

154 Colonnade Road
Ottawa, Ontario
Canada, K2E 7J5
Tel: (613) 226-7381

November 20, 2024
File: PH4407-LET.01.REV.05.

Dymech Engineering Inc.
1359 Coker Street,
Ottawa (Greely), ON
K4P 1A1

Geotechnical Engineering
Environmental Engineering
Hydrogeology
Geological Engineering
Materials Testing
Building Science

www.patersongroup.ca

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 m²/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 minimum 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)	GW2 (8.5 hr)
				2022-02-03	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-NH ₃)	mg/L	-	-	<0.010	<0.010
Nitrite (N-NO ₂)	mg/L	1	MAC	<0.10	<0.10
Nitrate (N-NO ₃)	mg/L	10	MAC	<0.10	<0.10
Total Kjeldahl Nitrogen	mg/L	-	-	0.210	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 CaCO ₃)	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 CaCO ₃)	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

- ODWS identifies the following types of parameters:
 - MAC = Maximum Allowable Concentration
 - AO = Aesthetic Objective
 - OG = Operational Guideline
- Shaded Concentration Indicates an Exceedance of the ODWS Objective

TABLE 2b: GROUNDWATER GEOCHEMISTRY - METALS					
PARAMETER	UNITS	ODWS		TW1	
		LIMIT	TYPE	GW1 (4 hr)	GW2 (8.5 hr)
				2022-02-03	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

- ODWS identifies the following types of parameters:
 - MAC = Maximum Acceptable Concentration
 - IMAC = Interim Maximum Acceptable Concentration
 - AO = Aesthetic Objective
 - OG = Operational Guideline
- Shaded Concentration Indicates an Exceedance of the ODWS Objective

TABLE 2c: GROUNDWATER GEOCHEMISTRY - VOLATILES					
PARAMETER	UNITS	ODWS		TW1	
		LIMIT	TYPE	GW1 (4 hr)	GW2 (8.5 hr)
				2022-02-03	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

- ODWS identifies the following types of parameters:
 - MAC = Maximum Acceptable Concentration
 - IMAC = Interim Maximum Acceptable Concentration
 - AO = Aesthetic Objective
 - OG = Operational Guideline
- 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 CaCO₃)
- 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 CaCO₃

Hardness, expressed as calcium carbonate, an operational guideline, does not appear in the Ontario Drinking Water Standards, Objectives and Guidelines (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. Underlying 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 tertiary 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 m³
- 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:
 - 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 minimum 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

Paterson Group Inc.

Head Office and Laboratory
154 Colonnade Road South
Ottawa - Ontario - K2E 7J5
Tel: (613) 226-7381

Northern Office and Laboratory
63 Gibson Street
North Bay - Ontario - P1B 8Z4
Tel: (705) 472-5331

St. Lawrence Office
993 Princess Street
Kingston - Ontario - K7L 1H3
Tel: (613) 542-7381



FIGURE 1

KEY PLAN

JB

316/57



UTM 1182 455180E

WATER RESOURCES DIVISION 15 No 7224 SEP 28 1965 ONTARIO WATER RESOURCES COMMISSION

Co. 5 R. 15 0 1 1 6 1 9 N The Ontario Water Resources Commission Act

WATER WELL RECORD

Elev. 503.25

Basin 215 | Carleton

Township, Village, Town or City Osgoode Date completed 26 July 1965

Con. IV Lot 5

Address RR 2 Osgoode

Casing and Screen Record

Inside diameter of casing 6 1/4
Total length of casing 18'
Type of screen -
Length of screen -
Depth to top of screen -
Diameter of finished hole 6"

Pumping Test

Static level 20'
Test-pumping rate 5 G.P.M.
Pumping level 65'
Duration of test pumping 1/2 hr
Water clear or cloudy at end of test cloudy
Recommended pumping rate 5 G.P.M.
with pump setting of 65 feet below ground surface

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	Kind of water (fresh, salty, sulphur)
sand & 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

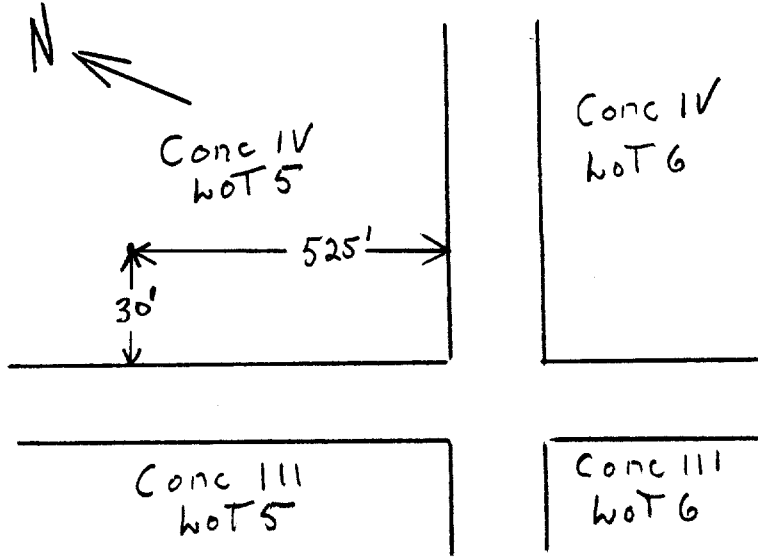
Address

Date July 26 1965

(Signature of Licensed Drilling or Boring Contractor)

Location of Well

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



1 8 Z 4 5 5 3 6 0
 4 R 5 0 1 1 1 7 7 0
 5 R 0 3 2 5
 2 5



1509840

316/59 B

The Ontario Water Resources Commission Act

WATER WELL RECORD

County or District Carleton Place Township, Village, Town or City Carleton Place
 Con. 5 Lot 4 Date completed 20 June 1968
 (day month year)
 Address Manastick

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 clearly
 Recommended pumping rate 5 G.P.M.
 with pump setting of 35 feet below ground surface

Well Log

Water Record

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

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 Cayer

Address Carletonman

Licence Number 2911

Name of Driller or Borer

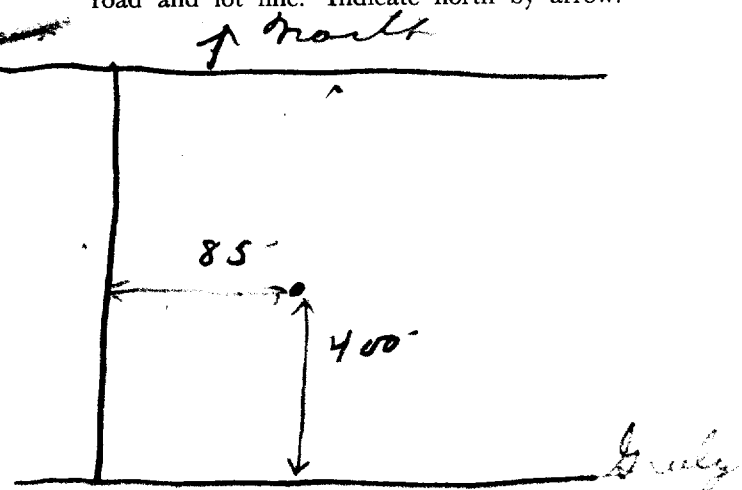
Address

Date 20 June 1968

Maurice Cayer
(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.





The Ontario Water Resources Commission Act WATER WELL RECORD

Water management in Ontario

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

11

1510585

MUNICIP. 15009

CON. 36N

04

COUNTY OR DISTRICT **CARLETON** TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE **OSGOODE** CON., BLOCK, TRACT, SURVEY, ETC. **4** LOT **006**

OWNER (SURNAME FIRST) **[REDACTED]** ADDRESS **463 RIVERDALE AVE. OTTAWA,** DATE COMPLETED DAY **14** MO **05** YR **70**

UTM ZONE **18** EASTING **455300** NORTHING **5011590** ELEVATION **50322** RC. BASIN CODE **25**

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)

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

31 **0005 0209 0017 111309 010825**

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER			
10-13 0105	<input checked="" type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERAL
15-18	<input type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERAL
20-23	<input type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERAL
25-28	<input type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERAL
30-33	<input type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERAL

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11 06	<input checked="" type="checkbox"/> STEEL			13-16 0022
11-18 54	<input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE	188	0	22
17-18 06	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input checked="" type="checkbox"/> OPEN HOLE		22	20-23 0108
24-25 14	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE			27-30 108

SCREEN

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

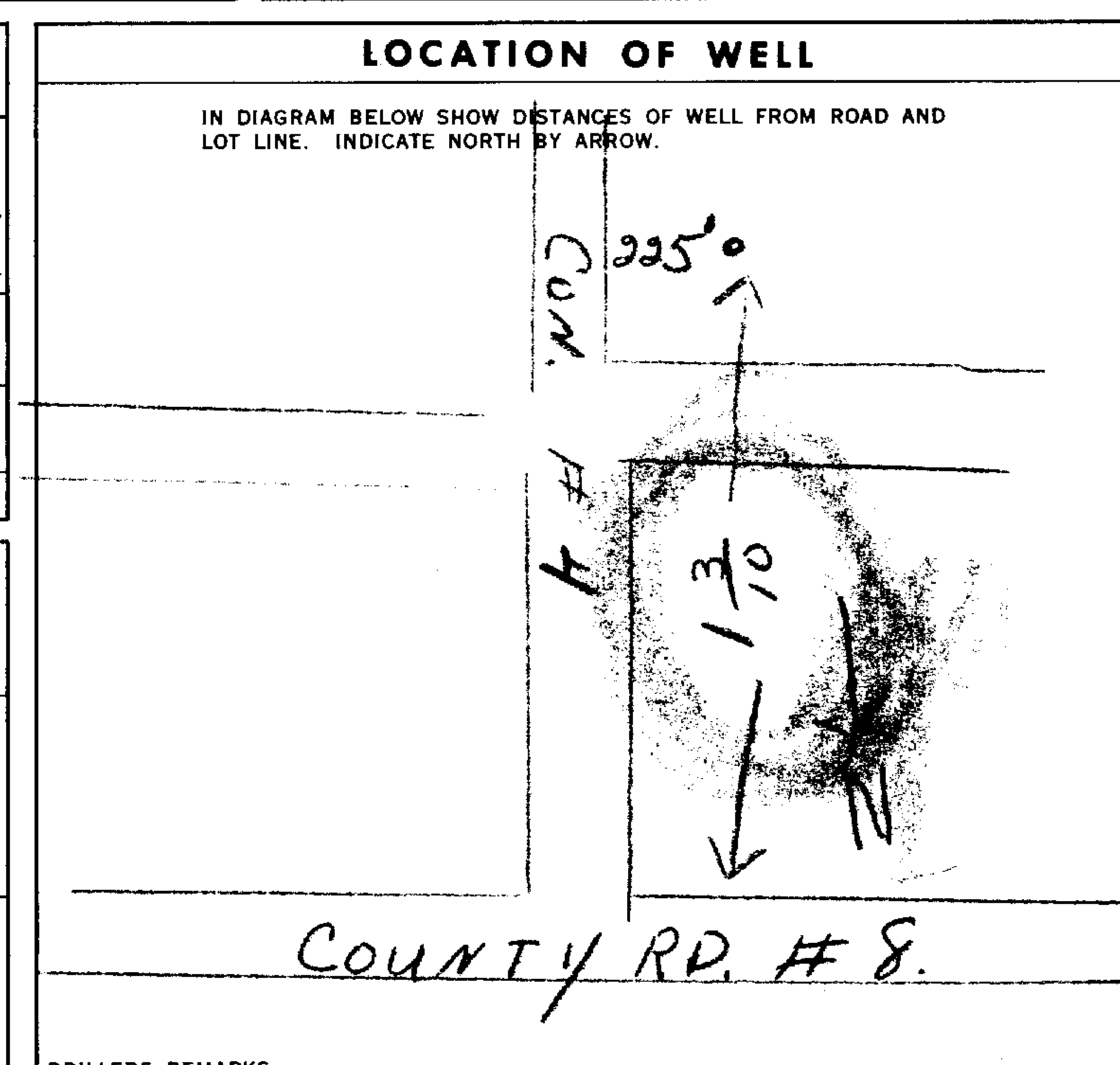
MATERIAL AND TYPE

PLUGGING & SEALING RECORD

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

71 PUMPING TEST

PUMPING TEST METHOD	PUMPING RATE	DURATION OF PUMPING
<input type="checkbox"/> PUMP <input checked="" type="checkbox"/> BAILER	0010 GPM.	01 HOURS 00 MINS.
STATIC LEVEL	WATER LEVELS DURING	
19-21 015 FEET	15 MINUTES 22-24 030 FEET	30 MINUTES 26-28 018 FEET
	45 MINUTES 29-31 017 FEET	60 MINUTES 32-34 016 FEET
IF FLOWING, GIVE RATE	WATER AT END OF TEST	
	38-41 PUMP INTAKE SET AT	42 <input type="checkbox"/> CLEAR <input checked="" type="checkbox"/> CLOUDY
RECOMMENDED PUMP TYPE	RECOMMENDED PUMP SETTING	RECOMMENDED PUMPING RATE
<input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/> DEEP	050 FEET	0008 GPM.
50-53 000.7 GPM./FT. SPECIFIC CAPACITY		



FINAL STATUS OF WELL

WATER SUPPLY

WATER USE

DOMESTIC

METHOD OF DRILLING

CABLE TOOL

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 **[Signature]** SUBMISSION DATE DAY **19** MO **5** YR **70**

OFFICE USE ONLY

DATA SOURCE **1** CONTRACTOR **3504** DATE RECEIVED **280570**

DATE OF INSPECTION INSPECTOR **[Signature]**

REMARKS:

OWRC COPY



WATER WELL RECORD

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

11

1522346

MUNICIPALITY 15009

CON. 10 14 15 22 23 24

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

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

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	TO
BROWN	SAND			0	8
GREY	SAND, GRAVEL	BOULDERS		8	56
GREY	LIMESTONE	SLATE		56	176

31

32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER		
10-13	1 <input checked="" type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	14
15-18	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	18
20-23	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	24
25-28	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	28
30-33	1 <input type="checkbox"/> FRESH 2 <input type="checkbox"/> SALTY	3 <input type="checkbox"/> SULPHUR 4 <input type="checkbox"/> MINERALS 6 <input type="checkbox"/> GAS	34

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/4"	1 <input checked="" type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC	.188	0	63
6"	1 <input type="checkbox"/> STEEL 2 <input type="checkbox"/> GALVANIZED 3 <input type="checkbox"/> CONCRETE 4 <input type="checkbox"/> OPEN HOLE 5 <input type="checkbox"/> PLASTIC		63	126

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE	(CEMENT GROUT LEAD PACKER ETC.)
0-13	63	CEMENT GROUT
18-21		BENTONITE SLURRY
26-28		(Pressure grout)

71 PUMPING TEST

PUMPING TEST METHOD: PUMP BAILER

PUMPING RATE: 20 GPM

DURATION OF PUMPING: 1 HOURS 30 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
10-21	115	15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
10	115	115	115	115	115

IF FLOWING, GIVE RATE: — GPM

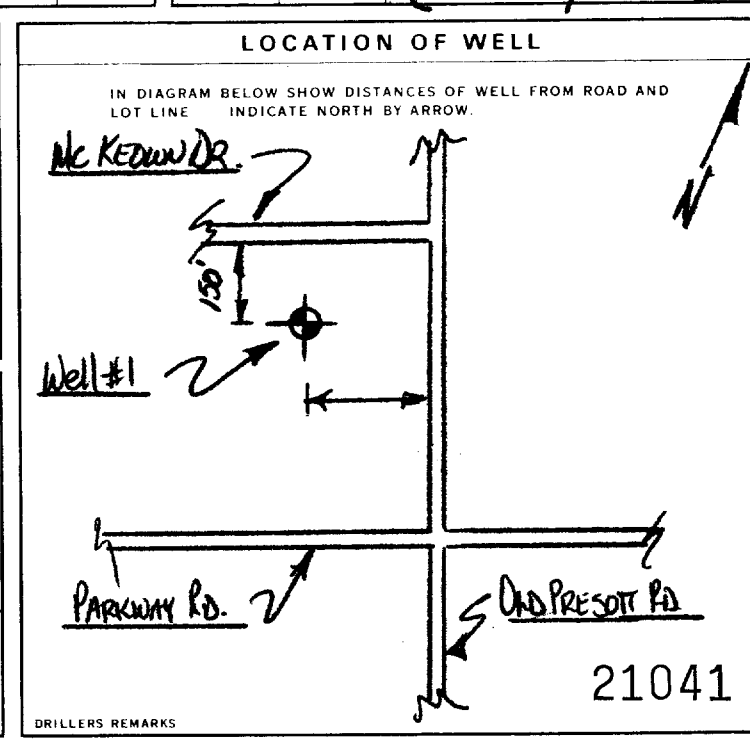
PUMP INTAKE SET AT: 115 FEET

WATER AT END OF TEST: CLEAR CLOUDY

RECOMMENDED PUMP TYPE: SHALLOW DEEP

RECOMMENDED PUMP SETTING: 115 FEET

RECOMMENDED PUMPING RATE: 620 GPM



FINAL STATUS OF WELL

1 WATER SUPPLY
2 OBSERVATION WELL
3 TEST HOLE
4 RECHARGE WELL

5 ABANDONED, INSUFFICIENT SUPPLY
6 ABANDONED POOR QUALITY
7 UNFINISHED
9 DEWATERING

WATER USE

1 DOMESTIC
2 STOCK
3 IRRIGATION
4 INDUSTRIAL
5 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
10 DIGGING
11 OTHER

CONTRACTOR: STANTON DRILLING INC
ADDRESS: BOX 429, GREEZY, ONT.
WELL CONTRACTOR'S LICENCE NUMBER: 4875

WELL TECHNICIAN: PETER JA STANTON
WELL TECHNICIAN'S LICENCE NUMBER: T-0036

SIGNATURE OF TECHNICIAN/CONTRACTOR: [Signature]
SUBMISSION DATE: DAY 26 MO 04 YR 88

OFFICE USE ONLY

DATA SOURCE: 58 CONTRACTOR: 59-62 DATE RECEIVED: 63-68

DATE OF INSPECTION: JUN 21 1988
INSPECTOR: [Signature]

REMARKS: [Blank]

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

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, GREEZY, ONT.
DATE COMPLETED: DAY 13 MO 04 YR 88

U ZONE EASTING NORTHING RC ELEVATION RC BASIN CODE III IV

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)					
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN	SAND			0	9
GREY	SANDY GRAVEL	BOULDERS		9	57
GREY	LIMESTONE	SHALE		57	62

31
32

41 WATER RECORD

WATER FOUND AT - FEET	KIND OF WATER					
60	<input checked="" type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERALS	<input type="checkbox"/> GAS	
	<input type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERALS	<input type="checkbox"/> GAS	
	<input type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERALS	<input type="checkbox"/> GAS	
	<input type="checkbox"/> FRESH	<input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR	<input type="checkbox"/> MINERALS	<input type="checkbox"/> GAS	

51 CASING & OPEN HOLE RECORD

INSIDE DIAM INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
6 1/4"	STEEL GALVANIZED CONCRETE OPEN HOLE PLASTIC	.188	0	59
6"	STEEL GALVANIZED CONCRETE OPEN HOLE PLASTIC		59	62

SCREEN

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

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT LEAD PACKER, ETC.)
0-59	CEMENT GROUT & BENTONITE SLURRY (Pressure grouted)

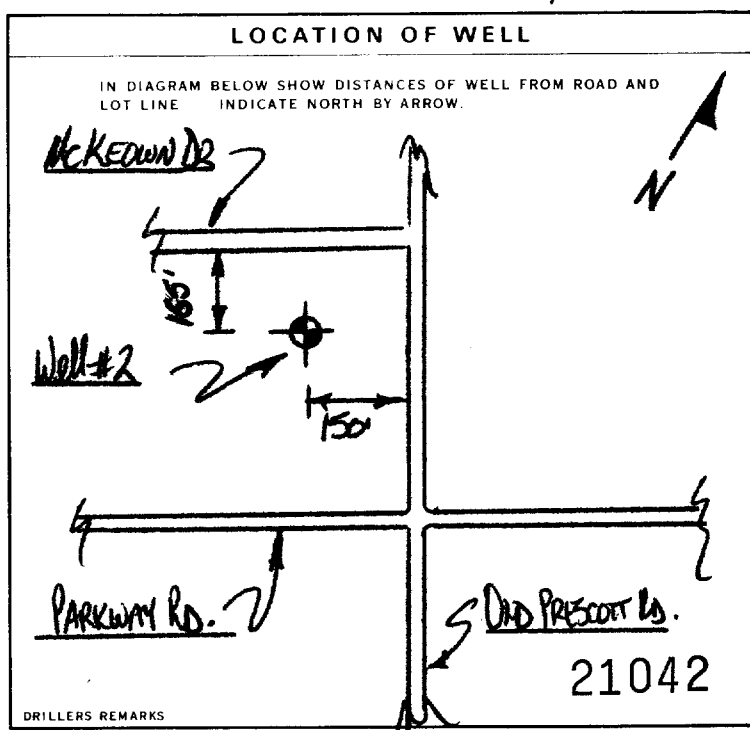
71 PUMPING TEST

PUMPING TEST METHOD: PUMP BAILER
PUMPING RATE: 40+ GPM
DURATION OF PUMPING: 0 HOURS 45 MINS

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
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: CLEAR CLOUDY

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



FINAL STATUS OF WELL

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

WATER USE

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

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: STANTON DRILLING INC
ADDRESS: BOX 429, GREEZY, ONT.
WELL CONTRACTOR'S LICENCE NUMBER: 4875

NAME OF WELL TECHNICIAN: PETER VA STANTON
WELL TECHNICIAN'S LICENCE NUMBER: 710066

SIGNATURE OF TECHNICIAN / CONTRACTOR: [Signature]
SUBMISSION DATE: DAY 26 MO 04 YR 88

OFFICE USE ONLY

DATA SOURCE: 4875
DATE RECEIVED: JUN 21 1988
DATE OF INSPECTION: _____
INSPECTOR: _____
REMARKS: _____

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

11

1522348

MUNICIPALITY 15009

CON. 15 22 23 74

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: **6975 SHADOW RIDGE, GREELY.** DATE COMPLETED: DAY **19** MO **04** YR **88**

21 ZONE EASTING NORTHING RC ELEVATION RC BASIN CODE II III IV

GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	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		
10-13 60	<input checked="" type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS	
15-18	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS	
20-23	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS	
25-28	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS	
30-33	<input type="checkbox"/> FRESH <input type="checkbox"/> SALTY	<input type="checkbox"/> SULPHUR <input type="checkbox"/> MINERALS <input type="checkbox"/> GAS	

51 CASING & OPEN HOLE RECORD

INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET	
			FROM	TO
10-11 6 1/4"	<input checked="" type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC	.188	0	59
17-18 6"	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC		59	62
24-25	<input type="checkbox"/> STEEL <input type="checkbox"/> GALVANIZED <input type="checkbox"/> CONCRETE <input type="checkbox"/> OPEN HOLE <input type="checkbox"/> PLASTIC			

SCREEN

SIZES OF OPENING (SLOT NO.): 31-33 DIAMETER: 34-38 LENGTH: 39-40

MATERIAL AND TYPE: 41-44 DEPTH TO TOP OF SCREEN: 45-48

61 PLUGGING & SEALING RECORD

DEPTH SET AT - FEET	MATERIAL AND TYPE (CEMENT GROUT, LEAD PACKER, ETC.)
0-13 59	CEMENT GROUT & BENTONITE SLURRY
18-21	(Pressure grouted)
26-28	
30-33	

71 PUMPING TEST

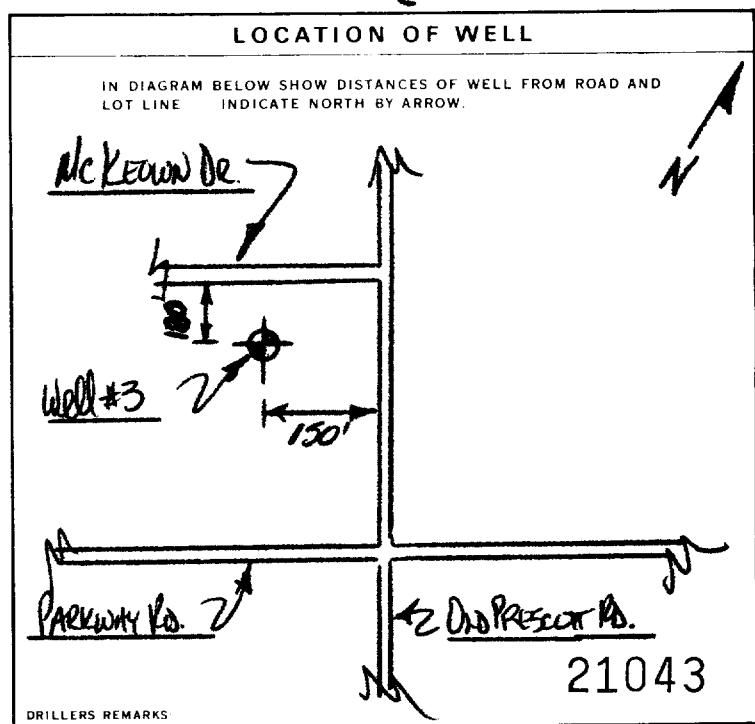
PUMPING TEST METHOD: **AK** PUMPING RATE: **40+** GPM DURATION OF PUMPING: **1** HOURS **0** MINS

1 PUMP 2 BAILER

STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
19-21 10	22-24 40	15 MINUTES 40	30 MINUTES 40	45 MINUTES 40	60 MINUTES 40

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

RECOMMENDED PUMP TYPE: SHALLOW DEEP RECOMMENDED PUMP SETTING: **40** FEET RECOMMENDED PUMPING RATE: **640** GPM



FINAL STATUS OF WELL

1 WATER SUPPLY 6 ABANDONED, INSUFFICIENT SUPPLY
2 OBSERVATION WELL 7 ABANDONED, POOR QUALITY
3 TEST HOLE 8 UNFINISHED
4 RECHARGE WELL 9 DEWATERING

WATER USE

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

METHOD OF CONSTRUCTION

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

CONTRACTOR

NAME OF WELL CONTRACTOR: **STANTON DRILLING INC** WELL CONTRACTOR'S LICENSE NUMBER: **4875**

ADDRESS: **BOX 429, GREELY, ONT.**

NAME OF WELL TECHNICIAN: **PETER VA STANTON** WELL TECHNICIAN'S LICENSE NUMBER: **7-0006**

SIGNATURE OF TECHNICIAN/CONTRACTOR: *[Signature]* SUBMISSION DATE: DAY **16** MO **04** YR **88**

OFFICE USE ONLY

DATE RECEIVED: **JUN 21 1988**

DATE OF INSPECTION: _____ INSPECTOR: _____

REMARKS: _____

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

11

1529728

Municipality 15009 Con. CON 14

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

General colour	Most common material	Other materials	General description	Depth - feet	
				From	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 [Scale] 32 [Scale]

41 WATER RECORD

Water found at - feet	Kind of water
10-13	1 <input type="checkbox"/> Fresh 3 <input type="checkbox"/> Sulphur 14
15-18	2 <input type="checkbox"/> Salty 4 <input type="checkbox"/> Minerals 15
56-62	NOT TESTED
20-23	1 <input type="checkbox"/> Fresh 3 <input type="checkbox"/> Sulphur 24
25-28	2 <input type="checkbox"/> Salty 4 <input type="checkbox"/> Minerals 25
30-33	1 <input type="checkbox"/> Fresh 3 <input type="checkbox"/> Sulphur 34
	2 <input type="checkbox"/> Salty 4 <input type="checkbox"/> Minerals 35

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
6 1/4	1 <input checked="" type="checkbox"/> Steel 12	.188	0	54
	2 <input type="checkbox"/> Galvanized			
	3 <input type="checkbox"/> Concrete			
	4 <input type="checkbox"/> Open hole			
	5 <input type="checkbox"/> Plastic			
6 1/8	1 <input type="checkbox"/> Steel 19		54	76
	2 <input type="checkbox"/> Galvanized			
	3 <input type="checkbox"/> Concrete			
	4 <input type="checkbox"/> Open hole			
	5 <input type="checkbox"/> Plastic			
24-25	1 <input type="checkbox"/> Steel 26			27-30
	2 <input type="checkbox"/> Galvanized			
	3 <input type="checkbox"/> Concrete			
	4 <input type="checkbox"/> Open hole			
	5 <input type="checkbox"/> Plastic			

SCREEN

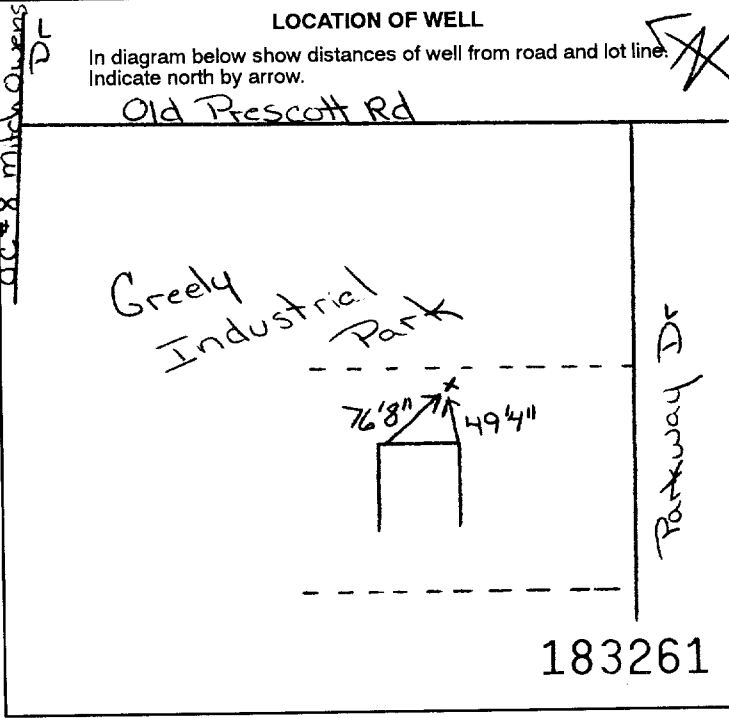
Sizes of opening (Slot No.)	Diameter inches	Length feet
Material and type		Depth at top of screen feet

61 PLUGGING & SEALING RECORD

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

71 PUMPING TEST

Pumping test method: <input checked="" type="checkbox"/> Pump 2 <input type="checkbox"/> Bailer	Pumping rate: 50 GPM	Duration of pumping: 1 Hours 1 Mins
Static level: 5.8 feet	Water level end of pumping: 20 feet	Water levels during: 7.6 feet
		6.1 feet
		5.8 feet
		5.8 feet
If flowing give rate: 35 GPM	Pump intake set at: 35 feet	Water at end of test: <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Cloudy
Recommended pump type: <input checked="" type="checkbox"/> Deep	Recommended pump setting: 5 feet	Recommended pump rate: 5 GPM



FINAL STATUS OF WELL

1 Water supply 5 Abandoned, insufficient supply 9 Unfinished

2 Observation well 6 Abandoned, poor quality 10 Replacement well

3 Test hole 7 Abandoned (Other)

4 Recharge well 8 Dewatering

WATER USE

1 Domestic 5 Commercial 9 Not used

2 Stock 6 Municipal 10 Other

3 Irrigation 7 Public supply

4 Industrial 8 Cooling & air conditioning

METHOD OF CONSTRUCTION

1 Cable tool 5 Air percussion 9 Driving

2 Rotary (conventional) 6 Boring 10 Digging

3 Rotary (reverse) 7 Diamond 11 Other

4 Rotary (air) 8 Jetting

Name of Well Contractor: **Capital Water Supply Ltd.** Well Contractor's Licence No.: **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: [Signature] Submission date: **day 24 mo 10 yr 97**

MINISTRY USE ONLY

Data source: **1558** Date received: **DEC 22 1997**

Date of inspection: Inspector: [Signature]

Remarks: [Signature]

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

11

1531816

Municipality 15009

Con. CAN 04 Part of

County or District: Ottawa-Carleton
Township/Borough/City/Town/Village: Osgoode
Con block tract survey, etc.: 4
Lot: 304
Address: Greely Pt
Date completed: 07 22 01
Basin Code: ii

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

31
32

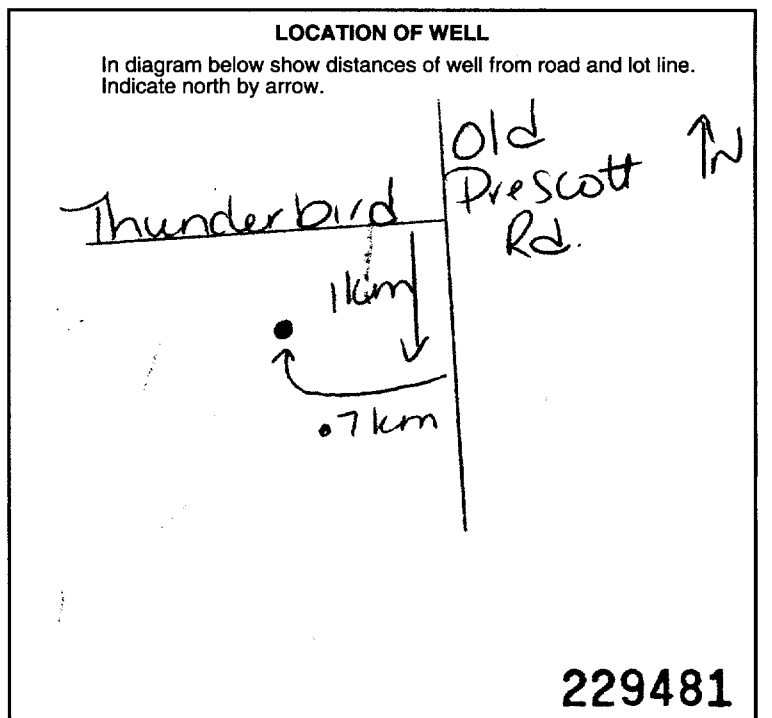
WATER RECORD	
Water found at - feet	Kind of water
89	1 <input checked="" type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas
237	1 <input checked="" type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas
	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas
	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas
	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas

CASING & OPEN HOLE RECORD			Depth - feet	
Inside diam inches	Material	Wall thickness inches	From	To
6 1/4	1 <input checked="" type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic	188	0	44
8 3/4	1 <input type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input checked="" type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic		0	42
6	1 <input type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input checked="" type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic		42	240

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

PLUGGING & SEALING RECORD	
Depth set at - feet	Material and type (Cement grout, bentonite, etc.)
2 1/3	44 1/2 Cement grout
18-21	22-25 Bentonite

PUMPING TEST	
Pumping test method	Pumping rate
1 <input checked="" type="checkbox"/> Pump 2 <input type="checkbox"/> Bailer	5 GPM
Static level: 35 feet	Water level end of pumping: 220 feet
Water levels during:	15 minutes: 160 feet
	30 minutes: 101 feet
	45 minutes: 41 feet
	60 minutes: 35 feet
Recommended pump type: <input checked="" type="checkbox"/> Deep	Recommended pump setting: 220 feet
	Recommended pump rate: 5 GPM



