grey Limestone			13.10	28.95
	✓ Sandstone			28.95	34.44
	✓ Limestone			34.44	41.14
	✓ Sandstone			41.14	42.66

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	42.66	15.23

Water Record

Water found at Metres	Kind of Water
35.05 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: NOT TESTED
41.14 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: NOT TESTED
___ m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was ☐ Clear and sediment free ☐ Other, specify: NOT TESTED

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	15.84
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		15.23	42.66

Test of Well Yield

Pumping test method: SubPump

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	2.86		41.72
1	5.72	1	39.29
2	8.06	2	37.35
3	10.17	3	33.35
4	12.26	4	38.26
5	14.10	5	31.79
10	21.89	10	24.06
15	26.88	15	19.51
20	30.53	20	15.90
25	33.16	25	13.45
30	34.94	30	11.53
40	37.60	40	9.34
50	40.02	50	7.92
60	41.72	60	5.48

Pump intake set at (metres): 39.62

Pumping rate - (litres/min): 45.50

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 41.72 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 39.62 metres

Recommended pump rate: 45.50 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason:

Plugging and Sealing Record ☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
15.23	12.19	Neat Cement Slurry	.227
12.19	0	Bentonite Slurry	.981

Method of Construction

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

Water Use

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

Final Status of Well

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

Well Contractor/Technician Information

Name of Well Contractor: Air Rock Drilling Co Ltd | Well Contractor's Licence No.: 1119

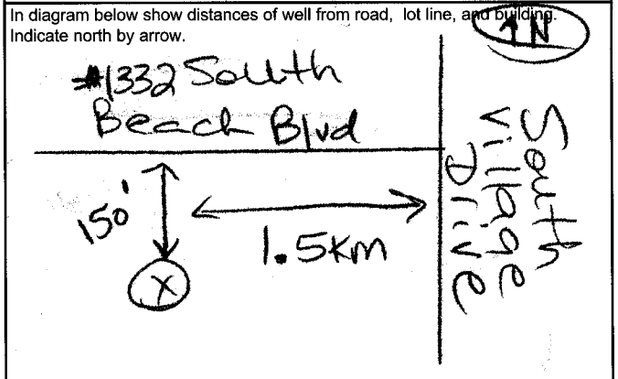
Business Address (street name, number, city etc.): RR#1 Richmond Ont K0A 2Z0

Name of Well Technician (last name, first name): Desaulniers Ken | Well Technician's Licence No.: T4

Signature of Technician/Contractor: X [signature] | Date Submitted: 2006 08 28 (YYYY MM DD)

Location of Well

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



Audit No. Z 48636 | Date Well Completed: 2006 07 24 (YYYY MM DD)

Was the well owner's information package delivered? ☒ Yes ☐ No | Date Delivered: 2006 08 06 (YYYY MM DD)

Ministry Use Only

Data Source | Contractor: 1119

Date Received: SEP 07 2006 (YYYY MM DD) | Date of Inspection (YYYY MM DD)

Remarks | Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐

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Ontario Ministry of the Environment

Well Tag Number (nber below) A 043520

A043520

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

Ottawa-Carleton | Goodle | 4 | 4

RR#/Street Number/Name: #1350 South Beach Blvd | City/Town/Village: Greely | Site/Compartment/Block/Tract etc.: Plan 4M-1265 / L 114

GPS Reading | NAD: 83 | Zone: 18 | Easting: 454648 | Northing: 5012199 | Unit Make/Model: Magellan | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sand & gravel			0	13.10
	Grey limestone			13.10	36.57
	Grey Sandstone			36.57	53.33

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	53.33	15.23

Water Record

Water found at - Metres / Kind of Water

- 51.80 m ☐ Fresh ☐ Sulphur
- ☐ Gas ☐ Salty ☐ Minerals
- ☐ Other: NOT TESTED
- ___ m ☐ Fresh ☐ Sulphur
- ☐ Gas ☐ Salty ☐ Minerals
- ☐ Other:
- ___ m ☐ Fresh ☐ Sulphur
- ☐ Gas ☐ Salty ☐ Minerals
- ☐ Other:

After test of well yield, water was ☐ Clear/Unsediment free NOT TESTED ☐ Other, specify

Chlorinated? ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	15.84
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		15.23	53.33

Test of Well Yield

Pumping test method: SubPump

	Draw Down Time (min)	Draw Down Water Level (Metres)	Recovery Time (min)	Recovery Water Level (Metres)
Static Level		10.78		21.96
1	1	12.73	1	19.60
2	2	13.70	2	17.18
3	3	14.38	3	15.08
4	4	15.00	4	14.17
5	5	15.45	5	13.08
10	10	17.36	10	11.15
15	15	18.53	15	10.96
20	20	19.40	20	10.89
25	25	20.08	25	10.87
30	30	20.57	30	10.855
40	40	21.30	40	10.83
50	50	21.63	50	10.805
60	60	21.96	60	10.79

Pump intake set at (metres): 48.76

Pumping rate (litres/min): 54.60

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 21.96 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 48.76 metres

Recommended pump rate: 54.60 (litres/min)

If flowing give rate - (litres/min): X

If pumping discontinued, give reason.

Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - From	Depth set at - To (Metres)	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
15.23	12.19	Neat Cement Slurry	.227
12.19	0	Bentonite Slurry	.735

Method of Construction

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

Water Use

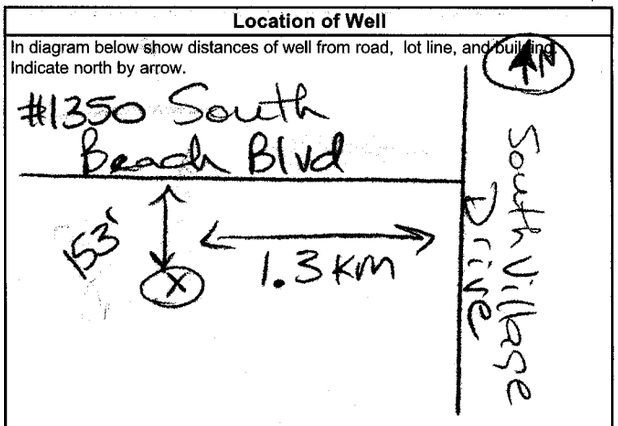
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

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

Location of Well

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



Audit No. Z 48637

Date Well Completed: 2006 07 24 (YYYY MM DD)

Was the well owner's information package delivered? ☒ Yes ☐ No

Date Delivered: 2006 07 26 (YYYY MM DD)

Well Contractor/Technician Information

Name of Well Contractor: AIR ROCK DRILLING CO LTD | Well Contractor's Licence No.: 1119

Business Address (street name, number, city etc.): RR#1 RICHMOND ONT K0A2Z0

Name of Well Technician (last name, first name): Desaulniers Ken | Well Technician's Licence No.: T4

Signature of Technician/Contractor: X [signature] | Date Submitted: 2006 08 08 (YYYY MM DD)

Ministry Use Only

Data Source	Contractor 1119
Date Received SEP 07 2006 (YYYY MM DD)	Date of Inspection (YYYY MM DD)
Remarks	Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☒ Well Owner's Copy ☐ *Cette formule est disponible en français*

Ontario Ministry of the Environment

Well Tag Number (nber below): A 043522

A 043522

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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- Please print clearly in blue or black ink only.

Ministry Use Only

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Well Owner's Information and Location of Well Information

[redacted]

Ottawa-Carleton | US Goode | 4 | 4

RR#/Street Number/Name: #6940 South Village Dr | City/Town/Village: Greely | Site/Compartment/Block/Tract etc.: Plan 4M-1265 S/L 13

GPS Reading | NAD: 8 3 | Zone: 18 | Easting: 454807 | Northing: 5012320 | Unit/Make/Model: Mogellon | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sand			0	5.18
	Sandy clay, Sand, gravel			5.18	10.97
	Limestone			10.97	24.99

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	24.99	15.24

Water Record

Water found at Metres	Kind of Water
16.76 m	☐ Fresh ☒ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: NO
23.16 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: TESTED
m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was ☐ Clear and sediment free ☐ Other, specify TESTED

Chlorinated ☐ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	16.00
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		15.39	24.99

Test of Well Yield

Pumping test method: SubPump

Pump intake set at (metres): 21.33

Pumping rate (litres/min): 91

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 15.85 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 91.5 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason:

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	3.27			4.85
1	4.36	1		3.56
2	4.50	2		3.51
3	4.56	3		3.46
4	4.60	4		3.45
5	4.62	5		3.44
10	4.70	10		3.38
15	4.72	15		3.34
20	4.74	20		3.29
25	4.75	25		3.27
30	4.76	30		
40	4.77	40		
50	4.80	50		
60	4.85	60		

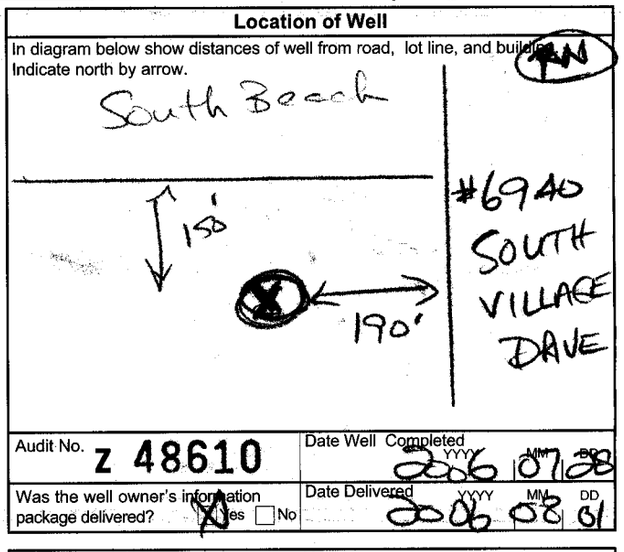
Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
15.39	12.34	Neat Cement Slurry	.1816
12.34	0	bentonite Slurry	.858

Location of Well

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



Method of Construction

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

Water Use

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

Final Status of Well

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

Audit No. Z 48610

Date Well Completed: YYYY 2006 MM 10 DD 08

Was the well owner's information package delivered? ☒ Yes ☐ No

Date Delivered: YYYY 2006 MM 08 DD 01

Well Contractor/Technician Information

Name of Well Contractor: AIRROCK DRILLING CO LTD | Well Contractor's Licence No.: 1119

Business Address (street name, number, city etc.): RR#1 RICHMOND ONT K0A 2Z0

Name of Well Technician (last name, first name): Desauniers Ken | Well Technician's Licence No.: T4

Signature of Technician/Contractor: X [signature] | Date Submitted: YYYY 2006 MM 08 DD 08

Ministry Use Only

Data Source	Contractor 1119
Date Received: SEP 07 2006	Date of Inspection: YYYY MM DD
Remarks	Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☒ Well Owner's Copy ☐

Cette formule est disponible en français

Ontario Ministry of the Environment

Well Tag Number (if below) A 043463

A043463

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

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- Questions regarding completing this application can be directed to the Water Well Management Coordinator at 416-235-6203.
- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

Ottawa-Carleton

RR#/Street Number/Name #1362 South Beach Blvd | City/Town/Village Greely | Site/Compartment/Block/Tract etc. Plan 4M-1265 LL116

GPS Reading | NAD 8 3 | Zone 18 | Easting 454725 | Northing 5012231 | Unit Make/Model Magellan | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sandy clay			0	2.74
	Sand + gravel			2.74	13.11
	Limestone			13.11	46.02
	Sandstone			46.02	56.69

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	56.69	15.23

Water Record

Water found at Metres | Kind of Water

54.25 m ☒ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: TESTED

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: ___

___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: ___

After test of well yield, water was ☒ Clear and sediment free ☐ Other, specify TESTED

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	15.54
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		14.93	56.69

Test of Well Yield

Pumping test method: Submp

Pump intake set at (metres): 51.81

Pumping rate (litres/min): 91

Duration of pumping: ___ hrs + 0 min

Final water level end of pumping: 14.80 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 36.57 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min)

If pumping discontinued, give reason: ✓

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		10.37		14.80
1	1	12.58	1	11.01
2	2	13.40	2	10.70
3	3	13.84	3	10.57
4	4	14.10	4	10.53
5	5	14.30	5	10.52
10	10	14.57	10	10.46
15	15	14.67	15	10.42
20	20	14.68	20	10.39
25	25	14.72	25	
30	30	14.76	30	
40	40	14.77	40	
50	50	14.78	50	
60	60	14.80	60	

Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - From	Depth set at - To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
14.93	11.89	Neat Cement Slurry	.207
11.89	0	Bentonite Slurry	.735

Method of Construction

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

Water Use

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

Final Status of Well

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

Well Contractor/Technician Information

Name of Well Contractor: TIR Rock Drilling Co LTD | Well Contractor's Licence No.: 1119

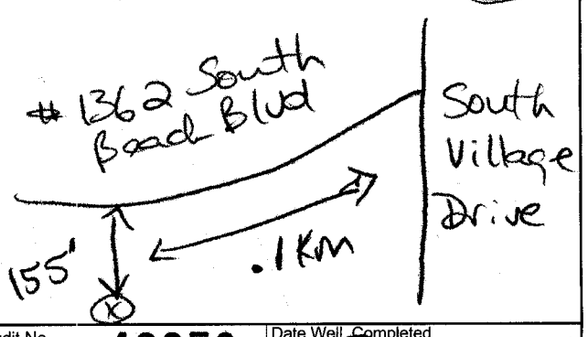
Business Address (street name, number, city etc.): RR#1 Richmond ONT K0A2Z0

Name of Well Technician (last name, first name): Purcell Shannon | Well Technician's Licence No.: T2122

Signature of Technician/Contractor: X [signature] | Date Submitted YYYY MM DD: 2006 09 07

Location of Well

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



Audit No. Z 48653 | Date Well Completed YYYY MM DD: 2006 09 05

Was the well owner's information package delivered? ☒ Yes ☐ No | Date Delivered YYYY MM DD: 2006 09 06

Ministry Use Only

Data Source | Contractor: 1119

Date Received YYYY MM DD: OCT 11 2006 | Date of Inspection YYYY MM DD

Remarks | Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☒ Well Owner's Copy ☐ *Cette formule est disponible en français*

Ontario Ministry of the Environment

Well Tag No. (Instructions on the back of this form) A 046215

A046215

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

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- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

(1) [redacted]

City of Ottawa | City of Ottawa | Osgoode | 112

RR#/Street Number/Name: 1338 South Beach DR. | City/Town/Village: CARELY | Site/Compartment/Block/Tract etc.: Plan 4M1265

GPS Reading: NAD 83 | Zone 18 | Easting 454616E | Northing 5012160 | Unit Make/Model: Magellan utm | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To
yellow	sand		Soft	0	3.10
grey	sand gravel		Soft	3.10	10.97
Grey	limestone		Packed layered Hard	10.97	13.41
Grey	sandstone			13.41	42.67
Grey	sandstone			42.67	48.76

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	14.63	21.23
14.63	48.76	15.55

Water Record

Water found at Metres / Kind of Water

- ~~147~~ m ☒ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was ☐ Clear and sediment free ☐ Other, specify

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.55	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	0.48	+0.60	14.63
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		14.63	48.76

Test of Well Yield

Pumping test method: 3 H.P.S wb

Pump intake set at - (metres) 30

Pumping rate - (litres/min) 40

Duration of pumping 1 hrs + 0 min

Final water level end of pumping 10.17 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth. 30 metres

Recommended pump rate. 40 (litres/min)

If flowing give rate - (litres/min)

If pumping discontinued, give reason.

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		7.17		10.17
1	1	8.12	1	9.72
2	2	8.40	2	9.37
3	3	8.46	3	9.16
4	4	8.67	4	8.99
5	5	8.70	5	8.90
10	10	8.86	10	8.33
15	15	9.32	15	8.62
20	20	9.60	20	7.87
25	25	9.79	25	7.72
30	30	9.79	30	7.62
40	40	9.96	40	
50	50	10.10	50	
60	60	10.17	60	

Plugging and Sealing Record ☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	14.63	cement/ pressure grout	11 bags

Method of Construction

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

Water Use

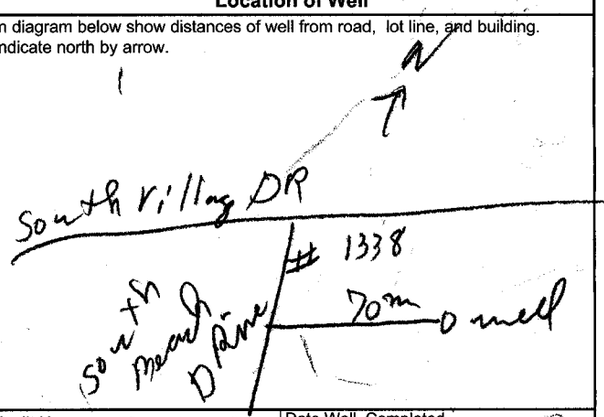
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

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

Location of Well

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



Audit No. Z 52056

Date Well Completed: YYYY 06 MM 11 DD 21

Was the well owner's information package delivered? ☐ Yes ☒ No

Date Delivered: YYYY MM DD

Well Contractor/Technician Information

Name of Well Contractor: Giles Bouvier | Well Contractor's Licence No.: 1414

Business Address (street name, number, city etc.): St Albert Ont

Name of Well Technician (last name, first name): Bourgeois Alain | Well Technician's Licence No.: 2710

Signature of Technician/Contractor: X [signature] | Date Submitted: YYYY 06 MM 11 DD 21

Ministry Use Only

Data Source | Contractor: 1414

Date Received: JAN 25 2007 | Date of Inspection: YYYY MM DD

Remarks | Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐

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Ontario Ministry of the Environment

Well Tag No. A 046216 (below)
A046216

Well Record
Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

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- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

2 [redacted]

Address of Well Location (County/District/Municipality): City of Ottawa | Township: Osgoode | Lot: 13 | Concession:

RR#/Street Number/Name: 1344 South Beach DR | City/Town/Village: GREELY | Site/Compartment/Block/Tract etc.: Plan 4M1265

GPS Reading: NAD 83 | Zone 18 | Easting 454626 E | Northing 5012175 | Unit Make/Model: Magellan | Mode of Operation: ☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify: A+m

Log of Overburden and Bedrock Materials (see Instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
Yellow	Sand		Soft	0	3.10
grey	Sand		Soft	3.10	10.36
Grey	gravel		Packed	10.36	13.41
Grey	limestone		Hard	13.41	42.67
White	Sandstone		Hard	42.67	48.68

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	14.63	21.23
14.63	48.68	15.55

Water Record

Water found at ___ Metres / Kind of Water

- 46 m ☑ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was
☐ Clear and sediment free
☐ Other, specify

Chlorinated ☑ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.55	☑ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	0.48	+0.60	14.63
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☑ Open hole		14.63	48.68

Test of Well Yield

Pumping test method: 3 H.P.
Pump intake set at - (metres): 30
Pumping rate - (litres/min): 40
Duration of pumping: 1 hrs + 0 min
Final water level end of pumping: 10.16 metres
Recommended pump type: ☐ Shallow ☑ Deep
Recommended pump depth: 30 metres
Recommended pump rate: 40 (litres/min)
If flowing give rate - (litres/min):
If pumping discontinued, give reason.

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		7.07		10.16
1	1	8.02	1	9.62
2	2	8.30	2	9.27
3	3	8.36	3	9.06
4	4	8.57	4	8.91
5	5	8.66	5	8.80
10	10	8.86	10	8.23
15	15	9.22	15	8.02
20	20	9.50	20	7.77
25	25	9.69	25	7.62
30	30	9.69	30	7.52
40	40	9.86	40	
50	50	10.00	50	
60	60	10.16	60	

Plugging and Sealing Record

☑ Annular space ☐ Abandonment

Depth set at - Metres From	Depth set at - Metres To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
0	14.63	pressure grout cement	12 bags

Method of Construction

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

Water Use

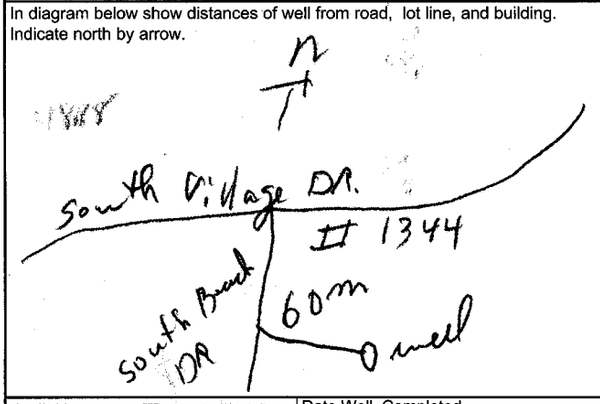
☑ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

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

Location of Well

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



Audit No. Z 52057

Date Well Completed: YYYY 06 MM 11 DD 22

Was the well owner's information package delivered? ☐ Yes ☑ No

Date Delivered: YYYY MM DD

Well Contractor/Technician Information

Name of Well Contractor: Gilles Bourgeois | Well Contractor's Licence No.: 1414

Business Address (street name, number, city etc.): 50 A Bird Cr

Name of Well Technician (last name, first name): Alain Bourgeois | Well Technician's Licence No.: 2710

Signature of Technician/Contractor: x [signature] | Date Submitted: YYYY 06 MM 11 DD 22

Ministry Use Only

Data Source | Contractor: 1414

Date Received: JAN 25 2007 MM DD | Date of Inspection: YYYY MM DD

Remarks | Well Record Number

0506E (09/03) Contractor's Copy ☐ Ministry's Copy ☐ Well Owner's Copy ☐

Cette formule est disponible en français

Ontario Ministry of the Environment

Well (number below) A 052500

A052500

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

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- Questions regarding completing this application can be directed to the Water Well Help Desk (Toll Free) at 1-888-396-9355.
- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

[redacted]

Address of Well Location (County/District/Municipality): Ottawa-Carleton | Township: Osgoode | Lot: 4 | Concession: 4

RR#/Street Number/Name: 1368 South Beach Blvd | City/Town/Village: Greely | Site/Compartment/Block/Tract etc.: 4M-1265 S/L 117

GPS Reading: NAD 8 3 | Zone: 18 | Easting: 454738 | Northing: 5012250 | Unit Make/Model: Magellan | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To
	Sand			0	12.50
	Grey Limestone			12.50	45.72
	White Sandstone			45.72	48.77

Hole Diameter

Depth From	Depth To	Diameter Centimetres
0	48.77	14.91

Water Record

Water found at Metres	Kind of Water
17.98 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
46.33 m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:
___ m	☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was: ☒ Clear and sediment free ☐ Other, specify

Chlorinated: ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	14.93
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		14.32	48.77

Test of Well Yield

Pumping test method: Sub Pump

Pump intake set at - (metres): 30.48

Pumping rate - (litres/min): 91

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 13.44 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 30.48 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason:

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	0	10.40		13.44
1	1	11.75	1	11.40
2	2	12.14	2	11.32
3	3	12.35	3	11.16
4	4	12.47	4	11.08
5	5	12.63	5	10.99
10	10	12.73	10	10.80
15	15	13.10	15	10.63
20	20	13.20	20	10.57
25	25	13.24	25	10.51
30	30	13.28	30	10.45
40	40	13.43	40	10.40
50	50	13.43	50	
60	60	13.44	60	

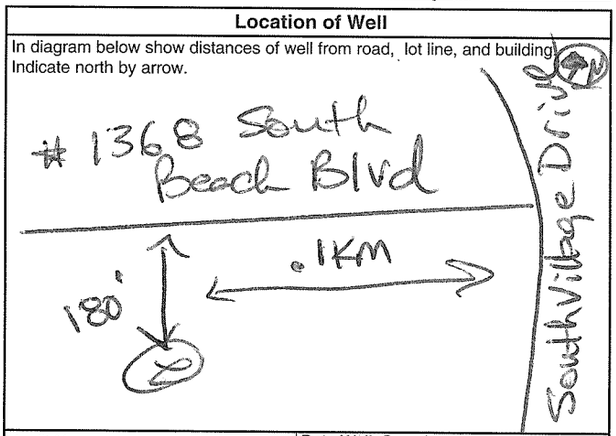
Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
14.32	11.28	Neat Cement Slurry	.1362
11.28	0	Bentonite Slurry	.613

Location of Well

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



Method of Construction

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

Water Use

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

Final Status of Well

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

Audit No. Z 55596

Date Well Completed: YYYY 2007 MM 01 DD 05

Was the well owner's information package delivered? ☒ Yes ☐ No

Date Delivered: YYYY 2007 MM 01 DD 12

Well Contractor/Technician Information

Name of Well Contractor: AIR ROCK DRILLING CO LTD | Well Contractor's Licence No.: 1119

Business Address (street name, number, city etc.): RR#1 Richmond ONT K0A 2Z0

Name of Well Technician (last name, first name): HOGAN DAN | Well Technician's Licence No.: 13058

Signature of Technician/Contractor: X [signature] | Date Submitted: YYYY 2007 MM 01 DD 12

Ministry Use Only

Data Source | Contractor: 1119

Date Received: FEB 12 2007 YYYY MM DD | Date of Inspection: YYYY MM DD

Remarks | Well Record Number

0506E (08/2006)

Ministry's Copy

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741 2599 Fax

Ontario Ministry of the Environment

Well Tag No. (Enter in the boxes below) A043541

A043541

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

- For use in the **Province of Ontario** only. This document is a permanent **legal** document. Please retain for future reference.
- All Sections **must** be completed in full to avoid delays in processing. Further instructions and explanations are available on the back of this form.
- Questions regarding completing this application can be directed to the Water Well Help Desk (Toll Free) at 1-888-396-9355.
- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

MUN ___ CON ___ LOT ___

[redacted]

Address of Well Location (County/District/Municipality): Ottawa-Carleton | Township: Osgoode | Lot: 4 | Concession: 4

RR#/Street Number/Name: #6892 Lake Forest Walk | City/Town/Village: Greely | Site/Compartment/Block/Tract etc.: Plan 4M-1265 SL27

GPS Reading: NAD 8 3 | Zone: 18 | Easting: 454770 | Northing: 5012405 | Unit Make/Model: Megabar | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sand Gravel			0	12.50
	Limestone			12.50	54.86

Hole Diameter

Depth From (Metres)	Depth To (Metres)	Diameter (Centimetres)
0	54.86	14.91

Water Record

Water found at ___ Metres | Kind of Water

- 54.86 m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☒ Minerals ☐ Other: NO
- 45.11 m ☐ Fresh ☐ Sulphur ☒ Gas ☐ Salty ☐ Minerals ☐ Other: TESTED
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was ☒ Clear and sediment free ☐ Other, specify NOT TESTED

Chlorinated ☐ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From (Metres)	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	14.93
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		14.32	54.86

Test of Well Yield

Pumping test method: Sub Pump

Pump intake set at (metres): 48.77

Pumping rate (litres/min): 34.07

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 21.27 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 48.77 metres

Recommended pump rate: 34.07 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason:

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		10.61		21.27
1	1	12.70	1	17.50
2	2	13.27	2	15.90
3	3	13.78	3	14.79
4	4	14.17	4	12.90
5	5	14.50	5	12.37
10	10	16.07	10	11.07
15	15	17.00	15	10.61
20	20	17.78	20	
25	25	18.51	25	
30	30	19.00	30	
40	40	19.92	40	
50	50	20.75	50	
60	60	21.27	60	

Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - From (Metres)	Depth set at - To (Metres)	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
14.32	11.28	Neat Cement Slurry	.227
11.28	0	Bentonite Slurry	.490

Method of Construction

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

Water Use

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

Final Status of Well

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

Well Contractor/Technician Information

Name of Well Contractor: AIRROCK DRILLING CO LTD | Well Contractor's Licence No.: 1119

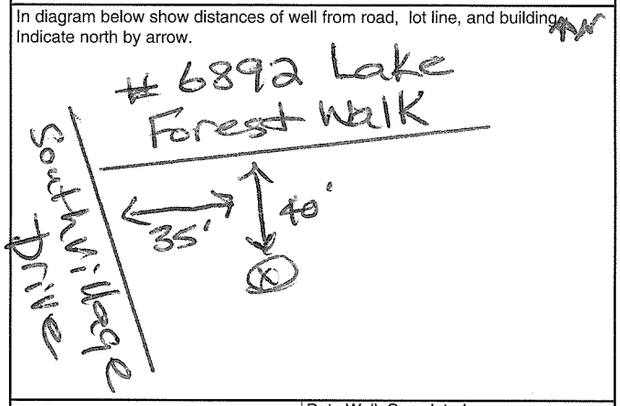
Business Address (street name, number, city etc.): RR#1 RICHMOND ONT K0A2Z0

Name of Well Technician (last name, first name): PURCELL SHAWNON | Well Technician's Licence No.: 12122

Signature of Technician/Contractor: X [signature] | Date Submitted: 2007 01 12

Location of Well

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



Audit No.: Z 55551 | Date Well Completed: 2006 11 03

Was the well owner's information package delivered? ☒ Yes ☐ No | Date Delivered: 2006 11 27

Ministry Use Only

Data Source | Contractor: 1119

Date Received: FEB 12 2007 | Date of Inspection

Remarks | Well Record Number

0506E (08/2006)

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Ontario Ministry of the Environment

Well T A049710 (number below)

A049710

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

Instructions for Completing Form

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- Please print clearly in blue or black ink only.

Ministry Use Only

MUN ___ CON ___ LOT ___

[redacted]

Address of Well Location (County/District/Municipality): Ottawa-Carleton | Township: Osgoode | Lot: 4 | Concession: 4

RR#/Street Number/Name: #1369 South Beach Blvd | City/Town/Village: Greely | Site/Compartment/Block/Tract etc.: Plan 4M-1265 S/L 81

GPS Reading | NAD: 83 | Zone: 18 | Easting: 454682 | Northing: 5012330 | Unit Make/Model: Magellan | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Till			0	1.52
	Sand, Gravel, Boulders			1.52	13.11
	Limestone			13.11	38.10
	Sandstone			38.10	94.48

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	79.24	14.91
79.24	94.48	14.59

Water Record

Water found at Metres	Kind of Water	Kind of Water
22.86 m	☐ Fresh ☒ Sulphur	☐ Gas ☐ Salty ☐ Minerals ☐ Other:
90.83 m	☐ Fresh ☐ Sulphur	☐ Gas ☐ Salty ☐ Minerals ☐ Other:
___ m	☐ Fresh ☐ Sulphur	☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was ☐ Clear and sediment free ☐ Other, specify ☐ Yes ☐ No

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	15.54
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		14.93	94.48

Test of Well Yield

Pumping test method: Sub Pump

Pump intake set at (metres): 82.29

Pumping rate - (litres/min): 91

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 13.74 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 82.29 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason: ✓

	Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level		11.90		13.74
1	1	13.15	1	11.97
2	2	13.40	2	11.90
3	3	13.50	3	
4	4	13.54	4	
5	5	13.57	5	
10	10	13.65	10	
15	15	13.69	15	
20	20	13.72	20	
25	25	13.74	25	
30	30	13.74	30	
40	40	13.74	40	
50	50	13.74	50	
60	60	13.74	60	

Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
14.93	11.89	Neat Cement Slurry	.227
11.89	0	Bentonite Slurry	1.10

Method of Construction

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

Water Use

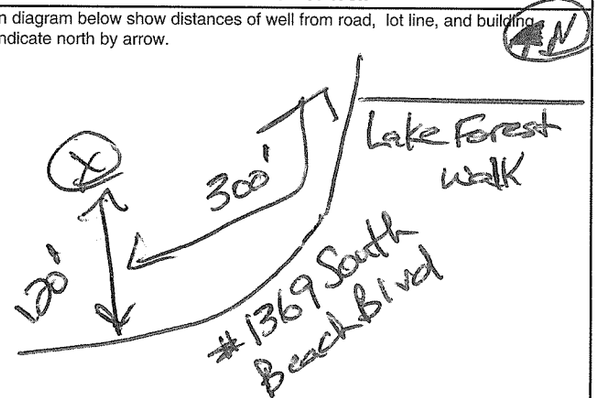
☒ Domestic ☐ Industrial ☐ Public Supply ☐ Other
☐ Stock ☐ Commercial ☐ Not used
☐ Irrigation ☐ Municipal ☐ Cooling & air conditioning

Final Status of Well

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

Location of Well

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



Audit No. Z 64799

Date Well Completed: 2007 05 17 (YYYY MM DD)

Was the well owner's information package delivered? ☒ Yes ☐ No

Date Delivered: 2007 05 30 (YYYY MM DD)

Well Contractor/Technician Information

Name of Well Contractor: AIR ROCK DRILLING CO LTD | Well Contractor's Licence No.: 1119

Business Address (street name, number, city etc.): RR#1 RICHMOND ONT K0A2Z0

Name of Well Technician (last name, first name): DesaulniersKen | Well Technician's Licence No.: 14

Signature of Technician/Contractor: X [signature] | Date Submitted: 2007 05 30 (YYYY MM DD)

Ministry Use Only

Data Source	Contractor 1119
Date Received APR 11 2007 (YYYY MM DD)	Date of Inspection (YYYY MM DD)
Remarks	Well Record Number

0506E (08/2006)

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Ontario Ministry of the Environment

Well number below) A055252

A055252

Well Record

Regulation 903 Ontario Water Resources Act

page ___ of ___

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- **All metre measurements shall be reported to 1/10th of a metre.**
- Please print clearly in blue or black ink only.