FINAL STATUS OF WELL

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

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

9 Unfinished 10 Replacement well

WATER USE

1 Domestic 2 Stock 3 Irrigation 4 Industrial

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

9 Not use 10 Other

METHOD OF CONSTRUCTION

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

5 Air percussion 6 Boring 7 Diamond 8 Jetting

9 Driving 10 Digging 11 Other

Name of Well Contractor: Arr Koch Drilling Ltd
Address: RR #2 Jasper, Ont
Well Contractor's Licence No.: 1119

Name of Well Technician: Shannon Purcell
Well Technician's Licence No.: 12122
Submission date: 28 02 01

MINISTRY USE ONLY

Data source: 1119
Date received: APR 18 2001
Inspector: [blank]
Remarks: CSS.ES1

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

11

1531817

Municipality 15009

Con. CON

04

County or District: **Ottawa Carleton** Township/Borough/City/Town/Village: **Osgoode** Con. block tract survey, etc.: **4** Lot: **394**
 Owner's surname: **Sunset Lakes** First Name: **Greely** Address: **Ont** Date completed: **08 02 01**

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	To
	sand	boulders		0	44
grey	limestone			44	80

31 32

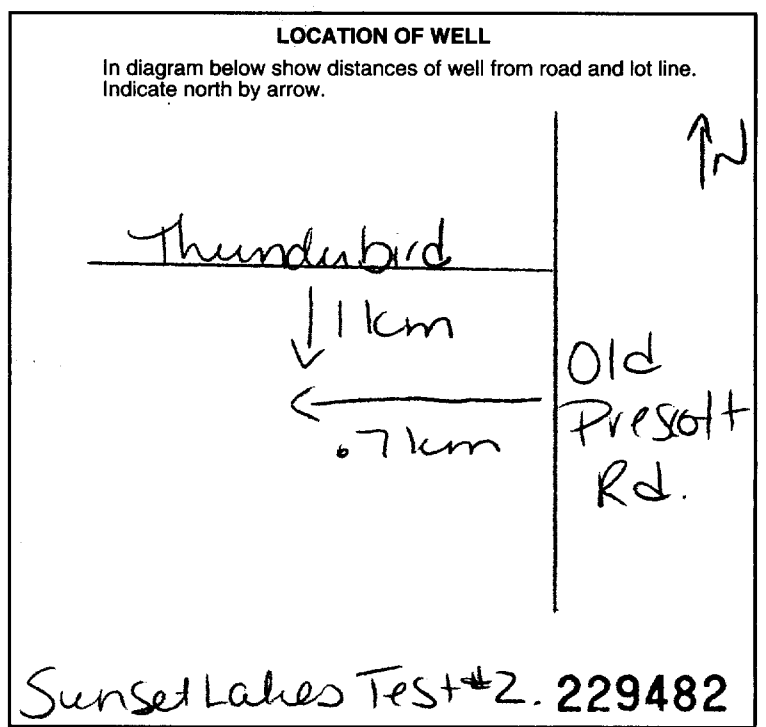
41 WATER RECORD	
Water found at - feet	Kind of water
69	1 <input checked="" type="checkbox"/> Fresh 3 <input type="checkbox"/> Sulphur 14 2 <input type="checkbox"/> Minerals 4 <input type="checkbox"/> Gas 5
73	1 <input checked="" type="checkbox"/> Fresh 3 <input type="checkbox"/> Sulphur 19 2 <input type="checkbox"/> Salty 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas 5
	20-23 1 <input type="checkbox"/> Fresh 3 <input type="checkbox"/> Sulphur 24 2 <input type="checkbox"/> Salty 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas 5
	25-28 1 <input type="checkbox"/> Fresh 3 <input type="checkbox"/> Sulphur 29 2 <input type="checkbox"/> Salty 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas 5
	30-33 1 <input type="checkbox"/> Fresh 3 <input type="checkbox"/> Sulphur 34 2 <input type="checkbox"/> Salty 4 <input type="checkbox"/> Minerals 6 <input type="checkbox"/> Gas 5

51 CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
6 1/4	Steel	188	0	53
8 3/4	Steel		0	51
6	Steel		51	80

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

61 PLUGGING & SEALING RECORD		
Annular space <input checked="" type="checkbox"/> Abandonment <input type="checkbox"/>		
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)
From	To	
2 1/3	5 3/8	Cement grout
18-21	22-25	Bentonite

71 PUMPING TEST	
Pumping test method	10 Pumping rate
1 <input checked="" type="checkbox"/> Pump 2 <input type="checkbox"/> Bailor	45 GPM
Static level	Water level end of pumping
12 feet	70 feet
15 minutes	30 minutes
12 feet	12 feet
45 minutes	60 minutes
12 feet	12 feet
Recommended pump type	Recommended pump setting
1 <input type="checkbox"/> Shallow 2 <input checked="" type="checkbox"/> Deep	70 feet



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

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

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

Name of Well Contractor: **Art Koch Dr. Wngltd** Well Contractor's Licence No.: **1119**
 Address: **Rt #2 Jasper Ont**
 Name of Well Technician: **Shannon Purcell** Well Technician's Licence No.: **T2122**
 Signature of Technician/Contractor: *[Signature]* Submission date: **02 01**

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

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

11

1533428

Municipality 15009 Con. CON 04

County or District Ottawa-Carleton	Township/Borough/City/Town/Village Osgoode	Con block tract survey, etc. 4	Lot 5
Address 1545 River Road Maontick, Ontario K4M 1B4		Date completed 27 day 11 month 02 year	

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)

General colour	Most common material	Other materials	General description	Depth - feet	
				From	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 _____

32 _____

41 WATER RECORD

Water found at - feet	Kind of water
10-13 216	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas
15-18 NOT TESTED	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas
20-23	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas
25-28	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas
30-33	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty 3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas

51 CASING & OPEN HOLE RECORD

Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
6 1/4	1 <input checked="" type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic	.188	+ 1.5	65 ⁶
5 7/8	1 <input type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input checked="" type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic		65	223

SCREEN

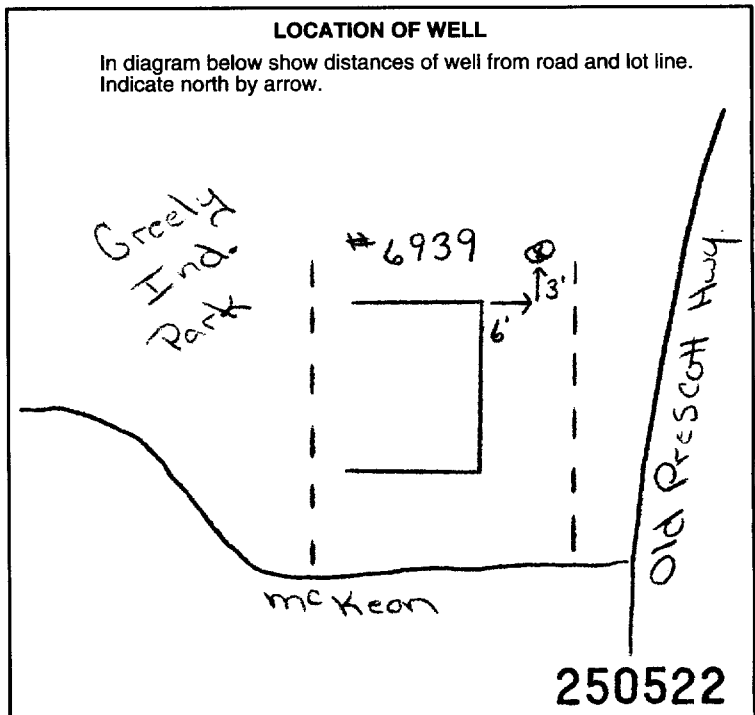
Sizes of opening (Slot No.)	Diameter inches	Length feet
Material and type		Depth at top of screen feet

61 PLUGGING & SEALING RECORD

<input checked="" type="checkbox"/> Annular space		<input type="checkbox"/> Abandonment
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)
From	To	
10-13 64	14-17 0	Grouted - Cement (1) Bentonite (3)
18-21	22-25	
26-29	30-33	

71 PUMPING TEST

Pumping test method 1 <input checked="" type="checkbox"/> Pump 2 <input type="checkbox"/> Bailer	Pumping rate 10 GPM	Duration of pumping 1 _____ Hours _____ Mins
Static level 19-21 34'6" feet	Water level end of pumping 22-24 75 feet	Water levels during pumping 1 <input checked="" type="checkbox"/> Pumping 2 <input type="checkbox"/> Recovery
15 minutes 26-28 220 feet	30 minutes 29-31 175 feet	45 minutes 32-34 150 feet
60 minutes 35-37 75 feet	Water at end of test <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Cloudy	
If flowing give rate 38-41 GPM	Pump intake set at 42 feet	Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep
Recommended pump setting 43-45 150 feet	Recommended pump rate 46-49 5 GPM	



FINAL STATUS OF WELL

1 <input checked="" type="checkbox"/> Water supply	5 <input type="checkbox"/> Abandoned, insufficient supply	9 <input type="checkbox"/> Unfinished
2 <input type="checkbox"/> Observation well	6 <input type="checkbox"/> Abandoned, poor quality	10 <input type="checkbox"/> Replacement well
3 <input type="checkbox"/> Test hole	7 <input type="checkbox"/> Abandoned (Other)	
4 <input type="checkbox"/> Recharge well	8 <input type="checkbox"/> Dewatering	

WATER USE

1 <input checked="" type="checkbox"/> Domestic	5 <input type="checkbox"/> Commercial	9 <input type="checkbox"/> Not use
2 <input type="checkbox"/> Stock	6 <input type="checkbox"/> Municipal	10 <input type="checkbox"/> Other
3 <input type="checkbox"/> Irrigation	7 <input type="checkbox"/> Public supply	
4 <input type="checkbox"/> Industrial	8 <input type="checkbox"/> Cooling & air conditioning	

METHOD OF CONSTRUCTION

1 <input type="checkbox"/> Cable tool	5 <input checked="" type="checkbox"/> Air percussion	9 <input type="checkbox"/> Driving
2 <input type="checkbox"/> Rotary (conventional)	6 <input type="checkbox"/> Boring	10 <input type="checkbox"/> Digging
3 <input type="checkbox"/> Rotary (reverse)	7 <input type="checkbox"/> Diamond	11 <input type="checkbox"/> Other
4 <input checked="" type="checkbox"/> Rotary (air mud)	8 <input type="checkbox"/> Jetting	

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

MINISTRY USE ONLY

Data source 1558	Contractor 1558	Date received DEC 17 2002
Date of inspection	Inspector	
Remarks CCS.EC2		

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

1533469

Municipality: 15009 CON
Cov: OS
Plan 4m389 Sublot 11

11

County or District: Ottawa-Carleton
Township/Borough/City/Town/Village: Osgoode
Con block tract survey, etc.: 5 Lot: 4
Address: Greely, Ont
Date completed: 13/12/02

21
25-27
48-53
Northings: 10, 12, 17, 18, 24, 25, 26, 30, 31
RC: ii, iii, iv

LOG OF OVERBURDEN AND BEDROCK MATERIALS (see instructions)					
General colour	Most common material	Other materials	General description	Depth - feet	
				From	To
	sand	gravel & boulders		0	62
grey	limestone			62	188
grey	sandy limestone			188	227
white-grey	sandstone			227	333

31
32

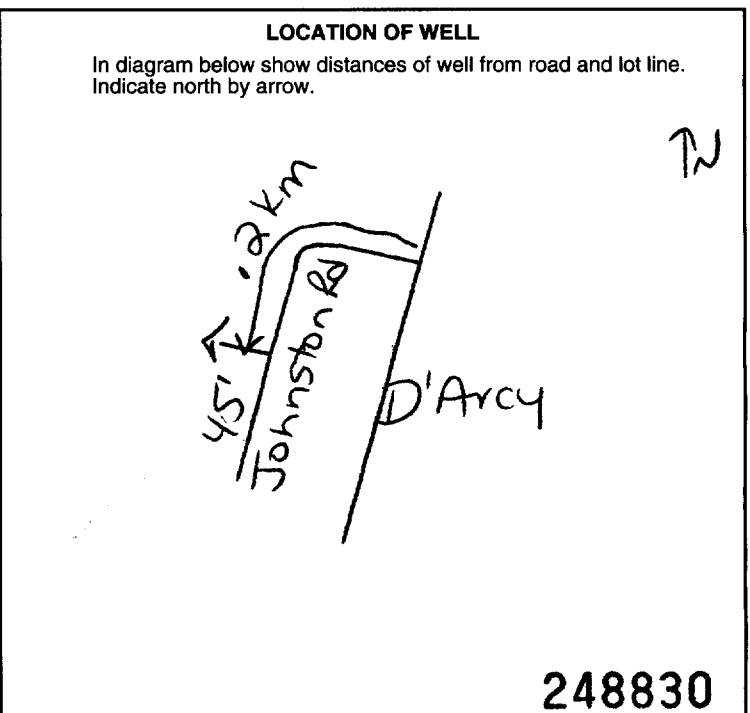
41 WATER RECORD			
Water found at - feet	Kind of water		
10-13 330	1 <input type="checkbox"/> Fresh 2 <input checked="" type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas	14
15-18	1 <input type="checkbox"/> Fresh 2 <input checked="" type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas	19
20-23	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas	24
25-28	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas	29
30-33	1 <input type="checkbox"/> Fresh 2 <input type="checkbox"/> Salty	3 <input type="checkbox"/> Sulphur 4 <input type="checkbox"/> Minerals 5 <input type="checkbox"/> Gas	34

51 CASING & OPEN HOLE RECORD				
Inside diam inches	Material	Wall thickness inches	Depth - feet	
			From	To
10-11 6 1/4	1 <input checked="" type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic	188	0	70
17-18 8 3/4	1 <input type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic		0	68
24-25 6	1 <input type="checkbox"/> Steel 2 <input type="checkbox"/> Galvanized 3 <input type="checkbox"/> Concrete 4 <input checked="" type="checkbox"/> Open hole 5 <input type="checkbox"/> Plastic		68	333

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

61 PLUGGING & SEALING RECORD		
<input checked="" type="checkbox"/> Annular space		<input type="checkbox"/> Abandonment
Depth set at - feet		Material and type (Cement grout, bentonite, etc.)
From	To	
18-21 2	22-25 30	bentonite
26-29	30-33	

71 PUMPING TEST	Pumping test method	Pumping rate	Duration of pumping		
	1 <input checked="" type="checkbox"/> Pump 2 <input type="checkbox"/> Bailer	9 GPM	1	Hours	Mins
	Static level	Water level end of pumping	Water levels during		
	19-21 50	22-24 160	15 minutes 25-28 50	30 minutes 29-31 50	45 minutes 32-34 50
			60 minutes 35-37 50		
	If flowing give rate	Pump intake set at	Water at end of test		
	GPM	feet	<input type="checkbox"/> Clear <input checked="" type="checkbox"/> Cloudy		
	Recommended pump type	Recommended pump setting	Recommended pump rate		
	<input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	160 feet	9 GPM		



54 FINAL STATUS OF WELL		
1 <input checked="" type="checkbox"/> Water supply	5 <input type="checkbox"/> Abandoned, insufficient supply	9 <input type="checkbox"/> Unfinished
2 <input type="checkbox"/> Observation well	6 <input type="checkbox"/> Abandoned, poor quality	10 <input type="checkbox"/> Replacement well
3 <input type="checkbox"/> Test hole	7 <input type="checkbox"/> Abandoned (Other)	
4 <input type="checkbox"/> Recharge well	8 <input type="checkbox"/> Dewatering	

55-56 WATER USE		
1 <input checked="" type="checkbox"/> Domestic	5 <input type="checkbox"/> Commercial	9 <input type="checkbox"/> Not use
2 <input type="checkbox"/> Stock	6 <input type="checkbox"/> Municipal	10 <input type="checkbox"/> Other
3 <input type="checkbox"/> Irrigation	7 <input type="checkbox"/> Public supply	
4 <input type="checkbox"/> Industrial	8 <input type="checkbox"/> Cooling & air conditioning	

57 METHOD OF CONSTRUCTION		
1 <input type="checkbox"/> Cable tool	5 <input checked="" type="checkbox"/> Air percussion	9 <input type="checkbox"/> Driving
2 <input type="checkbox"/> Rotary (conventional)	6 <input type="checkbox"/> Boring	10 <input type="checkbox"/> Digging
3 <input type="checkbox"/> Rotary (reverse)	7 <input type="checkbox"/> Diamond	11 <input type="checkbox"/> Other
4 <input type="checkbox"/> Rotary (air)	8 <input type="checkbox"/> Jetting	

Name of Well Contractor: Air-Rock Drilling Ltd	Well Contractor's Licence No.: 1119
Address: RR#1 Richmond, Ont	
Name of Well Technician: Shannon Purcell	Well Technician's Licence No.: TA122
Signature of Technician/Contractor: [Signature]	Submission date: 18/12/02

MINISTRY USE ONLY	Data source	Contractor	Date received
		1119	DEC 23 2002
	Date of inspection	Inspector	
Remarks			
CSS.E02			

Well Tag Number **A 004862**

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.

Well Owner's Information and Location of Well Information

MUN **15009** CON **CON** LOT **04** CONCESSION **06**

Address of Well Location (County/District/Municipality) **Ottawa Carleton** Township **Osgoode** Lot **6** Concession **4**
 RR#/Street Number/Name **Greeley** City/Town/Village **Greeley** Site/Compartment/Block/Tract etc.
 GPS Reading NAD Zone Easting Northing Unit Make/Model Mode of Operation: Undifferentiated Averaged
8.3 18 455214 5011633 Magellan Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

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

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	41.76	15.24

Construction Record

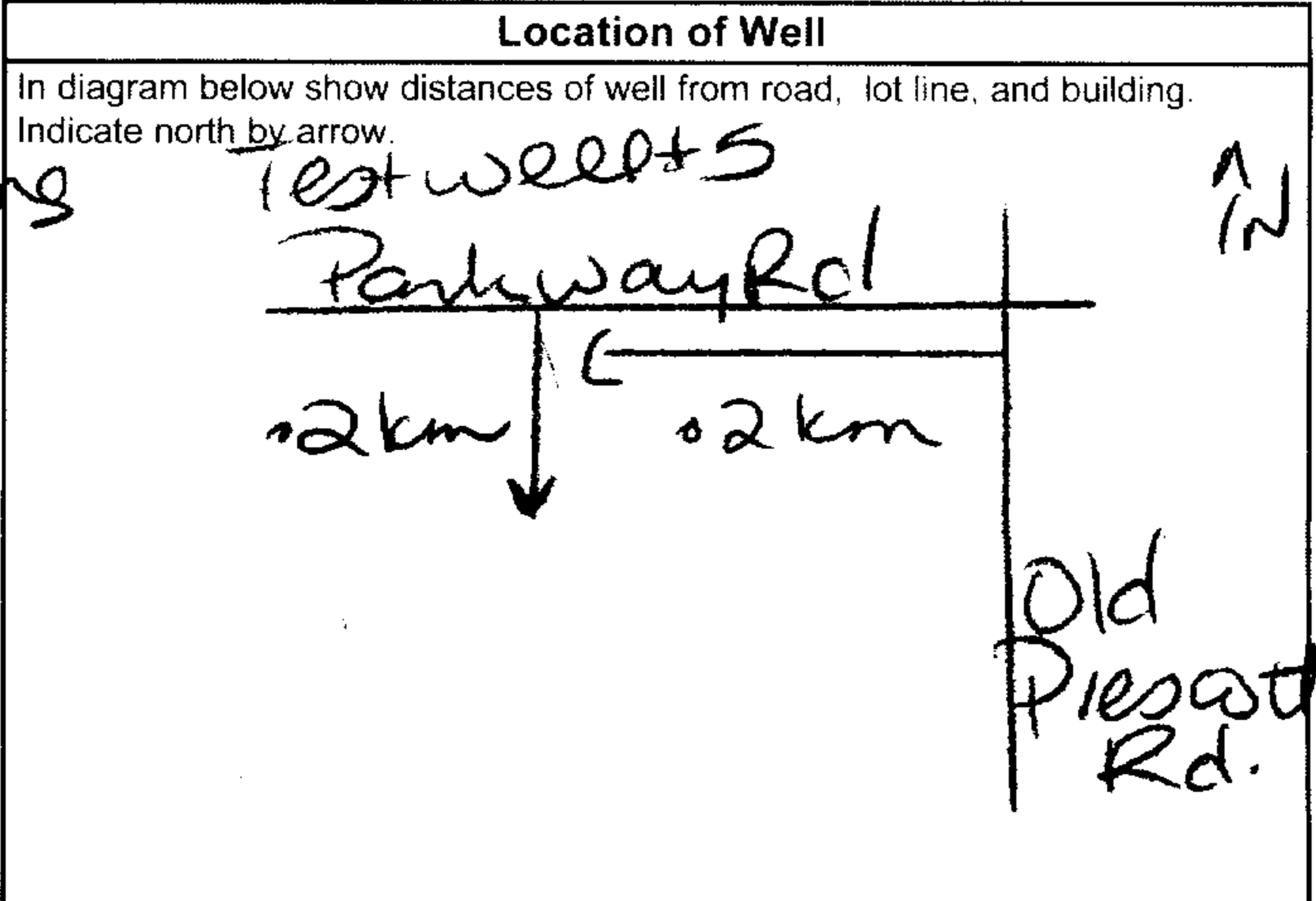
Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To
15.88	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.478	0	18.9
Screen				
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.		
No Casing or Screen				
<input checked="" type="checkbox"/> Open hole				

Test of Well Yield See Attached.

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Subpump				
Pump intake set at - (metres)	Static Level	2.66		9.85
Pumping rate (litres/min) 84 + 30	1	5.66	1	8.18
Duration of pumping 6 hrs + - min	2	8.26	2	7.40
Final water level end of pumping 9.8 metres	3		3	
Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	12.78	4	6.32
Recommended pump depth 39.6 metres	6	16.34	6	5.52
Recommended pump rate 36 (litres/min)	8	18.37	8	4.96
If flowing give rate - (litres/min)	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

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

Audit No. **Z 04877** Date Well Completed **2004 02 17**
 Was the well owner's information package delivered? Yes No **NA**

Well Contractor/Technician Information

Name of Well Contractor **Ar. Rock Drilling Ltd** Well Contractor's Licence No. **1119**
 Business Address (street name, number, city etc.) **Rt 1 Richmond, Ont**
 Name of Well Technician (last name, first name) **Shannon Pulwell** Well Technician's Licence No. **Ta 122**
 Signature of Technician/Contractor **[Signature]** Date Submitted **2004 03 22**

Ministry Use Only

Data Source Contractor **1119**
 Date Received **MAR 31 2004** Date of Inspection **MM DD**
 Remarks **CS 153** Well Record Number **1534585**

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.

Well Owner's Information and Location of Well Information

Ministry Use Only											
MUN				CON				LOT			

RR#/Street Number/Name: **6976 South Village Drive** City/Town/Village: **Georgetown** Site/Compartment/Block/Tract etc.: **1/1**

GPS Reading: NAD 83 Zone 18 Easting 455034 E Northing 5012414 Unit Make/Model: **Magedan** Mode of Operation: Undifferentiated Averaged Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth From	Metres To
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	Metres To	Diameter Centimetres
0	17.37	21.23
17.37	30.48	15.55

Construction Record				
Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
Casing				
15.55	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	0.48	10.60	17.37
Screen				
No Casing or Screen				
<input type="checkbox"/> Open hole			17.37	30.48

Test of Well Yield				
Pumping test method	Draw Down Time min	Water Level Metres	Recovery	
			Time min	Water Level Metres
3 24 H.P. sub				
Pump intake set at - (metres) 24	Static Level	4.61		5.49
Pumping rate - (litres/min) 38	1		1	
Duration of pumping 1 hrs + 0 min	2		2	
Final water level end of pumping 5.19 metres	3	5.21		3
Recommended pump type. <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4			4
Recommended pump depth. 24 metres	5	5.21		5 4.69
Recommended pump rate. 40 (litres/min)	10	5.36		10 4.61
If flowing give rate - (litres/min)	15	5.36		15
	20	5.43		20
	25	5.45		25
If pumping discontinued, give reason.	30	5.46		30
	40	5.48		40
	50	5.48		50
	60	5.49		60

Water Record

Water found at: 30 m Kind of Water: Fresh Sulphur Gas Salty Minerals

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

Chlorinated Yes No

Plugging and Sealing Record			<input checked="" type="checkbox"/> Annular space	<input type="checkbox"/> 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	

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.

Auditing No. **28003** Date Well Completed **05 09 27**

Was the well owner's information package delivered? Yes No Date Delivered

Well Contractor/Technician Information

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

Business Address (street name, number, city, etc.): **St A. Bourgeois**

Name of Well Technician (last name, first name): **Claude Bourgeois** Well Technician's Licence No.: **3310**

Signature of Technician/Contractor: **[Signature]** Date Submitted: **05 09 27**

Ministry Use Only

Data Source: Contractor **1414**

Date Received: **05 09 27** MM DD Date of Inspection: YYY Y MM DD

Remarks: Well Record Number

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

Address of Well Location (County/District/Municipality) Ottawa Carleton Township Osgoode Lot 4 Concession 4 RR#/Street Number/Name #6958 South Village Dr City/Town/Village Greely Site/Compartment/Block/Tract et PLAN 4M-1265 9/110 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)

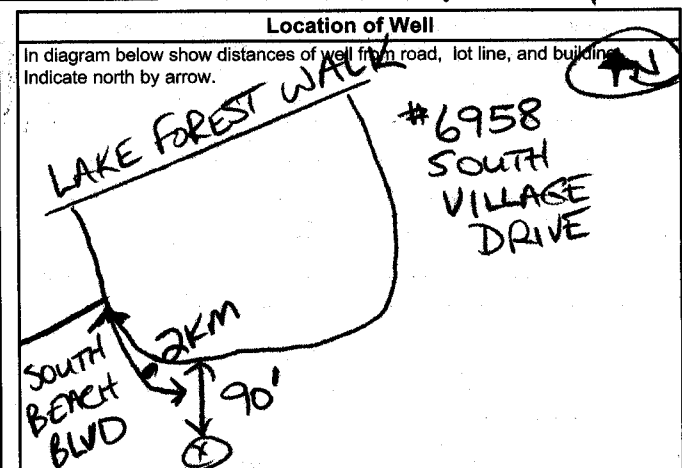
Table with columns: General Colour, Most common material, Other Materials, General Description, Depth From, Metres To. Handwritten entries: sand fill, clay, sand, grey limestone, sand, gravel. Depth ranges from 0 to 24.4 metres.

Hole Diameter table with columns: Depth From, Metres To, Diameter Centimetres. Handwritten entry: 0 to 24.4 metres, 14.91 centimetres.

Construction Record table with columns: Inside diam centimetres, Material, Wall thickness centimetres, Depth From, Metres To. Handwritten entries: 15.88, Steel, .48, 0, 17.7. Includes sections for Casing and Screen.

Test of Well Yield table with columns: Pumping test method, Draw Down, Recovery. Handwritten entries: Sub Pump, 91, 4.34, 7.53, 6.22, 5.03, 6.85, 4.72, 7.07, 4.69, 7.19, 4.66, 7.24, 4.62, 7.38, 4.56, 7.42, 4.50, 7.44, 4.48, 7.47, 4.46, 7.48, 4.44, 7.50, 4.42, 7.52, 4.41, 7.53, 4.40.

Plugging and Sealing Record table with columns: Depth set at - Metres From, To, Material and type, Volume Placed. Handwritten entries: 17.1 to 14.0, neat cement slurry, 11816; 14.0 to 0, bentonite slurry, 490.



Method of Construction table with checkboxes for Cable Tool, Rotary (air), Rotary (conventional), Rotary (reverse), Air percussion, Boring, Diamond, Jetting, Digging, Other.

Water Use table with checkboxes for Domestic, Stock, Irrigation, Industrial, Commercial, Municipal, Public Supply, Not used, Cooling & air conditioning, Other.

Final Status of Well table with checkboxes for Water Supply, Observation well, Test Hole, Recharge well, Abandoned, insufficient supply, Abandoned, poor quality, Unfinished, Dewatering, Replacement well, Abandoned, (Other).

Well Contractor/Technician Information section with fields for Name of Well Contractor, Business Address, Name of Well Technician, Signature, Date Submitted.

Audit No. Z 23315, Date Well Completed 2005 10 18, Date Delivered 2005 10 19.

Ministry Use Only section with fields for Data Source, Date Received, Date of Inspection, Well Record Number.

Instructions for Completing Form

A028641

page ___ of ___

- 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.

Well Owner's Information and Location of Well Information				Ministry Use Only			
First Name: [Redacted]				MUN	CON		LOT
Mailing Address (Street Number/Name, RR, Lot, Concession): 6779 LAKES PARK DRIVE							
County/District/Municipality: Chabot Manor Development		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		Sect./Compartment/Block/Tract etc.: PLAN 4M-1265 9/25	
GPS Reading	NAD	Zone	Easting	Northing	Unit Make/Model	Mode of Operation: <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify	
	83	18	454843	5012416	Magellan		

Log of Overburden and Bedrock Materials (see instructions)

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

Hole Diameter	Construction Record	Test of Well Yield																																																																																																														
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Depth From</th> <th>Metres To</th> <th>Diameter Centimetres</th> </tr> <tr> <td>0</td> <td>54.9</td> <td>15.07</td> </tr> </table>	Depth From	Metres To	Diameter Centimetres	0	54.9	15.07	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Inside diam centimetres</th> <th>Material</th> <th>Wall thickness centimetres</th> <th>Depth From</th> <th>Metres To</th> </tr> <tr> <td>15.88</td> <td> <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized </td> <td>.48</td> <td>0</td> <td>15.2</td> </tr> <tr> <td colspan="5" style="text-align: center;">Casing</td> </tr> <tr> <td colspan="5"> <input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized </td> </tr> <tr> <td colspan="5" style="text-align: center;">Screen</td> </tr> <tr> <td>Outside diam</td> <td> <input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized </td> <td>Slot No.</td> <td colspan="2"></td> </tr> <tr> <td colspan="5" style="text-align: center;">No Casing or Screen</td> </tr> <tr> <td colspan="5"> <input checked="" type="checkbox"/> Open hole </td> </tr> </table>	Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To	15.88	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.48	0	15.2	Casing					<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized					Screen					Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.			No Casing or Screen					<input checked="" type="checkbox"/> Open hole					<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Pumping test method</th> <th>Draw Down</th> <th colspan="2">Recovery</th> </tr> <tr> <td>Sub pump</td> <td>Time min Water Level Metres</td> <td>Time min</td> <td>Water Level Metres</td> </tr> <tr> <td>Pump intake set at (metres): 51.8</td> <td>Static Level: 11.13</td> <td></td> <td></td> </tr> <tr> <td>Pumping rate - (litres/min): 30.28</td> <td>1 12.95</td> <td>1</td> <td>36.15</td> </tr> <tr> <td>Duration of pumping: 1 hrs + 0 min</td> <td>2 13.93</td> <td>2</td> <td>34.77</td> </tr> <tr> <td>Final water level end of pumping: 37.51 metres</td> <td>3 14.82</td> <td>3</td> <td>33.64</td> </tr> <tr> <td>Recommended pump type: <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep</td> <td>4 15.68</td> <td>4</td> <td>32.47</td> </tr> <tr> <td>Recommended pump depth: 51.8 metres</td> <td>5 16.53</td> <td>5</td> <td>30.53</td> </tr> <tr> <td>Recommended pump rate: 30.28 (litres/min)</td> <td>10 20.15</td> <td>10</td> <td>27.20</td> </tr> <tr> <td>If flowing give rate - (litres/min)</td> <td>15 22.80</td> <td>15</td> <td>24.10</td> </tr> <tr> <td></td> <td>20 25.44</td> <td>20</td> <td>21.90</td> </tr> <tr> <td></td> <td>25 27.62</td> <td>25</td> <td>20.14</td> </tr> <tr> <td>If pumping discontinued, give reason.</td> <td>30 29.37</td> <td>30</td> <td>18.24</td> </tr> <tr> <td></td> <td>40 32.73</td> <td>40</td> <td>16.58</td> </tr> <tr> <td></td> <td>50 35.22</td> <td>50</td> <td>14.98</td> </tr> <tr> <td></td> <td>60 37.51</td> <td>60</td> <td>14.11</td> </tr> </table>	Pumping test method	Draw Down	Recovery		Sub pump	Time min Water Level Metres	Time min	Water Level Metres	Pump intake set at (metres): 51.8	Static Level: 11.13			Pumping rate - (litres/min): 30.28	1 12.95	1	36.15	Duration of pumping: 1 hrs + 0 min	2 13.93	2	34.77	Final water level end of pumping: 37.51 metres	3 14.82	3	33.64	Recommended pump type: <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4 15.68	4	32.47	Recommended pump depth: 51.8 metres	5 16.53	5	30.53	Recommended pump rate: 30.28 (litres/min)	10 20.15	10	27.20	If flowing give rate - (litres/min)	15 22.80	15	24.10		20 25.44	20	21.90		25 27.62	25	20.14	If pumping discontinued, give reason.	30 29.37	30	18.24		40 32.73	40	16.58		50 35.22	50	14.98		60 37.51	60	14.11
Depth From	Metres To	Diameter Centimetres																																																																																																														
0	54.9	15.07																																																																																																														
Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To																																																																																																												
15.88	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.48	0	15.2																																																																																																												
Casing																																																																																																																
<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized																																																																																																																
Screen																																																																																																																
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.																																																																																																														
No Casing or Screen																																																																																																																
<input checked="" type="checkbox"/> Open hole																																																																																																																
Pumping test method	Draw Down	Recovery																																																																																																														
Sub pump	Time min Water Level Metres	Time min	Water Level Metres																																																																																																													
Pump intake set at (metres): 51.8	Static Level: 11.13																																																																																																															
Pumping rate - (litres/min): 30.28	1 12.95	1	36.15																																																																																																													
Duration of pumping: 1 hrs + 0 min	2 13.93	2	34.77																																																																																																													
Final water level end of pumping: 37.51 metres	3 14.82	3	33.64																																																																																																													
Recommended pump type: <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4 15.68	4	32.47																																																																																																													
Recommended pump depth: 51.8 metres	5 16.53	5	30.53																																																																																																													
Recommended pump rate: 30.28 (litres/min)	10 20.15	10	27.20																																																																																																													
If flowing give rate - (litres/min)	15 22.80	15	24.10																																																																																																													
	20 25.44	20	21.90																																																																																																													
	25 27.62	25	20.14																																																																																																													
If pumping discontinued, give reason.	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

Location of Well

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

Audit No. **Z 23357** Date Well Completed **2005 09 30**

Was the well owner's information package delivered? Yes No Date Delivered **2005 09 30**

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 1119** 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: *[Signature]* Date Submitted **2005 11 02**

Ministry Use Only

Data Source Contractor **1119**

Date Received **NOV 14 2005** DD Date of Inspection **2005 09 30** YYYY MM DD

Remarks _____ Well Record Number _____



Ontario

Ministry of the Environment

Well Tag Number

A 028715

Well Record

Regulation 903 Ontario Water Resources Act

Instructions for Completing Form

A028715

page ___ of ___

- 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

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. PLANAM-1265 5/126
 GPS Reading NAD 83 Zone 18 Easting 454807 Northing 5012421 Unit Make/Model magellan Mode of Operation: Undifferentiated Averaged Differentiated, specify _____

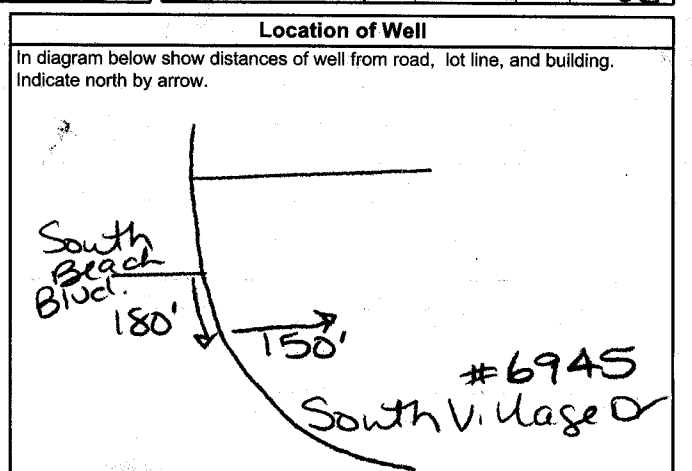
Log of Overburden and Bedrock Materials (see instructions)

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

Hole Diameter			Construction Record				Test of Well Yield					
Depth From	Metres To	Diameter Centimetres	Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To	Pumping test method	Draw Down Time min	Water Level Metres	Recovery Time min	Water Level Metres
0	54.9	15.24	15.88	Steel	.48	0	14.0	Subpump		10.06		
Water Record			Casing				Test of Well Yield					
Water found at Metres	Kind of Water		Screen				Test of Well Yield					
35.0	Fresh Sulphur		No Casing or Screen				Test of Well Yield					
51.5	Fresh Sulphur		Open hole				Test of Well Yield					
After test of well yield, water was			No Casing or Screen				Test of Well Yield					
not tested			Open hole				Test of Well Yield					
cloudy			Open hole				Test of Well Yield					
Chlorinated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Open hole				Test of Well Yield					

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)
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

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.) Rte 1 Richmond, Ont

Name of Well Technician (last name, first name) Purcell Shannon Well Technician's Licence No. 12122

Signature of Technician/Contractor [Signature] Date Submitted 2005 11 04

Ministry Use Only

Data Source 1119 Contractor 1119

Date Received NOV 14 2005 Date of Inspection YYYY MM DD

Remarks _____ Well Record Number _____

Instructions for Completing Form

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

Ministry Use Only											
MUN										CON	LOT

Well Owner's Information and Location of Well Information

Ottawa Carleton / Ossonge
 RR#/Street Number/Name: **#6934 South Village Drive**
 City/Town/Village: **Ossonge** Site/Compartment/Block/Tract etc.: **4 4**
 GPS Reading: **8.3** NAD Zone Easting Northing: **10 454777 5012309** Unit Make/Model: **Mogelbon** 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 Metres	
				From	To
	Sand gravel			0	12.19
	Gray limestone			12.19	45.72

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	45.72	15.07

Water Record

Water found at: **43.08** m

Kind of Water: **NOT TESTED**

Other: **TESTED**

Chlorinated: Yes No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From	Metres To
15.88	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.48	0	14.63

Screen

Outside diam: Steel Fibreglass Plastic Concrete Galvanized

No Casing or Screen

Open hole

Depth: **14.02** to **45.72**

Test of Well Yield

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Subpump				
Pump intake set at (metres)	Static Level	10.20		12.75
Pumping rate (litres/min)	1	11.13	1	11.43
Duration of pumping	2	11.46	2	11.05
Final water level end of pumping (metres)	3	11.65	3	11.02
Recommended pump type	4	11.78	4	10.87
Recommended pump depth (metres)	5	11.87	5	10.78
Recommended pump rate (litres/min)	10	12.09	10	10.49
If flowing give rate (litres/min)	15	12.38	15	10.32
	20	12.50	20	10.25
	25	12.56	25	10.21
	30	12.62	30	10.20
	40	12.68	40	
	50	12.71	50	
	60	12.75	60	

Plugging and Sealing Record

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	1.816
10.97	0	Bentonite Slurry	0.363

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 39914** Date Well Completed **2006 03 15**
 Was the well owner's information package delivered? Yes No Date Delivered **2006 03 16**

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 ROAD 20**
 Name of Well Technician (last name, first name): **HOSAN DAN** Well Technician's Licence No.: **T 3058**
 Signature of Technician/Contractor: **[Signature]** Date Submitted **2006 04 05**

Ministry Use Only

Data Source: Contractor **1119**
 Date Received: **APR 12 2006** Date of Inspection: **2006 03 16**
 Remarks: _____ Well Record Number: _____

Instructions for Completing Form

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

Ministry Use Only

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

Well Owner's Information and Location of Well Information

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

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

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

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

GPS Reading: NAD Zone Easting Northing Unit Make/Model Mode of Operation: Undifferentiated Averaged Differentiated, specify

8 3 18 454882 5012483 Garmin

Log of Overburden and Bedrock Materials (see instructions)

General Colour	Most common material	Other Materials	General Description	Depth Metres	
				From	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 Metres	Metres	Diameter Centimetres
From	To	
0	14.93	12.75
14.93	95.09	15.23

Construction Record					
Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres		
			From	To	
Casing					
15.86	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	0.48	+ .45	14.93	
Screen					
15.23	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized			14.93	95.09
No Casing or Screen					
	<input checked="" type="checkbox"/> Open hole			14.93	95.09

Test of Well Yield				
Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
submersible				
Pump intake set at - (metres) 60.95	Static Level			
Pumping rate - (litres/min) 54.6	1	10.32	1	10.21
Duration of pumping 1 hrs + 0 min	2	10.32	2	10.22
Final water level end of pumping 10.34	3	10.33	3	10.22
Recommended pump type. <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	10.33	4	10.23
Recommended pump depth. 45.71 metres	5	10.33	5	10.22
Recommended pump rate. 45.5 (litres/min)	10	10.33	10	10.222
	15	10.33	15	10.22
If flowing give rate - (litres/min)	20	10.34	20	10.22
	25	10.34	25	10.20
If pumping discontinued, give reason.	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			
Depth set at - Metres		Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
From	To		
14.93	0	Grouted Bentonite Slurry	1.38m3

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

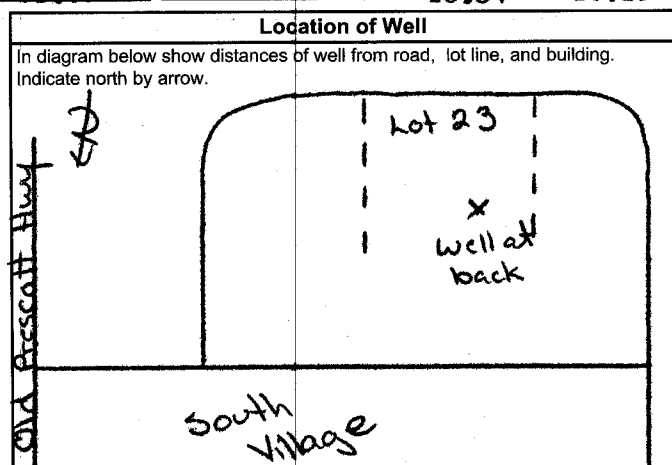
Well Contractor/Technician Information

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

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

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

Signature of Technician/Contractor: *[Signature]* Date Submitted: **2006 03 31**



Audit No. **7 39272** Date Well Completed: **2006 03 30**

Was the well owner's information package delivered? Yes No Date Delivered: **2006 03 30**

Ministry Use Only

Data Source: **1558** Contractor

Date Received: **APR 19 2006** Date of Inspection: **2006 03 30**

Remarks: Well Record Number

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. 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.

Well Owner's Information and Location of Well Information

Table with columns: MUN, CON, LOT

RR#/Street Number/Name: #6970 South Village Drive; City/Town/Village: Greely; Site/Compartment/Block/Tract etc: Pbn 4M-1265 S/L8

Log of Overburden and Bedrock Materials (see instructions)

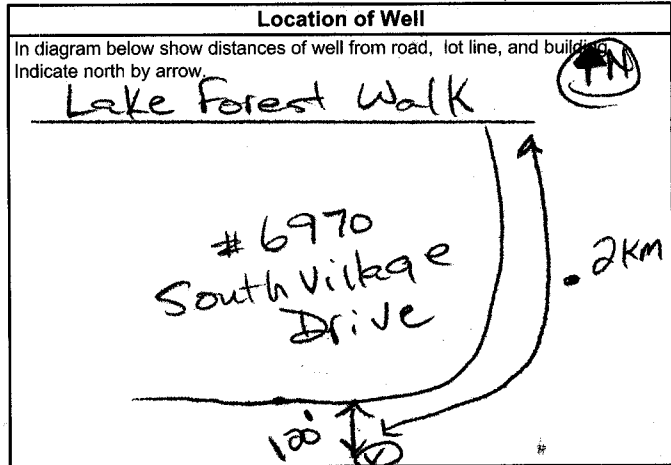
Table with columns: General Colour, Most common material, Other Materials, General Description, Depth From, Metres To. Includes handwritten entries: Sand & Boulders, Dark Grey limestone.

Hole Diameter, Water Record, Chlorinated sections. Includes handwritten data: Depth 0 to 24.69, Diameter 15.23.

Construction Record, Screen, No Casing or Screen sections. Includes handwritten data: Inside diam 15.88, Wall thickness .48, Depth 0 to 18.29.

Test of Well Yield table with columns: Pumping test method, Draw Down, Recovery. Includes handwritten data for Subpump.

Plugging and Sealing Record table. Includes handwritten data: Depth set at 17.68 to 14.63, Material Neat Cement Slurry.



Method of Construction, Water Use, Final Status of Well sections. Includes handwritten data: Air percussion, Domestic Stock.

Audit No. 239992, Date Well Completed 2006 04 19, Date Delivered 2006 04 20.

Well Contractor/Technician Information section. Includes handwritten data: Air Rock Drilling Co Ltd, HOSAN DAN.

Ministry Use Only section. Includes handwritten data: Contractor 1119, Date Received JUN 12 2006.

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.

Well Owner's Information and Location of Well Information

Ministry Use Only											
MUN				CON				LOT			

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 Metres	
				From	To
	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	Metres To	Diameter Centimetres
0	42.66	15.23

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
15.88	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.48	0	15.84

Screen

Outside diam	Material	Slot No.
	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	

No Casing or Screen

Open hole

Test of Well Yield

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Subpump Pump intake set at (metres) 27.62	Static Level	28.6		41.72
Pumping rate (litres/min) 45	1	5.72	1	39.29
Duration of pumping (hrs + 0 min)	2	8.20	2	37.35
Final water level end of pumping (metres)	3	10.17	3	35.35
Recommended pump type: <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	12.26	4	33.26
Recommended pump depth (metres)	5	14.10	5	31.79
Recommended pump rate (litres/min)	10	21.89	10	24.06
	15	26.88	15	17.51
If flowing give rate (litres/min)	20	30.53	20	15.90
	25	33.16	25	14.53
If pumping discontinued, give reason:	30	34.94	30	11.53
	40	37.60	40	9.34
	50	40.22	50	7.92
	60	41.72	60	5.48

Plugging and Sealing Record Annular space Abandonment

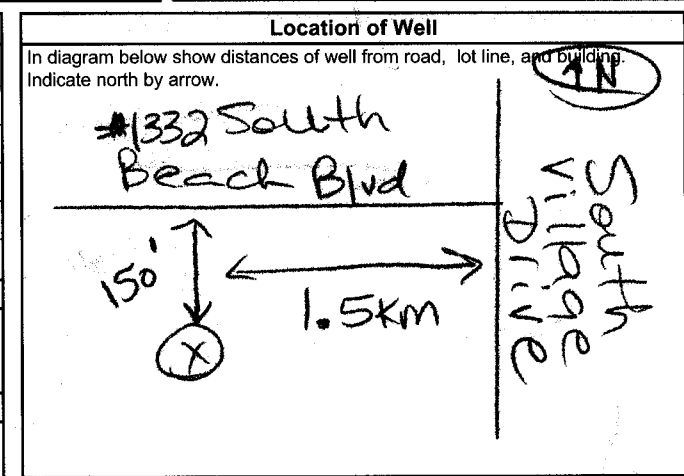
Depth set at - Metres From	To	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
15.23	12.19	Neat Cement Slurry	.227
12.19	0	Bentonite Slurry	.981

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 K0A2Z0**
 Name of Well Technician (last name, first name): **Desautniers Ken** Well Technician's Licence No.: **14**
 Signature of Technician/Contractor: *[Signature]* Date Submitted: **2006 08 28**

Audit No. **Z 48636** Date Well Completed **2006 07 27**

Was the well owner's information package delivered? Yes No Date Delivered **2006 08 06**

Ministry Use Only

Data Source Contractor **1119**

Date Received **SEP 07 2006** Date of Inspection

Remarks Well Record Number

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.

Well Owner's Information and Location of Well Information

Ministry Use Only											
MUN										CON	LOT

RR#/Street Number/Name: **Ottawa - Carleton** **1350 South Beach Blvd**
 City/Town/Village: **Ussoude** **Greenly**
 Site/Compartment/Block/Tract, etc.: **4 4** **4M-6655/L114**
 GPS Reading: NAD **813** 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 Metres	
				From	To
	Sand & gravel			0	13.10
	Grey limestone			13.10	36.57
	Grey Sandstone			36.57	53.33

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	53.33	15.23

Water Record

Water found at **5.00** m Kind of Water: **TESTED**

Fresh Sulphur
 Gas Salty Minerals
 Other: **TESTED**

After test of well yield, water was **TESTED**

Chlorinated Yes No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
15.88	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	1.48	0	15.84

Casing

Steel Fibreglass
 Plastic Concrete
 Galvanized

Screen

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

No Casing or Screen

Open hole

Test of Well Yield

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
SUBPUMP				
Pump intake set (metres)	10	7.78	21	9.6
Static Level	1	12.73	1	19.60
Pumping rate (litres/min)	2	13.7	2	17.18
Duration of pumping	3	14.38	3	15.08
Final water level end of pumping (metres)	4	15.0	4	14.17
Recommended pump type	5	15.45	5	13.08
Recommended pump depth (metres)	10	17.36	10	11.15
Recommended pump rate (litres/min)	15	18.53	15	10.96
If flowing give rate (litres/min)	20	19.40	20	10.89
	25	20.08	25	10.87
	30	20.57	30	10.85
	40	21.30	40	10.83
	50	21.63	50	10.80
	60	21.96	60	10.79

Plugging and Sealing Record

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	.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: **AR 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): **Desautels Ken** Well Technician's Licence No.: **T4**
 Signature of Technician/Contractor: *[Signature]* Date Submitted: **2006 08 28**

Location of Well

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

#1350 South Beach Blvd

153' (distance from road)

1.3 km (distance from road)

South Village Drive

Audit No. **Z 48637** Date Well Completed **2006 07 24**
 Was the well owner's information package delivered? Yes No Date Delivered **2006 07 26**

Ministry Use Only

Data Source: Contractor **1119**
 Date Received: **SEP 07 2006** Date of Inspection: **2006 08 28**
 Remarks: _____ Well Record Number: _____

Instructions for Completing Form

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

Ministry Use Only									
MUN								CON	LOT

Well Owner's Information and Location of Well Information

RR#/Street Number/Name: Uttawa-Carleton #6940 South Village Dr City/Town/Village: Uxbridge Site/Compartment/Block/Tract etc: 4 4

GPS Reading: NAD Zone Easting Northing: 83 18454807 502320 Unit/Make/Model: Mogellan 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 Metres	
				From	To
	Sand			0	5.18
	Sandy clay, sand, gravel			5.18	10.97
	Limestone			10.97	24.99

Hole Diameter

Depth Metres	Diameter Centimetres
0	24.99
	15.24

Water Record

Water found at: 16.10 m Kind of Water: NOT TESTED

Other: NOT TESTED

After test of well yield, water was: NOT TESTED

Chlorinated: Yes No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth From Metres	Depth To Metres
15.38	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	48	0	16.00

Screen

Outside diam: Steel Fibreglass Plastic Concrete Galvanized

No Casing or Screen

Open hole

Depth: 15.39 to 24.99

Test of Well Yield

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Sub Pump				
Pump intake set at (metres)	1	3.27		4.85
Pumping rate (litres/min)	1	4.36	1	3.56
Duration of pumping (hrs + min)	2	4.50	2	3.51
Final water level and of pumping (metres)	3	4.56	3	3.46
Recommended pump type: <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	4.60	4	3.45
Recommended pump depth (metres)	5	4.62	5	3.44
Recommended pump rate (litres/min)	10	4.70	10	3.38
If flowing give rate - (litres/min)	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

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

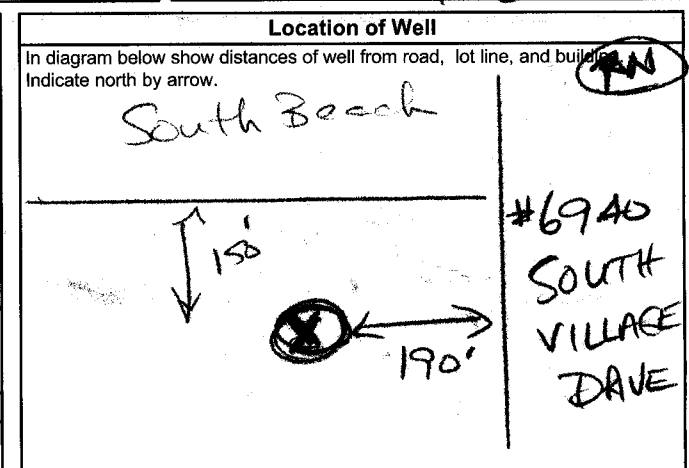
Well Contractor/Technician Information

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): Desautniers Ken Well Technician's Licence No.: 14

Signature of Technician/Contractor: [Signature] Date Submitted: 2006 08 28



Audit No.: **z 48610** Date Well Completed: 2006 07 28

Was the well owner's information package delivered? Yes No Date Delivered: 2006 08 01

Ministry Use Only

Data Source: Contractor **1119**

Date Received: SEP 07 2006 Date of Inspection: 2006 08 01

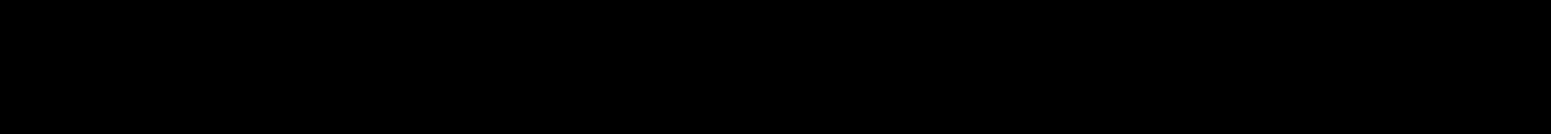
Remarks: _____ Well Record Number: _____

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.
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.

Well Owner's Information and Location of Well Information

Ministry Use Only table with columns for MUN, CON, LOT



Well location details: Ottawa-Carleton, 1362 South Beach Blvd, Greely Plan 4M-1065/1416, NAD 83, Easting 454725, Northing 5012231

Log of Overburden and Bedrock Materials (see instructions)

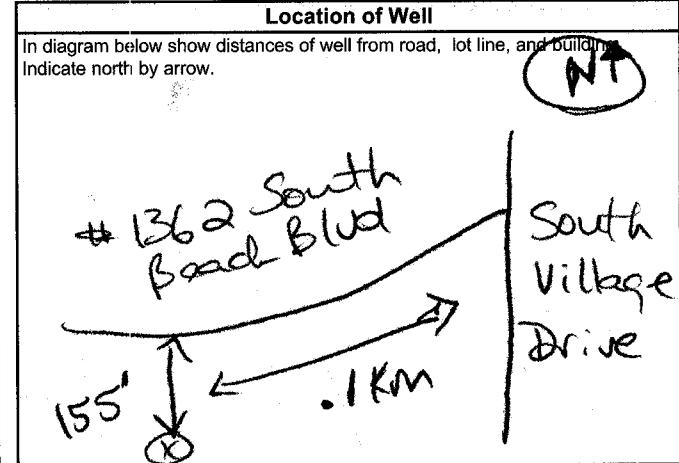
Log of Overburden and Bedrock Materials table with columns for General Colour, Most common material, Other Materials, General Description, Depth From, Metres To

Hole Diameter and Water Record sections

Construction Record section with Casing and Screen details

Test of Well Yield table with columns for Pumping test method, Draw Down, Recovery

Plugging and Sealing Record table with columns for Depth set at, Material and type, Volume Placed



Method of Construction, Water Use, and Final Status of Well sections

Audit No. and Date Well Completed fields

Well Contractor/Technician Information section

Ministry Use Only section with Date Received and Date of Inspection

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.

Well Owner's Information and Location of Well Information

Ministry Use Only										
MUN								CON		LOT

City/Town/Village: **City of Ottawa** / **City of Ottawa Osgoode 112**
 RR#/Street Number/Name: **1338 South Beach DR.**
 City/Town/Village: **GREELY** / Site/Compartment/Block/Tract etc.: **Plan HM 1265**
 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 Metres	
				From	To
yellow	sand		Soft	0	3.10
gray	sand		Soft	3.10	10.97
gray	gravel		Packed	10.97	13.41
red	illite shale		layered	13.41	42.67
purple	sandstone		Hard	42.67	48.76

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	14.63	2123
14.63	48.76	1555

Water Record

Water found at Metres / Kind of Water

14.63 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 Metres	
			From	To
Casing				
1555	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	0.48	14.60	14.63
Screen				
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.		
No Casing or Screen				
<input checked="" type="checkbox"/> Open hole			14.63	48.76

Test of Well Yield

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
2 H.P.S. w/p				
Pump intake set at - (metres) 30		7.17		10.17
Pumping rate - (litres/min) 40	1	8.12	1	9.72
Duration of pumping 1 hrs + 0 min	2	8.40	2	9.37
Final water level end of pumping 10.7 metres	3	8.46	3	9.16
Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	8.67	4	8.99
Recommended pump depth 30 metres	5	8.70	5	8.90
Recommended pump rate (litres/min) 40	10	8.86	10	8.93
If flowing give rate - (litres/min)	15	9.32	15	8.62
	20	9.60	20	7.87
	25	9.79	25	7.72
If pumping discontinued, give reason.	30	9.79	30	7.62
	40	9.96	40	-
	50	10.10	50	-
	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	neat cement slurry	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 **06/11/21**

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

Well Contractor/Technician Information

Name of Well Contractor: **Giles Bourgeois** Well Contractor's Licence No. **1414**

Business Address (street name, number, city etc.): **57A 16th Ave**

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

Signature of Technician/Contractor: **Alan Bourgeois** Date Submitted **06/11/21**

Ministry Use Only

Data Source: **1414** Contractor

Date Received **JAN 25 2007** MM DD Date of Inspection **06/11/21** YYYY MM DD

Remarks: _____ Well Record Number: _____



Well Tag No. **A 046216** (elow)

A046216

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

Address of well location (County/District/Municipality) **City of Ottawa** Township **Osgoode** Lot **113** 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

Log of Overburden and Bedrock Materials (see Instructions)

General Colour	Most common material	Other Materials	General Description	Depth Metres	
				From	To
Yellow	sand		SOFT	0	3.10
grey	sand		SOFT	3.10	10.36
grey	gravel		Paired	10.36	13.41
grey	limestone		Hard	13.41	42.67
white	Sandstone		Hard	42.67	48.68

Hole Diameter

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

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
15.55	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	0.48	10.60	14.63
Screen				
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.		
No Casing or Screen				
<input checked="" type="checkbox"/> Open hole			14.63	48.68

Test of Well Yield

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
3 H.P.				
Pump intake set at - (metres) 3.0	Static Level	7.07		10.16
Pumping rate - (litres/min) 40	1	8.02	1	9.62
Duration of pumping 1 hrs + 0 min	2	8.30	2	9.27
Final water level end of pumping 10.16 metres	3	8.36	3	9.06
Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	8.57	4	8.91
Recommended pump depth 3.0 metres	5	8.66	5	8.80
Recommended pump rate 40 (litres/min)	10	8.86	10	8.23
If flowing give rate - (litres/min)	15	9.22	15	8.02
	20	9.50	20	7.77
	25	9.69	25	7.62
If pumping discontinued, give reason.	30	9.69	30	7.52
	40	9.86	40	
	50	10.00	50	
	60	10.16	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	pressure grout cement	12 bags

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 **06 11 22**

Was the well owner's information package delivered? Yes No Date Delivered **06 11 22**

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 **Gilles Bourgeois** Well Contractor's Licence No. **1414**

Business Address (street name, number, city, etc.) **504 Bess ave**

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

Signature of Technician/Contractor **[Signature]** Date Submitted **06 11 22**

Ministry Use Only

Data Source **1414** Contractor

Date Received **JAN 23 2007** Date of Inspection **06 11 22**

Remarks **[Blank]** Well Record Number **[Blank]**

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

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-1263 S/L 117**
 GPS Reading NAD Zone Easting Northing Unit Make/Model Mode of Operation: Undifferentiated Averaged Differentiated, specify

Log of Overburden and Bedrock Materials (see instructions)

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

Hole Diameter

Depth	Metres	Diameter
From	To	Centimetres
0	48.77	14.91

Water Record

Water found at **17.81** m / Kind of Water **NOT TESTED**

Fresh Sulphur Gas Salty Minerals Other: **NOT TESTED**

Fresh Sulphur Gas Salty Minerals Other: **NOT TESTED**

After test of well yield, water was **clear and sediment free** **NOT TESTED**

Chlorinated Yes No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth	
			From	Metres To
15.88	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.48	0	14.93

Screen

Outside diam Steel Fibreglass Plastic Concrete Galvanized

No Casing or Screen

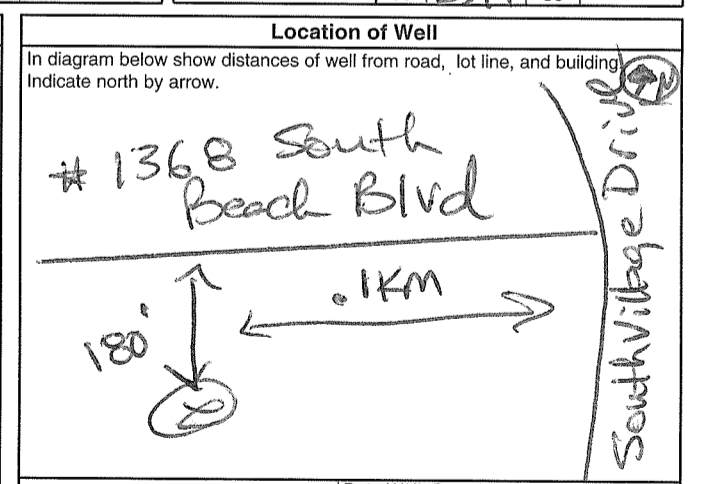
Open hole **14.32 48.77**

Test of Well Yield

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Sub Pump				
Pump intake set at (metres) 20.43	Static Level	10.40		13.44
Pumping rate (litres/min) 11	1	11.73	1	11.40
Duration of pumping 1 hrs + 0 min	2	12.14	2	11.32
Final water level end of pumping 13.44 metres	3	12.35	3	11.16
Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	12.57	4	11.08
Recommended pump depth 30.43 metres	5	12.63	5	10.99
Recommended pump rate (litres/min) 9.1	10	12.73	10	10.80
If flowing give rate (litres/min) 9.1	15	13.10	15	10.63
	20	13.20	20	10.57
	25	13.24	25	10.51
	30	13.28	30	10.45
	40	13.43	40	10.40
	50	13.43	50	
	60	13.44	60	

Plugging and Sealing Record Annular space Abandonment

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



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 **2007 01 05**

Was the well owner's information package delivered? Yes No Date Delivered **2007 01 12**

Well Contractor/Technician Information

Name of Well Contractor **HR Back Drilling Ltd 1119** Well Contractor's Licence No. **1119**
 Business Address (street name, number, city etc.) **RR1 RICHMOND ONT K0A2Z0**
 Name of Well Technician (last name, first name) **TOSAN DAN** Well Technician's Licence No. **13058**
 Signature of Technician/Contractor **[Signature]** Date Submitted **2007 01 05**

Ministry Use Only

Data Source Contractor **1119**

Date Received **FEB 12 2007** Date of Inspection **2007 01 05**

Remarks Well Record Number

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

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 **Greenly** Site/Compartment/Block/Tract etc. **Plan 4M-1265 S/L81**
 GPS Reading NAD **83** Zone **18** Easting **454682** Northing **5012330** Unit/Make/Model **Nagelton** 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	To
	Till			0	1.52
	Sand, Gravel, boulders			1.52	13.11
	Limestone			13.11	38.10
	Sandstone			38.10	94.48

Hole Diameter

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

Water Record

Water found at **0.83** m Kind of Water **NOT TESTED**

Fresh Sulphur
 Gas Salty Minerals
 Other: **NOT TESTED**

After test of well yield, water was **NOT TESTED**

Chlorinated Yes No

Construction Record

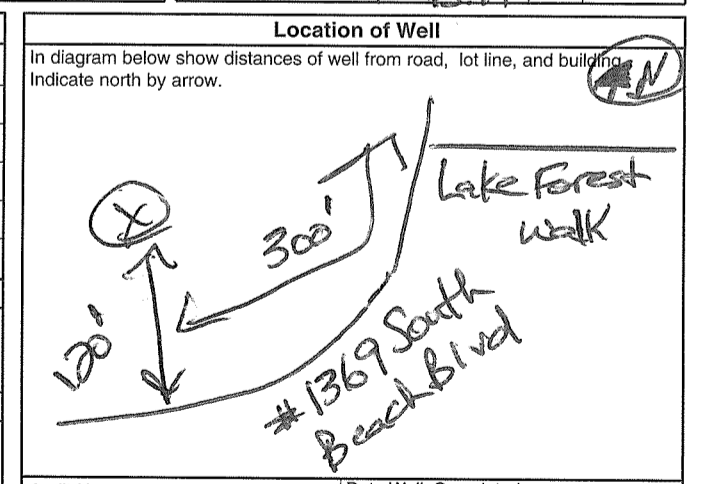
Inside diam centimetres	Material	Wall thickness centimetres	Depth	
			From	To
15.88	Steel <input checked="" type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	480	0	15.54
Screen				
Outside diam	Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.		
No Casing or Screen				
<input checked="" type="checkbox"/> Open hole			14.93	94.48

Test of Well Yield

Pumping test method	Time min	Draw Down		Recovery	
		Water Level Metres	Time min	Water Level Metres	Time min
Sub Pump		Static Level 11.90		13.74	
Pump intake set (metres) 82.29	1	13.15	1	11.97	
Pumping rate (litres/min) 91	2	13.40	2	11.90	
Duration of pumping 1 hrs + 0 min	3	13.50	3		
Final water level end of pumping 13.74 metres	4	13.54	4		
Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	5	13.57	5		
Recommended pump depth 82.29 metres	10	13.65	10		
Recommended pump rate (litres/min) 11	15	13.69	15		
If flowing give rate (litres/min)	20	13.72	20		
	25	13.74	25		
If pumping discontinued, give reason.	30	13.74	30		
	40	13.74	40		
	50	13.74	50		
	60	13.74	60		

Plugging and Sealing Record Annular space Abandonment

Depth set at - Metres	Material and type (bentonite slurry, neat cement slurry) etc.	Volume Placed (cubic metres)
From	To	
14.93	11.87 Neat Cement Slurry	0.227
11.87	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

Audit No. **Z 64799** Date Well Completed **2007 03 17**

Was the well owner's information package delivered? Yes No Date Delivered **2007 05 20**

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) **Desautels Ken** Well Technician's Licence No. **14**
 Signature of Technician/Contractor **x Ken Desautels** Date Submitted **2007 03 20**

Ministry Use Only

Data Source Contractor **1119**

Date Received **APR 11 2007** Date of Inspection **YYYY MM DD**

Remarks Well Record Number

A055252

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.