Ministry Use Only

MUN | CON | LOT

Well Owner's Information and Location of Well Information

[redacted]

RR#/Street Number/Name #1374 South Beach Blvd | City/Town/Village Greely | Site/Compartment/Block/Tract etc. Plan 4M-1265 SL118

GPS Reading | NAD 83 | Zone 18 | Easting 454767 | Northing 5012263 | Unit Make/Model Magellan | Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Depth To (Metres)
	Sand, Gravel, Boulders			0	12.19
Grey	Limestone			12.19	42.97
White	Sandstone			42.97	48.77

Hole Diameter

Depth From	Depth To (Metres)	Diameter (Centimetres)
0	48.77	15.55

Water Record

Water found at ___ Metres / Kind of Water

- 45.72 m ☒ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: NOT TESTED
- 46.63 m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other: TESTED
- ___ m ☐ Fresh ☐ Sulphur ☐ Gas ☐ Salty ☐ Minerals ☐ Other:

After test of well yield, water was ☐ Clear and sediment free ☐ Other, specify CLOUDY NOT TESTED

Chlorinated ☒ Yes ☐ No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Depth To (Metres)
Casing				
15.88	☒ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	.48	0	15.24
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized			
Screen				
Outside diam	☐ Steel ☐ Fibreglass ☐ Plastic ☐ Concrete ☐ Galvanized	Slot No.		
No Casing or Screen				
	☒ Open hole		14.63	48.77

Test of Well Yield

Pumping test method: SubPump

Pump intake set at (metres): 42.67

Pumping rate (litres/min): 91

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping: 42.97 metres

Recommended pump type: ☐ Shallow ☒ Deep

Recommended pump depth: 42.67 metres

Recommended pump rate: 91 (litres/min)

If flowing give rate - (litres/min):

If pumping discontinued, give reason: —

Draw Down Time min	Draw Down Water Level Metres	Recovery Time min	Recovery Water Level Metres
Static Level	9.46		42.97
1	11.15	1	10.53
2	11.44	2	10.53
3	11.58	3	10.52
4	11.68	4	10.51
5	11.76	5	10.45
10	11.97	10	10.28
15	12.06	15	10.19
20	12.12	20	10.12
25	12.15	25	10.11
30	12.17	30	10.09
40	12.21	40	10.09
50	12.24	50	10.08
60	12.27	60	10.08

Plugging and Sealing Record

☒ Annular space ☐ Abandonment

Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
14.63	11.58	Neat Cement Slurry	.227
11.58	0	Bentonite Slurry	.490

Method of Construction

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

Water Use

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

Final Status of Well

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

Well Contractor/Technician Information

Name of Well Contractor: AIR ROCK DRILLING CO LTD | Well Contractor's Licence No.: 1119

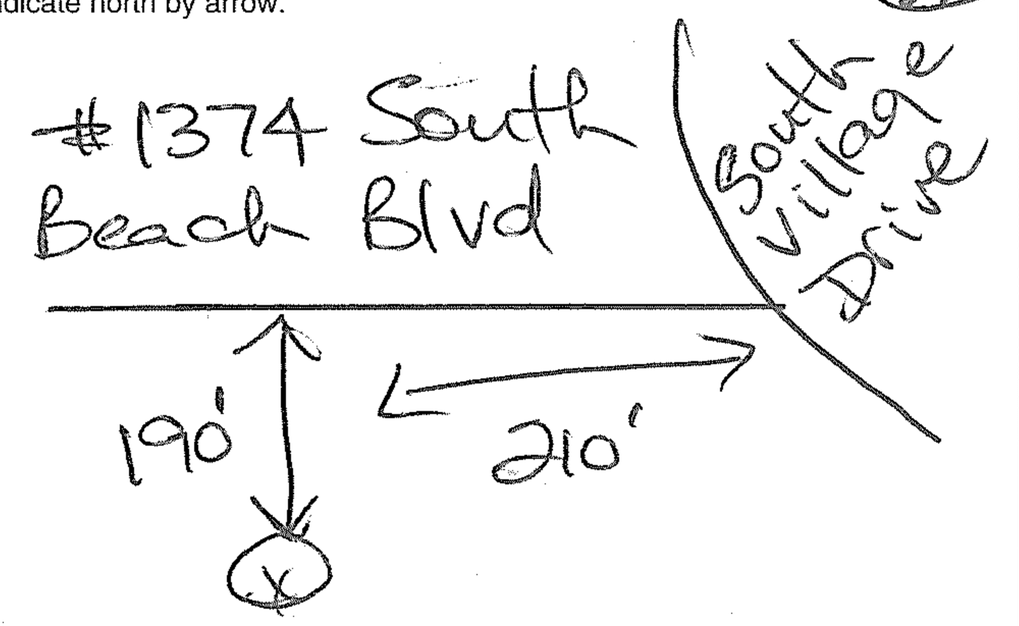
Business Address (street name, number, city etc.): RR#1 RICHMOND ONT K0A 2Z0

Name of Well Technician (last name, first name): PURCELL SHANNON | Well Technician's Licence No.: T2122

Signature of Technician/Contractor | Date Submitted: 2007 08 21

Location of Well

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



Audit No. Z 65197

Date Well Completed: 2007 06 05

Was the well owner's information package delivered? ☒ Yes ☐ No

Date Delivered: 2007 06 18

Ministry Use Only

Data Source | Contractor 1119

Date Received: AUG 29 2007 | Date of Inspection

Remarks | Well Record Number

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Ontario Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)* N/A

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

Well Owner's Information

First Name	Last Name	E-mail Address	☐ Well Constructed by Well Owner
Ken Gordon	Holdings Inc		

Mailing Address (Street Number/Name, RR)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
Box 310	Manotick	Ont	K4M 1A4	

Part A Construction and/or Major Alteration of a Well

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
#6969 Parkway Road	Osgoode	P/L 5	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation: ☐ Undifferentiated ☒ Averaged ☐ Differentiated, specify
NAD 83	18	455341	5011913	Magellan	200	

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	Depth (Metres) To
	6" Drilled Well		Abandonment	0	18.90

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Placed (Cubic Metres)
18.90	0.15	Hole Plug	
0.15	0	Dirt	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Rotary (Air) ☐ Digging
☐ Air percussion ☐ Boring
☐ Other, *specify* _____

Water Use

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

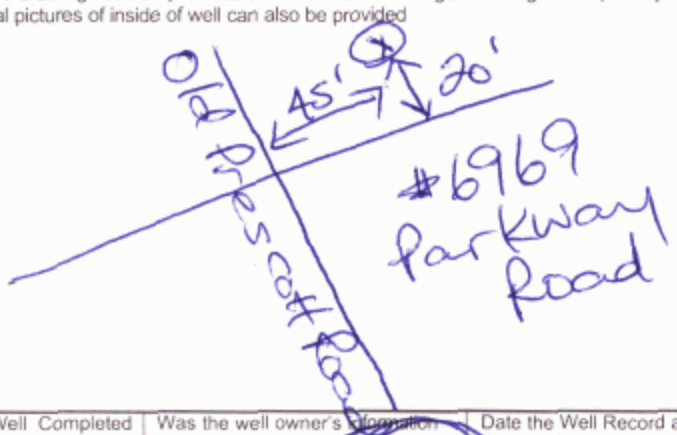
Status of Well

☐ Water Supply ☐ Dewatering Well ☐ Observation and/or Monitoring Hole
☐ Replacement Well ☐ Abandoned, Insufficient Supply ☐ Alteration (Construction)
☐ Test Hole ☐ Abandoned, Poor Water Quality ☐ Other, *specify*
☐ Recharge Well ☒ Abandoned, other, *specify* NOT USEABLE

Location of Well

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

NT



Date Well Completed (yyyy/mm/dd)	Was the well owner's information package delivered?	Date the Well Record and Package Delivered to Well Owner (yyyy/mm/dd)
2008-03-26	☐ Yes ☒ No	

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co Ltd	1119

Business Address (Street No./Name, number, RR)	Municipality
RR#1	Richmond

Province	Postal Code	Business E-mail Address
ONT	K0A 2Z0	

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
613 838 2170	Desaulniers Ken

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
T4		2008-04-07

Results of Well Yield Testing

Check box if after test of well yield, water was:
☐ Clear and sand free
☐ Cannot develop to sand-free state

If pumping discontinued, give reason:

Pumping test method

Pump intake set at *(Metres)*

Pumping rate *(Litres/min)*

Duration of pumping ____ hrs + ____ min

Final water level end of pumping *(Metres)*

Recommended pump type ☐ Shallow ☐ Deep

Recommended pump depth _____ Metres

Recommended pump rate *(Litres/min)*

If flowing give rate *(Litres/min)*

Draw Down Time (Min)	Draw Down Water Level (Metres)	Recovery Time (Min)	Recovery Water Level (Metres)
Static Level		Static Level	
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Water Details

Water found at Depth	Kind of Water
Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

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

No Casing and Screen Used

☐ Open Hole

Disinfected? ☒ Yes ☐ No

Casing and Well Details

Diameter of the Hole *(Centimetres)*

Depth of the Hole *(Metres)*

Wall Thickness *(Metres)*

Inside Diameter of the Casing *(Metres)*

Depth of the Casing *(Metres)*

Ministry Use Only

Audit No.	Well Contractor No.
Z 78174	
Date Received (yyyy/mm/dd) APR 28 2008	Date of Inspection (yyyy/mm/dd)
Remarks	

(11/2006)

Ministry's Copy

Ontario Ministry of the Environment

Well Tag No. (Please Print Below) A 057686

A057686

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name	E-mail Address	Well Constructed by Well Owner
Oakcraft	Homes Inc.	ebizroggers.com	☐

Mailing Address (Street Number/Name, RR)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
6876 Lakes Park Dr.	Greely	On	K4P1M6	6137240990

Part A Construction and/or Major Alteration of a Well

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
1326 South Beach Blvd	Ottawa	110	

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa Carleton	Ottawa/Greely	Ontario	K4P1M6

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation:
NAD 83	18	454552	5012125	UTM	Magellan	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	Depth (Metres) To
Brown	Sand		loose	0	5
Grey	Sand		loose	5	8
Grey	Gravel	Boulder	packed	8	13
Grey	limestone		layered	13	48.7

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Placed (Cubic Metres)
0	14.63	Cement grout	13 Bag

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☑ Rotary (Air) ☐ Digging
☐ Air percussion ☐ Boring
☐ Other, specify

Water Use

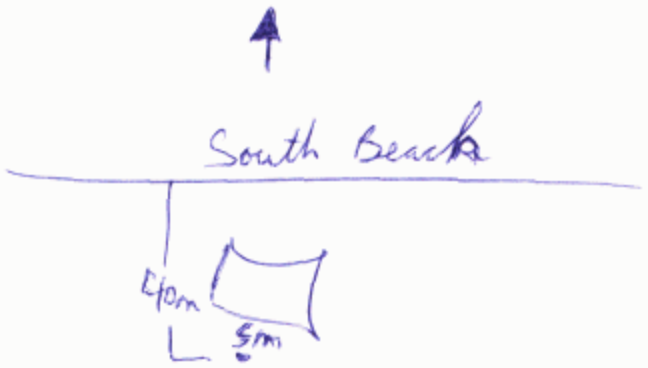
☐ Public ☐ Commercial ☐ Not used
☑ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Status of Well

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

Location of Well

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



Date Well Completed (yyyy/mm/dd)	Was the well owner's information package delivered?	Date the Well Record and Package Delivered to Well Owner (yyyy/mm/dd)
2008/05/30	☐ Yes ☑ No	

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Bourgeois well Drilling	1414

Business Address (Street No./Name, number, RR)	Municipality
1982 900 East	Nation

Province	Postal Code	Business E-mail Address
Ontario	K0A3C0	NA

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6139879291	Michael Grenier

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
3493		2008/05/30

Results of Well Yield Testing

Check box if after test of well yield, water was:
☑ Clear and sand free
☐ Cannot develop to sand-free state

If pumping discontinued, give reason:

Pumping test method: 1/2 pipe Sub

Pump intake set at (Metres): 38.7

Pumping rate (Litres/min): 53

Duration of pumping: 1 hrs + ____ min

Final water level end of pumping (Metres): 23.54

Recommended pump type: ☐ Shallow ☑ Deep

Recommended pump depth: 38 Metres

Recommended pump rate (Litres/min): 53

If flowing give rate (Litres/min):

	Draw Down Time (Min)	Draw Down Water Level (Metres)	Recovery Time (Min)	Recovery Water Level (Metres)
Static Level		3.8	Static Level	23.54
1		6	1	
2		7.01	2	20.90
3		7.84	3	19.20
4		9.20	4	15.51
5		10.30	5	13.11
10		14.50	10	9.08
15		17.25	15	5.38
20		18.78	20	3.90
25		20.11	25	
30		21.50	30	
40		22.51	40	
50		23.24	50	
60		23.54	60	

Water Details

Water found at Depth		Kind of Water	
42 Metres	☐ Gas	☑ Fresh	☐ Salty ☐ Sulphur ☐ Minerals
Metres	☐ Gas	☐ Fresh	☐ Salty ☐ Sulphur ☐ Minerals
Metres	☐ Gas	☐ Fresh	☐ Salty ☐ Sulphur ☐ Minerals

Casing Used

☐ Galvanized
☑ Steel
☐ Fibreglass
☐ Plastic
☐ Concrete

Screen Used

☐ Galvanized
☐ Steel
☐ Fibreglass
☐ Plastic
☐ Concrete

No Casing and Screen Used

☑ Open Hole

Disinfected? ☑ Yes ☐ No

Casing and Well Details

Diameter of the Hole (Centimetres): 15.55

Depth of the Hole (Metres): 48.7

Wall Thickness (Metres): 0.48

Inside Diameter of the Casing (Metres): 15.55

Depth of the Casing (Metres): 14.63

Ministry Use Only

Audit No.	Well Contractor No.
z 79829	
Date Received (yyyy/mm/dd)	**Date of Inspection (yyyy/mm/dd)**
JUN 25 2008	
Remarks	

0506E (11/2006) **Ministry's Copy**

Ontario Ministry of the Environment

Well Tag No. (Place Sticker and/or Print Below)
A 057689
A057684

Well Record
Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

First Name	Last Name	E-mail Address	Well Constructed by Well Owner
Oakcroft Homes Inc.		[redacted]	☐

Mailing Address (Street Number/Name, RR)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
6876 Lakes Park Dr.	Greely	Ont.	K4P 1M6	613 724 0990

Part A Construction and/or Major Alteration of a Well

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
1320 South Beach Blvd.	Ottawa	109	

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa Carleton	Ottawa/Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation
NAD 83	18	454522	5012119	UTM	Magellan	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	To
Brown	Sand		loose	0	4
Grey	Sand		loose	4	8
Grey	gravel	Boulder	Packed	8	11
Grey	limestone		layered	11	418.7

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Placed (Cubic Metres)
0	13.4	Cement grout	10 Bag

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☑ Rotary (Air) ☐ Digging
☐ Air percussion ☐ Boring
☐ Other, specify _____

Water Use

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

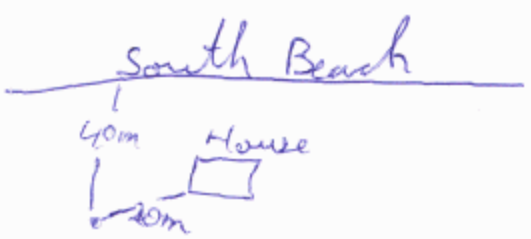
Status of Well

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

Location of Well

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

NA



Date Well Completed (yyyy/mm/dd)	Was the well owner's information package delivered?	Date the Well Record and Package Delivered to Well Owner (yyyy/mm/dd)
2008/05/30	☐ Yes ☑ No	

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Bourgeois Well Drilling	1414

Business Address (Street No./Name, number, RR)	Municipality
1182 900 East	Nation

Province	Postal Code	Business E-mail Address
Ontario	K0ABK0	NA

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
613 987 5291	Michael Grenier

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
3493	[signature]	2008/05/08

Results of Well Yield Testing

Check box if after test of well yield, water was:
☑ Clear and sand free
☐ Cannot develop to sand-free state

If pumping discontinued, give reason:

Pumping test method: 1/2 ph Sub

Pump intake set at (Metres): 38.7

Pumping rate (Litres/min): 53

Duration of pumping: 1 hrs + ____ min

Final water level end of pumping (Metres)

Recommended pump type: ☐ Shallow ☑ Deep

Recommended pump depth: 38.7 Metres

Recommended pump rate (Litres/min): 53

If flowing give rate (Litres/min)

Draw Down Time (Min)	Water Level (Metres)	Recovery Time (Min)	Water Level (Metres)
Static Level	3.90	Static Level	23.89
1	5.90	1	
2	6.99	2	20.14
3	7.60	3	9.02
4	9m	4	16.78
5	10.28	5	9.14
10	14.12	10	8.50
15	17.35	15	4.75
20	18.52	20	4.40
25	19.96	25	
30	20.82	30	
40	22.43	40	
50	23.19	50	
60	23.89	60	

Water Details

Water found at Depth	Kind of Water
42 Metres ☐ Gas	☑ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Casing Used

☐ Galvanized
☑ Steel
☐ Fibreglass
☐ Plastic
☐ Concrete

Screen Used

☐ Galvanized
☐ Steel
☐ Fibreglass
☐ Plastic
☐ Concrete

No Casing and Screen Used

☑ Open Hole

Disinfected? ☑ Yes ☐ No

Casing and Well Details

Diameter of the Hole (Centimetres): 15.55
Depth of the Hole (Metres): 418.7
Wall Thickness (Metres): 0.48
Inside Diameter of the Casing (Metres): 15.55
Depth of the Casing (Metres): 13.41

Ministry Use Only

Audit No.	Well Contractor No.
Z 79830	
Date Received (yyyy/mm/dd) JUN 25 2008	Date of Inspection (yyyy/mm/dd)
Remarks	

0506E (11/2006)

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Measurements recorded in: [X] Metric [ ] Imperial

Well Tag No. A 066957

A066957

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

Well Owner's Information

[redacted]

1363 South Beach — Osgoode — Lot 4 Con 4

County/District/Municipality: Ottawa Carlton — City/Town/Village: Greely — Province: Ontario — Postal Code:

UTM Coordinates: NAD 83 — Zone: 18 — Easting: 454592 — Northing: 5012272 — Municipal Plan and Sublot Number: 4M-1265 SL # 80. — Other:

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	To
	Sand & Boulders			0	12.50
	Grey Limestone			12.50	41.14
	White Sandstone			41.14	54.86

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
14.32	11.27	Neat Cement Slurry	.1816
11.27	0	Bentonite Slurry	.490

Method of Construction

[ ] Cable Tool [ ] Diamond
[ ] Rotary (Conventional) [ ] Jetting
[ ] Rotary (Reverse) [ ] Driving
[ ] Boring [ ] Digging
[X] Air percussion
[ ] Other, specify

Well Use

[ ] Public [ ] Commercial [ ] Not used
[X] Domestic [ ] Municipal [ ] Dewatering
[ ] Livestock [ ] Test Hole [ ] Monitoring
[ ] Irrigation [ ] Cooling & Air Conditioning
[ ] Industrial
[ ] Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
15.88	Steel	.148	+.6	14.32
15.09	open hole		14.32	54.86

Construction Record - Screen

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

Status of Well

[X] Water Supply
[ ] Replacement Well
[ ] Test Hole
[ ] Recharge Well
[ ] Dewatering Well
[ ] Observation and/or Monitoring Hole
[ ] Alteration (Construction)
[ ] Abandoned, Insufficient Supply
[ ] Abandoned, Poor Water Quality
[ ] Abandoned, other, specify
[ ] Other, specify

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
52.72	[ ]	[X] Fresh [ ] Untested	NOT TESTED
	[ ]	[ ] Fresh [ ] Untested	
	[ ]	[ ] Fresh [ ] Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
54.86	0	15.07

Results of Well Yield Testing

After test of well yield, water was:
[ ] Clear and sand free
[ ] Other, specify — NOT TESTED

If pumping discontinued, give reason:

Pump intake set at (m/ft): 51.81

Pumping rate (l/min / GPM): 34.07

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 12.38

If flowing give rate (l/min / GPM):

Recommended pump depth (m/ft): 51.81

Recommended pump rate (l/min / GPM): 34.07

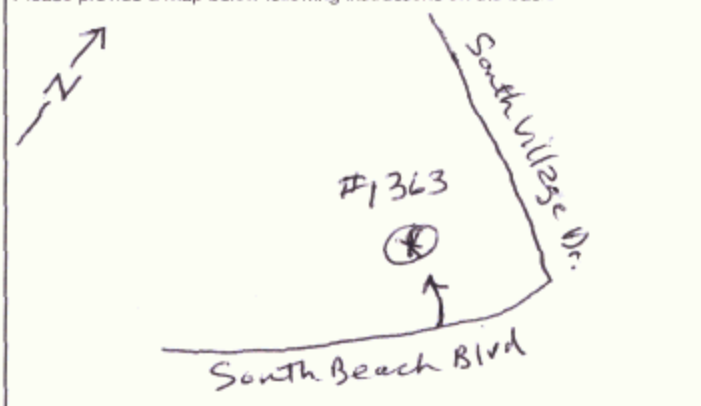
Well production (l/min / GPM): 7 g.pm

Disinfected? [X] Yes [ ] No

Draw Down Time (min)	Water Level (m/ft)	Recovery Time (min)	Water Level (m/ft)
Static Level	8.14		12.30
1	9.70	1	11.13
2	10.12	2	10.47
3	10.68	3	10.15
4	11.09	4	9.90
5	11.29	5	9.73
10	11.95	10	8.74
15	12.08	15	
20	12.31	20	
25	12.32	25	
30	12.33	30	
40	12.35	40	
50	12.36	50	
60	12.38	60	

Map of Well Location

Please provide a map below following instructions on the back.



#1363 South Beach

Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: Air Rock Drilling Co Ltd — Well Contractor's Licence No.: 1119

Business Address (Street Number/Name): RR1 — Municipality: Richmond

Province: Ont — Postal Code: K0A2Z0 — Business E-mail Address:

Bus. Telephone No. (inc. area code): 0138382470 — Name of Well Technician (Last Name, First Name): Purcell, Shannon

Well Technician's Licence No.: T2122 — Signature of Technician and/or Contractor — Date Submitted: 2008 08 01

Well owner's information package delivered: [X] Yes [ ] No — Date Package Delivered: 2008 07 24

Date Work Completed: 2008 05 21

Ministry Use Only

Audit No. Z 80748

AUG 14 2008

Received

0506E (12/2007)

Ministry's Copy

Ontario Ministry of the Environment

A085398

Well Tag No. for Master Well *(Place Sticker and/or Print Below)*

A 085398

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

[redacted]

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
6906 McKeown Rd			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation:
NAD 83	18	455060	5011834	Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	To
Gry	Gravel	Sand	soft, dry	0	.61
Brn	Sand		soft, dry	.61	1.5
Gry	clay		Soft, moist	1.5	2.74
Gry	Silt		wet	2.74	4.88

Hole Details

Depth (Metres) From	To	Diameter (Centimetres)
0	4.88	10.92

Water Use

☐ Public ☐ Industrial ☐ Not used ☐ Other, specify
☐ Domestic ☐ Commercial ☐ Dewatering
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☑ Test Hole ☐ Cooling & Air Conditioning

Method of Construction

☐ Cable Tool ☐ Air Percussion ☐ Digging
☐ Rotary (Conventional) ☐ Diamond ☐ Boring
☐ Rotary (Reverse) ☐ Jetting ☑ Other, specify
☐ Rotary (Air) ☐ Driving Direct Push

Status of Well

☑ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☑ Other, specify monitoring
☐ Alteration (Construction) ☐ Abandoned, other, specify

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres) From	To
5.20	PVC Riser	.390	0	1.83
	PVC screen		1.83	4.88

No Casing and Screen Used

Open Hole ☐ Yes ☐ No

Static Water Level Test

[ ][ ] Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres)	Slot No.
6.03	10

Water Details

Water found at Depth	Kind of Water
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Disinfected ☐ Yes ☐ No If no, provide reason:

Date Master Well Completed (yyyy/mm/dd): 2009/08/31

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0	.31	Concrete / flushmount	
.31	1.5	Bensea l	
1.5	4.88	Sand	

Cluster Information *(Please also fill out the additional Cluster Well Information for Well Construction for each parcel of land and cluster.)*

Total Wells in Cluster	Please indicate Number of Cluster Well Information Log Sheets Submitted
4	1
Total Wells on this Property: 4	

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 14"). Sketches are not allowed.

☑ Check box to confirm detailed map is provided as per Section 11.1 (3)

[redacted]

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling	7241

Business Address (Street No./Name, number, RR)	Municipality
#2-147 West Beaver Creek	Richmond Hill

Province	Postal Code	Business E-mail Address
ON	L4B1C6	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
(905) 764-9601	Rebenson, Tevis

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
3159		2009/09/11

Ministry Use Only

Audit No.	Well Contractor No.
M 02599	
Date Received (yyyy/mm/dd): SEP 22 2009	Date of Inspection (yyyy/mm/dd)
Remarks	

BR 1791

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Ontario

Ministry of the Environment

Well (Well Tag No.) **A 085398**

A085398

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

6679 Page 2 of 3

[redacted]

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
6906 McKeown Rd				

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation	
Greely	Ontario		Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify:	

upon request

Signature of Technician/Contractor	Date (yyyy/mm/dd)

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	Screen Interval (metres) To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
2	18	455042	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/31
3	18	455051	5011843	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/3
4	18	455052	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/3

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
Strata Soil Sampling	#2-147 West Beaver Creek	Richmond Hill	ON

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
L4B1G6	(905)764-9301	7241	

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Travis Robinson	3159	2009/09/11	

BB, 1296

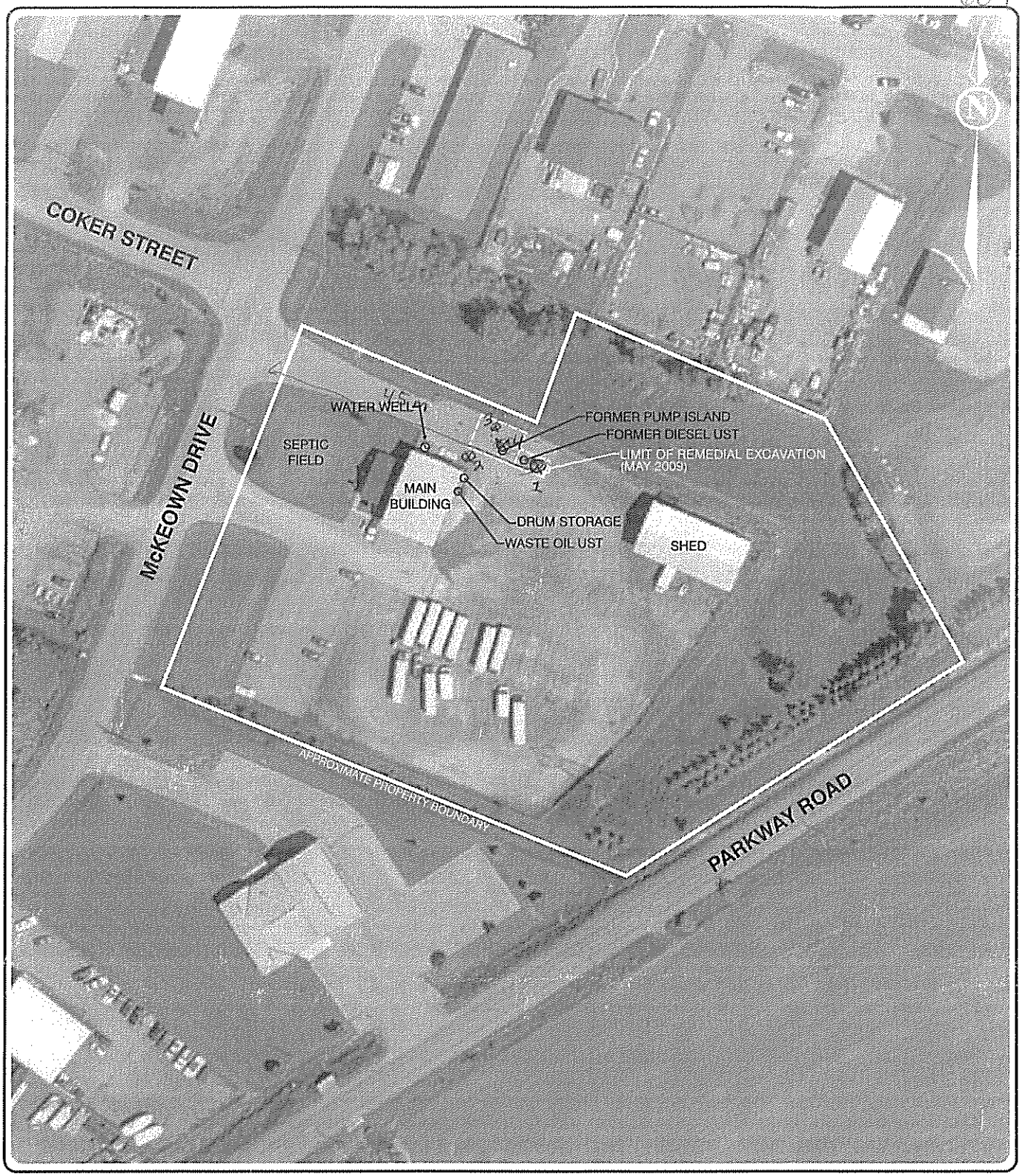
Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2009/08/31	2009/08/31

Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
SEP 22 2009	
Audit No. C 03827	Remarks MOE59

1991 (11/2006)

Ministry's Copy



Trow Associates Inc. 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Tel: (613) 225-9940 Fax: (613) 225-7337

DATE: JULY 2009	CLIENT: VINTAGE PAVING	JOB No.: OTEN00020135A
DESIGN: CB / CHECKED: CH		SCALE: 1:1250±
DRAWN: RG	TITLE: SITE LAYOUT 6906 McKEOWN DRIVE, GREELY (OTTAWA)	FIG 2

C-7241 M02599 C03827

SEP 22 2009

Ontario Ministry of the Environment

A085398

Well Tag No. for Master Well *(Place Sticker and/or Print Below)*

A 085398

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

[redacted]

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
6906 McKeown Rd			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation:
NAD 83	18	455060	5011834	Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	To
Gry	Gravel	Sand	soft, dry	0	.61
Brn	Sand		soft, dry	.61	1.5
Gry	clay		Soft, moist	1.5	2.74
Gry	Silt		wet	2.74	4.88

Hole Details

Depth (Metres) From	To	Diameter (Centimetres)
0	4.88	10.92

Water Use

☐ Public ☐ Industrial ☐ Not used ☐ Other, specify
☐ Domestic ☐ Commercial ☐ Dewatering
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☑ Test Hole ☐ Cooling & Air Conditioning

Method of Construction

☐ Cable Tool ☐ Air Percussion ☐ Digging
☐ Rotary (Conventional) ☐ Diamond ☐ Boring
☐ Rotary (Reverse) ☐ Jetting ☑ Other, specify
☐ Rotary (Air) ☐ Driving Direct Push

Status of Well

☑ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☑ Other, specify monitoring
☐ Alteration (Construction) ☐ Abandoned, other, specify

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres) From	To
5.20	PVC Riser	.390	0	1.83
	PVC screen		1.83	4.88

No Casing and Screen Used

Open Hole ☐ Yes ☐ No

Static Water Level Test

[ ][ ] Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres)	Slot No.
6.03	10

Water Details

Water found at Depth	Kind of Water
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Disinfected ☐ Yes ☐ No If no, provide reason:

Date Master Well Completed (yyyy/mm/dd): 2009/08/31

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0	.31	Concrete / flushmount	
.31	1.5	Bensea l	
1.5	4.88	Sand	

Cluster Information *(Please also fill out the additional Cluster Well Information for Well Construction for each parcel of land and cluster.)*

Total Wells in Cluster	Please indicate Number of Cluster Well Information Log Sheets Submitted
4	1
Total Wells on this Property: 4	

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 14"). Sketches are not allowed.