Well Owner's Information and Location of Well Information

Ministry Use Only											
MUN				CON				LOT			

RR#/Street Number/Name: **#1374 South Beach Blvd** City/Town/Village: **Greely** Site/Compartment/Block/Tract/etc.: **Plan 4M-1265 5/L118**

GPS Reading: **8.3** NAD Zone: **18** Easting: **454767** Northing: **5012263** Unit Make/Model: **Mogellan** 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 Metres	
				From	To
	Sand Gravel, Boulders			0	12.19
	Grey Limestone			12.19	42.97
	White Sandstone			42.97	48.77

Hole Diameter

Depth From	Metres To	Diameter Centimetres
0	48.77	15.55

Water Record

Water found at **45.72** m Kind of Water: Fresh Sulphur Gas Salty Minerals Other: **NOT TESTED**

Water found at **46.63** m Kind of Water: Fresh Sulphur Gas Salty Minerals Other: **TESTED**

After test of well yield, water was Clear and sediment free Other: **TESTED**

Chlorinated Yes No

Construction Record

Inside diam centimetres	Material	Wall thickness centimetres	Depth Metres	
			From	To
15.88	<input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	.48	0	15.24
Screen				
Outside diam	<input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete <input type="checkbox"/> Galvanized	Slot No.		
No Casing or Screen				
<input checked="" type="checkbox"/> Open hole			14.63	48.77

Test of Well Yield

Pumping test method	Draw Down		Recovery	
	Time min	Water Level Metres	Time min	Water Level Metres
Sub Pump				
Pump intake set at (metres) 42.57	Static Level	9.46		12.27
Pumping rate (litres/min) 91	1	11.15	1	10.53
Duration of pumping 0 hrs + 0 min	2	11.44	2	10.53
Final water level end of pumping (metres) 12.27	3	11.58	3	10.52
Recommended pump type <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep	4	11.68	4	10.51
Recommended pump depth (metres) 42.57	5	11.76	5	10.45
Recommended pump rate (litres/min) 91	10	11.97	10	10.38
If flowing give rate - (litres/min)	15	12.06	15	10.19
	20	12.12	20	10.12
	25	12.15	25	10.11
If pumping discontinued, give reason.	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

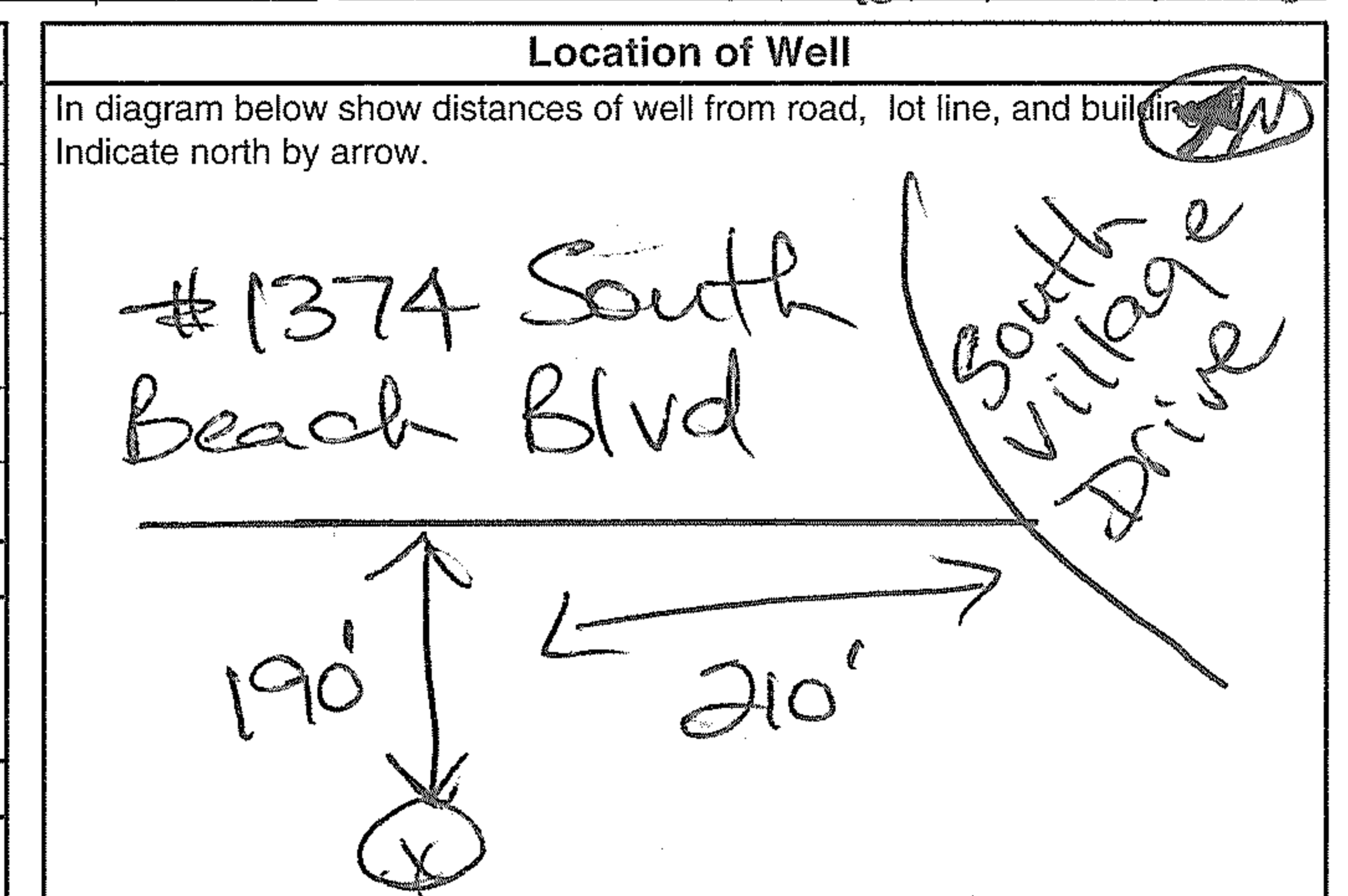
Well Contractor/Technician Information

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 K0A2Z0**

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

Date Submitted: **2007 08 21**



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 2'S 2007** DD Date of Inspection: _____ YYY MM DD

Remarks: _____ Well Record Number: _____

N/A

Well Owner's Information

First Name: Ken Gordon Holdings Inc
 Last Name: Ken Gordon Holdings Inc
 E-mail Address: [Blank]
 Well Constructed by Well Owner
 Mailing Address (Street Number/Name, RR): Box 310
 Municipality: Manotick
 Province: Ont
 Postal Code: K4M 1A4
 Telephone No. (inc. area code): [Blank]

Part A Construction and/or Major Alteration of a Well

Address of Well Location (Street Number/Name, RR): #6969 Parkway Road
 Township: Osgoode
 Lot: P/L 5
 Concession: 4
 County/District/Municipality: Ottawa-Carleton
 City/Town/Village: Greely
 Province: Ontario
 Postal Code: [Blank]
 UTM Coordinates: NAD 83
 Zone: 18
 Easting: 455341
 Northing: 5011913
 GPS Unit Make: Magellan
 Model: 200
 Mode of Operation: Undifferentiated Averaged

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

Results of Well Yield Testing

Check box if after test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Cannot develop to sand-free state	Draw Down		Recovery	
	Time (Min)	Water Level (Metres)	Time (Min)	Water Level (Metres)
<input type="checkbox"/>	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		

Method of Construction

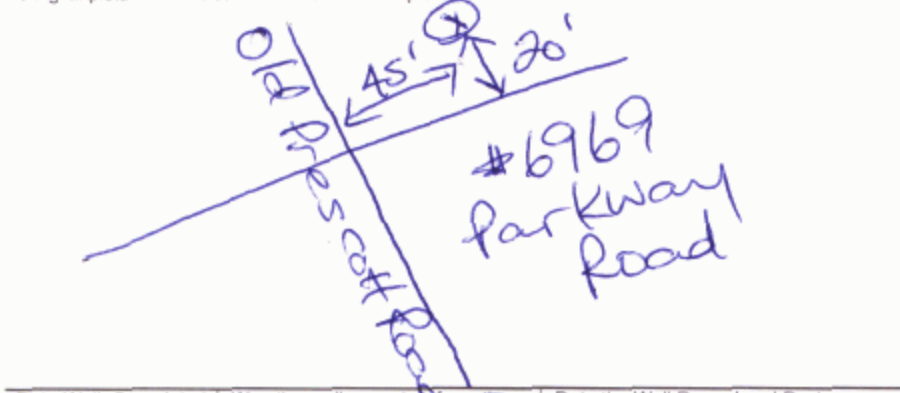
Cable Tool Diamond Public Commercial Not used
 Rotary (Conventional) Jetting Domestic Municipal Dewatering
 Rotary (Reverse) Driving Livestock Test Hole Monitoring
 Rotary (Air) Digging Irrigation Cooling & Air Conditioning
 Air percussion Boring Industrial
 Other, specify _____ Other, specify _____

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")
 - digital pictures of inside of well can also be provided



Water Details

Water found at Depth: [Blank] Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth: [Blank] Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth: [Blank] Metres Gas Fresh Salty Sulphur Minerals

Casing Used

Galvanized Steel Fibreglass Plastic Concrete

Screen Used

Galvanized Steel Fibreglass Plastic Concrete

Casing and Well Details

Diameter of the Hole (Centimetres): [Blank]
 Depth of the Hole (Metres): [Blank]
 Wall Thickness (Metres): [Blank]

Date Well Completed (yyyy/mm/dd): 2008-03-22
 Was the well owner's signature package delivered? Yes No
 Date the Well Record and Package Delivered to Well Owner (yyyy/mm/dd): [Blank]

No Casing and Screen Used

Open Hole
 Disinfected? Yes No

Inside Diameter of the Casing (Metres): [Blank]
 Depth of the Casing (Metres): [Blank]

Well Contractor and Well Technician Information

Business Name of Well Contractor: AIR ROCK DRILLING CO. LTD (119)
 Well Contractor's Licence No.: [Blank]
 Business Address (Street No./Name, number, RR): RA#1 RICHMOND
 Municipality: RICHMOND
 Province: ONT
 Postal Code: K0A 2Z0
 Business E-mail Address: [Blank]
 Bus. Telephone No. (inc. area code): 613-838-2170
 Name of Well Technician (Last Name, First Name): Desautels, Ken
 Well Technician's Licence No.: T14
 Signature of Technician: [Signature]
 Date Submitted (yyyy/mm/dd): 2008-04-01

Ministry Use Only

Audit No.: z 78174
 Well Contractor No.: [Blank]
 Date Received (yyyy/mm/dd): APR 28 2008
 Date of Inspection (yyyy/mm/dd): [Blank]
 Remarks: [Blank]

Well Owner's Information

First Name: Oakcraft Last Name: Momez Inc. E-mail Address: ebizprogen.com Well Constructed by Well Owner

Mailing Address (Street Number/Name, RR): 6876 Lakes Park Dr. Municipality: Greely Province: On Postal Code: K4P1M6 Telephone No. (inc. area code): 613 724 0990

Part A Construction and/or Major Alteration of a Well

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

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

UTM Coordinates: Zone: 18 Easting: 4545525012125 Northing: UTM GPS Unit Make: Magellan Model: _____ Mode of Operation: 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	Depth Set at (Metres) To	Type of Sealant Used (Material and Type)	Volume Placed (Cubic Metres)
0	14.63	limerit grout	13 Bag

Results of Well Yield Testing

Check box if after test of well yield, water was: <input checked="" type="checkbox"/> Clear and sand free <input type="checkbox"/> Cannot develop to sand-free state	Draw Down		Recovery	
	Time (Min)	Water Level (Metres)	Time (Min)	Water Level (Metres)
<input type="checkbox"/> If pumping discontinued, give reason: Pumping test method: <u>1/2ph Sub</u> Pump intake set at (Metres): <u>38.7</u> Pumping rate (Litres/min): <u>53</u> Duration of pumping: <u>1</u> hrs + _____ min Final water level end of pumping (Metres): <u>23.54</u> Recommended pump type: <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Deep Recommended pump depth: <u>38</u> Metres Recommended pump rate (Litres/min): <u>53</u> If flowing give rate (Litres/min): _____	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		

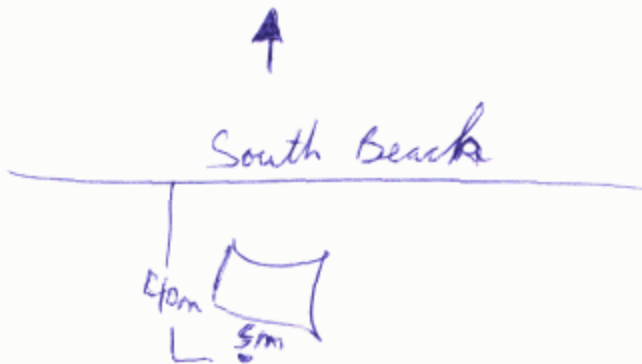
Method of Construction	Water Use
<input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Rotary (Reverse) <input checked="" type="checkbox"/> Rotary (Air) <input type="checkbox"/> Air percussion <input type="checkbox"/> Other, specify _____	<input checked="" type="checkbox"/> Public <input type="checkbox"/> Commercial <input type="checkbox"/> Not used <input type="checkbox"/> Domestic <input type="checkbox"/> Municipal <input type="checkbox"/> Dewatering <input type="checkbox"/> Livestock <input type="checkbox"/> Test Hole <input type="checkbox"/> Monitoring <input type="checkbox"/> Irrigation <input type="checkbox"/> Cooling & Air Conditioning <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify _____

Status of Well

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

Location of Well

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



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

Well Contractor and Well Technician Information

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

Business Address (Street No./Name, number, RR): 1782 900 East Municipality: Nation

Province: Ontario Postal Code: K0A3C0 Business E-mail Address: NA

Bus. Telephone No. (inc. area code): 613 987 9291 Name of Well Technician (Last Name, First Name): Michael Genier

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

Water Details

Water found at Depth	Kind of Water
<u>4.2</u> Metres <input type="checkbox"/> Gas	<input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals
_____ Metres <input type="checkbox"/> Gas	<input type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals
_____ Metres <input type="checkbox"/> Gas	<input type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals

Casing Used	Screen Used	Casing and Well Details
<input type="checkbox"/> Galvanized <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete	<input type="checkbox"/> Galvanized <input type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete	Diameter of the Hole (Centimetres): <u>15.55</u> Depth of the Hole (Metres): <u>48.7</u> Wall Thickness (Metres): <u>0.48</u> Inside Diameter of the Casing (Metres): <u>15.55</u> Depth of the Casing (Metres): <u>14.63</u>
<input checked="" type="checkbox"/> No Casing and Screen Used <input type="checkbox"/> Open Hole		
Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Ministry Use Only

Audit No.: **z 79829** Well Contractor No.: _____

Date Received (yyyy/mm/dd): JUN 25 2008 Date of Inspection (yyyy/mm/dd): _____

Remarks: _____

Well Owner's Information

First Name: Dakera FT Homes Inc. Last Name: _____ E-mail Address: _____ Well Constructed by Well Owner

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

Part A Construction and/or Major Alteration of a Well

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

County/District/Municipality: Ottawa Carleton City/Town/Village: Ottawa/Oreeby Province: **Ontario** Postal Code: _____

UTM Coordinates: Zone 18 Easting 454522 Northing 5012119 GPS Unit Make UTM Model Magellan Mode of Operation: 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	4
Grey	Sand		loose	4	8
Grey	gravel	Boulder	Packed	8	11
Grey	limestone		layered	11	48.7

Annular Space/Abandonment Sealing Record

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

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 + 0 min
 Final water level end of pumping (Metres): _____

Time (Min)	Draw Down		Recovery	
	Water Level (Metres)	Time (Min)	Water Level (Metres)	Time (Min)
Static Level	3.90	Static Level	23.89	
1	5.90	1		
2	6.99	2	20.14	
3	7.60	3	19.02	
4	9m	4	18.78	
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		

Recommended pump type: Shallow Deep
 Recommended pump depth: 38.7 Metres
 Recommended pump rate (Litres/min): 53
 If flowing give rate (Litres/min): _____

Method of Construction

Water Use

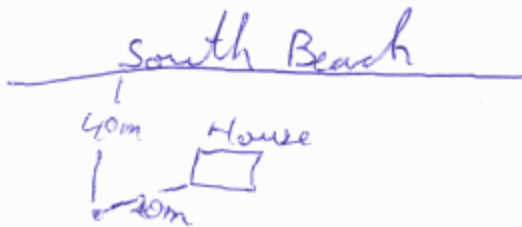
- Cable Tool Diamond Public Commercial Not used
 Rotary (Conventional) Jetting Domestic Municipal Dewatering
 Rotary (Reverse) Driving Livestock Test Hole Monitoring
 Rotary (Air) Digging Irrigation Cooling & Air Conditioning
 Air percussion Boring Industrial
 Other, specify _____ Other, specify _____

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")
 - digital pictures of inside of well can also be provided



Water Details

Water found at Depth	Kind of Water
<u>48</u> Metres <input type="checkbox"/> Gas <input checked="" type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals	
_____ Metres <input type="checkbox"/> Gas <input type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals	
_____ Metres <input type="checkbox"/> Gas <input type="checkbox"/> Fresh <input type="checkbox"/> Salty <input type="checkbox"/> Sulphur <input type="checkbox"/> Minerals	

Casing Used

Screen Used

Casing and Well Details

<input type="checkbox"/> Galvanized <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete	<input type="checkbox"/> Galvanized <input checked="" type="checkbox"/> Steel <input type="checkbox"/> Fibreglass <input type="checkbox"/> Plastic <input type="checkbox"/> Concrete	Diameter of the Hole (Centimetres): <u>15.55</u> Depth of the Hole (Metres): <u>48.47</u> Wall Thickness (Metres): <u>0.48</u> Inside Diameter of the Casing (Metres): <u>15.55</u> Depth of the Casing (Metres): <u>13.41</u>
--	--	--

No Casing and Screen Used: Open Hole

Disinfected? Yes No

Ministry Use Only

Audit No. z 79830	Well Contractor No. _____
Date Received (yyyy/mm/dd): <u>JUN 25 2008</u>	Date of Inspection (yyyy/mm/dd): _____
Remarks: _____	

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

Well Contractor and Well Technician Information

Business Name of Well Contractor: Bourgeois well Drilling Well Contractor's Licence No.: 14114
 Business Address (Street No./Name, number, RR): 1182 900 East Municipality: Nation
 Province: Ontario Postal Code: K0A3K0 Business E-mail Address: NA
 Bus. Telephone No. (inc. area code): 6139875291 Name of Well Technician (Last Name, First Name): Michael Genier
 Well Technician's Licence No.: 34193 Signature of Technician: _____ Date Submitted (yyyy/mm/dd): 2008/05/08

Measurements recorded in: Metric Imperial

Page _____ of _____

A 066957

Well Owner's Information

1363 South Beach Osgoode ~~1363~~ Lot 4 Con 4
 County/District/Municipality City/Town/Village Province Postal Code
 Ottawa Carlton Ontario
 UTM Coordinates Zone Easting Northing Municipal Plan and Sublot Number Other
 NAD 83 184545925012292 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 To
	Sand & Boulders Grey Limestone White Sandstone			0 12.50 12.50 41.14 41.14 54.86

Annular Space		
Depth Set at (m/ft) From To	Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft ³)
14.32 11.21	Neat Cement Slurry	1.816
11.21 0	Bentonite Slurry	4.90

Results of Well Yield Testing			
After test of well yield, water was:			
<input checked="" type="checkbox"/> Not tested			
<input type="checkbox"/> Clear and sand free			
<input type="checkbox"/> Other, specify			
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.p.m			
Disinfected?			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Draw Down			
Time (min)	Water Level (m/ft)	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	11.07	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	

Method of Construction		Well Use	
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Municipal
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning
<input checked="" type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial	
<input type="checkbox"/> Other, specify		<input type="checkbox"/> Other, specify	

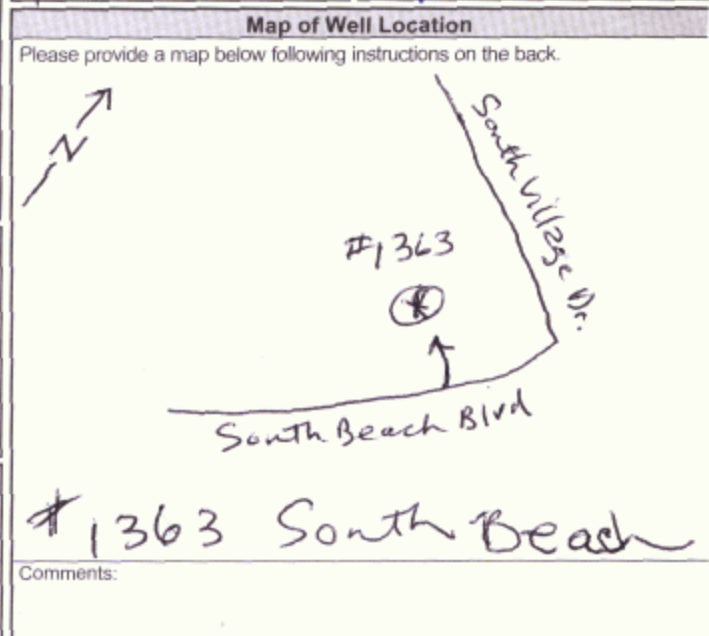
Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		<input checked="" type="checkbox"/> Water Supply
			From	To	
15.88	Steel	.48	4.6	14.32	<input type="checkbox"/> Replacement Well
15.09	Open hole		14.32	54.86	<input type="checkbox"/> Test Hole
					<input type="checkbox"/> Recharge Well
					<input type="checkbox"/> Dewatering Well
					<input type="checkbox"/> Observation and/or Monitoring Hole
					<input type="checkbox"/> Alteration (Construction)
					<input type="checkbox"/> Abandoned, Insufficient Supply
					<input type="checkbox"/> Abandoned, Poor Water Quality
					<input type="checkbox"/> Abandoned, other, specify
					<input type="checkbox"/> Other, specify

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

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input checked="" type="checkbox"/> Gas	Depth (m/ft) From To	Diameter (cm/in)
52.72	Gas	54.86 0	15.07
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input checked="" type="checkbox"/> Gas		
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input checked="" type="checkbox"/> Gas		

Well Contractor and Well Technician Information

Business Name of Well Contractor: Air Rock Drilling Co Ltd
 Well Contractor's Licence No.: 11119
 Business Address (Street Number/Name): RR1
 Municipality: Richmond



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

Bus. Telephone No. (inc. area code): 6138382170 Name of Well Technician (Last Name, First Name): Purcell, Shannon

Well Technician's Licence No.: T2122 Signature of Technician and/or Contractor: [Signature] Date Submitted: 20080801

Well owner's information package delivered: Yes No

Date Package Delivered: 20080724

Date Work Completed: 20080521

Ministry Use Only

Audit No. Z 80748

Received: AUG 14 2008

A085398

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

A 085398

10/19 Page 1 of 3

Address of Well Location (Street Number/Name, RR) **6906 McKeown Rd** Township _____ Lot _____ Concession _____
 County/District/Municipality _____ City/Town/Village **Greely** Province **Ontario** Postal Code _____

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
Grn	Gravel	Sand	soft, dry	0	.61
Brn	Sand		soft, dry	.61	1.5
brn	clay		soft, moist	1.5	2.74
brn	silt		Wet	2.74	4.88

Hole Details

Depth (Metres)	Diameter (Centimetres)	
	From	To
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 _____

No Casing and Screen Used Yes No

Static Water Level Test _____ Metres

Screen

Galvanized Steel Fibreglass Concrete Plastic

Outside Diameter (Centimetres) **6.03** Slot No. **10**

Water Details

Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals

Disinfected Yes No. If no, provide reason: _____ Date Master Well Completed (yyyy/mm/dd) **2009/08/31**

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

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)

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

Annular Space/Abandonment Sealing Record

Depth Set at (Metres)		Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
From	To		
0	.31	Concrete / Flushmount	
.31	1.5	Benseal	
1.5	4.88	sand	

Well Contractor and Well Technician Information

Business Name of Well Contractor **Strata Soil Sampling** Well Contractor's Licence No. **7241**
 Business Address (Street No./Name, number, RR) **#2-147 West Beaver Creek** Municipality **Richmond Hill**
 Province **ON** Postal Code **L4B1C6** Business E-mail Address _____
 Bus. Telephone No. (inc. area code) **(905) 764-9301** Name of Well Technician (Last Name, First Name) **Robynne Toas**
 Well Technician's Licence No. **31659** Signature of Technician _____ Date Submitted (yyyy/mm/dd) **2009/09/11**

Ministry Use Only

Audit No. **M 02599** Well Contractor No. _____
 Date Received (yyyy/mm/dd) **SEP 22 2009** Date of Inspection (yyyy/mm/dd) _____
 Remarks _____

A085398

Address of Well Location (Street Number/Name, RR) 6906 McKeown Rd		Lot	Concession	Township	County/District/Municipality
City/Town/Village Greely	Province Ontario	Postal Code	GPS Unit Make Garmin	Model Etrex	Unit Mode of Operation <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify:

upon request	
Signature of Technician/Contractor	Date (yyyy/mm/dd)

Well # on Sketch	UTM Coordinates		Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres)		Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
	Zone	Easting						Northing	From					
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			2009/08/31
4	18	455052	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal			2009/08/31

Well Contractor and Well Technician Information					
Business Name of Well Contractor Strata Soil Sampling		Business Address (Street Number/Name, RR) #2-147 West Beaver Creek		Municipality Richmond Hill	Province ON
Postal Code L4B 1C6	Business Telephone No. (inc. area code) (905) 769-9304	Well Contractor's Licence No. 72411	Business E-mail Address		
Name of Well Technician (First Name, Last Name) Trevor Robinson		Well Technician's Licence No. 8159	Date Submitted (yyyy/mm/dd) 08/09/11	Signature of Technician	

Date 1st Well in Cluster Constructed (yyyy/mm/dd) 2009/08/31	Date Last Well in Cluster Constructed (yyyy/mm/dd) 2009/08/31
Ministry Use Only	
Date Received (yyyy/mm/dd) SEP 22 2009	Date Inspected (yyyy/mm/dd)
Audit No. C 03827	Remarks M02599



Trow Associates Inc. 154 Colonnade Road South, Tel: (613) 225-9940
Ottawa, Ontario K2E 7J5 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

SEP 22 2009
C-7241 M02599 203827

A085398

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

A 085398

10/19 Page 1 of 3

Address of Well Location (Street Number/Name, RR) **6906 McKeown Rd** Township _____ Lot _____ Concession _____
 County/District/Municipality _____ City/Town/Village **Greely** Province **Ontario** Postal Code _____

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
Grn	Gravel	Sand	soft, dry	0 .61
Brn	Sand		soft, dry	.61 1.5
brn	clay		soft, moist	1.5 2.74
brn	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 _____

No Casing and Screen Used Yes No

Static Water Level Test _____ Metres

Screen

Galvanized Steel Fibreglass Concrete Plastic

Outside Diameter (Centimetres) **6.03** Slot No. **10**

Water Details

Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals

Disinfected Yes No. If no, provide reason: _____ Date Master Well Completed (yyyy/mm/dd) **2009/08/31**

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 **4** Please indicate Number of Cluster Well Information Log Sheets Submitted **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)

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

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	Benseal	
1.5 4.88	sand	

Well Contractor and Well Technician Information

Business Name of Well Contractor **Strata Soil Sampling** Well Contractor's Licence No. **7241**
 Business Address (Street No./Name, number, RR) **#2-147 West Beaver Creek** Municipality **Richmond Hill**
 Province **ON** Postal Code **L4B1C6** Business E-mail Address _____
 Bus. Telephone No. (inc. area code) **(905) 764-9301** Name of Well Technician (Last Name, First Name) **Robynne Toas**
 Well Technician's Licence No. **31659** Signature of Technician _____ Date Submitted (yyyy/mm/dd) **2009/09/11**

Ministry Use Only

Audit No. **M 02599** Well Contractor No. _____
 Date Received (yyyy/mm/dd) **SEP 22 2009** Date of Inspection (yyyy/mm/dd) _____
 Remarks _____

A085398

Address of Well Location (Street Number/Name, RR) 6906 McKeown Rd		Lot	Concession	Township	County/District/Municipality
City/Town/Village Greely	Province Ontario	Postal Code	GPS Unit Make Garmin	Model Etrex	Unit Mode of Operation <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify:

upon request	
Signature of Technician/Contractor	Date (yyyy/mm/dd)

Well # on Sketch	UTM Coordinates		Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres)		Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
	Zone	Easting						Northing	From					
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			2009/08/31
4	18	455052	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal			2009/08/31

Well Contractor and Well Technician Information					
Business Name of Well Contractor Strata Soil Sampling		Business Address (Street Number/Name, RR) #2-147 West Beaver Creek		Municipality Richmond Hill	Province ON
Postal Code L4B 1C6	Business Telephone No. (inc. area code) (905) 769-9304	Well Contractor's Licence No. 72411	Business E-mail Address		
Name of Well Technician (First Name, Last Name) Trevor Robinson		Well Technician's Licence No. 8159	Date Submitted (yyyy/mm/dd) 08/09/11	Signature of Technician	

Date 1st Well in Cluster Constructed (yyyy/mm/dd) 2009/08/31	Date Last Well in Cluster Constructed (yyyy/mm/dd) 2009/08/31
Ministry Use Only	
Date Received (yyyy/mm/dd) SEP 22 2009	Date Inspected (yyyy/mm/dd)
Audit No. C 03827	Remarks M02599



Trow Associates Inc. 154 Colonnade Road South, Tel: (613) 225-9940
Ottawa, Ontario K2E 7J5 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

SEP 22 2009
C-7241 M02599 203827

A085398

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

A 085398

10/19 Page 1 of 3

Address of Well Location (Street Number/Name, RR) **6906 McKeown Rd** Township _____ Lot _____ Concession _____
 County/District/Municipality _____ City/Town/Village **Greely** Province **Ontario** Postal Code _____

UTM Coordinates Zone Easting Northing GPS Unit Make Model Mode of Operation: Undifferentiated Averaged
NAD 83 18 455060 5011834 **Garmin** **Etrex** 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
Grn	Gravel	Sand	soft, dry	0	.61
Brn	Sand		soft, dry	.61	1.5
brn	clay		soft, moist	1.5	2.74
brn	silt		Wet	2.74	4.88

Hole Details

Depth (Metres)		Diameter (Centimetres)
From	To	
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 _____

No Casing and Screen Used Yes No Static Water Level Test _____ Metres

Screen

Galvanized Steel Fibreglass Concrete Plastic
 Outside Diameter (Centimetres) **6.03** Slot No. **10**

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

Water Details

Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals

Annular Space/Abandonment Sealing Record

Depth Set at (Metres)		Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
From	To		
0	.31	Concrete / Flushmount	
.31	1.5	Benseal	
1.5	4.88	sand	

Disinfected Yes No. If no, provide reason: _____ Date Master Well Completed (yyyy/mm/dd) **2009/08/31**

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

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)

Well Contractor and Well Technician Information

Business Name of Well Contractor **Strata Soil Sampling** Well Contractor's Licence No. **7241**
 Business Address (Street No./Name, number, RR) **#2-147 West Beaver Creek** Municipality **Richmond Hill**
 Province **ON** Postal Code **L4B1C6** Business E-mail Address _____
 Bus. Telephone No. (inc. area code) **(905) 764-9301** Name of Well Technician (Last Name, First Name) **Robynne Teas**
 Well Technician's Licence No. **31659** Signature of Technician _____ Date Submitted (yyyy/mm/dd) **2009/09/11**

Ministry Use Only

Audit No. **M 02599** Well Contractor No. _____
 Date Received (yyyy/mm/dd) **SEP 22 2009** Date of Inspection (yyyy/mm/dd) _____
 Remarks _____

A085398

Address of Well Location (Street Number/Name, RR) 6906 McKeown Rd		Lot	Concession	Township	County/District/Municipality
City/Town/Village Greely	Province Ontario	Postal Code	GPS Unit Make Garmin	Model Etrex	Unit Mode of Operation <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify:

upon request	
Signature of Technician/Contractor	Date (yyyy/mm/dd)

Well # on Sketch	UTM Coordinates		Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres)		Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
	Zone	Easting						Northing	From					
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			2009/08/31
4	18	455052	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal			2009/08/31

Well Contractor and Well Technician Information			
Business Name of Well Contractor Strata Soil Sampling		Business Address (Street Number/Name, RR) #2-147 West Beaver Creek	
Municipality Richmond Hill		Province ON	
Postal Code L4B 1C6	Business Telephone No. (inc. area code) (905) 769-9304	Well Contractor's Licence No. 72411	Business E-mail Address
Name of Well Technician (First Name, Last Name) Trevor Robinson		Well Technician's Licence No. 8159	Date Submitted (yyyy/mm/dd) 08/09/11
		Signature of Technician	

Date 1st Well in Cluster Constructed (yyyy/mm/dd) 2009/08/31	Date Last Well in Cluster Constructed (yyyy/mm/dd) 2009/08/31
Ministry Use Only	
Date Received (yyyy/mm/dd) SEP 22 2009	Date Inspected (yyyy/mm/dd)
Audit No. C 03827	Remarks M02599



Trow Associates Inc. 154 Colonnade Road South, Tel: (613) 225-9940
Ottawa, Ontario K2E 7J5 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

SEP 22 2009
C-7241 M02599 203827

A085398

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

A 085398

10/19 Page 1 of 3

Address of Well Location (Street Number/Name, RR) **6906 McKeown Rd** Township _____ Lot _____ Concession _____
 County/District/Municipality _____ City/Town/Village **Greely** Province **Ontario** Postal Code _____

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
Grn	Gravel	Sand	soft, dry	0	.61
Brn	Sand		soft, dry	.61	1.5
brn	clay		soft, moist	1.5	2.74
brn	silt		Wet	2.74	4.88

Hole Details

Depth (Metres)	Diameter (Centimetres)	
	From	To
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 _____

No Casing and Screen Used Yes No

Static Water Level Test _____ Metres

Screen

Galvanized Steel Fibreglass Concrete Plastic

Outside Diameter (Centimetres) **6.03** Slot No. **10**

Water Details

Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals
 Water found at Depth _____ Metres Gas Fresh Salty Sulphur Minerals

Disinfected Yes No. If no, provide reason: _____ Date Master Well Completed (yyyy/mm/dd) **2009/08/31**

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

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)

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

Annular Space/Abandonment Sealing Record

Depth Set at (Metres)		Type of Sealant Used (Material and Type)	Volume Used (Cubic Metres)
From	To		
0	.31	Concrete / Flushmount	
.31	1.5	Benseal	
1.5	4.88	sand	

Well Contractor and Well Technician Information

Business Name of Well Contractor **Strata Soil Sampling** Well Contractor's Licence No. **7241**
 Business Address (Street No./Name, number, RR) **#2-147 West Beaver Creek** Municipality **Richmond Hill**
 Province **ON** Postal Code **L4B1C6** Business E-mail Address _____
 Bus. Telephone No. (inc. area code) **(905) 764-9301** Name of Well Technician (Last Name, First Name) **Robynne Toas**
 Well Technician's Licence No. **31659** Signature of Technician _____ Date Submitted (yyyy/mm/dd) **2009/09/11**

Ministry Use Only

Audit No. **M 02599** Well Contractor No. _____
 Date Received (yyyy/mm/dd) **SEP 22 2009** Date of Inspection (yyyy/mm/dd) _____
 Remarks _____

A085398

Address of Well Location (Street Number/Name, RR) 6906 McKeown Rd		Lot	Concession	Township	County/District/Municipality
City/Town/Village Greely	Province Ontario	Postal Code	GPS Unit Make Garmin	Model Etrex	Unit Mode of Operation <input type="checkbox"/> Undifferentiated <input checked="" type="checkbox"/> Averaged <input type="checkbox"/> Differentiated, specify:

upon request	
Signature of Technician/Contractor	Date (yyyy/mm/dd)

Well # on Sketch	UTM Coordinates		Full Depth of Hole (metres)	Hole Diameter (cm)	Method of Construction	Casing Material	Casing Length (metres)	Screen Interval (metres)		Annular Space Sealant Used	Static Water Level (metres)	Abandonment Sealant Used	Comments	Date of Completion (yyyy/mm/dd)
	Zone	Easting						Northing	From					
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			2009/08/31
4	18	455052	5011837	4.88	10.92	Direct Push	PVC	1.83	1.83	4.88	Benseal			2009/08/31

Well Contractor and Well Technician Information			
Business Name of Well Contractor Strata Soil Sampling		Business Address (Street Number/Name, RR) #2-147 West Beaver Creek	
Municipality Richmond Hill		Province ON	
Postal Code L4B 1C6	Business Telephone No. (inc. area code) (905) 769-9304	Well Contractor's Licence No. 72411	Business E-mail Address
Name of Well Technician (First Name, Last Name) Trevor Robinson		Well Technician's Licence No. 8159	Date Submitted (yyyy/mm/dd) 08/09/11
		Signature of Technician	

Date 1st Well in Cluster Constructed (yyyy/mm/dd) 2009/08/31	Date Last Well in Cluster Constructed (yyyy/mm/dd) 2009/08/31
Ministry Use Only	
Date Received (yyyy/mm/dd) SEP 22 2009	Date Inspected (yyyy/mm/dd)
Audit No. C 03827	Remarks M02599



Trow Associates Inc. 154 Colonnade Road South, Tel: (613) 225-9940
Ottawa, Ontario K2E 7J5 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

SEP 22 2009
C-7241 M02599 203827

Measurements recorded in: Metric Imperial

A095924

Well Owner's Information

First Name: **MANOR** Last Name / Organization: **DEVELOPMENTS** E-mail Address: _____ Well Constructed by Well Owner

Mailing Address (Street Number/Name): **1269 South Beach Blvd** Municipality: **Greely Ont** Province: **Ont** Postal Code: **K4P 0A5** Telephone No. (inc. area code): _____

Well Location

Address of Well Location (Street Number/Name): **#1363 South Beach Blvd** Township: **Osgoode** Lot: **4** Concession: **4**

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

UTM Coordinates Zone: **18** Easting: **454641** Northing: **5012313** Municipal Plan and Sublot Number: **PLAN 4M-1265** Other: **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	To
	Sand, Gravel + boulders			0'	45' 6"
	Grey limestone			45' 6"	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 (m ³ /ft ³)
54'	44'	Neat Cement Slurry	7.8
44'	0'	Neat Bentonite Slurry	29.4

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): **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): _____

Recommended pump depth (m/ft): **200'**

Recommended pump rate (l/min / GPM): **20**

Well production (l/min / GPM): **20**

Disinfected? Yes No

Time (min)	Draw Down		Recovery	
	Water Level (m/ft)	Time (min)	Water Level (m/ft)	Time (min)
Static Level	31' 3"		52' 5"	
1	35' 8"		41' 6"	
2	40'		34' 2"	
3	44'		31' 3"	
4	48'			
5	50'			
10	52' 1"			
15	↓			
20	52' 2"			
25	↓			
30	52' 4"			
40	↓			
50	52' 5"			
60	↓			

Method of Construction

Cable Tool Diamond Public Commercial Not used

Rotary (Conventional) Jetting Domestic Municipal Dewatering

Rotary (Reverse) Driving Livestock Test Hole Monitoring

Boring Digging Irrigation Cooling & Air Conditioning

Air percussion 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)		Status of Well
			From	To	
6"	Steel	188"	12' 54'		<input checked="" type="checkbox"/> Water Supply
6"	Openhole		54' 301'		<input type="checkbox"/> Replacement Well

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)		Status of Well
			From	To	
					<input type="checkbox"/> Test Hole

Water Details

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft) From	To	Diameter (cm/in)
146'	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify: _____	0'	301'	6"
295'	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify: _____			

Well Contractor and Well Technician Information

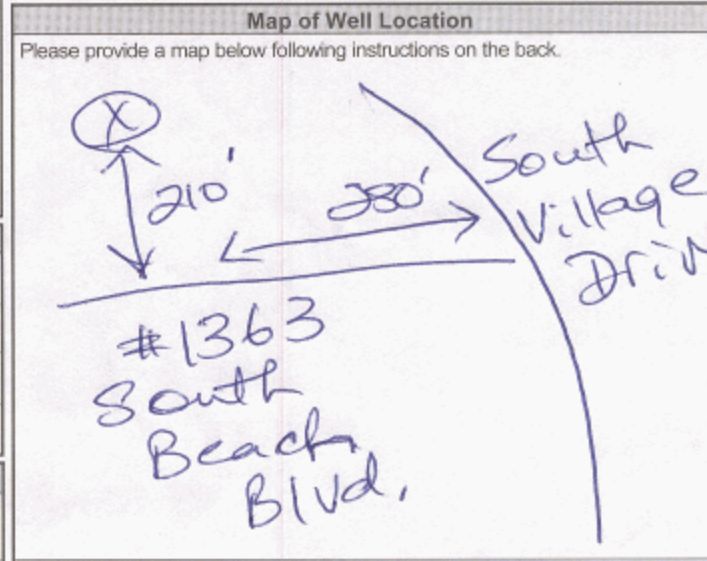
Business Name of Well Contractor: **Air Rock Drilling Co Ltd** Well Contractor's Licence No.: **11119**

Business Address (Street Number/Name): **Richmond** Municipality: _____

Province: **Ont** Postal Code: **K0A 2Z0** Business E-mail Address: _____

Bus. Telephone No. (inc. area code): **6138380170** Name of Well Technician (Last Name, First Name): **GRAHAM RYAN**

Well Technician's Licence No.: **T3484** Signature of Technician and/or Contractor: _____ Date Submitted: **20100510**



Comments: _____

Well owner's information package delivered <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered: 20100405	Ministry Use Only Audit No. Z 108300
Date Work Completed: 20100315		

Regulated on: **JUN 01 2010**

Well ID: A095990

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 Zone 18 Easting 454728 Northing 5012346 Municipal Plan and Sublot Number PLAN 4M-1265 Other 3/L82

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			0ft	42'
	Gray limestone			42'	155'
	Gray Sandstone			155'	172'
	Gray + White Sandstone + limestone Mix			172'	300'

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)
50'	40'	Neat Cement Slurry	7.8
40'	0'	Neat Bentonite Slurry	18.90

Results of Well Yield Testing

After test of well yield, water was:
 Clear and sand free
 Other, specify TESTED

If pumping discontinued, give reason:
 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) 20

Recommended pump depth (m/ft) 36'5"

Recommended pump rate (l/min / GPM) 20

Well production (l/min / GPM) 20

Disinfected? Yes No

Time (min)	Draw Down		Recovery	
	Water Level (m/ft)	Time (min)	Water Level (m/ft)	Time (min)
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		

Method of Construction

Cable Tool Diamond Public Commercial Not used
 Rotary (Conventional) Jetting Domestic Municipal Dewatering
 Rotary (Reverse) Driving Livestock Test Hole Monitoring
 Boring Digging Irrigation Cooling & Air Conditioning
 Air percussion 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)		Status of Well
			From	To	
6"	Steel	.188"	0'	50'	<input checked="" type="checkbox"/> Water Supply
6 1/4"	open hole		50'	300'	<input type="checkbox"/> Replacement Well

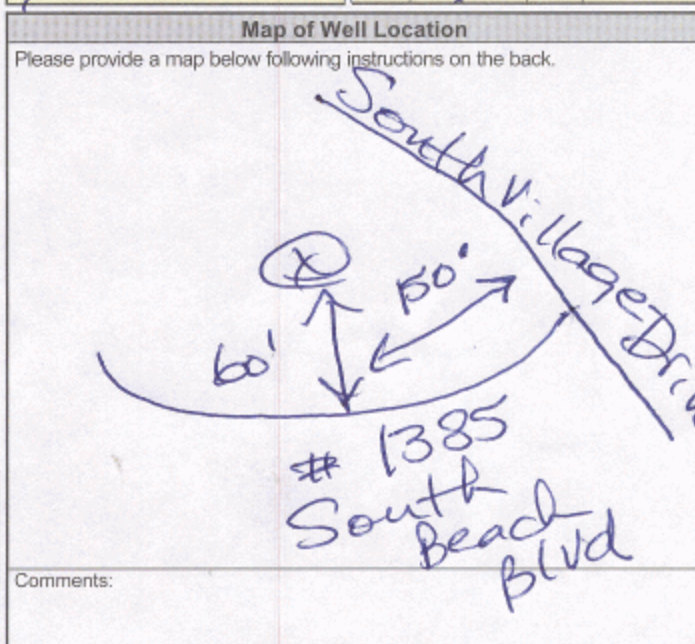
Test Hole Recharge Well Dewatering Well Observation and/or Monitoring Hole Alteration (Construction) Abandoned, Insufficient Supply Abandoned, Poor Water Quality Abandoned, other, specify Other, specify

Construction Record - Screen

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

Water Details

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
172	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify <u> </u>	0'	50'	6"
274	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify <u> </u>	50'	300'	6 1/4"



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 RICHMOND Municipality
 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 Graham Ryan Date Submitted 20100510

Well owner's information package delivered Yes No

Date Package Delivered 20100427 Date Work Completed 20100421

Ministry Use Only

Audit No. Z108320
 JUN 01 2010
 Received

Well Location

Address of Well Location (Street Number/Name): **1344 Barfield Street**
 Township: **Osgoode** Lot: **Part 62, 63 + 64** Concession:
 County/District/Municipality: **Ottawa Carleton** City/Town/Village: **Greely** Province: **Ontario** Postal Code:
 UTM Coordinates Zone: **18** Easting: **454720** Northing: **5011766** Municipal Plan and Sublot Number: **4M-351** Other: **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	To
			Silty Sand	0'	26'
			Sand, Gravel + Boulders	26	54
			Grey + Brown limestone	54	120

Annular Space			
Depth Set at (m(ft))	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	
From: 60' To: 50'	Neat cement	7.8	
From: 50' To: 0'	Bentonite slurry	25.2	

Method of Construction		Well Use		
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole	<input type="checkbox"/> Monitoring
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input checked="" type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial		
<input type="checkbox"/> Other, specify		<input type="checkbox"/> Other, specify		

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m(ft))		
6"	Steel	.188"	From: +2' To: 60'	<input checked="" type="checkbox"/> Water Supply	
515/16"	Open Hole		60' to 120'	<input type="checkbox"/> Replacement Well	

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

Water Details		Hole Diameter		
Water found at Depth: 65 (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft)	Diameter (cm/in)	
Water found at Depth: 105 (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	From: 0 To: 60	6"	
Water found at Depth: 113 (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	From: 60 To: 120	515/16"	

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): 6659 Franktown Road, RR#1	Municipality: Richmond		

Province: ON	Postal Code: K0A 2Z0	Business E-mail Address: air-rock@sympatico.ca
Bus. Telephone No. (inc. area code): 6138382170	Name of Well Technician (Last Name, First Name): Graham, Ryan	
Well Technician's Licence No.: T3484	Signature of Technician and/or Contractor: <i>[Signature]</i>	Date Submitted: 2010 01 29

Results of Well Yield Testing				
After test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify Not tested	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason: _____	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
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'	10	29.7	10	4
If flowing give rate (l/min / GPM)	15	32.6	15	4
Recommended pump depth (m(ft)) 80'	20	35	20	4
Recommended pump rate (l/min / GPM) 20	25	36.8	25	4
Well production (l/min / GPM) 20	30	38.2	30	4
Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	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.

125'
1344 Barfield Street
McKewen Dr

Well owner's information package delivered: Yes No

Date Package Delivered: **2010 01 17**

Date Work Completed: **2010 01 16**

Ministry Use Only
Audit No.: **z119920**
Received: **DEC 29 2010**



Measurements recorded in: Metric Imperial

Page of

Well Location

Address of Well Location (Street Number/Name) 6906 McKeown Drive, Township Osgoode, Lot P/L5, Concession 4, County/District/Municipality Ottawa Carleton, City/Town/Village Greely, Province Ontario, Postal Code, UTM Coordinates Zone Easting Northing, Municipal Plan and Sublot Number Plan 4M-351 P/Block 3 less 4RS327

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

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth From, Depth To. Includes handwritten entries: Sand & Gravel & Clay, Grey Limestone, 0' to 56', 56' to 180'.

Annular Space table with columns: Depth Set at (m/ft) From, To, Type of Sealant Used (Material and Type), Volume Placed (m³/ft³). Includes entries for Neat cement and Bentonite slurry.

Method of Construction and Well Use checkboxes. Includes options like Cable Tool, Rotary, Boring, Air percussion, and various well uses like Domestic, Commercial, etc.

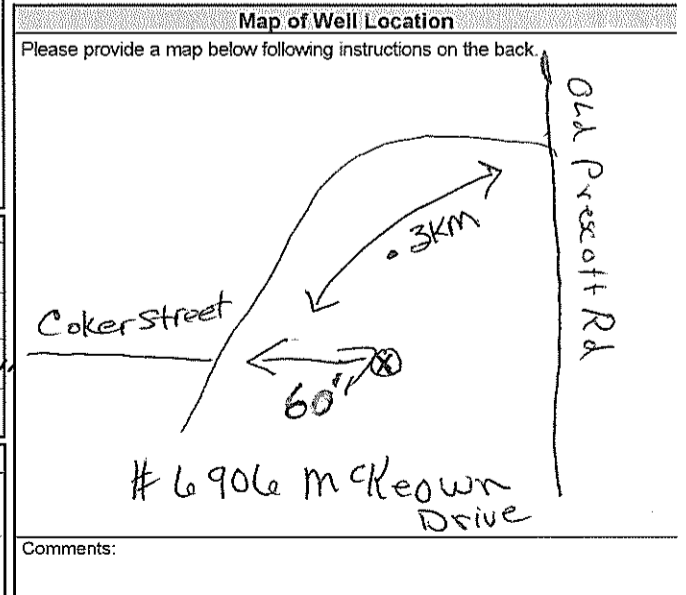
Construction Record - Casing table with columns: Inside Diameter (cm/in), Open Hole OR Material, Wall Thickness (cm/in), Depth (m/ft) From, To, Status of Well. Includes handwritten entries for Steel and Open Hole casing.

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

Water Details and Hole Diameter table. Includes columns for Water found at Depth, Kind of Water, and Hole Diameter (Depth and Diameter).

Well Contractor and Well Technician Information section. Includes Business Name of Well Contractor (Air Rock Drilling Co. Ltd.), Well Contractor's Licence No. (1119), Business Address (6659 Franktown Road, RR#1), Municipality (Richmond), Province (ON), Postal Code (K0A 2Z0), Business E-mail Address (air-rock@sympatico.ca), Bus. Telephone No. (6138382170), Name of Well Technician (Hogan, Dan), Well Technician's Licence No. (T3058), Signature of Technician and/or Contractor, Date Submitted (2010 01 29).

Results of Well Yield Testing table. Includes columns: Draw Down (Time, Water Level), Recovery (Time, Water Level). Includes handwritten entries for pumping rate (20 GPM), duration (1 hr), and various draw down/recovery data points.



Ministry Use Only section. Includes Well owner's information package delivered (Yes/No), Date Package Delivered (2010 01 25), Date Work Completed (2010 01 24), Audit No. (z119918), and Received date (JAN 17 2011).

Measurements recorded in: Metric Imperial

Well Location

Address of Well Location (Street Number/Name) 1333 South Beach Boulevard Township City Ottawa Lot Sublot 75 Concession 4
 County/District/Municipality Osgoode City/Town/Village Osgoode Province Ontario Postal Code K0A 2W0
 UTM Coordinates Zone Easting Northing Municipal Plan and Sublot Number Other
 NAD 83 184545615012104 R 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	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)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0 to 16.6	cement grout	7 Bag

Results of Well Yield Testing

Static Level	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
		3.24		3.32
1		3.25	1	3.26
2		3.27	2	3.24
3		3.28	3	7
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	

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

Method of Construction Well Use

<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole	<input type="checkbox"/> Monitoring
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial		
<input checked="" type="checkbox"/> Other, specify <u>Air Rotary</u>		<input type="checkbox"/> Other, specify _____		

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		Status of Well
			From	To	
15.55	Steel	0.48	4.6	16.6	<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____
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	To

Water Details Hole Diameter

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft)		Diameter (cm/in)
		From	To	
24	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____			
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____			
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	0	16.6	21.23
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	16.6	25.9	15.55

Well Contractor and Well Technician Information

Business Name of Well Contractor Bourgeois Well Drilling Ltd Well Contractor's Licence No. 74117
 Business Address (Street Number/Name) 151 Montee D'Abust Municipality Nation
 Province On Postal Code K0A 3C0 Business E-mail Address N/A
 Bus. Telephone No. (inc. area code) 613 987 5291 Name of Well Technician (Last Name, First Name) Gempier Michael
 Well Technician's Licence No. 3493 Signature of Technician and/or Contractor [Signature] Date Submitted 2011/01/23

Map of Well Location

Please provide a map below following instructions on the back.

Comments: _____

Well owner's information package delivered	Date Package Delivered	Ministry Use Only	
	Y Y Y Y M M D D	Audit No.	Received
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>2011/01/23</u>	<u>2127020</u>	<u>JAN 21 2011</u>

Measurements recorded in: Metric Imperial

Page _____ of _____

N/A

Well Owner's Information

First Name: **KEN** Last Name / Organization: **GORDON HOLDINGS** E-mail Address: _____ Well Constructed by Well Owner

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

Well Location

Address of Well Location (Street Number/Name): **Parkway Road** Township: **Osgoode** Lot: **6** Concession: **4**

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

UTM Coordinates Zone: **18** Easting: **455214** Northing: **5011633** Municipal Plan and Sublot Number: _____ 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	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)
137'	6'	Grout plug
6'	0'	Backfill

Method of Construction

Cable Tool Rotary (Conventional) Rotary (Reverse) Boring Air percussion Other, specify _____

Diamond Jetting Driving Digging

Well Use

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

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

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

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

Well Contractor and Well Technician Information

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

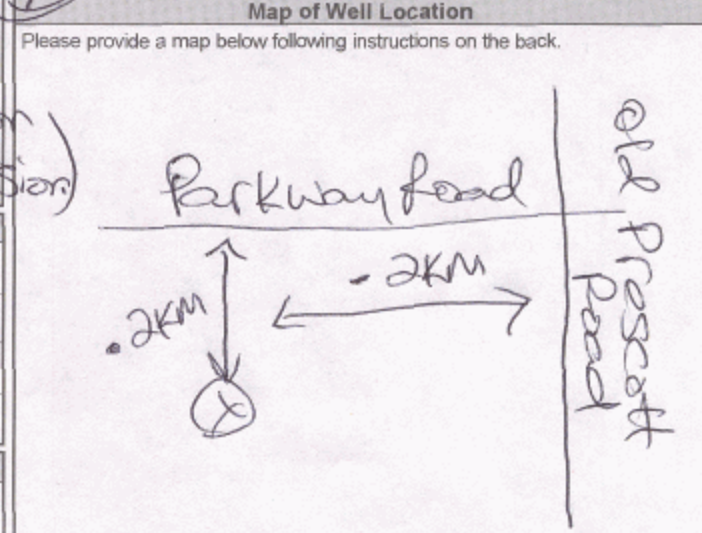
Business Address (Street Number/Name): **RR#1** Municipality: **RICHMOND**

Province: **ONT** Postal Code: **K0A2Z0** Business E-mail Address: _____

Bus. Telephone No. (inc. area code): **6138382170** Name of Well Technician (Last Name, First Name): **Desautels Ken**

Well Technician's Licence No.: **T4** Signature of Technician and/or Contractor: **Ken Desautels** Date Submitted: **20110131**

Results of Well Yield Testing				
After test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason: 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 / GRM) Recommended pump depth (m/ft) Recommended pump rate (l/min / GPM) Well production (l/min / GPM) Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	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		



Comments: **TW#5 - A004862**

Well owner's information package delivered <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered: Y Y Y Y M M D D 20110118	Ministry Use Only Audit No. z119939 Received FEB 10 2011
--	---	---

Address of Well Location (Street Number/Name) 1356 South Beach Blvd		Township Osgoode	Lot 4	Concession 4
County/District/Municipality Ottawa-Carleton		City/Town/Village Greely	Province Ontario	Postal Code
UTM Coordinates Zone NAD 83	Easting 18 454663	Northing 5012212	Municipal Plan and Sublot Number 4M-1265	Other 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	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)	Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft ³)	
50' / 40'	Neat cement slurry	9.36	
40' / 0'	Bentonite slurry	29.4	

Method of Construction	Well Use
<input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Rotary (Reverse) <input type="checkbox"/> Boring <input checked="" type="checkbox"/> Air percussion <input type="checkbox"/> Other, specify _____	<input type="checkbox"/> Public <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Livestock <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify _____
<input type="checkbox"/> Diamond <input type="checkbox"/> Jetting <input type="checkbox"/> Driving <input type="checkbox"/> Digging	<input type="checkbox"/> Commercial <input type="checkbox"/> Municipal <input type="checkbox"/> Test Hole <input type="checkbox"/> Cooling & Air Conditioning <input type="checkbox"/> Not used <input type="checkbox"/> Dewatering <input type="checkbox"/> Monitoring

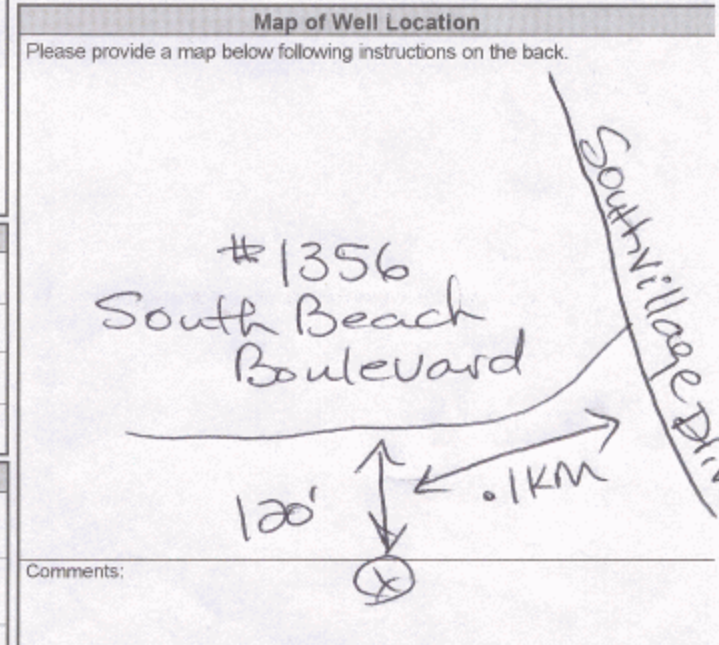
Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	<input checked="" type="checkbox"/> Water Supply	<input type="checkbox"/> Replacement Well
			From To		
6"	Steel	.188"	+2' / 50'	<input type="checkbox"/> Test Hole	<input type="checkbox"/> Recharge Well
57 3/4"	Open Hole		50' / 100'	<input type="checkbox"/> Dewatering Well	<input type="checkbox"/> Observation and/or Monitoring Hole

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

Water Details		Hole Diameter	
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft)	Diameter (cm/in)
55 (m/ft)	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other, specify _____	From To	
94 (m/ft)	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other, specify _____	0' / 50'	6"
	<input type="checkbox"/> Fresh <input type="checkbox"/> Untested	50' / 100'	57 3/4"

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) 6659 Franktown Road, RR#1	Municipality Richmond
Province ON	Postal Code K0A 2Z0
Business E-mail Address air-rock@sympatico.ca	
Bus. Telephone No. (inc. area code) 6138882170	Name of Well Technician (Last Name, First Name) Hogan, Dan
Well Technician's Licence No. T3058	Signature of Technician and/or Contractor <i>[Signature]</i>
Date Submitted 2011 07 29	

Results of Well Yield Testing					
After test of well yield, water was:		Draw Down		Recovery	
<input type="checkbox"/> Clear and sand free	<input type="checkbox"/> Other, specify Not tested	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:		Static Level	8.6'		12.9'
<input checked="" type="checkbox"/>		1	10.5	1	10.8
Pump intake set at (m/ft) 80'		2	10.8	2	9.8
Pumping rate (l/min / GPM) 20		3	11	3	8.6
Duration of pumping 1 hrs + 0 min		4	11.2	4	8.6
Final water level end of pumping (m/ft) 12.9'		5	11.3	5	8.6
If flowing give rate (l/min / GPM)		10	11.7	10	8.6
<input checked="" type="checkbox"/>		15	11.9	15	8.6
Recommended pump depth (m/ft) 80'		20	12.1	20	8.6
Recommended pump rate (l/min / GPM) 20		25	12.2	25	8.6
Well production (l/min / GPM) 20		30	12.3	30	8.6
Disinfected?		40	12.5	40	8.6
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		50	12.8	50	8.6
		60	12.9'	60	8.6'



Well owner's information package delivered		Date Package Delivered	Ministry Use Only
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2011 06 24	Audit No. z119752
		Date Work Completed 2011 06 23	Received AUG 22 2011



Measurements recorded in: Metric Imperial

Well Owner's Information

First Name, Last Name / Organization (SiteCast Construction Corp.), E-mail Address, Mailing Address (16 Concourse Gate #200), Municipality (Ottawa), Province (ON), Postal Code (K2E 7S8), Telephone No.

Well Location

Address of Well Location (6815 McKeown Road), Township (Osgoode), Lot (P/L 5), Concession (4), County/District/Municipality (Ottawa-Carleton), City/Town/Village (Greely), Province (Ontario), Postal Code, UTM Coordinates, Municipal Plan and Sublot Number (4M-351), Other (P/L 6)

Overburden and Bedrock Materials/Abandonment Sealing Record

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From, To. Rows include Sand & Gravel, Clay, Limestone, Sandstone.

Annular Space table with columns: Depth Set at (m/ft) From, To; Type of Sealant Used; Volume Placed (m³/ft³). Rows for Neat cement and Bentonite slurry.

Method of Construction and Well Use checkboxes. Includes Cable Tool, Rotary, Boring, Air percussion, Public, Commercial, Domestic, etc.

Construction Record - Casing table with columns: Inside Diameter, Open Hole OR Material, Wall Thickness, Depth (m/ft) From, To. Rows for Steel and Open Hole.

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

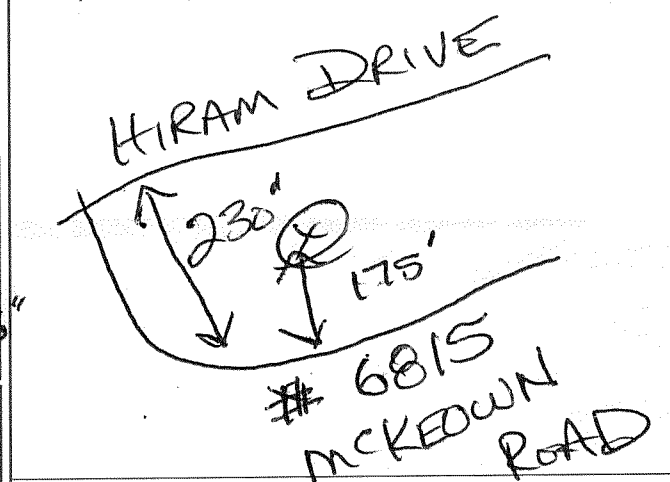
Water Details and Hole Diameter tables. Water found at depths 179 and 185 m/ft. Hole diameter 5 15/16 inches.

Well Contractor and Well Technician Information. Business Name: Air Rock Drilling Co. Ltd. Business Address: 8659 Franktown Road, RR#1. Well Contractor's License No. 1119. Municipality: Richmond.

Well Technician Information. Name: Purcell, Shannon. Signature: [Signature]. Date Submitted: 2012 05 31.

Results of Well Yield Testing table. Columns: Time (min), Water Level (m/ft), Time (min), Water Level (m/ft). Includes draw down and recovery data.

Map of Well Location



Comments: 1/2 HP - 10 GPM set @ 140 ft

Ministry Use Only section. Audit No. Z128551. Date Package Delivered: 2012 05 08. Date Work Completed: 2012 05 03.

JUN 29 2012



Measurements recorded in: Metric Imperial

Address of Well Location (Street Number/Name) 6946 South Village Drive Township Osgoode Lot 4 Concession 4
County/District/Municipality Ottawa-Carleton City/Town/Village Greely Province Ontario Postal Code
UTM Coordinates Zone Easting Northing NAD 83 18 454832 5012327 Municipal Plan and Sublot Number 4M-1265 Other S/L 12

Overburden and Bedrock Materials/Abandonment Sealing Record (see instructions on the back of this form)
Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m) From To

Annular Space
Table with columns: Depth Set at (m) From To, Type of Sealant Used (Material and Type), Volume Placed (m³)

Method of Construction Well Use
Cable Tool, Rotary (Conventional), Rotary (Reverse), Boring, Air percussion, Other, specify
Diamond, Jetting, Driving, Digging, Public, Commercial, Not used, Domestic, Municipal, Dewatering, Livestock, Test Hole, Monitoring, Irrigation, Cooling & Air Conditioning, Industrial, Other, specify

Construction Record - Casing Status of Well
Table with columns: Inside Diameter (cm), Open Hole OR Material, Wall Thickness (cm/in), 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

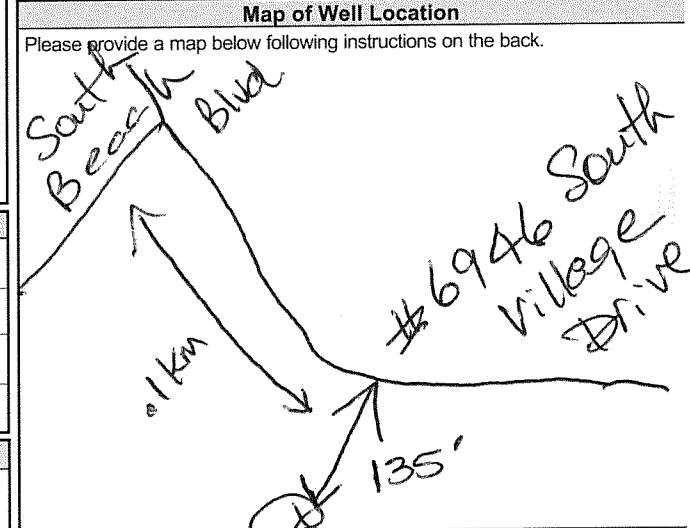
Construction Record - Screen
Table with columns: Outside Diameter (cm/in), Material (Plastic, Galvanized, Steel), Slot No., Depth (m/ft) From To

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

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): 6659 Franktown Road, RR#1 Municipality: Richmond
Province: ON Postal Code: K0A 2Z0 Business E-mail Address: air-rock@sympatico.ca

Bus. Telephone No. (inc. area code): 6138382170 Name of Well Technician (Last Name, First Name): Purcell, Shannon
Well Technician's Licence No.: T2122 Signature of Technician and/or Contractor: [Signature] Date Submitted: 2012 06 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): 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



Comments: 3/4 HP - 15 GPM SET @ 100.

Well owner's information package delivered: 2012 06 07 Date Work Completed: 2012 06 06
Ministry Use Only: Audit No. Z 144600 JUL 17 2012

Measurements recorded in: Metric Imperial

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization M. Scapillati Flooring Inc.	E-mail Address	<input type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) P.O. Box 13090	Municipality Kanata	Province Ontario	Postal Code K2K 1X3
Telephone No. (inc. area code) 613 839 3462			

Well Location

Address of Well Location (Street Number/Name) 6786 Hiram Drive	Township Osgoode	Lot 5	Concession 4
County/District/Municipality Ottawa Carleton	City/Town/Village Greely	Province Ontario	Postal Code
UTM Coordinates	Zone 18	Easting 454621	Northing 5011602
Municipal Plan and Sublot Number		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
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)	Type of Sealant Used	Volume Placed	
From	(Material and Type)	(m³/ft³)	
19.50	0 Grouted Bentonite Slurry	.92m³	

Results of Well Yield Testing					
After test of well yield, water was:		Draw Down		Recovery	
<input checked="" type="checkbox"/> Clear and sand free	<input type="checkbox"/> Other, specify _____	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason:		Static Level	1.73		
Pump intake set at (m/ft) 22.85		1	2.74	1	4.81
Pumping rate (l/min / GPM) 45.5		2	2.70	2	3.11
Duration of pumping 7 hrs + 28 min		3	4.25	3	2.23
Final water level end of pumping (m/ft) 6.31		4	4.62	4	1.90
If flowing give rate (l/min / GPM)		5	4.88	5	1.83
Recommended pump depth (m/ft) 22.85		10	5.49	10	1.81
Recommended pump rate (l/min / GPM) 45.5		15	5.68	15	
Well production (l/min / GPM)		20	5.78	20	
Disinfected?		25	5.82	25	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		30	5.85	30	
		40	5.88	40	
		50	5.92	50	
		60	5.95	60	

Method of Construction		Well Use		
<input type="checkbox"/> Cable Tool	<input type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial	<input type="checkbox"/> Not used
<input checked="" type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input checked="" type="checkbox"/> Domestic	<input type="checkbox"/> Municipal	<input type="checkbox"/> Dewatering
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole	<input type="checkbox"/> Monitoring
<input type="checkbox"/> Boring	<input type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning	
<input checked="" type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial		
<input type="checkbox"/> Other, specify _____		<input type="checkbox"/> Other, specify _____		

Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____
			From	To	
15.86	Steel	.48	+ .45	19.50	

Construction Record - Screen					
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)		<input type="checkbox"/> Other, specify _____
			From	To	

Water Details		Hole Diameter		
Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft)		Diameter (cm/in)
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	From	To	
21.33		0	19.50	15.86
28.95		19.50	29.86	15.23

Well Contractor and Well Technician Information			
Business Name of Well Contractor Capital Water Supply Ltd.		Well Contractor's Licence No. 1 5 5 8	
Business Address (Street Number/Name) Box 490		Municipality Stittsville	
Province Ontario	Postal Code K2S 1A6	Business E-mail Address office@capitalwater.ca	
Bus. Telephone No. (inc. area code) 613 836 1766	Name of Well Technician (Last Name, First Name) Miller, Stephen		
Well Technician's Licence No. 0 0 9 7	Signature of Technician and/or Contractor	Date Submitted 20120131	

Map of Well Location	
Please provide a map below following instructions on the back.	
Comments:	

Ministry Use Only	
Well owner's information package delivered	Audit No. 2139740
Date Package Delivered 20120127	Received
Date Work Completed 20120124	SEP 20 2012
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	



Measurements recorded in: Metric Imperial

Well Owner's Information

First Name, Last Name / Organization (Slavko Concrete Finishing), E-mail Address, Mailing Address (6789 Sunset Blvd), Municipality (Greely), Province (ON), Postal Code (K4P 1M6), Telephone No.

Well Location

Address of Well Location (6828 McKeown Drive), Township (Osgoode), Lot (P/L 4), Concession (4), County/District/Municipality (Ottawa-Carleton), City/Town/Village (Greely), Province (Ontario), UTM Coordinates, Municipal Plan and Sublot Number (4M-351 - S/L 19), Other (Block 6)

Overburden and Bedrock Materials/Abandonment Sealing Record

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From, To. Rows include Sand & Gravel, Boulders, Limestone at various depths.

GRAVEL SEAM - KEEP PUMP ABOVE 100 FEET

Annular Space table with columns: Depth Set at (m/ft) From, To, Type of Sealant Used, Volume Placed (m³/ft³). Rows for Neat cement and Bentonite slurry.

Method of Construction and Well Use checkboxes. Includes Cable Tool, Rotary, Boring, Air percussion, and various well uses like Domestic, Commercial, etc.

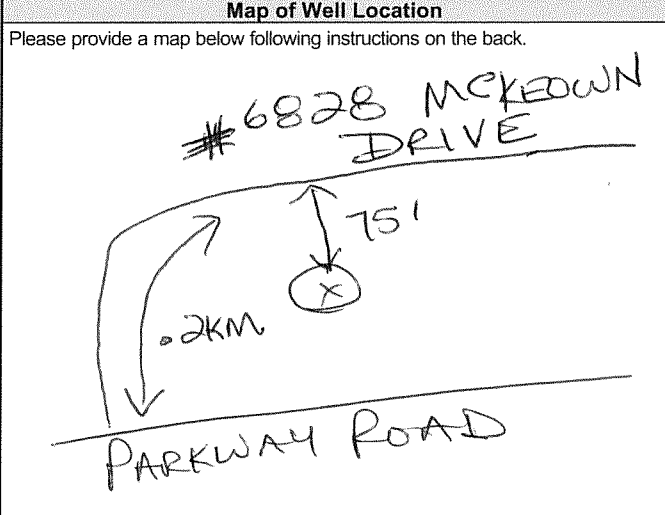
Construction Record - Casing and Status of Well. Includes Inside Diameter, Open Hole OR Material, Wall Thickness, Depth, and Status options like Water Supply, Replacement Well, etc.