☑ Check box to confirm detailed map is provided as per Section 11.1 (3)

[redacted]

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling	7241

Business Address (Street No./Name, number, RR)	Municipality
#2-147 West Beaver Creek	Richmond Hill

Province	Postal Code	Business E-mail Address
ON	L4B1C6	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
(905) 764-9601	Rebenson, Tevis

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
3159		2009/09/11

Ministry Use Only

Audit No.	Well Contractor No.
M 02599	
Date Received (yyyy/mm/dd): SEP 22 2009	Date of Inspection (yyyy/mm/dd)
Remarks	

BR 1791

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Ontario

Ministry of the Environment

Well (Well Tag No.) **A 085398**

A085398

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

6679 Page 2 of 3

[redacted]

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
6906 McKeown Rd				

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation	
Greely	Ontario		Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify:	

upon request

Signature of Technician/Contractor	Date (yyyy/mm/dd)

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	Screen Interval (metres) To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
2	18	455042	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/31
3	18	455051	5011843	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/3
4	18	455052	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/3

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
Strata Soil Sampling	#2-147 West Beaver Creek	Richmond Hill	ON

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
L4B1G6	(905)764-9301	7241	

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Travis Robinson	3159	2009/09/11	

BB, 1296

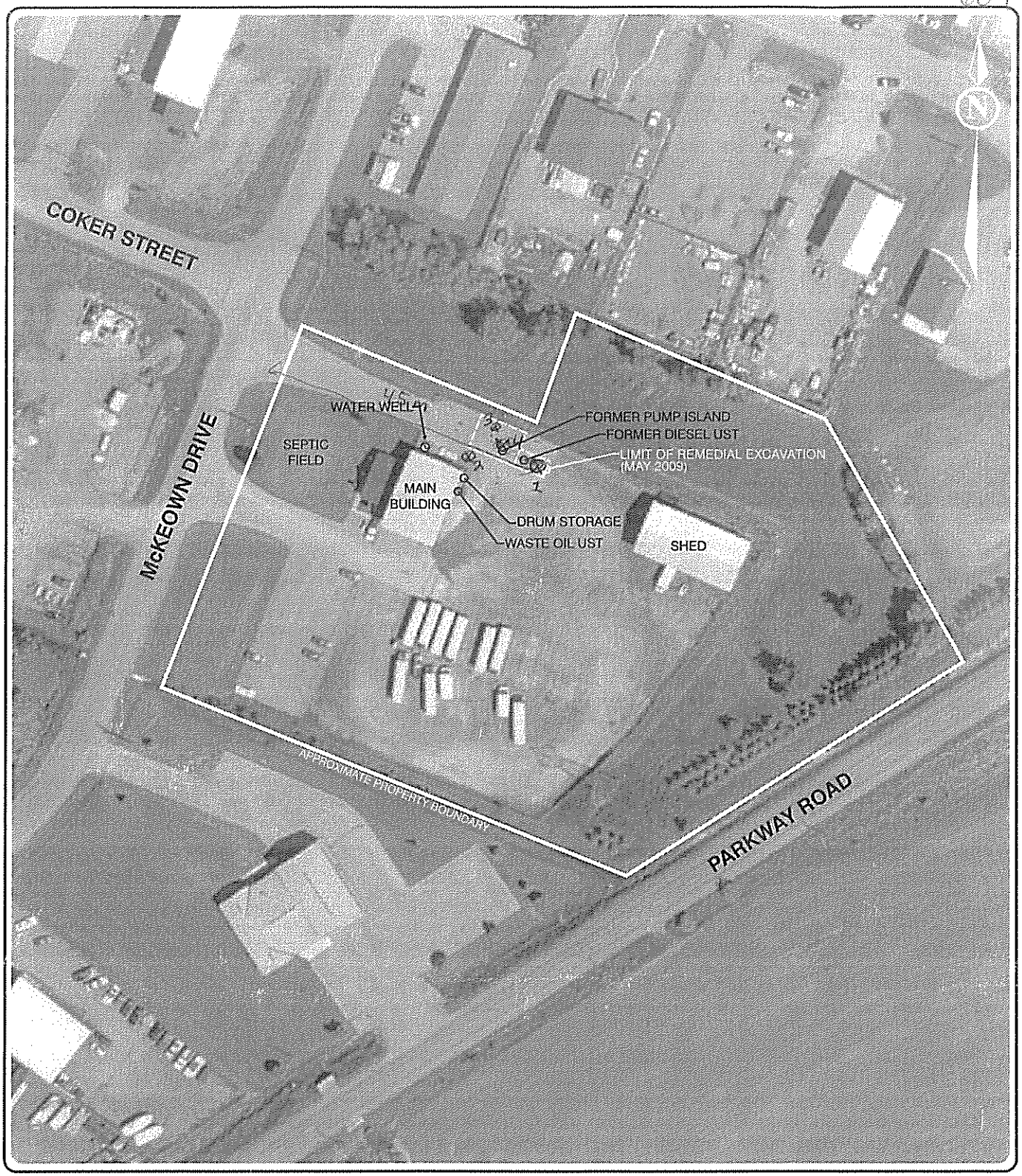
Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2009/08/31	2009/08/31

Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
SEP 22 2009	
Audit No. C 03827	Remarks MOE59

1991 (11/2006)

Ministry's Copy



Trow Associates Inc. 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Tel: (613) 225-9940 Fax: (613) 225-7337

DATE: JULY 2009	CLIENT: VINTAGE PAVING	JOB No.: OTEN00020135A
DESIGN: CB / CHECKED: CH		SCALE: 1:1250±
DRAWN: RG	TITLE: SITE LAYOUT 6906 McKEOWN DRIVE, GREELY (OTTAWA)	FIG 2

C-7241 M02599 C03827

SEP 22 2009

Ontario Ministry of the Environment

A085398

Well Tag No. for Master Well *(Place Sticker and/or Print Below)*

A 085398

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

[redacted]

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
6906 McKeown Rd			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation:
NAD 83	18	455060	5011834	Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	To
Gry	Gravel	Sand	soft, dry	0	.61
Brn	Sand		soft, dry	.61	1.5
Gry	clay		Soft, moist	1.5	2.74
Gry	Silt		wet	2.74	4.88

Hole Details

Depth (Metres) From	To	Diameter (Centimetres)
0	4.88	10.92

Water Use

☐ Public ☐ Industrial ☐ Not used ☐ Other, specify
☐ Domestic ☐ Commercial ☐ Dewatering
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☑ Test Hole ☐ Cooling & Air Conditioning

Method of Construction

☐ Cable Tool ☐ Air Percussion ☐ Digging
☐ Rotary (Conventional) ☐ Diamond ☐ Boring
☐ Rotary (Reverse) ☐ Jetting ☑ Other, specify
☐ Rotary (Air) ☐ Driving Direct Push

Status of Well

☑ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☑ Other, specify monitoring
☐ Alteration (Construction) ☐ Abandoned, other, specify

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres) From	To
5.20	PVC Riser	.390	0	1.83
	PVC screen		1.83	4.88

No Casing and Screen Used

Open Hole ☐ Yes ☐ No

Static Water Level Test

[ ][ ] Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres)	Slot No.
6.03	10

Water Details

Water found at Depth	Kind of Water
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Disinfected ☐ Yes ☐ No If no, provide reason:

Date Master Well Completed (yyyy/mm/dd): 2009/08/31

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0	.31	Concrete / flushmount	
.31	1.5	Bensea l	
1.5	4.88	Sand	

Cluster Information *(Please also fill out the additional Cluster Well Information for Well Construction for each parcel of land and cluster.)*

Total Wells in Cluster	Please indicate Number of Cluster Well Information Log Sheets Submitted
4	1
Total Wells on this Property: 4	

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 14"). Sketches are not allowed.

☑ Check box to confirm detailed map is provided as per Section 11.1 (3)

[redacted]

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling	7241

Business Address (Street No./Name, number, RR)	Municipality
#2-147 West Beaver Creek	Richmond Hill

Province	Postal Code	Business E-mail Address
ON	L4B1C6	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
(905) 764-9601	Rebenson, Tevis

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
3159		2009/09/11

Ministry Use Only

Audit No.	Well Contractor No.
M 02599	
Date Received (yyyy/mm/dd): SEP 22 2009	Date of Inspection (yyyy/mm/dd)
Remarks	

BR 1791

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Ontario

Ministry of the Environment

Well (Well Tag No.) **A 085398**

A085398

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

6679 Page 2 of 3

[redacted]

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
6906 McKeown Rd				

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation	
Greely	Ontario		Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify:	

upon request

Signature of Technician/Contractor	Date (yyyy/mm/dd)

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	Screen Interval (metres) To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
2	18	455042	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/31
3	18	455051	5011843	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/3
4	18	455052	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/3

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
Strata Soil Sampling	#2-147 West Beaver Creek	Richmond Hill	ON

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
L4B1G6	(905)764-9301	7241	

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Travis Robinson	3159	2009/09/11	

BB, 1296

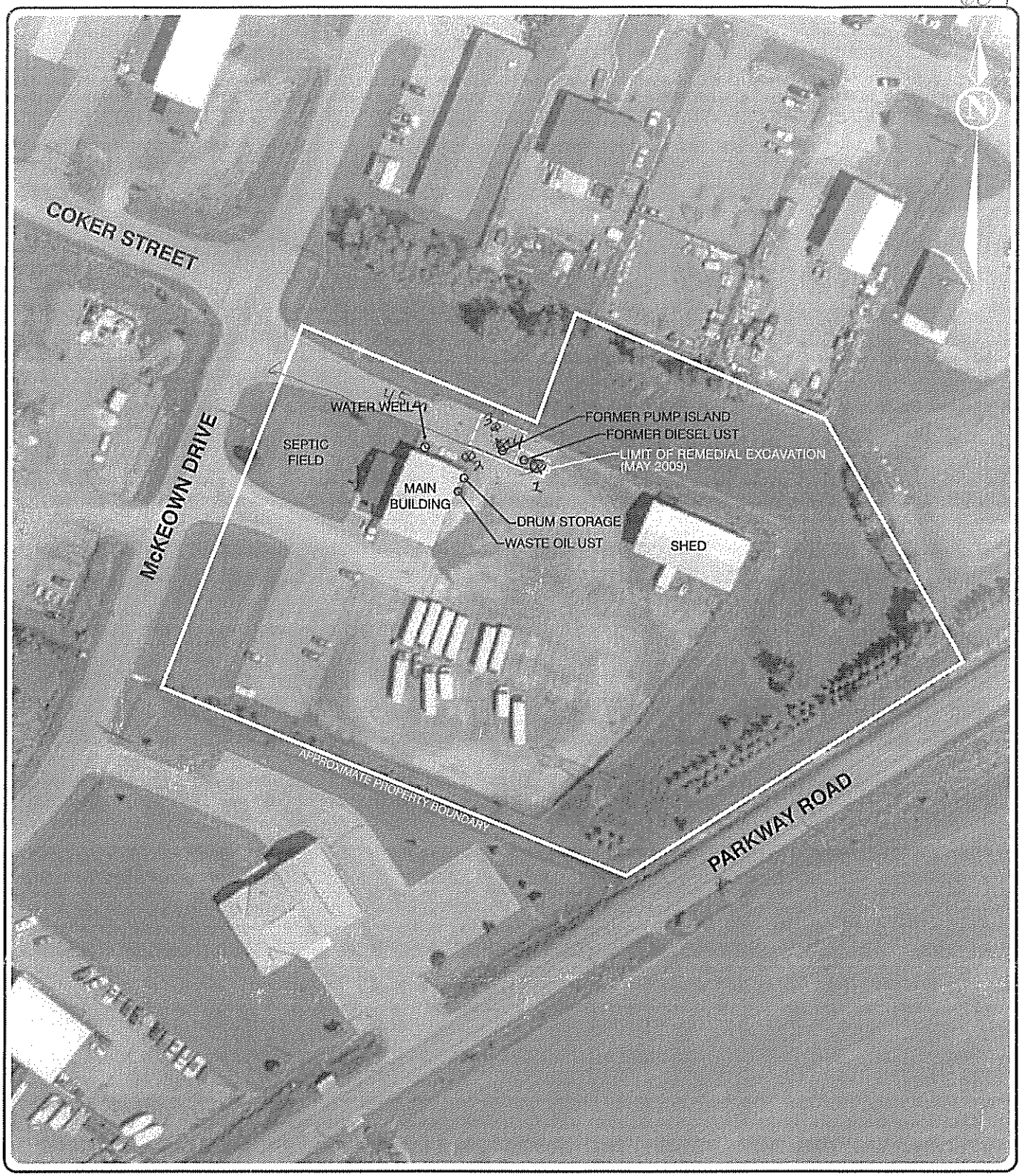
Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2009/08/31	2009/08/31

Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
SEP 22 2009	
Audit No. C 03827	Remarks MOE59

1991 (11/2006)

Ministry's Copy



Trow Associates Inc. 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Tel: (613) 225-9940 Fax: (613) 225-7337

DATE: JULY 2009	CLIENT: VINTAGE PAVING	JOB No.: OTEN00020135A
DESIGN: CB / CHECKED: CH		SCALE: 1:1250±
DRAWN: RG	TITLE: SITE LAYOUT 6906 McKEOWN DRIVE, GREELY (OTTAWA)	FIG 2

C-7241 M02599 C03827

SEP 22 2009

Ontario Ministry of the Environment

A085398

Well Tag No. for Master Well *(Place Sticker and/or Print Below)*

A 085398

Master Well Record for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

[redacted]

Address of Well Location (Street Number/Name, RR)	Township	Lot	Concession
6906 McKeown Rd			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	GPS Unit Make	Model	Mode of Operation:
NAD 83	18	455060	5011834	Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify

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

General Colour	Most Common Material	Other Materials	General Description	Depth (Metres) From	To
Gry	Gravel	Sand	soft, dry	0	.61
Brn	Sand		soft, dry	.61	1.5
Gry	clay		Soft, moist	1.5	2.74
Gry	Silt		wet	2.74	4.88

Hole Details

Depth (Metres) From	To	Diameter (Centimetres)
0	4.88	10.92

Water Use

☐ Public ☐ Industrial ☐ Not used ☐ Other, specify
☐ Domestic ☐ Commercial ☐ Dewatering
☐ Livestock ☐ Municipal ☑ Monitoring
☐ Irrigation ☑ Test Hole ☐ Cooling & Air Conditioning

Method of Construction

☐ Cable Tool ☐ Air Percussion ☐ Digging
☐ Rotary (Conventional) ☐ Diamond ☐ Boring
☐ Rotary (Reverse) ☐ Jetting ☑ Other, specify
☐ Rotary (Air) ☐ Driving Direct Push

Status of Well

☑ Test Hole ☐ Abandoned, Insufficient Supply
☐ Replacement Well ☐ Abandoned, Poor Water Quality
☐ Dewatering Well ☑ Other, specify monitoring
☐ Alteration (Construction) ☐ Abandoned, other, specify

Construction Details

Inside Diameter (Centimetres)	Material (steel, plastic, fibreglass, concrete, galvanized)	Wall Thickness	Depth (Metres) From	To
5.20	PVC Riser	.390	0	1.83
	PVC screen		1.83	4.88

No Casing and Screen Used

Open Hole ☐ Yes ☐ No

Static Water Level Test

[ ][ ] Metres

Screen

☐ Galvanized ☐ Steel ☐ Fibreglass ☐ Concrete ☑ Plastic

Outside Diameter (Centimetres)	Slot No.
6.03	10

Water Details

Water found at Depth	Kind of Water
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals
[ ] Metres ☐ Gas	☐ Fresh ☐ Salty ☐ Sulphur ☐ Minerals

Disinfected ☐ Yes ☐ No If no, provide reason:

Date Master Well Completed (yyyy/mm/dd): 2009/08/31

Annular Space/Abandonment Sealing Record

Depth Set at (Metres) From	To	Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
0	.31	Concrete / flushmount	
.31	1.5	Bensea l	
1.5	4.88	Sand	

Cluster Information *(Please also fill out the additional Cluster Well Information for Well Construction for each parcel of land and cluster.)*

Total Wells in Cluster	Please indicate Number of Cluster Well Information Log Sheets Submitted
4	1
Total Wells on this Property: 4	

Location of Well Cluster

Detailed Map must be provided as an attachment no larger than legal size (8.5" x 14"). Sketches are not allowed.

☑ Check box to confirm detailed map is provided as per Section 11.1 (3)

[redacted]

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Strata Soil Sampling	7241

Business Address (Street No./Name, number, RR)	Municipality
#2-147 West Beaver Creek	Richmond Hill

Province	Postal Code	Business E-mail Address
ON	L4B1C6	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
(905) 764-9601	Rebenson, Tevis

Well Technician's Licence No.	Signature of Technician	Date Submitted (yyyy/mm/dd)
3159		2009/09/11

Ministry Use Only

Audit No.	Well Contractor No.
M 02599	
Date Received (yyyy/mm/dd): SEP 22 2009	Date of Inspection (yyyy/mm/dd)
Remarks	

BR 1791

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Ministry of the Environment

Well (Well Tag No.) **A 085398**

A085398

Cluster Well Information for Cluster Well Construction

Regulation 903 Ontario Water Resources Act

6679 Page 2 of 3

[redacted]

Address of Well Location (Street Number/Name, RR)	Lot	Concession	Township	County/District/Municipality
6906 McKeown Rd				

City/Town/Village	Province	Postal Code	GPS Unit Make	Model	Unit Mode of Operation	
Greely	Ontario		Garmin	Etrex	☐ Undifferentiated ☑ Averaged ☐ Differentiated, specify:	

upon request

Signature of Technician/Contractor	Date (yyyy/mm/dd)

Well # on Sketch	UTM Coordinates Zone	Easting	Northing	Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres) From	Screen Interval (metres) To	Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
2	18	455042	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/31
3	18	455051	5011843	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/3
4	18	455052	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal				2009/08/3

Well Contractor and Well Technician Information

Business Name of Well Contractor	Business Address (Street Number/Name, RR)	Municipality	Province
Strata Soil Sampling	#2-147 West Beaver Creek	Richmond Hill	ON

Postal Code	Business Telephone No. (inc. area code)	Well Contractor's Licence No.	Business E-mail Address
L4B1G6	(905)764-9301	7241	

Name of Well Technician (First Name, Last Name)	Well Technician's Licence No.	Date Submitted (yyyy/mm/dd)	Signature of Technician
Travis Robinson	3159	2009/09/11	

BB, 1296

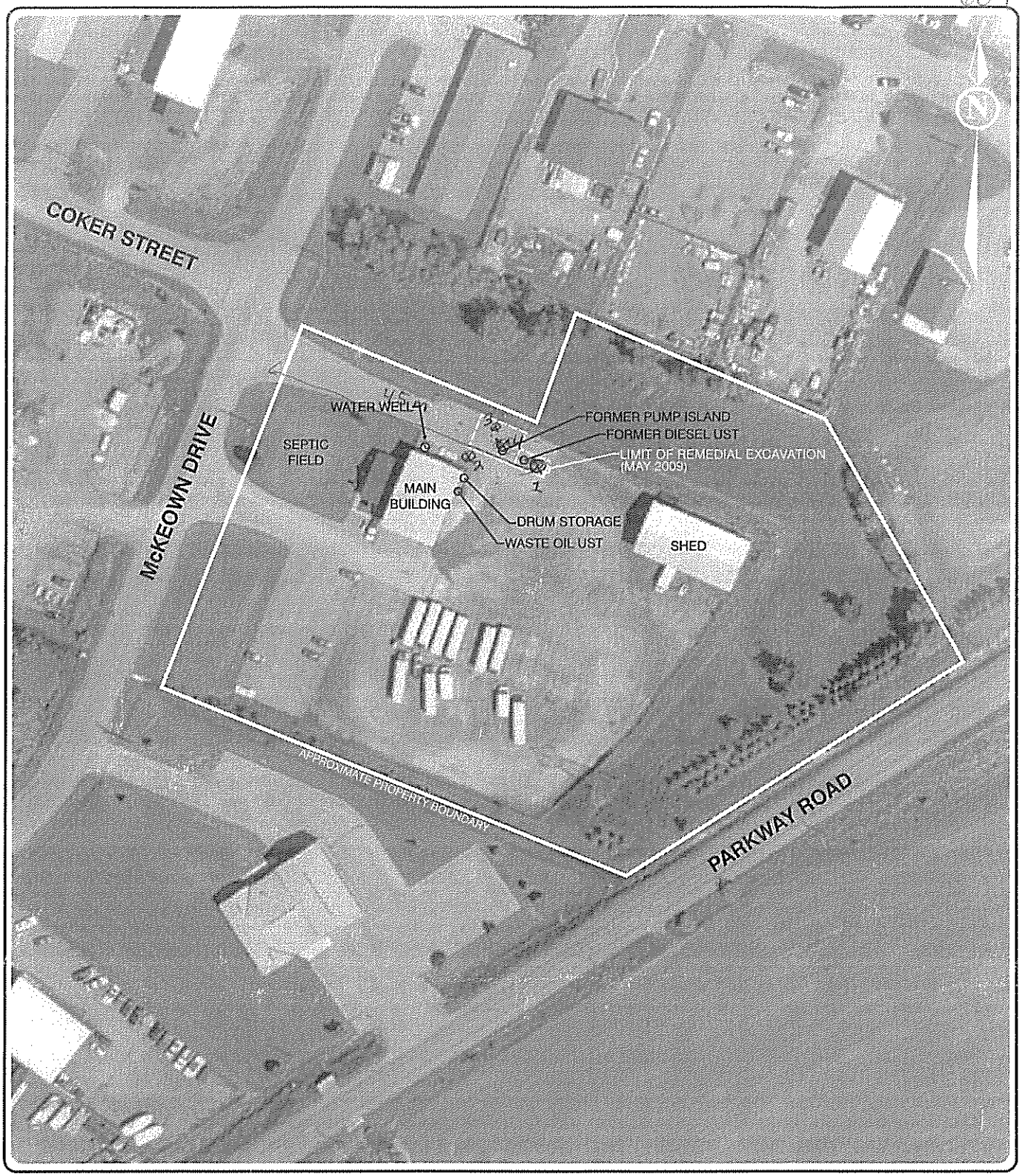
Date 1st Well in Cluster Constructed (yyyy/mm/dd)	Date Last Well in Cluster Constructed (yyyy/mm/dd)
2009/08/31	2009/08/31

Ministry Use Only

Date Received (yyyy/mm/dd)	Date Inspected (yyyy/mm/dd)
SEP 22 2009	
Audit No. C 03827	Remarks MOE59

1991 (11/2006)

Ministry's Copy



Trow Associates Inc. 154 Colonnade Road South, Ottawa, Ontario K2E 7J5 Tel: (613) 225-9940 Fax: (613) 225-7337

DATE: JULY 2009	CLIENT: VINTAGE PAVING	JOB No.: OTEN00020135A
DESIGN: CB / CHECKED: CH		SCALE: 1:1250±
DRAWN: RG	TITLE: SITE LAYOUT 6906 McKEOWN DRIVE, GREELY (OTTAWA)	FIG 2

C-7241 M02599 C03827

SEP 22 2009

Ontario — Ministry of the Environment

Well Record

Regulation 903 Ontario Water Resources Act

A 095924

Well T... (See Instructions on the Back of This Form) A095924

Measurements recorded in: ☐ Metric ☒ Imperial

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
MANOR	DEVELOPMENTS		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
1269 South Beach Blvd	Greely	Ont	K4P 0A5	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
#1363 South Beach Blvd.	Osgoode	4	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454641	5012313	PLAN 4M-1265	S/L 80

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand, Gravel + Boulders			0'	45'6"
	Grey Limestone			45'1/2	145'
	Grey Sandstone			145'	215'
	Grey Limestone + Sandstone Mix			215'	248'
	Grey + White Sandstone			248'	301'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
54'	44'	Neat Cement Slurry	7.8
44'	0'	Neat Bentonite Slurry	29.4

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify _____

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6"	Steel	.188"	+2'	54'
6"	Open hole		54'	301'

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
146'	☐	☐ Fresh ☒ Untested	
295'	☐	☐ Fresh ☒ Untested	
	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	301'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify NOT TESTED

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 250'

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 52'5"

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 200'

Recommended pump rate (l/min / GPM): 20

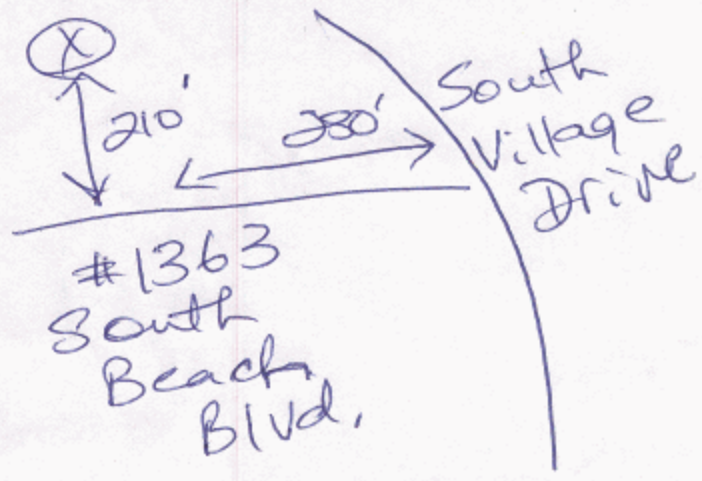
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	31'3"		52'5"
1	35'8"	1	41'6"
2	40'	2	34'2"
3	44'	3	31'3"
4	48'	4	
5	50'	5	
10	52'1"	10	
15	↓	15	
20	52'2"	20	
25	↓	25	
30	52'4"	30	
40	↓	40	
50	52'5"	50	
60	↓	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co LTD	1119

Business Address (Street Number/Name)	Municipality
RR#1	Richmond

Province	Postal Code	Business E-mail Address
Ont	K0A 2Z0	

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138382170	Graham Ryan

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T3484		20100510

Well owner's information package delivered: ☒ Yes ☐ No

Date Package Delivered: 2010 04 05

Date Work Completed: 2010 03 15

Ministry Use Only

Audit No. Z 108300

Received JUN 0 1 2010

0506E (12/2007)

Ministry's Copy

A 095990

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☒ Imperial

Well Ta... (See Below) A095990

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

[redacted]

Address of Well Location (Street Number/Name): #1385 South Beach Blvd | Township: Osgoode | Lot: 4 | Concession: 4

County/District/Municipality: Ottawa - Carleton | City/Town/Village: Greely | Province: Ontario | Postal Code:

UTM Coordinates: NAD 8 3 | Zone: 18 | Easting: 454728 | Northing: 5012346 | Municipal Plan and Sublot Number: PLAN 4M-1265 | Other: S/L 82

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand, Gravel + Boulders			OFT	42'
	Grey limestone			42'	155'
	Grey Sandstone			155'	172'
	Grey & White Sandstone + limestone Mix			172'	300'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
50'	40'	Neat Cement Slurry	7.8
40'	0'	Neat Bentonite Slurry	18.90

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☒ Air percussion ☐ Other, *specify* ____

Well Use

☐ Public ☐ Commercial ☐ Not used ☒ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☐ Test Hole ☐ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, *specify* ____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6"	Steel	.188"	+2'	50'
6 1/4"	open hole		50'	300'

Construction Record - Screen

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

Status of Well

☒ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, *specify* ____ ☐ Other, *specify* ____

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
172	☐	☐ Fresh ☒ Untested	
294	☐	☐ Fresh ☒ Untested	
	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	50'	6"
50'	300'	6 1/4"

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify NOT TESTED

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 250'

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 36'6"

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM): 20

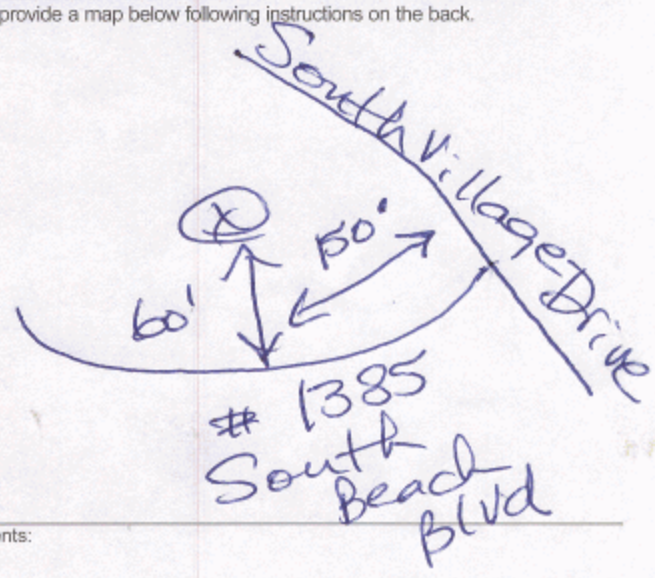
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	35'6"		36'6"
1	36'3"	1	35'6"
2		2	
3		3	
4	36'4"	4	
5		5	
10		10	
15		15	
20	36'5"	20	
25		25	
30		30	
40		40	
50	36'6"	50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor: AIR ROCK DRILLING CO LTD | Well Contractor's Licence No.: 1119

Business Address (Street Number/Name): RR#1 | Municipality: RICHMOND

Province: ONT | Postal Code: K0A2Z0 | Business E-mail Address:

Bus. Telephone No. (inc. area code): 613 838 2170 | Name of Well Technician (Last Name, First Name): GRAHAM RYAN

Well Technician's Licence No.: T3484 | Signature of Technician and/or Contractor | Date Submitted: 2010/05/10

Well owner's information package delivered: ☒ Yes ☐ No | Date Package Delivered: 2010/04/27

Date Work Completed: 2010/04/21

Ministry Use Only

Audit No. Z108320

JUN 01 2010 Received

0506E (12/2007)

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Ontario Ministry of the Environment

Well Record

Well Tag No. (Place A 095851

A095851

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page of

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1344 Barfield Street	Osgoode	Part 62, 63 & 64	

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	454720	5011766	4M-351	PT BLK 5 RP 4R054 27

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
			Silty Sand	0	26
			Sand, Gravel & Boulders	26	54
			Grey & Brown limestone	54	120

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
60	50	Neat cement	7.8
50	0	Bentonite slurry	25.2

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6"	Steel	.188"	+2'	60'
5 15/16	Open Hole		60'	120'

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
65	☐	☐ Fresh ☒ Untested	
105	☐	☐ Fresh ☒ Untested	
113	☐	☐ Fresh ☒ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	60'	6"
60'	120'	5 15/16

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify Not tested

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 80'

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 41.7'

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 80'

Recommended pump rate (l/min / GPM): 20

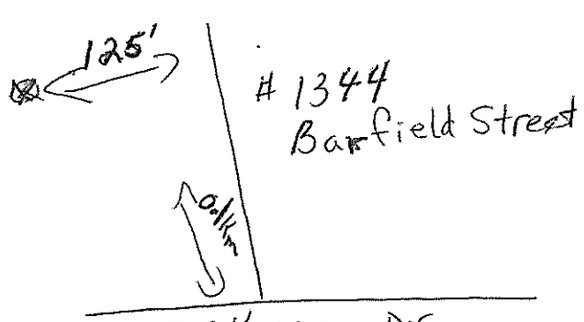
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	4		41.7
1	12.8	1	23.5
2	17.2	2	15.5
3	20.2	3	10.3
4	22.5	4	6.7
5	24	5	5.1
10	29.7	10	4
15	32.6	15	4
20	35	20	4
25	36.8	25	4
30	38.2	30	4
40	40.2	40	4
50	40.2	50	4
60	41.7	60	4

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6659 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138382170	Graham, Ryan

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted (Y Y Y Y M M D D)
T3484		2010 11 29

Well owner's information package delivered	Date Package Delivered (Y Y Y Y M M D D)	Date Work Completed (Y Y Y Y M M D D)
☒ Yes ☐ No	2010 11 17	2010 11 16

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Received DEC 29 2010

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Well Tag No. (Place A 096007) A096007

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial — Page ___ of ___

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
6906 McKeown Drive	Osgoode	P/L5	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	455093	5011835	Plan 4M-351 P/Block 3 less 4R5327 Part 1 to 9	

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand/Gravel & Clay			0′	56′
Grey	Limestone			56′	180′

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
62′	52′	Neat cement	9.36
52′	0′	Bentonite slurry	42

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☒ Air percussion ☐ Other, specify ___

Well Use

☐ Public ☐ Commercial ☐ Not used ☒ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☐ Test Hole ☐ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify ___

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6″	Steel	.188″	+2′	62′
5 15/16″	Open Hole		62′	180′

Construction Record - Screen

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

Status of Well

☒ Water Supply ☐ Replacement Well ☐ Test Hole ☐ Recharge Well ☐ Dewatering Well ☐ Observation and/or Monitoring Hole ☐ Alteration (Construction) ☐ Abandoned, Insufficient Supply ☐ Abandoned, Poor Water Quality ☐ Abandoned, other, specify ___ ☐ Other, specify ___

Water Details

Water found at Depth (m/ft)	Kind of Water	Hole Diameter Depth From (m/ft)	Depth To (m/ft)	Diameter (cm/in)
55 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify ___	0′	62′	6″
138 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify ___	62′	180′	5 15/16″
174 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify ___			

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6659 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138382170	Hogan, Dan

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted (Y Y Y Y M M D D)
T3058		2010 01 29