Construction Record - Screen. Includes Outside Diameter, Material, Slot No., and Depth.

Water Details and Hole Diameter. Includes Water found at Depth, Kind of Water, and Hole Diameter (Depth and Diameter).

Well Contractor and Well Technician Information. Includes Business Name (Air Rock Drilling Co. Ltd.), Licence No., Business Address (6659 Franktown Road), and Technician Name (Graham, Ryan).

Results of Well Yield Testing table. Includes Draw Down and Recovery columns with Time, Water Level, and Static Level data.



Comments: 3/4 HP - 15 GPM - SET AT 100 FEET

Well owner's information package delivered, Date Package Delivered (2013 01 28), Date Work Completed (2013 01 17), Ministry Use Only (Audit No. Z144877, Received FEB 19 2013).

Measurements recorded in: Metric Imperial

A135268

Page ___ of ___

Well Owner's Information

First Name: _____ Last Name / Organization: **1850563 Ontario Ltd** E-mail Address: _____ Well Constructed by Well Owner

Mailing Address (Street Number/Name): **146 Tartan Drive** Municipality: **Ottawa** Province: **ON** Postal Code: **K2J 3X2** Telephone No. (inc. area code): _____

Well Location

Address of Well Location (Street Number/Name): **1358 Coker Street** Township: **Osgoode** Lot: **P/L5** Concession: **4**

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

UTM Coordinates Zone: **18** Easting: **454059** Northing: **5011925** Municipal Plan and Sublot Number: **4M 351** Other: **RP4R-5427 Part 26, 27, 28**

NAD: **83** **18** **454059** **5011925** **4M 351** **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)
				From 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)	Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft ³)
From To		
52' 42'	Neat cement	10.9
42' 0'	Bentonite slurry	21

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): **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): _____

Recommended pump depth (m/ft): **100'**

Recommended pump rate (l/min / GPM): **20**

Well production (l/min / GPM): **20**

Disinfected? Yes No

Time (min)	Draw Down		Recovery	
	Water Level (m/ft)	Time (min)	Water Level (m/ft)	Time (min)
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		

Method of Construction

Cable Tool Diamond Public Commercial Not used
 Rotary (Conventional) Jetting Municipal Dewatering
 Rotary (Reverse) Driving Domestic Test Hole Monitoring
 Boring Digging Livestock Cooling & Air Conditioning
 Air percussion Irrigation Industrial Other, specify _____
 Other, specify _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		Status of Well
			From	To	
6 1/4"	Steel	188"	+2'	52'	<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____
5 7/8"	Open Hole		52'	200'	

Construction Record - Screen

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

Water Details

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Hole Diameter	
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Depth (m/ft)	Diameter (cm/in)
		From	To
154 (m/ft)	<input checked="" type="checkbox"/> Untested	0' 52'	9 3/4"
182 (m/ft)	<input checked="" type="checkbox"/> Untested	52' 200'	5 7/8"

Well Contractor and Well Technician Information

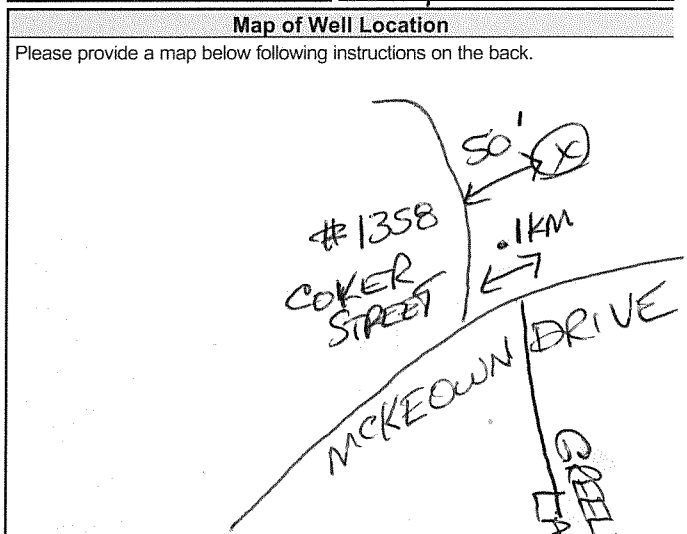
Business Name of Well Contractor: **Air Rock Drilling Co. Ltd** Well Contractor's Licence No.: **1119**

Business Address (Street Number/Name): **6659 Franktown Road, RR#1** Municipality: **Richmond**

Province: **ON** Postal Code: **K0A 2Z0** Business E-mail Address: **air-rock@sympatico.ca**

Bus. Telephone No. (inc. area code): **613-832-170** Name of Well Technician (Last Name, First Name): **Graham, Ryan**

Well Technician's Licence No.: **T3484** Signature of Technician and/or Contractor: _____ Date Submitted: **2013 03 28**



Comments: **3/4HP - 15GPM @ 100 FT**

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
<input checked="" type="checkbox"/> Yes	2013 03 12	Audit No. Z 155046
<input type="checkbox"/> No	2013 03 11	Rec'd On 15 2013



Measurements recorded in: Metric Imperial

Well Owner's Information

First Name, Last Name / Organization (1384341 Ontario Limited (c/o Cavanagh Const)), E-mail Address, Mailing Address (9094 Cavanagh Road), Municipality (Ashton), Province (On), Postal Code (K0A 1B0), Telephone No.

Well Location

Address of Well Location (1240 Old Prescott Road), Township (Osgoode), Lot (P/L 4), Concession (4S), County/District/Municipality (Ottawa-Carleton), City/Town/Village (Greely), Province (Ontario), UTM Coordinates, Northing (5012245), TEST WELL # 1

Overburden and Bedrock Materials/Abandonment Sealing Record

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (From/To). Rows include Sand, Silt, Sandstone, Limestone, etc.

Annular Space table with columns: Depth Set at (From/To), Type of Sealant Used, Volume Placed. Rows for Neat cement and Bentonite slurry.

Method of Construction and Well Use checkboxes. Includes Cable Tool, Rotary, Boring, Air percussion, Domestic, Commercial, etc.

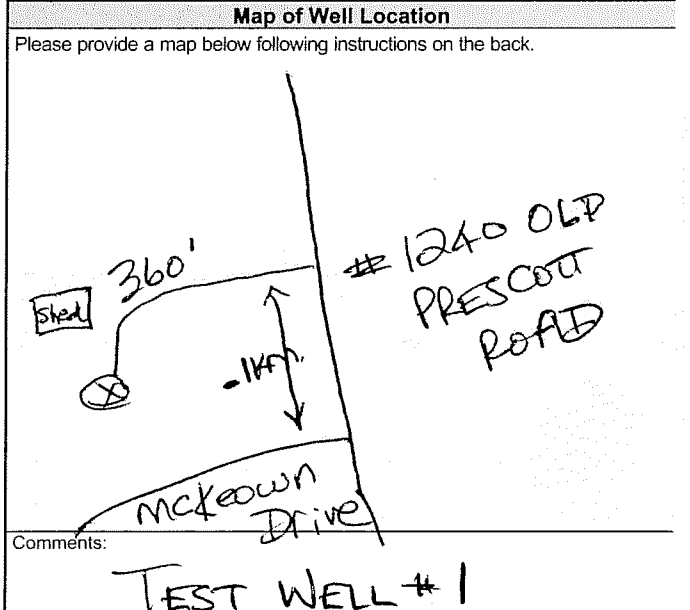
Construction Record - Casing and Status of Well. Includes Inside Diameter, Open Hole OR Material, Wall Thickness, Depth, and checkboxes for Water Supply, Replacement Well, etc.

Construction Record - Screen. Includes Outside Diameter, Material, Slot No., Depth.

Water Details and Hole Diameter. Includes Water found at Depth, Kind of Water, and Hole Diameter (Depth/Diameter).

Well Contractor and Well Technician Information. Includes Business Name (Air Rock Drilling Co. Ltd.), Licence No., Business Address (6659 Franktown Road), Municipality (Richmond), Province (ON), Postal Code (K0A 2Z0), Business E-mail Address (air-rock@sympatico.ca), Name of Well Technician (Graham, Ryan), Signature, Date Submitted (2013 05 31).

Results of Well Yield Testing. Includes After test of well yield, water was (Not tested), Draw Down (Time, Water Level), Recovery (Time, Water Level), Pumping rate (12 GPM), Duration of pumping (1 hrs + 0 min), Final water level end of pumping (85.4 m/ft), Recommended pump depth (150' (114' - 109' PM)), Recommended pump rate (12 l/min / GPM), Well production (12 l/min / GPM), Disinfected? (Yes).



Well owner's information package delivered (Yes), Date Package Delivered (2013 05 29), Date Work Completed (2013 05 27), Ministry Use Only (Audit No. Z 155095, Received JUL 16 2013).



Measurements recorded in: Metric Imperial

Well Owner's Information

First Name, Last Name / Organization (1384341 Ontario Limited (c/o Cavanagh Const)), E-mail Address, Mailing Address (9094 Cavanagh Road), Municipality (Ashton), Province (On), Postal Code (K0A 1B0), Telephone No.

Well Location

Address of Well Location (1240 Old Prescott Road), Township (Osgoode), Lot (P/L 4), Concession (4S), County/District/Municipality (Ottawa-Carleton), City/Town/Village (Greenly), Province (Ontario), UTM Coordinates, Northing (5012227), Municipal Plan and Sublot Number, Other (TEST WELL # 2)

Overburden and Bedrock Materials/Abandonment Sealing Record

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From, To. Includes entries for Sand, Silty Sand & Gravel, Boulders, Limestone, and Sandstone Mix.

Annular Space table with columns: Depth Set at (m/ft) From, To; Type of Sealant Used; Volume Placed (m³). Includes entries for Neat cement and Bentonite slurry.

Method of Construction and Well Use checkboxes. Includes options like Cable Tool, Rotary, Boring, Air percussion, and Well Use categories like Domestic, Commercial, etc.

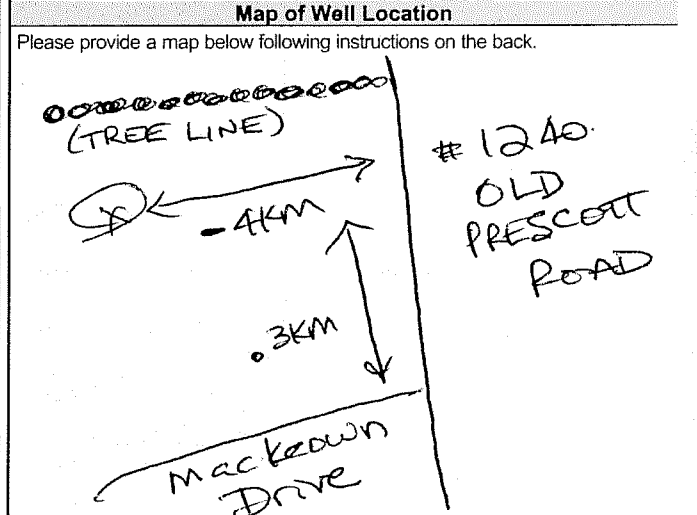
Construction Record - Casing and Status of Well. Includes columns for Inside Diameter, Open Hole OR Material, Wall Thickness, Depth, and checkboxes for Water Supply, Replacement Well, etc.

Construction Record - Screen. Includes columns for Outside Diameter, Material, Slot No., and Depth.

Water Details and Hole Diameter. Includes columns for Water found at Depth, Kind of Water, and Hole Diameter (Depth and Diameter).

Well Contractor and Well Technician Information. Includes Business Name (Air Rock Drilling Co. Ltd.), Licence No., Business Address (6658 Franktown Road), Municipality (Richmond), Province (ON), Postal Code (K0A 2Z0), Business E-mail Address (air-rock@sympatico.ca), Name of Well Technician (Graham, Ryan), and Signature.

Results of Well Yield Testing. Includes Draw Down and Recovery data with columns for Time (min), Water Level (m/ft), and Static Level. Includes notes like 'Not tested' and 'Pump intake set at 190'.



Comments: 3/4 HP - 10 GPM SET AT 190 FT TESTWELL#2

Ministry Use Only section. Includes Well owner's information package delivered (Yes/No), Date Package Delivered (2013 06 04), Date Work Completed (2013 05 30), and Audit No. (2155104).

Follow the **[COVID-19 restrictions and public health measures \(https://covid-19.ontario.ca/public-health-measures\)](https://covid-19.ontario.ca/public-health-measures)** and **[book your appointment to get vaccinated \(https://covid-19.ontario.ca/book-vaccine/\)](https://covid-19.ontario.ca/book-vaccine/)**.



[\(/page/government-ontario\)](/page/government-ontario)

Français (/fr/page/registre-de-puits)
FR (/FR/PAGE/REGISTRE-DE-PUITS)

Menu

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 \(https://data.ontario.ca/dataset/well-records\)](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 Record

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 Depth Diameter From To

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 \(/page/how-use-ministry-environment-map#wells\)](/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

[about Ontario \(https://www.ontario.ca/page/about-ontario\)](https://www.ontario.ca/page/about-ontario).

[accessibility \(https://www.ontario.ca/page/accessibility\)](https://www.ontario.ca/page/accessibility).

[news \(http://news.ontario.ca/newsroom/en\)](http://news.ontario.ca/newsroom/en).

[privacy \(https://www.ontario.ca/page/privacy-statement\)](https://www.ontario.ca/page/privacy-statement).

[terms of use \(https://www.ontario.ca/page/terms-use\)](https://www.ontario.ca/page/terms-use).

[© Queen's Printer for Ontario, 2012-22 \(https://www.ontario.ca/page/copyright-information-c-queens-printer-ontario\)](https://www.ontario.ca/page/copyright-information-c-queens-printer-ontario).



Measurements recorded in: Metric Imperial

W

A135367

Well Owner's Information

First Name, Last Name / Organization, E-mail Address, Mailing Address (Street Number/Name), Municipality, Province, Postal Code, Telephone No. (inc. area code)

Well Location

Address of Well Location (Street Number/Name), Township, Lot, Concession, County/District/Municipality, City/Town/Village, Province, Postal Code, UTM Coordinates, Zone, Easting, Northing, Municipal Plan and Sublot Number, Other

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

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From, To

TEST WELL # 4

Annular Space

Table with columns: Depth Set at (m/ft) From, To, Type of Sealant Used (Material and Type), Volume Placed (m³/ft³)

Results of Well Yield Testing

Table with columns: After test of well yield, water was: (Clear and sand free, Other), Draw Down (Time, Water Level), Recovery (Time, Water Level), Pumping rate, Duration of pumping, Final water level end of pumping, If flowing give rate, Recommended pump depth, Recommended pump rate, Well production, Disinfected?

Method of Construction

Well Use

Checkboxes for Method of Construction (Cable Tool, Rotary, Boring, Air percussion) and Well Use (Public, Commercial, Domestic, Municipal, Test Hole, etc.)

Construction Record - Casing

Status of Well

Table with columns: Inside Diameter (cm/in), Open Hole OR Material, Wall Thickness (cm/in), Depth (m/ft) From, To, Status of Well (Water Supply, Replacement Well, etc.)

Construction Record - Screen

Table with columns: Outside Diameter (cm/in), Material (Plastic, Galvanized, Steel), Slot No., Depth (m/ft) From, To

Water Details

Hole Diameter

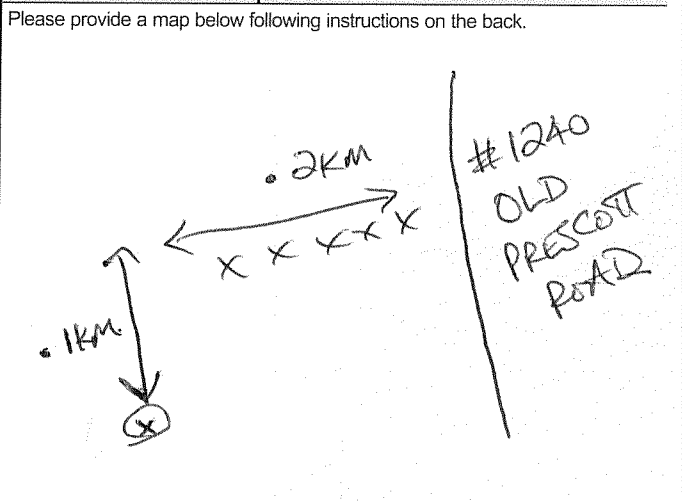
Table with columns: Water found at Depth, Kind of Water, Depth (m/ft) From, To, Diameter (cm/in)

Well Contractor and Well Technician Information

Business Name of Well Contractor, Well Contractor's Licence No., Business Address (Street Number/Name), Municipality, Province, Postal Code, Business E-mail Address

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

Map of Well Location



Comments: 3/4 HP - 15 GPM SET @ 100 FT

Well owner's information package delivered, Date Package Delivered, Date Work Completed, Ministry Use Only (Audit No., Received)



Measurements recorded in: Metric Imperial

Well ID: A144873

Well Owner's Information

First Name, Last Name / Organization (1384341 Ontario Limited (c/o Cavanagh Const)), E-mail Address, Mailing Address (9094 Cavanagh Road), Municipality (Ashton), Province (On), Postal Code (K0A 1B0), Telephone No.

Well Location

Address of Well Location (1240 Old Prescott Road), Township (Osgoode), Lot (P/L 4), Concession (4S), County/District/Municipality (Ottawa-Carleton), City/Town/Village (Greely), Province (Ontario), UTM Coordinates, Municipal Plan and Sublot Number, Other (TEST WELL #3)

Overburden and Bedrock Materials/Abandonment Sealing Record

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth From, Depth To. Rows include Sand, Sand & Gravel, Limestone, and Sandstone Mix.

Annular Space

Table with columns: Depth Set at From, Depth Set at To, Type of Sealant Used, Volume Placed. Rows for Neat cement and Bentonite slurry.

Results of Well Yield Testing

Table with columns: After test of well yield, water was, Draw Down (Time, Water Level), Recovery (Time, Water Level). Includes pumping rate, duration, and final water level.

Method of Construction

Well Use

Checkboxes for Cable Tool, Rotary, Boring, Air percussion, Diamond, Jetting, Driving, Digging, Public, Commercial, Domestic, Municipal, Test Hole, Livestock, Irrigation, Industrial, Cooling & Air Conditioning, Not used, Dewatering, Monitoring, Other.

Construction Record - Casing

Status of Well

Table for casing construction (Inside Diameter, Open Hole OR Material, Wall Thickness, Depth) and status of well (Water Supply, Replacement Well, etc.).

Construction Record - Screen

Table for screen construction (Outside Diameter, Material, Slot No., Depth).

Water Details

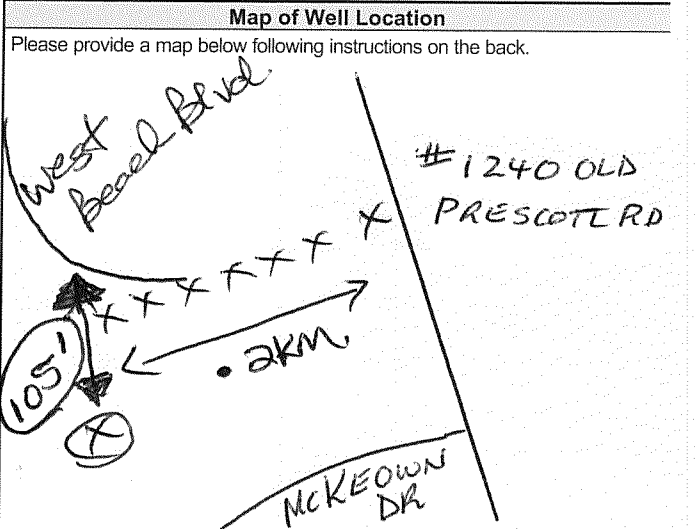
Hole Diameter

Table for water details (Depth, Kind of Water) and hole diameter (Depth, Diameter).

Well Contractor and Well Technician Information

Business Name of Well Contractor (Air Rock Drilling Co. Ltd.), Well Contractor's Licence No. (1119), Business Address, Municipality (Richmond), Province (ON), Postal Code (K0A 2Z0), Business E-mail Address (air-rock@sympatico.ca).

Bus. Telephone No. (8138382170), Name of Well Technician (Grant, Andrew), Well Technician's Licence No. (13438), Signature of Technician and/or Contractor, Date Submitted (08/30).



Comments: 1 HP - 10 gpm @ 150'

Well owner's information package delivered (Yes), Date Package Delivered (2013/08/19), Date Work Completed (2013/08/14), Ministry Use Only (Audit No. 2155193, Date OCT 10 2013).

Measurements recorded in: Metric Imperial

Page _____ of _____

Well Owner's Information

First Name	Last Name / Organization Direct Bore Inc.	E-mail Address	<input type="checkbox"/> Well Constructed by Well Owner
Mailing Address (Street Number/Name) 5689 Power Road		Municipality Gloucester	Province ON
		Postal Code K1G 3N4	Telephone No. (inc. area code)

Well Location

Address of Well Location (Street Number/Name) 6834 Hiram Drive		Township Osgoode	Lot P/L 5	Concession 4
County/District/Municipality Ottawa-Carleton		City/Town/Village Green	Province Ontario	Postal Code
UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number 4m-351
NAD	8	3	19	454568
				5011739
		Other 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	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)	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	
From: 66' To: 56'	Neat cement	9.36	
From: 56' To: 0'	Bentonite slurry	29.4	

Method of Construction	Well Use
<input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Rotary (Reverse) <input type="checkbox"/> Boring <input checked="" type="checkbox"/> Air percussion <input type="checkbox"/> Other, specify _____	<input type="checkbox"/> Diamond <input type="checkbox"/> Jetting <input type="checkbox"/> Driving <input type="checkbox"/> Digging <input type="checkbox"/> Public <input checked="" type="checkbox"/> Domestic <input type="checkbox"/> Livestock <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify _____
	<input type="checkbox"/> Commercial <input type="checkbox"/> Municipal <input type="checkbox"/> Test Hole <input type="checkbox"/> Cooling & Air Conditioning <input type="checkbox"/> Not used <input type="checkbox"/> Dewatering <input type="checkbox"/> Monitoring

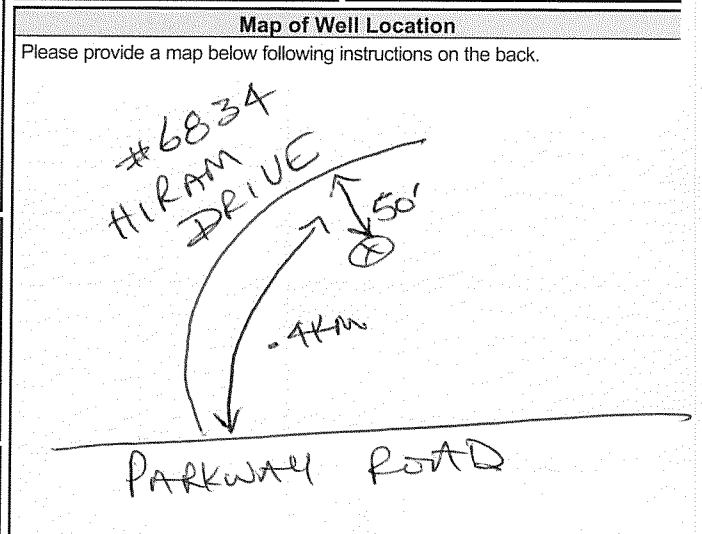
Construction Record - Casing				Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____
			From	To	
6 1/4"	Steel	188"	+2'	66'	
6"	Open Hole		66'	101'	

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

Water Details		Hole Diameter	
Water found at Depth: 77' (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft) From: 0'	To: 66'
Water found at Depth: 83' (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft) From: 66'	To: 101'
Water found at Depth: 94' (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft) From: 66'	To: 101'
		Diameter (cm/in)	9 3/4"
		Diameter (cm/in)	6"

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) 6659 Franktown Road, RR#1		Municipality Richmond	
Province ON	Postal Code K0A 2Z0	Business E-mail Address air-rock@sympatico.ca	
Bus. Telephone No. (inc. area code) 513832170	Name of Well Technician (Last Name, First Name) Furcell, Shannon		
Well Technician's Licence No. T2122	Signature of Technician and/or Contractor 	Date Submitted 2013 08 30	

Results of Well Yield Testing				
After test of well yield, water was: <input type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify Not tested	Draw Down		Recovery	
	Time (min)	Water Level (m/ft)	Time (min)	Water Level (m/ft)
If pumping discontinued, give reason: X	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
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	10	11	10	8.9
If flowing give rate (l/min / GPM) X	15	11	15	8.9
Recommended pump depth (m/ft) 80'	20	11	20	8.9
Recommended pump rate (l/min / GPM) 20	25	11	25	8.9
Well production (l/min / GPM) 20+	30	11	30	8.9
Disinfected? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	40	11	40	8.9
	50	11	50	8.9
	60	11'	60	8.9'


 Comments:
1/2 HP - 10 GPM - SET @ 90 FT

Well owner's information package delivered	Date Package Delivered	Ministry Use Only
<input checked="" type="checkbox"/> Yes	2013 08 09	Audit No. z 155176
<input type="checkbox"/> No	Date Work Completed 2013 08 08	Received OCT 10 2013

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/>).



[\(/page/government-ontario\)](/page/government-ontario)

Français (/fr/page/registre-de-puits)
FR (/FR/PAGE/REGISTRE-DE-PUITS)

Menu

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) (<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 \(/page/how-use-ministry-environment-map#wells\)](/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

[about Ontario \(https://www.ontario.ca/page/about-ontario\)](https://www.ontario.ca/page/about-ontario)

[accessibility \(https://www.ontario.ca/page/accessibility\)](https://www.ontario.ca/page/accessibility)

[news \(http://news.ontario.ca/newsroom/en\)](http://news.ontario.ca/newsroom/en)

[privacy \(https://www.ontario.ca/page/privacy-statement\)](https://www.ontario.ca/page/privacy-statement)

[terms of use \(https://www.ontario.ca/page/terms-use\)](https://www.ontario.ca/page/terms-use)

[© Queen's Printer for Ontario, 2012–22 \(https://www.ontario.ca/page/copyright-information-c-queens-printer-ontario\)](https://www.ontario.ca/page/copyright-information-c-queens-printer-ontario)



Measurements recorded in: Metric Imperial

A144876

Page ____ of ____

Well Owner's Information

First Name, Last Name / Organization, E-mail Address, Mailing Address (Street Number/Name), Municipality, Province, Postal Code, Telephone No. (inc. area code)

Well Location

Address of Well Location (Street Number/Name), Township, Lot, Concession, County/District/Municipality, City/Town/Village, Province, Postal Code, UTM Coordinates, Northing, Municipal Plan and Sublot Number, Other

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

Table with columns: General Colour, Most Common Material, Other Materials, General Description, Depth (m/ft) From, To. Includes handwritten 'Test Well # 5' across the bottom.

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

Method of Construction and Well Use checkboxes: Cable Tool, Rotary, Boring, Air percussion, etc.

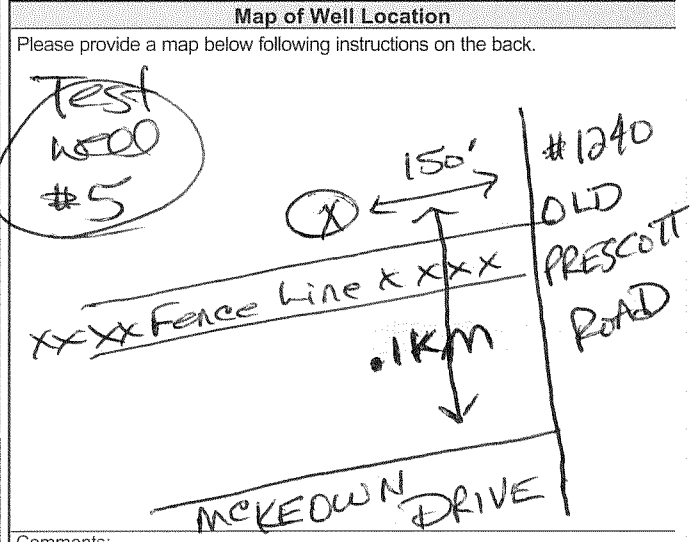
Construction Record - Casing table with columns: Inside Diameter (cm/in), Open Hole OR Material, Wall Thickness (cm/in), Depth (m/ft) From, To, Status of Well

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

Water Details and Hole Diameter tables with columns for water found at depth, kind of water, and hole diameter.

Well Contractor and Well Technician Information form with fields for Business Name, Licence No., Address, E-mail, and Technician Name.

Results of Well Yield Testing table with columns: Draw Down (Time, Water Level), Recovery (Time, Water Level), and various pumping parameters.



Comments: 1 HP - 10 GPM SET @ 250 FT TW#5

Ministry Use Only section with fields for Well owner's information, Date Package Delivered, Date Work Completed, and Audit No.

Measurements recorded in: Metric Imperial

Well Owner's Information

First Name: Last Name / Organization: **Waiko Construction Ltd.** E-mail Address: Well Constructed by Well Owner

Mailing Address (Street Number/Name): **811 Kennedy Road** Municipality: **Kemptville** Province: **ON** Postal Code: **K0G 1J0** Telephone No. (inc. area code):

Well Location

Address of Well Location (Street Number/Name): **6945 McKeown Drive** Township: **Osgoode** Lot: **P/L 5** Concession: **4**

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

UTM Coordinates Zone: **18** Easting: **435080** Northing: **5012157** Municipal Plan and Sublot Number: **4M-351** Other: **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 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)	Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft ³)
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)		Status of Well
			From	To	
6 1/4"	Steel	188"	+2'	61'	<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify <input type="checkbox"/> Other, specify
5 15/16"	Open Hole		61'	200'	

Construction Record - Screen

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

Water Details

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify
137'	
194'	

Hole Diameter

Depth (m/ft)	Diameter (cm/in)
0' 61'	93/4"
61' 200'	5 15/16"

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): **8859 Frankton Road, Richmond** Municipality: **Richmond**

Province: **ON** Postal Code: **R6L 2C0** Business Email Address: **airrock@sympatico.ca**

Bus. Telephone No. (inc. area code): **613-332-170** Name of Well Technician (Last Name, First Name): **Hogan, Dan**

Well Contractor's Licence No.: **13058** Signature of Technician and/or Contractor: *[Signature]* Date Submitted: **2015-02-27**

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**

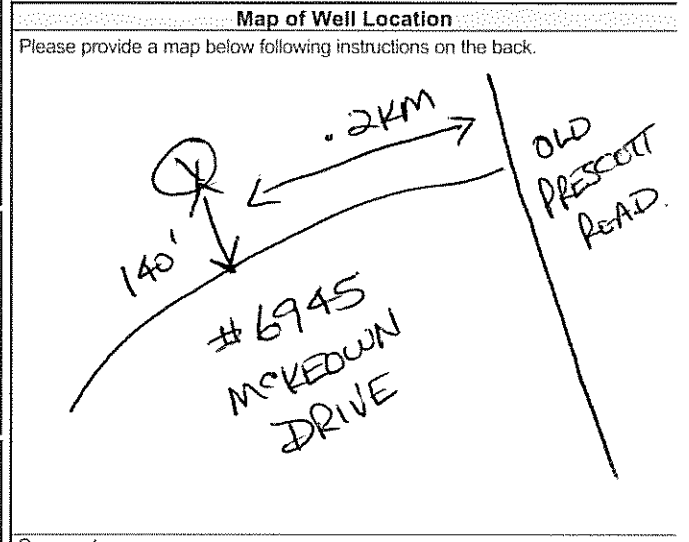
Recommended pump depth (m/ft): **140'**

Recommended pump rate (l/min / GPM): **8**

Well production (l/min / GPM): **8**

Disinfected? Yes No

Time (min)	Draw Down (m/ft)		Recovery (m/ft)	
	Water Level	Time	Water Level	Time
Static Level	13.2'		58.8'	
1	20.4	1	44.8	
2	24.4	2	39	
3	28.3	3	34.4	
4	31.8	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'	



Comments: **1/2 HP - 5 GPM SET @ 140 FT**

Well owner's information package delivered: Yes No

Date Package Delivered: **2015 02 11**

Date Work Completed: **2015 02 06**

Ministry Use Only

Audit No.: **Z191365**

Received: **APR 24 2015**

Measurements recorded in: Metric Imperial

Page ___ of ___

A177769

Well Owner's Information

First Name: _____ Last Name / Organization: **Marathon Drilling Co. Ltd.** E-mail Address: _____ Well Constructed by Well Owner

Mailing Address (Street Number/Name): **6847 Hiram Road** Municipality: **Greely** Province: **ON** Postal Code: **K4P 1A2** Telephone No. (inc. area code): _____

Well Location

Address of Well Location (Street Number/Name): **6847 Hiram Road** Township: **Osgoode** Lot: **P1L4** Concession: **45**

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

UTM Coordinates Zone: **18** Easting: **454596** Northing: **5011876** Municipal Plan and Sublot Number: _____ 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	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)	Type of Sealant Used (Material and Type)	Volume Placed (m ³ /ft ³)
From To		
64' 54'	Neat cement	21.8
54' 0'	Bentonite slurry	16.8

Method of Construction

Cable Tool Diamond Public Commercial Not used

Rotary (Conventional) Jetting Domestic Municipal Dewatering

Rotary (Reverse) Driving Livestock Test Hole Monitoring

Boring Digging Irrigation Cooling & Air Conditioning

Air percussion Industrial Other, specify _____

Other, specify _____

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)		Status of Well
			From	To	
6 1/4"	Steel	.188"	+2'	64'	<input checked="" type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify _____ <input type="checkbox"/> Other, specify _____
6"	Open Hole		64'	260'	

Construction Record - Screen

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

Water Details

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested
161 (m/ft)	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other, specify _____
232 (m/ft)	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other, specify _____
247 (m/ft)	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Other, specify _____

Hole Diameter

Depth (m/ft)	Diameter (cm/in)
From To	
0' 64'	9 3/4"
64' 260'	6"

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): **6639 Franktown Road, RR#1** Municipality: **Richmond**

Province: **ON** Postal Code: **K0A 2Z0** Business E-mail Address: **air-rock@sympatico.ca**

Bus. Telephone No. (inc. area code): **6138382170** Name of Well Technician (Last Name, First Name): **Hanna, Jeremy**

Well Technician's Licence No.: **T3632** Signature of Technician and/or Contractor: _____ Date Submitted: **2015 10 30**

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): **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): _____