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify Not tested

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 160′

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 22.1″

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 100′

Recommended pump rate (l/min / GPM): 20

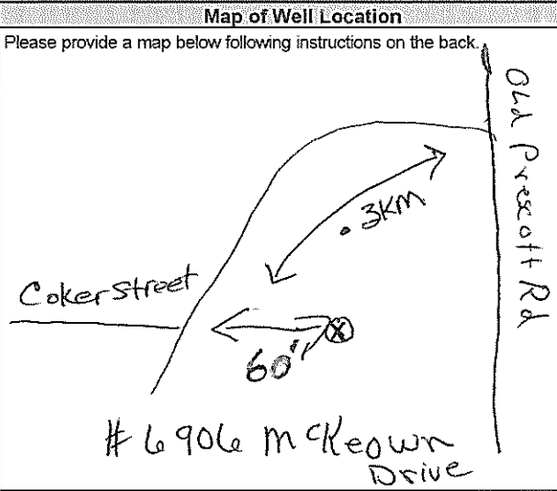
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	8.3		22.1
1	16.6	1	10.8
2	19.3	2	8.3
3	20.4	3	8.3
4	20.9	4	8.3
5	21.4	5	8.3
10	21.4	10	8.3
15	21.5	15	8.3
20	21.6	20	8.3
25	21.6	25	8.3
30	21.7	30	8.3
40	21.9	40	8.3
50	22	50	8.3
60	22.1	60	8.3

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well owner's information package delivered	Date Package Delivered (Y Y Y Y M M D D)	Ministry Use Only
☒ Yes ☐ No	2010 01 25	Audit No. Z 119918
	Date Work Completed: 2010 01 24	Received JAN 17 2011

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Well Tag No. *(Place Sticker and/or Print Below)* **A106100**

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☑ Metric ☐ Imperial — Page ___ of ___

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Sublot	Concession
1333 South Beach Boulevard	City Ottawa	4	75	4

County/District/Municipality	City/Town/Village	Province	Postal Code
	Osgood	Ontario	K0A 2W0

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot/Lot Number	Other
NAD 83	18	454561	5012104	RP Plan 4M 1265	

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sand	clay	Soft	0	3.1
Grey	Sand coarse	gravel, Stone	Soft / packed	3.1	12.5
Grey	gravel	Stone, Boulder	packed	12.5	14.6
Grey	limestone		layered	14.6	25.9

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	16.6	cement grout	7 Bag

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☐ Air percussion ☑ Other, specify: Air Rotary

Well Use

☐ Public ☐ Commercial ☐ Not used ☑ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☐ Test Hole ☐ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify: ___

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
15.55	Steel	.48	+.6	16.6
15.55	Open Hole		16.6	25.9

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth	Kind of Water	Hole Diameter Depth From	Depth To	Diameter (cm/in)
24 (m/ft) ☐ Gas	☐ Fresh ☑ Untested ☐ Other, specify			
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify			
(m/ft) ☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify	0	16.6	21.23
		16.6	25.9	15.55

Results of Well Yield Testing

After test of well yield, water was: ☑ Clear and sand free ☐ Other, specify ___

If pumping discontinued, give reason:

Pump intake set at (m/ft): 20

Pumping rate (l/min / GPM): 68

Duration of pumping: 1 hrs + ___ min

Final water level end of pumping (m/ft): 3.32

If flowing give rate (l/min / GPM):

Recommended pump depth (m/ft): 20

Recommended pump rate (l/min / GPM): 68

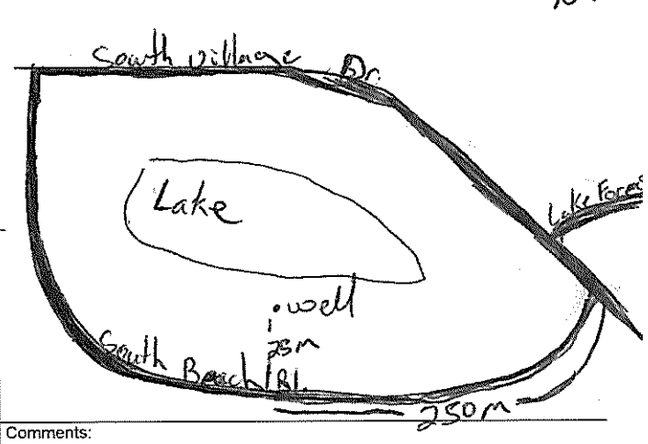
Well production (l/min / GPM):

Disinfected? ☑ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	3.24		3.32
1	3.25	1	3.26
2	3.27	2	3.24
3	3.28	3	
4	3.28	4	
5	2.29	5	
10	3.30	10	
15	3.30	15	
20	3.31	20	
25	3.31	25	
30	3.32	30	
40	3.32	40	
50	3.32	50	
60	3.32	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Bourgeois Well Drilling Ltd	7117

Business Address (Street Number/Name)	Municipality
151 Montee D'Aoust	Nation

Province	Postal Code	Business E-mail Address
On	K0A 3C0	N/A

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6139875291	Gervier, Michaël

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3493		2010/12/23

Well owner's information package delivered: ☐ Yes ☑ No

Date Package Delivered: ____

Date Work Completed: 2010/12/23

Ministry Use Only

Audit No. Z 127020

Received JAN 21 2011

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Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☒ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*: N/A

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
KEN	GORDON HOLDINGS		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
Box 310	Manotick Ont		K4M 1A4	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
Parkway Road	Osgoode	6	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	455214	5011633		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	6" Drilled Well	Abandonment		0'	137'

TW#5 - Tag A004862 - Audit 204877 - Feb 17, 2004

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used *(Material and Type)*	Volume Placed *(m³/ft³)*
137'	6'	Hole plug	
6'	0'	Backfill	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☐ Air percussion
☐ Other, specify _____

Well Use

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

Construction Record - Casing

Inside Diameter *(cm/in)*	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness *(cm/in)*	Depth (m/ft) From	Depth (m/ft) To

Construction Record - Screen

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

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☒ Abandoned, other, specify Construction (New Subdivision)
☐ Other, specify

Water Details

Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify
Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify
Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter *(cm/in)*

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify _____

If pumping discontinued, give reason:

Pump intake set at *(m/ft)*

Pumping rate *(l/min / GPM)*

Duration of pumping _____ hrs + _____ min

Final water level end of pumping *(m/ft)*

If flowing give rate *(l/min / GPM)*

Recommended pump depth *(m/ft)*

Recommended pump rate *(l/min / GPM)*

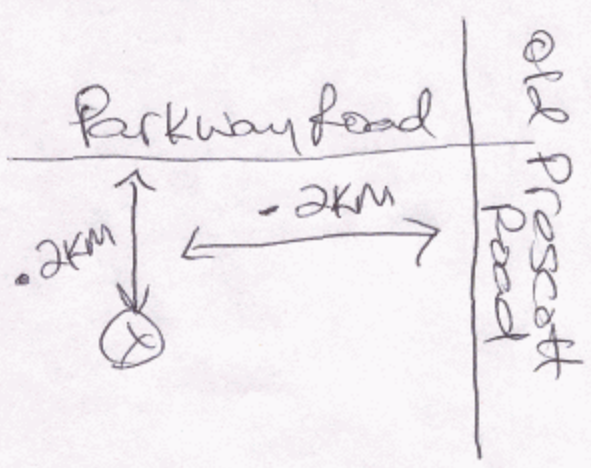
Well production *(l/min / GPM)*

Disinfected? ☒ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments: TW#5 - A004862

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
AIR ROCK DRILLING Co LTD	1119

Business Address (Street Number/Name)	Municipality
RR#1	RICHMOND

Province	Postal Code	Business E-mail Address
ONT	K0A 2Z0	

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
6138382170	Desaulniers Ken

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T4		2011/01/31

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☒ No		2011/01/18

Ministry Use Only

Audit No. z119939

Received FEB 10 2011

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Measurements recorded in: ☐ Metric ☒ Imperial

Well Tag No. A113265

A113265

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1356 South Beach Blvd	Osgoode	4	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454663	5012212	4M-1265	S/L 115

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand & Gravel	&	Boulders	0	42
Grey	Limestone			42	55
Grey	Limestone			55	94
Grey	Limestone			94	100

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
50	40	Neat cement slurry	9.36
40	0	Bentonite slurry	29.4

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6"	Steel	.188"	+2'	50'
5 7/8"	Open Hole		50'	100'

Construction Record - Screen

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

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
55	☐	☐ Fresh ☒ Untested	
94	☐	☐ Fresh ☒ Untested	
(m/ft)	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	50'	6"
50'	100'	5 7/8"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 80'

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 12'9"

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 80'

Recommended pump rate (l/min / GPM): 20

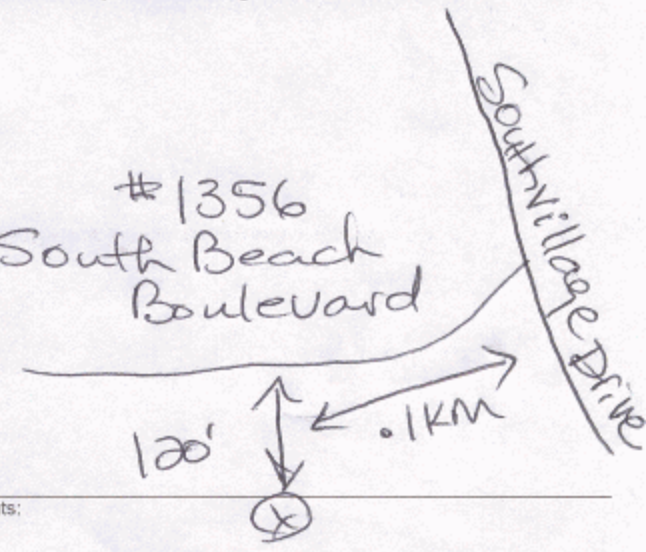
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	8'6"		12'9"
1	10.5	1	10.8
2	10.8	2	9.6
3	11	3	8.6
4	11.2	4	8.6
5	11.3	5	8.6
10	11.7	10	8.6
15	11.9	15	8.6
20	12.1	20	8.6
25	12.2	25	8.6
30	12.3	30	8.6
40	12.5	40	8.6
50	12.8	50	8.6
60	12'9"	60	8'6"

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6659 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138382170	Hogan, Dan

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T3058		2011 07 29

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2011 06 24	2011 06 23

Ministry Use Only

Audit No. z119752

Received AUG 2 2 2011

0506E (2007/12)

Ministry's Copy

Tag#: A128067

Ontario — Ministry of the Environment

V (Print Below) A128067

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	SiteCast Construction Corp.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
16 Concourse Gate. #200	Ottawa	ON	K2E 7S8	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
6815 McKeown Road	Osgoode	P/L 5	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454693	5011670	4M-351	P/L 6

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand & Gravel			0	5
Brown	Clay			5	21
	Sand & Gravel		Boulders	21	60
Grey	Limestone			60	114
Grey & White	Sandstone			114	179
Grey & White	Sandstone			179	185
Grey & White	Sandstone			185	201

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
66	56	Neat cement	10.9
56	0	Bentonite slurry	37.8

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify _____

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6"	Steel	.188"	+2'	66'
5 15/16"	Open Hole		66'	201'

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
179 (m/ft)	☐ Gas	☐ Fresh ☐ Untested ☒	
185 (m/ft)	☐ Gas	☐ Fresh ☐ Untested ☒	
(m/ft)	☐ Gas	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	66'	6"
66'	201'	5 15/16"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 180

Pumping rate (l/min / GPM): 12

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 54.3'

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 140'

Recommended pump rate (l/min / GPM): 12

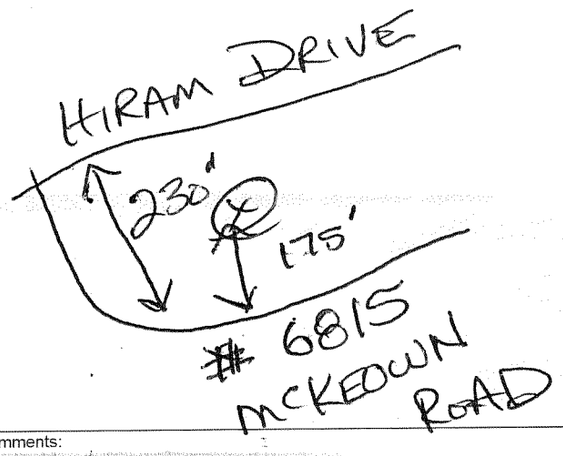
Well production (l/min / GPM): 12

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	16.7'		54.3'
1	24.3	1	39
2	27.8	2	30.7
3	30.8	3	27.8
4	32.7	4	25
5	34.5	5	23.6
10	40.5	10	19.6
15	43	15	16.7
20	45.4	20	16.7
25	46.6	25	16.7
30	47.8	30	16.7
40	50.2	40	16.7
50	52.2	50	16.7
60	54.3'	60	16.7'

Map of Well Location

Please provide a map below following instructions on the back.



Comments:
1/2 HP - 10 GPM set @ 140 ft

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6659 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138882170	Purcell, Shannon

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T2122		2012 05 31

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2012 05 08	2012 05 03

Ministry Use Only

Audit No. Z 128551

Received JUN 29 2012

Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☒ Imperial

We [redacted] Tag#: A128050 (Print Below) A128050

Well Record

Regulation 903 Ontario Water Resources Act

Page ____ of ____

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
6946 South Village Drive	Osgoode	4	4
County/District/Municipality	**City/Town/Village**	**Province**	**Postal Code**
Ottawa-Carleton	Greely	Ontario	
UTM Coordinates NAD 8 3 — Zone 18 — Easting 454832 — Northing 5012327	**Municipal Plan and Sublot Number**	**Other**	
	4M-1265	S/L 12	

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sand			0	27
	Sand & Gravel			27	38
Grey	Limestone			38	110
Grey	Limestone			110	124
Grey & White	Sandstone			124	175
Grey & White	Sandstone			175	181

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
48	38	Neat cement	9.36
38	0	Bentonite slurry	16.8

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, *specify* ____

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* ____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6"	Steel	.188"	+2	48
6"	Open Hole		48	181

Construction Record - Screen

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

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Other, specify
110	☐	☐ Fresh ☐ Untested	X
175	☐	☐ Fresh ☒ Untested	X
	☐	☐ Fresh ☐ Untested	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	181	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 160'

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 74.9'

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 100' (3/4 HP - 15 gpm)

Recommended pump rate (l/min / GPM): 20

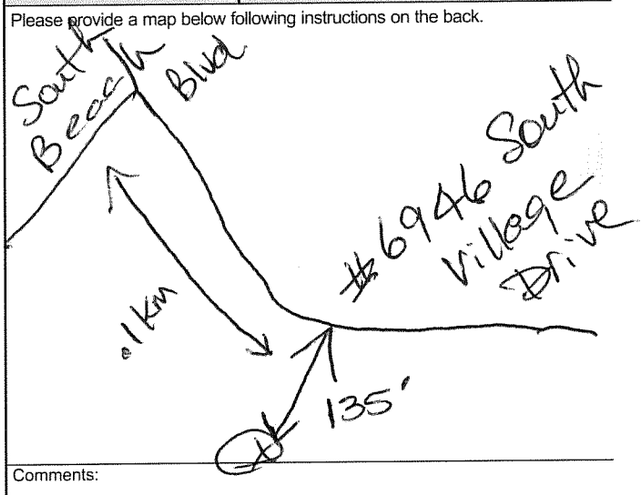
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	31'		74.9
1	38.7	1	67.8
2	42.8	2	50
3	45.8	3	41.6
4	48.5	4	36.9
5	50.6	5	33.8
10	57.7	10	31.
15	62.2	15	
20	65.2	20	
25	66.9	25	
30	68.6	30	
40	71.2	40	
50	73.1	50	
60	74.9	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:
3/4 HP - 15 GPM SET @ 100.

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119
Business Address (Street Number/Name)	**Municipality**
6659 Franktown Road, RR#1	Richmond
Province	**Postal Code**	**Business E-mail Address**
ON	K0A 2Z0	air-rock@sympatico.ca
Bus. Telephone No. (inc. area code)	**Name of Well Technician (Last Name, First Name)**
6138382170	Purcell, Shannon
Well Technician's Licence No.	**Signature of Technician and/or Contractor**	**Date Submitted**
T2122	[signature]	2012 06 29

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No	2012 06 07	2012 06 06

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Audit No. Z144600

Received JUL 17 2012

Ministry's Copy

Ontario — Ministry of the Environment

Well Tag No. *(Place Sticker and/or Print Below)* A119641 **A119641**

Well Record

...on 903 Ontario Water Resources Act

Measurements recorded in: [X] Metric [ ] Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	[ ] Well Constructed by Well Owner
	M. Scapillati Flooring Inc.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
P.O. Box 13090	Kanata	Ontario	K2K 1X3	613 839 3462

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
6786 Hiram Drive	Osgoode	5	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	454621	5011602		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Clay		Packed	0	2.43
Grey	Clay		Sticky	2.43	4.87
Grey	Sand	Boulders	Loose	4.87	17.67
Grey	Limestone			17.67	29.86

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
19.50	0	Grouted Bentonite Slurry	.92m^3

Method of Construction

[ ] Cable Tool
[X] Rotary (Conventional) Mud
[ ] Rotary (Reverse)
[ ] Boring
[X] Air percussion
[ ] Other, *specify* ____
[ ] Diamond
[ ] Jetting
[ ] Driving
[ ] Digging

Well Use

[ ] Public
[X] Domestic
[ ] Livestock
[ ] Irrigation
[ ] Industrial
[ ] Other, *specify* ____
[ ] Commercial
[ ] Municipal
[ ] Test Hole
[ ] Cooling & Air Conditioning
[ ] Not used
[ ] Dewatering
[ ] Monitoring

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
15.86	Steel	.48	+.45	19.50

Construction Record - Screen

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

Status of Well

[X] Water Supply
[ ] Replacement Well
[ ] Test Hole
[ ] Recharge Well
[ ] Dewatering Well
[ ] Observation and/or Monitoring Hole
[ ] Alteration (Construction)
[ ] Abandoned, Insufficient Supply
[ ] Abandoned, Poor Water Quality
[ ] Abandoned, other, *specify* ____
[ ] Other, *specify* ____

Water Details

Water found at Depth	Kind of Water	
21.33 (m/ft) [ ] Gas	[ ] Fresh [X] Untested	[ ] Other, *specify* ____
28.95 (m/ft) [ ] Gas	[ ] Fresh [X] Untested	[ ] Other, *specify* ____
(m/ft) [ ] Gas	[ ] Fresh [ ] Untested	[ ] Other, *specify* ____

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	19.50	15.86
19.50	29.86	15.23

Results of Well Yield Testing

After test of well yield, water was:
[X] Clear and sand free
[ ] Other, *specify* ____

If pumping discontinued, give reason:

Pump intake set at (m/ft): 22.85

Pumping rate (l/min / GPM): 45.5

Duration of pumping: 7 hrs + 28 min

Final water level end of pumping (m/ft): 6.31

If flowing give rate (l/min / GPM):

Recommended pump depth (m/ft): 22.85

Recommended pump rate (l/min / GPM): 45.5

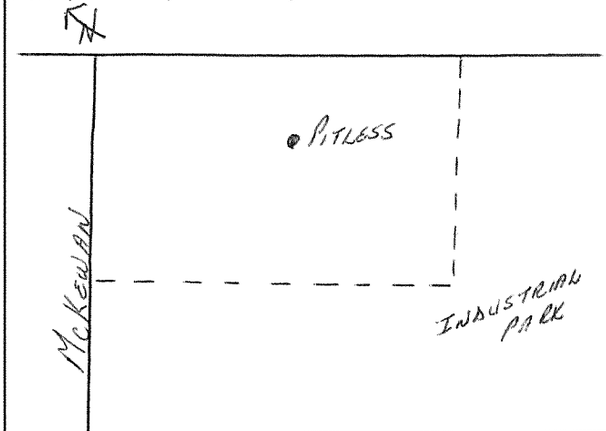
Well production (l/min / GPM):

Disinfected? [X] Yes [ ] No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	1.73		
1	2.74	1	4.81
2	2.70	2	3.11
3	4.25	3	2.23
4	4.62	4	1.90
5	4.88	5	1.83
10	5.49	10	1.81
15	5.68	15	
20	5.78	20	
25	5.82	25	
30	5.85	30	
40	5.88	40	
50	5.92	50	
60	5.95	60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Capital Water Supply Ltd.	1558

Business Address (Street Number/Name)	Municipality
Box 490	Stittsville

Province	Postal Code	Business E-mail Address
Ontario	K2S 1A6	office@capitalwater.ca

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
613 836 1766	Miller, Stephen

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
0097		2012 01 31

Well owner's information package delivered	Date Package Delivered	Date Work Completed
[X] Yes [ ] No	2012 01 27	2012 01 24

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Audit No. Z139740

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Well Record

Regulation 903 Ontario Water Resources Act

Tag#: A127925 (We ... int Below) A127925

Measurements recorded in: ☐ Metric ☒ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Slavko Concrete Finishing		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
6789 Sunset Blvd	Greely	ON	K4P 1M6	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
6828 McKeown Drive	Osgoode	P/L 4	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454766	5011616	4M-351 - S/L 19	Block 6

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand & Gravel	& Boulders		0	57
Grey	Limestone			57	119
Grey	Limestone			119	123
Grey	Limestone			123	140

GRAVEL SEAM- KEEP PUMP ABOVE 100 FEET

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft³)
64	54	Neat cement	10.9
54	0	Bentonite slurry	33.6

Method of Construction

☐ Cable Tool ☐ Diamond ☐ Rotary (Conventional) ☐ Jetting ☐ Rotary (Reverse) ☐ Driving ☐ Boring ☐ Digging ☒ Air percussion ☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used ☒ Domestic ☐ Municipal ☐ Dewatering ☐ Livestock ☐ Test Hole ☐ Monitoring ☐ Irrigation ☐ Cooling & Air Conditioning ☐ Industrial ☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6¼"	Steel	.188"	+2	64
5⅞"	Open Hole		64	140

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Hole Diameter Depth From	Depth To	Diameter (cm/in)
119	☐	☐ Fresh ☒ Untested ☐ Other, specify	0	64	9¾"
123	☐	☐ Fresh ☒ Untested ☐ Other, specify	64	140	5⅞"
	☐	☐ Fresh ☐ Untested ☐ Other, specify			

Results of Well Yield Testing

After test of well yield, water was: ☐ Clear and sand free ☐ Other, specify **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 100

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 17.9"

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 100'

Recommended pump rate (l/min / GPM): 20

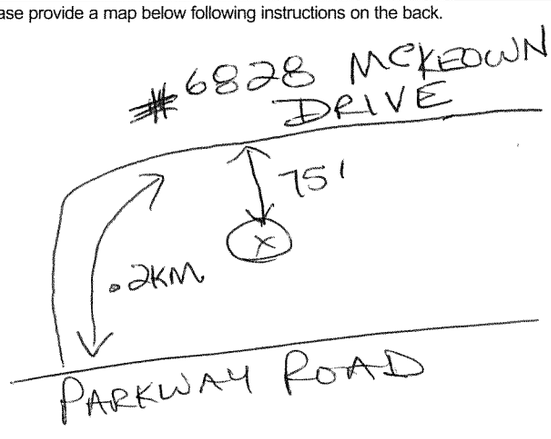
Well production (l/min / GPM): 20#

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	10.4"		17.9"
1	12.4	1	11.8
2	12.4	2	10.4
3	12.7	3	10.4
4	13.4	4	10.4
5	13.8	5	10.4
10	14.4	10	10.4
15	14.9	15	10.4
20	15.7	20	10.4
25	16.3	25	10.4
30	16.6	30	10.4
40	17.	40	10.4
50	17.4	50	10.4
60	17.9	60	10.4

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 3/4 HP - 15 GPM - SET AT 100 FEET

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
6659 Franktown Road, RR#1	Richmond	ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
6138382170	Graham, Ryan	T3484		2013 01 31

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2013 01 28	2013 01 17

Ministry Use Only

Audit No. Z144877

Received FEB 19 2013

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Ontario — Ministry of the Environment

Well Record

Regulation 903 Ontario Water Resources Act

Tag#: A135268

W (Print Below)

A135268

Measurements recorded in: ☐ Metric ☒ Imperial

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	1850563 Ontario Ltd		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
146 Tartan Drive	Ottawa	ON	K2J 3X2	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1358 Coker Street	Osgoode	P/L 5	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454958	5011825	4M-351 RP4R-5427 Part 36,37	38 P/B 4

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand & Gravel	& Boulders		0	45
Grey	Limestone			45	138
Grey & White	Sandstone	Mix		138	154
Grey & White	Sandstone	Mix		154	182
Grey & White	Sandstone	Mix		182	200

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
52	42	Neat cement	10.9
42	0	Bentonite slurry	21

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify _____

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2	52
5 7/8"	Open Hole		52	200

Construction Record - Screen

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

Status of Well

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

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 180'

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 34' 1"

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 100'

Recommended pump rate (l/min / GPM): 20

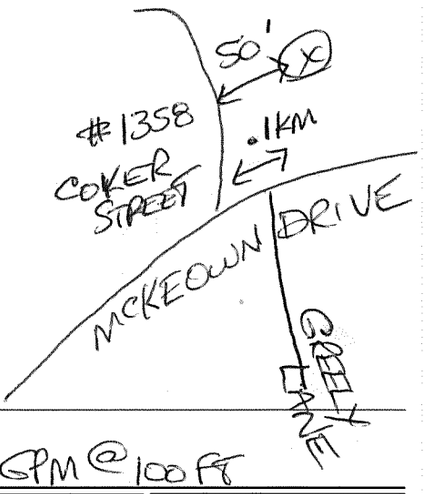
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	15'9"		34'9"
1	25.6	1	25.5
2	29.1	2	21.2
3	32.5	3	18.4
4	34.9	4	15.9
5	34.9	5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 3/4HP - 15GPM @ 100 FT

Water Details

Water found at Depth (m/ft)	Kind of Water	Gas	Other, specify
154	☐ Fresh ☐ Untested	☐	X
182	☐ Fresh ☐ Untested	☐	X
	☐ Fresh ☐ Untested	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	52	9 3/4"
52	200	5 7/8"

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6659 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138382170	Graham, Ryan

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T3484		2013 03 29

Well owner's information package delivered: ☒ Yes ☐ No

Date Package Delivered: 2013 03 12

Date Work Completed: 2013 03 11

Ministry Use Only

Audit No. Z155046

Received APR 15 2013

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Ontario — Ministry of the Environment

Measurements recorded in: ☐ Metric ☒ Imperial

Well Tag#: A128140 (nt Below)

A128140

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	1384341 Ontario Limited (c/o Cavanagh Const)		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
9094 Cavanagh Road	Ashton	On	K0A 1B0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1240 Old Prescott Road	Osgoode	P/L 4	4S

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	455133	5012245		TEST WELL # 1

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand			0	11
Grey	Sand	Silt		11	34
	Sand - Course	+ Gravel & Boulders		34	60
Grey & Brown	Limestone			60	125
White	Sandstone			125	136
Grey	Limestone			136	161
Grey & White	Sandstone	& Limestone	Mix	161	292
Grey & White	Sandstone	& Limestone	Mix	292	300

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
70	60	Neat cement	10.9
60	0	Bentonite slurry	25.2

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2	70
6 1/8"	Open Hole		70	300

Construction Record - Screen

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

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	Gas	Other, specify
292	☐ Fresh ☒ Untested	☐ Gas	☐ Other, specify X
	☐ Fresh ☐ Untested	☐ Gas	☐ Other, specify
	☐ Fresh ☐ Untested	☐ Gas	☐ Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	70	9 3/4"
70	300	6 1/8"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 280

Pumping rate (l/min / GPM): 12

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 85.4'

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 150' (1HP - 10gpm)

Recommended pump rate (l/min / GPM): 12

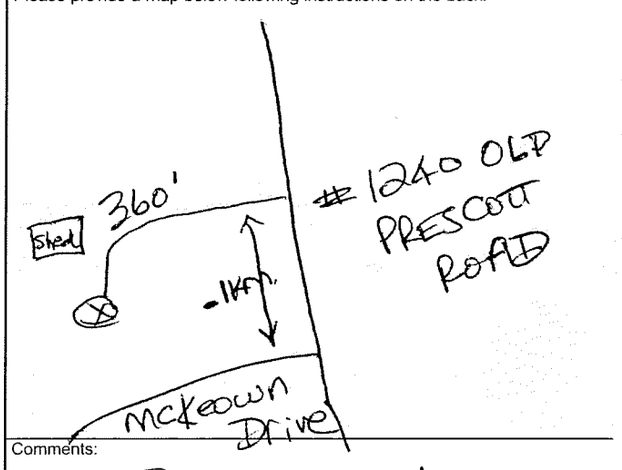
Well production (l/min / GPM): 12

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	34.2'		85.4'
1	42.2	1	74.5
2	44.8	2	63.4
3	47.2	3	55.4
4	49.3	4	50.4
5	53.6	5	47.5
10	57.4	10	38.6
15	66.4	15	34.2
20	71.8	20	34.2
25	74.8	25	34.2
30	78.7	30	34.2
40	80.2	40	34.2
50	82.3	50	34.2
60	85.4'	60	34.2'

Map of Well Location

Please provide a map below following instructions on the back.



Comments: TEST WELL #1

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6659 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138882170	Graham, Ryan

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T3484		2013 05 31

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2013 05 29	2013 05 27

Ministry Use Only

Audit No. Z 155095

Received JUL 16 2013

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Ontario — Ministry of the Environment

Well Record

Regulation 903 Ontario Water Resources Act

Tag#: A128132

W A128132 *Print Below)*

Measurements recorded in: ☐ Metric ☒ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	1384341 Ontario Limited (c/o Cavanagh Const)		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. *(inc. area code)*
9094 Cavanagh Road	Ashton	On	K0A 1B0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1240 Old Prescott Road	Osgoode	P/L 4	4S

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454826	5012227		TEST WELL # 2

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand			0	14
Grey	Sandy Silt			14	38
	Sand & Gravel	& Boulders		38	47
Grey	Limestone			47	132
Grey & White	Limestone	& Sandstone Mix		132	158
Grey & White	Limestone	& Sandstone Mix		158	189
Grey & White	Limestone	& Sandstone Mix		189	200

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used *(Material and Type)*	Volume Placed (m³/ft³)
58	48	Neat cement	10.9
48	0	Bentonite slurry	25.2

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
6 1/4"	Steel	.188"	+2	58
6 1/8"	Open Hole		58	200

Construction Record - Screen

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

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water	Gas	Other, specify
158	☐ Fresh ☒ Untested	☐	
189	☐ Fresh ☒ Untested	☐	
	☐ Fresh ☐ Untested	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	58	9 3/4"
58	200	6 1/8"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 190

Pumping rate (l/min / GPM): 12

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 98.7

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 190

Recommended pump rate (l/min / GPM): 12

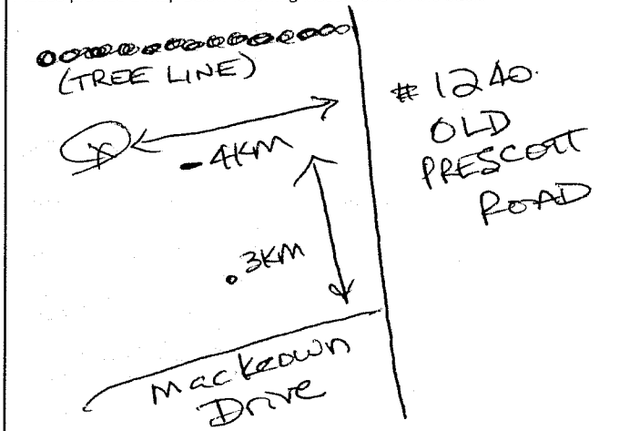
Well production (l/min / GPM): 12

Disinfected? ☒ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level		34.3		98.7
1	42.8	1	79	
2	48	2	71.7	
3	52.3	3	65.4	
4	55.9	4	59.8	
5	58.2	5	55.1	
10	71.1	10	40.1	
15	77.2	15	36	
20	83.2	20	34.3	
25	86	25	34.3	
30	88.9	30	34.3	
40	92	40	34.3	
50	95.5	50	34.3	
60	98.5	60	34.3	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:
3/4 HP - 10 GPM SET AT 190 FT TEST WELL #2

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6659 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. *(inc. area code)*	Name of Well Technician (Last Name, First Name)
6138382170	Graham, Ryan

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted (Y Y Y Y M M D D)
T3484		2013 06 28

Well owner's information package delivered	Date Package Delivered (Y Y Y Y M M D D)	Ministry Use Only
☒ Yes ☐ No	2013 06 04	Audit No. Z155104
	Date Work Completed (Y Y Y Y M M D D)	Date Received JUL 16 2013
	2013 05 30	

Ministry's Copy

Follow the **COVID-19 restrictions and public health measures (https://covid-19.ontario.ca/public-health-measures)** and **book your appointment to get vaccinated (https://covid-19.ontario.ca/book-vaccine/)** .