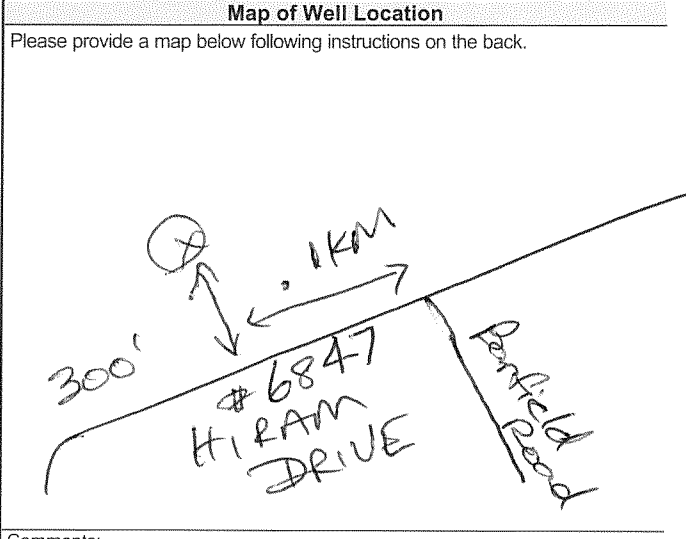
Recommended pump depth (m/ft): **200'**

Recommended pump rate (l/min / GPM): **20+**

Well production (l/min / GPM): **20+**

Disinfected? Yes No

Time (min)	Draw Down		Recovery	
	Water Level (m/ft)	Time (min)	Water Level (m/ft)	Time (min)
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"	



Comments: _____

Well owner's information package delivered: Yes No

Date Package Delivered: **2015 10 06**

Date Work Completed: **2015 10 01**

Ministry Use Only

Audit No: **Z 202618**

Retrieved: **NOV 17 2015**



Measurements recorded in: Metric Imperial

A229022

Page ___ of ___

Address of Well Location (Street Number/Name) **6820 McKeown Drive** Township **Osgoode** Lot **P/L 4** Concession **4**

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

UTM Coordinates Zone **18** Easting **454770** Northing **5011553** Municipal Plan and Sublot Number **4M-351** Other **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)
				From 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)	Type of Sealant Used (Material and Type)	Volume Placed (m³)
From To		
66' 58'	Neat cement	10.8
58' 0'	Bentonite slurry	18.8

Method of Construction

Cable Tool Diamond Public Commercial Not used

Rotary (Conventional) Jetting Domestic Municipal Dewatering

Rotary (Reverse) Driving Livestock Test Hole Monitoring

Boring Digging Irrigation Cooling & Air Conditioning

Air percussion Industrial Other, specify _____

Construction Record - Casing

Inside Diameter (cm)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm)	Depth (m)	Status of Well
			From To	
6 1/4"	Steel	.188"	+2' 66'	<input checked="" type="checkbox"/> Water Supply
6"	Open Hole		66' 220'	<input type="checkbox"/> Replacement Well

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	Status of Well
			From To	
				<input type="checkbox"/> Abandoned, Insufficient Supply
				<input type="checkbox"/> Abandoned, Poor Water Quality
				<input type="checkbox"/> Abandoned, other, specify _____
				<input type="checkbox"/> Other, specify _____

Water Details

Water found at Depth (m/ft)	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Intested	Depth (m/ft)	Diameter (cm/in)
	<input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	From To	
209 (m/ft)	<input checked="" type="checkbox"/> Intested	0' 66'	9 3/4"
213 (m/ft)	<input checked="" type="checkbox"/> Intested	66' 220'	6"

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) **6820 McKeown Drive, RR#1** Municipality **Richmond**

Province **ON** Postal Code **K0A 2Z0** Business E-mail Address **air-rock@sympatico.ca**

Bus. Telephone No. (inc. area code) **813882170** Name of Well Technician (Last Name, First Name) **Hanna, Jeremy**

Well Technician's Licence No. **13632** Signature of Technician and/or Contractor Date Submitted **09 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) **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**

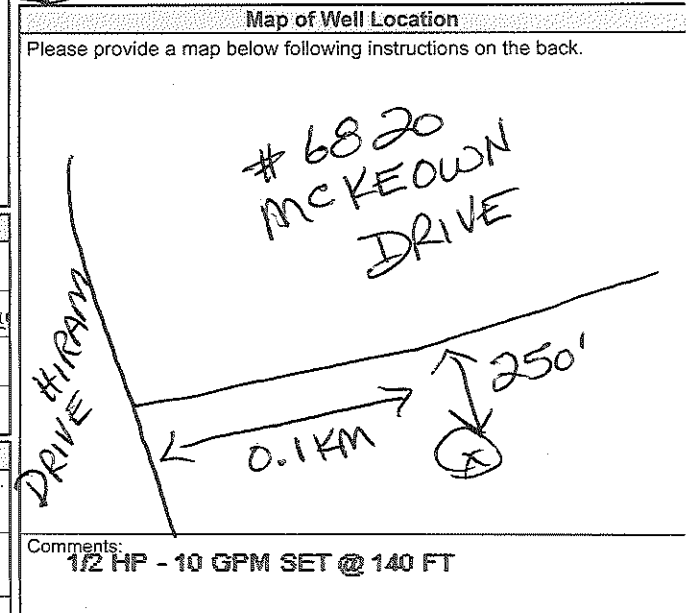
Recommended pump depth (m) **140'**

Recommended pump rate (l/min / GPM) **20 gpm**

Well production (l/min / GPM) **20**

Disinfected? Yes No

Time (min)	Draw Down (m/ft)		Recovery (m/ft)	
	Water Level	Static Level	Water Level	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'



Comments: **1/2 HP - 10 GPM SET @ 140 FT**

Well owner's information package delivered Yes No

Date Package Delivered **2017 09 19**

Date Work Completed **2017 09 18**

Ministry Use Only

Audit No. **2262386**

Received **OCT 13 2017**

Follow the **[COVID-19 restrictions and public health measures \(https://covid-19.ontario.ca/public-health-measures\)](https://covid-19.ontario.ca/public-health-measures)** and **[book your appointment to get vaccinated \(https://covid-19.ontario.ca/book-vaccine/\)](https://covid-19.ontario.ca/book-vaccine/)**.



[\(/page/government-ontario\)](/page/government-ontario)

Français (/fr/page/registre-de-puits)
FR (/FR/PAGE/REGISTRE-DE-PUITS)

Menu

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 \(https://data.ontario.ca/dataset/well-records\)](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 \(/page/how-use-ministry-environment-map#wells\)](/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

[about Ontario \(https://www.ontario.ca/page/about-ontario\)](https://www.ontario.ca/page/about-ontario)

[accessibility \(https://www.ontario.ca/page/accessibility\)](https://www.ontario.ca/page/accessibility)

[news \(http://news.ontario.ca/newsroom/en\)](http://news.ontario.ca/newsroom/en)

[privacy \(https://www.ontario.ca/page/privacy-statement\)](https://www.ontario.ca/page/privacy-statement)

[terms of use \(https://www.ontario.ca/page/terms-use\)](https://www.ontario.ca/page/terms-use)

[© Queen's Printer for Ontario, 2012–22 \(https://www.ontario.ca/page/copyright-information-c-queens-printer-ontario\)](https://www.ontario.ca/page/copyright-information-c-queens-printer-ontario)

Measurements recorded in: Metric Imperial

Address of Well Location (Street Number/Name) 1366 Johnston Drive		Township Osgoode	Lot N/A	Concession N/A
County/District/Municipality Ottawa		City/Town/Village Ottawa	Province Ontario	Postal Code K4P 1W6
UTM Coordinates Zone NAD 83	Easting 180455360501	Northing 21104	Municipal Plan and Sublot Number N/A	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
			raised casing above Grade in accordance off regulation 903	
			well was sanitized	

Annular Space		
Depth Set at (m/ft) From To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
	N/A	

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

Method of Construction		Well Use	
<input type="checkbox"/> Cable Tool	<input checked="" type="checkbox"/> Diamond	<input type="checkbox"/> Public	<input type="checkbox"/> Commercial
<input type="checkbox"/> Rotary (Conventional)	<input type="checkbox"/> Jetting	<input type="checkbox"/> Domestic	<input type="checkbox"/> Municipal
<input type="checkbox"/> Rotary (Reverse)	<input type="checkbox"/> Driving	<input type="checkbox"/> Livestock	<input type="checkbox"/> Test Hole
<input type="checkbox"/> Boring	<input checked="" type="checkbox"/> Digging	<input type="checkbox"/> Irrigation	<input type="checkbox"/> Cooling & Air Conditioning
<input type="checkbox"/> Air percussion		<input type="checkbox"/> Industrial	<input type="checkbox"/> Other, specify
<input type="checkbox"/> Other, specify		<input type="checkbox"/> Not used	<input type="checkbox"/> Dewatering
		<input type="checkbox"/> Monitoring	

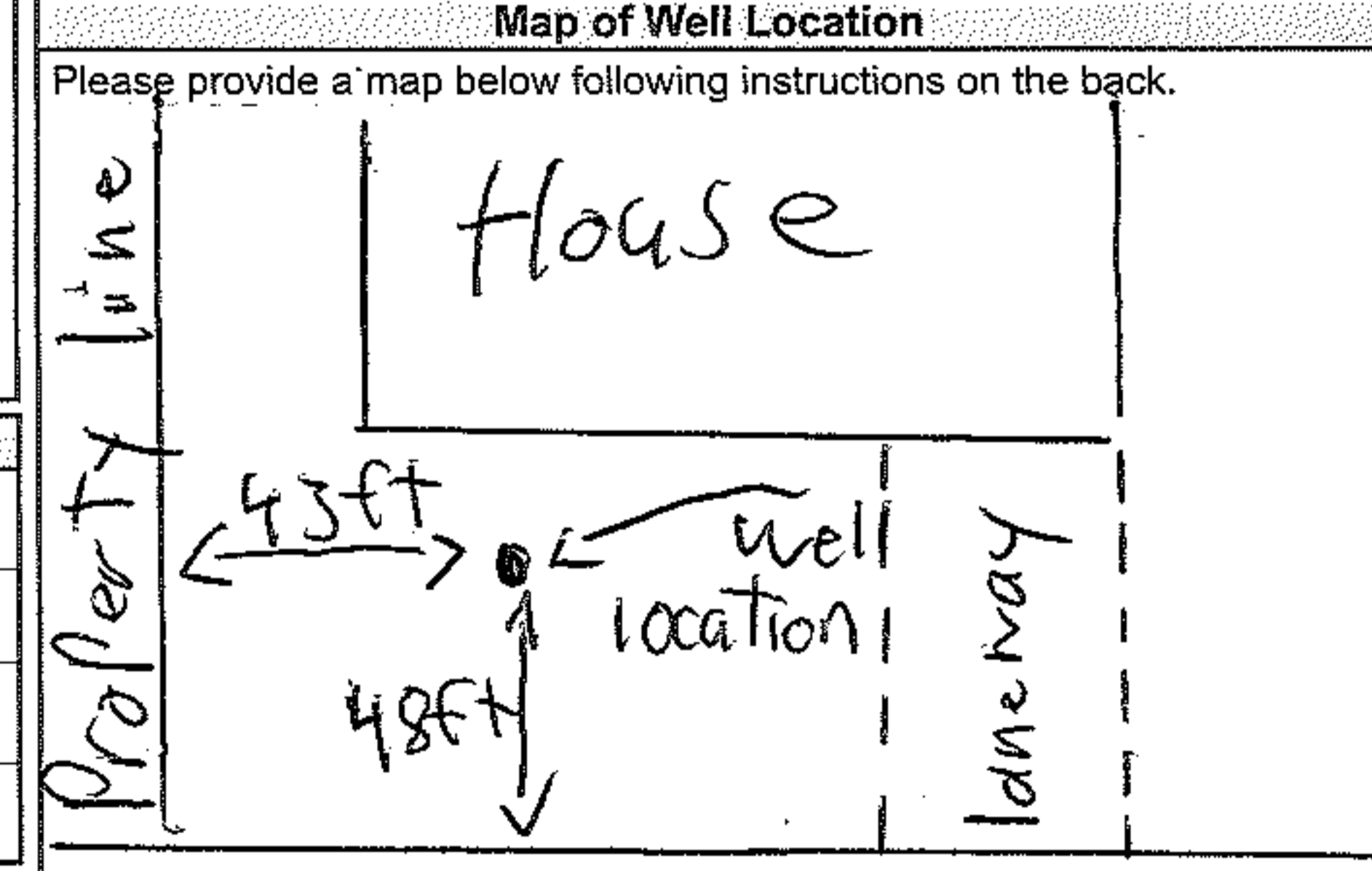
Construction Record - Casing			Status of Well	
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft)	
			From	To
	N/A		6"	6"

<input checked="" type="checkbox"/> Water Supply
<input type="checkbox"/> Replacement Well
<input type="checkbox"/> Test Hole
<input type="checkbox"/> Recharge Well
<input type="checkbox"/> Dewatering Well
<input type="checkbox"/> Observation and/or Monitoring Hole
<input type="checkbox"/> Alteration (Construction)
<input type="checkbox"/> Abandoned, Insufficient Supply
<input type="checkbox"/> Abandoned, Poor Water Quality
<input type="checkbox"/> Abandoned, other, specify
<input type="checkbox"/> Other, specify

Construction Record - Screen				
Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To
	N/A			

Water Details		Hole Diameter	
Water found at Depth (m/ft) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	Kind of Water: <input type="checkbox"/> Fresh <input checked="" type="checkbox"/> Untested	Depth (m/ft) From To	Diameter (cm/in)
	11ft		N/A

Well Contractor and Well Technician Information			
Business Name of Well Contractor CN electric & Plumbing		Well Contractor's Licence No. 6684	
Business Address (Street Number/Name) 5640 Manotick main		Municipality Ottawa	
Province ONT	Postal Code K4M 1D3	Business E-mail Address CN-electric.ca	
Bus. Telephone No. (inc. area code) 613 692 3284	Name of Well Technician (Last Name, First Name) Sadler Johnston		
Well Technician's Licence No. 3689	Signature of Technician and/or Contractor		Date Submitted 20190816



Johnston Drive

Comments:

Well owner's information package delivered <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date Package Delivered 20180816	Ministry Use Only Audit No. 2319379 SEP 06 2019 Received
	Date Work Completed 20180816	

Follow the **[COVID-19 restrictions and public health measures \(https://covid-19.ontario.ca/public-health-measures\)](https://covid-19.ontario.ca/public-health-measures)** and **[book your appointment to get vaccinated \(https://covid-19.ontario.ca/book-vaccine/\)](https://covid-19.ontario.ca/book-vaccine/)**.



[\(/page/government-ontario\)](/page/government-ontario)

Français (/fr/page/registre-de-
puits)
FR (/FR/PAGE/REGISTRE-DE-
PUITS)

Menu

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 \(https://data.ontario.ca/dataset/well-records\)](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 Depth Diameter
From To**

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 \(/page/how-use-ministry-environment-map#wells\)](/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

[about Ontario \(https://www.ontario.ca/page/about-ontario\)](https://www.ontario.ca/page/about-ontario)

[accessibility \(https://www.ontario.ca/page/accessibility\)](https://www.ontario.ca/page/accessibility)

[news \(http://news.ontario.ca/newsroom/en\)](http://news.ontario.ca/newsroom/en)

[privacy \(https://www.ontario.ca/page/privacy-statement\)](https://www.ontario.ca/page/privacy-statement)

[terms of use \(https://www.ontario.ca/page/terms-use\)](https://www.ontario.ca/page/terms-use)

[© Queen's Printer for Ontario, 2012–22 \(https://www.ontario.ca/page/copyright-information-c-queens-printer-ontario\)](https://www.ontario.ca/page/copyright-information-c-queens-printer-ontario)

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

Page 1 of 13

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, Inorganics Supervisor

Addrine
Thomas
2022.02.10
14:16:00 -05'00'

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise indicated.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at: <http://www.cala.ca/scopes/2602.pdf>.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is licensed by the Ontario Ministry of the Environment, Conservation, and Parks (MECP) for specific tests in drinking water (license #2318). A copy of the license is available upon request.

Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) is accredited by the Ontario Ministry of Agriculture, Food, and Rural Affairs for specific tests in agricultural soils.

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.

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

Group	Analyte	MRL	Units	Guideline	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

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

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

Group	Analyte	MRL	Units	Guideline	Lab I.D.	1608980	1608981
					Sample Matrix	GW	GW
					Sample Type	2022-02-03	2022-02-03
					Sampling Date	GW1	GW2
					Sample I.D.		
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

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

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

Group	Analyte	MRL	Units	Guideline	1608980 GW 2022-02-03 GW1	1608981 GW 2022-02-03 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	

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

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

Group	Analyte	MRL	Units	Guideline	Lab I.D.	1608980	1608981
					Sample Matrix	GW	GW
					Sample Type	2022-02-03	2022-02-03
					Sampling Date	GW1	GW2
					Sample I.D.		
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	

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

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

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

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

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

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

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

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

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

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

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

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

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

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 CaCO ₃			
Ion Balance			

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

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

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

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

DATUM Geodetic


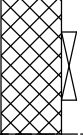
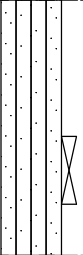
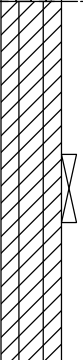
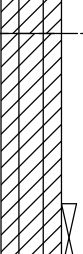
FILE NO. **PG6052**

REMARKS

HOLE NO. **TP 1-21**

BORINGS BY Backhoe

DATE December 17, 2021

SOIL DESCRIPTION	STRATA PLOT	SAMPLE				DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone				Piezometer Construction	
		TYPE	NUMBER	RECOVERY %	N VALUE or RQD			20	40	60	80		
GROUND SURFACE						0	100.05						
Asphaltic concrete													
FILL: Brown silty sand with gravel and crushed stone		G	1										
Compact, brown SILTY SAND		G	2			1	99.05						▽
Very stiff to stiff, grey SILTY CLAY - silt content increasing with depth		G	3			2	98.05						▲
Stiff, grey CLAYEY SILT		G	4			3	97.05						
End of Test Pit (Groundwater infiltration at 1.0m depth)													

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

DATUM Geodetic



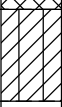
FILE NO. **PG6052**

REMARKS

HOLE NO. **TP 2-21**

BORINGS BY Backhoe

DATE December 17, 2021

SOIL DESCRIPTION	STRATA PLOT	SAMPLE				DEPTH (m)	ELEV. (m)	Pen. Resist. Blows/0.3m ● 50 mm Dia. Cone				Piezometer Construction	
		TYPE	NUMBER	RECOVERY	N VALUE or RQD			20	40	60	80		
GROUND SURFACE						0	100.06						
FILL: Crushed stone with sand													
FILL: Brown silty sand with gravel		G	1										▽
Very stiff to stiff, grey SILTY CLAY		G	2										▲
End of Test Pit (Groundwater infiltration at 0.4m depth)													

20 40 60 80 100
Shear Strength (kPa)
▲ Undisturbed △ Remoulded

DATUM Geodetic

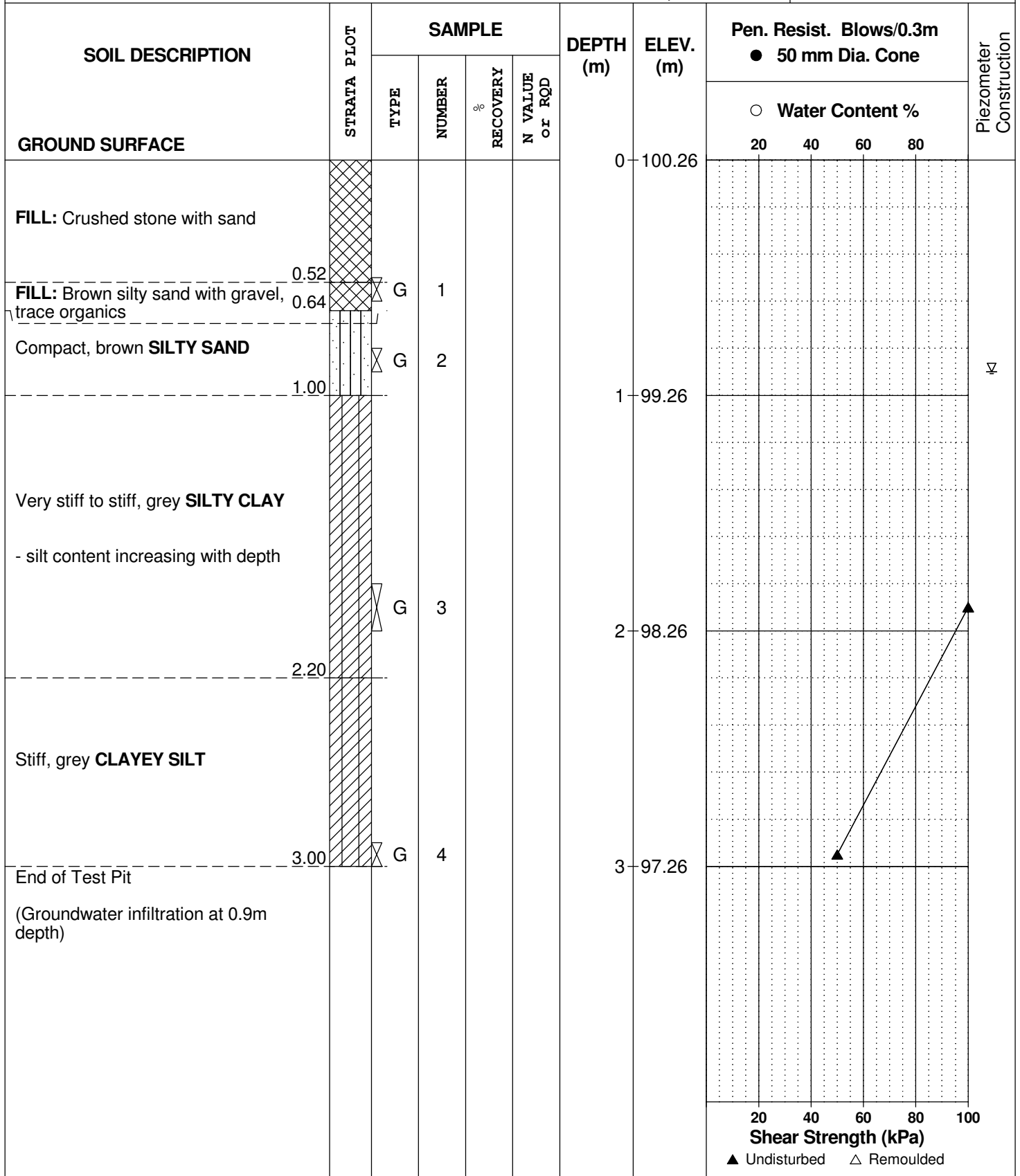
REMARKS

BORINGS BY Backhoe

DATE December 17, 2021

FILE NO. **PG6052**

HOLE NO. **TP 3-21**



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 = $(D_{30})^2 / (D_{10} \times D_{60})$
Cu	-	Uniformity coefficient = D_{60} / D_{10}

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		Overconsolidation 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



Topsoil



Asphalt



Fill



Peat



Sand



Silty Sand



Silt



Sandy Silt



Clay



Silty Clay



Clayey Silty Sand



Glacial Till



Shale



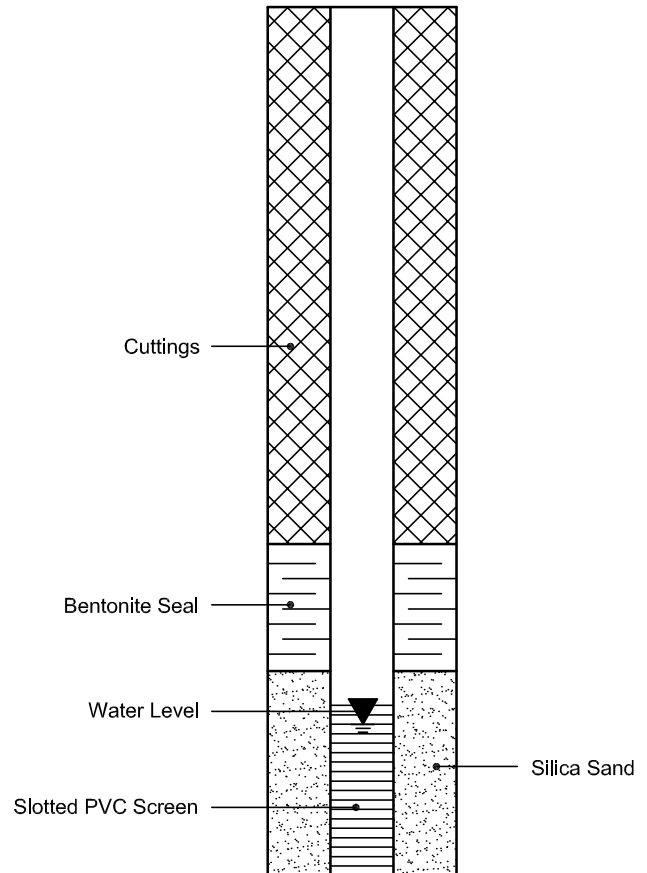
Bedrock

MONITORING WELL AND PIEZOMETER CONSTRUCTION

MONITORING WELL CONSTRUCTION

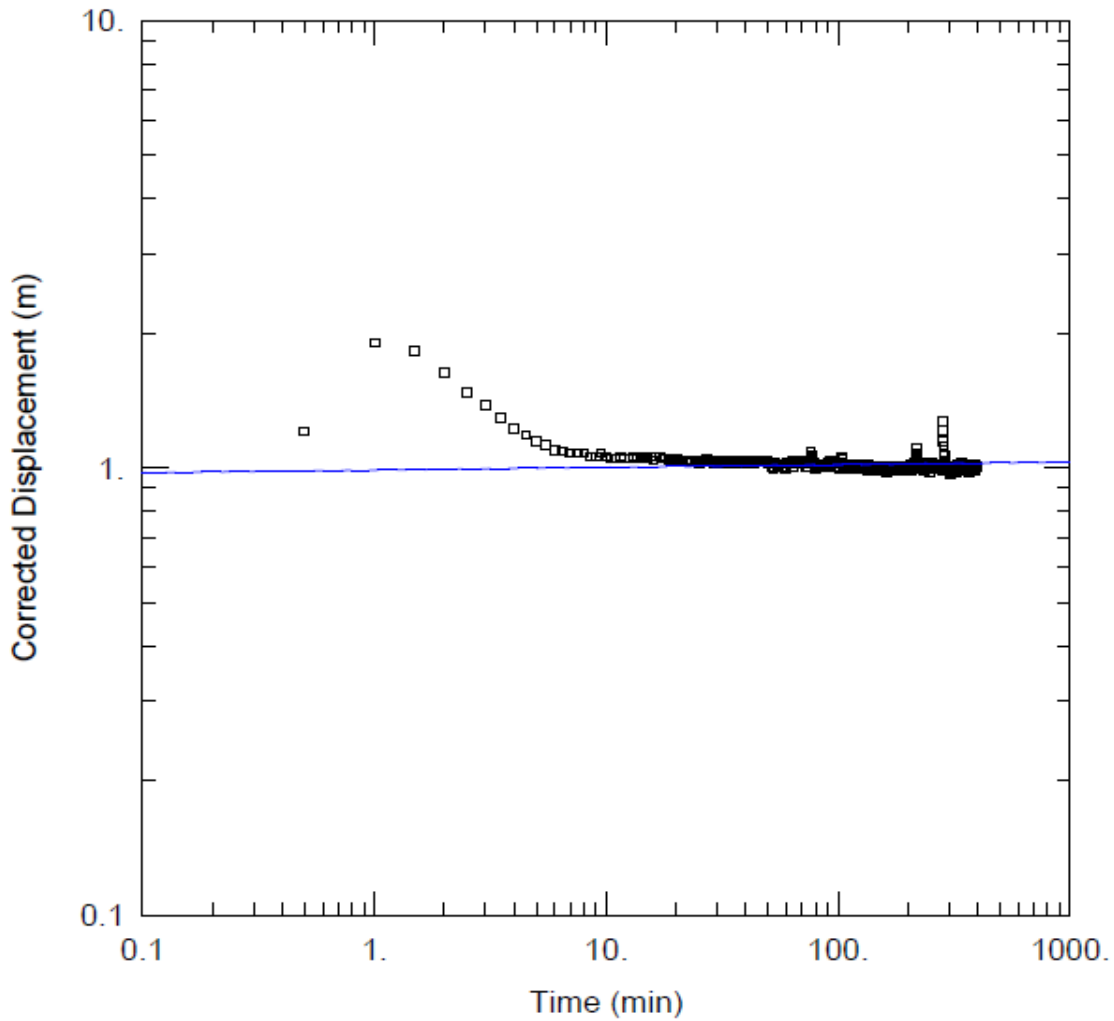


PIEZOMETER CONSTRUCTION



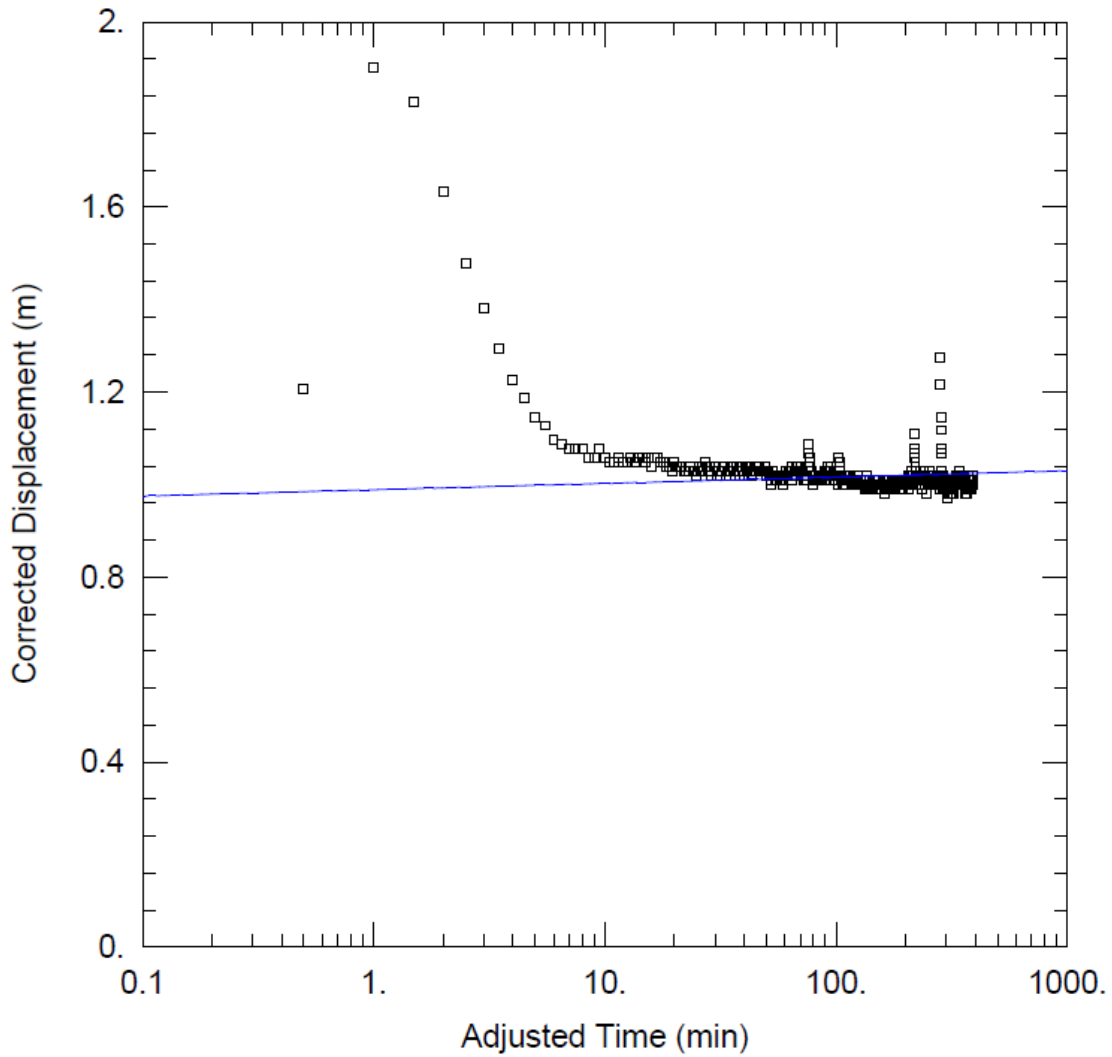
Pumping Test Analysis Report

File No.	PH4407	Well ID:	TW1
Date:	February 22, 2022	Solution Method:	Theis
Client:	Dymech Engineering Inc.	Transmissivity (m ² /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.	Transmissivity (m ² /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:	Transmissivity (m ² /day):
Theis	TW1	367.2
Cooper-Jacob	TW1	367.2
Average:		367.20

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)		
$C_T = (Q_b C_b + Q_e C_e + Q_i C_i) / (Q_b + Q_e + Q_i) =$ 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
<i>Notes: Site characteristic values were measured as approximate values from the available site plan. Daily Sewage Flow volume was calculated by Paterson Group as a preliminary design flow.</i>		

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	A = (Log10 [TDS] - 1) / 10	
pHs = (9.3 + A + B) - (C + D)	B = -13.12 x Log10 (oC + 273) + 34.55	
Where:	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)BOD₅	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%.

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 cBOD₅ and TSS levels below 10 mg/L.

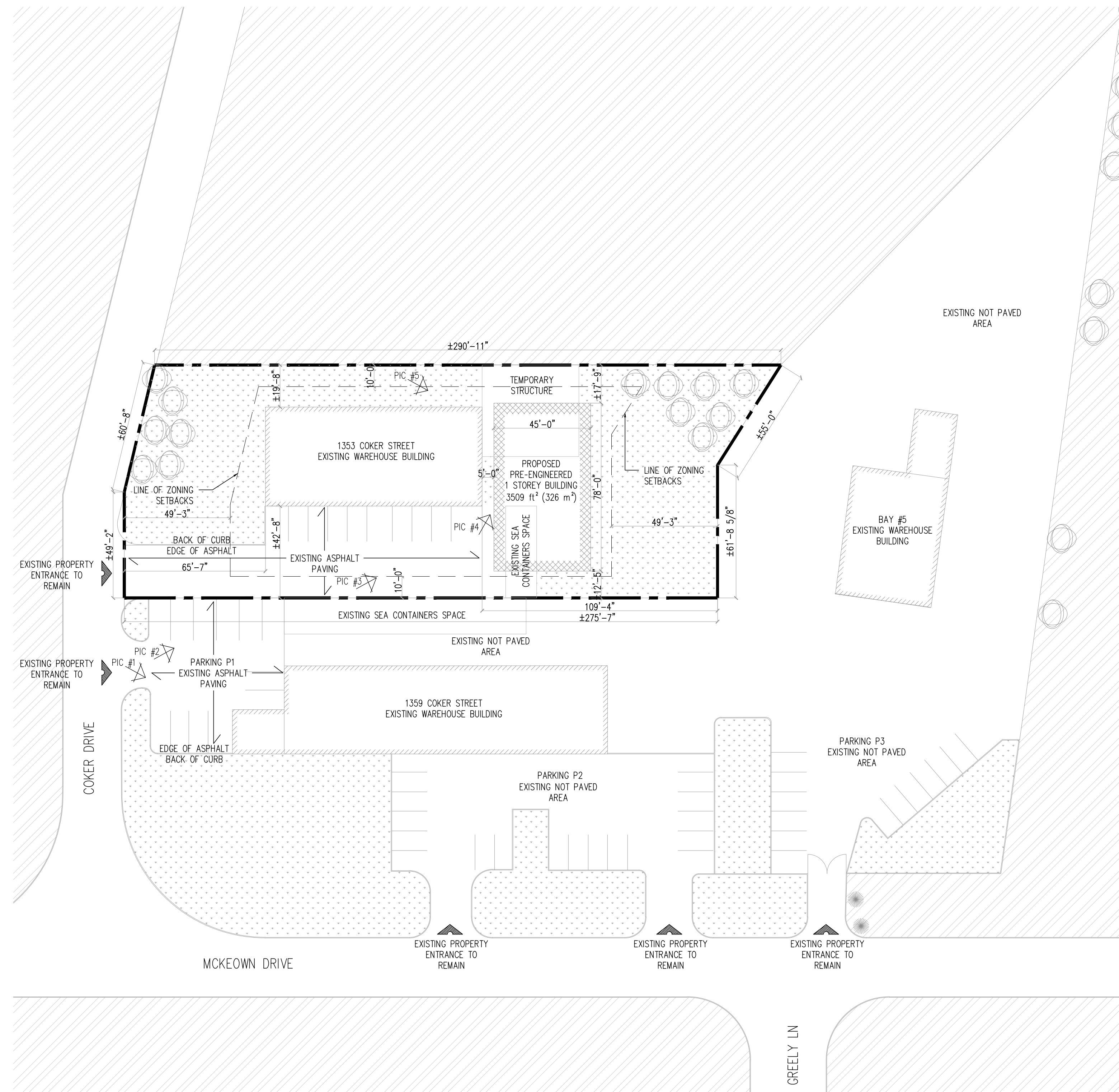
DRAWING LIST:

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 NEW SITE PLAN
A-002 1/32" = 1'-0"



PICTURE #1



PICTURE #2



PICTURE #3



PICTURE #4



PICTURE #5

LOCATION PLAN: GROUND FLOOR



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

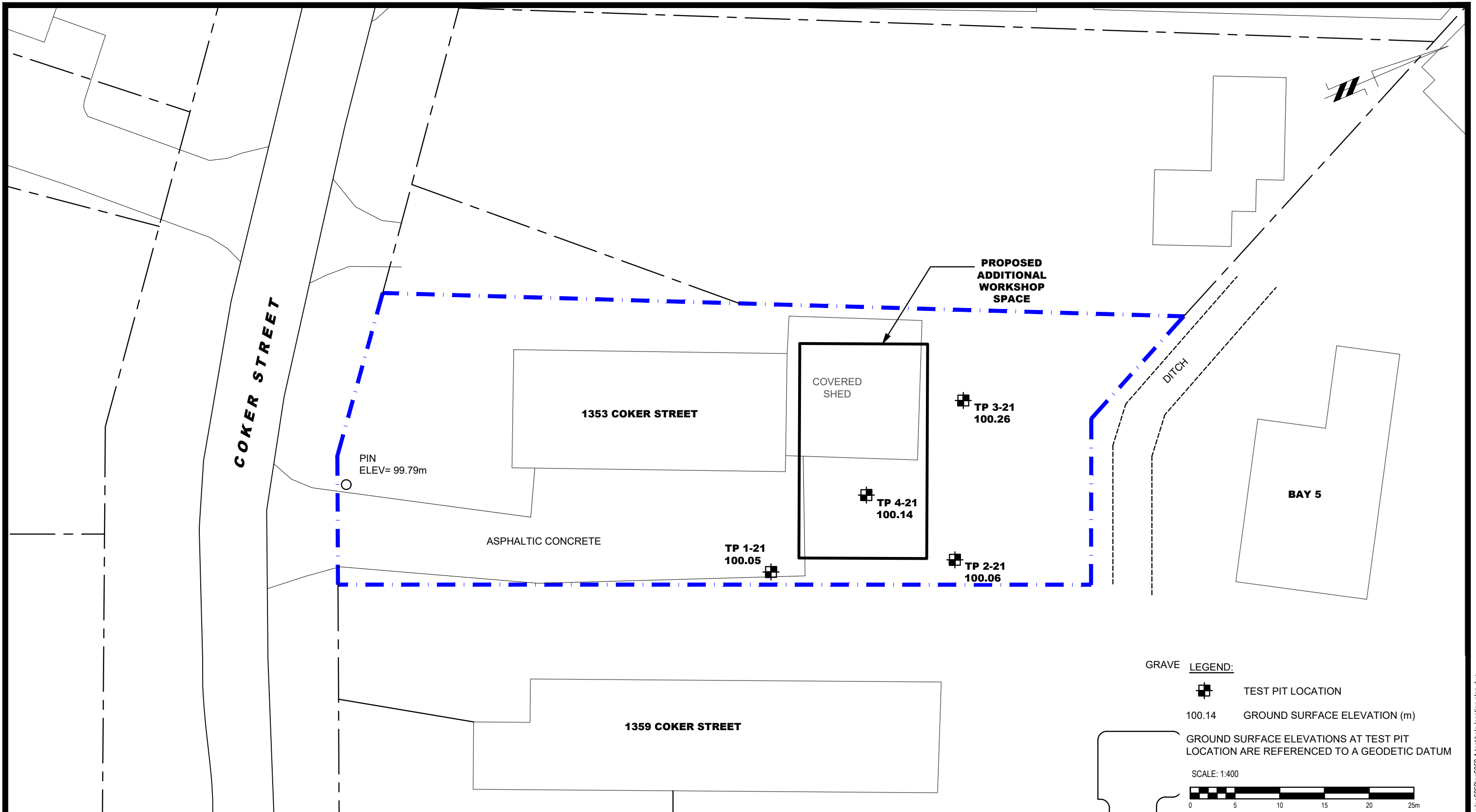
	PROJECT NORTH	DATE
	DRAWN	PB
	CHECKED	AB
	DATE PRINTED	-

NOT TO BE USED FOR CONSTRUCTION PURPOSES UNTIL SIGNED BY THE ARCHITECT.



DYMECH WAREHOUSE ADDITION
ADDRESS: 1359 COKER STREET, GREELEY, ON, K4P 1A1
DRAWING TITLE

NEW SITE PLAN + NOTES

SCALE	DRAWING NO. 1
AS SHOWN	A-002
PROJECT NO.	059-20



GRAVE LEGEND:

 TEST PIT LOCATION
 100.14 GROUND SURFACE ELEVATION (m)
 GROUND SURFACE ELEVATIONS AT TEST PIT LOCATION ARE REFERENCED TO A GEODETIC DATUM
 SCALE: 1:400


patersongroup
consulting engineers

154 Colonnade Road South
Ottawa, Ontario K2E 7J5
Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL

GREELY,
Title:

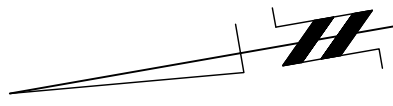
DYMECH ENGINEERING INC.
GEOTECHNICAL INVESTIGATION
PROPOSED BUILDING ADDITION
1353 COKER STREET

ONTARIO

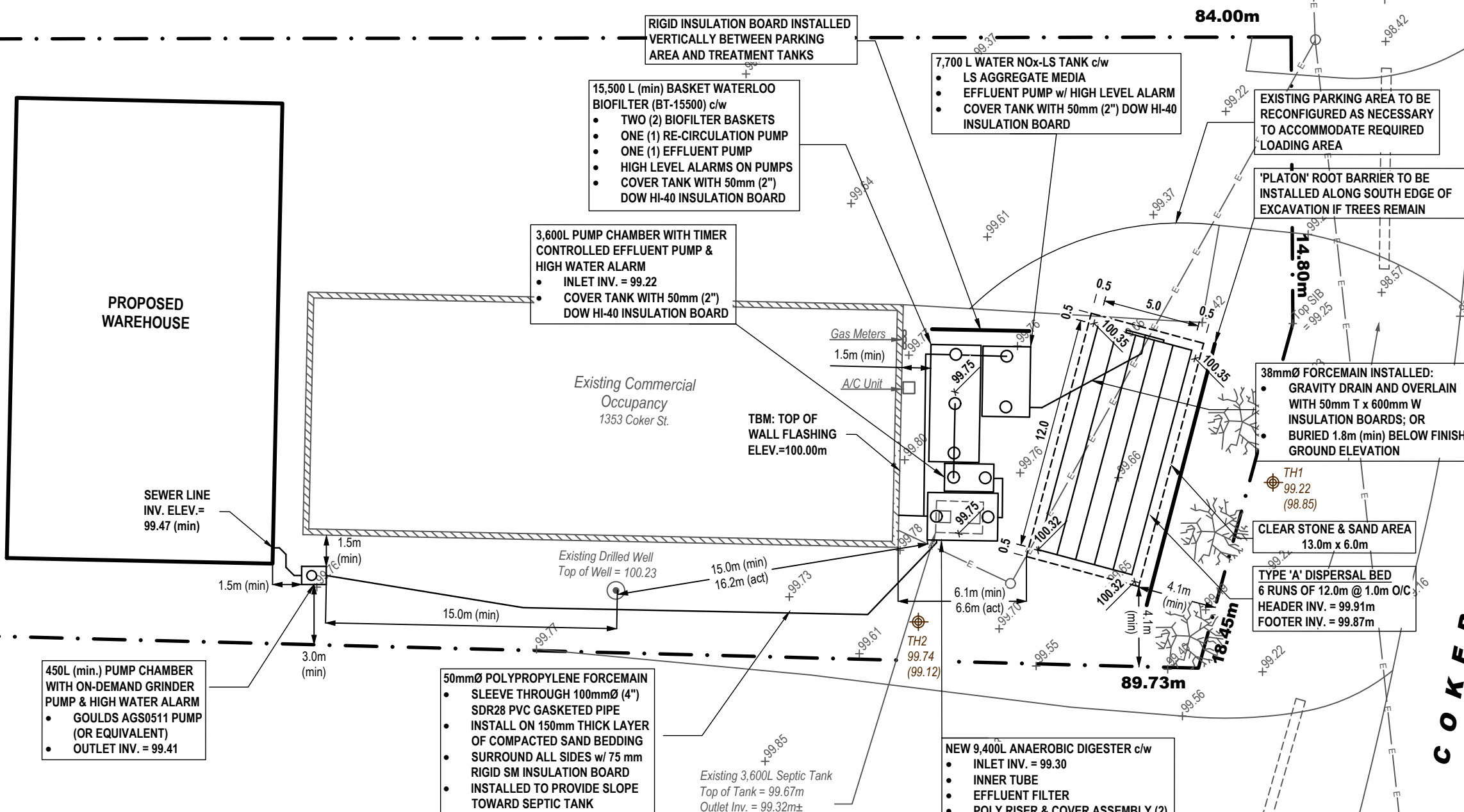
TEST HOLE LOCATION PLAN

Scale: 1:400
Drawn by: YA
Checked by: MS
Approved by: DJG

Date: 01/2022
Report No.: PG6052-1
Dwg. No.: **PG6052-1**
Revision No.:



CONTRACTOR TO EXERCISE CAUTION DURING CONSTRUCTION NOT TO IMPACT EXISTING OVERHEAD HYDRO LINES, AND UNDERGROUND HYDRO AND GAS LINES



COKER STREET

LEGEND:		BENCHMARK INFORMATION:	
Test Hole Location	GFL	Garage Floor Level	TBM: Top of Wall Flashing at Base of Metal Wall Sheeting. Elev. = 100.00m
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	TTTT	Terrace Grade 3H:1V Max.
BFL	Basement Floor Level	Existing Structure	
T/C	Top of Foundation Wall	Proposed Structure	

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

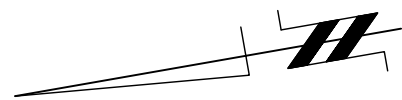
Client
DYMECH ENGINEERING INC.
1353 COKER STREET
OTTAWA (GREELY), ONTARIO

Project
PROPOSED REPLACEMENT SEWAGE SYSTEM

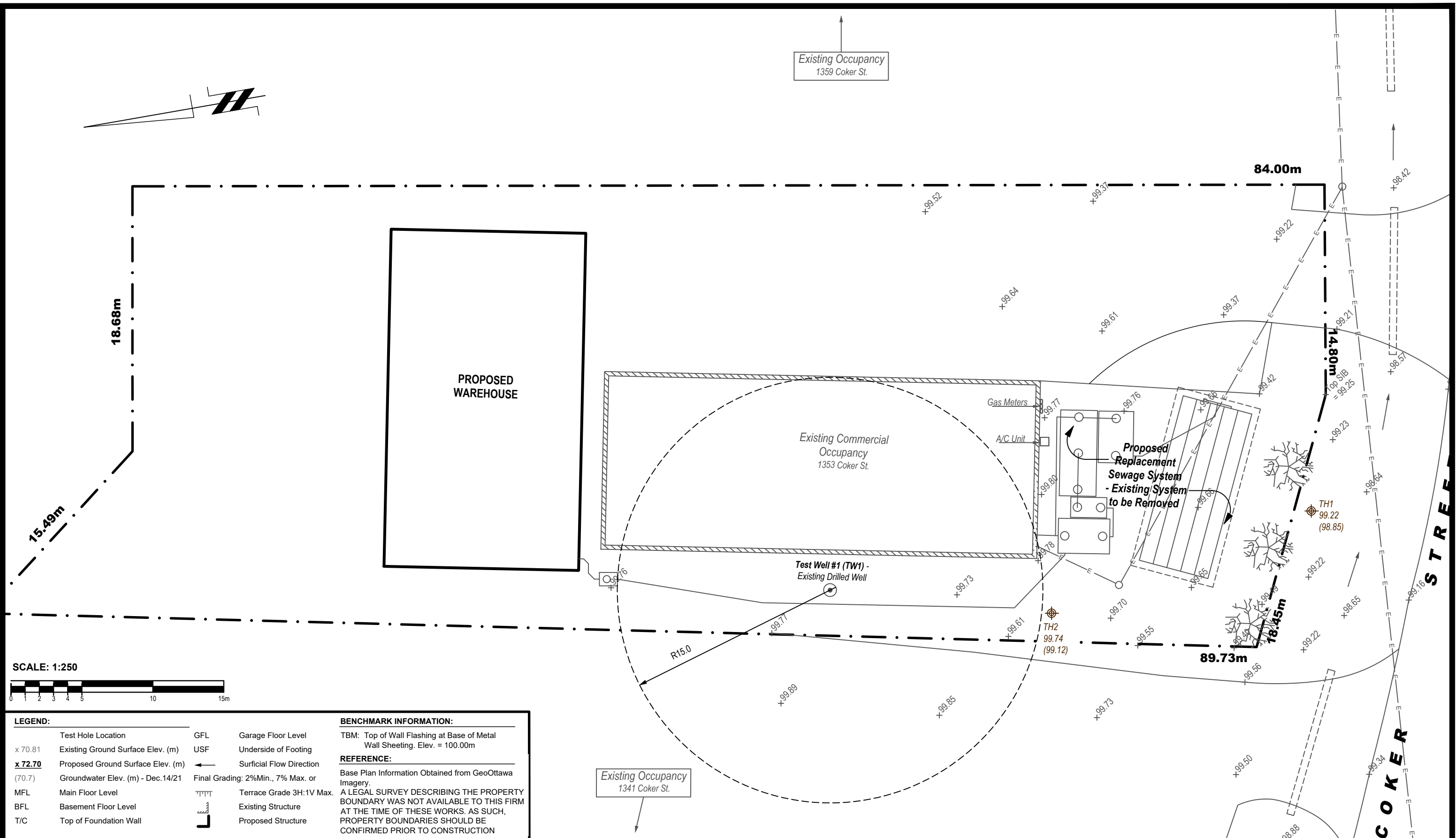
Drawing
SEWAGE SYSTEM LAYOUT PLAN

Scale:	1:250	Drawn by:	AD
Date:	02/2022	Checked by:	MK
Drawing no.:	PH4407-1(rev.2)		

p:\autocad\drawings\hydrology\p4407\p4407-1.dwg



Existing Occupancy
1359 Coker St.



LEGEND:		BENCHMARK INFORMATION:	
x 70.81	Existing Ground Surface Elev. (m)	GFL	Garage Floor Level
x 72.70	Proposed Ground Surface Elev. (m)	USF	Underside of Footing
(70.7)	Groundwater Elev. (m) - Dec.14/21	←	Surficial Flow Direction
MFL	Main Floor Level	Final Grading: 2%Min., 7% Max. or	
BFL	Basement Floor Level	TTTT	Terrace Grade 3H:1V Max.
T/C	Top of Foundation Wall	Existing Structure	
		Proposed Structure	

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.

Drawing
WATER WELL LOCATION PLAN

Project
PROPOSED WAREHOUSE ADDITION
1353 COKER STREET
OTTAWA (GEELEY), ONTARIO

Scale: 1:250
Date: 02/2022
Drawing no.: PH4407-3

Drawn by: AD
Checked by: MK

p:\autocad\drawings\hydrogeology\p444x\p4407 - dymech engineering - 1353 coker st\p4407-1.dwg



Ottawa Septic Bureau des systèmes
System Office 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 **OTTAWA** Fax: 613-692-1507 Email: septic@rvca.ca

SITE ADDRESS: 1353 Coker St Township OSG-HUN-GLO-FIT-CUM-NEP-GOU-RID-KAN-TOR

CONTACT: 1. Ke Poterson 2. Dymrech 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

RVCA RECEIVED
MAR 04 2022
 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 1353 Coker St.		Unit number	Lot/con.
Municipality Ottawa (Osgoode)	Postal code K4P 1A1	Plan number/other description	
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 Commercial	Current use of building
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 Dillon		First name Adam	Corporation or partnership Paterson Group Inc.
Street address 154 Colonnade Rd. S		Unit number	Lot/con.
Municipality Ottawa (Nepean)	Postal code K2E 7J5	Province ON	E-mail adillon@patersongroup.ca
Telephone number () (613) 226-7381	Fax ()	Cell number ()	

D. Owner (if different from applicant)

Last name		First name	Corporation or partnership Dymech Engineering Inc.
Street address 1359 Coker St.		Unit number	Lot/con.
Municipality Ottawa (Osgoode)	Postal code K4P 1A1	Province ON	E-mail mmain@dymech.ca
Telephone number (613) 327-4867	Fax ()	Cell number ()	

Application for a Permit to Construct or Demolish – Effective January 1, 2014

E. Builder (optional)		RVCA RECEIVED		22-059	
Last name	First name	Corporation or partnership (if applicable)			
Street address		REFER TO: _____		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 <i>Ontario New Home Warranties Plan Act</i> ? If no, go to section G.				Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
ii. Is registration required under the <i>Ontario New Home Warranties Plan Act</i> ?				Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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 <i>Building Code Act, 1992</i> , to be paid when the application is made.				Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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 <i>Building Code Act, 1992</i> .				Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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 <i>Building Code Act, 1992</i> which enable the chief building official to determine whether the proposed building, construction or demolition will contravene any applicable law.				Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
iv) The proposed building, construction or demolition will not contravene any applicable law.				Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
I. Declaration of applicant					
<p>Adam Dillon - Paterson Group Inc. _____ declare that:</p> <p>(print name)</p> <p>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.</p> <p>2. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership.</p> <p>Date 2/17/22 Signature of applicant </p>					


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.

RVCA RECEIVED

MAR 04 2022

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information			
Building number, street name 1353 Coker St.		Unit no.	Lot/con. 22-059
Municipality Ottawa (Osgoode)	Postal code K4P 1A1	Plan number/ other description	
B. Individual who reviews and takes responsibility for design activities			
Name Adam Dillon		Firm Paterson Group Inc.	
Street address 154 Colonnade Rd. S.		Unit no.	Lot/con.
Municipality Ottawa (Nepean)	Postal code K2E 7J5	Province ON	E-mail adillon@patersongroup.ca
Telephone number () () (613) 226-7381	Fax number () ()	Cell number () ()	
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:

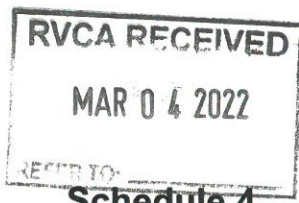
- For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) (c), of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed 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

SCHEDULE RECEIVED
MAR 04 2022

SEPTIC FILE
22-059
OTTAWA

A. Project Information			
Building number, street name 1353 Coker St.		Unit number	Lot/con. 22-059
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:			
<p>Adam Dillon - Paterson Group Inc. _____ declare that:</p> <p align="center">(print name)</p> <p>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;</p> <p>OR</p> <p>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.</p> <p>I certify that:</p> <ol style="list-style-type: none"> The information contained in this schedule is true to the best of my knowledge. If the owner is a corporation or partnership, I have the authority to bind the corporation or partnership. <p>2/17/22 Date</p> <p align="right">Signature of applicant </p>			



Do Not Complete
 Permit # _____
 Revision # 2-059
 Date _____
 OTTAWA

Schedule 4
Proposed Services
 Complete Sections 1 thru 7

1. Engineered

- Yes
- No

2. Water supply

- Proposed
- Existing

3. Type of work proposed

- New Installation
- Replacement
- Alteration

4. Type of Well

- Dug/bored/Sandpoint well
- 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)

7. Type of System

- 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 4 – BMEC Area Bed (Schedule 11)
 - Fully raised
 - Partially raised
 - In-ground
- Class 4 – “Type A” Dispersal (Schedule 13)
 - Fully raised
 - Partially raised
 - In-ground
- Class 4 – “Type B” Dispersal (Schedule 14)
 - Fully raised
 - Partially raised
 - In-ground
- Class 5 – Holding Tank (9000L min)
- Tank/Treatment Unit/Pump Chamber ONLY
- Effluent Filter/Risers ONLY



RVCA RECEIVED
MAR 04 2022
 REFER TO: _____

Do Not Complete
 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

Shallow Buried Trench

Loading Area _____ m²

Pipe Length _____ m

Type of Chamber _____

Length of Chamber _____ m

Filter Media Bed

BMEC Area Bed

Stone _____ m²

Type A

Extended Base _____ m²

Type B

Pipe _____ m

Stone 78.0 m²

Weight of Filter Media _____ Kg

Sand 78.0 m²

Loading Area _____ m²

Pipe 72.0m (6 @ 12.0m) m

Linear Loading _____ L/m²

Tank/Treatment Unit/Pump Chamber Replacement ONLY

Effluent Filter & Riser ONLY

Construction Notes:



RVCA RECEIVED
MAR 04 2022
 REFER TO:

Do Not Complete
 Permit # **SEPTIC FILE #**
 Revision # _____
 Date **22-059**

Schedule 6
Soil and Water Table Information
(Minimum depth of test pit: 2 metres)

OTTAWA

Name of Applicant/Agent: <u>Paterson Group Inc.</u> Date: <u>December 14, 2021</u> Time: _____ Applicant/Agent Signature: _____			Inspector: <u>HO</u> Date: _____ Time: _____ Inspector Signature: _____		
EG (.....)	Soil Description	T	EG (.....)	Soil Description	
.5m	Refer to Drawing No. PH4407-2 (rev.2)		.5m		
1.0 m			1.0 m		
1.5m			1.5m	Test pits not available for inspection. Engineer assumes all liability for soil and HGWT info/elv's	
2.0 m			2.0 m		
EG (.....)	Soil Description	T	EG (.....)	Soil Description	T
.5m			.5m		
1.0 m			1.0 m		
1.5m			1.5m		
2.0 m			2.0 m		
LEGEND BR = Bedrock HGWT = High ground water table EG = Existing grade GWT = Ground water table M = metres T = percolation rate					



BYCA RECEIVED
MAR 04 2022

Do Not Complete
Permit # _____
Revision # 27-059
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)

X₁ _____ X₂ _____

X₃ _____ X₄ _____

X₅ _____ X₆ (toe) _____

X₇ _____ X₈ _____



RVCA RECEIVED
MAR 04 2022
 REFER TO:
Schedule 8

Do Not Complete
 Permit # **SEPTIC FILE #**
 Revision # _____
 Date **22-059**

Fixture unit count

OTTAWA

Fixtures	# Existing + # Proposed X unit count = Fixture Count				
Bathroom					
Bathroom group (toilet, sink and tub or shower) installed in the <u>same</u> 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 =

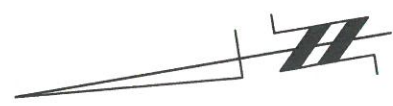
***Total: 16.5**

***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)).

 Agent/Owner signature

February 17, 2022
 Date



RVCA RECEIVED
MAR 04 2022
 REFER TO:

SEPTIC FILE #
22-059
OTTAWA

CONTRACTOR TO EXERCISE CAUTION DURING CONSTRUCTION NOT TO IMPACT EXISTING OVERHEAD HYDRO LINES, AND UNDERGROUND HYDRO AND GAS LINES

Existing Occupancy
 1359 Coker St.

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

38mmØ FORCEMAIN INSTALLED:
 • GRAVITY DRAIN AND OVERLAIN WITH 50mm T x 600mm W INSULATION BOARDS; OR
 • BURIED 1.8m (min) BELOW FINISHED GROUND ELEVATION

Existing Commercial Occupancy
 1353 Coker St.

TBM: TOP OF WALL FLASHING ELEV.=100.00m

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

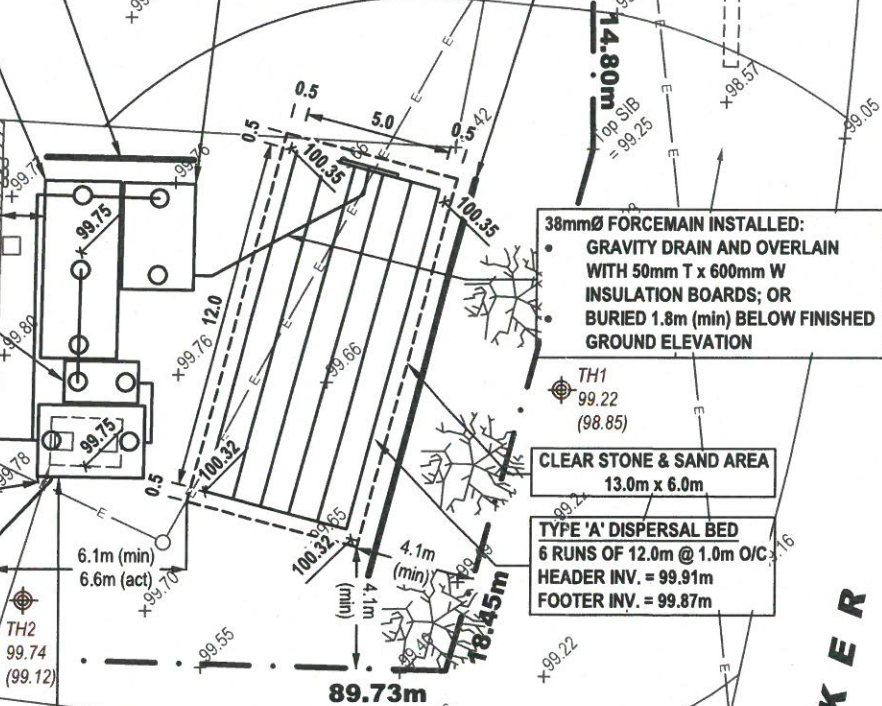
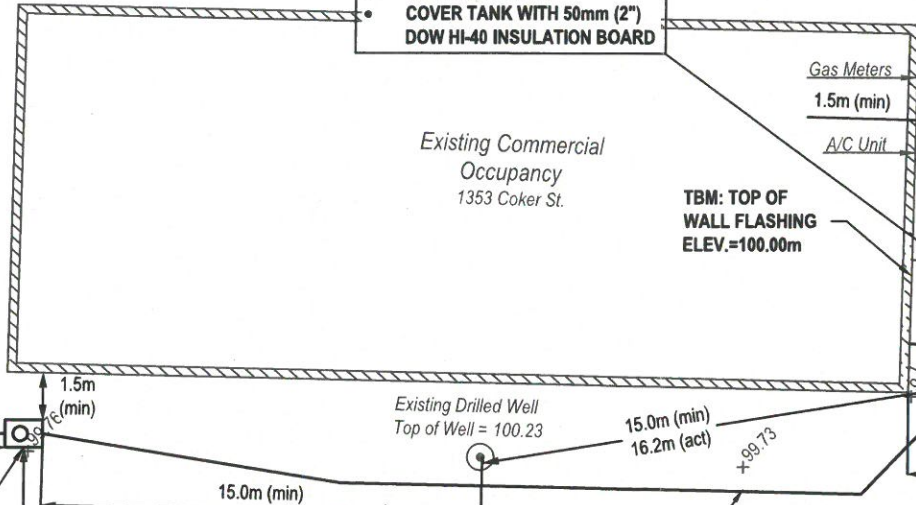
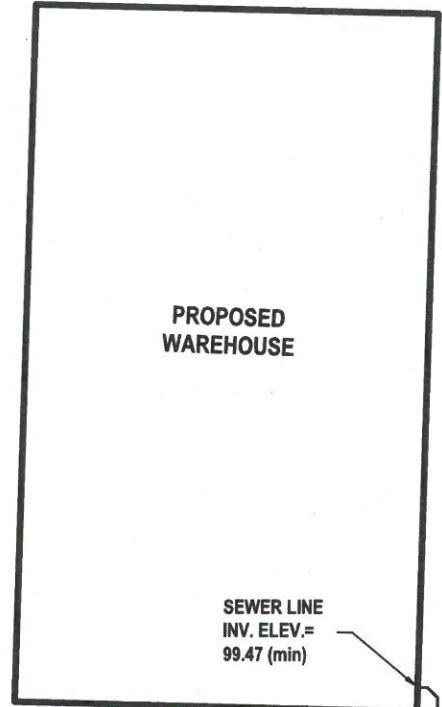
Existing Drilled Well
 Top of Well = 100.23

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 3,600L Septic Tank
 Top of Tank = 99.67m
 Outlet Inv. = 99.32m±
 • TO BE PUMPED AND REMOVED

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

450L (min.) PUMP CHAMBER WITH ON-DEMAND GRINDER PUMP & HIGH WATER ALARM
 • GOULDS AGS0511 PUMP (OR EQUIVALENT)
 • OUTLET INV. = 99.41



COKER STREET

Existing Occupancy
 1341 Coker St.

LEGEND:		BENCHMARK INFORMATION:	
x 70.81	Existing Ground Surface Elev. (m)	GFL	Garage Floor Level
x 72.70	Proposed Ground Surface Elev. (m)	USF	Underside of Footing
(70.7)	Groundwater Elev. (m) - Dec.14/21	←	Surficial Flow Direction
MFL	Main Floor Level	Final Grading: 2%Min., 7% Max. or	
BFL	Basement Floor Level	TTTT	Terrace Grade 3H:1V Max.
T/C	Top of Foundation Wall	Existing Structure	
		Proposed Structure	

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
DD/MM/YY	Description	Rev.

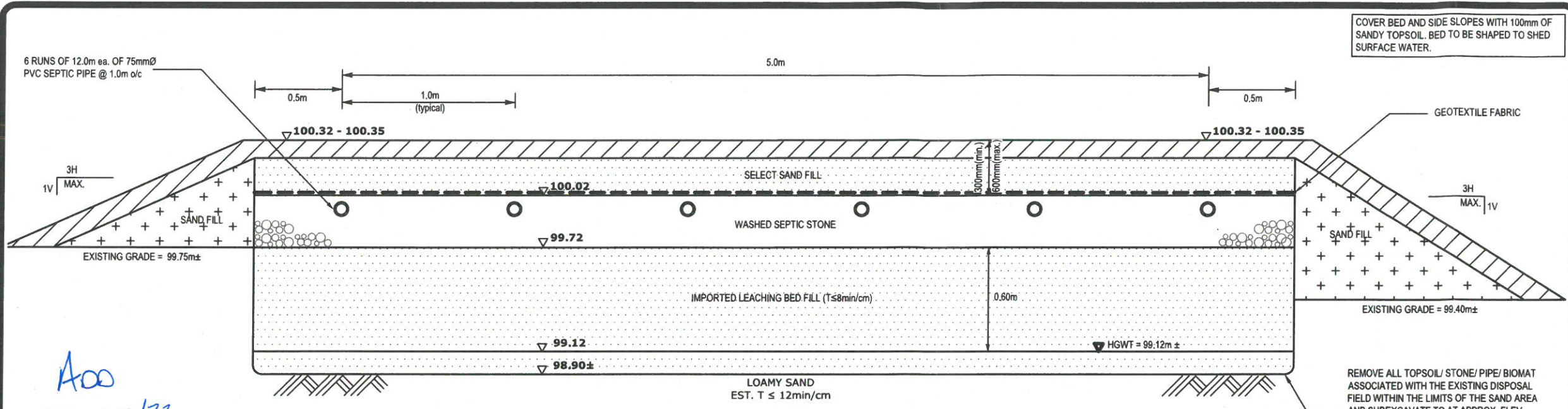
Client
DYMECH ENGINEERING INC.

Project
PROPOSED REPLACEMENT SEWAGE SYSTEM
 1353 COKER STREET
 OTTAWA (GRIELY), 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:\arccad\drawings\hydrogeology\ph4407-1\ph4407-1.dwg - dymech engineering - 1353 coker st\ph4407-1.dwg



PROFILE
N.T.S.

Acc
March 2/22

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 X 150 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
0.37-0.50	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: N.T.S.	Drawn by: AD
Date: 02/2022	Checked by: HV

Drawing No.:
PH4407-2(rev.2)



Do Not Complete
Permit No <u>22-059</u>
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 <u>9400</u> L	weigh bills for <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
effluent filter <u>N/A</u>	grain size analysis required <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
pump rate <u>AS PER WATERLOO BIOFILTER</u> L/15 MIN	site to be scarified <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
treatment unit <u>Waterloo Biofilter BT-15,500</u>	clay seal inspection <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
number of units <u>1</u>	mantle required <input type="checkbox"/> yes <input checked="" type="checkbox"/> no
	sub-grade inspection <input checked="" type="checkbox"/> yes <input type="checkbox"/> no

ELEVATION In Ground Partially Raised Fully Raised

TYPE OF SYSTEM

- Trench
 Pipe and Stone or Chambers

type of chamber _____
 loading area _____ m²
 total trench length _____ m
 trench configuration _____

Dispersal Bed

BMEC Type A Type B
 stone 78 m²
 sand 78 m²
 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 _____ m²
 extended base _____ m²
 pipe _____
 weight of filter media _____ kg
 loading area _____ m²

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
 Class 5 Holding Tank approval only valid for three years from date of issue subgrade squirt height
 Manager, Septic System Approvals: _____ Revision Date: _____
 Comments: _____

NOTE: For further details, refer to corresponding application.