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: 7206661
Well Audit Number: *Z155129*
Well Tag Number: *A128106*
This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	6808 HIRAM DRIVE

Township	OSGOODE TOWNSHIP
Lot	005
Concession	CON 04
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	GREELV
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 454576.00 Northing: 5011680.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	CLAY			0 ft	5 ft
GREY	CLAY			5 ft	18 ft
	SAND	GRVL	BLDR	18 ft	52 ft
GREY	LMSN			52 ft	135 ft
GREY	LMSN	SNDS		135 ft	153 ft
GREY	LMSN	SNDS		153 ft	160 ft

Annular Space/Abandonment Sealing Recor

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
50 ft	0 ft	BENTONITE SLURRY	
60 ft	50 ft	CONCRETE	

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	
	Domestic

Status of Well

Water Supply

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
6.25 inch	STEEL	-2 ft	60 ft
6 inch	OPEN HOLE	60 ft	160 ft

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1119

Results of Well Yield Testing

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	150 ft
Pumping Rate	20 GPM
Duration of Pumping	1 h:0 m
Final water level	36.6 ft
If flowing give rate	
Recommended pump depth	100 ft
Recommended pump rate	20 GPM
Well Production	
Disinfected?	Y

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	18.3 ft		
1	22.5 ft	1	27.6 ft
2	24.5 ft	2	26.6 ft
3	25.7 ft	3	26 ft

4	26.6 ft	4	25.4 ft
5	27.4 ft	5	24.8 ft
10	29.5 ft	10	21.8 ft
15	31.1 ft	15	19 ft
20	32.7 ft	20	18.3 ft
25	33 ft	25	18.3 ft
30	33.3 ft	30	18.3 ft
40	34.5 ft	40	18.3 ft
45		45	
50	35.7 ft	50	18.3 ft
60	36.6 ft	60	18.3 ft

Water Details

Water Found at Depth	Kind
153 ft	Untested

Hole Diameter

Depth From	Depth To	Diameter
0 ft	60 ft	9.75 inch
60 ft	160 ft	6 inch

Audit Number: Z155129

Date Well Completed: June 24, 2013

Date Well Record Received by MOE: August 19, 2013

Related

How to use a Ministry of the Environment map (/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

Ontario — Ministry of the Environment

Tag#: A135367

(Print Below) A135367

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	1384341 Ontario Limited (c/o Cavanagh Const)		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
9094 Cavanagh Road	Ashton	On	K0A 1B0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1240 Old Prescott Road	Osgoode	P/L 4	4S

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454896	5012107		TEST WELL # 4

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand			0	20
	Sand & Gravel	+ Boulders		20	48
Grey	Limestone			48	69
Grey	Limestone			69	139
Grey & White	Sandstone			139	147
Grey & White	Sandstone			147	170
Grey & White	Sandstone			170	180
	TEST WELL # 4				

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
58	48	Neat cement	12.5
48	0	Bentonite slurry	29.4

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify ____

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify ____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2	58
6 1/8"	Open Hole		58	180

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: Fresh	Untested	Other, specify
69	☐	☐	X	
147	☐	☐	X	
170	☐	☐	X	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	58	9 3/4"
58	180	6 1/8"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify Not tested

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 170

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 148

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 100 (3/4HP - 15GPM)

Recommended pump rate (l/min / GPM): 20

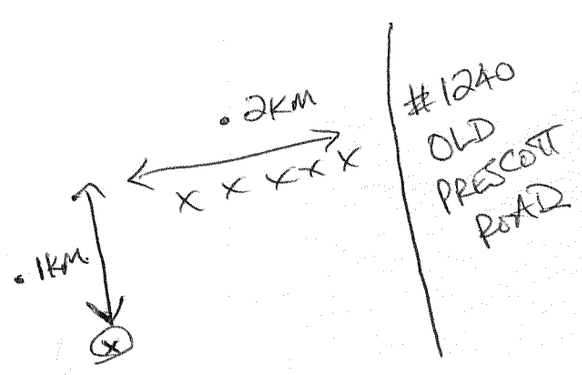
Well production (l/min / GPM): 20+

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	12		14.8
1	12.9	1	12
2	13.2	2	12
3	13.3	3	12
4	13.5	4	12
5	13.7	5	12
10	14.4	10	12
15	14.6	15	12
20	14.8	20	12
25	14.8	25	12
30	14.8	30	12
40	14.8	40	12
50	14.8	50	12
60	14.8	60	12

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 3/4 HP - 15 GPM SET @ 100 FT

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
6659 Franktown Road, RR#1	Richmond	ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
6138382170	Hanna, Jeremy	T3632		2013 08 30

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2013 08 26	2013 08 22

Ministry Use Only

Audit No. Z155202

Received OCT 10 2013

Ministry's Copy

Tag#: A144873

Ontario — Ministry of the Environment

Well Tag No. (Print Below): A144873

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	1384341 Ontario Limited (c/o Cavanagh Const)		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
9094 Cavanagh Road	Ashton	On	K0A 1B0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1240 Old Prescott Road	Osgoode	P/L 4	4S

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454483	5012012		TEST WELL #3

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown	Sand			0	44
	Sand & Gravel	+	Boulders	44	48
Grey	Limestone			48	127
Grey	Limestone			127	170
Grey	Limestone	+	Sandstone Mix	170	236
Grey	Limestone	+	Sandstone Mix	236	250

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
58	48	Neat cement	12.5
48	0	Bentonite slurry	37.8

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify _____

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2	58
6 1/8"	Open hole		58	250

Construction Record - Screen

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

Status of Well

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

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify Not tested

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 240

Pumping rate (l/min / GPM): 14

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 57.7

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 150

Recommended pump rate (l/min / GPM): 14

Well production (l/min / GPM): 14

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	15.6		57.7
1	22.6	1	49.6
2	27.5	2	41.8
3	31.4	3	37.5
4	34.2	4	34.2
5	35.6	5	31.8
10	40.5	10	24.5
15	45.4	15	18.2
20	47.3	20	15.6
25	48.7	25	15.6
30	50.1	30	15.6
40	52.7	40	15.6
50	55.3	50	15.6
60	57.7	60	15.6

Water Details

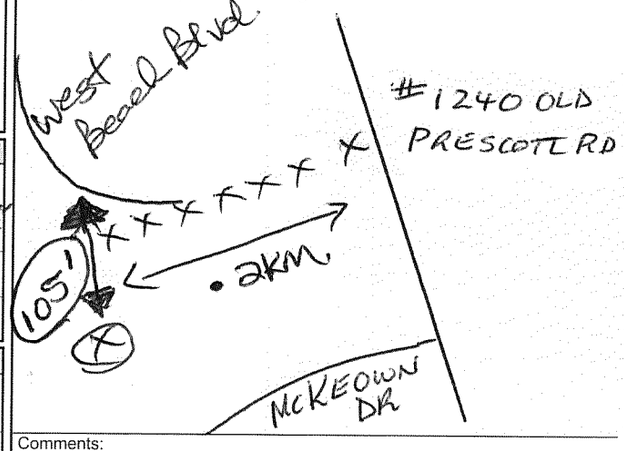
Water found at Depth (m/ft)	Kind of Water	
170	☐ Fresh ☒ Untested	☐ Gas ☐ Other, specify
236	☐ Fresh ☒ Untested	☐ Gas ☐ Other, specify
	☐ Fresh ☐ Untested	☐ Gas ☐ Other, specify

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	58	9 3/4"
58	250	6 1/8"

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 1 HP - 10 gpm @ 150'

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6059 Frankford Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138382170	Grant, Andrew

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted (Y Y Y Y M M D D)
13438		2013 08 30

Well owner's information package delivered	Date Package Delivered (Y Y Y Y M M D D)	Ministry Use Only
☒ Yes ☐ No	2013 08 19	Audit No. Z 155193
	Date Work Completed: 2013 08 14	Received OCT 10 2013

Ontario — Ministry of the Environment

Well Record

Regulation 903 Ontario Water Resources Act

Tag#: A144822 (Print Below) A144822

Measurements recorded in: ☐ Metric ☒ Imperial

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Direct Bore Inc.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
5689 Power Road	Gloucester	ON	K1G 3N4	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
6834 Hiram Drive	Osgoode	P/L 5	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454568	5011739	4m-351	P/L 6

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand			0	10
Grey	Clay	& Gravel		10	21
	Gravel	& Boulders		21	60
Grey	Limestone			60	77
Grey	Limestone			77	83
Grey	Limestone			83	94
Grey	Limestone			94	101

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
66	56	Neat cement	9.36
56	0	Bentonite slurry	29.4

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify _____

Well Use

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

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2	66
6"	Open Hole		66	101

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: Fresh	Untested	Other, specify
77	☐	☐	☒	
83	☐	☐	☒	
94	☐	☐	☒	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0	66	9 3/4"
66	101	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify Not tested

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 90

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 11

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 80

Recommended pump rate (l/min / GPM): 20

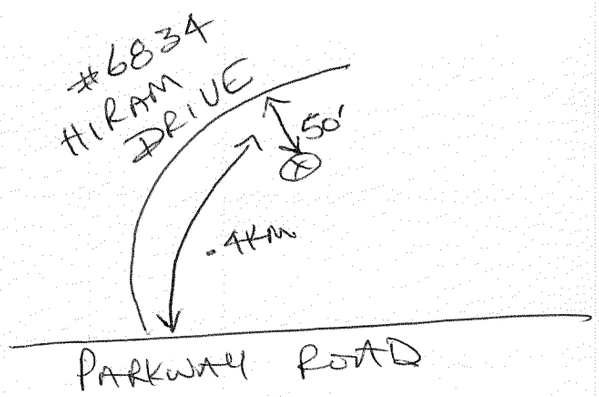
Well production (l/min / GPM): 20+

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	8.9		11
1	10.9	1	8.9
2	10.9	2	8.9
3	10.9	3	8.9
4	10.9	4	8.9
5	10.9	5	8.9
10	11	10	8.9
15	11	15	8.9
20	11	20	8.9
25	11	25	8.9
30	11	30	8.9
40	11	40	8.9
50	11	50	8.9
60	11	60	8.9

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 1/2 HP - 10 GPM - SET @ 90 FT

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6669 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138382170	Purcell, Shannon

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted (Y Y Y Y M M D D)
T2122		2013 08 30

Well owner's information package delivered	Date Package Delivered (Y Y Y Y M M D D)	Ministry Use Only
☒ Yes ☐ No	2013 08 08	Audit No. Z 155176
	Date Work Completed (Y Y Y Y M M D D)	Received OCT 10 2013
	2013 08 08	

Ministry's Copy

Follow the **COVID-19 restrictions and public health measures (https://covid-19.ontario.ca/public-health-measures)** and **book your appointment to get vaccinated (https://covid-19.ontario.ca/book-vaccine/)** .

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: 7228021
Well Audit Number: *Z166988*
Well Tag Number: *A128102*
This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	6823 HIRAM DRIVE

Township	OSGOODE TOWNSHIP
Lot	
Concession	
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	GREELY
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 454579.00 Northing: 5011728.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	SAND	GRVL	BLDR	0 ft	52 ft
GREY	LMSN			52 ft	87 ft
GREY	LMSN			87 ft	135 ft
GREY	SNDS			135 ft	155 ft
GREY	SNDS			155 ft	162 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed

48 ft	0 ft	BENTONITE SLURRY
58 ft	48 ft	NEAT CEMENT

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	
	Domestic

Status of Well

Water Supply

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
6.25 inch	STEEL	-2 ft	58 ft
5.9375 inch	OPEN HOLE	58 ft	162 ft

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1119

Results of Well Yield Testing

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	150 ft
Pumping Rate	5 GPM
Duration of Pumping	1 h:0 m
Final water level	114.5 ft
If flowing give rate	
Recommended pump depth	140 ft
Recommended pump rate	5 GPM
Well Production	
Disinfected?	Y

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	15.5 ft		
1	19.417 ft	1	96.583 ft
2	28.5 ft	2	79.25 ft
3	33.167 ft	3	72.167 ft
4	36.417 ft	4	69.167 ft
5	40.583 ft	5	66.417 ft

10	55.333 ft	10	50.667 ft
15	63.667 ft	15	36.333 ft
20	71.583 ft	20	23.167 ft
25	78.5 ft	25	15.5 ft
30	87.25 ft	30	15.5 ft
40	94.5 ft	40	15.5 ft
45		45	
50	103.583 ft	50	15.5 ft
60	114.5 ft	60	15.5 ft

Water Details

Water Found at Depth	Kind
155 ft	Untested

Hole Diameter

Depth From	Depth To	Diameter
0 ft	58 ft	9.75 inch
58 ft	162 ft	5.9375 inch

Audit Number: Z166988

Date Well Completed: August 13, 2014

Date Well Record Received by MOE: September 22, 2014

Related

How to use a Ministry of the Environment map (/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

Ontario — Ministry of the Environment

W Tag#: A144876 (Print Below)

A144876

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	1384341 Ontario Limited (c/o Cavanagh Const)		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
9094 Cavanagh Road	Ashton	On	K0A 1B0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1240 Old Prescott Road	Osgoode	P/L 4	4S

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	455162	5012266		TEST WELL # 5

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand			0′	30′
	Gravel	& Sand		30′	58′
Grey	Limestone			58′	141′
Grey	Limestone	& Grey Sandstone		141′	158′
Grey	Sandstone			158′	291′
Grey	Sandstone			291′	297′

Test Well #5

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
132′	122′	Neat cement	9.36
122′	0′	Bentonite slurry	37.8

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2′	132′
6"	Open Hole		132′	297′

Construction Record - Screen

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

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	☐ Gas	Kind of Water: ☐ Fresh ☐ Untested ☐ Other, *specify*
291		X

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0′	132′	9 3/4"
132′	297′	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* Not tested

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 280

Pumping rate (l/min / GPM): 12

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 166′

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 250′

Recommended pump rate (l/min / GPM): 12

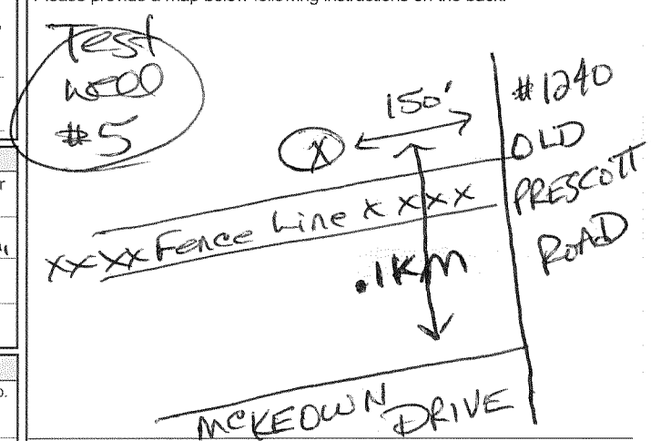
Well production (l/min / GPM): 12

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	33′ 8"		166′
1	42.7	1	152.3
2	49.5	2	145.3
3	55.2	3	139.5
4	60.8	4	133.5
5	66.4	5	128.0
10	89.3	10	104.7
15	107.3	15	85.8
20	121.8	20	70.9
25	133.3	25	59
30	143	30	50
40	155.8	40	38
50	162.3	50	33.8
60	166′	60	33.8"

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

1 HP - 10 GPM SET @ 250 FT TW#5

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6659 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138382170	Hanna, Jeremy

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T1632		2014 09 30

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2014 09 17	2014 09 11

Ministry Use Only

Audit No. Z 167024

Received OCT 2 9 2014

Ontario — Ministry of the Environment

Tag#: A177797

Well Tag No. (Place Sticker and/or Print Below): A177797

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☒ Imperial

Page ____ of ____

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Watko Construction Ltd.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
811 Kennedy Road	Kemptville	ON	K0G 1J0	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
6945 McKeown Drive	Osgoode	P/L 5	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	435080	5012157	4M-351	Part Block 1

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Clay	& Sand	& Boulders	0'	55'
Grey	Limestone			55'	137'
Grey	Limestone			137'	170'
Grey & White	Sandstone			170'	194'
Grey & White	Sandstone			194'	200'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
61'	51'	Neat cement	10.9
51'	0'	Bentonite slurry	29.4

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	188"	+2'	61'
5 15/16"	Open Hole		61'	200'

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth (m/ft)	Kind of Water	Hole Diameter Depth From	Depth To	Diameter (cm/in)
137 ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify	0'	61'	9 3/4"
194 ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify	61'	200'	5 15/16"
☐ Gas	☐ Fresh ☐ Untested ☐ Other, specify			

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 180

Pumping rate (l/min / GPM): 8

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 58.8'

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 140'

Recommended pump rate (l/min / GPM): 8

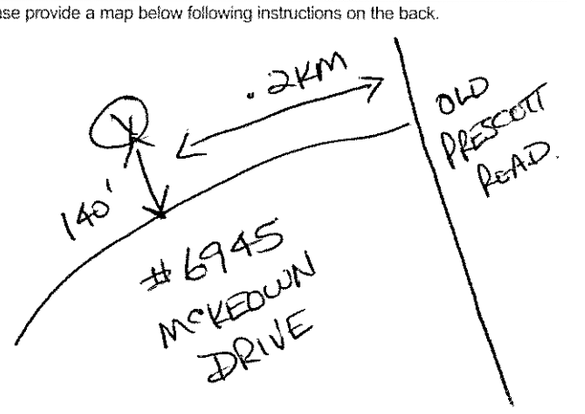
Well production (l/min / GPM): 8

Disinfected? ☒ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level		13' 2"		58.8'
1	20.4		1	44.8
2	24.4		2	39
3	28.3		3	34.4
4	31.6		4	30.5
5	34.5		5	27.3
10	43.8		10	17.2
15	49		15	14
20	52.3		20	13.2
25	54.5		25	13.2
30	55.8		30	13.2
40	56.9		40	13.2
50	58		50	13.2
60	58.8"		60	13.2"

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 1/2 HP - 5 GPM SET @ 140 FT

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
5559 Arrowsmith Road, RR#1	Richmond	ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
6135382170	Hogan, Dan	13058		2015 02 27

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☒ Yes ☐ No	2015 02 11	2015 02 06

Ministry Use Only

Audit No. Z 191365

Received APR 24 2015

Ontario — Ministry of the Environment

Tag#: A177769 (Print Below)

A177769

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

Measurements recorded in: ☐ Metric ☒ Imperial

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	Marathon Drilling Co. Ltd.		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
6847 Hiram Road	Greely	ON	K4P 1A2	

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
6847 Hiram Road	Osgoode	PL 4	4 S.

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	454596	5011876		

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Sand	& Clay		0'	28'
	Sand & Gravel	& Boulders		28'	54'
Grey	Limestone			54'	143'
Grey	Sandstone			143'	161'
Grey	Sandstone			161'	232'
Grey	Sandstone			232'	247'
Grey	Sandstone			247'	260'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
64'	54'	Neat cement	21.8
54'	0'	Bentonite slurry	16.8

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, specify

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, specify

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
6 1/4"	Steel	.188"	+2'	64'
6"	Open Hole		64'	260'

Construction Record - Screen

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

Status of Well

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

Water Details

Water found at Depth	Kind of Water	
161 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify	
232 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify	
247 (m/ft) ☐ Gas	☐ Fresh ☒ Untested ☐ Other, specify	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	64'	9 3/4"
64'	260'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, specify **Not tested**

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 200'

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 86'6"

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 200'

Recommended pump rate (l/min / GPM): 20+

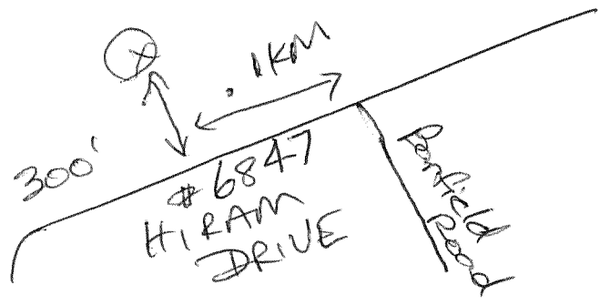
Well production (l/min / GPM): 20+

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	26'6"		86.6'
1	35.5	1	60
2	41.3	2	50.8
3	45.6	3	45.6
4	49.2	4	42.2
5	52.1	5	39.5
10	61.3	10	33
15	66.6	15	27
20	69.9	20	26.6
25	72.3	25	26.6
30	74.5	30	26.6
40	78.7	40	26.6
50	82.7	50	26.6
60	86.6'	60	26.6'

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6659 Franktown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138382170	Hanna, Jeremy

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
T3632		2015 10 30

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No	2015 10 06	2015 10 20

Ministry Use Only

Audit No Z 202618

Received NOV 17 2015

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Ontario

Ministry of the Environment and Climate Change

Measurements recorded in: ☐ Metric ☒ Imperial

Tag#: A 229022 *(Print Below)*

A229022

Well Record

Regulation 903 Ontario Water Resources Act

Page _____ of _____

[redacted]

Address of Well Location (Street Number/Name)	Township	Lot	Concession
6820 McKeown Drive	Osgoode	P/L 4	4

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa-Carleton	Greely	Ontario	

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 8 3	18	454770	5011553	4M-351	Part Block 6

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	Clay			0'	10'
	Gravel	& Boulders		10'	58'
Grey	Limestone			58'	151'
Grey	Sandstone			151'	209'
Grey	Sandstone			209'	213'
Grey	Sandstone			213'	220'

Annular Space

Depth Set at (m/ft) From	To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft)
66'	56'	Neat cement	10.9
56'	0'	Bentonite slurry	16.8

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☐ Boring ☐ Digging
☒ Air percussion
☐ Other, *specify* _____

Well Use

☐ Public ☐ Commercial ☐ Not used
☒ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☐ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify* _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	To
6 1/4"	Steel	.188"	+2'	66'
6"	Open Hole		66'	220'

Construction Record - Screen

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

Status of Well

☒ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water: Fresh	Untested	Other, *specify*
209	☐	☐	☒	
213	☐	☐	☒	
	☐	☐	☐	

Hole Diameter

Depth (m/ft) From	To	Diameter (cm/in)
0'	66'	9 3/4"
66'	220'	6"

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* Not tested

If pumping discontinued, give reason: X

Pump intake set at (m/ft): 180

Pumping rate (l/min / GPM): 20

Duration of pumping: 1 hrs + 0 min

Final water level end of pumping (m/ft): 51.1'

If flowing give rate (l/min / GPM): X

Recommended pump depth (m/ft): 140'

Recommended pump rate (l/min / GPM): 20 — 20 gpm

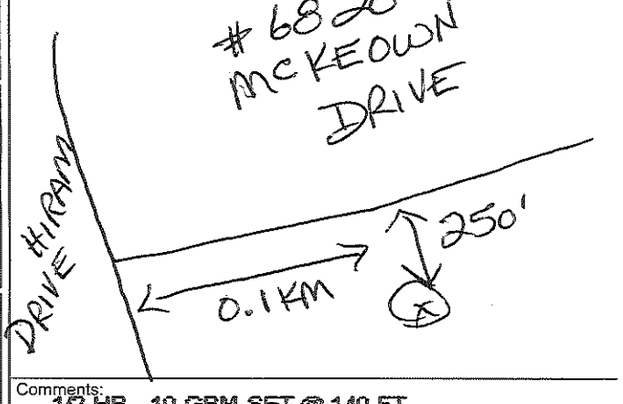
Well production (l/min / GPM): 20

Disinfected? ☒ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level	23.5"		51.1"
1	30	1	32.5
2	33.1	2	28.9
3	35.4	3	27.3
4	37	4	26.7
5	38.3	5	26.4
10	41.5	10	25.2
15	43.1	15	24.2
20	44.2	20	23.5
25	45.2	25	23.5
30	46.1	30	23.5
40	47.8	40	23.5
50	49.4	50	23.5
60	51.1'	60	23.5"

Map of Well Location

Please provide a map below following instructions on the back.



Comments: 1/2 HP - 10 GPM SET @ 140 FT

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Air Rock Drilling Co. Ltd.	1119

Business Address (Street Number/Name)	Municipality
6650 Frankdown Road, RR#1	Richmond

Province	Postal Code	Business E-mail Address
ON	K0A 2Z0	air-rock@sympatico.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6138882170	Hanna, Jeremy

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted (Y Y Y Y M M D D)
13632		2017 09 29

Well owner's information package delivered	Date Package Delivered (Y Y Y Y M M D D)	Ministry Use Only
☒ Yes ☐ No	2017 09 15	Audit No. Z262386
	Date Work Completed (Y Y Y Y M M D D) 2017 09 15	Received OCT 13 2017

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Follow the **COVID-19 restrictions and public health measures (https://covid-19.ontario.ca/public-health-measures)** and **book your appointment to get vaccinated (https://covid-19.ontario.ca/book-vaccine/)** .

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: 7310034
Well Audit Number: *Z262192*
Well Tag Number: *A229069*
This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	1314 SOUTH BEACH BLVD

Township	OSGOODE TOWNSHIP
Lot	004
Concession	CON 04
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	GREELY
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 454482.00 Northing: 5012159.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	SAND	GRVL		0 ft	44 ft
GREY	LMSN			44 ft	95 ft
GREY	LMSN			95 ft	116 ft
GREY	LMSN			116 ft	134 ft
GREY	LMSN			134 ft	140 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed

40 ft	0 ft	BENTONITE SLURRY 21
50 ft	40 ft	NEAT CEMENT 12.5

Method of Construction & Well Use

Method of Construction	Well Use
Air Percussion	
	Domestic

Status of Well

Water Supply

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To
6.25 inch	STEEL	-2 ft	50 ft
6 inch	OPEN HOLE	50 ft	140 ft

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 1119

Results of Well Yield Testing

After test of well yield, water was	
If pumping discontinued, give reason	
Pump intake set at	80 ft
Pumping Rate	20 GPM
Duration of Pumping	1 h:0 m
Final water level	7.333 ft
If flowing give rate	
Recommended pump depth	80 ft
Recommended pump rate	20 GPM
Well Production	
Disinfected?	Y

Draw Down & Recovery

Draw Down Time(min)	Draw Down Water level	Recovery Time(min)	Recovery Water level
SWL	6 ft		
1	7 ft	1	6 ft
2	7 ft	2	6 ft
3	7.1 ft	3	6 ft
4	7.1 ft	4	6 ft
5	7.1 ft	5	6 ft

10	7.1 ft	10	6 ft
15	7.1 ft	15	6 ft
20	7.1 ft	20	6 ft
25	7.1 ft	25	6 ft
30	7.1 ft	30	6 ft
40	7.1 ft	40	6 ft
45		45	
50	7.1 ft	50	6 ft
60	7.1 ft	60	6 ft

Water Details

Water Found at Depth	Kind
95 ft	Untested
116 ft	Untested
134 ft	Untested

Hole Diameter

Depth From	Depth To	Diameter
0 ft	50 ft	9.75 inch
50 ft	140 ft	6 inch

Audit Number: Z262192

Date Well Completed: November 14, 2017

Date Well Record Received by MOE: April 24, 2018

Related

How to use a Ministry of the Environment map (/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

Ontario

Ministry of the Environment, Conservation and Parks

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)*

Tag#:A277265

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 3

[redacted]

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
1366 Johnston Prive	OSGoode	N/A	N/A

County/District/Municipality	City/Town/Village	Province	Postal Code
Ottawa	Ottawa	Ontario	K4P1W6

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	18	0455360	5014104	N/A	

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

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
	raised casing above Grade in acordince off regulation 903 *well was Sanitized*				

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m^3/ft^3)
		N/A	

Method of Construction

☐ Cable Tool ☐ Rotary (Conventional) ☐ Rotary (Reverse) ☐ Boring ☐ Air percussion ☐ Other, *specify* ____

☐ Diamond ☐ Jetting ☐ Driving ☑ ~~Digging~~

Well Use

☐ Public ☐ Domestic ☐ Livestock ☐ Irrigation ☐ Industrial ☐ Other, *specify* ____

☐ Commercial ☐ Municipal ☐ Test Hole ☐ Cooling & Air Conditioning

☐ Not used ☐ Dewatering ☐ Monitoring

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
	N/A		6"	6"

Construction Record - Screen

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

Status of Well

☑ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☐ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify* ____
☐ Other, *specify* ____

Water Details

Water found at Depth (m/ft)	Gas	Kind of Water	Hole Diameter Depth From (m/ft)	Hole Diameter Depth To (m/ft)	Hole Diameter (cm/in)
	☐	☑ Untested ☐ Other, *specify* 11ft			
	☐	☐ Fresh ☐ Untested ☐ Other, *specify*			
	☐	☐ Fresh ☐ Untested ☐ Other, *specify*			

Hole Diameter: N/A

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify* ____

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM) /

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

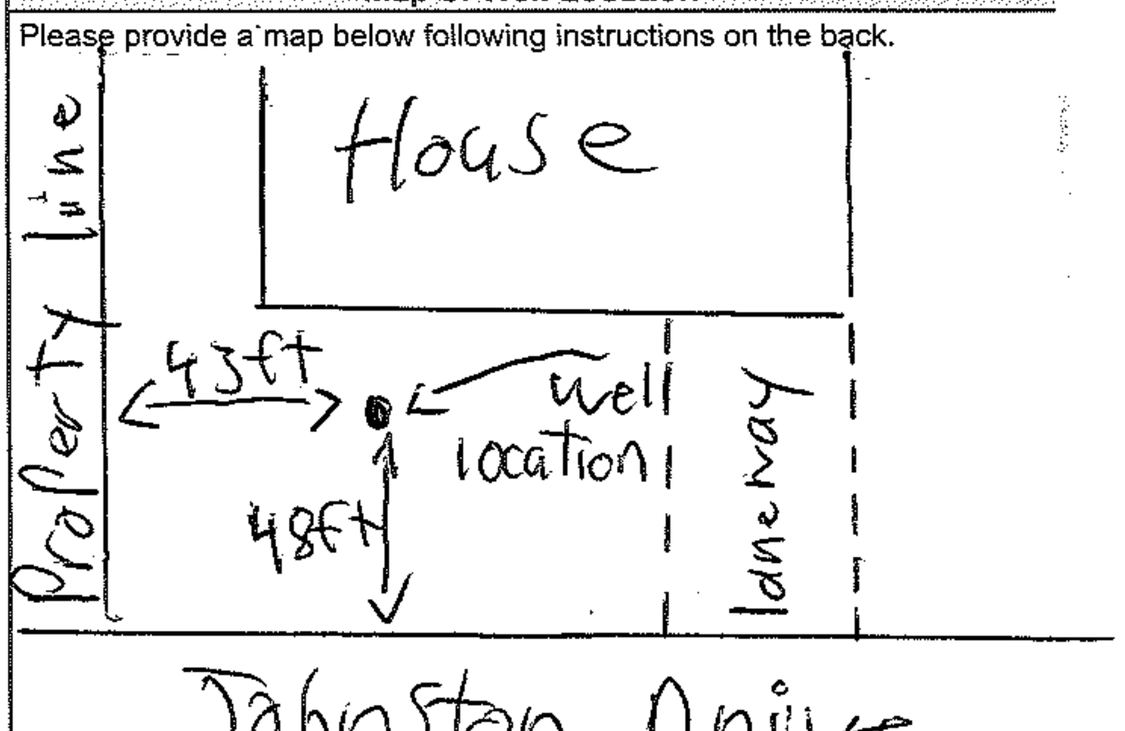
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level			
1		1	
2		2	
3		3	
4		4	
5		5	
10		10	
15		15	
20		20	
25		25	
30		30	
40		40	
50		50	
60		60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
CN electric & Plumbing	6364

Business Address (Street Number/Name)	Municipality
5640 Manotick main	Ottawa

Province	Postal Code	Business E-mail Address
ONT	K4M1B3	CN-electric.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)
6136923284	Sadler Johnston

Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
3689		20190816

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☑ Yes ☐ No	20180816	20180816

Ministry Use Only

Audit No. Z319379

SEP 06 2019

Received

0506E (2018/12)

Ministry's Copy

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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: 7372157
Well Audit Number: *Z344080*
Well Tag Number: *A305154*
This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location

Township	OSGOODE TOWNSHIP
Lot	004
Concession	CON 04
County/District/Municipality	OTTAWA-CARLETON
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 18 Easting: 454691.00 Northing: 5012376.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed

Method of Construction & Well Use

Method of Construction	Well Use

Status of Well

Construction Record - Casing

Inside Diameter	Open Hole or material	Depth From	Depth To

Construction Record - Screen

Outside Diameter	Material	Depth From	Depth To

Well Contractor and Well Technician Information

Well Contractor's Licence Number: 7681

Results of Well Yield Testing

After test of well yield, water was
If pumping discontinued, give reason
Pump intake set at

Pumping Rate
Duration of Pumping
Final water level
If flowing give rate
Recommended pump depth
Recommended pump rate
Well Production
Disinfected?

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

Audit Number: Z344080

Date Well Completed: September 11, 2020

Date Well Record Received by MOE: November 03, 2020

Related

How to use a Ministry of the Environment map (/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

Certificate of Analysis

Client: Paterson Group
154 Colonnade Rd. South
Nepean, ON
K2E 7T7
Attention: Mr. Kirby Magee-Dittburner
PO#: 33729
Invoice to: Paterson Group

Report Number: 1971215
Date Submitted: 2022-02-04
Date Reported: 2022-02-10
Project: PH4407
COC #: 885852

Dear Kirby Magee-Dittburner:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

APPROVAL: Addrine Thomas 2022.02.10 14:16:00 -05'00'

Addrine Thomas, Inorganics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

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Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline values listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official provincial or federal guideline as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

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Certificate of Analysis

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PO#: 33729
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Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1608980 GW 2022-02-03 GW1	1608981 GW 2022-02-03 GW2
Anions	Cl	1	mg/L	AO 250		97	96
	F	0.10	mg/L	MAC 1.5		0.16	0.15
	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		70	70
General Chemistry	Alkalinity as CaCO3	5	mg/L	OG 30-500		246	244
	Colour (Apparent)	2	TCU	AO 5		67*	28*
	Conductivity	5	uS/cm			848	840
	DOC	0.5	mg/L	AO 5		2.4	2.5
	pH	1.00		6.5-8.5		8.02	8.07
	Phenols	0.001	mg/L			<0.001	<0.001
	S2-	0.02	mg/L	AO 0.05			<0.02
		0.05	mg/L	AO 0.05		<0.05	
	TDS (COND - CALC)	1	mg/L	AO 500		551*	546*
	Turbidity	0.1	NTU	AO 5		4.9	2.2
Hardness	Hardness as CaCO3	1	mg/L	OG 80-100		384*	380*
Indices/Calc	Ion Balance	0.01				0.98	0.98
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
	B	0.01	mg/L	IMAC 5.0		0.02	0.02
	Ba	0.01	mg/L	MAC 1.0		0.40	0.40
	Be	0.0005	mg/L			<0.0005	<0.0005
	Ca	1	mg/L			101	101
	Cd	0.0001	mg/L	MAC 0.005		<0.0001	<0.0001

Guideline = ODWSOG *** = Guideline Exceedence**

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154 Colonnade Rd. South
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K2E 7T7
Attention: Mr. Kirby Magee-Dittburner
PO#: 33729
Invoice to: Paterson Group

Report Number: 1971215
Date Submitted: 2022-02-04
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Project: PH4407
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Group	Analyte	MRL	Units	Guideline	1608980 GW 2022-02-03 GW1	1608981 GW 2022-02-03 GW2
	Lab I.D.				1608980	1608981
	Sample Matrix				GW	GW
	Sample Type					
	Sampling Date				2022-02-03	2022-02-03
	Sample I.D.				GW1	GW2
Metals	Co	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	0.008	0.003
	Fe	0.03	mg/L	AO 0.3	0.58*	0.46*
	Hg	0.0001	mg/L	MAC 0.001	<0.0001	<0.0001
	K	1	mg/L		2	2
	Mg	1	mg/L		32	31
	Mn	0.01	mg/L	AO 0.05	0.03	0.03
	Mo	0.005	mg/L		<0.005	<0.005
	Na	1	mg/L	AO 200	28	28
	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		0.306	0.293
	Tl	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
Nutrients	N-NH3	0.010	mg/L		<0.010	<0.010
	Total Kjeldahl Nitrogen	0.100	mg/L		0.210	0.402
Subcontract	Tannin & Lignin	0.1	mg/L		0.9	0.9
VOCs Surrogates	1,2-dichloroethane-d4	0	%		110	120

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K2E 7T7
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PO#: 33729
Invoice to: Paterson Group

Report Number: 1971215
Date Submitted: 2022-02-04
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Project: PH4407
COC #: 885852

Group	Analyte	MRL	Units	Guideline	1608980 GW 2022-02-03 GW1	1608981 GW 2022-02-03 GW2
	Lab I.D.				1608980	1608981
	Sample Matrix				GW	GW
	Sample Type					
	Sampling Date				2022-02-03	2022-02-03
	Sample I.D.				GW1	GW2
VOCs Surrogates	4-bromofluorobenzene	0	%		82	73
	Toluene-d8	0	%		119	103
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	0.2	ug/L	IMAC 5	<0.2	<0.2
	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)	0.3	ug/L		<0.3	<0.3
	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
	c-1,2-Dichloroethylene	0.4	ug/L		<0.4	<0.4
	c-1,3-Dichloropropylene	0.2	ug/L		<0.2	<0.2
	Carbon Tetrachloride	0.2	ug/L	MAC 2	<0.2	<0.2
	Chloroethane	0.2	ug/L		<0.2	<0.2
	Chloroform	0.5	ug/L		<0.5	<0.5

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Date Submitted: 2022-02-04
Date Reported: 2022-02-10
Project: PH4407
COC #: 885852

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1608980 GW 2022-02-03 GW1	1608981 GW 2022-02-03 GW2
Volatiles	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	0.2	ug/L			<0.2	<0.2
	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
	Xylene; total	0.5	ug/L	MAC 90		<0.5	<0.5

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Report Number: 1971215
Date Submitted: 2022-02-04
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Project: PH4407
COC #: 885852

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 416630 **Analysis/Extraction Date** 2022-02-05 **Analyst** DRA **Method** AMBCOLM1			
Escherichia Coli			
Total Coliforms			
Run No 416636 **Analysis/Extraction Date** 2022-02-04 **Analyst** AaN **Method** C SM2130B			
Turbidity	<0.1 NTU	99	70-130
Run No 416668 **Analysis/Extraction Date** 2022-02-07 **Analyst** AsA **Method** C SM2120C			
Colour (Apparent)	<2 TCU	109	90-110
Run No 416675 **Analysis/Extraction Date** 2022-02-07 **Analyst** SKH **Method** EPA 350.1			
N-NH3	<0.010 mg/L	104	80-120
Run No 416691 **Analysis/Extraction Date** 2022-02-07 **Analyst** SKH **Method** EPA 351.2			
Total Kjeldahl Nitrogen	<0.100 mg/L	98	70-130
Run No 416692 **Analysis/Extraction Date** 2022-02-07 **Analyst** AsA **Method** C SM4500-S2-D			
S2-	<0.01 mg/L	92	80-120

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QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 416703 **Analysis/Extraction Date** 2022-02-07 **Analyst** Z S **Method** M SM3120B-3500C			
Calcium	<1 mg/L	99	90-110
Potassium	<1 mg/L	90	87-113
Magnesium	<1 mg/L	98	76-124
Sodium	<1 mg/L	97	82-118
Run No 416719 **Analysis/Extraction Date** 2022-02-08 **Analyst** AaN **Method** SM 4110			
Chloride	<1 mg/L	100	90-110
N-NO2	<0.10 mg/L	101	90-110
N-NO3	<0.10 mg/L	105	90-110
SO4	<1 mg/L	105	90-110
Run No 416755 **Analysis/Extraction Date** 2022-02-07 **Analyst** AsA **Method** SM2320,2510,4500H/F			
Alkalinity (CaCO3)	<5 mg/L	104	90-110
Conductivity	<5 uS/cm	100	90-110
F	<0.10 mg/L	105	90-110
pH		99	90-110

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QC Summary

Analyte	Blank	QC % Rec	QC Limits
Run No 416780 **Analysis/Extraction Date** 2022-02-08 **Analyst** YH **Method** EPA 8260			
Tetrachloroethane, 1,1,1,2-	<0.5 ug/L	86	60-130
Trichloroethane, 1,1,1-	<0.4 ug/L	94	60-130
Tetrachloroethane, 1,1,2,2-	<0.5 ug/L	100	60-130
Trichloroethane, 1,1,2-	<0.4 ug/L	105	60-130
Dichloroethane, 1,1-	<0.4 ug/L	91	60-130
Dichloroethylene, 1,1-	<0.5 ug/L	93	60-130
Dichlorobenzene, 1,2-	<0.4 ug/L	82	60-130
Dichloroethane, 1,2-	<0.2 ug/L	97	60-130
Dichloropropane, 1,2-	<0.5 ug/L	88	60-130
1,3,5-trimethylbenzene	<0.3 ug/L	85	60-130
Dichlorobenzene, 1,3-	<0.4 ug/L	90	60-130
Dichloropropene,1,3-	<0.3 ug/L		
Dichlorobenzene, 1,4-	<0.4 ug/L	85	60-130
Acetone	<30 ug/L		60-130
Benzene	<0.5 ug/L	88	60-130
Bromodichloromethane	<0.3 ug/L	92	60-130

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QC Summary

Analyte	Blank	QC % Rec	QC Limits
Bromoform	<0.4 ug/L	101	60-130
Bromomethane	<0.5 ug/L	91	60-130
Dichloroethylene, 1,2-cis-	<0.4 ug/L	87	60-130
Dichloropropene,1,3-cis-	<0.2 ug/L	81	60-130
Carbon Tetrachloride	<0.2 ug/L	90	60-130
Chloroethane	<0.2 ug/L	92	60-130
Chloroform	<0.5 ug/L	90	60-130
Dibromochloromethane	<0.3 ug/L	103	60-130
Dichlorodifluoromethane	<0.5 ug/L	89	60-130
Methylene Chloride	<4.0 ug/L	117	60-130
Ethylbenzene	<0.5 ug/L	82	60-130
Ethylene dibromide	<0.2 ug/L	100	60-130
Hexane (n)	<5 ug/L	90	60-130
m/p-xylene	<0.4 ug/L	84	60-130
Methyl Ethyl Ketone	<10 ug/L	100	60-130
Methyl Isobutyl Ketone	<10 ug/L		60-130
Methyl tert-Butyl Ether (MTBE)	<2 ug/L	80	60-130
Chlorobenzene	<0.5 ug/L	99	60-130

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QC Summary

Analyte	Blank	QC % Rec	QC Limits
o-xylene	<0.4 ug/L	91	60-130
Styrene	<0.5 ug/L	87	60-130
Dichloroethylene, 1,2-trans-	<0.4 ug/L	85	60-130
Dichloropropene,1,3-trans-	<0.2 ug/L	84	60-130
Tetrachloroethylene	<0.3 ug/L	81	60-130
Toluene	<0.4 ug/L	88	60-130
Trichloroethylene	<0.3 ug/L	88	60-130
Trichlorofluoromethane	<0.5 ug/L	92	60-130
Vinyl Chloride	<0.2 ug/L	89	60-130
Run No 416789 **Analysis/Extraction Date** 2022-02-08 **Analyst** YH **Method** EPA 8260			
Xylene Mixture			
Run No 416791 **Analysis/Extraction Date** 2022-02-08 **Analyst** IP **Method** SM5530D/EPA420.2			
Phenols	<0.001 mg/L	57	50-120
Run No 416797 **Analysis/Extraction Date** 2022-02-08 **Analyst** AET **Method** C SM2340B			
Hardness as CaCO3			
Ion Balance			

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QC Summary

Analyte	Blank	QC % Rec	QC Limits
TDS (COND - CALC)			
Run No 416800 **Analysis/Extraction Date** 2022-02-08 **Analyst** AsA **Method** SM 5310B			
DOC	<0.5 mg/L	92	80-120
Run No 416836 **Analysis/Extraction Date** 2022-02-08 **Analyst** SD **Method** EPA 200.8			
Silver	<0.0001 mg/L	102	80-120
Aluminum	<0.01 mg/L	115	80-120
Arsenic	<0.001 mg/L	101	80-120
Boron (total)	<0.01 mg/L	116	80-120
Barium	<0.01 mg/L	95	80-120
Beryllium	<0.0005 mg/L	114	80-120
Cadmium	<0.0001 mg/L	99	80-120
Cobalt	<0.0002 mg/L	111	80-120
Chromium Total	<0.001 mg/L	110	80-120
Copper	<0.001 mg/L	115	80-120
Iron	<0.03 mg/L	112	80-120
Manganese	<0.01 mg/L	106	80-120

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PO#: 33729
Invoice to: Paterson Group

Report Number: 1971215
Date Submitted: 2022-02-04
Date Reported: 2022-02-10
Project: PH4407
COC #: 885852

QC Summary

Analyte	Blank	QC % Rec	QC Limits
Molybdenum	<0.005 mg/L	102	80-120
Nickel	<0.005 mg/L	116	80-120
Lead	<0.001 mg/L	108	80-120
Antimony	<0.0005 mg/L	111	80-120
Selenium	<0.001 mg/L	90	80-120
Strontium	<0.001 mg/L	93	80-120
Thallium	<0.0001 mg/L	109	80-120
Uranium	<0.001 mg/L	112	80-120
Vanadium	<0.001 mg/L	106	80-120
Zinc	<0.01 mg/L	104	80-120
Run No 416840 **Analysis/Extraction Date** 2022-02-07 **Analyst** AET **Method** SUBCONTRACT-A			
Tannin & Lignin	<0.10 mg/L	108	
Run No 416883 **Analysis/Extraction Date** 2022-02-09 **Analyst** SD **Method** EPA 200.8			
Mercury	<0.0001 mg/L	119	80-120

Guideline = ODWSOG *** = Guideline Exceedence**

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

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

Certificate of Analysis

Client: Paterson Group
154 Colonnade Rd. South
Nepean, ON
K2E 7T7
Attention: Mr. Kirby Magee-Dittburner
PO#: 33729
Invoice to: Paterson Group

Report Number: 1971215
Date Submitted: 2022-02-04
Date Reported: 2022-02-10
Project: PH4407
COC #: 885852

Sample Comment Summary

Sample ID: 1608980	GW1	S2-	MRL elevated due to matrix interference (dilution was done).
Sample ID: 1608981	GW2	S2-	MRL elevated due to matrix interference (dilution was done).

Guideline = ODWSOG *** = Guideline Exceedence**

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

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

patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Proposed Building Addition - 1353 Coker Street
Ottawa, Ontario

DATUM Geodetic

FILE NO. PG6052

REMARKS

HOLE NO. TP 1-21

BORINGS BY Backhoe **DATE** December 17, 2021

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	100.05
Asphaltic concrete							
0.20							
FILL: Brown silty sand with gravel and crushed stone		G	1				
0.60							
Compact, brown **SILTY SAND**		G	2			1	99.05
1.35							
Very stiff to stiff, grey **SILTY CLAY**		G	3			2	98.05
- silt content increasing with depth							
2.50							
Stiff, grey **CLAYEY SILT**		G	4			3	97.05
3.20							
End of Test Pit							
(Groundwater infiltration at 1.0m depth)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone

○ Water Content %

20 40 60 80

Piezometer Construction

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Proposed Building Addition - 1353 Coker Street
Ottawa, Ontario

DATUM Geodetic

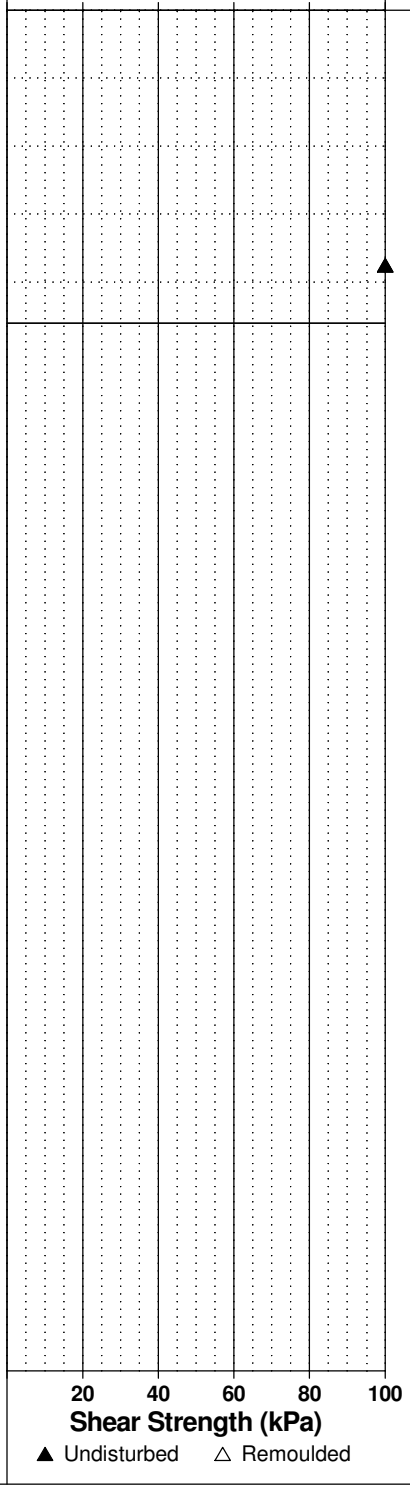
FILE NO. PG6052

REMARKS

HOLE NO. TP 2-21

BORINGS BY Backhoe **DATE** December 17, 2021

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	100.06		
FILL: Crushed stone with sand									
0.47									
FILL: Brown silty sand with gravel		G	1						
0.65									
Very stiff to stiff, grey **SILTY CLAY**		G	2						
0.92									
End of Test Pit									
(Groundwater infiltration at 0.4m depth)									



patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Proposed Building Addition - 1353 Coker Street
Ottawa, Ontario

DATUM Geodetic

FILE NO. PG6052

REMARKS

HOLE NO. TP 3-21

BORINGS BY Backhoe **DATE** December 17, 2021

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone ○ Water Content %	Piezometer Construction
GROUND SURFACE						0	100.26		
FILL: Crushed stone with sand									
0.52									
FILL: Brown silty sand with gravel, trace organics		G	1						
0.64									
Compact, brown **SILTY SAND**		G	2						▽
1.00						1	99.26		
Very stiff to stiff, grey **SILTY CLAY**									
- silt content increasing with depth		G	3			2	98.26		
2.20									
Stiff, grey **CLAYEY SILT**									
3.00		G	4			3	97.26		
End of Test Pit									
(Groundwater infiltration at 0.9m depth)									

Pen. Resist. Blows/0.3m: ● 50 mm Dia. Cone; ○ Water Content %

20 40 60 80

20 40 60 80 100

Shear Strength (kPa)

▲ Undisturbed △ Remoulded

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154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Geotechnical Investigation
Proposed Building Addition - 1353 Coker Street
Ottawa, Ontario

DATUM Geodetic

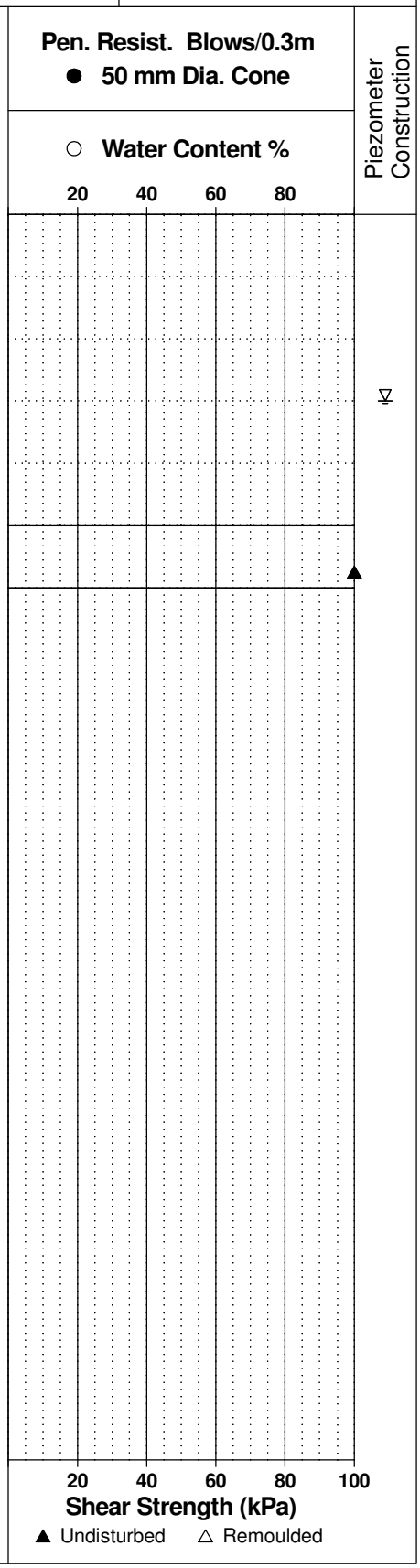
FILE NO. PG6052

REMARKS

HOLE NO. TP 4-21

BORINGS BY Backhoe **DATE** December 17, 2021

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	100.14
FILL: Crushed stone with sand							
0.40							
FILL: Brown silty sand with gravel		G	1				
0.82		G	2				
Compact, brown **SILTY SAND**							
1.00						1	99.14
Very stiff, grey **SILTY CLAY**		G	3				
1.20							
End of Test Pit							
(Groundwater infiltration at 0.6m depth)							



SYMBOLS AND TERMS

SOIL DESCRIPTION

Behavioural properties, such as structure and strength, take precedence over particle gradation in describing soils. Terminology describing soil structure are as follows:

Desiccated	-	having visible signs of weathering by oxidation of clay minerals, shrinkage cracks, etc.
Fissured	-	having cracks, and hence a blocky structure.
Varved	-	composed of regular alternating layers of silt and clay.
Stratified	-	composed of alternating layers of different soil types, e.g. silt and sand or silt and clay.
Well-Graded	-	Having wide range in grain sizes and substantial amounts of all intermediate particle sizes (see Grain Size Distribution).
Uniformly-Graded	-	Predominantly of one grain size (see Grain Size Distribution).

The standard terminology to describe the strength of cohesionless soils is the relative density, usually inferred from the results of the Standard Penetration Test (SPT) 'N' value. The SPT N value is the number of blows of a 63.5 kg hammer, falling 760 mm, required to drive a 51 mm O.D. split spoon sampler 300 mm into the soil after an initial penetration of 150 mm.

Relative Density	'N' Value	Relative Density %
Very Loose	<4	<15
Loose	4-10	15-35
Compact	10-30	35-65
Dense	30-50	65-85
Very Dense	>50	>85

The standard terminology to describe the strength of cohesive soils is the consistency, which is based on the undisturbed undrained shear strength as measured by the in situ or laboratory vane tests, penetrometer tests, unconfined compression tests, or occasionally by Standard Penetration Tests.

Consistency	Undrained Shear Strength (kPa)	'N' Value
Very Soft	<12	<2
Soft	12-25	2-4
Firm	25-50	4-8
Stiff	50-100	8-15
Very Stiff	100-200	15-30
Hard	>200	>30

SYMBOLS AND TERMS (continued)

SOIL DESCRIPTION (continued)

Cohesive soils can also be classified according to their “sensitivity”. The sensitivity is the ratio between the undisturbed undrained shear strength and the remoulded undrained shear strength of the soil.

Terminology used for describing soil strata based upon texture, or the proportion of individual particle sizes present is provided on the Textural Soil Classification Chart at the end of this information package.

ROCK DESCRIPTION

The structural description of the bedrock mass is based on the Rock Quality Designation (RQD).

The RQD classification is based on a modified core recovery percentage in which all pieces of sound core over 100 mm long are counted as recovery. The smaller pieces are considered to be a result of closely-spaced discontinuities (resulting from shearing, jointing, faulting, or weathering) in the rock mass and are not counted. RQD is ideally determined from NXL size core. However, it can be used on smaller core sizes, such as BX, if the bulk of the fractures caused by drilling stresses (called “mechanical breaks”) are easily distinguishable from the normal in situ fractures.

RQD %	ROCK QUALITY
90-100	Excellent, intact, very sound
75-90	Good, massive, moderately jointed or sound
50-75	Fair, blocky and seamy, fractured
25-50	Poor, shattered and very seamy or blocky, severely fractured
0-25	Very poor, crushed, very severely fractured

SAMPLE TYPES

SS	-	Split spoon sample (obtained in conjunction with the performing of the Standard Penetration Test (SPT))
TW	-	Thin wall tube or Shelby tube
PS	-	Piston sample
AU	-	Auger sample or bulk sample
WS	-	Wash sample
RC	-	Rock core sample (Core bit size AXT, BXL, etc.). Rock core samples are obtained with the use of standard diamond drilling bits.

SYMBOLS AND TERMS (continued)

GRAIN SIZE DISTRIBUTION

MC%	-	Natural moisture content or water content of sample, %
LL	-	Liquid Limit, % (water content above which soil behaves as a liquid)
PL	-	Plastic limit, % (water content above which soil behaves plastically)
PI	-	Plasticity index, % (difference between LL and PL)
Dxx	-	Grain size which xx% of the soil, by weight, is of finer grain sizes These grain size descriptions are not used below 0.075 mm grain size
D10	-	Grain size at which 10% of the soil is finer (effective grain size)
D60	-	Grain size at which 60% of the soil is finer
Cc	-	Concavity coefficient = $(D30)^2$ / (D10 x D60)
Cu	-	Uniformity coefficient = D60 / D10

Cc and Cu are used to assess the grading of sands and gravels:
Well-graded gravels have: $1 < Cc < 3$ and $Cu > 4$
Well-graded sands have: $1 < Cc < 3$ and $Cu > 6$
Sands and gravels not meeting the above requirements are poorly-graded or uniformly-graded.
Cc and Cu are not applicable for the description of soils with more than 10% silt and clay
(more than 10% finer than 0.075 mm or the #200 sieve)

CONSOLIDATION TEST

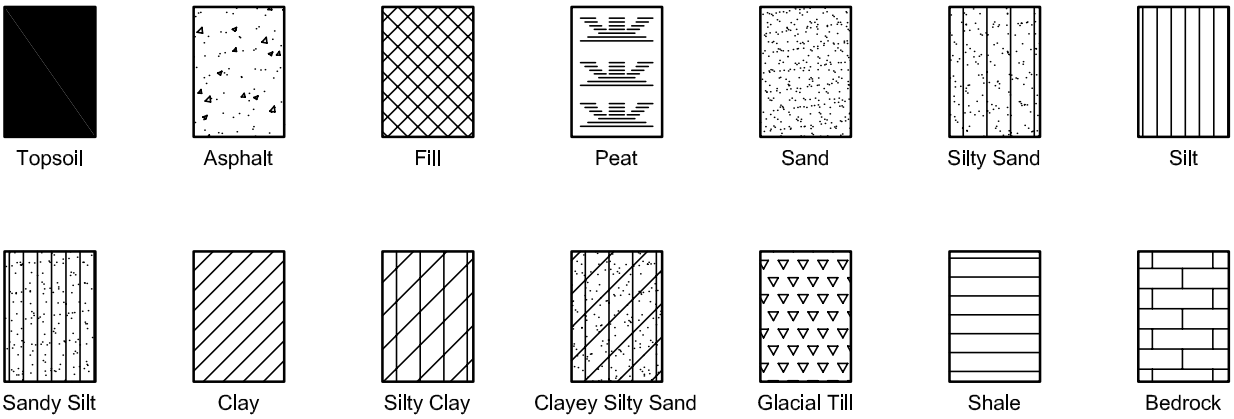
p'_o	-	Present effective overburden pressure at sample depth
p'_c	-	Preconsolidation pressure of (maximum past pressure on) sample
Ccr	-	Recompression index (in effect at pressures below p'_c)
Cc	-	Compression index (in effect at pressures above p'_c)
OC Ratio		Overconsolidaton ratio = p'_c / p'_o
Void Ratio		Initial sample void ratio = volume of voids / volume of solids
Wo	-	Initial water content (at start of consolidation test)

PERMEABILITY TEST

k	-	Coefficient of permeability or hydraulic conductivity is a measure of the ability of water to flow through the sample. The value of k is measured at a specified unit weight for (remoulded) cohesionless soil samples, because its value will vary with the unit weight or density of the sample during the test.

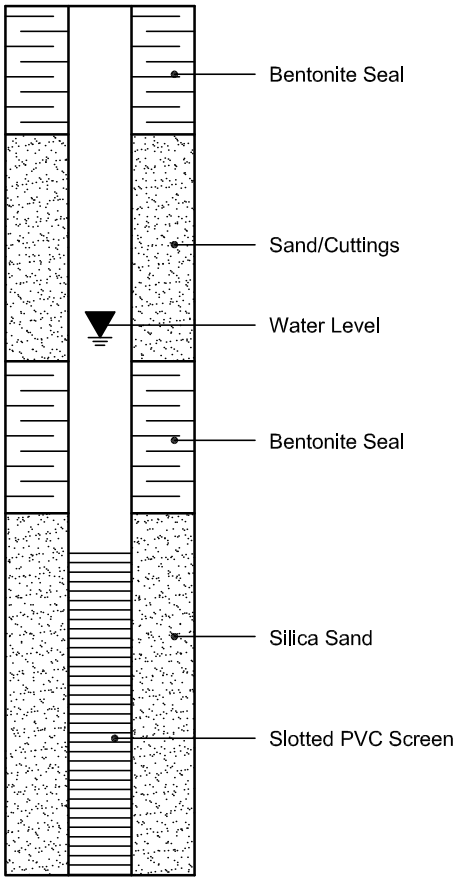
SYMBOLS AND TERMS (continued)

STRATA PLOT

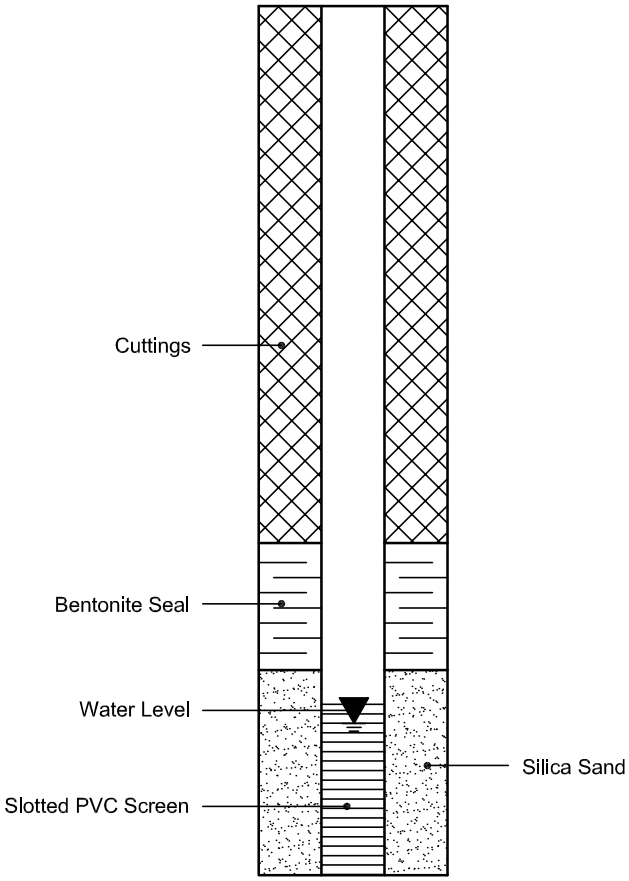


MONITORING WELL AND PIEZOMETER CONSTRUCTION

MONITORING WELL CONSTRUCTION

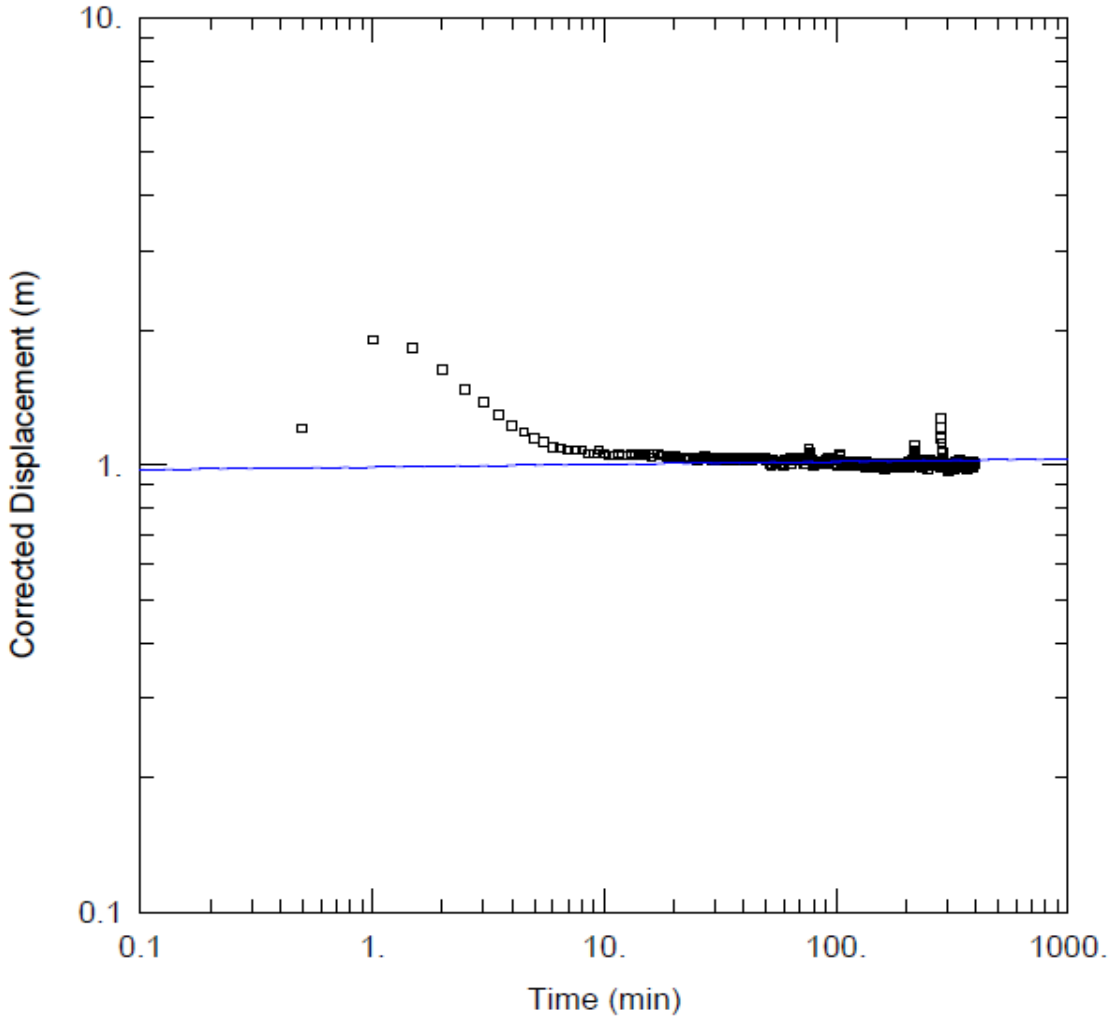


PIEZOMETER CONSTRUCTION



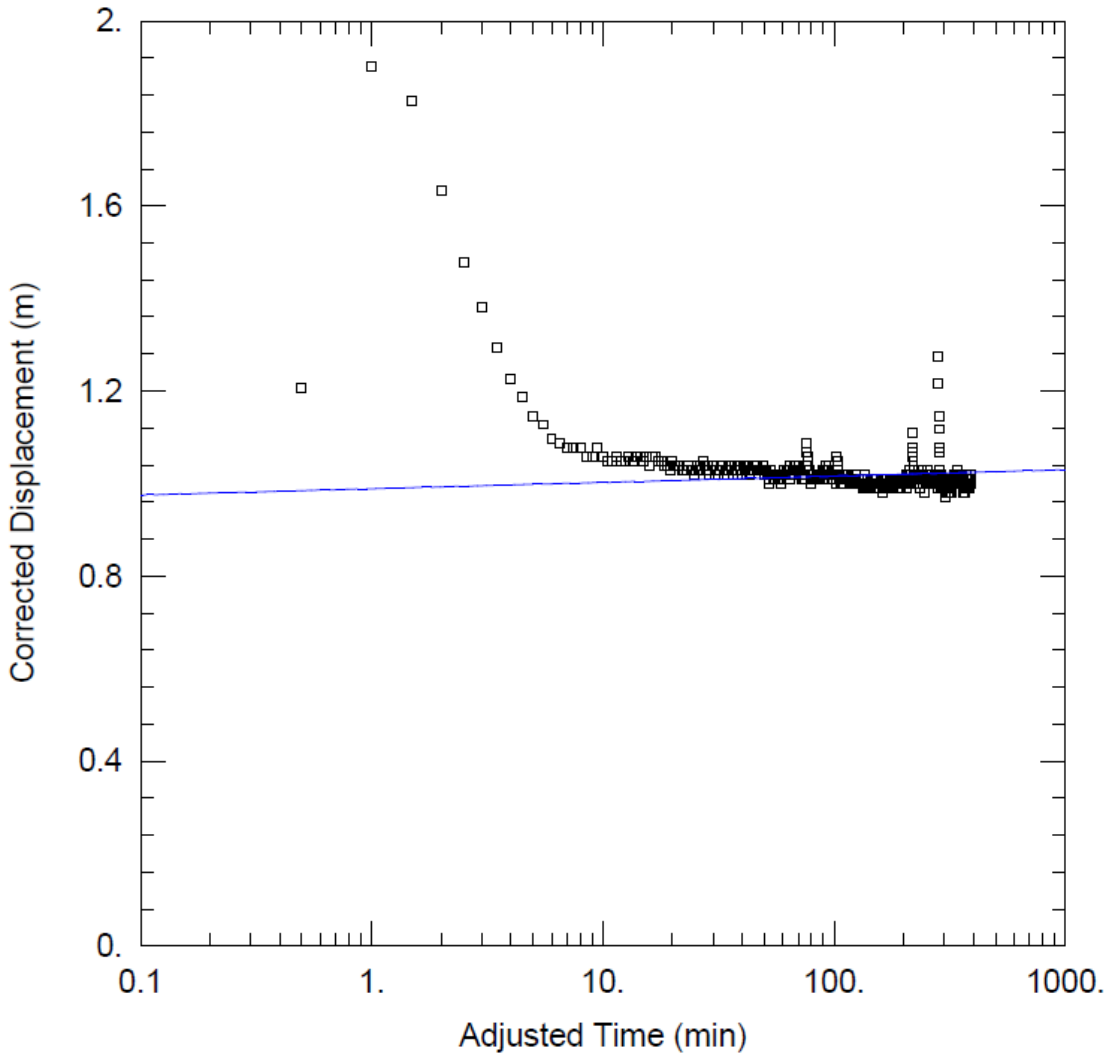
Pumping Test Analysis Report

File No.	PH4407	Well ID:	TW1
Date:	February 22, 2022	Solution Method:	**Theis**
Client:	Dymech Engineering Inc.	Transmissitivity (m2/day):	367.2
Site Address:	1353 Coker Street, Ottawa, ON	Discharge Rate (L/min)	19
Project:	Site Plan Application	Analysis performed by:	EA



Pumping Test Analysis Report

File No.	PH4407	Well ID:	TW1
Date:	February 22, 2022	Solution Method:	**Cooper-Jacob**
Client:	Dymech Engineering Inc.	Transmissitivity (m2/day):	367.2
Site Address:	1353 Coker Street, Ottawa, ON	Discharge Rate (L/min)	19
Project:	Site Plan Application	Analysis performed by:	EA



Pumping Test Analysis Report

File No.	PH4407
Date:	February 22, 2022
Client:	Dymech Engineering Inc.
Site Address:	1353 Coker Street, Ottawa, ON
Project:	Site Plan Application

Summary Table:

Solution Method:	Well ID:	Transmissitivity (m2/day):
Theis	TW1	367.2
Cooper-Jacob	TW1	367.2
Average:		**367.20**

patersongroup PH4407

1353 Coker Street, Ottawa - Dymech

PREDICTIVE NITRATE IMPACT ASSESSEMENT

Infiltration Factors		
Topography	0.30	
Soil	0.30	
Cover	0.10	
Total	**0.70**	
Site Characteristics		
Area of Site :	2675	m^2
Total of roof areas:	729	m^2
Total area of paved driveway areas:	1327	m^2
Roof + paved driveway areas	2056	m^2
Impervious Area	2056	m^2
Percent Impervious Area =	77	%
Infiltration Area =	619	m^2
Septic Effluent		
Concentration of Effluent (Cs) =	4	mg/L
Daily Sewage Flow (Qs)=	3.6	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) =	0	m^3/day
Mass Balance Model (MOEE, 1995)		
$C_T = (Q_bC_b+Q_eC_e+Q_iC_i)/(Q_b+Q_e+Q_i)$ = Cumulative 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	3.6	m^3/day
C_e = concentration of nitrates in the septic effluent	4	mg/L
Q_i = flow entering the system from infiltration	0	m^3/day
C_i = Concentration of nitrates in the infiltrate	0	mg/L
C_T =	**3.56**	**mg/L**
Estimate Number of Lots	**1**	**lots**

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

patersongroup

1353 Coker Street, Ottawa

PH4407

TW1	inputs		
pH	8.07	A	0.17
TDS	546	B	2.40
Hardness	380	C	2.18
Alkalinity	244	D	2.39
Temp.	9.3		
		pHs =	7.30321912

Langelier Saturation Index (LSI) Calculation

(Langelier, 1936)

LSI = pH - pHs

pHs = (9.3 + A + B) - (C + D)

Where:

A = (Log10 [TDS] - 1) / 10

B = -13.12 x Log10 (oC + 273) + 34.55

C = Log10 [Ca2+ as CaCO3] - 0.4

D = Log10 [alkalinity as CaCO3]

LSI =	0.8

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).

WaterNOx-LS Third Party Testing Summary

In the fall of 2016, Waterloo Biofilter Systems Inc. installed their WaterNOx-LS™ denitrification unit at the Bureau de Normalisation du Quebec (BNQ) test site located in Quebec City. The system underwent BNQ 3680-600 test protocol which includes two parts - Period A and Period B. Period A is based on the methodology of NSF/ANSI Standards 40 and 245, containing the same flow patterns and stress tests. Period B provides for a further 6 months of seasonal reliability testing to ensure that the test includes cold weather results.

The WaterNOx-LS is a passive autotrophic denitrification process using sulphur-limestone minerals in a submerged, up-flow configuration. The WaterNOx-LS, which was sized for 1,600 L/day (350 gpd) followed a Waterloo Biofilter nitrifying treatment unit.

Period A Test Results

During Period A wastewater is dosed according to the hydraulic loading specified in NSF-40. Period A includes the wash-day, working-parent, power failure, and vacation period stress tests. All sample results taken during stress tests are included in the analysis. Influent wastewater temperature values ranged from 10.0 °C (50 °F) to 16.5 °C (62 °F) with an average value of 13.3 °C (56 °F). Influent pH averaged 7.9 and effluent pH averaged 7.2.

Table 1 – Period A Results for the WaterNOx-LS

Parameters	Influent	Effluent	Removal
(c)BOD_5	260	6	97.6%
TSS	312	3	99.2%
Fecal Coliforms	2,403,000	4,900	99.8%
$NO_{2,3}$	-	0.20	-
TKN	57.1	4.6	92.0%
TN ($NO_{2,3}$ + TKN)	57.1	4.8	91.6%

n = 123; n = 357 for fecals
All parameters in mg/L except Fecal Coliforms in cfu/100mL
All values arithmetic averages except Fecal Coliforms in geometric average

Weekly influent total nitrogen concentrations ranged from 43.0 mg/L to 68.8 mg/L with a six-month average concentration of 57.1 mg/L.

Weekly effluent $NO_{2,3}$ concentrations ranged from < 0.02 mg/L to 3.33 mg/L with a six-month average of 0.20 mg/L. Weekly effluent TKN concentrations ranged from 1.5 mg/L to 16.9 mg/L with a six-month average of 4.6 mg/L. Weekly effluent total nitrogen concentrations ranged from 1.7 mg/L to 17.1 mg/L with a six-month average of 4.8 mg/L. The total nitrogen reduction over the six-month period was 91.6%.

65 Massey Road, Suite C, Guelph ON N1H 7M6 T: 519 856-0757 1-866-366-4329 F: 519 856-0759 www.waterloo-biofilter.com

Period B Test Results

Weekday hydraulic loading is modified during Period B to a strenuous 'working parent' schedule where 40% of the flow is delivered over three hours in the morning, and 60% is delivered over three hours in the evening. All samples taken during Period B are included in the analysis. Influent wastewater temperature values ranged from 10.1 °C (50 °F) to 15.8 °C (60 °F) with an average value of 12.3 °C (54 °F). Influent pH averaged 8.0 and effluent pH averaged 7.1.

Table 2 – Period B Results for the WaterNOx-LS

Parameters	Influent	Effluent	Removal
(c)BOD_5	248	4	98.2%
TSS	304	3	99.1%
Fecal Coliforms	2,142,000	2,800	99.9%
$NO_{2,3}$	-	3.38	-
TKN	60.3	8.5	85.9%
TN ($NO_{2,3}$ + TKN)	60.4	11.9	80.3%

n = 59; n = 118 for fecals
All parameters in mg/L except Fecal Coliforms in cfu/100mL
All values arithmetic averages except Fecal Coliforms in geometric average

Weekly influent total nitrogen concentrations ranged from 21.2 mg/L to 85.6 mg/L with a six-month average concentration of 60.4 mg/L.

Weekly effluent $NO_{2,3}$ concentrations ranged from < 0.04 mg/L to 15.2 mg/L with a six-month average of 3.38 mg/L. Weekly effluent TKN concentrations ranged from 1.2 mg/L to 21.2 mg/L with a weekly average of 8.5 mg/L. Weekly effluent total nitrogen concentrations ranged from 3.7 mg/L to 22.2 mg/L with a six-month average of 11.9 mg/L. The total nitrogen reduction over the six-month period was 80.3%.

Conclusion

In summary, the WaterNOx-LS system can successfully remove very high levels of total nitrogen passively, while buffering pH to neutral and keeping $cBOD_5$ and TSS levels below 10 mg/L.

DRAWING LIST:

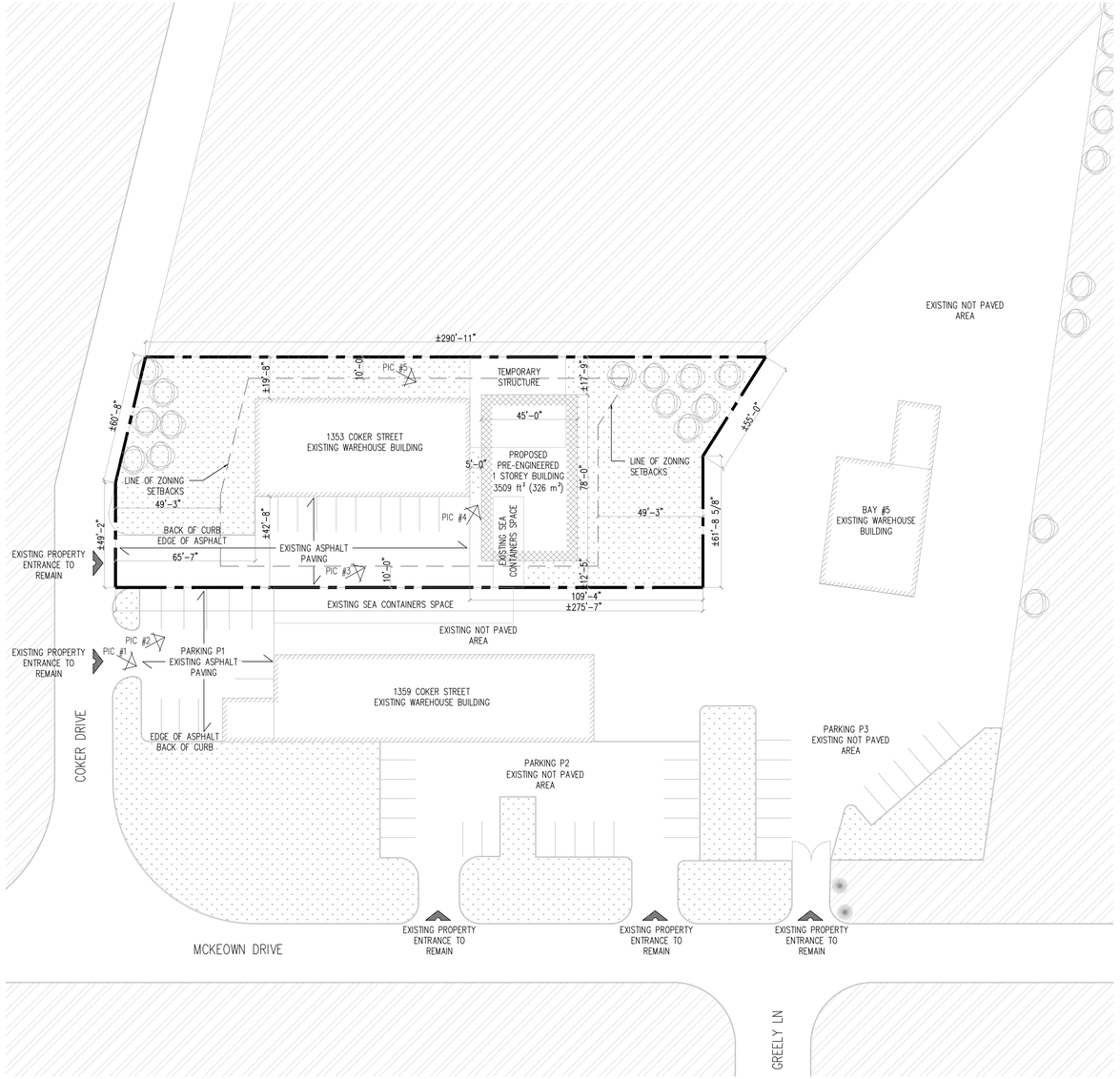
ARCHITECTURAL

A000 – COVER PAGE
A002 – DRAWING LIST, LEGEND + NEW SITE PLAN + ZONING COMPLIANCE + O.B.C MATRIX
A050 – EXCAVATION PLAN + NOTES
A100 – NEW FLOOR PLAN + NOTES
A200 – EXTERIOR ELEVATIONS + NOTES

LEGEND:

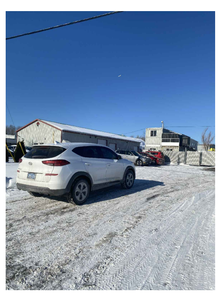
NOT INCLUDED IN CONTRACT (N.I.C.)

EXISTING GRASS



1 / A-002 NEW SITE PLAN
1/32" – 1'-0"

PICTURE #1


PICTURE #2


PICTURE #3


PICTURE #4


PICTURE #5

DYMECH ENGINEERING INC.

arbaum ARCHITECTS
535 LEGGET DRIVE, SUITE 102
KANATA, ONTARIO K2K 3B8

CLELAND JARDINE ENGINEERING LTD

D.B. Gray Engineering Inc.

LOCATION PLAN: GROUND FLOOR

TRUE NORTH

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	Issued for Class D estimate	Feb 22,2021

PROJECT NORTH

DATE

DRAWN
PB

CHECKED
AB

DATE PRINTED
–

NOT TO BE USED FOR CONSTRUCTION PURPOSES UNTIL SIGNED BY THE ARCHITECT.

DYMECH WAREHOUSE ADDITION

ADDRESS: 1359 COKER STREET, GREELY, ON. K4P 1A1

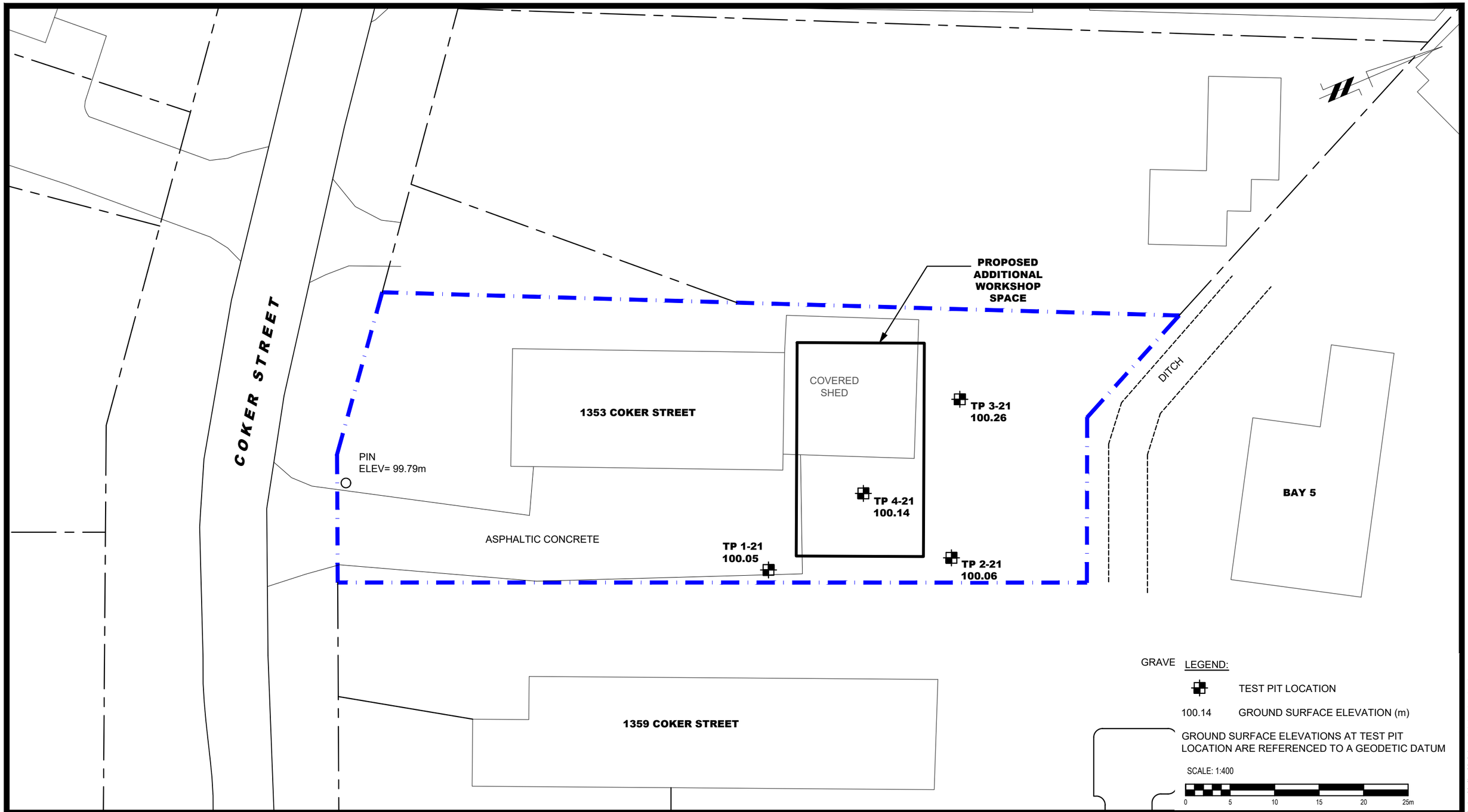
DRAWING TITLE

NEW SITE PLAN + NOTES

SCALE
AS SHOWN

PROJECT NO.
059-20

DRAWING NO. :
A-002



patersongroup
consulting engineers

154 Colonnade Road South
Ottawa, Ontario K2E 7J5
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL

DYMECH ENGINEERING INC.

GEOTECHNICAL INVESTIGATION
PROPOSED BUILDING ADDITION
1353 COKER STREET

GREELY, ONTARIO

Title:

TEST HOLE LOCATION PLAN

Scale: 1:400	Date: 01/2022
Drawn by: YA	Report No.: PG6052-1
Checked by: MS	Dwg. No.: PG6052-1
Approved by: DJG	Revision No.:

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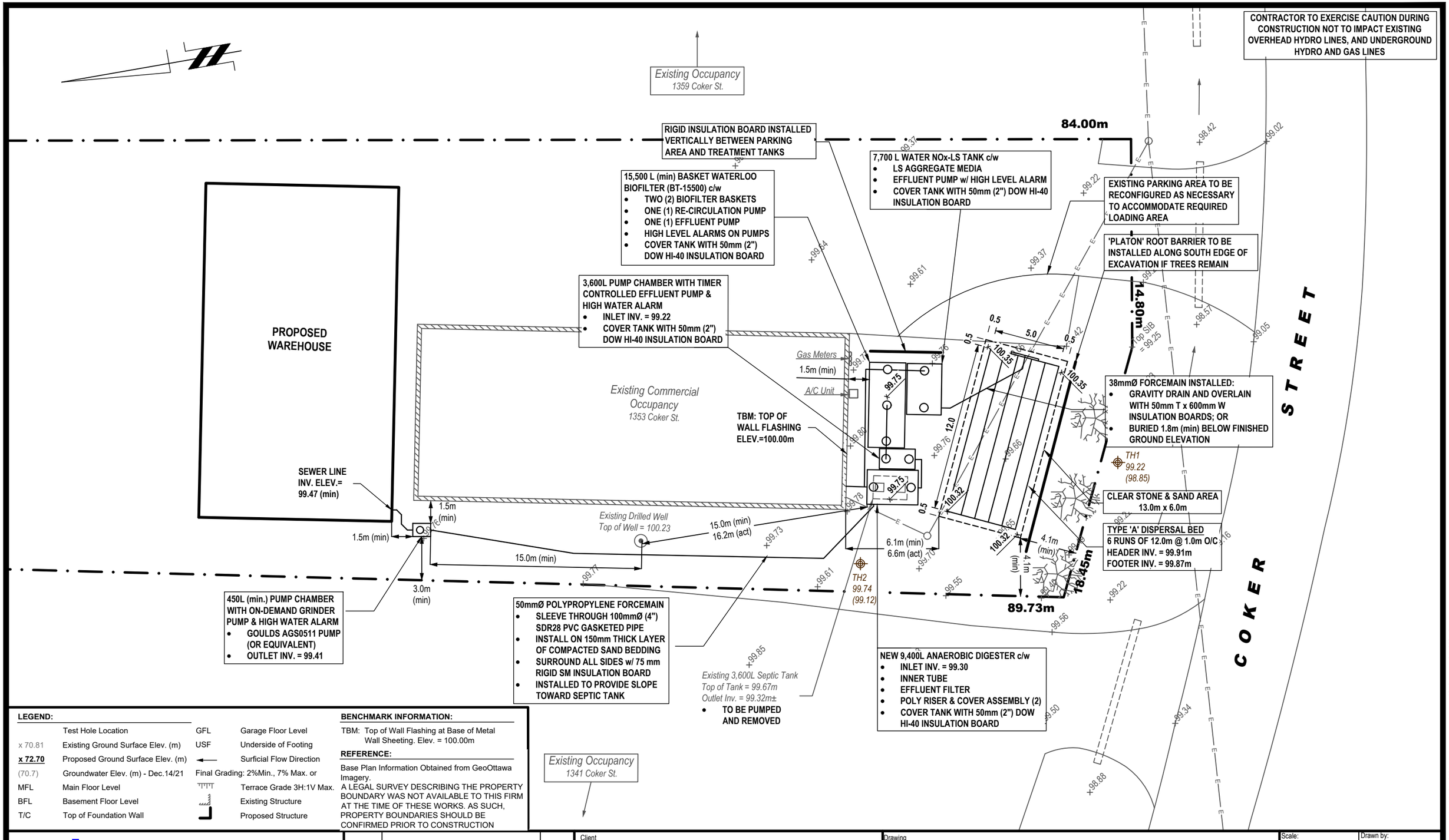

LEGEND:

	Test Hole Location	GFL	Garage Floor Level
x 70.81	Existing Ground Surface Elev. (m)	USF	Underside of Footing
x 72.70	Proposed Ground Surface Elev. (m)	←	Surficial Flow Direction
(70.7)	Groundwater Elev. (m) - Dec.14/21	Final Grading: 2%Min., 7% Max. or	
MFL	Main Floor Level		Terrace Grade 3H:1V Max.
BFL	Basement Floor Level		Existing Structure
T/C	Top of Foundation Wall		Proposed Structure

BENCHMARK INFORMATION:

TBM: Top of Wall Flashing at Base of Metal Wall Sheeting. Elev. = 100.00m

REFERENCE:

Base Plan Information Obtained from GeoOttawa Imagery.
A LEGAL SURVEY DESCRIBING THE PROPERTY BOUNDARY WAS NOT AVAILABLE TO THIS FIRM AT THE TIME OF THESE WORKS. AS SUCH, PROPERTY BOUNDARIES SHOULD BE CONFIRMED PRIOR TO CONSTRUCTION

patersongroup
consulting engineers
154 Colonnade Road, Ottawa, Ontario K2E 7J5

DD/MM/YY	Description	Rev.
17/02/22	Issued for Permit Approval	2
11/02/22	Revised per Treatment Requirements	1
21/12/21	Issued for Client Review	0

Client: **DYMECH ENGINEERING INC.**

Project: **PROPOSED REPLACEMENT SEWAGE SYSTEM**
1353 COKER STREET
OTTAWA (GREELY), ONTARIO

Drawing: **SEWAGE SYSTEM LAYOUT PLAN**

Scale: 1:250	Drawn by: AD
Date: 02/2022	Checked by: MK

Drawing no.: **PH4407-1(rev.2)**

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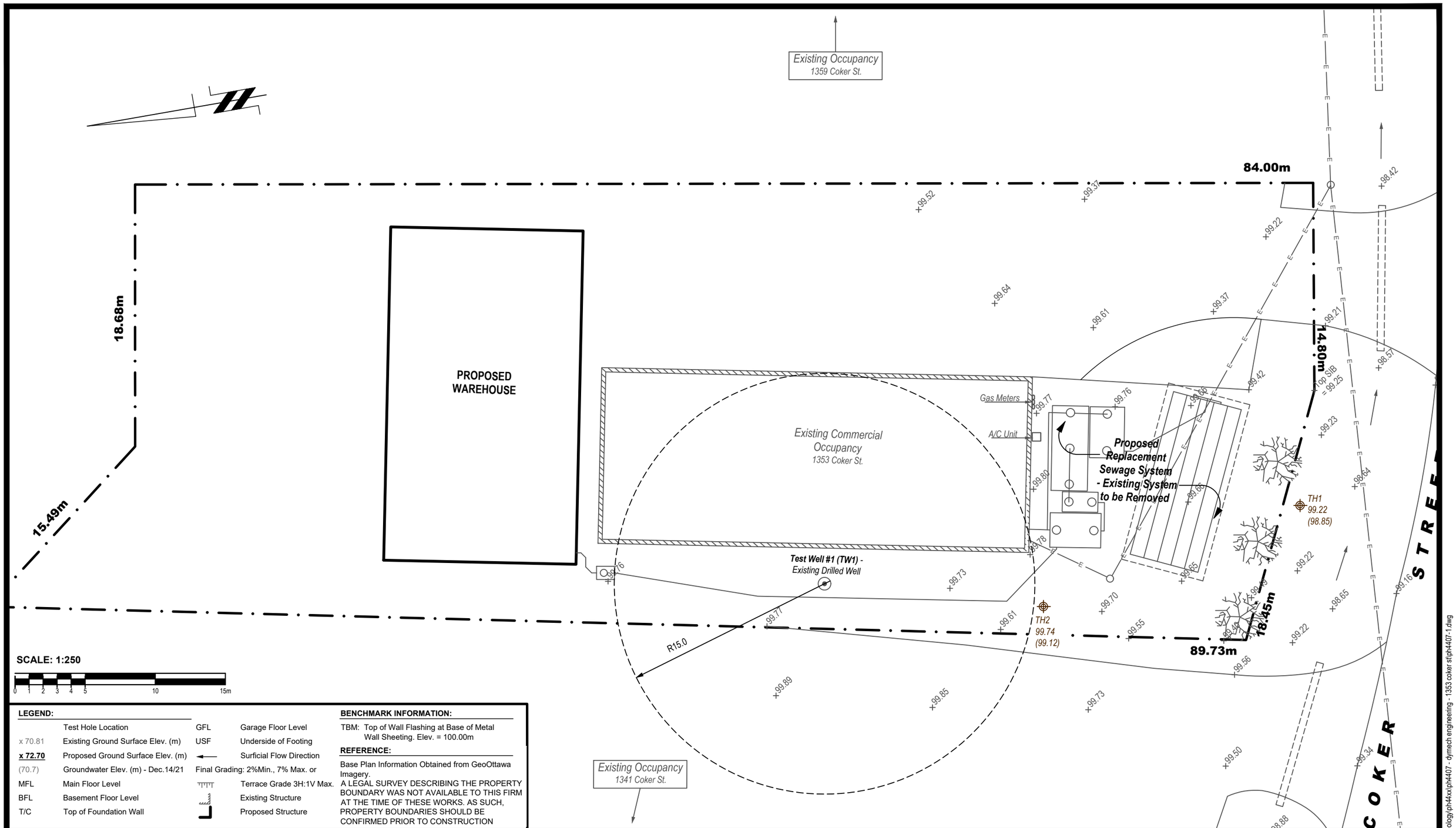

SCALE: 1:250

0 1 2 3 4 5 10 15m

LEGEND:

	Test Hole Location	GFL	Garage Floor Level
x 70.81	Existing Ground Surface Elev. (m)	USF	Underside of Footing
x 72.70	Proposed Ground Surface Elev. (m)	←	Surficial Flow Direction
(70.7)	Groundwater Elev. (m) - Dec.14/21	Final Grading: 2%Min., 7% Max. or	
MFL	Main Floor Level		Terrace Grade 3H:1V Max.
BFL	Basement Floor Level		Existing Structure
T/C	Top of Foundation Wall		Proposed Structure

BENCHMARK INFORMATION:

TBM: Top of Wall Flashing at Base of Metal Wall Sheeting. Elev. = 100.00m

REFERENCE:

Base Plan Information Obtained from GeoOttawa Imagery.
A LEGAL SURVEY DESCRIBING THE PROPERTY BOUNDARY WAS NOT AVAILABLE TO THIS FIRM AT THE TIME OF THESE WORKS. AS SUCH, PROPERTY BOUNDARIES SHOULD BE CONFIRMED PRIOR TO CONSTRUCTION

patersongroup
consulting engineers
154 Colonnade Road, Ottawa, Ontario K2E 7J5

DD/MM/YY	Description	Rev.
18/02/22	Issued for City Comment	0

Client: **DYMECH ENGINEERING INC.**

Project: **PROPOSED WAREHOUSE ADDITION**
1353 COKER STREET
OTTAWA (GREELY), ONTARIO

Drawing: **WATER WELL LOCATION PLAN**

Scale: 1:250	Drawn by: AD
Date: 02/2022	Checked by: MK

Drawing no.: **PH4407-3**

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Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa
3889 Rideau Valley Drive Box 599 Manotick, ON K4M 1A5
Phone: 613-692-3571 PRESS "4" for septic office 1-800-267-3504 Fax: 613-692-1507 Email: septic@rvca.ca

STREET/CIVIC INITIAL ☐
EMAIL ONLY

SEPTIC FILE # 22-059
OTTAWA

SITE ADDRESS: 1353 Coker St Township (OSG)-HUN-GLO-FIT-CUM-NEP-GOU-RID-KAN-TOR

CONTACT: 1. Ke Paterson 2. Dymech Eng. 3.

INFORMATION FOR OWNER/APPLICANT

Attached is your Sewage System Permit. **A minimum of two inspections are required before your proposed sewage system can be approved for use (additional inspections may be required for clay soils/bedrock and/or re-inspections).** Inspections must be requested in writing. Please see attached:

- Inspection fax request form (all inspections MUST be requested in writing)
- As-built components and drawing form
- Copy of the approved application and schedule pages
- Approved Part 8 permit: ***Electronic copy only** – **Be sure to INCLUDE in Building Application Package for Plans Examiner at CITY of OTTAWA client services, if NEW or RENO construction project.**

Special Note

- **A permit is valid for 12 months from the original date of issuance noted in "*permit date*".** If lapsed, it may be renewed only once for a period of 12 months *from the date of expiry.*

- No person shall make a material change or cause a material change to be made to a plan, specification, document or other information on the basis of which a permit was issued without notifying, filing details with and obtaining the authorization of the Chief Building Official. *(Building Code Act 1992, c.23, s.8(12))*

Sewage System Permit Construction Requirements

1. Clay Soils/Bedrock only (if required per issued Approval)
In clay soils/bedrock, a site preparation inspection is required. The total contact area must be properly prepared. Scarification must be done under dry conditions prior to importing leaching bed fill.

2. Installation Inspection – 2nd inspection
When the sewage system is substantially completed (i.e., before the final fill is placed over the septic tank and leaching bed system) an installation inspection is required. Prior to any inspection request, the following must be submitted:

a) "as-built components" and "as-built drawings" — see attached form
b) "engineer letter" — if the system is engineered
c) grain size analysis and weight bills for all Filter Media types of septic systems
d) Weigh bills for washed septic stone, where applicable
e) Maintenance/service contract for treatment unit installed

3. Final Grading Inspection – 3rd inspection
When construction of the sewage system is complete, a final grading inspection is required. Before a Certificate of Completion can be issued, the following must be complete:

a) The leaching bed and septic tank must be covered with sand fill and topsoil and graded accordingly
b) All conditions of the Sewage System Permit & comments on the installation inspection report must be met
c) The depth of cover & material type must be identified by inspection pipes or holes placed over trenches at 4 corners of bed
d) The 4 corners of the bed must be staked

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REFER TO:

Application for a Permit to Construct or Demolish

This form is authorized under subsection 8(1.1) of the *Building Code Act, 1992*

SEPTIC FILE # 22-059 OTTAWA

For use by Principal Authority	
Application number:	Permit number (if different):
Date received:	Roll number:

Application submitted to: OTTAWA SEPTIC SYSTEM OFFICE
(Name of municipality, upper-tier municipality, board of health or conservation authority)

A. Project information

Building number, street name	Unit number	Lot/con.
1353 Coker St.		

Municipality	Postal code	Plan number/other description
Ottawa (Osgoode)	K4P 1A1	

Project value est. $	Area of work (m^2)

B. Purpose of application

☑ New construction ☐ Addition to an existing building ☐ Alteration/repair ☐ Demolition ☐ Conditional Permit

Proposed use of building	Current use of building
Commercial	

Description of proposed work
Construction of new sewage system to accommodate proposed construction of additional warehouse building

C. Applicant

Applicant is: Owner or Authorized agent of owner

Last name	First name	Corporation or partnership	
Dillon	Adam	Paterson Group Inc.	
Street address		Unit number	Lot/con.
154 Colonnade Rd. S			
Municipality	Postal code	Province	E-mail
Ottawa (Nepean)	K2E 7J5	ON	adillon@patersongroup.ca
Telephone number	Fax		Cell number
( ) (613) 226-7381	( )		( )

D. Owner (if different from applicant)

Last name	First name	Corporation or partnership	
		Dymech Engineering Inc.	
Street address		Unit number	Lot/con.
1359 Coker St.			
Municipality	Postal code	Province	E-mail
Ottawa (Osgoode)	K4P 1A1	ON	mmain@dymech.ca
Telephone number	Fax		Cell number
(613) 327-4867	( )		( )

SEPTIC FILE # 22-059

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OTTAWA

E. Builder (optional)

Last name	First name	Corporation or partnership (if applicable)	
Street address		Unit number	Lot/con.
Municipality	Postal code	Province	E-mail
Telephone number ( )	Fax ( )	Cell number ( )	

F. Tarion Warranty Corporation (Ontario New Home Warranty Program)

i. Is proposed construction for a new home as defined in the *Ontario New Home Warranties Plan Act*? If no, go to section G.	Yes ☐	No ☑
ii. Is registration required under the *Ontario New Home Warranties Plan Act*?	Yes ☐	No ☑
iii. If yes to (ii) provide registration number(s): _____		

G. Required Schedules

i) Attach Schedule 1 for each individual who reviews and takes responsibility for design activities.

ii) Attach Schedule 2 where application is to construct on-site, install or repair a sewage system.

H. Completeness and compliance with applicable law

i) This application meets all the requirements of clauses 1.3.1.3 (5) (a) to (d) of Division C of the Building Code (the application is made in the correct form and by the owner or authorized agent, all applicable fields have been completed on the application and required schedules, and all required schedules are submitted).	Yes ☑	No ☐
Payment has been made of all fees that are required, under the applicable by-law, resolution or regulation made under clause 7(1)(c) of the *Building Code Act, 1992*, to be paid when the application is made.	Yes ☑	No ☐
ii) This application is accompanied by the plans and specifications prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the *Building Code Act, 1992.*	Yes ☑	No ☐
iii) This application is accompanied by the information and documents prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the *Building Code Act, 1992* which enable the chief building official to determine whether the proposed building, construction or demolition will contravene any applicable law.	Yes ☑	No ☐
iv) The proposed building, construction or demolition will not contravene any applicable law.	Yes ☑	No ☐

I. Declaration of applicant

I Adam Dillon - Paterson Group Inc. declare that:
(print name)

1. The information contained in this application, attached schedules, attached plans and specifications, and other attached documentation is true to the best of my knowledge.
2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.

Date 2/17/22 Signature of applicant

Personal information contained in this form and schedules is collected under the authority of subsection 8(1.1) of the *Building Code Act, 1992*, and will be used in the administration and enforcement of the *Building Code Act, 1992*. Questions about the collection of personal information may be addressed to: a) the Chief Building Official of the municipality or upper-tier municipality to which this application is being made, or, b) the inspector having the powers and duties of a chief building official in relation to sewage systems or plumbing for an upper-tier municipality, board of health or conservation authority to whom this application is made, or, c) Director, Building and Development Branch, Ministry of Municipal Affairs and Housing 777 Bay St., 2nd Floor. Toronto, M5G 2E5 (416) 585-6666.

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

SEPTIC FILE
22-059
OTTAWA

A. Project Information

Building number, street name		Unit no.	Lot/con.
1353 Coker St.			
Municipality	**Postal code**	**Plan number/ other description**	
Ottawa (Osgoode)	K4P 1A1		

B. Individual who reviews and takes responsibility for design activities

Name		Firm	
Adam Dillon		Paterson Group Inc.	
Street address		**Unit no.**	**Lot/con.**
154 Colonnade Rd. S.			
Municipality	**Postal code** / **Province**	**E-mail**	
Ottawa (Nepean)	K2E 7J5 / ON	adillon@patersongroup.ca	
Telephone number	**Fax number**	**Cell number**	
( ) (613) 226-7381	( )	( )	

C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1. of Division C]

House	HVAC – House	Building Structural
Small Buildings	Building Services	Plumbing – House
Large Buildings	Detection, Lighting and Power	Plumbing – All Buildings
Complex Buildings	Fire Protection	X On-site Sewage Systems

Description of designer's work: New sewage system - Waterloo Biofilter with WaterNOx-LS System and Type 'A' Dispersal Bed

D. Declaration of Designer

I Adam Dillon - Paterson Group Inc. declare that (choose one as appropriate):
(print name)

I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4.of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories.

Individual BCIN: 19879

Firm BCIN: 29346

I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5.of Division C, of the Building Code.

Individual BCIN: _____

Basis for exemption from registration: _____

The design work is exempt from the registration and qualification requirements of the Building Code.

Basis for exemption from registration and qualification: _____

I certify that:

1. The information contained in this schedule is true to the best of my knowledge.
2. I have submitted this application with the knowledge and consent of the firm.

Date 2/17/22 Signature of Designer

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) (c).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
2. Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of practice, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

Schedule 2: Sewage System Installer Information

A. Project Information				
Building number, street name: 1353 Coker St.			Unit number	Lot/con.
Municipality: Ottawa (Osgoode)	Postal code: K4P 1A1	Plan number/ other description		

B. Sewage system installer

Is the installer of the sewage system engaged in the business of constructing on-site, installing, repairing, servicing, cleaning or emptying sewage systems, in accordance with Building Code Article 3.3.1.1, Division C?

Yes (Continue to Section C) | No (Continue to Section E) | X Installer unknown at time of application (Continue to Section E)

C. Registered installer information (where answer to B is "Yes")

Name			BCIN	
Street address			Unit number	Lot/con.
Municipality	Postal code	Province	E-mail	
Telephone number ( )	Fax ( )		Cell number ( )	

D. Qualified supervisor information (where answer to section B is "Yes")

Name of qualified supervisor(s)	Building Code Identification Number (BCIN)

E. Declaration of Applicant:

I Adam Dillon - Paterson Group Inc. declare that:
(print name)

I am the applicant for the permit to construct the sewage system. If the installer is unknown at time of application, I shall submit a new Schedule 2 prior to construction when the installer is known;

OR

I am the holder of the permit to construct the sewage system, and am submitting a new Schedule 2, now that the installer is known.

I certify that:

1. The information contained in this schedule is true to the best of my knowledge.
2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.

2/17/22
Date

Signature of applicant

Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

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Permit #
Revision # 22-059
Date
OTTAWA

Schedule 4
Proposed Services
Complete Sections 1 thru 7

1. **Engineered**
- [x] Yes
- [ ] No

2. **Water supply**
- [ ] Proposed
- [x] Existing

3. **Type of work proposed**
- [ ] New Installation
- [x] Replacement
- [ ] Alteration

4. **Type of Well**
- [ ] Dug/bored/Sandpoint well
- [x] Drilled well
- [ ] Municipal
- [ ] Other

5. **Residential** Sewage Design Flow Info.

Bedrooms _____
House (floor area) _____ **m²**
People _____
Total Fixture Units _____ **(Schedule 8)**
Residential Flow _____ **L/day**

6. Sewage Design Flow **Other Occupancies**

Design Flow 3,600 L/day
Detailed sewage flow calculations:
Refer to Drawing No. PH4407-2(rev.2)

- [ ] Class 4 – BMEC Area Bed **(Schedule 11)**
  - [ ] Fully raised
  - [ ] Partially raised
  - [ ] In-ground
- [x] Class 4 – "Type A" Dispersal **(Schedule 13)**
  - [ ] Fully raised
  - [x] Partially raised
  - [ ] In-ground
- [ ] Class 4 – "Type B" Dispersal **(Schedule 14)**
  - [ ] Fully raised
  - [ ] Partially raised
  - [ ] In-ground

7. **Type of System**
- [x] Treatment Unit _____
- [ ] Class 2 – Leaching Pit
- [ ] Class 3 – Cesspool
- [ ] Class 4 – Shallow Buried Trench

_____

- [ ] Class 4 – Trench **(Schedule 9)**
  - [ ] Fully raised
  - [ ] Partially raised
  - [ ] In-ground
- [ ] Class 4 – Filter Media **(Schedule 10)**
  - [ ] Fully raised
  - [ ] Partially raised
  - [ ] In-ground

- [ ] Class 5 – Holding Tank (9000L min)
- [ ] Tank/TreatmentUnit/PumpChamber ONLY
- [ ] Effluent Filter/Risers ONLY

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Permit # SEPTIC FILE #
Revision #
Date 22-059
OTTAWA

Schedule 5
Sewage System Details

Type of System: Class 4 - Type 'A' Dispersal Bed (Schedule 4)
Septic/Holding Tank Size: 9,400 Litres Make: Boyd Bros.
Septic Tank Effluent Filter Make: Tuf-Tite Model: EF6 (or equivalent)

Treatment Unit – Make & Model: Waterloo Biofilter BT-15,500 + WaterNOx-LS
Number of Units: 1 Other:
Refer to Typical Drawing # PH4407-1&-2(rev.2) Pump(s) required yes
Mantle Information: Pump Rate L/15min
Native or imported =15m in direction(s) **Note:** Alarm required for all pumping systems

Slope subgrade % slope
direction(s)

Site to be Scarified (If clay) **YES / NO** - No
Clay Seal Required (If bedrock) **YES / NO** - No

☐ **Trench**
Distribution Pipe Length m
Loading Area m^2
Type of Chamber
Length of Chamber m

☐ **BMEC Area Bed**

■ **Type A**

☐ **Type B**
Stone 78.0 m^2
Sand 78.0 m^2
Pipe 72.0m (6 @ 12.0m) m
Linear Loading L/m^2

☐ **Shallow Buried Trench**
Pipe Length m

☐ **Filter Media Bed**
Stone m^2
Extended Base m^2
Pipe m
Weight of Filter Media Kg
Loading Area m^2

☐ **Tank/Treatment Unit/Pump Chamber Replacement** ONLY

☐ **Effluent Filter & Riser** ONLY

Construction Notes:

Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

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REFER TO:

Do Not Complete
Permit # SEPTIC FILE #
Revision # _____
Date 22-059

OTTAWA

Schedule 6
Soil and Water Table Information
(Minimum depth of test pit: 2 metres)

Name of Applicant/Agent: Paterson Group Inc.
Date: December 14, 2021 Time: _____
Applicant/Agent Signature: _____

Inspector: HOO
Date: _____ Time: _____
Inspector Signature: _____

EG (……..)	Soil Description	T
.5m	Refer to Drawing No. PH4407-2 (rev.2)	
1.0 m		
1.5m		
2.0 m		

EG (……..)	Soil Description	
.5m		
1.0 m		
1.5m	Test pits not available for inspection. Engineer assumes all liability for soil and HGWT info/elv's	
2.0 m		

EG (……..)	Soil Description	T
.5m		
1.0 m		
1.5m		
2.0 m		

EG (……..)	Soil Description	T
.5m		
1.0 m		
1.5m		
2.0 m		

LEGEND
BR = Bedrock
GWT = Ground water table
HGWT = High ground water table
M = metres
EG = Existing grade
T = percolation rate

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Permit # _____
Revision # 22-059
Date _____
OTTAWA

Scale: 1Block = _____

Schedule 7
Layout Section

N

Refer to Drawing No. PH4407-1(rev.2)

○Dug Well ●Drilled Well ▲Neighbouring Homes ◊Benchmark ---Tile Drainage —Property Line

Elevations (metric only)
B.M. 100.00 m
B.M.Description Top of wall flashing at base of metal wall sheeting near center of south wall
Exact Location see plan

Min. of 5 elevations in proposed system area (in X pattern)
X_1 _____ X_2 _____
X_3 _____ X_4 _____
X_5 _____ X_6 (toe) _____
X_7 X_8

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Do Not Complete
Permit # SEPTIC FILE #
Revision # _____
Date 22-059

OTTAWA

~~Schedule 8~~
Fixture unit count

Fixtures	# Existing	+	# Proposed	X	unit count	=	Fixture Count
Bathroom							
Bathroom group (toilet, sink and tub **or** shower) installed in the **same** room		+		X	6	=	
Bathtub with/without overhead shower		+		X	1.5	=	
Shower stall		+		X	1.5	=	
Wash basin (SINK) (1½inch trap)	2	+	1	X	1.5	=	4.5
Watercloset (TOILET) tank operated	2	+	1	X	4	=	12.0
Bidet		+		X	1	=	
Kitchen							
Dishwasher		+		X	1	=	
Sink with/without garbage grinder(s), domestic and other small type single, double or 2 single with a common trap		+		X	1.5	=	
Other							
Domestic washing machine		+		X	1.5	=	
Combination sink and laundry tray single or double (Installed on 1½ trap)		+		X	1.5	=	

***Total:** 16.5

***Insert the TOTAL in section 5 of Schedule 4** (0.Reg 151/13 Table 7.4.9.3)

1. **Sump pumps and floor drains are not to be connected to the sewage system.** Connection of such fixtures to a sewage system may lead to a hydraulic failure of the said system. The above mentioned fixtures should be discharged separately to an approved Class 2 (leaching pit) sewage system.
2. Where laundry waste is not more than 20% of the total daily design sanitary sewage flow, it may discharge to a sewage system (Part 8, OBC, 8.1.3.1(2)).

_____ _____ February 17, 2022

Agent/Owner signature **Date**

SEPTIC FILE # 22-059
OTTAWA

A00
Mar 9/22

Existing Occupancy
1359 Coker St.

84.00m

CONTRACTOR TO EXERCISE CAUTION DURING CONSTRUCTION NOT TO IMPACT EXISTING OVERHEAD HYDRO LINES, AND UNDERGROUND HYDRO AND GAS LINES

RIGID INSULATION BOARD INSTALLED VERTICALLY BETWEEN PARKING AREA AND TREATMENT TANKS

15,500 L (min) BASKET WATERLOO BIOFILTER (BT-15500) c/w
- TWO (2) BIOFILTER BASKETS
- ONE (1) RE-CIRCULATION PUMP
- ONE (1) EFFLUENT PUMP
- HIGH LEVEL ALARMS ON PUMPS
- COVER TANK WITH 50mm (2") DOW HI-40 INSULATION BOARD

7,700 L WATER NOx-LS TANK c/w
- LS AGGREGATE MEDIA
- EFFLUENT PUMP w/ HIGH LEVEL ALARM
- COVER TANK WITH 50mm (2") DOW HI-40 INSULATION BOARD

EXISTING PARKING AREA TO BE RECONFIGURED AS NECESSARY TO ACCOMMODATE REQUIRED LOADING AREA

'PLATON' ROOT BARRIER TO BE INSTALLED ALONG SOUTH EDGE OF EXCAVATION IF TREES REMAIN

3,600L PUMP CHAMBER WITH TIMER CONTROLLED EFFLUENT PUMP & HIGH WATER ALARM
- INLET INV. = 99.22
- COVER TANK WITH 50mm (2") DOW HI-40 INSULATION BOARD

PROPOSED WAREHOUSE

Existing Commercial Occupancy
1353 Coker St.

Gas Meters
1.5m (min)
A/C Unit

TBM: TOP OF WALL FLASHING ELEV.=100.00m

14.80m
Top SIB = 99.25

38mmØ FORCEMAIN INSTALLED:
- GRAVITY DRAIN AND OVERLAIN WITH 50mm T x 600mm W INSULATION BOARDS; OR
- BURIED 1.8m (min) BELOW FINISHED GROUND ELEVATION

TH1
99.22
(98.85)

CLEAR STONE & SAND AREA
13.0m x 6.0m

TYPE 'A' DISPERSAL BED
6 RUNS OF 12.0m @ 1.0m O/C
HEADER INV. = 99.91m
FOOTER INV. = 99.87m

SEWER LINE
INV. ELEV.=
99.47 (min)

1.5m (min)
1.5m (min)
3.0m (min)

Existing Drilled Well
Top of Well = 100.23

15.0m (min)
16.2m (act)
15.0m (min)

6.1m (min)
6.6m (act)

4.1m (min)
4.1m (min)

18.45m

89.73m

TH2
99.74
(99.12)

450L (min.) PUMP CHAMBER WITH ON-DEMAND GRINDER PUMP & HIGH WATER ALARM
- GOULDS AGS0511 PUMP (OR EQUIVALENT)
- OUTLET INV. = 99.41

50mmØ POLYPROPYLENE FORCEMAIN
- SLEEVE THROUGH 100mmØ (4") SDR28 PVC GASKETED PIPE
- INSTALL ON 150mm THICK LAYER OF COMPACTED SAND BEDDING
- SURROUND ALL SIDES w/ 75 mm RIGID SM INSULATION BOARD
- INSTALLED TO PROVIDE SLOPE TOWARD SEPTIC TANK

Existing 3,600L Septic Tank
Top of Tank = 99.67m
Outlet Inv. = 99.32m±
- TO BE PUMPED AND REMOVED

NEW 9,400L ANAEROBIC DIGESTER c/w
- INLET INV. = 99.30
- INNER TUBE
- EFFLUENT FILTER
- POLY RISER & COVER ASSEMBLY (2)
- COVER TANK WITH 50mm (2") DOW HI-40 INSULATION BOARD

Existing Occupancy
1341 Coker St.

STREET

COKER

LEGEND:

	Test Hole Location	GFL	Garage Floor Level
x 70.81	Existing Ground Surface Elev. (m)	USF	Underside of Footing
x 72.70	Proposed Ground Surface Elev. (m)	←	Surficial Flow Direction
(70.7)	Groundwater Elev. (m) - Dec.14/21	Final Grading: 2%Min., 7% Max. or	
MFL	Main Floor Level		Terrace Grade 3H:1V Max.
BFL	Basement Floor Level		Existing Structure
T/C	Top of Foundation Wall		Proposed Structure

BENCHMARK INFORMATION:

TBM: Top of Wall Flashing at Base of Metal Wall Sheeting. Elev. = 100.00m

REFERENCE:

Base Plan Information Obtained from GeoOttawa Imagery.
A LEGAL SURVEY DESCRIBING THE PROPERTY BOUNDARY WAS NOT AVAILABLE TO THIS FIRM AT THE TIME OF THESE WORKS. AS SUCH, PROPERTY BOUNDARIES SHOULD BE CONFIRMED PRIOR TO CONSTRUCTION

patersongroup
consulting engineers
154 Colonnade Road, Ottawa, Ontario K2E 7J5

DD/MM/YY	Description	Rev.
17/02/22	Issued for Permit Approval	2
11/02/22	Revised per Treatment Requirements	1
21/12/21	Issued for Client Review	0

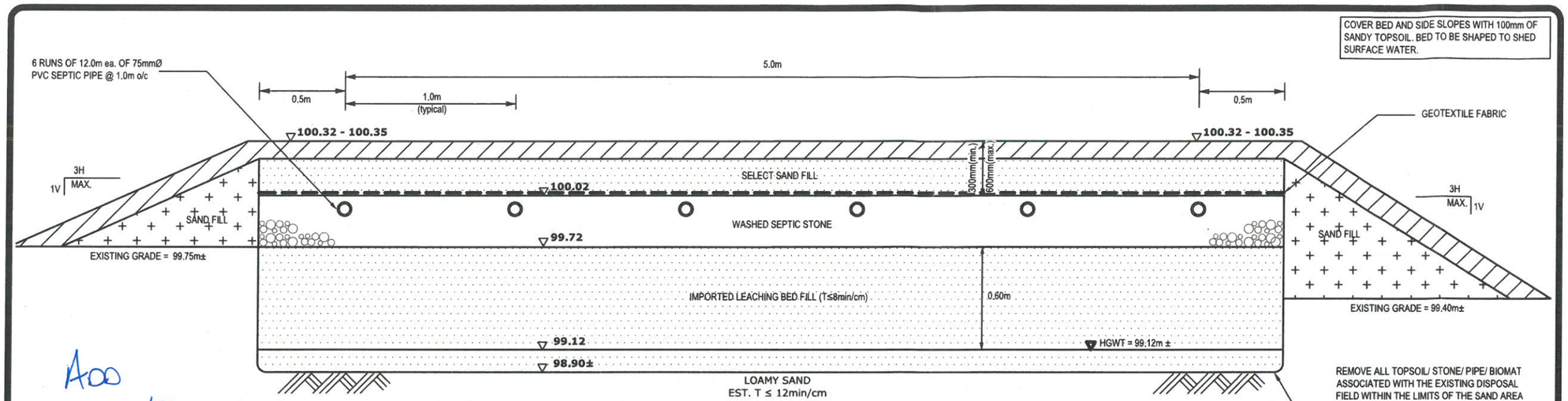
Client: DYMECH ENGINEERING INC.

Project: PROPOSED REPLACEMENT SEWAGE SYSTEM
1353 COKER STREET
OTTAWA (GREELY), ONTARIO

Drawing: SEWAGE SYSTEM LAYOUT PLAN

Scale: 1:250 | Drawn by: AD
Date: 02/2022 | Checked by: MK
Drawing no.: PH4407-1(rev.2)

p:\autocad drawings\hydrogeology\ph4xx\ph4407 - dymech engineering - 1353 coker st\ph4407-1.dwg



PROFILE
N.T.S.

A00
March 9/22

NOTES:

1) ESTIMATE OF DAILY SEWAGE FLOW (Q)

EXISTING:
- FACTORY (NO SHOWERS) w/ 6 EMPLOYEES = 6 X 76 L/DAY = 450 L/DAY; OR
- NO. OF WATER CLOSETS = 2 X 950 L/DAY = 1,900 L/DAY

PROPOSED:
- WAREHOUSE w/ 5 BAY DOORS = 5 X150 L/DAY = 750 L/DAY; AND
- NO. OF WATER CLOSETS = 1 X 950 L/DAY = 950 L/DAY

DESIGN SEWAGE FLOW RATE = 1,900 (EXISTING) + 1,700 (PROPOSED) = 3,600 L/DAY

2) SOIL CONDITIONS

SOILS INFORMATION GATHERED BY PATERSON GROUP INC. ON DECEMBER 14, 2021

TH 1, ELEV. 99.22m		TH 2, ELEV. 99.74m	
0-0.13	TOPSOIL	0-0.13	TOPSOIL
0.13-0.29	MIXED FILL	0.13-0.68	MIXED FILL
0.29-0.37	TOPSOIL	0.68-0.82	TOPSOIL
0.37-050	LOAMY SAND	0.82-1.22	LOAMY SAND
0.50-0.65	SAND w/ PEBBLES & GRAVEL	1.22-1.35	GR. SANDY CLAY
-WATER @ 0.37m B/G		- WATER @ 0.62m B/G	

3) SEPTIC TANK / ANAEROBIC DIGESTER

- PUMP AND REMOVE EXISTING SEPTIC TANK.
- MINIMUM WORKING CAPACITY OF NEW ANAEROBIC DIGESTER TANK = 9,400L (min.)
- TANK TO CONTAIN A MINIMUM 720L INNER TUBE OF 305mmØ
- AN OBC APPROVED EFFLUENT FILTER (I.E. POLYLOK PL-122 EFFLUENT FILTER, OR EQUIVALENT) SHALL BE INSTALLED ON THE OUTLET PIPE OF ANAEROBIC DIGESTER TANK.
- THE ACCESS LIDS TO THE TANK OPENINGS SHALL BE EXTENDED TO THE GROUND SURFACE. INSTALL RISERS AND COVERS TO SUIT.

4) PUMP CHAMBER (IN TREATMENT PROCESS)

- INSTALL A NEW 3,600L (min) PUMP CHAMBER
- EQUIP WITH 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

5) WATERLOO BIOFILTER BASKET TANK

- INSTALL A NEW MINIMUM CAPACITY 15,500L CONCRETE TREATMENT TANK c/w TWO (2) BIOFILTER BASKETS
- HELICAL SPRAY NOZZLES TO BE INSTALLED DIRECTLY OVER BIOFILTER BASKETS
- INSTALL ONE (1) ½ HP LITTLE GIANT WSV50 (OR EQUIVALENT) EFFLUENT PUMP PLUMBED TO RECIRCULATE EFFLUENT TO INLET OF ANAEROBIC DIGESTER TANK
- INSTALL ONE (1) ½ HP LITTLE GIANT WSV50 (OR EQUIVALENT) EFFLUENT PUMP PLUMBED TO DISCHARGE EFFLUENT INTO WATER NOx-LS TANK
- EQUIP WITH 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) WATER NOx-LS TANK

- INSTALL A NEW 7,700L CONCRETE, TWO-COMPARTMENT WATER NOx-LS TANK
- FIRST COMPARTMENT TO CONTAIN LIME-SULPHUR AGGREGATE MEDIA
- SECOND COMPARTMENT TO BE EQUIPPED WITH ONE (1) ½ HP LITTLE GIANT WSV50 (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

7) FORCEMAIN (TO TYPE A DISPERSAL BED)

- A 38mmØ 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 FROST PROTECT 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 SO TO MANUFACTURER SPECIFICATIONS.
- PUMP CHAMBER SHALL BE EQUIPPED WITH A HIGH-LEVEL ALARM FLOAT SET SO TO ALLOW RESPONSE TIME IN THE EVENT OF PUMP FAILURE.

8) TYPE 'A' DISPERSAL BED

- STONE AREA REQUIRED = Q/50 = 3,600/50 = 72.0m²
- USE 6 RUNS OF 12.0m EACH @ 1.0m o/c
  - STONE AREA PROVIDED = 6.0m x 13.0 = 78.0m²
- SAND AREA REQUIRED = 3,600(12)/850 = 50.8m²
  - SAND AREA PROVIDED = 6.0m x 13.0m = 78.0m²
- HYDRAULIC LOADING RATE = 46.2 L/m²/DAY

9) TYPE 'A' DISPERSAL BED CONSTRUCTION GUIDELINES

- REMOVE ALL TOPSOIL/ PIPE/ STONE/ BIOMAT/ CONTAMINATED MATERIAL ASSOCIATED WITH EXISTING DISPOSAL FIELD AND SUBEXCAVATE TO AT LEAST ELEVATION 98.90m
- 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 (6 RUNS OF 12.0m EACH) SHALL CONSIST OF 75mmØ 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 99.90m AT THE HEADER AND ELEVATION 99.87m AT 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.

10) MINIMUM CLEARANCE DISTANCE FROM LEACHING BED

- 4.1m FROM ANY PROPERTY LINE
- 6.1m FROM ANY STRUCTURE; 5.0m TO ANY STRUCTURE WITHOUT PERIMETER DRAINAGE
- 16.1m FROM ANY DRILLED WELL; 31.1m TO ANY DUG OR SANDPOINT WELL

11) MINIMUM CLEARANCE DISTANCE FROM TANK(S)

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

12) GENERAL

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

SEPTIC FILE # 22-059
OTTAWA

RVCA RECEIVED
MAR 04 2022
REFER TO:

DD/MM/YY	DESCRIPTION	REV.
17/02/22	Issued for Permit Approval	2
11/02/22	Revised per Treatment Requirements	1
12/12/21	Issued for Preliminary Review	0

Consultant:
patersongroup
consulting engineers

Client:
DYMECH ENGINEERING INC.

Project:
PROPOSED SEWAGE SYSTEM REPLACEMENT
1353 COKER ST.
OTTAWA (GREELY), ONTARIO

Drawing:
SEWAGE SYSTEM DETAIL & NOTES

Scale:	Drawn by:
N.T.S.	AD
Date: 02/2022	Checked by: HV

Drawing No.:
PH4407-2(rev.2)

p:\autocad drawings\hydrogeology\ph44xx\ph4407 - dymech engineering - 1353 coker st\ph4407-2(rev.1).dwg

Ottawa Septic System Office | Bureau des systèmes septiques d'Ottawa

Do Not Complete
Permit No 22-059
Revision No
Date
Related Application

Permit
Part 8 – Sewage System
Ontario Building Code

A copy of this permit must be posted on the property at all time during construction. OBC, Division C — Part 1, Section 1.3.2.1

This permit verifies that the on-site sewage system was reviewed and approved for construction under the *Ontario Building Code* and *O.Reg. 323/12* as amended by *O.Reg. 151/13.*

Inspected & Recommended by: ALEX DEKLEINE
Owner: DYMECH ENGINEERING INC
Inspection Date & Time: MARCH 9, 2022
Weather: SUNNY
Civic Address: 1353 COKER ST
Legal:
Osgoode: ☒ CUMBERLAND: ☐ Gloucester: ☐
number of bedrooms:
fixture units:
finished floor area:
Q: 3600 L/day

pretreatment tank 9400 L
effluent filter N/A
pump rate AS PER WATERLOO BIOFILTER L/15 MIN
treatment unit Waterloo Biofilter BT-15,500
number of units 1

weigh bills for	❒ yes	■ no
grain size analysis required	❒ yes	■ no
site to be scarified	❒ yes	■ no
clay seal inspection	❒ yes	■ no
mantle required	❒ yes	■ no
sub-grade inspection	■ yes	❒ no

ELEVATION ☐ In Ground ☒ Partially Raised ☐ Fully Raised

TYPE OF SYSTEM

❒ **Trench**
◯ **Pipe and Stone** or ◯ **Chambers**
type of chamber
loading area m^2
total trench length m
trench configuration

■ **Dispersal Bed**
◯ BMEC ◉ Type A ◯ Type B
stone 78 m^2
sand 78 m^2
pipe 6 RUNS OF 12M @ 1M O/C
weight of sand kg

❒ **Shallow Buried Trench**
pipe length m
orifice spacing m

❒ **Filter Media Bed**
stone m^2
extended base m^2
pipe
weight of filter media kg
loading area m^2

❒ **Class 5 Holding Tank**

❒ **Septic Tank Only**

Manager, Septic System Approvals: [signature] Permit Date: MARCH 17/2022
Comments:

■ maintenance/pumping required ■ ESA permit # required ■ engineer to verify ■ subgrade ❒ squirt height
❒ Class 5 Holding Tank approval only valid for three years from date of issue

Manager, Septic System Approvals: Revision Date:
Comments:

NOTE: For further details, refer to corresponding application.